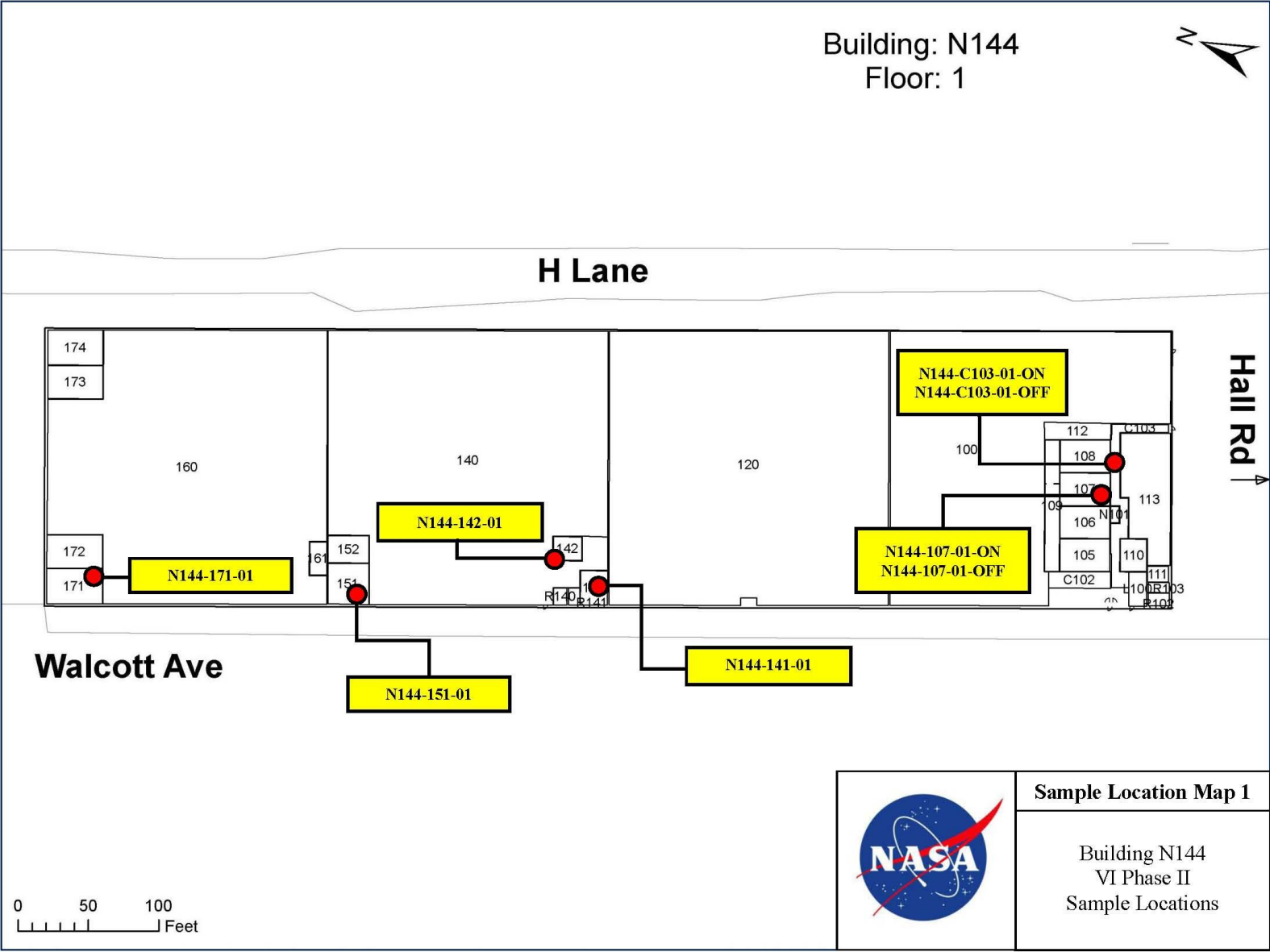
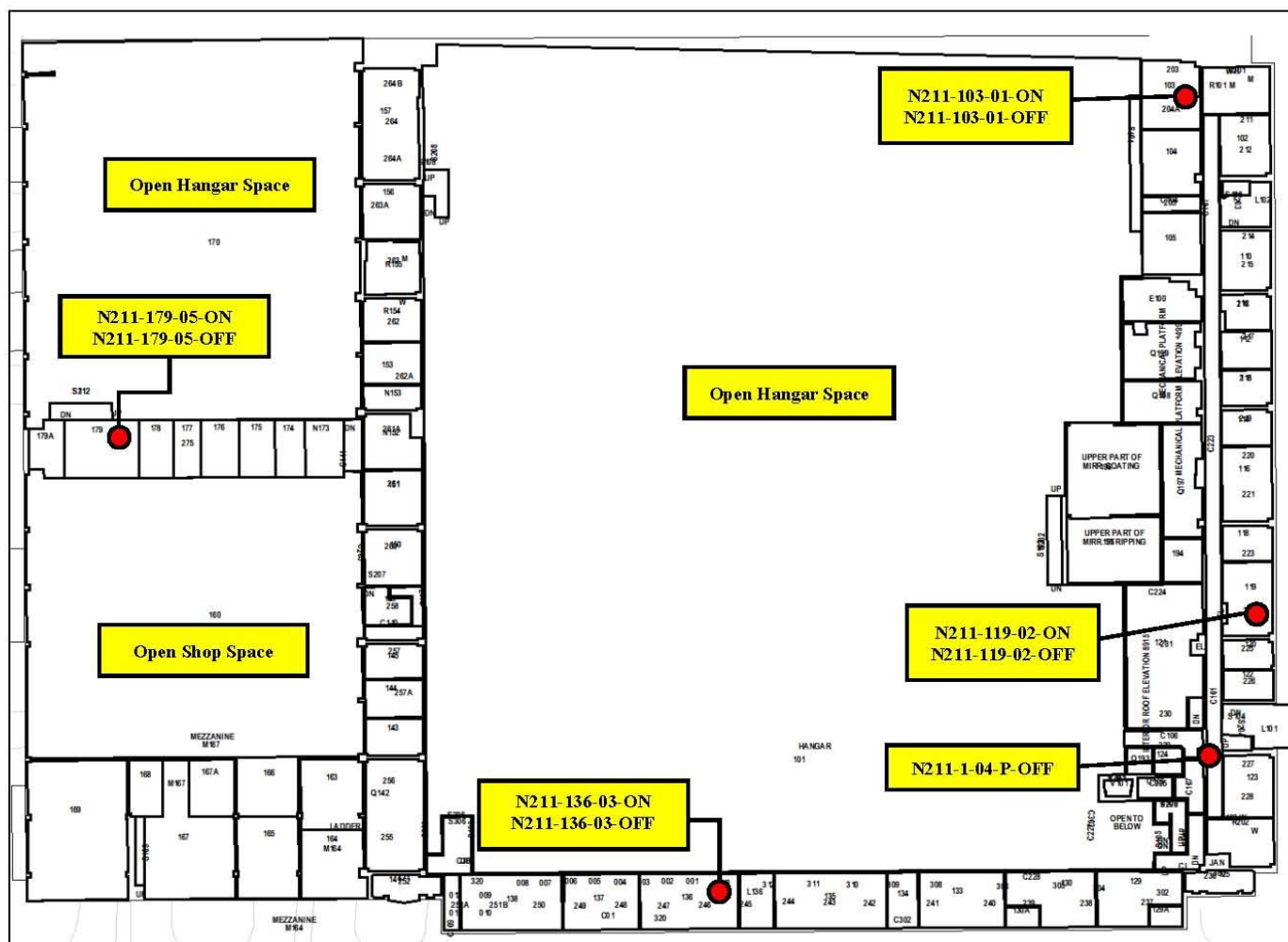




APPENDIX A

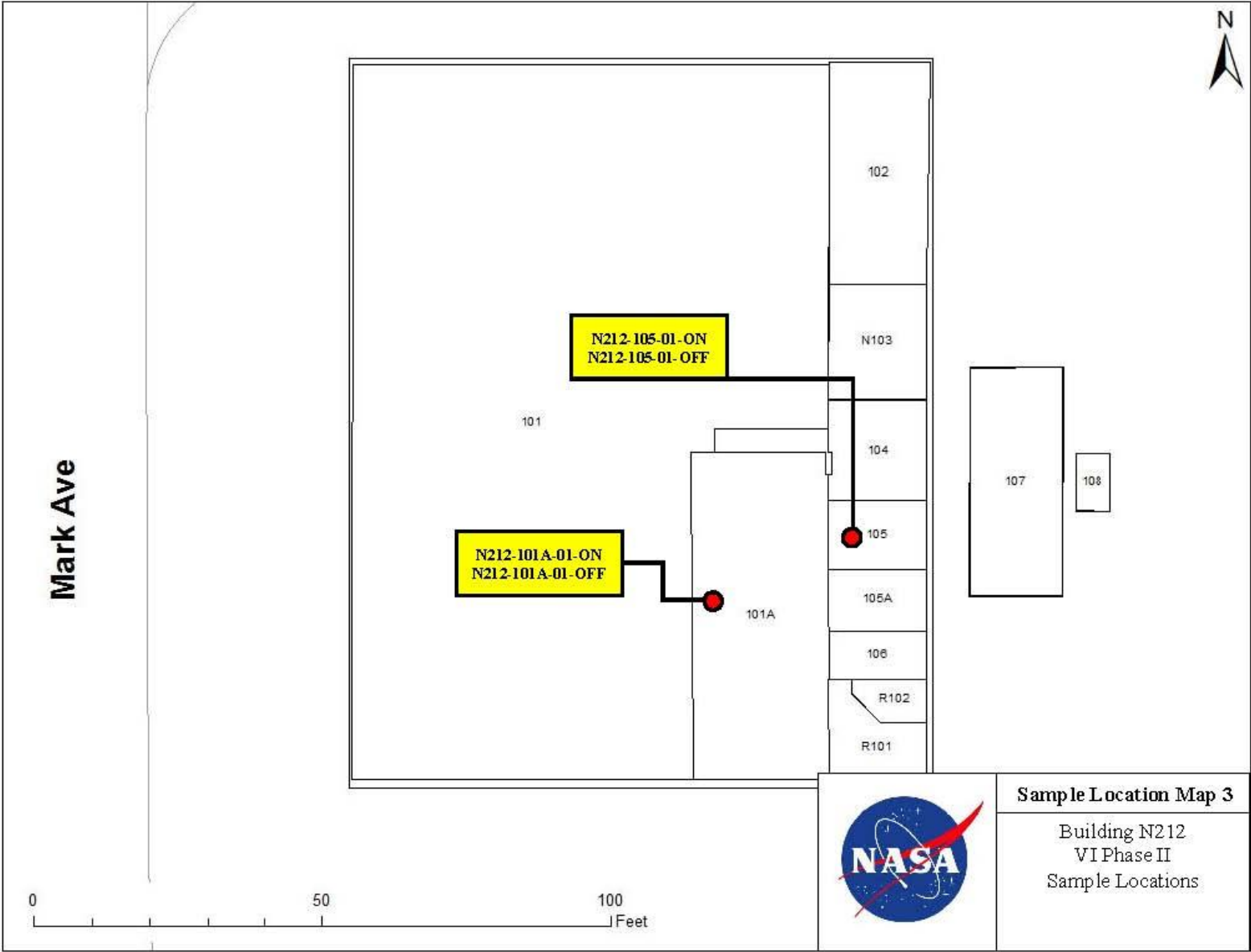
Sample Location Maps

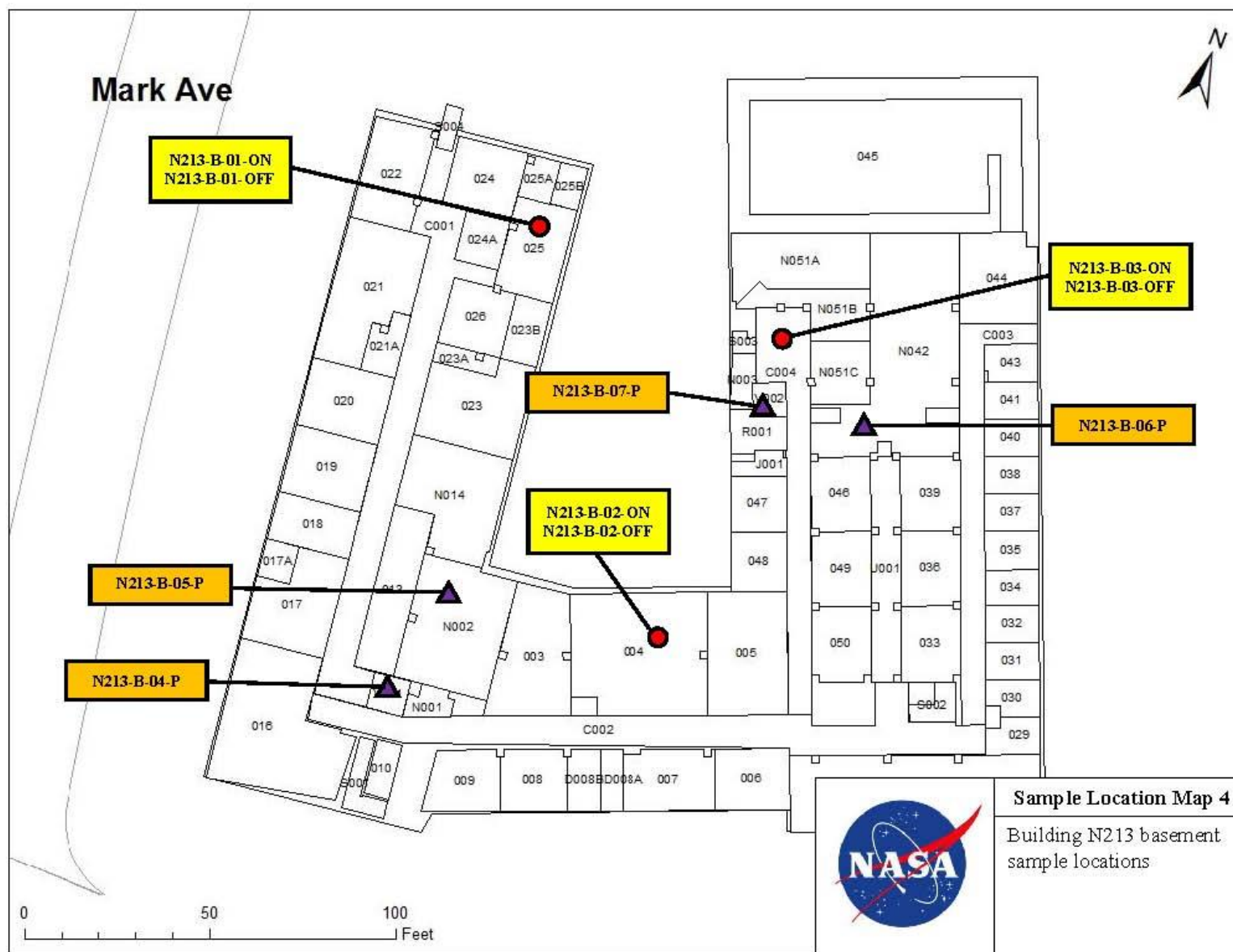


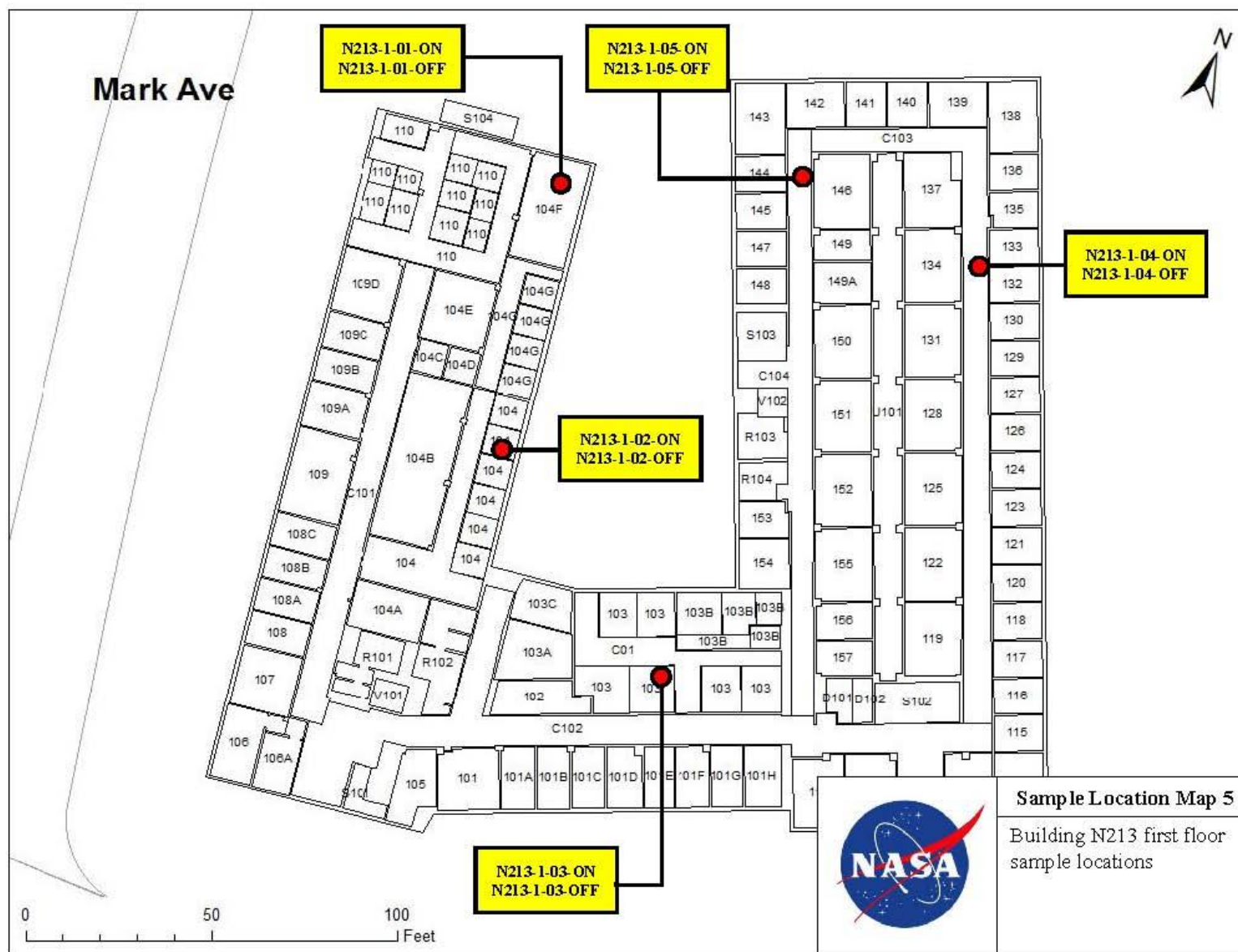


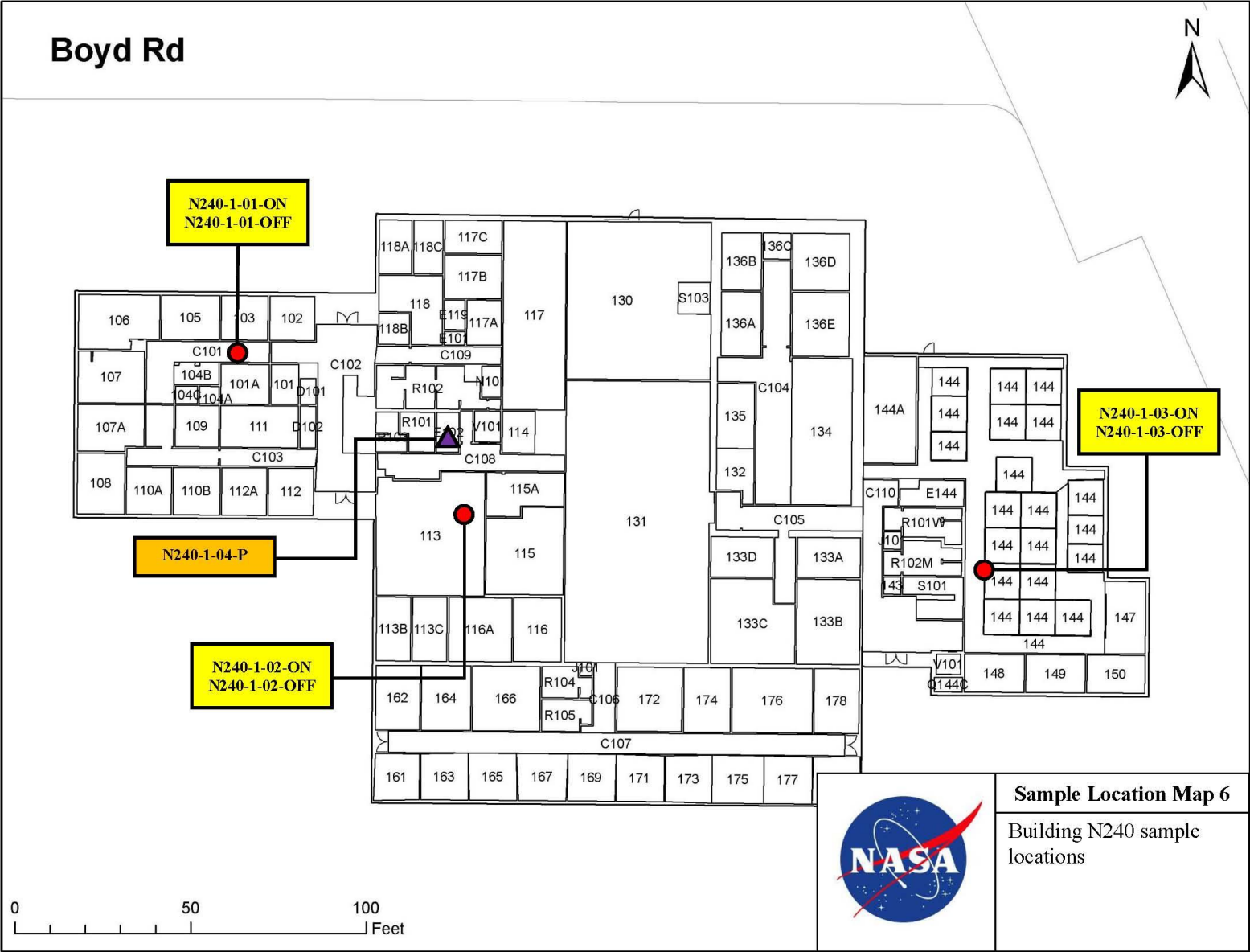
Sample Location Map 2

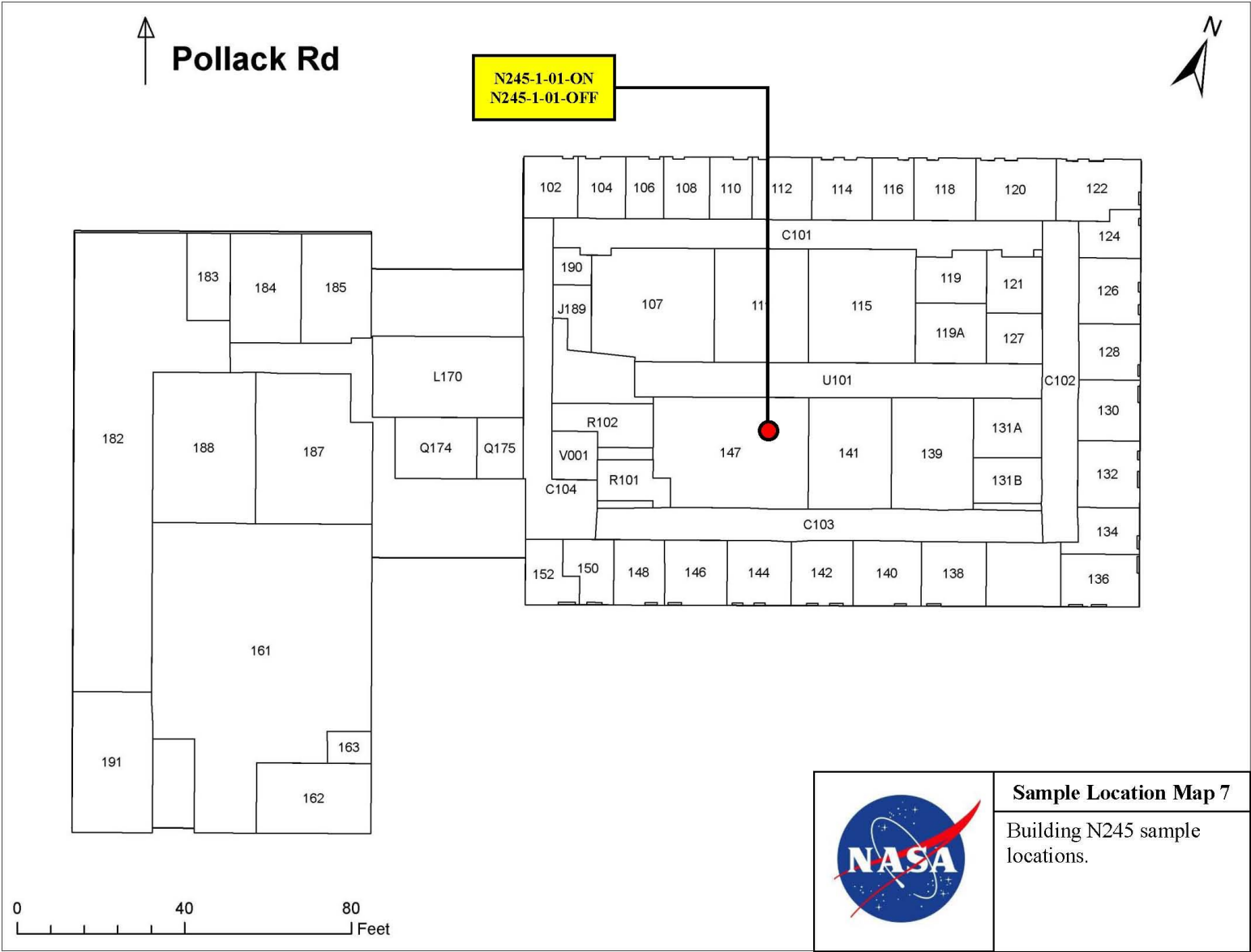
Building N211
VI Phase II
Sample Locations

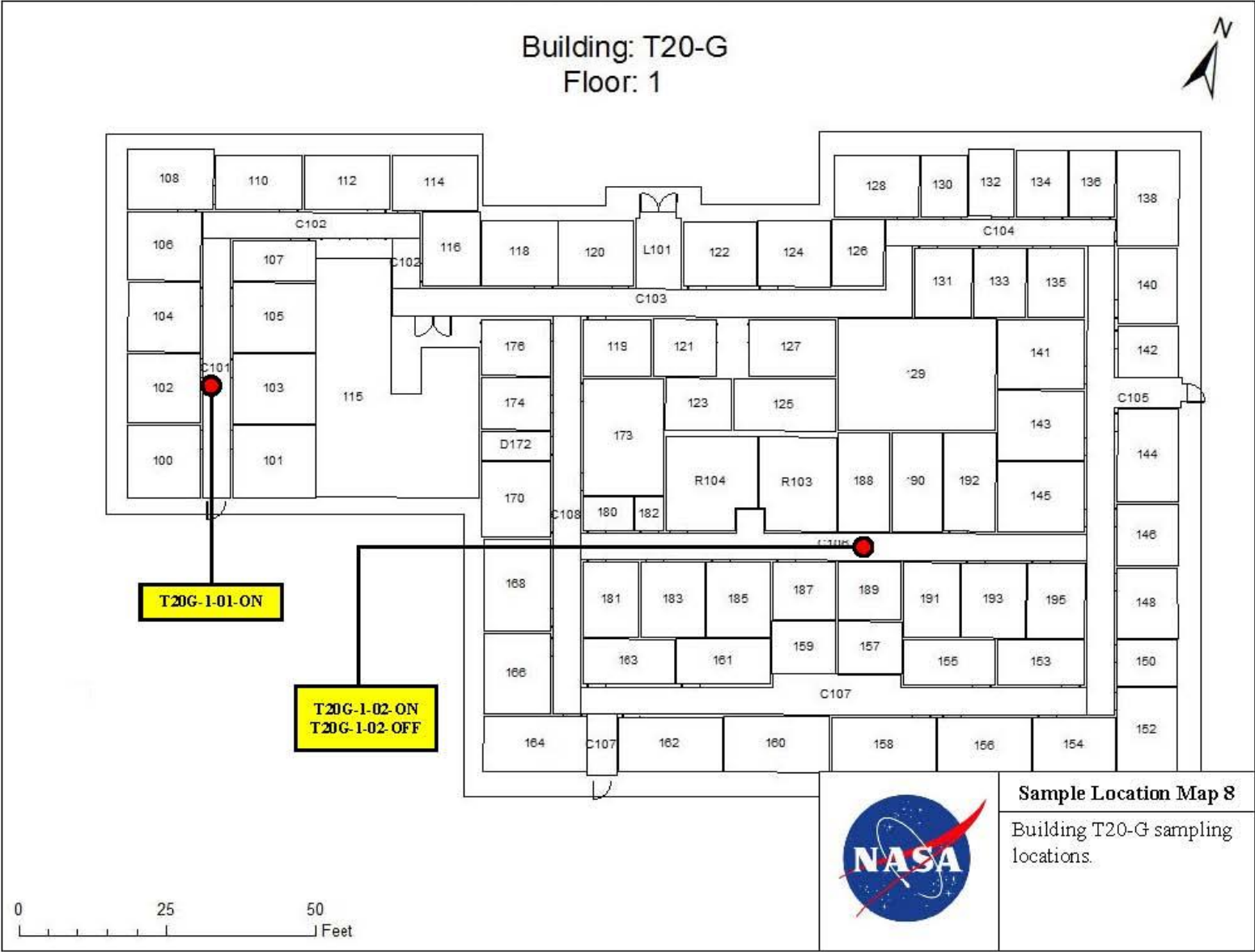


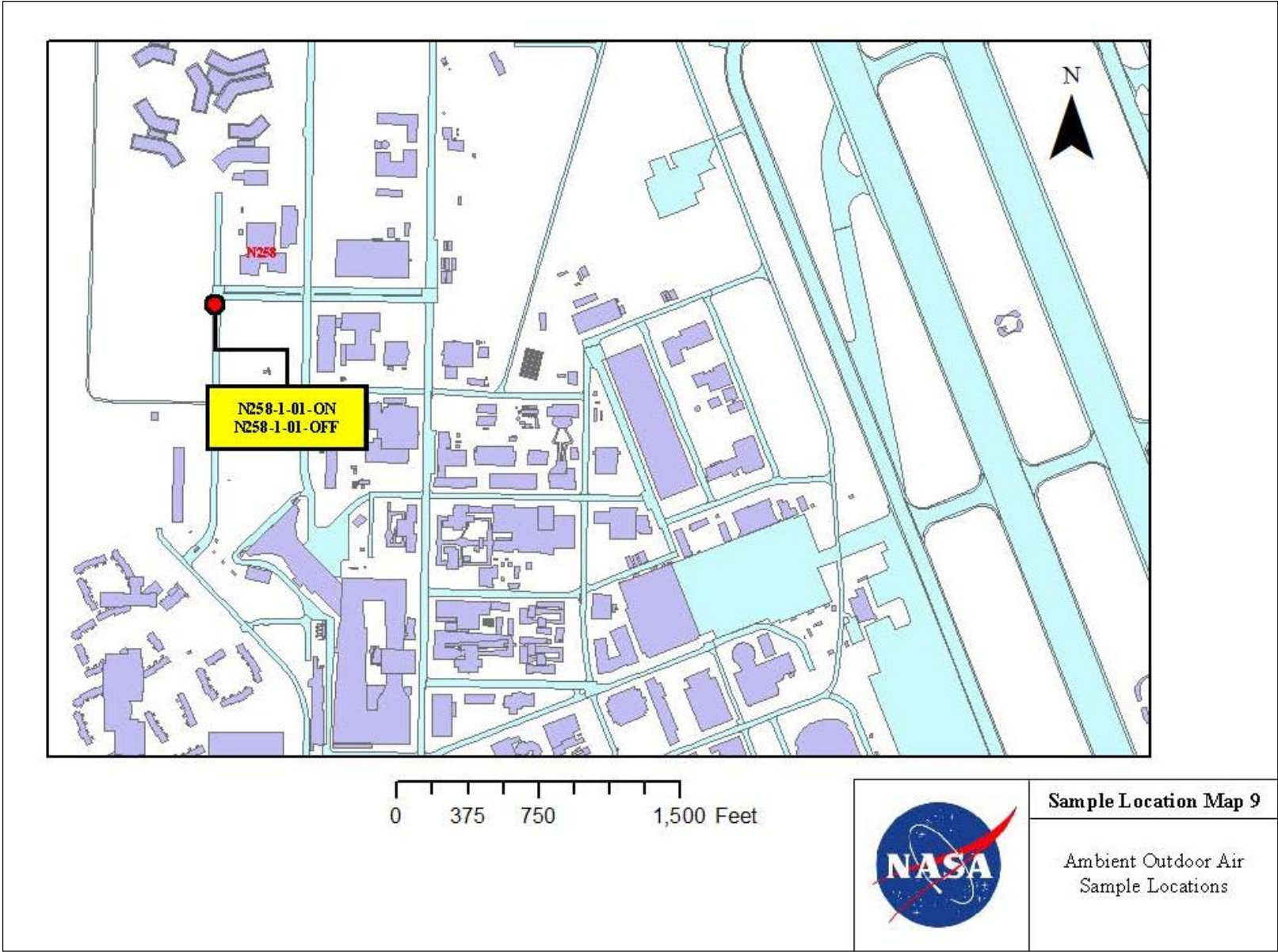














APPENDIX B

Tables



**Table 1: Building List & Samples, 2012 Phase I Vapor Intrusion Study
NASA Ames, California**

Building No.	Building Usage	Sample No.	Sample Type	HVAC Status		No. of Samples	Notes
				ON	OFF		
N144	NASA Warehouse/ FEMA	N144-1-01-ON	24-Hour	X		1	Room R141
		N144-1-01-OFF	24-Hour		X	1	
N212	Model Development	N212-1-01-ON	24-Hour	X		1	Room 104 (moved to Room 101A)
		N212-1-01-OFF	24-Hour		X	1	
N213	Research Support	N213-B-01-ON	24-Hour	X		2	Basement Room 022 (moved to Room 025 which is occupied office space)
		N213-B-01-OFF	24-Hour		X	2	
		N213-B-02-ON	24-Hour	X		2	Basement Room 003 (moved to Room 004 which is occupied office space)
		N213-B-02-OFF	24-Hour		X	1	
		N213-B-03-ON	24-Hour	X		1	Basement Room C004
		N213-B-03-OFF	24-Hour		X	1	
		N213-B-04-P	Grab	X		1	Basement Elevator vault
		N213-B-05-P	Grab	X		1	Basement Room N002
		N213-B-06-P	Grab	X		1	Basement Room N042
		N213-B-07-P	Grab	X		1	Basement Elevator vault
		N213-1-01-ON	24-Hour	X		1	1 st Floor Room 104F
		N213-1-01-OFF	24-Hour		X	1	
		N213-1-02-ON	24-Hour	X		1	1 st Floor Room 104
		N213-1-02-OFF	24-Hour		X	1	
		N213-1-03-ON	24-Hour	X		2	1 st Floor Room 103
		N213-1-03-OFF	24-Hour		X	1	
		N213-1-04-ON	24-Hour	X		1	1 st Floor Room C103
		N213-1-04-OFF	24-Hour		X	1	
		N213-1-05-ON	24-Hour	X		1	1 st Floor outside of Room 146
		N213-1-05-OFF	24-Hour		X	1	
N240	Airborne Missions & Life Science Experiments	N240-1-01-ON	24-Hour	X		1	1 st Floor Room C101 (OFF not collected). Mission critical research. See text.
		N240-1-01-OFF	24-Hour		-	1	
		N240-1-02-ON	24-Hour	X		1	1 st Floor Room 113 (moved to Room 115A)
		N240-1-02-OFF	24-Hour		-	1	1 st Floor Room 113 (not collected. See text)
		N240-1-03-ON	24-Hour	X		1	1 st Floor Room 144
		N240-1-03-OFF	24-Hour		X	1	
		N240-1-04-P	Grab	X		1	1 st Floor Elevator shaft
N245	Space Science Research	N245-1-01-ON	24-Hour	X		1	1 st Floor Room 147
		N245-1-01-OFF	24-Hour		X	1	
T20-G	Space Sciences & Environmental	T20G-1-01-ON	24-Hour	X		1	1 st Floor Room C101
		T20G-1-01-OFF	24-Hour		X	1	
		T20G-1-02-ON	24-Hour	X		1	1 st Floor Room C106
		T20G-1-02-OFF	24-Hour		X	1	



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**Table 2: List of Buildings in NASA AOR, 2015 Air Sampling and VI Tier RER
NASA Ames, California**

Building Number	Building Use	Building Occupancy and Status	Sampled
N144	Warehouse, FEMA	Intermittently occupied	Yes
N211	Hangar Space, Offices & Shop Space	Occupied; to stay	Yes
N212	Shop Space, Offices & Storage	Occupied; to stay	Yes
N213	Offices, Conference Room Space & General Storage Space	Occupied; to stay	Yes
N240	Research Space, Offices, Laboratory, & Storage Space	Occupied; to stay	Yes
N245	Research Space, Offices, Fabrication Space, Auditorium	Occupied; to stay	Yes
T20G	Offices & Laboratory	Occupied; to be demolished	Yes



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Table 3: Indoor Air Cleanup Level for Chemicals of Concern for the Vapor Intrusion Study Area, NASA Ames, California

Chemical of Concern	Indoor Air Cleanup Level ($\mu\text{g}/\text{m}^3$) ^a	
	Residential	Commercial
Trichloroethene	1	5
Perchloroethene	0.4	2
cis-1,2-Dichloroethene	60	210
trans-1,2-Dichloroethene	60	210
Vinyl Chloride	0.2	2
1,1-Dichloroethane	2	6
1,1-Dichloroethene	210	700

Notes:

a As presented in the Record of Decision Amendment of the Vapor Intrusion pathway (EPA 2010)
 $\mu\text{g}/\text{m}^3$ micrograms per cubic meter



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Table 4: Summary of Tiering Descriptions and Response Actions for Existing Commercial Buildings in the Vapor Intrusion Study Area

Tier	Description	Response Action	Selected Remedy
1	Building with indoor air concentrations greater than outdoor (background) air concentrations and indoor air cleanup levels.	Implement selected remedy (appropriate EC) to meet indoor air cleanup levels. Once indoor air cleanup levels is achieved and confirmed, building is recategorized as Tier 2. Implement governmental, proprietary and informational ICs.	<p>Active subslab/ submembrane ventilation, monitoring, and ICs (including conduit sealing).¹ ICs consist of:</p> <ul style="list-style-type: none"> • Permitting and building requirements to install appropriate engineering controls in future construction. • Recorded agreements to ensure installation and operation of engineering controls; require information of building changes be provided to EPA and MEW responsible parties. Tracking service to provide information to EPA and MEW responsible parties of occupancy and building changes.
2	Building with indoor air concentrations below the indoor air cleanup levels, while an EC is in place or in operation. Also, former Tier 1 buildings with confirmed indoor air concentrations that are below the indoor air cleanup levels.	Ensure continued operation and maintenance of active ventilation system or other selected engineered remedy to meet remedial action objectives. Develop and implement long-term monitoring and IC implementation plan. Implement governmental proprietary and informational ICs. Where remedy is achieved through operation of an active ventilation system, agreement of property owner must be contained in a recorded agreement.	
3A	Building sampled without EC in place or operating with indoor air concentrations below indoor air cleanup levels, but greater than outdoor (background) concentration.	No engineering remedy required. Develop and implement long-term monitoring plan. Implement governmental ICs.	<p>No engineering control. ICs only. ICs consist of:</p> <ul style="list-style-type: none"> • Permitting and building requirements to install appropriate ECs in future construction.
3B	Building samples without EC in place or operating with indoor air concentrations below indoor air cleanup levels, but greater than outdoor (background) concentrations.	No engineered remedy required. Develop and implement long-term monitoring plan. Implement government ICs.	



Tier	Description	Response Action	Selected Remedy
4	Buildings where converging lines of evidence demonstrate that there is no longer the potential for vapor intrusion into the building exceeding indoor air cleanup levels.	No action required after performance of all necessary confirmation sampling and documentation approved by EPA that is no action necessary.	No remedy required.

Notes:

1 Alternatively, active indoor air ventilation system, monitoring and ICs (including conduit sealing) may be selected as the vapor intrusion remedy for Tier 1 and 2 existing commercial building if the property/building owner agrees to use, operate, and monitor the indoor air ventilation system (e.g., HVAC system) in a manner consistent with the operation, maintenance, and monitoring plan developed for that building in a signed recorded agreement.

EC engineering control MEW Middlefield-Ellis-Whisman
 IC institutional control EPA United States Environmental Protection Agency



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Table 5: Number of Indoor Samples for Individual Buildings
2015 Air Sampling and VI Tier RER
NASA Ames, California

Building	Indoor Air Samples			Duplicate Samples	Total Number of Samples
	24-Hour	8-Hour	Grab		
N144	6	2		1	9
N211	4	4	1		9
N212	2	2		2	6
N213	8	8	4	2	22
N240	3	3	1		7
N245	1	1			2
T20G	2	1			3
Total	25	21	6	5	58



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**Table 6: Indoor Air Sampling Locations, 2015 Air Sampling and VI Tier RER
NASA Ames, California**

Sample Name	Sample Date	Sample Day	Location			HVAC On/off	Sample Duration			Sample Type	Building Info	Sampling Rationale
			Bldg	Floor	Room		8-hr	24-hr	Grab			
Building areas with no operating HVAC system												
Indoor Air Samples												
N144-141-01	11-Feb	Wednesday	N144	1	141	N/A		X		Work Area	Office in Warehouse	Enclosed office space in warehouse.
N144-142-01	11-Feb	Wednesday	N144	1	142	N/A		X		Work Area	Office in Warehouse	Enclosed office space in warehouse.
N144-151-01	11-Feb	Wednesday	N144	1	151	N/A		X		Work Area	Office in Warehouse	Enclosed office space in warehouse.
N144-171-01	11-Feb	Wednesday	N144	1	171	N/A		X		Work Area	Office in Warehouse	Enclosed office space in warehouse.
Duplicate Samples												
N144-141-01-D	11-Feb	Wednesday	N144	1	141	N/A		X		Work Area	Office in Warehouse	Enclosed office space in warehouse.
Number of Indoor Air Samples = 4Number of Duplicate Samples = 1												
Buildings with HVAC System – HVAC in Operation												
Indoor Air Samples												
N144-C103-01-ON	11-Feb	Wednesday	N144	1	C103	On		X		Work Area	Hallway Near Offices	Southern portion of N144.
N144-107-01-ON	11-Feb	Wednesday	N144	1	107	On		X		Work Area	Office in Warehouse	Southern portion of N144.
N211-103-01-ON	11-Feb	Wednesday	N211	1	103	On		X		Work Area	Office	Located south of the open hangar space.
N211-119-02-ON	11-Feb	Wednesday	N211	1	119	On		X		Work Area	Office	Located south of open hangar space,
N211-136-03-ON	11-Feb	Wednesday	N211	1	136	On		X		Pathway	Elevator Vault	Located west of the open hangar space.
N211-179-05-ON	11-Feb	Wednesday	N211	1	179	On		X		Work Area	Kitchen	Located between open hangar space and open shop space.
N212-101A-01-ON	11-Feb	Wednesday	N211	1	101A	On		X		Work Area	Office	Located east of open shop space.
N212-105-01-ON	11-Feb	Wednesday	N212	1	105	On		X		Work Area	Office	Located east of Room 101A and open shop space.
N213-B-01-ON	11-Feb	Wednesday	N213	Base- ment	025	On		X		Work Area	Office	Located in northwestern portion of N213.



Sample Name	Sample Date	Sample Day	Location			HVAC On/off	Sample Duration			Sample Type	Building Info	Sampling Rationale
			Bldg	Floor	Room		8-hr	24-hr	Grab			
N213-B-02-ON	11-Feb	Wednesday	N213	Base-ment	004	On		X		Work Area	Office	Located in southern portion of N213.
N213-B-03-ON	11-Feb	Wednesday	N213	Base-ment	C004	On		X		Work Area	Office	Located in eastern portion of N213.
N213-1-01-ON	11-Feb	Wednesday	N213	1	104F	On		X		Pathway	Elevator Vault	Located in northeastern portion of N213
N213-1-02-ON	11-Feb	Wednesday	N213	1	104	On		X		Work Area	Office	Located in western portion of N213.
N213-1-03-ON	11-Feb	Wednesday	N213	1	103	On		X		Work Area	Office	Located in southern portion of N213.
N213-1-04-ON	11-Feb	Wednesday	N213	1	C103	On		X		Work Area	Hallway Near Offices	Located in northeast portion of N213.
N213-1-05-ON	11-Feb	Wednesday	N213	1	C103	On		X		Work Area	Hallway Near Offices	Located in northeast portion of N213.
N240-1-01-ON	11-Feb	Wednesday	N240	1	C101	On		X		Work Area	Hallway Near Offices	Located in western portion of N240.
N240-1-02-ON	11-Feb	Wednesday	N240	1	113	On		X		Work Area	Clean Laboratory	Located in central portion of N240.
N240-1-03-ON	11-Feb	Wednesday	N240	1	144	On		X		Work Area	Office	Located in eastern portion of N240.
N245-1-01-ON	11-Feb	Wednesday	N245	1	147	On		X		Work Area	Office	Located in central portion of N245.
T20G-1-01-ON	11-Feb	Wednesday	T20G	1	C101	On		X		Work Area	Hallway Near Offices	Located in western portion of T20G
T20G-2-01-ON	11-Feb	Wednesday	T20G	1	C106	On		X		Work Area	Hallway Near Offices	Located in central portion of T20G
Duplicate Samples												
N212-105-01-OND	11-Feb	Wednesday	N212	1	105	On		X		Work Area	Office	Located east of Room 101A and open shop space.
N213-B-01-OND	11-Feb	Wednesday	N213	Base-ment	025	On		X		Work Area	Office	Located in northwestern portion of N213.
<div> <div>Number of Indoor Air Samples = 22</div> <div>Number of Duplicate Samples = 2</div> </div>												
Buildings with HVAC System – HVAC not in Operation												
Indoor Air Samples												
N144-C103-01-OFF	22-Feb	Sunday	N144	1	C103					Work Area	Hallway Near Offices	Southern portion of N144
N144-107-01-OFF	22-Feb	Sunday	N144	1	107	Off	X			Work Area	Near Offices	Southern portion of N144
N211-103-01-OFF	22-Feb	Sunday	N211	1	103	Off	X			Work Area	Office	Enclosed office space off open hangar.
N211-119-02-OFF	22-Feb	Sunday	N211	1	119	Off	X			Work Area	Office	South of the open hangar.



Sample Name	Sample Date	Sample Day	Location			HVAC On/off	Sample Duration			Sample Type	Building Info	Sampling Rationale
			Bldg	Floor	Room		8-hr	24-hr	Grab			
N211-1-04-P-OFF	22-Feb	Sunday	N211	1	C101	Off			X	Pathway	Elevator	Located west of the open hangar space.
N211-136-03-OFF	22-Feb	Sunday	N211	1	136	Off	X			Work Area	Kitchen	Located west of the open hangar space.
N211-179-05-OFF	22-Feb	Sunday	N211	1	179	Off	X			Work Area	Office	Located between open hangar space and open shop space.
N212-101A-01-OFF	22-Feb	Sunday	N212	1	101A	Off	X			Work Area	Office/Shop Space	Located east of open shop space.
N212-105-01-OFF	22-Feb	Sunday	N212	1	105	Off	X			Work Area	Office	Located east of Room 101A and open shop space.
N213-B-01-OFF	22-Feb	Sunday	N212	Base-ment	25	Off	X			Work Area	Office	Located in western portion of N213.
N213-B-02-OFF	22-Feb	Sunday	N212	Base-ment	4	Off	X			Work Area	Office	Located in southern portion of N213.
N213-B-03-OFF	22-Feb	Sunday	N212	Base-ment	C004	Off	X			Work Area	Near stairway and offices	Located in eastern portion of N213.
N213-B-04-P-OFF	22-Feb	Sunday	N212	Base-ment	C004	Off			X	Pathway	Near Stairway and Offices	Located in eastern portion of N213.
N213-B-05-P-OFF	22-Feb	Sunday	N212	Base-ment	V001	Off			X	Pathway	Elevator Vault	Located in western portion of N213.
N213-B-06-P-OFF	22-Feb	Sunday	N212	Base-ment	N002	Off			X	Pathway	Mechanical Room	Located in western portion of N213.
N213-B-07-P-OFF	22-Feb	Sunday	N212	Base-ment	N042	Off			X	Pathway	Mechanical Room	Located in eastern portion of N213.
N213-1-01-OFF	22-Feb	Sunday	N213	1	104F	Off	X			Work Area	Office	Located in northwestern portion of N213.
N213-1-02-OFF	22-Feb	Sunday	N213	1	104	Off	X			Work Area	Office	Located in western portion of N213.
N213-1-03-OFF	22-Feb	Sunday	N213	1	103	Off	X			Work Area	Office	Located in southern portion of N213.
N213-1-04-OFF	22-Feb	Sunday	N213	1	C103	Off	X			Work Area	Hallway Near Offices	Located in northeastern portion of N213.
N213-1-05-OFF	22-Feb	Sunday	N213	1	C103	Off	X			Work Area	Hallway Near Offices	Located in northeastern portion of N213.
N240-1-01-OFF	22-Feb	Sunday	N240	1	C101	Off	X			Work Area	Hallway Near Offices	Located in western portion of N240.
N240-1-02-OFF	22-Feb	Sunday	N240	1	113	Off	X			Work Area	Clean Laboratory	Located in central portion of N240.
N240-1-03-OFF	22-Feb	Sunday	N240	1	144	Off	X			Work Area	Offices	Located in eastern portion of N240.
N240-1-04-P-OFF	22-Feb	Sunday	N240	1	E102	Off			X	Pathway	Elevator Vault	Located in central portion of N240.
N245-1-01-OFF	22-Feb	Sunday	N245	1	147	Off	X			Work Area	Offices	Located in central portion of N245.
T20G-2-01-OFF	22-Feb	Sunday	T20G	1	C101	Off	X			Work Area	Hallway Near Offices	Located in central portion of T20G.



Sample Name	Sample Date	Sample Day	Location			HVAC On/off	Sample Duration			Sample Type	Building Info	Sampling Rationale
			Bldg	Floor	Room		8-hr	24-hr	Grab			
Duplicate Samples												
N212-105-01-OFFD	22-Feb	Sunday	N212	1	105	Off	X			Work Area	Office	Located east of Room 101A and open shop space.
N213-1-04-OFFD	22-Feb	Sunday	N213	1	C103	Off	X			Work Area	Hallway Near Offices	Located in northeastern portion of N213.
Number of Indoor Air Samples = 27Number of Duplicate Samples = 2												
Ambient Air Samples												
N258-1-01-ON	11-Feb	Wednesday	N/A	N/A	N/A	N/A		X		Back-ground	Outdoor	Located south of N258.
N258-1-01-OFF	22-Feb	Sunday	N/A	N/A	N/A	N/A	X			Back-ground	Outdoor	Located south of N258.
Number of Ambient Air Samples = 2Number of Duplicate Samples = 0												
Total Indoor Air Samples = 53Total Ambient Air Samples = 2Total Duplicate Samples = 5												



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**Table 7: Deviations in Sampling Locations from Sampling Plan, 2015 Air Sampling and VI Tier RER
NASA Ames, California**

Sample Name	Sample Date (2015)	Sample Day	Location			HVAC on/off	Sample Duration			Sample Type	Building Info	Sampling Rationale	Deviations from Sampling Plan
			Bldg	Floor	Room		8-hr	24-hr	Grab				
Eliminated Samples													
N144-171-01-OFF	22-Feb	Sunday	N144	1	171	N/A	X			Work Area	Office in Warehouse	Enclosed office space in warehouse.	Sample eliminated; no operating HVAC system in northern portion of N144.
N144-151-01-OFF	22-Feb	Sunday	N144	1	151	N/A	X			Work Area	Office in Warehouse	Enclosed office space in warehouse.	Sample eliminated; no operating HVAC system in northern portion of N144.
N144-142-01-OFF	22-Feb	Sunday	N144	1	142	N/A	X			Work Area	Office in Warehouse	Enclosed office space in warehouse.	Sample eliminated; no operating HVAC system in northern portion of N144.
N144-142W-01-OFF	22-Feb	Sunday	N144	1	140	N/A	X			Work Area	Near Offices	Open Warehouse near Rooms 141 & 142.	Sample eliminated; no operating HVAC system in northern portion of N144.
N-144-141-01-OFF	22-Feb	Sunday	N144	1	141	N/A	X			Work Area	Office in Warehouse	Enclosed office space in warehouse.	Sample eliminated; no operating HVAC system in northern portion of N144.
T20G-1-01-OFF	22-Feb	Sunday	T20G	1	C101	OFF	X			Work Area	Hallway Near Offices	Located in western portion of T20G	Sample not collected due to sample container pressure failure.
Relocated Samples													
N212-105-01-ON	11-Feb	Wednesday	N212	1	104	ON		X		Work Area	Office	Located in eastern portion of N212	Sample relocated from Room 104 to Room 105 due to access restriction.
N212-105-01-OFF	22-Feb	Sunday	N212	1	104	OFF	X			Work Area	Office	Located in eastern portion of N212	Sample relocated from Room 104 to Room 105 due to access restriction.
N240-1-02-ON	11-Feb	Wednesday	N240	1	115A	ON		X		Work Area	Office	Located in central portion of N240.	Sample relocated from Room 113 to Room 115 due to access restrictions.
N240-1-02-OFF	22-Feb	Sunday	N240	1	115A	OFF	X			Work Area	Office	Located in central portion of N240	Sample relocated from Room 113 to Room 115 due to access restrictions.



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**Table 8: 2012 & 2015 Indoor Air Sampling Results
NASA Ames, California**

Building	Sample Name	Sample Location		HVAC (on/off)	Sample Type	Sample Duration	Sample Date & Time	VOCs by TO-15 SIM						
		Floor	Room					VC	TCE	PCE	trans- 1,2-DCE	cis-1,2- DCE	1,1- DCE	1,1- DCA
2012 Sampling Results														
N144	N144-1-01-OFF	1	141	OFF	Work Areas	24-hr	2/19/2012	<0.0063	7.00	1.80	0.26	0.18	<0.014	<0.0052
	N144-1-01-ON	1	141	ON	Work Areas	24-hr	02/23/12	<0.0063	3.40	1.40	0.20	0.19	ND	<0.0052
N212	N212-1-01-OFF	1	101A	OFF	Work Areas	24-hr	02/19/12	<0.0063	0.03	3.00	<0.0059	0.011	ND	<0.0052
	N212-1-01-ON	1	101A	ON	Work Areas	24-hr	02/23/12	<0.0063	0.07	0.28	<0.0059	0.018	ND	<0.0052
N213 (Basement)	N213-B-01-OFF	Basement	022	OFF	Work Areas	24-hr	02/19/12	<0.0063	0.036	0.039	<0.0059	0.012	ND	<0.0052
	N213-B-08-OFF	Basement	022	OFF	Work Areas	24-hr	02/19/12	<0.0063	0.045	0.077	<0.0059	0.015	ND	<0.0052
	N213-B-01-ON	Basement	022	ON	Work Areas	24-hr	02/23/12	Sample failed lab leak test. No analysis completed. See Duplicate results below = -B-08-ON.						
	N213-B-08-ON	Basement	022	ON	Work Areas	24-hr	02/23/12	<0.0063	0.041	0.110	<0.0059	0.028	ND	<0.0052
	N213-B-02-OFF	Basement	003	OFF	Work Areas	24-hr	02/19/12	<0.0063	0.075	0.600	<0.0059	0.048	ND	0.011
	N213-B-02-ON	Basement	003	ON	Work Areas	24-hr	02/23/12	<0.0063	0.084	0.300	<0.0059	0.087	ND	0.0085
	N213-B-09-ON	Basement	003	ON	Work Areas	24-hr	02/23/12	<0.0063	0.080	0.300	0.0073	0.088	ND	0.0080
	N213-B-03-OFF	Basement	004	OFF	Work Areas	24-hr	02/19/12	<0.0063	0.086	0.074	<0.0059	0.120	ND	0.0061
	N213-B-03-ON	Basement	004	ON	Work Areas	24-hr	02/23/12	<0.0063	0.059	0.180	<0.0059	0.082	ND	<0.0052
	N213-B-04-P(ON)	Basement	V001	ON	Pathway	Grab	02/22/12	0.260	3.100	0.250	0.110	12.00	0.250	0.220
	N213-B-05-P(ON)	Basement	N002	ON	Pathway	Grab	02/22/12	0.018	0.320	0.057	<0.0059	0.91	0.019	<0.0052
	N213-B-06-P (ON)	Basement	N042	ON	Pathway	Grab	02/22/12	<0.0063	0.036	0.040	<0.0059	0.02	<0.014	<0.0052
	N213-B-07-P (ON)	Basement	V002	ON	Pathway	Grab	02/22/12	<0.0063	0.064	0.120	<0.0059	0.074	<0.014	<0.0052
N213	N213-1-01-OFF	1	104F	OFF	Work Areas	24-hr	02/19/12	<0.0063	0.040	0.051	<0.0059	<0.0069	<0.014	<0.0052
	N213-1-01-ON	1	104F	ON	Work Areas	24-hr	02/23/12	<0.0063	0.063	0.140	<0.0059	0.030	<0.014	<0.0052
	N213-1-02-OFF	1	104	OFF	Work Areas	24-hr	02/19/12	<0.0063	0.058	0.240	<0.0059	0.036	<0.014	<0.0052
	N213-1-02-ON	1	104	ON	Work Areas	24-hr	02/23/12	<0.0063	0.067	0.190	<0.0059	0.069	<0.014	<0.0052
	N213-1-03-OFF	1	103	OFF	Work Areas	24-hr	02/19/12	<0.0063	0.120	0.220	0.010	0.076	<0.014	0.0074
	N213-1-03-ON	1	103	ON	Work Areas	24-hr	02/23/12	<0.0063	0.077	0.110	<0.0059	0.047	<0.014	<0.0052



Building	Sample Name	Sample Location		HVAC (on/off)	Sample Type	Sample Duration	Sample Date & Time	VOCs by TO-15 SIM						
		Floor	Room					VC	TCE	PCE	trans- 1,2-DCE	cis-1,2- DCE	1,1- DCE	1,1- DCA
	N213-1-10-ON	1	103	ON	Work Areas	24-hr	02/23/12	<0.0063	0.076	0.190	<0.0059	0.048	<0.014	<0.0052
	N213-1-04-OFF	1	C103	OFF	Work Areas	24-hr	02/19/12	<0.0063	0.095	0.044	0.0096	0.11	<0.014	0.0065
	N213-1-04-ON	1	C103	ON	Work Areas	24-hr	02/23/12	<0.0063	0.050	0.240	<0.0059	0.049	<0.014	<0.0052
	N213-1-05-OFF	1	146	OFF	Work Areas	24-hr	02/19/12	<0.0063	0.059	0.033	<0.0059	0.057	<0.014	<0.0052
	N213-1-05-ON	1	146	ON	Work Areas	24-hr	02/23/12	<0.0063	0.054	0.190	0.024	0.054	<0.014	<0.0052
N240	N240-1-01-ON	1	144	OFF	Work Areas	24-hr	02/19/12	<0.0063	0.780	0.740	0.033	0.110	<0.014	<0.0052
	N240-1-02-ON	1	C101	ON	Work Areas	24-hr	02/23/12	<0.0063	0.750	0.590	<0.0059	0.080	<0.014	<0.0052
	N240-1-03-OFF	1	E102	ON	Pathway	Grab	02/22/12	<0.0063	0.290	0.036	<0.0059	0.021	<0.014	0.006
	N240-1-03-ON	1	113	ON	Work Areas	24-hr	02/23/12	<0.0063	0.090	0.330	<0.0059	0.013	<0.014	<0.0052
	N240-1-04-P (ON)	1	144	ON	Work Areas	24-hr	02/23/12	<0.0063	1.700	0.093	<0.0059	0.035	<0.014	<0.0052
N245	N245-1-01-OFF	1	147	OFF	Work Areas	24-hr	02/19/12	<0.0063	0.110	0.100	<0.0059	0.031	<0.014	<0.0052
	N245-1-01-ON	1	147	ON	Work Areas	24-hr	02/23/12	<0.0063	0.034	0.150	<0.0059	<0.0069	<0.014	<0.0052
T20G	T20G-1-01-OFF	1	C101	OFF	Work Areas	24-hr	02/19/12	<0.0063	0.034	0.031	0.017	0.0092	<0.014	<0.0052
	T20G-1-01-ON	1	C101	ON	Work Areas	24-hr	02/23/12	<0.0063	0.033	0.540	0.032	0.015	<0.014	<0.0052
	T20G-1-02-OFF	1	C106	OFF	Work Areas	24-hr	02/19/12	<0.0063	0.040	0.130	0.018	0.013	<0.014	<0.0052
	T20G-1-02-ON	1	C106	ON	Work Areas	24-hr	02/23/12	<0.0063	0.024	1.700	0.015	0.0075	<0.014	<0.0052
Background	N258-1-01-OFF	N/A	N/A	Background	Work Areas	24-hr	02/19/12	<0.0063	0.023	0.140	0.0097	<0.0069	<0.014	<0.0052
	N258-1-01-ON	N/A	N/A	Background	Work Areas	24-hr	02/23/12	<0.0063	0.050	1.300	<0.0059	0.033	<0.014	<0.0052
2015 Sampling Results														
N144	N144-C103-01-ON	1	C103	On	Pathway	8-hr	2/11/15 6:49 AM	<0.033	0.18	0.12	0.05	0.04	<0.033	<0.033
	N144-C103-01-OFF	1	C103	Off	Pathway	24-hr	2/22/15 4:37 PM	<0.034	0.23	0.066	<0.034	<0.034	0.039	<0.034
	N144-107-01-ON	1	107	On	Work Areas	8-hr	2/11/15 6:50 AM	<0.033	0.15	0.091	0.057	0.044	<0.033	<0.033
	N144-107-01-OFF	1	107	Off	Work Areas	24-hr	2/22/15 4:48 PM	<0.037	0.24	0.06	<0.037	<0.037	<0.037	<0.037
	N144-141-01	1	141	N/A	Work Areas	24-hr	2/11/15 7:44 AM	<0.034	2.7	0.33	0.18	0.14	<0.034	<0.034
	N144-141-01D	1	141	N/A	Work Areas	24-hr	2/11/15 7:44 AM	<0.034	2.9	0.33	0.17	0.14	<0.034	<0.034



Building	Sample Name	Sample Location		HVAC (on/off)	Sample Type	Sample Duration	Sample Date & Time	VOCs by TO-15 SIM						
		Floor	Room					VC	TCE	PCE	trans- 1,2-DCE	cis-1,2- DCE	1,1- DCE	1,1- DCA
	N144-142-01	1	142	N/A	Work Areas	24-hr	2/11/15 7:45 AM	<0.034	1.2	0.42	0.15	0.18	<0.034	<0.034
	N144-151-01	1	151	N/A	Work Areas	24-hr	2/11/15 7:40 AM	<0.035	0.47	0.18	0.092	0.12	<0.035	<0.035
	N144-171-01	1	171	N/A	Work Areas	24-hr	2/11/15 7:41 AM	<0.035	0.81	0.087	0.057	0.037	<0.035	<0.035
N211	N211-103-01-ON	1	103	On	Work Areas	8-hr	2/11/15 10:39 AM	<0.031	0.38	0.039	<0.031	0.19	<0.031	<0.031
	N211-103-01-OFF	1	103	Off	Work Areas	24-hr	2/22/15 3:18 PM	<0.037	0.069	0.085	0.054	<0.037	<0.037	<0.037
	N211-119-02-ON	1	119	On	Work Areas	8-hr	2/11/15 10:37 AM	<0.030	0.13	0.055	<0.030	0.04	<0.030	<0.030
	N211-119-02-OFF	1	119	Off	Work Areas	24-hr	2/22/15 3:23 PM	<0.037	0.062	0.065	0.048	<0.037	<0.037	<0.037
	N211-1-04-P-OFF	1	C101	Off	Pathway	24-hr	2/22/15 7:47 AM	<0.034	0.15	0.07	0.08	<0.034	<0.034	<0.034
	N211-136-03-ON	1	136	On	Work Areas	8-hr	2/11/15 10:34 AM	<0.031	0.18	0.076	0.055	0.079	<0.031	<0.031
	N211-136-03-OFF	1	136	Off	Work Areas	24-hr	2/22/15 3:10 PM	<0.038	0.044	0.048	0.046	<0.038	<0.038	<0.038
	N211-179-05-ON	1	179	On	Work Areas	8-hr	2/11/15 10:32 AM	<0.035	0.13	0.086	0.053	0.05	<0.035	<0.035
N212	N212-101A-01-ON	1	101A	On	Work Areas	8-hr	2/11/15 8:03 AM	<0.036	0.071	0.067	0.053	<0.036	<0.036	<0.036
	N212-101A-01-OFF	1	101A	Off	Work Areas	24-hr	2/22/15 4:24 PM	<0.039	<0.039	0.045	<0.039	<0.039	<0.039	<0.039
	N212-105-01-ON	1	105	On	Work Areas	8-hr	2/11/15 8:01 AM	<0.031	0.033	0.049	<0.031	<0.031	<0.031	<0.031
	N212-105-01-OND	1	105	On	Work Areas	8-hr	2/11/15 8:02 AM	<0.036	0.092	0.057	0.052	0.046	<0.036	<0.036
	N212-105-01-OFF	1	105	Off	Work Areas	24-hr	2/22/15 4:05 PM	<0.038	<0.038	0.053	0.041	<0.038	<0.038	<0.038
	N212-105-01-OFFD	1	105	Off	Work Areas	24-hr	2/22/15 4:00 PM	<0.034	<0.034	0.043	<0.034	<0.034	<0.034	<0.034
N213 (Basement)	N213-B-01-ON	Basement	025	On	Work Areas	8-hr	2/11/15 9:32 AM	<0.040	0.1	0.085	0.057	0.073	<0.040	<0.040
	N213-B-01-OND	Basement	025	On	Work Areas	8-hr	2/11/15 9:32 AM	<0.031	0.049	0.072	<0.031	0.06	<0.031	<0.031
	N213-B-01-OFF	Basement	025	Off	Work Areas	24-hr	2/22/15 5:07 PM	<0.037	<0.037	0.046	<0.037	<0.037	<0.037	<0.037
	N213-B-02-ON	Basement	004	On	Work Areas	8-hr	2/11/15 9:29 AM	<0.030	0.069	0.075	<0.030	0.12	<0.030	<0.030



Building	Sample Name	Sample Location		HVAC (on/off)	Sample Type	Sample Duration	Sample Date & Time	VOCs by TO-15 SIM						
		Floor	Room					VC	TCE	PCE	trans- 1,2-DCE	cis-1,2- DCE	1,1- DCE	1,1- DCA
	N213-B-02-OFF	Basement	004	Off	Work Areas	24-hr	2/22/15 5:33 PM	<0.037	0.16	0.059	<0.037	0.24	<0.037	0.046
	N213-B-03-ON	Basement	C004	On	Pathway	8-hr	2/11/15 9:23 AM	<0.037	0.1	0.078	0.057	0.076	<0.037	<0.037
	N213-B-03-OFF	Basement	C004	Off	Pathway	24-hr	2/22/15 5:25 PM	<0.037	0.068	0.042	<0.037	0.15	<0.037	<0.037
	N213-B-04-P-OFF	Basement	V001	Off	Pathway	24-hr	2/22/15 9:13 AM	0.25	4.4	0.13	0.16	20	0.33	0.33
	N213-B-05-P-OFF	Basement	N002	Off	Pathway	24-hr	2/22/15 9:18 AM	2.6	75	1.6	2.3	290	3.7	4.8
	N213-B-06-P-OFF	Basement	N042	Off	Pathway	24-hr	2/22/15 9:30 AM	0.05	1.4	2.0	<0.034	3.0	0.058	0.1
	N213-B-07-P-OFF	Basement	V002	Off	Pathway	24-hr	2/22/15 9:28 AM	<0.032	0.089	0.054	<0.032	0.095	<0.032	<0.032
N213	N213-1-01-ON	1	104F	On	Work Areas	8-hr	2/11/15 9:11 AM	<0.030	0.065	0.047	<0.030	0.045	<0.030	<0.030
	N213-1-01-OFF	1	104F	Off	Work Areas	24-hr	2/22/15 5:51 PM	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
	N213-1-02-ON	1	104	On	Work Areas	8-hr	2/11/15 9:09 AM	<0.031	0.085	0.069	0.049	0.074	<0.031	<0.031
	N213-1-02-OFF	1	104	Off	Work Areas	24-hr	2/22/15 5:39 PM	<0.034	<0.034	0.042	<0.034	<0.034	<0.034	<0.034
	N213-1-03-ON	1	103	On	Work Areas	8-hr	2/11/15 9:15 AM	<0.031	0.16	0.071	0.046	0.13	<0.031	<0.031
	N213-1-03-OFF	1	103	Off	Work Areas	24-hr	2/22/15 5:42 PM	<0.035	0.037	0.068	<0.035	0.073	<0.035	<0.035
	N213-1-04-ON	1	C103	On	Work Areas	8-hr	2/11/15 9:19 AM	<0.030	0.12	0.061	0.036	0.087	<0.030	<0.030
	N213-1-04-OFF	1	C103	Off	Pathway	24-hr	2/22/15 5:45 PM	<0.037	0.06	0.05	<0.037	0.13	<0.037	<0.037
	N213-1-04-OFFD	1	C103	Off	Pathway	24-hr	2/22/15 5:45 PM	<0.036	0.057	0.049	<0.036	0.13	<0.036	<0.036
	N213-1-05-ON	1	C103	On	Pathway	8-hr	2/11/15 9:18 AM	<0.032	0.1	0.086	0.052	0.093	<0.032	<0.032
	N213-1-05-OFF	1	C103	Off	Pathway	24-hr	2/22/15 5:47 PM	<0.037	0.067	0.038	<0.037	0.17	<0.037	<0.037
N240	N240-1-01-ON	1	C101	On	Pathway	8-hr	2/11/15 10:51 AM	<0.033	1.2	0.12	0.063	0.22	<0.033	<0.033
	N240-1-01-OFF	1	C101	Off	Pathway	24-hr	2/22/15 5:57 PM	<0.036	1.2	0.037	<0.036	<0.036	<0.036	<0.036
	N240-1-02-ON	1	113	On	Work Areas	8-hr	2/11/15 10:58 AM	<0.031	0.55	0.073	0.048	0.11	<0.031	<0.031
	N240-1-02-OFF	1	113	Off	Work Areas	24-hr	2/22/15 6:12 PM	<0.035	0.015	<0.035	<0.035	<0.035	<0.035	<0.035



Building	Sample Name	Sample Location		HVAC (on/off)	Sample Type	Sample Duration	Sample Date & Time	VOCs by TO-15 SIM						
		Floor	Room					VC	TCE	PCE	trans- 1,2-DCE	cis-1,2- DCE	1,1- DCE	1,1- DCA
	N240-1-03-ON	1	144	On	Work Areas	8-hr	2/11/15 10:54 AM	<0.034	0.21	0.064	0.045	0.041	<0.034	<0.034
	N240-1-03-OFF	1	144	Off	Work Areas	24-hr	2/22/15 6:15 PM	<0.036	0.35	0.044	<0.036	<0.036	<0.036	<0.036
	N240-1-04-P-OFF	1	E102	Off	Pathway	24-hr	2/22/15 10:19 AM	<0.037	1.7	0.085	<0.037	<0.037	<0.037	<0.037
N245	N245-1-01-ON	1	147	On	Work Areas	8-hr	2/11/15 6:58 AM	<0.035	0.13	0.07	0.058	<0.035	<0.035	<0.035
	N245-1-01-OFF	1	147	Off	Work Areas	24-hr	2/22/15 4:30 PM	<0.034	0.2	0.036	<0.034	0.036	<0.034	<0.034
T20G	T20G-1-01-ON	1	C101	On	Pathway	8-hr	2/11/15 6:56 AM	<0.030	0.052	0.052	<0.030	<0.030	<0.030	<0.030
	T20G-1-02-ON	1	C106	On	Pathway	8-hr	2/10/15 5:03 PM	<0.037	<0.037	0.054	<0.037	<0.037	<0.037	<0.037
	T20G-1-02-OFF	1	C106	Off	Pathway	24-hr	2/22/15 6:58 PM	<0.039	0.045	0.042	<0.039	<0.039	<0.039	<0.039
Background	N258-1-01-ON	N/A	N/A	N/A	Background	8-hr	2/11/15 7:54 AM	<0.029	<0.029	0.034	<0.029	<0.029	<0.029	<0.029
	N258-1-01-OFF	N/A	N/A	N/A	Background	24-hr	2/22/15 6:40 PM	<0.036	<0.036	<0.036	<0.036	<0.036	<0.036	<0.036

Notes:

Values exceeding the Indoor Commercial/Residential level are bolded and red.

a Pathway sample types are grab samples collected from building sumps and elevator vaults,

b Samples collected from the portion of N144 without an operational HVAC system were collected over 24 hours but have no HVAC indicator ("ON") in the sample name.

µg/m³ micrograms per cubic meter



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**Table 9: Ambient Air Concentration Ranges, 2015 Air Sampling and VI Tier RER
NASA Ames, California**

Chemical of Concern	Ambient Air Concentration Range ($\mu\text{g}/\text{m}^3$) ^a
Vinyl Chloride	<0.029 to <0.036
1,1-Dichloroethene	<0.029 to <0.036
trans-1,2-Dichloroethene	<0.036 to 0.034
1,1-Dichloroethane	<0.029 to <0.036
cis-1,2-Dichloroethene	<0.029 to <0.036
Trichloroethene	<0.029 to <0.036
Perchloroethene	<0.029 to <0.036

Notes:

a Established from the results of outdoor air samples collected as per the Final Work Plan.
 $\mu\text{g}/\text{m}^3$ micrograms per cubic meter



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**Table 10: Indoor Air Sampling Results Summary, 2015 Air Sampling and VI Tier RER
NASA Ames, California**

Building Number	Number & Type of Samples	COCs Detected	Concentration Range ($\mu\text{g}/\text{m}^3$)	Detected COCs (one or more samples) Exceeding Indoor Air Cleanup Levels?	Detected COCs (one or more samples) Exceeding Ambient Air Concentration Range? ^a
Building with no operating HVAC system					
N144	5 indoor	TCE PCE trans-1,2-DCE cis-1,2-DCE	0.47-2.9 0.087-0.42 0.057-0.18 0.037-0.18	No No No No	Yes No (within range) No (within range) No (within range)
Buildings with operating HVAC System					
N144	4 indoor (1 duplicate)	TCE PCE trans-1,2-DCE cis-1,2-DCE 1,1-DCE	0.15-0.24 0.06-0.12 0.05-0.057 0.04-0.044 0.039	No No No No No	No (within range) No (within range) No (within range) No (within range) No (within range)
N211	9 indoor (1 pathway)	TCE PCE trans-1,2-DCE cis-1,2-DCE	0.044-0.38 0.038-0.086 0.046-0.08 0.04-0.19	No No No No	No (within range) No (within range) No (within range) No (within range)
N212	6 indoor (2 duplicate)	TCE PCE trans-1,2-DCE cis-1,2-DCE	0.033-0.092 0.043-0.067 0.041-0.053 0.046	No No No No	No (within range) No (within range) No (within range) No (within range)
N213	22 indoor (2 duplicate and 4 pathway)	VC TCE PCE trans-1,2-DCE cis-1,2-DCE 1,1-DCE 1,1-DCA	0.05-2.6 0.037-75 0.038-2.0 0.036-2.3 0.045-290 0.058-3.7 0.046-4.8	Yes Yes Yes No Yes No No	Yes Yes Yes No (within range) Yes No (within range) Yes
N240	7 indoor (1 pathway)	TCE PCE trans-1,2-DCE cis-1,2-DCE	0.015-1.7 0.037-0.12 0.045-0.063 0.041-0.22	No No No No	Yes No (within range) No (within range) No (within range)
N245	2 indoor	TCE PCE trans-1,2-DCE cis-1,2-DCE	0.13-0.2 0.036-0.07 0.058 0.036	No No No No	No (within range) No (within range) No (within range) No (within range)
T20G	3 indoor	TCE PCE	0.045-0.052 0.042-0.054	No No	No (within range) No (within range)



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**Table 11: Tier Evaluation Summary and Potential Mitigation Measures, 2015 Air Sampling and VI Tier RER
NASA Ames, California**

Building Number	Building Use	Tier Classification	Results Summary	Required Action
N144	FEMA (warehouse & offices)	Tier 3A	In the 2012, TCE was measured above the long-term cleanup goal at a concentration of 7.0 µg/m ³ in Room 141 of Building N144. PCE was also detected above the ambient outdoor air concentration range during the 2012 sampling. During 2015, TCE was detected exceeding the ambient outdoor air concentrations but below the indoor air cleanup level in Room 141. N144 is classified as Tier 3A because the TCE concentration remains above the ambient air concentration range even though reduced below the long-term cleanup goal from 2012 to 2015	Based on these COC concentrations combined with consultations with EPA Region 9, long-term monitoring is proposed.
N211	Flight Support Facility (open hangars, offices & shop space)	Tier 3B	TCE, PCE, and trans-1,2-DCE were within range of the outdoor concentration ranges with the HVAC system on and off. All COCs were below the long-term cleanup levels.	None
N212	Model Development Bldg. (shop space & offices)	Tier 3A	In the 2012, PCE was detected above the long-term cleanup goal at a concentration of 3.0 µg/m ³ . All other COCs were within ambient air concentration ranges during the 2012 sampling event. During the 2015 sampling, the concentrations of COCs were detected below the long term cleanup levels and within background air concentration ranges in all samples. Building N212 is ranked as Tier 3A because PCE was detected above the long-term cleanup levels in 2012 but not in 2015.	Based on these COC concentrations combined with consultations with EPA Region 9, long-term monitoring is proposed.
N213	Research Support Bldg. (offices & laboratories)	Tier 3A	In 2012, there were no detections of the seven (7) COCs above current action levels. Only one of the 5-minute grab air samples collected from the sample location V001 elevator under-vault area revealed the presence of TCE above the ambient outdoor air concentration range. In 2015, vinyl chloride, TCE, PCE, and cis-1,2-DCE exceeded the ambient outdoor air concentration. TCE was detected above the long-term cleanup level. These samples were from non-work area samples and included 5-minute grab samples collected from utility room sumps in the basement of Building N213 with the HVAC system not operating. Because the samples containing	Based on these COC concentrations combined with consultations with EPA Region 9, long-term monitoring is proposed.

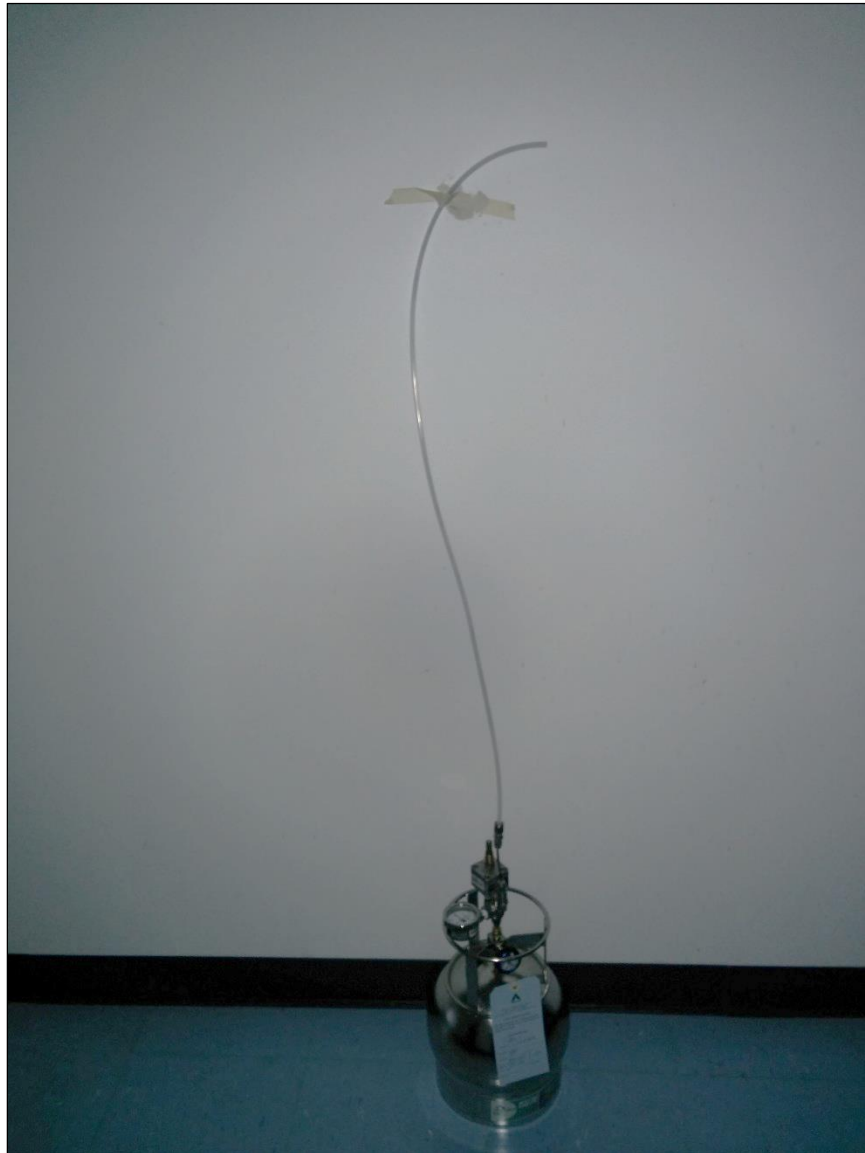


Building Number	Building Use	Tier Classification	Results Summary	Required Action
			concentrations of VOCs above the long-term cleanup levels were collected in non-work areas, Building N213 is classified as Tier 3A.	
N240	Airborne Missions & Applied Life Sciences Experiments (offices & laboratories)	Tier 3A	In 2012, all sample results were measured below the indoor air cleanup levels and within ambient air concentration ranges. In 2015, TCE was detected above the ambient air concentration range in samples collected from the C101 Hallway location and from the 5-minute grab sample collected from the elevator vault (with the HVAC system off). Building N240 is therefore classified as Tier 3A.	Based on these COC concentrations combined with consultations with EPA Region 9, long-term monitoring is proposed.
N245	Space Science Research Laboratory (offices & laboratories)	Tier 3B	In 2012 and 2015, the concentrations of COCs in Building 245 were detected below the long term cleanup levels and within background air concentration ranges. Building N245 is classified as Tier 3B.	None
T20G	Modular Office Units	Tier 3B	In 2012, PCE was detected in Building T20G at a concentration slightly above the ambient air concentration range. In 2015, all sample results were below the long term cleanup levels and within background air concentration ranges. Because PCE was not measured above the ambient outdoor air concentration range during 2015, Building T20G is classified as Tier 3B.	None

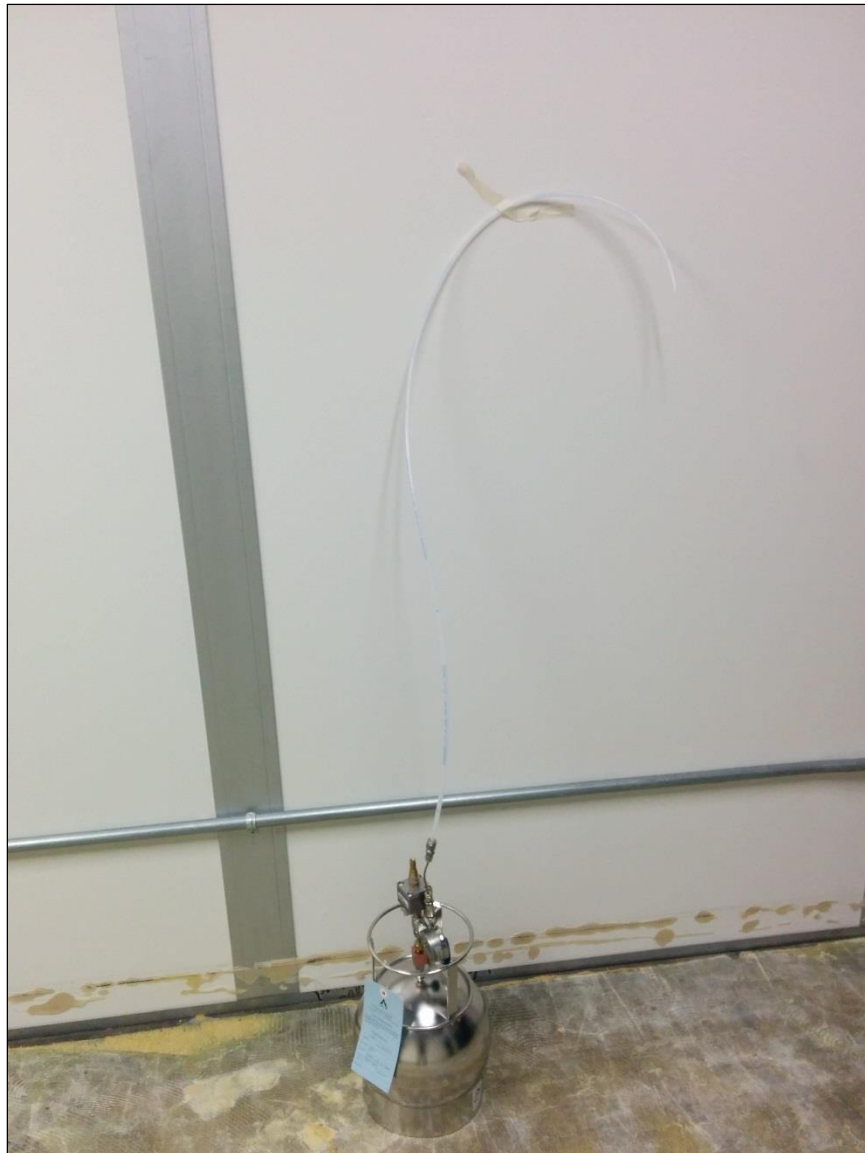


APPENDIX C

Photographs of Sampling Locations



Sample N144-C103-01-OFF
Building N144, C103 Hallway
February 22, 2015



Sample N144-107-01-OFF
Building N144, Room 107
February 22, 2015



Sample N211-103-01-OFF
Building N211, Room 103
February 22, 2015



**Sample N211-119-02-OFF
Building N211, Room 119
February 22, 2015**



Sample N211-179-05-OFF
Building N211, Room 179
February 22, 2015



Sample N212-101A-01-OFF
Building N212, Room 101A
February 22, 2015



**Samples N212-105-01-OFF & N212-105-01-OFFD
Building N212, Room 105
February 22, 2015**



Sample N213-B-01-OFF
Building N213, Room 025
February 22, 2015



Sample N213-B-05-P
Building N213, Room N002
February 22, 2015



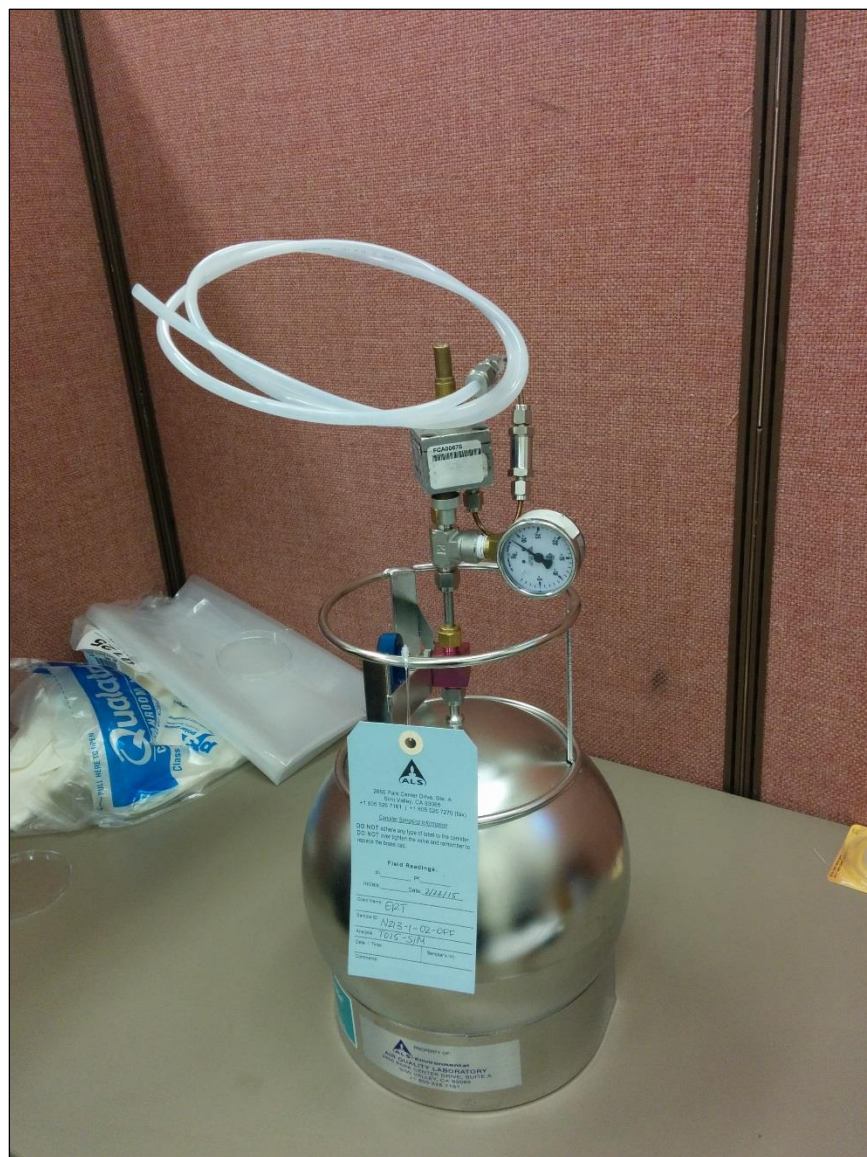
Sample N213-B-06-P
Building N213, Room N042
February 22, 2015



**Sample N213-B-03-OFF
Building N213, C004 Hallway
February 22, 2015**



Sample N213-1-01-OFF
Building N213, Room 104F
February 22, 2015



Sample N213-1-02-OFF
Building N213, Room 104
February 22, 2015



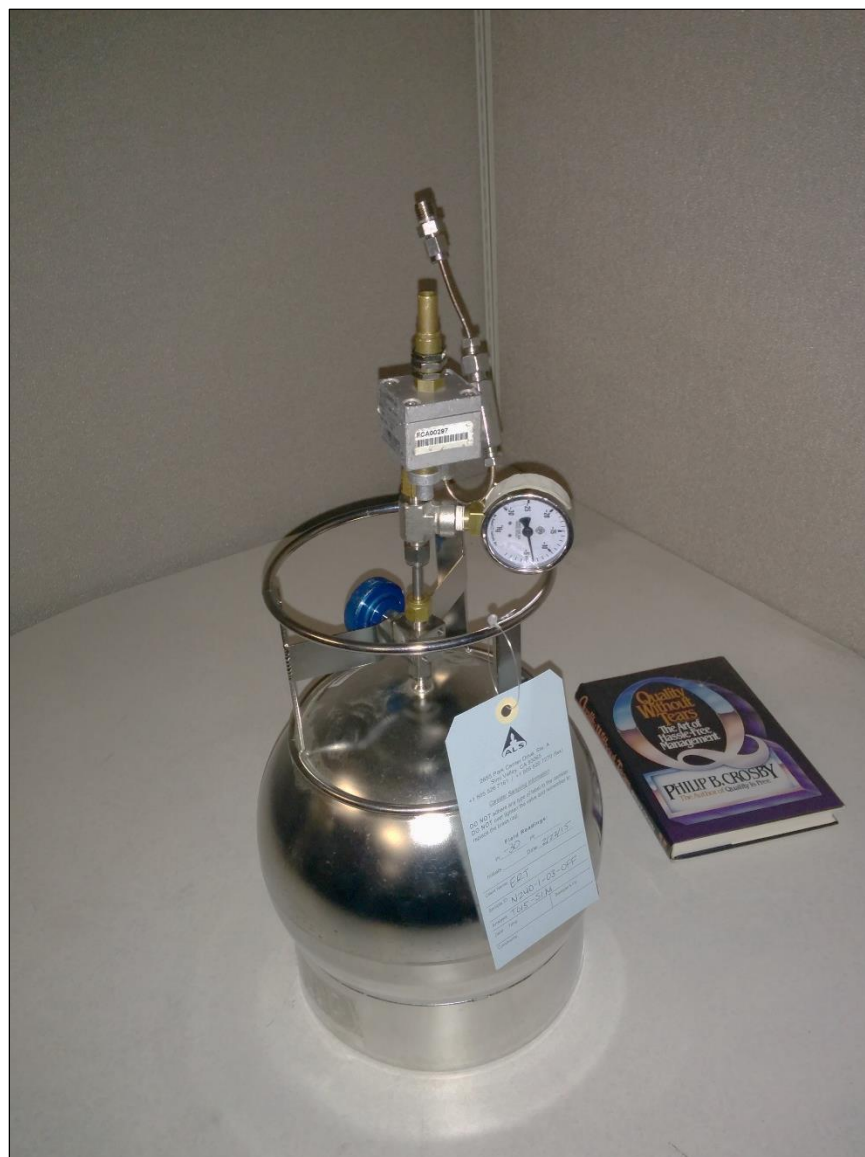
**Samples N213-1-04-OFF & N213-1-04-OFFD
Building N213, C103 Hallway
February 22, 2015**



**Sample N240-1-01-OFF
Building N240, C101 Hallway
February 22, 2015**



**Sample N240-1-02-OFF
Building N240, Room 113
February 22, 2015**



Sample N240-1-03-OFF
Building N240, Room 144
February 22, 2015



**Sample T20G-1-02-OFF
Building T20G, C106 Hallway
February 22, 2015**



Sample N258-1-01-OFF
South of Building N258
February 22, 2015



APPENDIX D

Building Surveys



Building N144

INDOOR AIR QUALITY BUILDING SURVEY

DATE: 2/28/2012

BUILDING: N144

Owner/Developer/Property Manager

Contact Name: Lili Pirbazari

Address: N204-15

NASA Ames Research Center, Moffett Field CA 94035

Phone: 650-604-1767

Email: lili.pirbazari-1@nasa.gov

Tenant

Contact Name: Jeff Anongos

Address: N144 Room 141

NASA Ames Research Center, Moffett Field CA 94035

Phone: 650-603-8496

Email: Jeffrey.Anongos@dhs.gov

INDOOR AIR QUALITY BUILDING SURVEY

Building Construction Characteristics:

General description of building construction materials: Reinforced Concrete

How many occupied stories does the building have? 1

What year was the building constructed? 1952

What type of basement does the building have? (Circle all that apply)

☒ None

☐ Full basement

☐ Other (specify): _____

How is the basement used? (Circle all that apply) NA

☐ Not used

☐ Office space

☐ Storage Utilities

☐ Other(specify): _____

What are the characteristics of the basement? (Circle all that apply) NA

Basement floor: ☐ Concrete

☐ Other (specify): _____

Foundation walls: ☐ Poured concrete

☐ Other (specify): _____

Moisture: ☐ Dry

☐ Wet

☐ Damp ☐ Other (specify): _____

What are the characteristics of the floor slab? (Circle all that apply)

☒ Concrete

☐ Carpeted

☐ Tiled

☐ Stone

☒ Cracks

☐ Seams

☐ Other (specify): _____

Are drains or sumps present? (Y/N) Y Describe each, including information on contents : the only drains located were in the bathrooms (R140 & R141).

Are elevator shafts present? (Y/N) N Describe each:

INDOOR AIR QUALITY BUILDING SURVEY

Are there locations where chemicals were or are used or stored? (☒Y/☐N) ____ Describe each: Janitors closet

Are plumbing pipes or utility conduits present that penetrate the floor slab? (Y/☒N) N Describe each:

Were foundation design specifications and as-built drawings for the facility obtained? (Y/N) _____ N

Was soil beneath the floor slab treated with lime or cement prior to placing the slab? (Y/N) _____ N

Was a vapor barrier installed under the floor slab? (Y/N) _____ N

Describe: _____

Were any other liners installed under the floor slab? (Y/N) _____ N

Describe: _____

Were fibers or additional rebar added to the concrete floor slab to minimize cracking? (☒Y/☐N) Most likely additional rebar

Describe: _____

Were other techniques used to restrict vapor migration through the floor slab? (Y/N) _____ N

Describe: _____

Heating, Ventilation and Air Conditioning Systems (HVAC):

Were HVAC as-built drawings for the facility obtained? (Y/N) N

Is the HVAC system a zone cooling/heating system? (Y/N) Y

If not, what type of HVAC system is used in this building? _____

How Many? _____ 1 _____

INDOOR AIR QUALITY BUILDING SURVEY

Describe, and delineate HVAC zones in the facility and corresponding rooftop HVAC air inlets:

Single Wall

Other (specify and describe): _____

Does the HVAC system have an exhaust capability? (Y/N) Y _____

What other type of mechanical ventilation systems are present and/or currently operating in the building?

Mechanical fans

Open windows

Restroom vent fans

Other (specify): _____

Who maintains and manages the HVAC system operation? Onsite Contractors / IAP

Describe the control sequencing and operation of the HVAC system with respect to hours of operation, the intake of outside air, minimums, maximums, relative percentage outside air, differences between day and evening operation on weekdays and weekends: The office wall heater is regulated by a standard thermostat which is adjusted by the office occupant as needed. The wall mounted ac unit operates as desired by the office occupant as well. Air intake is adjusted by IAP as needed (between 15% and 100% outside air).

What type(s) of fuel(s) for space heating and water heating are used in this building? (Circle all that apply)

Natural gas

Electric

Solar Other (specify): _____

Are any other fuels or chemicals used in this building? (Y/N) N

Describe:

INDOOR AIR QUALITY BUILDING SURVEY

Sources of Chemical Contaminants: Which of these items are present in the building? (Check all that apply)

Potential chemical source	Location of Source	MSDS obtained?
Lacquers, paints or paint thinners		
Gas-powered equipment		
Gasoline storage cans		
Cleaning solvents		
Lubricants		
Air fresheners		
Oven cleaners		
Carpet/upholstery cleaners		
Hairspray		
Nail polish/polish remover		
Bathroom cleaner	Janitors Closet	no
Appliance cleaner		
Furniture/floor polish		
Moth balls		
Fuel tank		
Wood stove		
Fireplace		
Perfume/colognes		
Photographic darkroom chemicals		
Glues		
Scented trees, wreaths, potpourri, etc.		
Other (specify):		
Other (specify): _____		

What are the hours during which a majority of the workers are in the building during a work day? Normal business hours (8:00am to 5:00pm)

INDOOR AIR QUALITY BUILDING SURVEY

fiberboard)? (Y/**N**)

Are there any new upholstery, drapes, or other textiles in the building? (Y/N)

Has the building been treated with any insecticides/pesticides? If so, what chemicals were used and how often were they applied? No

Outdoor sources of contamination:

Is there any stationary emission source in the vicinity of the building? N

Are there any mobile emission sources (e.g. highway, bus stop, high-traffic area) in the vicinity of the building? Propane gas powered forklift

Is there any other information about the structural features of this building, the habits of its occupants or potential sources of chemical contaminants to the indoor air that may be of importance in facilitating the evaluation of the indoor air quality of the building? No

Sketch any key features or proposed sampling locations:

This image shows a full page of blank graph paper. The grid consists of thin, light gray horizontal and vertical lines that intersect to form small squares across the entire surface. There are no margins, text, or other markings on the paper.



Building N211

INDOOR AIR QUALITY BUILDING SURVEY

DATE: 2/10/2015

BUILDING: N211

Owner/Developer/Property Manager

Contact Name: Lili Pirbazari

Address: N204-15

NASA Ames Research Center, Moffett Field CA 94035

Phone: 650-604-1767

Email: lili.pirbazari-1@nasa.gov

Tenant

Contact Name: Rob Kiehm

Address: N211 Room 179A

NASA Ames Research Center, Moffett Field CA 94035

Phone: 408/747-7944

Email: rkiehm@bluecityholdings.com

INDOOR AIR QUALITY BUILDING SURVEY

Building Construction Characteristics:

General description of building construction materials: Aircraft hangar with Reinforced Concrete floors, and concrete walls plus metal roof with covering.

How many occupied stories does the building have? Hangar + 3

What year was the building constructed? 1943

What type of basement does the building have? (Circle all that apply)

☒ None

☐ Full basement

☐ Other (specify): _____

What are the characteristics of the floor slab? (Circle all that apply)

☒ Concrete

☐ Carpeted

☐ Tiled

☐ Stone

☐ Cracks

☐ Seams

☐ Other (specify): _____

Are drains or sumps present? (Y/N) Y Describe each, including information on contents : the only drain located was on the floor of the men's shower (R101M).

Are elevator shafts present? (Y/N) Y Describe each: One located in the southwest section of the building.

Are there locations where chemicals were or are used or stored? NO Describe each:

Are plumbing pipes or utility conduits present that penetrate the floor slab? NO Describe each:

Were foundation design specifications and as-built drawings for the facility obtained? NO

Was soil beneath the floor slab treated with lime or cement prior to placing the slab? NO
Describe:

Was a vapor barrier installed under the floor slab? NO
Describe: _____

Were any other liners installed under the floor slab? (Y/N) NO _
Describe:

Were fibers or additional rebar added to the concrete floor slab to minimize cracking? Most likely
Describe: Most likely

INDOOR AIR QUALITY BUILDING SURVEY

Were other techniques used to restrict vapor migration through the floor slab? NO
Describe:

Heating, Ventilation and Air Conditioning Systems (HVAC):

Were HVAC as-built drawings for the facility obtained? NO

Is the HVAC system a zone cooling/heating system? YES (multiple zone cooling/heating)

If not, what type of HVAC system is used in this building? _____

How Many? _____ 5 _____

Describe, and delineate HVAC zones in the facility and corresponding rooftop HVAC air inlets:

Other (specify and describe): _____

Does the HVAC system have an exhaust capability? YES

What other type of mechanical ventilation systems are present and/or currently operating in the building?

☐ Mechanical fans

☐ Open windows

☐ Restroom vent fans

Other (specify): _____

Who maintains and manages the HVAC system operation? Onsite Contractors / IAP

Describe the control sequencing and operation of the HVAC system with respect to hours of operation, the intake of outside air, minimums, maximums, relative percentage outside air, differences between day and evening operation on weekdays and weekends: Thermostat Control: As needed

What type(s) of fuel(s) for space heating and water heating are used in this building? (Circle all that apply)

☐ Natural gas

Electric

Solar Other (specify): _____

Are any other fuels or chemicals used in this building? NO

INDOOR AIR QUALITY BUILDING SURVEY

Sources of Chemical Contaminants: Which of these items are present in the building? (Check all that apply)

Potential chemical source	Location of Source	MSDS obtained?
Lacquers, paints or paint thinners		
Gas-powered equipment		
Gasoline storage cans		
Cleaning solvents		
Lubricants		
Air fresheners	Bathroom	No
Oven cleaners		
Carpet/upholstery cleaners		
Hairspray		
Nail polish/polish remover		
Bathroom cleaner	Janitors Closet	No
Appliance cleaner		
Furniture/floor polish		
Moth balls		
Fuel tank		
Wood stove		
Fireplace		
Perfume/colognes		
Photographic darkroom chemicals		
Glues		
Scented trees, wreaths, potpourri, etc.		
Other (specify):		
Other (specify): _____		

What are the hours during which a majority of the workers are in the building during a work day? Normal business hours (8:00am to 5:00pm)

Do the occupants of the building frequently have their clothes dry-cleaned? NO

Was there any recent remodeling or painting done in the building? NO

When and where was the most recent carpeting applied in the building? Unknown

Were glues used to attach the carpeting to the floor slab? Unknown

Are there any pressed wood products in the building (e.g. hardwood plywood wall paneling, particleboard, fiberboard)? NO

Are there any new upholstery, drapes, or other textiles in the building? NO

INDOOR AIR QUALITY BUILDING SURVEY

Has the building been treated with any insecticides/pesticides? If so, what chemicals were used and how often were they applied? NO

Outdoor sources of contamination:

Is there any stationary emission source in the vicinity of the building? NO

Are there any mobile emission sources (e.g. highway, bus stop, high-traffic area) in the vicinity of the building? Air Field (Low level usage)



Building N212

Do the occupants of the building frequently have their clothes dry-cleaned? (Y/☒N)

Was there any recent remodeling or painting done in the building? (Y/☒N) _____

When and where was the most recent carpeting applied in the building? _____ unknown _____

Were glues used to attach the carpeting to the floor slab? (Y/N) Unknown

Are there any pressed wood products in the building (e.g. hardwood plywood wall paneling, particleboard,

INDOOR AIR QUALITY BUILDING SURVEY

DATE: 2/28/2012

BUILDING: N212

Owner/Developer/Property Manager

Contact Name: Lili Pirbazari

Address: N204-15

NASA Ames Research Center, Moffett Field CA 94035

Phone: 650-604-1767

Email: lili.pirbazari-1@nasa.gov

Tenant

Contact Name: Dave Andrews

Address: N212 Room 179A

NASA Ames Research Center, Moffett Field CA 94035

Phone: 650-604-1417

Email: david.s.andrews@nasa.gov

INDOOR AIR QUALITY BUILDING SURVEY

Building Construction Characteristics:

General description of building construction materials: Reinforced Concrete

How many occupied stories does the building have? 2

What year was the building constructed? 1950

What type of basement does the building have? (Circle all that apply)

☒ None

☐ Full basement

☐ Other (specify): _____

How is the basement used? (Circle all that apply)

☐ Not used

☐ Office space

☐ Storage Utilities

☐ Other(specify): _____

What are the characteristics of the basement? (Circle all that apply)

Basement floor: ☐ Concrete

☐ Other (specify): _____

Foundation walls: ☐ Poured concrete

☐ Other (specify): _____

Moisture: ☐ Dry

☐ Wet

☐ Damp ☐ Other (specify): _____

What are the characteristics of the floor slab? (Circle all that apply)

☒ Concrete

☐ Carpeted

☐ Tiled

☐ Stone

☐ Cracks

☐ Seams

☐ Other (specify): _____

Are drains or sumps present? (Y/N) Y Describe each, including information on contents : the only drain located was on the floor of the mens shower (R101M)

Are elevator shafts present? (Y/N) N Describe each:

INDOOR AIR QUALITY BUILDING SURVEY

Are there locations where chemicals were or are used or stored? (☒Y/☐N) ____ Describe each: There are two chemical storage lockers, one yellow and one red.

Are plumbing pipes or utility conduits present that penetrate the floor slab? (☒Y/☐N) Y Describe each: There is a concrete trench in the floor which houses copper piping used to provide heat to the floors via steam.

Were foundation design specifications and as-built drawings for the facility obtained? (Y/N) _____ N

Was soil beneath the floor slab treated with lime or cement prior to placing the slab? (Y/N) _____ N

Describe:

Was a vapor barrier installed under the floor slab? (Y/N) _____ N

Describe: _____

Were any other liners installed under the floor slab? (Y/N) _____ N

Describe:

Were fibers or additional rebar added to the concrete floor slab to minimize cracking? (☒Y/☐N) Most likely

Describe: _____

Were other techniques used to restrict vapor migration through the floor slab? (Y/N) _____ N

Describe:

Heating, Ventilation and Air Conditioning Systems (HVAC):

Were HVAC as-built drawings for the facility obtained? (Y/☒N) _____

Is the HVAC system a zone cooling/heating system? (☒Y/☐N) _____

If not, what type of HVAC system is used in this building? _____

How Many?_____5_____

INDOOR AIR QUALITY BUILDING SURVEY

Describe, and delineate HVAC zones in the facility and corresponding rooftop HVAC air inlets:
4 units over workshop and 1 unit on second floor mezzanine which supplies air to office (101A) and small shop below. The 4 units on over the workshop on the roof are seldom run due to large open shop area.

Other (specify and describe): _____

Does the HVAC system have an exhaust capability? (Y/N) _____

What other type of mechanical ventilation systems are present and/or currently operating in the building?

☒ Mechanical fans

☒ Open windows

☒ Restroom vent fans

Other (specify): _____

Who maintains and manages the HVAC system operation? Onsite Contractors / IAP

Describe the control sequencing and operation of the HVAC system with respect to hours of operation, the intake of outside air, minimums, maximums, relative percentage outside air, differences between day and evening operation on weekdays and weekends: Thermostat Control – as needed _____

What type(s) of fuel(s) for space heating and water heating are used in this building? (Circle all that apply)

☒ Natural gas

☐ Electric

☐ Solar Other (specify): _____

Are any other fuels or chemicals used in this building? (Y/☒N) N

Describe:

INDOOR AIR QUALITY BUILDING SURVEY

Sources of Chemical Contaminants: Which of these items are present in

the building? (Check all that apply)

Potential chemical source	Location of Source	MSDS obtained?
Lacquers, paints or paint thinners	105A	
Gas-powered equipment		
Gasoline storage cans	Outside chem. Storage locker	
Cleaning solvents	105A	
Lubricants	Outside chem. Storage locker	
Air fresheners	Bathroom	
Oven cleaners		
Carpet/upholstery cleaners		
Hairspray		
Nail polish/polish remover		
Bathroom cleaner	Janitors Closet	
Appliance cleaner	105A	
Furniture/floor polish		
Moth balls		
Fuel tank		
Wood stove		
Fireplace		
Perfume/colognes		
Photographic darkroom chemicals		
Glues		
Scented trees, wreaths, potpourri, etc.		
Other (specify):		
Other (specify):		

What are the hours during which a majority of Page 5 of 6 the workers are in the building during a work

day? Normal business hours (8:00am to 5:00pm)

Do the occupants of the building frequently have their clothes dry-cleaned? (Y/☒N)

Was there any recent remodeling or painting done in the building? (Y/☒N) _____

When and where was the most recent carpeting applied in the building? _____ unknown _____

Were glues used to attach the carpeting to the floor slab? (Y/N) Unknown

Are there any pressed wood products in the building (e.g. hardwood plywood wall paneling, particleboard,

INDOOR AIR QUALITY BUILDING SURVEY

fiberboard)? (Y/**N**)

Are there any new upholstery, drapes, or other textiles in the building? (Y/N)

Has the building been treated with any insecticides/pesticides? If so, what chemicals were used and how often were they applied? No

Outdoor sources of contamination:

Is there any stationary emission source in the vicinity of the building? N

Are there any mobile emission sources (e.g. highway, bus stop, high-traffic area) in the vicinity of the building? Air Field (Not Active / Low level usage)

Is there any other information about the structural features of this building, the habits of its occupants or potential sources of chemical contaminants to the indoor air that may be of importance in facilitating the evaluation of the indoor air quality of the building? No

Sketch any key features or proposed sampling locations:

This image shows a full page of blank graph paper. The grid consists of thin, light gray horizontal and vertical lines that intersect to form a series of small squares across the entire page. There are no margins, text, or other markings present.



Building N213

INDOOR AIR QUALITY BUILDING SURVEY

DATE: 6/1/12

BUILDING: N213

Owner/Developer/Property Manager

Contact Name: Lili Pirbazari

Address: N204-15

NASA Ames Research Center, Moffett Field CA 94035

Phone: 650-604-1767

Email: lili.pirbazari-1@nasa.gov

Tenant

Contact Name: John Segreto

Address: N213 Room 134

NASA Ames Research Center, Moffett Field CA 94035

Phone: 650-604-4112

Email: john.a.segreto@nasa.gov

INDOOR AIR QUALITY BUILDING SURVEY

Building Construction Characteristics:

General description of building construction materials: Reinforced Concrete

How many occupied stories does the building have? 3

What year was the building constructed? 1950

What type of basement does the building have? (Circle all that apply)

None

☒ Full basement

Other (specify): _____

How is the basement used? (Circle all that apply) NA

Not used

☒ Office space

☒ Storage Utilities

☒ Other(specify): Lab

What are the characteristics of the basement? (Circle all that apply) NA

Basement floor: ☒ Concrete

Other (specify): _____

Foundation walls: ☒ Poured concrete

Other (specify): _____

Moisture: ☐ Dry ☐ Wet ☐ Damp Other (specify): _____

What are the characteristics of the floor slab? (Circle all that apply)

☒ Concrete

☐ Carpeted

☐ Tiled

☐ Stone

☐ Cracks

☐ Seams

Other (specify): _____

Are drains or sumps present? (Y/N) Y Describe each, including information on contents : sumps are present in N002 (sample N213-B-05-P) and N042 (sample N213-B-06-P) and drains leading to the sanitary sewer are present in the bathrooms

Are elevator shafts present? (Y/N) Y Describe each: standard elevator shaft, concrete

INDOOR AIR QUALITY BUILDING SURVEY

Are there locations where chemicals were or are used or stored? (☒Y/☐N) ____ Describe each: See chemical inventory statements

Are plumbing pipes or utility conduits present that penetrate the floor slab? (Y/☒N) N Describe each:

Were foundation design specifications and as-built drawings for the facility obtained? (Y/N) _____ N

Was soil beneath the floor slab treated with lime or cement prior to placing the slab? (Y/N) _____ N

Describe: _____

Was a vapor barrier installed under the floor slab? (Y/N) _____ N

Describe: _____

Were any other liners installed under the floor slab? (Y/N) _____ N

Describe:

Were fibers or additional rebar added to the concrete floor slab to minimize cracking? (☒Y/☐N) Most likely additional rebar

Describe: _____

Were other techniques used to restrict vapor migration through the floor slab? (Y/N) _____ N

Describe:

Heating, Ventilation and Air Conditioning Systems (HVAC):

Were HVAC as-built drawings for the facility obtained? (Y/N) Available in document control

Is the HVAC system a zone cooling/heating system? (Y/N) Y

If not, what type of HVAC system is used in this building? _____

How Many? _____ 3 central, 2 area (Large)

50 Area Central Handlers – (move internal air)

INDOOR AIR QUALITY BUILDING SURVEY

Describe, and delineate HVAC zones in the facility and corresponding rooftop HVAC air inlets:

2 – area, 3 - controls

Other (specify and describe): _____

Does the HVAC system have an exhaust capability? (☒Y/☐N) _____ Y _____

What other type of mechanical ventilation systems are present and/or currently operating in the building?

☒Mechanical fans

☒Open windows

☒Restroom vent fans

Other (specify): _____

Who maintains and manages the HVAC system operation? IAP

Describe the control sequencing and operation of the HVAC system with respect to hours of operation, the intake of outside air, minimums, maximums, relative percentage outside air, differences between day and evening operation on weekdays and weekends:

24/7 – 4AM – 9PM

Minimum 15% - Maximum 100%

What type(s) of fuel(s) for space heating and water heating are used in this building? (Circle all that apply)

☒Natural gas

☒Electric

Solar Other (specify): _____

Are any other fuels or chemicals used in this building? (Y/☒N) N

Describe:

INDOOR AIR QUALITY BUILDING SURVEY

Sources of Chemical Contaminants: Which of these items are present in the building? (Check all that apply) see chemical inventory statements

Potential chemical source	Location of Source	MSDS obtained?
Lacquers, paints or paint thinners		
Gas-powered equipment		
Gasoline storage cans		
Cleaning solvents		
Lubricants		
Air fresheners		
Oven cleaners		
Carpet/upholstery cleaners		
Hairspray		
Nail polish/polish remover		
Bathroom cleaner	Janitors Closet	
Appliance cleaner		
Furniture/floor polish		
Moth balls		
Fuel tank		
Wood stove		
Fireplace		
Perfume/colognes		
Photographic darkroom chemicals		
Glues		
Scented trees, wreaths, potpourri, etc.		
Other (specify): _____		
Other (specify): _____		

What are the hours during which a majority of the workers are in the building during a work day? Normal business hours (8:00am to 5:00pm)

Do the occupants of the building frequently have their clothes dry-cleaned? (Y/☒N)

Was there any recent remodeling or painting done in the building? (Y/☒N) _____

When and where was the most recent carpeting applied in the building? unknown _____

Were glues used to attach the carpeting to the floor slab? (Y/N) Unknown

Are there any pressed wood products in the building (e.g. hardwood plywood wall paneling, particleboard, fiberboard)? (Y/☒N)

INDOOR AIR QUALITY BUILDING SURVEY

Are there any new upholstery, drapes, or other textiles in the building? (Y/N)

Has the building been treated with any insecticides/pesticides? If so, what chemicals were used and how often were they applied? _____ No _____

Outdoor sources of contamination:

Is there any stationary emission source in the vicinity of the building? N

Are there any mobile emission sources (e.g. highway, bus stop, high-traffic area) in the vicinity of the building? _____

Is there any other information about the structural features of this building, the habits of its occupants or potential sources of chemical contaminants to the indoor air that may be of importance in facilitating the evaluation of the indoor air quality of the building? No

Sketch any key features or proposed sampling locations:

[illegible]



Building N240

INDOOR AIR QUALITY BUILDING SURVEY

DATE: 2/28/2012

BUILDING: N240

Owner/Developer/Property Manager

Contact Name: Lili Pirbazari

Address: N204-15

NASA Ames Research Center, Moffett Field CA 94035

Phone: 650-604-1767

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Tenant

Contact Name: Rudy Cotillon

Address: N240A Room 144

NASA Ames Research Center, Moffett Field CA 94035

Phone: 650-604-5120

Email: rudy.p.cotillon@nasa.gov

INDOOR AIR QUALITY BUILDING SURVEY

Building Construction Characteristics:

General description of building construction materials: Concrete

How many occupied stories does the building have? 3

What year was the building constructed? 1965

What type of basement does the building have? (Circle all that apply)

None

☒ Full basement

Other (specify): _____

How is the basement used? (Circle all that apply)

Not used

☒ Office space

Storage Utilities

Other(specify): Lab

What are the characteristics of the basement? (Circle all that apply)

Basement floor: ☒ Concrete

Other (specify): _____

Foundation walls: ☒ Poured concrete

Other (specify): _____

Moisture:

☒ Dry

Wet Damp Other (specify): _____

What are the characteristics of the floor slab? (Circle all that apply)

Concrete

☒ Carpeted

☒ Tiled

Stone

Cracks

☒ Seams

Other (specify): _____

Are drains or sumps present? (Y/N) Y Describe each, including information on contents :

No sumps, but there are floor drains in the bathroom.

Are elevator shafts present? (Y/N) Y Describe each:

Standard elevator

INDOOR AIR QUALITY BUILDING SURVEY

Are there locations where chemicals were or are used or stored? (☒Y/☐N) Y Describe each: There are three labs in the building (Rooms: 133B, 133C, 136B and 213) with liquids and gases present, All chemicals when not in use are properly closed.

Are plumbing pipes or utility conduits present that penetrate the floor slab? (Y/☒N) N Describe each:

Were foundation design specifications and as-built drawings for the facility obtained? (Y/N) N

Was soil beneath the floor slab treated with lime or cement prior to placing the slab? (Y/N) N

Describe:

Was a vapor barrier installed under the floor slab? (Y/N) N

Describe: _____

Were any other liners installed under the floor slab? (Y/N) N

Describe:

Were fibers or additional rebar added to the concrete floor slab to minimize cracking? (Y/☒N) No

Were other techniques used to restrict vapor migration through the floor slab? (Y/☒N) N

Describe: _____

Heating, Ventilation and Air Conditioning Systems (HVAC):

Were HVAC as-built drawings for the facility obtained? (☒Y/☐N) _____

Is the HVAC system a zone cooling/heating system? (☒Y/☐N) _____

If not, what type of HVAC system is used in this building? _____

How Many? 8

INDOOR AIR QUALITY BUILDING SURVEY

Describe, and delineate HVAC zones in the facility and corresponding rooftop HVAC air inlets:

There are 6 zones. Zones 1 through 5 occupy all rooms in the building except for the east wing and run 24hrs/7days a week. The east wing is the 6th zone and operates between 3am and 8pm. Air inlet locations were not provided.

Other (specify and describe): _____

Does the HVAC system have an exhaust capability? (☒Y/☐N) _____

What other type of mechanical ventilation systems are present and/or currently operating in the building?

☒Mechanical fans

Open windows

☒Restroom vent fans

Other (specify): _____

Who maintains and manages the HVAC system operation? IAP

Describe the control sequencing and operation of the HVAC system with respect to hours of operation, the intake of outside air, minimums, maximums, relative percentage outside air, differences between day and evening operation on weekdays and weekends: all zones operate 24/7 except for the eastern zone SF 1 which operates 3am to 8pm

What type(s) of fuel(s) for space heating and water heating are used in this building? (Circle all that apply)

☒Natural gas

Electric

Solar Other (specify): _____

Are any other fuels or chemicals used in this building? (Y/☒N) N

INDOOR AIR QUALITY BUILDING SURVEY

Sources of Chemical Contaminants:

Which of these items are present in the building? (Check all that apply)

Potential chemical source	Location of Source	MSDS obtained?
Lacquers, paints or paint thinners	133B	
Gas-powered equipment		
Gasoline storage cans	Outside	
Cleaning solvents	133B	Yes
Lubricants	133B	
Air fresheners	Bathroom	
Oven cleaners		
Carpet/upholstery cleaners		
Hairspray		
Nail polish/polish remover		
Bathroom cleaner	Janitors Closet, 133C, 213A	
Appliance cleaner	133C	
Furniture/floor polish		
Moth balls		
Fuel tank		
Wood stove		
Fireplace		
Perfume/colognes		
Photographic darkroom chemicals		
Glues	133B, 133C, 213	Yes
Scented trees, wreaths, potpourri, etc.		
Other (specify): Helium	133C	
Other (specify): _____		

What are the hours during which a majority of the workers are in the building during a work day? Normal business hours (7:00am to 5:00pm)

Do the occupants of the building frequently have their clothes dry-cleaned? (Y/☒N)

Was there any recent remodeling or painting done in the building? (Y/N) _____

When and where was the most recent carpeting applied in the building? unknown _____

Were glues used to attach the carpeting to the floor slab? (Y/N) unknown _____

Are there any pressed wood products in the building (e.g. hardwood plywood wall paneling, particleboard,

INDOOR AIR QUALITY BUILDING SURVEY

fiberboard)? (Y/**N**)

Are there any new upholstery, drapes, or other textiles in the building? (Y/N)

Has the building been treated with any insecticides/pesticides? If so, what chemicals were used and how often were they applied? No

Outdoor sources of contamination:

Is there any stationary emission source in the vicinity of the building? No

Are there any mobile emission sources (e.g. highway, bus stop, high-traffic area) in the vicinity of the building? No

Is there any other information about the structural features of this building, the habits of its occupants or potential sources of chemical contaminants to the indoor air that may be of importance in facilitating the evaluation of the indoor air quality of the building? No

Sketch any key features or proposed sampling locations:

A full-page view of a blank sheet of graph paper. The grid consists of small squares formed by thin black lines. There are 20 columns and 20 rows of squares, creating a uniform grid across the entire page.



Building N245

INDOOR AIR QUALITY BUILDING SURVEY

DATE: 6/1/12

BUILDING: N245

Owner/Developer/Property Manager

Contact Name: Lili Pirbazari

Address: N204-15

NASA Ames Research Center, Moffett Field CA 94035

Phone: 650-604-1767

Email: lili.pirbazari-1@nasa.gov

Tenant

Contact Name: Julie Nottage

Address: N245A Room 012

NASA Ames Research Center, Moffett Field CA 94035

Phone: 650-604-3711

Email: Julie.m.nottage@nasa.gov

INDOOR AIR QUALITY BUILDING SURVEY

Building Construction Characteristics:

General description of building construction materials: Reinforced Concrete

How many occupied stories does the building have? 3 including basement

What year was the building constructed? 1950's

What type of basement does the building have? (Circle all that apply)

None

☒ Full basement

Other (specify): _____

How is the basement used? (Circle all that apply)

Not used

☒ Office space

Storage Utilities

Other(specify): Lab

What are the characteristics of the basement? (Circle all that apply)

Basement floor:

☒ Concrete

Other (specify): _____

Foundation walls:

☒ Poured concrete

Other (specify): _____

Moisture:

☒ Dry

Wet Damp Other (specify): _____

What are the characteristics of the floor slab? (Circle all that apply)

Concrete

☒ Carpeted

☒ Tiled

Stone

Cracks

Seams

Other (specify): _____

Are drains or sumps present? (Y/N) Y Describe each, including information on contents :
Sanitary sewer floor drains in bathrooms

Are elevator shafts present? (Y/N) Y Describe each:

One elevator shaft

INDOOR AIR QUALITY BUILDING SURVEY

Are there locations where chemicals were or are used or stored? (☒Y/☐N) ____ Describe each: see chemical inventory statement

Are plumbing pipes or utility conduits present that penetrate the floor slab? (Y/☒N) N Describe each:

Were foundation design specifications and as-built drawings for the facility obtained? (Y/N) _____ N _____

Was soil ~~beneath the floor slab treated with lime or cement prior to placing the slab?~~ (Y/N) _____ N _____

Describe:

Was a vapor barrier installed under the floor slab? (Y/N) _____ N _____

Describe: _____

Were any ~~other liners installed under the floor slab?~~ (Y/N) _____ N _____

Describe:

Were fibers or additional rebar added to the concrete floor slab to minimize cracking? (Y/N) _____ NA _____

Describe: _____

Were other techniques used to restrict vapor migration through the floor slab? (Y/N) _____ N _____

Describe:

Heating, Ventilation and Air Conditioning Systems (HVAC):

Were HVAC as-built drawings for the facility obtained? (Y/N) Y _____

Is the HVAC system a zone cooling/heating system? (Y/N) Y _____

If not, what type of HVAC system is used in this building? _____

How Many? 5

INDOOR AIR QUALITY BUILDING SURVEY

Describe, and delineate HVAC zones in the facility and corresponding rooftop HVAC air inlets:

There are two (2) zones. An east and west wing separated by the lobby on the first floor.

Other (specify and describe): _____

Does the HVAC system have an exhaust capability? (Y/N) Y _____

What other type of mechanical ventilation systems are present and/or currently operating in the building?

Mechanical fans

Open windows

Restroom vent fans

Other (specify): _____

Who maintains and manages the HVAC system operation? Onsite Contractors IAP

Describe the control sequencing and operation of the HVAC system with respect to hours of operation, the intake of outside air, minimums, maximums, relative percentage outside air, differences between day and evening operation on weekdays and weekends:

The west wing air units (AH-1) operate 24hrs. The east wing air units (AH-2) operates from 4am to 8pm daily. The percentage of outside air intake varies between 15% – 100% depending on demand and weather.

What type(s) of fuel(s) for space heating and water heating are used in this building? (Circle all that apply)

Natural gas

Electric

Solar Other (specify): _____

Are any other fuels or chemicals used in this building? (Y/N) N

Describe: _____

INDOOR AIR QUALITY BUILDING SURVEY

Sources of Chemical Contaminants:

Which of these items are present in the building? (Check all that apply) see chemical inventory statement.

Potential chemical source	Location of Source	MSDS obtained?
Lacquers, paints or paint thinners		
Gas-powered equipment		
Gasoline storage cans		
Cleaning solvents		
Lubricants		
Air fresheners	Bathroom	
Oven cleaners		
Carpet/upholstery cleaners		
Hairspray		
Nail polish/polish remover		
Bathroom cleaner	Janitors Closet	
Appliance cleaner		
Furniture/floor polish		
Moth balls		
Fuel tank		
Wood stove		
Fireplace		
Perfume/colognes		
Photographic darkroom chemicals		
Glues		
Scented trees, wreaths, potpourri, etc.		
Other (specify):		
Other (specify): _____		

What are the hours during which a majority of the workers are in the building during a work day? Normal business hours (8:00am to 5:00pm)

Do the occupants of the building frequently have their clothes dry-cleaned? (Y/☒N)

Was there any recent remodeling or painting done in the building? (Y/☒N)

When and where was the most recent carpeting applied in the building? unknown

Were glues used to attach the carpeting to the floor slab? (Y/N) Unknown

Are there any pressed wood products in the building (e.g. hardwood plywood wall paneling, particleboard, fiberboard)? (Y/☒N)

INDOOR AIR QUALITY BUILDING SURVEY

Are there any new upholstery, drapes, or other textiles in the building? (Y/☒)

Has the building been treated with any insecticides/pesticides? If so, what chemicals were used and how often were they applied? No

Outdoor sources of contamination:

Is there any stationary emission source in the vicinity of the building? N

Are there any mobile emission sources (e.g. highway, bus stop, high-traffic area) in the vicinity of the building? Air Field (Not Active / Low level usage)

Is there any other information about the structural features of this building, the habits of its occupants or potential sources of chemical contaminants to the indoor air that may be of importance in facilitating the evaluation of the indoor air quality of the building? _____ No

Sketch any key features or proposed sampling locations:

Sketch any key features or proposed sampling locations.



Building T20G

INDOOR AIR QUALITY BUILDING SURVEY

DATE: 2/28/2012

BUILDING: T20G-4

Owner/Developer/Property Manager

Contact Name: Lili Pirbazari

Address: N204-15

NASA Ames Research Center, Moffett Field CA 94035

Phone: 650-604-1767

Email: lili.pirbazari-1@nasa.gov

Tenant

Contact Name: John A. Livacich

Address: T20G-4 Room 102

NASA Ames Research Center, Moffett Field CA 94035

Phone: 650-604-3243

Email: john.a.livacich@nasa.gov

INDOOR AIR QUALITY BUILDING SURVEY

Building Construction Characteristics:

General description of building construction materials: Wood Framed

How many occupied stories does the building have? 1

What year was the building constructed? 1988

What type of basement does the building have? (Circle all that apply)

☒ None

☐ Full basement

☐ Other (specify): _____

How is the basement used? (Circle all that apply)

☐ Not used

☐ Office space

☐ Storage Utilities

☐ Other (specify): _____

What are the characteristics of the basement? (Circle all that apply)

Basement floor: ☐ Concrete

☐ Other (specify): _____

Foundation walls: ☐ Poured concrete

☐ Other (specify): _____

Moisture: ☐ Dry

☐ Wet

☐ Damp ☐ Other (specify): _____

What are the characteristics of the floor slab? (Circle all that apply)

☐ Concrete

☒ Carpeted

☒ Tiled

☐ Stone

Cracks ☐

☒ Seams

☐ Other (specify): _____

Are drains or sumps present? (Y/N) Y

Describe each, including information on contents :

No sumps, but there are floor drains in the bathroom.

Are elevator shafts present? (Y/N) N Describe each:

INDOOR AIR QUALITY BUILDING SURVEY

Are there locations where chemicals were or are used or stored? (☒Y/☐N) ____ Describe each: There is a small lab where small amounts of preservatives, buffers, & cleansers are used for stormwater and drinking water sampling

Are plumbing pipes or utility conduits present that penetrate the floor slab? (Y/☒N) N Describe each:

Were foundation design specifications and as-built drawings for the facility obtained? (Y/N) _____ N _____

Was soil beneath the floor slab treated with lime or cement prior to placing the slab? (Y/N) _____ N _____

Describe:

Was a vapor barrier installed under the floor slab? (Y/N) _____ N _____

Describe: _____

Were any other liners installed under the floor slab? (Y/N) _____ N _____

Describe:

Were fibers or additional rebar added to the concrete floor slab to minimize cracking? (Y/N) _____ NA _____

Describe: _____

Were other techniques used to restrict vapor migration through the floor slab? (Y/N) _____ N _____

Describe:

Heating, Ventilation and Air Conditioning Systems (HVAC):

Were HVAC as-built drawings for the facility obtained? (Y/N) _____ N _____

Is the HVAC system a zone cooling/heating system? (Y/N) _____ Y _____

If not, what type of HVAC system is used in this building? _____

How Many? 11

INDOOR AIR QUALITY BUILDING SURVEY

Describe, and delineate HVAC zones in the facility and corresponding rooftop HVAC air inlets:
No rooftop map provided, however, there are 11 units and each unit provides air to approximately 3-4 offices.

Other (specify and describe): _____

Does the HVAC system have an exhaust capability? (☒Y/☐N) _____

What other type of mechanical ventilation systems are present and/or currently operating in the building?

☒ Mechanical fans

☐ Open windows

☒ Restroom vent fans

Other (specify): _____

Who maintains and manages the HVAC system operation? Onsite Contractors - IAP

Describe the control sequencing and operation of the HVAC system with respect to hours of operation, the intake of outside air, minimums, maximums, relative percentage outside air, differences between day and evening operation on weekdays and weekends: _____

Hours of operation for the units are from 6am to 6pm and off on weekends. Percentage of outside air varies.

What type(s) of fuel(s) for space heating and water heating are used in this building? (Circle all that apply)

☒ Natural gas Electric Solar Other (specify): _____

Are any other fuels or chemicals used in this building? (Y/☒N) N

Describe:

INDOOR AIR QUALITY BUILDING SURVEY

Sources of Chemical Contaminants:

Which of these items are present in the building? (Check all that apply)

Potential chemical source	Location of Source	MSDS obtained?
Lacquers, paints or paint thinners		
Gas-powered equipment		
Gasoline storage cans		
Cleaning solvents		
Lubricants		
Air fresheners	Bathroom	
Oven cleaners		
Carpet/upholstery cleaners		
Hairspray		
Nail polish/polish remover		
Bathroom cleaner	Janitors Closet (Room 182)	
Appliance cleaner		
Furniture/floor polish		
Moth balls		
Fuel tank		
Wood stove		

Fireplace		
Perfume/colognes		
Photographic darkroom chemicals		
Glues		
Scented trees, wreaths, potpourri, etc.		
Other (specify):		
Other (specify): _____		

What are the hours during which a majority of the workers are in the building during a work day? Normal business hours (8:00am to 5:00pm)

Do the occupants of the building frequently have their clothes dry-cleaned? (Y/☒N)

Was there any recent remodeling or painting done in the building? (Y/☒N) _____

When and where was the most recent carpeting applied in the building? Carpet in eastern corridors of T20G were replaced in January 2012

Were glues used to attach the carpeting to the floor slab? (☒Y/N) _____ Yes _____

Are there any pressed wood products in the building (e.g. hardwood plywood wall paneling,

particleboard, **INDOOR AIR QUALITY BUILDING SURVEY**
fiberboard)? (Y/N)

Are there any new upholstery, drapes, or other textiles in the building? (Y/N)

Has the building been treated with any insecticides/pesticides? If so, what chemicals were used and how often were they applied? _____ No _____

Outdoor sources of contamination:

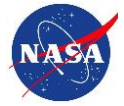
Is there any stationary emission source in the vicinity of the building? N

Are there any mobile emission sources (e.g. highway, bus stop, high-traffic area) in the vicinity of the building? Air Field (Not Active / Low level usage)

Is there any other information about the structural features of this building, the habits of its occupants or potential sources of chemical contaminants to the indoor air that may be of importance in facilitating the evaluation of the indoor air quality of the building? _____ No

Sketch any key features or proposed sampling locations:

[illegible]



APPENDIX E

Laboratory Analytical Reports



Group 1

24-hour Sampling
February 10 – 11, 2015



2655 Park Center Dr., Suite A
Simi Valley, CA 93065
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LABORATORY REPORT

February 25, 2015

Joseph Lukas
NASA Ames Research Center
Mail Stop T206-4 Room
Moffett Field, CA 94035-1000

RE: Vapor Intrusion Study, Phase II / 3602-750

Dear Joseph:

Enclosed are the results of the samples submitted to our laboratory on February 12, 2015. For your reference, these analyses have been assigned our service request number P1500566.

All analyses were performed according to our laboratory's NELAP and DoD-ELAP-approved quality assurance program. The test results meet requirements of the current NELAP and DoD-ELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP and DoD-ELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

ALS | Environmental

By Sue Anderson at 9:06 am, Feb 25, 2015

Sue Anderson
Project Manager



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T: +1 805 526 7161
F: +1 805 526 7270
www.alsglobal.com

Client: NASA Ames Research Center
Project: Vapor Intrusion Study, Phase II / 3602-750

Service Request No: P1500566

CASE NARRATIVE

The samples were received intact under chain of custody on February 12, 2015 and were stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the samples at the time of sample receipt.

Volatile Organic Compound Analysis

The samples were analyzed in SIM mode for selected volatile organic compounds in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph / mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator. This method is not included on the laboratory's AIHA-LAP scope of accreditation.

The Summa canisters were cleaned, prior to sampling, down to the method reporting limit (MRL) reported for this project. Please note, projects which require reporting below the MRL could have results between the MRL and method detection limit (MDL) that are biased high.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.



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 Simi Valley, CA 93065
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www.alsglobal.com

ALS Environmental – Simi Valley

CERTIFICATIONS, ACCREDITATIONS, AND REGISTRATIONS

Agency	Web Site	Number
AIHA	http://www.aihaaccreditedlabs.org	101661
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0694
DoD ELAP	http://www.pjlabs.com/search-accredited-labs	L14-2
Florida DOH (NELAP)	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E871020
Maine DHHS	http://www.maine.gov/dhhs/mecdc/environmental-health/water/dwp-services/labcert/labcert.htm	2014025
Minnesota DOH (NELAP)	http://www.health.state.mn.us/accreditation	838341
New Jersey DEP (NELAP)	http://www.nj.gov/dep/oqa/	CA009
New York DOH (NELAP)	http://www.wadsworth.org/labcert/elap/elap.html	11221
Oregon PHD (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	CA200007
Pennsylvania DEP	http://www.depweb.state.pa.us/labs	68-03307 (Registration)
Texas CEQ (NELAP)	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704413-14-5
Utah DOH (NELAP)	http://www.health.utah.gov/lab/labimp/certification/index.html	CA01627201 4-4
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C946

Analyses were performed according to our laboratory's NELAP and DoD-ELAP approved quality assurance program. A complete listing of specific NELAP and DoD-ELAP certified analytes can be found in the certifications section at www.alsglobal.com, or at the accreditation body's website.

Each of the certifications listed above have an explicit Scope of Accreditation that applies to specific matrices/methods/analytes; therefore, please contact the laboratory for information corresponding to a particular certification.

ALS ENVIRONMENTAL

DETAIL SUMMARY REPORT

Client: NASA Ames Research Center

Service Request: P1500566

Date Received: 2/12/2015

Time Received: 09:45

TO-15 - VOC SIM

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	Container ID	Pi1 (psig)	Pf1 (psig)	
N144-107-01-ON	P1500566-001	Air	2/11/2015	06:50	AS00310	-0.64	3.58	X
N144-C103-01-ON	P1500566-002	Air	2/11/2015	06:49	AS00098	-0.73	3.66	X
N144-171-01-ON	P1500566-003	Air	2/11/2015	07:41	AC01887	-1.42	3.60	X
N144-151-01-ON	P1500566-004	Air	2/11/2015	07:40	AS00833	-1.78	3.51	X
N144-142-01-ON	P1500566-005	Air	2/11/2015	07:45	AC00726	-1.30	3.68	X
N144-141-01-ON	P1500566-006	Air	2/11/2015	07:44	AS00859	-1.28	3.60	X
N144-141-01-OND	P1500566-007	Air	2/11/2015	07:44	AS00858	-1.19	3.54	X
N245-1-01-ON	P1500566-008	Air	2/11/2015	06:58	AC02056	-1.45	3.76	X
N258-1-01-ON	P1500566-009	Air	2/11/2015	07:54	AC00681	1.27	3.60	X
N212-101A-01-ON	P1500566-010	Air	2/11/2015	08:03	AS00388	-1.94	3.64	X
N212-105-01-ON	P1500566-011	Air	2/11/2015	08:01	AC01482	0.33	3.66	X
N212-105-01-OND	P1500566-012	Air	2/11/2015	08:02	AC01946	-1.95	3.68	X
T20G-1-01-ON	P1500566-013	Air	2/11/2015	06:56	AS00602	0.36	3.58	X
T20G-1-02-ON	P1500566-014	Air	2/10/2015	05:03	AC01939	-2.31	3.70	X
N213-1-02-ON	P1500566-015	Air	2/11/2015	09:09	AC01494	0.53	3.85	X
N213-1-01-ON	P1500566-016	Air	2/11/2015	09:11	AS00658	0.56	3.62	X
N213-1-03-ON	P1500566-017	Air	2/11/2015	09:15	AS00293	0.03	3.55	X
N213-1-05-ON	P1500566-018	Air	2/11/2015	09:18	AS00695	-0.06	4.13	X
N213-1-04-ON	P1500566-019	Air	2/11/2015	09:19	AS00766	0.53	3.59	X
N213-B-03-ON	P1500566-020	Air	2/11/2015	09:23	AC01610	-2.06	3.78	X
N213-B-02-ON	P1500566-021	Air	2/11/2015	09:29	AS00820	0.48	3.61	X
N213-B-01-ON	P1500566-022	Air	2/11/2015	09:32	AS00542	-3.32	3.67	X
N213-B-01-OND	P1500566-023	Air	2/11/2015	09:32	AS00780	0.41	3.87	X
N211-179-05-ON	P1500566-024	Air	2/11/2015	10:32	AC01784	-1.68	3.66	X
N211-136-03-ON	P1500566-025	Air	2/11/2015	10:34	AC02028	0.25	3.72	X
N211-119-02-ON	P1500566-026	Air	2/11/2015	10:37	AS00804	0.48	3.73	X
N211-103-01-ON	P1500566-027	Air	2/11/2015	10:39	AC01036	0.52	3.82	X
N240-1-01-ON	P1500566-028	Air	2/11/2015	10:51	AC00714	-0.54	3.72	X
N240-1-02-ON	P1500566-029	Air	2/11/2015	10:58	AS00785	0.05	3.76	X
N240-1-03-ON	P1500566-030	Air	2/11/2015	10:54	AS00804	-1.18	3.78	X



Air - Chain of Custody Record & Analytical Service Request

Page 1 of 3

2655 Park Center Drive, Suite A
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Phone (805) 526-7161
Fax (805) 526-7270

Requested Turnaround Time in Business Days (Surcharges) please circle
1 Day (100%) 2 Day (75%) 3 Day (50%) 4 Day (35%) 5 Day (25%) 10-Day-Standard

ALS Project No. P1500566

Company Name & Address (Reporting Information) Earth Resources Technology, Inc. (ERT) NASA Ames, Moffett Field, CA				Project Name Vapor Intrusion Study, Phase II				ALS Contact:		Analysis Method	Comments e.g. Actual Preservative or specific instructions				
Project Manager Joseph Lukas				Project Number 3602-750											
Phone 650/604-2057 Fax 650/604-2645				P.O. # / Billing Information ERT P.O. 1440 Sweitzer Ln, Suite 300 3601-0463 Laurel, MD 20707											
Email Address for Result Reporting Joseph.R.Lukas@nasa.gov				Sampler (Print & Sign) Ingrid J. Dittmar / <i>[Signature]</i>											
Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Canister ID (Bar code # - AC, SC, etc.)	Flow Controller ID (Bar code # - FC #)	Canister Start Pressure "Hg	Canister End Pressure "Hg/psig	Sample Volume	TO15-SIM						
N144-107-01-ON	①	2/11/15	6:50 AM	AS00310	FCA00954	-30	0	6L		X					
N144-103-01-ON	②		6:49 AM	AS00098	FCA00065	-30	-4			X					
N144-171-01-ON	③		7:41 AM	AC01887	FCA00964	-30	-5			X					
N144-151-01-ON	④		7:40 AM	AS00833	FCA00747	-30	-7			X					
N144-142-01-ON	⑤		7:45 AM	AC00726	FCA00716	-30	-7			X					
N144-141-01-ON	⑥		7:44 AM	AS00859	FCA00715	-30	-5.5			X					
N144-141-01-OND	⑦		7:44 AM	AS00858	FCA00611	-30	-6			X					
N245-1-01-ON	⑧		6:58 AM	AC02056	FCA00375	-29.5	-4			X					
N258-1-01-ON	⑨		7:54 AM	AC00681	FCA00532	-30	0			X					
N212-101A-01-ON	⑩		8:03 AM	AS00388	FCA00720	-30	-9			X					
N212-105-01-ON	⑪		8:01 AM	AC01482	FCA00176	-30	0			X					
N212-105-01-OND	⑫	V	8:02 AM	AC01946	FCA00682	-30	-7			X					
T20G-1-01-ON	⑬	2/13/15	6:56 AM	AS00602	FCA00355	-30	0	V		X					
T20G-1-02-ON	⑭	2/10/15	5:03 PM	AC01939	FCA00829	-29.5	-5.5	6L	X						
Report Tier Levels - please select															
Tier I - Results (Default in not specified)				Tier III (Results + QC & Calibration Summaries)				Tier IV (Date Validation Package) 10% Surcharge				Tier V (Date Validation Package) 10% Surcharge			
Tier II (Results + QC Summaries)				Tier III (Results + QC & Calibration Summaries)				Tier IV (Date Validation Package) 10% Surcharge				Tier V (Date Validation Package) 10% Surcharge			
Relinquished by: (Signature) <i>[Signature]</i>				Date: 2/11/15 Time: 2:00 PM				Received by: (Signature) <i>[Signature]</i>				Date: Time:			
Relinquished by: (Signature) <i>[Signature]</i>				Date: Time:				Received by: (Signature) <i>[Signature]</i>				Date: 2/12/15 Time: 0945			
Chain of Custody Seal: (Circle) INTACT BROKEN <u>ABSENT</u>												Project Requirements (MRLs, QAPP)			
Cooler / Blank Temperature _____ °C															



Air - Chain of Custody Record & Analytical Service Request

Page 2 of 3

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Requested Turnaround Time in Business Days (Surcharges) please circle
 1 Day (100%) 2 Day (75%) 3 Day (50%) 4 Day (35%) 5 Day (25%) 10-Day-Standard

ALS Project No

F5005266

Company Name & Address (Reporting Information) Earth Resources Technology, Inc. (ERT) NASA Ames, Moffett Field, CA				Project Name Vapor Intrusion Study, Phase II				ALS Contact:		Analysis Method	Comments e.g. Actual Preservative or specific instructions				
Project Manager Joseph Lukas				Project Number 3602-750											
Phone 650/604-2057 Fax 650/604-2645				P.O. # / Billing Information ERT P.O. 3601-0463 / 14401 Sweitzer Ln, Suite 300 Laurel, MD 20707											
Email Address for Result Reporting Joseph.R.Lukas@nasa.gov				Sampler (Print & Sign) Ingrid J. Dittmar / [Signature]											
Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Canister ID (Bar code # - AC, SC, etc.)	Flow Controller ID (Bar code # - FC #)	Canister Start Pressure "Hg	Canister End Pressure "Hg/psig	Sample Volume	TO IS - SIM						
N213-1-02-0N	<u>15</u>	2/11/15	9:09 AM	AC01494	FCA00921	-30	0	6L		X					
N213-1-01-0N	<u>16</u>		9:11 AM	AS00658	FCA00409	-30	0			X					
N213-1-03-0N	<u>17</u>		9:15 AM	AS00293	FCA0079	-30	-1			X					
N213-1-05-0N	<u>18</u>		9:18 AM	AS00695	FCA00834	-30	-3			X					
N213-1-04-0N	<u>19</u>		9:19 AM	AS00766	FCA00784	-29.5	0			X					
N213-B-03-0N	<u>20</u>		9:23 AM	AC01610	FCA00971	-25	-3			X					
N213-B-02-0N	<u>21</u>		9:29 AM	AS00820	FCA00748	-30	-4			X					
N213-B-01-0N	<u>22</u>		9:32 AM	AS00642	FCA00754	-30	-6			X					
N213-B-01-0ND	<u>23</u>		9:32 AM	AS00780	FCA00961	-30	0			X					
N211-179-05-0N	<u>24</u>		10:32 AM	AC01784	FCA00688	-30	-5			X					
N211-136-03-0N	<u>25</u>		10:34 AM	AC02028	FCA00343	-30	0			X					
N211-119-02-0N	<u>26</u>		10:37 AM	AS00804	FCA00399	-30	0			X					
N211-103-01-0N	<u>27</u>	✓	10:39 AM	AC01036	FCA00699	-29.5	0	✓		X					
N240-1-01-0N	<u>28</u>	2/11/15	10:51 AM	AC00714	FCA00454	-27	-4	6L	X						
Report Tier Levels - please select															
Tier I - Results (Default in not specified)				Tier III (Results + QC & Calibration Summaries)				Tier IV (Date Validation Package) <u>10% Surcharge</u>				Tier II (Results + QC Summaries)			
Relinquished by: (Signature) <u>[Signature]</u>				Date: <u>2/11/15</u>				Time: <u>2:00 PM</u>				Received by: (Signature) <u>[Signature]</u>			
Relinquished by: (Signature) <u>[Signature]</u>				Date: <u>2/12/15</u>				Time: <u>0945</u>				Received by: (Signature) <u>[Signature]</u>			
Chain of Custody Seal (Circle) INTACT <u>BROKEN</u> <u>ABSENT</u>												Project Requirements (MRLs, QAPP)			
Cooler / Blank Temperature <u> </u> °C															



Air - Chain of Custody Record & Analytical Service Request

Page 3 of 3

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1 Day (100%) 2 Day (75%) 3 Day (50%) 4 Day (35%) 5 Day (25%) 10 Day Standard

ALS Project No. F150566

Company Name & Address (Reporting Information) Earth Resources Technology, Inc. (ERT) NASA Ames, Moffett Field, CA				Project Name Vapor Intrusion Study, Phase II				ALS Contact:		Comments e.g. Actual Preservative or specific instructions
				Project Number 3602-750				Analysis Method		
Project Manager Joseph Lukas				P.O. # / Billing Information P.O. 3601-0463 / ERT 14401 Sweitzer Ln, Suite 300 Laurel, MD 20707				TO 15-SIM		
Phone 650/604-2057 Fax 650/604-2645				Sampler (Print & Sign) Ingrid J. Dittmar / Cheryl J. De						
Email Address for Result Reporting Joseph.R.Lukas@nasa.gov										
Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Canister ID (Bar code # - AC, SC, etc.)	Flow Controller ID (Bar code # - FC #)	Canister Start Pressure "Hg	Canister End Pressure "Hg/psig	Sample Volume		
N240-1-02-DN	<u>15</u>	2/11/15	10:58 AM	AS00785	FCA00956	-14	-0.5	6L	X	
N240-1-03-DN	<u>20</u>	2/11/15	10:54 AM	AC01804	FCA00886	-30	-4	6L	X	
Report Tier Levels - please select										Project Requirements (MRLs, QAPP)
Tier I - Results (Default in not specified) _____ Tier III (Results + QC & Calibration Summaries) _____ <input checked="" type="checkbox"/> Included in quote EDD required <input checked="" type="checkbox"/> Yes / No Type: _____ Units: _____ Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT										
Relinquished by: (Signature) Cheryl J. De		Date: 2/11/15	Time: 2:00 PM	Received by: (Signature) Felix		Date: 2/12/15	Time: 09:45	Cooler / Blank Temperature _____ °C		
Relinquished by: (Signature) Felix		Date: _____	Time: _____	Received by: (Signature) _____		Date: _____	Time: _____	Cooler / Blank Temperature _____ °C		

**ALS Environmental
Sample Acceptance Check Form**

Client: Earth Resources Technology

Work order: P1500566

Project: Vapor Intrusion Study, Phase II / 3602-750

Sample(s) received on: 2/12/15 Date opened: 2/12/15 by: ADAVID

Note: This form is used for all samples received by ALS. The use of this form for custody seals is strictly meant to indicate presence/absence and not as an indication of compliance or nonconformity. Thermal preservation and pH will only be evaluated either at the request of the client and/or as required by the method/SOP.

	Yes	No	N/A
1 Were sample containers properly marked with client sample ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Container(s) supplied by ALS ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Did sample containers arrive in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Were chain-of-custody papers used and filled out?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Did sample container labels and/or tags agree with custody papers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6 Was sample volume received adequate for analysis?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Are samples within specified holding times?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8 Was proper temperature (thermal preservation) of cooler at receipt adhered to?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
9 Was a trip blank received?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
10 Were custody seals on outside of cooler/Box?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Location of seal(s)? _____ Sealing Lid?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Were signature and date included?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Were seals intact?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Were custody seals on outside of sample container?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Location of seal(s)? _____ Sealing Lid?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Were signature and date included?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Were seals intact?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
11 Do containers have appropriate preservation , according to method/SOP or Client specified information?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Is there a client indication that the submitted samples are pH preserved?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Were VOA vials checked for presence/absence of air bubbles?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Does the client/method/SOP require that the analyst check the sample pH and <u>if necessary</u> alter it?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
12 Tubes: Are the tubes capped and intact?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Do they contain moisture?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
13 Badges: Are the badges properly capped and intact?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Are dual bed badges separated and individually capped and intact?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P1500566-001.01	6.0 L Silonite Can					
P1500566-002.01	6.0 L Silonite Can					
P1500566-003.01	6.0 L Ambient Can					
P1500566-004.01	6.0 L Silonite Can					
P1500566-005.01	6.0 L Ambient Can					
P1500566-006.01	6.0 L Silonite Can					
P1500566-007.01	6.0 L Silonite Can					
P1500566-008.01	6.0 L Ambient Can					

Explain any discrepancies: (include lab sample ID numbers): _____

ALS Environmental Sample Acceptance Check Form

Client: Earth Resources Technology

Work order: P1500566

Project: Vapor Intrusion Study, Phase II / 3602-750

Sample(s) received on: 2/12/15

Date opened: 2/12/15

by: **ADAVID**

[illegible]

Explain any discrepancies: (include lab sample ID numbers):

RSK - MEEPP, HCL (pH<2); RSK - CO₂, (pH 5-8); Sulfur (pH>4)

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: N144-107-01-ON
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P1500566-001

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS00310

Date Collected: 2/11/15
Date Received: 2/12/15
Date Analyzed: 2/16/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -0.64 **Final Pressure (psig):** 3.58

Canister Dilution Factor: 1.30

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.3	0.033	0.47	0.0066	
74-87-3	Chloromethane	0.65	0.033	0.31	0.016	
75-01-4	Vinyl Chloride	ND	0.033	ND	0.013	
74-83-9	Bromomethane	0.14	0.033	0.037	0.0084	
75-00-3	Chloroethane	ND	0.033	ND	0.012	
67-64-1	Acetone	10	3.3	4.3	1.4	
75-69-4	Trichlorofluoromethane	2.8	0.033	0.50	0.0058	
75-35-4	1,1-Dichloroethene	ND	0.033	ND	0.0082	
75-09-2	Methylene Chloride	0.72	0.13	0.21	0.037	
76-13-1	Trichlorotrifluoroethane	0.52	0.033	0.068	0.0042	
156-60-5	trans-1,2-Dichloroethene	0.057	0.033	0.014	0.0082	
75-34-3	1,1-Dichloroethane	ND	0.033	ND	0.0080	
1634-04-4	Methyl tert-Butyl Ether	ND	0.033	ND	0.0090	
156-59-2	cis-1,2-Dichloroethene	0.044	0.033	0.011	0.0082	
67-66-3	Chloroform	0.24	0.13	0.049	0.027	
107-06-2	1,2-Dichloroethane	0.11	0.033	0.027	0.0080	
71-55-6	1,1,1-Trichloroethane	0.068	0.033	0.012	0.0060	
71-43-2	Benzene	0.75	0.098	0.23	0.031	
56-23-5	Carbon Tetrachloride	0.66	0.033	0.11	0.0052	
78-87-5	1,2-Dichloropropane	0.042	0.033	0.0092	0.0070	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: N144-107-01-ON
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P1500566-001

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 6.0 L Silonite Canister
 Test Notes:
 Container ID: AS00310

Date Collected: 2/11/15
 Date Received: 2/12/15
 Date Analyzed: 2/16/15
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -0.64 Final Pressure (psig): 3.58

Canister Dilution Factor: 1.30

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	0.033	ND	0.0049	
79-01-6	Trichloroethene	0.15	0.033	0.028	0.0060	
123-91-1	1,4-Dioxane	ND	0.13	ND	0.036	
10061-01-5	cis-1,3-Dichloropropene	ND	0.033	ND	0.0072	
10061-02-6	trans-1,3-Dichloropropene	ND	0.033	ND	0.0072	
79-00-5	1,1,2-Trichloroethane	ND	0.13	ND	0.024	
108-88-3	Toluene	5.0	0.13	1.3	0.035	
106-93-4	1,2-Dibromoethane	ND	0.033	ND	0.0042	
127-18-4	Tetrachloroethene	0.091	0.033	0.013	0.0048	
108-90-7	Chlorobenzene	ND	0.13	ND	0.028	
100-41-4	Ethylbenzene	0.65	0.13	0.15	0.030	
179601-23-1	m,p-Xylenes	1.8	0.13	0.41	0.030	
95-47-6	o-Xylene	0.55	0.13	0.13	0.030	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.033	ND	0.0047	
541-73-1	1,3-Dichlorobenzene	ND	0.033	ND	0.0054	
106-46-7	1,4-Dichlorobenzene	0.046	0.033	0.0077	0.0054	
95-50-1	1,2-Dichlorobenzene	ND	0.033	ND	0.0054	
120-82-1	1,2,4-Trichlorobenzene	ND	0.033	ND	0.0044	
91-20-3	Naphthalene	0.14	0.13	0.027	0.025	
87-68-3	Hexachlorobutadiene	ND	0.033	ND	0.0030	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: N144-C103-01-ON
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P1500566-002

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS00098

Date Collected: 2/11/15
Date Received: 2/12/15
Date Analyzed: 2/16/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -0.73 Final Pressure (psig): 3.66

Canister Dilution Factor: 1.31

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.5	0.033	0.51	0.0066	
74-87-3	Chloromethane	0.77	0.033	0.37	0.016	
75-01-4	Vinyl Chloride	ND	0.033	ND	0.013	
74-83-9	Bromomethane	0.10	0.033	0.027	0.0084	
75-00-3	Chloroethane	ND	0.033	ND	0.012	
67-64-1	Acetone	9.8	3.3	4.1	1.4	
75-69-4	Trichlorofluoromethane	2.6	0.033	0.47	0.0058	
75-35-4	1,1-Dichloroethene	ND	0.033	ND	0.0083	
75-09-2	Methylene Chloride	0.67	0.13	0.19	0.038	
76-13-1	Trichlorotrifluoroethane	0.54	0.033	0.071	0.0043	
156-60-5	trans-1,2-Dichloroethene	0.050	0.033	0.013	0.0083	
75-34-3	1,1-Dichloroethane	ND	0.033	ND	0.0081	
1634-04-4	Methyl tert-Butyl Ether	ND	0.033	ND	0.0091	
156-59-2	cis-1,2-Dichloroethene	0.040	0.033	0.010	0.0083	
67-66-3	Chloroform	0.29	0.13	0.059	0.027	
107-06-2	1,2-Dichloroethane	0.10	0.033	0.025	0.0081	
71-55-6	1,1,1-Trichloroethane	0.070	0.033	0.013	0.0060	
71-43-2	Benzene	0.71	0.098	0.22	0.031	
56-23-5	Carbon Tetrachloride	0.56	0.033	0.090	0.0052	
78-87-5	1,2-Dichloropropane	0.047	0.033	0.010	0.0071	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: N144-C103-01-ON
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P1500566-002

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS00098

Date Collected: 2/11/15
Date Received: 2/12/15
Date Analyzed: 2/16/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -0.73 **Final Pressure (psig):** 3.66

Canister Dilution Factor: 1.31

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	0.033	ND	0.0049	
79-01-6	Trichloroethene	0.18	0.033	0.034	0.0061	
123-91-1	1,4-Dioxane	ND	0.13	ND	0.036	
10061-01-5	cis-1,3-Dichloropropene	ND	0.033	ND	0.0072	
10061-02-6	trans-1,3-Dichloropropene	ND	0.033	ND	0.0072	
79-00-5	1,1,2-Trichloroethane	ND	0.13	ND	0.024	
108-88-3	Toluene	4.9	0.13	1.3	0.035	
106-93-4	1,2-Dibromoethane	ND	0.033	ND	0.0043	
127-18-4	Tetrachloroethene	0.12	0.033	0.017	0.0048	
108-90-7	Chlorobenzene	ND	0.13	ND	0.028	
100-41-4	Ethylbenzene	0.56	0.13	0.13	0.030	
179601-23-1	m,p-Xylenes	1.5	0.13	0.35	0.030	
95-47-6	o-Xylene	0.50	0.13	0.11	0.030	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.033	ND	0.0048	
541-73-1	1,3-Dichlorobenzene	ND	0.033	ND	0.0054	
106-46-7	1,4-Dichlorobenzene	0.042	0.033	0.0070	0.0054	
95-50-1	1,2-Dichlorobenzene	ND	0.033	ND	0.0054	
120-82-1	1,2,4-Trichlorobenzene	ND	0.033	ND	0.0044	
91-20-3	Naphthalene	0.14	0.13	0.027	0.025	
87-68-3	Hexachlorobutadiene	ND	0.033	ND	0.0031	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: N144-171-01-ON
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P1500566-003

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC01887

Date Collected: 2/11/15
Date Received: 2/12/15
Date Analyzed: 2/16/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -1.42 Final Pressure (psig): 3.60

Canister Dilution Factor: 1.38

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.4	0.035	0.48	0.0070	
74-87-3	Chloromethane	0.70	0.035	0.34	0.017	
75-01-4	Vinyl Chloride	ND	0.035	ND	0.014	
74-83-9	Bromomethane	0.052	0.035	0.013	0.0089	
75-00-3	Chloroethane	ND	0.035	ND	0.013	
67-64-1	Acetone	16	3.5	6.6	1.5	
75-69-4	Trichlorofluoromethane	1.6	0.035	0.29	0.0061	
75-35-4	1,1-Dichloroethene	ND	0.035	ND	0.0087	
75-09-2	Methylene Chloride	0.50	0.14	0.14	0.040	
76-13-1	Trichlorotrifluoroethane	0.54	0.035	0.071	0.0045	
156-60-5	trans-1,2-Dichloroethene	0.057	0.035	0.014	0.0087	
75-34-3	1,1-Dichloroethane	ND	0.035	ND	0.0085	
1634-04-4	Methyl tert-Butyl Ether	ND	0.035	ND	0.0096	
156-59-2	cis-1,2-Dichloroethene	0.037	0.035	0.0093	0.0087	
67-66-3	Chloroform	0.14	0.14	0.029	0.028	
107-06-2	1,2-Dichloroethane	0.085	0.035	0.021	0.0085	
71-55-6	1,1,1-Trichloroethane	ND	0.035	ND	0.0063	
71-43-2	Benzene	0.57	0.10	0.18	0.032	
56-23-5	Carbon Tetrachloride	0.56	0.035	0.090	0.0055	
78-87-5	1,2-Dichloropropane	0.038	0.035	0.0082	0.0075	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: N144-171-01-ON
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P1500566-003

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 6.0 L Summa Canister
 Test Notes:
 Container ID: AC01887

Date Collected: 2/11/15
 Date Received: 2/12/15
 Date Analyzed: 2/16/15
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -1.42 Final Pressure (psig): 3.60

Canister Dilution Factor: 1.38

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	0.035	ND	0.0052	
79-01-6	Trichloroethene	0.81	0.035	0.15	0.0064	
123-91-1	1,4-Dioxane	ND	0.14	ND	0.038	
10061-01-5	cis-1,3-Dichloropropene	ND	0.035	ND	0.0076	
10061-02-6	trans-1,3-Dichloropropene	ND	0.035	ND	0.0076	
79-00-5	1,1,2-Trichloroethane	ND	0.14	ND	0.025	
108-88-3	Toluene	2.0	0.14	0.52	0.037	
106-93-4	1,2-Dibromoethane	ND	0.035	ND	0.0045	
127-18-4	Tetrachloroethene	0.087	0.035	0.013	0.0051	
108-90-7	Chlorobenzene	ND	0.14	ND	0.030	
100-41-4	Ethylbenzene	0.48	0.14	0.11	0.032	
179601-23-1	m,p-Xylenes	1.2	0.14	0.28	0.032	
95-47-6	o-Xylene	0.47	0.14	0.11	0.032	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.035	ND	0.0050	
541-73-1	1,3-Dichlorobenzene	ND	0.035	ND	0.0057	
106-46-7	1,4-Dichlorobenzene	0.063	0.035	0.011	0.0057	
95-50-1	1,2-Dichlorobenzene	ND	0.035	ND	0.0057	
120-82-1	1,2,4-Trichlorobenzene	ND	0.035	ND	0.0046	
91-20-3	Naphthalene	0.30	0.14	0.057	0.026	
87-68-3	Hexachlorobutadiene	ND	0.035	ND	0.0032	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: N144-151-01-ON
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P1500566-004

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS00833

Date Collected: 2/11/15
Date Received: 2/12/15
Date Analyzed: 2/16/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -1.78 Final Pressure (psig): 3.51

Canister Dilution Factor: 1.41

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.3	0.035	0.46	0.0071	
74-87-3	Chloromethane	0.69	0.035	0.33	0.017	
75-01-4	Vinyl Chloride	ND	0.035	ND	0.014	
74-83-9	Bromomethane	0.051	0.035	0.013	0.0091	
75-00-3	Chloroethane	ND	0.035	ND	0.013	
67-64-1	Acetone	92	3.5	39	1.5	
75-69-4	Trichlorofluoromethane	1.6	0.035	0.28	0.0063	
75-35-4	1,1-Dichloroethene	ND	0.035	ND	0.0089	
75-09-2	Methylene Chloride	0.50	0.14	0.14	0.041	
76-13-1	Trichlorotrifluoroethane	0.53	0.035	0.069	0.0046	
156-60-5	trans-1,2-Dichloroethene	0.092	0.035	0.023	0.0089	
75-34-3	1,1-Dichloroethane	ND	0.035	ND	0.0087	
1634-04-4	Methyl tert-Butyl Ether	ND	0.035	ND	0.0098	
156-59-2	cis-1,2-Dichloroethene	0.12	0.035	0.031	0.0089	
67-66-3	Chloroform	0.17	0.14	0.035	0.029	
107-06-2	1,2-Dichloroethane	0.15	0.035	0.036	0.0087	
71-55-6	1,1,1-Trichloroethane	ND	0.035	ND	0.0065	
71-43-2	Benzene	0.63	0.11	0.20	0.033	
56-23-5	Carbon Tetrachloride	0.53	0.035	0.084	0.0056	
78-87-5	1,2-Dichloropropane	ND	0.035	ND	0.0076	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: N144-151-01-ON
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P1500566-004

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 6.0 L Silonite Canister
 Test Notes:
 Container ID: AS00833

Date Collected: 2/11/15
 Date Received: 2/12/15
 Date Analyzed: 2/16/15
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -1.78 Final Pressure (psig): 3.51

Canister Dilution Factor: 1.41

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	0.035	ND	0.0053	
79-01-6	Trichloroethene	0.47	0.035	0.087	0.0066	
123-91-1	1,4-Dioxane	ND	0.14	ND	0.039	
10061-01-5	cis-1,3-Dichloropropene	ND	0.035	ND	0.0078	
10061-02-6	trans-1,3-Dichloropropene	ND	0.035	ND	0.0078	
79-00-5	1,1,2-Trichloroethane	ND	0.14	ND	0.026	
108-88-3	Toluene	3.8	0.14	1.0	0.037	
106-93-4	1,2-Dibromoethane	ND	0.035	ND	0.0046	
127-18-4	Tetrachloroethene	0.18	0.035	0.027	0.0052	
108-90-7	Chlorobenzene	ND	0.14	ND	0.031	
100-41-4	Ethylbenzene	0.37	0.14	0.084	0.032	
179601-23-1	m,p-Xylenes	1.0	0.14	0.24	0.032	
95-47-6	o-Xylene	0.39	0.14	0.091	0.032	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.035	ND	0.0051	
541-73-1	1,3-Dichlorobenzene	ND	0.035	ND	0.0059	
106-46-7	1,4-Dichlorobenzene	0.092	0.035	0.015	0.0059	
95-50-1	1,2-Dichlorobenzene	ND	0.035	ND	0.0059	
120-82-1	1,2,4-Trichlorobenzene	ND	0.035	ND	0.0048	
91-20-3	Naphthalene	0.35	0.14	0.066	0.027	
87-68-3	Hexachlorobutadiene	ND	0.035	ND	0.0033	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: N144-142-01-ON
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P1500566-005

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC00726

Date Collected: 2/11/15
Date Received: 2/12/15
Date Analyzed: 2/16/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -1.30 Final Pressure (psig): 3.68

Canister Dilution Factor: 1.37

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.4	0.034	0.48	0.0069	
74-87-3	Chloromethane	0.73	0.034	0.35	0.017	
75-01-4	Vinyl Chloride	ND	0.034	ND	0.013	
74-83-9	Bromomethane	0.051	0.034	0.013	0.0088	
75-00-3	Chloroethane	0.042	0.034	0.016	0.013	
67-64-1	Acetone	20	3.4	8.3	1.4	
75-69-4	Trichlorofluoromethane	1.7	0.034	0.29	0.0061	
75-35-4	1,1-Dichloroethene	ND	0.034	ND	0.0086	
75-09-2	Methylene Chloride	0.49	0.14	0.14	0.039	
76-13-1	Trichlorotrifluoroethane	0.54	0.034	0.070	0.0045	
156-60-5	trans-1,2-Dichloroethene	0.15	0.034	0.039	0.0086	
75-34-3	1,1-Dichloroethane	ND	0.034	ND	0.0085	
1634-04-4	Methyl tert-Butyl Ether	ND	0.034	ND	0.0095	
156-59-2	cis-1,2-Dichloroethene	0.18	0.034	0.046	0.0086	
67-66-3	Chloroform	0.19	0.14	0.040	0.028	
107-06-2	1,2-Dichloroethane	0.088	0.034	0.022	0.0085	
71-55-6	1,1,1-Trichloroethane	ND	0.034	ND	0.0063	
71-43-2	Benzene	0.63	0.10	0.20	0.032	
56-23-5	Carbon Tetrachloride	0.57	0.034	0.091	0.0054	
78-87-5	1,2-Dichloropropane	ND	0.034	ND	0.0074	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: N144-142-01-ON
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P1500566-005

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 6.0 L Summa Canister
 Test Notes:
 Container ID: AC00726

Date Collected: 2/11/15
 Date Received: 2/12/15
 Date Analyzed: 2/16/15
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -1.30 Final Pressure (psig): 3.68

Canister Dilution Factor: 1.37

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	0.034	ND	0.0051	
79-01-6	Trichloroethene	1.2	0.034	0.22	0.0064	
123-91-1	1,4-Dioxane	ND	0.14	ND	0.038	
10061-01-5	cis-1,3-Dichloropropene	ND	0.034	ND	0.0075	
10061-02-6	trans-1,3-Dichloropropene	ND	0.034	ND	0.0075	
79-00-5	1,1,2-Trichloroethane	ND	0.14	ND	0.025	
108-88-3	Toluene	1.9	0.14	0.49	0.036	
106-93-4	1,2-Dibromoethane	ND	0.034	ND	0.0045	
127-18-4	Tetrachloroethene	0.42	0.034	0.063	0.0051	
108-90-7	Chlorobenzene	ND	0.14	ND	0.030	
100-41-4	Ethylbenzene	0.40	0.14	0.092	0.032	
179601-23-1	m,p-Xylenes	1.1	0.14	0.25	0.032	
95-47-6	o-Xylene	0.44	0.14	0.10	0.032	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.034	ND	0.0050	
541-73-1	1,3-Dichlorobenzene	ND	0.034	ND	0.0057	
106-46-7	1,4-Dichlorobenzene	0.070	0.034	0.012	0.0057	
95-50-1	1,2-Dichlorobenzene	ND	0.034	ND	0.0057	
120-82-1	1,2,4-Trichlorobenzene	ND	0.034	ND	0.0046	
91-20-3	Naphthalene	0.19	0.14	0.037	0.026	
87-68-3	Hexachlorobutadiene	ND	0.034	ND	0.0032	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: N144-141-01-ON
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P1500566-006

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS00859

Date Collected: 2/11/15
Date Received: 2/12/15
Date Analyzed: 2/16/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -1.28 **Final Pressure (psig):** 3.60

Canister Dilution Factor: 1.36

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.4	0.034	0.48	0.0069	
74-87-3	Chloromethane	0.70	0.034	0.34	0.016	
75-01-4	Vinyl Chloride	ND	0.034	ND	0.013	
74-83-9	Bromomethane	0.052	0.034	0.013	0.0088	
75-00-3	Chloroethane	ND	0.034	ND	0.013	
67-64-1	Acetone	12	3.4	5.3	1.4	
75-69-4	Trichlorofluoromethane	1.7	0.034	0.30	0.0061	
75-35-4	1,1-Dichloroethene	ND	0.034	ND	0.0086	
75-09-2	Methylene Chloride	0.51	0.14	0.15	0.039	
76-13-1	Trichlorotrifluoroethane	0.54	0.034	0.071	0.0044	
156-60-5	trans-1,2-Dichloroethene	0.18	0.034	0.045	0.0086	
75-34-3	1,1-Dichloroethane	ND	0.034	ND	0.0084	
1634-04-4	Methyl tert-Butyl Ether	ND	0.034	ND	0.0094	
156-59-2	cis-1,2-Dichloroethene	0.14	0.034	0.037	0.0086	
67-66-3	Chloroform	0.19	0.14	0.040	0.028	
107-06-2	1,2-Dichloroethane	0.091	0.034	0.023	0.0084	
71-55-6	1,1,1-Trichloroethane	ND	0.034	ND	0.0062	
71-43-2	Benzene	0.70	0.10	0.22	0.032	
56-23-5	Carbon Tetrachloride	0.57	0.034	0.091	0.0054	
78-87-5	1,2-Dichloropropane	ND	0.034	ND	0.0074	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: N144-141-01-ON
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P1500566-006

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 6.0 L Silonite Canister
 Test Notes:
 Container ID: AS00859

Date Collected: 2/11/15
 Date Received: 2/12/15
 Date Analyzed: 2/16/15
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -1.28 Final Pressure (psig): 3.60

Canister Dilution Factor: 1.36

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	0.034	ND	0.0051	
79-01-6	Trichloroethene	2.7	0.034	0.50	0.0063	
123-91-1	1,4-Dioxane	ND	0.14	ND	0.038	
10061-01-5	cis-1,3-Dichloropropene	ND	0.034	ND	0.0075	
10061-02-6	trans-1,3-Dichloropropene	ND	0.034	ND	0.0075	
79-00-5	1,1,2-Trichloroethane	ND	0.14	ND	0.025	
108-88-3	Toluene	1.7	0.14	0.45	0.036	
106-93-4	1,2-Dibromoethane	ND	0.034	ND	0.0044	
127-18-4	Tetrachloroethene	0.33	0.034	0.048	0.0050	
108-90-7	Chlorobenzene	ND	0.14	ND	0.030	
100-41-4	Ethylbenzene	0.35	0.14	0.080	0.031	
179601-23-1	m,p-Xylenes	1.0	0.14	0.23	0.031	
95-47-6	o-Xylene	0.38	0.14	0.088	0.031	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.034	ND	0.0050	
541-73-1	1,3-Dichlorobenzene	ND	0.034	ND	0.0057	
106-46-7	1,4-Dichlorobenzene	0.060	0.034	0.010	0.0057	
95-50-1	1,2-Dichlorobenzene	ND	0.034	ND	0.0057	
120-82-1	1,2,4-Trichlorobenzene	ND	0.034	ND	0.0046	
91-20-3	Naphthalene	0.15	0.14	0.029	0.026	
87-68-3	Hexachlorobutadiene	ND	0.034	ND	0.0032	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: N144-141-01-OND
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P1500566-007

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS00858

Date Collected: 2/11/15
Date Received: 2/12/15
Date Analyzed: 2/16/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -1.19 **Final Pressure (psig):** 3.54

Canister Dilution Factor: 1.35

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.3	0.034	0.47	0.0068	
74-87-3	Chloromethane	0.68	0.034	0.33	0.016	
75-01-4	Vinyl Chloride	ND	0.034	ND	0.013	
74-83-9	Bromomethane	0.052	0.034	0.013	0.0087	
75-00-3	Chloroethane	ND	0.034	ND	0.013	
67-64-1	Acetone	11	3.4	4.7	1.4	
75-69-4	Trichlorofluoromethane	1.6	0.034	0.29	0.0060	
75-35-4	1,1-Dichloroethene	ND	0.034	ND	0.0085	
75-09-2	Methylene Chloride	0.50	0.14	0.14	0.039	
76-13-1	Trichlorotrifluoroethane	0.53	0.034	0.069	0.0044	
156-60-5	trans-1,2-Dichloroethene	0.17	0.034	0.043	0.0085	
75-34-3	1,1-Dichloroethane	ND	0.034	ND	0.0083	
1634-04-4	Methyl tert-Butyl Ether	ND	0.034	ND	0.0094	
156-59-2	cis-1,2-Dichloroethene	0.14	0.034	0.036	0.0085	
67-66-3	Chloroform	0.19	0.14	0.039	0.028	
107-06-2	1,2-Dichloroethane	0.10	0.034	0.025	0.0083	
71-55-6	1,1,1-Trichloroethane	ND	0.034	ND	0.0062	
71-43-2	Benzene	0.69	0.10	0.22	0.032	
56-23-5	Carbon Tetrachloride	0.54	0.034	0.086	0.0054	
78-87-5	1,2-Dichloropropane	0.035	0.034	0.0076	0.0073	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: N144-141-01-OND
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P1500566-007

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 6.0 L Silonite Canister
 Test Notes:
 Container ID: AS00858

Date Collected: 2/11/15
 Date Received: 2/12/15
 Date Analyzed: 2/16/15
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -1.19 Final Pressure (psig): 3.54

Canister Dilution Factor: 1.35

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	0.034	ND	0.0050	
79-01-6	Trichloroethene	2.9	0.034	0.53	0.0063	
123-91-1	1,4-Dioxane	ND	0.14	ND	0.037	
10061-01-5	cis-1,3-Dichloropropene	ND	0.034	ND	0.0074	
10061-02-6	trans-1,3-Dichloropropene	ND	0.034	ND	0.0074	
79-00-5	1,1,2-Trichloroethane	ND	0.14	ND	0.025	
108-88-3	Toluene	2.0	0.14	0.53	0.036	
106-93-4	1,2-Dibromoethane	ND	0.034	ND	0.0044	
127-18-4	Tetrachloroethene	0.33	0.034	0.049	0.0050	
108-90-7	Chlorobenzene	ND	0.14	ND	0.029	
100-41-4	Ethylbenzene	0.31	0.14	0.072	0.031	
179601-23-1	m,p-Xylenes	0.94	0.14	0.22	0.031	
95-47-6	o-Xylene	0.36	0.14	0.082	0.031	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.034	ND	0.0049	
541-73-1	1,3-Dichlorobenzene	ND	0.034	ND	0.0056	
106-46-7	1,4-Dichlorobenzene	0.062	0.034	0.010	0.0056	
95-50-1	1,2-Dichlorobenzene	ND	0.034	ND	0.0056	
120-82-1	1,2,4-Trichlorobenzene	ND	0.034	ND	0.0045	
91-20-3	Naphthalene	ND	0.14	ND	0.026	
87-68-3	Hexachlorobutadiene	ND	0.034	ND	0.0032	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: N245-1-01-ON
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P1500566-008

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC02056

Date Collected: 2/11/15
Date Received: 2/12/15
Date Analyzed: 2/16/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -1.45 **Final Pressure (psig):** 3.76

Canister Dilution Factor: 1.39

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.4	0.035	0.48	0.0070	
74-87-3	Chloromethane	0.71	0.035	0.34	0.017	
75-01-4	Vinyl Chloride	ND	0.035	ND	0.014	
74-83-9	Bromomethane	0.053	0.035	0.014	0.0090	
75-00-3	Chloroethane	ND	0.035	ND	0.013	
67-64-1	Acetone	7.5	3.5	3.1	1.5	
75-69-4	Trichlorofluoromethane	1.7	0.035	0.30	0.0062	
75-35-4	1,1-Dichloroethene	ND	0.035	ND	0.0088	
75-09-2	Methylene Chloride	0.59	0.14	0.17	0.040	
76-13-1	Trichlorotrifluoroethane	0.54	0.035	0.071	0.0045	
156-60-5	trans-1,2-Dichloroethene	0.058	0.035	0.015	0.0088	
75-34-3	1,1-Dichloroethane	ND	0.035	ND	0.0086	
1634-04-4	Methyl tert-Butyl Ether	ND	0.035	ND	0.0096	
156-59-2	cis-1,2-Dichloroethene	ND	0.035	ND	0.0088	
67-66-3	Chloroform	0.19	0.14	0.040	0.028	
107-06-2	1,2-Dichloroethane	0.10	0.035	0.025	0.0086	
71-55-6	1,1,1-Trichloroethane	0.037	0.035	0.0068	0.0064	
71-43-2	Benzene	0.73	0.10	0.23	0.033	
56-23-5	Carbon Tetrachloride	0.66	0.035	0.10	0.0055	
78-87-5	1,2-Dichloropropane	0.035	0.035	0.0076	0.0075	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: N245-1-01-ON
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P1500566-008

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 6.0 L Summa Canister
 Test Notes:
 Container ID: AC02056

Date Collected: 2/11/15
 Date Received: 2/12/15
 Date Analyzed: 2/16/15
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -1.45 Final Pressure (psig): 3.76

Canister Dilution Factor: 1.39

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	0.035	ND	0.0052	
79-01-6	Trichloroethene	0.13	0.035	0.024	0.0065	
123-91-1	1,4-Dioxane	ND	0.14	ND	0.039	
10061-01-5	cis-1,3-Dichloropropene	ND	0.035	ND	0.0077	
10061-02-6	trans-1,3-Dichloropropene	ND	0.035	ND	0.0077	
79-00-5	1,1,2-Trichloroethane	ND	0.14	ND	0.025	
108-88-3	Toluene	3.8	0.14	1.0	0.037	
106-93-4	1,2-Dibromoethane	ND	0.035	ND	0.0045	
127-18-4	Tetrachloroethene	0.070	0.035	0.010	0.0051	
108-90-7	Chlorobenzene	ND	0.14	ND	0.030	
100-41-4	Ethylbenzene	0.72	0.14	0.17	0.032	
179601-23-1	m,p-Xylenes	2.9	0.14	0.66	0.032	
95-47-6	o-Xylene	1.2	0.14	0.27	0.032	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.035	ND	0.0051	
541-73-1	1,3-Dichlorobenzene	ND	0.035	ND	0.0058	
106-46-7	1,4-Dichlorobenzene	0.067	0.035	0.011	0.0058	
95-50-1	1,2-Dichlorobenzene	ND	0.035	ND	0.0058	
120-82-1	1,2,4-Trichlorobenzene	ND	0.035	ND	0.0047	
91-20-3	Naphthalene	0.24	0.14	0.046	0.027	
87-68-3	Hexachlorobutadiene	ND	0.035	ND	0.0033	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: N258-1-01-ON
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P1500566-009

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC00681

Date Collected: 2/11/15
Date Received: 2/12/15
Date Analyzed: 2/17/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): 1.27 Final Pressure (psig): 3.60

Canister Dilution Factor: 1.15

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.4	0.029	0.48	0.0058	
74-87-3	Chloromethane	0.69	0.029	0.33	0.014	
75-01-4	Vinyl Chloride	ND	0.029	ND	0.011	
74-83-9	Bromomethane	0.048	0.029	0.012	0.0074	
75-00-3	Chloroethane	ND	0.029	ND	0.011	
67-64-1	Acetone	5.8	2.9	2.5	1.2	
75-69-4	Trichlorofluoromethane	1.7	0.029	0.30	0.0051	
75-35-4	1,1-Dichloroethene	ND	0.029	ND	0.0073	
75-09-2	Methylene Chloride	0.40	0.12	0.12	0.033	
76-13-1	Trichlorotrifluoroethane	0.54	0.029	0.070	0.0038	
156-60-5	trans-1,2-Dichloroethene	ND	0.029	ND	0.0073	
75-34-3	1,1-Dichloroethane	ND	0.029	ND	0.0071	
1634-04-4	Methyl tert-Butyl Ether	ND	0.029	ND	0.0080	
156-59-2	cis-1,2-Dichloroethene	ND	0.029	ND	0.0073	
67-66-3	Chloroform	0.12	0.12	0.024	0.024	
107-06-2	1,2-Dichloroethane	0.083	0.029	0.020	0.0071	
71-55-6	1,1,1-Trichloroethane	ND	0.029	ND	0.0053	
71-43-2	Benzene	0.51	0.086	0.16	0.027	
56-23-5	Carbon Tetrachloride	0.53	0.029	0.084	0.0046	
78-87-5	1,2-Dichloropropane	0.030	0.029	0.0064	0.0062	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: N258-1-01-ON
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P1500566-009

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 6.0 L Summa Canister
 Test Notes:
 Container ID: AC00681

Date Collected: 2/11/15
 Date Received: 2/12/15
 Date Analyzed: 2/17/15
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): 1.27 Final Pressure (psig): 3.60

Canister Dilution Factor: 1.15

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	0.029	ND	0.0043	
79-01-6	Trichloroethene	ND	0.029	ND	0.0054	
123-91-1	1,4-Dioxane	ND	0.12	ND	0.032	
10061-01-5	cis-1,3-Dichloropropene	ND	0.029	ND	0.0063	
10061-02-6	trans-1,3-Dichloropropene	ND	0.029	ND	0.0063	
79-00-5	1,1,2-Trichloroethane	ND	0.12	ND	0.021	
108-88-3	Toluene	1.3	0.12	0.33	0.031	
106-93-4	1,2-Dibromoethane	ND	0.029	ND	0.0037	
127-18-4	Tetrachloroethene	0.034	0.029	0.0051	0.0042	
108-90-7	Chlorobenzene	ND	0.12	ND	0.025	
100-41-4	Ethylbenzene	0.29	0.12	0.066	0.026	
179601-23-1	m,p-Xylenes	1.2	0.12	0.27	0.026	
95-47-6	o-Xylene	0.46	0.12	0.11	0.026	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.029	ND	0.0042	
541-73-1	1,3-Dichlorobenzene	ND	0.029	ND	0.0048	
106-46-7	1,4-Dichlorobenzene	ND	0.029	ND	0.0048	
95-50-1	1,2-Dichlorobenzene	ND	0.029	ND	0.0048	
120-82-1	1,2,4-Trichlorobenzene	ND	0.029	ND	0.0039	
91-20-3	Naphthalene	0.16	0.12	0.031	0.022	
87-68-3	Hexachlorobutadiene	ND	0.029	ND	0.0027	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: N212-101A-01-ON
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P1500566-010

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS00388

Date Collected: 2/11/15
Date Received: 2/12/15
Date Analyzed: 2/17/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -1.94 **Final Pressure (psig):** 3.64

Canister Dilution Factor: 1.44

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.4	0.036	0.48	0.0073	
74-87-3	Chloromethane	0.70	0.036	0.34	0.017	
75-01-4	Vinyl Chloride	ND	0.036	ND	0.014	
74-83-9	Bromomethane	0.054	0.036	0.014	0.0093	
75-00-3	Chloroethane	ND	0.036	ND	0.014	
67-64-1	Acetone	57	3.6	24	1.5	
75-69-4	Trichlorofluoromethane	1.7	0.036	0.31	0.0064	
75-35-4	1,1-Dichloroethene	ND	0.036	ND	0.0091	
75-09-2	Methylene Chloride	13	0.14	3.7	0.041	
76-13-1	Trichlorotrifluoroethane	0.66	0.036	0.086	0.0047	
156-60-5	trans-1,2-Dichloroethene	0.053	0.036	0.013	0.0091	
75-34-3	1,1-Dichloroethane	ND	0.036	ND	0.0089	
1634-04-4	Methyl tert-Butyl Ether	ND	0.036	ND	0.010	
156-59-2	cis-1,2-Dichloroethene	ND	0.036	ND	0.0091	
67-66-3	Chloroform	0.21	0.14	0.043	0.029	
107-06-2	1,2-Dichloroethane	0.094	0.036	0.023	0.0089	
71-55-6	1,1,1-Trichloroethane	0.086	0.036	0.016	0.0066	
71-43-2	Benzene	0.98	0.11	0.31	0.034	
56-23-5	Carbon Tetrachloride	0.56	0.036	0.090	0.0057	
78-87-5	1,2-Dichloropropane	ND	0.036	ND	0.0078	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: N212-101A-01-ON
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P1500566-010

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 6.0 L Silonite Canister
 Test Notes:
 Container ID: AS00388

Date Collected: 2/11/15
 Date Received: 2/12/15
 Date Analyzed: 2/17/15
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -1.94 Final Pressure (psig): 3.64

Canister Dilution Factor: 1.44

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	0.036	ND	0.0054	
79-01-6	Trichloroethene	0.071	0.036	0.013	0.0067	
123-91-1	1,4-Dioxane	ND	0.14	ND	0.040	
10061-01-5	cis-1,3-Dichloropropene	ND	0.036	ND	0.0079	
10061-02-6	trans-1,3-Dichloropropene	ND	0.036	ND	0.0079	
79-00-5	1,1,2-Trichloroethane	ND	0.14	ND	0.026	
108-88-3	Toluene	11	0.14	3.0	0.038	
106-93-4	1,2-Dibromoethane	ND	0.036	ND	0.0047	
127-18-4	Tetrachloroethene	0.067	0.036	0.0099	0.0053	
108-90-7	Chlorobenzene	ND	0.14	ND	0.031	
100-41-4	Ethylbenzene	0.86	0.14	0.20	0.033	
179601-23-1	m,p-Xylenes	2.9	0.14	0.66	0.033	
95-47-6	o-Xylene	1.1	0.14	0.24	0.033	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.036	ND	0.0052	
541-73-1	1,3-Dichlorobenzene	ND	0.036	ND	0.0060	
106-46-7	1,4-Dichlorobenzene	0.050	0.036	0.0084	0.0060	
95-50-1	1,2-Dichlorobenzene	ND	0.036	ND	0.0060	
120-82-1	1,2,4-Trichlorobenzene	ND	0.036	ND	0.0049	
91-20-3	Naphthalene	0.15	0.14	0.029	0.027	
87-68-3	Hexachlorobutadiene	ND	0.036	ND	0.0034	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: Method Blank
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P150216-MB

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Silonite Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 2/16/15
Volume(s) Analyzed: 1.00 Liter(s)

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	0.025	ND	0.0051	
74-87-3	Chloromethane	ND	0.025	ND	0.012	
75-01-4	Vinyl Chloride	ND	0.025	ND	0.0098	
74-83-9	Bromomethane	ND	0.025	ND	0.0064	
75-00-3	Chloroethane	ND	0.025	ND	0.0095	
67-64-1	Acetone	ND	2.5	ND	1.1	
75-69-4	Trichlorofluoromethane	ND	0.025	ND	0.0045	
75-35-4	1,1-Dichloroethene	ND	0.025	ND	0.0063	
75-09-2	Methylene Chloride	ND	0.10	ND	0.029	
76-13-1	Trichlorotrifluoroethane	ND	0.025	ND	0.0033	
156-60-5	trans-1,2-Dichloroethene	ND	0.025	ND	0.0063	
75-34-3	1,1-Dichloroethane	ND	0.025	ND	0.0062	
1634-04-4	Methyl tert-Butyl Ether	ND	0.025	ND	0.0069	
156-59-2	cis-1,2-Dichloroethene	ND	0.025	ND	0.0063	
67-66-3	Chloroform	ND	0.10	ND	0.020	
107-06-2	1,2-Dichloroethane	ND	0.025	ND	0.0062	
71-55-6	1,1,1-Trichloroethane	ND	0.025	ND	0.0046	
71-43-2	Benzene	ND	0.075	ND	0.023	
56-23-5	Carbon Tetrachloride	ND	0.025	ND	0.0040	
78-87-5	1,2-Dichloropropane	ND	0.025	ND	0.0054	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: Method Blank
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P150216-MB

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 6.0 L Silonite Canister
 Test Notes:

Date Collected: NA
 Date Received: NA
 Date Analyzed: 2/16/15
 Volume(s) Analyzed: 1.00 Liter(s)

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	0.025	ND	0.0037	
79-01-6	Trichloroethene	ND	0.025	ND	0.0047	
123-91-1	1,4-Dioxane	ND	0.10	ND	0.028	
10061-01-5	cis-1,3-Dichloropropene	ND	0.025	ND	0.0055	
10061-02-6	trans-1,3-Dichloropropene	ND	0.025	ND	0.0055	
79-00-5	1,1,2-Trichloroethane	ND	0.10	ND	0.018	
108-88-3	Toluene	ND	0.10	ND	0.027	
106-93-4	1,2-Dibromoethane	ND	0.025	ND	0.0033	
127-18-4	Tetrachloroethene	ND	0.025	ND	0.0037	
108-90-7	Chlorobenzene	ND	0.10	ND	0.022	
100-41-4	Ethylbenzene	ND	0.10	ND	0.023	
179601-23-1	m,p-Xylenes	ND	0.10	ND	0.023	
95-47-6	o-Xylene	ND	0.10	ND	0.023	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.025	ND	0.0036	
541-73-1	1,3-Dichlorobenzene	ND	0.025	ND	0.0042	
106-46-7	1,4-Dichlorobenzene	ND	0.025	ND	0.0042	
95-50-1	1,2-Dichlorobenzene	ND	0.025	ND	0.0042	
120-82-1	1,2,4-Trichlorobenzene	ND	0.025	ND	0.0034	
91-20-3	Naphthalene	ND	0.10	ND	0.019	
87-68-3	Hexachlorobutadiene	ND	0.025	ND	0.0023	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

SURROGATE SPIKE RECOVERY RESULTS

Page 1 of 2

Client: NASA Ames Research Center
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister(s)
Test Notes:

Date(s) Collected: 2/10 - 2/11/15
Date(s) Received: 2/12/15
Date(s) Analyzed: 2/16 - 2/18/15

Client Sample ID	ALS Sample ID	1,2-Dichloroethane-d4	Toluene-d8	Bromofluorobenzene	Acceptance Limits	Data Qualifier
		% Recovered	% Recovered	% Recovered		
Method Blank	P150216-MB	102	104	98	70-130	
Method Blank	P150217-MB	97	103	107	70-130	
Method Blank	P150217-MB	100	104	100	70-130	
Lab Control Sample	P150216-LCS	105	102	102	70-130	
Lab Control Sample	P150217-LCS	96	101	109	70-130	
Lab Control Sample	P150217-LCS	101	102	104	70-130	
N144-107-01-ON	P1500566-001	101	95	109	70-130	
N144-C103-01-ON	P1500566-002	95	103	109	70-130	
N144-C103-01-ON	P1500566-002DUP	92	102	110	70-130	
N144-171-01-ON	P1500566-003	90	94	113	70-130	
N144-151-01-ON	P1500566-004	89	103	113	70-130	
N144-142-01-ON	P1500566-005	90	101	113	70-130	
N144-141-01-ON	P1500566-006	92	100	115	70-130	
N144-141-01-OND	P1500566-007	90	103	114	70-130	
N245-1-01-ON	P1500566-008	91	101	116	70-130	
N258-1-01-ON	P1500566-009	90	102	113	70-130	
N212-101A-01-ON	P1500566-010	91	102	113	70-130	
N212-105-01-ON	P1500566-011	95	102	105	70-130	
N212-105-01-OND	P1500566-012	96	96	112	70-130	

Surrogate percent recovery is verified and accepted based on the on-column result.

Reported results are shown in concentration units and as a result of the calculation, may vary slightly from the on-column percent recovery.

ALS ENVIRONMENTAL

SURROGATE SPIKE RECOVERY RESULTS

Page 2 of 2

Client: NASA Ames Research Center
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister(s)
Test Notes:

Date(s) Collected: 2/10 - 2/11/15
Date(s) Received: 2/12/15
Date(s) Analyzed: 2/16 - 2/18/15

Client Sample ID	ALS Sample ID	1,2-Dichloroethane-d4	Toluene-d8	Bromofluorobenzene	Acceptance Limits	Data Qualifier
		% Recovered	% Recovered	% Recovered		
T20G-1-01-ON	P1500566-013	90	104	106	70-130	
T20G-1-02-ON	P1500566-014	95	103	105	70-130	
N213-1-02-ON	P1500566-015	93	98	107	70-130	
N213-1-01-ON	P1500566-016	94	103	106	70-130	
N213-1-03-ON	P1500566-017	92	102	112	70-130	
N213-1-05-ON	P1500566-018	93	100	107	70-130	
N213-1-04-ON	P1500566-019	92	102	107	70-130	
N213-1-04-ON	P1500566-019DUP	94	102	107	70-130	
N213-B-03-ON	P1500566-020	94	103	105	70-130	
N213-B-02-ON	P1500566-021	93	103	104	70-130	
N213-B-01-ON	P1500566-022	93	102	104	70-130	
N213-B-01-OND	P1500566-023	94	95	107	70-130	
N211-179-05-ON	P1500566-024	96	105	108	70-130	
N211-136-03-ON	P1500566-025	96	104	104	70-130	
N211-119-02-ON	P1500566-026	96	104	102	70-130	
N211-103-01-ON	P1500566-027	92	100	110	70-130	
N240-1-01-ON	P1500566-028	91	103	112	70-130	
N240-1-02-ON	P1500566-029	93	93	113	70-130	
N240-1-03-ON	P1500566-030	99	105	102	70-130	

Surrogate percent recovery is verified and accepted based on the on-column result.

Reported results are shown in concentration units and as a result of the calculation, may vary slightly from the on-column percent recovery.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: Lab Control Sample
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P150216-LCS

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Silonite Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 2/16/15
Volume(s) Analyzed: 0.125 Liter(s)

CAS #	Compound	Spike Amount µg/m ³	Result µg/m ³	% Recovery	ALS Acceptance Limits	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	4.08	4.27	105	63-120	
74-87-3	Chloromethane	3.96	4.26	108	60-118	
75-01-4	Vinyl Chloride	4.04	4.16	103	63-120	
74-83-9	Bromomethane	4.04	4.30	106	65-118	
75-00-3	Chloroethane	4.04	4.31	107	63-118	
67-64-1	Acetone	21.6	23.1	107	70-130	
75-69-4	Trichlorofluoromethane	3.96	4.20	106	59-116	
75-35-4	1,1-Dichloroethene	4.28	4.43	104	67-114	
75-09-2	Methylene Chloride	4.32	4.46	103	66-111	
76-13-1	Trichlorotrifluoroethane	4.32	4.14	96	68-114	
156-60-5	trans-1,2-Dichloroethene	4.24	4.45	105	66-115	
75-34-3	1,1-Dichloroethane	4.16	4.50	108	65-117	
1634-04-4	Methyl tert-Butyl Ether	4.24	4.21	99	64-114	
156-59-2	cis-1,2-Dichloroethene	4.28	4.30	100	66-116	
67-66-3	Chloroform	4.32	4.54	105	63-114	
107-06-2	1,2-Dichloroethane	4.20	4.38	104	61-118	
71-55-6	1,1,1-Trichloroethane	4.16	4.09	98	65-114	
71-43-2	Benzene	4.40	4.65	106	67-118	
56-23-5	Carbon Tetrachloride	4.28	4.34	101	65-117	
78-87-5	1,2-Dichloropropane	4.24	4.42	104	63-116	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
 Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: Lab Control Sample
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P150216-LCS

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 6.0 L Silonite Canister
 Test Notes:

Date Collected: NA
 Date Received: NA
 Date Analyzed: 2/16/15
 Volume(s) Analyzed: 0.125 Liter(s)

CAS #	Compound	Spike Amount µg/m ³	Result µg/m ³	% Recovery	ALS Acceptance Limits	Data Qualifier
75-27-4	Bromodichloromethane	4.32	4.36	101	62-118	
79-01-6	Trichloroethene	4.16	4.12	99	66-116	
123-91-1	1,4-Dioxane	4.36	4.02	92	62-117	
10061-01-5	cis-1,3-Dichloropropene	4.52	4.66	103	63-117	
10061-02-6	trans-1,3-Dichloropropene	4.32	4.36	101	61-119	
79-00-5	1,1,2-Trichloroethane	4.24	4.40	104	64-117	
108-88-3	Toluene	4.24	4.01	95	66-113	
106-93-4	1,2-Dibromoethane	4.32	4.41	102	64-116	
127-18-4	Tetrachloroethene	3.96	3.64	92	65-118	
108-90-7	Chlorobenzene	4.32	4.02	93	67-126	
100-41-4	Ethylbenzene	4.24	3.98	94	67-124	
179601-23-1	m,p-Xylenes	8.40	7.93	94	66-128	
95-47-6	o-Xylene	4.12	3.86	94	65-127	
79-34-5	1,1,2,2-Tetrachloroethane	4.04	3.93	97	62-129	
541-73-1	1,3-Dichlorobenzene	4.36	4.07	93	62-131	
106-46-7	1,4-Dichlorobenzene	4.24	3.90	92	59-126	
95-50-1	1,2-Dichlorobenzene	4.28	4.15	97	59-131	
120-82-1	1,2,4-Trichlorobenzene	4.20	4.31	103	43-137	
91-20-3	Naphthalene	3.92	4.36	111	40-142	
87-68-3	Hexachlorobutadiene	4.28	4.27	100	49-133	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
 Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

ALS ENVIRONMENTAL

LABORATORY DUPLICATE SUMMARY RESULTS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: N144-C103-01-ON
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P1500566-002DUP

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS00098

Date Collected: 2/11/15
Date Received: 2/12/15
Date Analyzed: 2/16/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -0.73 **Final Pressure (psig):** 3.66

Canister Dilution Factor: 1.31

CAS #	Compound	Sample Result		Duplicate Sample Result		Average µg/m³	% RPD	RPD Limit	Data Qualifier
		µg/m³	ppbV	µg/m³	ppbV				
75-71-8	Dichlorodifluoromethane (CFC 12)	2.50	0.506	2.41	0.488	2.455	4	25	
74-87-3	Chloromethane	0.773	0.375	0.657	0.318	0.715	16	25	
75-01-4	Vinyl Chloride	ND	ND	ND	ND	-	-	25	
74-83-9	Bromomethane	0.103	0.0266	0.100	0.0257	0.1015	3	25	
75-00-3	Chloroethane	ND	ND	ND	ND	-	-	25	
67-64-1	Acetone	9.79	4.12	9.27	3.91	9.53	5	25	
75-69-4	Trichlorofluoromethane	2.64	0.471	2.43	0.433	2.535	8	25	
75-35-4	1,1-Dichloroethene	ND	ND	ND	ND	-	-	25	
75-09-2	Methylene Chloride	0.672	0.194	0.656	0.189	0.664	2	25	
76-13-1	Trichlorotrifluoroethane	0.542	0.0707	0.542	0.0708	0.542	0	25	
156-60-5	trans-1,2-Dichloroethene	0.0504	0.0127	0.0507	0.0128	0.05055	0.6	25	
75-34-3	1,1-Dichloroethane	ND	ND	ND	ND	-	-	25	
1634-04-4	Methyl tert-Butyl Ether	ND	ND	ND	ND	-	-	25	
156-59-2	cis-1,2-Dichloroethene	0.0398	0.0100	0.0384	0.00969	0.0391	4	25	
67-66-3	Chloroform	0.288	0.0590	0.281	0.0575	0.2845	2	25	
107-06-2	1,2-Dichloroethane	0.102	0.0252	0.0961	0.0238	0.09905	6	25	
71-55-6	1,1,1-Trichloroethane	0.0701	0.0129	0.0685	0.0126	0.0693	2	25	
71-43-2	Benzene	0.709	0.222	0.687	0.215	0.698	3	25	
56-23-5	Carbon Tetrachloride	0.563	0.0896	0.546	0.0868	0.5545	3	25	
78-87-5	1,2-Dichloropropane	0.0471	0.0102	0.0480	0.0104	0.04755	2	25	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

ALS ENVIRONMENTAL

LABORATORY DUPLICATE SUMMARY RESULTS

Page 2 of 2

Client: NASA Ames Research Center

Client Sample ID: N144-C103-01-ON

Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566

ALS Sample ID: P1500566-002DUP

Test Code: EPA TO-15 SIM

Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19

Analyst: Wida Ang

Sample Type: 6.0 L Silonite Canister

Test Notes:

Container ID: AS00098

Date Collected: 2/11/15

Date Received: 2/12/15

Date Analyzed: 2/16/15

Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -0.73

Final Pressure (psig): 3.66

Canister Dilution Factor: 1.31

CAS #	Compound	Sample Result		Duplicate Sample Result		Average µg/m ³	% RPD	RPD Limit	Data Qualifier
		µg/m ³	ppbV	µg/m ³	ppbV				
75-27-4	Bromodichloromethane	ND	ND	ND	ND	-	-	25	
79-01-6	Trichloroethene	0.181	0.0338	0.184	0.0342	0.1825	2	25	
123-91-1	1,4-Dioxane	ND	ND	ND	ND	-	-	25	
10061-01-5	cis-1,3-Dichloropropene	ND	ND	ND	ND	-	-	25	
10061-02-6	trans-1,3-Dichloropropene	ND	ND	ND	ND	-	-	25	
79-00-5	1,1,2-Trichloroethane	ND	ND	ND	ND	-	-	25	
108-88-3	Toluene	4.86	1.29	4.67	1.24	4.765	4	25	
106-93-4	1,2-Dibromoethane	ND	ND	ND	ND	-	-	25	
127-18-4	Tetrachloroethene	0.116	0.0172	0.114	0.0168	0.115	2	25	
108-90-7	Chlorobenzene	ND	ND	ND	ND	-	-	25	
100-41-4	Ethylbenzene	0.561	0.129	0.554	0.128	0.5575	1	25	
179601-23-1	m,p-Xylenes	1.54	0.354	1.54	0.356	1.54	0	25	
95-47-6	o-Xylene	0.497	0.114	0.493	0.113	0.495	0.8	25	
79-34-5	1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	-	-	25	
541-73-1	1,3-Dichlorobenzene	ND	ND	ND	ND	-	-	25	
106-46-7	1,4-Dichlorobenzene	0.0421	0.00701	0.0415	0.00691	0.0418	1	25	
95-50-1	1,2-Dichlorobenzene	ND	ND	ND	ND	-	-	25	
120-82-1	1,2,4-Trichlorobenzene	ND	ND	ND	ND	-	-	25	
91-20-3	Naphthalene	0.140	0.0267	0.137	0.0262	0.1385	2	25	
87-68-3	Hexachlorobutadiene	ND	ND	ND	ND	-	-	25	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 1

Client: NASA Ames Research Center
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566

Method Blank Summary

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister(s)
Test Notes:

Lab File ID: 02161511.D
Date Analyzed: 2/16/15
Time Analyzed: 16:17

Client Sample ID	ALS Sample ID	Lab File ID	Time Analyzed
Lab Control Sample	P150216-LCS	02161514.D	17:59
N144-107-01-ON	P1500566-001	02161518.D	19:50
N144-C103-01-ON	P1500566-002	02161519.D	20:17
N144-C103-01-ON (Lab Duplicate)	P1500566-002DUP	02161520.D	20:45
N144-171-01-ON	P1500566-003	02161521.D	21:12
N144-151-01-ON	P1500566-004	02161522.D	21:40
N144-142-01-ON	P1500566-005	02161523.D	22:09
N144-141-01-ON	P1500566-006	02161524.D	22:37
N144-141-01-OND	P1500566-007	02161525.D	23:05
N245-1-01-ON	P1500566-008	02161526.D	23:32
N258-1-01-ON	P1500566-009	02161527.D	00:00
N212-101A-01-ON	P1500566-010	02161528.D	00:28
N211-103-01-ON	P1500566-027	02161529.D	00:55
N240-1-01-ON	P1500566-028	02161530.D	01:23
N240-1-02-ON	P1500566-029	02161531.D	01:53

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 1

Client: NASA Ames Research Center

Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566

Internal Standard Area and RT Summary

Test Code: EPA TO-15 SIM

Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19

Analyst: Wida Ang

Sample Type: 6.0 L Summa Canister(s)

Test Notes:

Lab File ID: 02161502.D

Date Analyzed: 2/16/15

Time Analyzed: 08:59

	IS1 (BCM)			IS2 (DFB)			IS3 (CBZ)		
	AREA	#	RT	AREA	#	RT	AREA	#	RT
24 Hour Standard	21265		6.11	152654		8.71	25184		13.13
Upper Limit	29771		6.44	213716		9.04	35258		13.46
Lower Limit	12759		5.78	91592		8.38	15110		12.80

Client Sample ID		IS1 (BCM)		IS2 (DFB)		IS3 (CBZ)	
		AREA	RT	AREA	RT	AREA	RT
01	Method Blank	15623	6.12	116275	8.72	20860	13.13
02	Lab Control Sample	15669	6.11	116292	8.72	21083	13.13
03	N144-107-01-ON	16214	6.11	142012	8.72	23418	13.13
04	N144-C103-01-ON	17893	6.11	130892	8.72	25220	13.13
05	N144-C103-01-ON (Lab Duplicate)	19836	6.11	143033	8.71	26287	13.13
06	N144-171-01-ON	20844	6.12	161714	8.72	25274	13.13
07	N144-151-01-ON	21842	6.11	155161	8.72	26201	13.13
08	N144-142-01-ON	20829	6.11	152313	8.71	25272	13.13
09	N144-141-01-ON	20343	6.11	151716	8.72	24906	13.13
10	N144-141-01-OND	21021	6.11	149863	8.72	25544	13.13
11	N245-1-01-ON	20370	6.11	150388	8.72	25659	13.13
12	N258-1-01-ON	20470	6.11	147971	8.72	25036	13.13
13	N212-101A-01-ON	20148	6.11	146879	8.72	24778	13.13
14	N211-103-01-ON	19346	6.11	145856	8.72	24583	13.13
15	N240-1-01-ON	19745	6.11	142240	8.72	24252	13.13
16	N240-1-02-ON	19687	6.12	161829	8.72	24934	13.13
17							
18							
19							
20							

IS1 (BCM) = Bromochloromethane

IS2 (DFB) = 1,4-Difluorobenzene

IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = 140% of internal standard area

AREA LOWER LIMIT = 60% of internal standard area

RT UPPER LIMIT = 0.33 minutes of internal standard RT

RT LOWER LIMIT = 0.33 minutes of internal standard RT

Column used to flag values outside QC limits with an I.

I = Internal standard not within the specified limits. See case narrative.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: N212-105-01-ON
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P1500566-011

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC01482

Date Collected: 2/11/15
Date Received: 2/12/15
Date Analyzed: 2/17/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): 0.33 Final Pressure (psig): 3.66

Canister Dilution Factor: 1.22

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.3	0.031	0.46	0.0062	
74-87-3	Chloromethane	0.71	0.031	0.35	0.015	
75-01-4	Vinyl Chloride	ND	0.031	ND	0.012	
74-83-9	Bromomethane	0.053	0.031	0.014	0.0079	
75-00-3	Chloroethane	ND	0.031	ND	0.012	
67-64-1	Acetone	20	3.1	8.6	1.3	
75-69-4	Trichlorofluoromethane	1.7	0.031	0.30	0.0054	
75-35-4	1,1-Dichloroethene	ND	0.031	ND	0.0077	
75-09-2	Methylene Chloride	6.5	0.12	1.9	0.035	
76-13-1	Trichlorotrifluoroethane	0.56	0.031	0.073	0.0040	
156-60-5	trans-1,2-Dichloroethene	ND	0.031	ND	0.0077	
75-34-3	1,1-Dichloroethane	ND	0.031	ND	0.0075	
1634-04-4	Methyl tert-Butyl Ether	ND	0.031	ND	0.0085	
156-59-2	cis-1,2-Dichloroethene	ND	0.031	ND	0.0077	
67-66-3	Chloroform	0.15	0.12	0.030	0.025	
107-06-2	1,2-Dichloroethane	0.14	0.031	0.034	0.0075	
71-55-6	1,1,1-Trichloroethane	0.044	0.031	0.0080	0.0056	
71-43-2	Benzene	0.64	0.092	0.20	0.029	
56-23-5	Carbon Tetrachloride	0.49	0.031	0.079	0.0049	
78-87-5	1,2-Dichloropropane	0.059	0.031	0.013	0.0066	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: N212-105-01-ON
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P1500566-011

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 6.0 L Summa Canister
 Test Notes:
 Container ID: AC01482

Date Collected: 2/11/15
 Date Received: 2/12/15
 Date Analyzed: 2/17/15
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): 0.33 Final Pressure (psig): 3.66

Canister Dilution Factor: 1.22

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	0.031	ND	0.0046	
79-01-6	Trichloroethene	0.033	0.031	0.0061	0.0057	
123-91-1	1,4-Dioxane	ND	0.12	ND	0.034	
10061-01-5	cis-1,3-Dichloropropene	ND	0.031	ND	0.0067	
10061-02-6	trans-1,3-Dichloropropene	ND	0.031	ND	0.0067	
79-00-5	1,1,2-Trichloroethane	ND	0.12	ND	0.022	
108-88-3	Toluene	8.4	0.12	2.2	0.032	
106-93-4	1,2-Dibromoethane	ND	0.031	ND	0.0040	
127-18-4	Tetrachloroethene	0.049	0.031	0.0072	0.0045	
108-90-7	Chlorobenzene	ND	0.12	ND	0.027	
100-41-4	Ethylbenzene	0.73	0.12	0.17	0.028	
179601-23-1	m,p-Xylenes	2.2	0.12	0.51	0.028	
95-47-6	o-Xylene	0.77	0.12	0.18	0.028	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.031	ND	0.0044	
541-73-1	1,3-Dichlorobenzene	ND	0.031	ND	0.0051	
106-46-7	1,4-Dichlorobenzene	ND	0.031	ND	0.0051	
95-50-1	1,2-Dichlorobenzene	ND	0.031	ND	0.0051	
120-82-1	1,2,4-Trichlorobenzene	ND	0.031	ND	0.0041	
91-20-3	Naphthalene	ND	0.12	ND	0.023	
87-68-3	Hexachlorobutadiene	ND	0.031	ND	0.0029	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: N212-105-01-OND
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P1500566-012

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC01946

Date Collected: 2/11/15
Date Received: 2/12/15
Date Analyzed: 2/17/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -1.95 Final Pressure (psig): 3.68

Canister Dilution Factor: 1.44

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.3	0.036	0.47	0.0073	
74-87-3	Chloromethane	0.73	0.036	0.35	0.017	
75-01-4	Vinyl Chloride	ND	0.036	ND	0.014	
74-83-9	Bromomethane	0.063	0.036	0.016	0.0093	
75-00-3	Chloroethane	0.047	0.036	0.018	0.014	
67-64-1	Acetone	27	3.6	11	1.5	
75-69-4	Trichlorofluoromethane	1.8	0.036	0.31	0.0064	
75-35-4	1,1-Dichloroethene	ND	0.036	ND	0.0091	
75-09-2	Methylene Chloride	9.3	0.14	2.7	0.041	
76-13-1	Trichlorotrifluoroethane	0.58	0.036	0.076	0.0047	
156-60-5	trans-1,2-Dichloroethene	0.052	0.036	0.013	0.0091	
75-34-3	1,1-Dichloroethane	ND	0.036	ND	0.0089	
1634-04-4	Methyl tert-Butyl Ether	ND	0.036	ND	0.010	
156-59-2	cis-1,2-Dichloroethene	0.046	0.036	0.012	0.0091	
67-66-3	Chloroform	0.22	0.14	0.044	0.029	
107-06-2	1,2-Dichloroethane	0.13	0.036	0.032	0.0089	
71-55-6	1,1,1-Trichloroethane	0.061	0.036	0.011	0.0066	
71-43-2	Benzene	0.96	0.11	0.30	0.034	
56-23-5	Carbon Tetrachloride	0.61	0.036	0.097	0.0057	
78-87-5	1,2-Dichloropropane	0.043	0.036	0.0092	0.0078	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: N212-105-01-OND
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P1500566-012

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 6.0 L Summa Canister
 Test Notes:
 Container ID: AC01946

Date Collected: 2/11/15
 Date Received: 2/12/15
 Date Analyzed: 2/17/15
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -1.95 Final Pressure (psig): 3.68

Canister Dilution Factor: 1.44

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	0.036	ND	0.0054	
79-01-6	Trichloroethene	0.092	0.036	0.017	0.0067	
123-91-1	1,4-Dioxane	ND	0.14	ND	0.040	
10061-01-5	cis-1,3-Dichloropropene	ND	0.036	ND	0.0079	
10061-02-6	trans-1,3-Dichloropropene	ND	0.036	ND	0.0079	
79-00-5	1,1,2-Trichloroethane	ND	0.14	ND	0.026	
108-88-3	Toluene	7.5	0.14	2.0	0.038	
106-93-4	1,2-Dibromoethane	ND	0.036	ND	0.0047	
127-18-4	Tetrachloroethene	0.057	0.036	0.0084	0.0053	
108-90-7	Chlorobenzene	ND	0.14	ND	0.031	
100-41-4	Ethylbenzene	0.75	0.14	0.17	0.033	
179601-23-1	m,p-Xylenes	2.4	0.14	0.56	0.033	
95-47-6	o-Xylene	0.89	0.14	0.21	0.033	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.036	ND	0.0052	
541-73-1	1,3-Dichlorobenzene	ND	0.036	ND	0.0060	
106-46-7	1,4-Dichlorobenzene	0.054	0.036	0.0089	0.0060	
95-50-1	1,2-Dichlorobenzene	ND	0.036	ND	0.0060	
120-82-1	1,2,4-Trichlorobenzene	ND	0.036	ND	0.0049	
91-20-3	Naphthalene	0.43	0.14	0.082	0.027	
87-68-3	Hexachlorobutadiene	ND	0.036	ND	0.0034	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: T20G-1-01-ON
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P1500566-013

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS00602

Date Collected: 2/11/15
Date Received: 2/12/15
Date Analyzed: 2/17/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): 0.36 **Final Pressure (psig):** 3.58

Canister Dilution Factor: 1.21

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.4	0.030	0.48	0.0061	
74-87-3	Chloromethane	0.71	0.030	0.35	0.015	
75-01-4	Vinyl Chloride	ND	0.030	ND	0.012	
74-83-9	Bromomethane	0.12	0.030	0.030	0.0078	
75-00-3	Chloroethane	ND	0.030	ND	0.011	
67-64-1	Acetone	9.4	3.0	4.0	1.3	
75-69-4	Trichlorofluoromethane	1.8	0.030	0.33	0.0054	
75-35-4	1,1-Dichloroethene	ND	0.030	ND	0.0076	
75-09-2	Methylene Chloride	0.45	0.12	0.13	0.035	
76-13-1	Trichlorotrifluoroethane	0.55	0.030	0.071	0.0039	
156-60-5	trans-1,2-Dichloroethene	ND	0.030	ND	0.0076	
75-34-3	1,1-Dichloroethane	ND	0.030	ND	0.0075	
1634-04-4	Methyl tert-Butyl Ether	ND	0.030	ND	0.0084	
156-59-2	cis-1,2-Dichloroethene	ND	0.030	ND	0.0076	
67-66-3	Chloroform	0.15	0.12	0.031	0.025	
107-06-2	1,2-Dichloroethane	0.12	0.030	0.030	0.0075	
71-55-6	1,1,1-Trichloroethane	ND	0.030	ND	0.0055	
71-43-2	Benzene	0.55	0.091	0.17	0.028	
56-23-5	Carbon Tetrachloride	0.55	0.030	0.088	0.0048	
78-87-5	1,2-Dichloropropane	ND	0.030	ND	0.0065	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: T20G-1-01-ON
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P1500566-013

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS00602

Date Collected: 2/11/15
Date Received: 2/12/15
Date Analyzed: 2/17/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): 0.36 **Final Pressure (psig):** 3.58

Canister Dilution Factor: 1.21

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	0.030	ND	0.0045	
79-01-6	Trichloroethene	0.052	0.030	0.0097	0.0056	
123-91-1	1,4-Dioxane	ND	0.12	ND	0.034	
10061-01-5	cis-1,3-Dichloropropene	ND	0.030	ND	0.0067	
10061-02-6	trans-1,3-Dichloropropene	ND	0.030	ND	0.0067	
79-00-5	1,1,2-Trichloroethane	ND	0.12	ND	0.022	
108-88-3	Toluene	1.5	0.12	0.41	0.032	
106-93-4	1,2-Dibromoethane	ND	0.030	ND	0.0039	
127-18-4	Tetrachloroethene	0.052	0.030	0.0077	0.0045	
108-90-7	Chlorobenzene	ND	0.12	ND	0.026	
100-41-4	Ethylbenzene	0.24	0.12	0.055	0.028	
179601-23-1	m,p-Xylenes	0.62	0.12	0.14	0.028	
95-47-6	o-Xylene	0.23	0.12	0.052	0.028	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.030	ND	0.0044	
541-73-1	1,3-Dichlorobenzene	ND	0.030	ND	0.0050	
106-46-7	1,4-Dichlorobenzene	ND	0.030	ND	0.0050	
95-50-1	1,2-Dichlorobenzene	ND	0.030	ND	0.0050	
120-82-1	1,2,4-Trichlorobenzene	ND	0.030	ND	0.0041	
91-20-3	Naphthalene	ND	0.12	ND	0.023	
87-68-3	Hexachlorobutadiene	ND	0.030	ND	0.0028	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: T20G-1-02-ON
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P1500566-014

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC01939

Date Collected: 2/10/15
Date Received: 2/12/15
Date Analyzed: 2/17/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.31 **Final Pressure (psig):** 3.70

Canister Dilution Factor: 1.49

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.4	0.037	0.49	0.0075	
74-87-3	Chloromethane	0.79	0.037	0.38	0.018	
75-01-4	Vinyl Chloride	ND	0.037	ND	0.015	
74-83-9	Bromomethane	0.084	0.037	0.022	0.0096	
75-00-3	Chloroethane	ND	0.037	ND	0.014	
67-64-1	Acetone	10	3.7	4.3	1.6	
75-69-4	Trichlorofluoromethane	1.8	0.037	0.32	0.0066	
75-35-4	1,1-Dichloroethene	ND	0.037	ND	0.0094	
75-09-2	Methylene Chloride	0.41	0.15	0.12	0.043	
76-13-1	Trichlorotrifluoroethane	0.55	0.037	0.072	0.0049	
156-60-5	trans-1,2-Dichloroethene	ND	0.037	ND	0.0094	
75-34-3	1,1-Dichloroethane	ND	0.037	ND	0.0092	
1634-04-4	Methyl tert-Butyl Ether	ND	0.037	ND	0.010	
156-59-2	cis-1,2-Dichloroethene	ND	0.037	ND	0.0094	
67-66-3	Chloroform	0.17	0.15	0.035	0.031	
107-06-2	1,2-Dichloroethane	0.10	0.037	0.025	0.0092	
71-55-6	1,1,1-Trichloroethane	ND	0.037	ND	0.0068	
71-43-2	Benzene	0.45	0.11	0.14	0.035	
56-23-5	Carbon Tetrachloride	0.57	0.037	0.090	0.0059	
78-87-5	1,2-Dichloropropane	ND	0.037	ND	0.0081	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: T20G-1-02-ON
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P1500566-014

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 6.0 L Summa Canister
 Test Notes:
 Container ID: AC01939

Date Collected: 2/10/15
 Date Received: 2/12/15
 Date Analyzed: 2/17/15
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.31 Final Pressure (psig): 3.70

Canister Dilution Factor: 1.49

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	0.037	ND	0.0056	
79-01-6	Trichloroethene	ND	0.037	ND	0.0069	
123-91-1	1,4-Dioxane	ND	0.15	ND	0.041	
10061-01-5	cis-1,3-Dichloropropene	ND	0.037	ND	0.0082	
10061-02-6	trans-1,3-Dichloropropene	ND	0.037	ND	0.0082	
79-00-5	1,1,2-Trichloroethane	ND	0.15	ND	0.027	
108-88-3	Toluene	1.2	0.15	0.31	0.040	
106-93-4	1,2-Dibromoethane	ND	0.037	ND	0.0048	
127-18-4	Tetrachloroethene	0.054	0.037	0.0080	0.0055	
108-90-7	Chlorobenzene	ND	0.15	ND	0.032	
100-41-4	Ethylbenzene	0.25	0.15	0.057	0.034	
179601-23-1	m,p-Xylenes	0.65	0.15	0.15	0.034	
95-47-6	o-Xylene	0.25	0.15	0.057	0.034	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.037	ND	0.0054	
541-73-1	1,3-Dichlorobenzene	ND	0.037	ND	0.0062	
106-46-7	1,4-Dichlorobenzene	ND	0.037	ND	0.0062	
95-50-1	1,2-Dichlorobenzene	ND	0.037	ND	0.0062	
120-82-1	1,2,4-Trichlorobenzene	ND	0.037	ND	0.0050	
91-20-3	Naphthalene	0.49	0.15	0.094	0.028	
87-68-3	Hexachlorobutadiene	ND	0.037	ND	0.0035	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: N213-1-02-ON
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P1500566-015

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC01494

Date Collected: 2/11/15
Date Received: 2/12/15
Date Analyzed: 2/17/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): 0.53 **Final Pressure (psig):** 3.85

Canister Dilution Factor: 1.22

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.4	0.031	0.49	0.0062	
74-87-3	Chloromethane	0.74	0.031	0.36	0.015	
75-01-4	Vinyl Chloride	ND	0.031	ND	0.012	
74-83-9	Bromomethane	0.050	0.031	0.013	0.0079	
75-00-3	Chloroethane	ND	0.031	ND	0.012	
67-64-1	Acetone	20	3.1	8.2	1.3	
75-69-4	Trichlorofluoromethane	4.6	0.031	0.81	0.0054	
75-35-4	1,1-Dichloroethene	ND	0.031	ND	0.0077	
75-09-2	Methylene Chloride	0.53	0.12	0.15	0.035	
76-13-1	Trichlorotrifluoroethane	0.56	0.031	0.073	0.0040	
156-60-5	trans-1,2-Dichloroethene	0.049	0.031	0.012	0.0077	
75-34-3	1,1-Dichloroethane	ND	0.031	ND	0.0075	
1634-04-4	Methyl tert-Butyl Ether	ND	0.031	ND	0.0085	
156-59-2	cis-1,2-Dichloroethene	0.074	0.031	0.019	0.0077	
67-66-3	Chloroform	0.17	0.12	0.036	0.025	
107-06-2	1,2-Dichloroethane	0.11	0.031	0.026	0.0075	
71-55-6	1,1,1-Trichloroethane	0.042	0.031	0.0077	0.0056	
71-43-2	Benzene	0.76	0.092	0.24	0.029	
56-23-5	Carbon Tetrachloride	0.60	0.031	0.095	0.0049	
78-87-5	1,2-Dichloropropane	0.040	0.031	0.0087	0.0066	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: N213-1-02-ON
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P1500566-015

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 6.0 L Summa Canister
 Test Notes:
 Container ID: AC01494

Date Collected: 2/11/15
 Date Received: 2/12/15
 Date Analyzed: 2/17/15
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): 0.53 Final Pressure (psig): 3.85

Canister Dilution Factor: 1.22

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	0.031	ND	0.0046	
79-01-6	Trichloroethene	0.085	0.031	0.016	0.0057	
123-91-1	1,4-Dioxane	ND	0.12	ND	0.034	
10061-01-5	cis-1,3-Dichloropropene	ND	0.031	ND	0.0067	
10061-02-6	trans-1,3-Dichloropropene	ND	0.031	ND	0.0067	
79-00-5	1,1,2-Trichloroethane	ND	0.12	ND	0.022	
108-88-3	Toluene	3.5	0.12	0.94	0.032	
106-93-4	1,2-Dibromoethane	ND	0.031	ND	0.0040	
127-18-4	Tetrachloroethene	0.069	0.031	0.010	0.0045	
108-90-7	Chlorobenzene	ND	0.12	ND	0.027	
100-41-4	Ethylbenzene	0.48	0.12	0.11	0.028	
179601-23-1	m,p-Xylenes	1.4	0.12	0.32	0.028	
95-47-6	o-Xylene	0.50	0.12	0.12	0.028	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.031	ND	0.0044	
541-73-1	1,3-Dichlorobenzene	ND	0.031	ND	0.0051	
106-46-7	1,4-Dichlorobenzene	0.043	0.031	0.0071	0.0051	
95-50-1	1,2-Dichlorobenzene	ND	0.031	ND	0.0051	
120-82-1	1,2,4-Trichlorobenzene	ND	0.031	ND	0.0041	
91-20-3	Naphthalene	ND	0.12	ND	0.023	
87-68-3	Hexachlorobutadiene	ND	0.031	ND	0.0029	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: N213-1-01-ON
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P1500566-016

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS00658

Date Collected: 2/11/15
Date Received: 2/12/15
Date Analyzed: 2/17/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): 0.56 Final Pressure (psig): 3.62

Canister Dilution Factor: 1.20

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.4	0.030	0.48	0.0061	
74-87-3	Chloromethane	0.73	0.030	0.35	0.015	
75-01-4	Vinyl Chloride	ND	0.030	ND	0.012	
74-83-9	Bromomethane	0.054	0.030	0.014	0.0077	
75-00-3	Chloroethane	ND	0.030	ND	0.011	
67-64-1	Acetone	8.7	3.0	3.7	1.3	
75-69-4	Trichlorofluoromethane	2.4	0.030	0.42	0.0053	
75-35-4	1,1-Dichloroethene	ND	0.030	ND	0.0076	
75-09-2	Methylene Chloride	0.41	0.12	0.12	0.035	
76-13-1	Trichlorotrifluoroethane	0.55	0.030	0.072	0.0039	
156-60-5	trans-1,2-Dichloroethene	ND	0.030	ND	0.0076	
75-34-3	1,1-Dichloroethane	ND	0.030	ND	0.0074	
1634-04-4	Methyl tert-Butyl Ether	ND	0.030	ND	0.0083	
156-59-2	cis-1,2-Dichloroethene	0.045	0.030	0.011	0.0076	
67-66-3	Chloroform	0.13	0.12	0.026	0.025	
107-06-2	1,2-Dichloroethane	0.096	0.030	0.024	0.0074	
71-55-6	1,1,1-Trichloroethane	ND	0.030	ND	0.0055	
71-43-2	Benzene	0.51	0.090	0.16	0.028	
56-23-5	Carbon Tetrachloride	0.56	0.030	0.089	0.0048	
78-87-5	1,2-Dichloropropane	0.034	0.030	0.0073	0.0065	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: N213-1-01-ON
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P1500566-016

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 6.0 L Silonite Canister
 Test Notes:
 Container ID: AS00658

Date Collected: 2/11/15
 Date Received: 2/12/15
 Date Analyzed: 2/17/15
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): 0.56 Final Pressure (psig): 3.62

Canister Dilution Factor: 1.20

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	0.030	ND	0.0045	
79-01-6	Trichloroethene	0.065	0.030	0.012	0.0056	
123-91-1	1,4-Dioxane	ND	0.12	ND	0.033	
10061-01-5	cis-1,3-Dichloropropene	ND	0.030	ND	0.0066	
10061-02-6	trans-1,3-Dichloropropene	ND	0.030	ND	0.0066	
79-00-5	1,1,2-Trichloroethane	ND	0.12	ND	0.022	
108-88-3	Toluene	1.7	0.12	0.45	0.032	
106-93-4	1,2-Dibromoethane	ND	0.030	ND	0.0039	
127-18-4	Tetrachloroethene	0.047	0.030	0.0070	0.0044	
108-90-7	Chlorobenzene	ND	0.12	ND	0.026	
100-41-4	Ethylbenzene	0.24	0.12	0.055	0.028	
179601-23-1	m,p-Xylenes	0.60	0.12	0.14	0.028	
95-47-6	o-Xylene	0.23	0.12	0.053	0.028	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.030	ND	0.0044	
541-73-1	1,3-Dichlorobenzene	ND	0.030	ND	0.0050	
106-46-7	1,4-Dichlorobenzene	ND	0.030	ND	0.0050	
95-50-1	1,2-Dichlorobenzene	ND	0.030	ND	0.0050	
120-82-1	1,2,4-Trichlorobenzene	ND	0.030	ND	0.0040	
91-20-3	Naphthalene	ND	0.12	ND	0.023	
87-68-3	Hexachlorobutadiene	ND	0.030	ND	0.0028	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: N213-1-03-ON
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P1500566-017

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS00293

Date Collected: 2/11/15
Date Received: 2/12/15
Date Analyzed: 2/17/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): 0.03 Final Pressure (psig): 3.55

Canister Dilution Factor: 1.24

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.5	0.031	0.50	0.0063	
74-87-3	Chloromethane	0.70	0.031	0.34	0.015	
75-01-4	Vinyl Chloride	ND	0.031	ND	0.012	
74-83-9	Bromomethane	0.052	0.031	0.013	0.0080	
75-00-3	Chloroethane	ND	0.031	ND	0.012	
67-64-1	Acetone	11	3.1	4.7	1.3	
75-69-4	Trichlorofluoromethane	2.2	0.031	0.40	0.0055	
75-35-4	1,1-Dichloroethene	ND	0.031	ND	0.0078	
75-09-2	Methylene Chloride	0.62	0.12	0.18	0.036	
76-13-1	Trichlorotrifluoroethane	0.56	0.031	0.073	0.0040	
156-60-5	trans-1,2-Dichloroethene	0.046	0.031	0.012	0.0078	
75-34-3	1,1-Dichloroethane	ND	0.031	ND	0.0077	
1634-04-4	Methyl tert-Butyl Ether	ND	0.031	ND	0.0086	
156-59-2	cis-1,2-Dichloroethene	0.13	0.031	0.033	0.0078	
67-66-3	Chloroform	0.21	0.12	0.043	0.025	
107-06-2	1,2-Dichloroethane	0.11	0.031	0.028	0.0077	
71-55-6	1,1,1-Trichloroethane	ND	0.031	ND	0.0057	
71-43-2	Benzene	0.80	0.093	0.25	0.029	
56-23-5	Carbon Tetrachloride	0.57	0.031	0.090	0.0049	
78-87-5	1,2-Dichloropropane	0.041	0.031	0.0088	0.0067	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: N213-1-03-ON
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P1500566-017

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 6.0 L Silonite Canister
 Test Notes:
 Container ID: AS00293

Date Collected: 2/11/15
 Date Received: 2/12/15
 Date Analyzed: 2/17/15
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): 0.03 Final Pressure (psig): 3.55

Canister Dilution Factor: 1.24

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	0.031	ND	0.0046	
79-01-6	Trichloroethene	0.16	0.031	0.029	0.0058	
123-91-1	1,4-Dioxane	ND	0.12	ND	0.034	
10061-01-5	cis-1,3-Dichloropropene	ND	0.031	ND	0.0068	
10061-02-6	trans-1,3-Dichloropropene	ND	0.031	ND	0.0068	
79-00-5	1,1,2-Trichloroethane	ND	0.12	ND	0.023	
108-88-3	Toluene	2.8	0.12	0.74	0.033	
106-93-4	1,2-Dibromoethane	ND	0.031	ND	0.0040	
127-18-4	Tetrachloroethene	0.071	0.031	0.011	0.0046	
108-90-7	Chlorobenzene	ND	0.12	ND	0.027	
100-41-4	Ethylbenzene	0.41	0.12	0.094	0.029	
179601-23-1	m,p-Xylenes	1.2	0.12	0.28	0.029	
95-47-6	o-Xylene	0.46	0.12	0.11	0.029	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.031	ND	0.0045	
541-73-1	1,3-Dichlorobenzene	ND	0.031	ND	0.0052	
106-46-7	1,4-Dichlorobenzene	0.058	0.031	0.0097	0.0052	
95-50-1	1,2-Dichlorobenzene	ND	0.031	ND	0.0052	
120-82-1	1,2,4-Trichlorobenzene	ND	0.031	ND	0.0042	
91-20-3	Naphthalene	ND	0.12	ND	0.024	
87-68-3	Hexachlorobutadiene	ND	0.031	ND	0.0029	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: N213-1-05-ON
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P1500566-018

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS00695

Date Collected: 2/11/15
Date Received: 2/12/15
Date Analyzed: 2/17/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -0.06 Final Pressure (psig): 4.13

Canister Dilution Factor: 1.29

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.4	0.032	0.49	0.0065	
74-87-3	Chloromethane	0.74	0.032	0.36	0.016	
75-01-4	Vinyl Chloride	ND	0.032	ND	0.013	
74-83-9	Bromomethane	0.083	0.032	0.021	0.0083	
75-00-3	Chloroethane	ND	0.032	ND	0.012	
67-64-1	Acetone	17	3.2	7.3	1.4	
75-69-4	Trichlorofluoromethane	4.1	0.032	0.73	0.0057	
75-35-4	1,1-Dichloroethene	ND	0.032	ND	0.0081	
75-09-2	Methylene Chloride	0.62	0.13	0.18	0.037	
76-13-1	Trichlorotrifluoroethane	0.55	0.032	0.072	0.0042	
156-60-5	trans-1,2-Dichloroethene	0.052	0.032	0.013	0.0081	
75-34-3	1,1-Dichloroethane	ND	0.032	ND	0.0080	
1634-04-4	Methyl tert-Butyl Ether	ND	0.032	ND	0.0089	
156-59-2	cis-1,2-Dichloroethene	0.093	0.032	0.024	0.0081	
67-66-3	Chloroform	0.22	0.13	0.044	0.026	
107-06-2	1,2-Dichloroethane	0.13	0.032	0.032	0.0080	
71-55-6	1,1,1-Trichloroethane	0.034	0.032	0.0061	0.0059	
71-43-2	Benzene	4.7	0.097	1.5	0.030	
56-23-5	Carbon Tetrachloride	0.62	0.032	0.099	0.0051	
78-87-5	1,2-Dichloropropane	0.051	0.032	0.011	0.0070	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: N213-1-05-ON
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P1500566-018

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 6.0 L Silonite Canister
 Test Notes:
 Container ID: AS00695

Date Collected: 2/11/15
 Date Received: 2/12/15
 Date Analyzed: 2/17/15
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -0.06 Final Pressure (psig): 4.13

Canister Dilution Factor: 1.29

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	0.032	ND	0.0048	
79-01-6	Trichloroethene	0.10	0.032	0.019	0.0060	
123-91-1	1,4-Dioxane	ND	0.13	ND	0.036	
10061-01-5	cis-1,3-Dichloropropene	ND	0.032	ND	0.0071	
10061-02-6	trans-1,3-Dichloropropene	ND	0.032	ND	0.0071	
79-00-5	1,1,2-Trichloroethane	ND	0.13	ND	0.024	
108-88-3	Toluene	3.8	0.13	1.0	0.034	
106-93-4	1,2-Dibromoethane	ND	0.032	ND	0.0042	
127-18-4	Tetrachloroethene	0.086	0.032	0.013	0.0048	
108-90-7	Chlorobenzene	ND	0.13	ND	0.028	
100-41-4	Ethylbenzene	0.68	0.13	0.16	0.030	
179601-23-1	m,p-Xylenes	2.3	0.13	0.53	0.030	
95-47-6	o-Xylene	0.92	0.13	0.21	0.030	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.032	ND	0.0047	
541-73-1	1,3-Dichlorobenzene	ND	0.032	ND	0.0054	
106-46-7	1,4-Dichlorobenzene	0.056	0.032	0.0094	0.0054	
95-50-1	1,2-Dichlorobenzene	ND	0.032	ND	0.0054	
120-82-1	1,2,4-Trichlorobenzene	ND	0.032	ND	0.0043	
91-20-3	Naphthalene	0.37	0.13	0.071	0.025	
87-68-3	Hexachlorobutadiene	ND	0.032	ND	0.0030	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: N213-1-04-ON
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P1500566-019

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS00766

Date Collected: 2/11/15
Date Received: 2/12/15
Date Analyzed: 2/17/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): 0.53 **Final Pressure (psig):** 3.59

Canister Dilution Factor: 1.20

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.4	0.030	0.48	0.0061	
74-87-3	Chloromethane	0.67	0.030	0.32	0.015	
75-01-4	Vinyl Chloride	ND	0.030	ND	0.012	
74-83-9	Bromomethane	0.098	0.030	0.025	0.0077	
75-00-3	Chloroethane	ND	0.030	ND	0.011	
67-64-1	Acetone	8.7	3.0	3.7	1.3	
75-69-4	Trichlorofluoromethane	3.4	0.030	0.61	0.0053	
75-35-4	1,1-Dichloroethene	ND	0.030	ND	0.0076	
75-09-2	Methylene Chloride	0.52	0.12	0.15	0.035	
76-13-1	Trichlorotrifluoroethane	0.54	0.030	0.071	0.0039	
156-60-5	trans-1,2-Dichloroethene	0.036	0.030	0.0091	0.0076	
75-34-3	1,1-Dichloroethane	ND	0.030	ND	0.0074	
1634-04-4	Methyl tert-Butyl Ether	ND	0.030	ND	0.0083	
156-59-2	cis-1,2-Dichloroethene	0.087	0.030	0.022	0.0076	
67-66-3	Chloroform	0.17	0.12	0.035	0.025	
107-06-2	1,2-Dichloroethane	0.11	0.030	0.027	0.0074	
71-55-6	1,1,1-Trichloroethane	ND	0.030	ND	0.0055	
71-43-2	Benzene	0.79	0.090	0.25	0.028	
56-23-5	Carbon Tetrachloride	0.57	0.030	0.090	0.0048	
78-87-5	1,2-Dichloropropane	0.040	0.030	0.0087	0.0065	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: N213-1-04-ON
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P1500566-019

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 6.0 L Silonite Canister
 Test Notes:
 Container ID: AS00766

Date Collected: 2/11/15
 Date Received: 2/12/15
 Date Analyzed: 2/17/15
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): 0.53 Final Pressure (psig): 3.59

Canister Dilution Factor: 1.20

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	0.030	ND	0.0045	
79-01-6	Trichloroethene	0.12	0.030	0.023	0.0056	
123-91-1	1,4-Dioxane	ND	0.12	ND	0.033	
10061-01-5	cis-1,3-Dichloropropene	ND	0.030	ND	0.0066	
10061-02-6	trans-1,3-Dichloropropene	ND	0.030	ND	0.0066	
79-00-5	1,1,2-Trichloroethane	ND	0.12	ND	0.022	
108-88-3	Toluene	2.0	0.12	0.54	0.032	
106-93-4	1,2-Dibromoethane	ND	0.030	ND	0.0039	
127-18-4	Tetrachloroethene	0.061	0.030	0.0090	0.0044	
108-90-7	Chlorobenzene	ND	0.12	ND	0.026	
100-41-4	Ethylbenzene	0.35	0.12	0.080	0.028	
179601-23-1	m,p-Xylenes	1.1	0.12	0.24	0.028	
95-47-6	o-Xylene	0.40	0.12	0.093	0.028	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.030	ND	0.0044	
541-73-1	1,3-Dichlorobenzene	ND	0.030	ND	0.0050	
106-46-7	1,4-Dichlorobenzene	0.040	0.030	0.0066	0.0050	
95-50-1	1,2-Dichlorobenzene	ND	0.030	ND	0.0050	
120-82-1	1,2,4-Trichlorobenzene	ND	0.030	ND	0.0040	
91-20-3	Naphthalene	ND	0.12	ND	0.023	
87-68-3	Hexachlorobutadiene	ND	0.030	ND	0.0028	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: N213-B-03-ON
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P1500566-020

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC01610

Date Collected: 2/11/15
Date Received: 2/12/15
Date Analyzed: 2/17/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.06 **Final Pressure (psig):** 3.78

Canister Dilution Factor: 1.46

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.5	0.037	0.51	0.0074	
74-87-3	Chloromethane	0.78	0.037	0.38	0.018	
75-01-4	Vinyl Chloride	ND	0.037	ND	0.014	
74-83-9	Bromomethane	0.096	0.037	0.025	0.0094	
75-00-3	Chloroethane	ND	0.037	ND	0.014	
67-64-1	Acetone	21	3.7	8.8	1.5	
75-69-4	Trichlorofluoromethane	3.2	0.037	0.57	0.0065	
75-35-4	1,1-Dichloroethene	ND	0.037	ND	0.0092	
75-09-2	Methylene Chloride	0.65	0.15	0.19	0.042	
76-13-1	Trichlorotrifluoroethane	0.56	0.037	0.073	0.0048	
156-60-5	trans-1,2-Dichloroethene	0.057	0.037	0.014	0.0092	
75-34-3	1,1-Dichloroethane	ND	0.037	ND	0.0090	
1634-04-4	Methyl tert-Butyl Ether	ND	0.037	ND	0.010	
156-59-2	cis-1,2-Dichloroethene	0.076	0.037	0.019	0.0092	
67-66-3	Chloroform	0.21	0.15	0.044	0.030	
107-06-2	1,2-Dichloroethane	0.12	0.037	0.031	0.0090	
71-55-6	1,1,1-Trichloroethane	ND	0.037	ND	0.0067	
71-43-2	Benzene	0.87	0.11	0.27	0.034	
56-23-5	Carbon Tetrachloride	0.51	0.037	0.081	0.0058	
78-87-5	1,2-Dichloropropane	0.045	0.037	0.0098	0.0079	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: N213-B-03-ON
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P1500566-020

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 6.0 L Summa Canister
 Test Notes:
 Container ID: AC01610

Date Collected: 2/11/15
 Date Received: 2/12/15
 Date Analyzed: 2/17/15
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.06 Final Pressure (psig): 3.78

Canister Dilution Factor: 1.46

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	0.037	ND	0.0055	
79-01-6	Trichloroethene	0.10	0.037	0.020	0.0068	
123-91-1	1,4-Dioxane	ND	0.15	ND	0.041	
10061-01-5	cis-1,3-Dichloropropene	ND	0.037	ND	0.0080	
10061-02-6	trans-1,3-Dichloropropene	ND	0.037	ND	0.0080	
79-00-5	1,1,2-Trichloroethane	ND	0.15	ND	0.027	
108-88-3	Toluene	4.1	0.15	1.1	0.039	
106-93-4	1,2-Dibromoethane	ND	0.037	ND	0.0048	
127-18-4	Tetrachloroethene	0.078	0.037	0.012	0.0054	
108-90-7	Chlorobenzene	ND	0.15	ND	0.032	
100-41-4	Ethylbenzene	0.80	0.15	0.18	0.034	
179601-23-1	m,p-Xylenes	2.8	0.15	0.65	0.034	
95-47-6	o-Xylene	1.1	0.15	0.25	0.034	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.037	ND	0.0053	
541-73-1	1,3-Dichlorobenzene	ND	0.037	ND	0.0061	
106-46-7	1,4-Dichlorobenzene	0.058	0.037	0.0096	0.0061	
95-50-1	1,2-Dichlorobenzene	ND	0.037	ND	0.0061	
120-82-1	1,2,4-Trichlorobenzene	ND	0.037	ND	0.0049	
91-20-3	Naphthalene	0.27	0.15	0.052	0.028	
87-68-3	Hexachlorobutadiene	ND	0.037	ND	0.0034	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: N213-B-02-ON
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P1500566-021

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS00820

Date Collected: 2/11/15
Date Received: 2/12/15
Date Analyzed: 2/17/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): 0.48 Final Pressure (psig): 3.61

Canister Dilution Factor: 1.21

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.4	0.030	0.49	0.0061	
74-87-3	Chloromethane	0.73	0.030	0.35	0.015	
75-01-4	Vinyl Chloride	ND	0.030	ND	0.012	
74-83-9	Bromomethane	0.046	0.030	0.012	0.0078	
75-00-3	Chloroethane	ND	0.030	ND	0.011	
67-64-1	Acetone	9.7	3.0	4.1	1.3	
75-69-4	Trichlorofluoromethane	23	0.030	4.1	0.0054	
75-35-4	1,1-Dichloroethene	ND	0.030	ND	0.0076	
75-09-2	Methylene Chloride	0.45	0.12	0.13	0.035	
76-13-1	Trichlorotrifluoroethane	0.56	0.030	0.072	0.0039	
156-60-5	trans-1,2-Dichloroethene	ND	0.030	ND	0.0076	
75-34-3	1,1-Dichloroethane	ND	0.030	ND	0.0075	
1634-04-4	Methyl tert-Butyl Ether	ND	0.030	ND	0.0084	
156-59-2	cis-1,2-Dichloroethene	0.12	0.030	0.031	0.0076	
67-66-3	Chloroform	0.16	0.12	0.033	0.025	
107-06-2	1,2-Dichloroethane	0.11	0.030	0.027	0.0075	
71-55-6	1,1,1-Trichloroethane	0.045	0.030	0.0082	0.0055	
71-43-2	Benzene	0.63	0.091	0.20	0.028	
56-23-5	Carbon Tetrachloride	0.56	0.030	0.089	0.0048	
78-87-5	1,2-Dichloropropane	0.046	0.030	0.010	0.0065	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: N213-B-02-ON
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P1500566-021

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 6.0 L Silonite Canister
 Test Notes:
 Container ID: AS00820

Date Collected: 2/11/15
 Date Received: 2/12/15
 Date Analyzed: 2/17/15
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): 0.48 Final Pressure (psig): 3.61

Canister Dilution Factor: 1.21

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	0.030	ND	0.0045	
79-01-6	Trichloroethene	0.069	0.030	0.013	0.0056	
123-91-1	1,4-Dioxane	ND	0.12	ND	0.034	
10061-01-5	cis-1,3-Dichloropropene	ND	0.030	ND	0.0067	
10061-02-6	trans-1,3-Dichloropropene	ND	0.030	ND	0.0067	
79-00-5	1,1,2-Trichloroethane	ND	0.12	ND	0.022	
108-88-3	Toluene	2.0	0.12	0.54	0.032	
106-93-4	1,2-Dibromoethane	ND	0.030	ND	0.0039	
127-18-4	Tetrachloroethene	0.075	0.030	0.011	0.0045	
108-90-7	Chlorobenzene	ND	0.12	ND	0.026	
100-41-4	Ethylbenzene	0.37	0.12	0.086	0.028	
179601-23-1	m,p-Xylenes	1.1	0.12	0.25	0.028	
95-47-6	o-Xylene	0.50	0.12	0.11	0.028	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.030	ND	0.0044	
541-73-1	1,3-Dichlorobenzene	ND	0.030	ND	0.0050	
106-46-7	1,4-Dichlorobenzene	0.057	0.030	0.0094	0.0050	
95-50-1	1,2-Dichlorobenzene	ND	0.030	ND	0.0050	
120-82-1	1,2,4-Trichlorobenzene	0.069	0.030	0.0093	0.0041	
91-20-3	Naphthalene	26	0.12	4.9	0.023	
87-68-3	Hexachlorobutadiene	ND	0.030	ND	0.0028	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: N213-B-01-ON
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P1500566-022

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS00542

Date Collected: 2/11/15
Date Received: 2/12/15
Date Analyzed: 2/17/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -3.32 Final Pressure (psig): 3.67

Canister Dilution Factor: 1.61

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.6	0.040	0.53	0.0081	
74-87-3	Chloromethane	0.77	0.040	0.37	0.019	
75-01-4	Vinyl Chloride	ND	0.040	ND	0.016	
74-83-9	Bromomethane	0.060	0.040	0.015	0.010	
75-00-3	Chloroethane	ND	0.040	ND	0.015	
67-64-1	Acetone	54	4.0	23	1.7	
75-69-4	Trichlorofluoromethane	2.9	0.040	0.51	0.0072	
75-35-4	1,1-Dichloroethene	ND	0.040	ND	0.010	
75-09-2	Methylene Chloride	0.70	0.16	0.20	0.046	
76-13-1	Trichlorotrifluoroethane	0.56	0.040	0.073	0.0053	
156-60-5	trans-1,2-Dichloroethene	0.057	0.040	0.014	0.010	
75-34-3	1,1-Dichloroethane	ND	0.040	ND	0.0099	
1634-04-4	Methyl tert-Butyl Ether	ND	0.040	ND	0.011	
156-59-2	cis-1,2-Dichloroethene	0.073	0.040	0.019	0.010	
67-66-3	Chloroform	0.35	0.16	0.071	0.033	
107-06-2	1,2-Dichloroethane	0.17	0.040	0.042	0.0099	
71-55-6	1,1,1-Trichloroethane	0.068	0.040	0.012	0.0074	
71-43-2	Benzene	0.85	0.12	0.27	0.038	
56-23-5	Carbon Tetrachloride	0.55	0.040	0.087	0.0064	
78-87-5	1,2-Dichloropropane	0.068	0.040	0.015	0.0087	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: N213-B-01-ON
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P1500566-022

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 6.0 L Silonite Canister
 Test Notes:
 Container ID: AS00542

Date Collected: 2/11/15
 Date Received: 2/12/15
 Date Analyzed: 2/17/15
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -3.32 Final Pressure (psig): 3.67

Canister Dilution Factor: 1.61

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	0.040	ND	0.0060	
79-01-6	Trichloroethene	0.10	0.040	0.019	0.0075	
123-91-1	1,4-Dioxane	ND	0.16	ND	0.045	
10061-01-5	cis-1,3-Dichloropropene	ND	0.040	ND	0.0089	
10061-02-6	trans-1,3-Dichloropropene	ND	0.040	ND	0.0089	
79-00-5	1,1,2-Trichloroethane	ND	0.16	ND	0.030	
108-88-3	Toluene	4.2	0.16	1.1	0.043	
106-93-4	1,2-Dibromoethane	ND	0.040	ND	0.0052	
127-18-4	Tetrachloroethene	0.085	0.040	0.013	0.0059	
108-90-7	Chlorobenzene	ND	0.16	ND	0.035	
100-41-4	Ethylbenzene	0.59	0.16	0.14	0.037	
179601-23-1	m,p-Xylenes	1.9	0.16	0.44	0.037	
95-47-6	o-Xylene	0.70	0.16	0.16	0.037	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.040	ND	0.0059	
541-73-1	1,3-Dichlorobenzene	ND	0.040	ND	0.0067	
106-46-7	1,4-Dichlorobenzene	0.063	0.040	0.011	0.0067	
95-50-1	1,2-Dichlorobenzene	ND	0.040	ND	0.0067	
120-82-1	1,2,4-Trichlorobenzene	0.092	0.040	0.012	0.0054	
91-20-3	Naphthalene	0.38	0.16	0.073	0.031	
87-68-3	Hexachlorobutadiene	ND	0.040	ND	0.0038	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: N213-B-01-OND
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P1500566-023

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS00780

Date Collected: 2/11/15
Date Received: 2/12/15
Date Analyzed: 2/17/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): 0.41 Final Pressure (psig): 3.87

Canister Dilution Factor: 1.23

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.8	0.031	0.57	0.0062	
74-87-3	Chloromethane	0.70	0.031	0.34	0.015	
75-01-4	Vinyl Chloride	ND	0.031	ND	0.012	
74-83-9	Bromomethane	0.088	0.031	0.023	0.0079	
75-00-3	Chloroethane	ND	0.031	ND	0.012	
67-64-1	Acetone	12	3.1	4.9	1.3	
75-69-4	Trichlorofluoromethane	3.4	0.031	0.61	0.0055	
75-35-4	1,1-Dichloroethene	ND	0.031	ND	0.0078	
75-09-2	Methylene Chloride	0.52	0.12	0.15	0.035	
76-13-1	Trichlorotrifluoroethane	0.55	0.031	0.071	0.0040	
156-60-5	trans-1,2-Dichloroethene	ND	0.031	ND	0.0078	
75-34-3	1,1-Dichloroethane	ND	0.031	ND	0.0076	
1634-04-4	Methyl tert-Butyl Ether	ND	0.031	ND	0.0085	
156-59-2	cis-1,2-Dichloroethene	0.060	0.031	0.015	0.0078	
67-66-3	Chloroform	0.14	0.12	0.029	0.025	
107-06-2	1,2-Dichloroethane	0.22	0.031	0.055	0.0076	
71-55-6	1,1,1-Trichloroethane	0.077	0.031	0.014	0.0056	
71-43-2	Benzene	0.62	0.092	0.19	0.029	
56-23-5	Carbon Tetrachloride	0.68	0.031	0.11	0.0049	
78-87-5	1,2-Dichloropropane	0.095	0.031	0.020	0.0067	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: N213-B-01-OND
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P1500566-023

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 6.0 L Silonite Canister
 Test Notes:
 Container ID: AS00780

Date Collected: 2/11/15
 Date Received: 2/12/15
 Date Analyzed: 2/17/15
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): 0.41 Final Pressure (psig): 3.87

Canister Dilution Factor: 1.23

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	0.031	ND	0.0046	
79-01-6	Trichloroethene	0.049	0.031	0.0091	0.0057	
123-91-1	1,4-Dioxane	ND	0.12	ND	0.034	
10061-01-5	cis-1,3-Dichloropropene	ND	0.031	ND	0.0068	
10061-02-6	trans-1,3-Dichloropropene	ND	0.031	ND	0.0068	
79-00-5	1,1,2-Trichloroethane	ND	0.12	ND	0.023	
108-88-3	Toluene	5.1	0.12	1.3	0.033	
106-93-4	1,2-Dibromoethane	ND	0.031	ND	0.0040	
127-18-4	Tetrachloroethene	0.072	0.031	0.011	0.0045	
108-90-7	Chlorobenzene	ND	0.12	ND	0.027	
100-41-4	Ethylbenzene	0.52	0.12	0.12	0.028	
179601-23-1	m,p-Xylenes	1.7	0.12	0.38	0.028	
95-47-6	o-Xylene	0.62	0.12	0.14	0.028	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.031	ND	0.0045	
541-73-1	1,3-Dichlorobenzene	ND	0.031	ND	0.0051	
106-46-7	1,4-Dichlorobenzene	0.034	0.031	0.0057	0.0051	
95-50-1	1,2-Dichlorobenzene	ND	0.031	ND	0.0051	
120-82-1	1,2,4-Trichlorobenzene	0.092	0.031	0.012	0.0041	
91-20-3	Naphthalene	ND	0.12	ND	0.023	
87-68-3	Hexachlorobutadiene	ND	0.031	ND	0.0029	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: N211-179-05-ON
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P1500566-024

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC01784

Date Collected: 2/11/15
Date Received: 2/12/15
Date Analyzed: 2/17/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -1.68 Final Pressure (psig): 3.66

Canister Dilution Factor: 1.41

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.5	0.035	0.51	0.0071	
74-87-3	Chloromethane	0.80	0.035	0.39	0.017	
75-01-4	Vinyl Chloride	ND	0.035	ND	0.014	
74-83-9	Bromomethane	0.050	0.035	0.013	0.0091	
75-00-3	Chloroethane	ND	0.035	ND	0.013	
67-64-1	Acetone	20	3.5	8.2	1.5	
75-69-4	Trichlorofluoromethane	1.8	0.035	0.33	0.0063	
75-35-4	1,1-Dichloroethene	ND	0.035	ND	0.0089	
75-09-2	Methylene Chloride	1.0	0.14	0.29	0.041	
76-13-1	Trichlorotrifluoroethane	0.55	0.035	0.072	0.0046	
156-60-5	trans-1,2-Dichloroethene	0.053	0.035	0.013	0.0089	
75-34-3	1,1-Dichloroethane	ND	0.035	ND	0.0087	
1634-04-4	Methyl tert-Butyl Ether	ND	0.035	ND	0.0098	
156-59-2	cis-1,2-Dichloroethene	0.050	0.035	0.013	0.0089	
67-66-3	Chloroform	0.22	0.14	0.044	0.029	
107-06-2	1,2-Dichloroethane	0.10	0.035	0.025	0.0087	
71-55-6	1,1,1-Trichloroethane	ND	0.035	ND	0.0065	
71-43-2	Benzene	0.82	0.11	0.26	0.033	
56-23-5	Carbon Tetrachloride	0.56	0.035	0.089	0.0056	
78-87-5	1,2-Dichloropropane	0.038	0.035	0.0083	0.0076	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: N211-179-05-ON
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P1500566-024

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 6.0 L Summa Canister
 Test Notes:
 Container ID: AC01784

Date Collected: 2/11/15
 Date Received: 2/12/15
 Date Analyzed: 2/17/15
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -1.68 Final Pressure (psig): 3.66

Canister Dilution Factor: 1.41

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	0.035	ND	0.0053	
79-01-6	Trichloroethene	0.13	0.035	0.025	0.0066	
123-91-1	1,4-Dioxane	ND	0.14	ND	0.039	
10061-01-5	cis-1,3-Dichloropropene	ND	0.035	ND	0.0078	
10061-02-6	trans-1,3-Dichloropropene	ND	0.035	ND	0.0078	
79-00-5	1,1,2-Trichloroethane	ND	0.14	ND	0.026	
108-88-3	Toluene	4.0	0.14	1.1	0.037	
106-93-4	1,2-Dibromoethane	ND	0.035	ND	0.0046	
127-18-4	Tetrachloroethene	0.086	0.035	0.013	0.0052	
108-90-7	Chlorobenzene	ND	0.14	ND	0.031	
100-41-4	Ethylbenzene	0.67	0.14	0.15	0.032	
179601-23-1	m,p-Xylenes	2.0	0.14	0.47	0.032	
95-47-6	o-Xylene	0.68	0.14	0.16	0.032	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.035	ND	0.0051	
541-73-1	1,3-Dichlorobenzene	ND	0.035	ND	0.0059	
106-46-7	1,4-Dichlorobenzene	0.066	0.035	0.011	0.0059	
95-50-1	1,2-Dichlorobenzene	ND	0.035	ND	0.0059	
120-82-1	1,2,4-Trichlorobenzene	ND	0.035	ND	0.0048	
91-20-3	Naphthalene	ND	0.14	ND	0.027	
87-68-3	Hexachlorobutadiene	ND	0.035	ND	0.0033	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: N211-136-03-ON
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P1500566-025

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC02028

Date Collected: 2/11/15
Date Received: 2/12/15
Date Analyzed: 2/17/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): 0.25 Final Pressure (psig): 3.72

Canister Dilution Factor: 1.23

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.6	0.031	0.53	0.0062	
74-87-3	Chloromethane	0.77	0.031	0.38	0.015	
75-01-4	Vinyl Chloride	ND	0.031	ND	0.012	
74-83-9	Bromomethane	0.080	0.031	0.021	0.0079	
75-00-3	Chloroethane	ND	0.031	ND	0.012	
67-64-1	Acetone	7.6	3.1	3.2	1.3	
75-69-4	Trichlorofluoromethane	1.9	0.031	0.33	0.0055	
75-35-4	1,1-Dichloroethene	ND	0.031	ND	0.0078	
75-09-2	Methylene Chloride	0.62	0.12	0.18	0.035	
76-13-1	Trichlorotrifluoroethane	0.56	0.031	0.073	0.0040	
156-60-5	trans-1,2-Dichloroethene	0.055	0.031	0.014	0.0078	
75-34-3	1,1-Dichloroethane	ND	0.031	ND	0.0076	
1634-04-4	Methyl tert-Butyl Ether	ND	0.031	ND	0.0085	
156-59-2	cis-1,2-Dichloroethene	0.079	0.031	0.020	0.0078	
67-66-3	Chloroform	0.25	0.12	0.051	0.025	
107-06-2	1,2-Dichloroethane	0.10	0.031	0.025	0.0076	
71-55-6	1,1,1-Trichloroethane	ND	0.031	ND	0.0056	
71-43-2	Benzene	0.85	0.092	0.26	0.029	
56-23-5	Carbon Tetrachloride	0.50	0.031	0.079	0.0049	
78-87-5	1,2-Dichloropropane	0.036	0.031	0.0079	0.0067	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: N211-136-03-ON
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P1500566-025

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 6.0 L Summa Canister
 Test Notes:
 Container ID: AC02028

Date Collected: 2/11/15
 Date Received: 2/12/15
 Date Analyzed: 2/17/15
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): 0.25 Final Pressure (psig): 3.72

Canister Dilution Factor: 1.23

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	0.031	ND	0.0046	
79-01-6	Trichloroethene	0.18	0.031	0.034	0.0057	
123-91-1	1,4-Dioxane	ND	0.12	ND	0.034	
10061-01-5	cis-1,3-Dichloropropene	ND	0.031	ND	0.0068	
10061-02-6	trans-1,3-Dichloropropene	ND	0.031	ND	0.0068	
79-00-5	1,1,2-Trichloroethane	ND	0.12	ND	0.023	
108-88-3	Toluene	3.0	0.12	0.80	0.033	
106-93-4	1,2-Dibromoethane	ND	0.031	ND	0.0040	
127-18-4	Tetrachloroethene	0.076	0.031	0.011	0.0045	
108-90-7	Chlorobenzene	ND	0.12	ND	0.027	
100-41-4	Ethylbenzene	0.43	0.12	0.10	0.028	
179601-23-1	m,p-Xylenes	1.4	0.12	0.32	0.028	
95-47-6	o-Xylene	0.50	0.12	0.12	0.028	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.031	ND	0.0045	
541-73-1	1,3-Dichlorobenzene	ND	0.031	ND	0.0051	
106-46-7	1,4-Dichlorobenzene	0.063	0.031	0.011	0.0051	
95-50-1	1,2-Dichlorobenzene	ND	0.031	ND	0.0051	
120-82-1	1,2,4-Trichlorobenzene	ND	0.031	ND	0.0041	
91-20-3	Naphthalene	ND	0.12	ND	0.023	
87-68-3	Hexachlorobutadiene	ND	0.031	ND	0.0029	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: N211-119-02-ON
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P1500566-026

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS00804

Date Collected: 2/11/15
Date Received: 2/12/15
Date Analyzed: 2/17/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): 0.48 Final Pressure (psig): 3.73

Canister Dilution Factor: 1.21

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.4	0.030	0.49	0.0061	
74-87-3	Chloromethane	0.69	0.030	0.34	0.015	
75-01-4	Vinyl Chloride	ND	0.030	ND	0.012	
74-83-9	Bromomethane	0.063	0.030	0.016	0.0078	
75-00-3	Chloroethane	ND	0.030	ND	0.011	
67-64-1	Acetone	7.1	3.0	3.0	1.3	
75-69-4	Trichlorofluoromethane	1.8	0.030	0.33	0.0054	
75-35-4	1,1-Dichloroethene	ND	0.030	ND	0.0076	
75-09-2	Methylene Chloride	0.44	0.12	0.13	0.035	
76-13-1	Trichlorotrifluoroethane	0.53	0.030	0.070	0.0039	
156-60-5	trans-1,2-Dichloroethene	ND	0.030	ND	0.0076	
75-34-3	1,1-Dichloroethane	ND	0.030	ND	0.0075	
1634-04-4	Methyl tert-Butyl Ether	ND	0.030	ND	0.0084	
156-59-2	cis-1,2-Dichloroethene	0.040	0.030	0.010	0.0076	
67-66-3	Chloroform	0.16	0.12	0.034	0.025	
107-06-2	1,2-Dichloroethane	0.10	0.030	0.025	0.0075	
71-55-6	1,1,1-Trichloroethane	ND	0.030	ND	0.0055	
71-43-2	Benzene	0.68	0.091	0.21	0.028	
56-23-5	Carbon Tetrachloride	0.56	0.030	0.088	0.0048	
78-87-5	1,2-Dichloropropane	0.037	0.030	0.0080	0.0065	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: N211-119-02-ON
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P1500566-026

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 6.0 L Silonite Canister
 Test Notes:
 Container ID: AS00804

Date Collected: 2/11/15
 Date Received: 2/12/15
 Date Analyzed: 2/17/15
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): 0.48 Final Pressure (psig): 3.73

Canister Dilution Factor: 1.21

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	0.030	ND	0.0045	
79-01-6	Trichloroethene	0.13	0.030	0.023	0.0056	
123-91-1	1,4-Dioxane	ND	0.12	ND	0.034	
10061-01-5	cis-1,3-Dichloropropene	ND	0.030	ND	0.0067	
10061-02-6	trans-1,3-Dichloropropene	ND	0.030	ND	0.0067	
79-00-5	1,1,2-Trichloroethane	ND	0.12	ND	0.022	
108-88-3	Toluene	3.0	0.12	0.79	0.032	
106-93-4	1,2-Dibromoethane	ND	0.030	ND	0.0039	
127-18-4	Tetrachloroethene	0.055	0.030	0.0081	0.0045	
108-90-7	Chlorobenzene	ND	0.12	ND	0.026	
100-41-4	Ethylbenzene	0.37	0.12	0.086	0.028	
179601-23-1	m,p-Xylenes	1.1	0.12	0.26	0.028	
95-47-6	o-Xylene	0.40	0.12	0.093	0.028	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.030	ND	0.0044	
541-73-1	1,3-Dichlorobenzene	ND	0.030	ND	0.0050	
106-46-7	1,4-Dichlorobenzene	ND	0.030	ND	0.0050	
95-50-1	1,2-Dichlorobenzene	ND	0.030	ND	0.0050	
120-82-1	1,2,4-Trichlorobenzene	ND	0.030	ND	0.0041	
91-20-3	Naphthalene	0.15	0.12	0.029	0.023	
87-68-3	Hexachlorobutadiene	ND	0.030	ND	0.0028	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: N211-103-01-ON
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P1500566-027

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC01036

Date Collected: 2/11/15
Date Received: 2/12/15
Date Analyzed: 2/17/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): 0.52 Final Pressure (psig): 3.82

Canister Dilution Factor: 1.22

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.4	0.031	0.49	0.0062	
74-87-3	Chloromethane	0.72	0.031	0.35	0.015	
75-01-4	Vinyl Chloride	ND	0.031	ND	0.012	
74-83-9	Bromomethane	0.042	0.031	0.011	0.0079	
75-00-3	Chloroethane	ND	0.031	ND	0.012	
67-64-1	Acetone	9.7	3.1	4.1	1.3	
75-69-4	Trichlorofluoromethane	1.7	0.031	0.29	0.0054	
75-35-4	1,1-Dichloroethene	ND	0.031	ND	0.0077	
75-09-2	Methylene Chloride	0.37	0.12	0.11	0.035	
76-13-1	Trichlorotrifluoroethane	0.56	0.031	0.074	0.0040	
156-60-5	trans-1,2-Dichloroethene	ND	0.031	ND	0.0077	
75-34-3	1,1-Dichloroethane	ND	0.031	ND	0.0075	
1634-04-4	Methyl tert-Butyl Ether	ND	0.031	ND	0.0085	
156-59-2	cis-1,2-Dichloroethene	0.19	0.031	0.047	0.0077	
67-66-3	Chloroform	0.13	0.12	0.028	0.025	
107-06-2	1,2-Dichloroethane	0.092	0.031	0.023	0.0075	
71-55-6	1,1,1-Trichloroethane	ND	0.031	ND	0.0056	
71-43-2	Benzene	0.48	0.092	0.15	0.029	
56-23-5	Carbon Tetrachloride	0.48	0.031	0.077	0.0049	
78-87-5	1,2-Dichloropropane	0.038	0.031	0.0082	0.0066	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: N211-103-01-ON
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P1500566-027

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 6.0 L Summa Canister
 Test Notes:
 Container ID: AC01036

Date Collected: 2/11/15
 Date Received: 2/12/15
 Date Analyzed: 2/17/15
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): 0.52 Final Pressure (psig): 3.82

Canister Dilution Factor: 1.22

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	0.031	ND	0.0046	
79-01-6	Trichloroethene	0.38	0.031	0.070	0.0057	
123-91-1	1,4-Dioxane	ND	0.12	ND	0.034	
10061-01-5	cis-1,3-Dichloropropene	ND	0.031	ND	0.0067	
10061-02-6	trans-1,3-Dichloropropene	ND	0.031	ND	0.0067	
79-00-5	1,1,2-Trichloroethane	ND	0.12	ND	0.022	
108-88-3	Toluene	2.4	0.12	0.63	0.032	
106-93-4	1,2-Dibromoethane	ND	0.031	ND	0.0040	
127-18-4	Tetrachloroethene	0.039	0.031	0.0058	0.0045	
108-90-7	Chlorobenzene	ND	0.12	ND	0.027	
100-41-4	Ethylbenzene	0.32	0.12	0.074	0.028	
179601-23-1	m,p-Xylenes	1.0	0.12	0.23	0.028	
95-47-6	o-Xylene	0.37	0.12	0.086	0.028	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.031	ND	0.0044	
541-73-1	1,3-Dichlorobenzene	ND	0.031	ND	0.0051	
106-46-7	1,4-Dichlorobenzene	ND	0.031	ND	0.0051	
95-50-1	1,2-Dichlorobenzene	ND	0.031	ND	0.0051	
120-82-1	1,2,4-Trichlorobenzene	ND	0.031	ND	0.0041	
91-20-3	Naphthalene	ND	0.12	ND	0.023	
87-68-3	Hexachlorobutadiene	ND	0.031	ND	0.0029	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: N240-1-01-ON
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P1500566-028

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC00714

Date Collected: 2/11/15
Date Received: 2/12/15
Date Analyzed: 2/17/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -0.54 **Final Pressure (psig):** 3.72

Canister Dilution Factor: 1.30

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.5	0.033	0.50	0.0066	
74-87-3	Chloromethane	0.73	0.033	0.35	0.016	
75-01-4	Vinyl Chloride	ND	0.033	ND	0.013	
74-83-9	Bromomethane	0.056	0.033	0.014	0.0084	
75-00-3	Chloroethane	ND	0.033	ND	0.012	
67-64-1	Acetone	14	3.3	5.8	1.4	
75-69-4	Trichlorofluoromethane	1.9	0.033	0.33	0.0058	
75-35-4	1,1-Dichloroethene	ND	0.033	ND	0.0082	
75-09-2	Methylene Chloride	1.2	0.13	0.35	0.037	
76-13-1	Trichlorotrifluoroethane	0.57	0.033	0.074	0.0042	
156-60-5	trans-1,2-Dichloroethene	0.063	0.033	0.016	0.0082	
75-34-3	1,1-Dichloroethane	ND	0.033	ND	0.0080	
1634-04-4	Methyl tert-Butyl Ether	ND	0.033	ND	0.0090	
156-59-2	cis-1,2-Dichloroethene	0.22	0.033	0.055	0.0082	
67-66-3	Chloroform	0.18	0.13	0.038	0.027	
107-06-2	1,2-Dichloroethane	0.16	0.033	0.038	0.0080	
71-55-6	1,1,1-Trichloroethane	0.033	0.033	0.0061	0.0060	
71-43-2	Benzene	0.82	0.098	0.26	0.031	
56-23-5	Carbon Tetrachloride	0.54	0.033	0.086	0.0052	
78-87-5	1,2-Dichloropropane	0.067	0.033	0.015	0.0070	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: N240-1-01-ON
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P1500566-028

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 6.0 L Summa Canister
 Test Notes:
 Container ID: AC00714

Date Collected: 2/11/15
 Date Received: 2/12/15
 Date Analyzed: 2/17/15
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -0.54 Final Pressure (psig): 3.72

Canister Dilution Factor: 1.30

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	0.033	ND	0.0049	
79-01-6	Trichloroethene	1.2	0.033	0.23	0.0060	
123-91-1	1,4-Dioxane	ND	0.13	ND	0.036	
10061-01-5	cis-1,3-Dichloropropene	ND	0.033	ND	0.0072	
10061-02-6	trans-1,3-Dichloropropene	ND	0.033	ND	0.0072	
79-00-5	1,1,2-Trichloroethane	ND	0.13	ND	0.024	
108-88-3	Toluene	4.3	0.13	1.1	0.035	
106-93-4	1,2-Dibromoethane	ND	0.033	ND	0.0042	
127-18-4	Tetrachloroethene	0.12	0.033	0.018	0.0048	
108-90-7	Chlorobenzene	ND	0.13	ND	0.028	
100-41-4	Ethylbenzene	0.45	0.13	0.10	0.030	
179601-23-1	m,p-Xylenes	1.4	0.13	0.32	0.030	
95-47-6	o-Xylene	0.51	0.13	0.12	0.030	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.033	ND	0.0047	
541-73-1	1,3-Dichlorobenzene	ND	0.033	ND	0.0054	
106-46-7	1,4-Dichlorobenzene	0.046	0.033	0.0076	0.0054	
95-50-1	1,2-Dichlorobenzene	ND	0.033	ND	0.0054	
120-82-1	1,2,4-Trichlorobenzene	ND	0.033	ND	0.0044	
91-20-3	Naphthalene	ND	0.13	ND	0.025	
87-68-3	Hexachlorobutadiene	ND	0.033	ND	0.0030	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: N240-1-02-ON
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P1500566-029

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS00785

Date Collected: 2/11/15
Date Received: 2/12/15
Date Analyzed: 2/17/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): 0.05 Final Pressure (psig): 3.76

Canister Dilution Factor: 1.25

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.4	0.031	0.48	0.0063	
74-87-3	Chloromethane	0.68	0.031	0.33	0.015	
75-01-4	Vinyl Chloride	ND	0.031	ND	0.012	
74-83-9	Bromomethane	0.047	0.031	0.012	0.0081	
75-00-3	Chloroethane	ND	0.031	ND	0.012	
67-64-1	Acetone	13	3.1	5.6	1.3	
75-69-4	Trichlorofluoromethane	1.7	0.031	0.31	0.0056	
75-35-4	1,1-Dichloroethene	ND	0.031	ND	0.0079	
75-09-2	Methylene Chloride	0.77	0.13	0.22	0.036	
76-13-1	Trichlorotrifluoroethane	0.55	0.031	0.072	0.0041	
156-60-5	trans-1,2-Dichloroethene	0.048	0.031	0.012	0.0079	
75-34-3	1,1-Dichloroethane	ND	0.031	ND	0.0077	
1634-04-4	Methyl tert-Butyl Ether	ND	0.031	ND	0.0087	
156-59-2	cis-1,2-Dichloroethene	0.11	0.031	0.028	0.0079	
67-66-3	Chloroform	0.16	0.13	0.033	0.026	
107-06-2	1,2-Dichloroethane	0.15	0.031	0.036	0.0077	
71-55-6	1,1,1-Trichloroethane	0.039	0.031	0.0072	0.0057	
71-43-2	Benzene	1.2	0.094	0.37	0.029	
56-23-5	Carbon Tetrachloride	0.64	0.031	0.10	0.0050	
78-87-5	1,2-Dichloropropane	0.050	0.031	0.011	0.0068	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: N240-1-02-ON
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P1500566-029

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 6.0 L Silonite Canister
 Test Notes:
 Container ID: AS00785

Date Collected: 2/11/15
 Date Received: 2/12/15
 Date Analyzed: 2/17/15
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): 0.05 Final Pressure (psig): 3.76

Canister Dilution Factor: 1.25

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	0.031	ND	0.0047	
79-01-6	Trichloroethene	0.55	0.031	0.10	0.0058	
123-91-1	1,4-Dioxane	ND	0.13	ND	0.035	
10061-01-5	cis-1,3-Dichloropropene	ND	0.031	ND	0.0069	
10061-02-6	trans-1,3-Dichloropropene	ND	0.031	ND	0.0069	
79-00-5	1,1,2-Trichloroethane	ND	0.13	ND	0.023	
108-88-3	Toluene	3.6	0.13	0.96	0.033	
106-93-4	1,2-Dibromoethane	ND	0.031	ND	0.0041	
127-18-4	Tetrachloroethene	0.073	0.031	0.011	0.0046	
108-90-7	Chlorobenzene	ND	0.13	ND	0.027	
100-41-4	Ethylbenzene	0.48	0.13	0.11	0.029	
179601-23-1	m,p-Xylenes	1.3	0.13	0.31	0.029	
95-47-6	o-Xylene	0.52	0.13	0.12	0.029	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.031	ND	0.0046	
541-73-1	1,3-Dichlorobenzene	ND	0.031	ND	0.0052	
106-46-7	1,4-Dichlorobenzene	0.047	0.031	0.0078	0.0052	
95-50-1	1,2-Dichlorobenzene	ND	0.031	ND	0.0052	
120-82-1	1,2,4-Trichlorobenzene	ND	0.031	ND	0.0042	
91-20-3	Naphthalene	0.16	0.13	0.031	0.024	
87-68-3	Hexachlorobutadiene	ND	0.031	ND	0.0029	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: N240-1-03-ON
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P1500566-030

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS00804

Date Collected: 2/11/15
Date Received: 2/12/15
Date Analyzed: 2/18/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -1.18 **Final Pressure (psig):** 3.78

Canister Dilution Factor: 1.37

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.4	0.034	0.48	0.0069	
74-87-3	Chloromethane	0.72	0.034	0.35	0.017	
75-01-4	Vinyl Chloride	ND	0.034	ND	0.013	
74-83-9	Bromomethane	0.066	0.034	0.017	0.0088	
75-00-3	Chloroethane	ND	0.034	ND	0.013	
67-64-1	Acetone	9.5	3.4	4.0	1.4	
75-69-4	Trichlorofluoromethane	3.1	0.034	0.56	0.0061	
75-35-4	1,1-Dichloroethene	ND	0.034	ND	0.0086	
75-09-2	Methylene Chloride	0.73	0.14	0.21	0.039	
76-13-1	Trichlorotrifluoroethane	0.55	0.034	0.071	0.0045	
156-60-5	trans-1,2-Dichloroethene	0.045	0.034	0.011	0.0086	
75-34-3	1,1-Dichloroethane	ND	0.034	ND	0.0085	
1634-04-4	Methyl tert-Butyl Ether	ND	0.034	ND	0.0095	
156-59-2	cis-1,2-Dichloroethene	0.041	0.034	0.010	0.0086	
67-66-3	Chloroform	0.28	0.14	0.058	0.028	
107-06-2	1,2-Dichloroethane	0.12	0.034	0.028	0.0085	
71-55-6	1,1,1-Trichloroethane	0.056	0.034	0.010	0.0063	
71-43-2	Benzene	0.77	0.10	0.24	0.032	
56-23-5	Carbon Tetrachloride	0.55	0.034	0.088	0.0054	
78-87-5	1,2-Dichloropropane	0.035	0.034	0.0076	0.0074	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: N240-1-03-ON
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P1500566-030

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 6.0 L Silonite Canister
 Test Notes:
 Container ID: AS00804

Date Collected: 2/11/15
 Date Received: 2/12/15
 Date Analyzed: 2/18/15
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -1.18 Final Pressure (psig): 3.78

Canister Dilution Factor: 1.37

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	0.034	ND	0.0051	
79-01-6	Trichloroethene	0.21	0.034	0.039	0.0064	
123-91-1	1,4-Dioxane	ND	0.14	ND	0.038	
10061-01-5	cis-1,3-Dichloropropene	ND	0.034	ND	0.0075	
10061-02-6	trans-1,3-Dichloropropene	ND	0.034	ND	0.0075	
79-00-5	1,1,2-Trichloroethane	ND	0.14	ND	0.025	
108-88-3	Toluene	2.2	0.14	0.58	0.036	
106-93-4	1,2-Dibromoethane	ND	0.034	ND	0.0045	
127-18-4	Tetrachloroethene	0.064	0.034	0.0094	0.0051	
108-90-7	Chlorobenzene	ND	0.14	ND	0.030	
100-41-4	Ethylbenzene	0.40	0.14	0.091	0.032	
179601-23-1	m,p-Xylenes	0.94	0.14	0.22	0.032	
95-47-6	o-Xylene	0.34	0.14	0.079	0.032	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.034	ND	0.0050	
541-73-1	1,3-Dichlorobenzene	ND	0.034	ND	0.0057	
106-46-7	1,4-Dichlorobenzene	0.035	0.034	0.0059	0.0057	
95-50-1	1,2-Dichlorobenzene	ND	0.034	ND	0.0057	
120-82-1	1,2,4-Trichlorobenzene	ND	0.034	ND	0.0046	
91-20-3	Naphthalene	ND	0.14	ND	0.026	
87-68-3	Hexachlorobutadiene	ND	0.034	ND	0.0032	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: Method Blank
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P150217-MB

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 2/17/15
Volume(s) Analyzed: 1.00 Liter(s)

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	0.025	ND	0.0051	
74-87-3	Chloromethane	ND	0.025	ND	0.012	
75-01-4	Vinyl Chloride	ND	0.025	ND	0.0098	
74-83-9	Bromomethane	ND	0.025	ND	0.0064	
75-00-3	Chloroethane	ND	0.025	ND	0.0095	
67-64-1	Acetone	ND	2.5	ND	1.1	
75-69-4	Trichlorofluoromethane	ND	0.025	ND	0.0045	
75-35-4	1,1-Dichloroethene	ND	0.025	ND	0.0063	
75-09-2	Methylene Chloride	ND	0.10	ND	0.029	
76-13-1	Trichlorotrifluoroethane	ND	0.025	ND	0.0033	
156-60-5	trans-1,2-Dichloroethene	ND	0.025	ND	0.0063	
75-34-3	1,1-Dichloroethane	ND	0.025	ND	0.0062	
1634-04-4	Methyl tert-Butyl Ether	ND	0.025	ND	0.0069	
156-59-2	cis-1,2-Dichloroethene	ND	0.025	ND	0.0063	
67-66-3	Chloroform	ND	0.10	ND	0.020	
107-06-2	1,2-Dichloroethane	ND	0.025	ND	0.0062	
71-55-6	1,1,1-Trichloroethane	ND	0.025	ND	0.0046	
71-43-2	Benzene	ND	0.075	ND	0.023	
56-23-5	Carbon Tetrachloride	ND	0.025	ND	0.0040	
78-87-5	1,2-Dichloropropane	ND	0.025	ND	0.0054	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: Method Blank
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P150217-MB

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 6.0 L Summa Canister
 Test Notes:

Date Collected: NA
 Date Received: NA
 Date Analyzed: 2/17/15
 Volume(s) Analyzed: 1.00 Liter(s)

Canister Dilution Factor: **1.00**

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	0.025	ND	0.0037	
79-01-6	Trichloroethene	ND	0.025	ND	0.0047	
123-91-1	1,4-Dioxane	ND	0.10	ND	0.028	
10061-01-5	cis-1,3-Dichloropropene	ND	0.025	ND	0.0055	
10061-02-6	trans-1,3-Dichloropropene	ND	0.025	ND	0.0055	
79-00-5	1,1,2-Trichloroethane	ND	0.10	ND	0.018	
108-88-3	Toluene	ND	0.10	ND	0.027	
106-93-4	1,2-Dibromoethane	ND	0.025	ND	0.0033	
127-18-4	Tetrachloroethene	ND	0.025	ND	0.0037	
108-90-7	Chlorobenzene	ND	0.10	ND	0.022	
100-41-4	Ethylbenzene	ND	0.10	ND	0.023	
179601-23-1	m,p-Xylenes	ND	0.10	ND	0.023	
95-47-6	o-Xylene	ND	0.10	ND	0.023	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.025	ND	0.0036	
541-73-1	1,3-Dichlorobenzene	ND	0.025	ND	0.0042	
106-46-7	1,4-Dichlorobenzene	ND	0.025	ND	0.0042	
95-50-1	1,2-Dichlorobenzene	ND	0.025	ND	0.0042	
120-82-1	1,2,4-Trichlorobenzene	ND	0.025	ND	0.0034	
91-20-3	Naphthalene	ND	0.10	ND	0.019	
87-68-3	Hexachlorobutadiene	ND	0.025	ND	0.0023	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: Method Blank
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P150217-MB

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 2/17/15
Volume(s) Analyzed: 1.00 Liter(s)

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	0.025	ND	0.0051	
74-87-3	Chloromethane	ND	0.025	ND	0.012	
75-01-4	Vinyl Chloride	ND	0.025	ND	0.0098	
74-83-9	Bromomethane	ND	0.025	ND	0.0064	
75-00-3	Chloroethane	ND	0.025	ND	0.0095	
67-64-1	Acetone	ND	2.5	ND	1.1	
75-69-4	Trichlorofluoromethane	ND	0.025	ND	0.0045	
75-35-4	1,1-Dichloroethene	ND	0.025	ND	0.0063	
75-09-2	Methylene Chloride	ND	0.10	ND	0.029	
76-13-1	Trichlorotrifluoroethane	ND	0.025	ND	0.0033	
156-60-5	trans-1,2-Dichloroethene	ND	0.025	ND	0.0063	
75-34-3	1,1-Dichloroethane	ND	0.025	ND	0.0062	
1634-04-4	Methyl tert-Butyl Ether	ND	0.025	ND	0.0069	
156-59-2	cis-1,2-Dichloroethene	ND	0.025	ND	0.0063	
67-66-3	Chloroform	ND	0.10	ND	0.020	
107-06-2	1,2-Dichloroethane	ND	0.025	ND	0.0062	
71-55-6	1,1,1-Trichloroethane	ND	0.025	ND	0.0046	
71-43-2	Benzene	ND	0.075	ND	0.023	
56-23-5	Carbon Tetrachloride	ND	0.025	ND	0.0040	
78-87-5	1,2-Dichloropropane	ND	0.025	ND	0.0054	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: Method Blank
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P150217-MB

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 6.0 L Summa Canister
 Test Notes:

Date Collected: NA
 Date Received: NA
 Date Analyzed: 2/17/15
 Volume(s) Analyzed: 1.00 Liter(s)

Canister Dilution Factor: **1.00**

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	0.025	ND	0.0037	
79-01-6	Trichloroethene	ND	0.025	ND	0.0047	
123-91-1	1,4-Dioxane	ND	0.10	ND	0.028	
10061-01-5	cis-1,3-Dichloropropene	ND	0.025	ND	0.0055	
10061-02-6	trans-1,3-Dichloropropene	ND	0.025	ND	0.0055	
79-00-5	1,1,2-Trichloroethane	ND	0.10	ND	0.018	
108-88-3	Toluene	ND	0.10	ND	0.027	
106-93-4	1,2-Dibromoethane	ND	0.025	ND	0.0033	
127-18-4	Tetrachloroethene	ND	0.025	ND	0.0037	
108-90-7	Chlorobenzene	ND	0.10	ND	0.022	
100-41-4	Ethylbenzene	ND	0.10	ND	0.023	
179601-23-1	m,p-Xylenes	ND	0.10	ND	0.023	
95-47-6	o-Xylene	ND	0.10	ND	0.023	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.025	ND	0.0036	
541-73-1	1,3-Dichlorobenzene	ND	0.025	ND	0.0042	
106-46-7	1,4-Dichlorobenzene	ND	0.025	ND	0.0042	
95-50-1	1,2-Dichlorobenzene	ND	0.025	ND	0.0042	
120-82-1	1,2,4-Trichlorobenzene	ND	0.025	ND	0.0034	
91-20-3	Naphthalene	ND	0.10	ND	0.019	
87-68-3	Hexachlorobutadiene	ND	0.025	ND	0.0023	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: Lab Control Sample
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P150217-LCS

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 2/17/15
Volume(s) Analyzed: 0.125 Liter(s)

CAS #	Compound	Spike Amount µg/m ³	Result µg/m ³	% Recovery	ALS	Data Qualifier
					Acceptance Limits	
75-71-8	Dichlorodifluoromethane (CFC 12)	4.08	3.88	95	63-120	
74-87-3	Chloromethane	3.96	3.84	97	60-118	
75-01-4	Vinyl Chloride	4.04	3.68	91	63-120	
74-83-9	Bromomethane	4.04	3.76	93	65-118	
75-00-3	Chloroethane	4.04	3.76	93	63-118	
67-64-1	Acetone	21.6	20.1	93	70-130	
75-69-4	Trichlorofluoromethane	3.96	3.84	97	59-116	
75-35-4	1,1-Dichloroethene	4.28	4.27	100	67-114	
75-09-2	Methylene Chloride	4.32	4.23	98	66-111	
76-13-1	Trichlorotrifluoroethane	4.32	4.03	93	68-114	
156-60-5	trans-1,2-Dichloroethene	4.24	4.31	102	66-115	
75-34-3	1,1-Dichloroethane	4.16	4.17	100	65-117	
1634-04-4	Methyl tert-Butyl Ether	4.24	4.04	95	64-114	
156-59-2	cis-1,2-Dichloroethene	4.28	4.15	97	66-116	
67-66-3	Chloroform	4.32	4.25	98	63-114	
107-06-2	1,2-Dichloroethane	4.20	3.98	95	61-118	
71-55-6	1,1,1-Trichloroethane	4.16	3.93	94	65-114	
71-43-2	Benzene	4.40	4.51	103	67-118	
56-23-5	Carbon Tetrachloride	4.28	4.28	100	65-117	
78-87-5	1,2-Dichloropropane	4.24	4.17	98	63-116	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
 Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: Lab Control Sample
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P150217-LCS

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 6.0 L Summa Canister
 Test Notes:

Date Collected: NA
 Date Received: NA
 Date Analyzed: 2/17/15
 Volume(s) Analyzed: 0.125 Liter(s)

CAS #	Compound	Spike Amount µg/m ³	Result µg/m ³	% Recovery	ALS Acceptance Limits	Data Qualifier
75-27-4	Bromodichloromethane	4.32	4.17	97	62-118	
79-01-6	Trichloroethene	4.16	4.08	98	66-116	
123-91-1	1,4-Dioxane	4.36	3.96	91	62-117	
10061-01-5	cis-1,3-Dichloropropene	4.52	4.53	100	63-117	
10061-02-6	trans-1,3-Dichloropropene	4.32	4.31	100	61-119	
79-00-5	1,1,2-Trichloroethane	4.24	4.21	99	64-117	
108-88-3	Toluene	4.24	3.85	91	66-113	
106-93-4	1,2-Dibromoethane	4.32	4.31	100	64-116	
127-18-4	Tetrachloroethene	3.96	3.54	89	65-118	
108-90-7	Chlorobenzene	4.32	4.22	98	67-126	
100-41-4	Ethylbenzene	4.24	4.14	98	67-124	
179601-23-1	m,p-Xylenes	8.40	8.16	97	66-128	
95-47-6	o-Xylene	4.12	3.98	97	65-127	
79-34-5	1,1,2,2-Tetrachloroethane	4.04	3.99	99	62-129	
541-73-1	1,3-Dichlorobenzene	4.36	4.14	95	62-131	
106-46-7	1,4-Dichlorobenzene	4.24	3.92	92	59-126	
95-50-1	1,2-Dichlorobenzene	4.28	4.18	98	59-131	
120-82-1	1,2,4-Trichlorobenzene	4.20	4.46	106	43-137	
91-20-3	Naphthalene	3.92	4.53	116	40-142	
87-68-3	Hexachlorobutadiene	4.28	4.37	102	49-133	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
 Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: Lab Control Sample
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P150217-LCS

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 2/17/15
Volume(s) Analyzed: 0.125 Liter(s)

CAS #	Compound	Spike Amount µg/m ³	Result µg/m ³	% Recovery	ALS Acceptance Limits	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	4.08	4.03	99	63-120	
74-87-3	Chloromethane	3.96	4.05	102	60-118	
75-01-4	Vinyl Chloride	4.04	3.86	96	63-120	
74-83-9	Bromomethane	4.04	4.00	99	65-118	
75-00-3	Chloroethane	4.04	3.98	99	63-118	
67-64-1	Acetone	21.6	21.6	100	70-130	
75-69-4	Trichlorofluoromethane	3.96	4.05	102	59-116	
75-35-4	1,1-Dichloroethene	4.28	4.36	102	67-114	
75-09-2	Methylene Chloride	4.32	4.35	101	66-111	
76-13-1	Trichlorotrifluoroethane	4.32	4.06	94	68-114	
156-60-5	trans-1,2-Dichloroethene	4.24	4.36	103	66-115	
75-34-3	1,1-Dichloroethane	4.16	4.34	104	65-117	
1634-04-4	Methyl tert-Butyl Ether	4.24	4.06	96	64-114	
156-59-2	cis-1,2-Dichloroethene	4.28	4.21	98	66-116	
67-66-3	Chloroform	4.32	4.35	101	63-114	
107-06-2	1,2-Dichloroethane	4.20	4.16	99	61-118	
71-55-6	1,1,1-Trichloroethane	4.16	3.96	95	65-114	
71-43-2	Benzene	4.40	4.68	106	67-118	
56-23-5	Carbon Tetrachloride	4.28	4.31	101	65-117	
78-87-5	1,2-Dichloropropane	4.24	4.28	101	63-116	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
 Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: Lab Control Sample
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P150217-LCS

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 6.0 L Summa Canister
 Test Notes:

Date Collected: NA
 Date Received: NA
 Date Analyzed: 2/17/15
 Volume(s) Analyzed: 0.125 Liter(s)

CAS #	Compound	Spike Amount µg/m ³	Result µg/m ³	% Recovery	ALS Acceptance Limits	Data Qualifier
75-27-4	Bromodichloromethane	4.32	4.27	99	62-118	
79-01-6	Trichloroethene	4.16	3.96	95	66-116	
123-91-1	1,4-Dioxane	4.36	3.94	90	62-117	
10061-01-5	cis-1,3-Dichloropropene	4.52	4.55	101	63-117	
10061-02-6	trans-1,3-Dichloropropene	4.32	4.30	100	61-119	
79-00-5	1,1,2-Trichloroethane	4.24	4.27	101	64-117	
108-88-3	Toluene	4.24	3.88	92	66-113	
106-93-4	1,2-Dibromoethane	4.32	4.30	100	64-116	
127-18-4	Tetrachloroethene	3.96	3.49	88	65-118	
108-90-7	Chlorobenzene	4.32	3.97	92	67-126	
100-41-4	Ethylbenzene	4.24	3.95	93	67-124	
179601-23-1	m,p-Xylenes	8.40	7.78	93	66-128	
95-47-6	o-Xylene	4.12	3.79	92	65-127	
79-34-5	1,1,2,2-Tetrachloroethane	4.04	3.85	95	62-129	
541-73-1	1,3-Dichlorobenzene	4.36	3.90	89	62-131	
106-46-7	1,4-Dichlorobenzene	4.24	3.71	88	59-126	
95-50-1	1,2-Dichlorobenzene	4.28	3.96	93	59-131	
120-82-1	1,2,4-Trichlorobenzene	4.20	4.17	99	43-137	
91-20-3	Naphthalene	3.92	4.25	108	40-142	
87-68-3	Hexachlorobutadiene	4.28	4.08	95	49-133	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
 Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

ALS ENVIRONMENTAL

LABORATORY DUPLICATE SUMMARY RESULTS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: N213-1-04-ON
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566
 ALS Sample ID: P1500566-019DUP

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS00766

Date Collected: 2/11/15
Date Received: 2/12/15
Date Analyzed: 2/17/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): 0.53 Final Pressure (psig): 3.59

Canister Dilution Factor: 1.20

CAS #	Compound	Sample Result		Duplicate Sample Result		Average µg/m³	% RPD	RPD Limit	Data Qualifier
		µg/m³	ppbV	µg/m³	ppbV				
75-71-8	Dichlorodifluoromethane (CFC 12)	2.40	0.485	2.46	0.498	2.43	2	25	
74-87-3	Chloromethane	0.668	0.323	0.593	0.287	0.6305	12	25	
75-01-4	Vinyl Chloride	ND	ND	ND	ND	-	-	25	
74-83-9	Bromomethane	0.0978	0.0252	0.0976	0.0252	0.0977	0.2	25	
75-00-3	Chloroethane	ND	ND	ND	ND	-	-	25	
67-64-1	Acetone	8.72	3.67	8.98	3.78	8.85	3	25	
75-69-4	Trichlorofluoromethane	3.42	0.608	3.37	0.600	3.395	1	25	
75-35-4	1,1-Dichloroethene	ND	ND	ND	ND	-	-	25	
75-09-2	Methylene Chloride	0.517	0.149	0.529	0.152	0.523	2	25	
76-13-1	Trichlorotrifluoroethane	0.542	0.0707	0.552	0.0721	0.547	2	25	
156-60-5	trans-1,2-Dichloroethene	0.0362	0.00915	0.0376	0.00948	0.0369	4	25	
75-34-3	1,1-Dichloroethane	ND	ND	ND	ND	-	-	25	
1634-04-4	Methyl tert-Butyl Ether	ND	ND	ND	ND	-	-	25	
156-59-2	cis-1,2-Dichloroethene	0.0866	0.0218	0.0918	0.0232	0.0892	6	25	
67-66-3	Chloroform	0.170	0.0347	0.175	0.0359	0.1725	3	25	
107-06-2	1,2-Dichloroethane	0.109	0.0268	0.110	0.0272	0.1095	0.9	25	
71-55-6	1,1,1-Trichloroethane	ND	ND	ND	ND	-	-	25	
71-43-2	Benzene	0.789	0.247	0.815	0.255	0.802	3	25	
56-23-5	Carbon Tetrachloride	0.566	0.0899	0.587	0.0933	0.5765	4	25	
78-87-5	1,2-Dichloropropane	0.0404	0.00873	0.0353	0.00764	0.03785	13	25	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

ALS ENVIRONMENTAL

LABORATORY DUPLICATE SUMMARY RESULTS

Page 2 of 2

Client: NASA Ames Research Center

Client Sample ID: N213-1-04-ON

Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: **P1500566**

ALS Sample ID: **P1500566-019DUP**

Test Code: EPA TO-15 SIM

Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19

Analyst: Wida Ang

Sample Type: 6.0 L Silonite Canister

Test Notes:

Container ID: AS00766

Date Collected: 2/11/15

Date Received: 2/12/15

Date Analyzed: 2/17/15

Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): 0.530

Final Pressure (psig): 3.590

Canister Dilution Factor: 1.20

CAS #	Compound	Sample Result		Duplicate Sample Result		Average µg/m ³	% RPD	RPD Limit	Data Qualifier
		µg/m ³	ppbV	µg/m ³	ppbV				
75-27-4	Bromodichloromethane	ND	ND	ND	ND	-	-	25	
79-01-6	Trichloroethene	0.122	0.0226	0.124	0.0232	0.123	2	25	
123-91-1	1,4-Dioxane	ND	ND	ND	ND	-	-	25	
10061-01-5	cis-1,3-Dichloropropene	ND	ND	ND	ND	-	-	25	
10061-02-6	trans-1,3-Dichloropropene	ND	ND	ND	ND	-	-	25	
79-00-5	1,1,2-Trichloroethane	ND	ND	ND	ND	-	-	25	
108-88-3	Toluene	2.04	0.541	2.10	0.556	2.07	3	25	
106-93-4	1,2-Dibromoethane	ND	ND	ND	ND	-	-	25	
127-18-4	Tetrachloroethene	0.0610	0.00900	0.0619	0.00914	0.06145	1	25	
108-90-7	Chlorobenzene	ND	ND	ND	ND	-	-	25	
100-41-4	Ethylbenzene	0.349	0.0805	0.359	0.0826	0.354	3	25	
179601-23-1	m,p-Xylenes	1.06	0.243	1.09	0.250	1.075	3	25	
95-47-6	o-Xylene	0.403	0.0928	0.416	0.0957	0.4095	3	25	
79-34-5	1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	-	-	25	
541-73-1	1,3-Dichlorobenzene	ND	ND	ND	ND	-	-	25	
106-46-7	1,4-Dichlorobenzene	0.0397	0.00660	0.0412	0.00686	0.04045	4	25	
95-50-1	1,2-Dichlorobenzene	ND	ND	ND	ND	-	-	25	
120-82-1	1,2,4-Trichlorobenzene	ND	ND	ND	ND	-	-	25	
91-20-3	Naphthalene	ND	ND	ND	ND	-	-	25	
87-68-3	Hexachlorobutadiene	ND	ND	ND	ND	-	-	25	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 1

Client: NASA Ames Research Center
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566

Method Blank Summary

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister(s)
Test Notes:

Lab File ID: 02171503.D
Date Analyzed: 2/17/15
Time Analyzed: 03:11

Client Sample ID	ALS Sample ID	Lab File ID	Time Analyzed
Lab Control Sample	P150217-LCS	02171504.D	03:38
N211-119-02-ON	P1500566-026	02171509.D	08:20
N211-136-03-ON	P1500566-025	02171510.D	08:49
N211-179-05-ON	P1500566-024	02171511.D	09:17
N213-B-01-OND	P1500566-023	02171512.D	09:45
N213-B-01-ON	P1500566-022	02171513.D	10:15
N213-B-02-ON	P1500566-021	02171514.D	10:43
N213-B-03-ON	P1500566-020	02171515.D	11:11
N212-105-01-ON	P1500566-011	02171516.D	12:43
N212-105-01-OND	P1500566-012	02171517.D	13:10
T20G-1-01-ON	P1500566-013	02171518.D	13:38
T20G-1-02-ON	P1500566-014	02171519.D	14:06
N213-1-02-ON	P1500566-015	02171520.D	14:34
N213-1-01-ON	P1500566-016	02171521.D	15:02
N213-1-03-ON	P1500566-017	02171522.D	15:30
N213-1-05-ON	P1500566-018	02171523.D	16:28
N213-1-04-ON	P1500566-019	02171524.D	16:55
N213-1-04-ON (Lab Duplicate)	P1500566-019DUP	02171525.D	17:25

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 1

Client: NASA Ames Research Center
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566

Method Blank Summary

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister(s)
Test Notes:

Lab File ID: 02171530.D
Date Analyzed: 2/17/15
Time Analyzed: 19:39

Client Sample ID	ALS Sample ID	Lab File ID	Time Analyzed
Lab Control Sample	P150217-LCS	02171531.D	20:06
N240-1-03-ON	P1500566-030	02171552.D	01:53

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 1

Client: NASA Ames Research Center
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566

Internal Standard Area and RT Summary

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 6.0 L Summa Canister(s)
 Test Notes:

Lab File ID: 02171502.D
 Date Analyzed: 2/17/15
 Time Analyzed: 02:43

	IS1 (BCM)		IS2 (DFB)		IS3 (CBZ)	
	AREA	#	RT	#	AREA	#
24 Hour Standard	19714	6.11	144828	8.72	23900	13.13
Upper Limit	27600	6.44	202759	9.05	33460	13.46
Lower Limit	11828	5.78	86897	8.39	14340	12.80

Client Sample ID		IS1 (BCM)		IS2 (DFB)		IS3 (CBZ)	
		AREA	#	RT	#	AREA	#
01	Method Blank	17796	6.12	134601	8.72	22802	13.14
02	Lab Control Sample	19044	6.11	138990	8.71	23271	13.13
03	N211-119-02-ON	16591	6.11	118605	8.72	21652	13.13
04	N211-136-03-ON	16524	6.11	120635	8.72	21659	13.13
05	N211-179-05-ON	17242	6.11	126319	8.71	23081	13.13
06	N213-B-01-OND	18766	6.11	147198	8.72	23545	13.13
07	N213-B-01-ON	18172	6.12	129114	8.72	22369	13.13
08	N213-B-02-ON	18172	6.11	128693	8.72	22568	13.13
09	N213-B-03-ON	18141	6.11	131704	8.72	23024	13.13
10	N212-105-01-ON	18228	6.12	132152	8.72	23561	13.13
11	N212-105-01-OND	18254	6.11	144000	8.72	24056	13.13
12	T20G-1-01-ON	19157	6.11	134163	8.72	23304	13.13
13	T20G-1-02-ON	18084	6.11	131424	8.72	22822	13.13
14	N213-1-02-ON	18951	6.12	142707	8.72	23614	13.13
15	N213-1-01-ON	18558	6.11	134797	8.72	24246	13.13
16	N213-1-03-ON	18985	6.11	137588	8.71	24012	13.13
17	N213-1-05-ON	18894	6.11	139106	8.71	23288	13.13
18	N213-1-04-ON	19326	6.11	140170	8.72	23825	13.13
19	N213-1-04-ON (Lab Duplicate)	18691	6.11	137068	8.72	23168	13.13
20							

IS1 (BCM) = Bromochloromethane

IS2 (DFB) = 1,4-Difluorobenzene

IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = 140% of internal standard area

AREA LOWER LIMIT = 60% of internal standard area

RT UPPER LIMIT = 0.33 minutes of internal standard RT

RT LOWER LIMIT = 0.33 minutes of internal standard RT

Column used to flag values outside QC limits with an I.

I = Internal standard not within the specified limits. See case narrative.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 1

Client: NASA Ames Research Center
Client Project ID: Vapor Intrusion Study, Phase II

ALS Project ID: P1500566

Internal Standard Area and RT Summary

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister(s)
Test Notes:

Lab File ID: 02171528.D
Date Analyzed: 2/17/15
Time Analyzed: 18:42

	IS1 (BCM)			IS2 (DFB)			IS3 (CBZ)		
	AREA	#	RT	AREA	#	RT	AREA	#	RT
24 Hour Standard	17906		6.11	131112		8.71	22260		13.13
Upper Limit	25068		6.44	183557		9.04	31164		13.46
Lower Limit	10744		5.78	78667		8.38	13356		12.80

Client Sample ID		IS1 (BCM)			IS2 (DFB)			IS3 (CBZ)		
		AREA	#	RT	AREA	#	RT	AREA	#	RT
01	Method Blank	15497		6.12	115570		8.72	20470		13.13
02	Lab Control Sample	16708		6.11	122602		8.72	21713		13.13
03	N240-1-03-ON	14475		6.11	107253		8.72	20437		13.13
04										
05										
06										
07										
08										
09										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = 140% of internal standard area
AREA LOWER LIMIT = 60% of internal standard area
RT UPPER LIMIT = 0.33 minutes of internal standard RT
RT LOWER LIMIT = 0.33 minutes of internal standard RT

Column used to flag values outside QC limits with an I.
I = Internal standard not within the specified limits. See case narrative.

Data File: I:\MS19\DATA\2015 02\16\02161518.D

Acq On : 16 Feb 2015 19:50

Operator: WA

Sample : P1500566-001 (1000mL)

Misc : S29-02041502

ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 17 09:54:15 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

2/17/15

DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	16214	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	142012	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	23418	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	39875	1007.042	pg	0.00
Spiked Amount 1000.000			Recovery	=	100.70%	
30) Toluene-d8 (SS2)	11.38	98	124755	952.610	pg	0.00
Spiked Amount 1000.000			Recovery	=	95.26%	
40) Bromofluorobenzene (SS3)	14.25	174	51484	1088.970	pg	0.00
Spiked Amount 1000.000			Recovery	=	108.90%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.73	85	117266	1779.617	pg	100
3) Chloromethane	1.84	52	6538	496.839	pg	99
4) Vinyl Chloride	0.00	62	0	N.D.	d	
5) Bromomethane	2.32	94	3247	109.584	pg	88
6) Chloroethane	0.00	64	0	N.D.	d	
7) Acetone	3.00	58	183826	7900.136	pg	# 58
8) Trichlorofluoromethane	3.11	101	121871	2153.191	pg	98
9) 1,1-Dichloroethene	3.66	96	157	N.D.		
10) Methylene Chloride	3.80	84	14774	550.097	pg	98
11) Trichlorotrifluoroethane	4.09	151	10426	400.879	pg	100
12) trans-1,2-Dichloroethene	4.74	96	1125	43.600	pg	94
13) 1,1-Dichloroethane	4.95	63	335	N.D.		
14) Methyl tert-Butyl Ether	5.11	73	696	N.D.		
15) cis-1,2-Dichloroethene	5.93	96	978	34.086	pg	88
16) Chloroform	6.31	83	9067	182.392	pg	99
18) 1,2-Dichloroethane	7.26	62	3351	84.661	pg	# 1
19) 1,1,1-Trichloroethane	7.59	97	2526	52.253	pg	93
20) Benzene	8.16	78	58601	573.140	pg	98
21) Carbon Tetrachloride	8.34	117	18442	509.571	pg	99
23) 1,2-Dichloropropane	9.16	63	1010	32.609	pg	91
24) Bromodichloromethane	0.00	83	0	N.D.	d	
25) Trichloroethene	9.46	130	4287	117.504	pg	97
26) 1,4-Dioxane	9.52	88	903	33.210	pg	93
27) cis-1,3-Dichloropropene	10.45	75	23	N.D.		
28) trans-1,3-Dichloropropene	11.05	75	54	N.D.		
29) 1,1,2-Trichloroethane	11.20	83	130	N.D.		
31) Toluene	11.48	91	540205	3878.416	pg	99
32) 1,2-Dibromoethane	12.13	107	39	N.D.		
33) Tetrachloroethene	12.61	166	3006	69.701	pg	92
35) Chlorobenzene	13.17	112	1165	N.D.		
36) Ethylbenzene	13.48	91	72879	496.280	pg	99
37) m,p-Xylene	13.61	91	164189	1360.368	pg	97
38) o-Xylene	13.94	106	24929	422.626	pg	99
39) 1,1,2,2-Tetrachloroethane	13.94	83	173	N.D.		
41) 1,3-Dichlorobenzene	15.17	146	155	N.D.		
42) 1,4-Dichlorobenzene	15.24	146	2872	35.489	pg	99
43) 1,2-Dichlorobenzene	15.46	146	162	N.D.		
44) 1,2,4-Trichlorobenzene	16.63	182	46	N.D.		
45) Naphthalene	16.70	128	15993	109.146	pg	97
46) Hexachlorobutadiene	16.96	225	30	N.D.		

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\16\02161518.D

Acq On : 16 Feb 2015 19:50

Operator: WA

Sample : P1500566-001 (1000mL)

Misc : S29-02041502

ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 17 09:54:15 2015

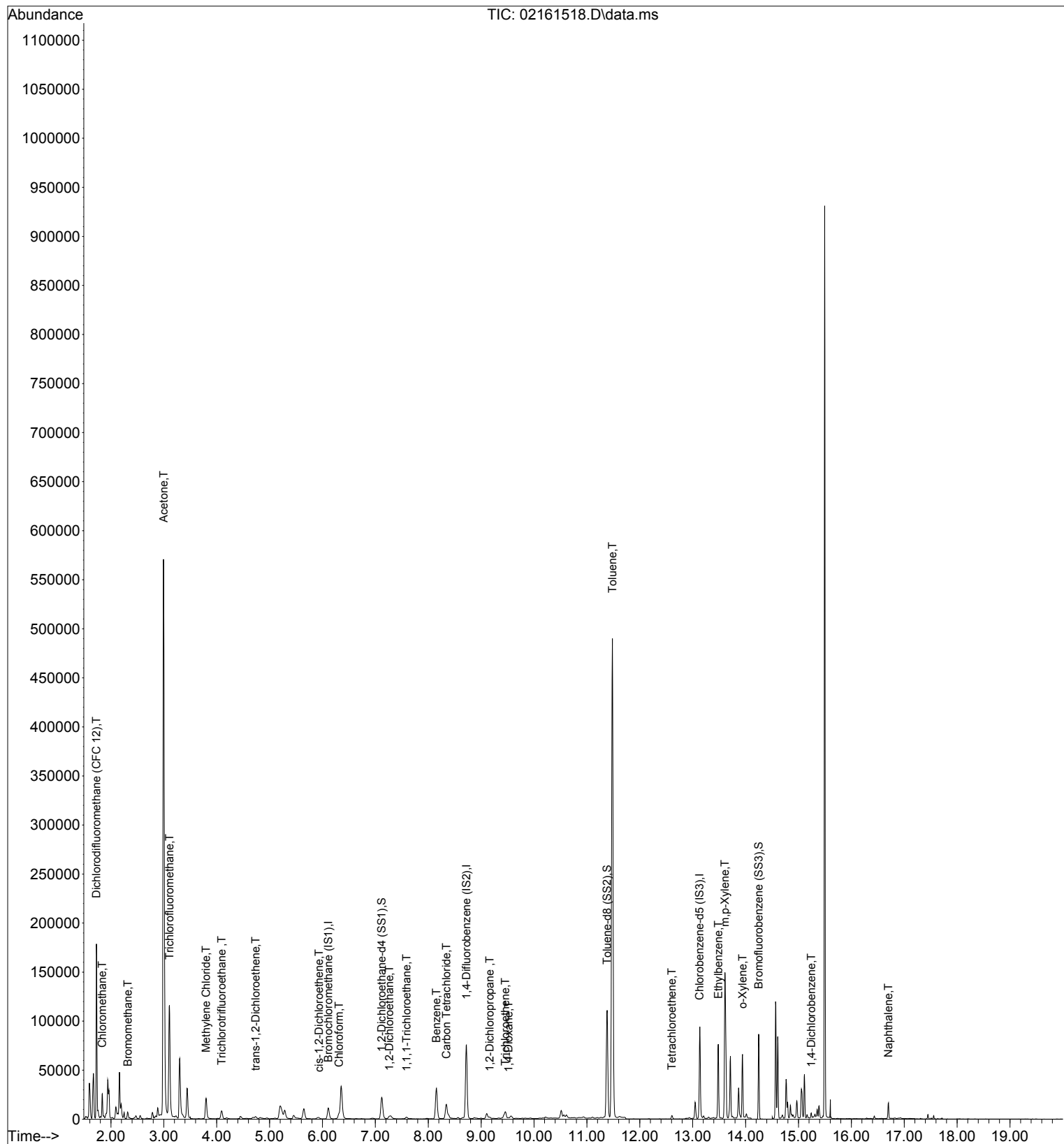
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 02\16\02161518.D

Acq On : 16 Feb 2015 19:50
 Sample : P1500566-001 (1000mL)
 Misc : S29-02041502
 ALS Vial : 1 Sample Multiplier: 1

Operator: WA

Quant Time: Feb 17 09:54:15 2015

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DataAcq Meth:TO15SIM.M

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System Monitoring Compounds

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Spiked Amount 1000.000			Recovery	=	100.70%	
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Spiked Amount 1000.000			Recovery	=	95.26%	
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Target Compounds

						Qvalue
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8) Trichlorofluoromethane	3.11	101	121871	2153.191	pg	98
10) Methylene Chloride	3.80	84	14774	550.097	pg	98
11) Trichlorotrifluoroethane	4.09	151	10426	400.879	pg	100
12) trans-1,2-Dichloroethene	4.74	96	1125	43.600	pg	94
15) cis-1,2-Dichloroethene	5.93	96	978	34.086	pg	88
16) Chloroform	6.31	83	9067	182.392	pg	99
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19) 1,1,1-Trichloroethane	7.59	97	2526	52.253	pg	93
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23) 1,2-Dichloropropane	9.16	63	1010	32.609	pg	91
25) Trichloroethene	9.46	130	4287	117.504	pg	97
26) 1,4-Dioxane	9.52	88	903	33.210	pg	93
31) Toluene	11.48	91	540205	3878.416	pg	99
33) Tetrachloroethene	12.61	166	3006	69.701	pg	92
36) Ethylbenzene	13.48	91	72879	496.280	pg	99
37) m,p-Xylene	13.61	91	164189	1360.368	pg	97
38) o-Xylene	13.94	106	24929	422.626	pg	99
42) 1,4-Dichlorobenzene	15.24	146	2872	35.489	pg	99
45) Naphthalene	16.70	128	15993	109.146	pg	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

2/17/15

Data File: I:\MS19\DATA\2015 02\16\02161518.D

Acq On : 16 Feb 2015 19:50

Operator: WA

Sample : P1500566-001 (1000mL)

Misc : S29-02041502

ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 17 09:54:15 2015

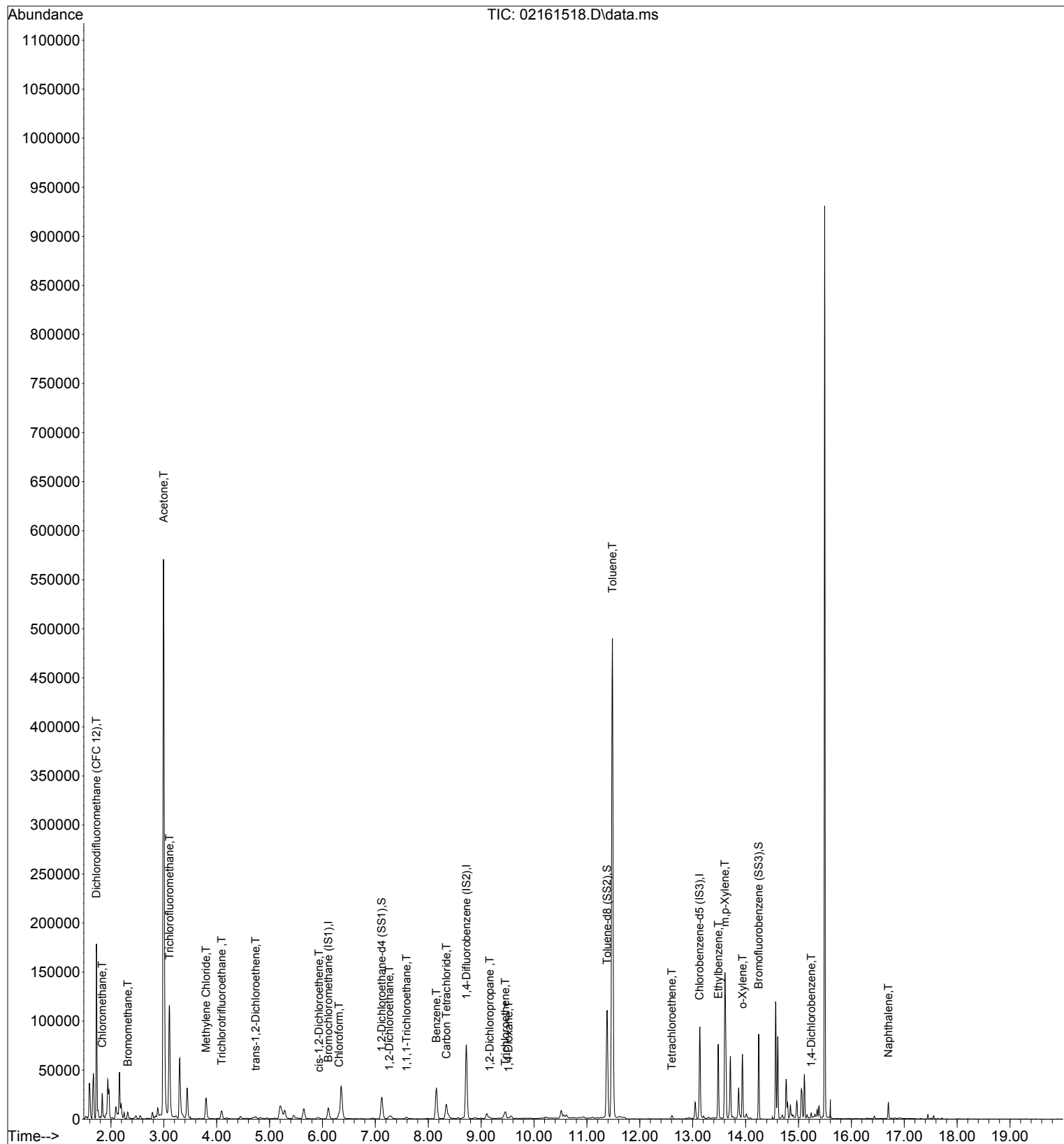
Quant Method : I:\MS19\METHODS\X19021115.M

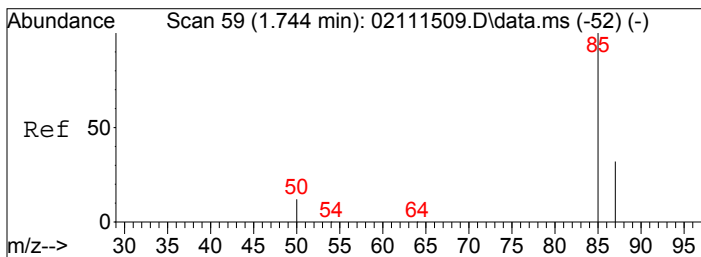
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

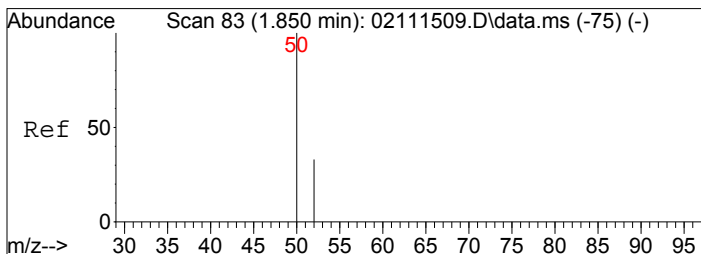
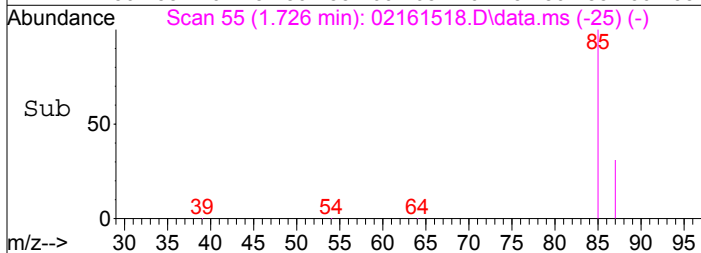
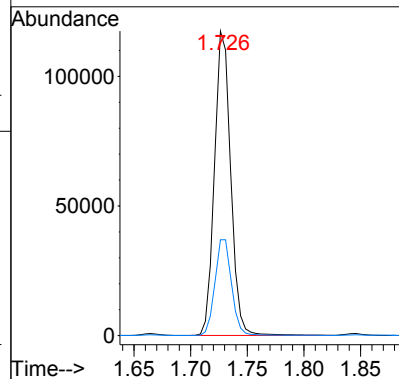
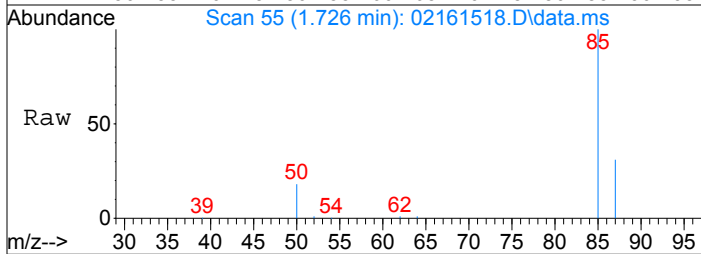
DataAcq Meth:TO15SIM.M





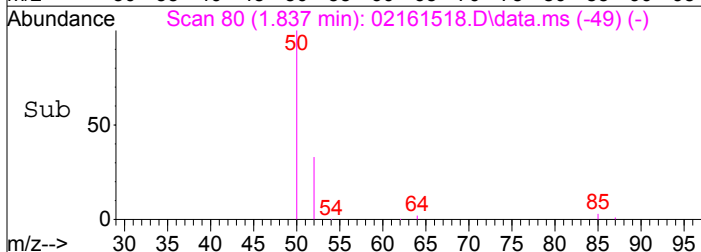
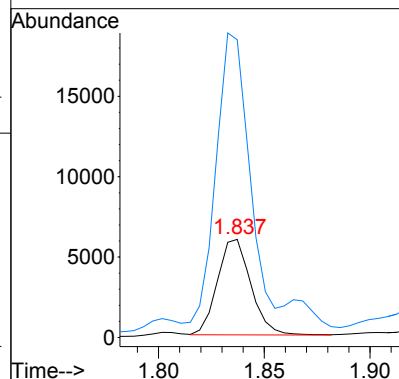
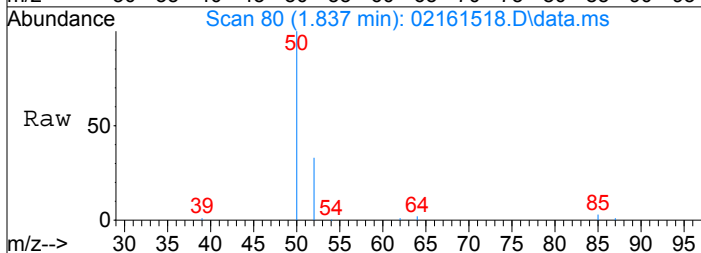
#2
 Dichlorodifluoromethane (CFC 12)
 Concen: 1779.62 pg
 RT: 1.73 min Scan# 55
 Delta R.T. -0.018 min
 Lab File: 02161518.D
 Acq: 16 Feb 2015 19:50

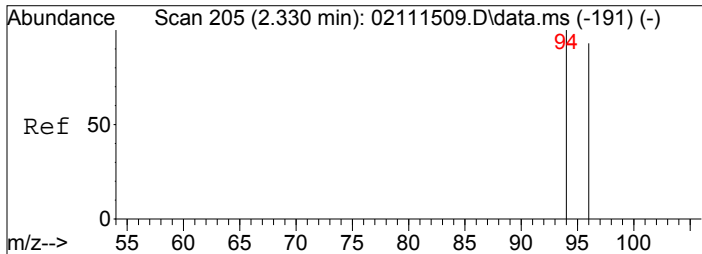
Tgt Ion: 85 Resp: 117266
 Ion Ratio Lower Upper
 85 100
 87 32.4 12.4 52.4



#3
 Chloromethane
 Concen: 496.84 pg
 RT: 1.84 min Scan# 80
 Delta R.T. -0.013 min
 Lab File: 02161518.D
 Acq: 16 Feb 2015 19:50

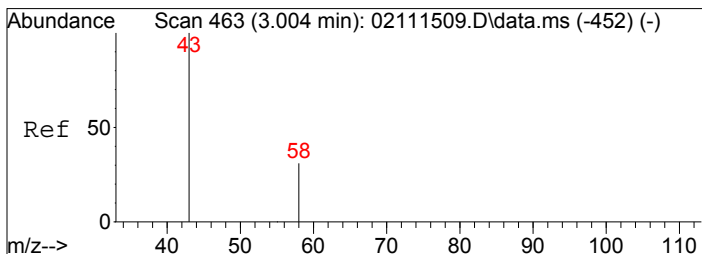
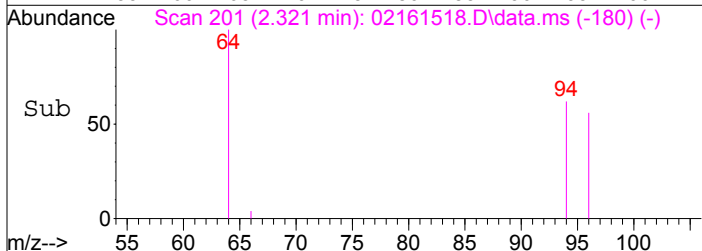
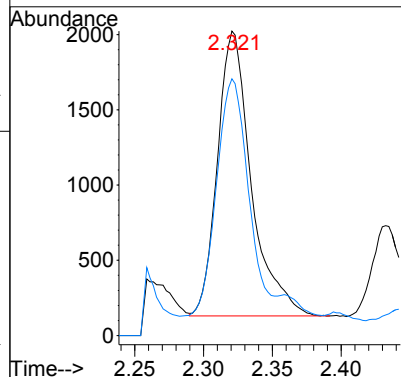
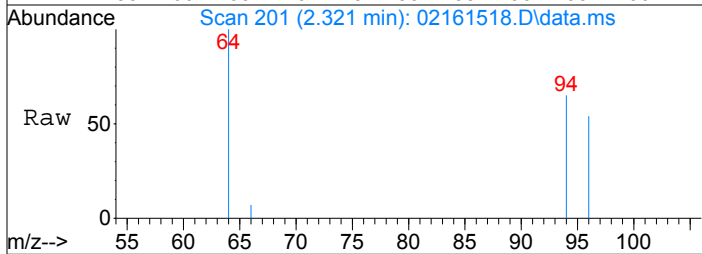
Tgt Ion: 52 Resp: 6538
 Ion Ratio Lower Upper
 52 100
 50 301.9 283.7 323.7





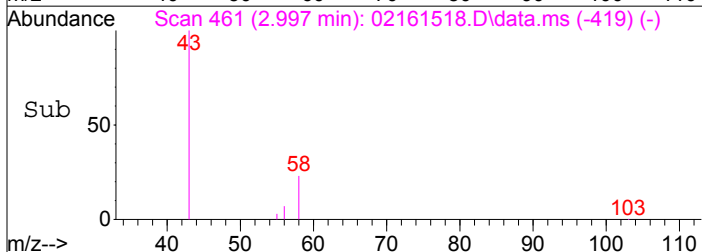
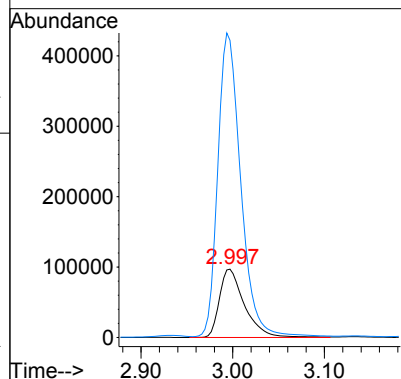
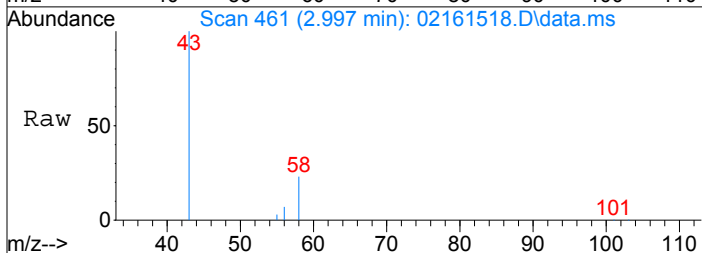
#5
Bromomethane
Concen: 109.58 pg
RT: 2.32 min Scan# 201
Delta R.T. -0.009 min
Lab File: 02161518.D
Acq: 16 Feb 2015 19:50

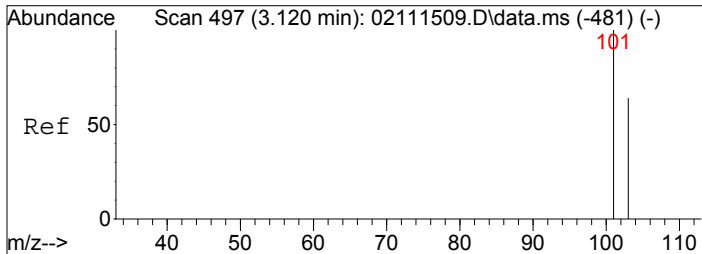
Tgt Ion: 94 Resp: 3247
Ion Ratio Lower Upper
94 100
96 82.4 75.5 113.3



#7
Acetone
Concen: 7900.14 pg
RT: 3.00 min Scan# 461
Delta R.T. -0.007 min
Lab File: 02161518.D
Acq: 16 Feb 2015 19:50

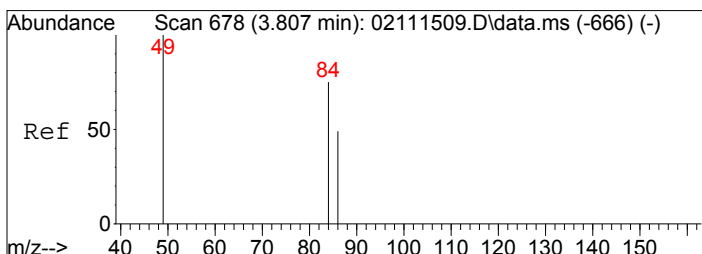
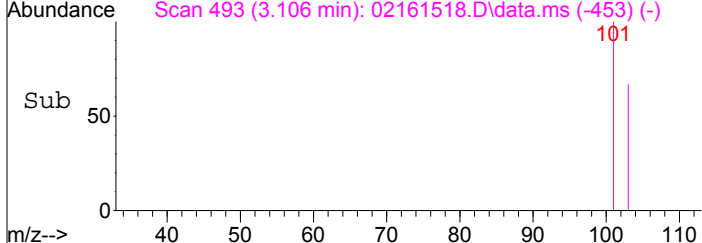
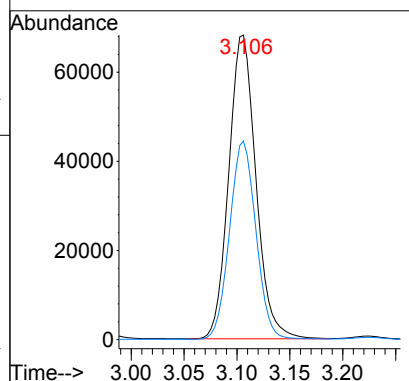
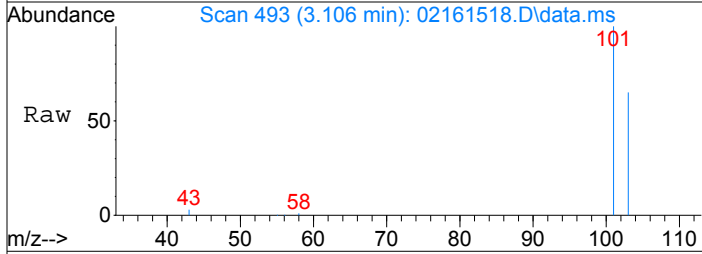
Tgt Ion: 58 Resp: 183826
Ion Ratio Lower Upper
58 100
43 407.3 301.8 341.8#





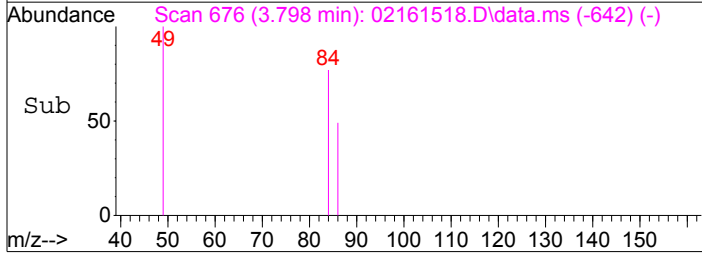
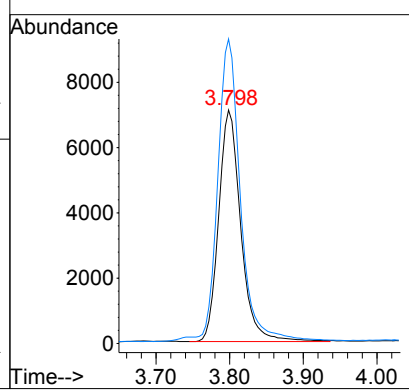
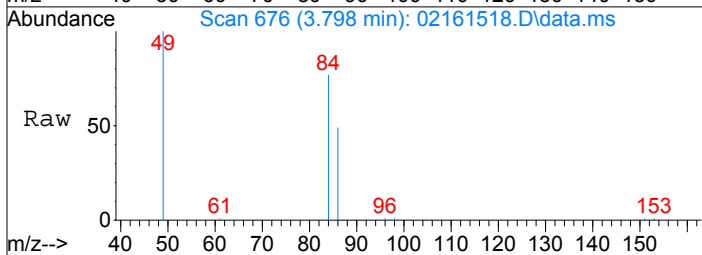
#8
 Trichlorofluoromethane
 Concen: 2153.19 pg
 RT: 3.11 min Scan# 493
 Delta R.T. -0.013 min
 Lab File: 02161518.D
 Acq: 16 Feb 2015 19:50

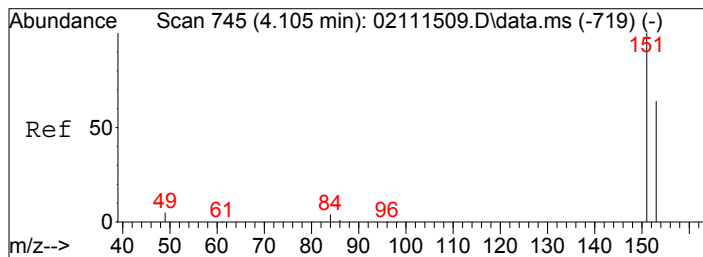
Tgt Ion: 101	Resp: 121871
Ion Ratio	Lower Upper
101	100
103	63.3 51.8 77.6



#10
 Methylene Chloride
 Concen: 550.10 pg
 RT: 3.80 min Scan# 676
 Delta R.T. -0.009 min
 Lab File: 02161518.D
 Acq: 16 Feb 2015 19:50

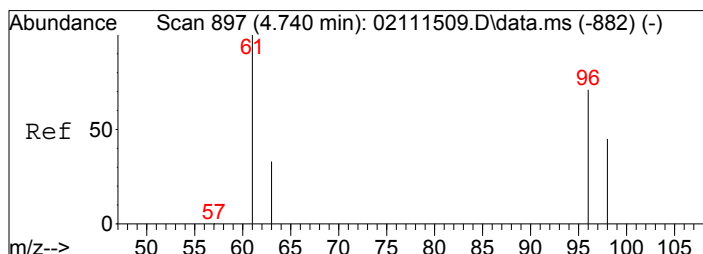
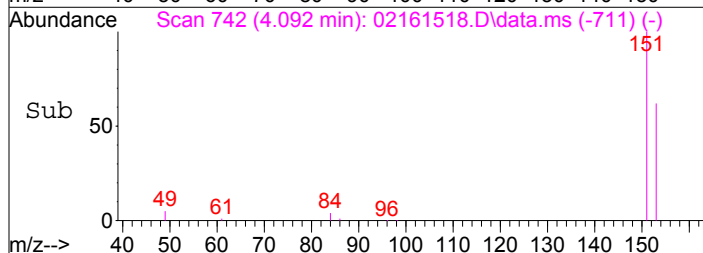
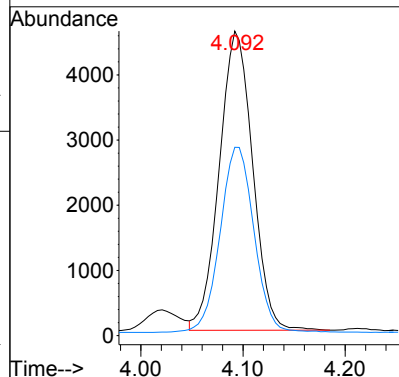
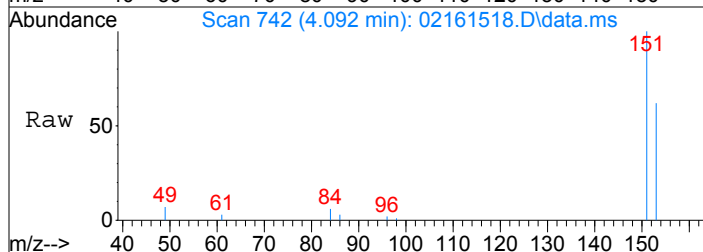
Tgt Ion: 84	Resp: 14774
Ion Ratio	Lower Upper
84	100
49	134.9 112.3 152.3





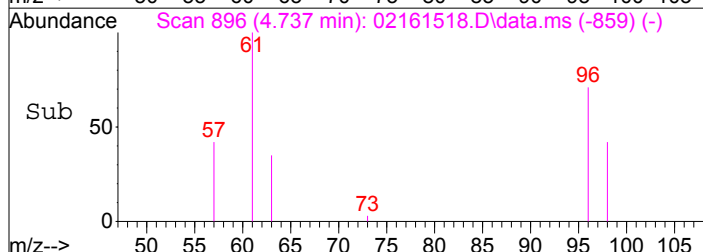
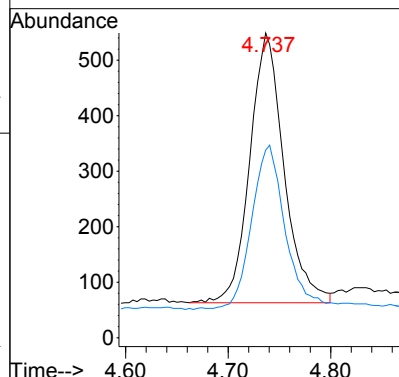
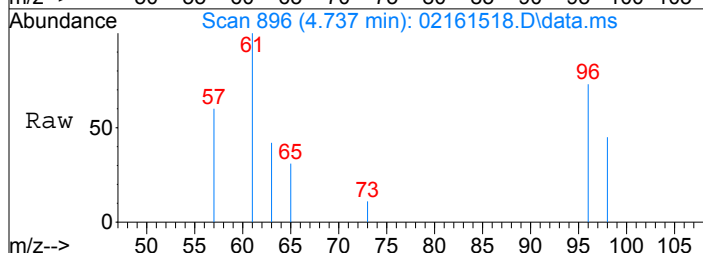
#11
Trichlorotrifluoroethane
Concen: 400.88 pg
RT: 4.09 min Scan# 742
Delta R.T. -0.013 min
Lab File: 02161518.D
Acq: 16 Feb 2015 19:50

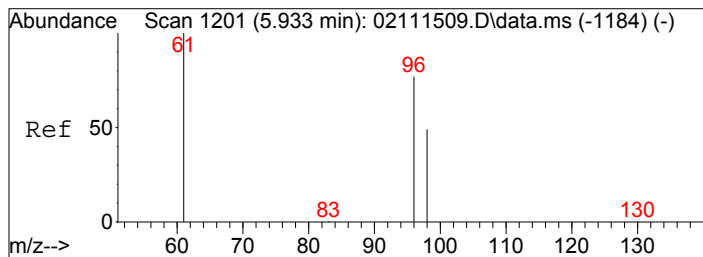
Tgt Ion: 151 Resp: 10426
Ion Ratio Lower Upper
151 100
153 63.3 43.6 83.6



#12
trans-1,2-Dichloroethene
Concen: 43.60 pg
RT: 4.74 min Scan# 896
Delta R.T. -0.004 min
Lab File: 02161518.D
Acq: 16 Feb 2015 19:50

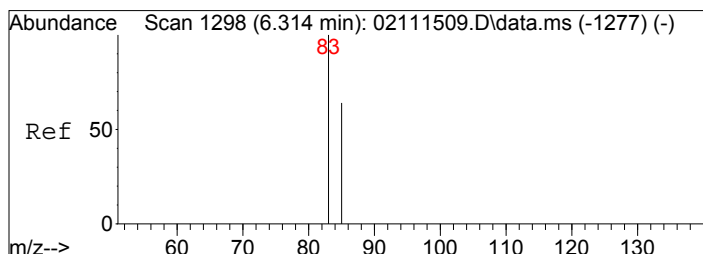
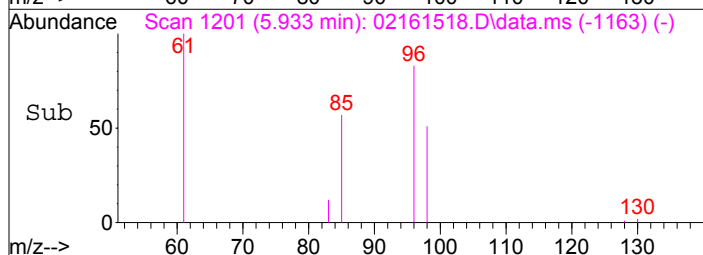
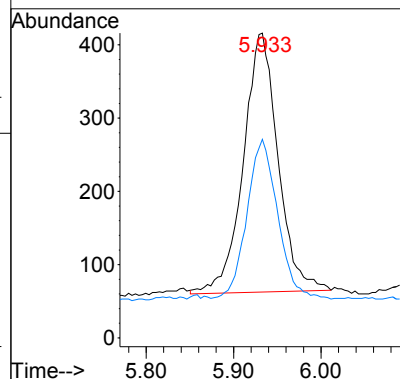
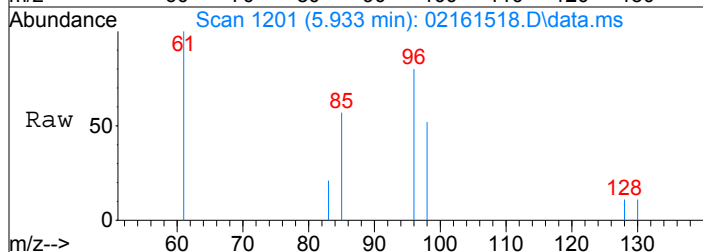
Tgt Ion: 96 Resp: 1125
Ion Ratio Lower Upper
96 100
98 59.0 43.7 83.7





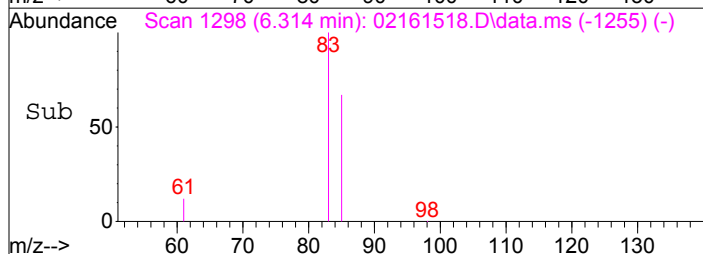
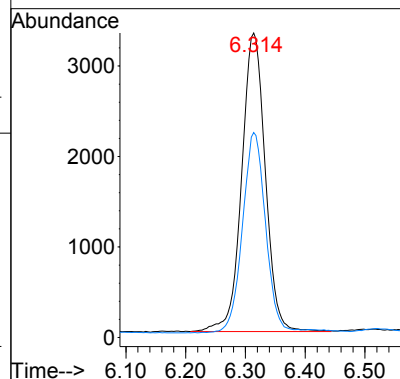
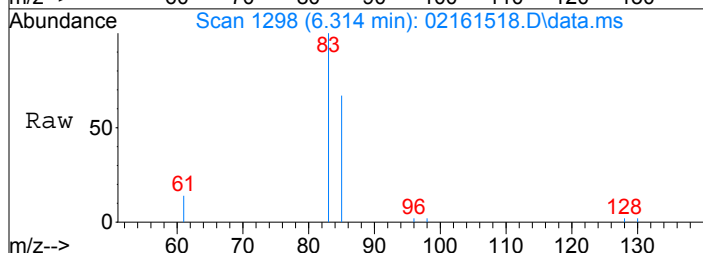
#15
 cis-1,2-Dichloroethene
 Concen: 34.09 pg
 RT: 5.93 min Scan# 1201
 Delta R.T. 0.000 min
 Lab File: 02161518.D
 Acq: 16 Feb 2015 19:50

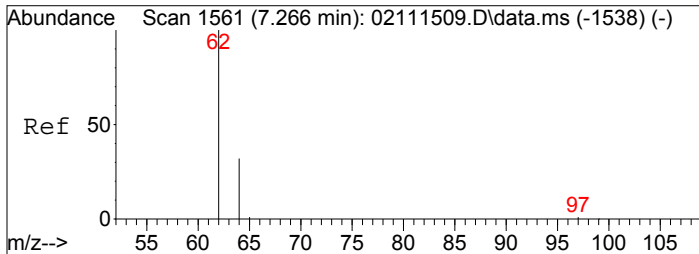
Tgt Ion: 96 Resp: 978
 Ion Ratio Lower Upper
 96 100
 98 54.7 44.3 84.3



#16
 Chloroform
 Concen: 182.39 pg
 RT: 6.31 min Scan# 1298
 Delta R.T. -0.000 min
 Lab File: 02161518.D
 Acq: 16 Feb 2015 19:50

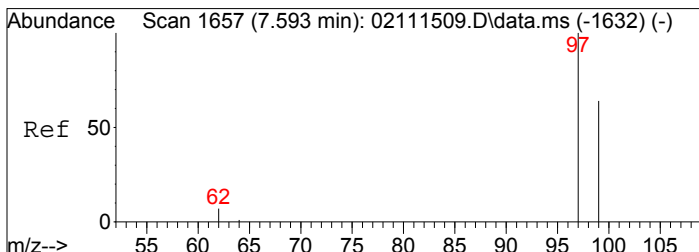
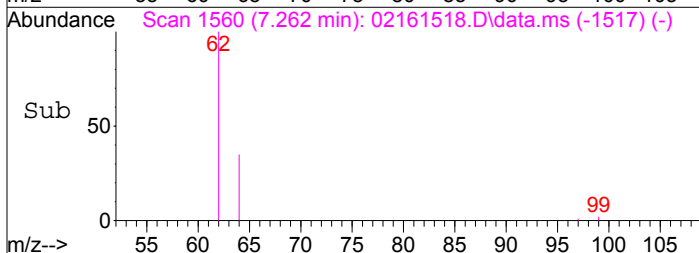
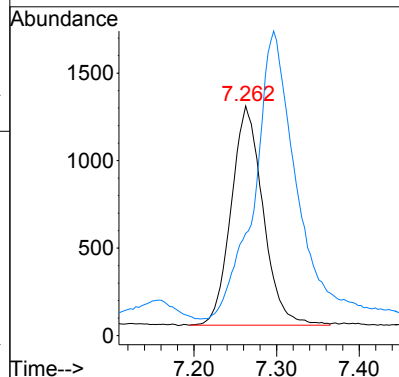
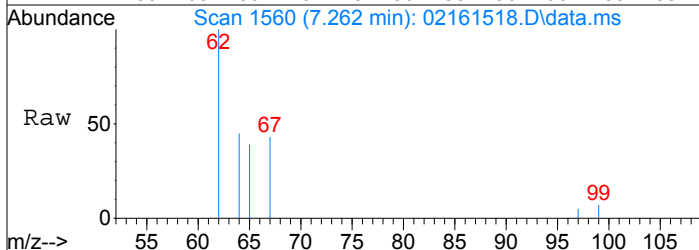
Tgt Ion: 83 Resp: 9067
 Ion Ratio Lower Upper
 83 100
 85 66.0 45.4 85.4





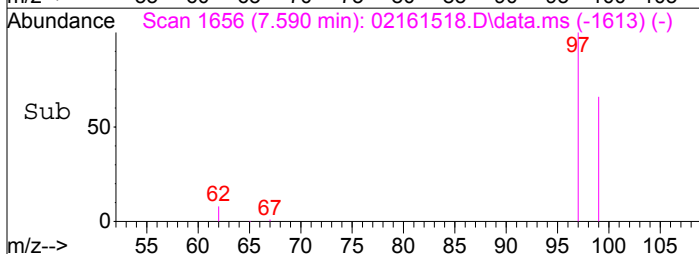
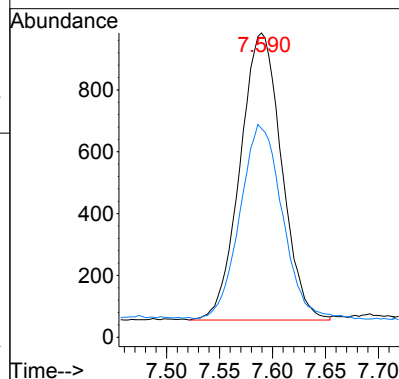
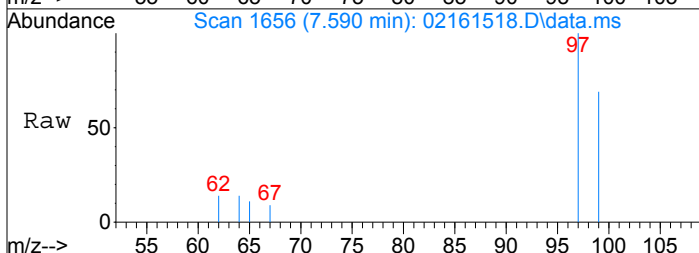
#18
1,2-Dichloroethane
Concen: 84.66 pg
RT: 7.26 min Scan# 1560
Delta R.T. -0.003 min
Lab File: 02161518.D
Acq: 16 Feb 2015 19:50

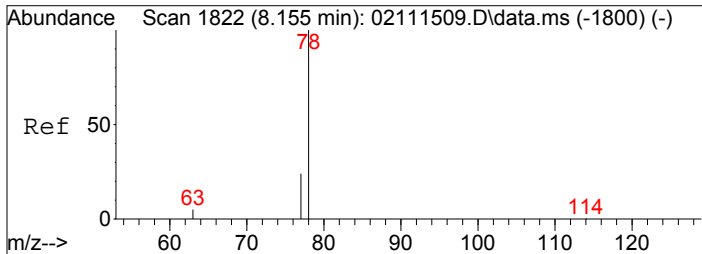
Tgt Ion: 62 Resp: 3351
Ion Ratio Lower Upper
62 100
64 172.3 11.6 51.6#



#19
1,1,1-Trichloroethane
Concen: 52.25 pg
RT: 7.59 min Scan# 1656
Delta R.T. -0.003 min
Lab File: 02161518.D
Acq: 16 Feb 2015 19:50

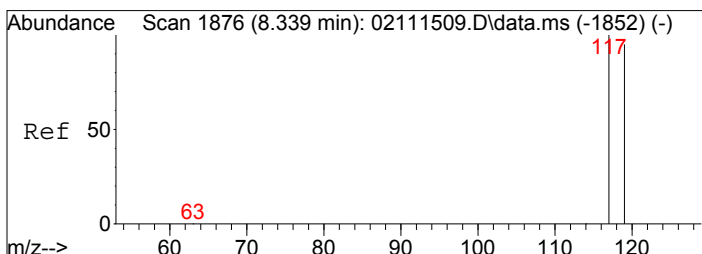
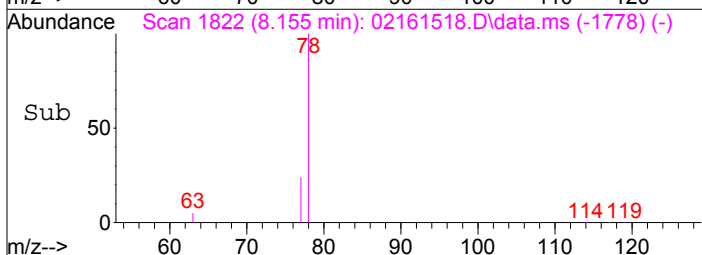
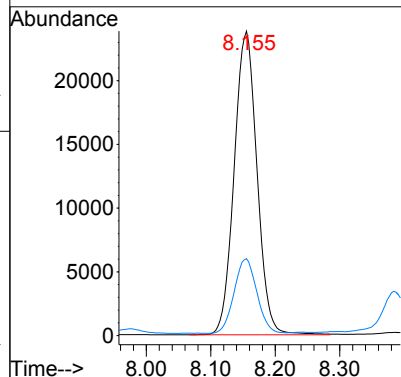
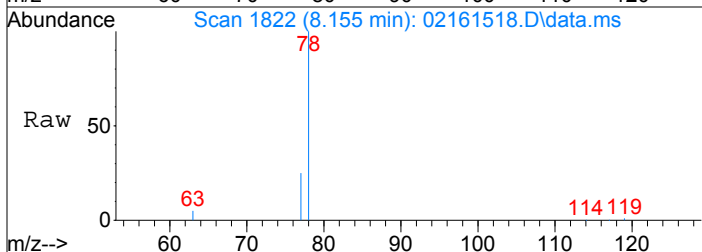
Tgt Ion: 97 Resp: 2526
Ion Ratio Lower Upper
97 100
99 69.3 44.0 84.0





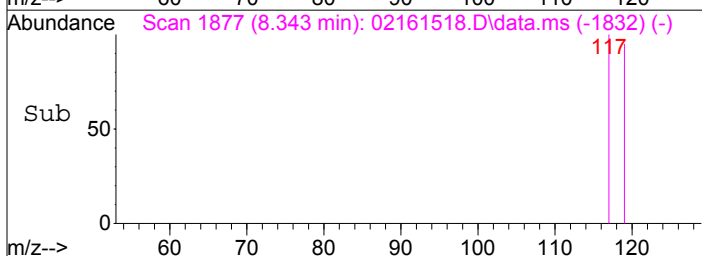
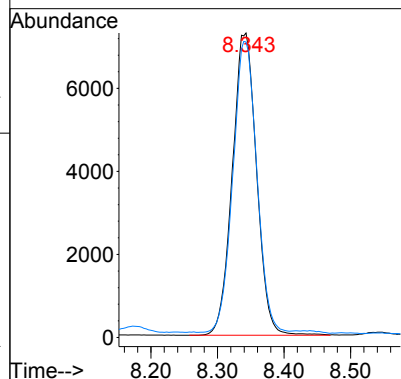
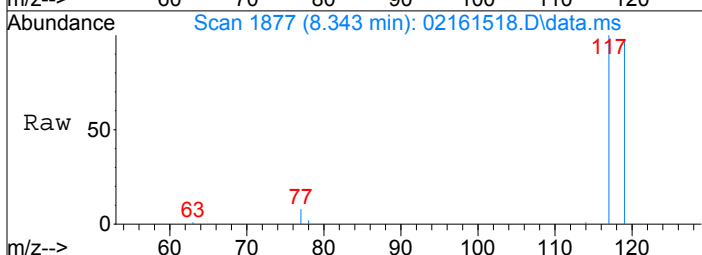
#20
Benzene
Concen: 573.14 pg
RT: 8.16 min Scan# 1822
Delta R.T. 0.000 min
Lab File: 02161518.D
Acq: 16 Feb 2015 19:50

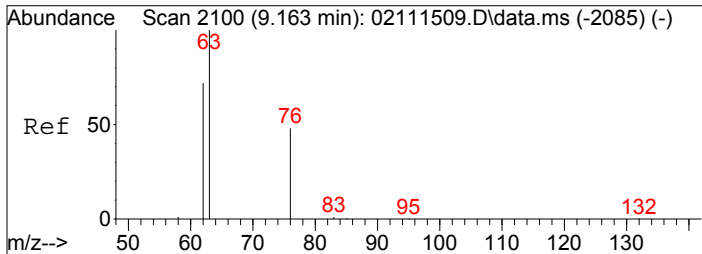
Tgt Ion: 78 Resp: 58601
Ion Ratio Lower Upper
78 100
77 24.5 3.7 43.7



#21
Carbon Tetrachloride
Concen: 509.57 pg
RT: 8.34 min Scan# 1877
Delta R.T. 0.004 min
Lab File: 02161518.D
Acq: 16 Feb 2015 19:50

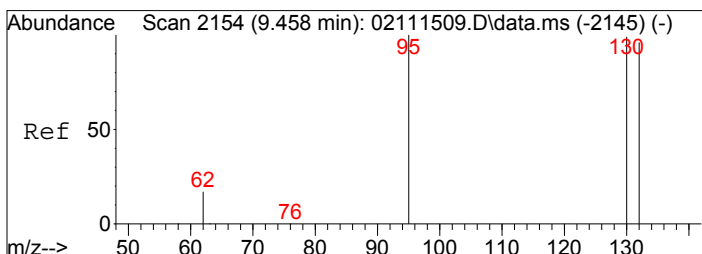
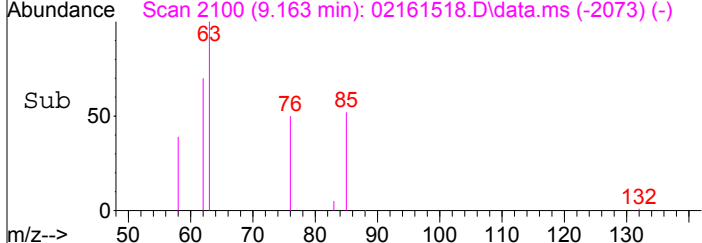
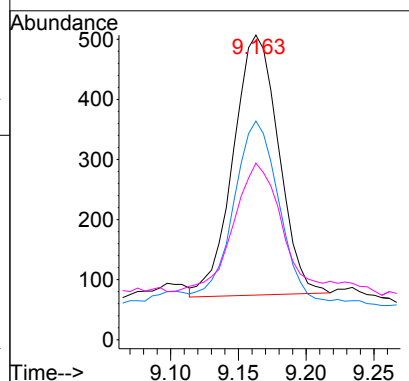
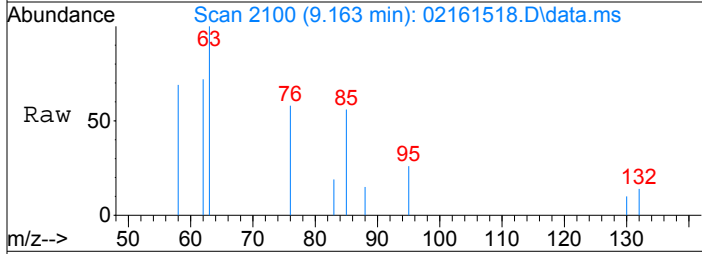
Tgt Ion: 117 Resp: 18442
Ion Ratio Lower Upper
117 100
119 94.9 75.5 115.5





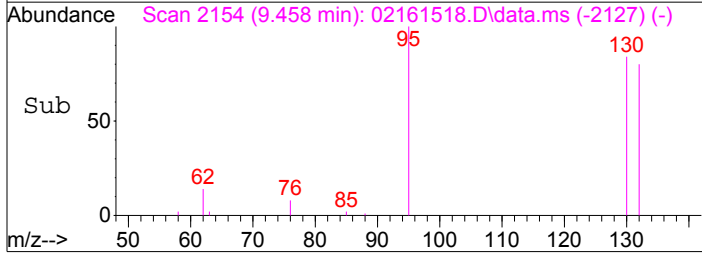
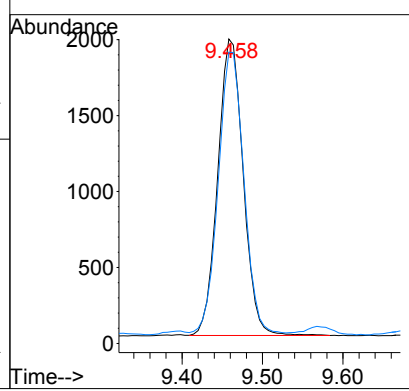
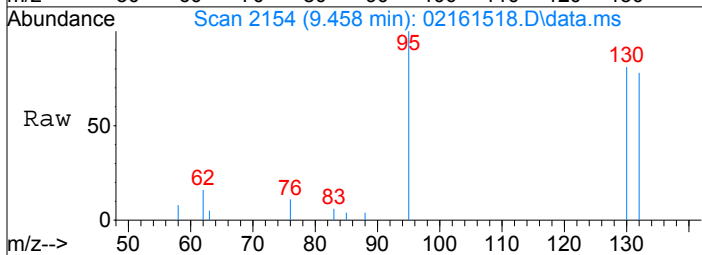
#23
 1,2-Dichloropropane
 Concen: 32.61 pg
 RT: 9.16 min Scan# 2100
 Delta R.T. 0.000 min
 Lab File: 02161518.D
 Acq: 16 Feb 2015 19:50

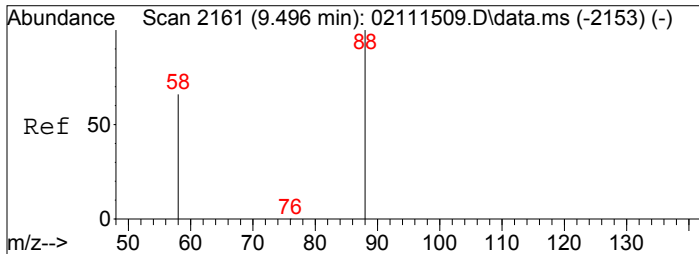
Tgt Ion:	63	Resp:	1010
Ion Ratio	Lower	Upper	
63	100		
62	75.8	52.0	92.0
76	59.3	28.1	68.1



#25
 Trichloroethene
 Concen: 117.50 pg
 RT: 9.46 min Scan# 2154
 Delta R.T. 0.000 min
 Lab File: 02161518.D
 Acq: 16 Feb 2015 19:50

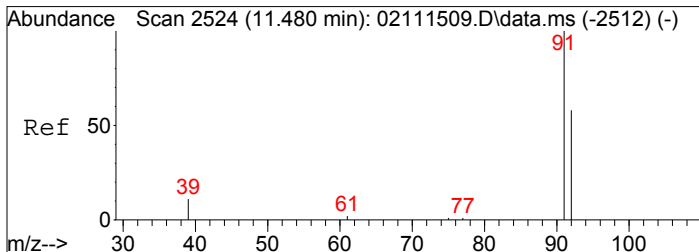
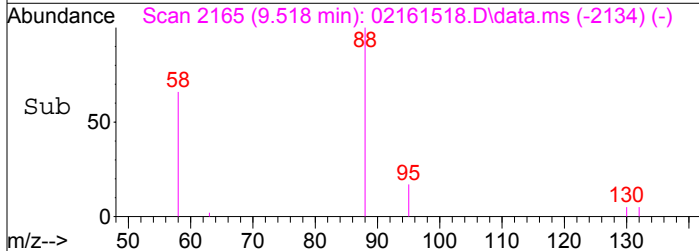
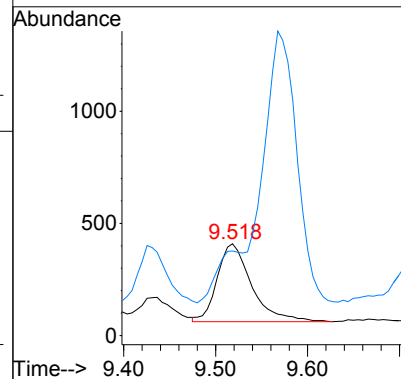
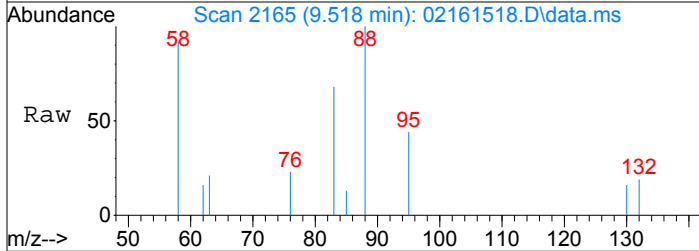
Tgt Ion:	130	Resp:	4287
Ion Ratio	Lower	Upper	
130	100		
132	94.6	77.1	117.1





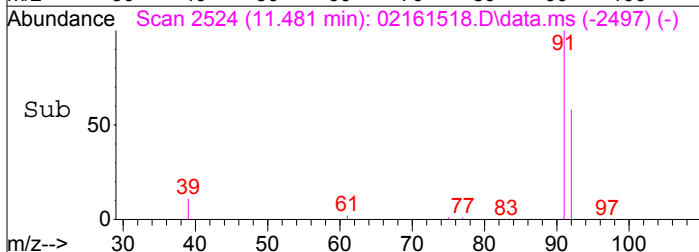
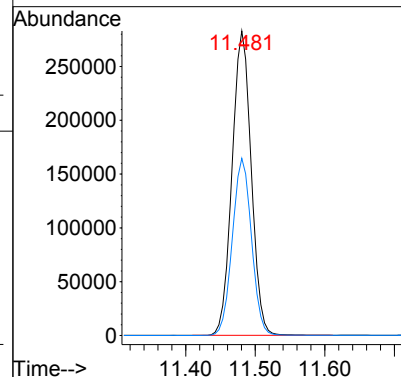
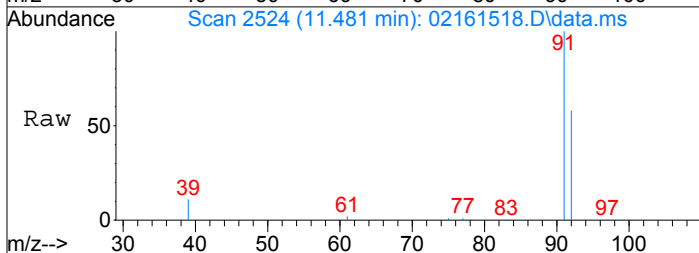
#26
1,4-Dioxane
Concen: 33.21 pg
RT: 9.52 min Scan# 2165
Delta R.T. 0.022 min
Lab File: 02161518.D
Acq: 16 Feb 2015 19:50

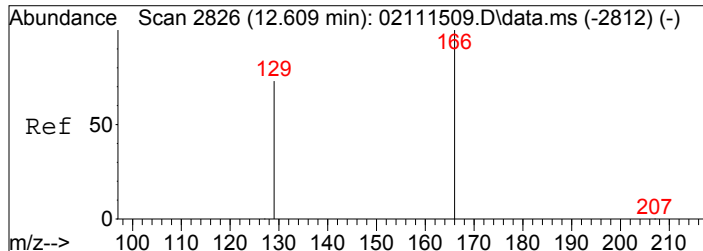
Tgt Ion: 88 Resp: 903
Ion Ratio Lower Upper
88 100
58 53.2 38.3 78.3



#31
Toluene
Concen: 3878.42 pg
RT: 11.48 min Scan# 2524
Delta R.T. 0.000 min
Lab File: 02161518.D
Acq: 16 Feb 2015 19:50

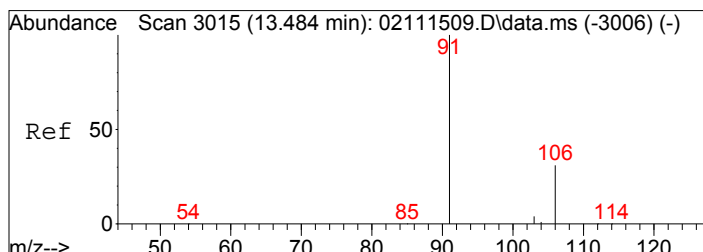
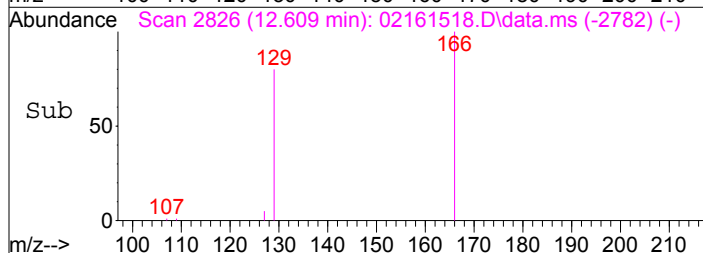
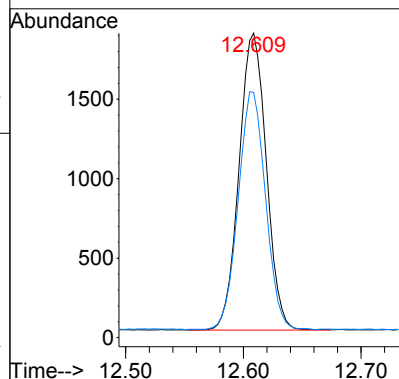
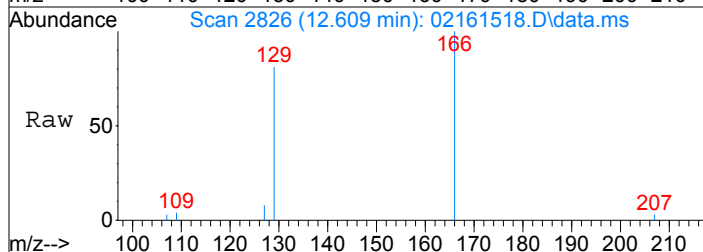
Tgt Ion: 91 Resp: 540205
Ion Ratio Lower Upper
91 100
92 58.2 37.7 77.7





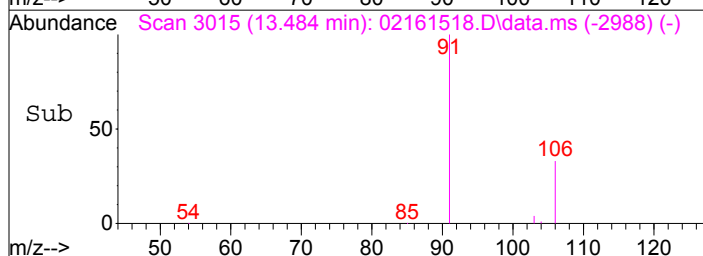
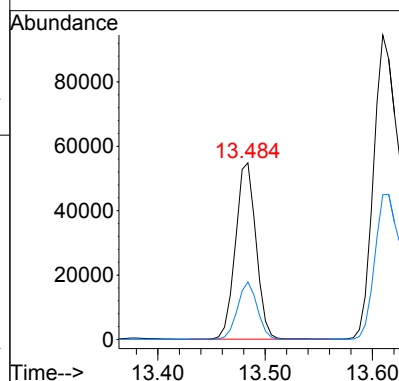
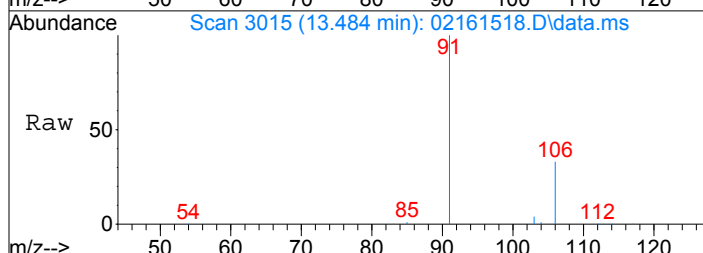
#33
Tetrachloroethene
Concen: 69.70 pg
RT: 12.61 min Scan# 2826
Delta R.T. -0.000 min
Lab File: 02161518.D
Acq: 16 Feb 2015 19:50

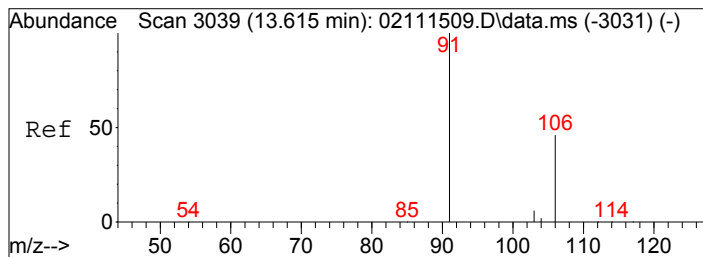
Tgt Ion: 166 Resp: 3006
Ion Ratio Lower Upper
166 100
129 80.4 53.3 93.3



#36
Ethylbenzene
Concen: 496.28 pg
RT: 13.48 min Scan# 3015
Delta R.T. 0.000 min
Lab File: 02161518.D
Acq: 16 Feb 2015 19:50

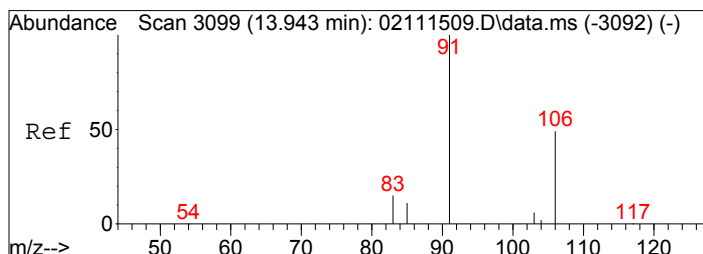
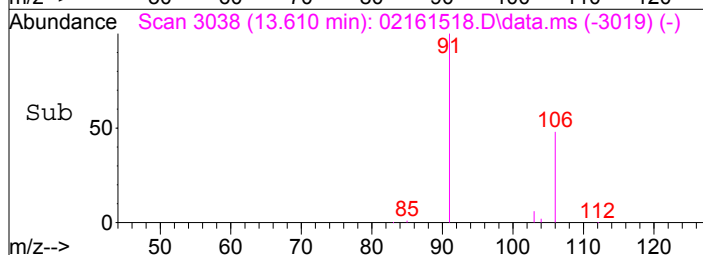
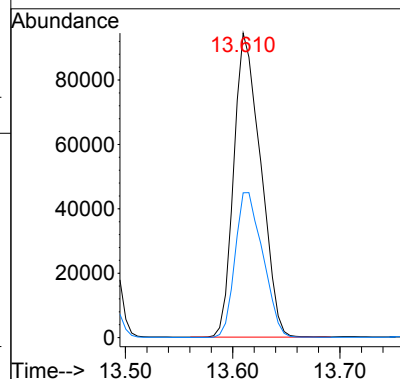
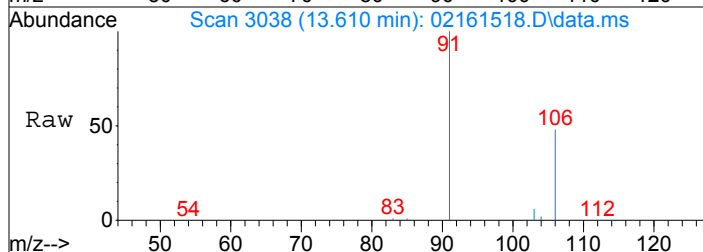
Tgt Ion: 91 Resp: 72879
Ion Ratio Lower Upper
91 100
106 31.3 10.9 50.9





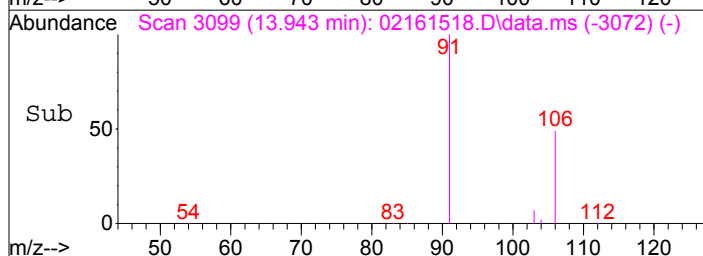
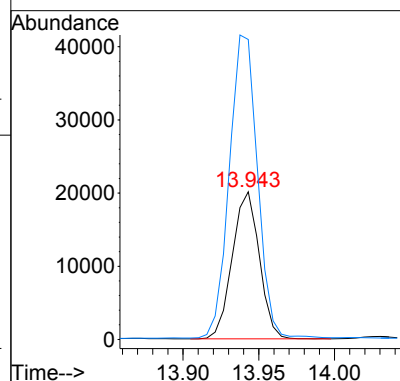
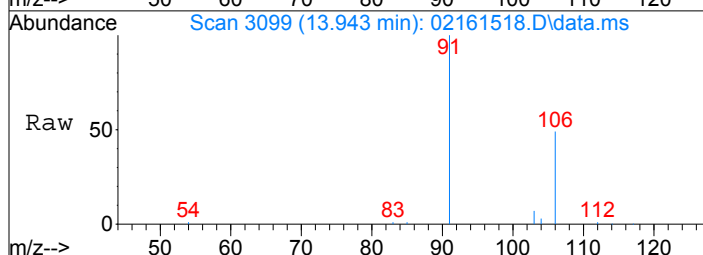
#37
m,p-Xylene
Concen: 1360.37 pg
RT: 13.61 min Scan# 3038
Delta R.T. -0.005 min
Lab File: 02161518.D
Acq: 16 Feb 2015 19:50

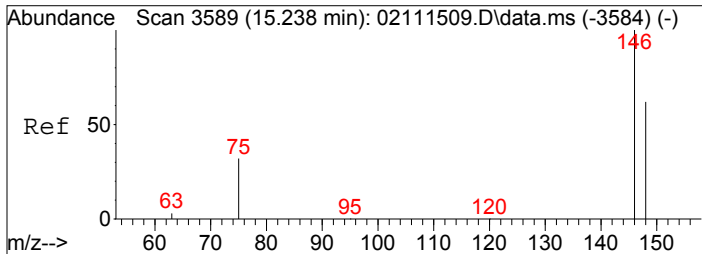
Tgt Ion: 91 Resp: 164189
Ion Ratio Lower Upper
91 100
106 49.2 27.5 67.5



#38
o-Xylene
Concen: 422.63 pg
RT: 13.94 min Scan# 3099
Delta R.T. 0.000 min
Lab File: 02161518.D
Acq: 16 Feb 2015 19:50

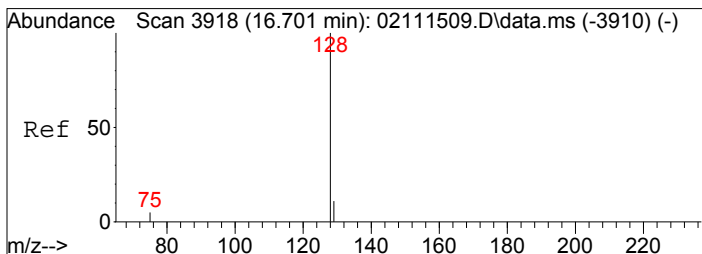
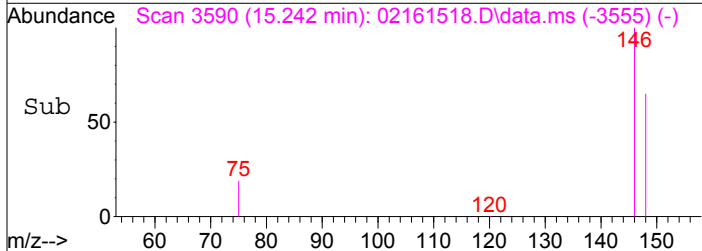
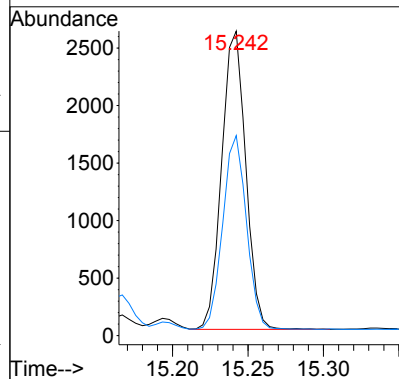
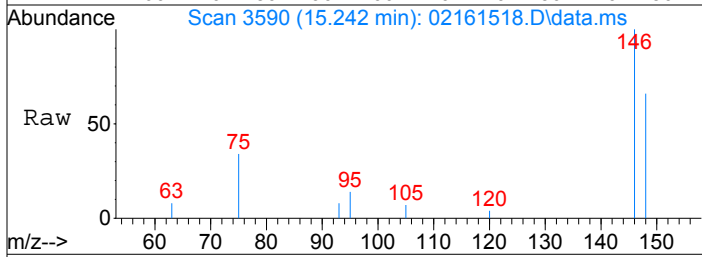
Tgt Ion: 106 Resp: 24929
Ion Ratio Lower Upper
106 100
91 216.2 198.3 238.3





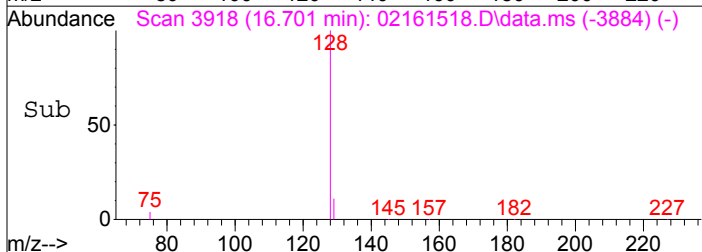
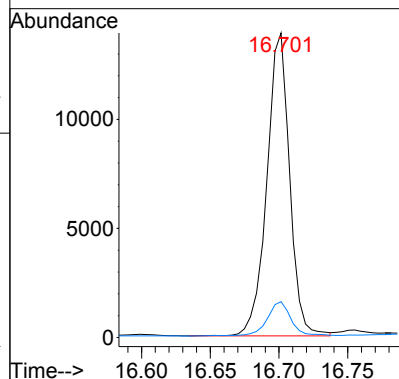
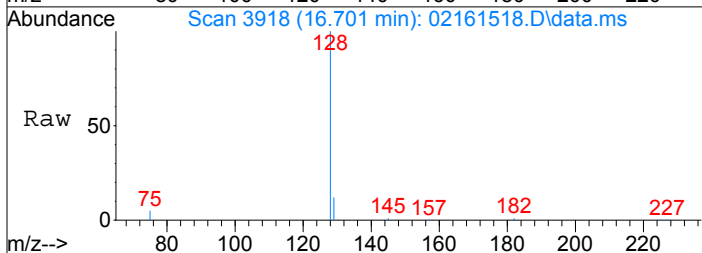
#42
 1,4-Dichlorobenzene
 Concen: 35.49 pg
 RT: 15.24 min Scan# 3590
 Delta R.T. 0.005 min
 Lab File: 02161518.D
 Acq: 16 Feb 2015 19:50

Tgt Ion	Ratio	Lower	Upper
146	100		
148	63.9	43.5	83.5



#45
 Naphthalene
 Concen: 109.15 pg
 RT: 16.70 min Scan# 3918
 Delta R.T. 0.000 min
 Lab File: 02161518.D
 Acq: 16 Feb 2015 19:50

Tgt Ion	Ratio	Lower	Upper
128	100		
129	12.2	0.0	30.9



Data File: I:\MS19\DATA\2015 02\16\02161519.D

Acq On : 16 Feb 2015 20:17

Operator: WA

Sample : P1500566-002 (1000mL)

Misc : S29-02041502

ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 17 09:57:00 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

WA 2/17/15

DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	17893	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	130892	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	25220	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	41590	951.794	pg	0.00
Spiked Amount 1000.000			Recovery	=	95.18%	
30) Toluene-d8 (SS2)	11.38	98	123944	1026.821	pg	0.00
Spiked Amount 1000.000			Recovery	=	102.68%	
40) Bromofluorobenzene (SS3)	14.25	174	55564	1091.294	pg	0.00
Spiked Amount 1000.000			Recovery	=	109.13%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.73	85	138787	1908.580	pg	100
3) Chloromethane	1.84	52	8574	590.420	pg	94
4) Vinyl Chloride	0.00	62	0	N.D.		
5) Bromomethane	2.33	94	2580	78.903	pg	94
6) Chloroethane	0.00	64	0	N.D.	d	
7) Acetone	2.99	58	191820	7470.136	pg	# 59
8) Trichlorofluoromethane	3.10	101	126081	2018.547	pg	99
9) 1,1-Dichloroethene	3.66	96	323	N.D.		
10) Methylene Chloride	3.80	84	15214	513.324	pg	94
11) Trichlorotrifluoroethane	4.09	151	11874	413.713	pg	100
12) trans-1,2-Dichloroethene	4.74	96	1095	38.455	pg	97
13) 1,1-Dichloroethane	4.95	63	310	N.D.		
14) Methyl tert-Butyl Ether	5.11	73	726	N.D.		
15) cis-1,2-Dichloroethene	5.93	96	962	30.382	pg	91
16) Chloroform	6.31	83	12069	219.999	pg	99
18) 1,2-Dichloroethane	7.26	62	3396	77.747	pg	93
19) 1,1,1-Trichloroethane	7.59	97	2856	53.535	pg	97
20) Benzene	8.15	78	61030	540.886	pg	99
21) Carbon Tetrachloride	8.34	117	17167	429.831	pg	99
23) 1,2-Dichloropropane	9.16	63	1027	35.975	pg	98
24) Bromodichloromethane	0.00	83	0	N.D.	d	
25) Trichloroethene	9.46	130	4658	138.520	pg	99
26) 1,4-Dioxane	9.53	88	440	N.D.		
27) cis-1,3-Dichloropropene	10.45	75	29	N.D.		
28) trans-1,3-Dichloropropene	11.06	75	53	N.D.		
29) 1,1,2-Trichloroethane	11.19	83	120	N.D.		
31) Toluene	11.48	91	476764	3713.737	pg	99
32) 1,2-Dibromoethane	12.12	107	31	N.D.		
33) Tetrachloroethene	12.61	166	3529	88.780	pg	99
35) Chlorobenzene	13.17	112	1209	N.D.		
36) Ethylbenzene	13.49	91	67699	428.066	pg	99
37) m,p-Xylene	13.61	91	152544	1173.579	pg	97
38) o-Xylene	13.94	106	24086	379.159	pg	97
39) 1,1,2,2-Tetrachloroethane	13.90	83	623	N.D.		
41) 1,3-Dichlorobenzene	0.00	146	0	N.D.	d	
42) 1,4-Dichlorobenzene	15.24	146	2802	32.150	pg	100
43) 1,2-Dichlorobenzene	15.46	146	164	N.D.		
44) 1,2,4-Trichlorobenzene	16.63	182	80	N.D.		
45) Naphthalene	16.70	128	16866	106.880	pg	98
46) Hexachlorobutadiene	16.95	225	33	N.D.		

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\16\02161519.D

Acq On : 16 Feb 2015 20:17

Operator: WA

Sample : P1500566-002 (1000mL)

Misc : S29-02041502

ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 17 09:57:00 2015

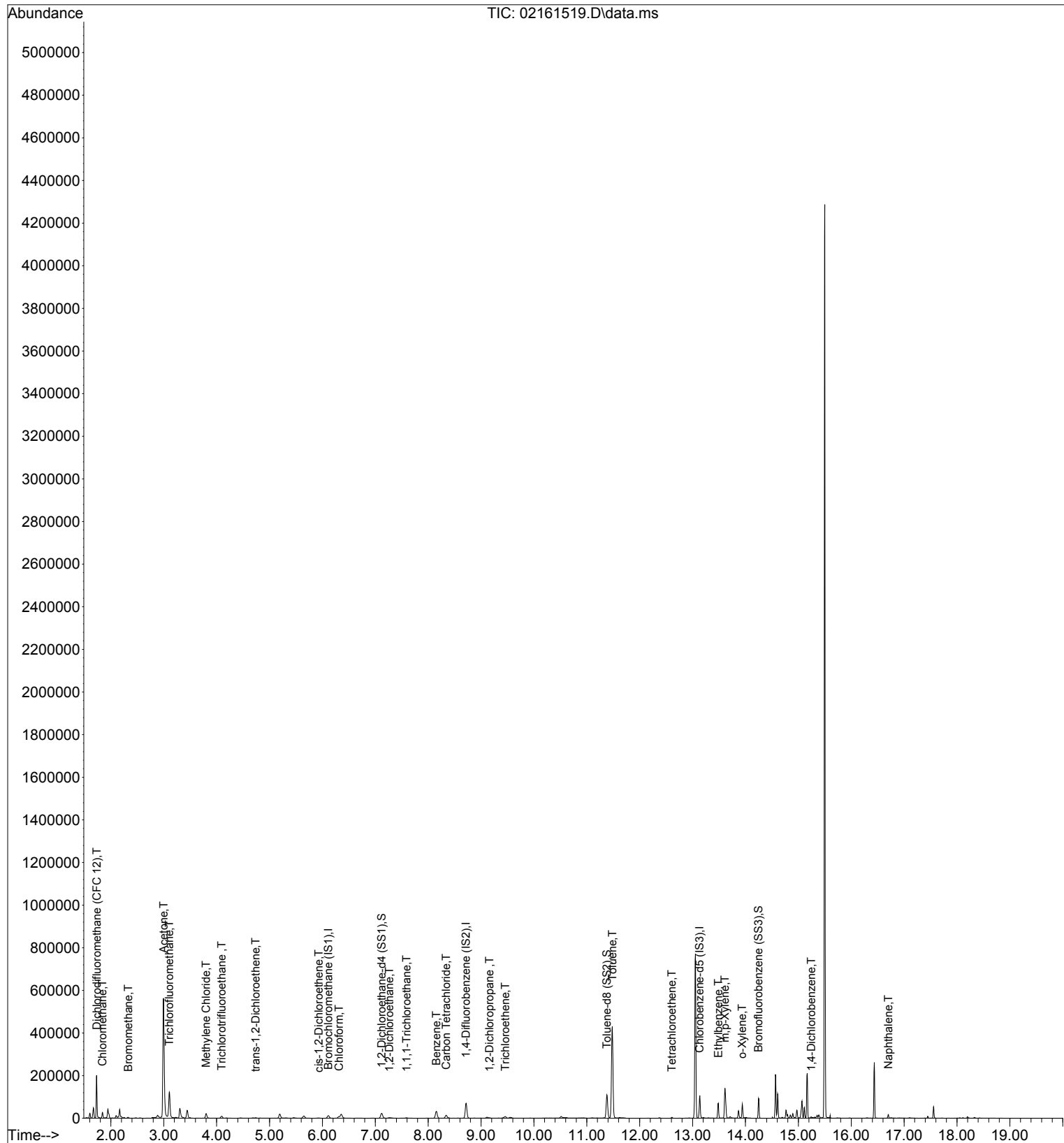
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 02\16\02161519.D

Acq On : 16 Feb 2015 20:17

Operator: WA

Sample : P1500566-002 (1000mL)

Misc : S29-02041502

ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 17 09:57:00 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

2/17/15

DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	17893	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	130892	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	25220	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	41590	951.794	pg	0.00
Spiked Amount 1000.000			Recovery	=	95.18%	
30) Toluene-d8 (SS2)	11.38	98	123944	1026.821	pg	0.00
Spiked Amount 1000.000			Recovery	=	102.68%	
40) Bromofluorobenzene (SS3)	14.25	174	55564	1091.294	pg	0.00
Spiked Amount 1000.000			Recovery	=	109.13%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.73	85	138787	1908.580	pg	100
3) Chloromethane	1.84	52	8574	590.420	pg	94
5) Bromomethane	2.33	94	2580	78.903	pg	94
7) Acetone	2.99	58	191820	7470.136	pg	# 59
8) Trichlorofluoromethane	3.10	101	126081	2018.547	pg	99
10) Methylene Chloride	3.80	84	15214	513.324	pg	94
11) Trichlorotrifluoroethane	4.09	151	11874	413.713	pg	100
12) trans-1,2-Dichloroethene	4.74	96	1095	38.455	pg	97
15) cis-1,2-Dichloroethene	5.93	96	962	30.382	pg	91
16) Chloroform	6.31	83	12069	219.999	pg	99
18) 1,2-Dichloroethane	7.26	62	3396	77.747	pg	93
19) 1,1,1-Trichloroethane	7.59	97	2856	53.535	pg	97
20) Benzene	8.15	78	61030	540.886	pg	99
21) Carbon Tetrachloride	8.34	117	17167	429.831	pg	99
23) 1,2-Dichloropropane	9.16	63	1027	35.975	pg	98
25) Trichloroethene	9.46	130	4658	138.520	pg	99
31) Toluene	11.48	91	476764	3713.737	pg	99
33) Tetrachloroethene	12.61	166	3529	88.780	pg	99
36) Ethylbenzene	13.49	91	67699	428.066	pg	99
37) m,p-Xylene	13.61	91	152544	1173.579	pg	97
38) o-Xylene	13.94	106	24086	379.159	pg	97
42) 1,4-Dichlorobenzene	15.24	146	2802	32.150	pg	100
45) Naphthalene	16.70	128	16866	106.880	pg	98

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\16\02161519.D

Acq On : 16 Feb 2015 20:17

Operator: WA

Sample : P1500566-002 (1000mL)

Misc : S29-02041502

ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 17 09:57:00 2015

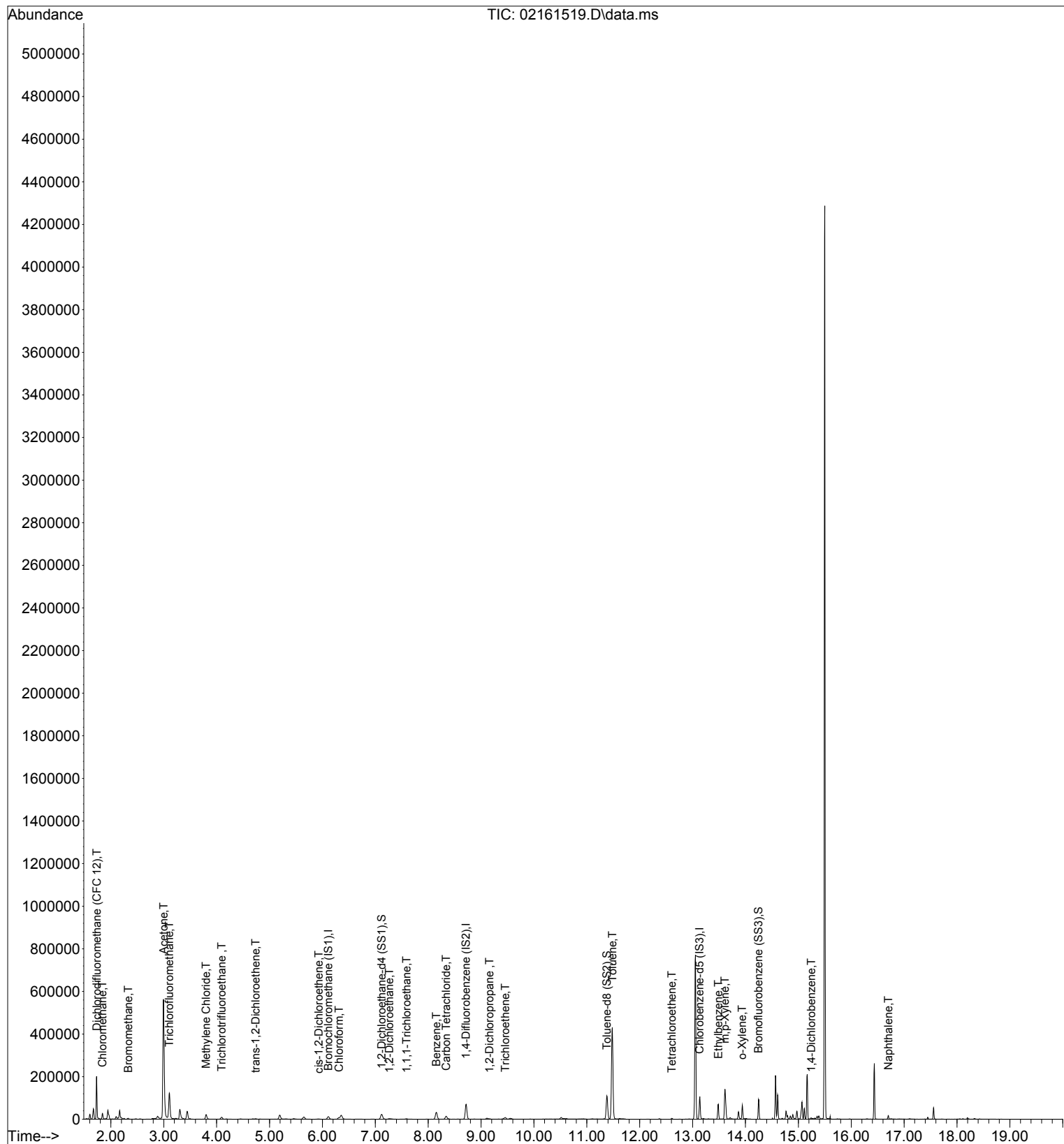
Quant Method : I:\MS19\METHODS\X19021115.M

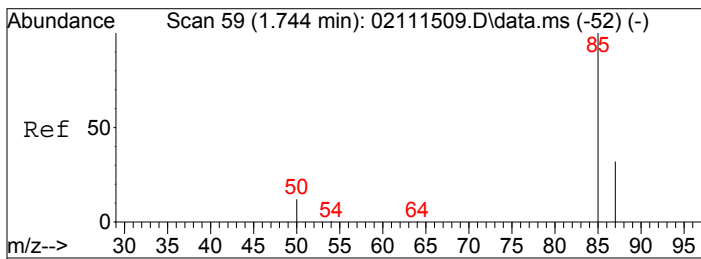
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

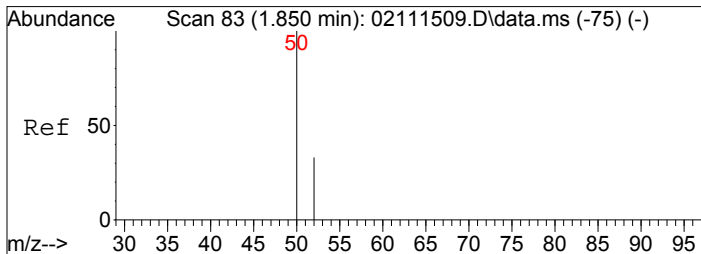
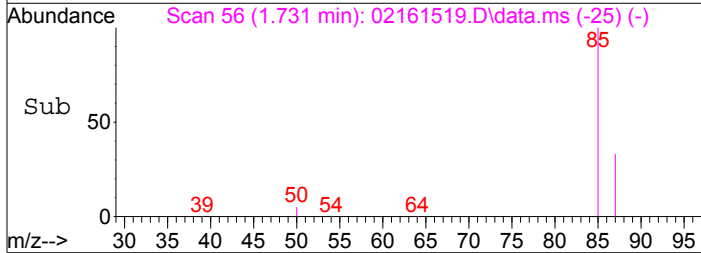
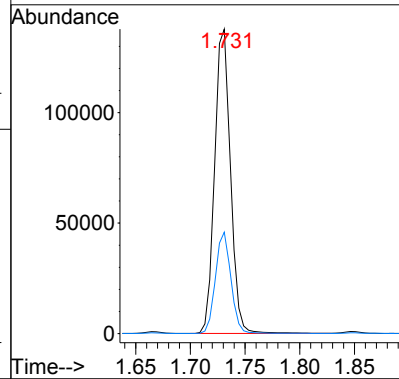
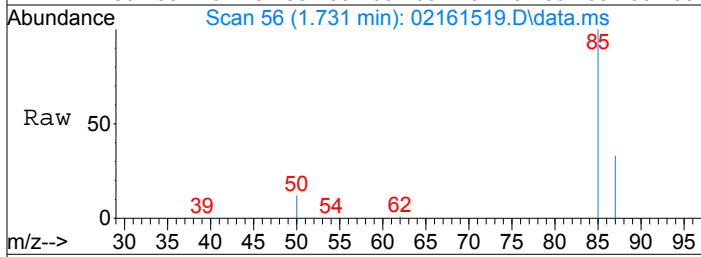
DataAcq Meth:TO15SIM.M





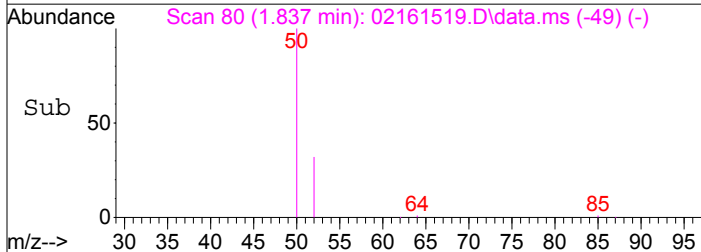
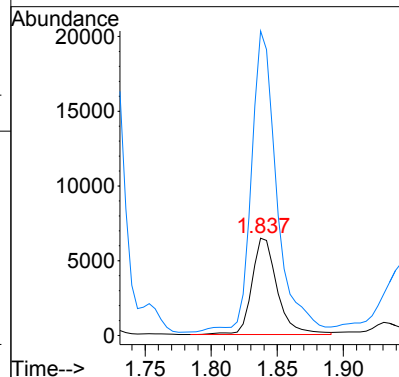
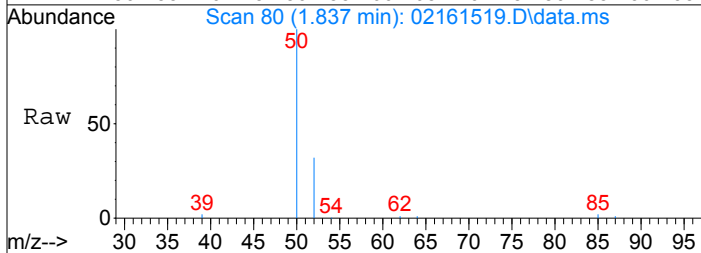
#2
 Dichlorodifluoromethane (CFC 12)
 Concen: 1908.58 pg
 RT: 1.73 min Scan# 56
 Delta R.T. -0.013 min
 Lab File: 02161519.D
 Acq: 16 Feb 2015 20:17

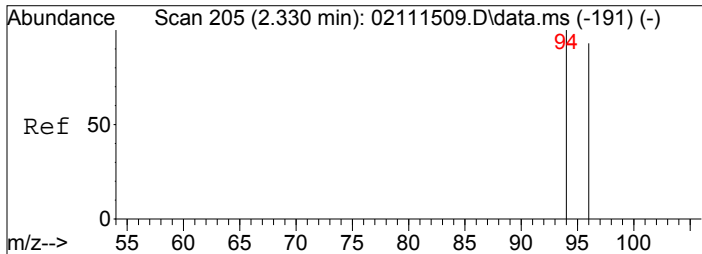
Tgt Ion: 85 Resp: 138787
 Ion Ratio Lower Upper
 85 100
 87 32.6 12.4 52.4



#3
 Chloromethane
 Concen: 590.42 pg
 RT: 1.84 min Scan# 80
 Delta R.T. -0.013 min
 Lab File: 02161519.D
 Acq: 16 Feb 2015 20:17

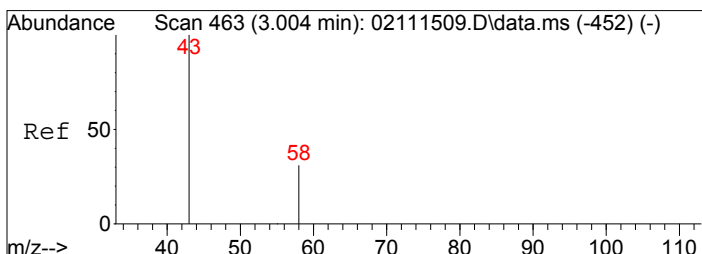
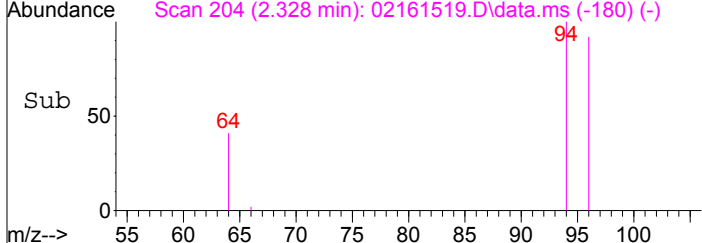
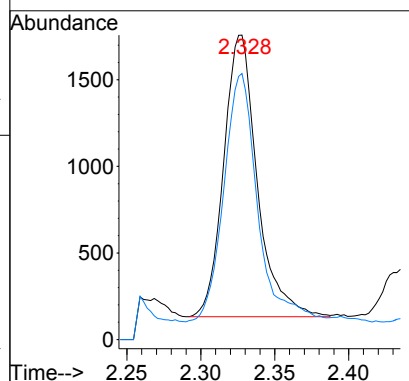
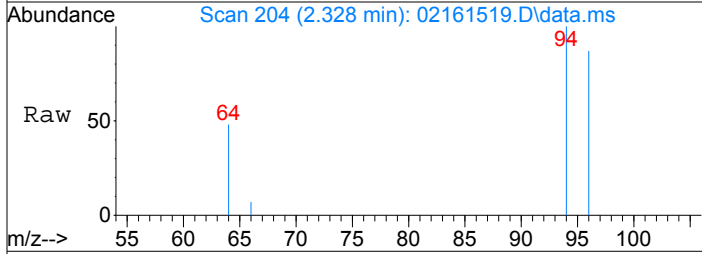
Tgt Ion: 52 Resp: 8574
 Ion Ratio Lower Upper
 52 100
 50 315.8 283.7 323.7





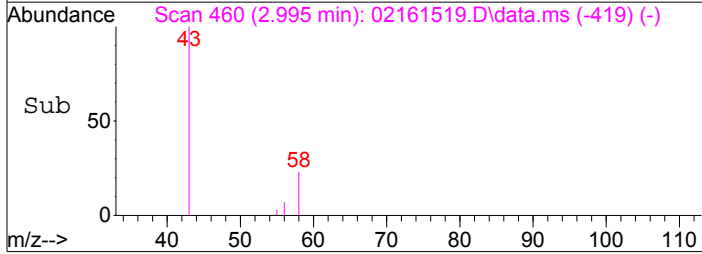
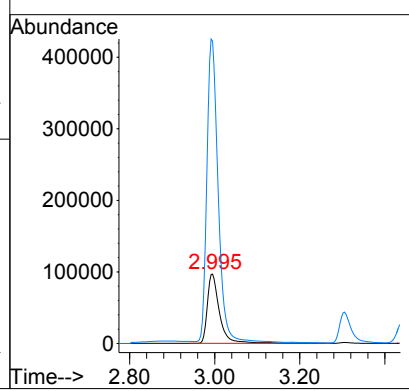
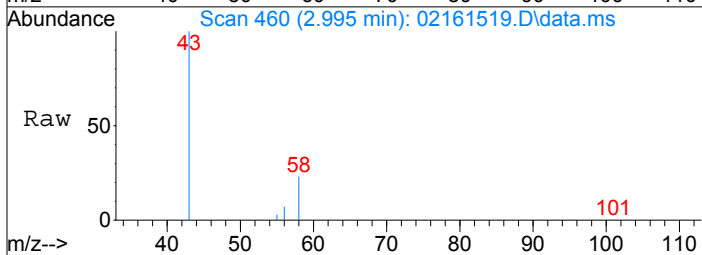
#5
 Bromomethane
 Concen: 78.90 pg
 RT: 2.33 min Scan# 204
 Delta R.T. -0.002 min
 Lab File: 02161519.D
 Acq: 16 Feb 2015 20:17

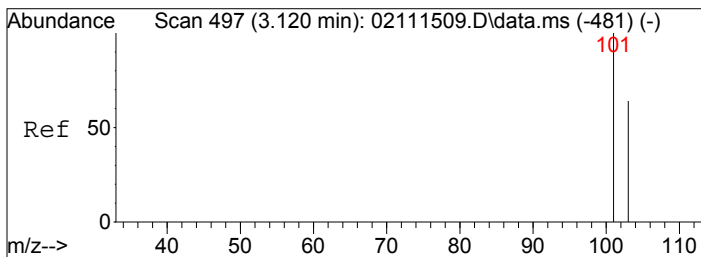
Tgt Ion:	94	Resp:	2580
Ion Ratio	Lower	Upper	
94	100		
96	89.1	75.5	113.3



#7
 Acetone
 Concen: 7470.14 pg
 RT: 2.99 min Scan# 460
 Delta R.T. -0.009 min
 Lab File: 02161519.D
 Acq: 16 Feb 2015 20:17

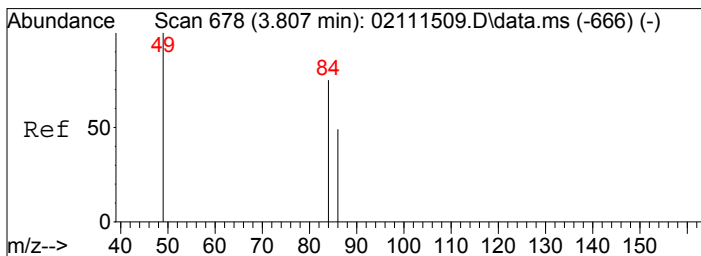
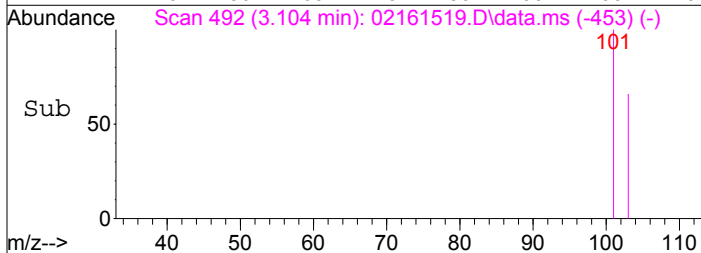
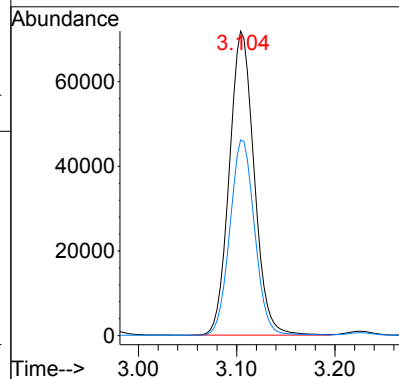
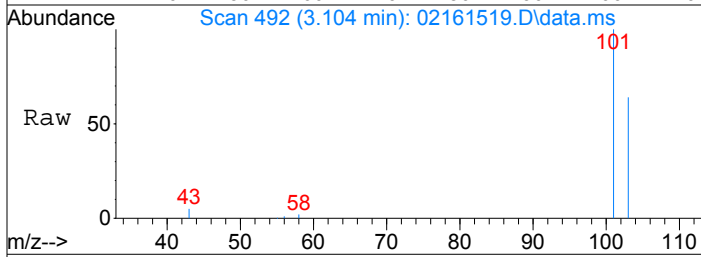
Tgt Ion:	58	Resp:	191820
Ion Ratio	Lower	Upper	
58	100		
43	406.3	301.8	341.8#





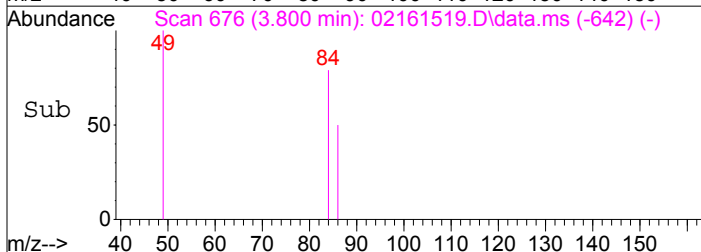
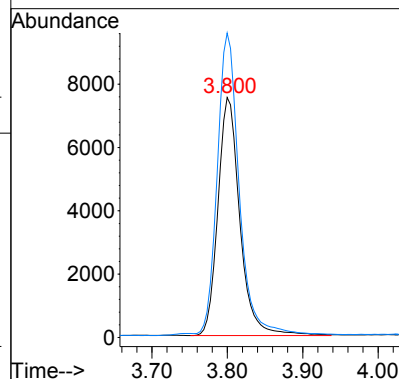
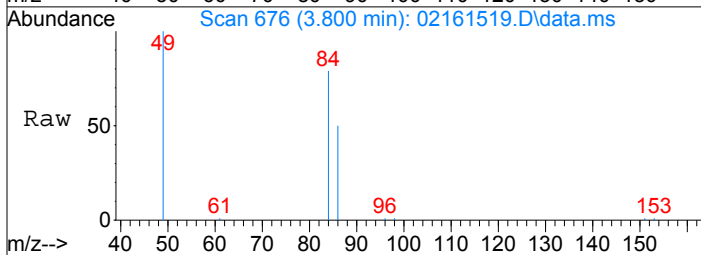
#8
 Trichlorofluoromethane
 Concen: 2018.55 pg
 RT: 3.10 min Scan# 492
 Delta R.T. -0.016 min
 Lab File: 02161519.D
 Acq: 16 Feb 2015 20:17

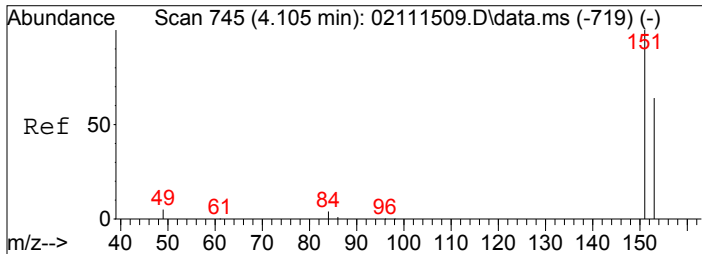
Tgt Ion: 101 Resp: 126081
 Ion Ratio Lower Upper
 101 100
 103 64.1 51.8 77.6



#10
 Methylene Chloride
 Concen: 513.32 pg
 RT: 3.80 min Scan# 676
 Delta R.T. -0.007 min
 Lab File: 02161519.D
 Acq: 16 Feb 2015 20:17

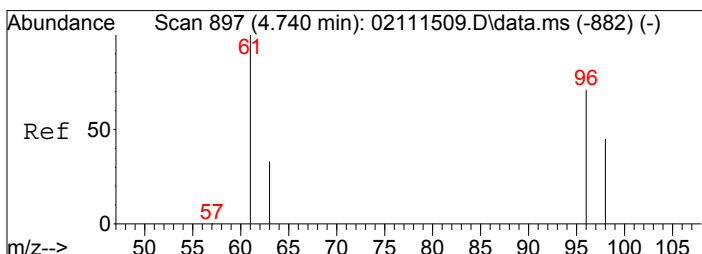
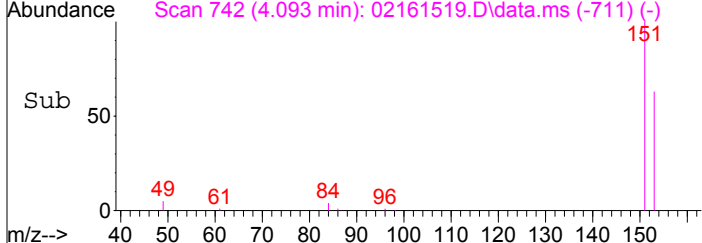
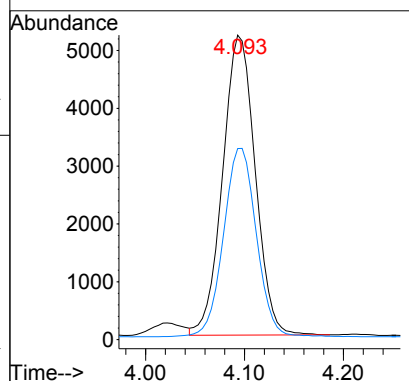
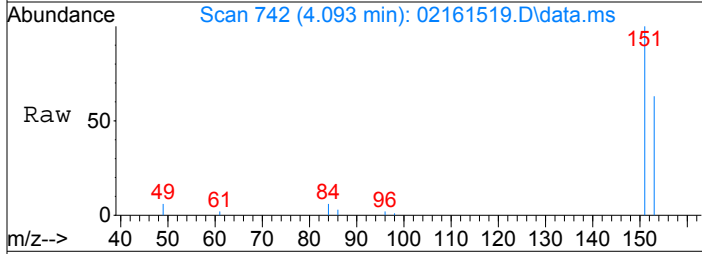
Tgt Ion: 84 Resp: 15214
 Ion Ratio Lower Upper
 84 100
 49 124.9 112.3 152.3





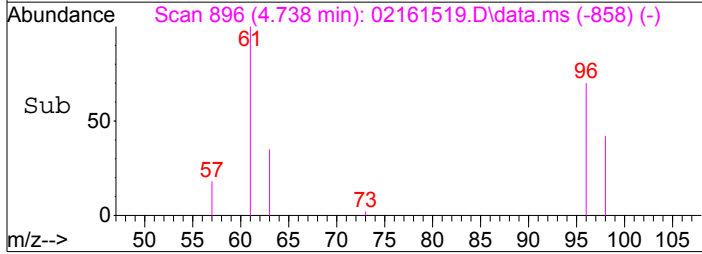
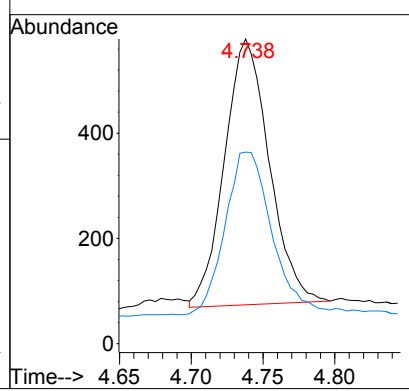
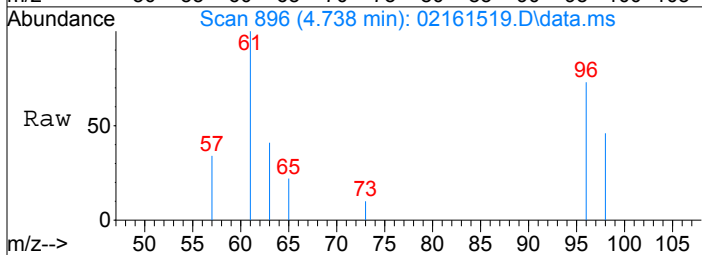
#11
 Trichlorotrifluoroethane
 Concen: 413.71 pg
 RT: 4.09 min Scan# 742
 Delta R.T. -0.012 min
 Lab File: 02161519.D
 Acq: 16 Feb 2015 20:17

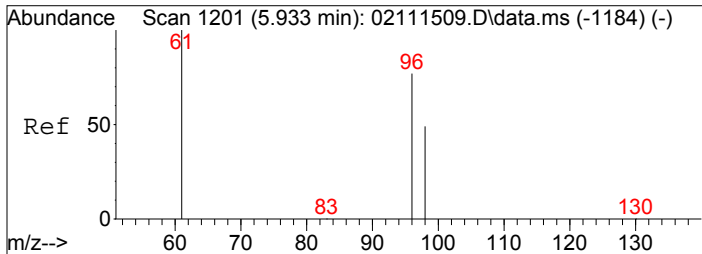
Tgt Ion: 151	Resp: 11874
Ion Ratio	Lower Upper
151	100
153	63.4 43.6 83.6



#12
 trans-1,2-Dichloroethene
 Concen: 38.46 pg
 RT: 4.74 min Scan# 896
 Delta R.T. -0.002 min
 Lab File: 02161519.D
 Acq: 16 Feb 2015 20:17

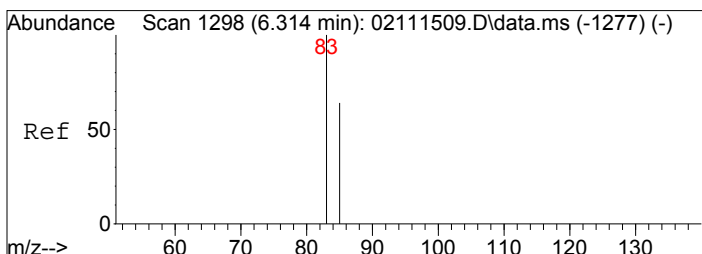
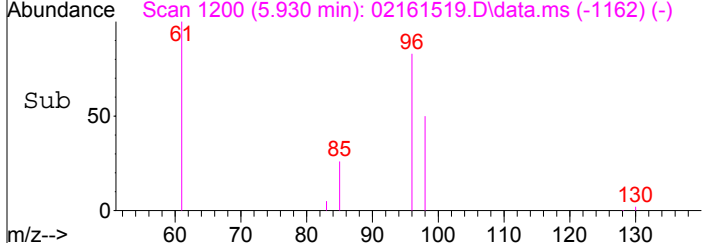
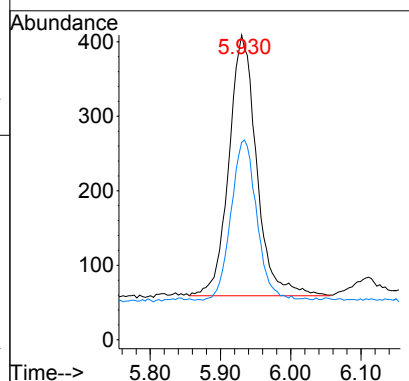
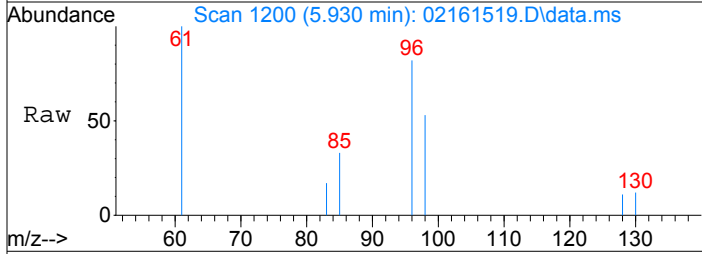
Tgt Ion: 96	Resp: 1095
Ion Ratio	Lower Upper
96	100
98	65.8 43.7 83.7





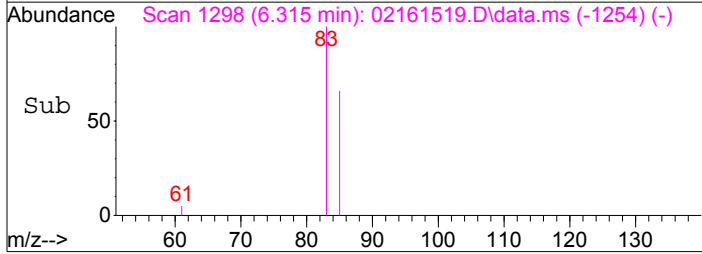
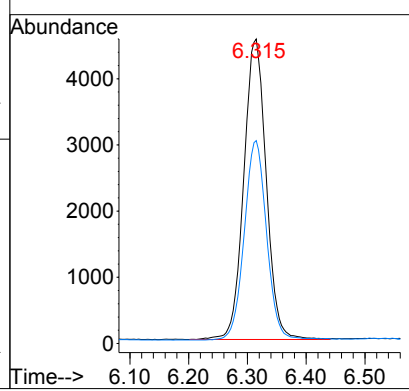
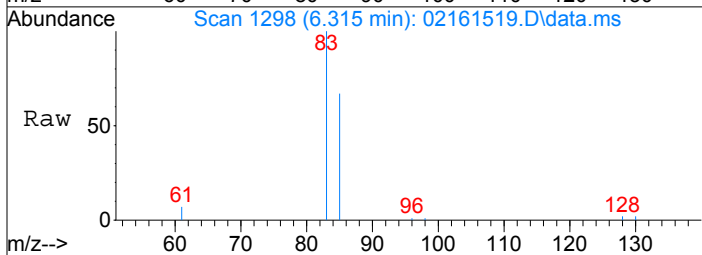
#15
 cis-1,2-Dichloroethene
 Concen: 30.38 pg
 RT: 5.93 min Scan# 1200
 Delta R.T. -0.002 min
 Lab File: 02161519.D
 Acq: 16 Feb 2015 20:17

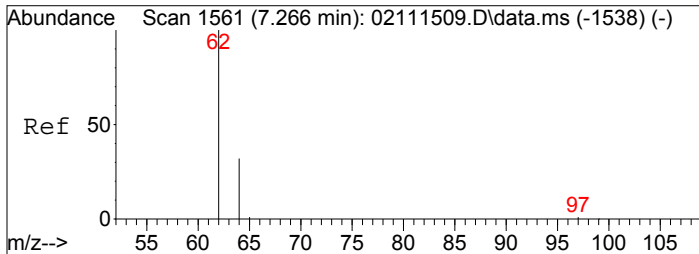
Tgt Ion:	96	Resp:	962
Ion Ratio	Lower	Upper	
96	100		
98	57.0	44.3	84.3



#16
 Chloroform
 Concen: 220.00 pg
 RT: 6.31 min Scan# 1298
 Delta R.T. 0.001 min
 Lab File: 02161519.D
 Acq: 16 Feb 2015 20:17

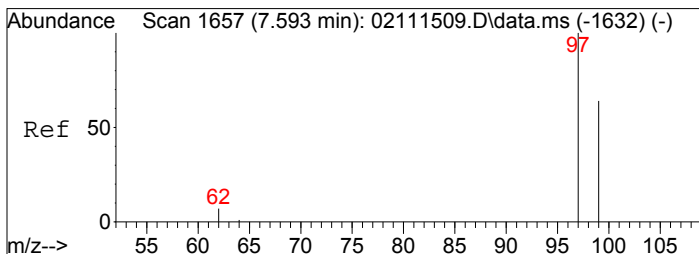
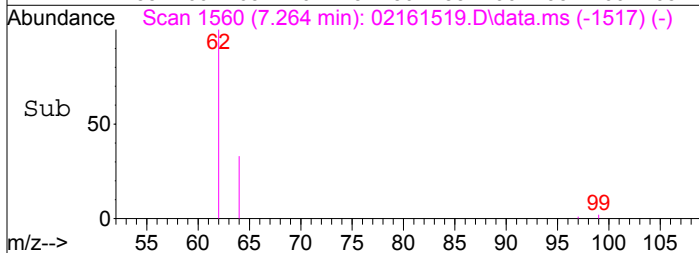
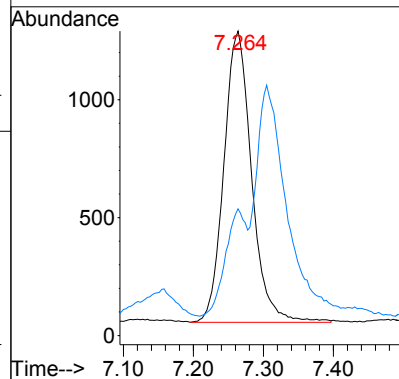
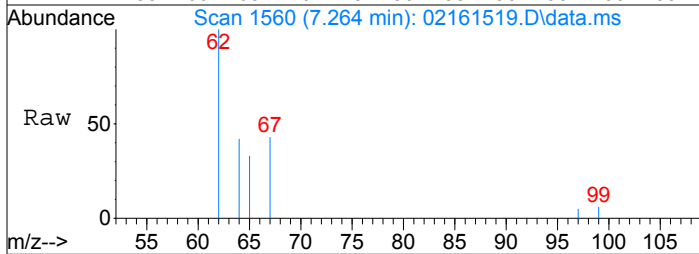
Tgt Ion:	83	Resp:	12069
Ion Ratio	Lower	Upper	
83	100		
85	65.9	45.4	85.4





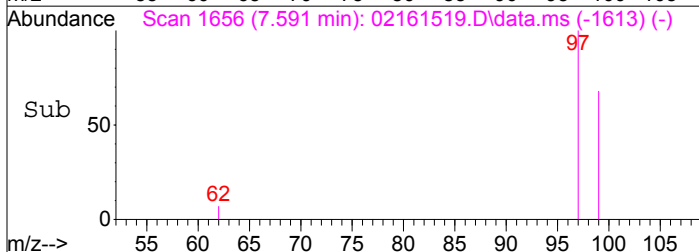
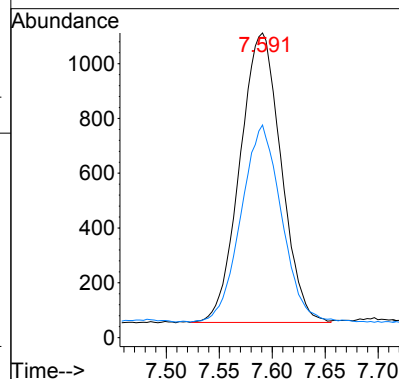
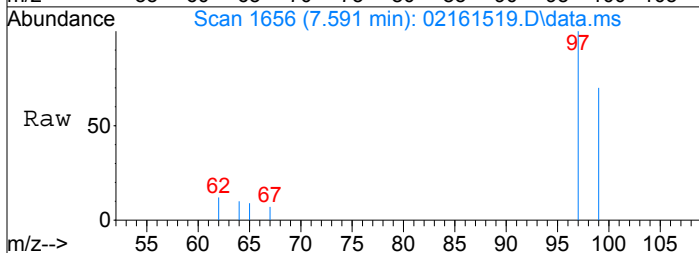
#18
1,2-Dichloroethane
Concen: 77.75 pg
RT: 7.26 min Scan# 1560
Delta R.T. -0.002 min
Lab File: 02161519.D
Acq: 16 Feb 2015 20:17

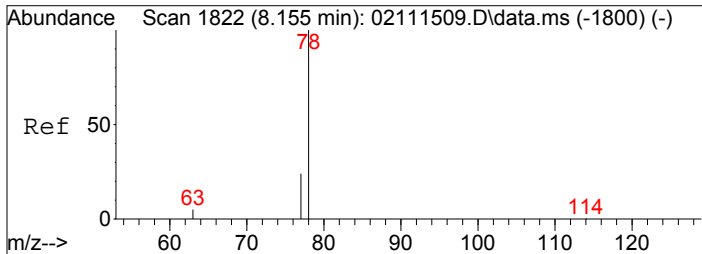
Tgt Ion: 62 Resp: 3396
Ion Ratio Lower Upper
62 100
64 27.7 11.6 51.6



#19
1,1,1-Trichloroethane
Concen: 53.54 pg
RT: 7.59 min Scan# 1656
Delta R.T. -0.002 min
Lab File: 02161519.D
Acq: 16 Feb 2015 20:17

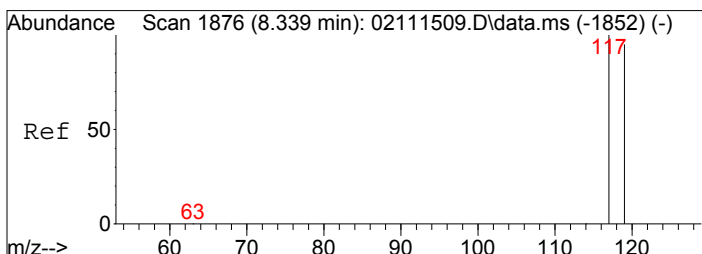
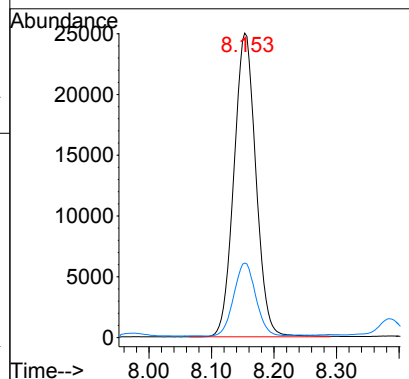
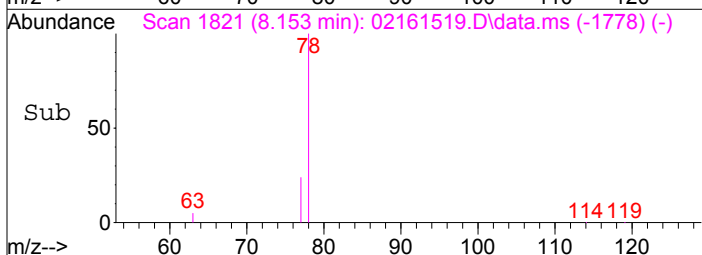
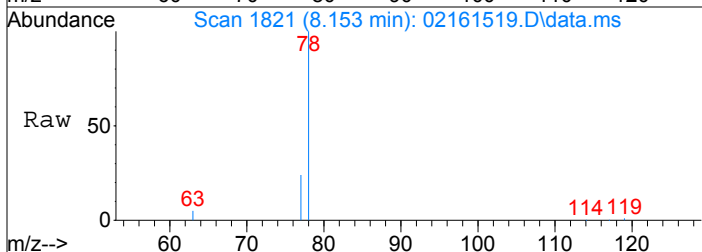
Tgt Ion: 97 Resp: 2856
Ion Ratio Lower Upper
97 100
99 66.6 44.0 84.0





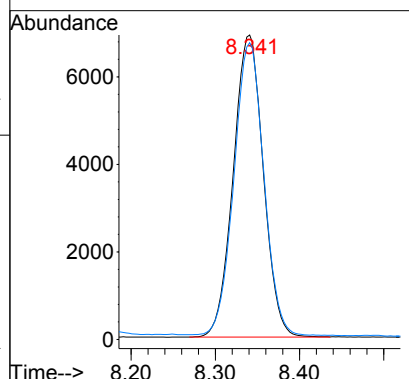
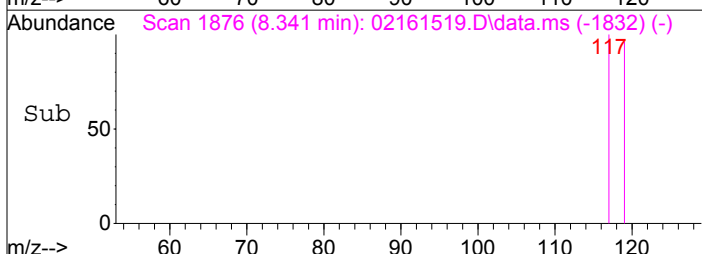
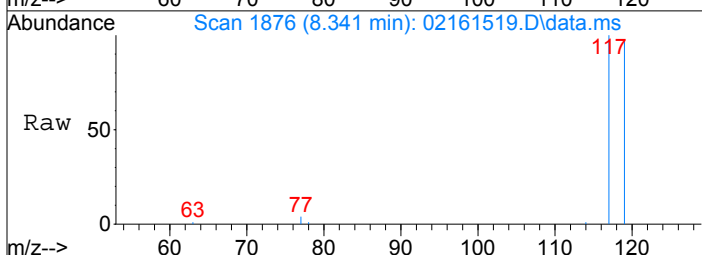
#20
Benzene
Concen: 540.89 pg
RT: 8.15 min Scan# 1821
Delta R.T. -0.002 min
Lab File: 02161519.D
Acq: 16 Feb 2015 20:17

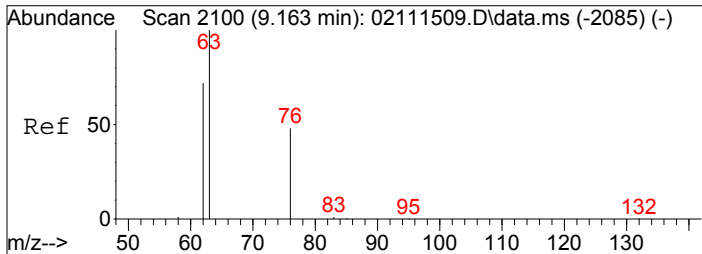
Tgt Ion: 78 Resp: 61030
Ion Ratio Lower Upper
78 100
77 24.0 3.7 43.7



#21
Carbon Tetrachloride
Concen: 429.83 pg
RT: 8.34 min Scan# 1876
Delta R.T. 0.001 min
Lab File: 02161519.D
Acq: 16 Feb 2015 20:17

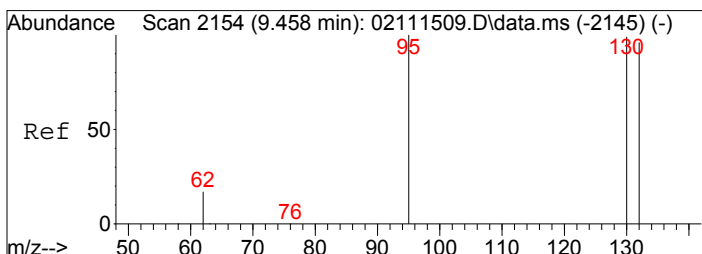
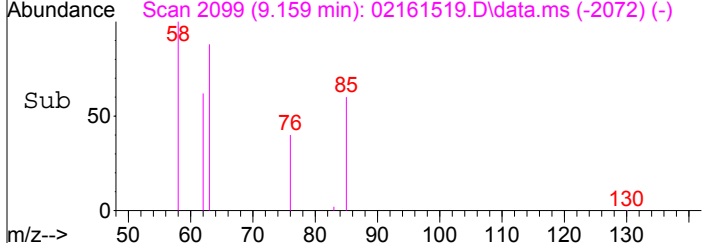
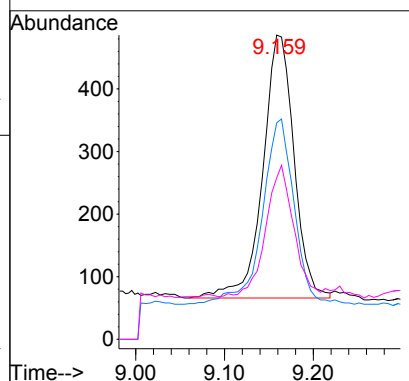
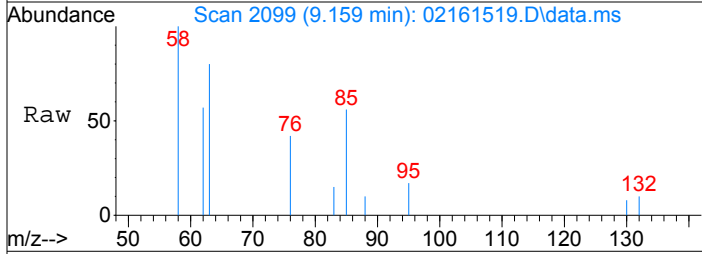
Tgt Ion: 117 Resp: 17167
Ion Ratio Lower Upper
117 100
119 96.5 75.5 115.5





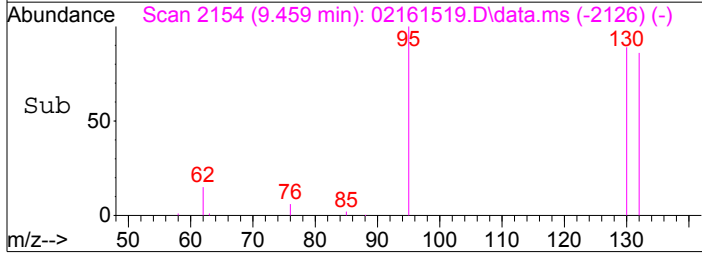
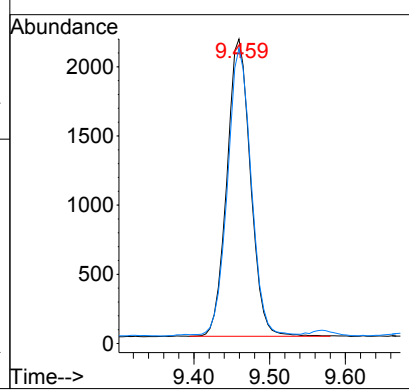
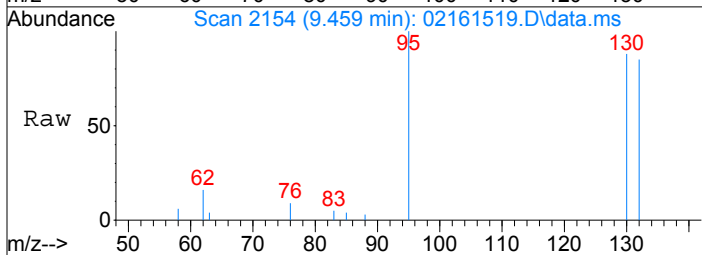
#23
 1,2-Dichloropropane
 Concen: 35.97 pg
 RT: 9.16 min Scan# 2099
 Delta R.T. -0.004 min
 Lab File: 02161519.D
 Acq: 16 Feb 2015 20:17

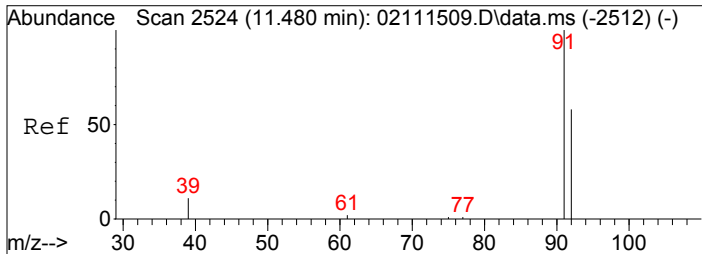
Tgt Ion:	63	Resp:	1027
Ion Ratio		Lower	Upper
63	100		
62	72.2	52.0	92.0
76	44.6	28.1	68.1



#25
 Trichloroethene
 Concen: 138.52 pg
 RT: 9.46 min Scan# 2154
 Delta R.T. 0.001 min
 Lab File: 02161519.D
 Acq: 16 Feb 2015 20:17

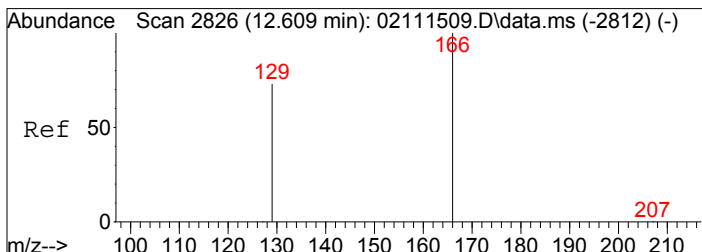
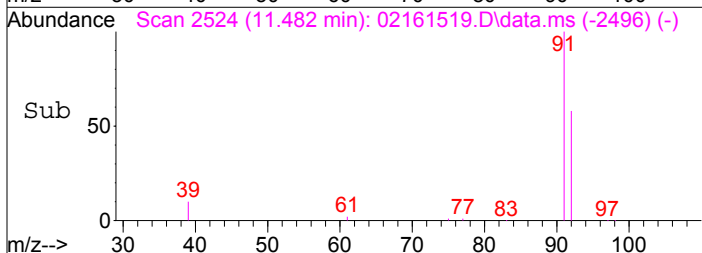
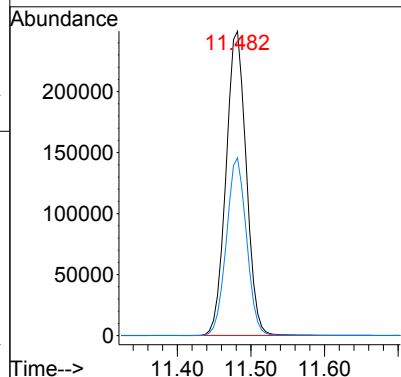
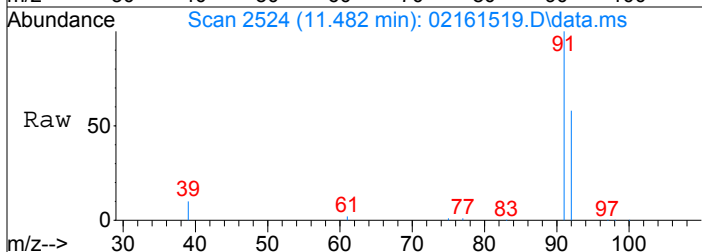
Tgt Ion:	130	Resp:	4658
Ion Ratio		Lower	Upper
130	100		
132	97.6	77.1	117.1





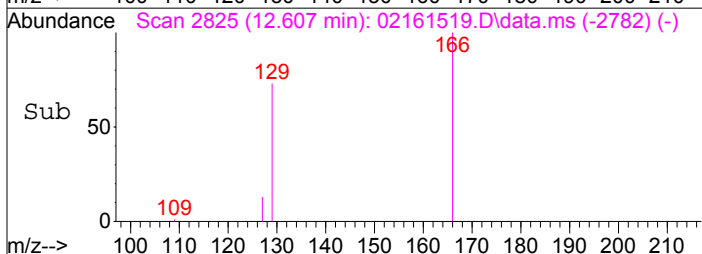
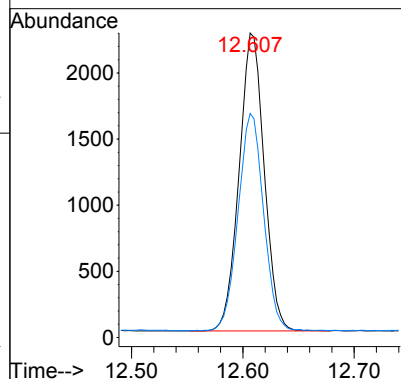
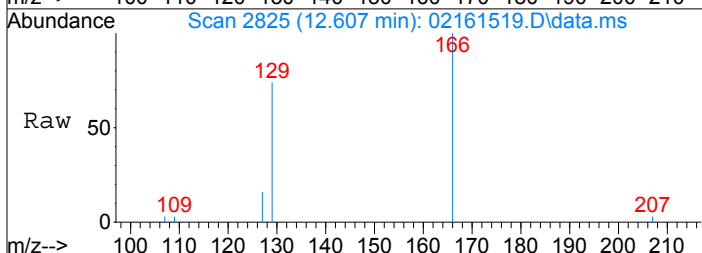
#31
Toluene
Concen: 3713.74 pg
RT: 11.48 min Scan# 2524
Delta R.T. 0.001 min
Lab File: 02161519.D
Acq: 16 Feb 2015 20:17

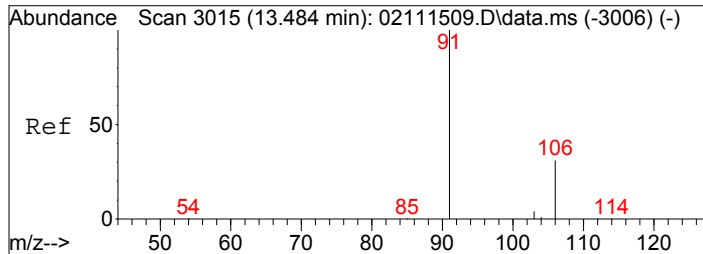
Tgt Ion	91	Resp	476764
Ion Ratio	100	Lower	Upper
91	100		
92	58.1	37.7	77.7



#33
Tetrachloroethene
Concen: 88.78 pg
RT: 12.61 min Scan# 2825
Delta R.T. -0.002 min
Lab File: 02161519.D
Acq: 16 Feb 2015 20:17

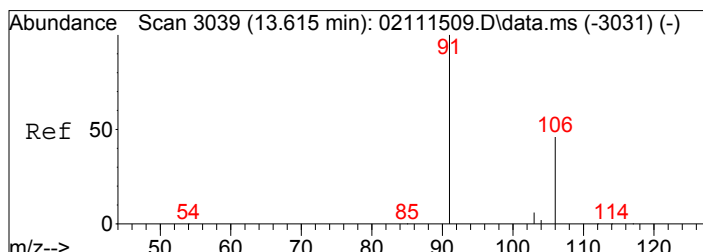
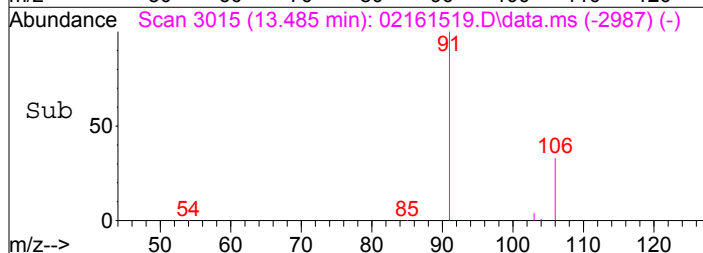
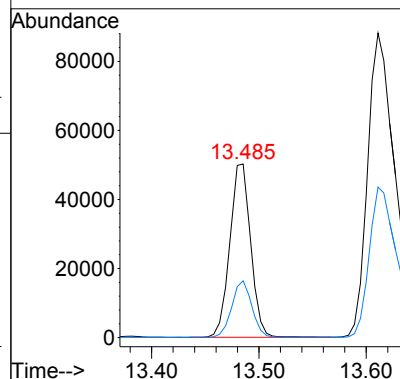
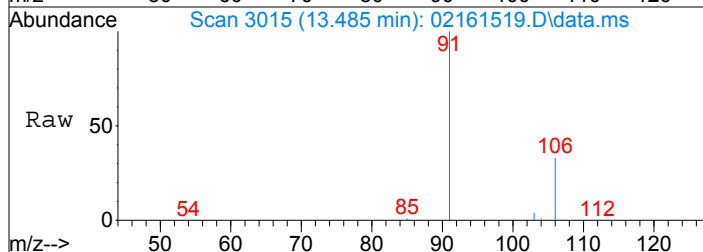
Tgt Ion	166	Resp	3529
Ion Ratio <td>100</td> <td>Lower</td> <td>Upper</td>	100	Lower	Upper
166	100		
129	74.0	53.3	93.3





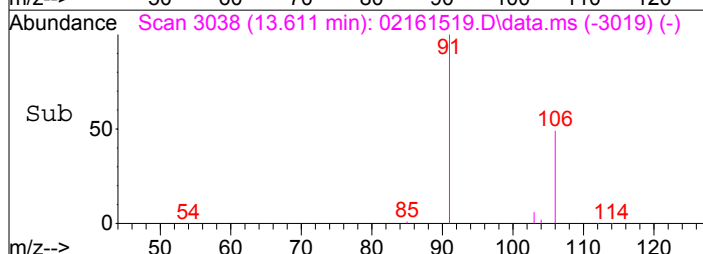
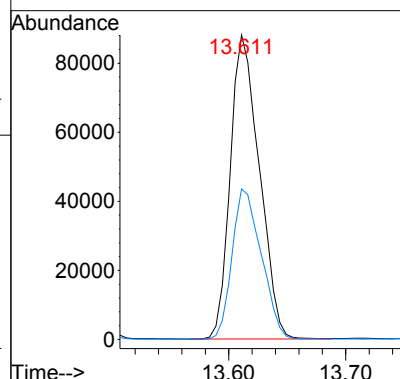
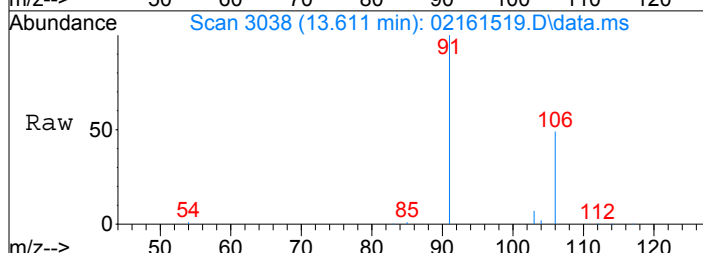
#36
Ethylbenzene
Concen: 428.07 pg
RT: 13.49 min Scan# 3015
Delta R.T. 0.001 min
Lab File: 02161519.D
Acq: 16 Feb 2015 20:17

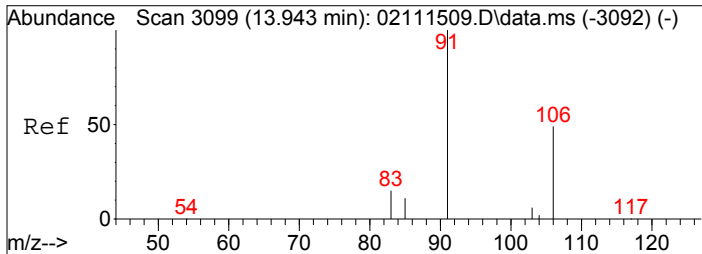
Tgt Ion: 91 Resp: 67699
Ion Ratio Lower Upper
91 100
106 31.5 10.9 50.9



#37
m,p-Xylene
Concen: 1173.58 pg
RT: 13.61 min Scan# 3038
Delta R.T. -0.004 min
Lab File: 02161519.D
Acq: 16 Feb 2015 20:17

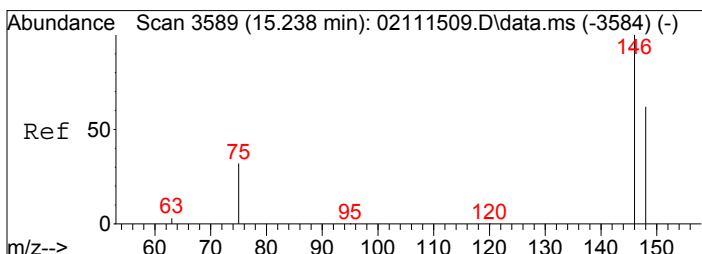
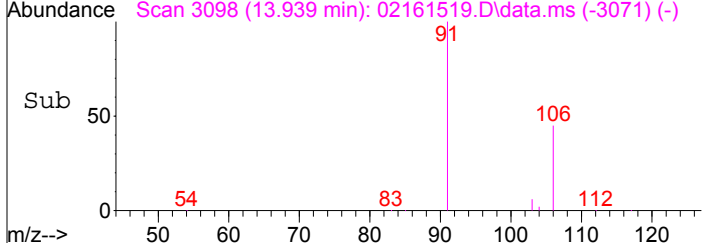
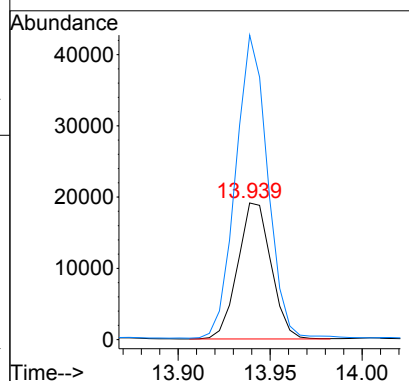
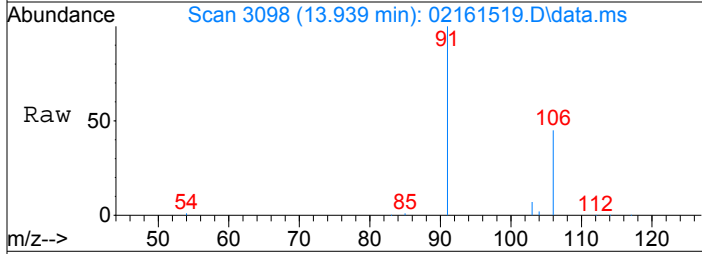
Tgt Ion: 91 Resp: 152544
Ion Ratio Lower Upper
91 100
106 49.8 27.5 67.5





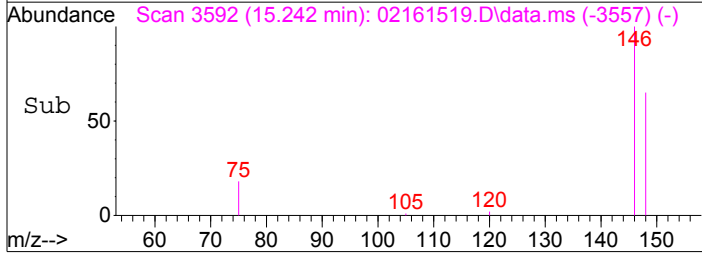
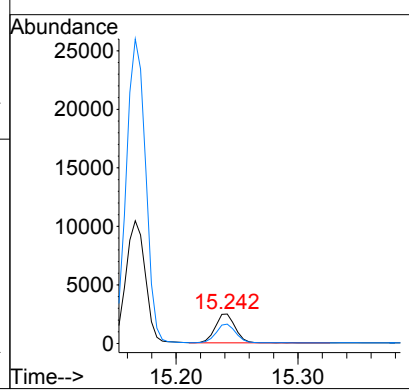
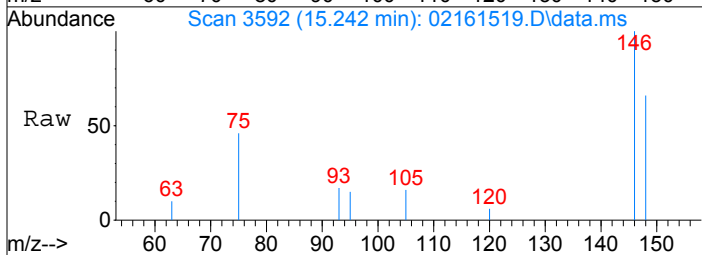
#38
 o-Xylene
 Concen: 379.16 pg
 RT: 13.94 min Scan# 3098
 Delta R.T. -0.004 min
 Lab File: 02161519.D
 Acq: 16 Feb 2015 20:17

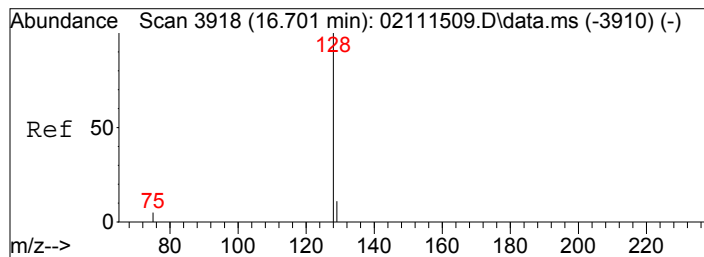
Tgt Ion:106	Resp:	24086
Ion Ratio	Lower	Upper
106	100	
91	213.9	198.3 238.3



#42
 1,4-Dichlorobenzene
 Concen: 32.15 pg
 RT: 15.24 min Scan# 3592
 Delta R.T. 0.004 min
 Lab File: 02161519.D
 Acq: 16 Feb 2015 20:17

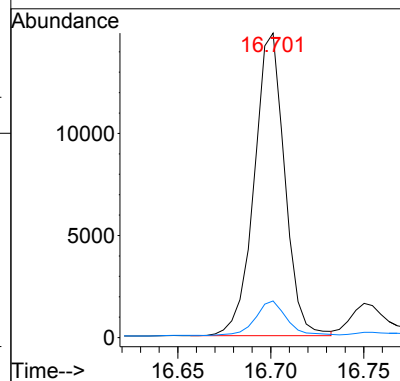
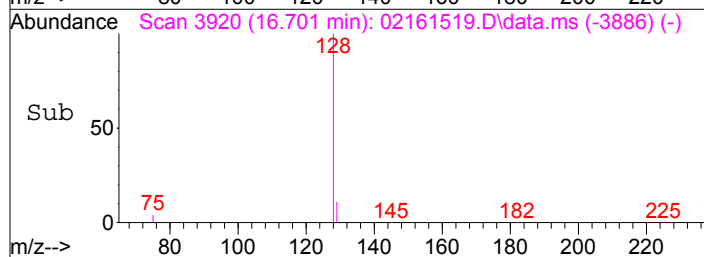
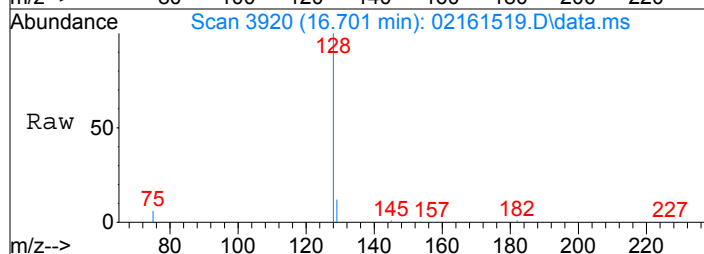
Tgt Ion:146	Resp:	2802
Ion Ratio	Lower	Upper
146	100	
148	63.3	43.5 83.5





#45
Naphthalene
Concen: 106.88 pg
RT: 16.70 min Scan# 3920
Delta R.T. 0.000 min
Lab File: 02161519.D
Acq: 16 Feb 2015 20:17

Tgt Ion:128 Resp: 16866
Ion Ratio Lower Upper
128 100
129 11.7 0.0 30.9



Data File: I:\MS19\DATA\2015 02\16\02161521.D

Acq On : 16 Feb 2015 21:12

Operator: WA

Sample : P1500566-003 (1000mL)

Misc : S29-02041502

ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 17 10:17:06 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

2/17/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.12	130	20844	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	161714	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	25274	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.13	65	45581	895.447	pg	0.00
Spiked Amount 1000.000			Recovery	=	89.55%	
30) Toluene-d8 (SS2)	11.38	98	140403	941.480	pg	0.00
Spiked Amount 1000.000			Recovery	=	94.15%	
40) Bromofluorobenzene (SS3)	14.25	174	57512	1127.140	pg	0.00
Spiked Amount 1000.000			Recovery	=	112.71%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.73	85	145909	1722.446	pg	100
3) Chloromethane	1.83	52	8526	503.994	pg	98
4) Vinyl Chloride	2.02	62	128	N.D.		
5) Bromomethane	2.33	94	1424	37.384	pg	98
6) Chloroethane	2.47	64	443	N.D.		
7) Acetone	2.99	58	340596	11386.134	pg	90
8) Trichlorofluoromethane	3.10	101	85370	1173.266	pg	100
9) 1,1-Dichloroethene	3.66	96	51	N.D.		
10) Methylene Chloride	3.80	84	12497	361.956	pg	91
11) Trichlorotrifluoroethane	4.10	151	13179	394.173	pg	100
12) trans-1,2-Dichloroethene	4.74	96	1360	41.000	pg	97
13) 1,1-Dichloroethane	4.96	63	292	N.D.		
14) Methyl tert-Butyl Ether	5.11	73	681	N.D.		
15) cis-1,2-Dichloroethene	5.94	96	983	26.650	pg	99
16) Chloroform	6.32	83	6653	104.104	pg	96
18) 1,2-Dichloroethane	7.27	62	3151	61.925	pg	97
19) 1,1,1-Trichloroethane	7.59	97	986	N.D.		
20) Benzene	8.16	78	54053	411.230	pg	100
21) Carbon Tetrachloride	8.34	117	19005	408.482	pg	100
23) 1,2-Dichloropropane	9.16	63	969	27.474	pg	91
24) Bromodichloromethane	9.43	83	925	N.D.		
25) Trichloroethene	9.46	130	24390	587.070	pg	99
26) 1,4-Dioxane	9.52	88	701	22.640	pg	# 1
27) cis-1,3-Dichloropropene	10.45	75	70	N.D.		
28) trans-1,3-Dichloropropene	11.05	75	73	N.D.		
29) 1,1,2-Trichloroethane	11.20	83	299	N.D.		
31) Toluene	11.48	91	224519	1415.554	pg	99
32) 1,2-Dibromoethane	12.13	107	27	N.D.		
33) Tetrachloroethene	12.61	166	3093	62.981	pg	97
35) Chlorobenzene	13.17	112	905	N.D.		
36) Ethylbenzene	13.48	91	55529	350.364	pg	98
37) m,p-Xylene	13.61	91	113074	868.062	pg	97
38) o-Xylene	13.94	106	21812	342.628	pg	98
39) 1,1,2,2-Tetrachloroethane	13.94	83	460	N.D.		
41) 1,3-Dichlorobenzene	0.00	146	0	N.D.	d	
42) 1,4-Dichlorobenzene	15.24	146	4009	45.901	pg	99
43) 1,2-Dichlorobenzene	15.46	146	232	N.D.		
44) 1,2,4-Trichlorobenzene	16.63	182	126	N.D.		
45) Naphthalene	16.70	128	34184	216.161	pg	97
46) Hexachlorobutadiene	16.96	225	46	N.D.		

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\16\02161521.D

Acq On : 16 Feb 2015 21:12

Operator: WA

Sample : P1500566-003 (1000mL)

Misc : S29-02041502

ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 17 10:17:06 2015

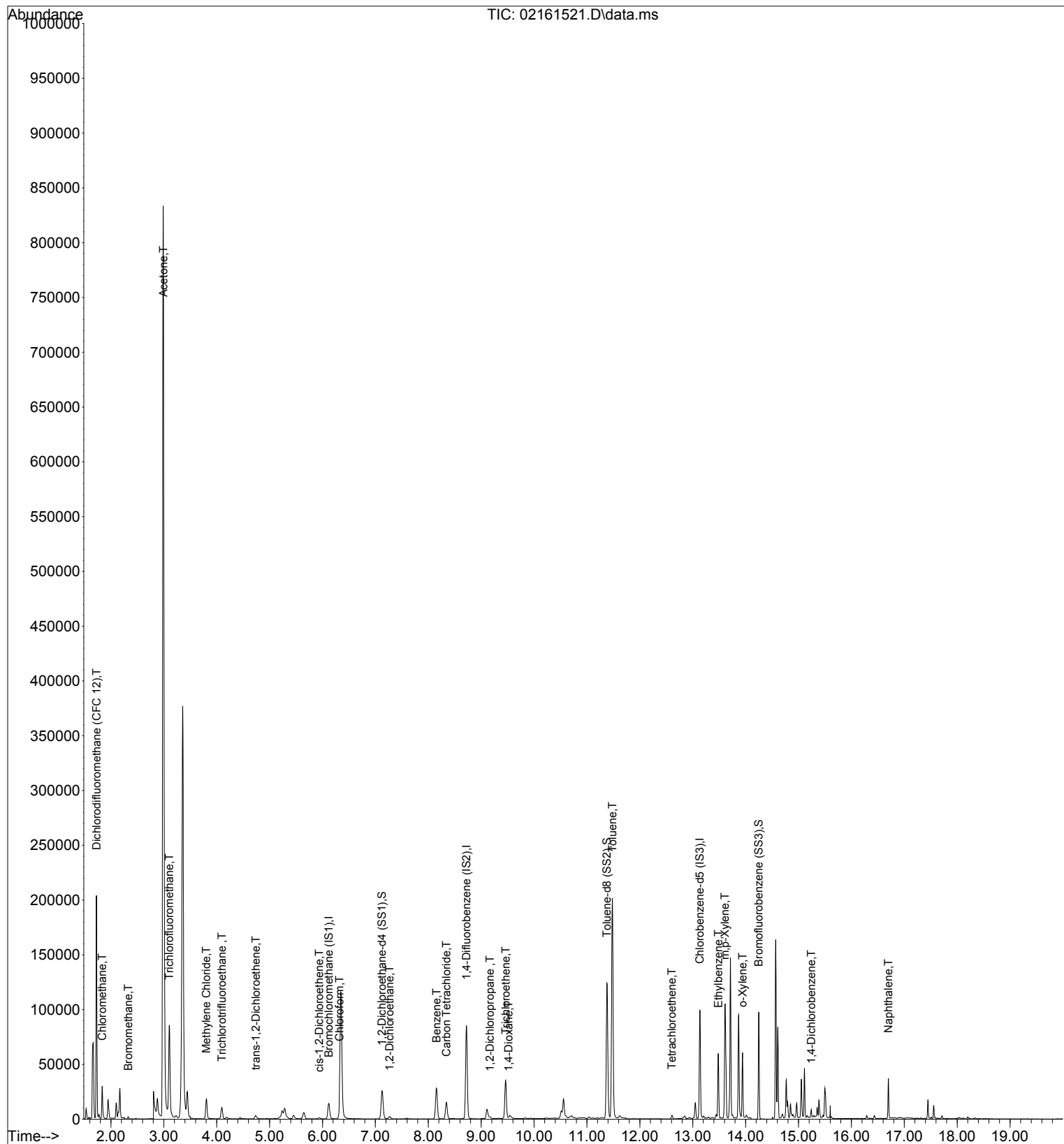
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 02\16\02161521.D

Acq On : 16 Feb 2015 21:12
 Sample : P1500566-003 (1000mL)
 Misc : S29-02041502
 ALS Vial : 4 Sample Multiplier: 1

Operator: WA

Quant Time: Feb 17 10:17:06 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

2/17/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.12	130	20844	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	161714	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	25274	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.13	65	45581	895.447	pg	0.00
Spiked Amount 1000.000			Recovery	=	89.55%	
30) Toluene-d8 (SS2)	11.38	98	140403	941.480	pg	0.00
Spiked Amount 1000.000			Recovery	=	94.15%	
40) Bromofluorobenzene (SS3)	14.25	174	57512	1127.140	pg	0.00
Spiked Amount 1000.000			Recovery	=	112.71%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.73	85	145909	1722.446	pg	100
3) Chloromethane	1.83	52	8526	503.994	pg	98
5) Bromomethane	2.33	94	1424	37.384	pg	98
7) Acetone	2.99	58	340596	11386.134	pg	90
8) Trichlorofluoromethane	3.10	101	85370	1173.266	pg	100
10) Methylene Chloride	3.80	84	12497	361.956	pg	91
11) Trichlorotrifluoroethane	4.10	151	13179	394.173	pg	100
12) trans-1,2-Dichloroethene	4.74	96	1360	41.000	pg	97
15) cis-1,2-Dichloroethene	5.94	96	983	26.650	pg	99
16) Chloroform	6.32	83	6653	104.104	pg	96
18) 1,2-Dichloroethane	7.27	62	3151	61.925	pg	97
20) Benzene	8.16	78	54053	411.230	pg	100
21) Carbon Tetrachloride	8.34	117	19005	408.482	pg	100
23) 1,2-Dichloropropane	9.16	63	969	27.474	pg	91
25) Trichloroethene	9.46	130	24390	587.070	pg	99
26) 1,4-Dioxane	9.52	88	701	22.640	pg	# 1
31) Toluene	11.48	91	224519	1415.554	pg	99
33) Tetrachloroethene	12.61	166	3093	62.981	pg	97
36) Ethylbenzene	13.48	91	55529	350.364	pg	98
37) m,p-Xylene	13.61	91	113074	868.062	pg	97
38) o-Xylene	13.94	106	21812	342.628	pg	98
42) 1,4-Dichlorobenzene	15.24	146	4009	45.901	pg	99
45) Naphthalene	16.70	128	34184	216.161	pg	97

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\16\02161521.D

Acq On : 16 Feb 2015 21:12

Operator: WA

Sample : P1500566-003 (1000mL)

Misc : S29-02041502

ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 17 10:17:06 2015

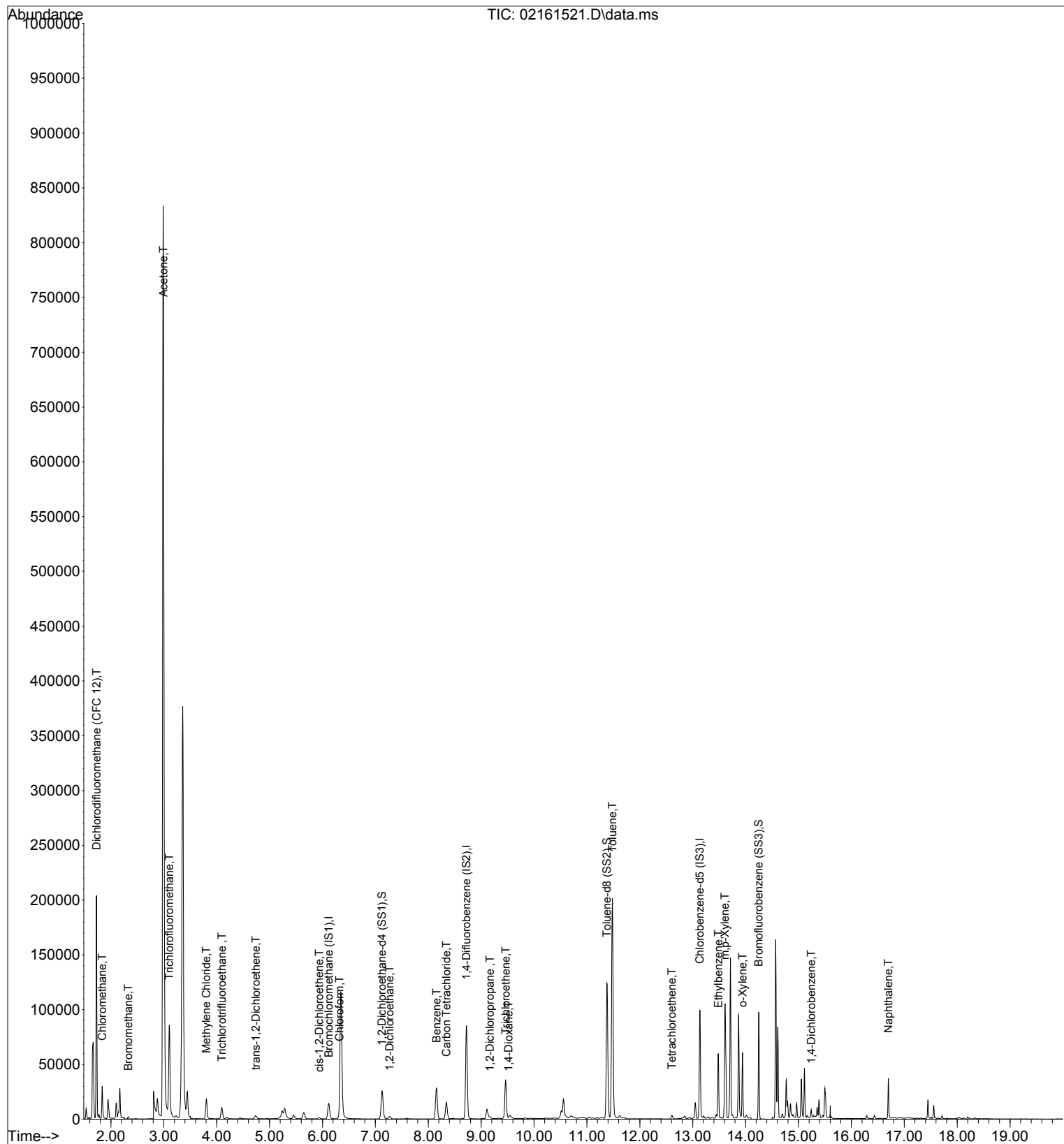
Quant Method : I:\MS19\METHODS\X19021115.M

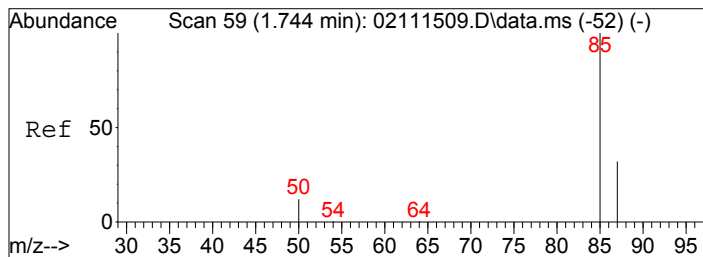
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

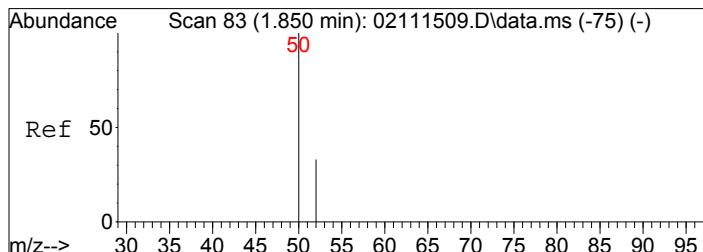
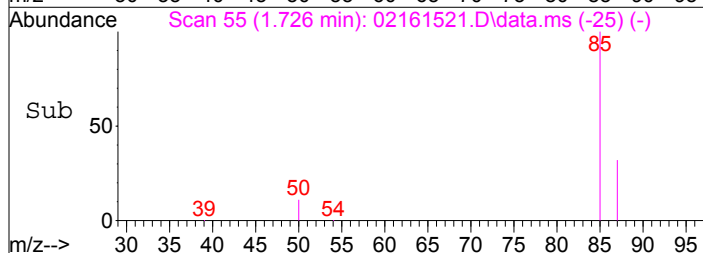
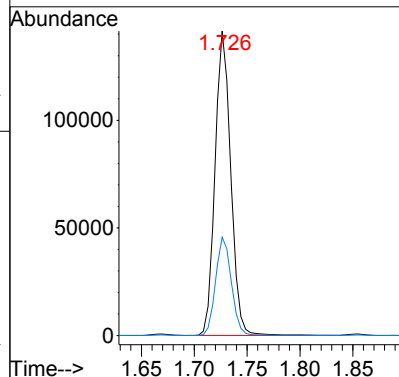
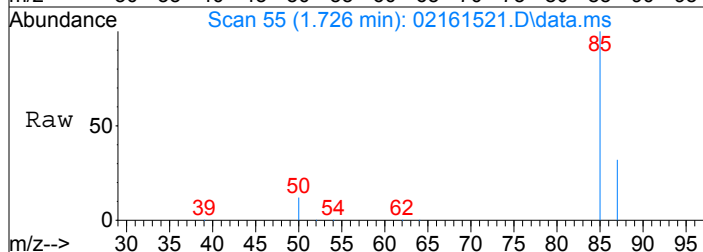
DataAcq Meth:TO15SIM.M





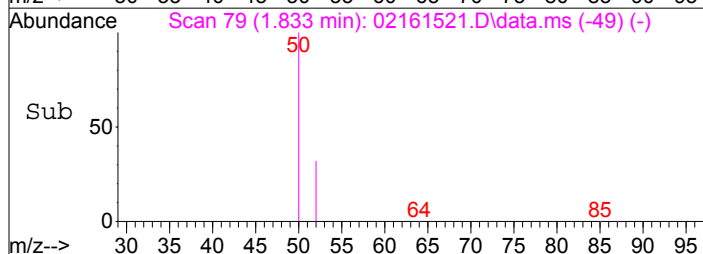
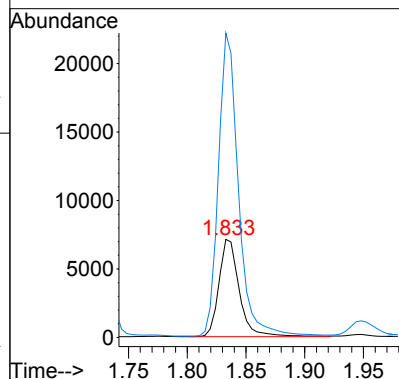
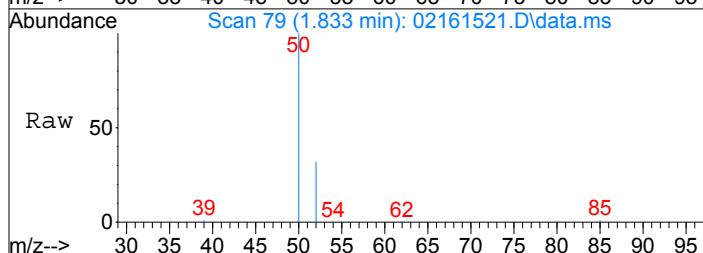
#2
 Dichlorodifluoromethane (CFC 12)
 Concen: 1722.45 pg
 RT: 1.73 min Scan# 55
 Delta R.T. -0.018 min
 Lab File: 02161521.D
 Acq: 16 Feb 2015 21:12

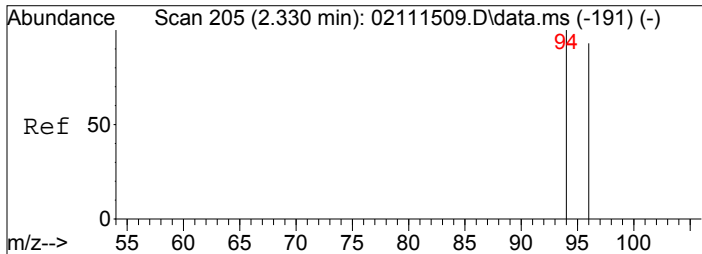
Tgt Ion: 85 Resp: 145909
 Ion Ratio Lower Upper
 85 100
 87 32.5 12.4 52.4



#3
 Chloromethane
 Concen: 503.99 pg
 RT: 1.83 min Scan# 79
 Delta R.T. -0.017 min
 Lab File: 02161521.D
 Acq: 16 Feb 2015 21:12

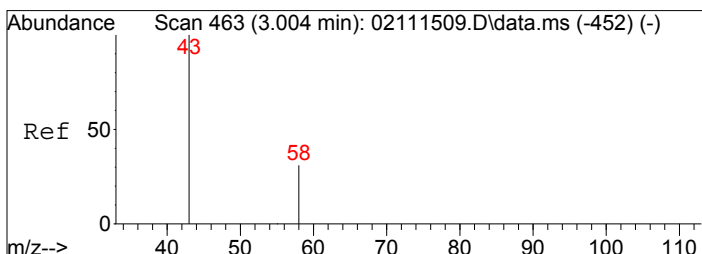
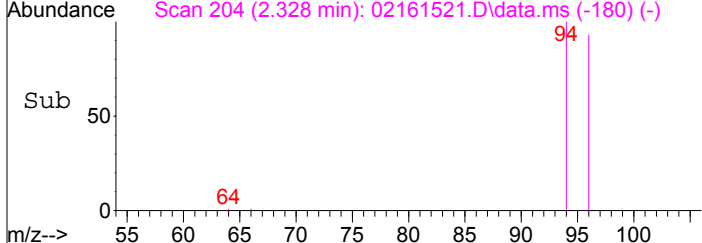
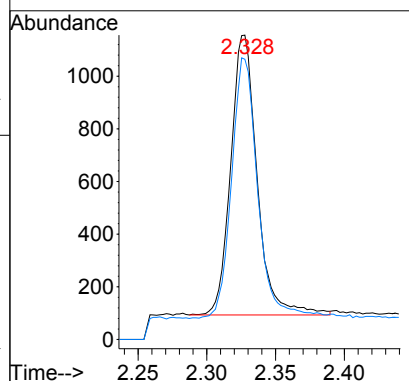
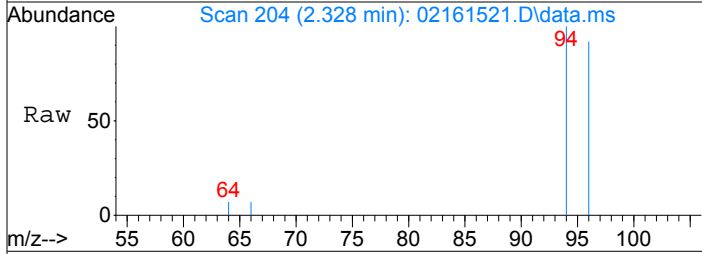
Tgt Ion: 52 Resp: 8526
 Ion Ratio Lower Upper
 52 100
 50 307.1 283.7 323.7





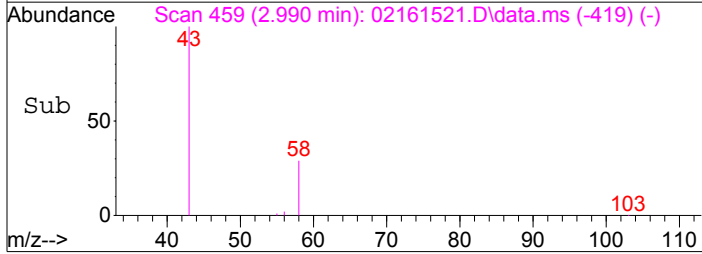
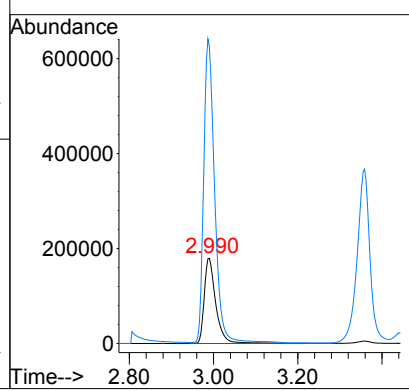
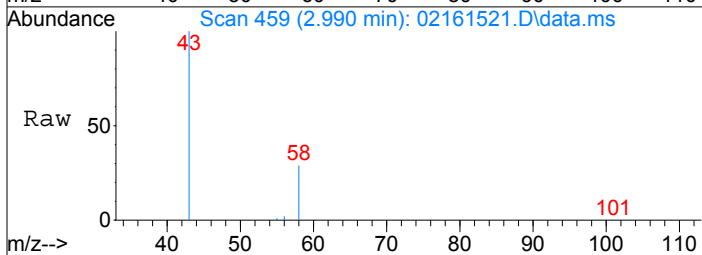
#5
 Bromomethane
 Concen: 37.38 pg
 RT: 2.33 min Scan# 204
 Delta R.T. -0.002 min
 Lab File: 02161521.D
 Acq: 16 Feb 2015 21:12

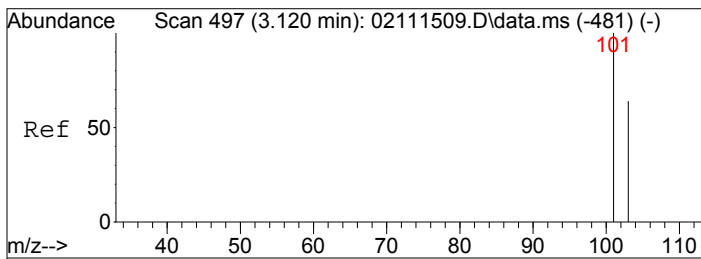
Tgt Ion:	94	Resp:	1424
Ion Ratio	Lower	Upper	
94	100		
96	92.8	75.5	113.3



#7
 Acetone
 Concen: 11386.13 pg
 RT: 2.99 min Scan# 459
 Delta R.T. -0.014 min
 Lab File: 02161521.D
 Acq: 16 Feb 2015 21:12

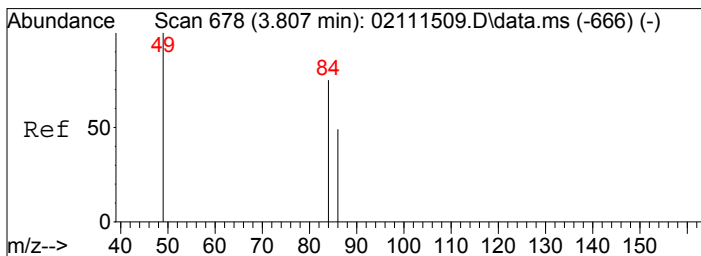
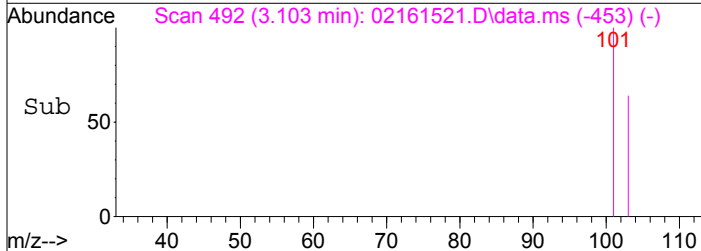
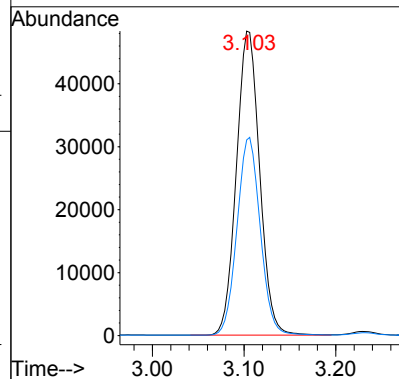
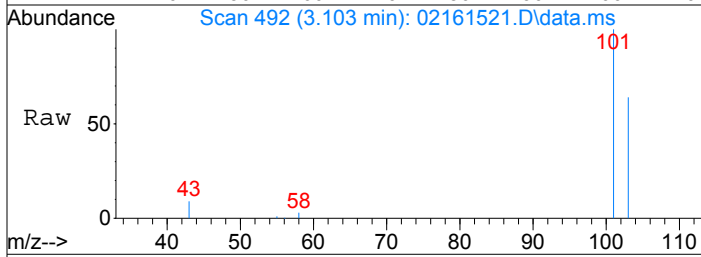
Tgt Ion:	58	Resp:	340596
Ion Ratio	Lower	Upper	
58	100		
43	341.7	301.8	341.8





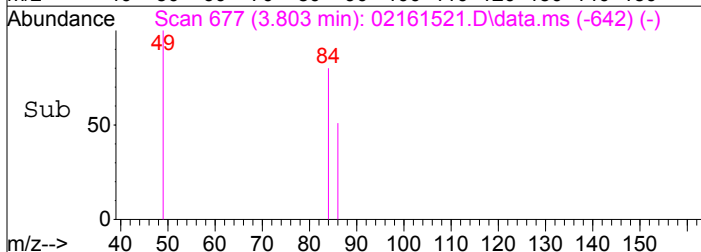
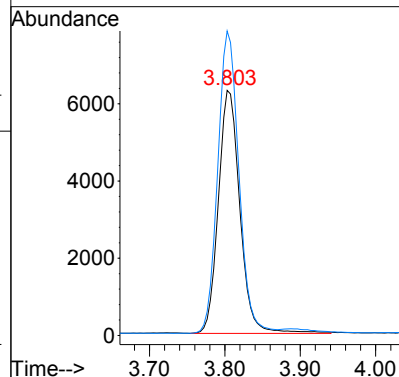
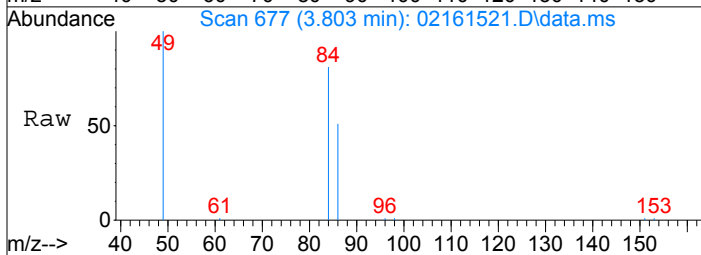
#8
 Trichlorofluoromethane
 Concen: 1173.27 pg
 RT: 3.10 min Scan# 492
 Delta R.T. -0.017 min
 Lab File: 02161521.D
 Acq: 16 Feb 2015 21:12

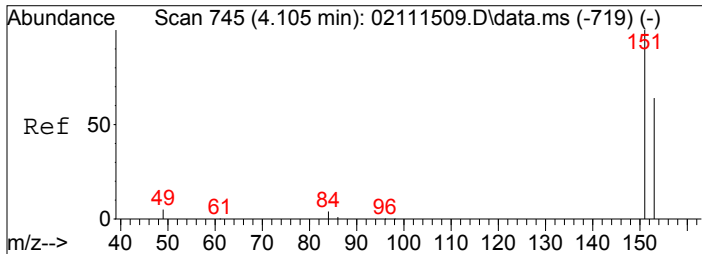
Tgt Ion: 101 Resp: 85370
 Ion Ratio Lower Upper
 101 100
 103 64.8 51.8 77.6



#10
 Methylene Chloride
 Concen: 361.96 pg
 RT: 3.80 min Scan# 677
 Delta R.T. -0.004 min
 Lab File: 02161521.D
 Acq: 16 Feb 2015 21:12

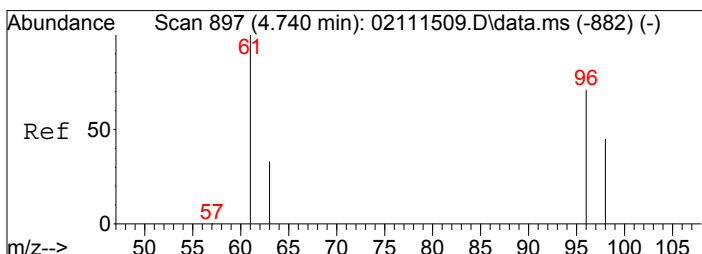
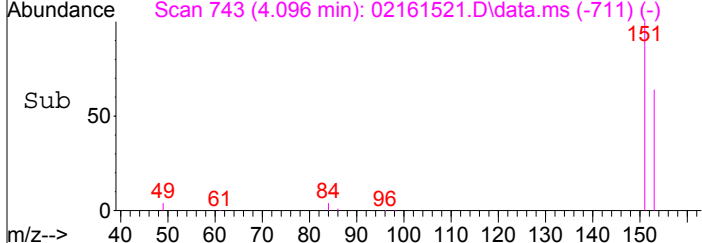
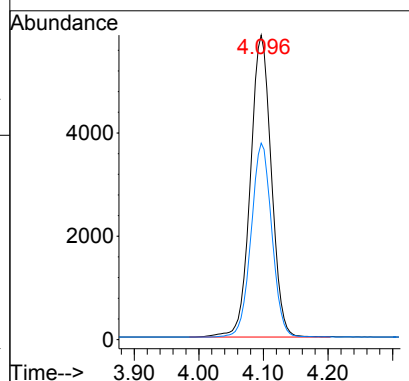
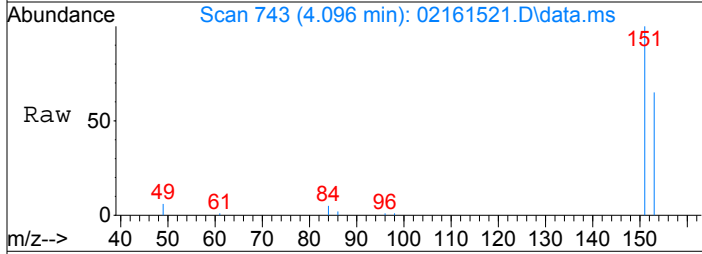
Tgt Ion: 84 Resp: 12497
 Ion Ratio Lower Upper
 84 100
 49 121.6 112.3 152.3





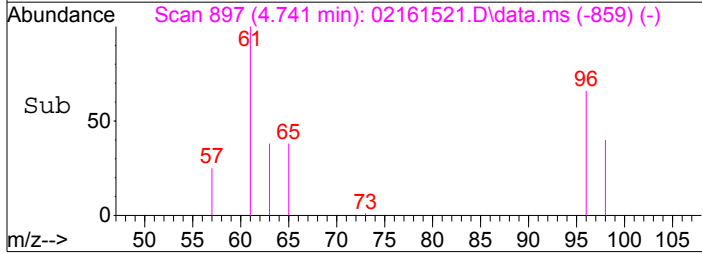
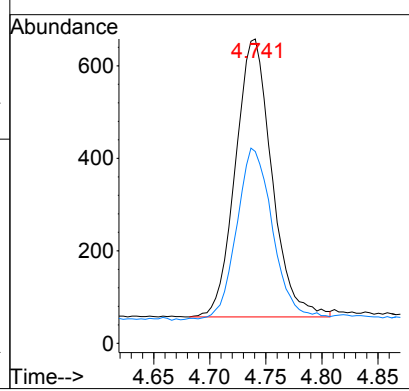
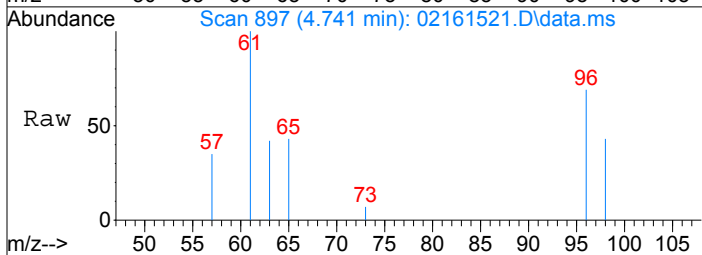
#11
 Trichlorotrifluoroethane
 Concen: 394.17 pg
 RT: 4.10 min Scan# 743
 Delta R.T. -0.009 min
 Lab File: 02161521.D
 Acq: 16 Feb 2015 21:12

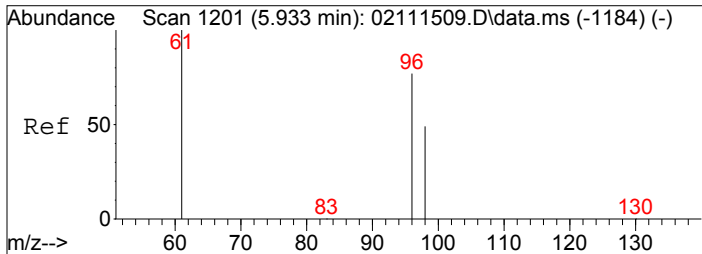
Tgt Ion: 151	Resp: 13179
Ion Ratio	Lower Upper
151	100
153	63.7 43.6 83.6



#12
 trans-1,2-Dichloroethene
 Concen: 41.00 pg
 RT: 4.74 min Scan# 897
 Delta R.T. 0.000 min
 Lab File: 02161521.D
 Acq: 16 Feb 2015 21:12

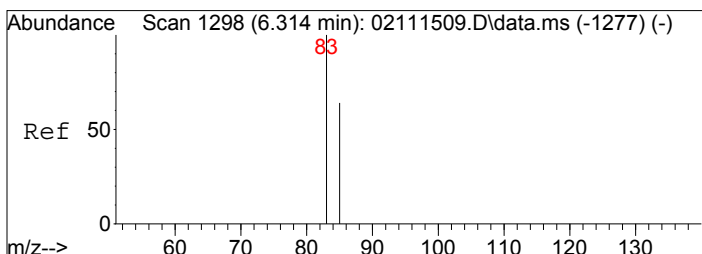
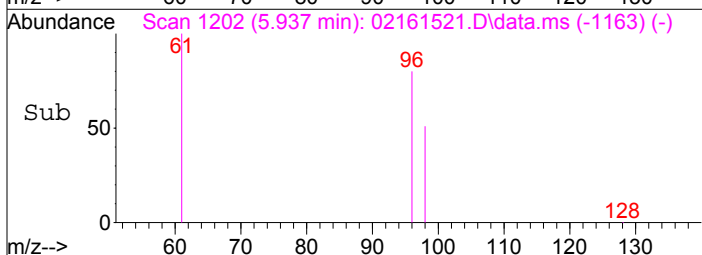
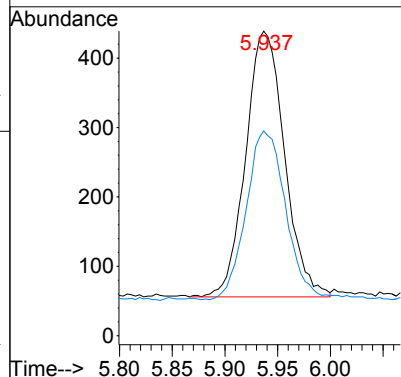
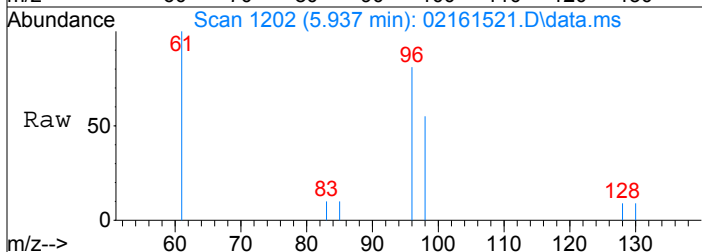
Tgt Ion: 96	Resp: 1360
Ion Ratio	Lower Upper
96	100
98	61.5 43.7 83.7





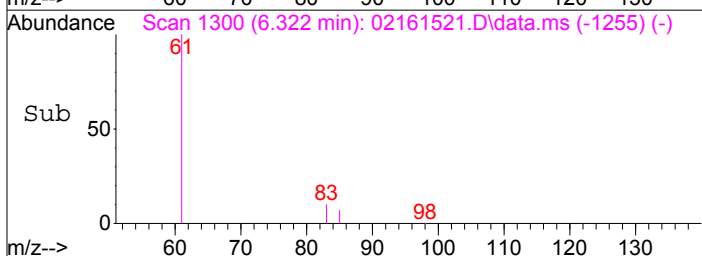
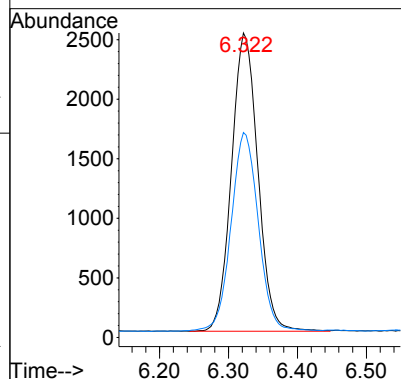
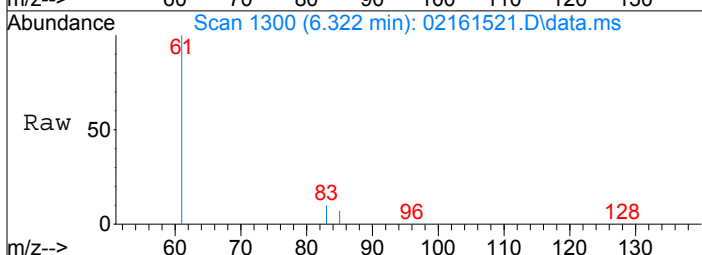
#15
 cis-1,2-Dichloroethene
 Concen: 26.65 pg
 RT: 5.94 min Scan# 1202
 Delta R.T. 0.004 min
 Lab File: 02161521.D
 Acq: 16 Feb 2015 21:12

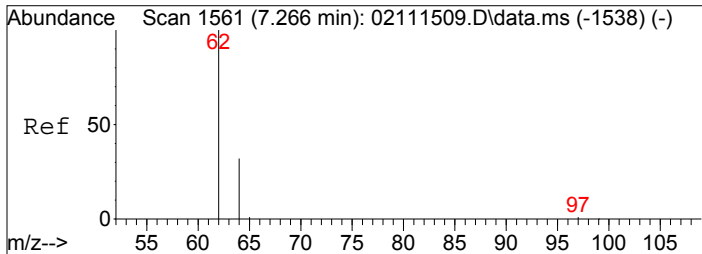
Tgt Ion: 96 Resp: 983
 Ion Ratio Lower Upper
 96 100
 98 65.3 44.3 84.3



#16
 Chloroform
 Concen: 104.10 pg
 RT: 6.32 min Scan# 1300
 Delta R.T. 0.008 min
 Lab File: 02161521.D
 Acq: 16 Feb 2015 21:12

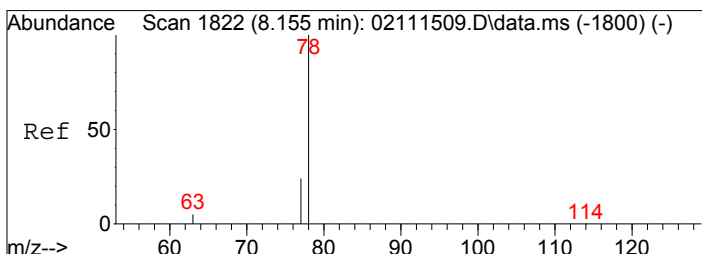
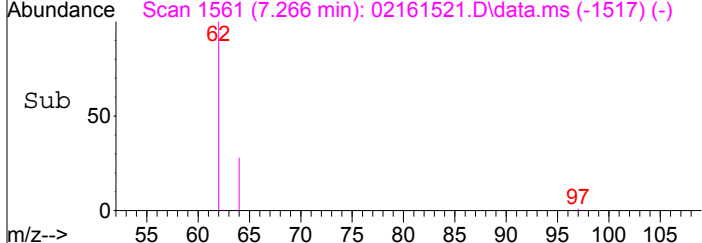
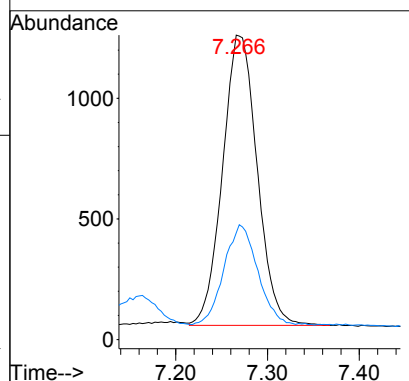
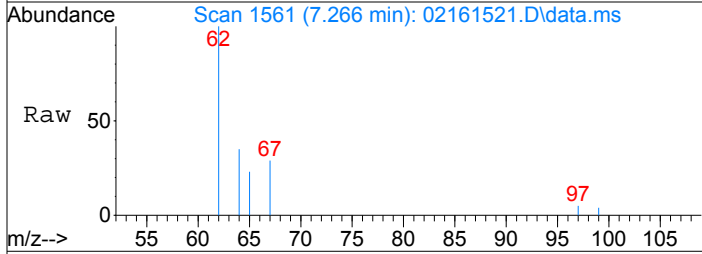
Tgt Ion: 83 Resp: 6653
 Ion Ratio Lower Upper
 83 100
 85 68.9 45.4 85.4





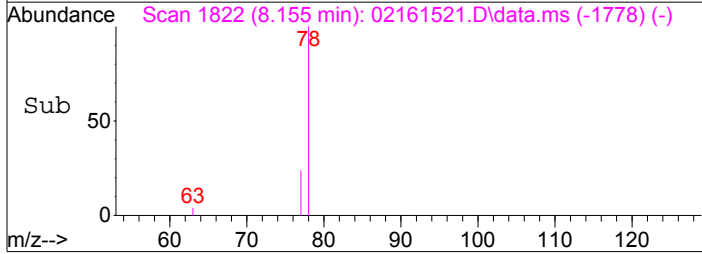
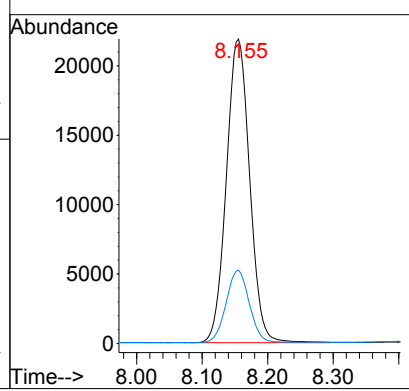
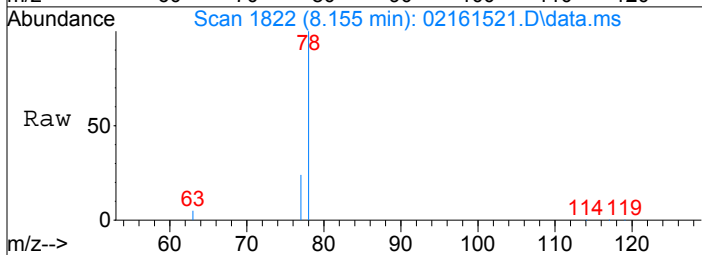
#18
 1,2-Dichloroethane
 Concen: 61.92 pg
 RT: 7.27 min Scan# 1561
 Delta R.T. 0.000 min
 Lab File: 02161521.D
 Acq: 16 Feb 2015 21:12

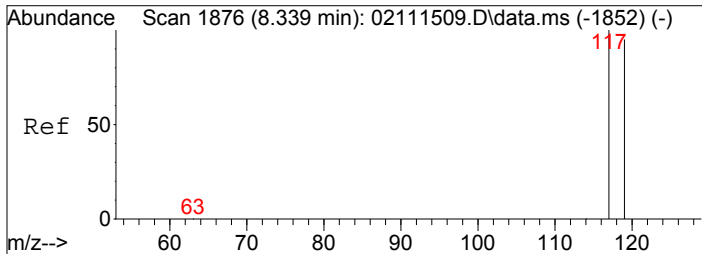
Tgt Ion:	62	Resp:	3151
Ion Ratio	Lower	Upper	
62	100		
64	33.3	11.6	51.6



#20
 Benzene
 Concen: 411.23 pg
 RT: 8.16 min Scan# 1822
 Delta R.T. 0.000 min
 Lab File: 02161521.D
 Acq: 16 Feb 2015 21:12

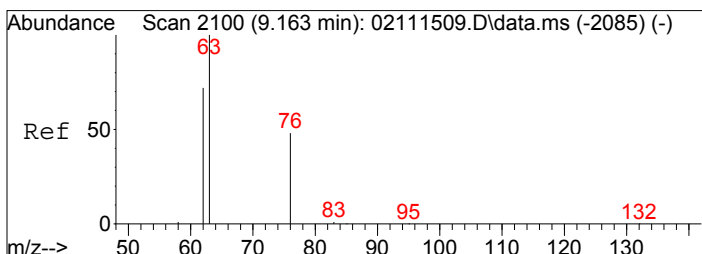
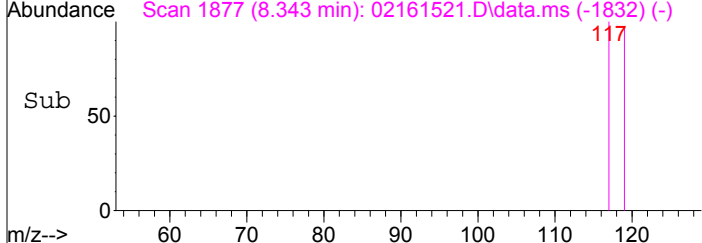
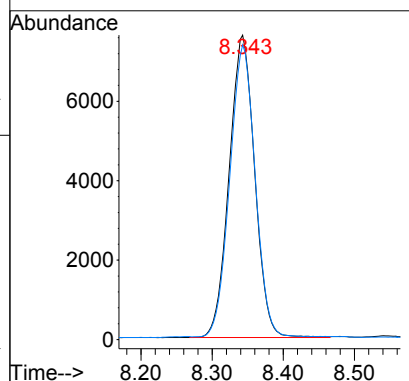
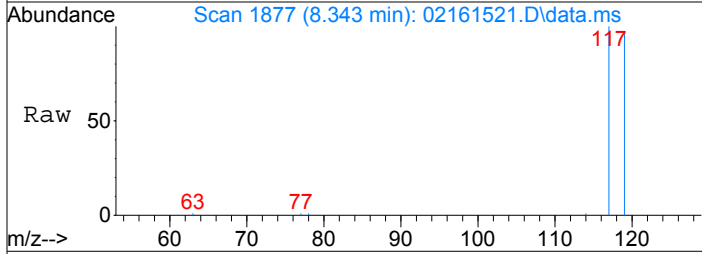
Tgt Ion:	78	Resp:	54053
Ion Ratio	Lower	Upper	
78	100		
77	23.7	3.7	43.7





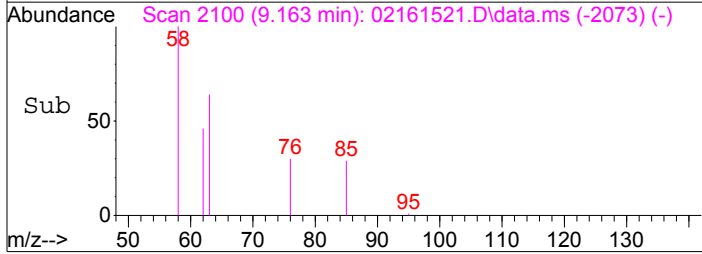
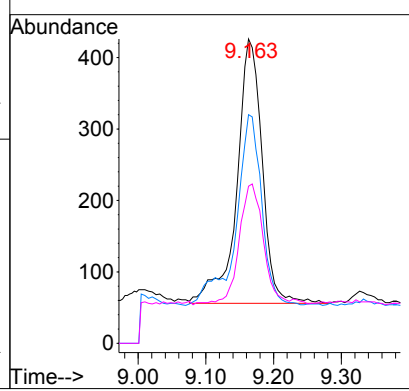
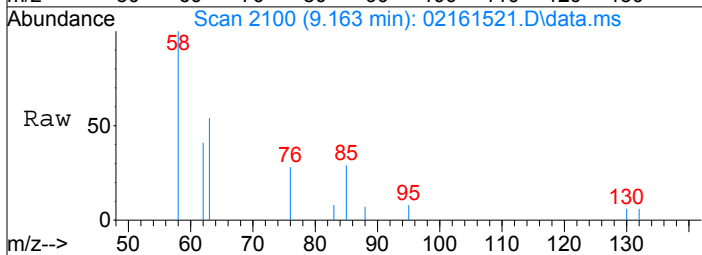
#21
Carbon Tetrachloride
Concen: 408.48 pg
RT: 8.34 min Scan# 1877
Delta R.T. 0.004 min
Lab File: 02161521.D
Acq: 16 Feb 2015 21:12

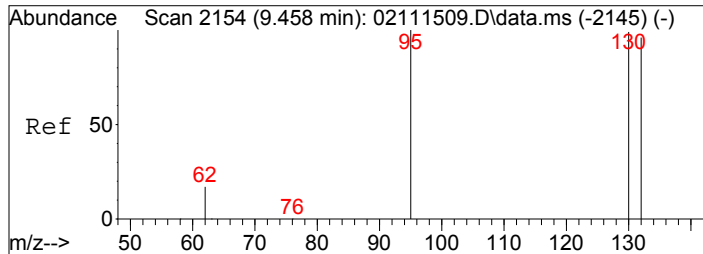
Tgt Ion:117	Resp:	19005
Ion Ratio	Lower	Upper
117	100	
119	95.6	75.5 115.5



#23
1,2-Dichloropropane
Concen: 27.47 pg
RT: 9.16 min Scan# 2100
Delta R.T. 0.000 min
Lab File: 02161521.D
Acq: 16 Feb 2015 21:12

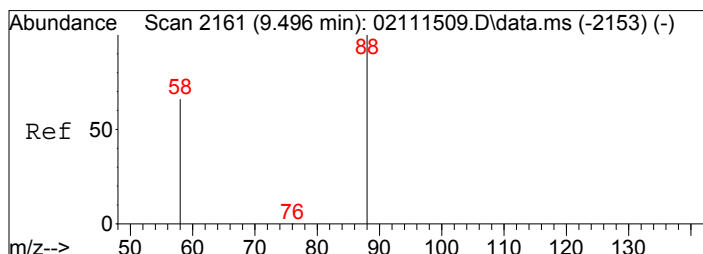
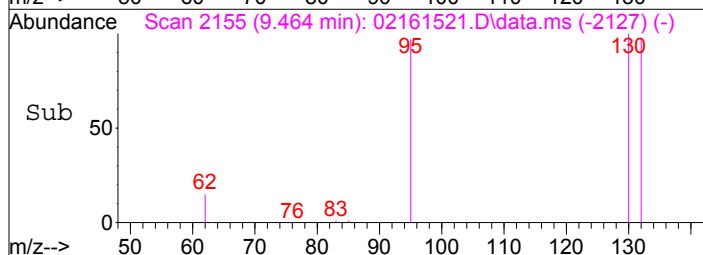
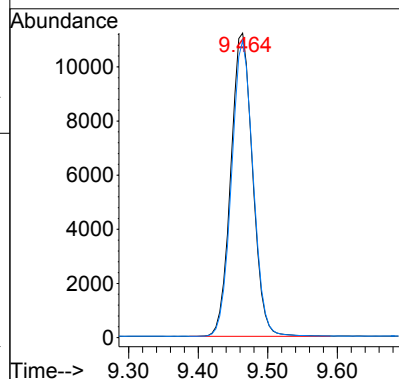
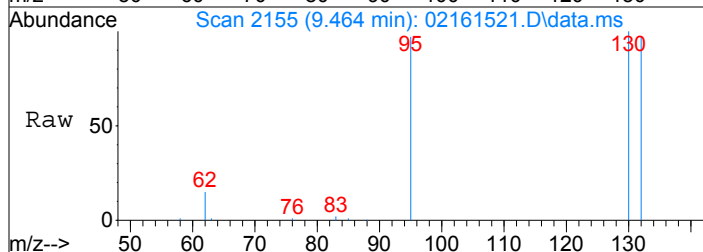
Tgt Ion: 63	Resp:	969
Ion Ratio	Lower	Upper
63	100	
62	63.4	52.0 92.0
76	43.7	28.1 68.1





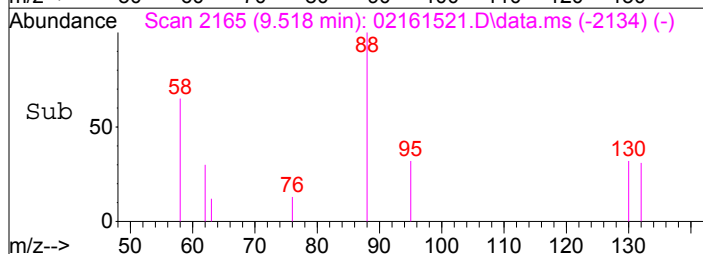
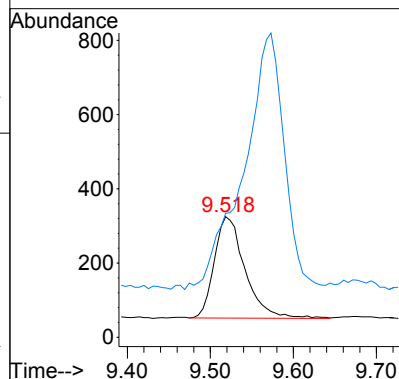
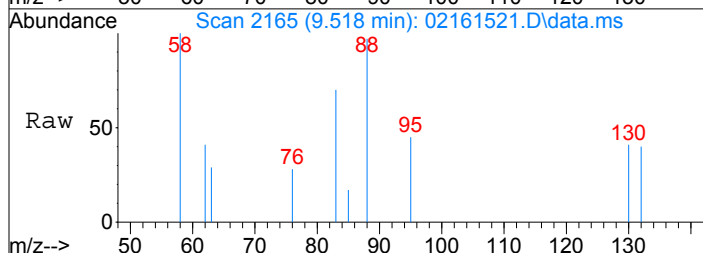
#25
Trichloroethene
Concen: 587.07 pg
RT: 9.46 min Scan# 2155
Delta R.T. 0.006 min
Lab File: 02161521.D
Acq: 16 Feb 2015 21:12

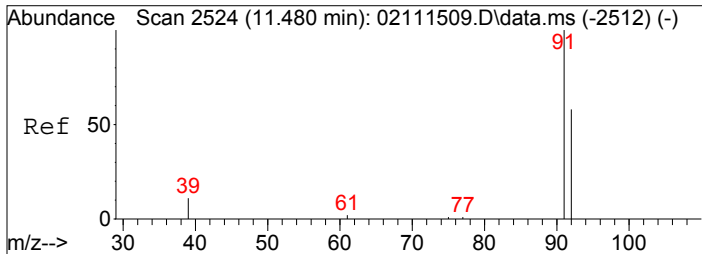
Tgt Ion: 130 Resp: 24390
Ion Ratio Lower Upper
130 100
132 96.4 77.1 117.1



#26
1,4-Dioxane
Concen: 22.64 pg
RT: 9.52 min Scan# 2165
Delta R.T. 0.022 min
Lab File: 02161521.D
Acq: 16 Feb 2015 21:12

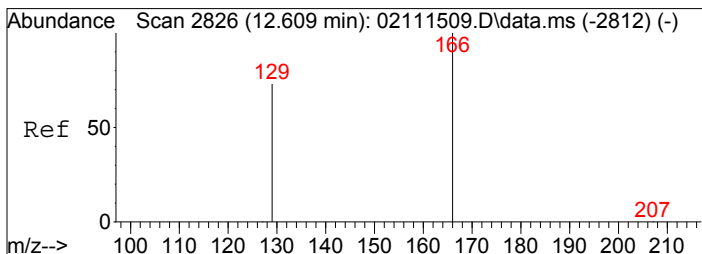
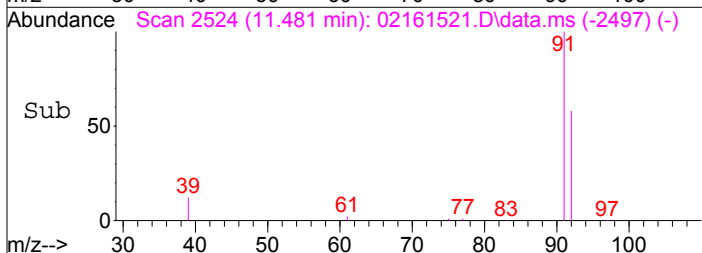
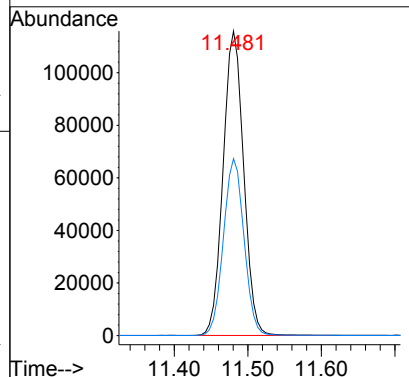
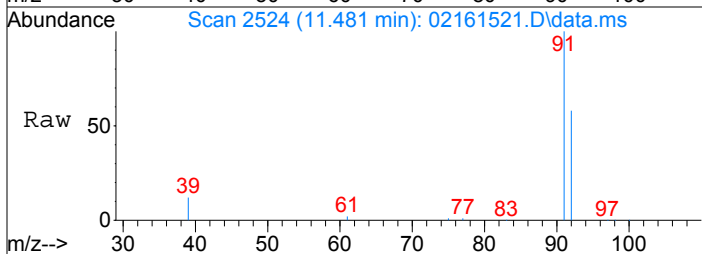
Tgt Ion: 88 Resp: 701
Ion Ratio Lower Upper
88 100
58 336.4 38.3 78.3#





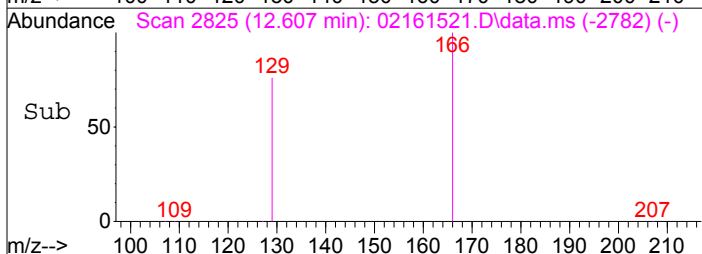
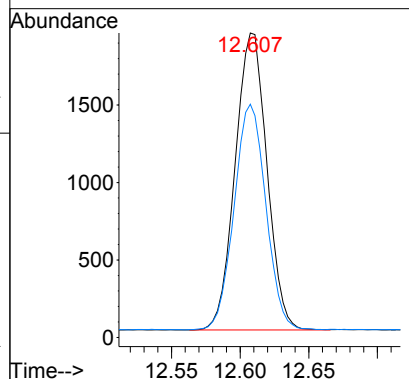
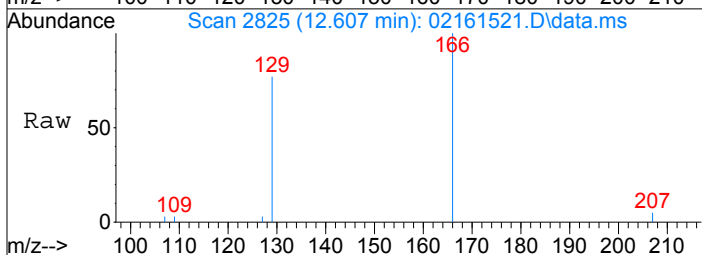
#31
Toluene
Concen: 1415.55 pg
RT: 11.48 min Scan# 2524
Delta R.T. 0.000 min
Lab File: 02161521.D
Acq: 16 Feb 2015 21:12

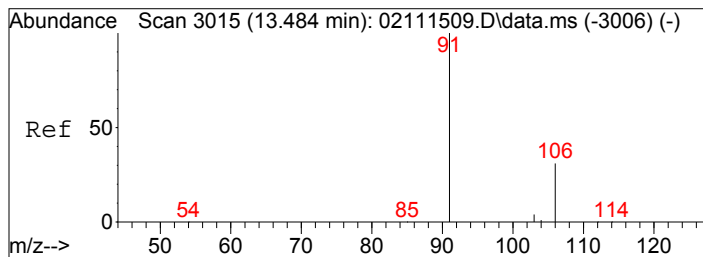
Tgt Ion	91	Resp	224519
Ion Ratio	100	Lower	Upper
91	100		
92	58.3	37.7	77.7



#33
Tetrachloroethene
Concen: 62.98 pg
RT: 12.61 min Scan# 2825
Delta R.T. -0.002 min
Lab File: 02161521.D
Acq: 16 Feb 2015 21:12

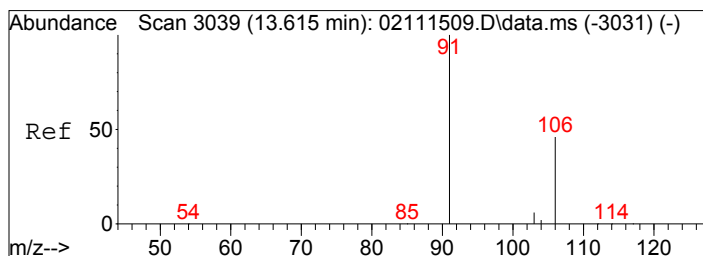
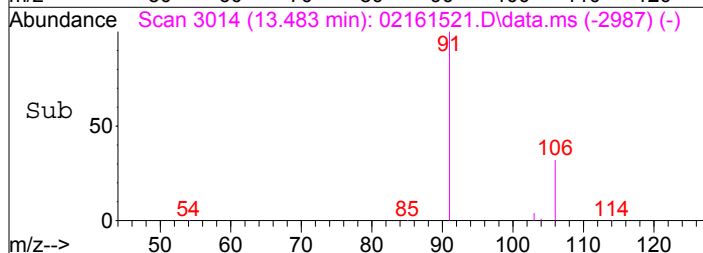
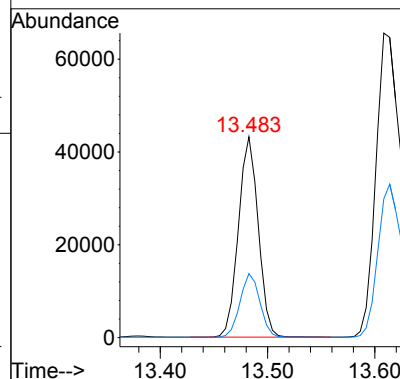
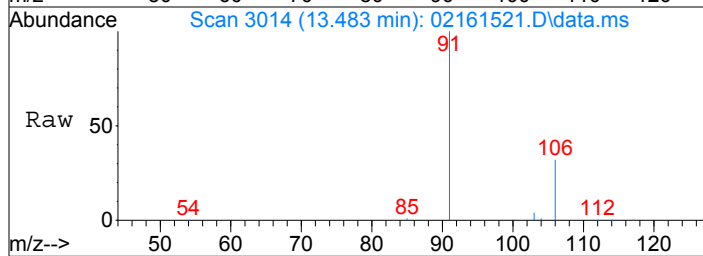
Tgt Ion	166	Resp	3093
Ion Ratio <th>166</th> <th>100</th> <th></th>	166	100	
129	75.9	53.3	93.3





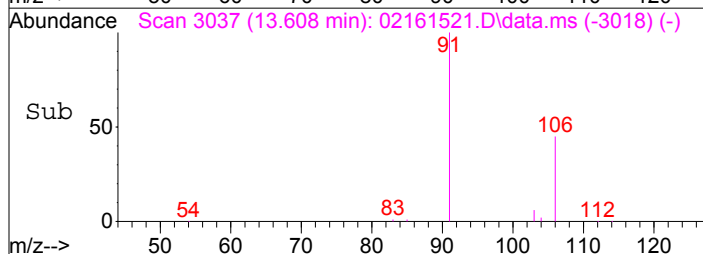
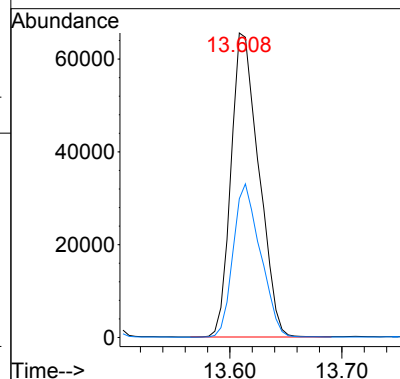
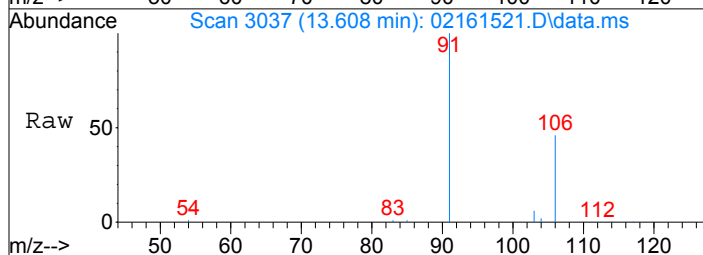
#36
Ethylbenzene
Concen: 350.36 pg
RT: 13.48 min Scan# 3014
Delta R.T. -0.001 min
Lab File: 02161521.D
Acq: 16 Feb 2015 21:12

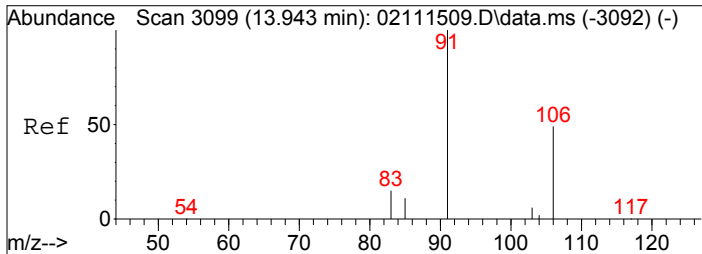
Tgt Ion: 91 Resp: 55529
Ion Ratio Lower Upper
91 100
106 31.8 10.9 50.9



#37
m,p-Xylene
Concen: 868.06 pg
RT: 13.61 min Scan# 3037
Delta R.T. -0.007 min
Lab File: 02161521.D
Acq: 16 Feb 2015 21:12

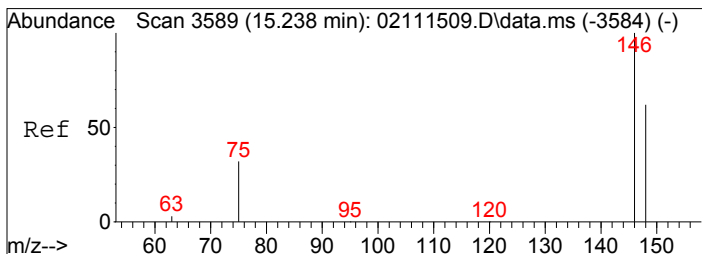
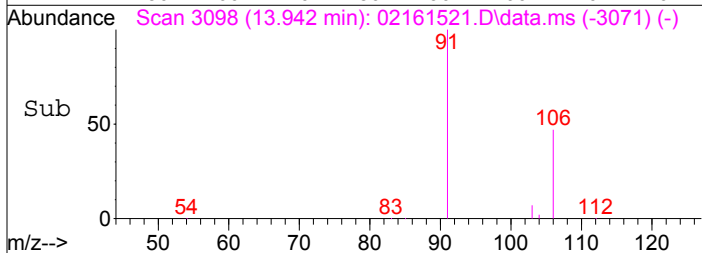
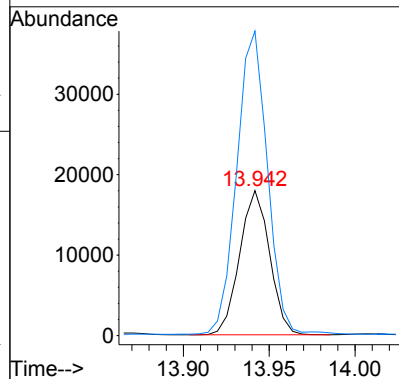
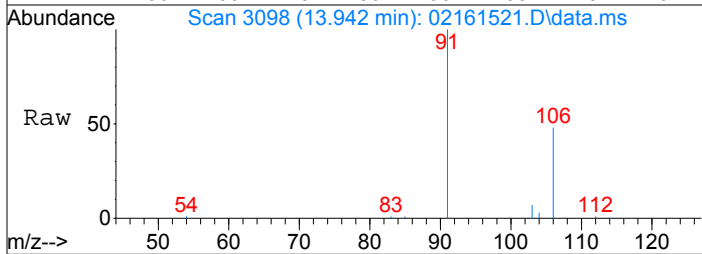
Tgt Ion: 91 Resp: 113074
Ion Ratio Lower Upper
91 100
106 49.4 27.5 67.5





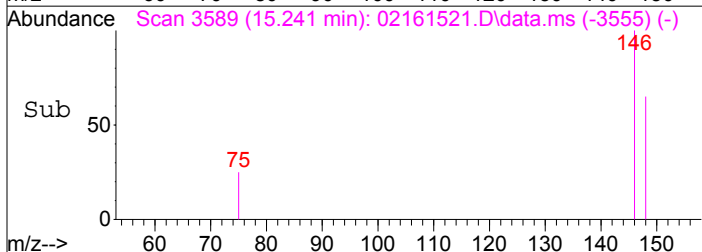
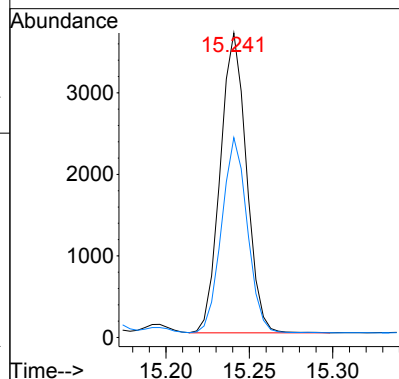
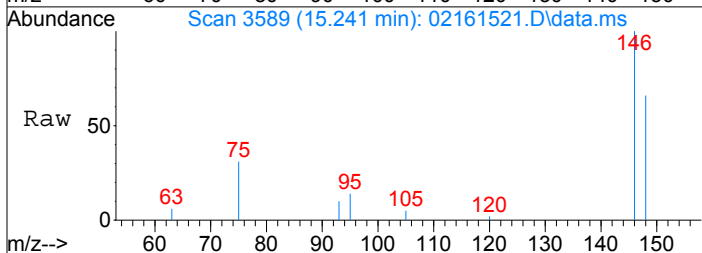
#38
o-Xylene
Concen: 342.63 pg
RT: 13.94 min Scan# 3098
Delta R.T. -0.001 min
Lab File: 02161521.D
Acq: 16 Feb 2015 21:12

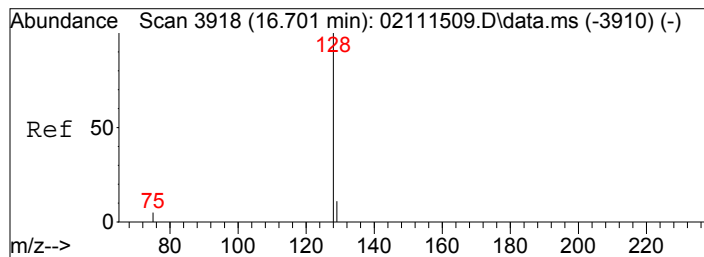
Tgt Ion:106 Resp: 21812
Ion Ratio Lower Upper
106 100
91 214.5 198.3 238.3



#42
1,4-Dichlorobenzene
Concen: 45.90 pg
RT: 15.24 min Scan# 3589
Delta R.T. 0.003 min
Lab File: 02161521.D
Acq: 16 Feb 2015 21:12

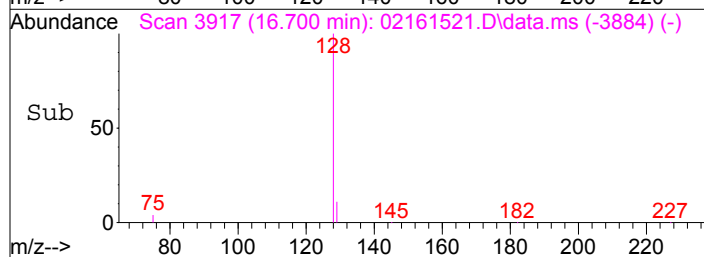
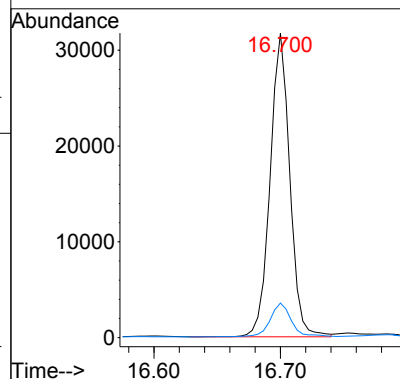
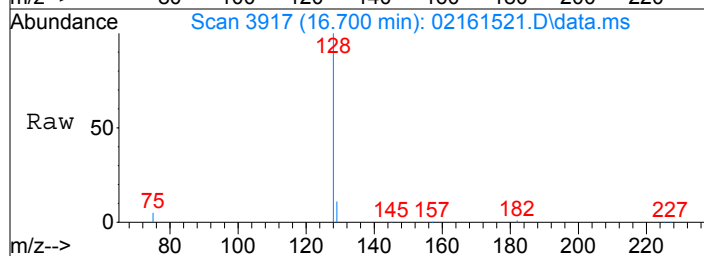
Tgt Ion:146 Resp: 4009
Ion Ratio Lower Upper
146 100
148 64.1 43.5 83.5





#45
Naphthalene
Concen: 216.16 pg
RT: 16.70 min Scan# 3917
Delta R.T. -0.001 min
Lab File: 02161521.D
Acq: 16 Feb 2015 21:12

Tgt Ion	Ratio	Lower	Upper
128	100		
129	12.2	0.0	30.9



Data File: I:\MS19\DATA\2015 02\16\02161522.D

Acq On : 16 Feb 2015 21:40

Operator: WA

Sample : P1500566-004 (1000mL)

Misc : S29-02041502

ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 17 10:18:12 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

2/17/15

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	21842	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	155161	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	26201	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	47364	887.960	pg	0.00
Spiked Amount 1000.000			Recovery	=	88.80%	
30) Toluene-d8 (SS2)	11.38	98	147319	1029.576	pg	0.00
Spiked Amount 1000.000			Recovery	=	102.96%	
40) Bromofluorobenzene (SS3)	14.25	174	59532	1125.449	pg	0.00
Spiked Amount 1000.000			Recovery	=	112.55%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.72	85	143970	1621.901	pg	100
3) Chloromethane	1.83	52	8619	486.211	pg	99
4) Vinyl Chloride	2.01	62	137	N.D.		
5) Bromomethane	2.32	94	1450	36.327	pg	97
6) Chloroethane	2.47	64	514	N.D.		
7) Acetone	2.99	58	2046138	65277.019	pg	99
8) Trichlorofluoromethane	3.10	101	86066	1128.786	pg	100
9) 1,1-Dichloroethene	3.65	96	96	N.D.		
10) Methylene Chloride	3.81	84	12805	353.931	pg	93
11) Trichlorotrifluoroethane	4.09	151	13080	373.337	pg	99
12) trans-1,2-Dichloroethene	4.74	96	2271	65.335	pg	98
13) 1,1-Dichloroethane	4.95	63	314	N.D.		
14) Methyl tert-Butyl Ether	5.10	73	874	N.D.		
15) cis-1,2-Dichloroethene	5.94	96	3321	85.921	pg	100
16) Chloroform	6.31	83	8132	121.433	pg	98
18) 1,2-Dichloroethane	7.26	62	5485	102.868	pg	99
19) 1,1,1-Trichloroethane	7.59	97	1067	N.D.		
20) Benzene	8.16	78	61672	447.756	pg	100
21) Carbon Tetrachloride	8.34	117	18190	373.101	pg	100
23) 1,2-Dichloropropane	9.16	63	765	22.606	pg	93
24) Bromodichloromethane	9.42	83	954	N.D.		
25) Trichloroethene	9.46	130	13162	330.191	pg	99
26) 1,4-Dioxane	9.53	88	281	N.D.		
27) cis-1,3-Dichloropropene	10.45	75	55	N.D.		
28) trans-1,3-Dichloropropene	11.05	75	37	N.D.		
29) 1,1,2-Trichloroethane	11.20	83	206	N.D.		
31) Toluene	11.48	91	408340	2683.244	pg	99
32) 1,2-Dibromoethane	12.12	107	18	N.D.		
33) Tetrachloroethene	12.61	166	6060	128.607	pg	99
35) Chlorobenzene	13.17	112	859	N.D.		
36) Ethylbenzene	13.48	91	42573	259.114	pg	99
37) m,p-Xylene	13.61	91	100538	744.517	pg	96
38) o-Xylene	13.94	106	18394	278.715	pg	98
39) 1,1,1,2,2-Tetrachloroethane	13.94	83	319	N.D.		
41) 1,3-Dichlorobenzene	0.00	146	0	N.D.	d	
42) 1,4-Dichlorobenzene	15.24	146	5905	65.218	pg	99
43) 1,2-Dichlorobenzene	15.46	146	246	N.D.		
44) 1,2,4-Trichlorobenzene	16.63	182	219	N.D.		
45) Naphthalene	16.70	128	40135	244.813	pg	99
46) Hexachlorobutadiene	16.96	225	41	N.D.		

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\16\02161522.D

Acq On : 16 Feb 2015 21:40

Operator: WA

Sample : P1500566-004 (1000mL)

Misc : S29-02041502

ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 17 10:18:12 2015

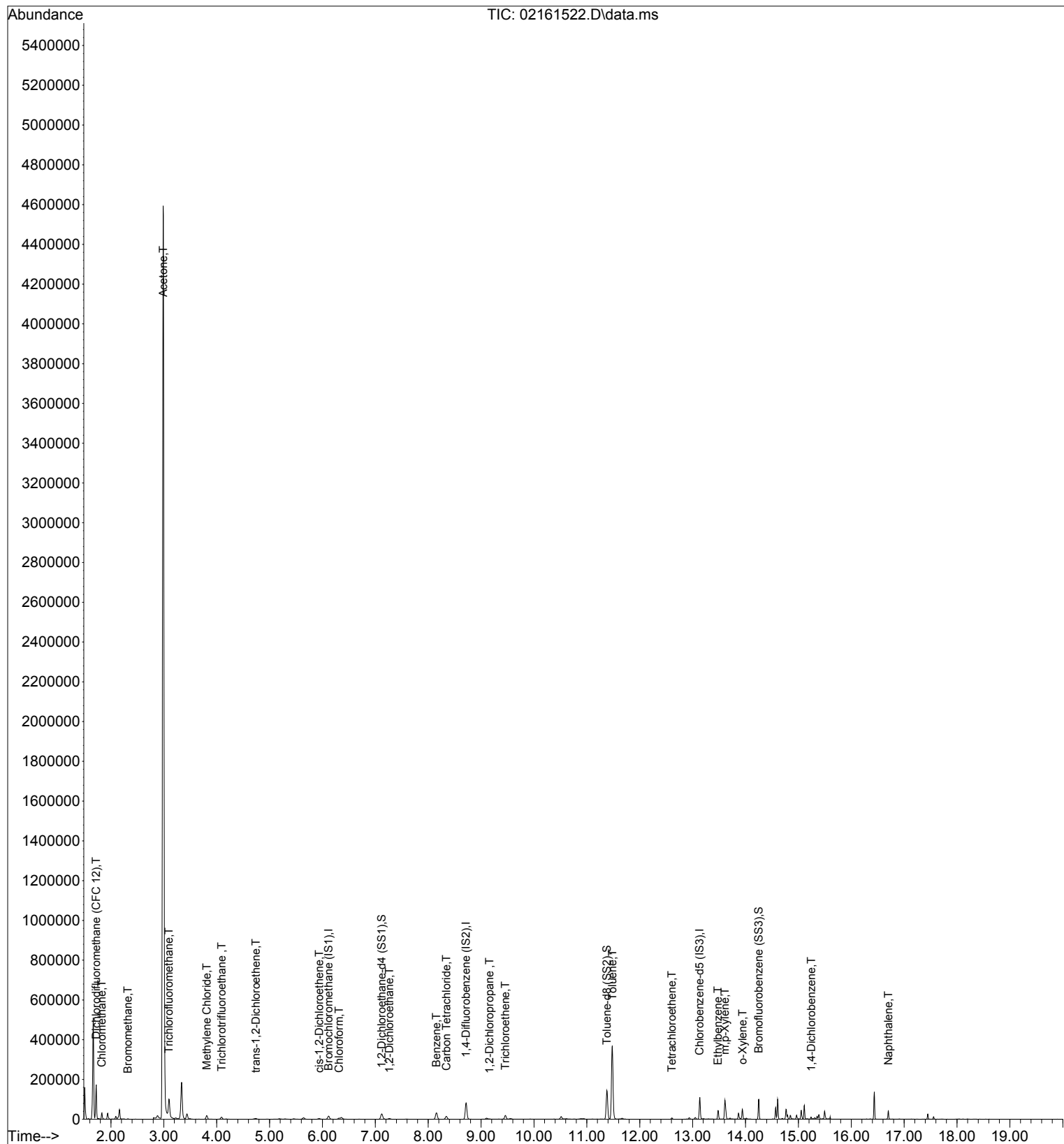
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 02\16\02161522.D

Acq On : 16 Feb 2015 21:40
 Sample : P1500566-004 (1000mL)
 Misc : S29-02041502
 ALS Vial : 5 Sample Multiplier: 1

Operator: WA

Quant Time: Feb 17 10:18:12 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

2/17/15

DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	21842	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	155161	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	26201	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	47364	887.960	pg	0.00
Spiked Amount 1000.000			Recovery	=	88.80%	
30) Toluene-d8 (SS2)	11.38	98	147319	1029.576	pg	0.00
Spiked Amount 1000.000			Recovery	=	102.96%	
40) Bromofluorobenzene (SS3)	14.25	174	59532	1125.449	pg	0.00
Spiked Amount 1000.000			Recovery	=	112.55%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.72	85	143970	1621.901	pg	100
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5) Bromomethane	2.32	94	1450	36.327	pg	97
7) Acetone	2.99	58	2046138	65277.019	pg	99
8) Trichlorofluoromethane	3.10	101	86066	1128.786	pg	100
10) Methylene Chloride	3.81	84	12805	353.931	pg	93
11) Trichlorotrifluoroethane	4.09	151	13080	373.337	pg	99
12) trans-1,2-Dichloroethene	4.74	96	2271	65.335	pg	98
15) cis-1,2-Dichloroethene	5.94	96	3321	85.921	pg	100
16) Chloroform	6.31	83	8132	121.433	pg	98
18) 1,2-Dichloroethane	7.26	62	5485	102.868	pg	99
20) Benzene	8.16	78	61672	447.756	pg	100
21) Carbon Tetrachloride	8.34	117	18190	373.101	pg	100
23) 1,2-Dichloropropane	9.16	63	765	22.606	pg	93
25) Trichloroethene	9.46	130	13162	330.191	pg	99
31) Toluene	11.48	91	408340	2683.244	pg	99
33) Tetrachloroethene	12.61	166	6060	128.607	pg	99
36) Ethylbenzene	13.48	91	42573	259.114	pg	99
37) m,p-Xylene	13.61	91	100538	744.517	pg	96
38) o-Xylene	13.94	106	18394	278.715	pg	98
42) 1,4-Dichlorobenzene	15.24	146	5905	65.218	pg	99
45) Naphthalene	16.70	128	40135	244.813	pg	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File: I:\MS19\DATA\2015 02\16\02161522.D

Acq On : 16 Feb 2015 21:40

Operator: WA

Sample : P1500566-004 (1000mL)

Misc : S29-02041502

ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 17 10:18:12 2015

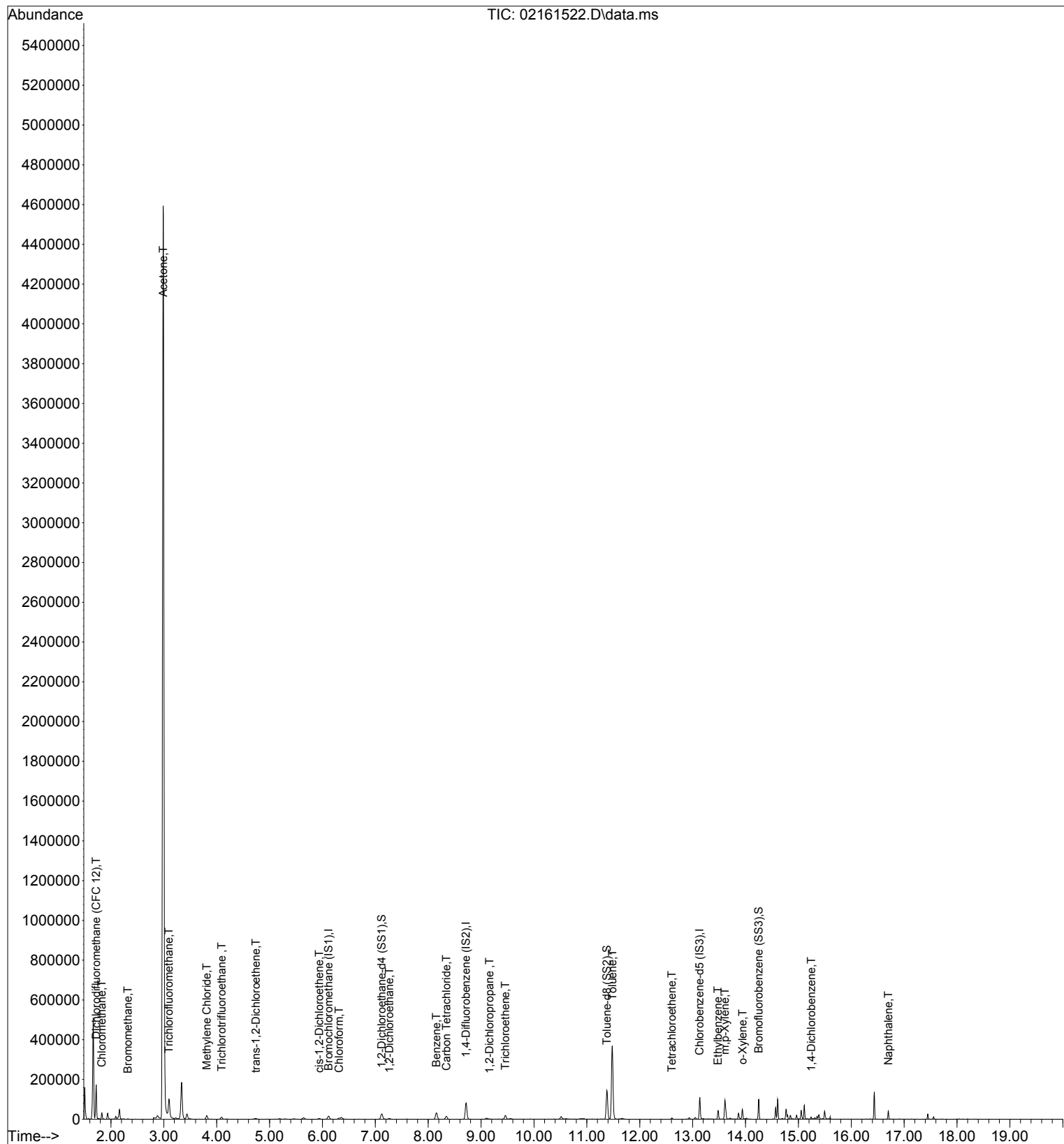
Quant Method : I:\MS19\METHODS\X19021115.M

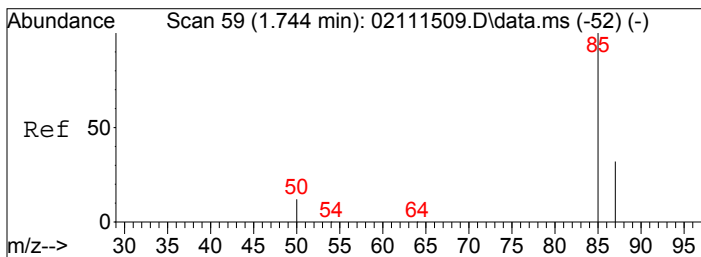
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

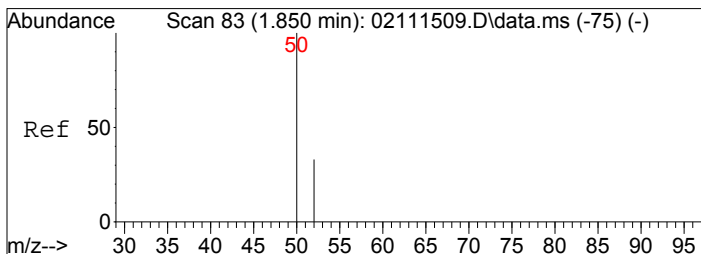
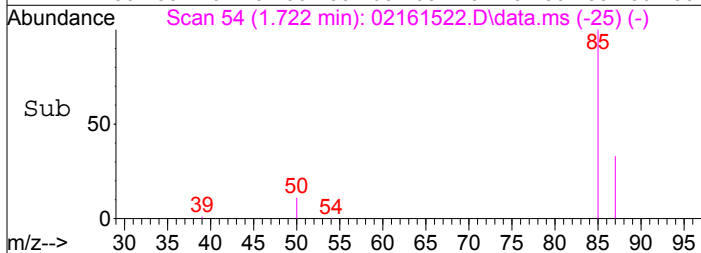
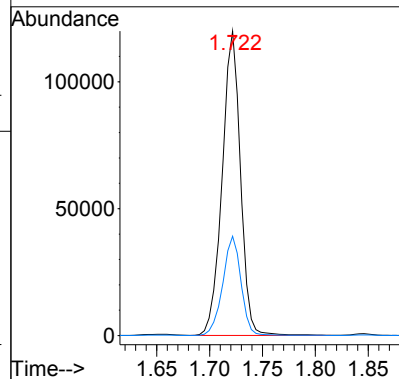
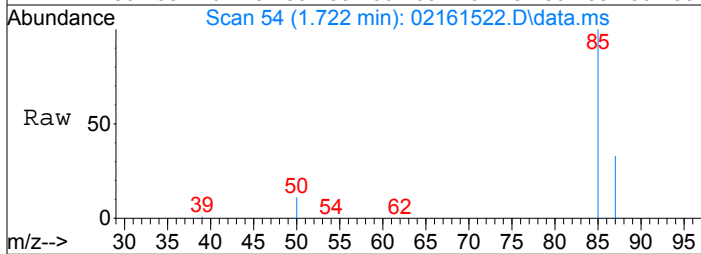
DataAcq Meth:TO15SIM.M





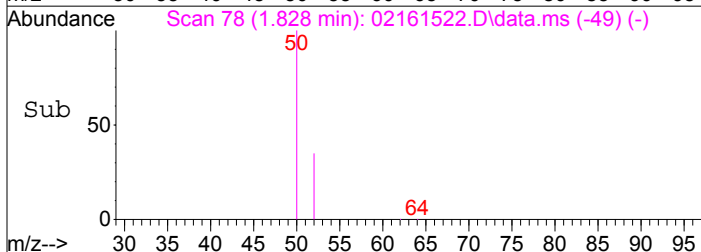
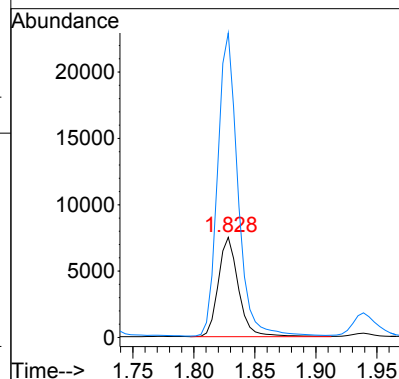
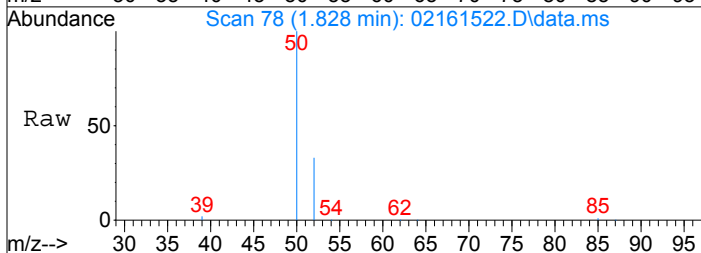
#2
 Dichlorodifluoromethane (CFC 12)
 Concen: 1621.90 pg
 RT: 1.72 min Scan# 54
 Delta R.T. -0.022 min
 Lab File: 02161522.D
 Acq: 16 Feb 2015 21:40

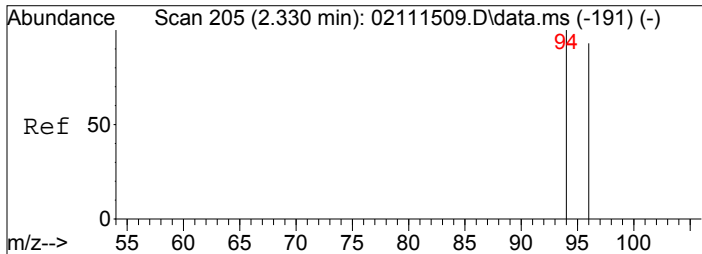
Tgt Ion: 85 Resp: 143970
 Ion Ratio Lower Upper
 85 100
 87 32.6 12.4 52.4



#3
 Chloromethane
 Concen: 486.21 pg
 RT: 1.83 min Scan# 78
 Delta R.T. -0.022 min
 Lab File: 02161522.D
 Acq: 16 Feb 2015 21:40

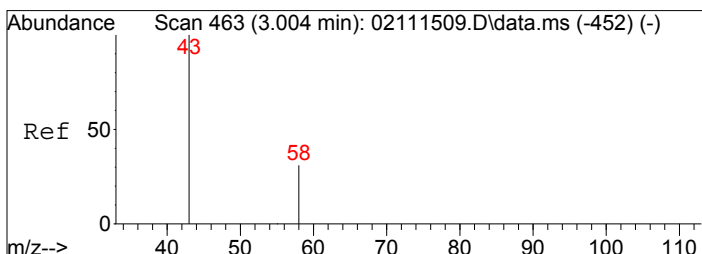
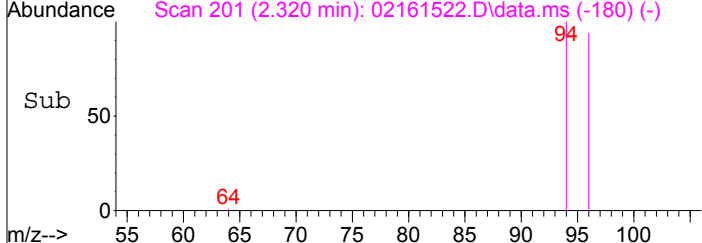
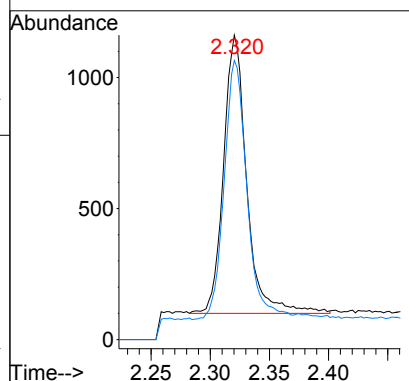
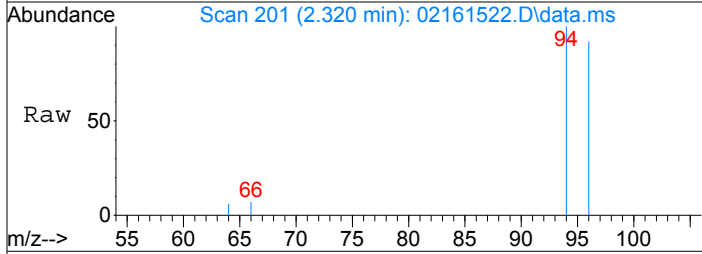
Tgt Ion: 52 Resp: 8619
 Ion Ratio Lower Upper
 52 100
 50 305.8 283.7 323.7





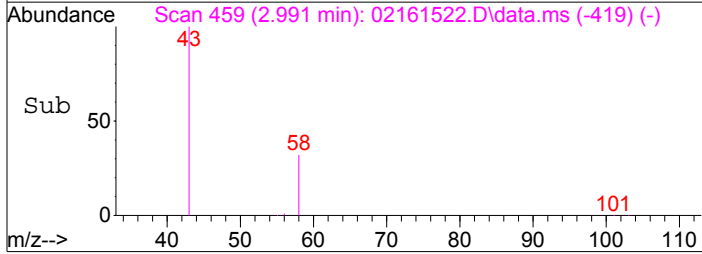
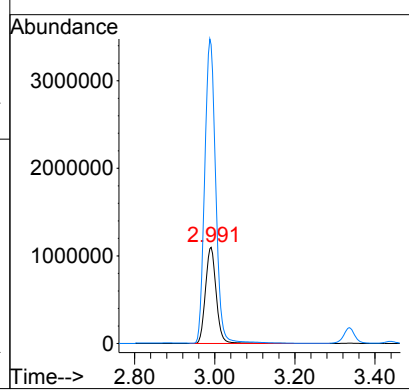
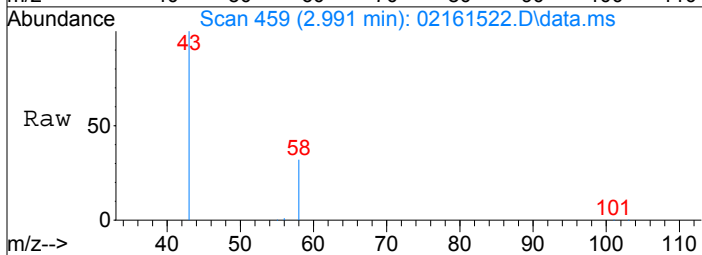
#5
 Bromomethane
 Concen: 36.33 pg
 RT: 2.32 min Scan# 201
 Delta R.T. -0.010 min
 Lab File: 02161522.D
 Acq: 16 Feb 2015 21:40

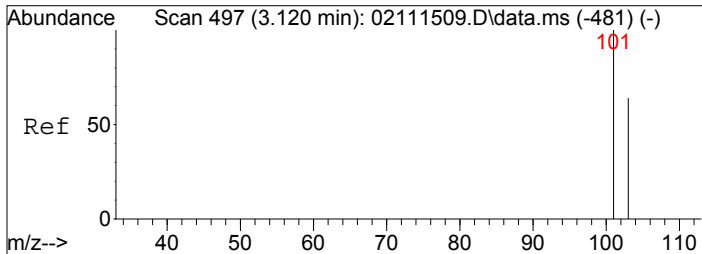
Tgt Ion:	94	Resp:	1450
Ion Ratio	Lower	Upper	
94	100		
96	91.7	75.5	113.3



#7
 Acetone
 Concen: 65277.02 pg
 RT: 2.99 min Scan# 459
 Delta R.T. -0.013 min
 Lab File: 02161522.D
 Acq: 16 Feb 2015 21:40

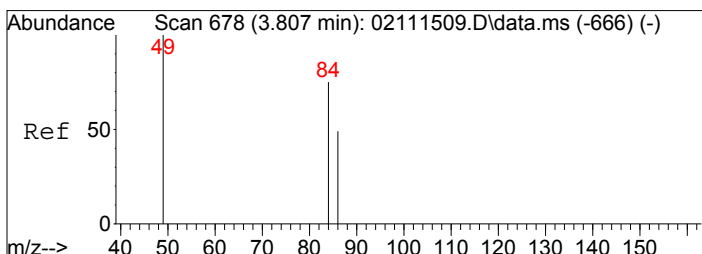
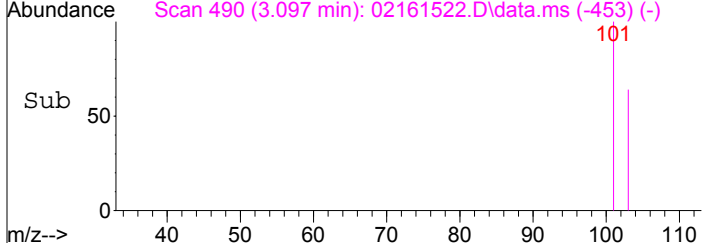
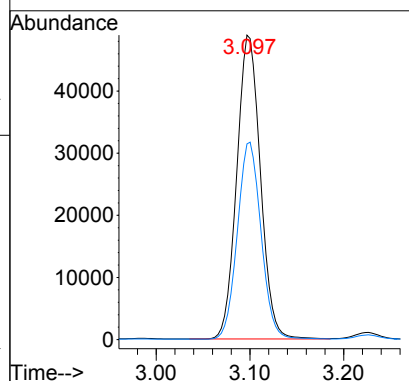
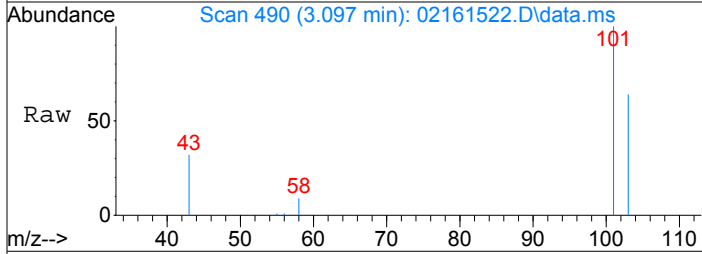
Tgt Ion:	58	Resp:	2046138
Ion Ratio	Lower	Upper	
58	100		
43	324.3	301.8	341.8





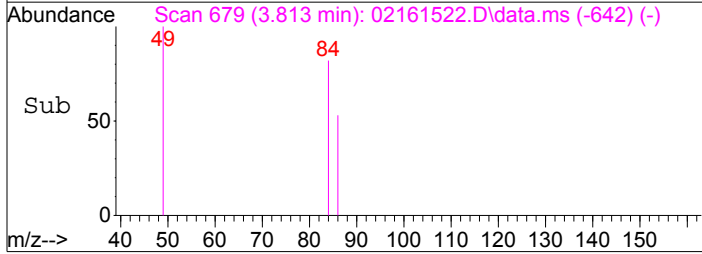
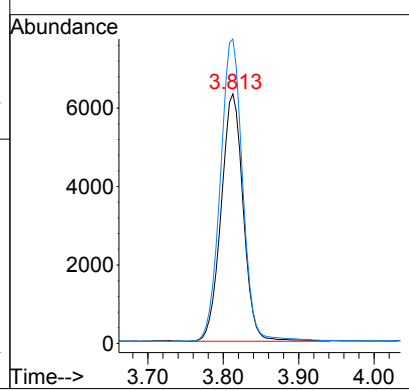
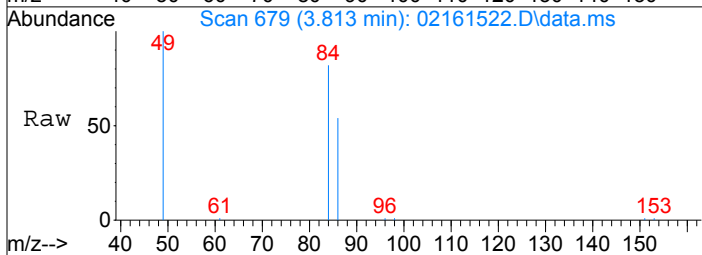
#8
 Trichlorofluoromethane
 Concen: 1128.79 pg
 RT: 3.10 min Scan# 490
 Delta R.T. -0.023 min
 Lab File: 02161522.D
 Acq: 16 Feb 2015 21:40

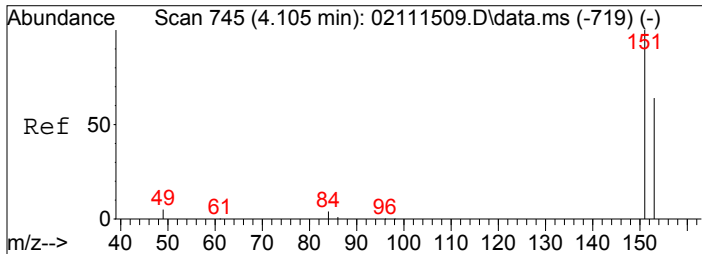
Tgt Ion: 101	Resp: 86066
Ion Ratio	Lower Upper
101	100
103	64.8 51.8 77.6



#10
 Methylene Chloride
 Concen: 353.93 pg
 RT: 3.81 min Scan# 679
 Delta R.T. 0.006 min
 Lab File: 02161522.D
 Acq: 16 Feb 2015 21:40

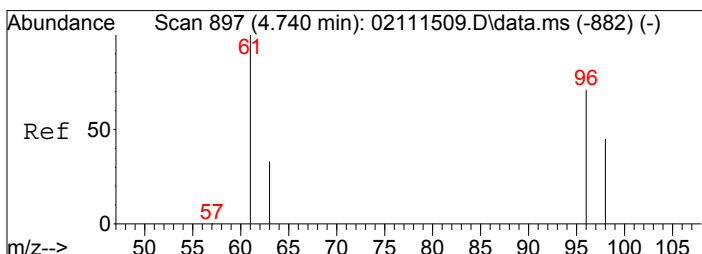
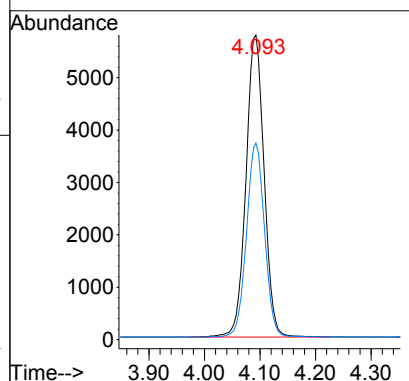
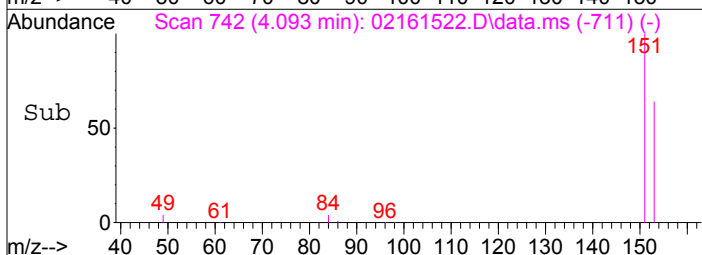
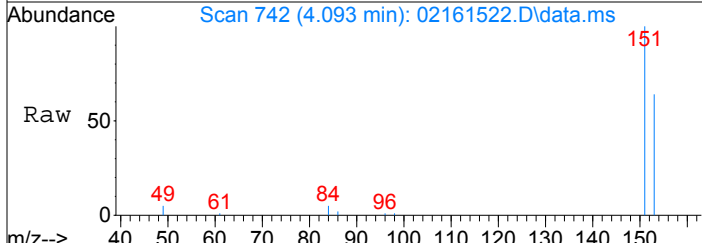
Tgt Ion: 84	Resp: 12805
Ion Ratio	Lower Upper
84	100
49	123.9 112.3 152.3





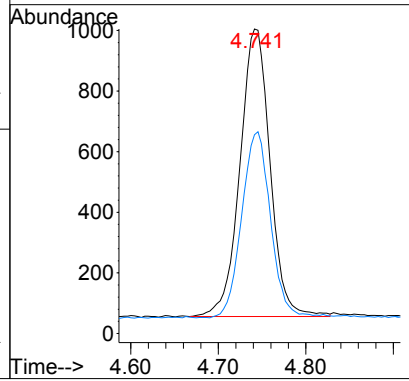
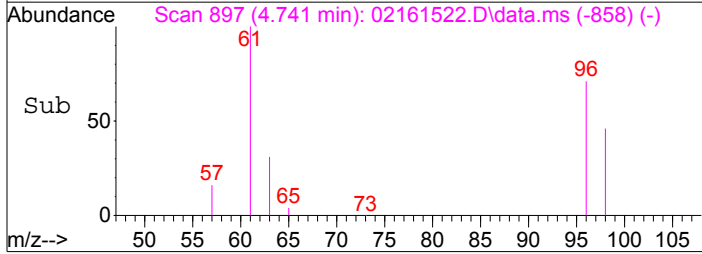
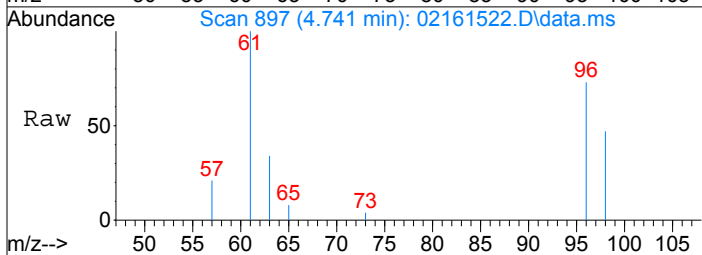
#11
 Trichlorotrifluoroethane
 Concen: 373.34 pg
 RT: 4.09 min Scan# 742
 Delta R.T. -0.012 min
 Lab File: 02161522.D
 Acq: 16 Feb 2015 21:40

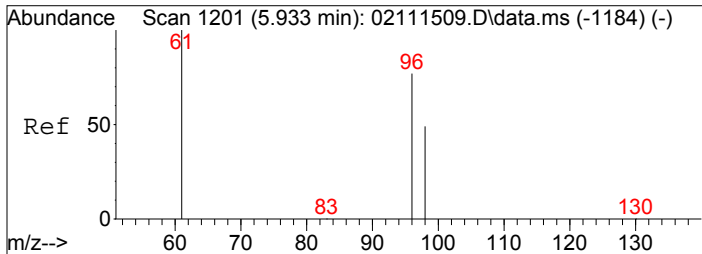
Tgt Ion: 151	Resp: 13080
Ion Ratio	Lower Upper
151	100
153	64.0 43.6 83.6



#12
 trans-1,2-Dichloroethene
 Concen: 65.34 pg
 RT: 4.74 min Scan# 897
 Delta R.T. 0.001 min
 Lab File: 02161522.D
 Acq: 16 Feb 2015 21:40

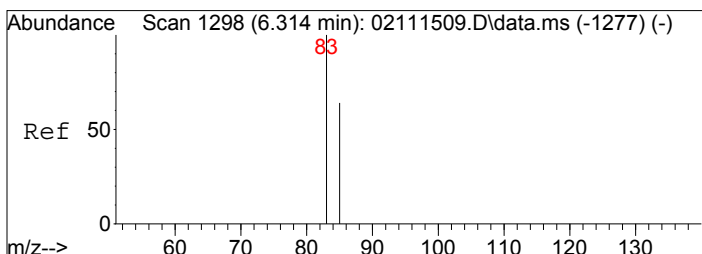
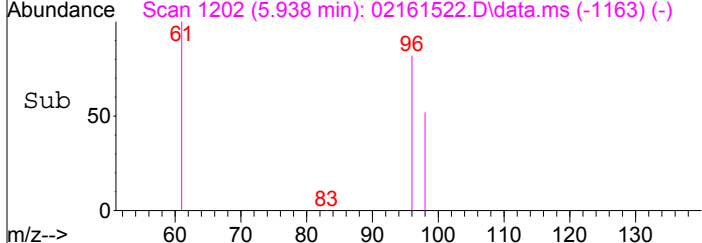
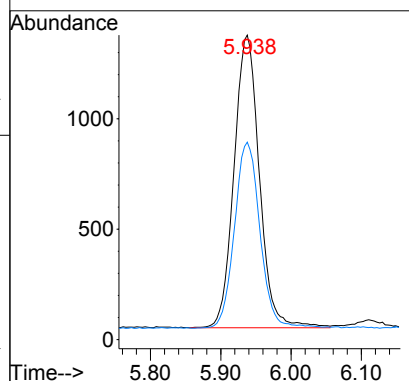
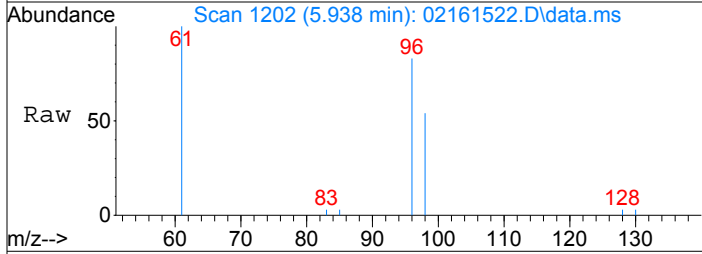
Tgt Ion: 96	Resp: 2271
Ion Ratio	Lower Upper
96	100
98	62.2 43.7 83.7





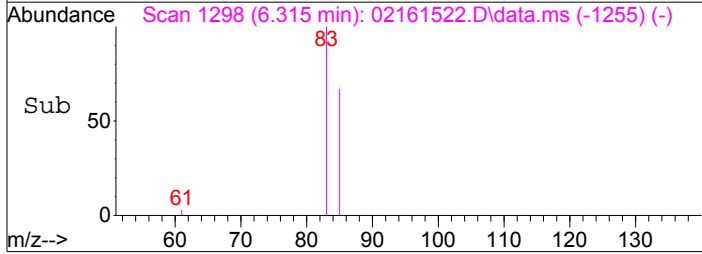
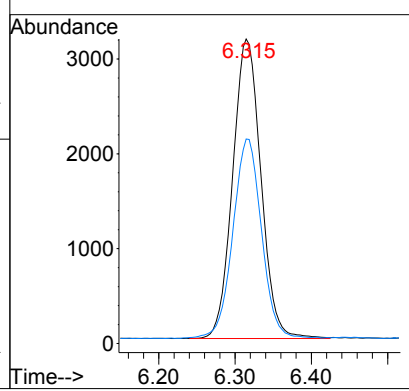
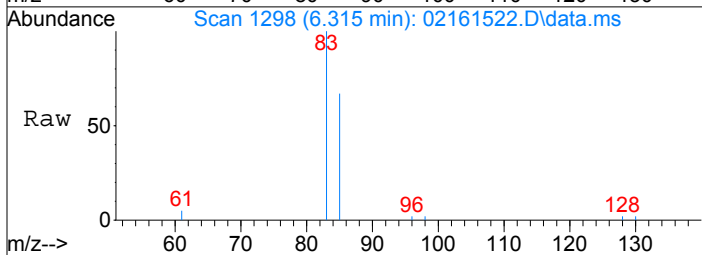
#15
 cis-1,2-Dichloroethene
 Concen: 85.92 pg
 RT: 5.94 min Scan# 1202
 Delta R.T. 0.005 min
 Lab File: 02161522.D
 Acq: 16 Feb 2015 21:40

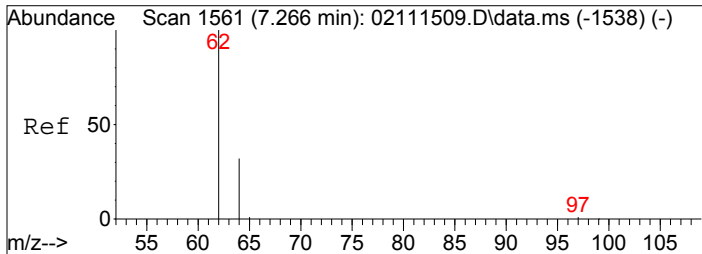
Tgt Ion:	96	Resp:	3321
Ion Ratio	Lower	Upper	
96	100		
98	64.1	44.3	84.3



#16
 Chloroform
 Concen: 121.43 pg
 RT: 6.31 min Scan# 1298
 Delta R.T. 0.001 min
 Lab File: 02161522.D
 Acq: 16 Feb 2015 21:40

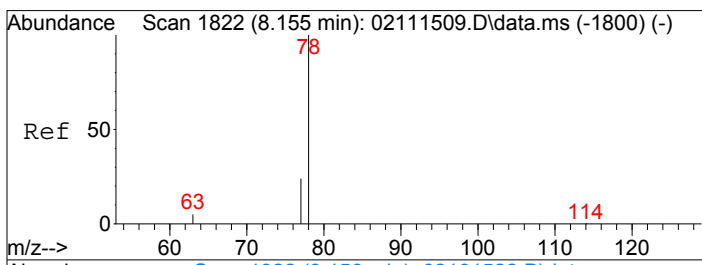
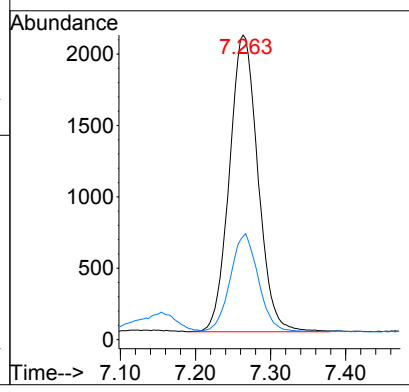
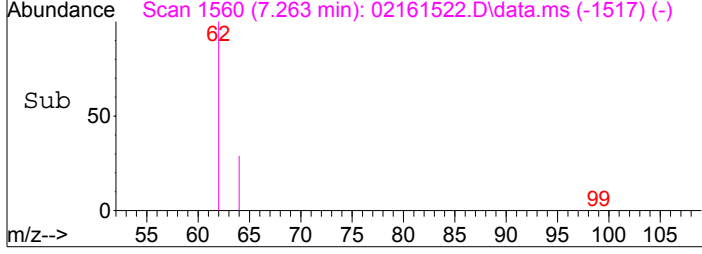
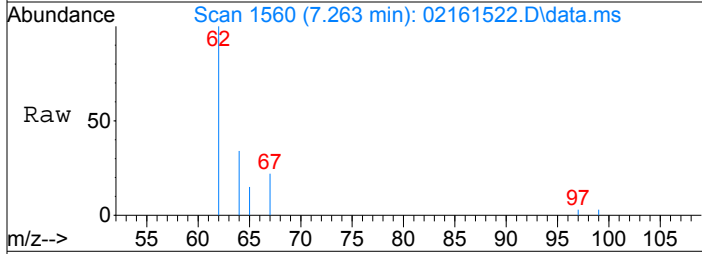
Tgt Ion:	83	Resp:	8132
Ion Ratio	Lower	Upper	
83	100		
85	67.4	45.4	85.4





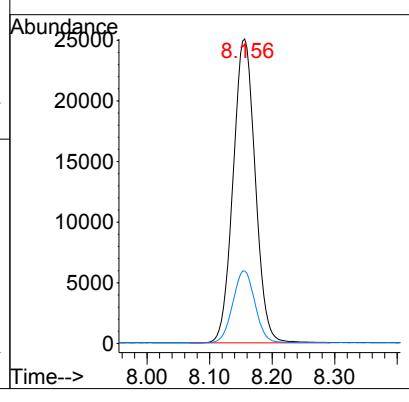
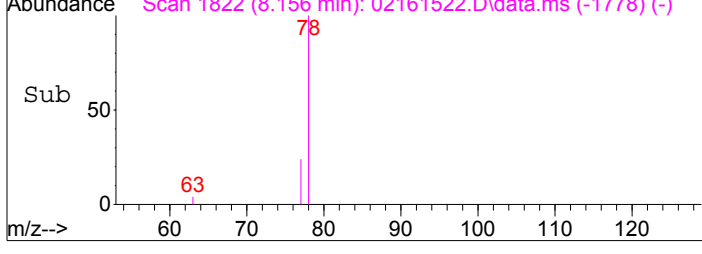
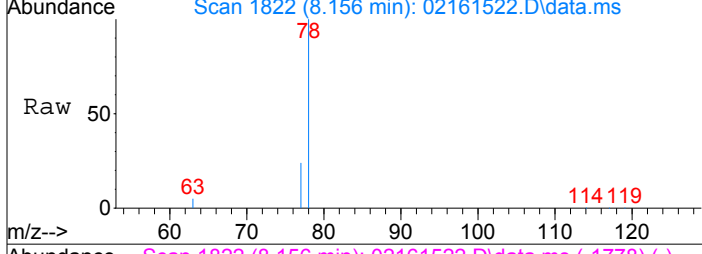
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 1,2-Dichloroethane
 Concen: 102.87 pg
 RT: 7.26 min Scan# 1560
 Delta R.T. -0.002 min
 Lab File: 02161522.D
 Acq: 16 Feb 2015 21:40

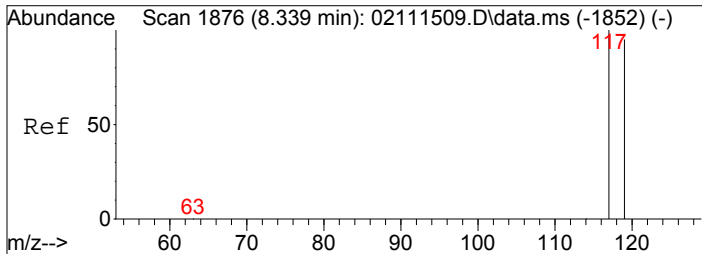
Tgt Ion:	62	Resp:	5485
Ion Ratio	Lower	Upper	
62	100		
64	32.3	11.6	51.6



#20
 Benzene
 Concen: 447.76 pg
 RT: 8.16 min Scan# 1822
 Delta R.T. 0.001 min
 Lab File: 02161522.D
 Acq: 16 Feb 2015 21:40

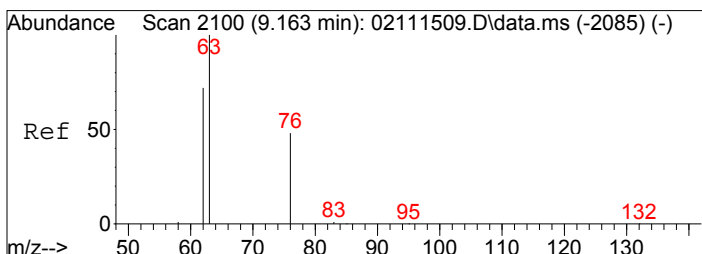
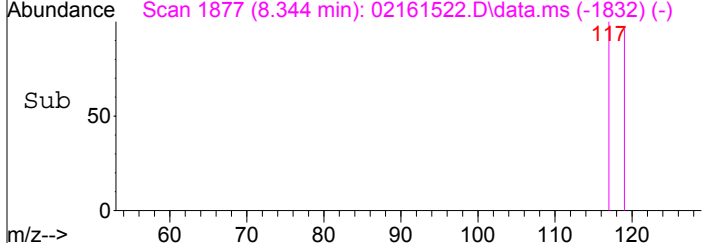
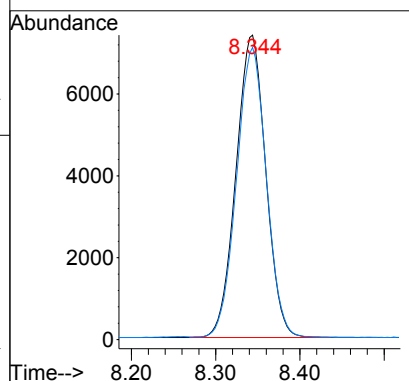
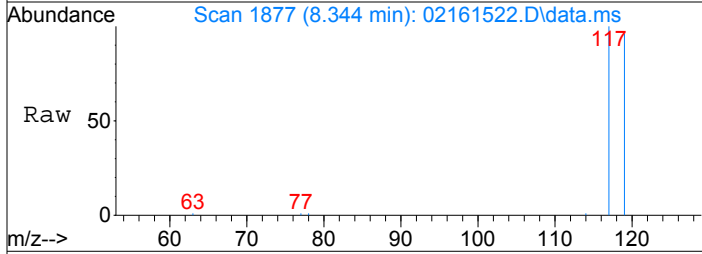
Tgt Ion:	78	Resp:	61672
Ion Ratio	Lower	Upper	
78	100		
77	23.7	3.7	43.7





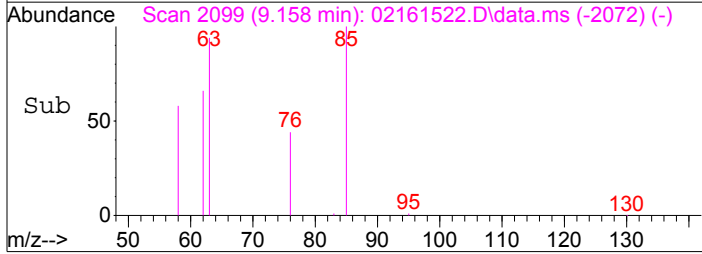
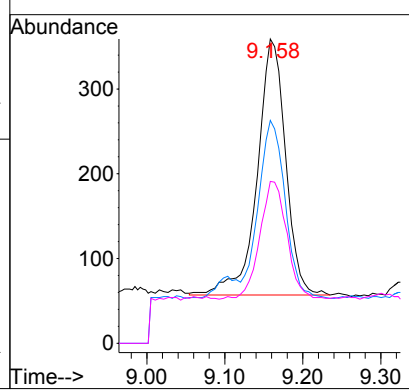
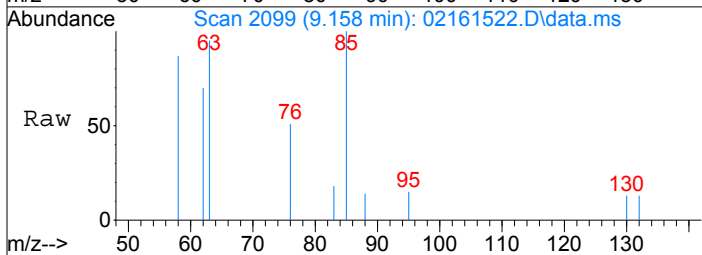
#21
Carbon Tetrachloride
Concen: 373.10 pg
RT: 8.34 min Scan# 1877
Delta R.T. 0.004 min
Lab File: 02161522.D
Acq: 16 Feb 2015 21:40

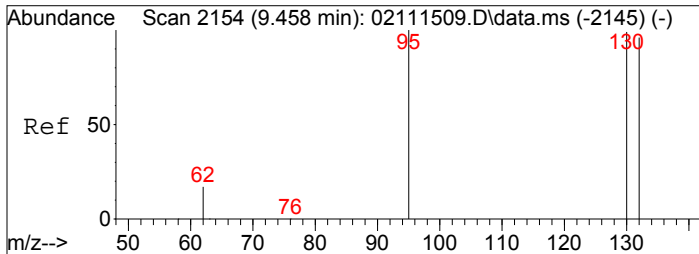
Tgt Ion: 117	Resp: 18190
Ion Ratio	Lower Upper
117	100
119	95.9 75.5 115.5



#23
1,2-Dichloropropane
Concen: 22.61 pg
RT: 9.16 min Scan# 2099
Delta R.T. -0.004 min
Lab File: 02161522.D
Acq: 16 Feb 2015 21:40

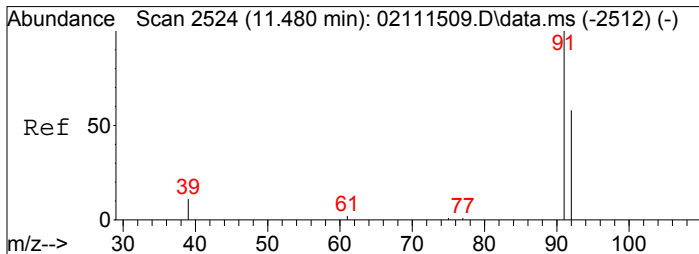
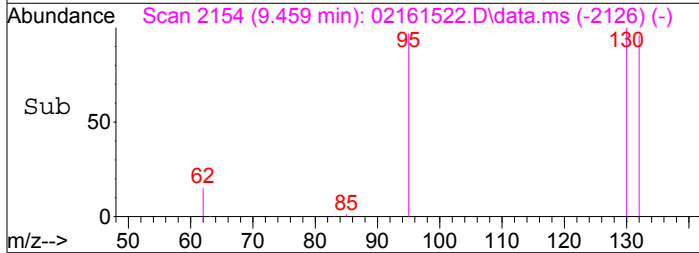
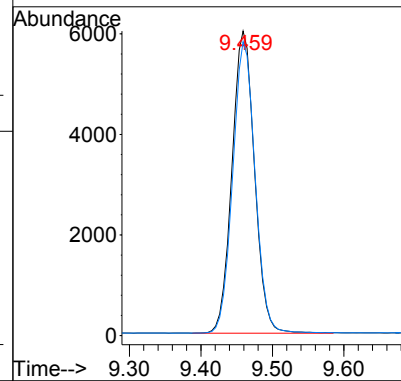
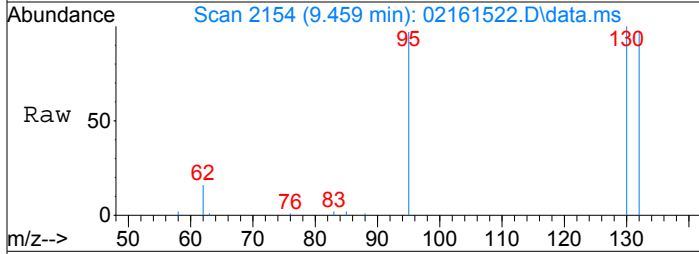
Tgt Ion: 63	Resp: 765
Ion Ratio	Lower Upper
63	100
62	65.4 52.0 92.0
76	44.1 28.1 68.1





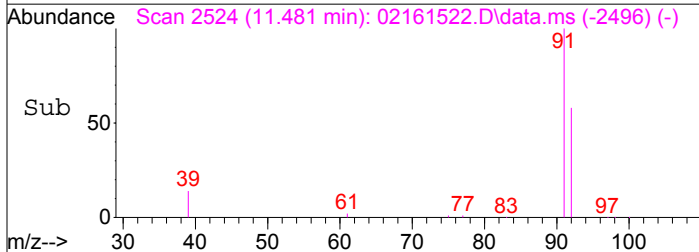
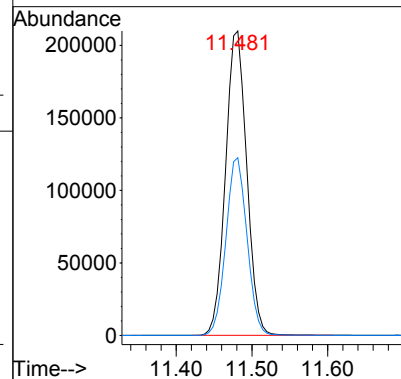
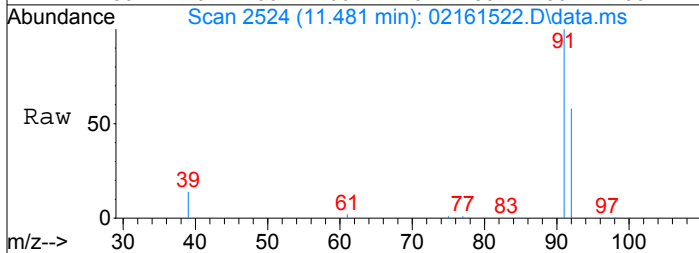
#25
 Trichloroethene
 Concen: 330.19 pg
 RT: 9.46 min Scan# 2154
 Delta R.T. 0.001 min
 Lab File: 02161522.D
 Acq: 16 Feb 2015 21:40

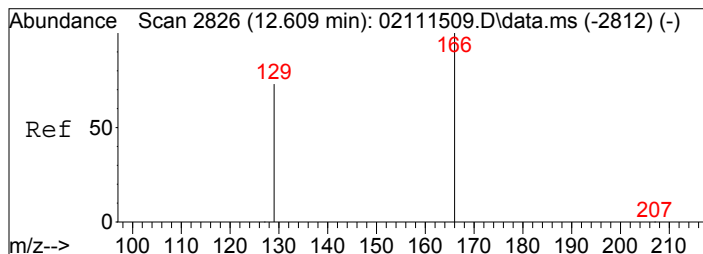
Tgt Ion: 130 Resp: 13162
 Ion Ratio Lower Upper
 130 100
 132 95.7 77.1 117.1



#31
 Toluene
 Concen: 2683.24 pg
 RT: 11.48 min Scan# 2524
 Delta R.T. 0.001 min
 Lab File: 02161522.D
 Acq: 16 Feb 2015 21:40

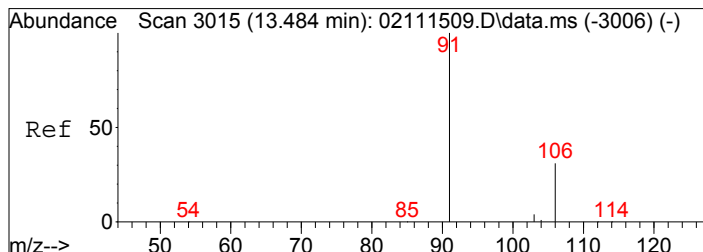
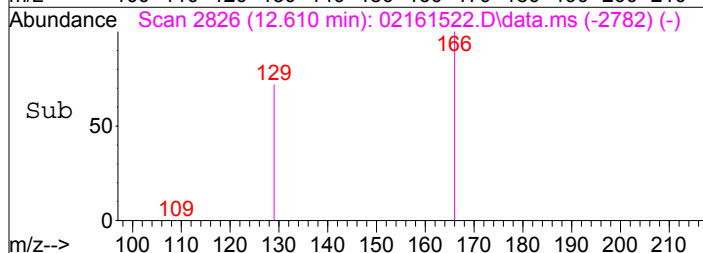
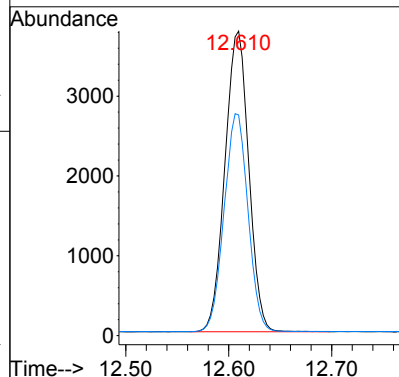
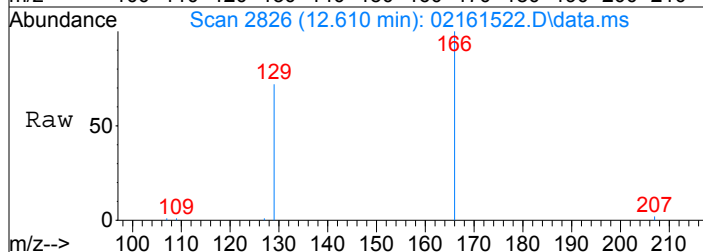
Tgt Ion: 91 Resp: 408340
 Ion Ratio Lower Upper
 91 100
 92 58.2 37.7 77.7





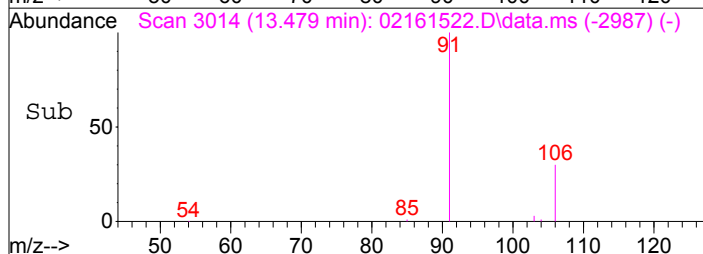
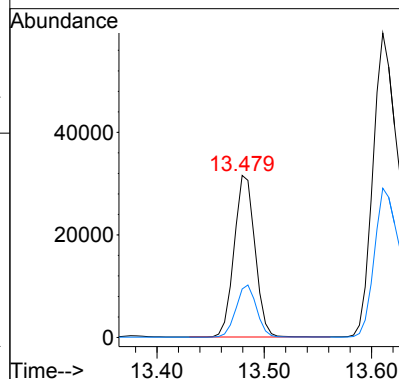
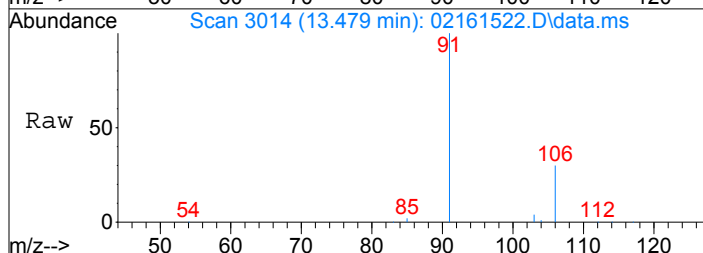
#33
Tetrachloroethene
Concen: 128.61 pg
RT: 12.61 min Scan# 2826
Delta R.T. 0.001 min
Lab File: 02161522.D
Acq: 16 Feb 2015 21:40

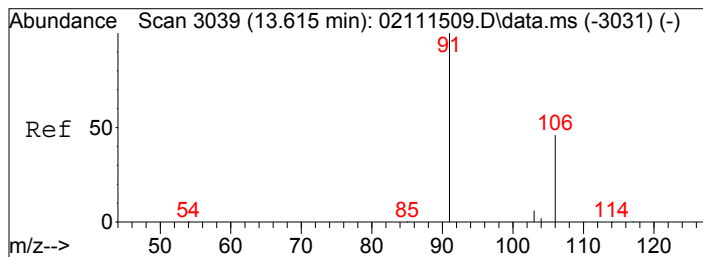
Tgt Ion: 166 Resp: 6060
Ion Ratio Lower Upper
166 100
129 72.6 53.3 93.3



#36
Ethylbenzene
Concen: 259.11 pg
RT: 13.48 min Scan# 3014
Delta R.T. -0.004 min
Lab File: 02161522.D
Acq: 16 Feb 2015 21:40

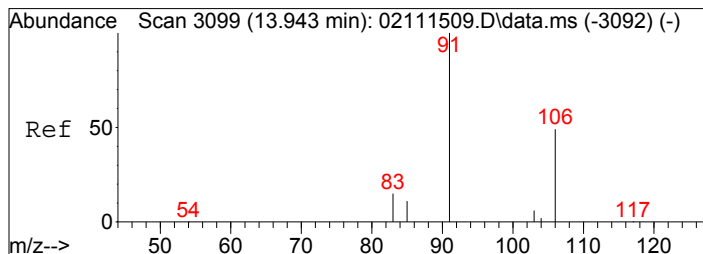
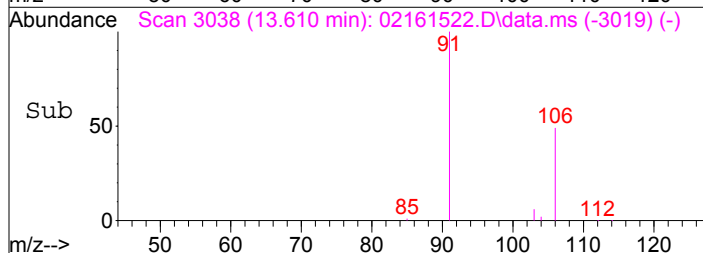
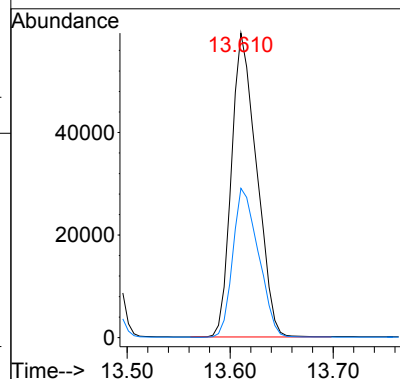
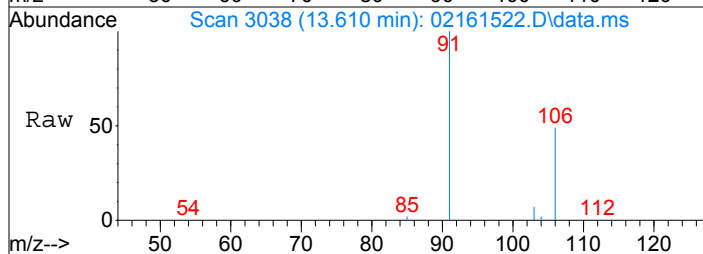
Tgt Ion: 91 Resp: 42573
Ion Ratio Lower Upper
91 100
106 31.7 10.9 50.9





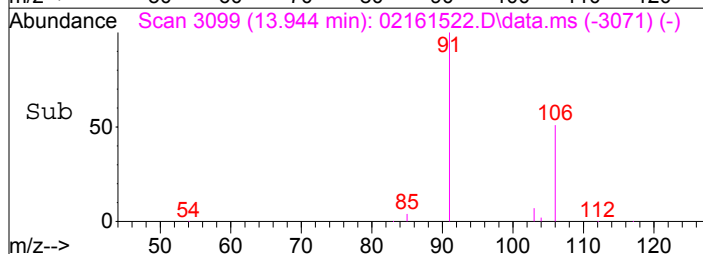
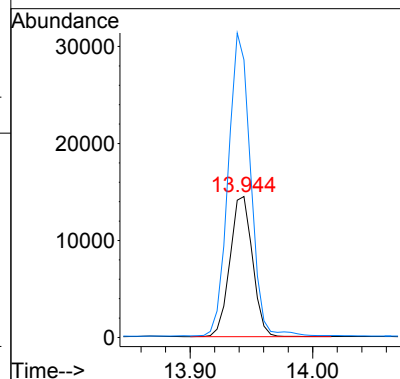
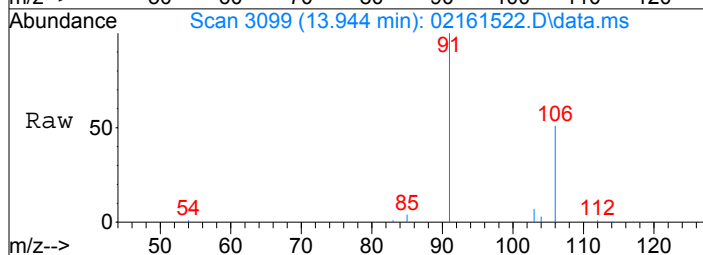
#37
m,p-Xylene
Concen: 744.52 pg
RT: 13.61 min Scan# 3038
Delta R.T. -0.004 min
Lab File: 02161522.D
Acq: 16 Feb 2015 21:40

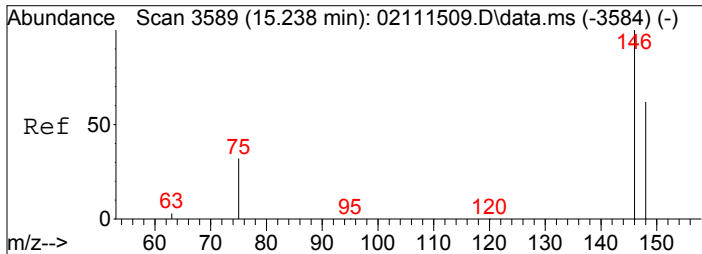
Tgt Ion: 91 Resp: 100538
Ion Ratio Lower Upper
91 100
106 49.9 27.5 67.5



#38
o-Xylene
Concen: 278.71 pg
RT: 13.94 min Scan# 3099
Delta R.T. 0.001 min
Lab File: 02161522.D
Acq: 16 Feb 2015 21:40

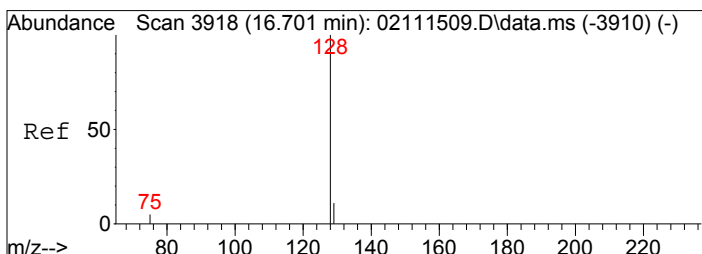
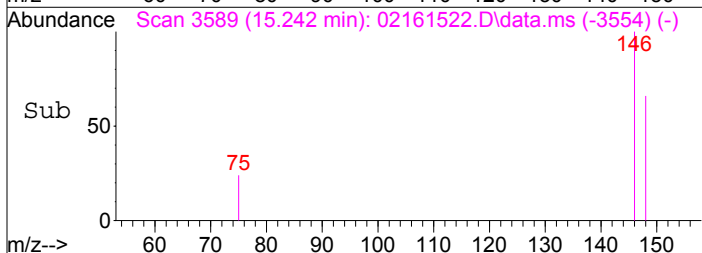
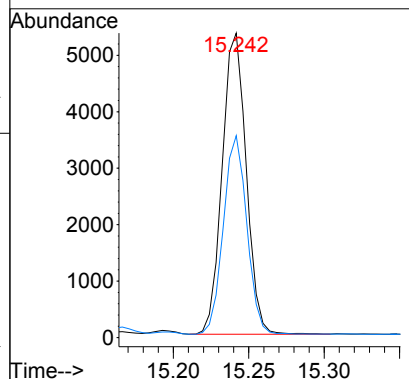
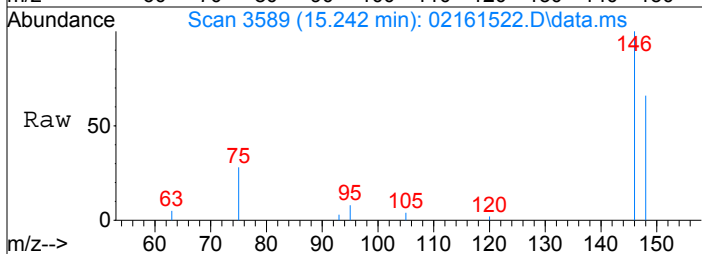
Tgt Ion: 106 Resp: 18394
Ion Ratio Lower Upper
106 100
91 215.9 198.3 238.3





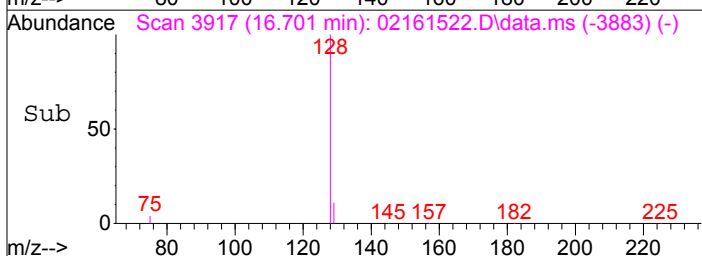
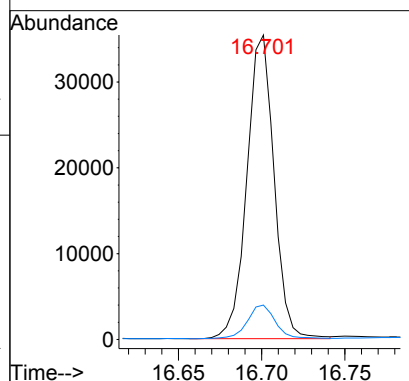
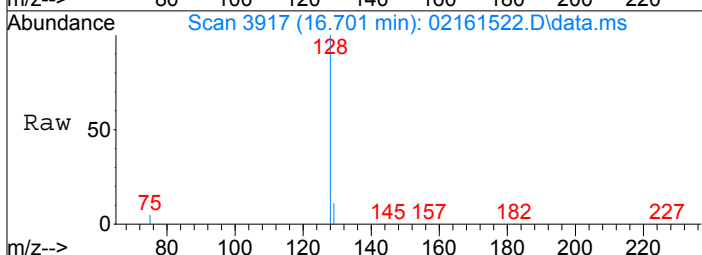
#42
 1,4-Dichlorobenzene
 Concen: 65.22 pg
 RT: 15.24 min Scan# 3589
 Delta R.T. 0.004 min
 Lab File: 02161522.D
 Acq: 16 Feb 2015 21:40

Tgt Ion:146 Resp: 5905
 Ion Ratio Lower Upper
 146 100
 148 64.4 43.5 83.5



#45
 Naphthalene
 Concen: 244.81 pg
 RT: 16.70 min Scan# 3917
 Delta R.T. 0.000 min
 Lab File: 02161522.D
 Acq: 16 Feb 2015 21:40

Tgt Ion:128 Resp: 40135
 Ion Ratio Lower Upper
 128 100
 129 11.4 0.0 30.9



Data File: I:\MS19\DATA\2015 02\16\02161523.D

Acq On : 16 Feb 2015 22:09

Operator: WA

Sample : P1500566-005 (1000mL)

Misc : S29-02041502

ALS Vial : 6 Sample Multiplier: 1

Quant Time: Feb 17 10:19:23 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

2/17/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	20829	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.71	114	152313	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	25272	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	45753	899.473	pg	0.00
Spiked Amount 1000.000			Recovery	=	89.95%	
30) Toluene-d8 (SS2)	11.38	98	141684	1008.709	pg	0.00
Spiked Amount 1000.000			Recovery	=	100.87%	
40) Bromofluorobenzene (SS3)	14.25	174	57788	1132.638	pg	0.00
Spiked Amount 1000.000			Recovery	=	113.26%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.72	85	146319	1728.530	pg	100
3) Chloromethane	1.83	52	9019	533.520	pg	97
4) Vinyl Chloride	2.01	62	154	N.D.		
5) Bromomethane	2.33	94	1417	37.227	pg	100
6) Chloroethane	2.47	64	972	30.353	pg	100
7) Acetone	2.98	58	430009	14385.565	pg	# 89
8) Trichlorofluoromethane	3.10	101	87613	1204.960	pg	100
9) 1,1-Dichloroethene	3.65	96	72	N.D.		
10) Methylene Chloride	3.80	84	12435	360.420	pg	94
11) Trichlorotrifluoroethane	4.10	151	13140	393.289	pg	100
12) trans-1,2-Dichloroethene	4.74	96	3702	111.684	pg	100
13) 1,1-Dichloroethane	4.95	63	336	N.D.		
14) Methyl tert-Butyl Ether	5.11	73	845	N.D.		
15) cis-1,2-Dichloroethene	5.93	96	4956	134.458	pg	100
16) Chloroform	6.31	83	9045	141.636	pg	98
18) 1,2-Dichloroethane	7.26	62	3248	63.877	pg	99
19) 1,1,1-Trichloroethane	7.59	97	1137	N.D.		
20) Benzene	8.15	78	60798	462.878	pg	100
21) Carbon Tetrachloride	8.34	117	19322	415.595	pg	99
23) 1,2-Dichloropropane	9.16	63	746	22.457	pg	99
24) Bromodichloromethane	0.00	83	0	N.D.	d	
25) Trichloroethene	9.46	130	34382	878.658	pg	99
26) 1,4-Dioxane	9.54	88	567	N.D.		
27) cis-1,3-Dichloropropene	10.46	75	95	N.D.		
28) trans-1,3-Dichloropropene	11.05	75	63	N.D.		
29) 1,1,2-Trichloroethane	11.20	83	296	N.D.		
31) Toluene	11.48	91	202029	1352.376	pg	99
32) 1,2-Dibromoethane	12.12	107	38	N.D.		
33) Tetrachloroethene	12.61	166	14334	309.889	pg	99
35) Chlorobenzene	13.17	112	1054	N.D.		
36) Ethylbenzene	13.48	91	46148	291.197	pg	99
37) m,p-Xylene	13.61	91	104929	805.597	pg	97
38) o-Xylene	13.94	106	20553	322.877	pg	98
39) 1,1,1,2,2-Tetrachloroethane	13.93	83	131	N.D.		
41) 1,3-Dichlorobenzene	0.00	146	0	N.D.	d	
42) 1,4-Dichlorobenzene	15.24	146	4485	51.355	pg	100
43) 1,2-Dichlorobenzene	15.46	146	247	N.D.		
44) 1,2,4-Trichlorobenzene	16.63	182	253	N.D.		
45) Naphthalene	16.70	128	22366	141.442	pg	97
46) Hexachlorobutadiene	16.96	225	42	N.D.		

(#)= qualifier out of range (m)= manual integration (+)= signals summed

Data File: I:\MS19\DATA\2015 02\16\02161523.D

Acq On : 16 Feb 2015 22:09

Operator: WA

Sample : P1500566-005 (1000mL)

Misc : S29-02041502

ALS Vial : 6 Sample Multiplier: 1

Quant Time: Feb 17 10:19:23 2015

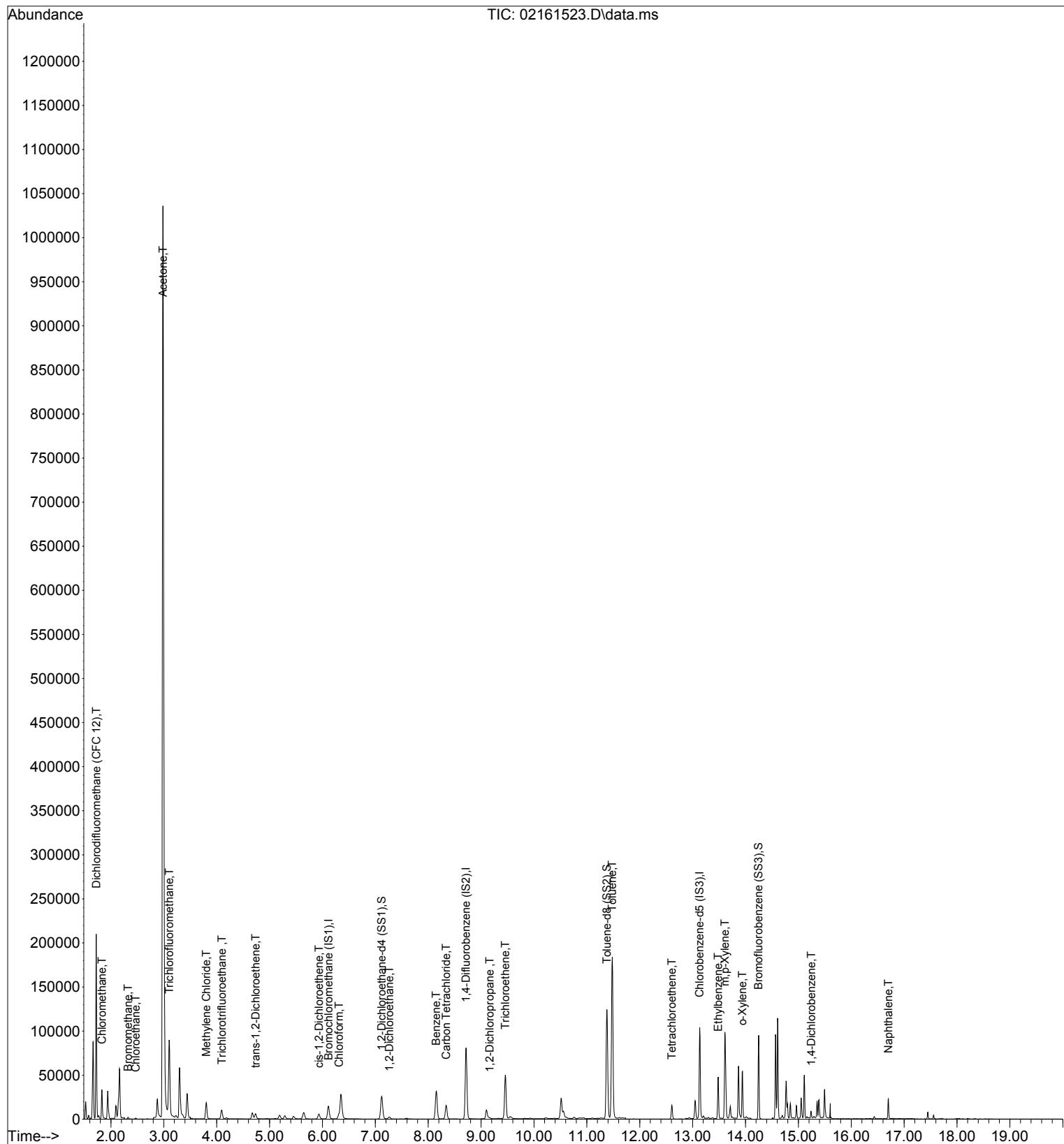
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 02\16\02161523.D

Acq On : 16 Feb 2015 22:09

Operator: WA

Sample : P1500566-005 (1000mL)

Misc : S29-02041502

ALS Vial : 6 Sample Multiplier: 1

Quant Time: Feb 17 10:19:23 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

2/17/15

DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	20829	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.71	114	152313	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	25272	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	45753	899.473	pg	0.00
Spiked Amount 1000.000			Recovery	=	89.95%	
30) Toluene-d8 (SS2)	11.38	98	141684	1008.709	pg	0.00
Spiked Amount 1000.000			Recovery	=	100.87%	
40) Bromofluorobenzene (SS3)	14.25	174	57788	1132.638	pg	0.00
Spiked Amount 1000.000			Recovery	=	113.26%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.72	85	146319	1728.530	pg	100
3) Chloromethane	1.83	52	9019	533.520	pg	97
5) Bromomethane	2.33	94	1417	37.227	pg	100
6) Chloroethane	2.47	64	972	30.353	pg	100
7) Acetone	2.98	58	430009	14385.565	pg	# 89
8) Trichlorofluoromethane	3.10	101	87613	1204.960	pg	100
10) Methylene Chloride	3.80	84	12435	360.420	pg	94
11) Trichlorotrifluoroethane	4.10	151	13140	393.289	pg	100
12) trans-1,2-Dichloroethene	4.74	96	3702	111.684	pg	100
15) cis-1,2-Dichloroethene	5.93	96	4956	134.458	pg	100
16) Chloroform	6.31	83	9045	141.636	pg	98
18) 1,2-Dichloroethane	7.26	62	3248	63.877	pg	99
20) Benzene	8.15	78	60798	462.878	pg	100
21) Carbon Tetrachloride	8.34	117	19322	415.595	pg	99
23) 1,2-Dichloropropane	9.16	63	746	22.457	pg	99
25) Trichloroethene	9.46	130	34382	878.658	pg	99
31) Toluene	11.48	91	202029	1352.376	pg	99
33) Tetrachloroethene	12.61	166	14334	309.889	pg	99
36) Ethylbenzene	13.48	91	46148	291.197	pg	99
37) m,p-Xylene	13.61	91	104929	805.597	pg	97
38) o-Xylene	13.94	106	20553	322.877	pg	98
42) 1,4-Dichlorobenzene	15.24	146	4485	51.355	pg	100
45) Naphthalene	16.70	128	22366	141.442	pg	97

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\16\02161523.D

Acq On : 16 Feb 2015 22:09

Operator: WA

Sample : P1500566-005 (1000mL)

Misc : S29-02041502

ALS Vial : 6 Sample Multiplier: 1

Quant Time: Feb 17 10:19:23 2015

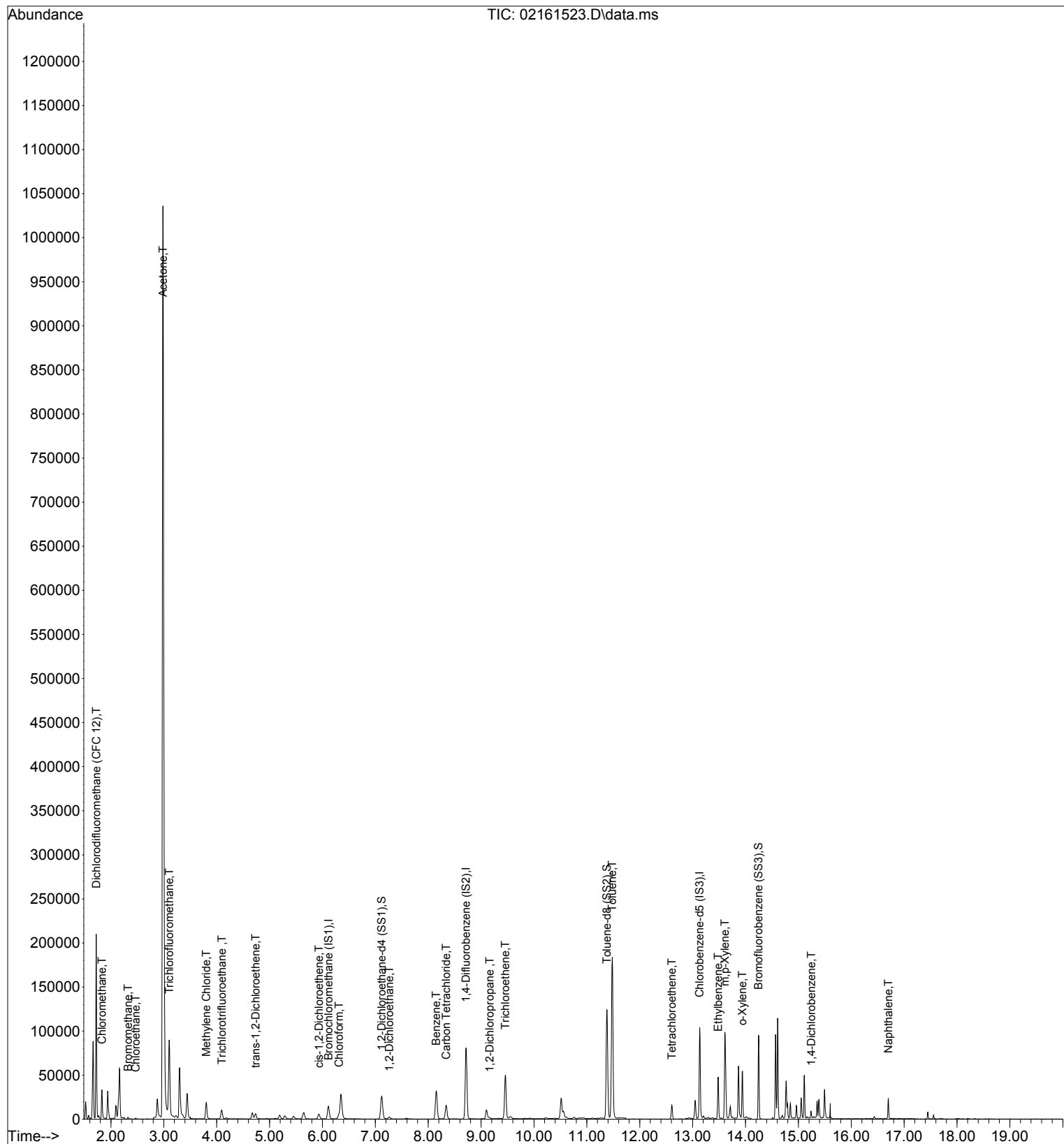
Quant Method : I:\MS19\METHODS\X19021115.M

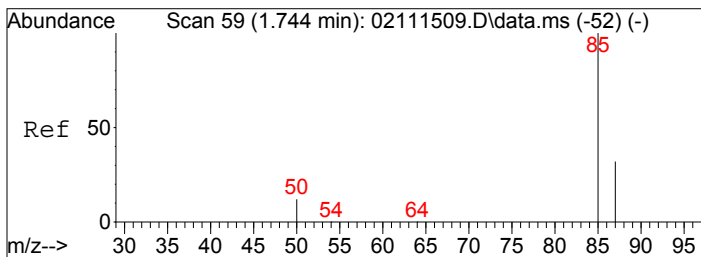
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

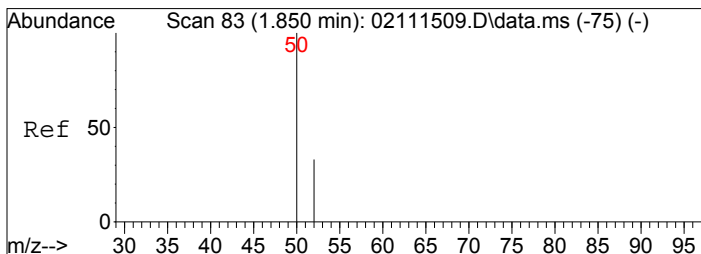
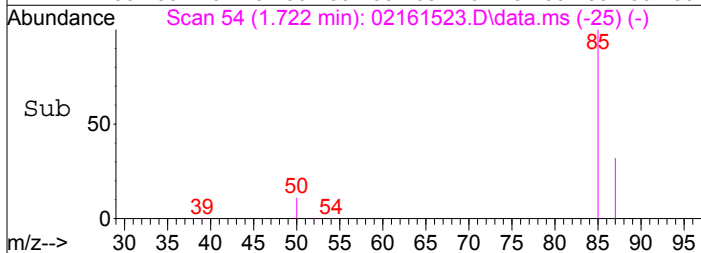
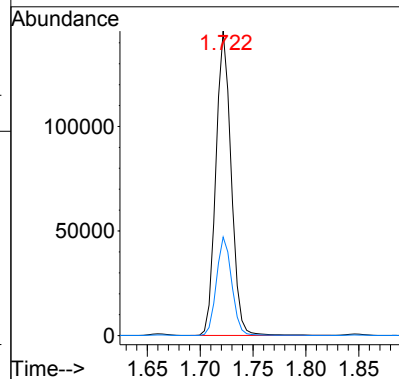
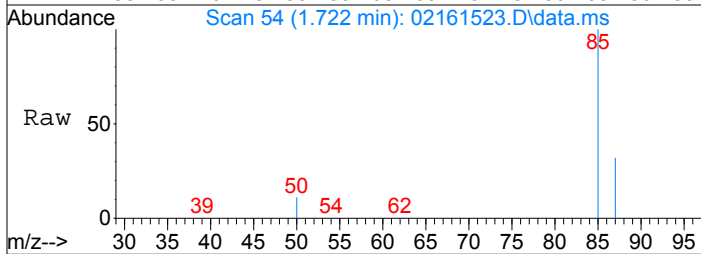
DataAcq Meth:TO15SIM.M





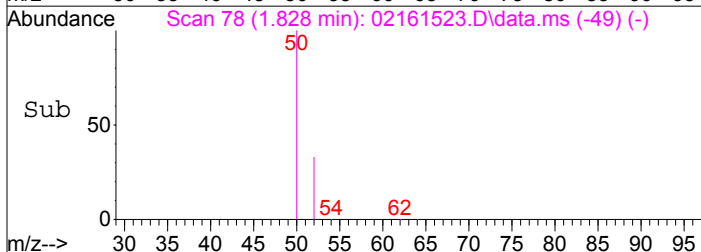
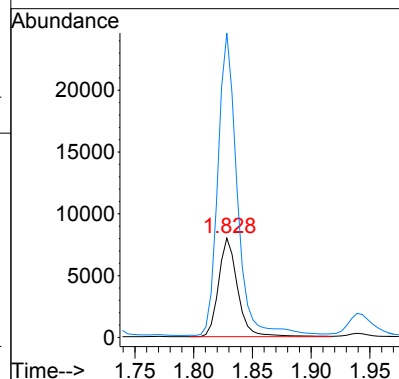
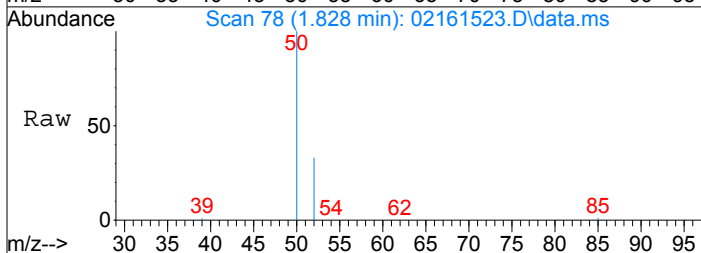
#2
 Dichlorodifluoromethane (CFC 12)
 Concen: 1728.53 pg
 RT: 1.72 min Scan# 54
 Delta R.T. -0.022 min
 Lab File: 02161523.D
 Acq: 16 Feb 2015 22:09

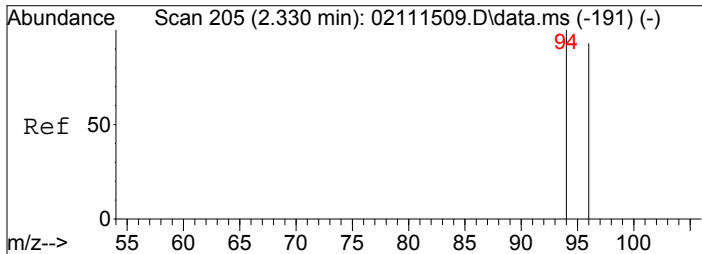
Tgt Ion: 85 Resp: 146319
 Ion Ratio Lower Upper
 85 100
 87 32.5 12.4 52.4



#3
 Chloromethane
 Concen: 533.52 pg
 RT: 1.83 min Scan# 78
 Delta R.T. -0.022 min
 Lab File: 02161523.D
 Acq: 16 Feb 2015 22:09

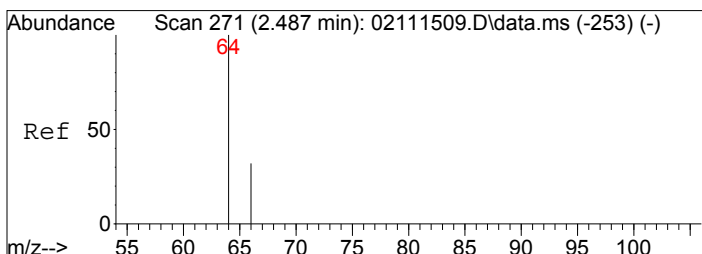
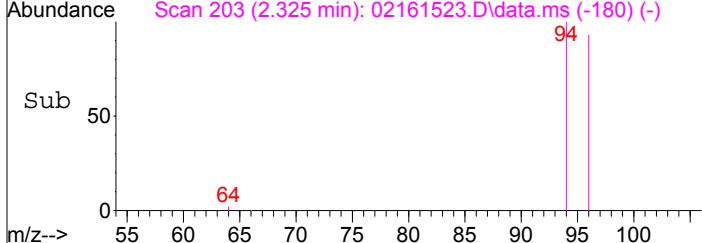
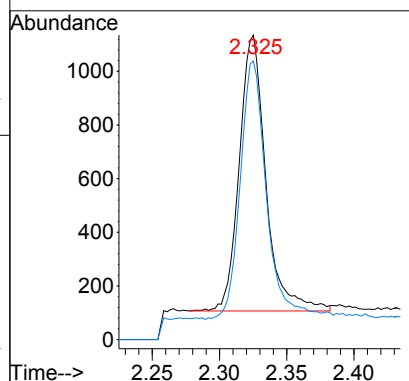
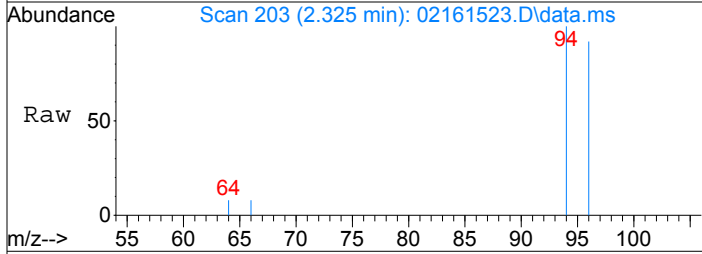
Tgt Ion: 52 Resp: 9019
 Ion Ratio Lower Upper
 52 100
 50 310.4 283.7 323.7





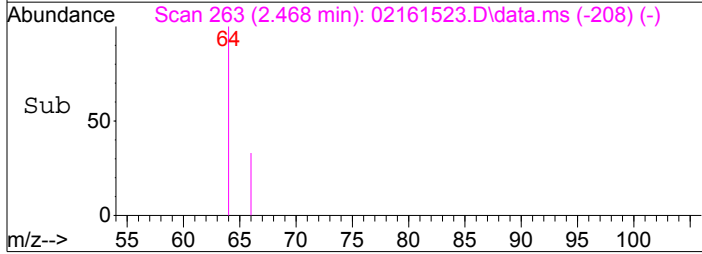
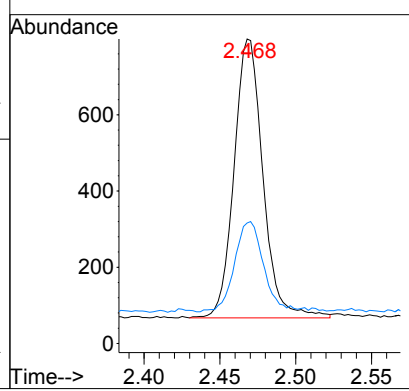
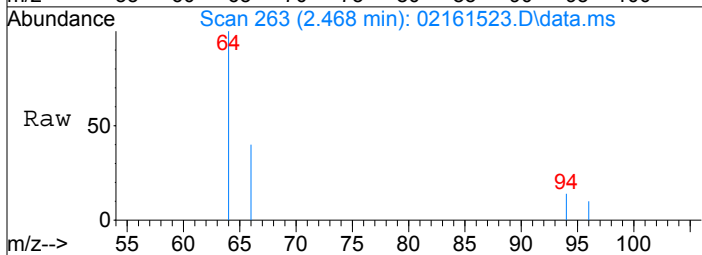
#5
 Bromomethane
 Concen: 37.23 pg
 RT: 2.33 min Scan# 203
 Delta R.T. -0.005 min
 Lab File: 02161523.D
 Acq: 16 Feb 2015 22:09

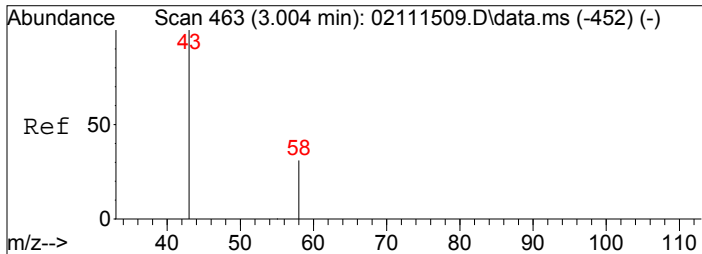
Tgt Ion: 94	Resp: 1417
Ion Ratio	Lower Upper
94	100
96	94.1 75.5 113.3



#6
 Chloroethane
 Concen: 30.35 pg
 RT: 2.47 min Scan# 263
 Delta R.T. -0.019 min
 Lab File: 02161523.D
 Acq: 16 Feb 2015 22:09

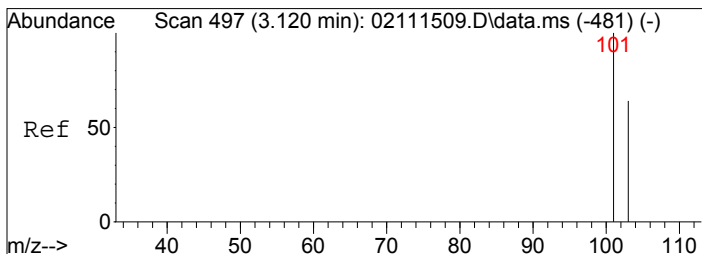
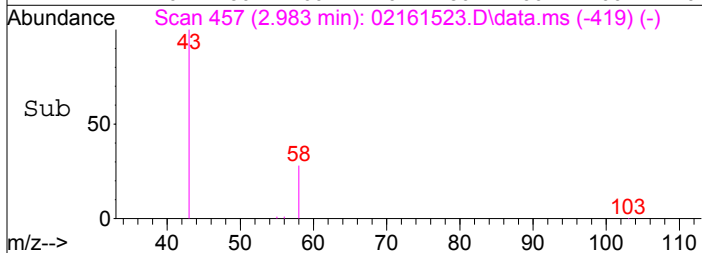
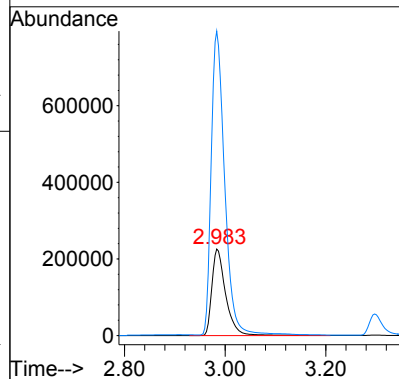
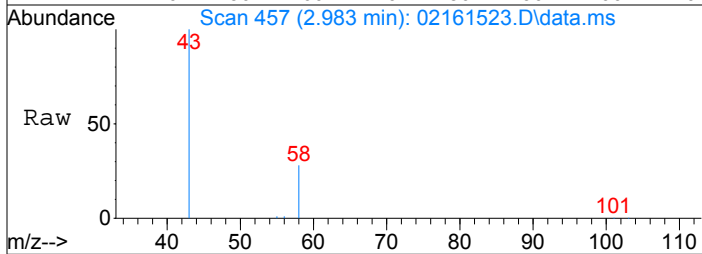
Tgt Ion: 64	Resp: 972
Ion Ratio	Lower Upper
64	100
66	32.3 12.2 52.2





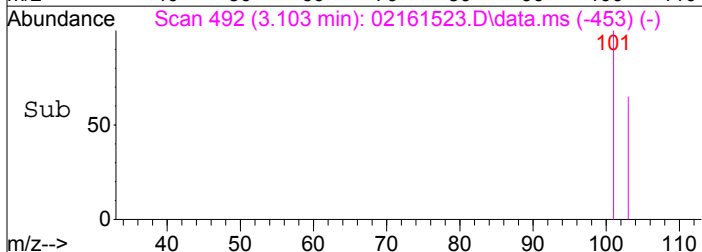
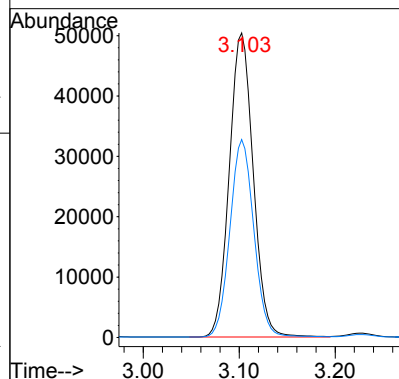
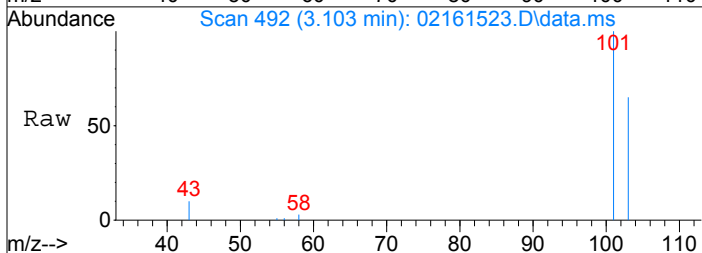
#7
Acetone
Concen: 14385.56 pg
RT: 2.98 min Scan# 457
Delta R.T. -0.021 min
Lab File: 02161523.D
Acq: 16 Feb 2015 22:09

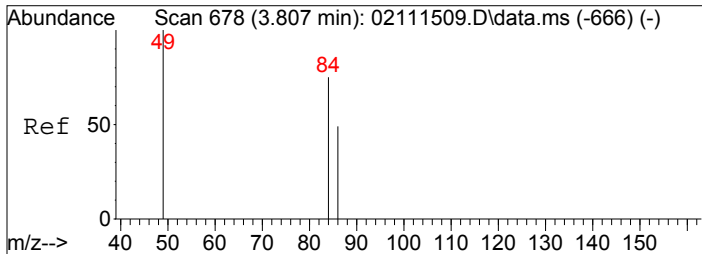
Tgt Ion	58	43	Resp	430009	Lower	Upper
Ion Ratio	100	343.5	301.8	341.8		



#8
Trichlorofluoromethane
Concen: 1204.96 pg
RT: 3.10 min Scan# 492
Delta R.T. -0.017 min
Lab File: 02161523.D
Acq: 16 Feb 2015 22:09

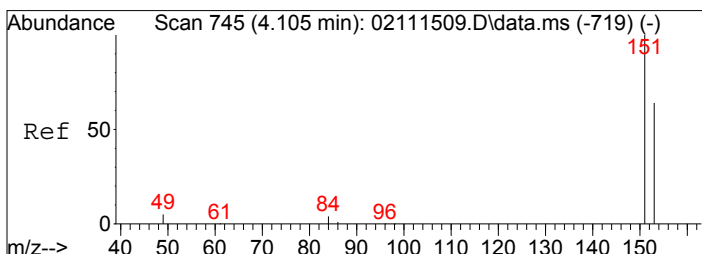
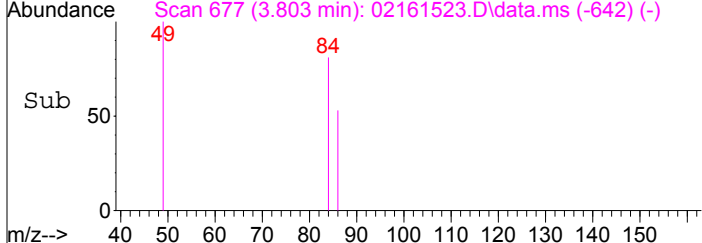
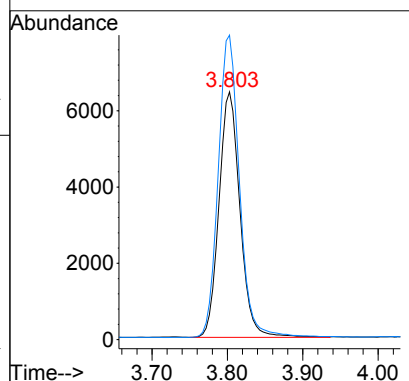
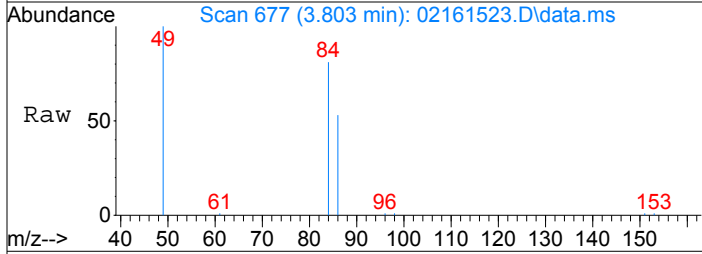
Tgt Ion	101	103	Resp	87613	Lower	Upper
Ion Ratio	100	64.8	51.8	77.6		





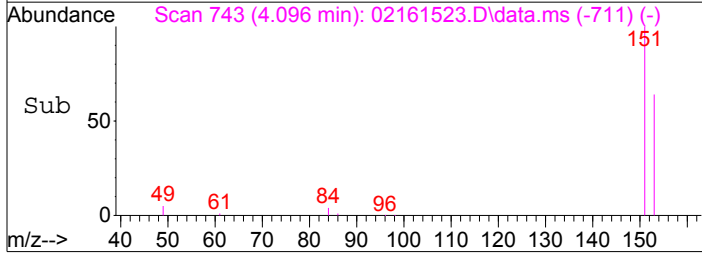
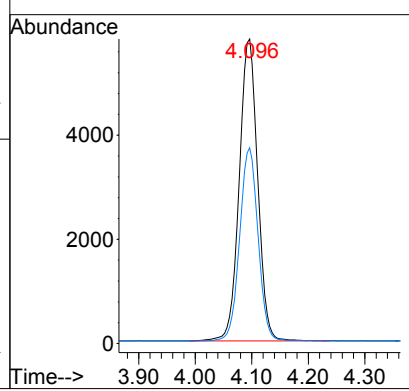
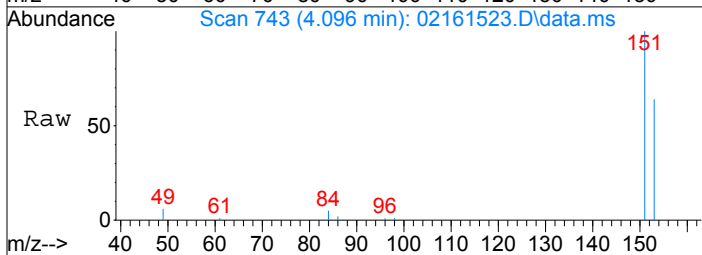
#10
 Methylene Chloride
 Concen: 360.42 pg
 RT: 3.80 min Scan# 677
 Delta R.T. -0.004 min
 Lab File: 02161523.D
 Acq: 16 Feb 2015 22:09

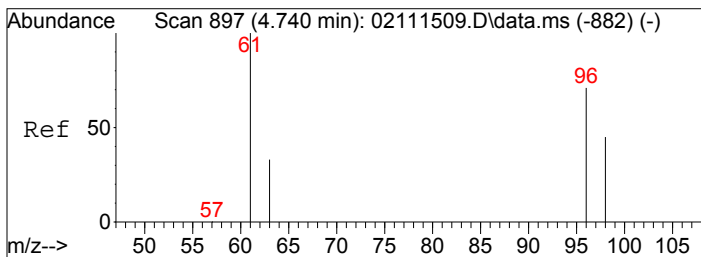
Tgt Ion: 84	Resp: 12435
Ion Ratio	Lower Upper
84	100
49	124.9 112.3 152.3



#11
 Trichlorotrifluoroethane
 Concen: 393.29 pg
 RT: 4.10 min Scan# 743
 Delta R.T. -0.009 min
 Lab File: 02161523.D
 Acq: 16 Feb 2015 22:09

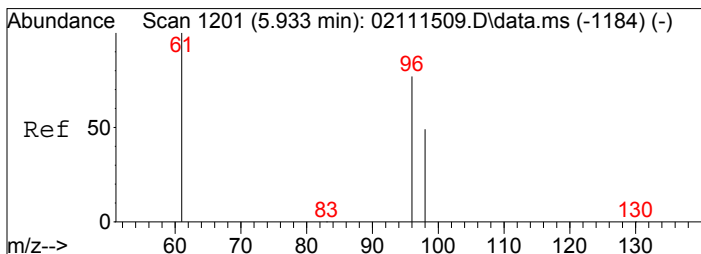
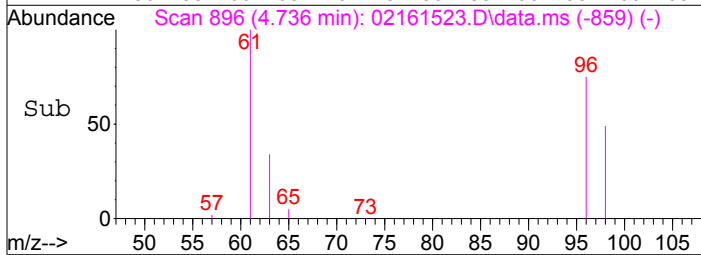
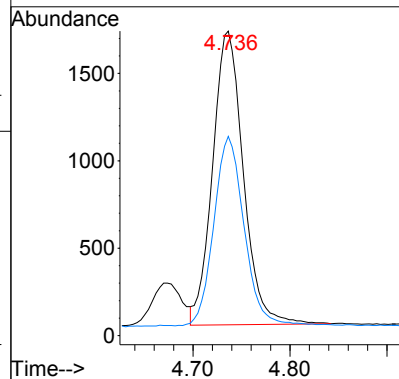
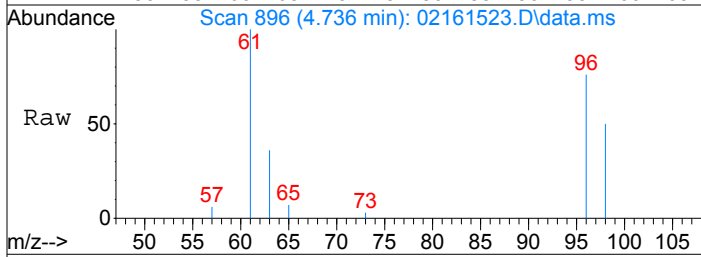
Tgt Ion: 151	Resp: 13140
Ion Ratio	Lower Upper
151	100
153	63.8 43.6 83.6





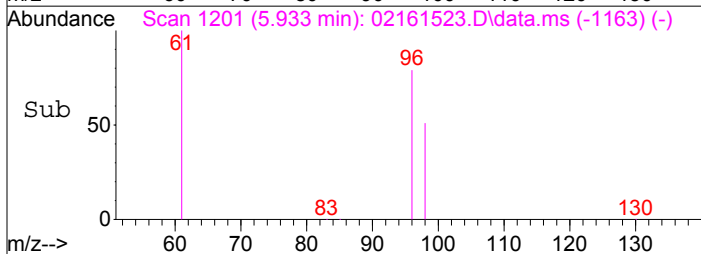
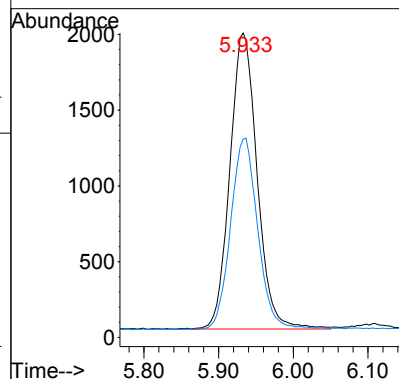
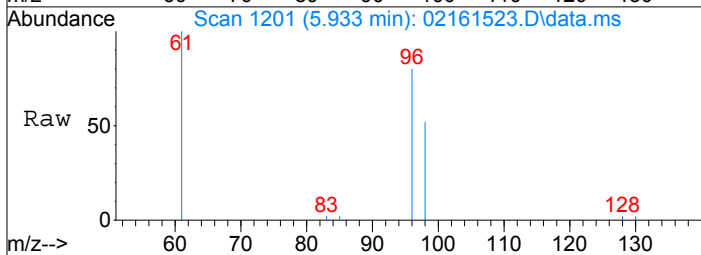
#12
trans-1,2-Dichloroethene
Concen: 111.68 pg
RT: 4.74 min Scan# 896
Delta R.T. -0.004 min
Lab File: 02161523.D
Acq: 16 Feb 2015 22:09

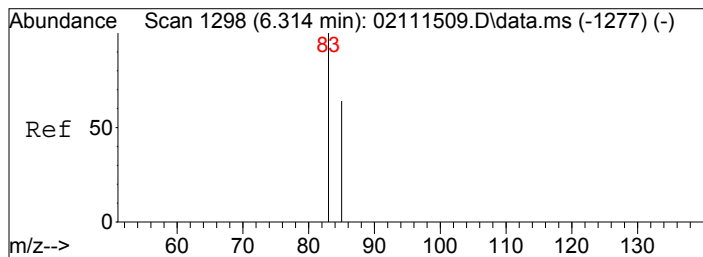
Tgt Ion: 96 Resp: 3702
Ion Ratio Lower Upper
96 100
98 63.9 43.7 83.7



#15
cis-1,2-Dichloroethene
Concen: 134.46 pg
RT: 5.93 min Scan# 1201
Delta R.T. 0.000 min
Lab File: 02161523.D
Acq: 16 Feb 2015 22:09

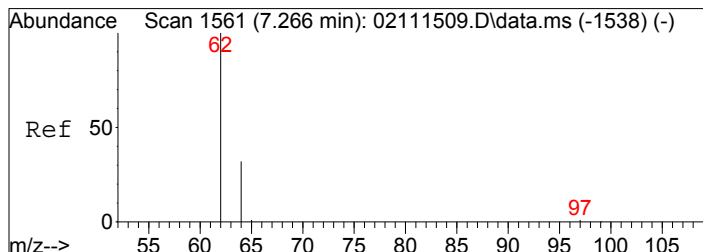
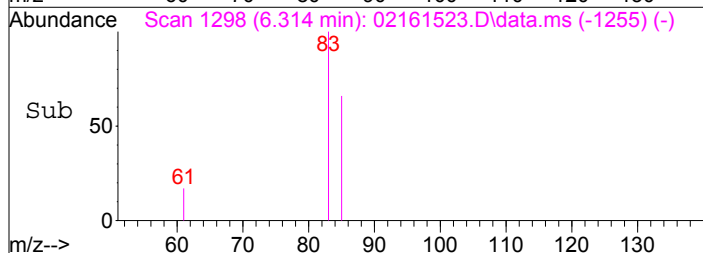
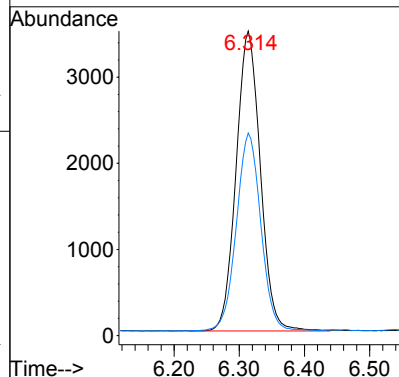
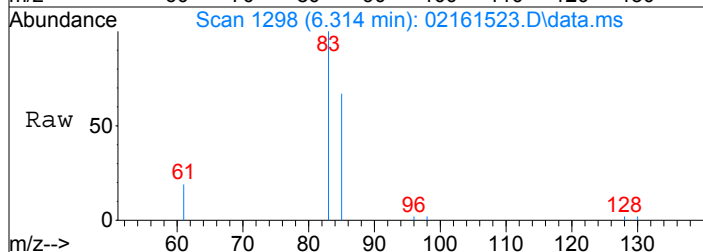
Tgt Ion: 96 Resp: 4956
Ion Ratio Lower Upper
96 100
98 64.5 44.3 84.3





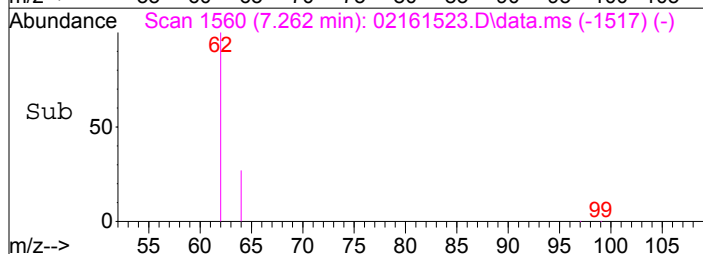
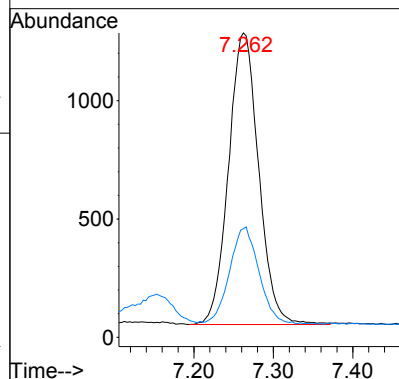
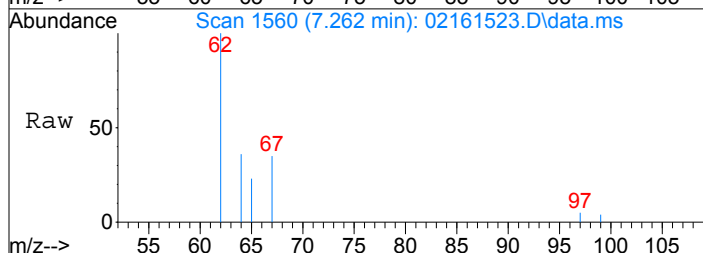
#16
Chloroform
Concen: 141.64 pg
RT: 6.31 min Scan# 1298
Delta R.T. -0.000 min
Lab File: 02161523.D
Acq: 16 Feb 2015 22:09

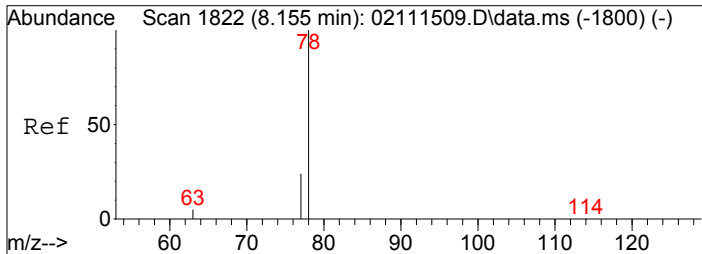
Tgt Ion: 83 Resp: 9045
Ion Ratio Lower Upper
83 100
85 66.7 45.4 85.4



#18
1,2-Dichloroethane
Concen: 63.88 pg
RT: 7.26 min Scan# 1560
Delta R.T. -0.003 min
Lab File: 02161523.D
Acq: 16 Feb 2015 22:09

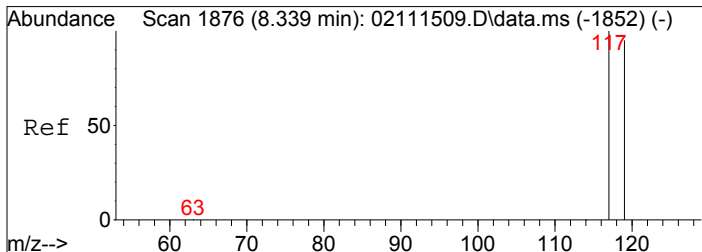
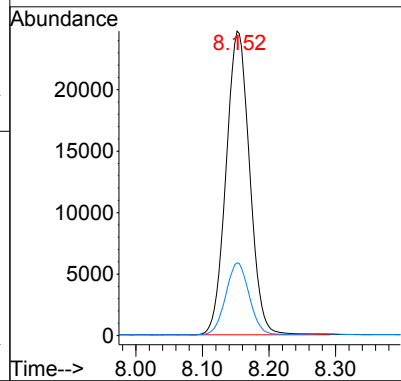
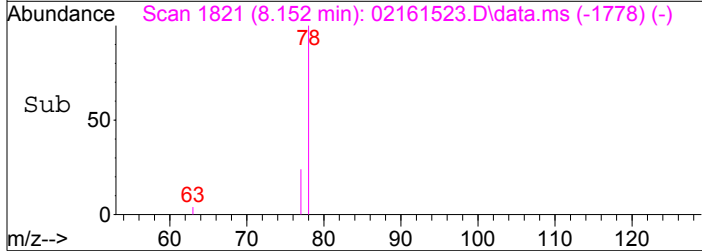
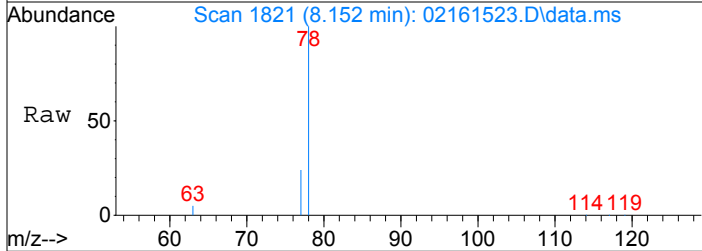
Tgt Ion: 62 Resp: 3248
Ion Ratio Lower Upper
62 100
64 32.1 11.6 51.6





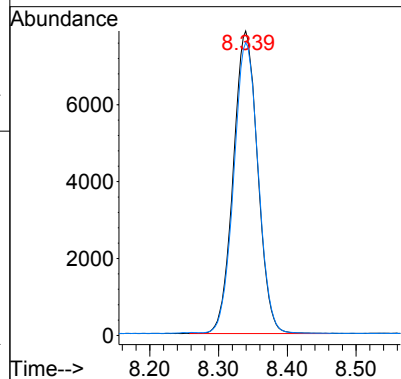
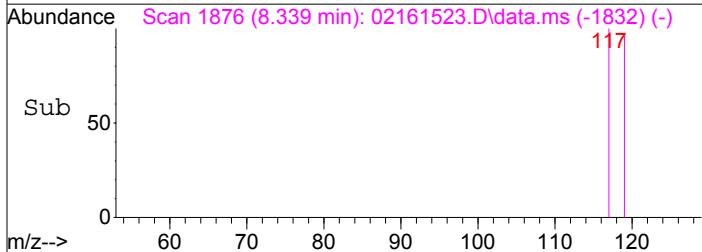
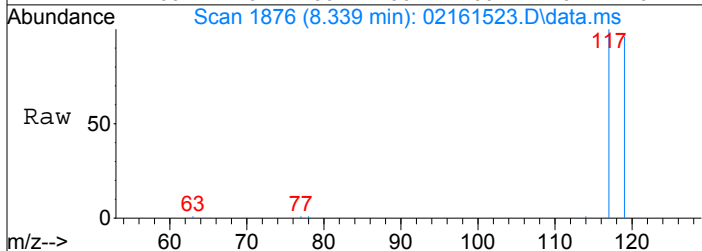
#20
Benzene
Concen: 462.88 pg
RT: 8.15 min Scan# 1821
Delta R.T. -0.003 min
Lab File: 02161523.D
Acq: 16 Feb 2015 22:09

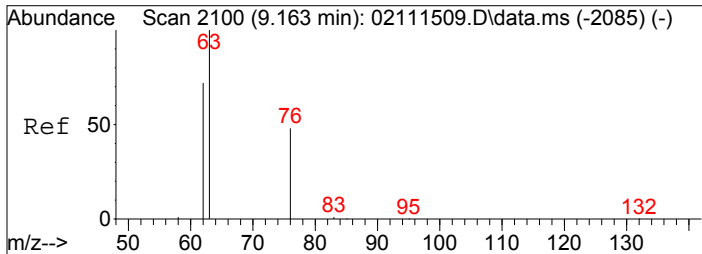
Tgt Ion: 78 Resp: 60798
Ion Ratio Lower Upper
78 100
77 23.6 3.7 43.7



#21
Carbon Tetrachloride
Concen: 415.59 pg
RT: 8.34 min Scan# 1876
Delta R.T. 0.000 min
Lab File: 02161523.D
Acq: 16 Feb 2015 22:09

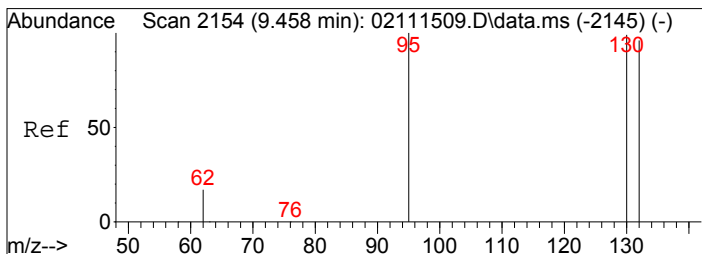
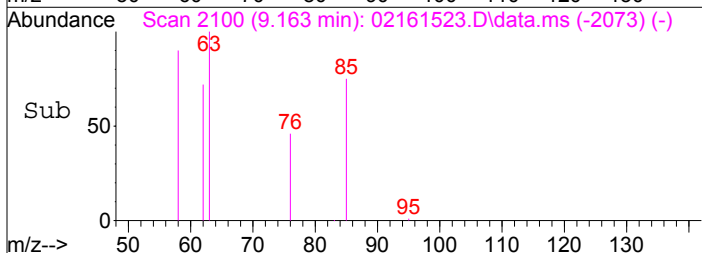
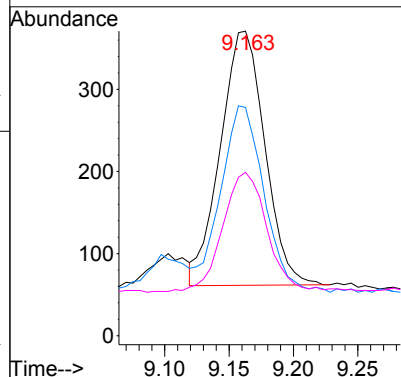
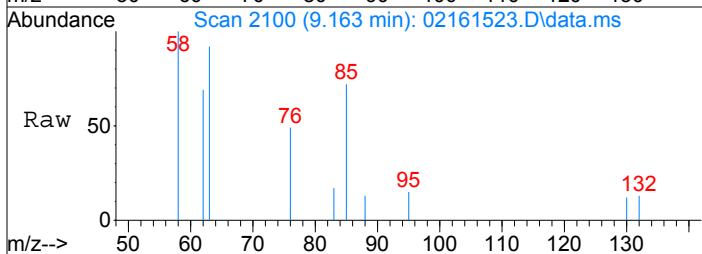
Tgt Ion: 117 Resp: 19322
Ion Ratio Lower Upper
117 100
119 96.5 75.5 115.5





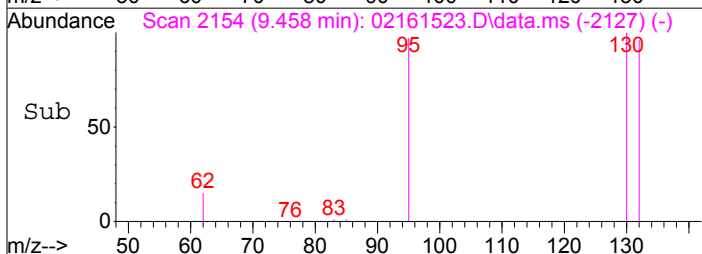
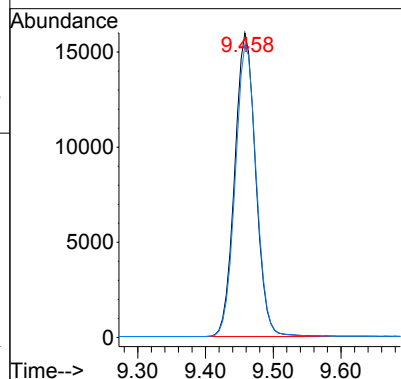
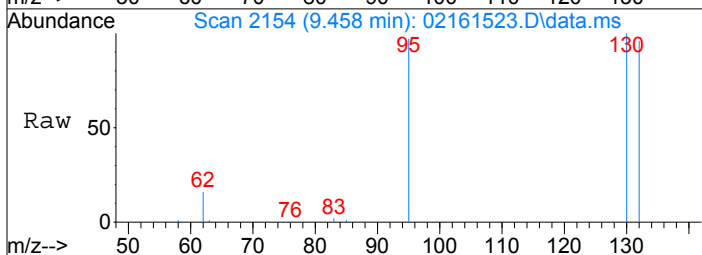
#23
 1,2-Dichloropropane
 Concen: 22.46 pg
 RT: 9.16 min Scan# 2100
 Delta R.T. 0.000 min
 Lab File: 02161523.D
 Acq: 16 Feb 2015 22:09

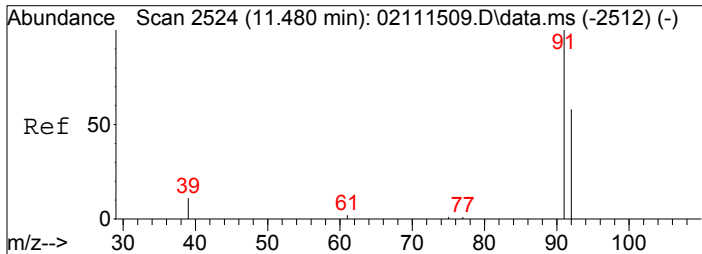
Tgt Ion:	63	Resp:	746
Ion Ratio	Lower	Upper	
63	100		
62	72.1	52.0	92.0
76	46.6	28.1	68.1



#25
 Trichloroethene
 Concen: 878.66 pg
 RT: 9.46 min Scan# 2154
 Delta R.T. 0.000 min
 Lab File: 02161523.D
 Acq: 16 Feb 2015 22:09

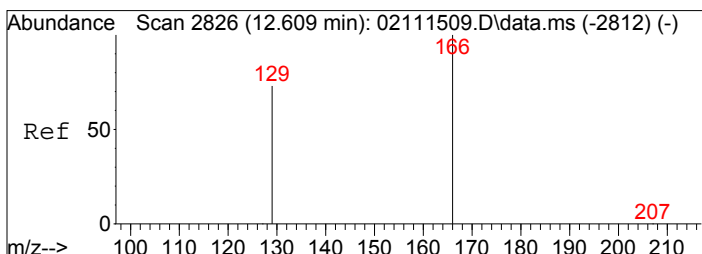
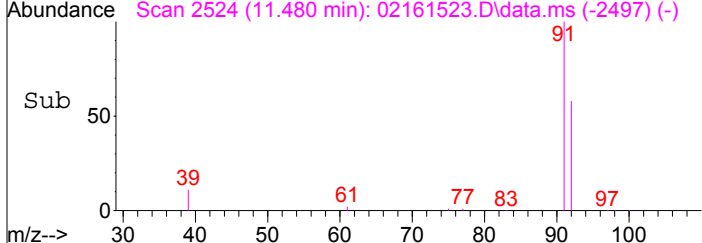
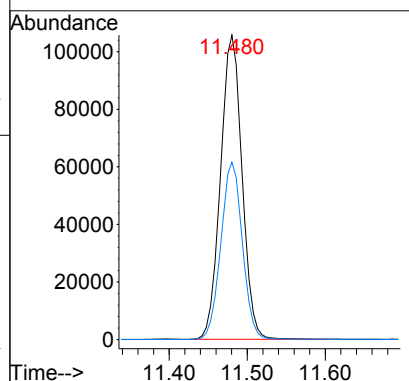
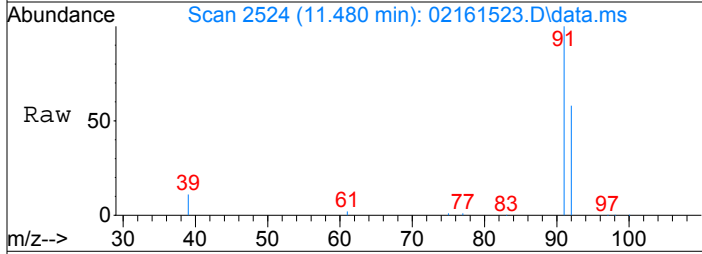
Tgt Ion:	130	Resp:	34382
Ion Ratio	Lower	Upper	
130	100		
132	96.6	77.1	117.1





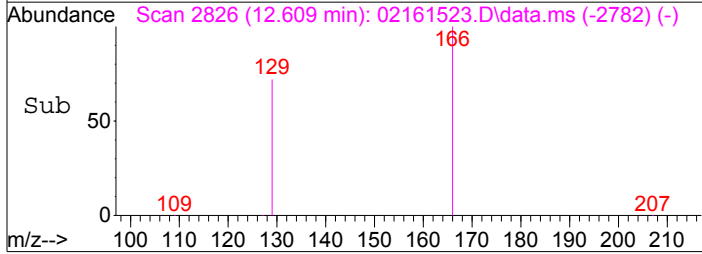
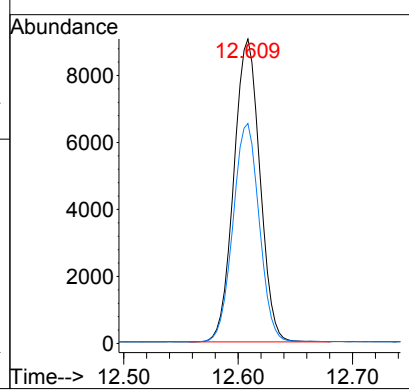
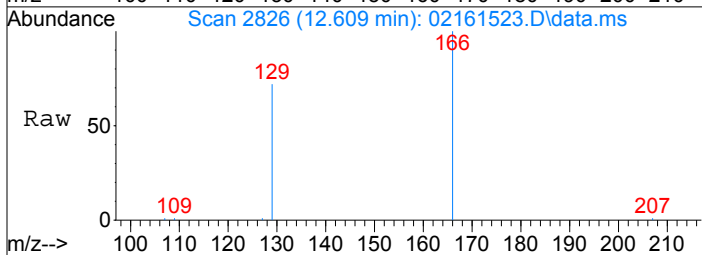
#31
Toluene
Concen: 1352.38 pg
RT: 11.48 min Scan# 2524
Delta R.T. 0.000 min
Lab File: 02161523.D
Acq: 16 Feb 2015 22:09

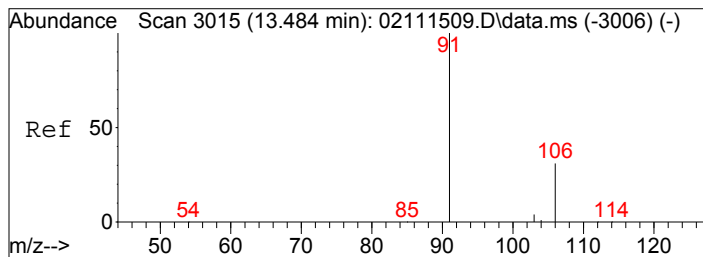
Tgt Ion:	91	Resp:	202029
Ion Ratio	Lower	Upper	
91	100		
92	58.3	37.7	77.7



#33
Tetrachloroethene
Concen: 309.89 pg
RT: 12.61 min Scan# 2826
Delta R.T. -0.000 min
Lab File: 02161523.D
Acq: 16 Feb 2015 22:09

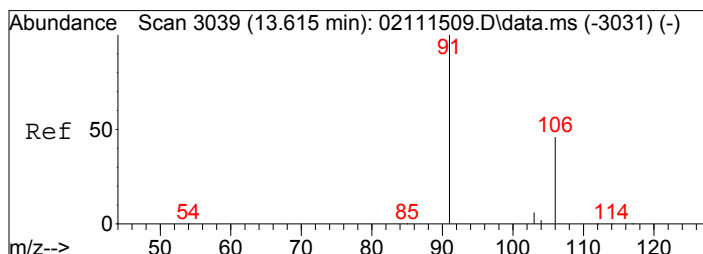
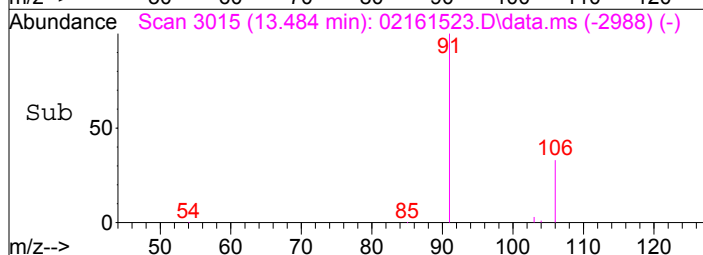
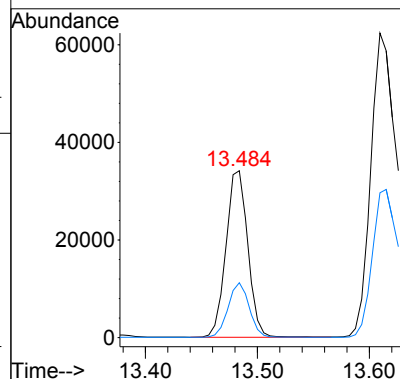
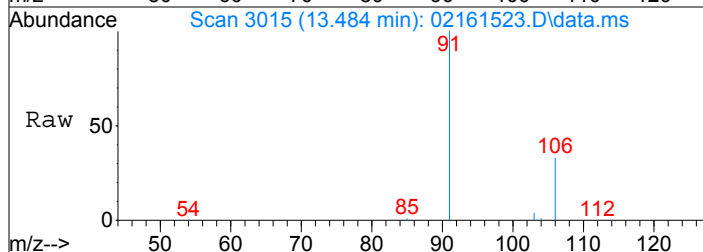
Tgt Ion:	166	Resp:	14334
Ion Ratio	Lower	Upper	
166	100		
129	72.4	53.3	93.3





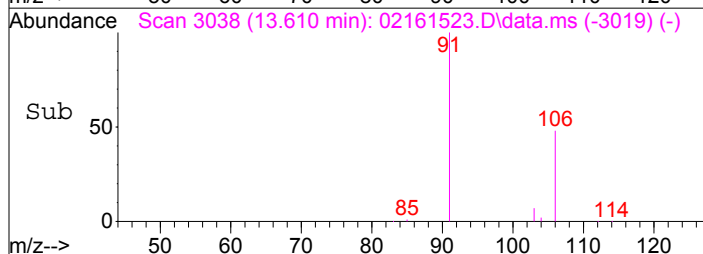
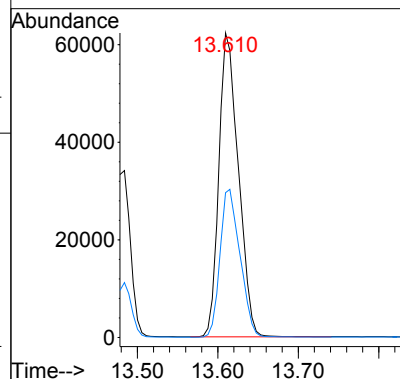
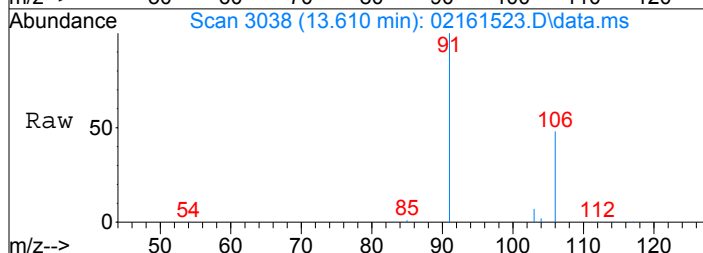
#36
Ethylbenzene
Concen: 291.20 pg
RT: 13.48 min Scan# 3015
Delta R.T. 0.000 min
Lab File: 02161523.D
Acq: 16 Feb 2015 22:09

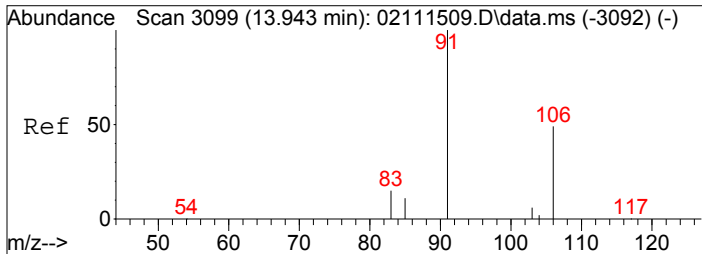
Tgt Ion: 91 Resp: 46148
Ion Ratio Lower Upper
91 100
106 31.7 10.9 50.9



#37
m,p-Xylene
Concen: 805.60 pg
RT: 13.61 min Scan# 3038
Delta R.T. -0.005 min
Lab File: 02161523.D
Acq: 16 Feb 2015 22:09

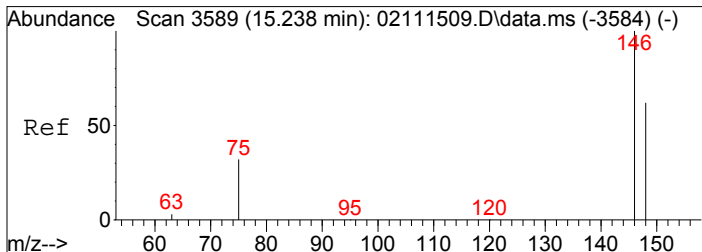
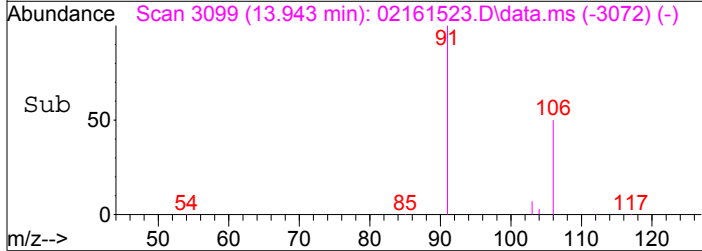
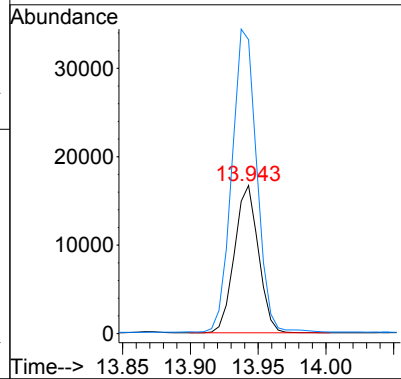
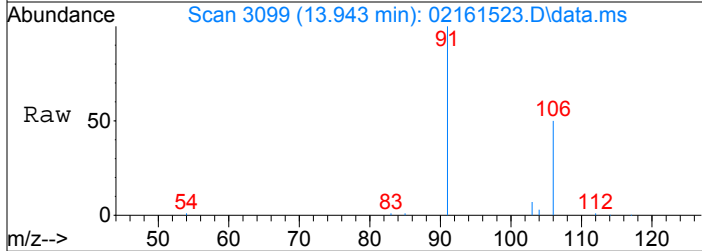
Tgt Ion: 91 Resp: 104929
Ion Ratio Lower Upper
91 100
106 49.7 27.5 67.5





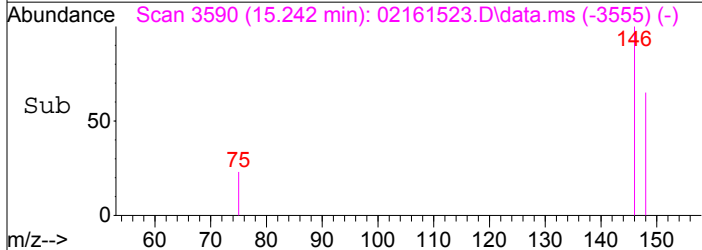
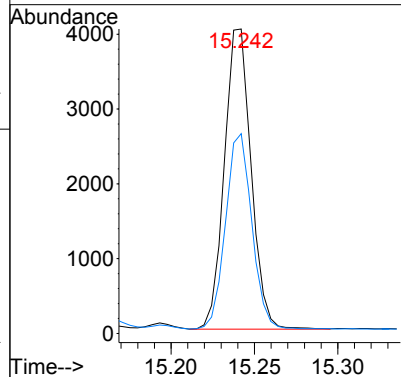
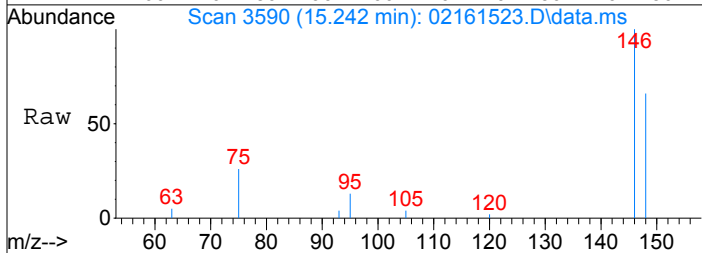
#38
o-Xylene
Concen: 322.88 pg
RT: 13.94 min Scan# 3099
Delta R.T. 0.000 min
Lab File: 02161523.D
Acq: 16 Feb 2015 22:09

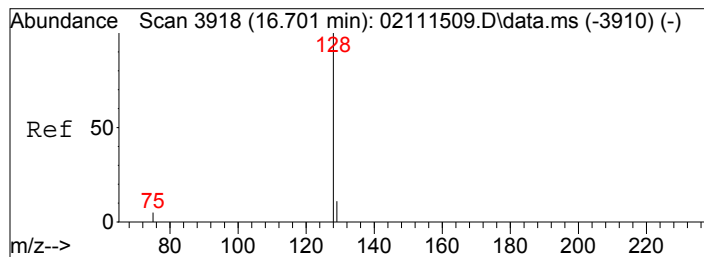
Tgt Ion	106	Resp	20553
Ion Ratio	Lower	Upper	
106	100		
91	214.7	198.3	238.3



#42
1,4-Dichlorobenzene
Concen: 51.36 pg
RT: 15.24 min Scan# 3590
Delta R.T. 0.004 min
Lab File: 02161523.D
Acq: 16 Feb 2015 22:09

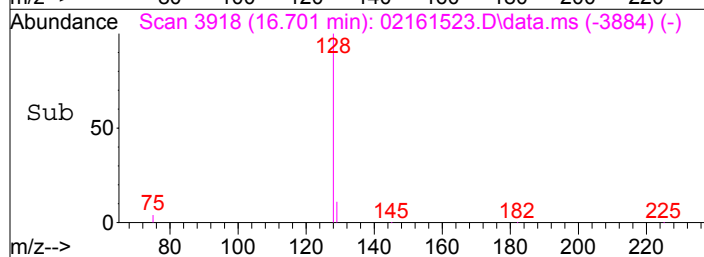
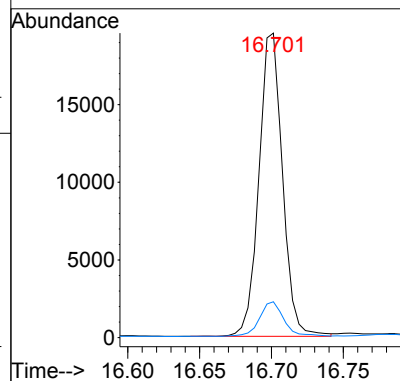
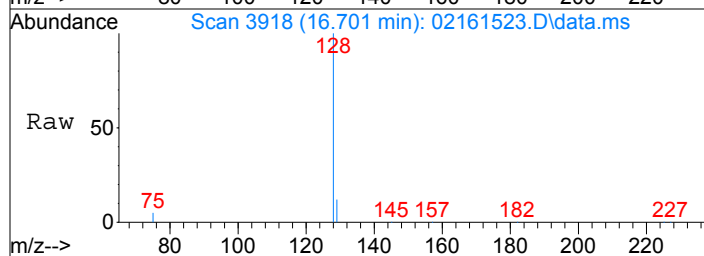
Tgt Ion	146	Resp	4485
Ion Ratio <td>Lower</td> <td>Upper</td> <td></td>	Lower	Upper	
146	100		
148	63.9	43.5	83.5





#45
Naphthalene
Concen: 141.44 pg
RT: 16.70 min Scan# 3918
Delta R.T. 0.000 min
Lab File: 02161523.D
Acq: 16 Feb 2015 22:09

Tgt Ion	Ratio	Lower	Upper
128	100		
129	11.9	0.0	30.9



Data File: I:\MS19\DATA\2015 02\16\02161524.D

Acq On : 16 Feb 2015 22:37

Operator: WA

Sample : P1500566-006 (1000mL)

Misc : S29-02041502

ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 17 06:52:00 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

2/17/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	20343	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	151716	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	24906	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	45424	914.340	pg	0.00
Spiked Amount 1000.000			Recovery	=	91.43%	
30) Toluene-d8 (SS2)	11.38	98	140380	1003.358	pg	0.00
Spiked Amount 1000.000			Recovery	=	100.34%	
40) Bromofluorobenzene (SS3)	14.25	174	57671	1146.956	pg	0.00
Spiked Amount 1000.000			Recovery	=	114.70%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.72	85	144019	1742.005	pg	100
3) Chloromethane	1.83	52	8555	518.162	pg	99
4) Vinyl Chloride	2.01	62	142	N.D.		
5) Bromomethane	2.32	94	1422	38.251	pg	99
6) Chloroethane	2.47	64	569	N.D.		
7) Acetone	2.99	58	267926	9177.358	pg	# 79
8) Trichlorofluoromethane	3.10	101	86755	1221.664	pg	100
9) 1,1-Dichloroethene	3.66	96	78	N.D.		
10) Methylene Chloride	3.80	84	12543	372.236	pg	94
11) Trichlorotrifluoroethane	4.10	151	12975	397.629	pg	100
12) trans-1,2-Dichloroethene	4.74	96	4200	129.735	pg	98
13) 1,1-Dichloroethane	4.95	63	316	N.D.		
14) Methyl tert-Butyl Ether	5.11	73	885	N.D.		
15) cis-1,2-Dichloroethene	5.93	96	3835	106.531	pg	99
16) Chloroform	6.31	83	8906	142.791	pg	97
18) 1,2-Dichloroethane	7.26	62	3335	67.155	pg	100
19) 1,1,1-Trichloroethane	7.59	97	1072	N.D.		
20) Benzene	8.15	78	66376	517.418	pg	100
21) Carbon Tetrachloride	8.34	117	19137	421.449	pg	99
23) 1,2-Dichloropropane	9.16	63	712	21.518	pg	98
24) Bromodichloromethane	9.33	83	904	N.D.		
25) Trichloroethene	9.46	130	77478	1987.801	pg	99
26) 1,4-Dioxane	9.55	88	293	N.D.		
27) cis-1,3-Dichloropropene	10.46	75	153	N.D.		
28) trans-1,3-Dichloropropene	11.05	75	248	N.D.		
29) 1,1,2-Trichloroethane	11.20	83	180	N.D.		
31) Toluene	11.48	91	187071	1257.175	pg	99
32) 1,2-Dibromoethane	12.12	107	159	N.D.		
33) Tetrachloroethene	12.61	166	11035	239.506	pg	99
35) Chlorobenzene	13.17	112	844	N.D.		
36) Ethylbenzene	13.48	91	39769	254.633	pg	99
37) m,p-Xylene	13.61	91	94325	734.827	pg	97
38) o-Xylene	13.94	106	17610	280.709	pg	100
39) 1,1,2,2-Tetrachloroethane	13.89	83	456	N.D.		
41) 1,3-Dichlorobenzene	15.19	146	222	N.D.		
42) 1,4-Dichlorobenzene	15.24	146	3797	44.116	pg	99
43) 1,2-Dichlorobenzene	15.46	146	276	N.D.		
44) 1,2,4-Trichlorobenzene	16.63	182	331	N.D.		
45) Naphthalene	16.70	128	17348	111.320	pg	98
46) Hexachlorobutadiene	16.96	225	40	N.D.		

(#)= qualifier out of range (m) = manual integration (+) = signals summed

Data File: I:\MS19\DATA\2015 02\16\02161524.D

Acq On : 16 Feb 2015 22:37

Operator: WA

Sample : P1500566-006 (1000mL)

Misc : S29-02041502

ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 17 06:52:00 2015

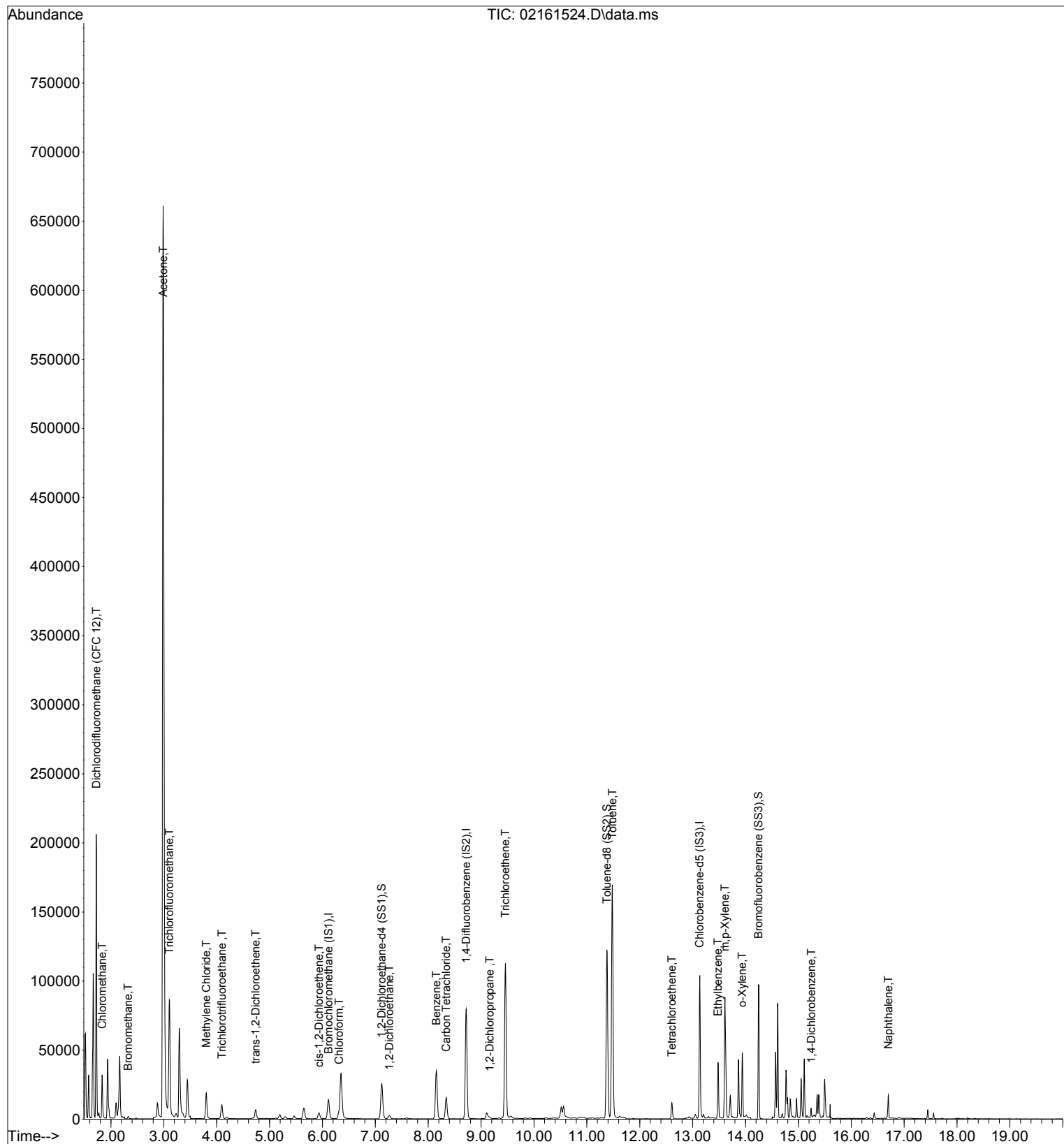
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 02\16\02161524.D

Acq On : 16 Feb 2015 22:37

Operator: WA

Sample : P1500566-006 (1000mL)

Misc : S29-02041502

ALS Vial : 7 Sample Multiplier: 1

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Quant Method : I:\MS19\METHODS\X19021115.M

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Spiked Amount 1000.000			Recovery	=	91.43%	
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Spiked Amount 1000.000			Recovery	=	100.34%	
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Spiked Amount 1000.000			Recovery	=	114.70%	

Target Compounds

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7) Acetone	2.99	58	267926	9177.358	pg	# 79
8) Trichlorofluoromethane	3.10	101	86755	1221.664	pg	100
10) Methylene Chloride	3.80	84	12543	372.236	pg	94
11) Trichlorotrifluoroethane	4.10	151	12975	397.629	pg	100
12) trans-1,2-Dichloroethene	4.74	96	4200	129.735	pg	98
15) cis-1,2-Dichloroethene	5.93	96	3835	106.531	pg	99
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18) 1,2-Dichloroethane	7.26	62	3335	67.155	pg	100
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21) Carbon Tetrachloride	8.34	117	19137	421.449	pg	99
23) 1,2-Dichloropropane	9.16	63	712	21.518	pg	98
25) Trichloroethene	9.46	130	77478	1987.801	pg	99
31) Toluene	11.48	91	187071	1257.175	pg	99
33) Tetrachloroethene	12.61	166	11035	239.506	pg	99
36) Ethylbenzene	13.48	91	39769	254.633	pg	99
37) m,p-Xylene	13.61	91	94325	734.827	pg	97
38) o-Xylene	13.94	106	17610	280.709	pg	100
42) 1,4-Dichlorobenzene	15.24	146	3797	44.116	pg	99
45) Naphthalene	16.70	128	17348	111.320	pg	98

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\16\02161524.D

Acq On : 16 Feb 2015 22:37

Operator: WA

Sample : P1500566-006 (1000mL)

Misc : S29-02041502

ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 17 06:52:00 2015

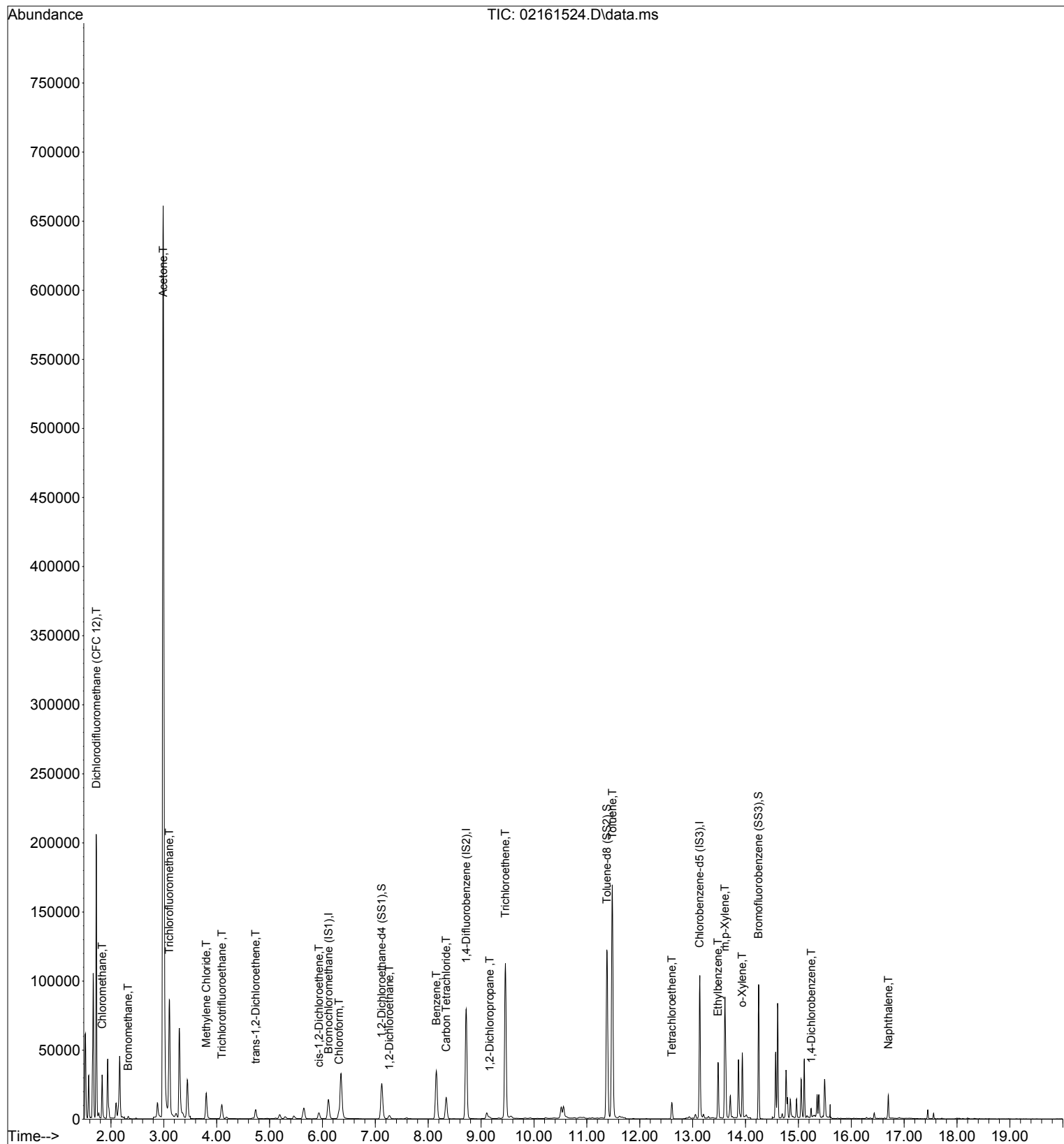
Quant Method : I:\MS19\METHODS\X19021115.M

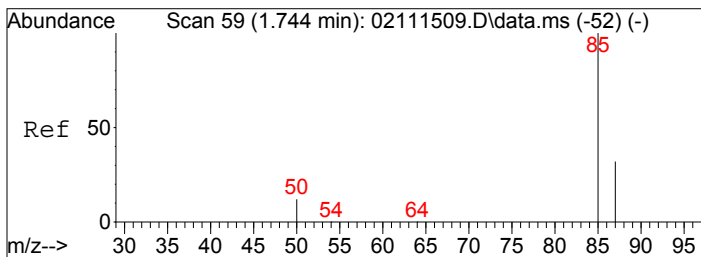
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

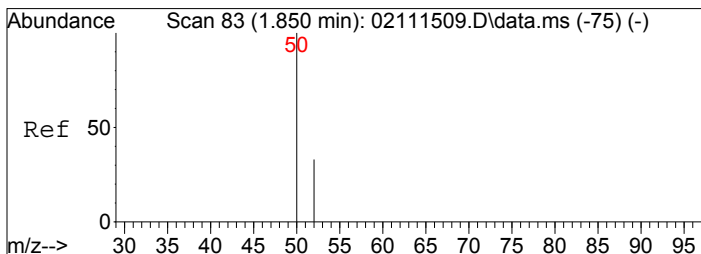
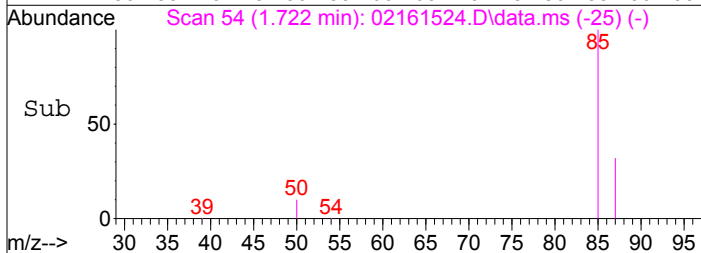
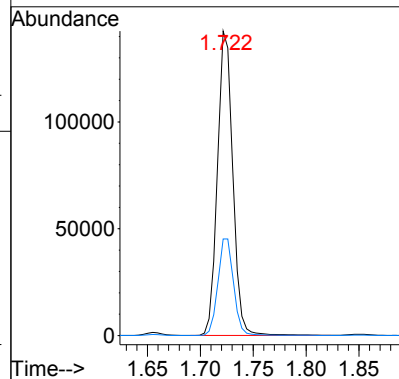
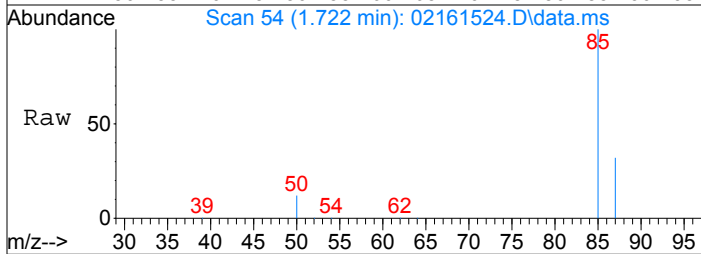
DataAcq Meth:TO15SIM.M





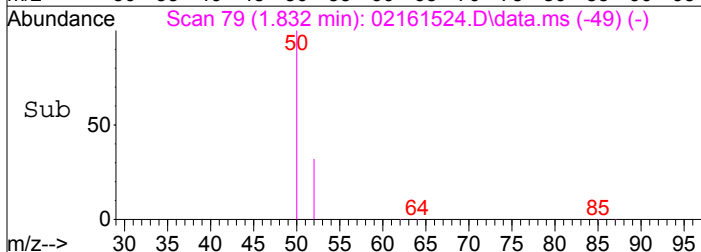
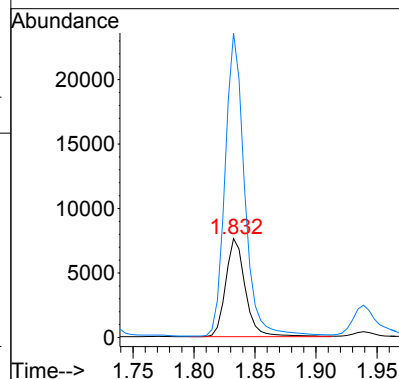
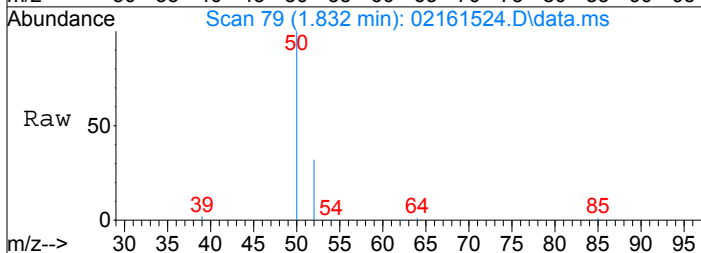
#2
 Dichlorodifluoromethane (CFC 12)
 Concen: 1742.01 pg
 RT: 1.72 min Scan# 54
 Delta R.T. -0.022 min
 Lab File: 02161524.D
 Acq: 16 Feb 2015 22:37

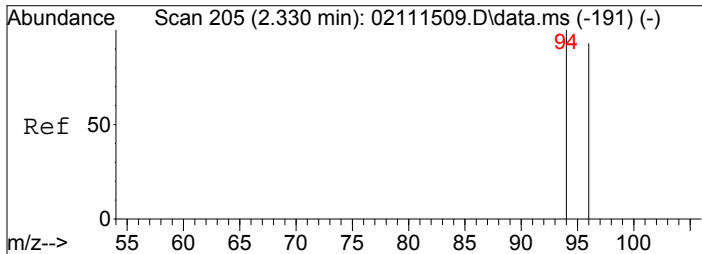
Tgt Ion: 85 Resp: 144019
 Ion Ratio Lower Upper
 85 100
 87 32.5 12.4 52.4



#3
 Chloromethane
 Concen: 518.16 pg
 RT: 1.83 min Scan# 79
 Delta R.T. -0.018 min
 Lab File: 02161524.D
 Acq: 16 Feb 2015 22:37

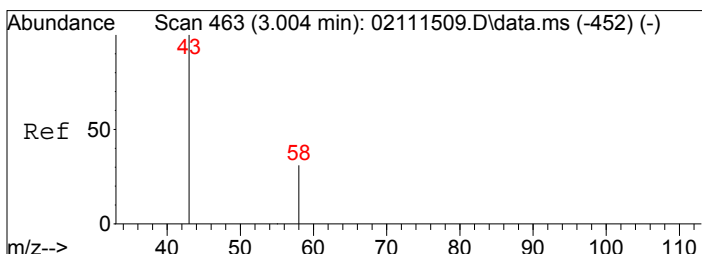
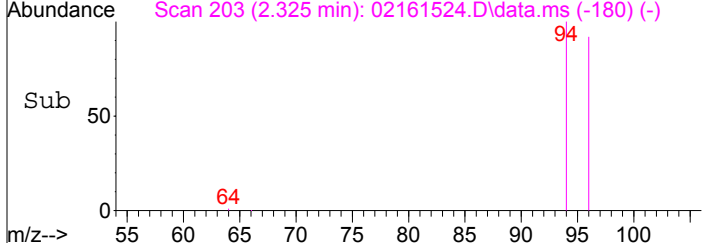
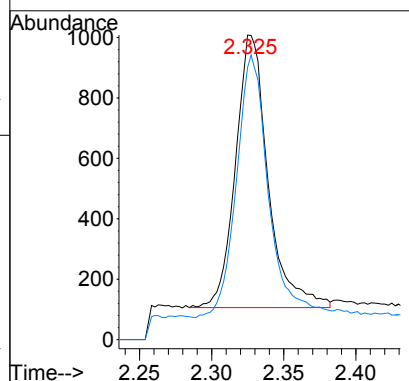
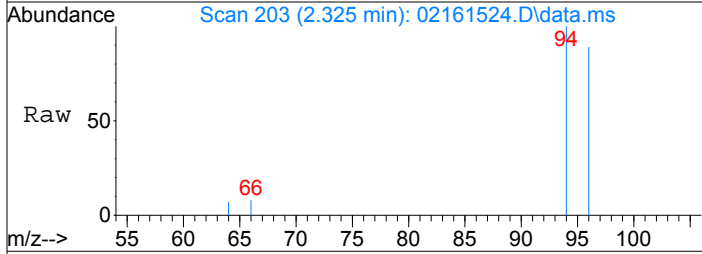
Tgt Ion: 52 Resp: 8555
 Ion Ratio Lower Upper
 52 100
 50 306.0 283.7 323.7





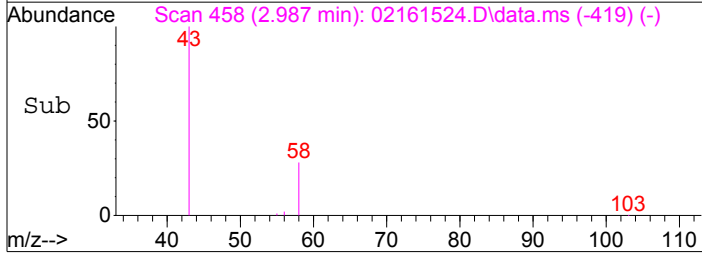
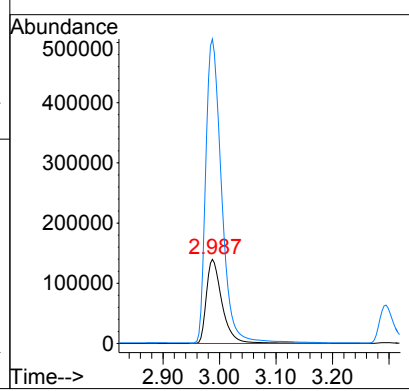
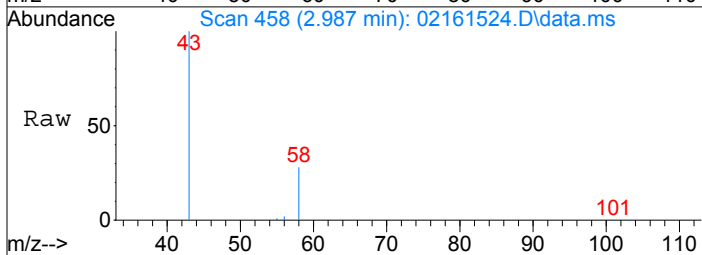
#5
 Bromomethane
 Concen: 38.25 pg
 RT: 2.32 min Scan# 203
 Delta R.T. -0.005 min
 Lab File: 02161524.D
 Acq: 16 Feb 2015 22:37

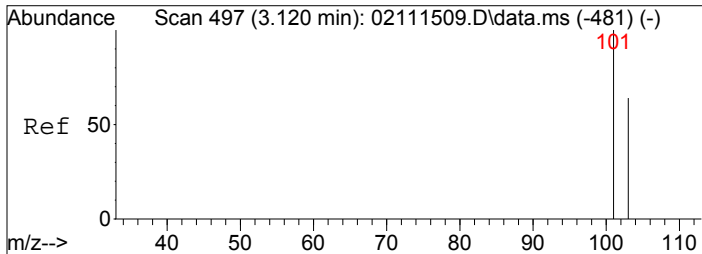
Tgt Ion:	94	Resp:	1422
Ion Ratio	Lower	Upper	
94	100		
96	95.2	75.5	113.3



#7
 Acetone
 Concen: 9177.36 pg
 RT: 2.99 min Scan# 458
 Delta R.T. -0.017 min
 Lab File: 02161524.D
 Acq: 16 Feb 2015 22:37

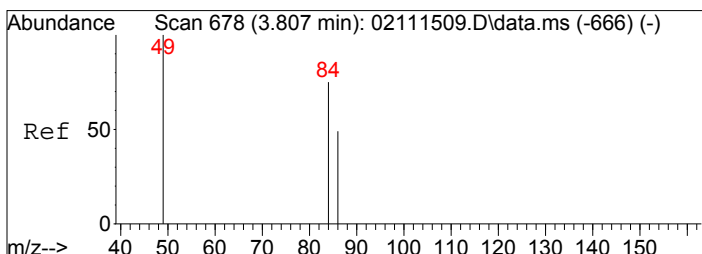
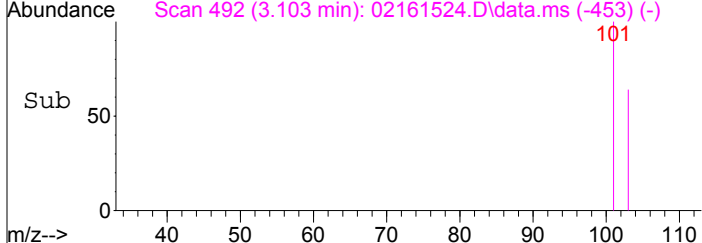
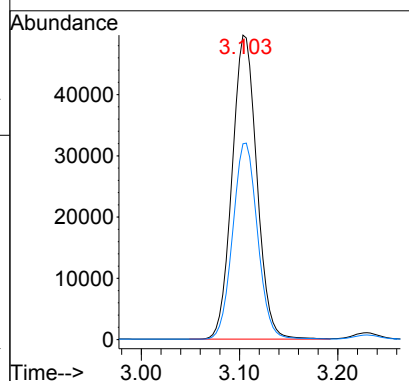
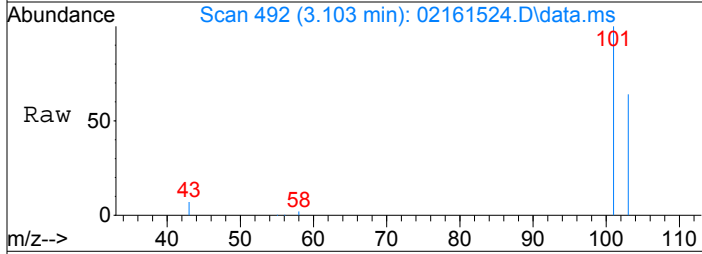
Tgt Ion:	58	Resp:	267926
Ion Ratio	Lower	Upper	
58	100		
43	365.1	301.8	341.8#





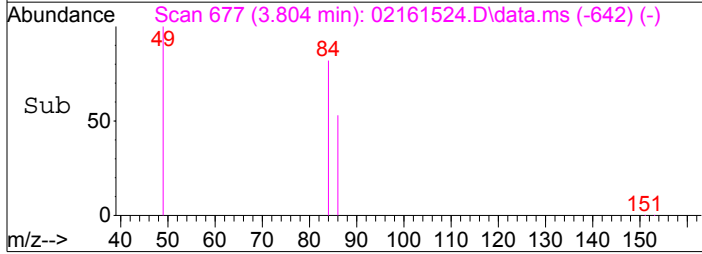
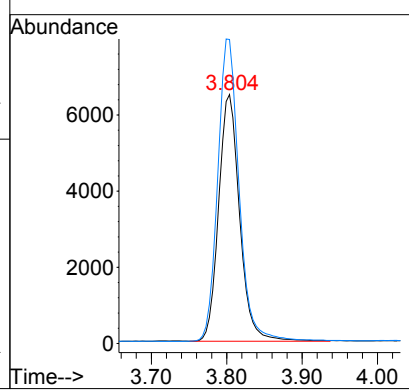
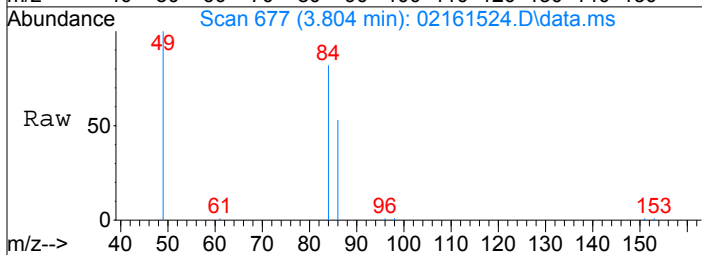
#8
 Trichlorofluoromethane
 Concen: 1221.66 pg
 RT: 3.10 min Scan# 492
 Delta R.T. -0.016 min
 Lab File: 02161524.D
 Acq: 16 Feb 2015 22:37

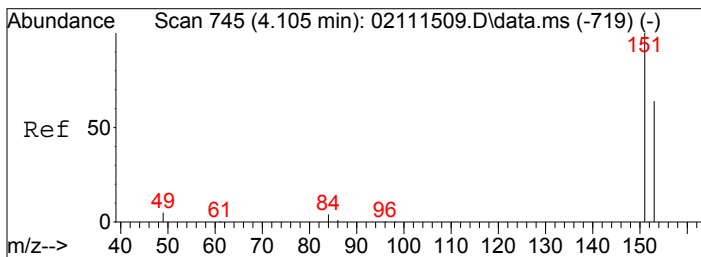
Tgt Ion: 101	Resp: 86755
Ion Ratio	Lower Upper
101	100
103	64.8 51.8 77.6



#10
 Methylene Chloride
 Concen: 372.24 pg
 RT: 3.80 min Scan# 677
 Delta R.T. -0.003 min
 Lab File: 02161524.D
 Acq: 16 Feb 2015 22:37

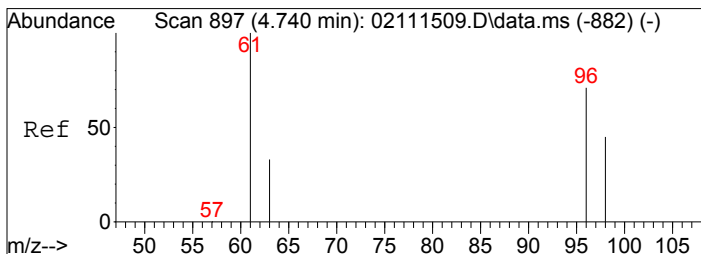
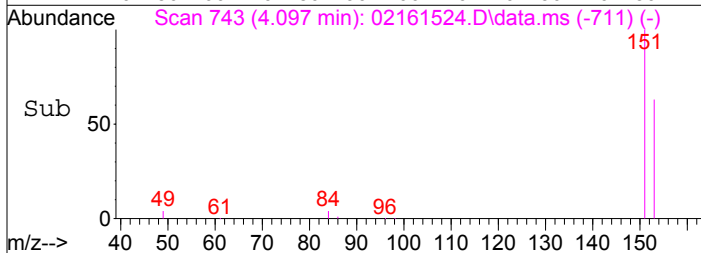
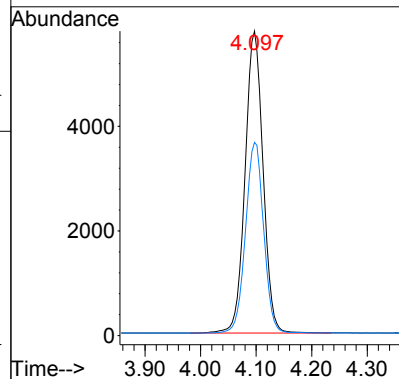
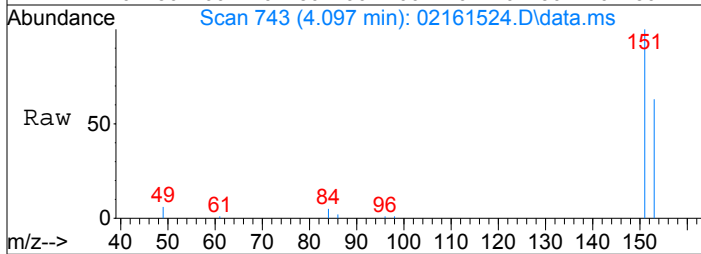
Tgt Ion: 84	Resp: 12543
Ion Ratio	Lower Upper
84	100
49	125.3 112.3 152.3





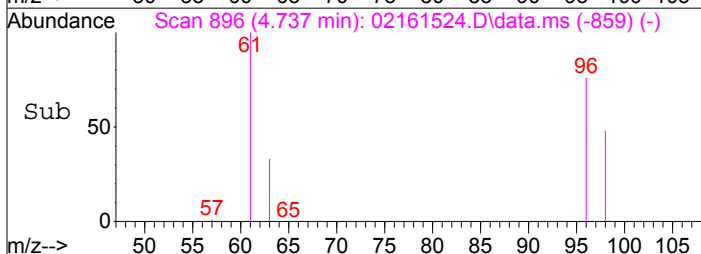
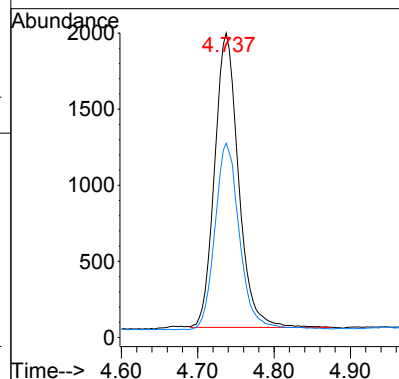
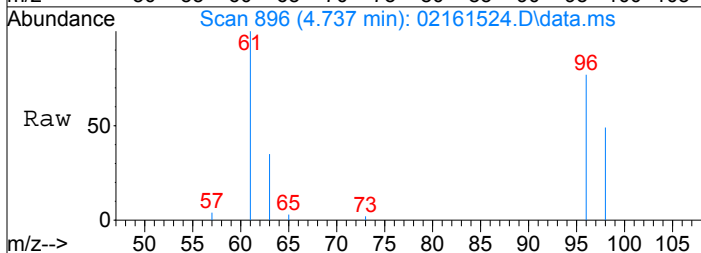
#11
Trichlorotrifluoroethane
Concen: 397.63 pg
RT: 4.10 min Scan# 743
Delta R.T. -0.008 min
Lab File: 02161524.D
Acq: 16 Feb 2015 22:37

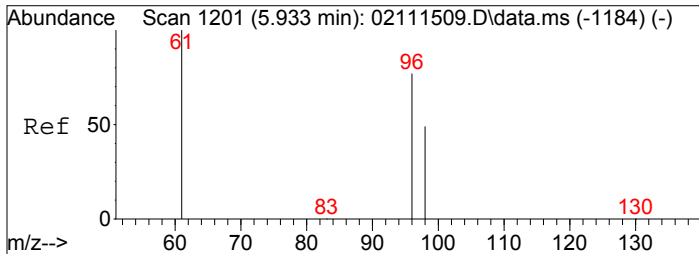
Tgt Ion: 151 Resp: 12975
Ion Ratio Lower Upper
151 100
153 63.8 43.6 83.6



#12
trans-1,2-Dichloroethene
Concen: 129.74 pg
RT: 4.74 min Scan# 896
Delta R.T. -0.003 min
Lab File: 02161524.D
Acq: 16 Feb 2015 22:37

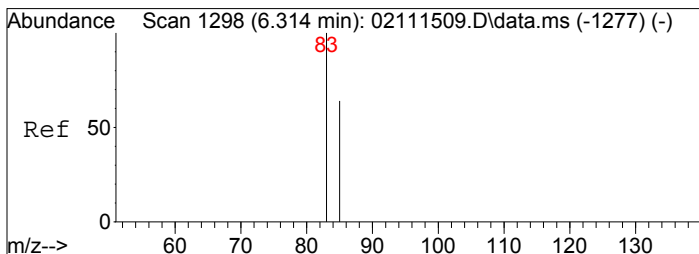
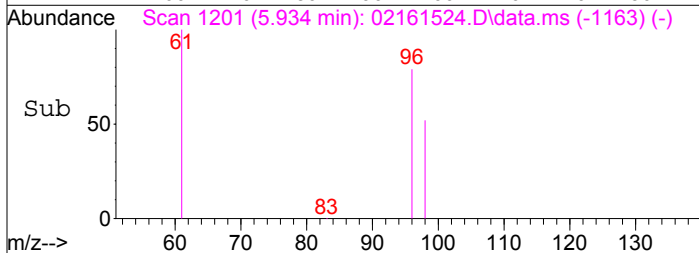
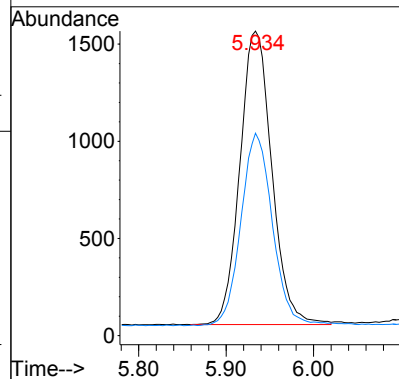
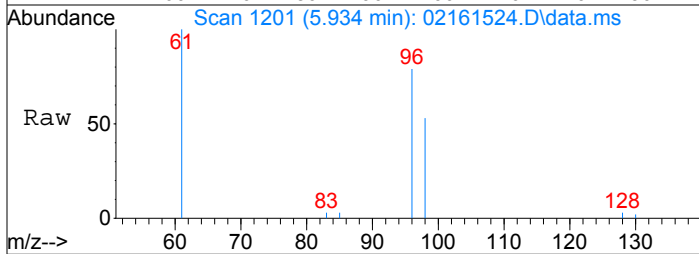
Tgt Ion: 96 Resp: 4200
Ion Ratio Lower Upper
96 100
98 65.3 43.7 83.7





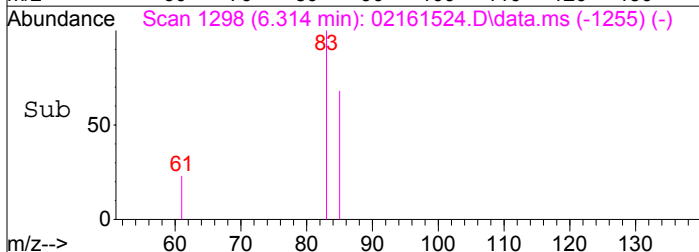
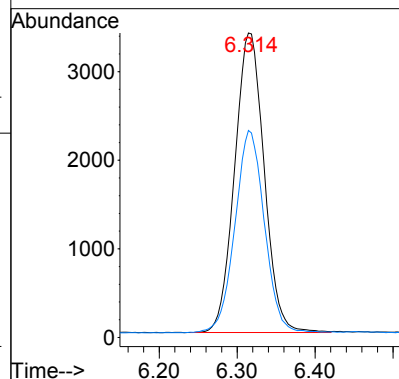
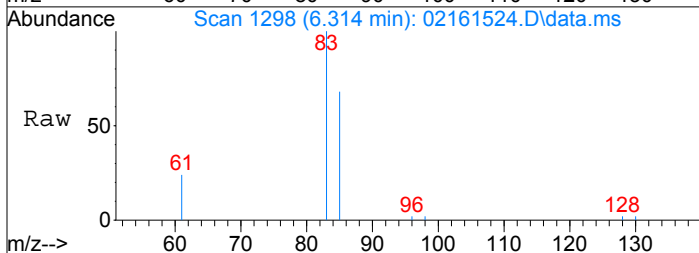
#15
 cis-1,2-Dichloroethene
 Concen: 106.53 pg
 RT: 5.93 min Scan# 1201
 Delta R.T. 0.001 min
 Lab File: 02161524.D
 Acq: 16 Feb 2015 22:37

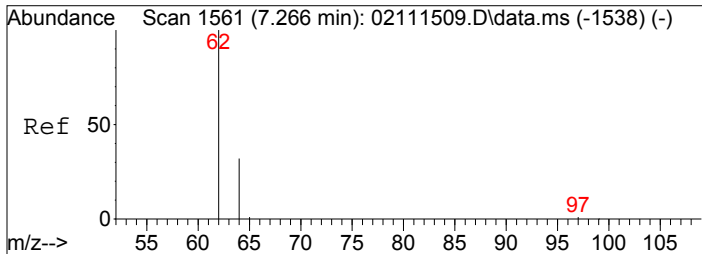
Tgt Ion: 96 Resp: 3835
 Ion Ratio Lower Upper
 96 100
 98 65.1 44.3 84.3



#16
 Chloroform
 Concen: 142.79 pg
 RT: 6.31 min Scan# 1298
 Delta R.T. 0.000 min
 Lab File: 02161524.D
 Acq: 16 Feb 2015 22:37

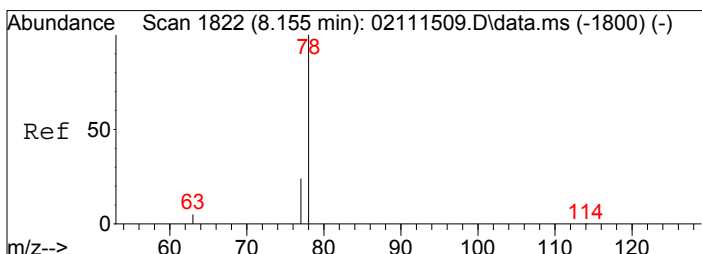
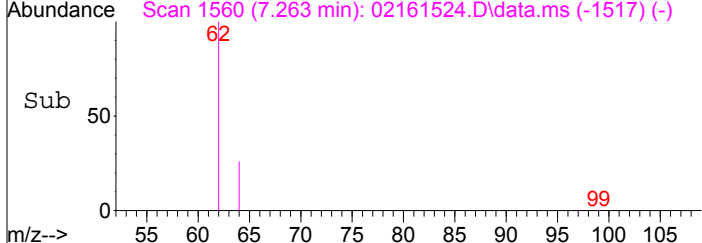
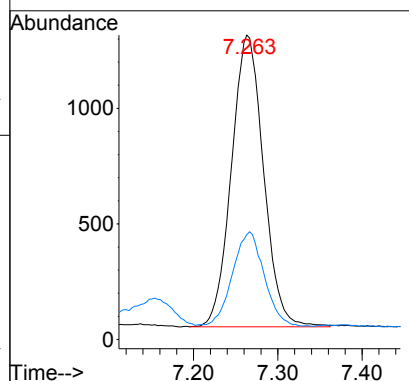
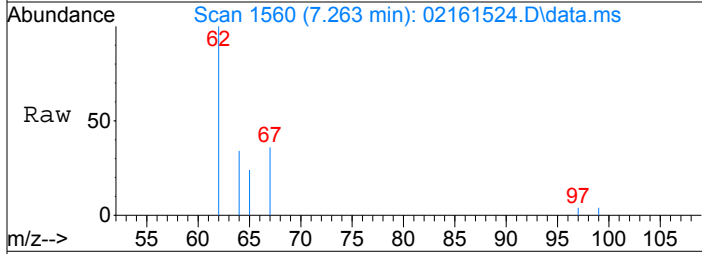
Tgt Ion: 83 Resp: 8906
 Ion Ratio Lower Upper
 83 100
 85 67.4 45.4 85.4





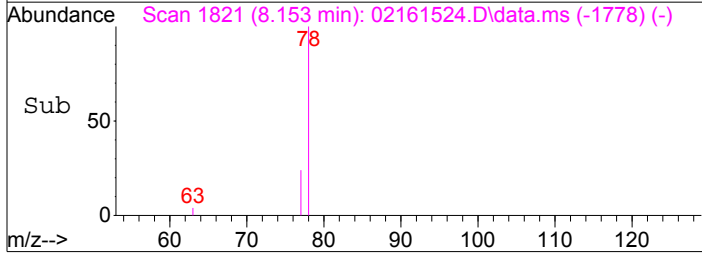
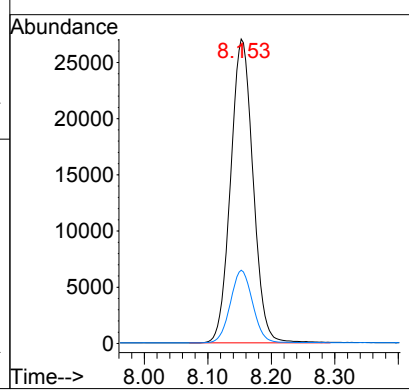
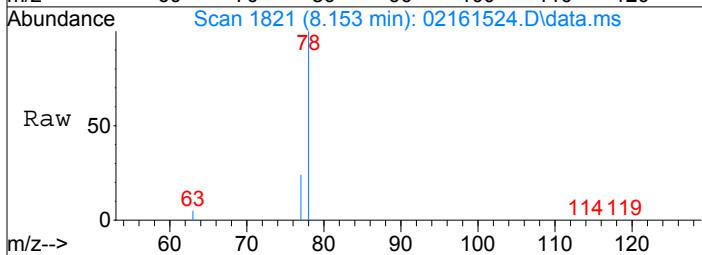
#18
 1,2-Dichloroethane
 Concen: 67.16 pg
 RT: 7.26 min Scan# 1560
 Delta R.T. -0.003 min
 Lab File: 02161524.D
 Acq: 16 Feb 2015 22:37

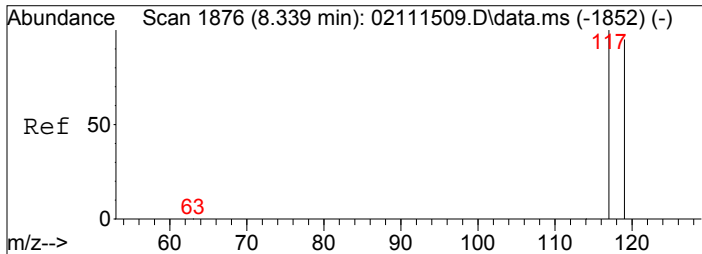
Tgt Ion:	62	Resp:	3335
Ion Ratio	Lower	Upper	
62	100		
64	31.8	11.6	51.6



#20
 Benzene
 Concen: 517.42 pg
 RT: 8.15 min Scan# 1821
 Delta R.T. -0.002 min
 Lab File: 02161524.D
 Acq: 16 Feb 2015 22:37

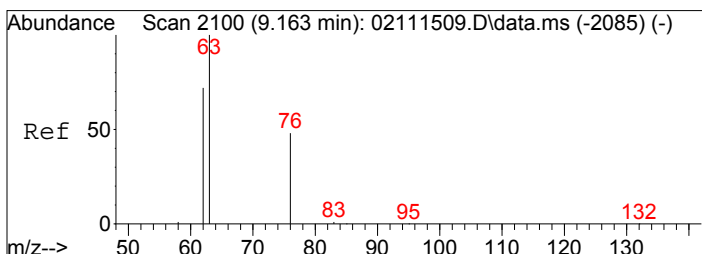
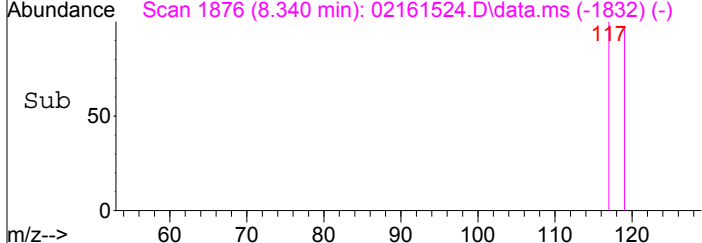
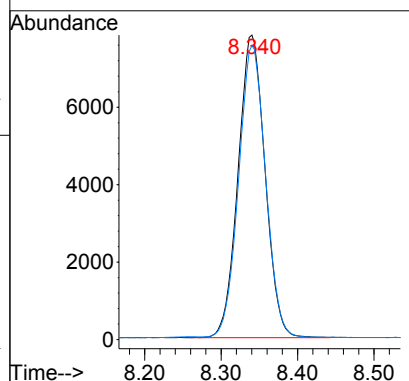
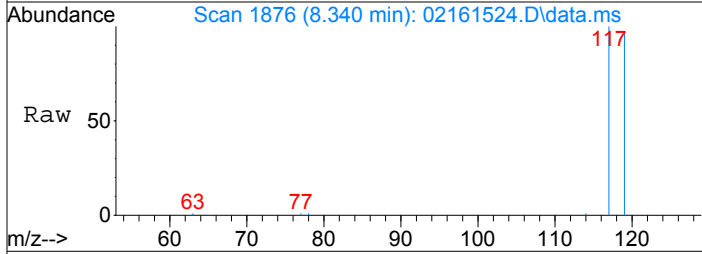
Tgt Ion:	78	Resp:	66376
Ion Ratio	Lower	Upper	
78	100		
77	23.9	3.7	43.7





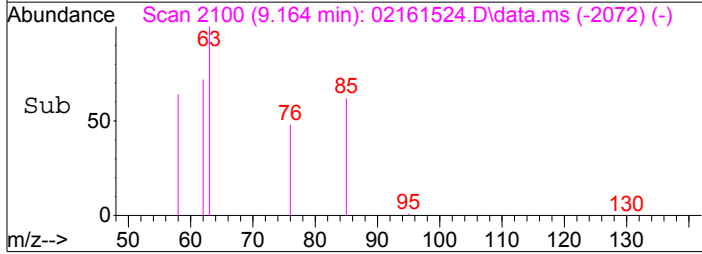
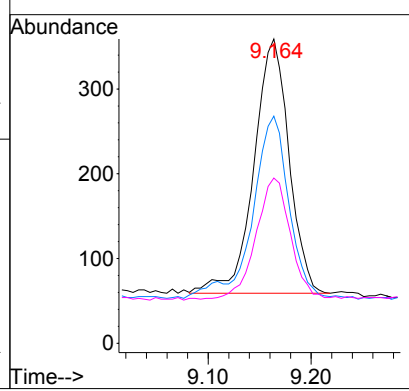
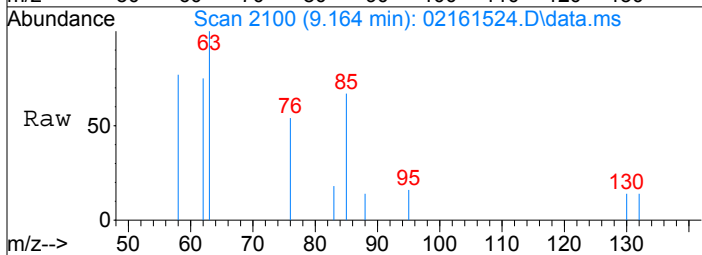
#21
Carbon Tetrachloride
Concen: 421.45 pg
RT: 8.34 min Scan# 1876
Delta R.T. 0.001 min
Lab File: 02161524.D
Acq: 16 Feb 2015 22:37

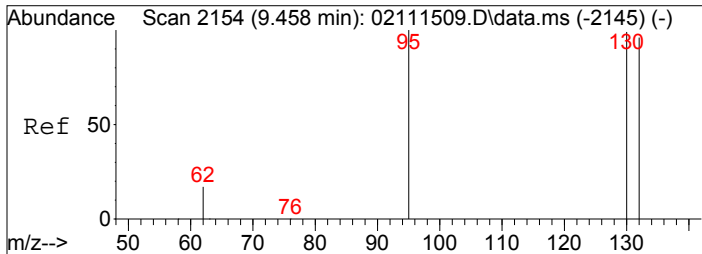
Tgt Ion: 117	Resp: 19137
Ion Ratio	Lower Upper
117	100
119	96.4 75.5 115.5



#23
1,2-Dichloropropane
Concen: 21.52 pg
RT: 9.16 min Scan# 2100
Delta R.T. 0.001 min
Lab File: 02161524.D
Acq: 16 Feb 2015 22:37

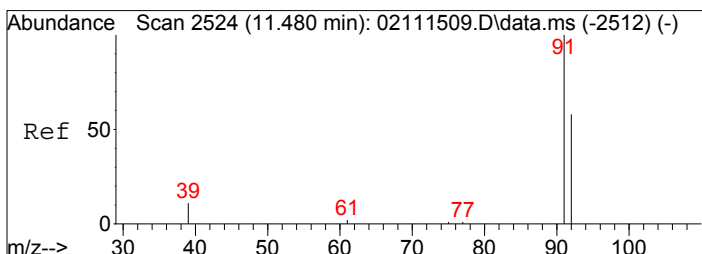
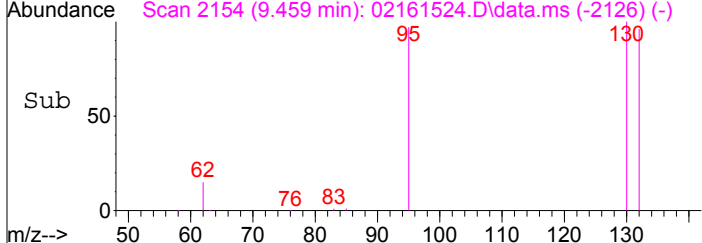
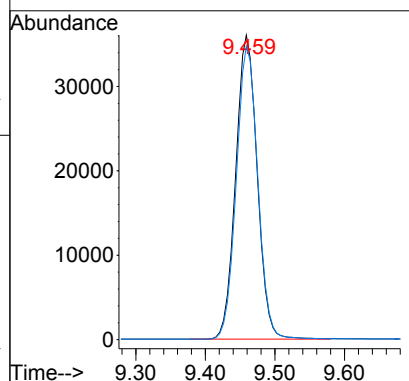
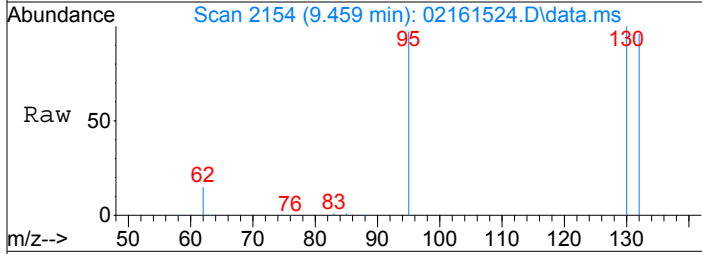
Tgt Ion: 63	Resp: 712
Ion Ratio	Lower Upper
63	100
62	70.5 52.0 92.0
76	46.6 28.1 68.1





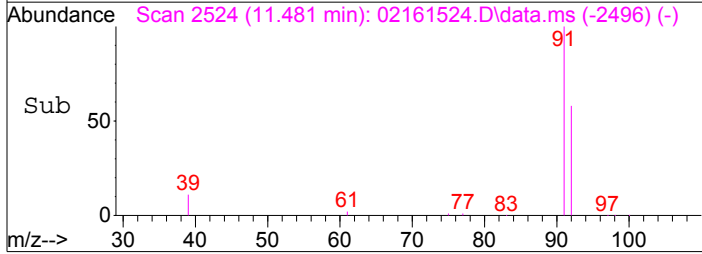
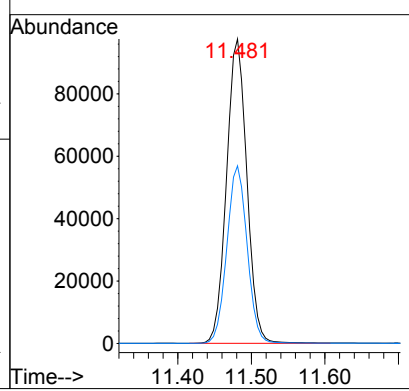
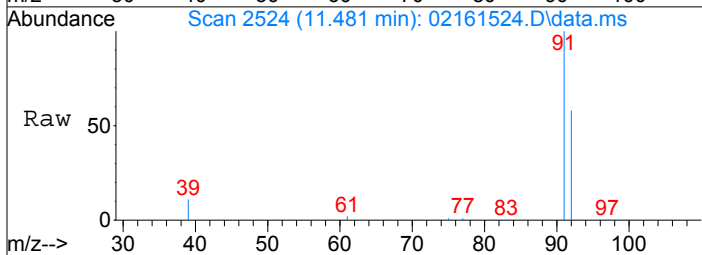
#25
 Trichloroethene
 Concen: 1987.80 pg
 RT: 9.46 min Scan# 2154
 Delta R.T. 0.001 min
 Lab File: 02161524.D
 Acq: 16 Feb 2015 22:37

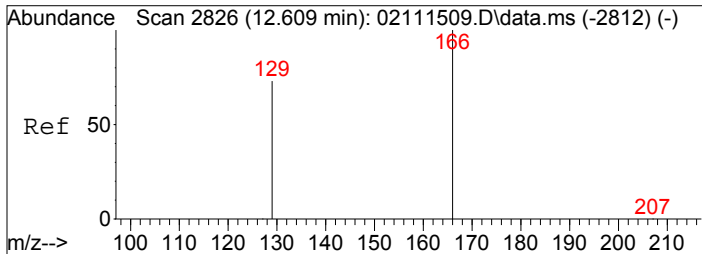
Tgt Ion:	130	Resp:	77478
Ion Ratio	Lower	Upper	
130	100		
132	96.5	77.1	117.1



#31
 Toluene
 Concen: 1257.18 pg
 RT: 11.48 min Scan# 2524
 Delta R.T. 0.001 min
 Lab File: 02161524.D
 Acq: 16 Feb 2015 22:37

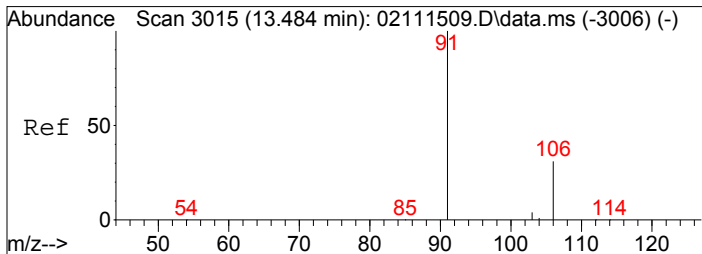
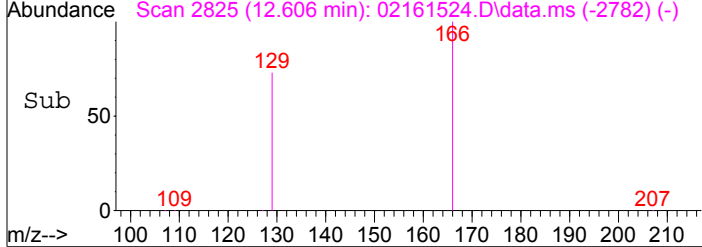
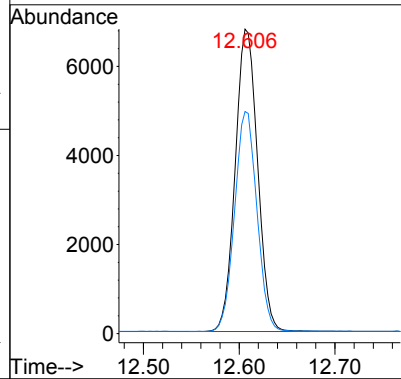
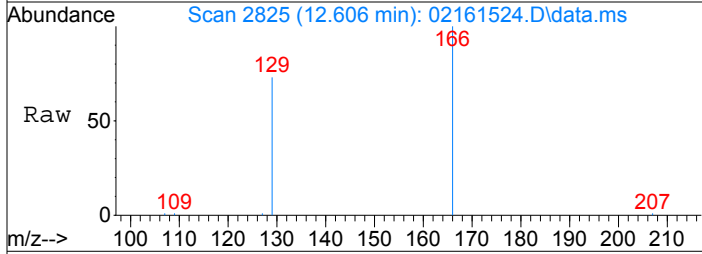
Tgt Ion:	91	Resp:	187071
Ion Ratio	Lower	Upper	
91	100		
92	58.2	37.7	77.7





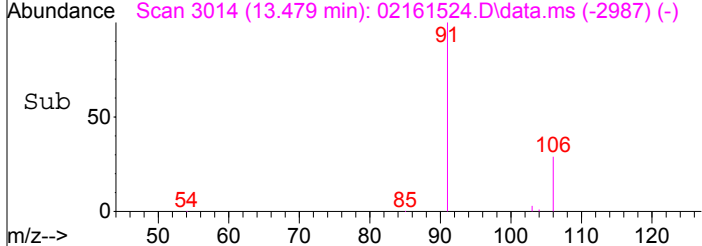
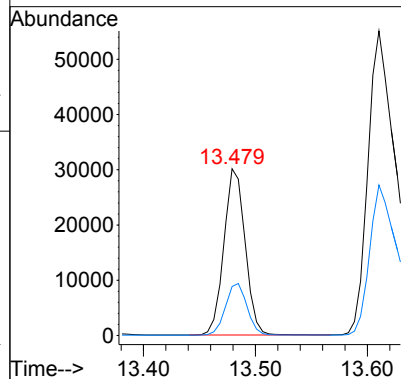
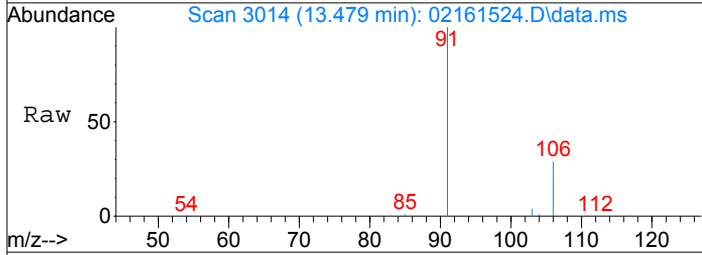
#33
Tetrachloroethene
Concen: 239.51 pg
RT: 12.61 min Scan# 2825
Delta R.T. -0.003 min
Lab File: 02161524.D
Acq: 16 Feb 2015 22:37

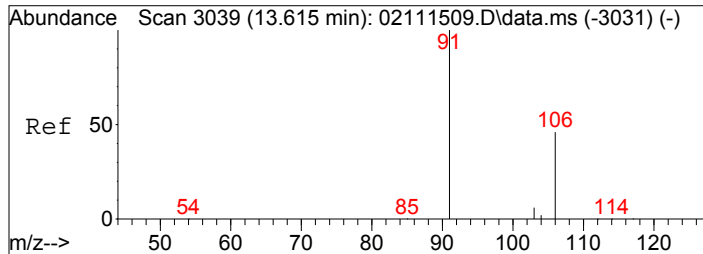
Tgt Ion	166	Resp	11035
Ion Ratio	100	Lower	Upper
129	72.7	53.3	93.3



#36
Ethylbenzene
Concen: 254.63 pg
RT: 13.48 min Scan# 3014
Delta R.T. -0.005 min
Lab File: 02161524.D
Acq: 16 Feb 2015 22:37

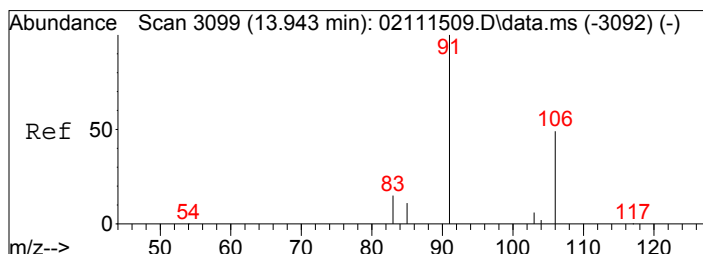
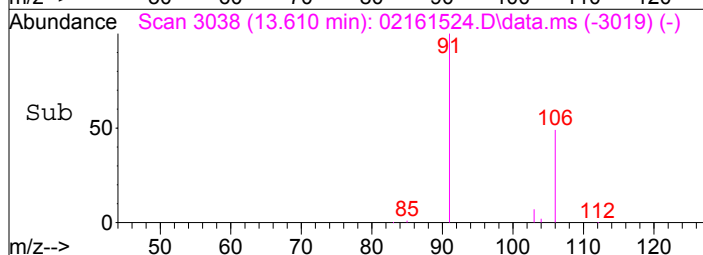
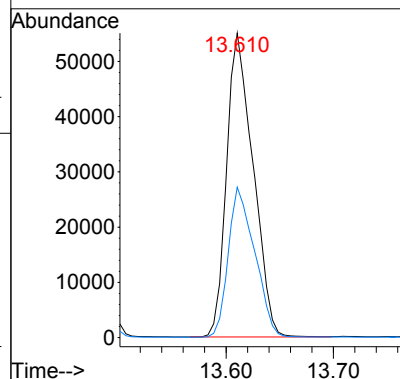
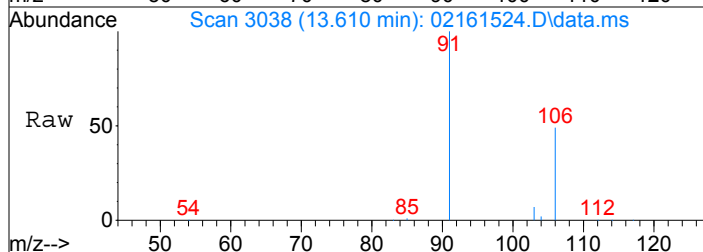
Tgt Ion	91	Resp	39769
Ion Ratio	100	Lower	Upper
106	31.4	10.9	50.9





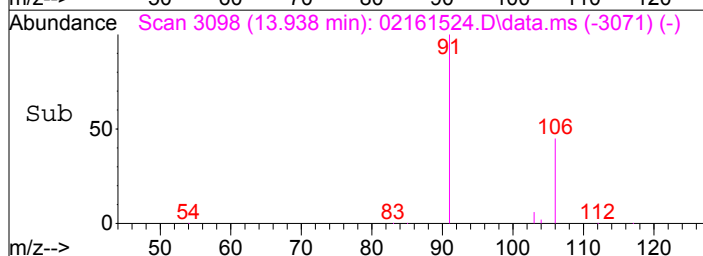
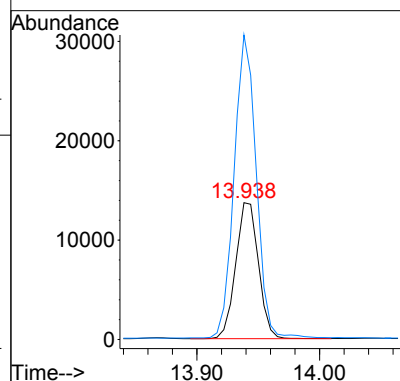
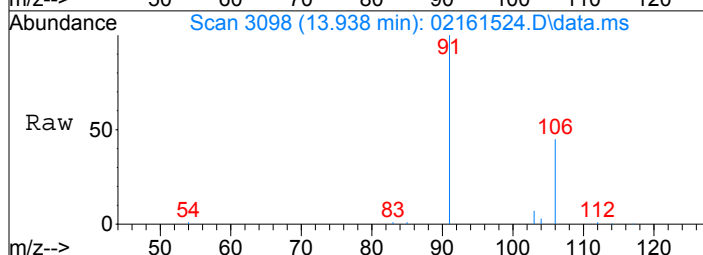
#37
m,p-Xylene
Concen: 734.83 pg
RT: 13.61 min Scan# 3038
Delta R.T. -0.005 min
Lab File: 02161524.D
Acq: 16 Feb 2015 22:37

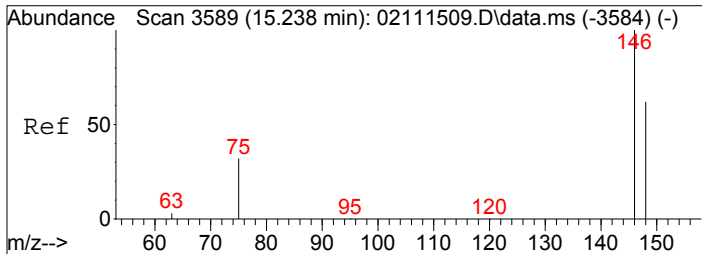
Tgt Ion: 91 Resp: 94325
Ion Ratio Lower Upper
91 100
106 49.3 27.5 67.5



#38
o-Xylene
Concen: 280.71 pg
RT: 13.94 min Scan# 3098
Delta R.T. -0.005 min
Lab File: 02161524.D
Acq: 16 Feb 2015 22:37

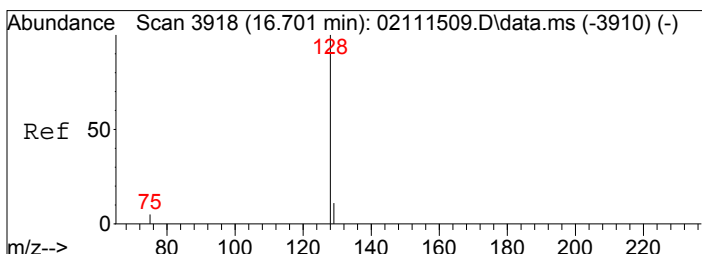
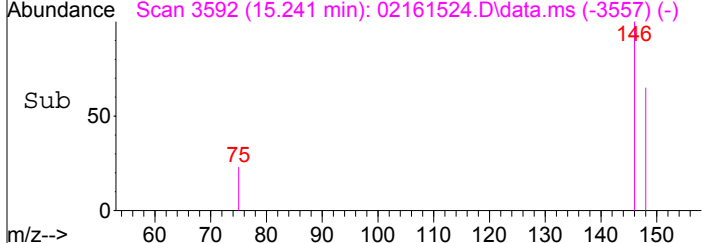
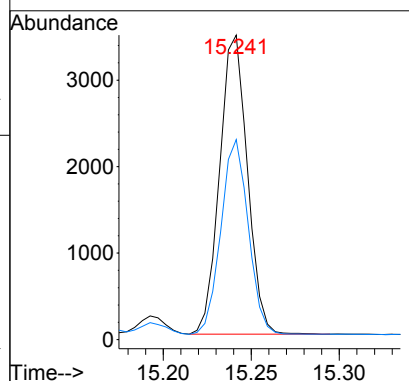
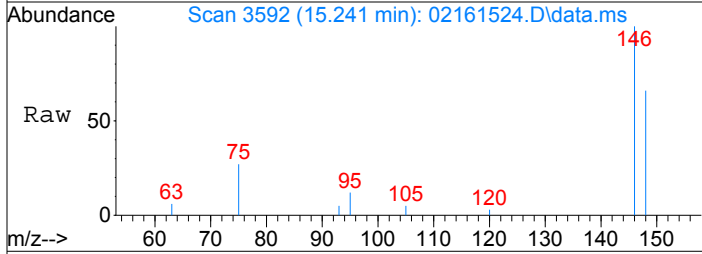
Tgt Ion: 106 Resp: 17610
Ion Ratio Lower Upper
106 100
91 217.7 198.3 238.3





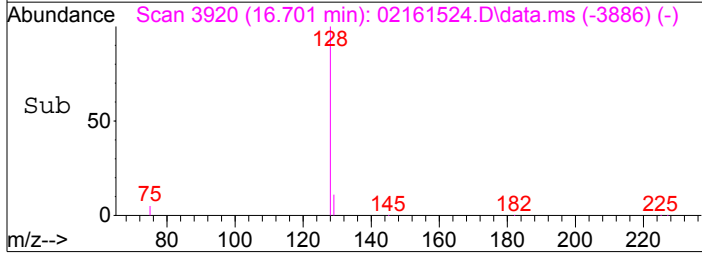
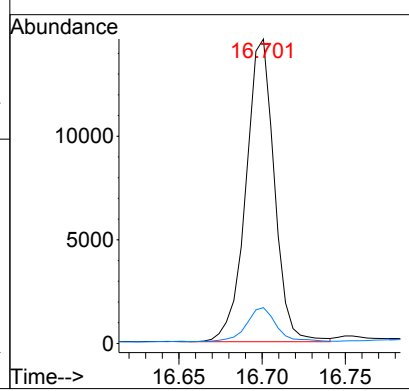
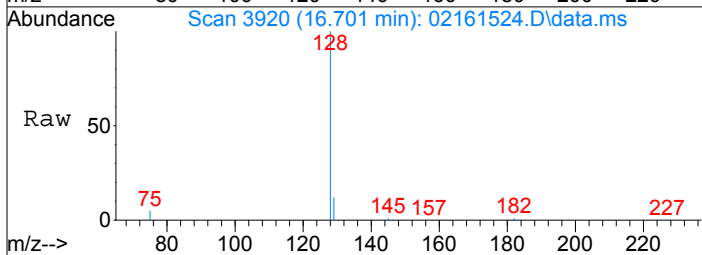
#42
 1,4-Dichlorobenzene
 Concen: 44.12 pg
 RT: 15.24 min Scan# 3592
 Delta R.T. 0.004 min
 Lab File: 02161524.D
 Acq: 16 Feb 2015 22:37

Tgt Ion:146	Resp:	3797
Ion Ratio	Lower	Upper
146	100	
148	64.4	43.5 83.5



#45
 Naphthalene
 Concen: 111.32 pg
 RT: 16.70 min Scan# 3920
 Delta R.T. -0.000 min
 Lab File: 02161524.D
 Acq: 16 Feb 2015 22:37

Tgt Ion:128	Resp:	17348
Ion Ratio	Lower	Upper
128	100	
129	11.8	0.0 30.9



Data File: I:\MS19\DATA\2015 02\16\02161525.D

Acq On : 16 Feb 2015 23:05

Operator: WA

Sample : P1500566-007 (1000mL)

Misc : S29-02041502

ALS Vial : 8 Sample Multiplier: 1

Quant Time: Feb 17 06:52:01 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

2/17/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	21021	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	149863	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	25544	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	45977	895.621	pg	0.00
Spiked Amount 1000.000			Recovery	=	89.56%	
30) Toluene-d8 (SS2)	11.38	98	141787	1025.945	pg	0.00
Spiked Amount 1000.000			Recovery	=	102.60%	
40) Bromofluorobenzene (SS3)	14.25	174	58938	1142.878	pg	0.00
Spiked Amount 1000.000			Recovery	=	114.29%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.73	85	145994	1708.938	pg	100
3) Chloromethane	1.83	52	8542	500.688	pg	98
4) Vinyl Chloride	2.01	62	149	N.D.		
5) Bromomethane	2.33	94	1484	38.631	pg	97
6) Chloroethane	2.47	64	477	N.D.		
7) Acetone	2.99	58	251877	8349.355	pg	# 72
8) Trichlorofluoromethane	3.11	101	87951	1198.560	pg	100
9) 1,1-Dichloroethene	3.66	96	81	N.D.		
10) Methylene Chloride	3.80	84	12952	371.976	pg	94
11) Trichlorotrifluoroethane	4.10	151	13139	389.668	pg	100
12) trans-1,2-Dichloroethene	4.74	96	4272	127.703	pg	97
13) 1,1-Dichloroethane	4.95	63	310	N.D.		
14) Methyl tert-Butyl Ether	5.11	73	898	N.D.		
15) cis-1,2-Dichloroethene	5.93	96	3969	106.697	pg	100
16) Chloroform	6.31	83	9147	141.925	pg	98
18) 1,2-Dichloroethane	7.26	62	3910	76.194	pg	100
19) 1,1,1-Trichloroethane	7.59	97	1098	N.D.		
20) Benzene	8.15	78	67951	512.611	pg	100
21) Carbon Tetrachloride	8.34	117	18706	398.670	pg	100
23) 1,2-Dichloropropane	9.16	63	850	26.006	pg	97
24) Bromodichloromethane	9.33	83	905	N.D.		
25) Trichloroethene	9.46	130	81597	2119.364	pg	99
26) 1,4-Dioxane	9.54	88	209	N.D.		
27) cis-1,3-Dichloropropene	10.46	75	215	N.D.		
28) trans-1,3-Dichloropropene	11.05	75	405	N.D.		
29) 1,1,2-Trichloroethane	11.20	83	176	N.D.		
31) Toluene	11.48	91	217305	1478.414	pg	99
32) 1,2-Dibromoethane	12.12	107	242	N.D.		
33) Tetrachloroethene	12.61	166	11197	246.027	pg	100
35) Chlorobenzene	13.17	112	977	N.D.		
36) Ethylbenzene	13.48	91	36961	230.743	pg	99
37) m,p-Xylene	13.61	91	91740	696.838	pg	98
38) o-Xylene	13.94	106	17033	264.730	pg	98
39) 1,1,1,2,2-Tetrachloroethane	13.89	83	414	N.D.		
41) 1,3-Dichlorobenzene	15.19	146	345	N.D.		
42) 1,4-Dichlorobenzene	15.24	146	4072	46.130	pg	100
43) 1,2-Dichlorobenzene	15.46	146	318	N.D.		
44) 1,2,4-Trichlorobenzene	16.63	182	395	N.D.		
45) Naphthalene	16.70	128	15697	98.210	pg	97
46) Hexachlorobutadiene	16.96	225	39	N.D.		

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\16\02161525.D

Acq On : 16 Feb 2015 23:05

Operator: WA

Sample : P1500566-007 (1000mL)

Misc : S29-02041502

ALS Vial : 8 Sample Multiplier: 1

Quant Time: Feb 17 06:52:01 2015

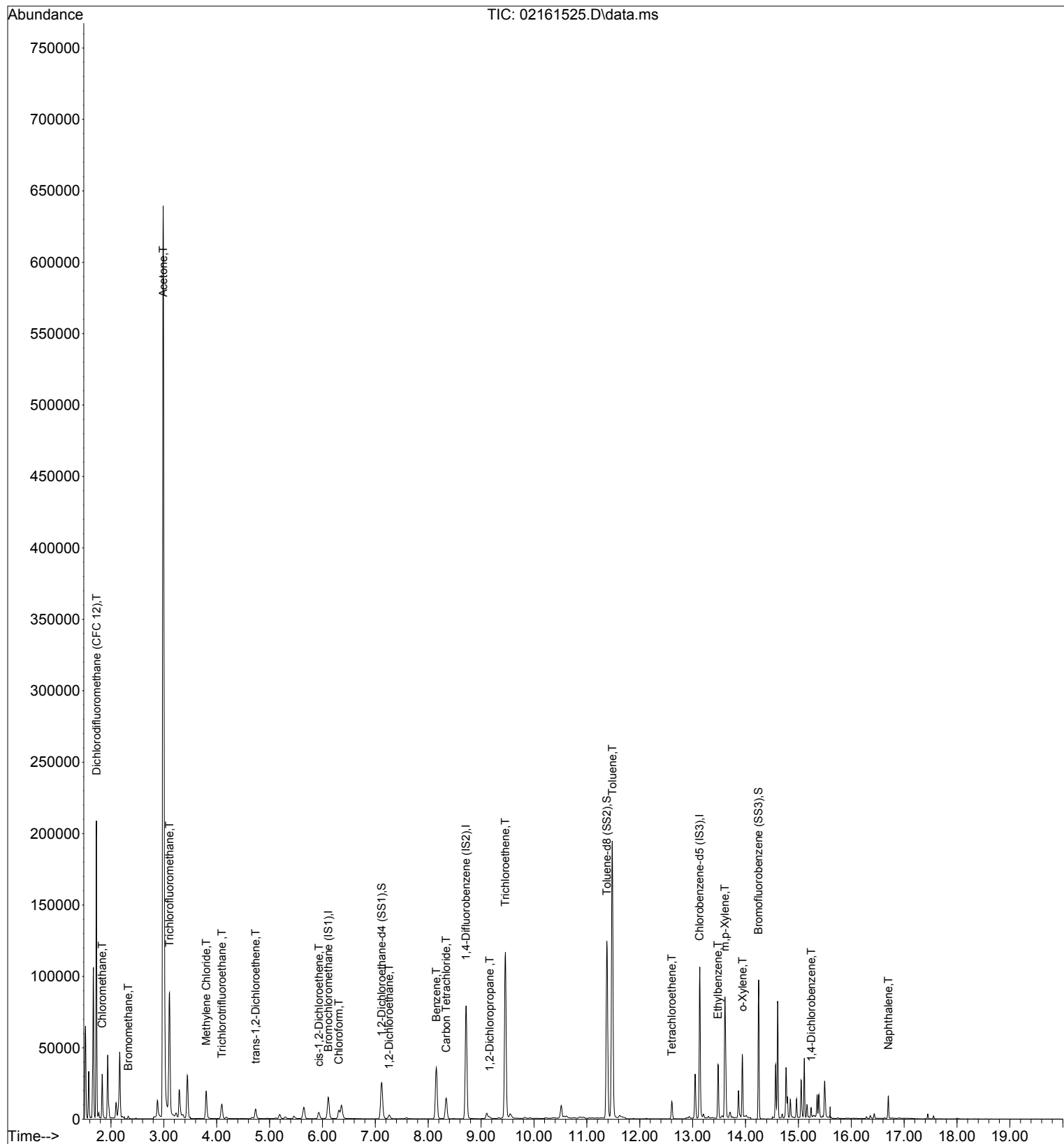
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 02\16\02161525.D

Acq On : 16 Feb 2015 23:05

Operator: WA

Sample : P1500566-007 (1000mL)

Misc : S29-02041502

ALS Vial : 8 Sample Multiplier: 1

Quant Time: Feb 17 06:52:01 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

~~10A~~ 2/17/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	21021	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	149863	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	25544	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	45977	895.621	pg	0.00
Spiked Amount 1000.000			Recovery	=	89.56%	
30) Toluene-d8 (SS2)	11.38	98	141787	1025.945	pg	0.00
Spiked Amount 1000.000			Recovery	=	102.60%	
40) Bromofluorobenzene (SS3)	14.25	174	58938	1142.878	pg	0.00
Spiked Amount 1000.000			Recovery	=	114.29%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.73	85	145994	1708.938	pg	100
3) Chloromethane	1.83	52	8542	500.688	pg	98
5) Bromomethane	2.33	94	1484	38.631	pg	97
7) Acetone	2.99	58	251877	8349.355	pg	# 72
8) Trichlorofluoromethane	3.11	101	87951	1198.560	pg	100
10) Methylene Chloride	3.80	84	12952	371.976	pg	94
11) Trichlorotrifluoroethane	4.10	151	13139	389.668	pg	100
12) trans-1,2-Dichloroethene	4.74	96	4272	127.703	pg	97
15) cis-1,2-Dichloroethene	5.93	96	3969	106.697	pg	100
16) Chloroform	6.31	83	9147	141.925	pg	98
18) 1,2-Dichloroethane	7.26	62	3910	76.194	pg	100
20) Benzene	8.15	78	67951	512.611	pg	100
21) Carbon Tetrachloride	8.34	117	18706	398.670	pg	100
23) 1,2-Dichloropropane	9.16	63	850	26.006	pg	97
25) Trichloroethene	9.46	130	81597	2119.364	pg	99
31) Toluene	11.48	91	217305	1478.414	pg	99
33) Tetrachloroethene	12.61	166	11197	246.027	pg	100
36) Ethylbenzene	13.48	91	36961	230.743	pg	99
37) m,p-Xylene	13.61	91	91740	696.838	pg	98
38) o-Xylene	13.94	106	17033	264.730	pg	98
42) 1,4-Dichlorobenzene	15.24	146	4072	46.130	pg	100
45) Naphthalene	16.70	128	15697	98.210	pg	97

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\16\02161525.D

Acq On : 16 Feb 2015 23:05

Operator: WA

Sample : P1500566-007 (1000mL)

Misc : S29-02041502

ALS Vial : 8 Sample Multiplier: 1

Quant Time: Feb 17 06:52:01 2015

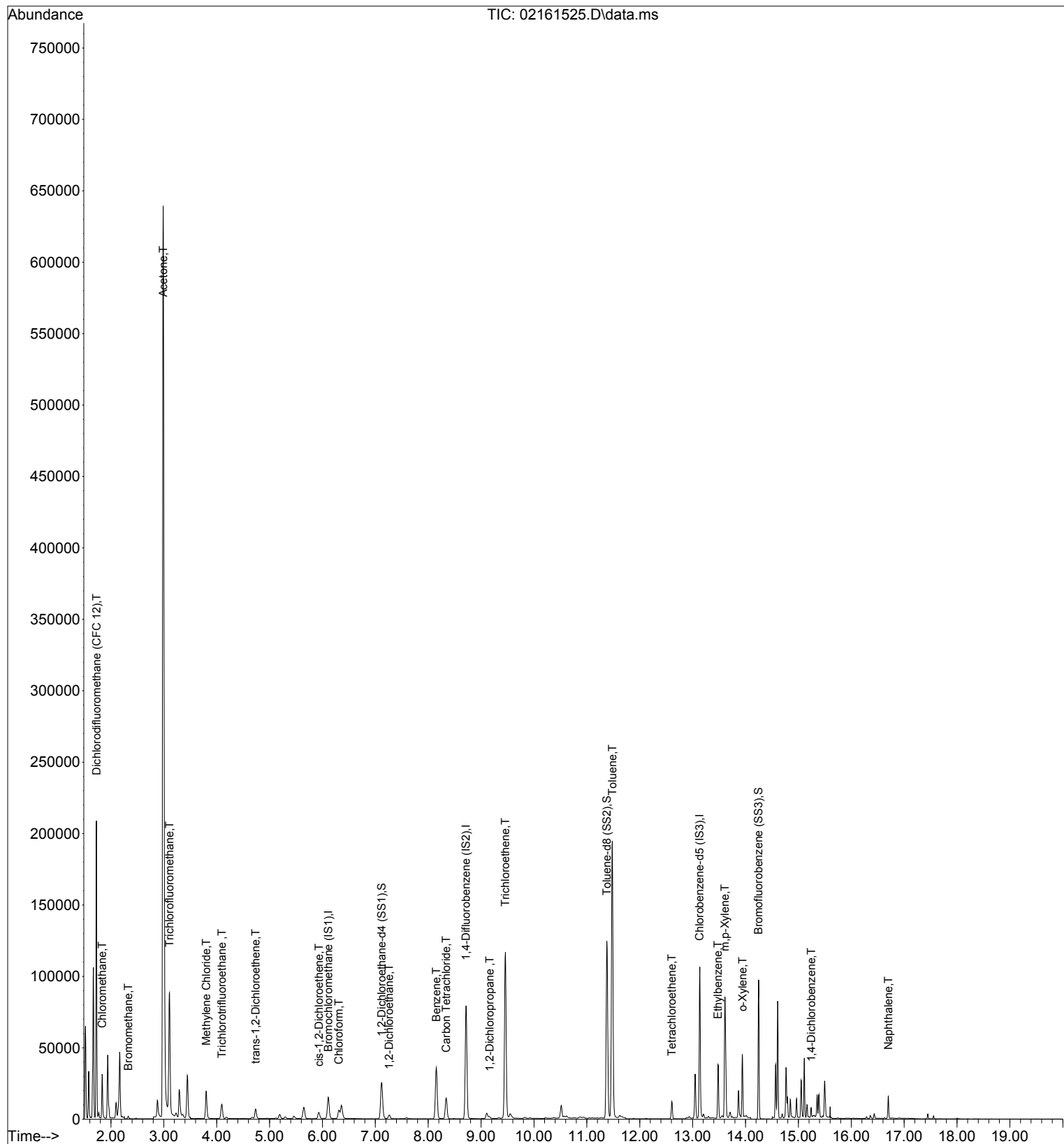
Quant Method : I:\MS19\METHODS\X19021115.M

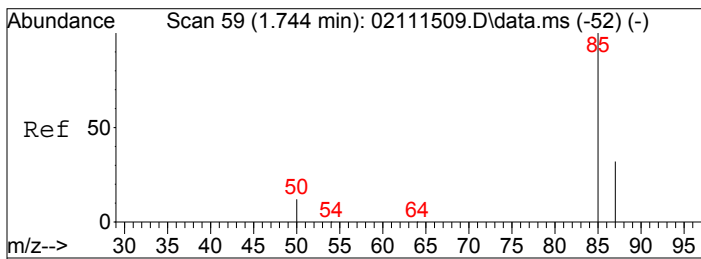
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

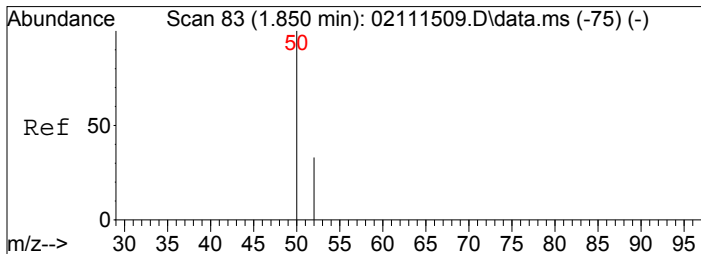
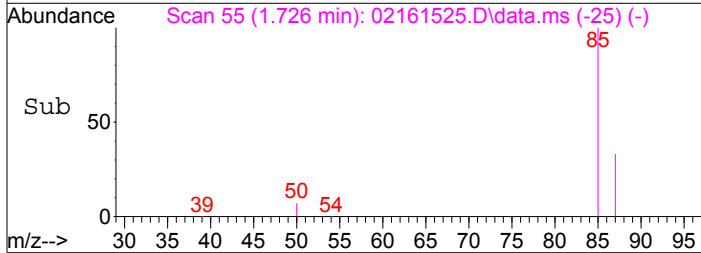
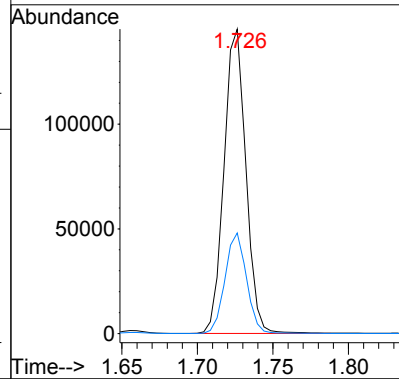
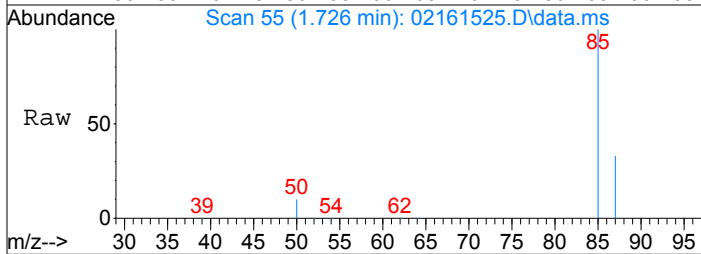
DataAcq Meth:TO15SIM.M





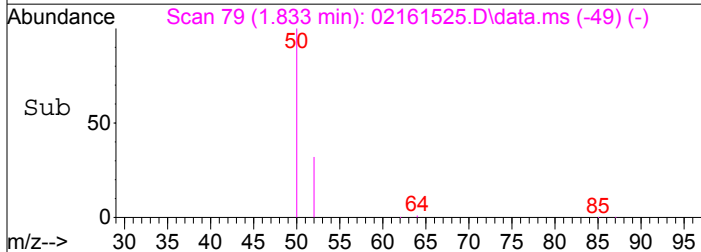
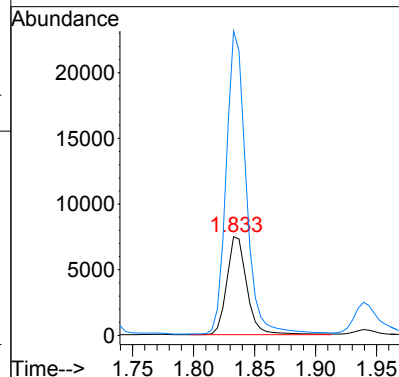
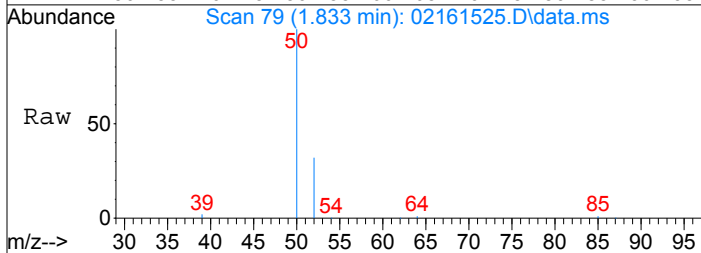
#2
 Dichlorodifluoromethane (CFC 12)
 Concen: 1708.94 pg
 RT: 1.73 min Scan# 55
 Delta R.T. -0.018 min
 Lab File: 02161525.D
 Acq: 16 Feb 2015 23:05

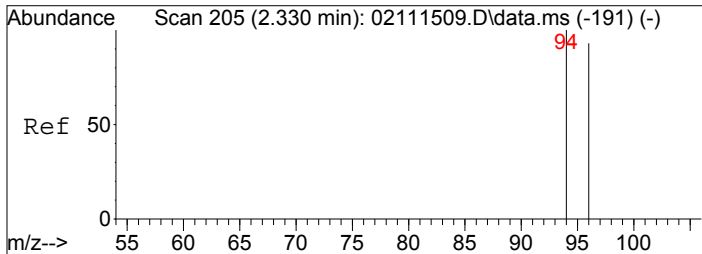
Tgt Ion: 85 Resp: 145994
 Ion Ratio Lower Upper
 85 100
 87 32.5 12.4 52.4



#3
 Chloromethane
 Concen: 500.69 pg
 RT: 1.83 min Scan# 79
 Delta R.T. -0.017 min
 Lab File: 02161525.D
 Acq: 16 Feb 2015 23:05

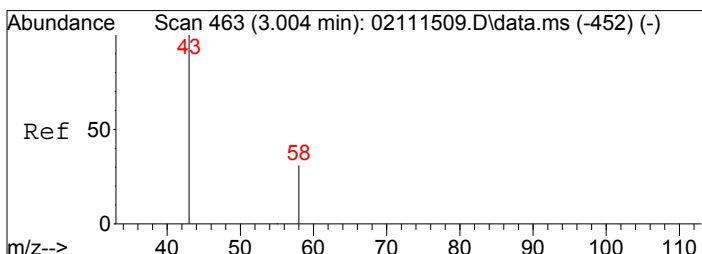
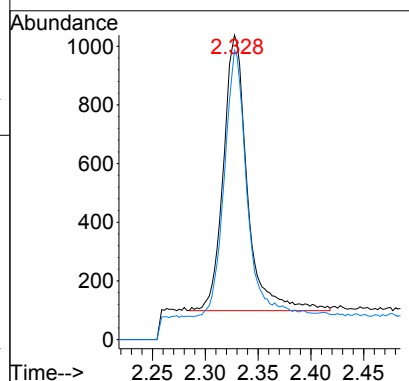
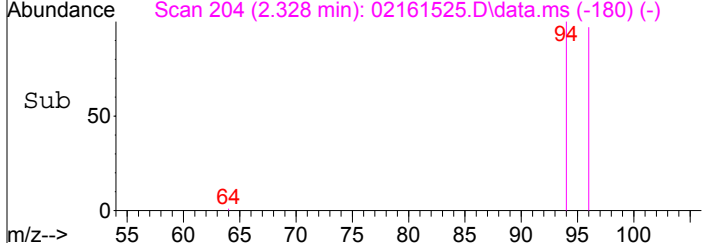
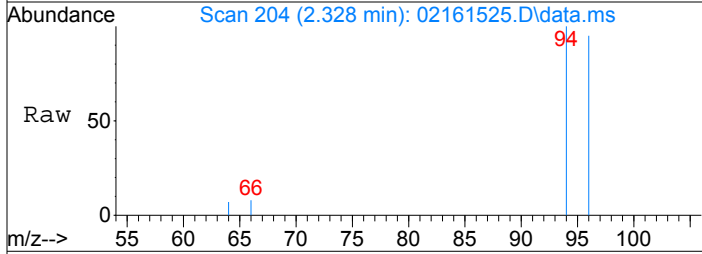
Tgt Ion: 52 Resp: 8542
 Ion Ratio Lower Upper
 52 100
 50 306.8 283.7 323.7





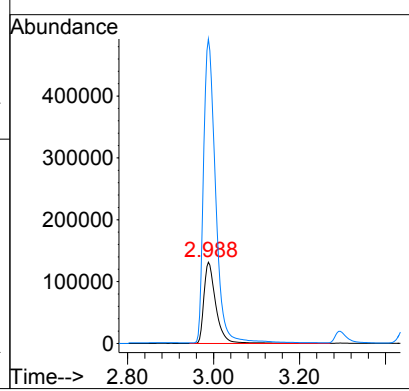
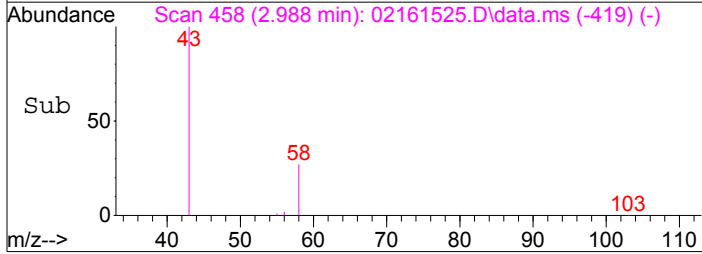
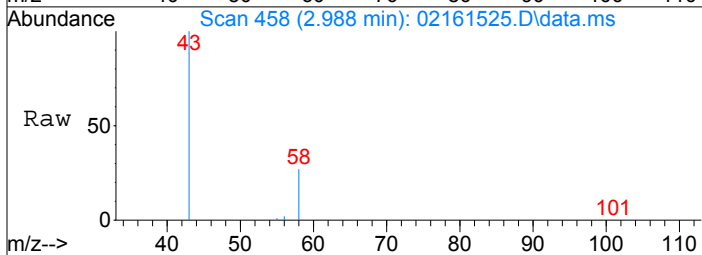
#5
 Bromomethane
 Concen: 38.63 pg
 RT: 2.33 min Scan# 204
 Delta R.T. -0.002 min
 Lab File: 02161525.D
 Acq: 16 Feb 2015 23:05

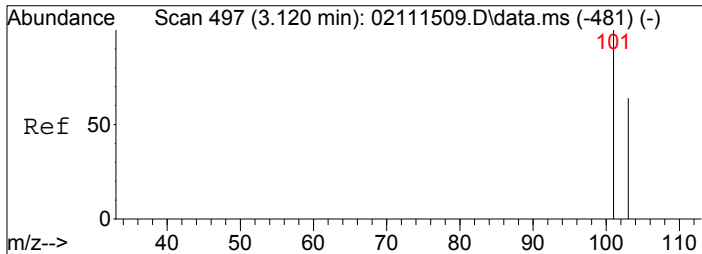
Tgt Ion:	94	Resp:	1484
Ion Ratio		Lower	Upper
94	100		
96	91.3	75.5	113.3



#7
 Acetone
 Concen: 8349.36 pg
 RT: 2.99 min Scan# 458
 Delta R.T. -0.016 min
 Lab File: 02161525.D
 Acq: 16 Feb 2015 23:05

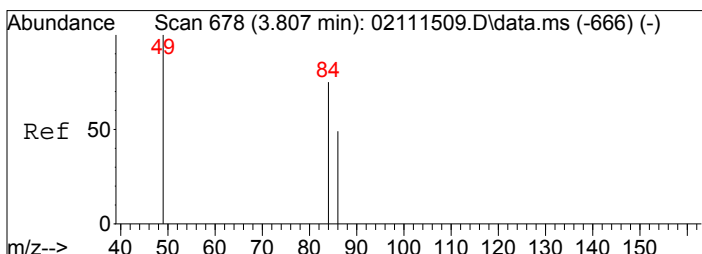
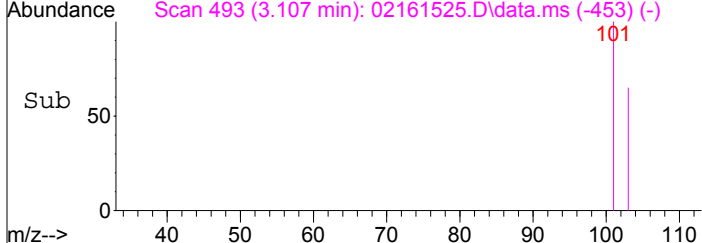
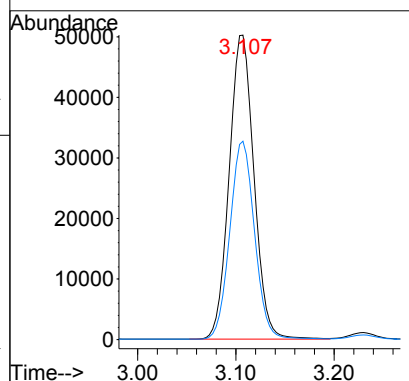
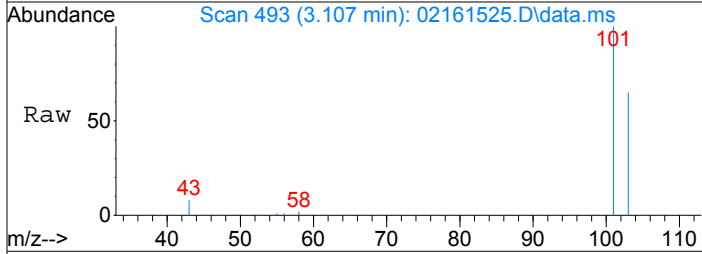
Tgt Ion:	58	Resp:	251877
Ion Ratio		Lower	Upper
58	100		
43	379.0	301.8	341.8#





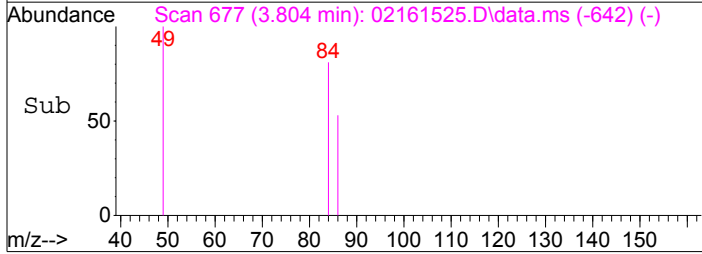
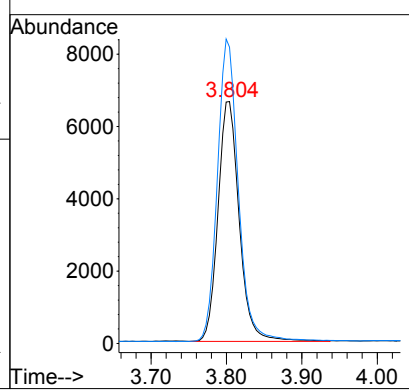
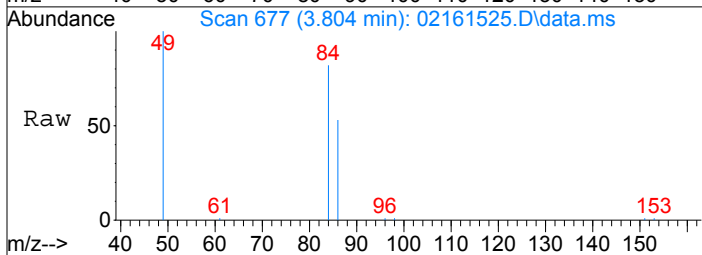
#8
 Trichlorofluoromethane
 Concen: 1198.56 pg
 RT: 3.11 min Scan# 493
 Delta R.T. -0.012 min
 Lab File: 02161525.D
 Acq: 16 Feb 2015 23:05

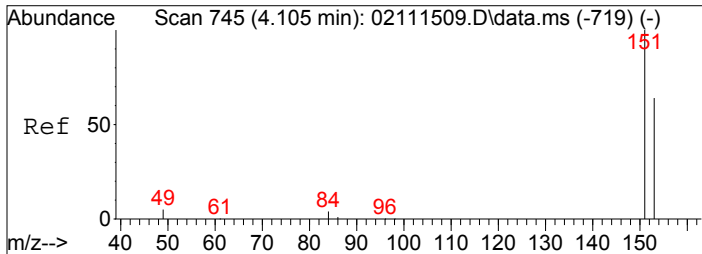
Tgt Ion: 101	Resp: 87951
Ion Ratio	Lower Upper
101	100
103	64.9 51.8 77.6



#10
 Methylene Chloride
 Concen: 371.98 pg
 RT: 3.80 min Scan# 677
 Delta R.T. -0.003 min
 Lab File: 02161525.D
 Acq: 16 Feb 2015 23:05

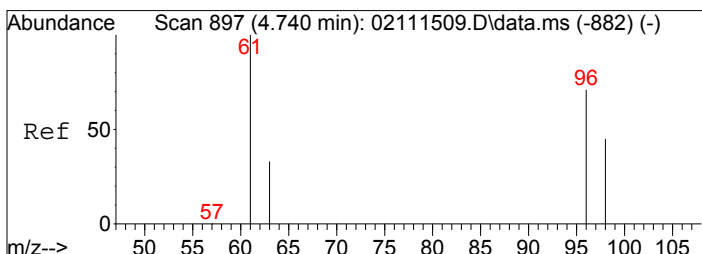
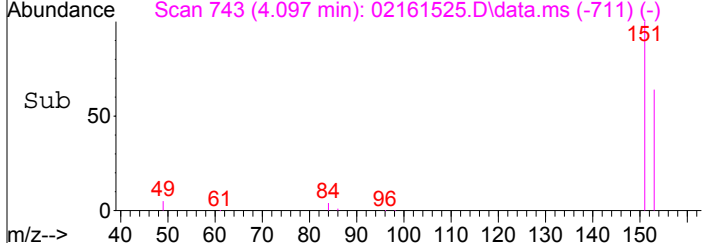
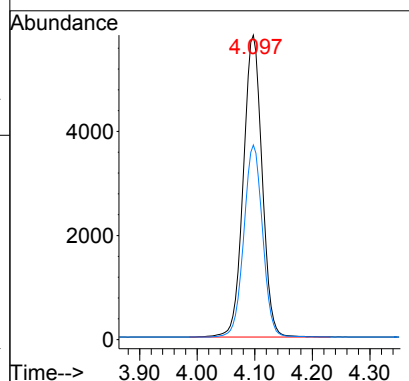
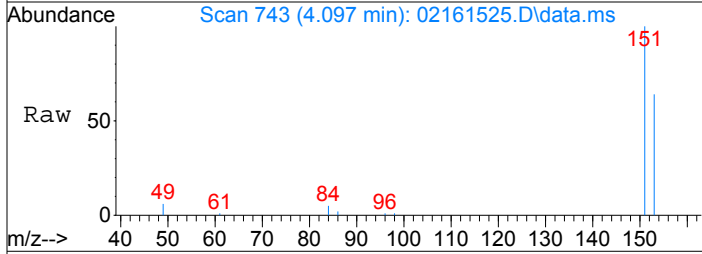
Tgt Ion: 84	Resp: 12952
Ion Ratio	Lower Upper
84	100
49	124.9 112.3 152.3





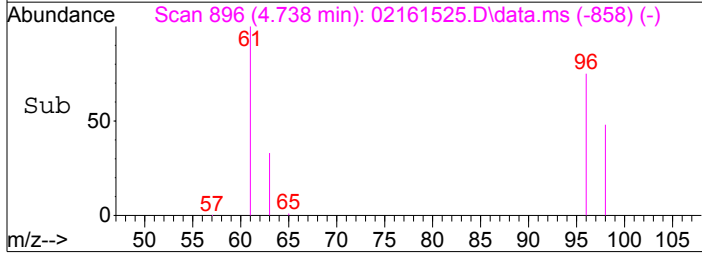
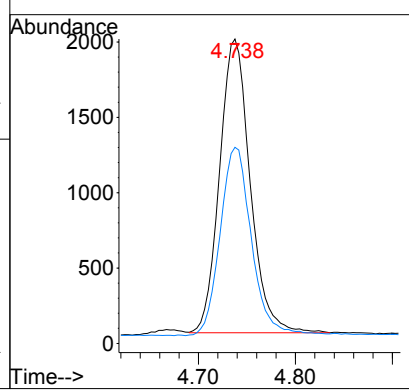
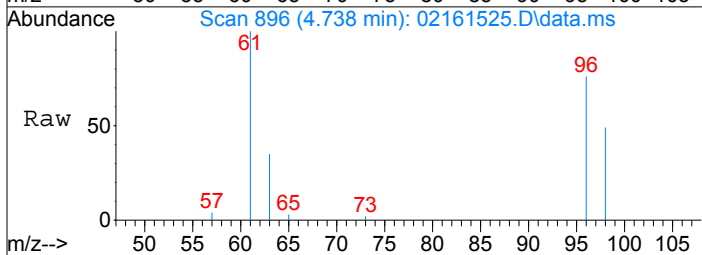
#11
 Trichlorotrifluoroethane
 Concen: 389.67 pg
 RT: 4.10 min Scan# 743
 Delta R.T. -0.008 min
 Lab File: 02161525.D
 Acq: 16 Feb 2015 23:05

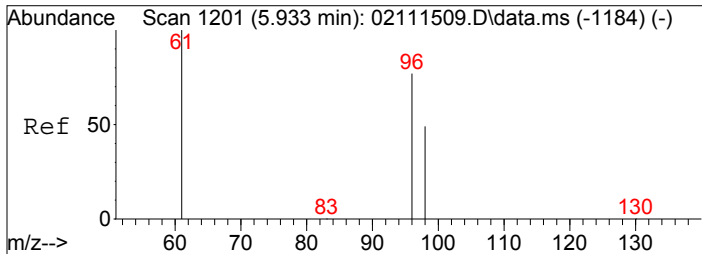
Tgt Ion: 151	Resp: 13139
Ion Ratio	Lower Upper
151	100
153	63.7 43.6 83.6



#12
 trans-1,2-Dichloroethene
 Concen: 127.70 pg
 RT: 4.74 min Scan# 896
 Delta R.T. -0.003 min
 Lab File: 02161525.D
 Acq: 16 Feb 2015 23:05

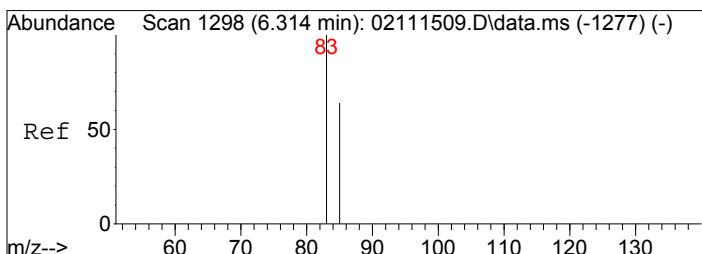
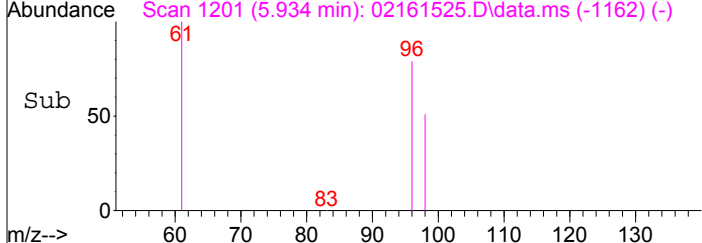
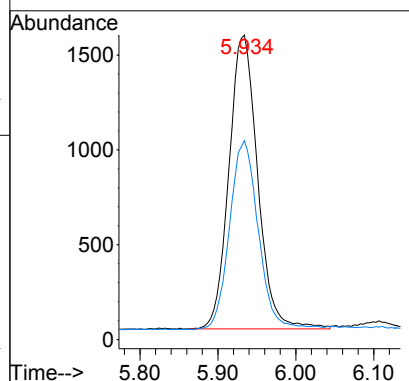
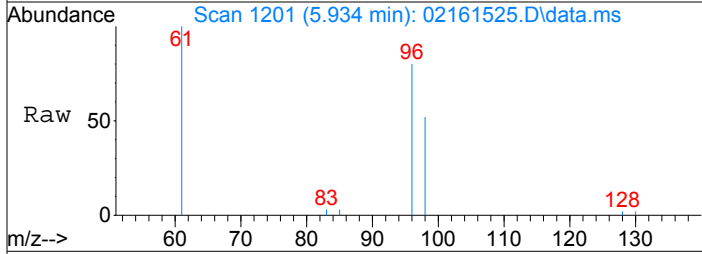
Tgt Ion: 96	Resp: 4272
Ion Ratio	Lower Upper
96	100
98	65.9 43.7 83.7





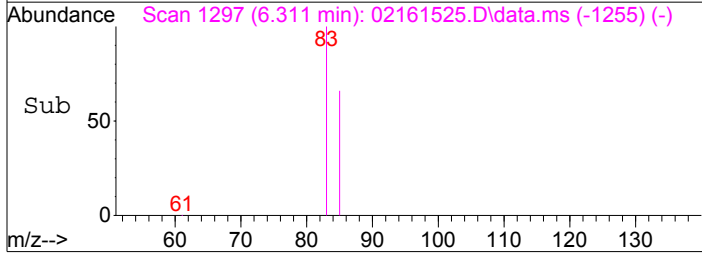
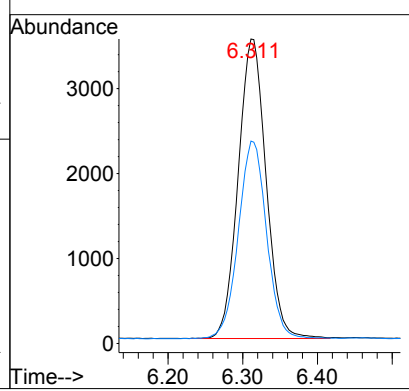
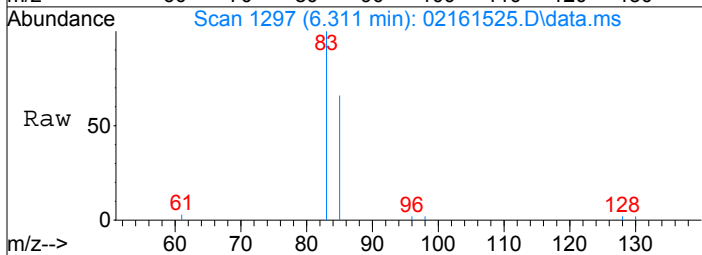
#15
 cis-1,2-Dichloroethene
 Concen: 106.70 pg
 RT: 5.93 min Scan# 1201
 Delta R.T. 0.001 min
 Lab File: 02161525.D
 Acq: 16 Feb 2015 23:05

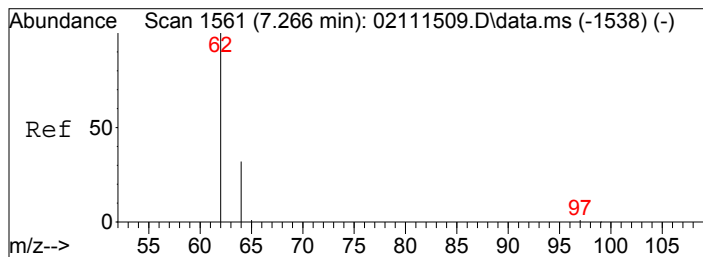
Tgt Ion:	96	Resp:	3969
Ion Ratio	Lower	Upper	
96	100		
98	64.5	44.3	84.3



#16
 Chloroform
 Concen: 141.92 pg
 RT: 6.31 min Scan# 1297
 Delta R.T. -0.003 min
 Lab File: 02161525.D
 Acq: 16 Feb 2015 23:05

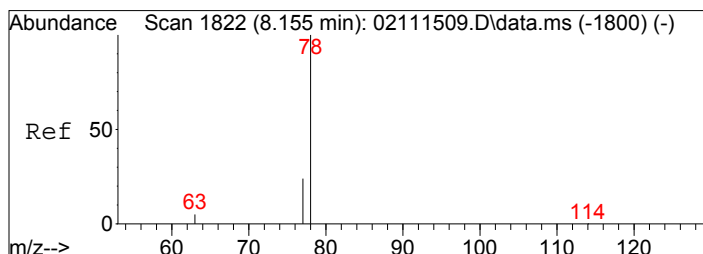
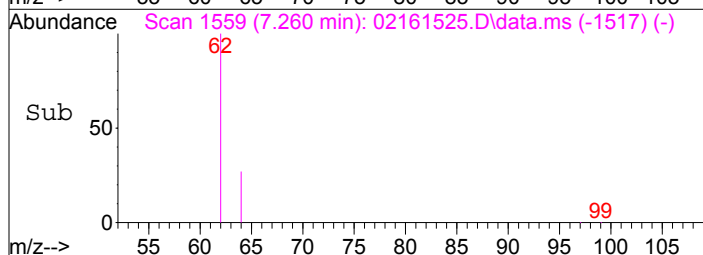
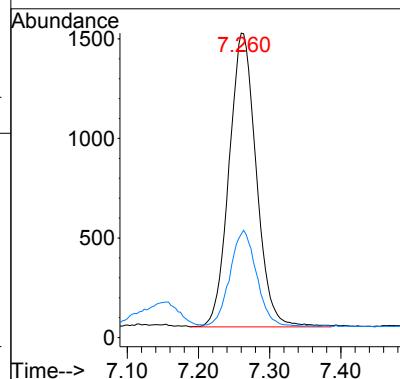
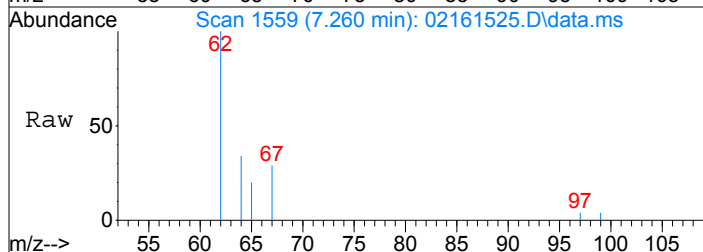
Tgt Ion:	83	Resp:	9147
Ion Ratio	Lower	Upper	
83	100		
85	67.1	45.4	85.4





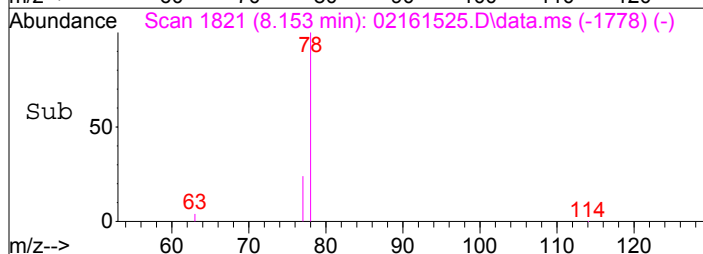
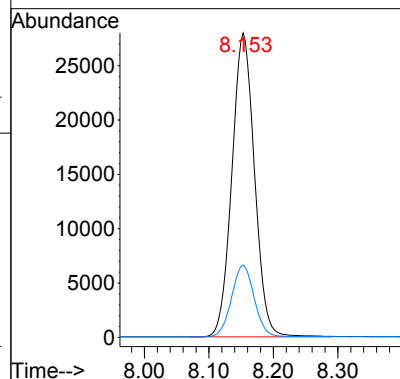
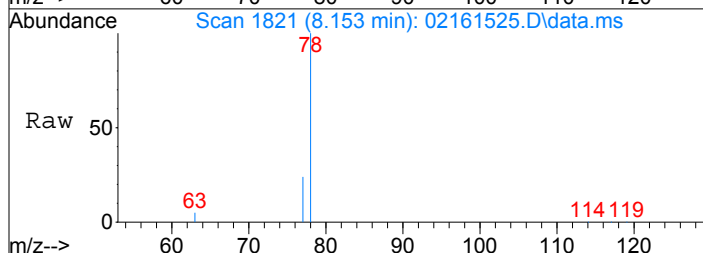
#18
1,2-Dichloroethane
Concen: 76.19 pg
RT: 7.26 min Scan# 1559
Delta R.T. -0.006 min
Lab File: 02161525.D
Acq: 16 Feb 2015 23:05

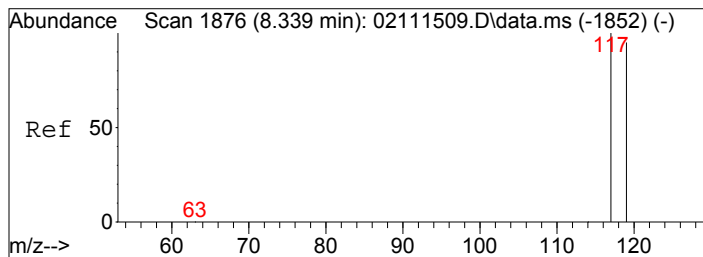
Tgt Ion: 62 Resp: 3910
Ion Ratio Lower Upper
62 100
64 31.7 11.6 51.6



#20
Benzene
Concen: 512.61 pg
RT: 8.15 min Scan# 1821
Delta R.T. -0.002 min
Lab File: 02161525.D
Acq: 16 Feb 2015 23:05

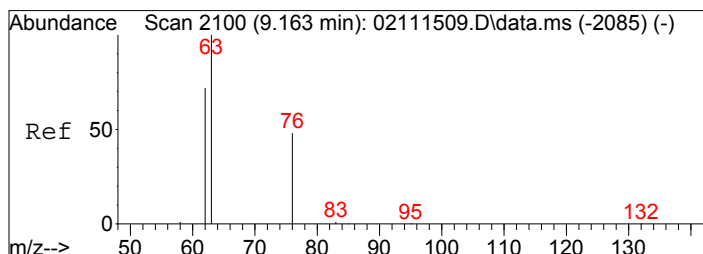
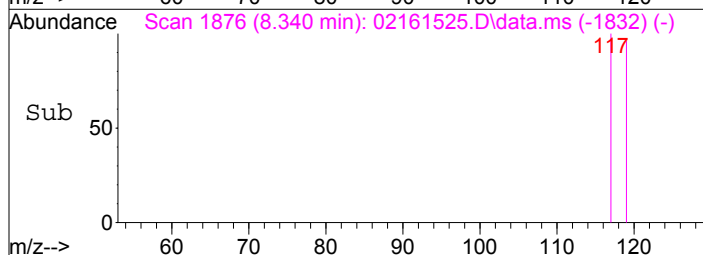
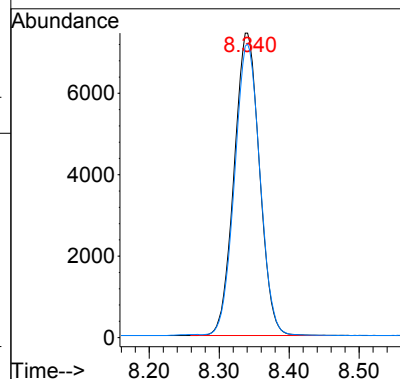
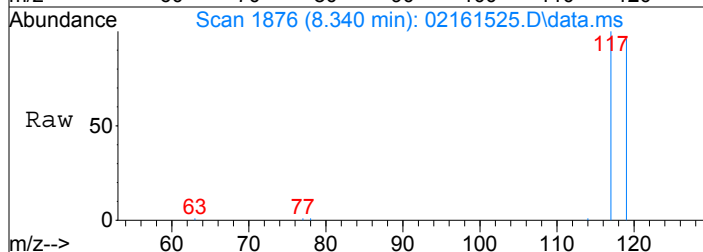
Tgt Ion: 78 Resp: 67951
Ion Ratio Lower Upper
78 100
77 23.8 3.7 43.7





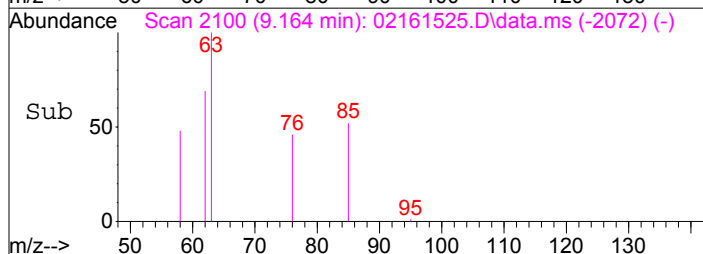
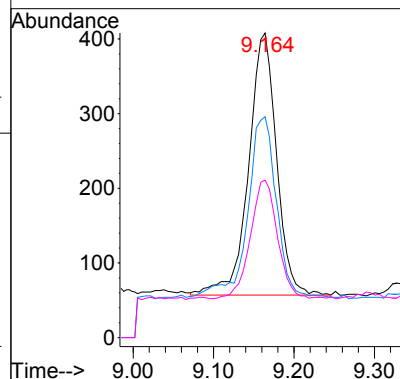
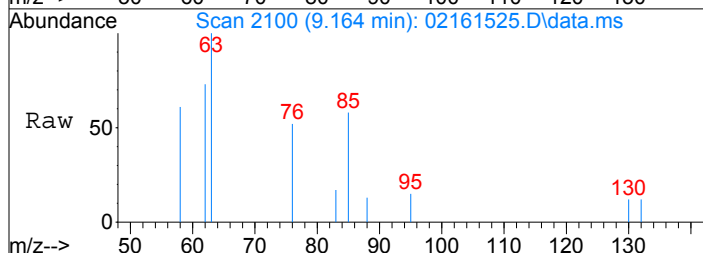
#21
Carbon Tetrachloride
Concen: 398.67 pg
RT: 8.34 min Scan# 1876
Delta R.T. 0.001 min
Lab File: 02161525.D
Acq: 16 Feb 2015 23:05

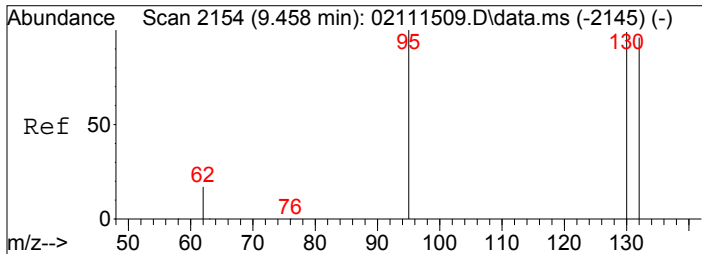
Tgt Ion: 117 Resp: 18706
Ion Ratio Lower Upper
117 100
119 96.0 75.5 115.5



#23
1,2-Dichloropropane
Concen: 26.01 pg
RT: 9.16 min Scan# 2100
Delta R.T. 0.001 min
Lab File: 02161525.D
Acq: 16 Feb 2015 23:05

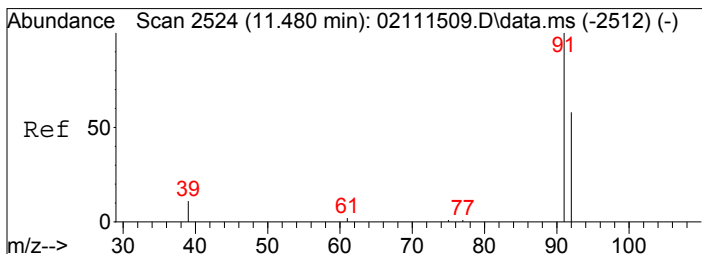
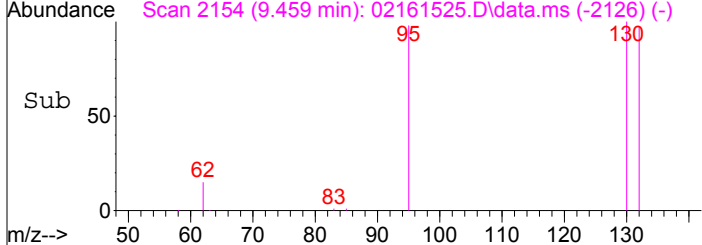
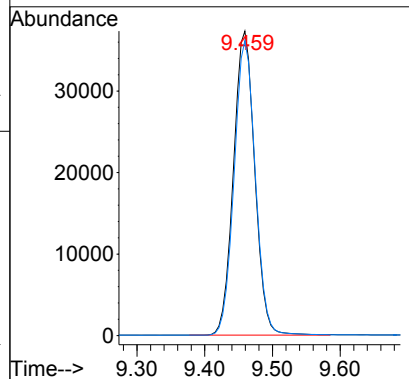
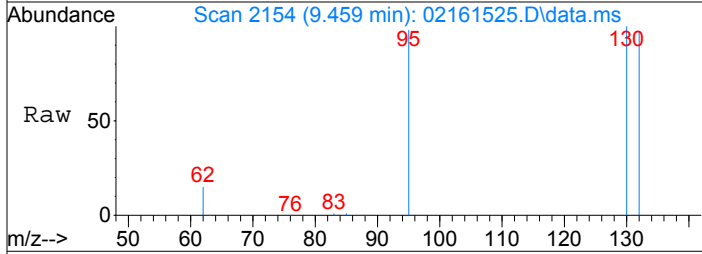
Tgt Ion: 63 Resp: 850
Ion Ratio Lower Upper
63 100
62 70.7 52.0 92.0
76 43.9 28.1 68.1





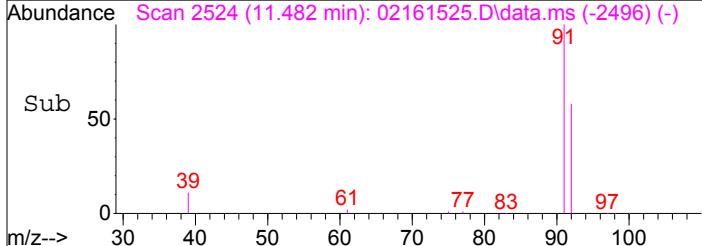
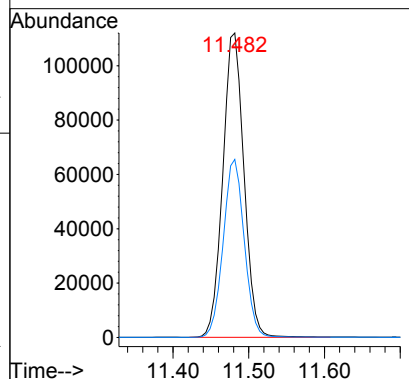
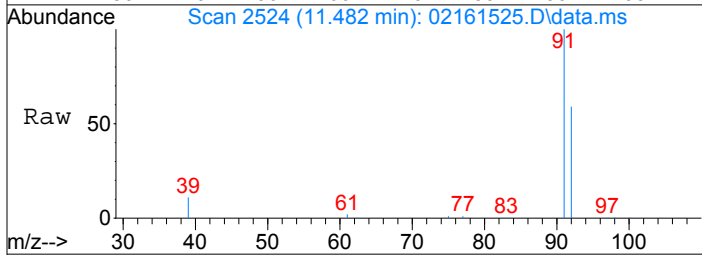
#25
 Trichloroethene
 Concen: 2119.36 pg
 RT: 9.46 min Scan# 2154
 Delta R.T. 0.001 min
 Lab File: 02161525.D
 Acq: 16 Feb 2015 23:05

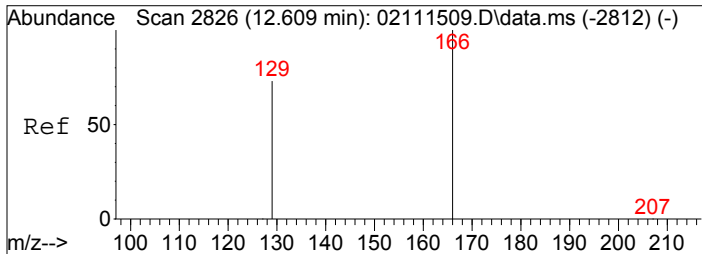
Tgt Ion: 130 Resp: 81597
 Ion Ratio Lower Upper
 130 100
 132 96.4 77.1 117.1



#31
 Toluene
 Concen: 1478.41 pg
 RT: 11.48 min Scan# 2524
 Delta R.T. 0.001 min
 Lab File: 02161525.D
 Acq: 16 Feb 2015 23:05

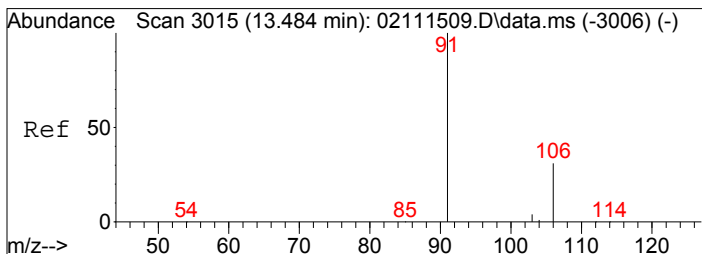
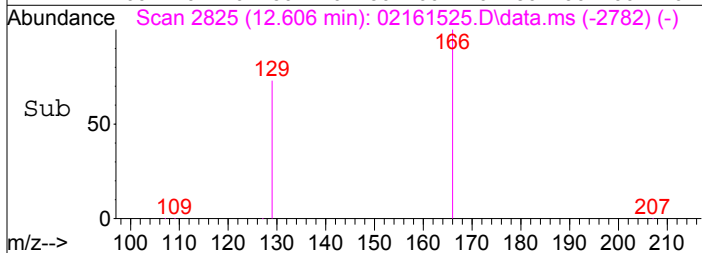
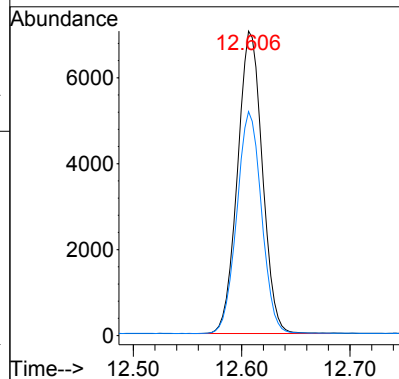
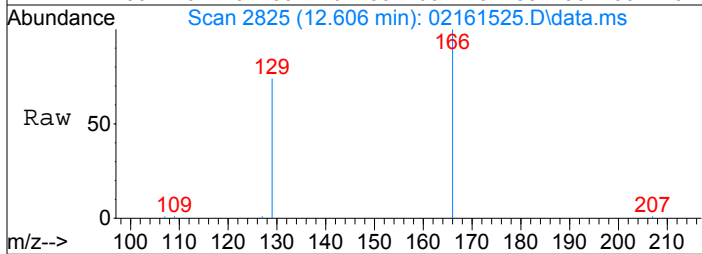
Tgt Ion: 91 Resp: 217305
 Ion Ratio Lower Upper
 91 100
 92 58.2 37.7 77.7





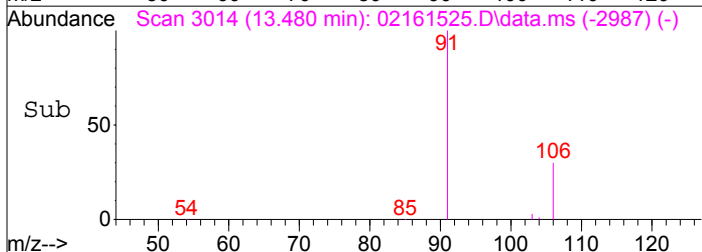
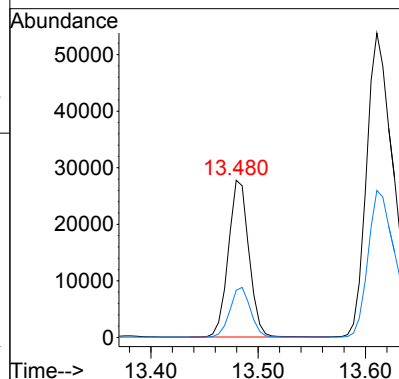
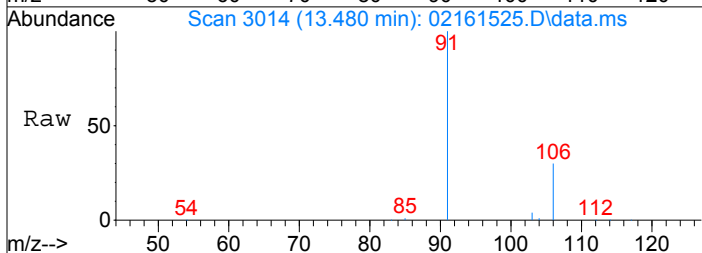
#33
Tetrachloroethene
Concen: 246.03 pg
RT: 12.61 min Scan# 2825
Delta R.T. -0.003 min
Lab File: 02161525.D
Acq: 16 Feb 2015 23:05

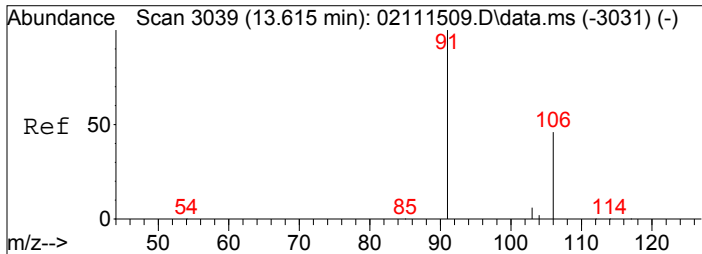
Tgt Ion: 166 Resp: 11197
Ion Ratio Lower Upper
166 100
129 73.2 53.3 93.3



#36
Ethylbenzene
Concen: 230.74 pg
RT: 13.48 min Scan# 3014
Delta R.T. -0.004 min
Lab File: 02161525.D
Acq: 16 Feb 2015 23:05

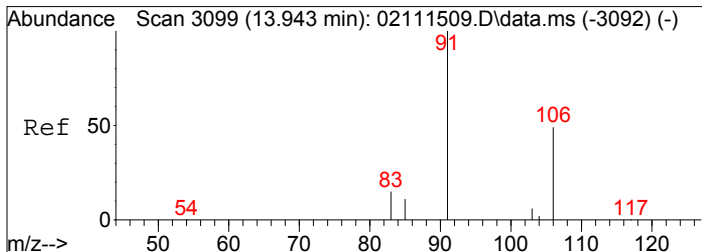
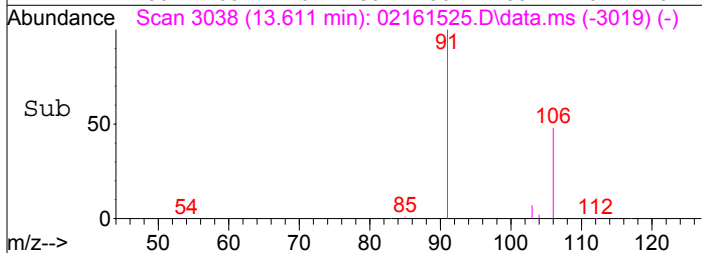
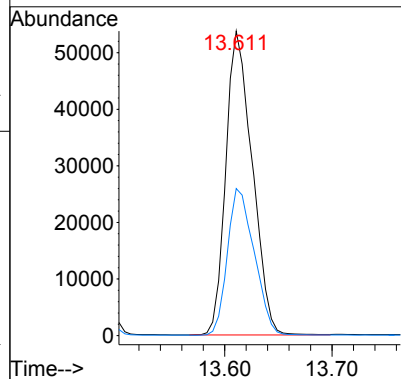
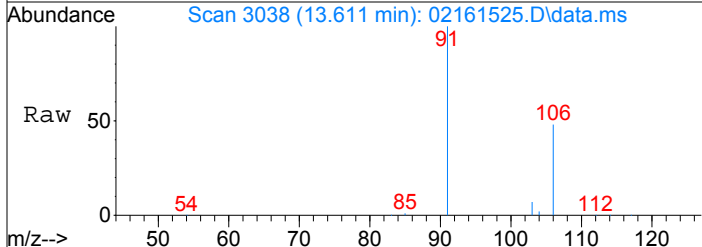
Tgt Ion: 91 Resp: 36961
Ion Ratio Lower Upper
91 100
106 31.6 10.9 50.9





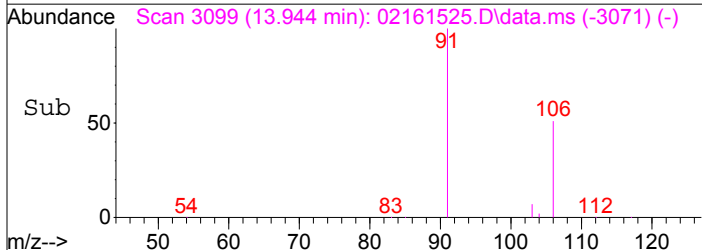
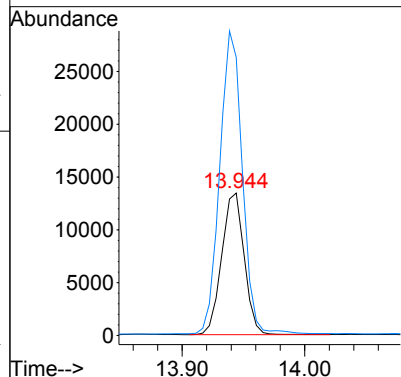
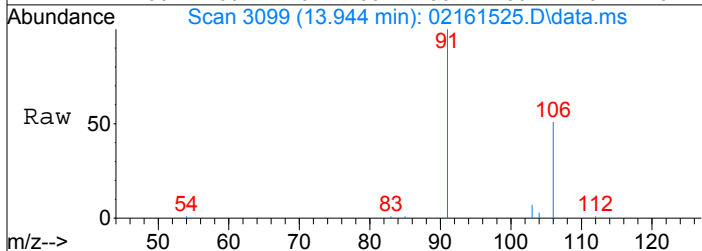
#37
m,p-Xylene
Concen: 696.84 pg
RT: 13.61 min Scan# 3038
Delta R.T. -0.004 min
Lab File: 02161525.D
Acq: 16 Feb 2015 23:05

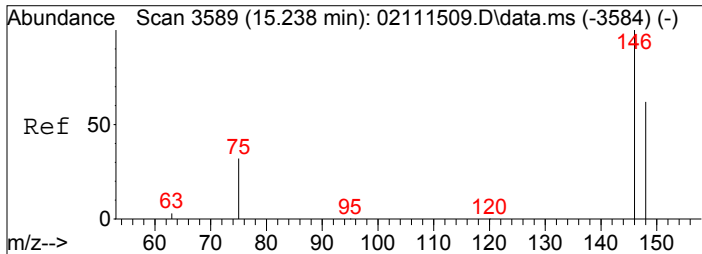
Tgt Ion: 91 Resp: 91740
Ion Ratio Lower Upper
91 100
106 49.2 27.5 67.5



#38
o-Xylene
Concen: 264.73 pg
RT: 13.94 min Scan# 3099
Delta R.T. 0.001 min
Lab File: 02161525.D
Acq: 16 Feb 2015 23:05

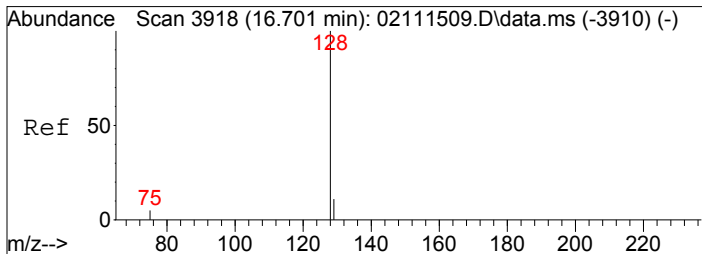
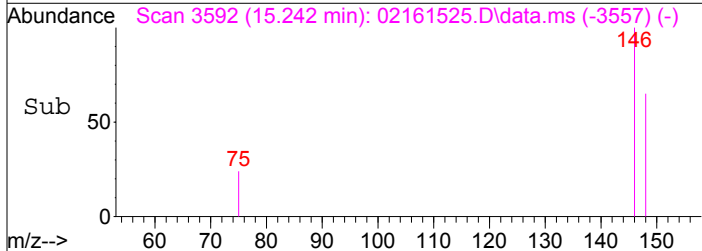
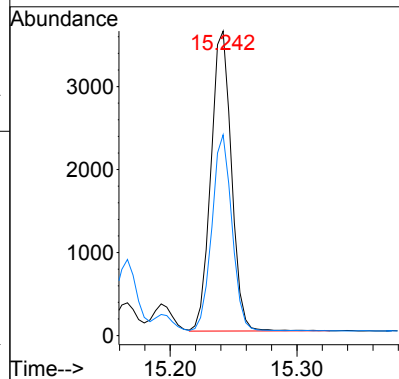
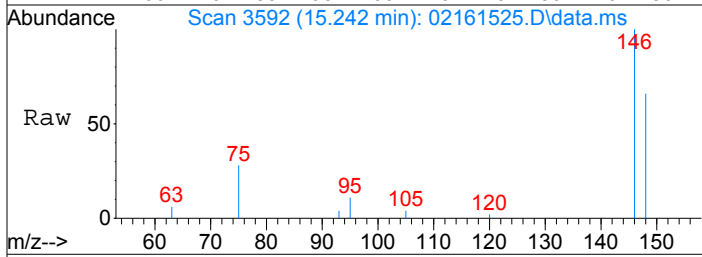
Tgt Ion: 106 Resp: 17033
Ion Ratio Lower Upper
106 100
91 215.2 198.3 238.3





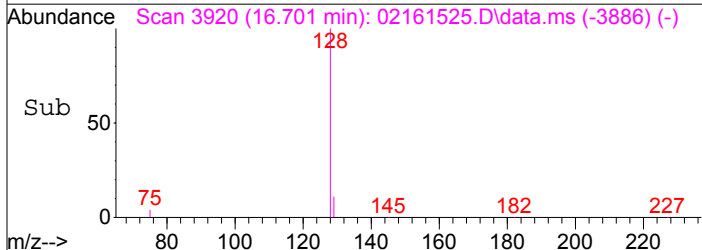
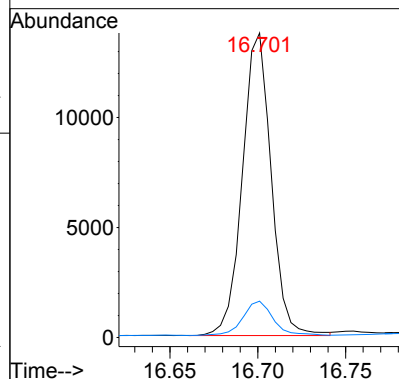
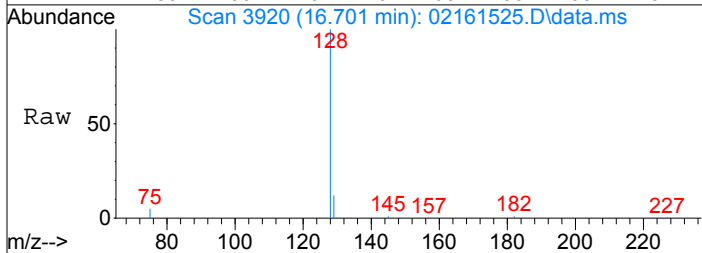
#42
 1,4-Dichlorobenzene
 Concen: 46.13 pg
 RT: 15.24 min Scan# 3592
 Delta R.T. 0.004 min
 Lab File: 02161525.D
 Acq: 16 Feb 2015 23:05

Tgt Ion:146 Resp: 4072
 Ion Ratio Lower Upper
 146 100
 148 63.5 43.5 83.5



#45
 Naphthalene
 Concen: 98.21 pg
 RT: 16.70 min Scan# 3920
 Delta R.T. 0.000 min
 Lab File: 02161525.D
 Acq: 16 Feb 2015 23:05

Tgt Ion:128 Resp: 15697
 Ion Ratio Lower Upper
 128 100
 129 12.0 0.0 30.9



Data File: I:\MS19\DATA\2015 02\16\02161526.D

Acq On : 16 Feb 2015 23:32

Operator: WA

Sample : P1500566-008 (1000mL)

Misc : S29-02041502

ALS Vial : 9 Sample Multiplier: 1

Quant Time: Feb 17 11:00:34 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

2/17/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	20370	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	150388	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	25659	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	45114	906.896	pg	0.00
Spiked Amount 1000.000			Recovery	=	90.69%	
30) Toluene-d8 (SS2)	11.38	98	140161	1010.639	pg	0.00
Spiked Amount 1000.000			Recovery	=	101.06%	
40) Bromofluorobenzene (SS3)	14.25	174	59825	1154.878	pg	0.00
Spiked Amount 1000.000			Recovery	=	115.49%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.72	85	141047	1703.796	pg	100
3) Chloromethane	1.83	52	8422	509.430	pg	98
4) Vinyl Chloride	2.01	62	128	N.D.		
5) Bromomethane	2.33	94	1415	38.012	pg	97
6) Chloroethane	2.47	64	313	N.D.		
7) Acetone	2.99	58	156788	5363.393	pg	# 72
8) Trichlorofluoromethane	3.10	101	85281	1199.316	pg	100
9) 1,1-Dichloroethene	3.66	96	85	N.D.		
10) Methylene Chloride	3.80	84	14220	421.444	pg	94
11) Trichlorotrifluoroethane	4.09	151	12753	390.307	pg	99
12) trans-1,2-Dichloroethene	4.74	96	1355	41.800	pg	97
13) 1,1-Dichloroethane	4.95	63	360	N.D.		
14) Methyl tert-Butyl Ether	0.00	73	0	N.D.	d	
15) cis-1,2-Dichloroethene	5.93	96	845	23.442	pg	99
16) Chloroform	6.31	83	8677	138.935	pg	99
18) 1,2-Dichloroethane	7.26	62	3603	72.455	pg	100
19) 1,1,1-Trichloroethane	7.59	97	1625	26.756	pg	98
20) Benzene	8.15	78	67274	523.723	pg	100
21) Carbon Tetrachloride	8.34	117	21588	474.797	pg	98
23) 1,2-Dichloropropane	9.16	63	831	25.336	pg	95
24) Bromodichloromethane	0.00	83	0	N.D.	d	
25) Trichloroethene	9.46	130	3515	90.978	pg	99
26) 1,4-Dioxane	9.53	88	253	N.D.		
27) cis-1,3-Dichloropropene	10.46	75	122	N.D.		
28) trans-1,3-Dichloropropene	11.05	75	170	N.D.		
29) 1,1,2-Trichloroethane	11.20	83	91	N.D.		
31) Toluene	11.48	91	403108	2732.933	pg	99
32) 1,2-Dibromoethane	12.12	107	108	N.D.		
33) Tetrachloroethene	12.61	166	2312	50.623	pg	99
35) Chlorobenzene	13.17	112	831	N.D.		
36) Ethylbenzene	13.48	91	83328	517.875	pg	98
37) m,p-Xylene	13.61	91	273664	2069.379	pg	96
38) o-Xylene	13.94	106	54721	846.673	pg	96
39) 1,1,2,2-Tetrachloroethane	13.89	83	351	N.D.		
41) 1,3-Dichlorobenzene	15.19	146	233	N.D.		
42) 1,4-Dichlorobenzene	15.24	146	4269	48.145	pg	99
43) 1,2-Dichlorobenzene	15.46	146	236	N.D.		
44) 1,2,4-Trichlorobenzene	16.63	182	307	N.D.		
45) Naphthalene	16.70	128	28138	175.260	pg	94
46) Hexachlorobutadiene	16.98	225	47	N.D.		

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\16\02161526.D

Acq On : 16 Feb 2015 23:32

Operator: WA

Sample : P1500566-008 (1000mL)

Misc : S29-02041502

ALS Vial : 9 Sample Multiplier: 1

Quant Time: Feb 17 11:00:34 2015

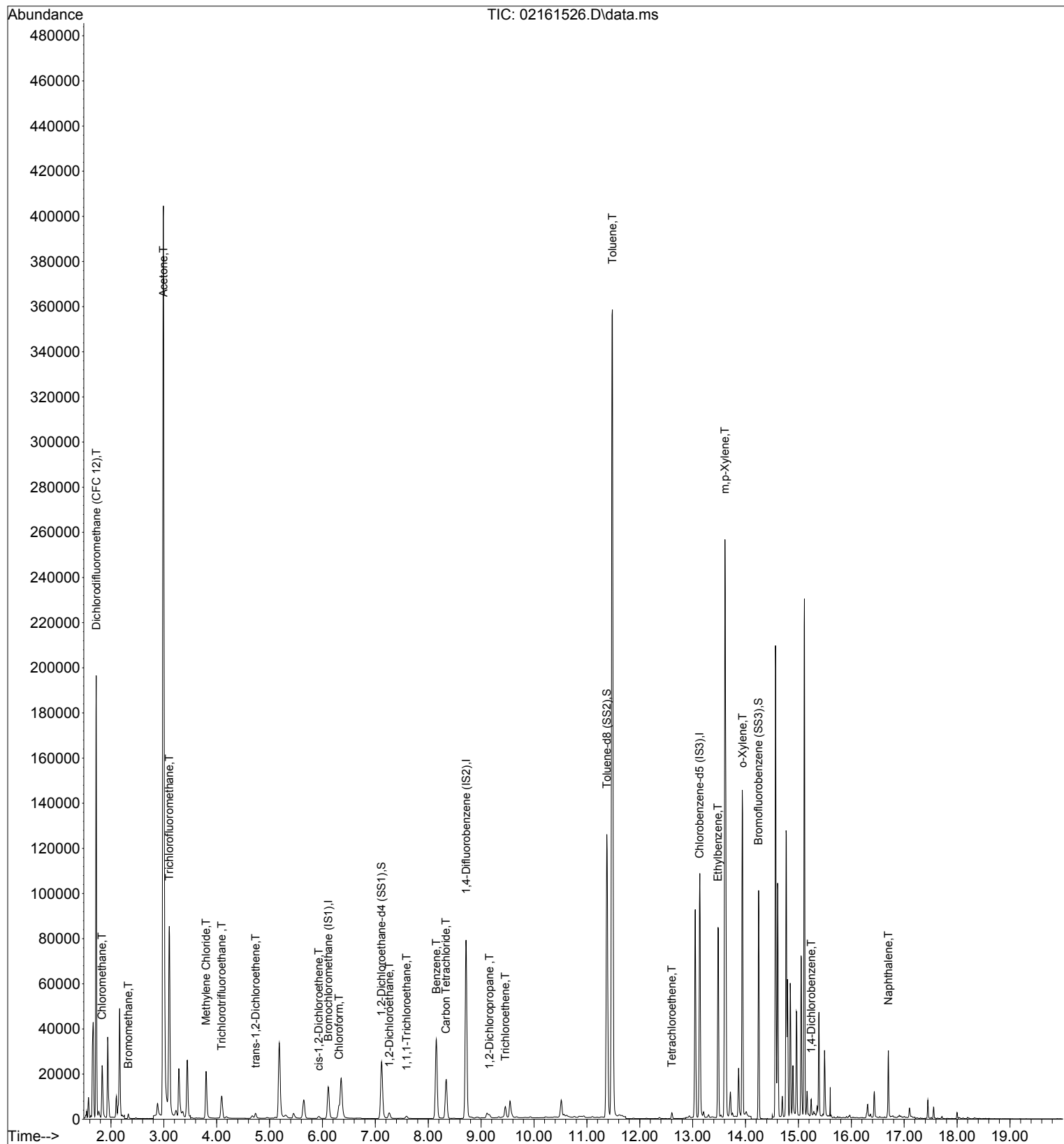
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 02\16\02161526.D

Acq On : 16 Feb 2015 23:32

Operator: WA

Sample : P1500566-008 (1000mL)

Misc : S29-02041502

ALS Vial : 9 Sample Multiplier: 1

Quant Time: Feb 17 11:00:34 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

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DataAcq Meth:TO15SIM.M

2/17/15

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34) Chlorobenzene-d5 (IS3)	13.13	54	25659	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	45114	906.896	pg	0.00
Spiked Amount 1000.000			Recovery	=	90.69%	
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Spiked Amount 1000.000			Recovery	=	101.06%	
40) Bromofluorobenzene (SS3)	14.25	174	59825	1154.878	pg	0.00
Spiked Amount 1000.000			Recovery	=	115.49%	

Target Compounds

						Qvalue
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3) Chloromethane	1.83	52	8422	509.430	pg	98
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7) Acetone	2.99	58	156788	5363.393	pg	# 72
8) Trichlorofluoromethane	3.10	101	85281	1199.316	pg	100
10) Methylene Chloride	3.80	84	14220	421.444	pg	94
11) Trichlorotrifluoroethane	4.09	151	12753	390.307	pg	99
12) trans-1,2-Dichloroethene	4.74	96	1355	41.800	pg	97
15) cis-1,2-Dichloroethene	5.93	96	845	23.442	pg	99
16) Chloroform	6.31	83	8677	138.935	pg	99
18) 1,2-Dichloroethane	7.26	62	3603	72.455	pg	100
19) 1,1,1-Trichloroethane	7.59	97	1625	26.756	pg	98
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23) 1,2-Dichloropropane	9.16	63	831	25.336	pg	95
25) Trichloroethene	9.46	130	3515	90.978	pg	99
31) Toluene	11.48	91	403108	2732.933	pg	99
33) Tetrachloroethene	12.61	166	2312	50.623	pg	99
36) Ethylbenzene	13.48	91	83328	517.875	pg	98
37) m,p-Xylene	13.61	91	273664	2069.379	pg	96
38) o-Xylene	13.94	106	54721	846.673	pg	96
42) 1,4-Dichlorobenzene	15.24	146	4269	48.145	pg	99
45) Naphthalene	16.70	128	28138	175.260	pg	94

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\16\02161526.D

Acq On : 16 Feb 2015 23:32

Operator: WA

Sample : P1500566-008 (1000mL)

Misc : S29-02041502

ALS Vial : 9 Sample Multiplier: 1

Quant Time: Feb 17 11:00:34 2015

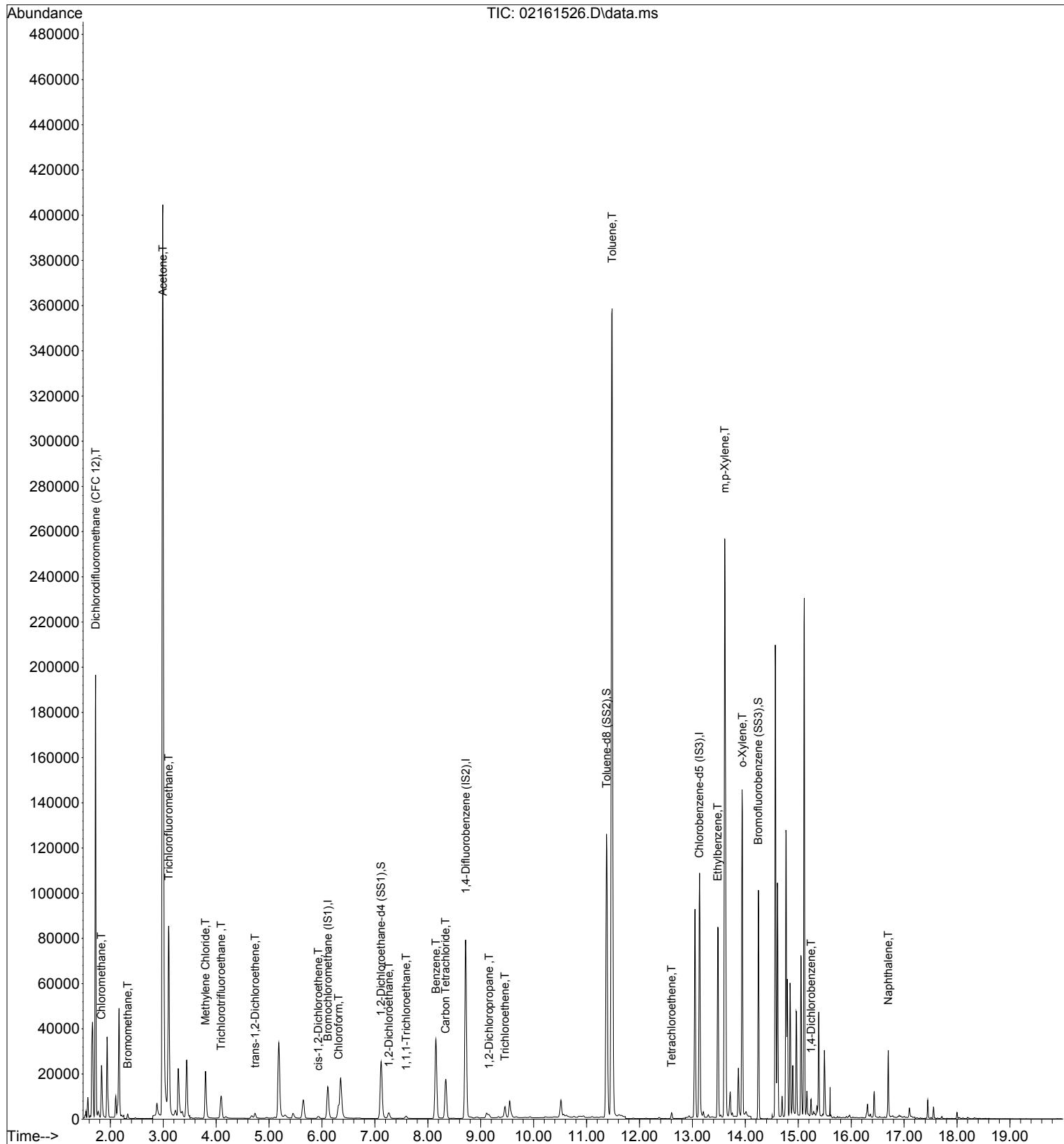
Quant Method : I:\MS19\METHODS\X19021115.M

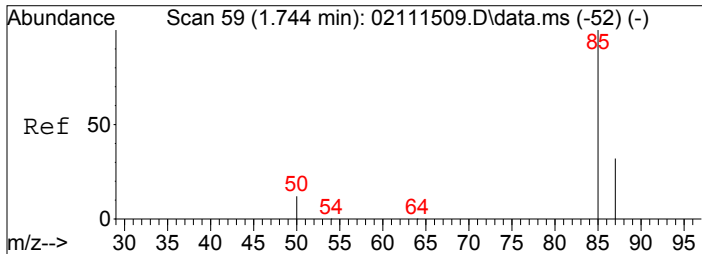
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

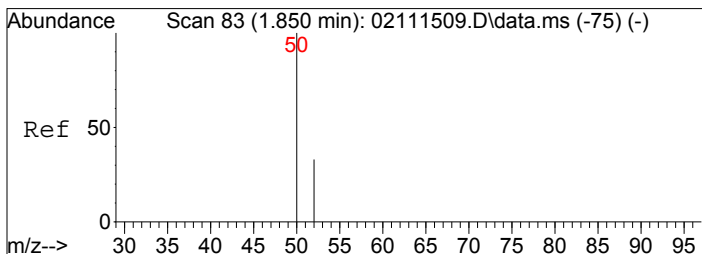
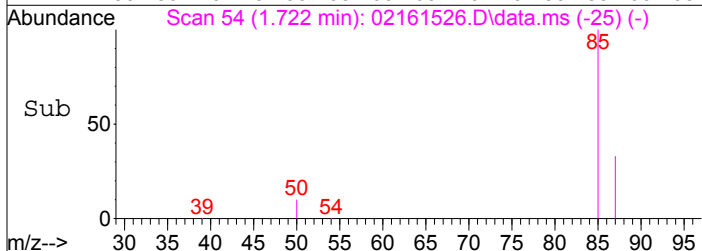
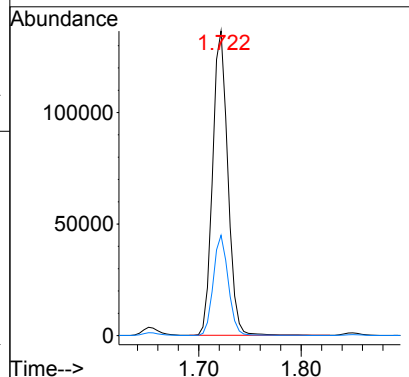
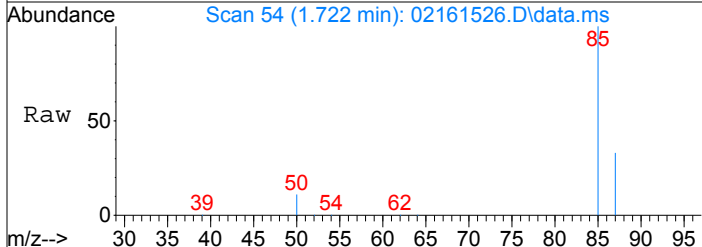
DataAcq Meth:TO15SIM.M





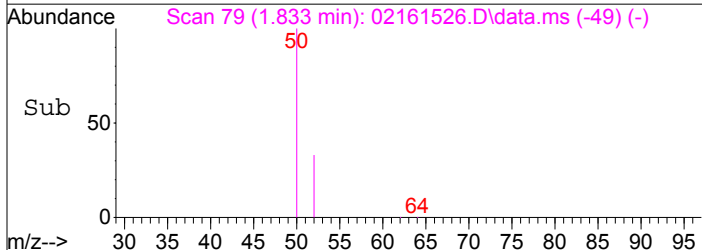
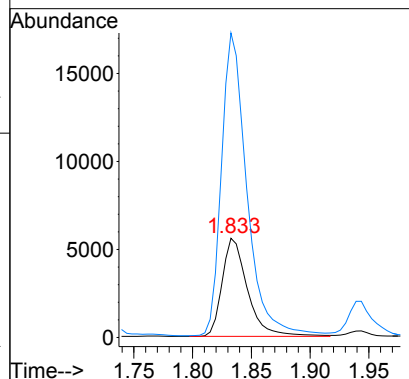
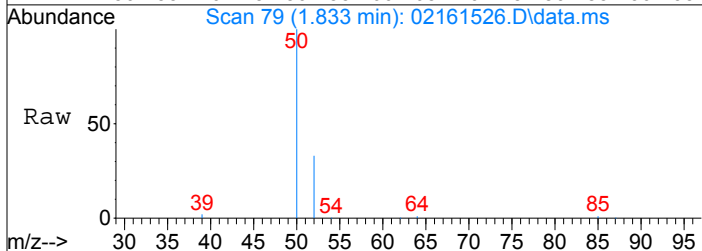
#2
 Dichlorodifluoromethane (CFC 12)
 Concen: 1703.80 pg
 RT: 1.72 min Scan# 54
 Delta R.T. -0.022 min
 Lab File: 02161526.D
 Acq: 16 Feb 2015 23:32

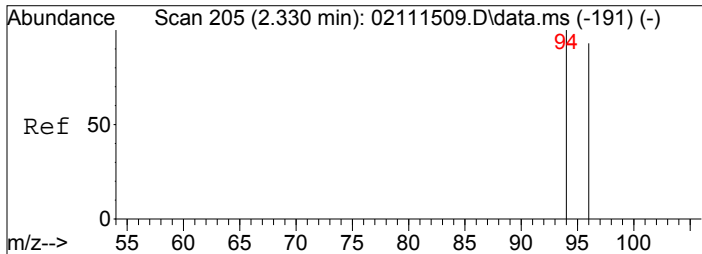
Tgt Ion: 85 Resp: 141047
 Ion Ratio Lower Upper
 85 100
 87 32.4 12.4 52.4



#3
 Chloromethane
 Concen: 509.43 pg
 RT: 1.83 min Scan# 79
 Delta R.T. -0.017 min
 Lab File: 02161526.D
 Acq: 16 Feb 2015 23:32

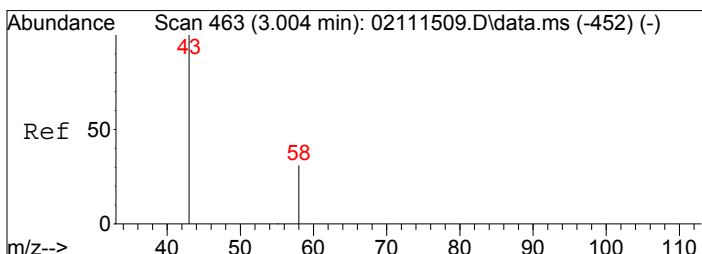
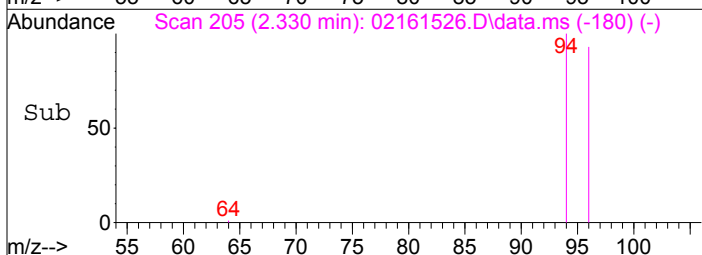
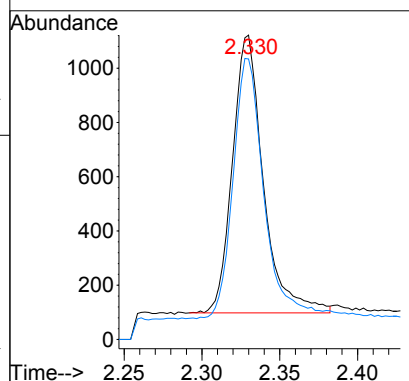
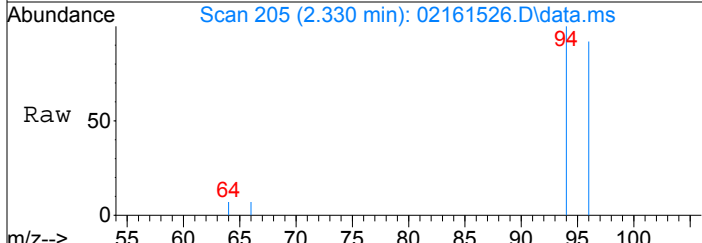
Tgt Ion: 52 Resp: 8422
 Ion Ratio Lower Upper
 52 100
 50 307.7 283.7 323.7





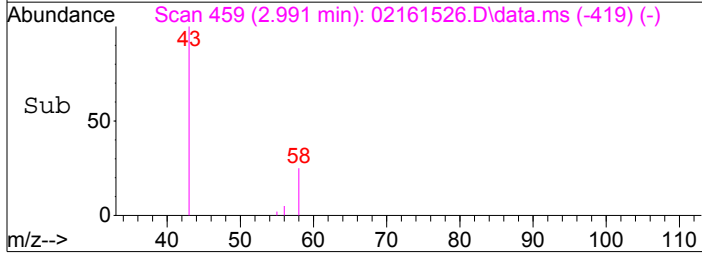
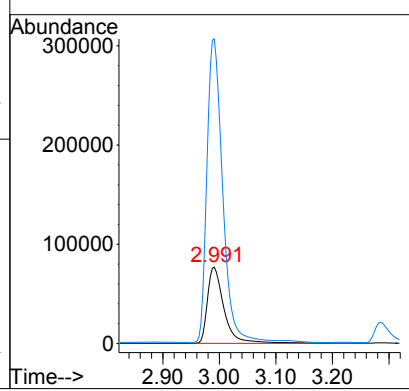
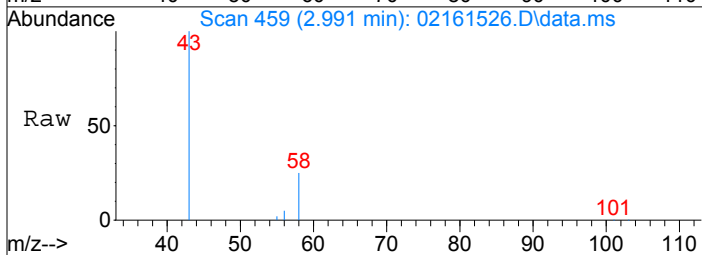
#5
 Bromomethane
 Concen: 38.01 pg
 RT: 2.33 min Scan# 205
 Delta R.T. -0.000 min
 Lab File: 02161526.D
 Acq: 16 Feb 2015 23:32

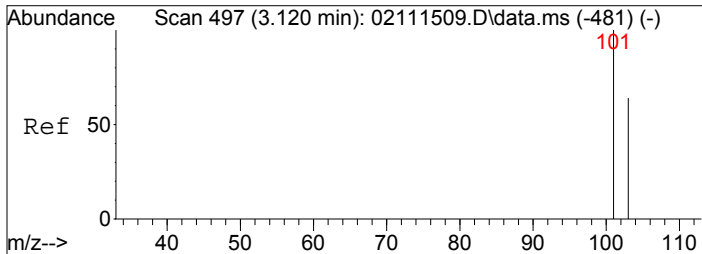
Tgt Ion:	94	Resp:	1415
Ion Ratio	Lower	Upper	
94	100		
96	96.9	75.5	113.3



#7
 Acetone
 Concen: 5363.39 pg
 RT: 2.99 min Scan# 459
 Delta R.T. -0.013 min
 Lab File: 02161526.D
 Acq: 16 Feb 2015 23:32

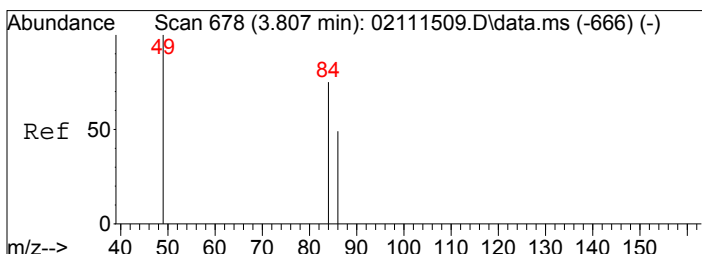
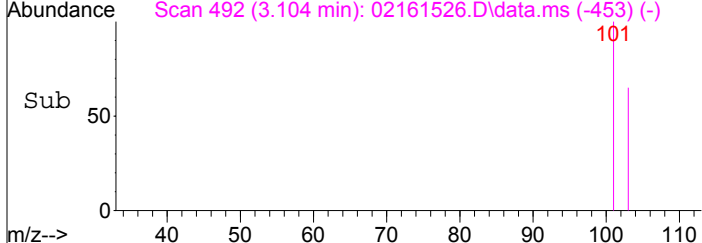
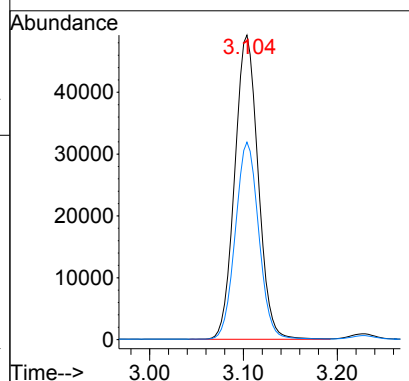
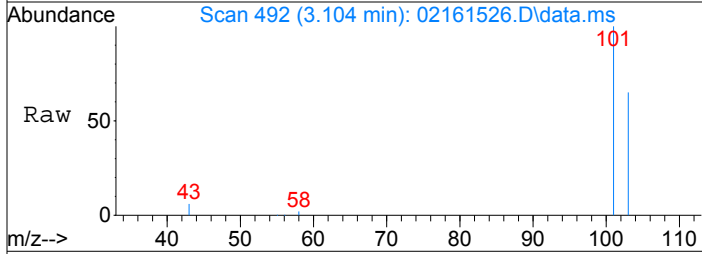
Tgt Ion:	58	Resp:	156788
Ion Ratio	Lower	Upper	
58	100		
43	379.1	301.8	341.8#





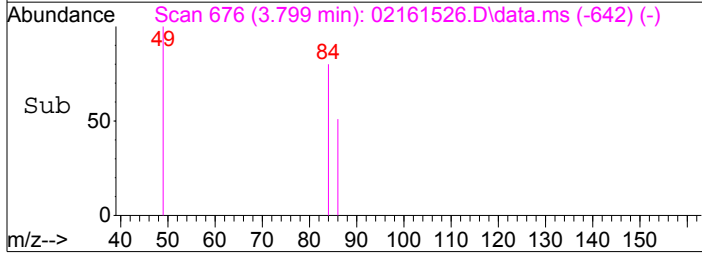
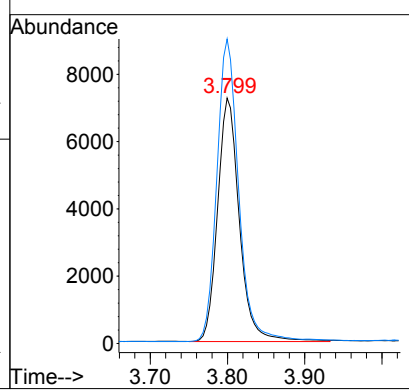
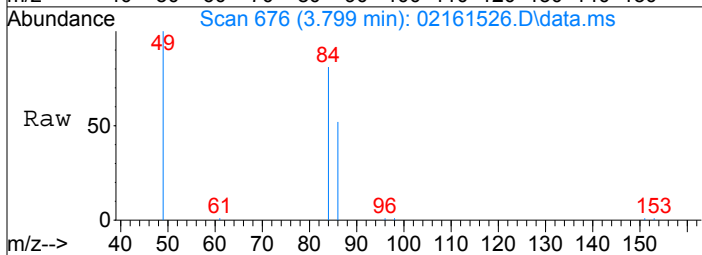
#8
 Trichlorofluoromethane
 Concen: 1199.32 pg
 RT: 3.10 min Scan# 492
 Delta R.T. -0.016 min
 Lab File: 02161526.D
 Acq: 16 Feb 2015 23:32

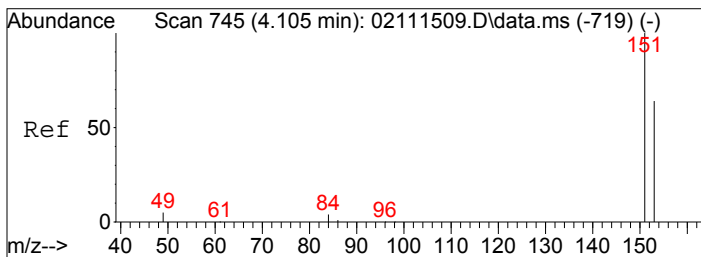
Tgt Ion: 101	Resp: 85281
Ion Ratio	Lower Upper
101	100
103	64.8 51.8 77.6



#10
 Methylene Chloride
 Concen: 421.44 pg
 RT: 3.80 min Scan# 676
 Delta R.T. -0.008 min
 Lab File: 02161526.D
 Acq: 16 Feb 2015 23:32

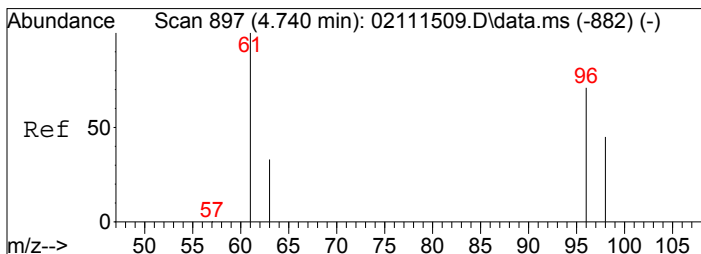
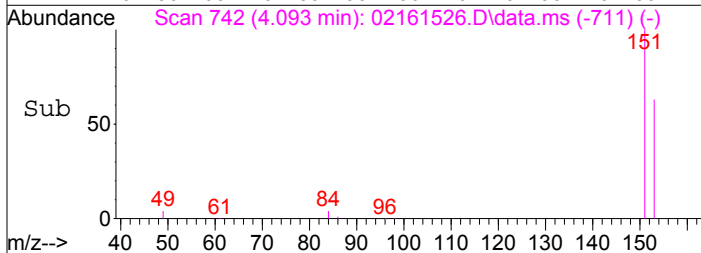
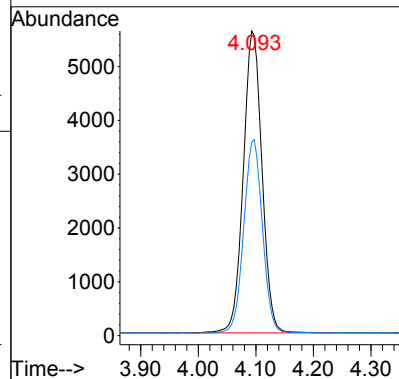
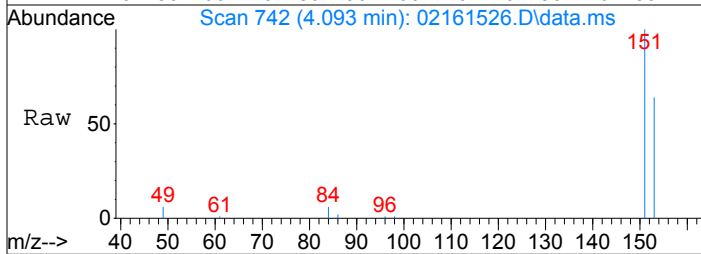
Tgt Ion: 84	Resp: 14220
Ion Ratio	Lower Upper
84	100
49	125.2 112.3 152.3





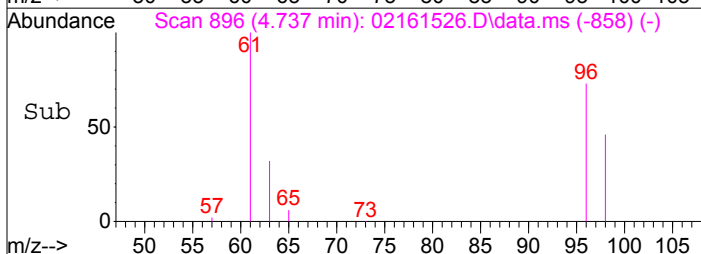
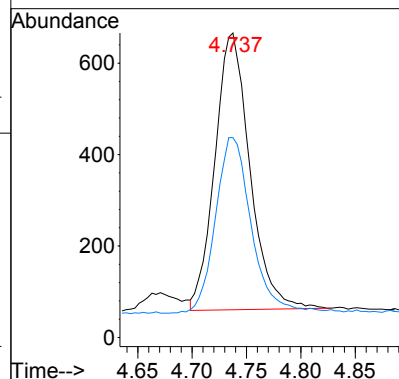
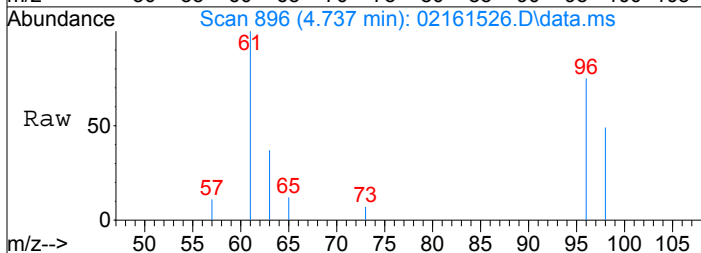
#11
Trichlorotrifluoroethane
Concen: 390.31 pg
RT: 4.09 min Scan# 742
Delta R.T. -0.012 min
Lab File: 02161526.D
Acq: 16 Feb 2015 23:32

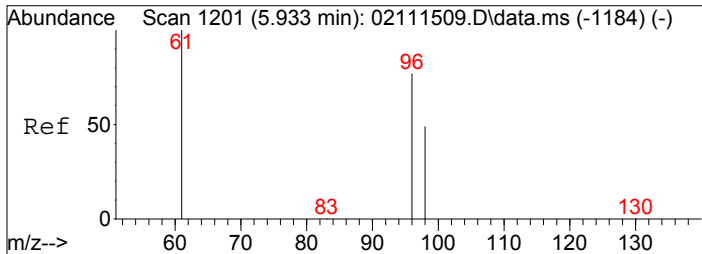
Tgt Ion: 151 Resp: 12753
Ion Ratio Lower Upper
151 100
153 64.0 43.6 83.6



#12
trans-1,2-Dichloroethene
Concen: 41.80 pg
RT: 4.74 min Scan# 896
Delta R.T. -0.003 min
Lab File: 02161526.D
Acq: 16 Feb 2015 23:32

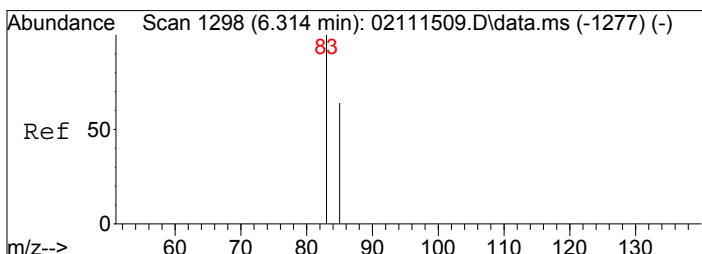
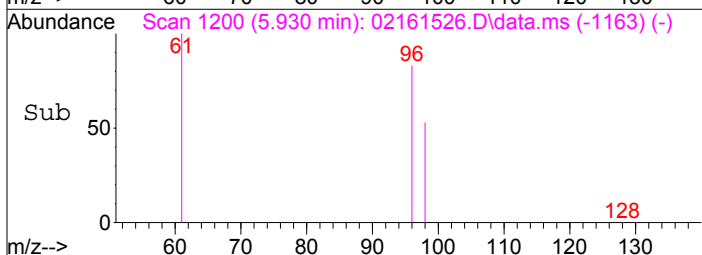
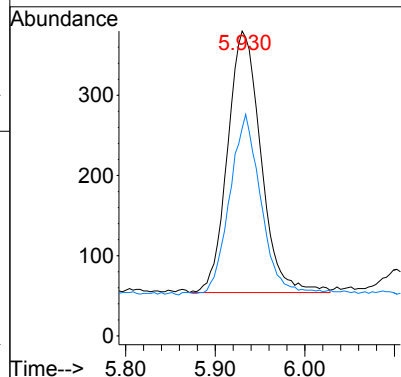
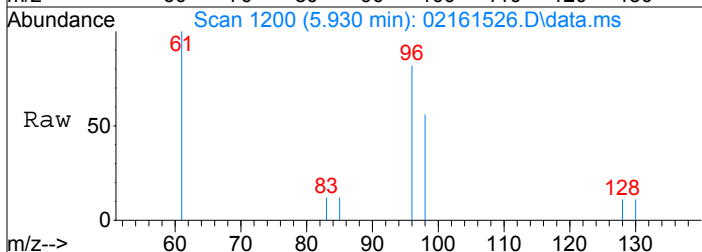
Tgt Ion: 96 Resp: 1355
Ion Ratio Lower Upper
96 100
98 65.8 43.7 83.7





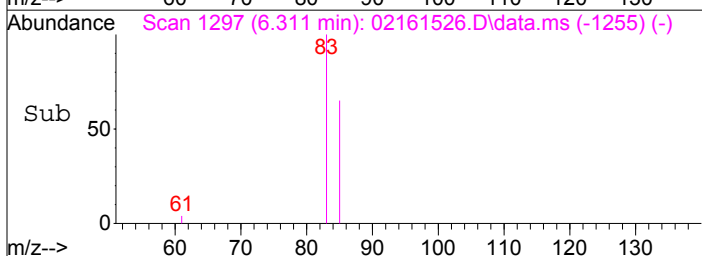
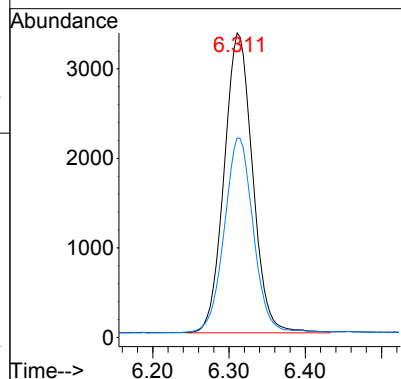
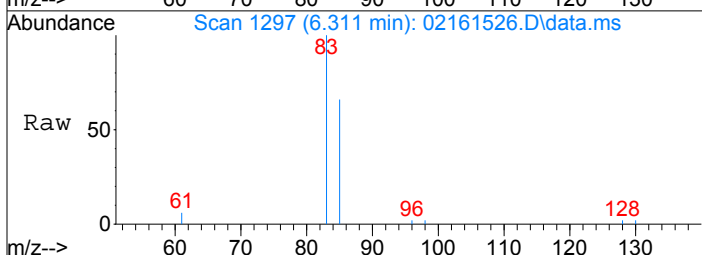
#15
 cis-1,2-Dichloroethene
 Concen: 23.44 pg
 RT: 5.93 min Scan# 1200
 Delta R.T. -0.003 min
 Lab File: 02161526.D
 Acq: 16 Feb 2015 23:32

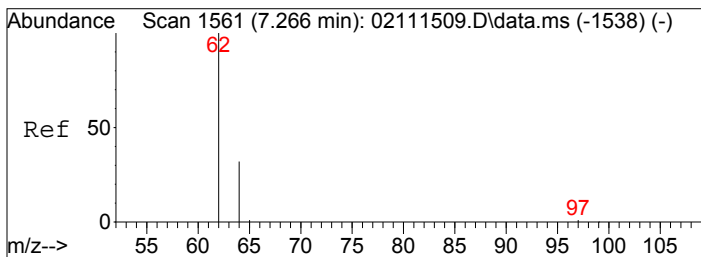
Tgt Ion:	96	Resp:	845
Ion Ratio	Lower	Upper	
96	100		
98	63.2	44.3	84.3



#16
 Chloroform
 Concen: 138.93 pg
 RT: 6.31 min Scan# 1297
 Delta R.T. -0.003 min
 Lab File: 02161526.D
 Acq: 16 Feb 2015 23:32

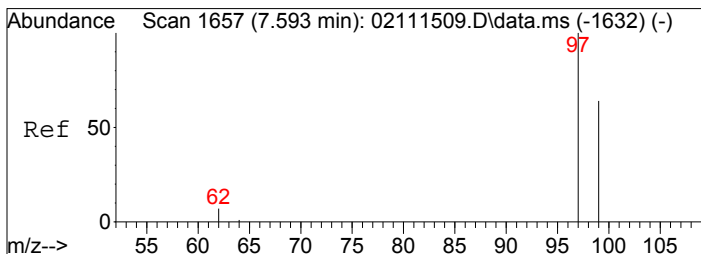
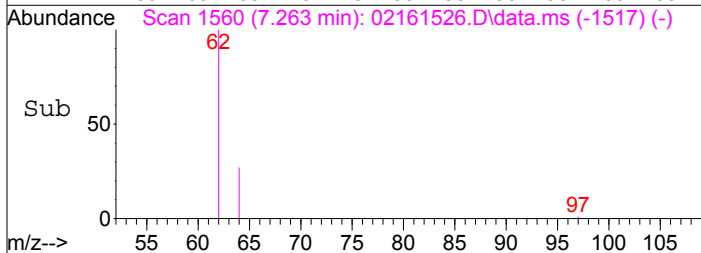
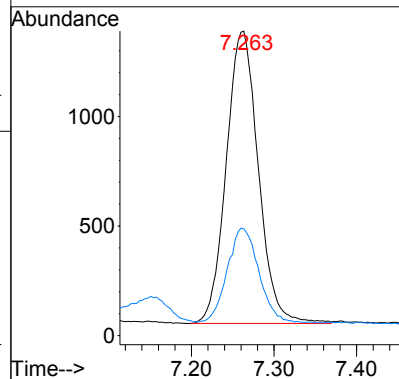
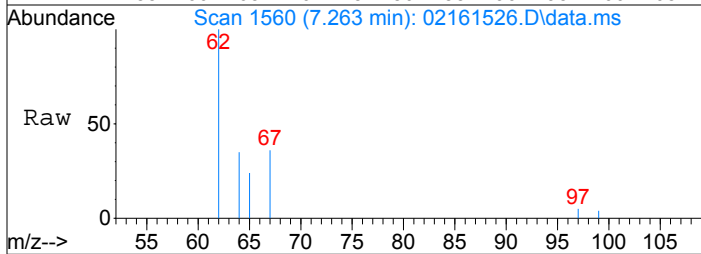
Tgt Ion:	83	Resp:	8677
Ion Ratio	Lower	Upper	
83	100		
85	66.5	45.4	85.4





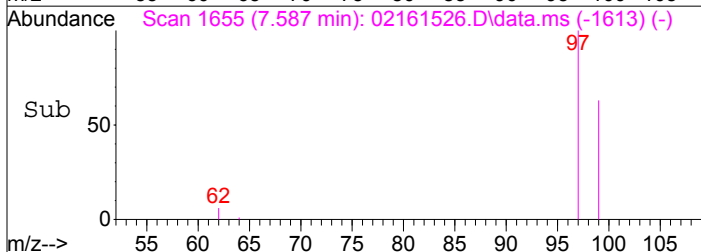
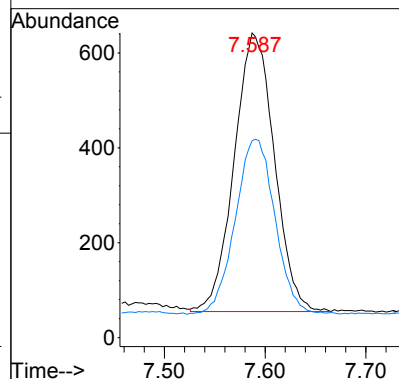
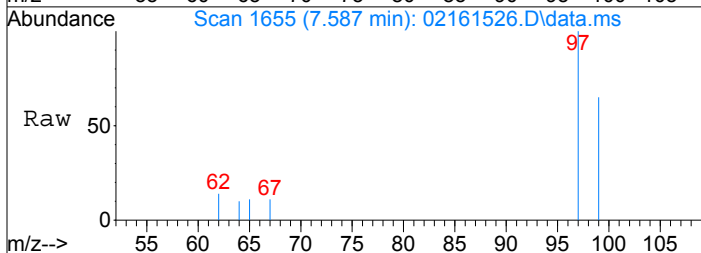
#18
1,2-Dichloroethane
Concen: 72.46 pg
RT: 7.26 min Scan# 1560
Delta R.T. -0.002 min
Lab File: 02161526.D
Acq: 16 Feb 2015 23:32

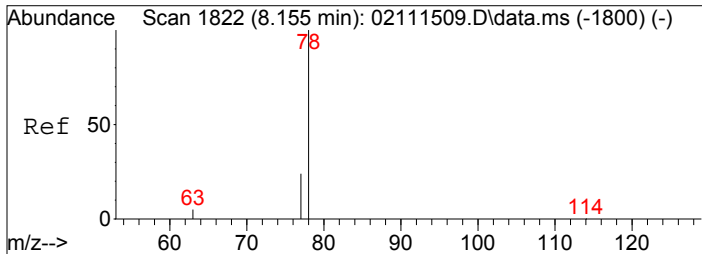
Tgt Ion: 62 Resp: 3603
Ion Ratio Lower Upper
62 100
64 31.4 11.6 51.6



#19
1,1,1-Trichloroethane
Concen: 26.76 pg
RT: 7.59 min Scan# 1655
Delta R.T. -0.006 min
Lab File: 02161526.D
Acq: 16 Feb 2015 23:32

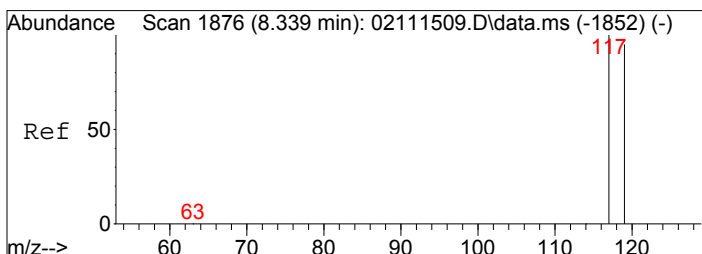
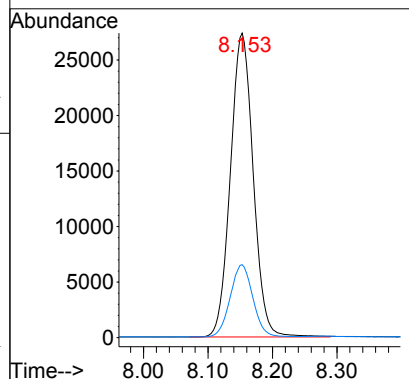
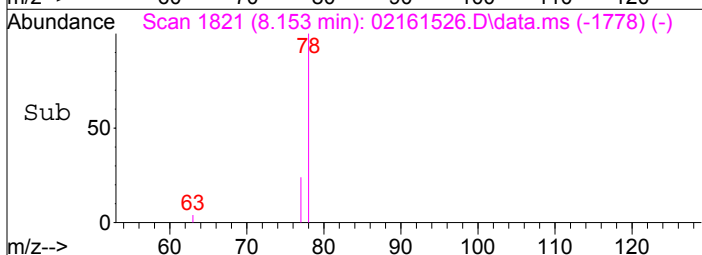
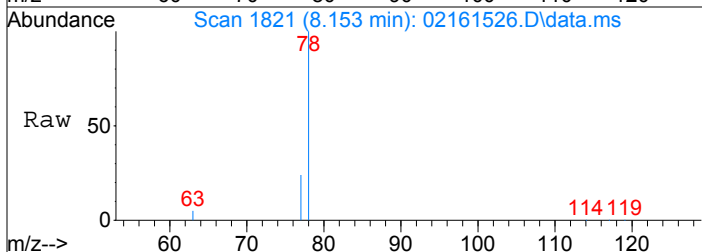
Tgt Ion: 97 Resp: 1625
Ion Ratio Lower Upper
97 100
99 62.5 44.0 84.0





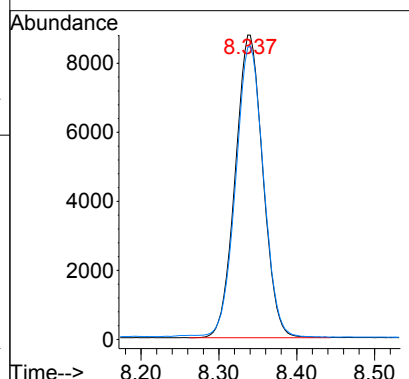
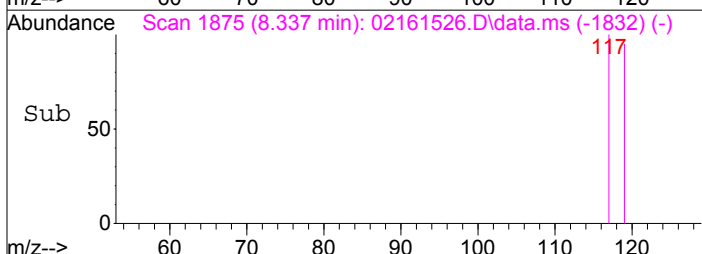
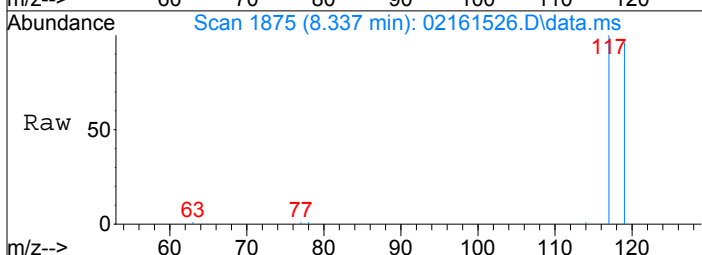
#20
Benzene
Concen: 523.72 pg
RT: 8.15 min Scan# 1821
Delta R.T. -0.002 min
Lab File: 02161526.D
Acq: 16 Feb 2015 23:32

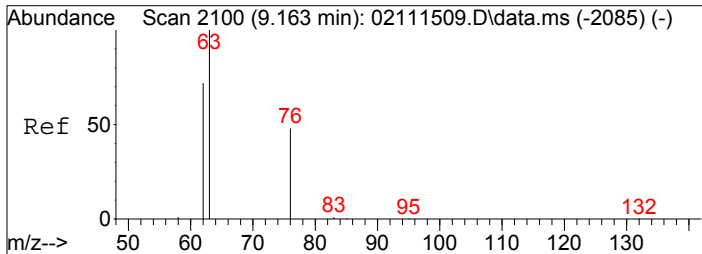
Tgt Ion: 78 Resp: 67274
Ion Ratio Lower Upper
78 100
77 23.7 3.7 43.7



#21
Carbon Tetrachloride
Concen: 474.80 pg
RT: 8.34 min Scan# 1875
Delta R.T. -0.002 min
Lab File: 02161526.D
Acq: 16 Feb 2015 23:32

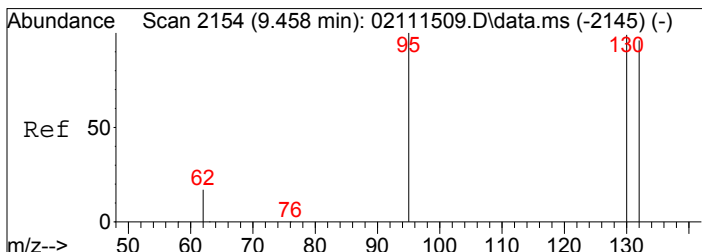
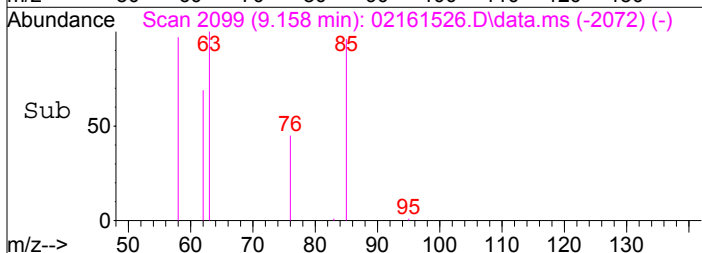
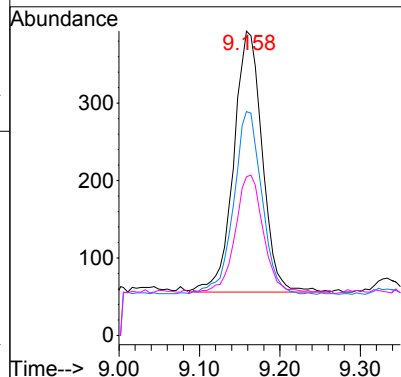
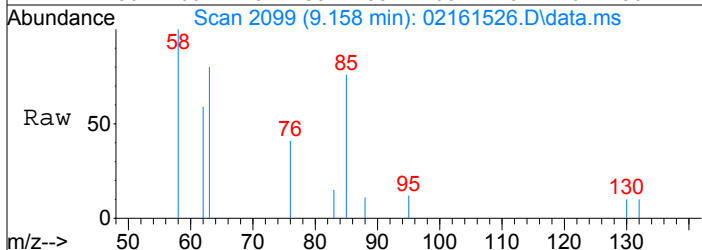
Tgt Ion: 117 Resp: 21588
Ion Ratio Lower Upper
117 100
119 97.5 75.5 115.5





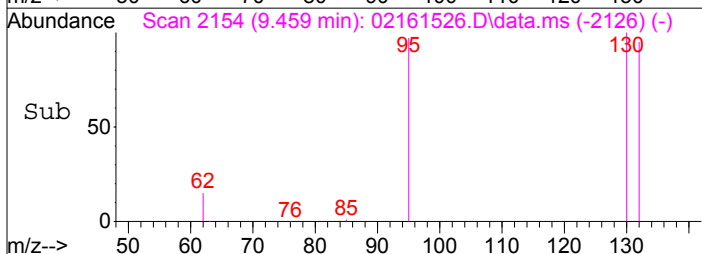
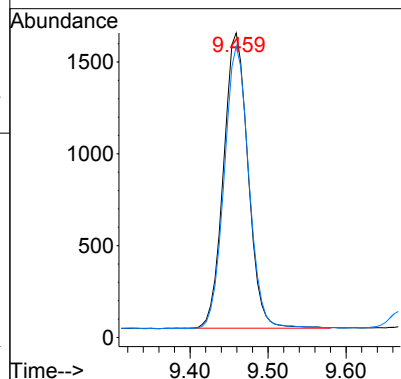
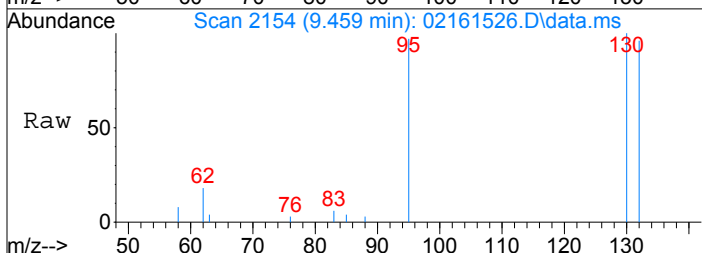
#23
1,2-Dichloropropane
Concen: 25.34 pg
RT: 9.16 min Scan# 2099
Delta R.T. -0.004 min
Lab File: 02161526.D
Acq: 16 Feb 2015 23:32

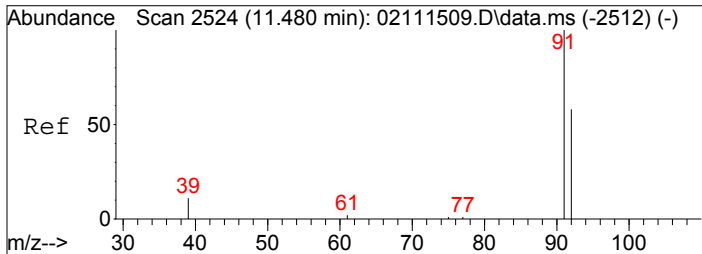
Tgt Ion: 63 Resp: 831
Ion Ratio Lower Upper
63 100
62 68.7 52.0 92.0
76 43.6 28.1 68.1



#25
Trichloroethene
Concen: 90.98 pg
RT: 9.46 min Scan# 2154
Delta R.T. 0.001 min
Lab File: 02161526.D
Acq: 16 Feb 2015 23:32

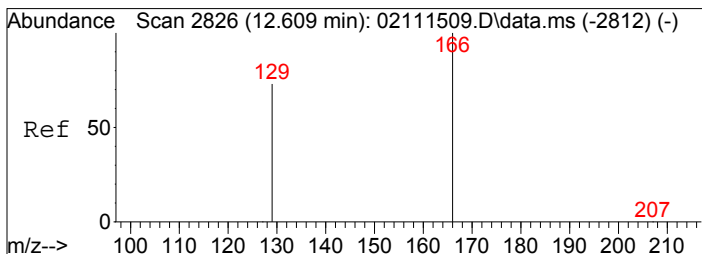
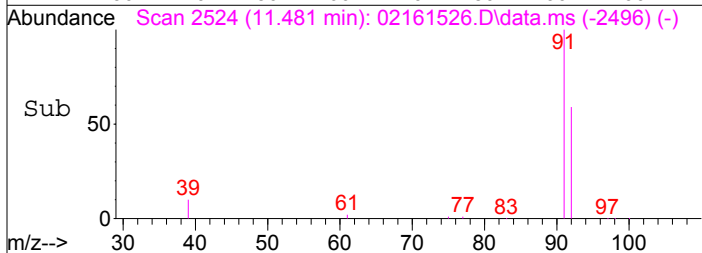
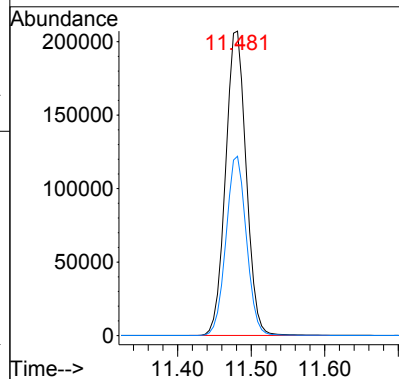
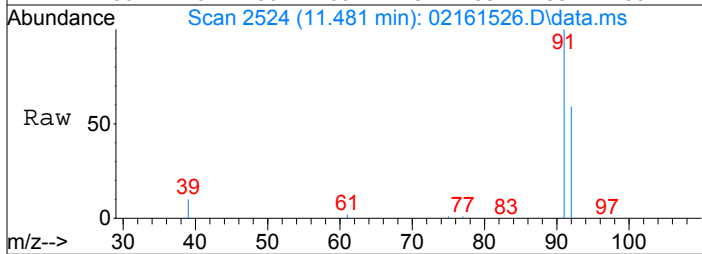
Tgt Ion: 130 Resp: 3515
Ion Ratio Lower Upper
130 100
132 96.4 77.1 117.1





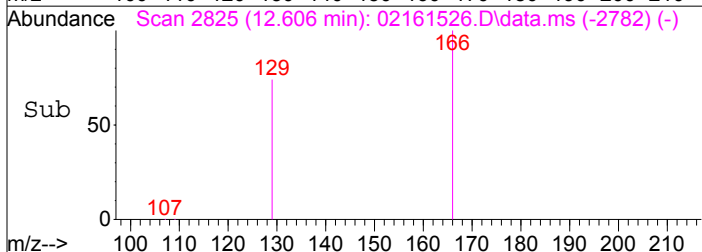
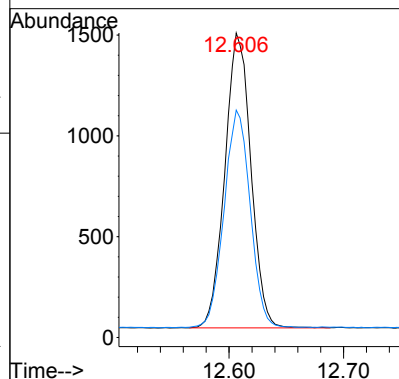
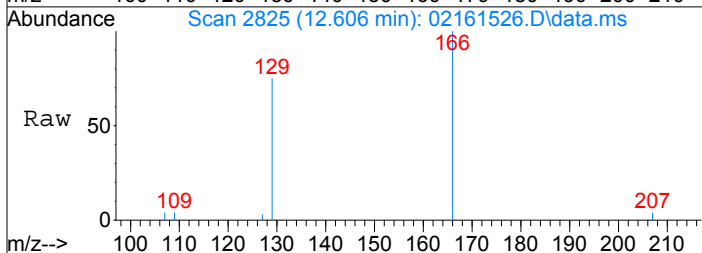
#31
Toluene
Concen: 2732.93 pg
RT: 11.48 min Scan# 2524
Delta R.T. 0.001 min
Lab File: 02161526.D
Acq: 16 Feb 2015 23:32

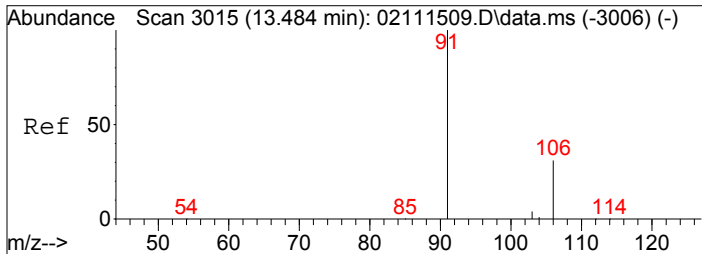
Tgt Ion: 91 Resp: 403108
Ion Ratio Lower Upper
91 100
92 58.4 37.7 77.7



#33
Tetrachloroethene
Concen: 50.62 pg
RT: 12.61 min Scan# 2825
Delta R.T. -0.003 min
Lab File: 02161526.D
Acq: 16 Feb 2015 23:32

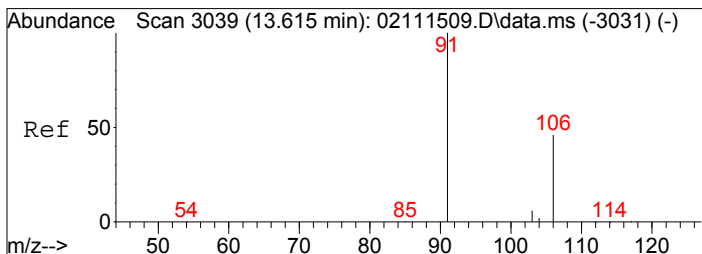
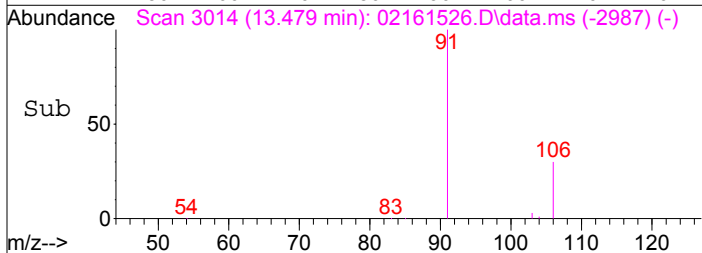
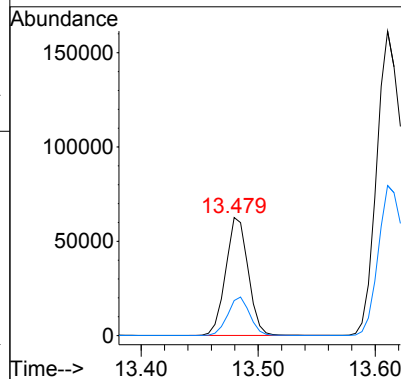
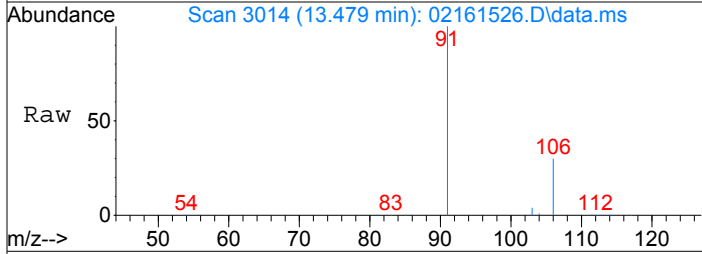
Tgt Ion: 166 Resp: 2312
Ion Ratio Lower Upper
166 100
129 74.1 53.3 93.3





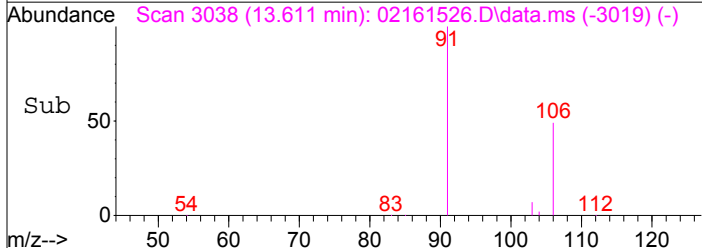
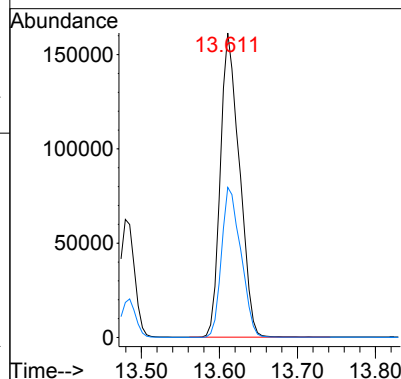
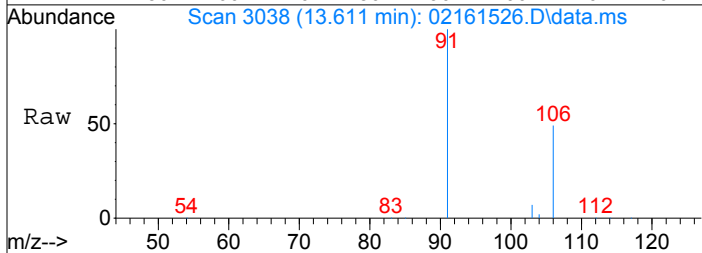
#36
Ethylbenzene
Concen: 517.88 pg
RT: 13.48 min Scan# 3014
Delta R.T. -0.004 min
Lab File: 02161526.D
Acq: 16 Feb 2015 23:32

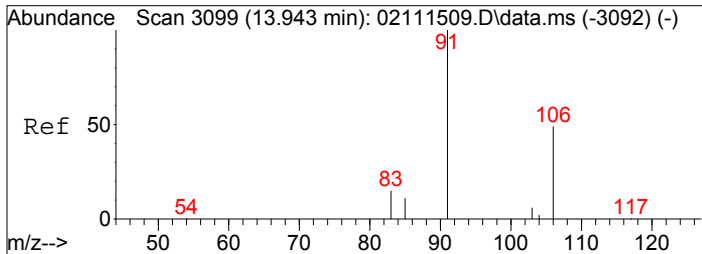
Tgt Ion: 91 Resp: 83328
Ion Ratio Lower Upper
91 100
106 32.0 10.9 50.9



#37
m,p-Xylene
Concen: 2069.38 pg
RT: 13.61 min Scan# 3038
Delta R.T. -0.004 min
Lab File: 02161526.D
Acq: 16 Feb 2015 23:32

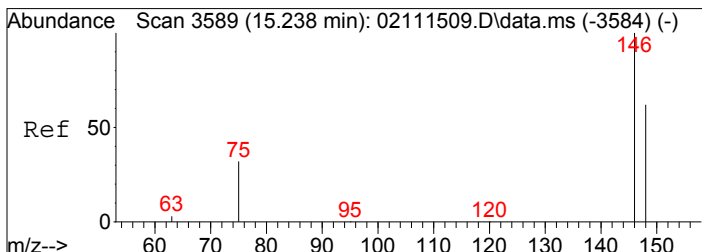
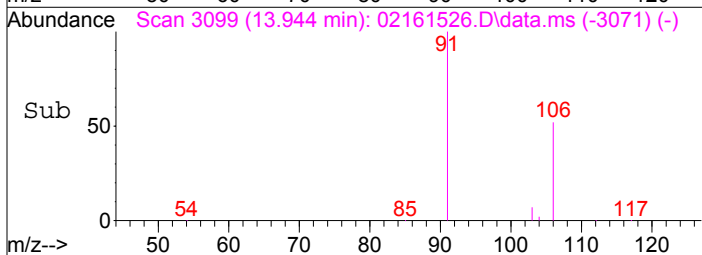
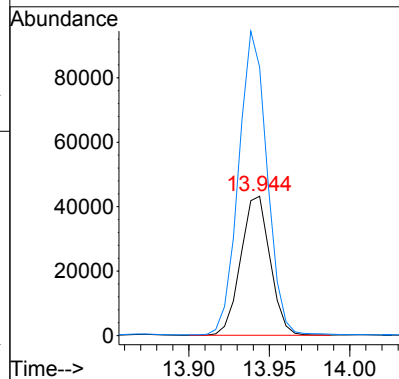
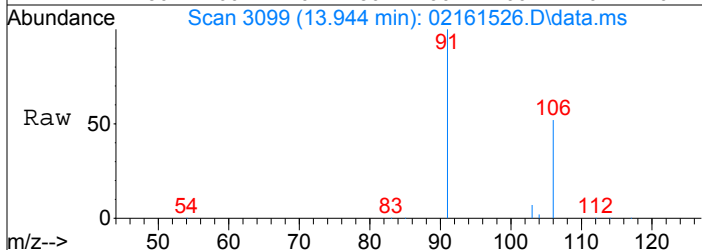
Tgt Ion: 91 Resp: 273664
Ion Ratio Lower Upper
91 100
106 50.1 27.5 67.5





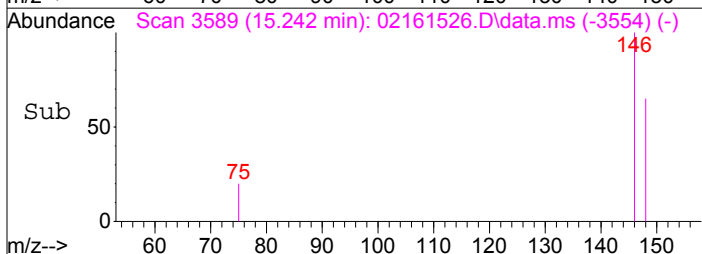
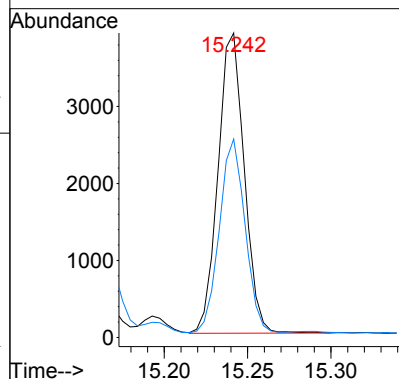
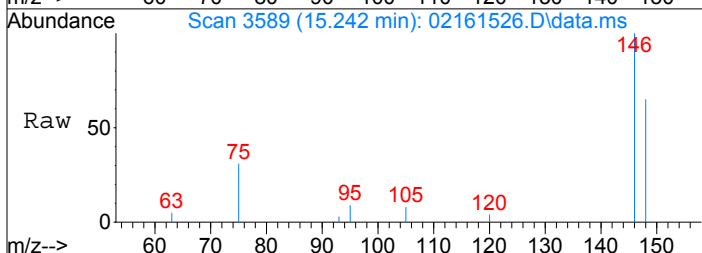
#38
o-Xylene
Concen: 846.67 pg
RT: 13.94 min Scan# 3099
Delta R.T. 0.001 min
Lab File: 02161526.D
Acq: 16 Feb 2015 23:32

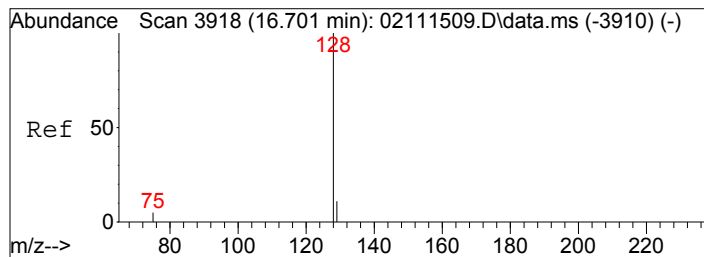
Tgt Ion:106 Resp: 54721
Ion Ratio Lower Upper
106 100
91 212.5 198.3 238.3



#42
1,4-Dichlorobenzene
Concen: 48.14 pg
RT: 15.24 min Scan# 3589
Delta R.T. 0.004 min
Lab File: 02161526.D
Acq: 16 Feb 2015 23:32

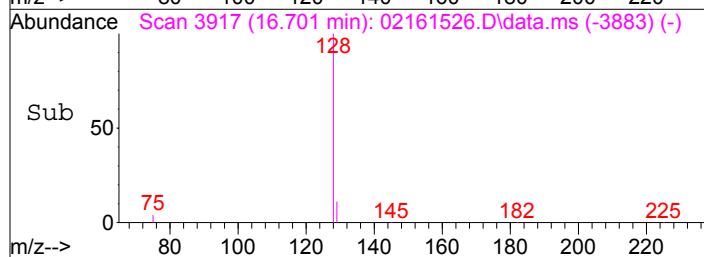
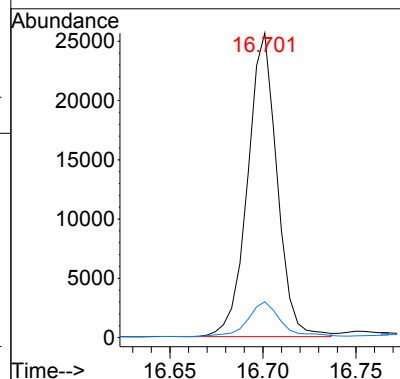
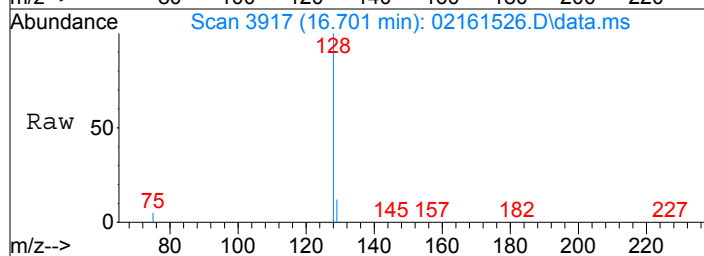
Tgt Ion:146 Resp: 4269
Ion Ratio Lower Upper
146 100
148 63.0 43.5 83.5





#45
Naphthalene
Concen: 175.26 pg
RT: 16.70 min Scan# 3917
Delta R.T. 0.000 min
Lab File: 02161526.D
Acq: 16 Feb 2015 23:32

Tgt Ion	Ratio	Lower	Upper
128	100		
129	13.2	0.0	30.9



Data File: I:\MS19\DATA\2015 02\16\02161527.D

Acq On : 17 Feb 2015 00:00

Operator: WA

Sample : P1500566-009 (1000mL)

Misc : S29-02041502

ALS Vial : 10 Sample Multiplier: 1

Quant Time: Feb 17 06:52:03 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

2/17/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	20470	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	147971	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	25036	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	45011	900.405	pg	0.00
Spiked Amount 1000.000			Recovery	=	90.04%	
30) Toluene-d8 (SS2)	11.38	98	139379	1021.417	pg	0.00
Spiked Amount 1000.000			Recovery	=	102.14%	
40) Bromofluorobenzene (SS3)	14.25	174	56849	1124.737	pg	0.00
Spiked Amount 1000.000			Recovery	=	112.47%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.73	85	172373	2072.030	pg	100
3) Chloromethane	1.83	52	9968	599.999	pg	99
4) Vinyl Chloride	2.01	62	152	N.D.		
5) Bromomethane	2.33	94	1550	41.435	pg	98
6) Chloroethane	2.47	64	415	N.D.		
7) Acetone	2.99	58	148875	5067.826	pg	# 84
8) Trichlorofluoromethane	3.10	101	103011	1441.578	pg	100
9) 1,1-Dichloroethene	3.66	96	25	N.D.		
10) Methylene Chloride	3.80	84	11931	351.877	pg	94
11) Trichlorotrifluoroethane	4.10	151	15400	469.017	pg	100
12) trans-1,2-Dichloroethene	4.74	96	415	N.D.		
13) 1,1-Dichloroethane	4.94	63	253	N.D.		
14) Methyl tert-Butyl Ether	5.12	73	559	N.D.		
15) cis-1,2-Dichloroethene	5.93	96	187	N.D.		
16) Chloroform	6.31	83	6279	100.047	pg	99
18) 1,2-Dichloroethane	7.26	62	3599	72.021	pg	100
19) 1,1,1-Trichloroethane	7.59	97	1017	N.D.		
20) Benzene	8.15	78	57142	442.673	pg	100
21) Carbon Tetrachloride	8.34	117	20898	457.376	pg	99
23) 1,2-Dichloropropane	9.16	63	829	25.687	pg	96
24) Bromodichloromethane	9.42	83	727	N.D.		
25) Trichloroethene	9.46	130	739	N.D.		
26) 1,4-Dioxane	9.53	88	1075	37.943	pg	# 1
27) cis-1,3-Dichloropropene	10.46	75	21	N.D.		
28) trans-1,3-Dichloropropene	11.04	75	8	N.D.		
29) 1,1,2-Trichloroethane	11.19	83	79	N.D.		
31) Toluene	11.48	91	158167	1089.833	pg	99
32) 1,2-Dibromoethane	12.12	107	9	N.D.		
33) Tetrachloroethene	12.61	166	1338	29.775	pg	99
35) Chlorobenzene	13.17	112	619	N.D.		
36) Ethylbenzene	13.48	91	39172	249.508	pg	99
37) m,p-Xylene	13.61	91	129681	1005.017	pg	97
38) o-Xylene	13.94	106	25026	396.851	pg	99
39) 1,1,1,2,2-Tetrachloroethane	13.89	83	415	N.D.		
41) 1,3-Dichlorobenzene	15.19	146	99	N.D.		
42) 1,4-Dichlorobenzene	15.24	146	1629	N.D.		
43) 1,2-Dichlorobenzene	15.46	146	116	N.D.		
44) 1,2,4-Trichlorobenzene	16.63	182	64	N.D.		
45) Naphthalene	16.70	128	22385	142.896	pg	94
46) Hexachlorobutadiene	16.96	225	48	N.D.		

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\16\02161527.D

Acq On : 17 Feb 2015 00:00

Operator: WA

Sample : P1500566-009 (1000mL)

Misc : S29-02041502

ALS Vial : 10 Sample Multiplier: 1

Quant Time: Feb 17 06:52:03 2015

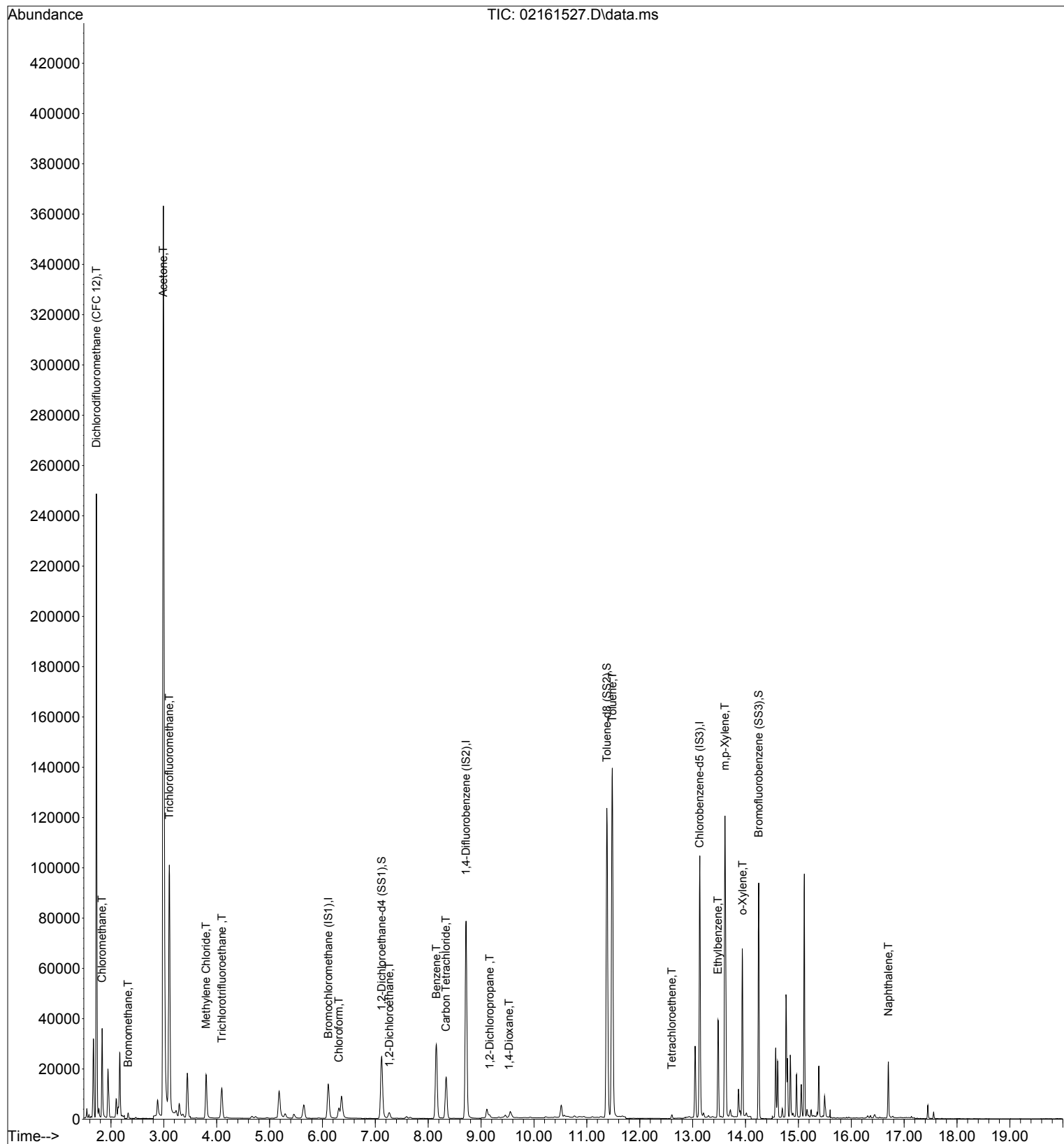
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 02\16\02161527.D

Acq On : 17 Feb 2015 00:00

Operator: WA

Sample : P1500566-009 (1000mL)

Misc : S29-02041502

ALS Vial : 10 Sample Multiplier: 1

Quant Time: Feb 17 06:52:03 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

2/17/15

DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	20470	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	147971	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	25036	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	45011	900.405	pg	0.00
Spiked Amount 1000.000			Recovery	=	90.04%	
30) Toluene-d8 (SS2)	11.38	98	139379	1021.417	pg	0.00
Spiked Amount 1000.000			Recovery	=	102.14%	
40) Bromofluorobenzene (SS3)	14.25	174	56849	1124.737	pg	0.00
Spiked Amount 1000.000			Recovery	=	112.47%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.73	85	172373	2072.030	pg	100
3) Chloromethane	1.83	52	9968	599.999	pg	99
5) Bromomethane	2.33	94	1550	41.435	pg	98
7) Acetone	2.99	58	148875	5067.826	pg	# 84
8) Trichlorofluoromethane	3.10	101	103011	1441.578	pg	100
10) Methylene Chloride	3.80	84	11931	351.877	pg	94
11) Trichlorotrifluoroethane	4.10	151	15400	469.017	pg	100
16) Chloroform	6.31	83	6279	100.047	pg	99
18) 1,2-Dichloroethane	7.26	62	3599	72.021	pg	100
20) Benzene	8.15	78	57142	442.673	pg	100
21) Carbon Tetrachloride	8.34	117	20898	457.376	pg	99
23) 1,2-Dichloropropane	9.16	63	829	25.687	pg	96
26) 1,4-Dioxane	9.53	88	1075	37.943	pg	# 1
31) Toluene	11.48	91	158167	1089.833	pg	99
33) Tetrachloroethene	12.61	166	1338	29.775	pg	99
36) Ethylbenzene	13.48	91	39172	249.508	pg	99
37) m,p-Xylene	13.61	91	129681	1005.017	pg	97
38) o-Xylene	13.94	106	25026	396.851	pg	99
45) Naphthalene	16.70	128	22385	142.896	pg	94

(#)= qualifier out of range (m) = manual integration (+) = signals summed

Data File: I:\MS19\DATA\2015 02\16\02161527.D

Acq On : 17 Feb 2015 00:00

Operator: WA

Sample : P1500566-009 (1000mL)

Misc : S29-02041502

ALS Vial : 10 Sample Multiplier: 1

Quant Time: Feb 17 06:52:03 2015

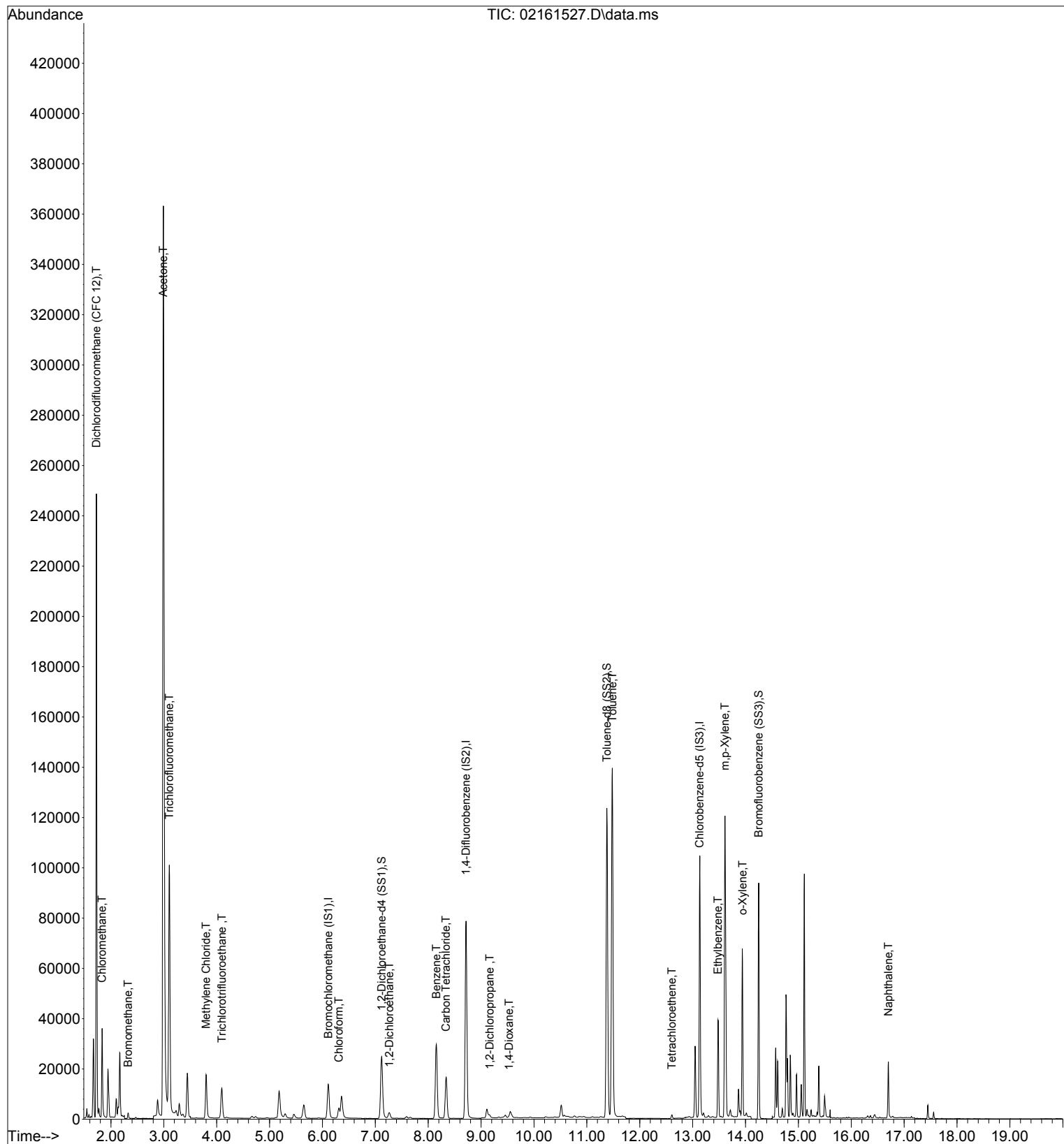
Quant Method : I:\MS19\METHODS\X19021115.M

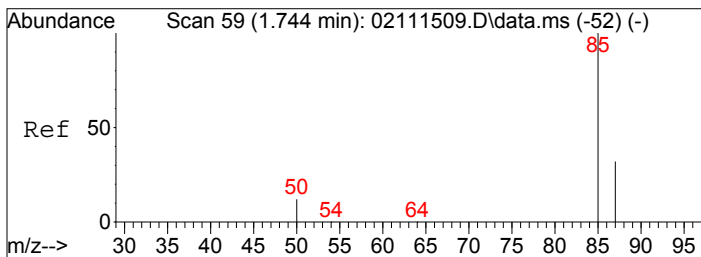
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

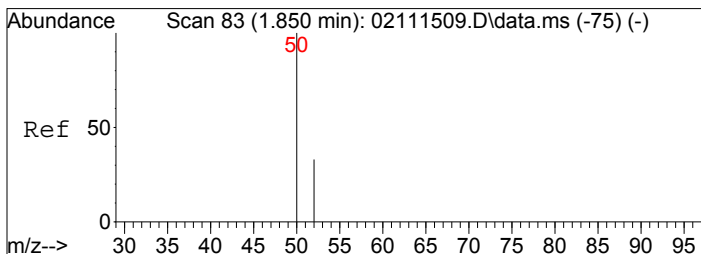
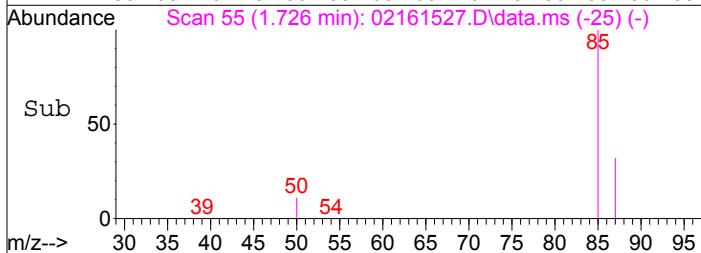
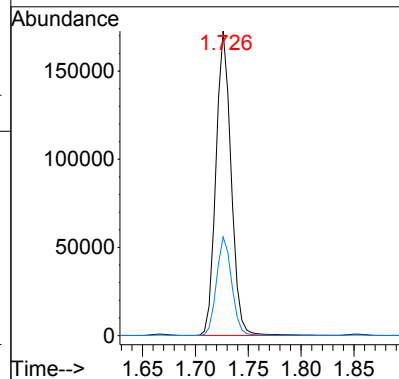
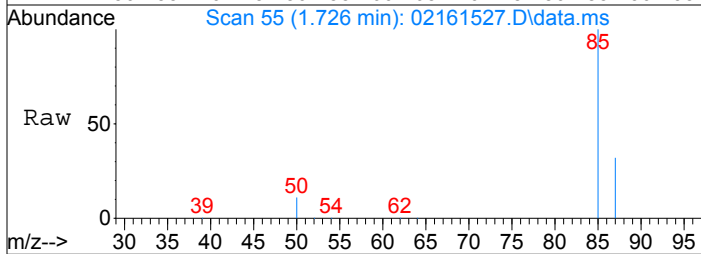
DataAcq Meth:TO15SIM.M





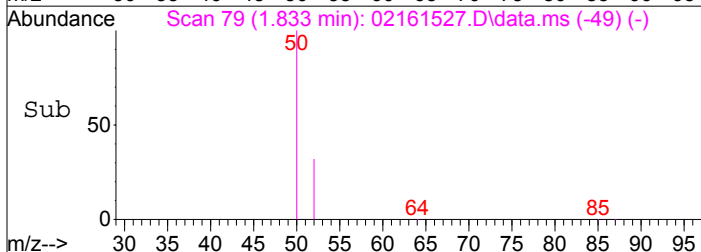
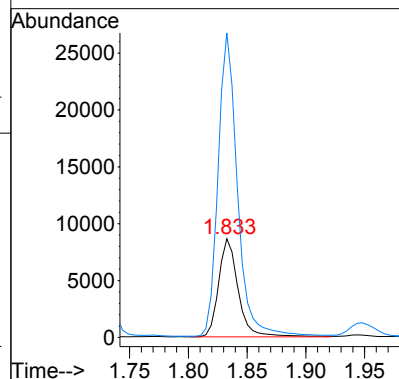
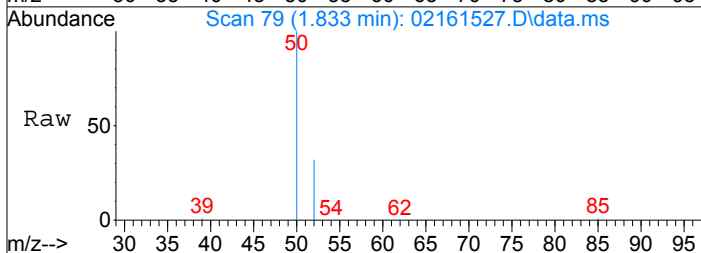
#2
 Dichlorodifluoromethane (CFC 12)
 Concen: 2072.03 pg
 RT: 1.73 min Scan# 55
 Delta R.T. -0.018 min
 Lab File: 02161527.D
 Acq: 17 Feb 2015 00:00

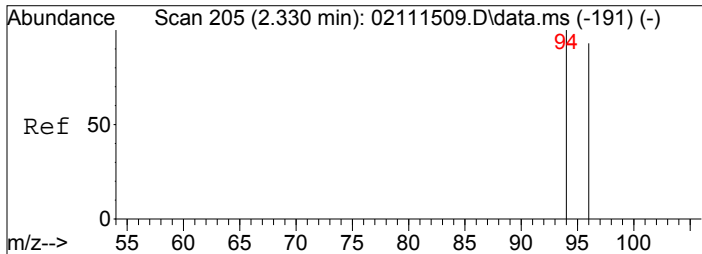
Tgt Ion: 85 Resp: 172373
 Ion Ratio Lower Upper
 85 100
 87 32.5 12.4 52.4



#3
 Chloromethane
 Concen: 600.00 pg
 RT: 1.83 min Scan# 79
 Delta R.T. -0.017 min
 Lab File: 02161527.D
 Acq: 17 Feb 2015 00:00

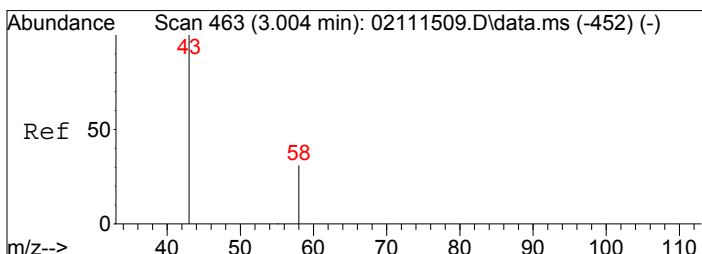
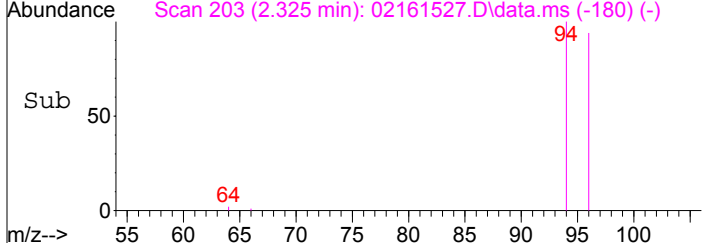
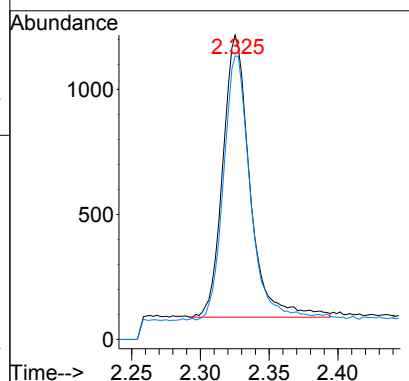
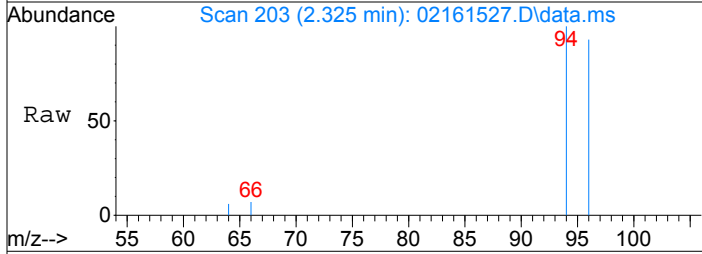
Tgt Ion: 52 Resp: 9968
 Ion Ratio Lower Upper
 52 100
 50 306.5 283.7 323.7





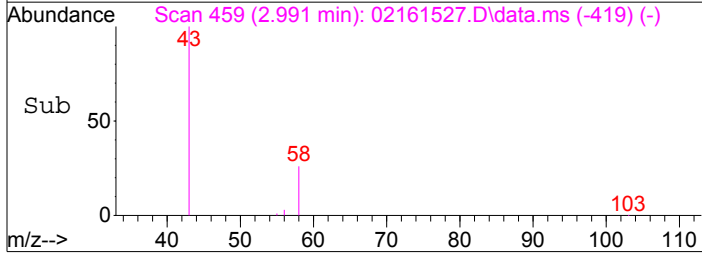
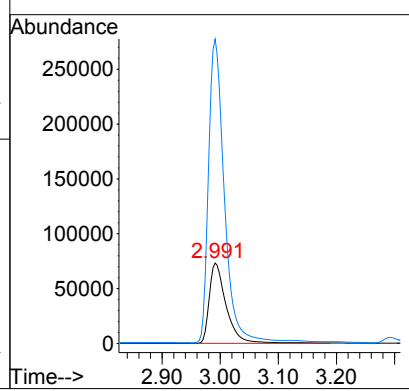
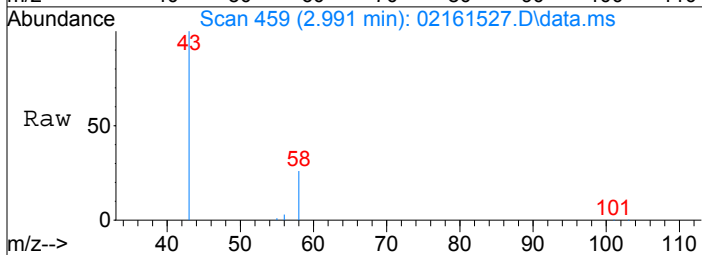
#5
 Bromomethane
 Concen: 41.44 pg
 RT: 2.33 min Scan# 203
 Delta R.T. -0.005 min
 Lab File: 02161527.D
 Acq: 17 Feb 2015 00:00

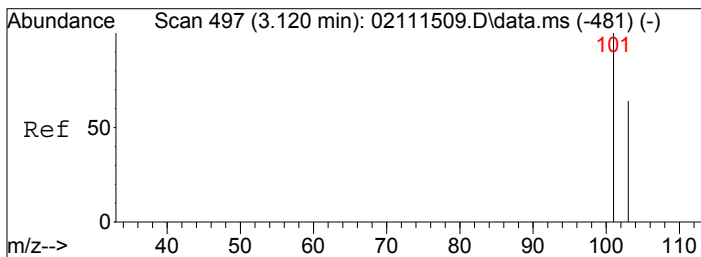
Tgt Ion:	94	Resp:	1550
Ion Ratio	Lower	Upper	
94	100		
96	92.8	75.5	113.3



#7
 Acetone
 Concen: 5067.83 pg
 RT: 2.99 min Scan# 459
 Delta R.T. -0.013 min
 Lab File: 02161527.D
 Acq: 17 Feb 2015 00:00

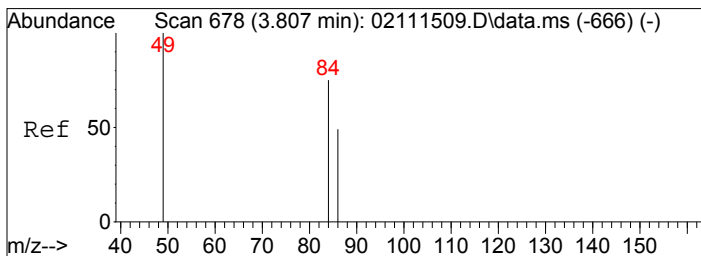
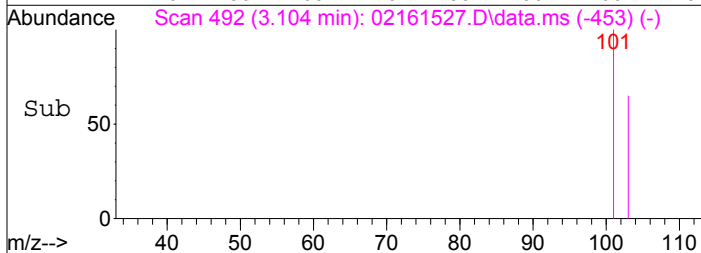
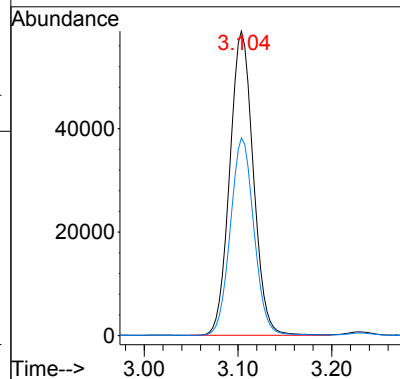
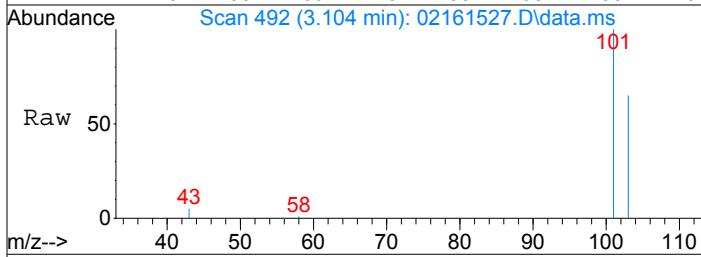
Tgt Ion:	58	Resp:	148875
Ion Ratio	Lower	Upper	
58	100		
43	354.6	301.8	341.8#





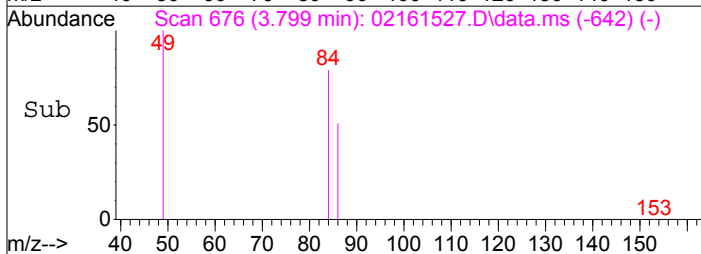
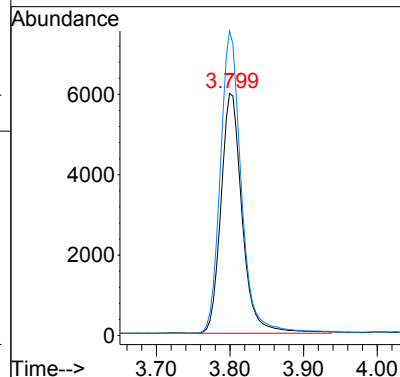
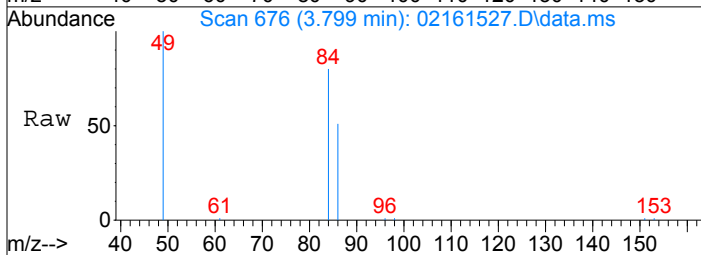
#8
 Trichlorofluoromethane
 Concen: 1441.58 pg
 RT: 3.10 min Scan# 492
 Delta R.T. -0.016 min
 Lab File: 02161527.D
 Acq: 17 Feb 2015 00:00

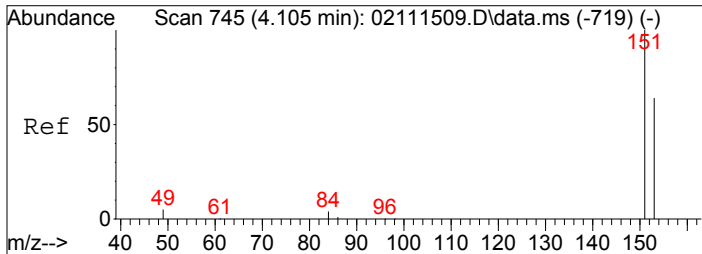
Tgt Ion: 101 Resp: 103011
 Ion Ratio Lower Upper
 101 100
 103 64.9 51.8 77.6



#10
 Methylene Chloride
 Concen: 351.88 pg
 RT: 3.80 min Scan# 676
 Delta R.T. -0.008 min
 Lab File: 02161527.D
 Acq: 17 Feb 2015 00:00

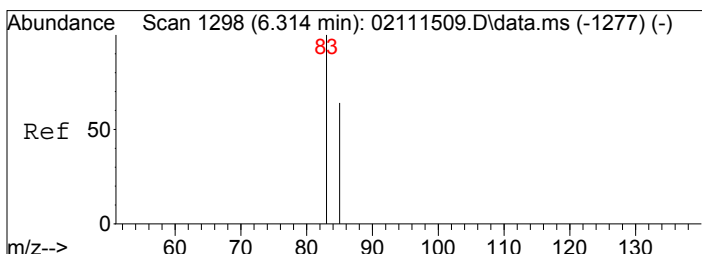
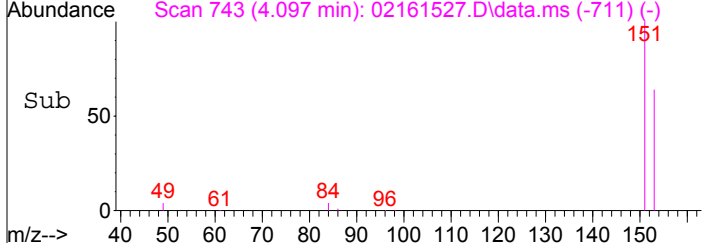
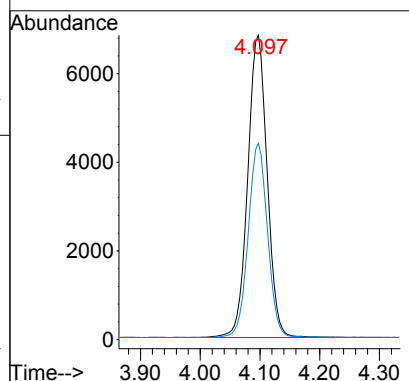
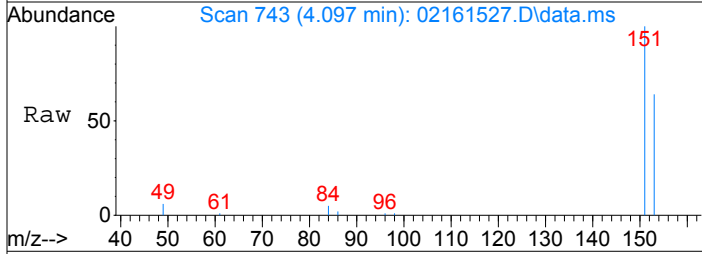
Tgt Ion: 84 Resp: 11931
 Ion Ratio Lower Upper
 84 100
 49 125.2 112.3 152.3





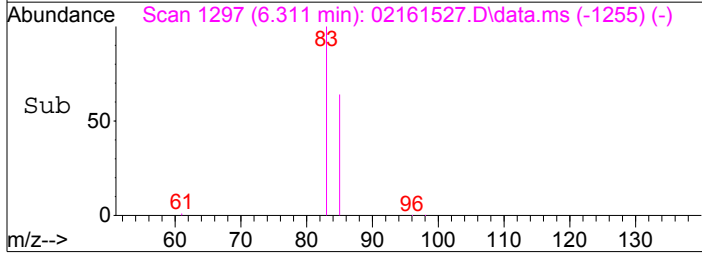
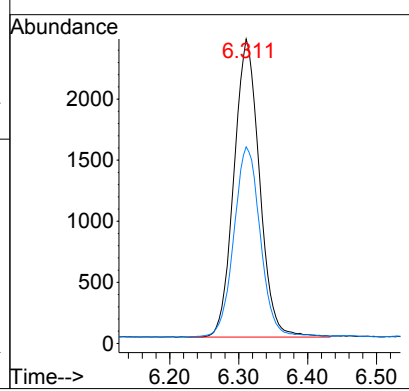
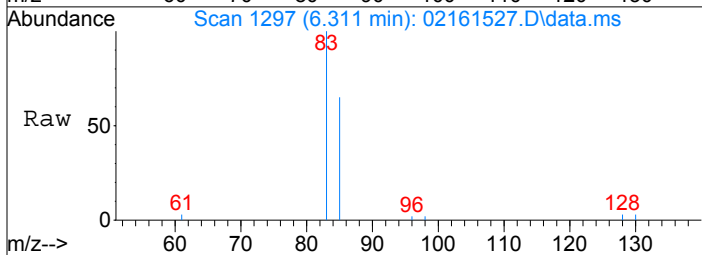
#11
 Trichlorotrifluoroethane
 Concen: 469.02 pg
 RT: 4.10 min Scan# 743
 Delta R.T. -0.008 min
 Lab File: 02161527.D
 Acq: 17 Feb 2015 00:00

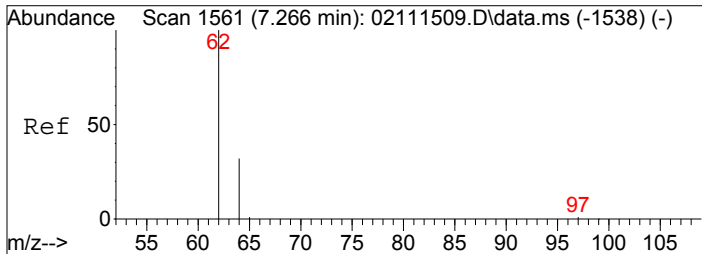
Tgt Ion: 151	Resp: 15400
Ion Ratio	Lower Upper
151	100
153	63.9 43.6 83.6



#16
 Chloroform
 Concen: 100.05 pg
 RT: 6.31 min Scan# 1297
 Delta R.T. -0.003 min
 Lab File: 02161527.D
 Acq: 17 Feb 2015 00:00

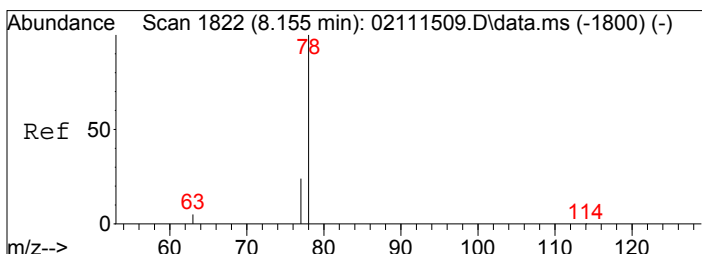
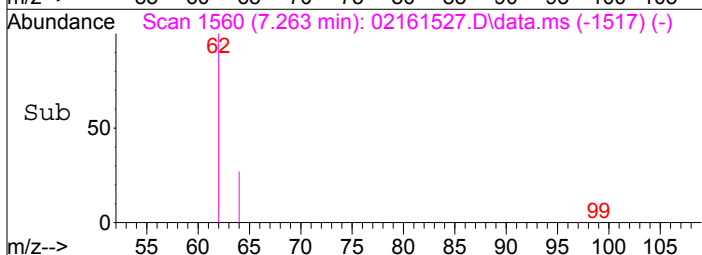
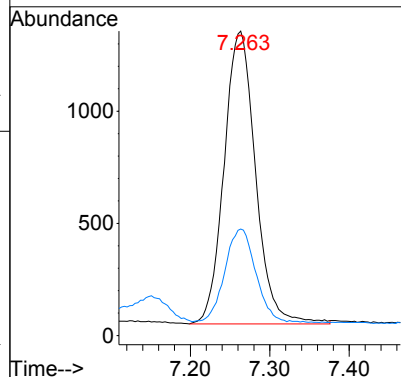
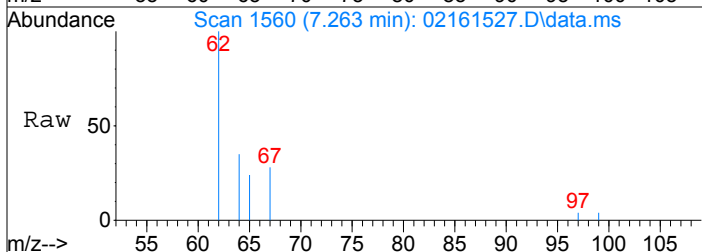
Tgt Ion: 83	Resp: 6279
Ion Ratio	Lower Upper
83	100
85	66.4 45.4 85.4





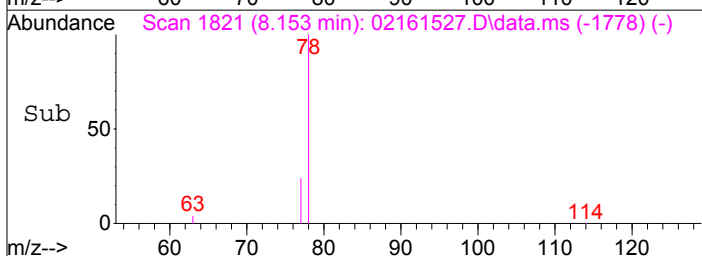
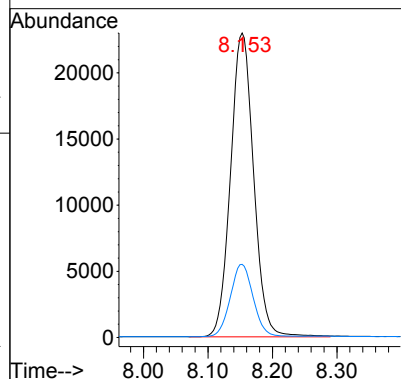
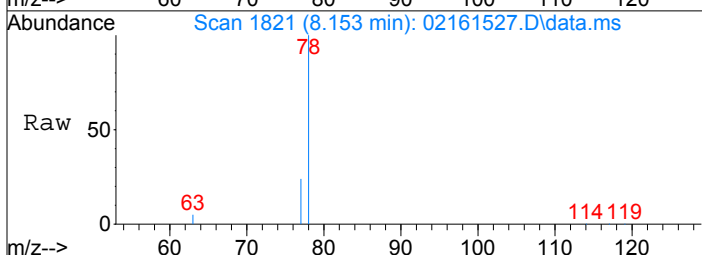
#18
1,2-Dichloroethane
Concen: 72.02 pg
RT: 7.26 min Scan# 1560
Delta R.T. -0.002 min
Lab File: 02161527.D
Acq: 17 Feb 2015 00:00

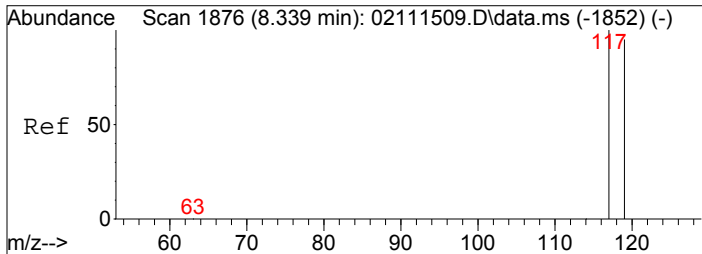
Tgt Ion	Ratio	Lower	Upper
62	100		
64	31.5	11.6	51.6



#20
Benzene
Concen: 442.67 pg
RT: 8.15 min Scan# 1821
Delta R.T. -0.002 min
Lab File: 02161527.D
Acq: 17 Feb 2015 00:00

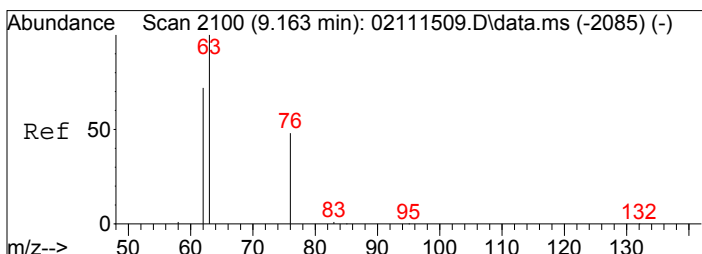
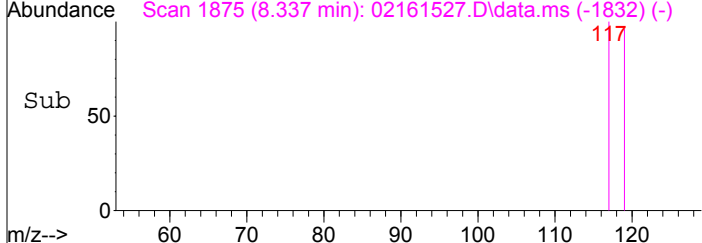
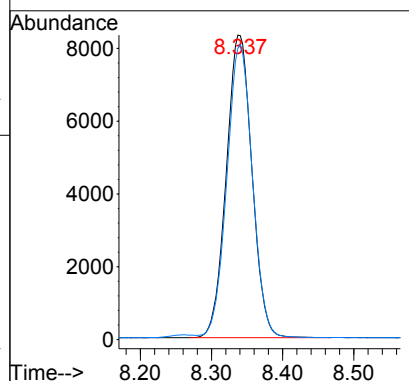
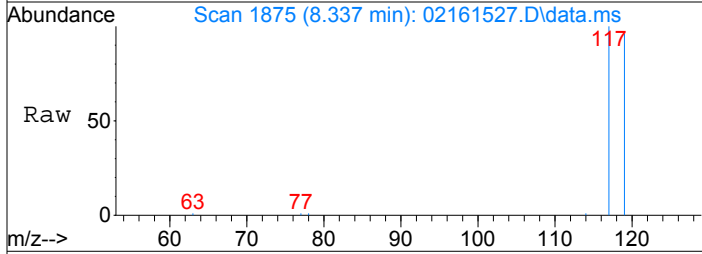
Tgt Ion	Ratio	Lower	Upper
78	100		
77	23.7	3.7	43.7





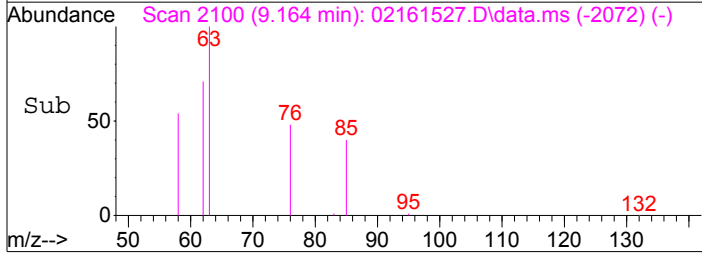
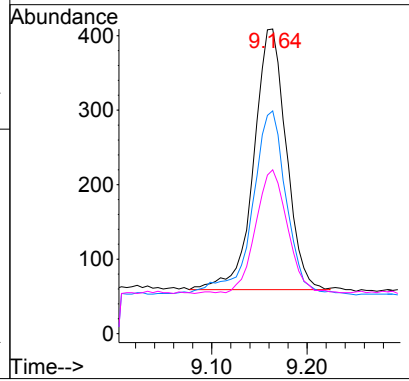
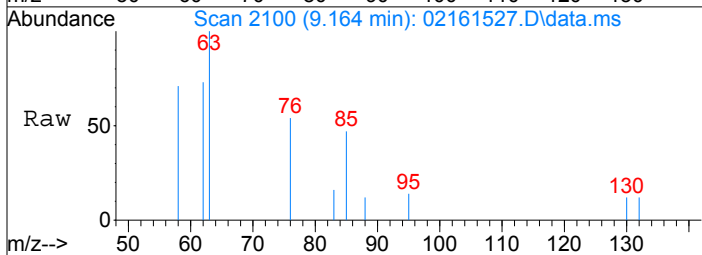
#21
Carbon Tetrachloride
Concen: 457.38 pg
RT: 8.34 min Scan# 1875
Delta R.T. -0.002 min
Lab File: 02161527.D
Acq: 17 Feb 2015 00:00

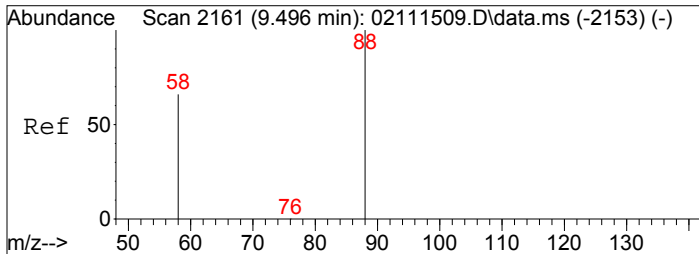
Tgt Ion: 117	Resp: 20898
Ion Ratio	Lower Upper
117	100
119	96.1 75.5 115.5



#23
1,2-Dichloropropane
Concen: 25.69 pg
RT: 9.16 min Scan# 2100
Delta R.T. 0.001 min
Lab File: 02161527.D
Acq: 17 Feb 2015 00:00

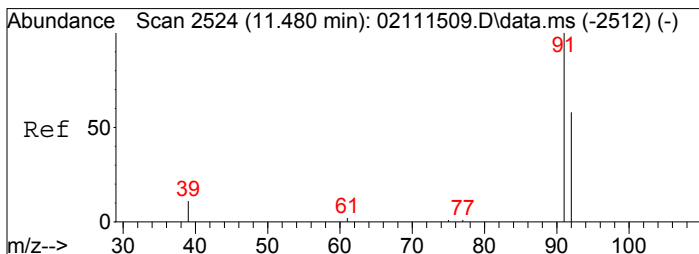
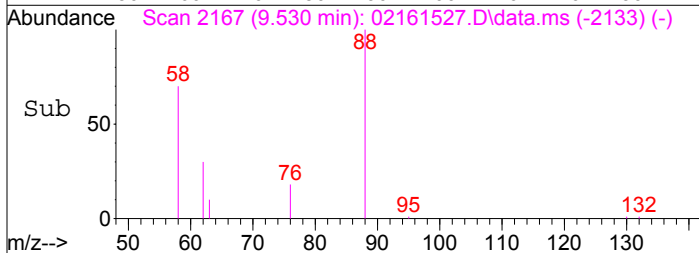
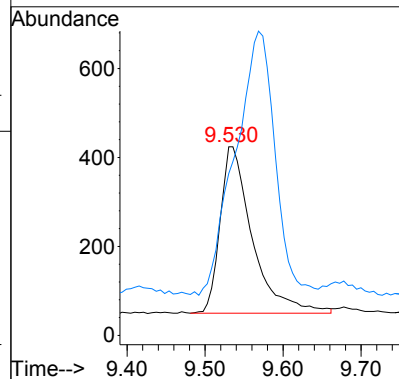
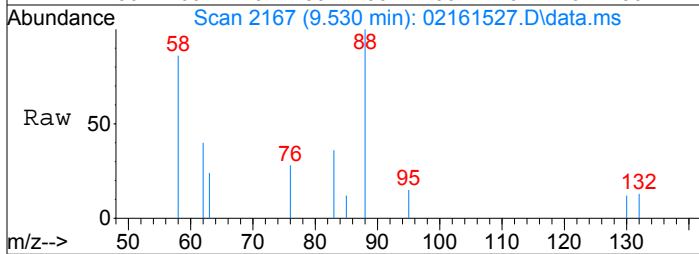
Tgt Ion: 63	Resp: 829
Ion Ratio	Lower Upper
63	100
62	75.0 52.0 92.0
76	45.8 28.1 68.1





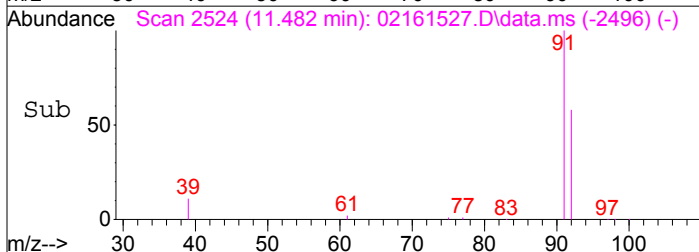
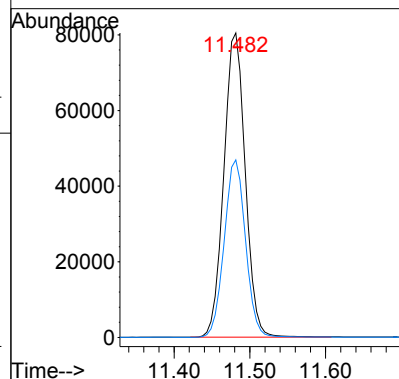
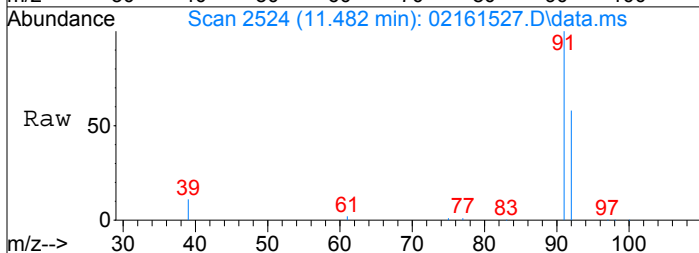
#26
1,4-Dioxane
Concen: 37.94 pg
RT: 9.53 min Scan# 2167
Delta R.T. 0.034 min
Lab File: 02161527.D
Acq: 17 Feb 2015 00:00

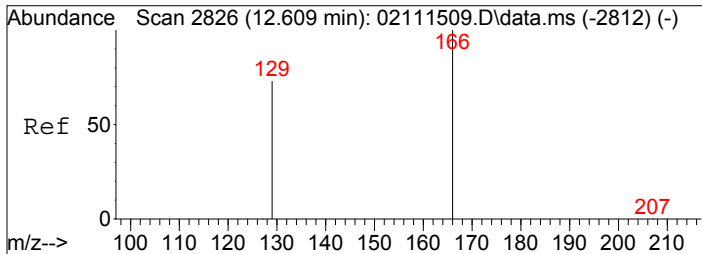
Tgt Ion: 88 Resp: 1075
Ion Ratio Lower Upper
88 100
58 194.9 38.3 78.3#



#31
Toluene
Concen: 1089.83 pg
RT: 11.48 min Scan# 2524
Delta R.T. 0.001 min
Lab File: 02161527.D
Acq: 17 Feb 2015 00:00

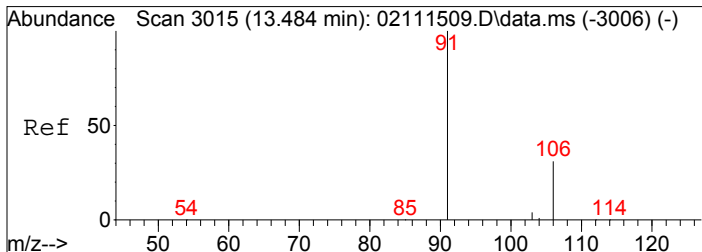
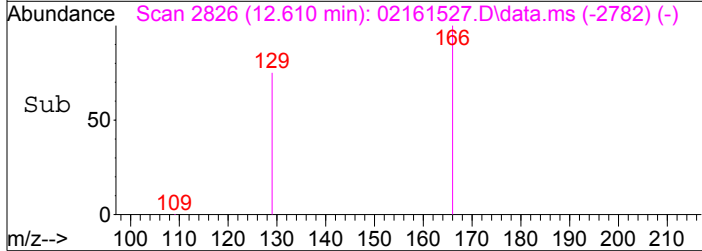
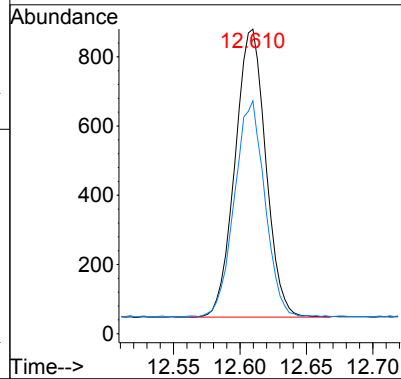
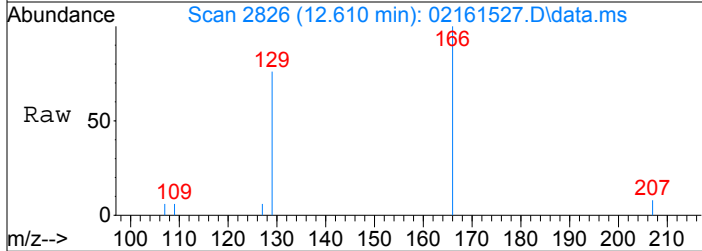
Tgt Ion: 91 Resp: 158167
Ion Ratio Lower Upper
91 100
92 58.2 37.7 77.7





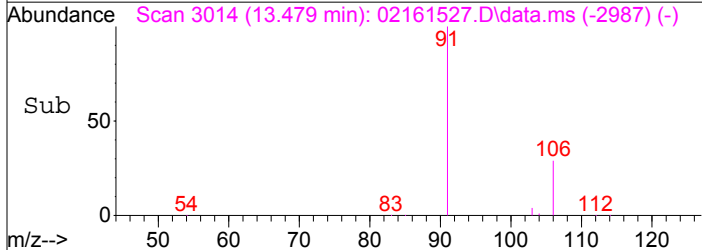
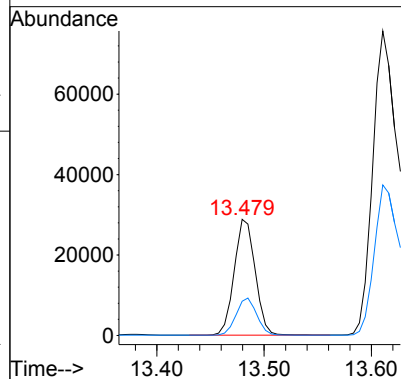
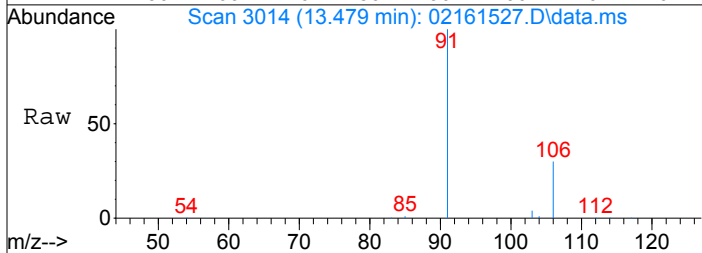
#33
Tetrachloroethene
Concen: 29.78 pg
RT: 12.61 min Scan# 2826
Delta R.T. 0.001 min
Lab File: 02161527.D
Acq: 17 Feb 2015 00:00

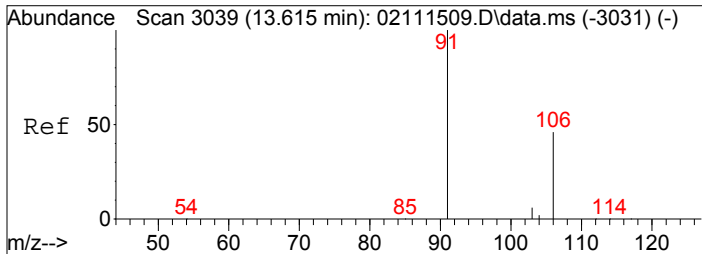
Tgt Ion	Ratio	Lower	Upper
166	100		
129	74.1	53.3	93.3



#36
Ethylbenzene
Concen: 249.51 pg
RT: 13.48 min Scan# 3014
Delta R.T. -0.004 min
Lab File: 02161527.D
Acq: 17 Feb 2015 00:00

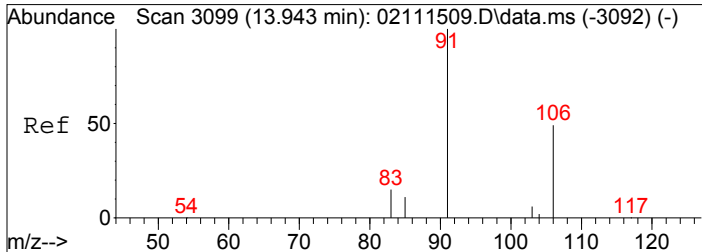
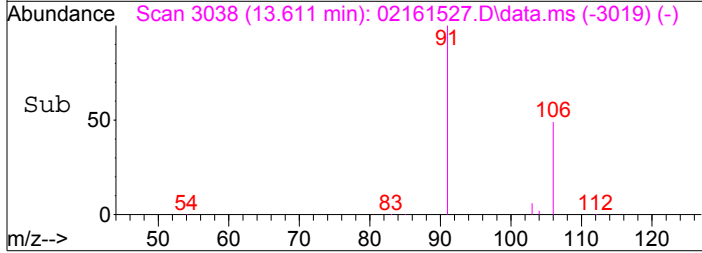
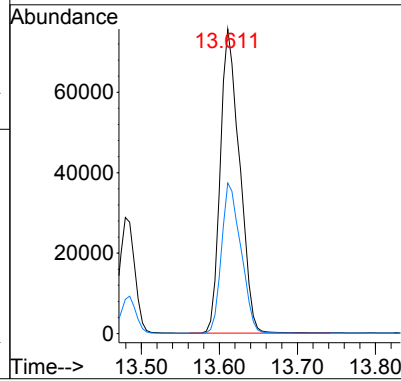
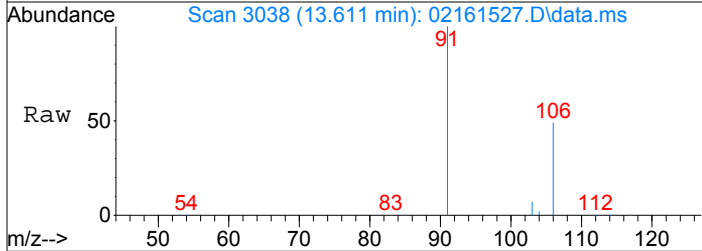
Tgt Ion	Ratio	Lower	Upper
91	100		
106	31.5	10.9	50.9





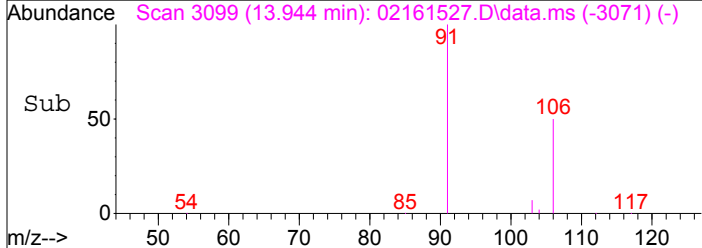
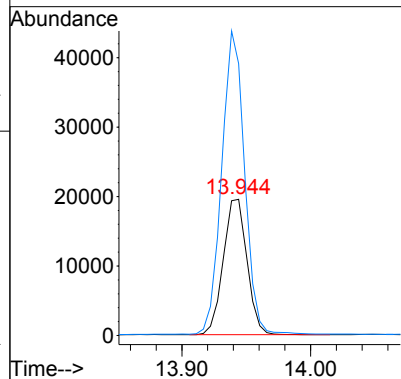
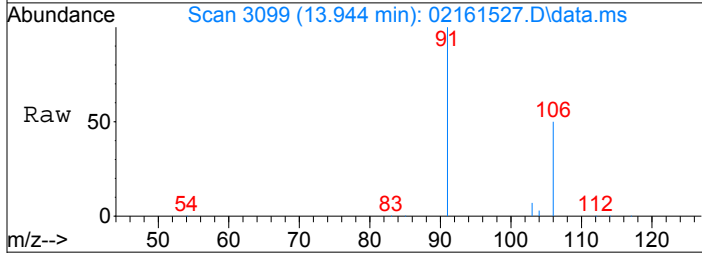
#37
 m,p-Xylene
 Concen: 1005.02 pg
 RT: 13.61 min Scan# 3038
 Delta R.T. -0.004 min
 Lab File: 02161527.D
 Acq: 17 Feb 2015 00:00

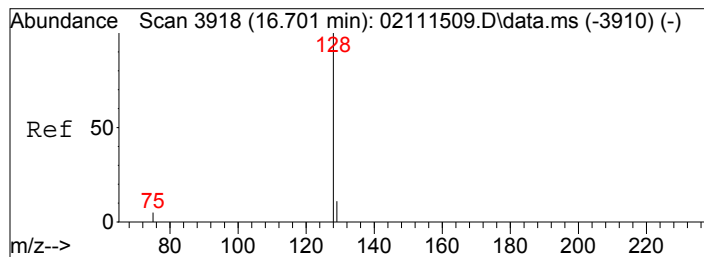
Tgt Ion: 91 Resp: 129681
 Ion Ratio Lower Upper
 91 100
 106 49.8 27.5 67.5



#38
 o-Xylene
 Concen: 396.85 pg
 RT: 13.94 min Scan# 3099
 Delta R.T. 0.001 min
 Lab File: 02161527.D
 Acq: 17 Feb 2015 00:00

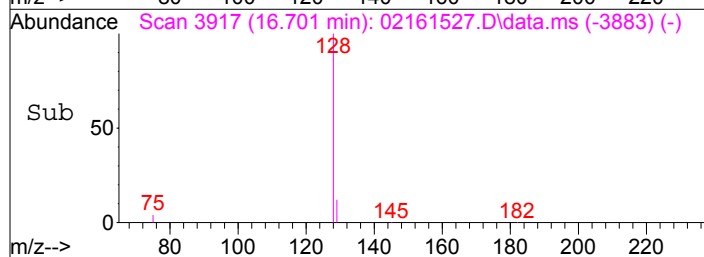
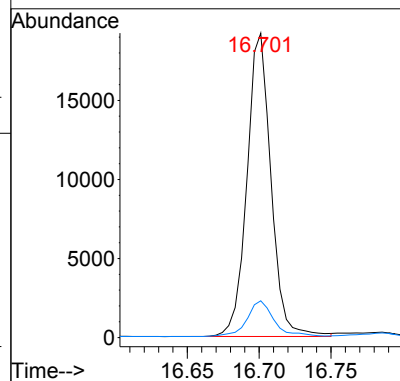
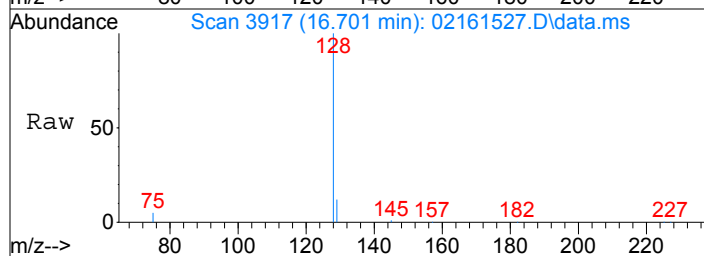
Tgt Ion: 106 Resp: 25026
 Ion Ratio Lower Upper
 106 100
 91 216.4 198.3 238.3





#45
Naphthalene
Concen: 142.90 pg
RT: 16.70 min Scan# 3917
Delta R.T. 0.000 min
Lab File: 02161527.D
Acq: 17 Feb 2015 00:00

Tgt Ion	Ratio	Lower	Upper
128	100		
129	13.2	0.0	30.9



Data File: I:\MS19\DATA\2015 02\16\02161528.D

Acq On : 17 Feb 2015 00:28

Operator: WA

Sample : P1500566-010 (1000mL)

Misc : S29-02041502

ALS Vial : 11 Sample Multiplier: 1

Quant Time: Feb 17 11:02:41 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

2/17/15

DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	20148	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	146879	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	24778	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	44856	911.645	pg	0.00
Spiked Amount 1000.000			Recovery	=	91.16%	
30) Toluene-d8 (SS2)	11.38	98	137558	1015.567	pg	0.00
Spiked Amount 1000.000			Recovery	=	101.56%	
40) Bromofluorobenzene (SS3)	14.25	174	56400	1127.473	pg	0.00
Spiked Amount 1000.000			Recovery	=	112.75%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.72	85	133950	1635.895	pg	100
3) Chloromethane	1.83	52	7926	484.711	pg	100
4) Vinyl Chloride	2.01	62	127	N.D.		
5) Bromomethane	2.32	94	1370	37.209	pg	97
6) Chloroethane	2.47	64	294	N.D.		
7) Acetone	2.98	58	1148612	39724.570	pg	# 87
8) Trichlorofluoromethane	3.10	101	85186	1211.180	pg	100
9) 1,1-Dichloroethene	3.66	96	65	N.D.		
10) Methylene Chloride	3.80	84	295378	8850.700	pg	93
11) Trichlorotrifluoroethane	4.09	151	14720	455.471	pg	100
12) trans-1,2-Dichloroethene	4.74	96	1170	36.490	pg	100
13) 1,1-Dichloroethane	4.95	63	416	N.D.		
14) Methyl tert-Butyl Ether	5.11	73	849	N.D.		
15) cis-1,2-Dichloroethene	5.93	96	639	N.D.		
16) Chloroform	6.31	83	8964	145.112	pg	97
18) 1,2-Dichloroethane	7.26	62	3225	65.569	pg	98
19) 1,1,1-Trichloroethane	7.59	97	3573	59.480	pg	100
20) Benzene	8.15	78	86535	681.092	pg	100
21) Carbon Tetrachloride	8.34	117	17631	392.041	pg	99
23) 1,2-Dichloropropane	9.16	63	773	24.130	pg	94
24) Bromodichloromethane	0.00	83	0	N.D.	d	
25) Trichloroethene	9.46	130	1852	49.080	pg	99
26) 1,4-Dioxane	9.55	88	237	N.D.		
27) cis-1,3-Dichloropropene	10.46	75	16	N.D.		
28) trans-1,3-Dichloropropene	11.05	75	26	N.D.		
29) 1,1,2-Trichloroethane	11.20	83	50	N.D.		
31) Toluene	11.48	91	1135633	7883.138	pg	99
32) 1,2-Dibromoethane	12.12	107	8	N.D.		
33) Tetrachloroethene	12.61	166	2087	46.788	pg	99
35) Chlorobenzene	13.17	112	754	N.D.		
36) Ethylbenzene	13.48	91	93299	600.461	pg	99
37) m,p-Xylene	13.61	91	253453	1984.693	pg	97
38) o-Xylene	13.94	106	45819	734.143	pg	97
39) 1,1,2,2-Tetrachloroethane	13.88	83	1029	N.D.		
41) 1,3-Dichlorobenzene	0.00	146	0	N.D.	d	
42) 1,4-Dichlorobenzene	15.24	146	2991	34.931	pg	100
43) 1,2-Dichlorobenzene	15.46	146	125	N.D.		
44) 1,2,4-Trichlorobenzene	16.63	182	56	N.D.		
45) Naphthalene	16.70	128	16154	104.194	pg	90
46) Hexachlorobutadiene	16.95	225	36	N.D.		

(#)= qualifier out of range (m)= manual integration (+)= signals summed

Data File: I:\MS19\DATA\2015 02\16\02161528.D

Acq On : 17 Feb 2015 00:28

Operator: WA

Sample : P1500566-010 (1000mL)

Misc : S29-02041502

ALS Vial : 11 Sample Multiplier: 1

Quant Time: Feb 17 11:02:41 2015

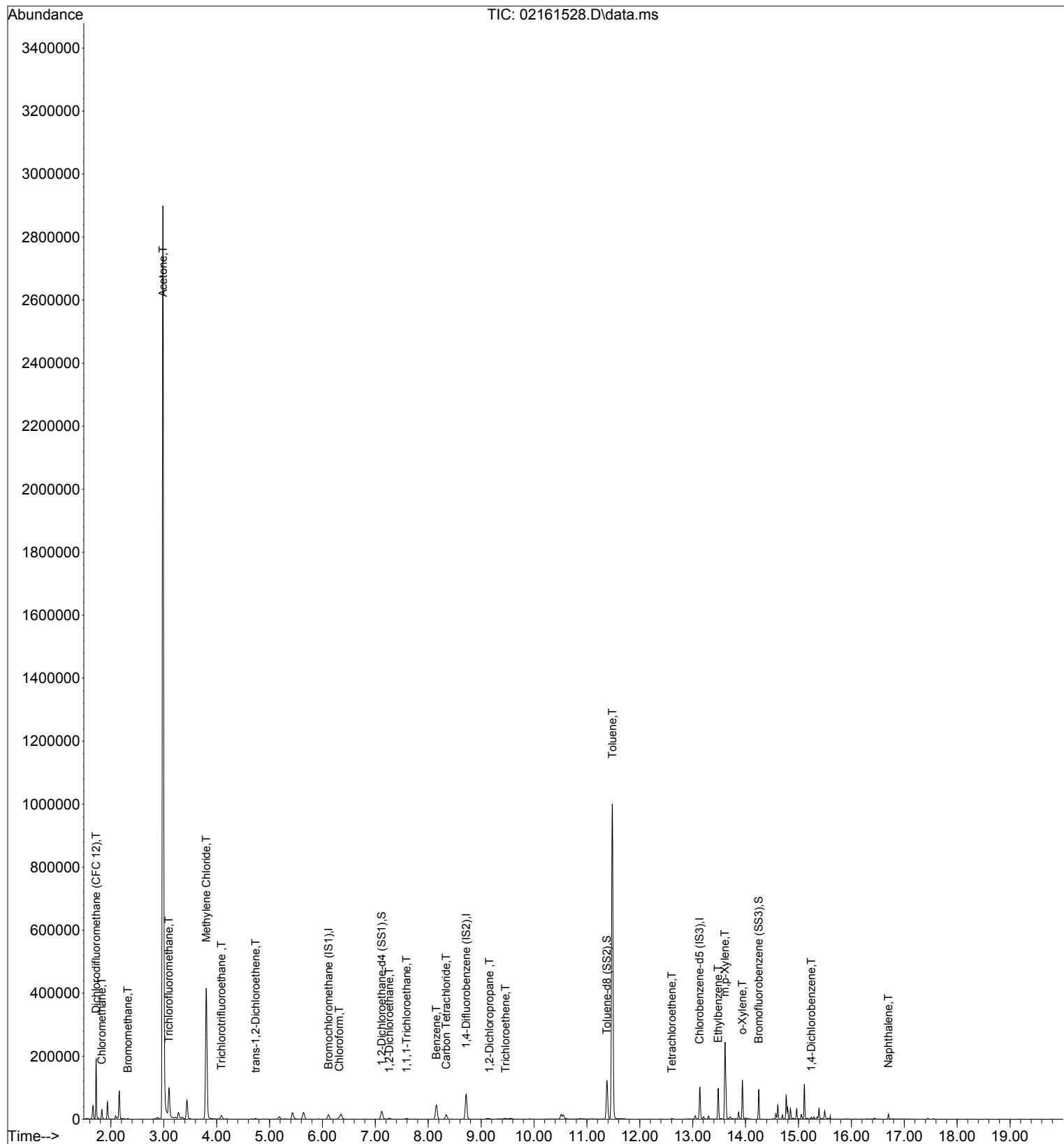
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 02\16\02161528.D

Acq On : 17 Feb 2015 00:28

Operator: WA

Sample : P1500566-010 (1000mL)

Misc : S29-02041502

ALS Vial : 11 Sample Multiplier: 1

Quant Time: Feb 17 11:02:41 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

2/17/15

DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	20148	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	146879	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	24778	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	44856	911.645	pg	0.00
Spiked Amount 1000.000			Recovery	=	91.16%	
30) Toluene-d8 (SS2)	11.38	98	137558	1015.567	pg	0.00
Spiked Amount 1000.000			Recovery	=	101.56%	
40) Bromofluorobenzene (SS3)	14.25	174	56400	1127.473	pg	0.00
Spiked Amount 1000.000			Recovery	=	112.75%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.72	85	133950	1635.895	pg	100
3) Chloromethane	1.83	52	7926	484.711	pg	100
5) Bromomethane	2.32	94	1370	37.209	pg	97
7) Acetone	2.98	58	1148612	39724.570	pg	# 87
8) Trichlorofluoromethane	3.10	101	85186	1211.180	pg	100
10) Methylene Chloride	3.80	84	295378	8850.700	pg	93
11) Trichlorotrifluoroethane	4.09	151	14720	455.471	pg	100
12) trans-1,2-Dichloroethene	4.74	96	1170	36.490	pg	100
16) Chloroform	6.31	83	8964	145.112	pg	97
18) 1,2-Dichloroethane	7.26	62	3225	65.569	pg	98
19) 1,1,1-Trichloroethane	7.59	97	3573	59.480	pg	100
20) Benzene	8.15	78	86535	681.092	pg	100
21) Carbon Tetrachloride	8.34	117	17631	392.041	pg	99
23) 1,2-Dichloropropane	9.16	63	773	24.130	pg	94
25) Trichloroethene	9.46	130	1852	49.080	pg	99
31) Toluene	11.48	91	1135633	7883.138	pg	99
33) Tetrachloroethene	12.61	166	2087	46.788	pg	99
36) Ethylbenzene	13.48	91	93299	600.461	pg	99
37) m,p-Xylene	13.61	91	253453	1984.693	pg	97
38) o-Xylene	13.94	106	45819	734.143	pg	97
42) 1,4-Dichlorobenzene	15.24	146	2991	34.931	pg	100
45) Naphthalene	16.70	128	16154	104.194	pg	90

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\16\02161528.D

Acq On : 17 Feb 2015 00:28

Operator: WA

Sample : P1500566-010 (1000mL)

Misc : S29-02041502

ALS Vial : 11 Sample Multiplier: 1

Quant Time: Feb 17 11:02:41 2015

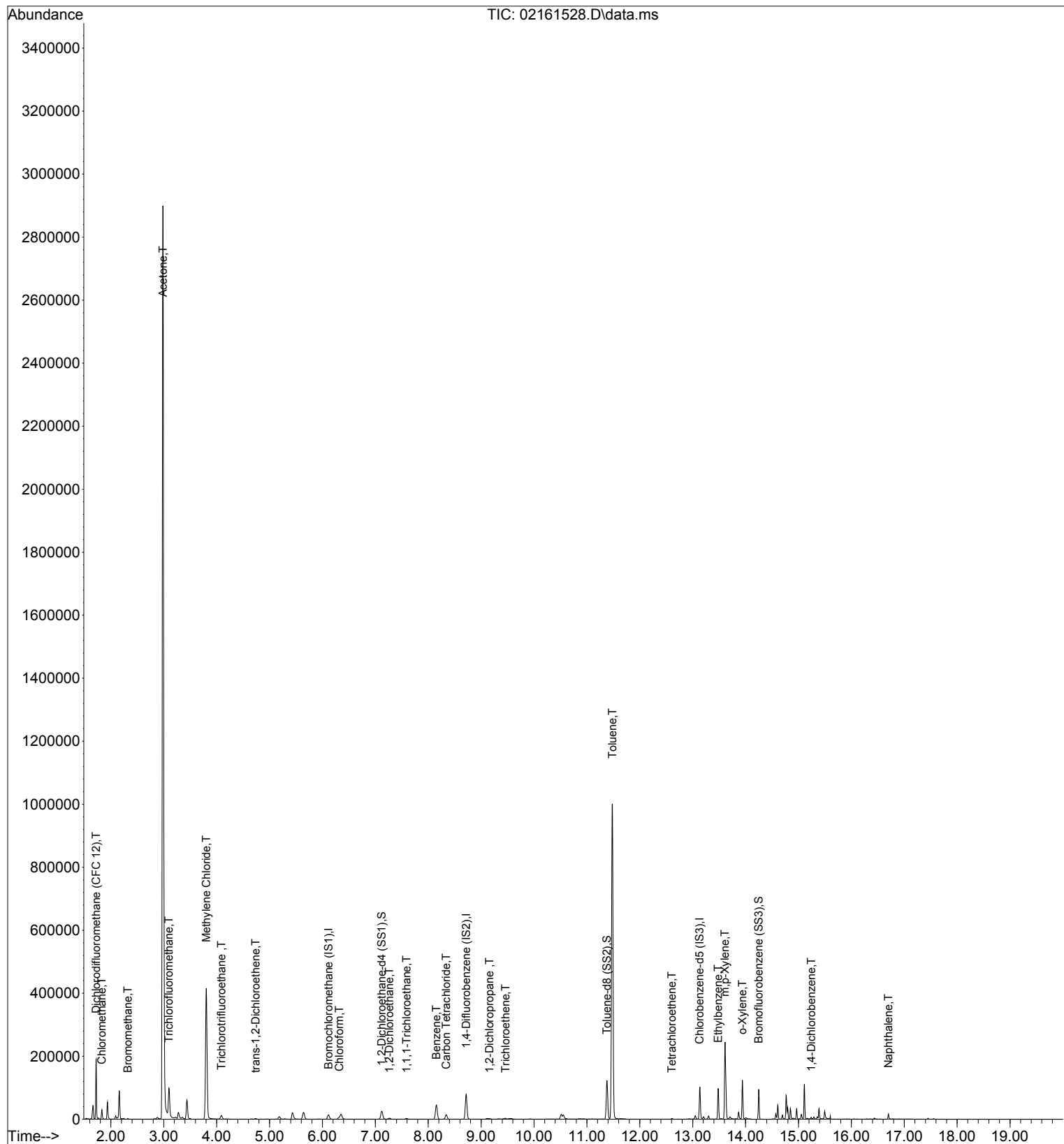
Quant Method : I:\MS19\METHODS\X19021115.M

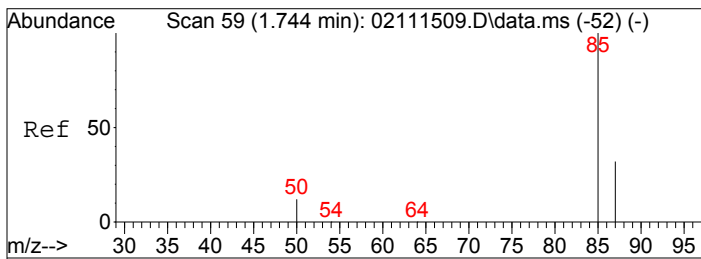
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

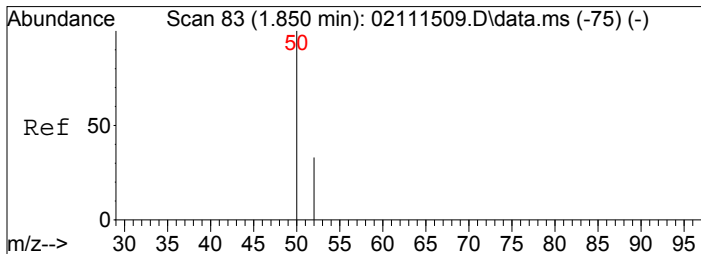
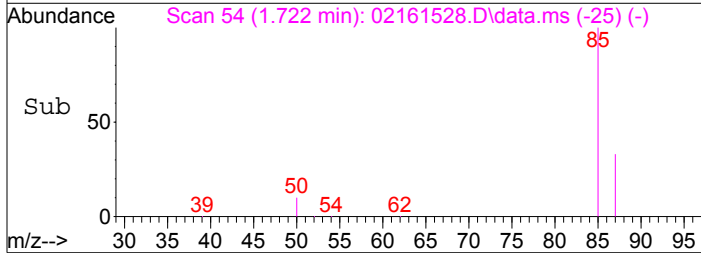
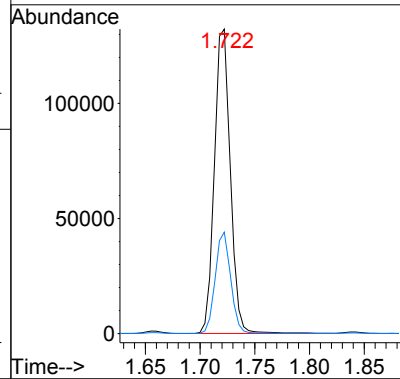
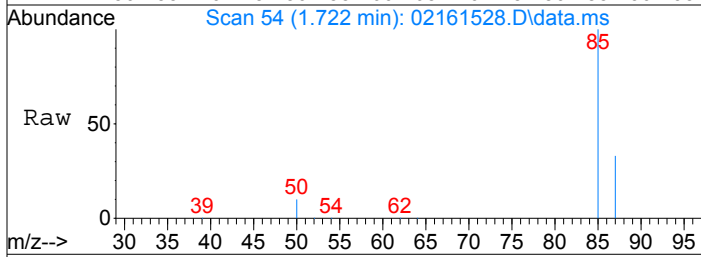
DataAcq Meth:TO15SIM.M





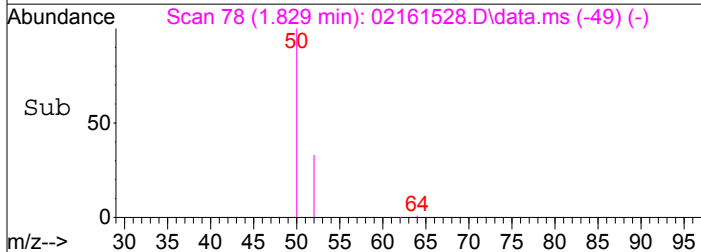
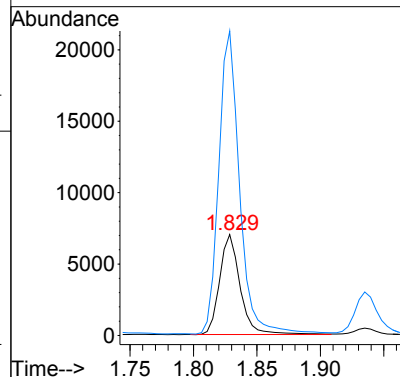
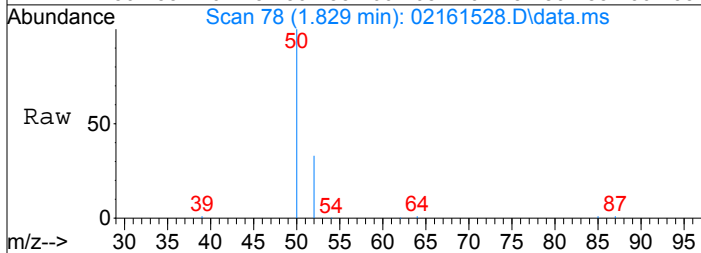
#2
 Dichlorodifluoromethane (CFC 12)
 Concen: 1635.90 pg
 RT: 1.72 min Scan# 54
 Delta R.T. -0.022 min
 Lab File: 02161528.D
 Acq: 17 Feb 2015 00:28

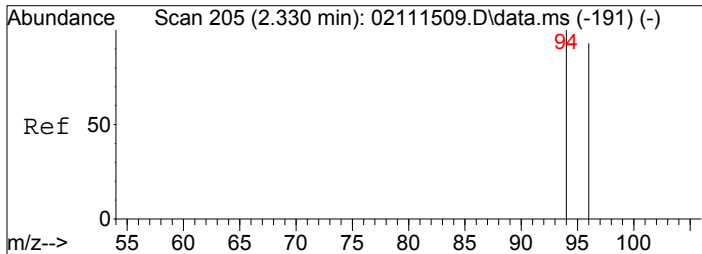
Tgt Ion: 85 Resp: 133950
 Ion Ratio Lower Upper
 85 100
 87 32.4 12.4 52.4



#3
 Chloromethane
 Concen: 484.71 pg
 RT: 1.83 min Scan# 78
 Delta R.T. -0.021 min
 Lab File: 02161528.D
 Acq: 17 Feb 2015 00:28

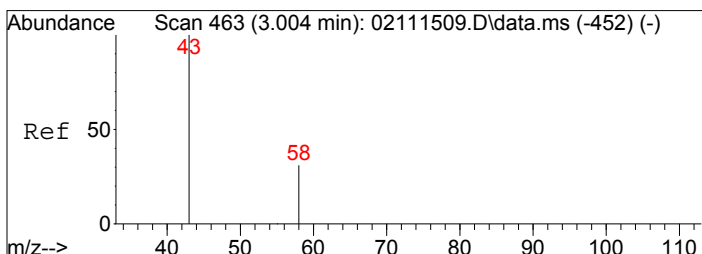
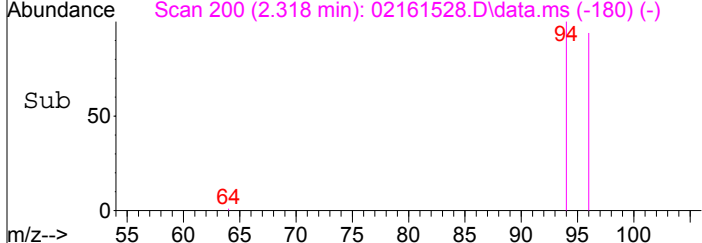
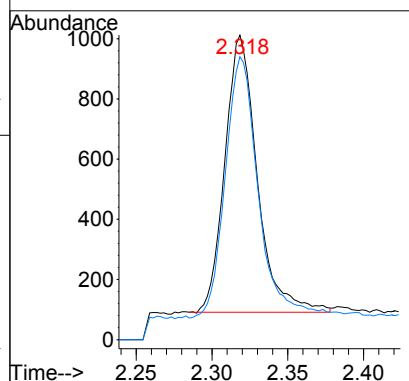
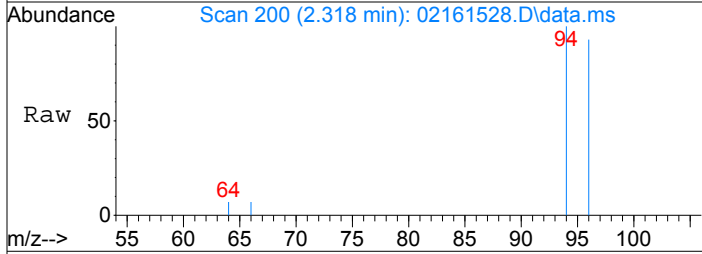
Tgt Ion: 52 Resp: 7926
 Ion Ratio Lower Upper
 52 100
 50 304.4 283.7 323.7





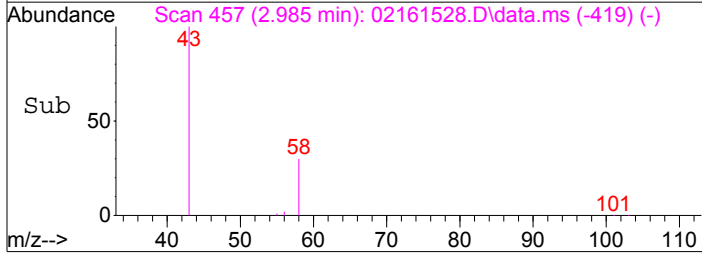
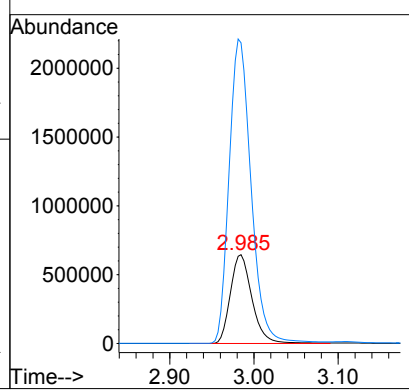
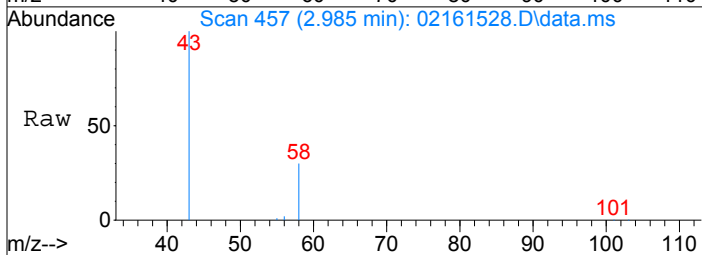
#5
 Bromomethane
 Concen: 37.21 pg
 RT: 2.32 min Scan# 200
 Delta R.T. -0.012 min
 Lab File: 02161528.D
 Acq: 17 Feb 2015 00:28

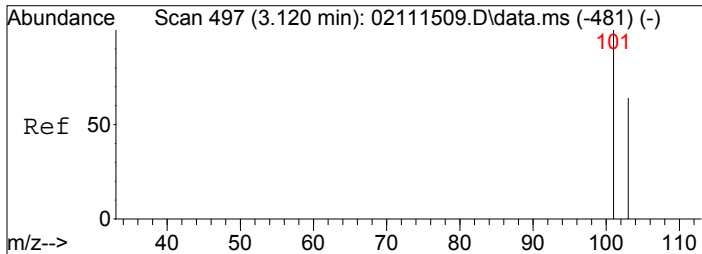
Tgt Ion:	94	Resp:	1370
Ion Ratio		Lower	Upper
94	100		
96	97.5	75.5	113.3



#7
 Acetone
 Concen: 39724.57 pg
 RT: 2.98 min Scan# 457
 Delta R.T. -0.019 min
 Lab File: 02161528.D
 Acq: 17 Feb 2015 00:28

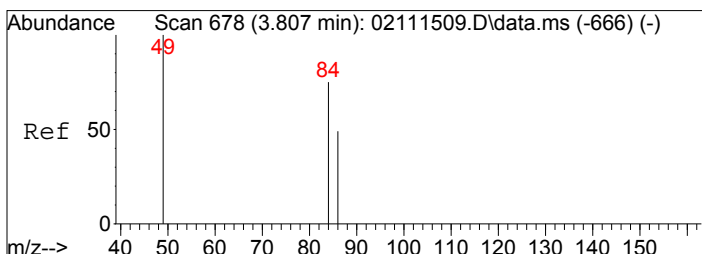
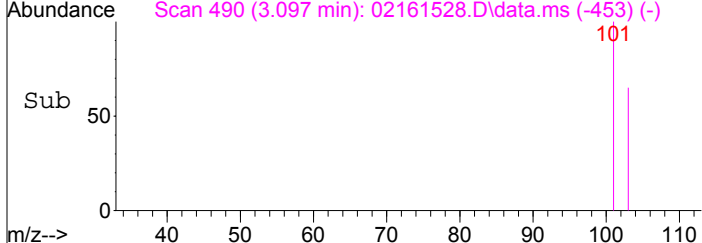
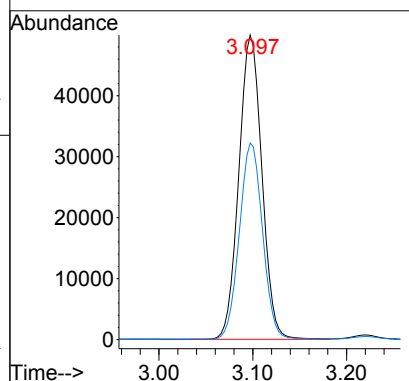
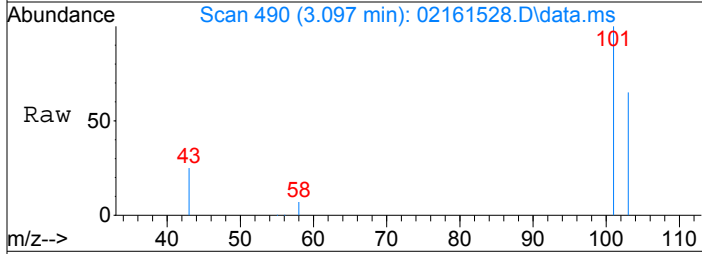
Tgt Ion:	58	Resp:	1148612
Ion Ratio		Lower	Upper
58	100		
43	349.0	301.8	341.8#





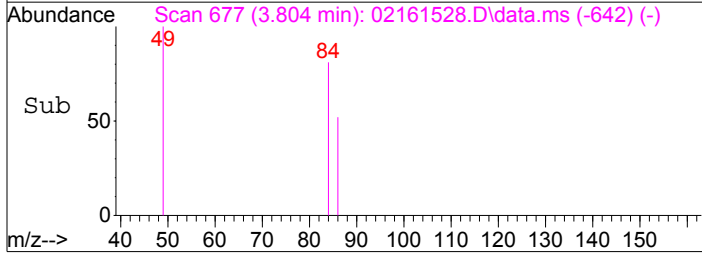
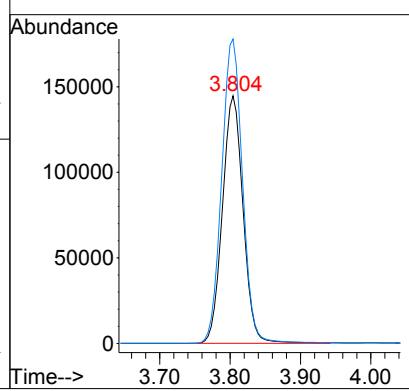
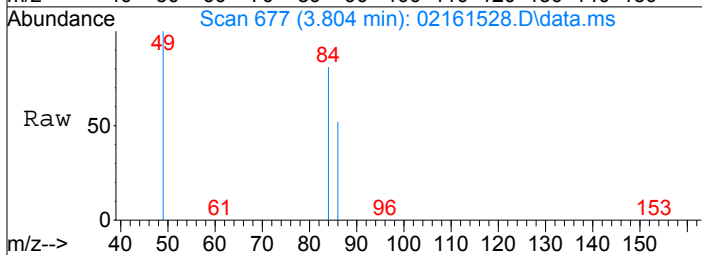
#8
 Trichlorofluoromethane
 Concen: 1211.18 pg
 RT: 3.10 min Scan# 490
 Delta R.T. -0.022 min
 Lab File: 02161528.D
 Acq: 17 Feb 2015 00:28

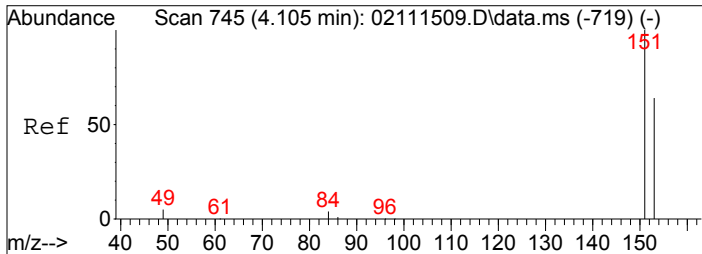
Tgt Ion:	101	Resp:	85186
Ion Ratio	Lower	Upper	
101	100		
103	64.9	51.8	77.6



#10
 Methylene Chloride
 Concen: 8850.70 pg
 RT: 3.80 min Scan# 677
 Delta R.T. -0.003 min
 Lab File: 02161528.D
 Acq: 17 Feb 2015 00:28

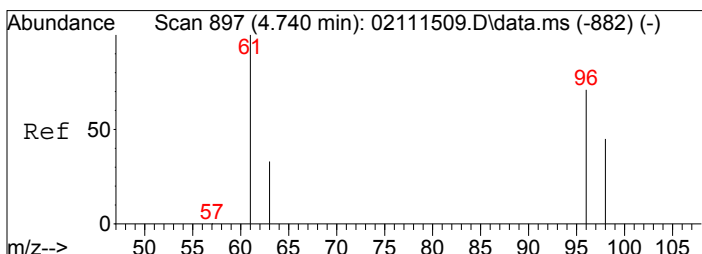
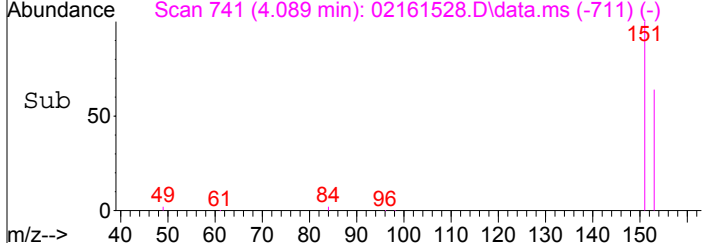
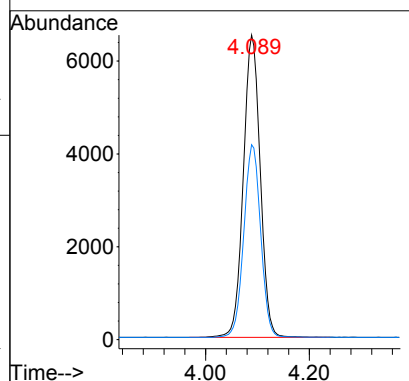
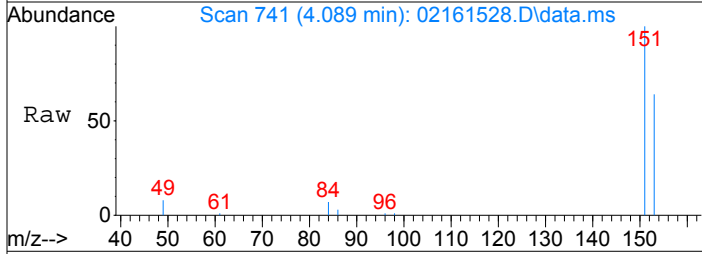
Tgt Ion:	84	Resp:	295378
Ion Ratio	Lower	Upper	
84	100		
49	124.1	112.3	152.3





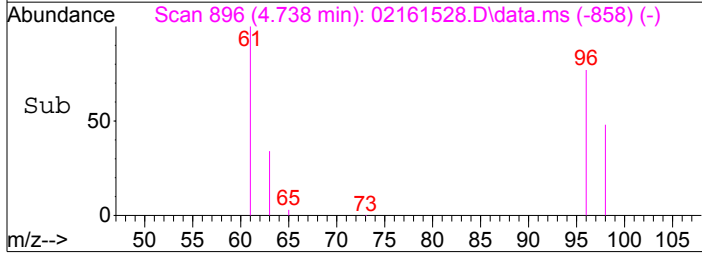
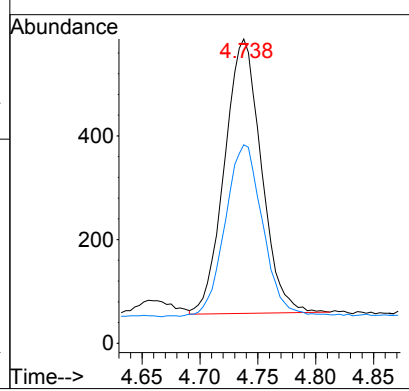
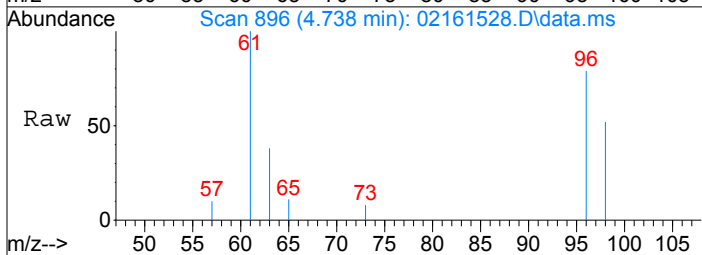
#11
 Trichlorotrifluoroethane
 Concen: 455.47 pg
 RT: 4.09 min Scan# 741
 Delta R.T. -0.016 min
 Lab File: 02161528.D
 Acq: 17 Feb 2015 00:28

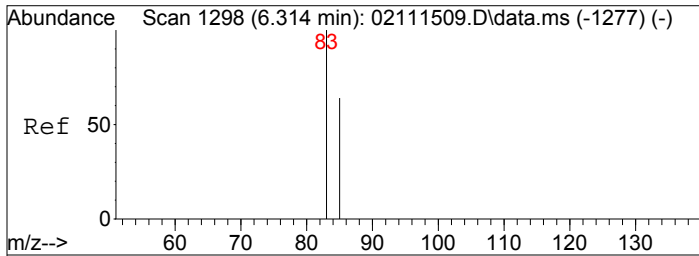
Tgt Ion: 151	Resp: 14720
Ion Ratio	Lower Upper
151	100
153	63.5 43.6 83.6



#12
 trans-1,2-Dichloroethene
 Concen: 36.49 pg
 RT: 4.74 min Scan# 896
 Delta R.T. -0.002 min
 Lab File: 02161528.D
 Acq: 17 Feb 2015 00:28

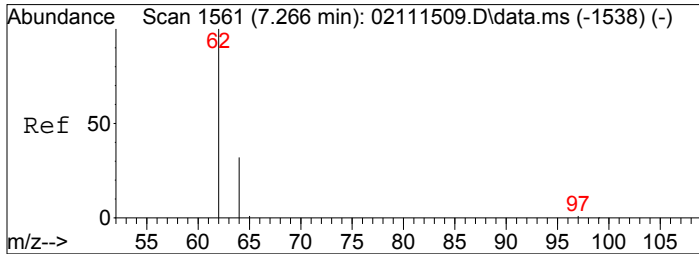
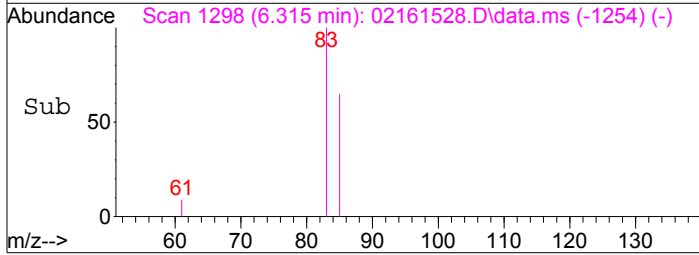
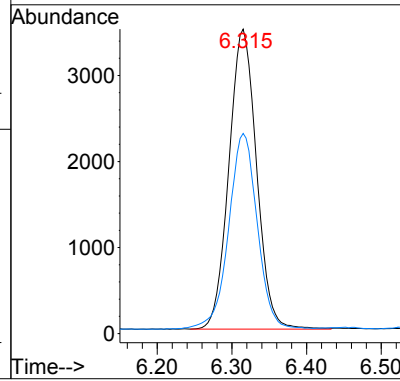
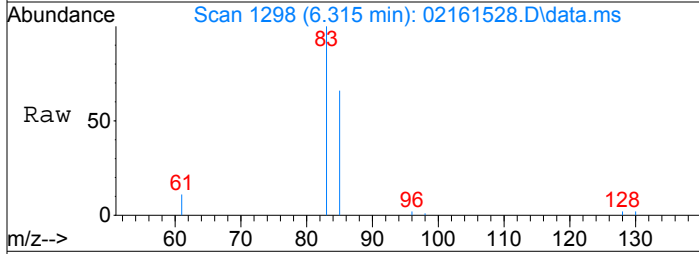
Tgt Ion: 96	Resp: 1170
Ion Ratio	Lower Upper
96	100
98	63.9 43.7 83.7





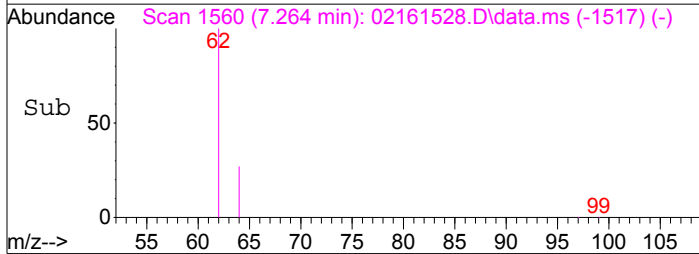
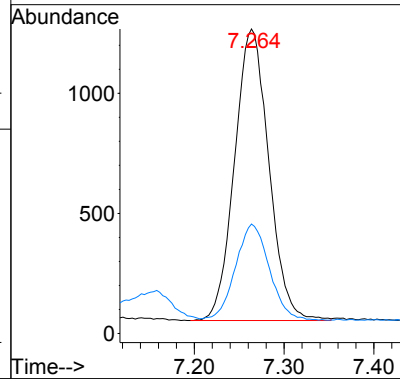
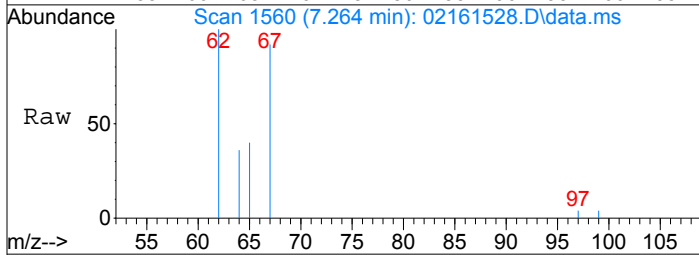
#16
Chloroform
Concen: 145.11 pg
RT: 6.31 min Scan# 1298
Delta R.T. 0.001 min
Lab File: 02161528.D
Acq: 17 Feb 2015 00:28

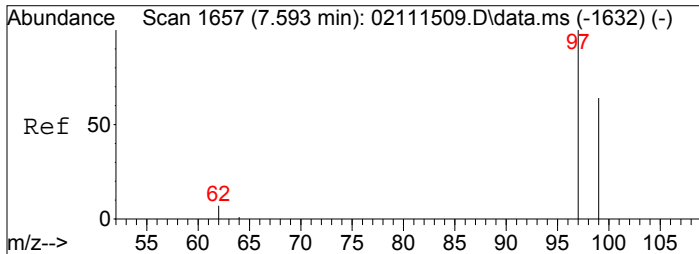
Tgt Ion: 83 Resp: 8964
Ion Ratio Lower Upper
83 100
85 67.6 45.4 85.4



#18
1,2-Dichloroethane
Concen: 65.57 pg
RT: 7.26 min Scan# 1560
Delta R.T. -0.002 min
Lab File: 02161528.D
Acq: 17 Feb 2015 00:28

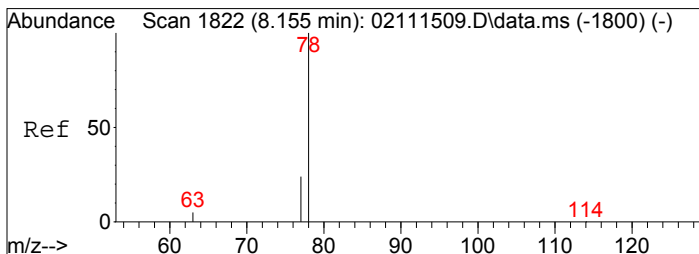
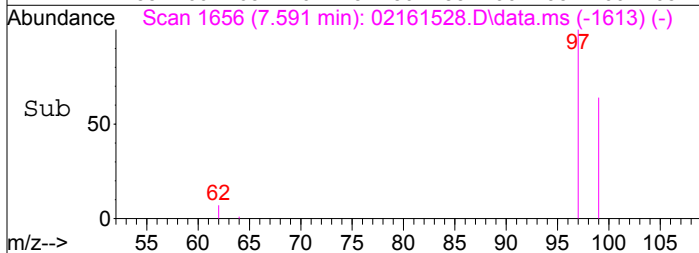
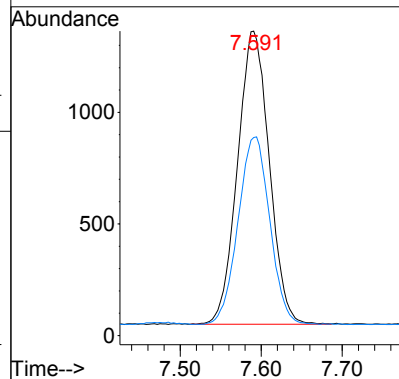
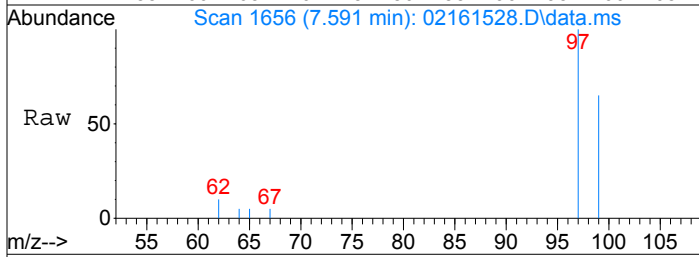
Tgt Ion: 62 Resp: 3225
Ion Ratio Lower Upper
62 100
64 32.7 11.6 51.6





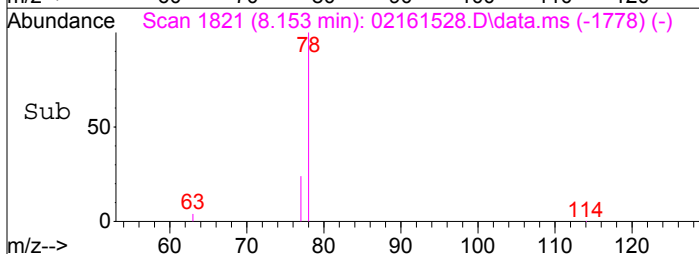
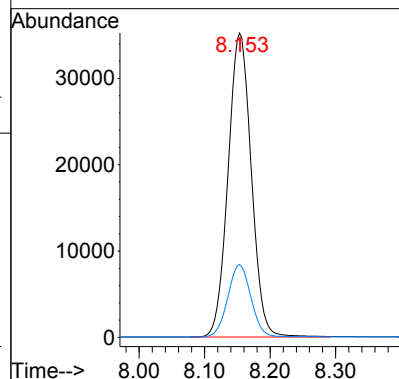
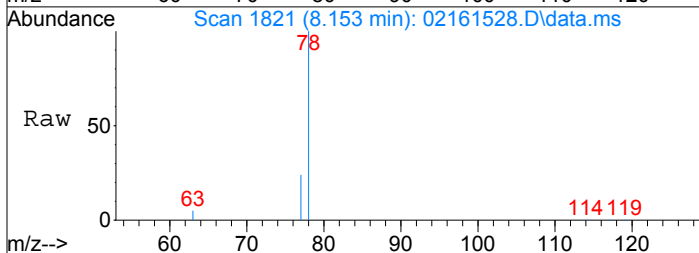
#19
1,1,1-Trichloroethane
Concen: 59.48 pg
RT: 7.59 min Scan# 1656
Delta R.T. -0.002 min
Lab File: 02161528.D
Acq: 17 Feb 2015 00:28

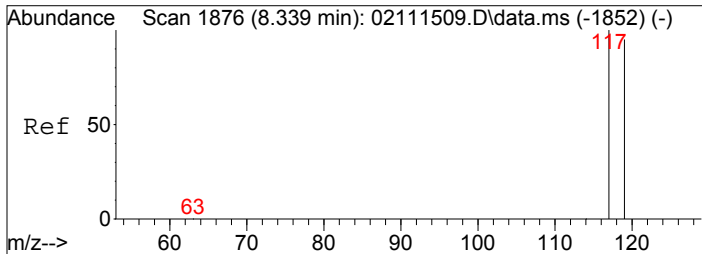
Tgt Ion: 97 Resp: 3573
Ion Ratio Lower Upper
97 100
99 64.0 44.0 84.0



#20
Benzene
Concen: 681.09 pg
RT: 8.15 min Scan# 1821
Delta R.T. -0.002 min
Lab File: 02161528.D
Acq: 17 Feb 2015 00:28

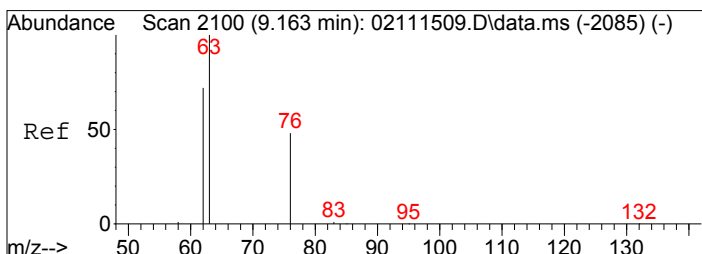
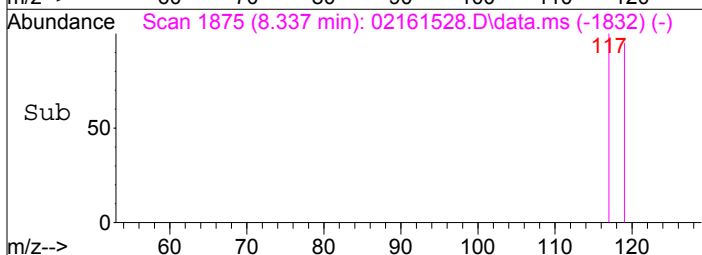
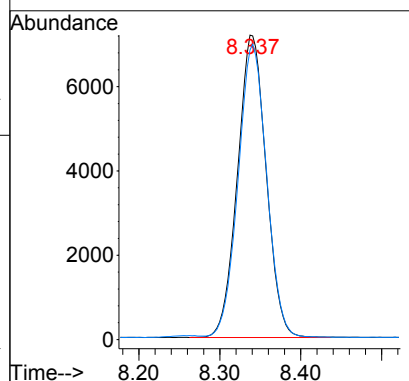
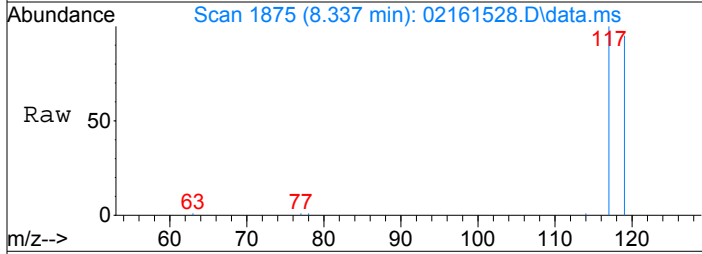
Tgt Ion: 78 Resp: 86535
Ion Ratio Lower Upper
78 100
77 23.7 3.7 43.7





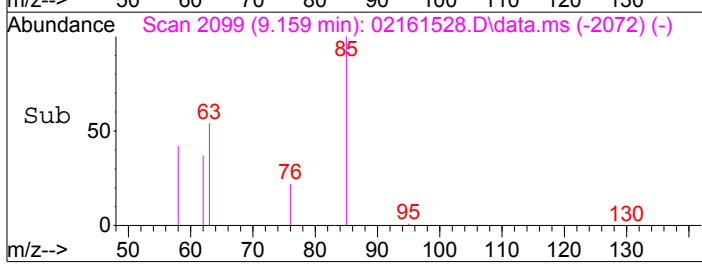
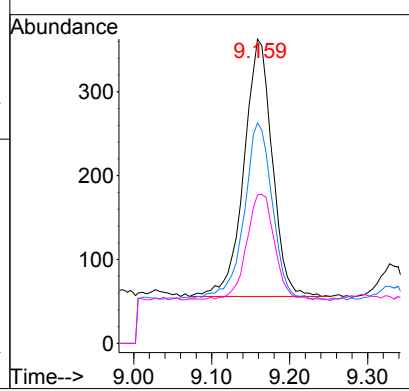
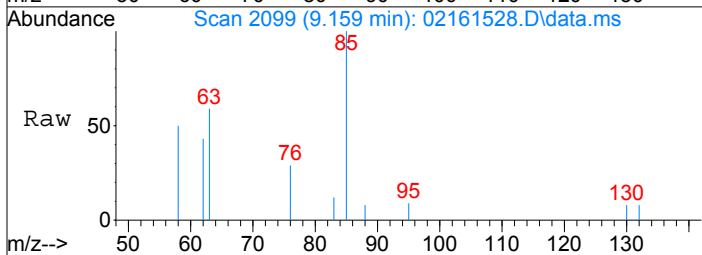
#21
Carbon Tetrachloride
Concen: 392.04 pg
RT: 8.34 min Scan# 1875
Delta R.T. -0.002 min
Lab File: 02161528.D
Acq: 17 Feb 2015 00:28

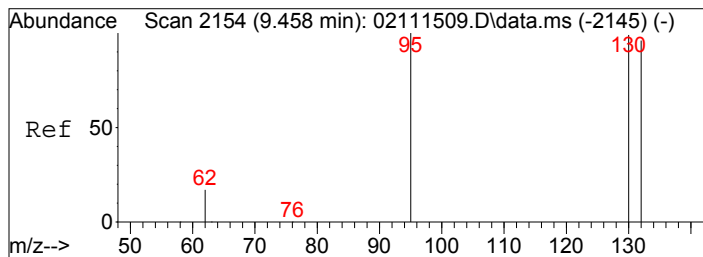
Tgt Ion:	117	Resp:	17631
Ion Ratio	Lower	Upper	
117	100		
119	96.5	75.5	115.5



#23
1,2-Dichloropropane
Concen: 24.13 pg
RT: 9.16 min Scan# 2099
Delta R.T. -0.004 min
Lab File: 02161528.D
Acq: 17 Feb 2015 00:28

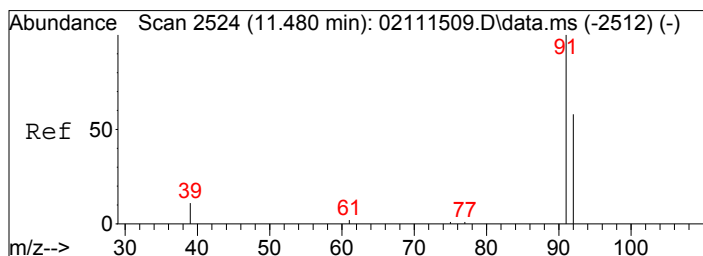
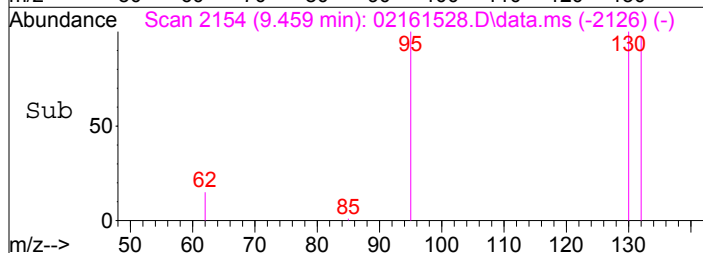
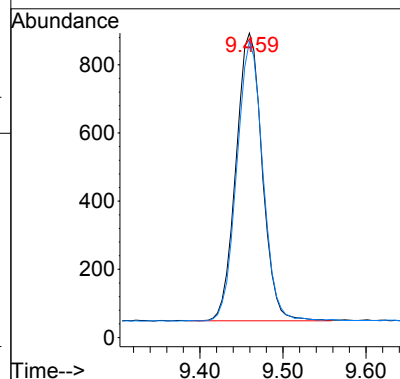
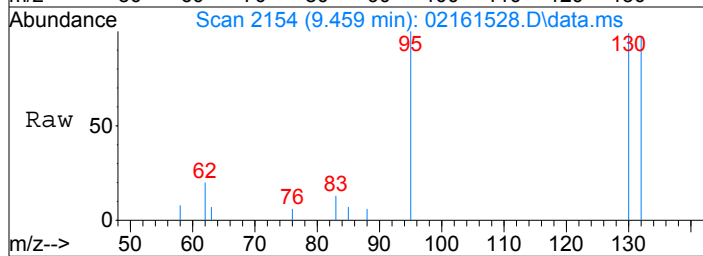
Tgt Ion:	63	Resp:	773
Ion Ratio	Lower	Upper	
63	100		
62	69.2	52.0	92.0
76	41.9	28.1	68.1





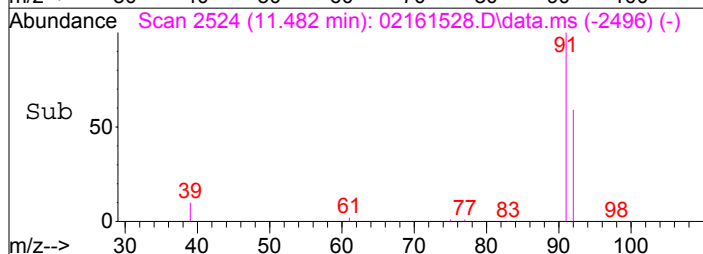
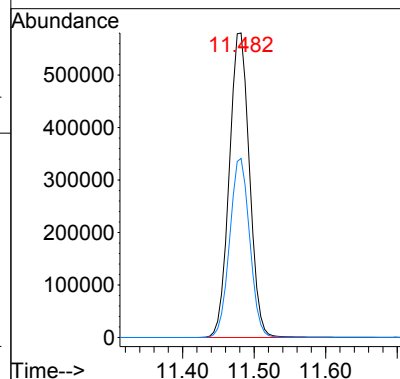
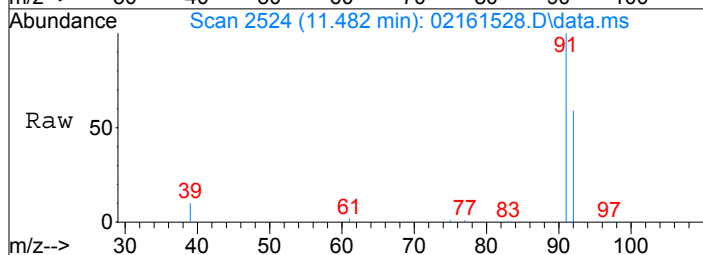
#25
Trichloroethene
Concen: 49.08 pg
RT: 9.46 min Scan# 2154
Delta R.T. 0.001 min
Lab File: 02161528.D
Acq: 17 Feb 2015 00:28

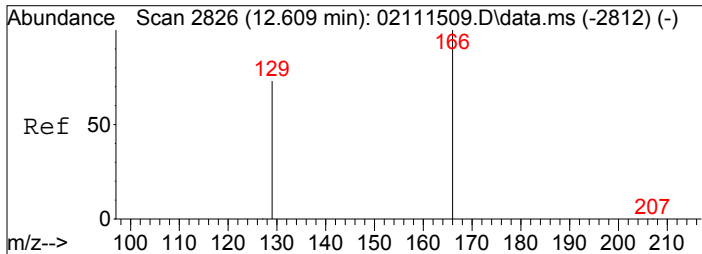
Tgt Ion: 130 Resp: 1852
Ion Ratio Lower Upper
130 100
132 96.1 77.1 117.1



#31
Toluene
Concen: 7883.14 pg
RT: 11.48 min Scan# 2524
Delta R.T. 0.001 min
Lab File: 02161528.D
Acq: 17 Feb 2015 00:28

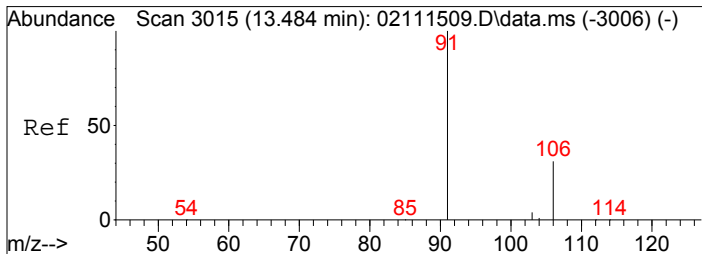
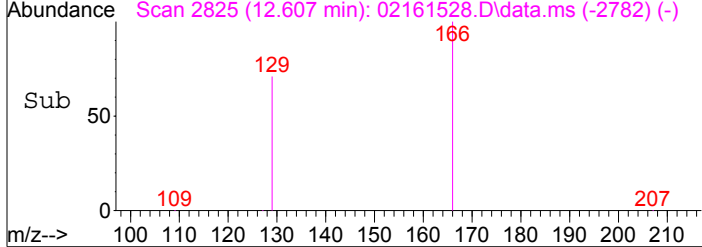
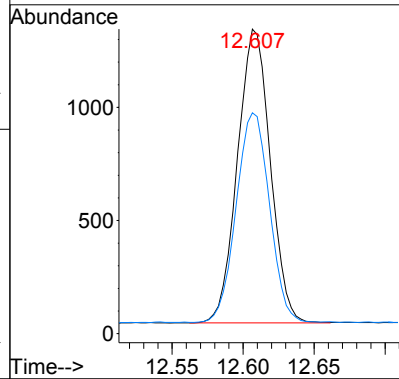
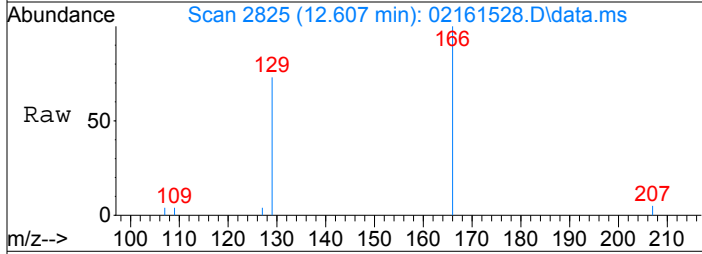
Tgt Ion: 91 Resp: 1135633
Ion Ratio Lower Upper
91 100
92 58.4 37.7 77.7





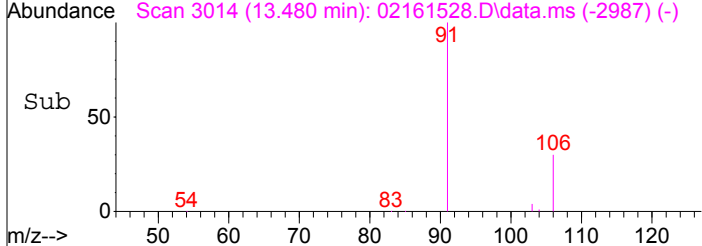
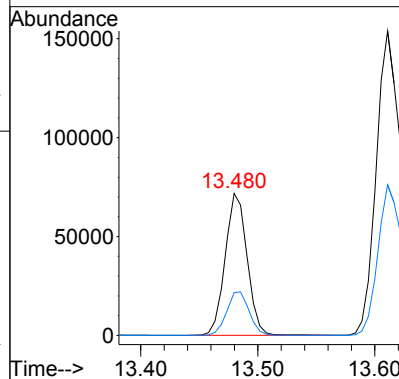
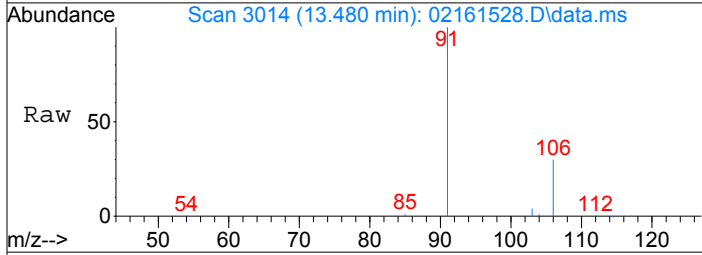
#33
Tetrachloroethene
Concen: 46.79 pg
RT: 12.61 min Scan# 2825
Delta R.T. -0.002 min
Lab File: 02161528.D
Acq: 17 Feb 2015 00:28

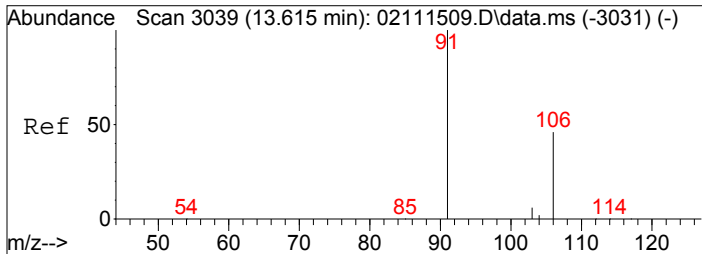
Tgt Ion: 166	Resp: 2087
Ion Ratio	Lower Upper
166	100
129	72.3 53.3 93.3



#36
Ethylbenzene
Concen: 600.46 pg
RT: 13.48 min Scan# 3014
Delta R.T. -0.004 min
Lab File: 02161528.D
Acq: 17 Feb 2015 00:28

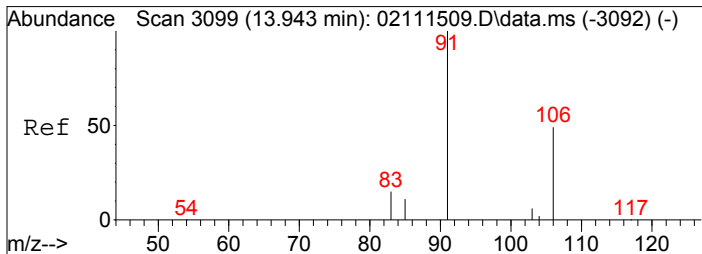
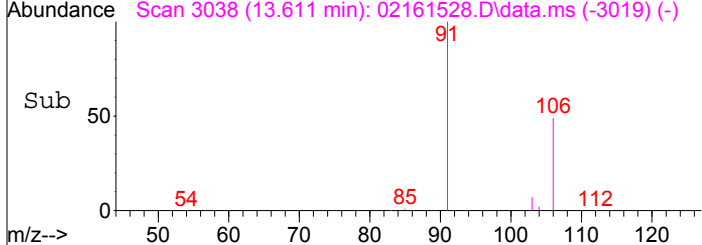
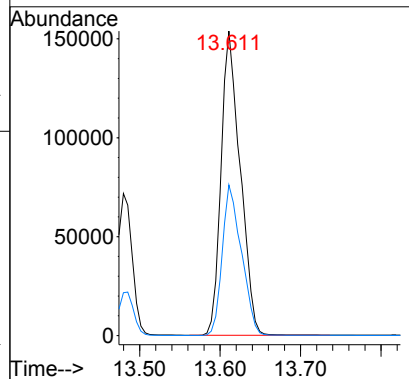
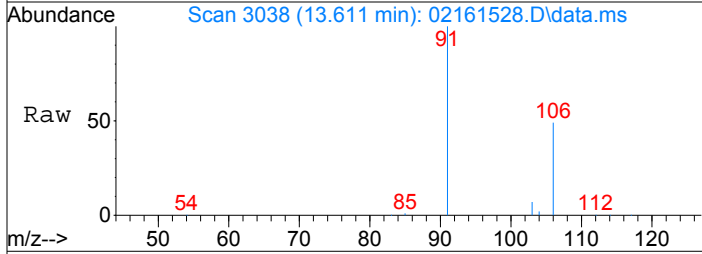
Tgt Ion: 91	Resp: 93299
Ion Ratio	Lower Upper
91	100
106	31.5 10.9 50.9





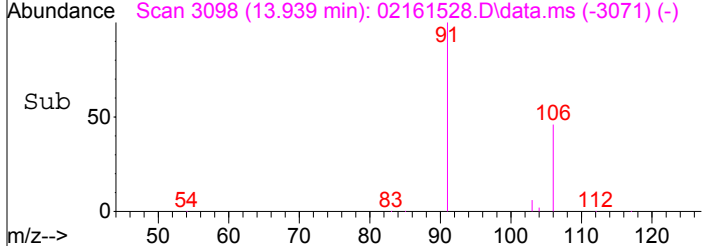
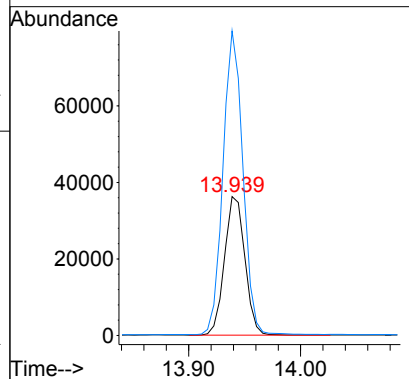
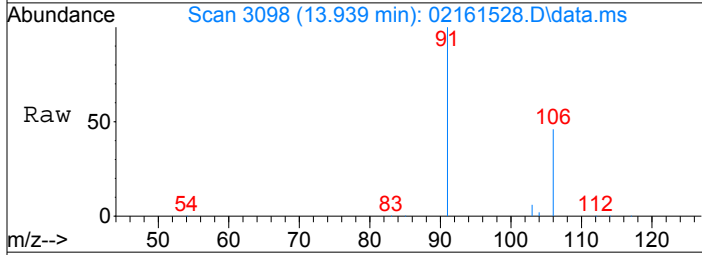
#37
m,p-Xylene
Concen: 1984.69 pg
RT: 13.61 min Scan# 3038
Delta R.T. -0.004 min
Lab File: 02161528.D
Acq: 17 Feb 2015 00:28

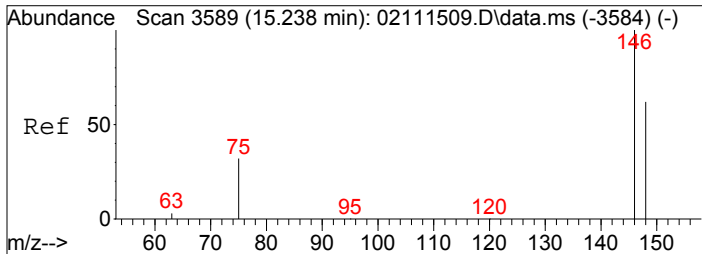
Tgt Ion: 91 Resp: 253453
Ion Ratio Lower Upper
91 100
106 49.7 27.5 67.5



#38
o-Xylene
Concen: 734.14 pg
RT: 13.94 min Scan# 3098
Delta R.T. -0.004 min
Lab File: 02161528.D
Acq: 17 Feb 2015 00:28

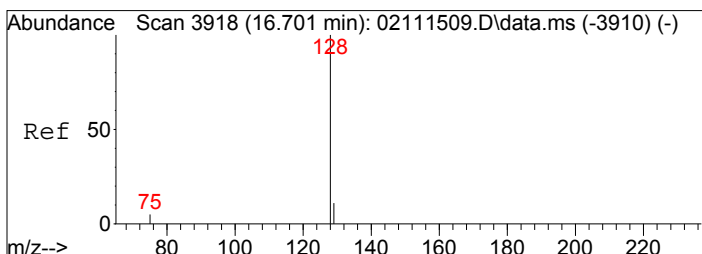
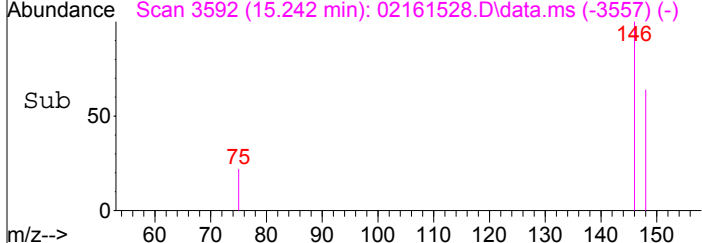
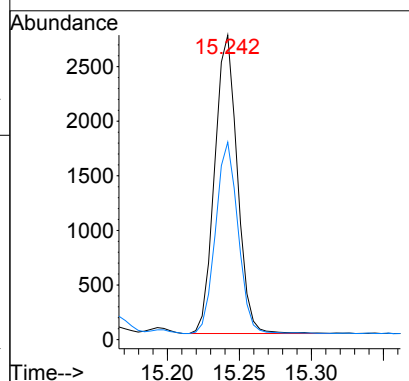
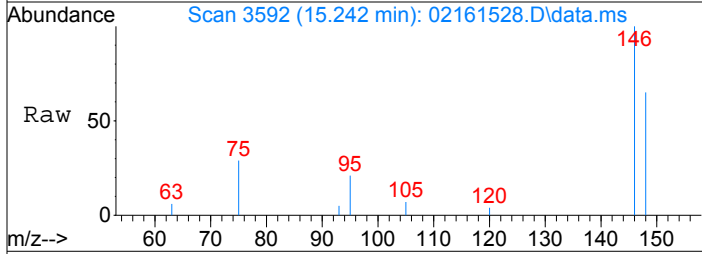
Tgt Ion: 106 Resp: 45819
Ion Ratio Lower Upper
106 100
91 213.1 198.3 238.3





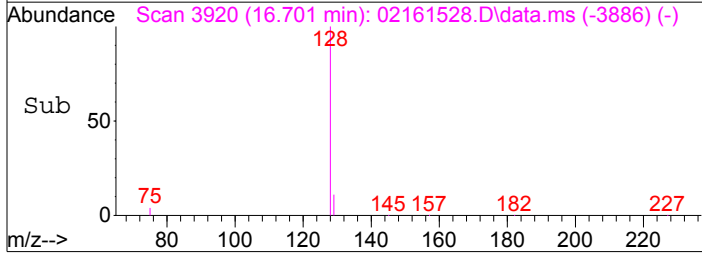
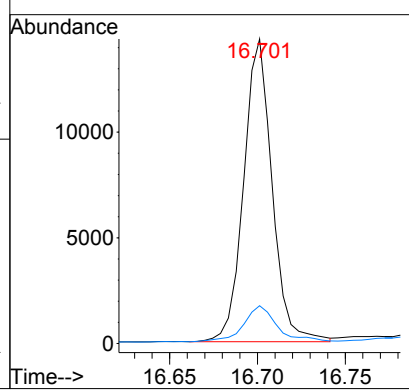
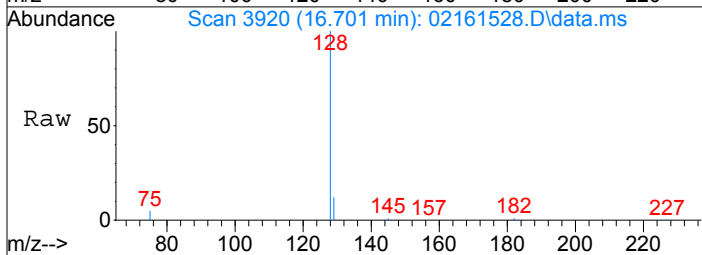
#42
 1,4-Dichlorobenzene
 Concen: 34.93 pg
 RT: 15.24 min Scan# 3592
 Delta R.T. 0.004 min
 Lab File: 02161528.D
 Acq: 17 Feb 2015 00:28

Tgt Ion:146	Resp:	2991
Ion Ratio	Lower	Upper
146	100	
148	63.8	43.5 83.5



#45
 Naphthalene
 Concen: 104.19 pg
 RT: 16.70 min Scan# 3920
 Delta R.T. 0.000 min
 Lab File: 02161528.D
 Acq: 17 Feb 2015 00:28

Tgt Ion:128	Resp:	16154
Ion Ratio	Lower	Upper
128	100	
129	14.6	0.0 30.9



Data File: I:\MS19\DATA\2015 02\17\02171516.D

Acq On : 17 Feb 2015 12:43

Operator: WA

Sample : P1500566-011 (1000mL)

Misc : S29-02041502

ALS Vial : 9 Sample Multiplier: 1

Quant Time: Feb 17 16:45:19 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

WA 2/18/15

DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.12	130	18228	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	132152	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	23561	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.13	65	42128	946.388	pg	0.00
Spiked Amount 1000.000			Recovery	=	94.64%	
30) Toluene-d8 (SS2)	11.38	98	123677	1014.840	pg	0.00
Spiked Amount 1000.000			Recovery	=	101.48%	
40) Bromofluorobenzene (SS3)	14.25	174	49692	1044.687	pg	0.00
Spiked Amount 1000.000			Recovery	=	104.47%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.73	85	138645	1871.586	pg	100
3) Chloromethane	1.83	52	8638	583.895	pg	98
4) Vinyl Chloride	2.02	62	91	N.D.		
5) Bromomethane	2.33	94	1447	43.439	pg	99
6) Chloroethane	2.47	64	402	N.D.		
7) Acetone	2.99	58	435763	16658.240	pg	# 86
8) Trichlorofluoromethane	3.10	101	89274	1403.002	pg	100
9) 1,1-Dichloroethene	3.67	96	46	N.D.		
10) Methylene Chloride	3.80	84	161715	5356.026	pg	97
11) Trichlorotrifluoroethane	4.10	151	13333	456.010	pg	100
12) trans-1,2-Dichloroethene	4.74	96	199	N.D.		
13) 1,1-Dichloroethane	4.95	63	282	N.D.		
14) Methyl tert-Butyl Ether	5.11	73	702	N.D.		
15) cis-1,2-Dichloroethene	5.94	96	248	N.D.		
16) Chloroform	6.33	83	6677	119.474	pg	97
18) 1,2-Dichloroethane	7.27	62	5076	114.072	pg	99
19) 1,1,1-Trichloroethane	7.59	97	1954	35.954	pg	100
20) Benzene	8.15	78	60725	528.292	pg	100
21) Carbon Tetrachloride	8.34	117	16501	405.562	pg	99
23) 1,2-Dichloropropane	9.16	63	1386	48.088	pg	95
24) Bromodichloromethane	0.00	83	0	N.D.	d	
25) Trichloroethene	9.46	130	907	26.715	pg	98
26) 1,4-Dioxane	9.54	88	320	N.D.		
27) cis-1,3-Dichloropropene	10.46	75	87	N.D.		
28) trans-1,3-Dichloropropene	11.04	75	132	N.D.		
29) 1,1,2-Trichloroethane	11.20	83	191	N.D.		
31) Toluene	11.48	91	896211	6914.445	pg	99
32) 1,2-Dibromoethane	12.12	107	92	N.D.		
33) Tetrachloroethene	12.61	166	1609	40.092	pg	99
35) Chlorobenzene	13.17	112	795	N.D.		
36) Ethylbenzene	13.48	91	87964	595.368	pg	100
37) m,p-Xylene	13.61	91	220154	1812.988	pg	98
38) o-Xylene	13.94	106	37450	631.044	pg	99
39) 1,1,1,2,2-Tetrachloroethane	13.89	83	531	N.D.		
41) 1,3-Dichlorobenzene	15.19	146	156	N.D.		
42) 1,4-Dichlorobenzene	15.24	146	669	N.D.		
43) 1,2-Dichlorobenzene	15.46	146	127	N.D.		
44) 1,2,4-Trichlorobenzene	16.63	182	134	N.D.		
45) Naphthalene	16.70	128	2498	N.D.		
46) Hexachlorobutadiene	16.95	225	17	N.D.		

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\17\02171516.D

Acq On : 17 Feb 2015 12:43

Operator: WA

Sample : P1500566-011 (1000mL)

Misc : S29-02041502

ALS Vial : 9 Sample Multiplier: 1

Quant Time: Feb 17 16:45:19 2015

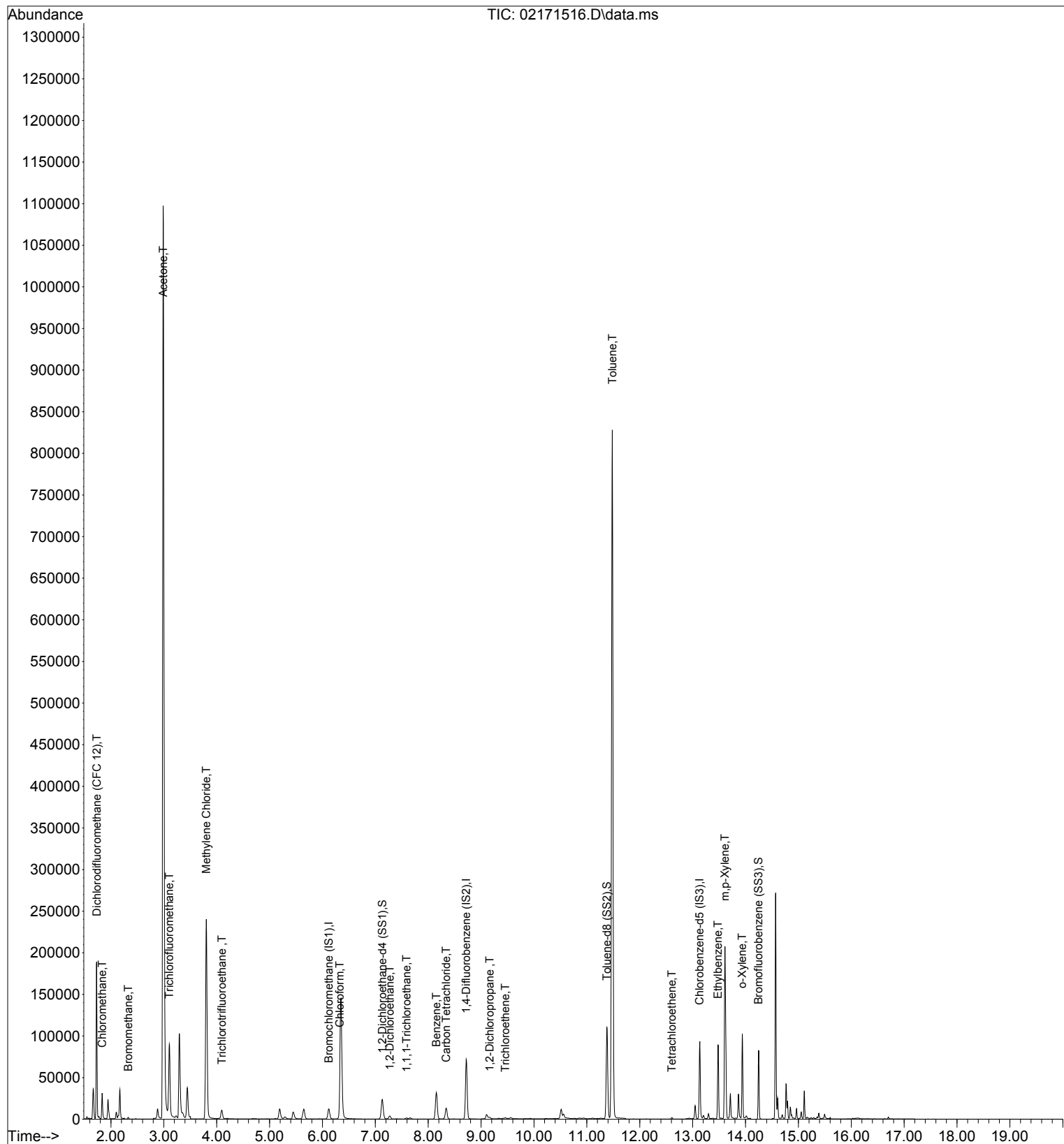
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 02\17\02171516.D

Acq On : 17 Feb 2015 12:43

Operator: WA

Sample : P1500566-011 (1000mL)

Misc : S29-02041502

ALS Vial : 9 Sample Multiplier: 1

Quant Time: Feb 17 16:45:19 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

2/17/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.12	130	18228	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	132152	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	23561	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.13	65	42128	946.388	pg	0.00
Spiked Amount 1000.000			Recovery	=	94.64%	
30) Toluene-d8 (SS2)	11.38	98	123677	1014.840	pg	0.00
Spiked Amount 1000.000			Recovery	=	101.48%	
40) Bromofluorobenzene (SS3)	14.25	174	49692	1044.687	pg	0.00
Spiked Amount 1000.000			Recovery	=	104.47%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.73	85	138645	1871.586	pg	100
3) Chloromethane	1.83	52	8638	583.895	pg	98
5) Bromomethane	2.33	94	1447	43.439	pg	99
7) Acetone	2.99	58	435763	16658.240	pg	# 86
8) Trichlorofluoromethane	3.10	101	89274	1403.002	pg	100
10) Methylene Chloride	3.80	84	161715	5356.026	pg	97
11) Trichlorotrifluoroethane	4.10	151	13333	456.010	pg	100
16) Chloroform	6.33	83	6677	119.474	pg	97
18) 1,2-Dichloroethane	7.27	62	5076	114.072	pg	99
19) 1,1,1-Trichloroethane	7.59	97	1954	35.954	pg	100
20) Benzene	8.15	78	60725	528.292	pg	100
21) Carbon Tetrachloride	8.34	117	16501	405.562	pg	99
23) 1,2-Dichloropropane	9.16	63	1386	48.088	pg	95
25) Trichloroethene	9.46	130	907	26.715	pg	98
31) Toluene	11.48	91	896211	6914.445	pg	99
33) Tetrachloroethene	12.61	166	1609	40.092	pg	99
36) Ethylbenzene	13.48	91	87964	595.368	pg	100
37) m,p-Xylene	13.61	91	220154	1812.988	pg	98
38) o-Xylene	13.94	106	37450	631.044	pg	99

(#)= qualifier out of range (m) = manual integration (+) = signals summed

Data File: I:\MS19\DATA\2015 02\17\02171516.D

Acq On : 17 Feb 2015 12:43

Operator: WA

Sample : P1500566-011 (1000mL)

Misc : S29-02041502

ALS Vial : 9 Sample Multiplier: 1

Quant Time: Feb 17 16:45:19 2015

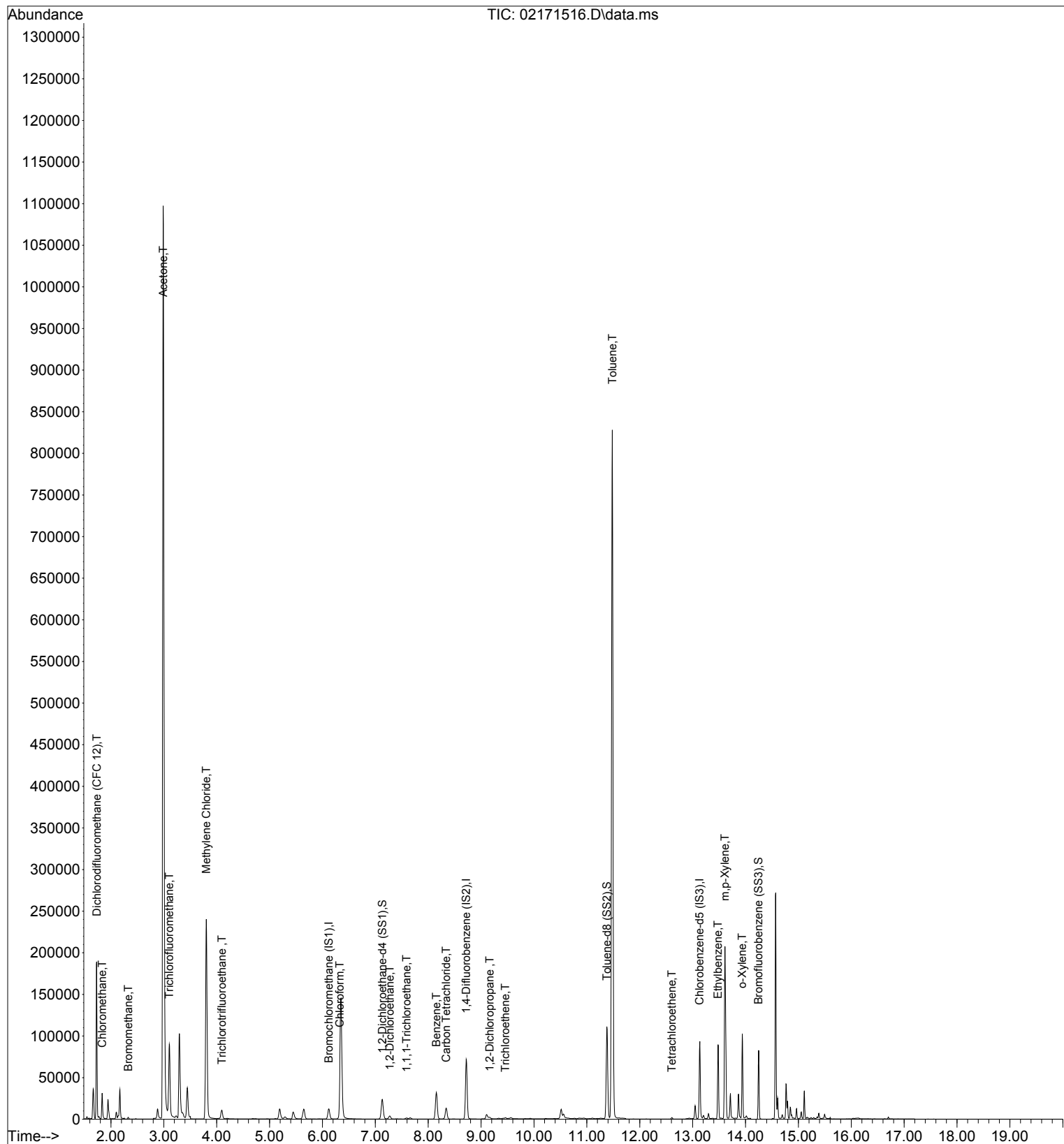
Quant Method : I:\MS19\METHODS\X19021115.M

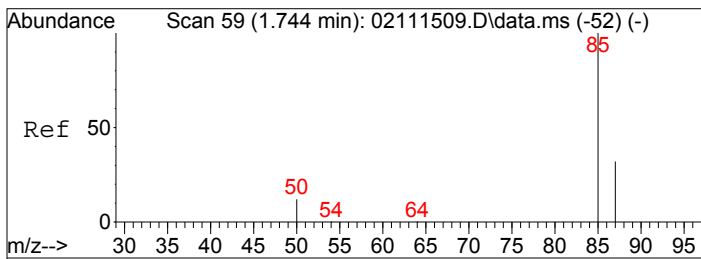
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

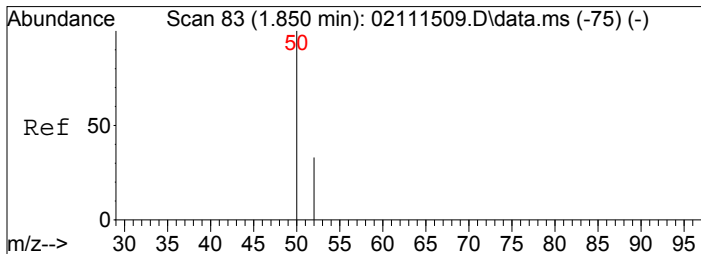
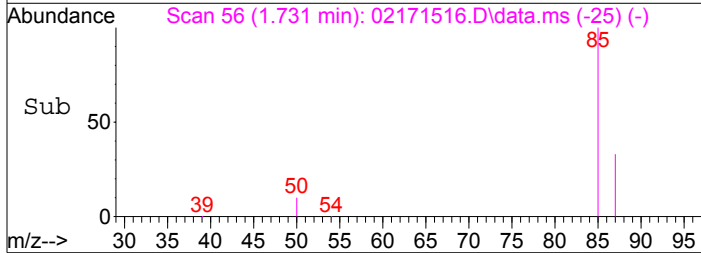
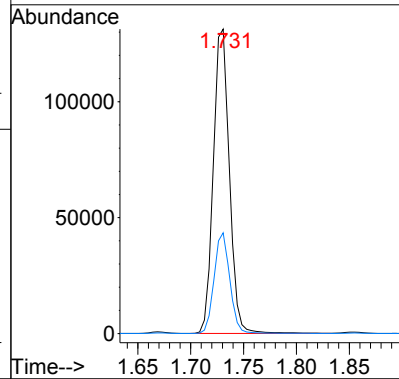
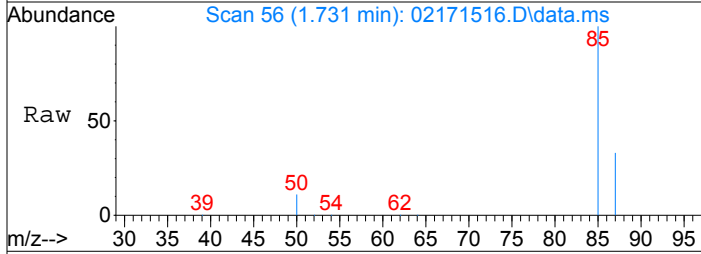
DataAcq Meth:TO15SIM.M





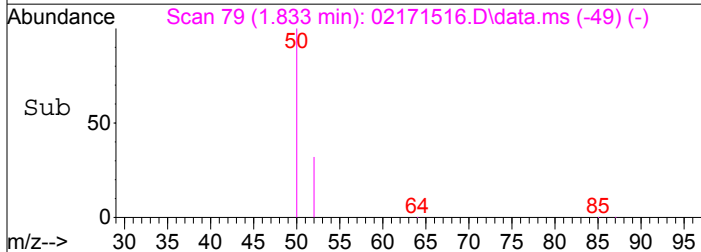
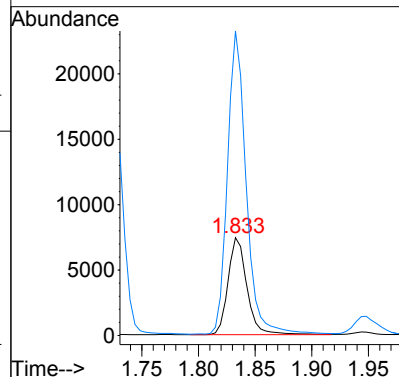
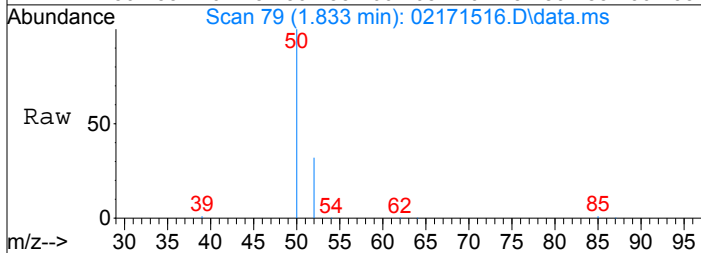
#2
 Dichlorodifluoromethane (CFC 12)
 Concen: 1871.59 pg
 RT: 1.73 min Scan# 56
 Delta R.T. -0.013 min
 Lab File: 02171516.D
 Acq: 17 Feb 2015 12:43

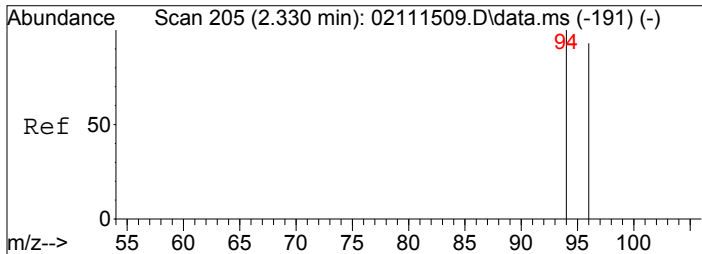
Tgt Ion: 85 Resp: 138645
 Ion Ratio Lower Upper
 85 100
 87 32.4 12.4 52.4



#3
 Chloromethane
 Concen: 583.90 pg
 RT: 1.83 min Scan# 79
 Delta R.T. -0.017 min
 Lab File: 02171516.D
 Acq: 17 Feb 2015 12:43

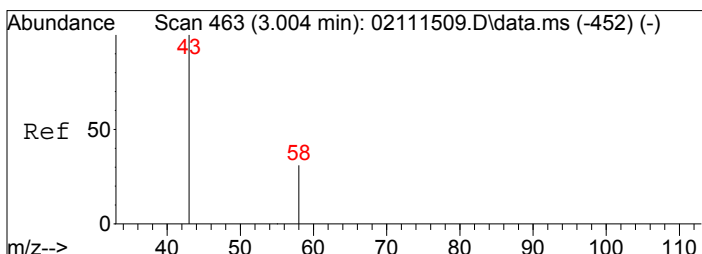
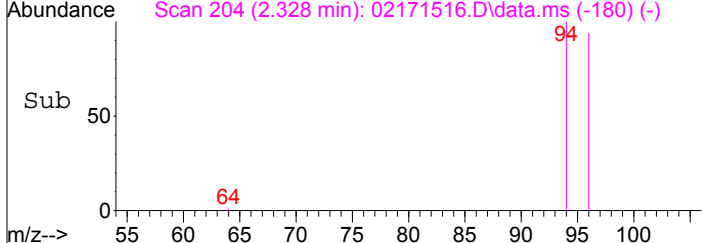
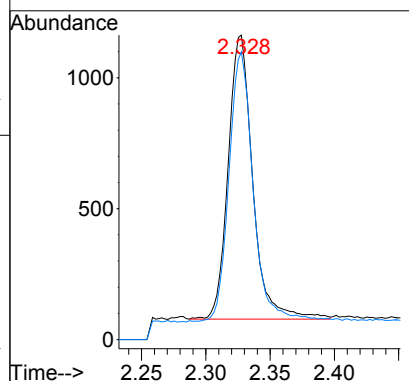
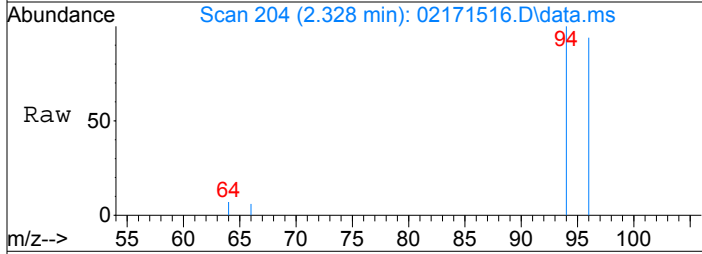
Tgt Ion: 52 Resp: 8638
 Ion Ratio Lower Upper
 52 100
 50 307.4 283.7 323.7





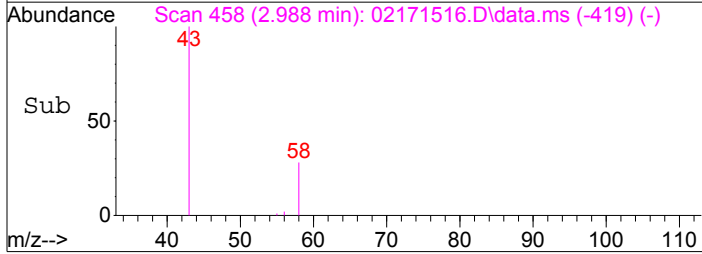
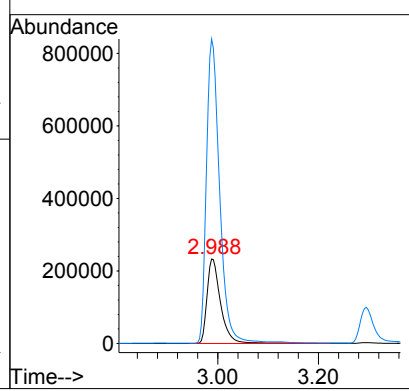
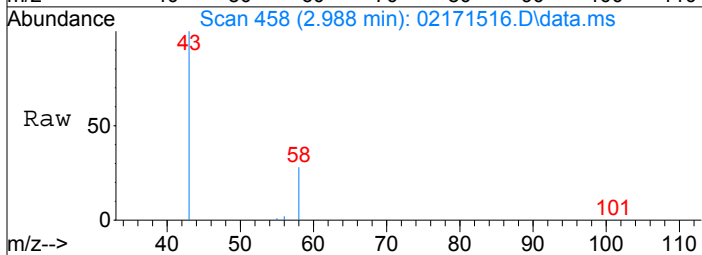
#5
 Bromomethane
 Concen: 43.44 pg
 RT: 2.33 min Scan# 204
 Delta R.T. -0.002 min
 Lab File: 02171516.D
 Acq: 17 Feb 2015 12:43

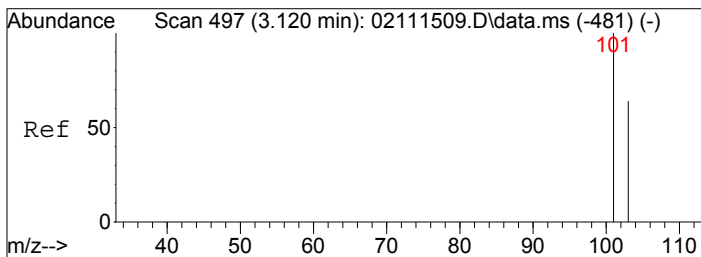
Tgt Ion:	94	Resp:	1447
Ion Ratio	Lower	Upper	
94	100		
96	93.7	75.5	113.3



#7
 Acetone
 Concen: 16658.24 pg
 RT: 2.99 min Scan# 458
 Delta R.T. -0.016 min
 Lab File: 02171516.D
 Acq: 17 Feb 2015 12:43

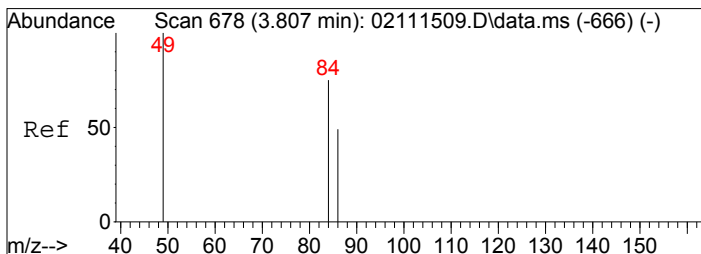
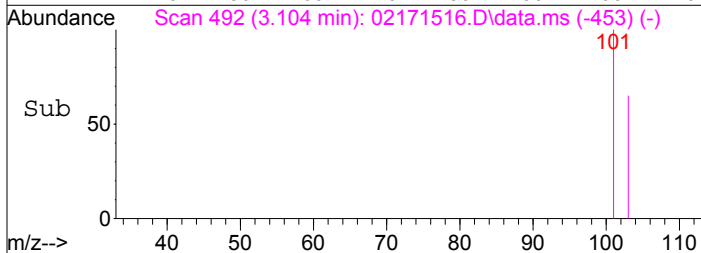
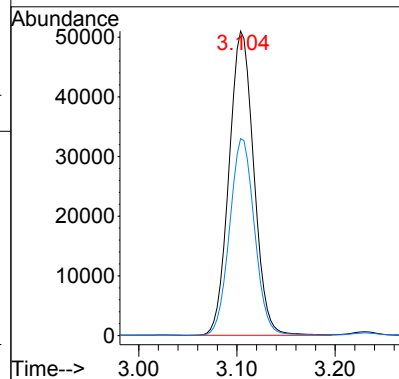
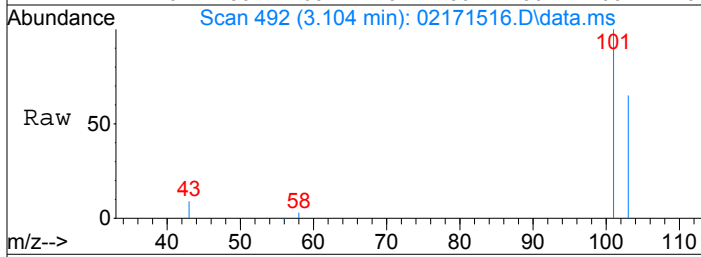
Tgt Ion:	58	Resp:	435763
Ion Ratio	Lower	Upper	
58	100		
43	351.2	301.8	341.8#





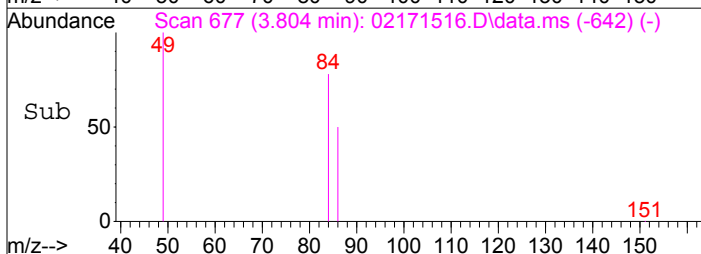
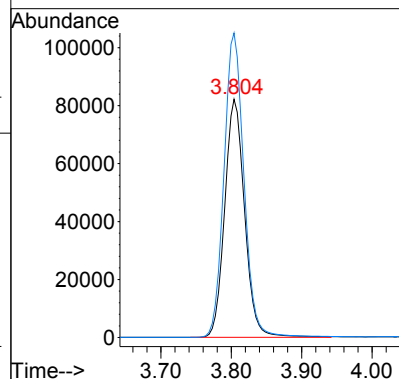
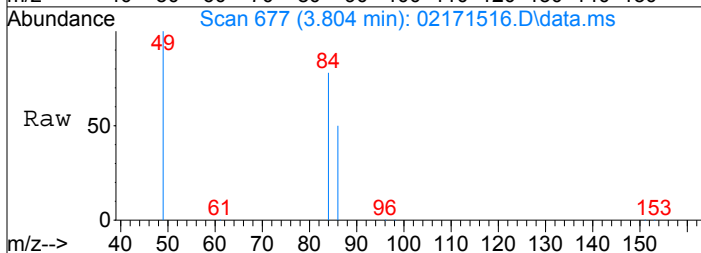
#8
 Trichlorofluoromethane
 Concen: 1403.00 pg
 RT: 3.10 min Scan# 492
 Delta R.T. -0.016 min
 Lab File: 02171516.D
 Acq: 17 Feb 2015 12:43

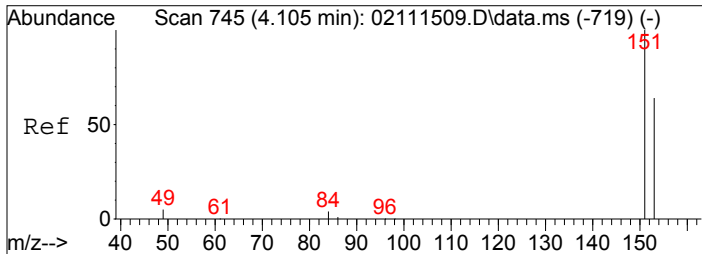
Tgt Ion: 101 Resp: 89274
 Ion Ratio Lower Upper
 101 100
 103 64.9 51.8 77.6



#10
 Methylene Chloride
 Concen: 5356.03 pg
 RT: 3.80 min Scan# 677
 Delta R.T. -0.003 min
 Lab File: 02171516.D
 Acq: 17 Feb 2015 12:43

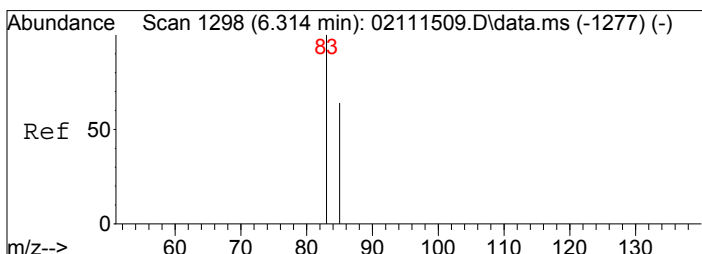
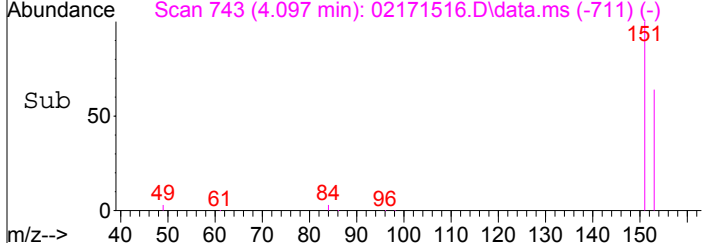
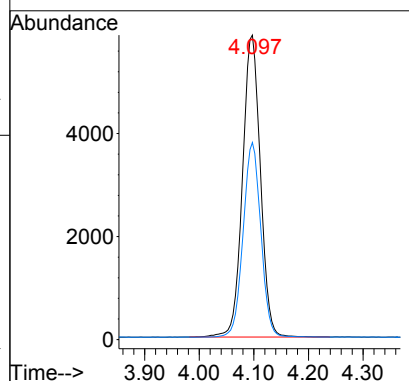
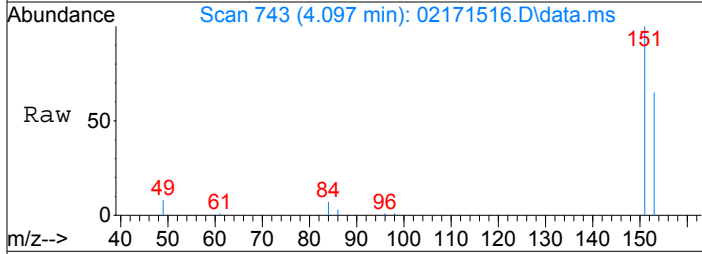
Tgt Ion: 84 Resp: 161715
 Ion Ratio Lower Upper
 84 100
 49 128.2 112.3 152.3





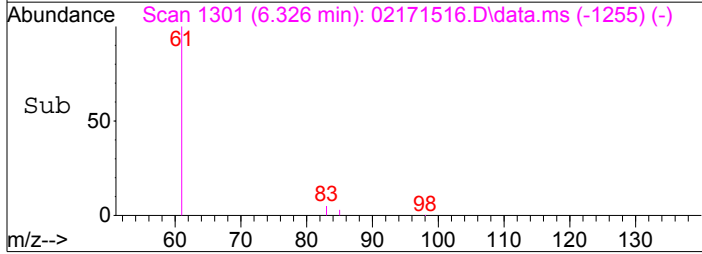
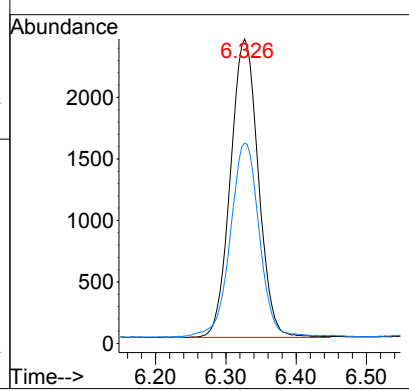
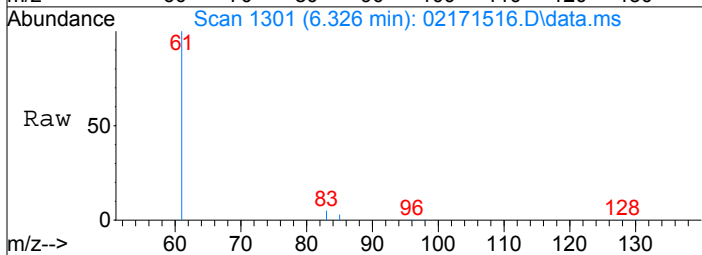
#11
 Trichlorotrifluoroethane
 Concen: 456.01 pg
 RT: 4.10 min Scan# 743
 Delta R.T. -0.008 min
 Lab File: 02171516.D
 Acq: 17 Feb 2015 12:43

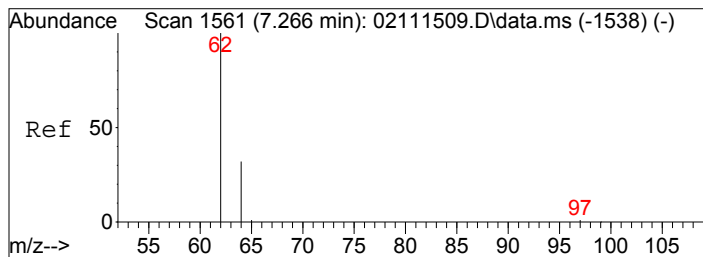
Tgt Ion: 151	Resp: 13333
Ion Ratio	Lower Upper
151	100
153	63.7 43.6 83.6



#16
 Chloroform
 Concen: 119.47 pg
 RT: 6.33 min Scan# 1301
 Delta R.T. 0.012 min
 Lab File: 02171516.D
 Acq: 17 Feb 2015 12:43

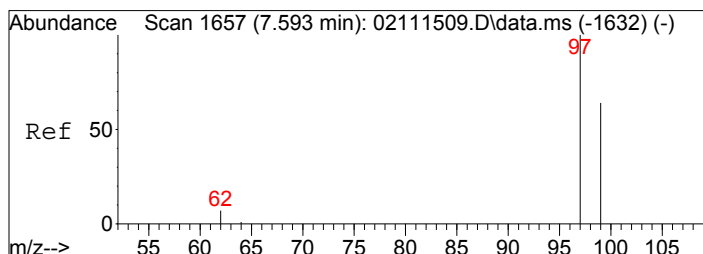
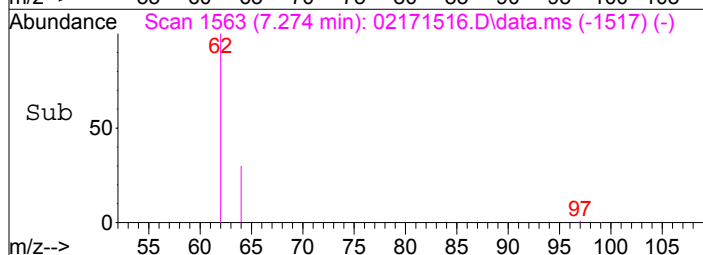
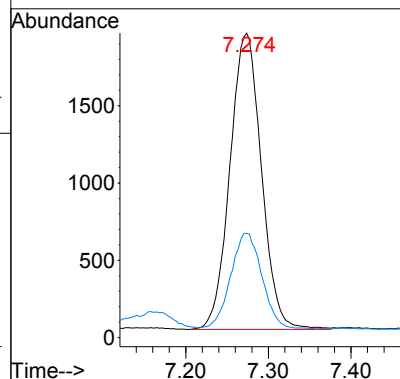
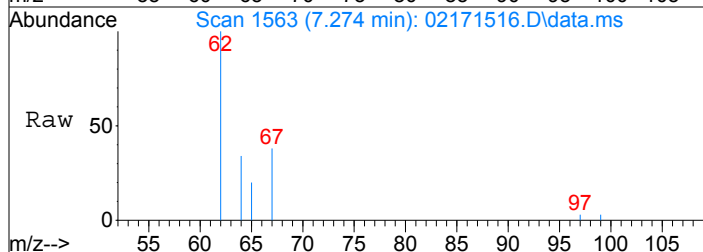
Tgt Ion: 83	Resp: 6677
Ion Ratio	Lower Upper
83	100
85	67.9 45.4 85.4





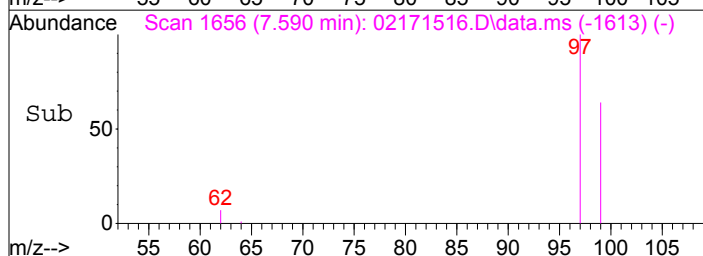
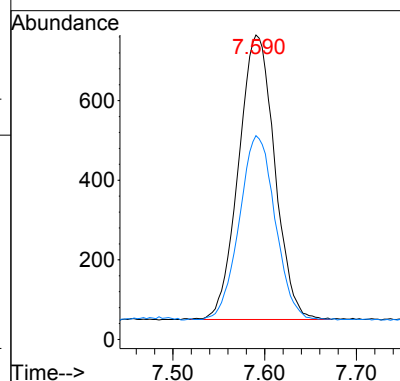
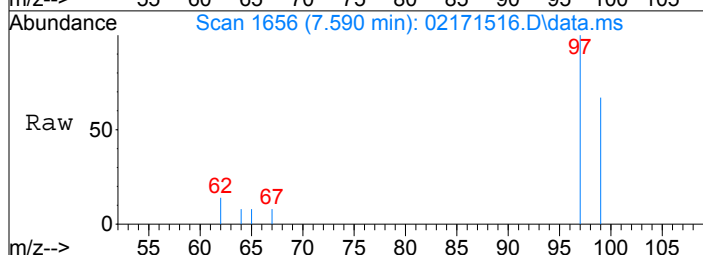
#18
1,2-Dichloroethane
Concen: 114.07 pg
RT: 7.27 min Scan# 1563
Delta R.T. 0.008 min
Lab File: 02171516.D
Acq: 17 Feb 2015 12:43

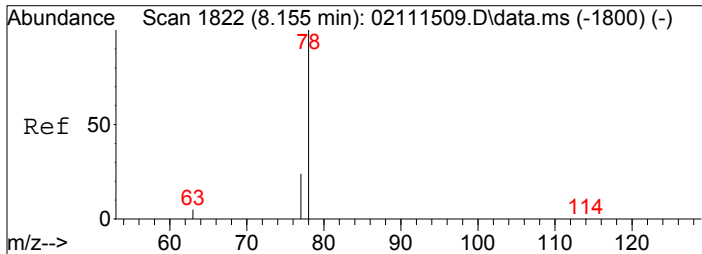
Tgt Ion: 62 Resp: 5076
Ion Ratio Lower Upper
62 100
64 32.1 11.6 51.6



#19
1,1,1-Trichloroethane
Concen: 35.95 pg
RT: 7.59 min Scan# 1656
Delta R.T. -0.002 min
Lab File: 02171516.D
Acq: 17 Feb 2015 12:43

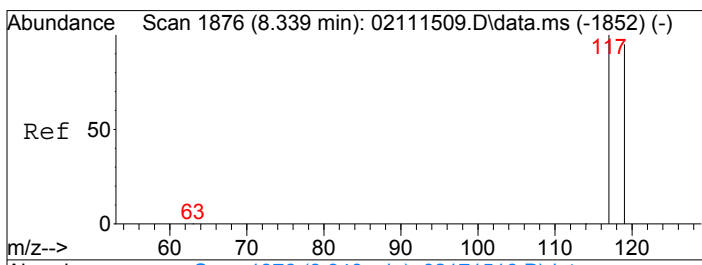
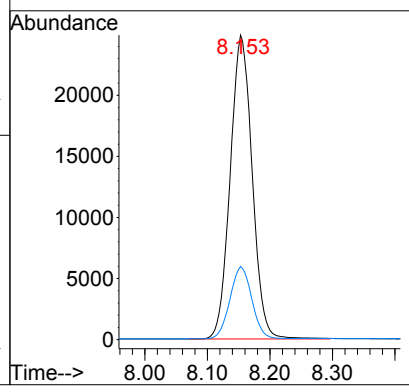
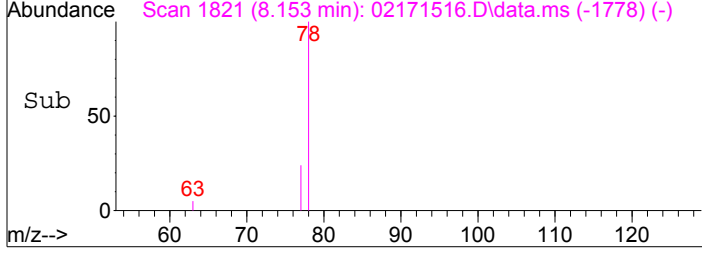
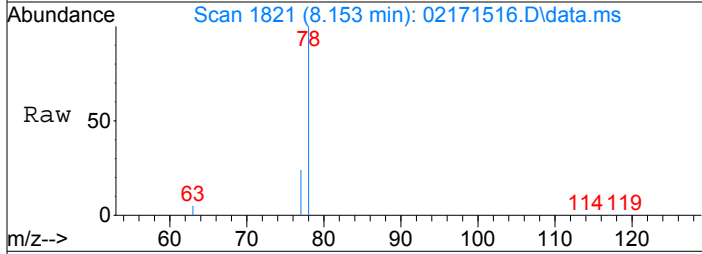
Tgt Ion: 97 Resp: 1954
Ion Ratio Lower Upper
97 100
99 63.9 44.0 84.0





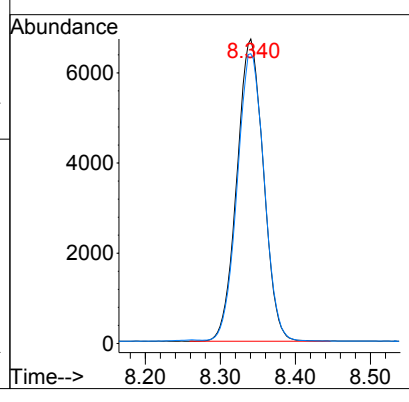
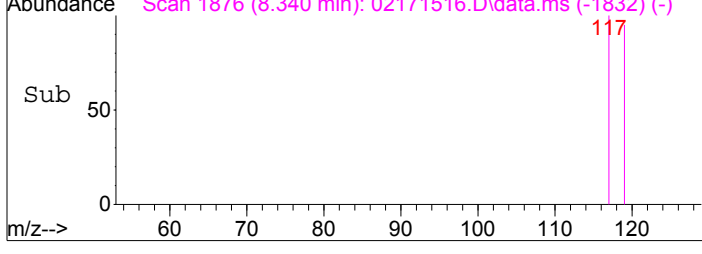
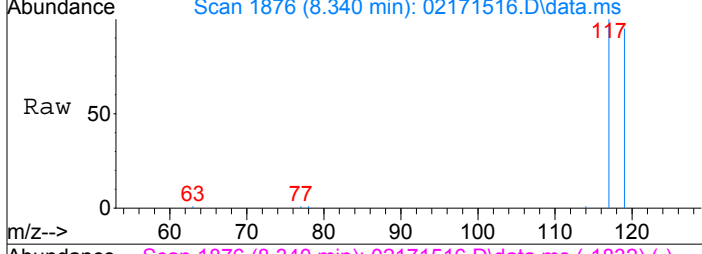
#20
Benzene
Concen: 528.29 pg
RT: 8.15 min Scan# 1821
Delta R.T. -0.002 min
Lab File: 02171516.D
Acq: 17 Feb 2015 12:43

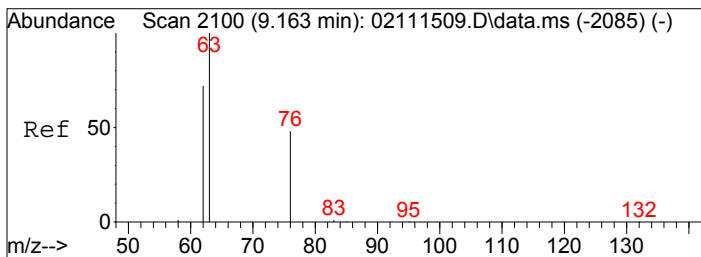
Tgt Ion:	78	Resp:	60725
Ion Ratio	Lower	Upper	
78	100		
77	23.7	3.7	43.7



#21
Carbon Tetrachloride
Concen: 405.56 pg
RT: 8.34 min Scan# 1876
Delta R.T. 0.001 min
Lab File: 02171516.D
Acq: 17 Feb 2015 12:43

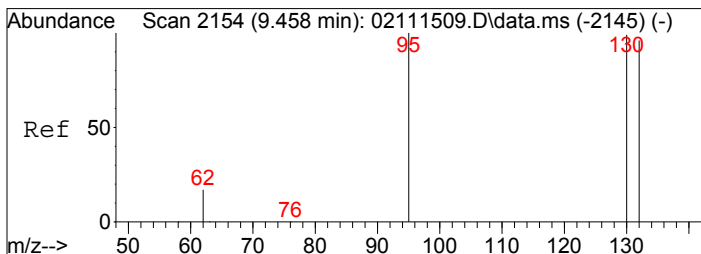
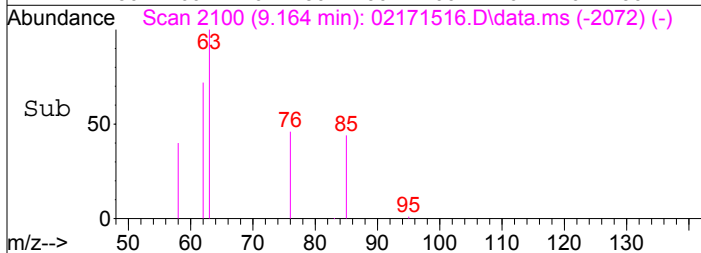
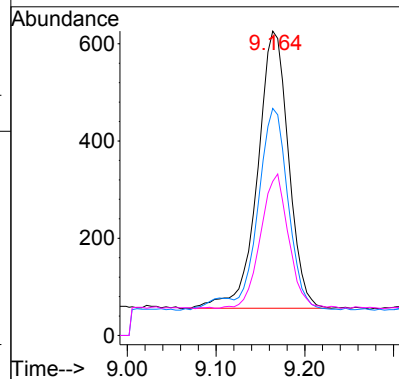
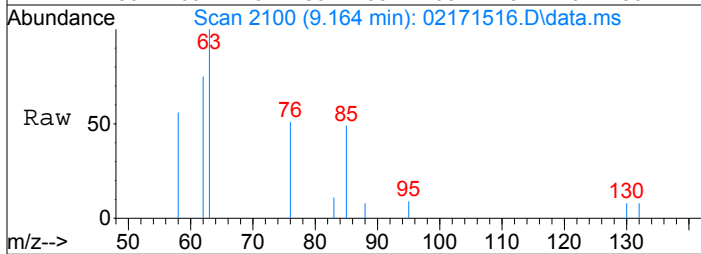
Tgt Ion:	117	Resp:	16501
Ion Ratio	Lower	Upper	
117	100		
119	96.3	75.5	115.5





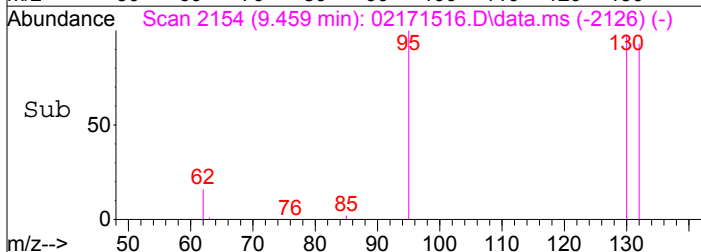
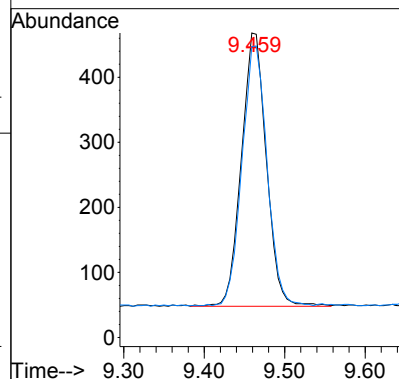
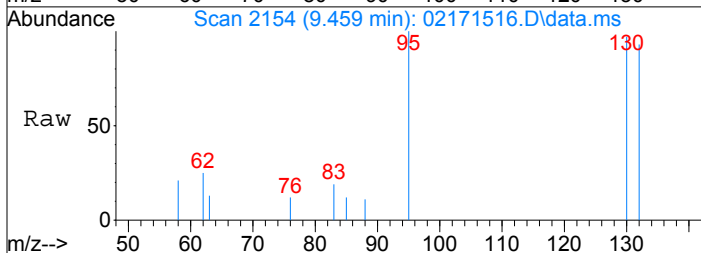
#23
1,2-Dichloropropane
Concen: 48.09 pg
RT: 9.16 min Scan# 2100
Delta R.T. 0.001 min
Lab File: 02171516.D
Acq: 17 Feb 2015 12:43

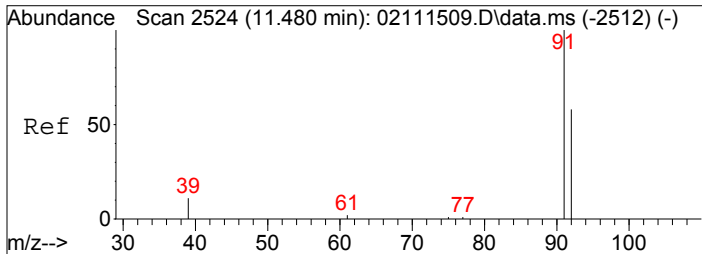
Tgt Ion: 63 Resp: 1386
Ion Ratio Lower Upper
63 100
62 69.0 52.0 92.0
76 43.8 28.1 68.1



#25
Trichloroethene
Concen: 26.72 pg
RT: 9.46 min Scan# 2154
Delta R.T. 0.001 min
Lab File: 02171516.D
Acq: 17 Feb 2015 12:43

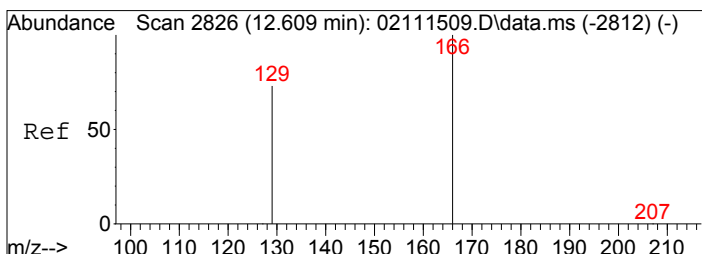
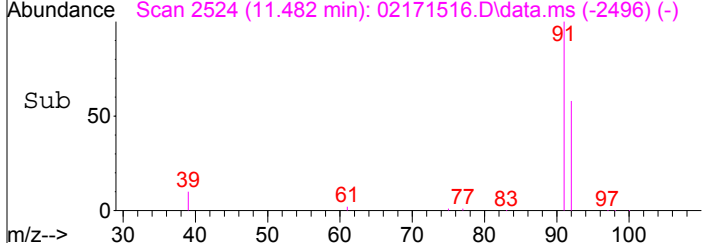
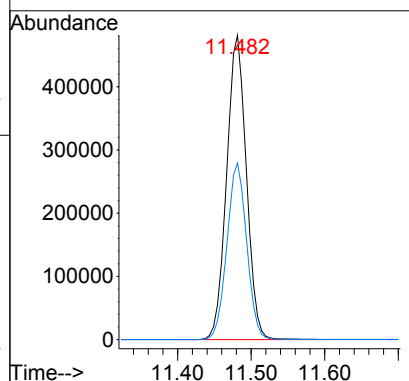
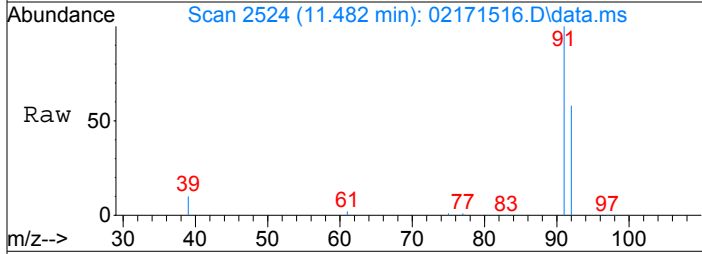
Tgt Ion: 130 Resp: 907
Ion Ratio Lower Upper
130 100
132 95.5 77.1 117.1





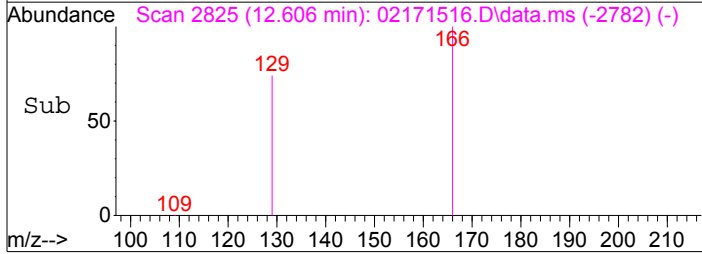
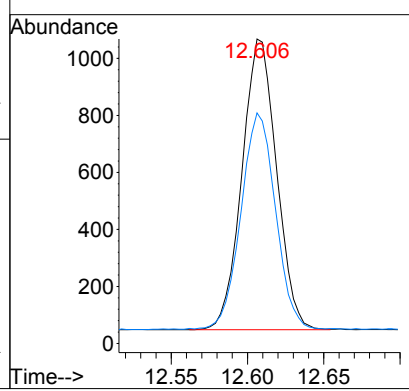
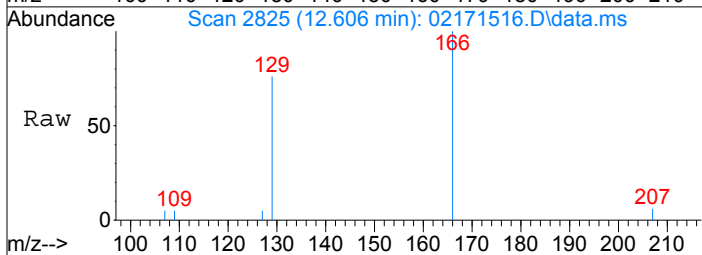
#31
Toluene
Concen: 6914.45 pg
RT: 11.48 min Scan# 2524
Delta R.T. 0.001 min
Lab File: 02171516.D
Acq: 17 Feb 2015 12:43

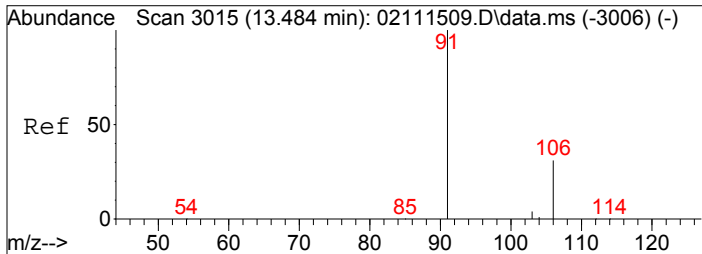
Tgt Ion:	91	Resp:	896211
Ion Ratio	Lower	Upper	
91	100		
92	58.1	37.7	77.7



#33
Tetrachloroethene
Concen: 40.09 pg
RT: 12.61 min Scan# 2825
Delta R.T. -0.003 min
Lab File: 02171516.D
Acq: 17 Feb 2015 12:43

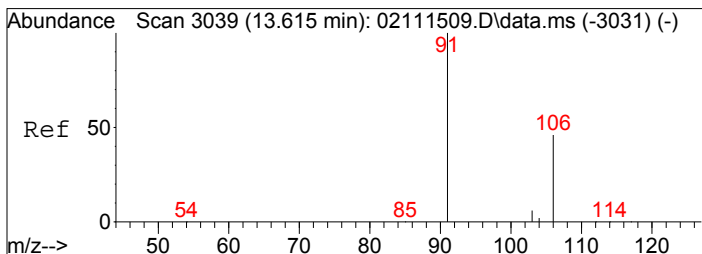
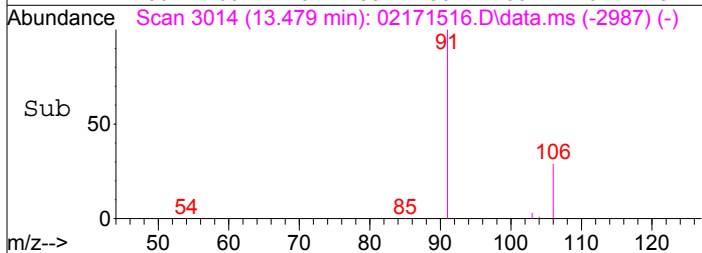
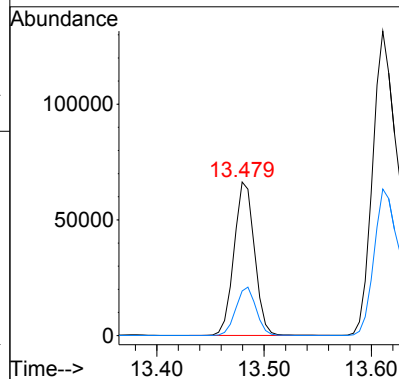
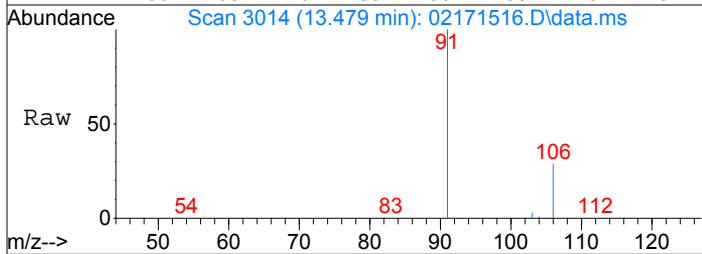
Tgt Ion:	166	Resp:	1609
Ion Ratio	Lower	Upper	
166	100		
129	74.2	53.3	93.3





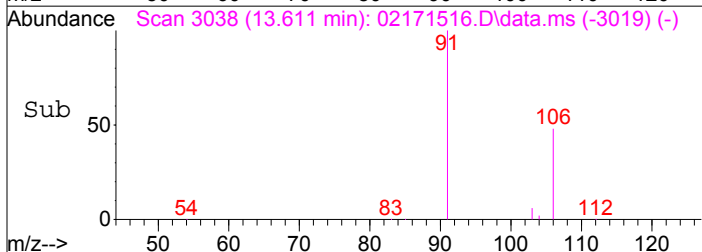
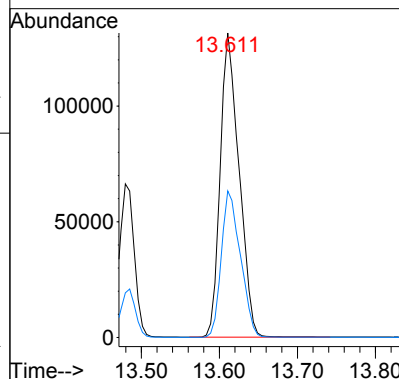
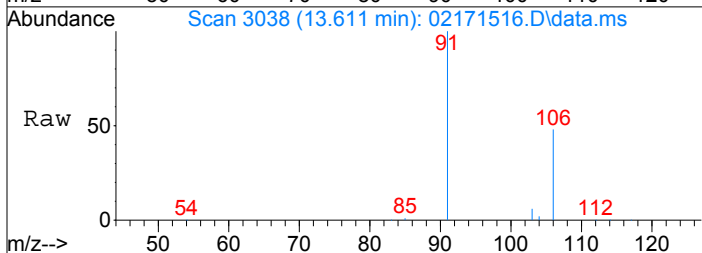
#36
Ethylbenzene
Concen: 595.37 pg
RT: 13.48 min Scan# 3014
Delta R.T. -0.004 min
Lab File: 02171516.D
Acq: 17 Feb 2015 12:43

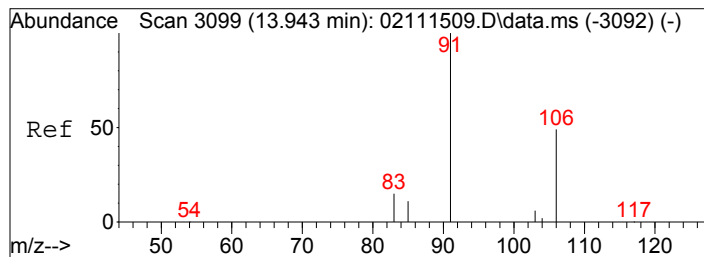
Tgt Ion: 91 Resp: 87964
Ion Ratio Lower Upper
91 100
106 31.2 10.9 50.9



#37
m,p-Xylene
Concen: 1812.99 pg
RT: 13.61 min Scan# 3038
Delta R.T. -0.004 min
Lab File: 02171516.D
Acq: 17 Feb 2015 12:43

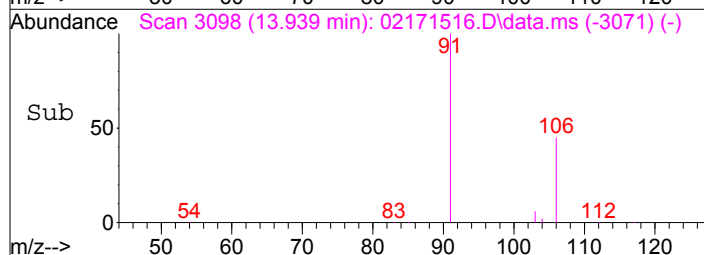
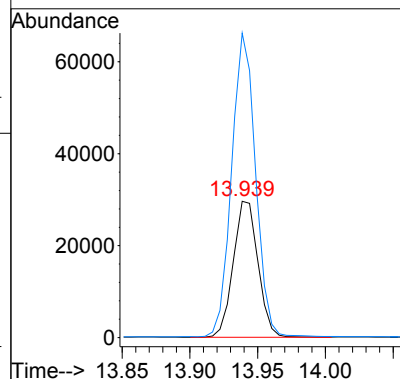
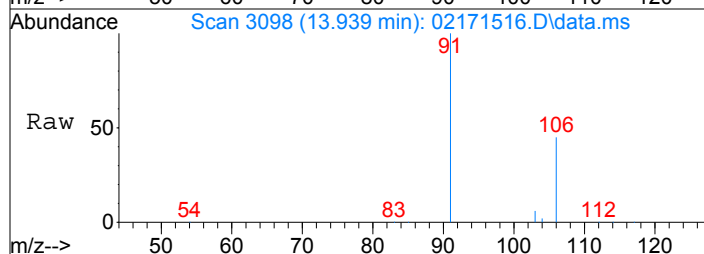
Tgt Ion: 91 Resp: 220154
Ion Ratio Lower Upper
91 100
106 48.9 27.5 67.5





#38
 o-Xylene
 Concen: 631.04 pg
 RT: 13.94 min Scan# 3098
 Delta R.T. -0.004 min
 Lab File: 02171516.D
 Acq: 17 Feb 2015 12:43

Tgt Ion:106 Resp: 37450
 Ion Ratio Lower Upper
 106 100
 91 217.0 198.3 238.3



Data File: I:\MS19\DATA\2015 02\17\02171517.D

Acq On : 17 Feb 2015 13:10

Operator: WA

Sample : P1500566-012 (1000mL)

Misc : S29-02041502

ALS Vial : 10 Sample Multiplier: 1

Quant Time: Feb 17 16:46:55 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

2/18/15

DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	18254	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	144000	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	24056	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	42788	959.845	pg	0.00
Spiked Amount 1000.000			Recovery	=	95.98%	
30) Toluene-d8 (SS2)	11.38	98	127954	963.549	pg	0.00
Spiked Amount 1000.000			Recovery	=	96.35%	
40) Bromofluorobenzene (SS3)	14.25	174	54420	1120.543	pg	0.00
Spiked Amount 1000.000			Recovery	=	112.05%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.73	85	120362	1622.468	pg	100
3) Chloromethane	1.83	52	7503	506.451	pg	98
4) Vinyl Chloride	2.01	62	100	N.D.		
5) Bromomethane	2.33	94	1459	43.737	pg	98
6) Chloroethane	2.47	64	917	32.675	pg	80
7) Acetone	2.99	58	488818	18659.798	pg	# 75
8) Trichlorofluoromethane	3.10	101	78269	1228.299	pg	100
9) 1,1-Dichloroethene	3.66	96	81	N.D.		
10) Methylene Chloride	3.80	84	196231	6489.944	pg	96
11) Trichlorotrifluoroethane	4.10	151	11833	404.131	pg	100
12) trans-1,2-Dichloroethene	4.74	96	1045	35.973	pg	97
13) 1,1-Dichloroethane	4.95	63	335	N.D.		
14) Methyl tert-Butyl Ether	5.11	73	800	N.D.		
15) cis-1,2-Dichloroethene	5.94	96	1033	31.979	pg	98
16) Chloroform	6.32	83	8360	149.376	pg	97
18) 1,2-Dichloroethane	7.26	62	4036	90.571	pg	100
19) 1,1,1-Trichloroethane	7.59	97	2302	42.297	pg	100
20) Benzene	8.15	78	76714	666.442	pg	100
21) Carbon Tetrachloride	8.34	117	17339	425.552	pg	99
23) 1,2-Dichloropropane	9.16	63	930	29.612	pg	93
24) Bromodichloromethane	0.00	83	0	N.D.	d	
25) Trichloroethene	9.46	130	2366	63.956	pg	98
26) 1,4-Dioxane	9.52	88	273	N.D.		
27) cis-1,3-Dichloropropene	10.45	75	9	N.D.		
28) trans-1,3-Dichloropropene	11.06	75	32	N.D.		
29) 1,1,2-Trichloroethane	11.19	83	68	N.D.		
31) Toluene	11.48	91	733976	5196.850	pg	99
32) 1,2-Dibromoethane	12.13	107	15	N.D.		
33) Tetrachloroethene	12.61	166	1724	39.423	pg	99
35) Chlorobenzene	13.17	112	877	N.D.		
36) Ethylbenzene	13.48	91	78093	517.682	pg	100
37) m,p-Xylene	13.61	91	209436	1689.235	pg	98
38) o-Xylene	13.94	106	37494	618.785	pg	98
39) 1,1,2,2-Tetrachloroethane	13.89	83	905	N.D.		
41) 1,3-Dichlorobenzene	15.17	146	236	N.D.		
42) 1,4-Dichlorobenzene	15.24	146	3092	37.195	pg	100
43) 1,2-Dichlorobenzene	15.46	146	164	N.D.		
44) 1,2,4-Trichlorobenzene	16.63	182	37	N.D.		
45) Naphthalene	16.70	128	44877	298.146	pg	93
46) Hexachlorobutadiene	16.96	225	36	N.D.		

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\17\02171517.D

Acq On : 17 Feb 2015 13:10

Operator: WA

Sample : P1500566-012 (1000mL)

Misc : S29-02041502

ALS Vial : 10 Sample Multiplier: 1

Quant Time: Feb 17 16:46:55 2015

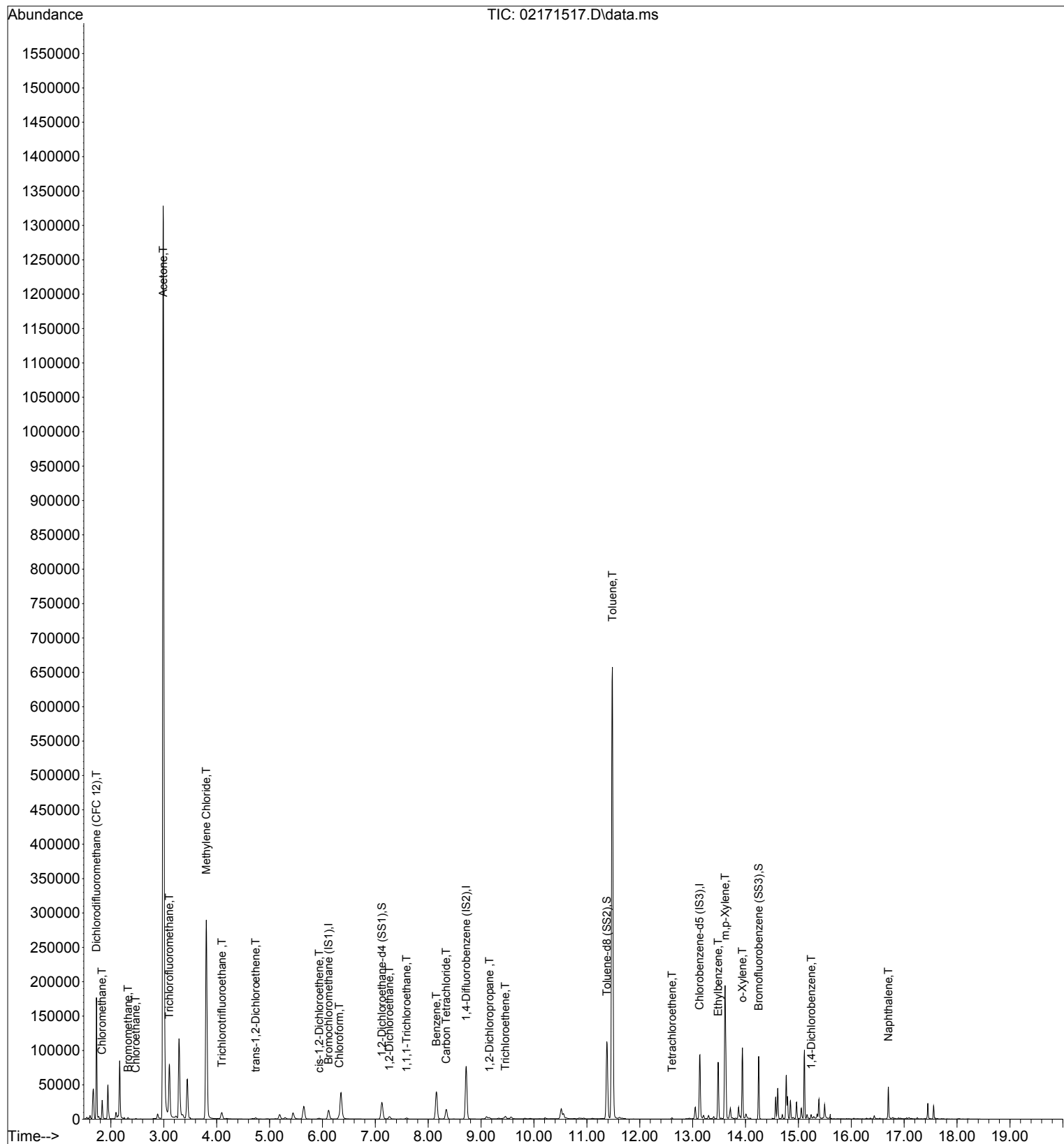
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 02\17\02171517.D

Acq On : 17 Feb 2015 13:10

Operator: WA

Sample : P1500566-012 (1000mL)

Misc : S29-02041502

ALS Vial : 10 Sample Multiplier: 1

Quant Time: Feb 17 16:46:55 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

2/17/15

DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	18254	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	144000	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	24056	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	42788	959.845	pg	0.00
Spiked Amount 1000.000			Recovery	=	95.98%	
30) Toluene-d8 (SS2)	11.38	98	127954	963.549	pg	0.00
Spiked Amount 1000.000			Recovery	=	96.35%	
40) Bromofluorobenzene (SS3)	14.25	174	54420	1120.543	pg	0.00
Spiked Amount 1000.000			Recovery	=	112.05%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.73	85	120362	1622.468	pg	100
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5) Bromomethane	2.33	94	1459	43.737	pg	98
6) Chloroethane	2.47	64	917	32.675	pg	80
7) Acetone	2.99	58	488818	18659.798	pg	# 75
8) Trichlorofluoromethane	3.10	101	78269	1228.299	pg	100
10) Methylene Chloride	3.80	84	196231	6489.944	pg	96
11) Trichlorotrifluoroethane	4.10	151	11833	404.131	pg	100
12) trans-1,2-Dichloroethene	4.74	96	1045	35.973	pg	97
15) cis-1,2-Dichloroethene	5.94	96	1033	31.979	pg	98
16) Chloroform	6.32	83	8360	149.376	pg	97
18) 1,2-Dichloroethane	7.26	62	4036	90.571	pg	100
19) 1,1,1-Trichloroethane	7.59	97	2302	42.297	pg	100
20) Benzene	8.15	78	76714	666.442	pg	100
21) Carbon Tetrachloride	8.34	117	17339	425.552	pg	99
23) 1,2-Dichloropropane	9.16	63	930	29.612	pg	93
25) Trichloroethene	9.46	130	2366	63.956	pg	98
31) Toluene	11.48	91	733976	5196.850	pg	99
33) Tetrachloroethene	12.61	166	1724	39.423	pg	99
36) Ethylbenzene	13.48	91	78093	517.682	pg	100
37) m,p-Xylene	13.61	91	209436	1689.235	pg	98
38) o-Xylene	13.94	106	37494	618.785	pg	98
42) 1,4-Dichlorobenzene	15.24	146	3092	37.195	pg	100
45) Naphthalene	16.70	128	44877	298.146	pg	93

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\17\02171517.D

Acq On : 17 Feb 2015 13:10

Operator: WA

Sample : P1500566-012 (1000mL)

Misc : S29-02041502

ALS Vial : 10 Sample Multiplier: 1

Quant Time: Feb 17 16:46:55 2015

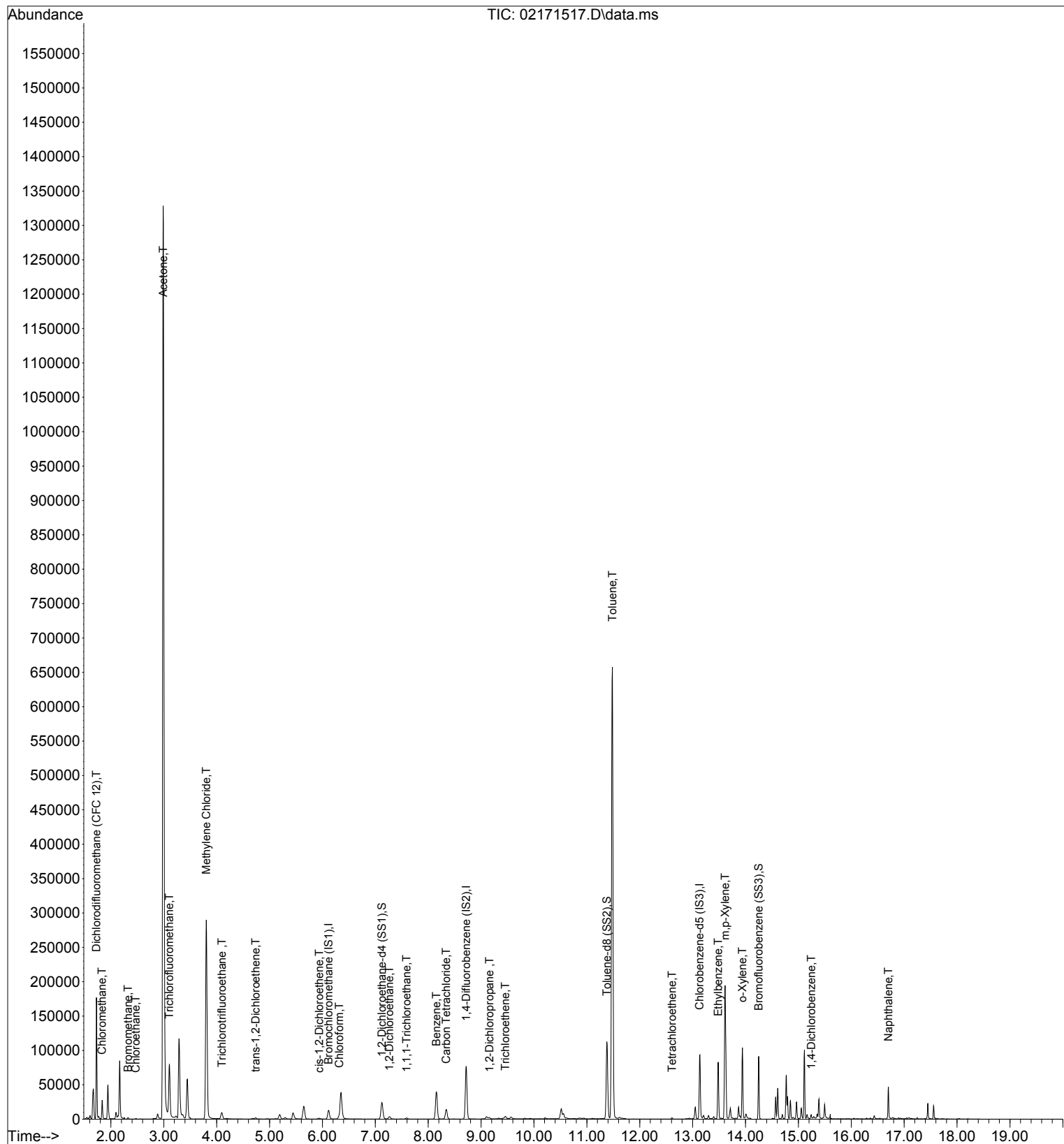
Quant Method : I:\MS19\METHODS\X19021115.M

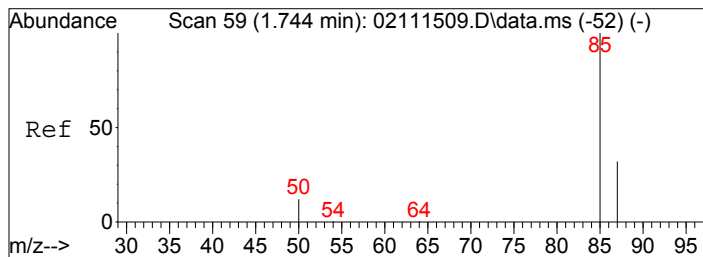
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

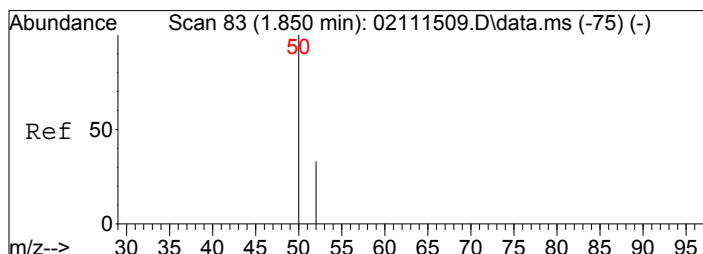
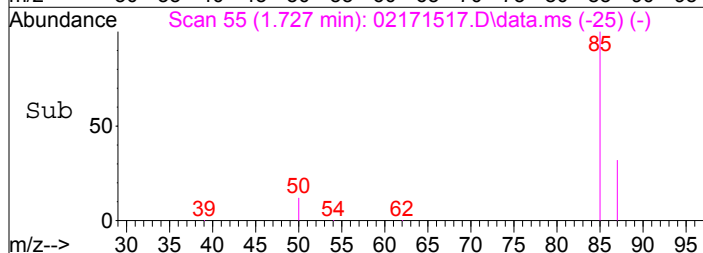
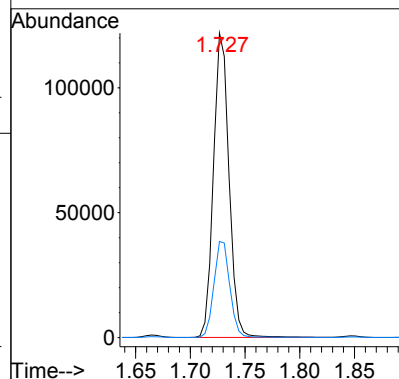
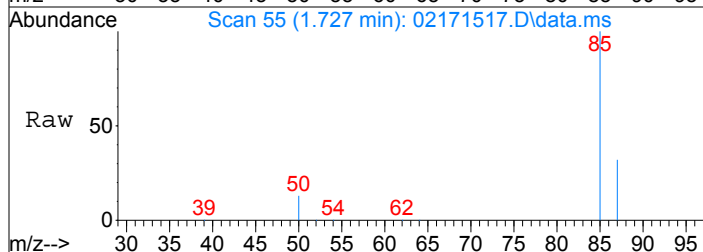
DataAcq Meth:TO15SIM.M





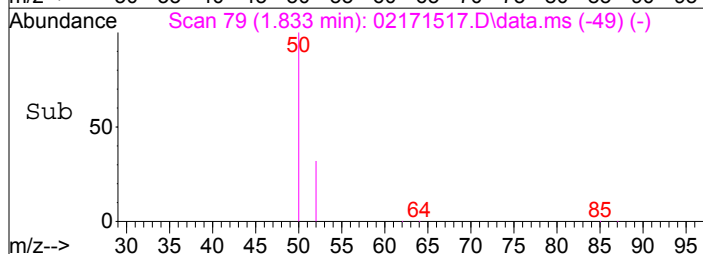
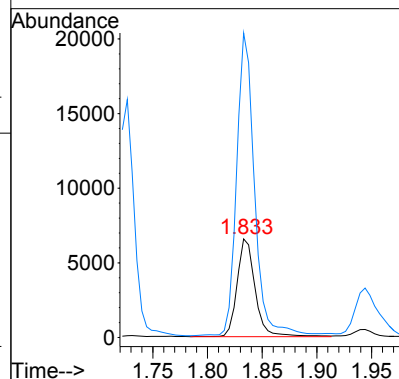
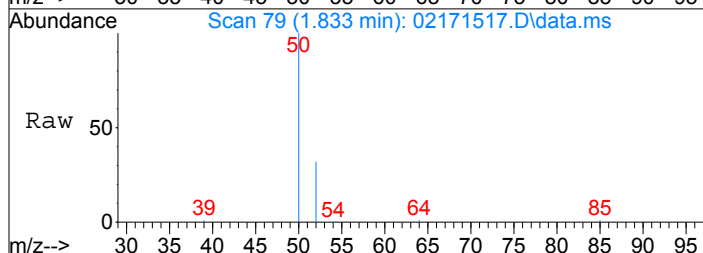
#2
 Dichlorodifluoromethane (CFC 12)
 Concen: 1622.47 pg
 RT: 1.73 min Scan# 55
 Delta R.T. -0.017 min
 Lab File: 02171517.D
 Acq: 17 Feb 2015 13:10

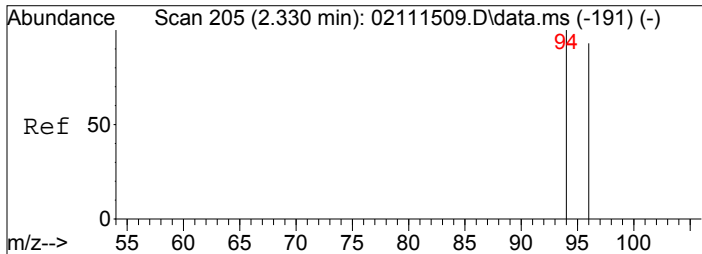
Tgt Ion: 85 Resp: 120362
 Ion Ratio Lower Upper
 85 100
 87 32.3 12.4 52.4



#3
 Chloromethane
 Concen: 506.45 pg
 RT: 1.83 min Scan# 79
 Delta R.T. -0.017 min
 Lab File: 02171517.D
 Acq: 17 Feb 2015 13:10

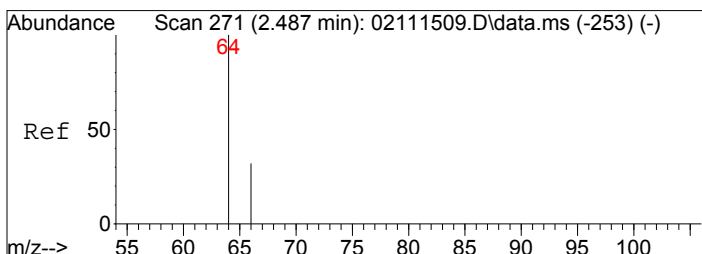
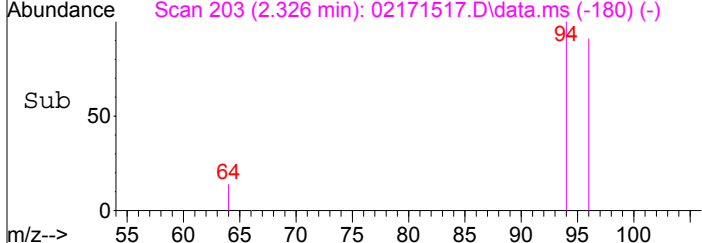
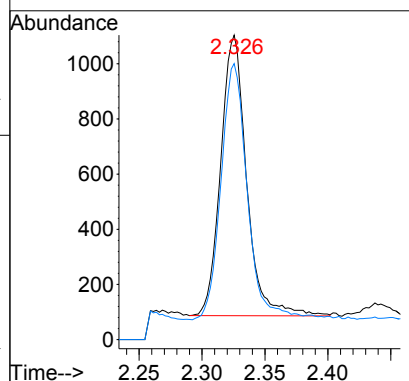
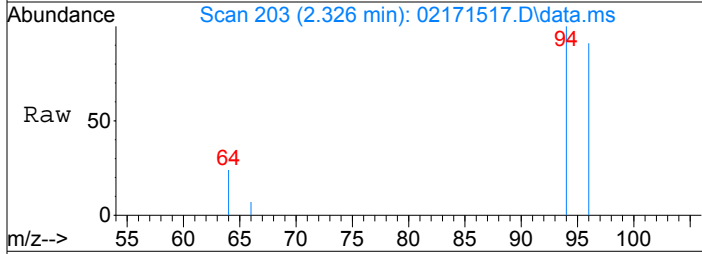
Tgt Ion: 52 Resp: 7503
 Ion Ratio Lower Upper
 52 100
 50 306.7 283.7 323.7





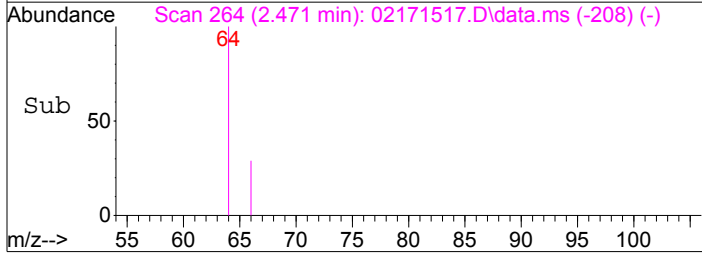
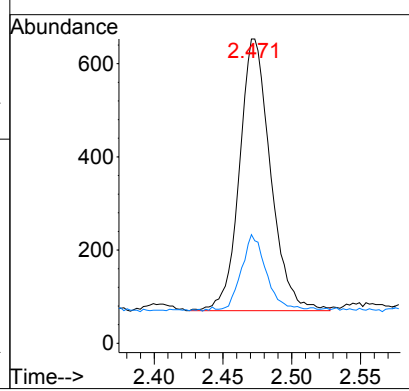
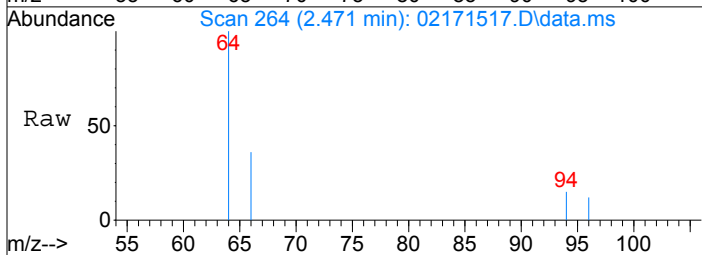
#5
 Bromomethane
 Concen: 43.74 pg
 RT: 2.33 min Scan# 203
 Delta R.T. -0.004 min
 Lab File: 02171517.D
 Acq: 17 Feb 2015 13:10

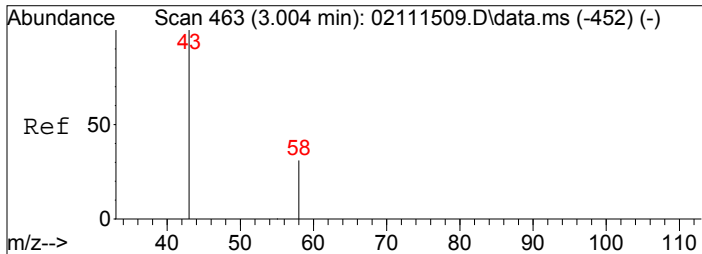
Tgt Ion:	94	Resp:	1459
Ion Ratio	Lower	Upper	
94	100		
96	92.5	75.5	113.3



#6
 Chloroethane
 Concen: 32.67 pg
 RT: 2.47 min Scan# 264
 Delta R.T. -0.016 min
 Lab File: 02171517.D
 Acq: 17 Feb 2015 13:10

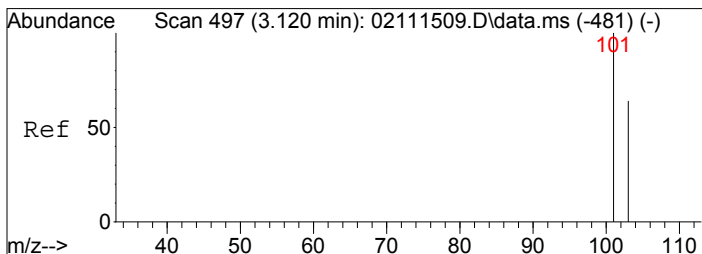
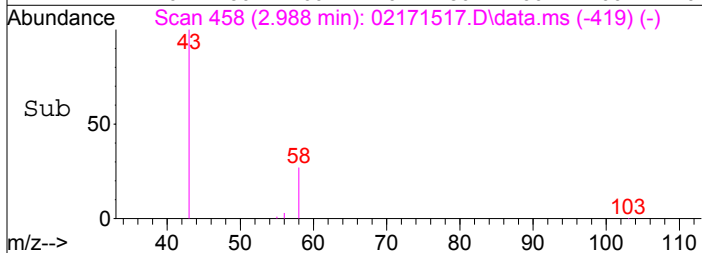
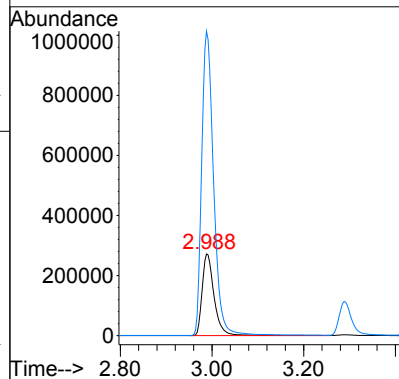
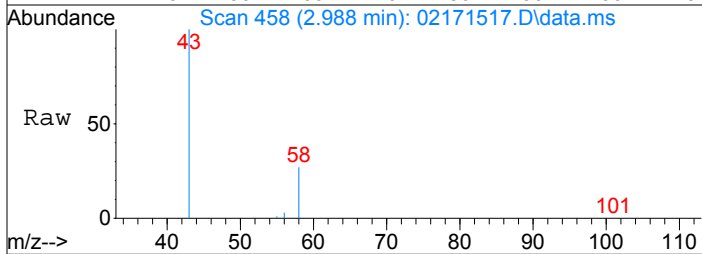
Tgt Ion:	64	Resp:	917
Ion Ratio	Lower	Upper	
64	100		
66	21.3	12.2	52.2





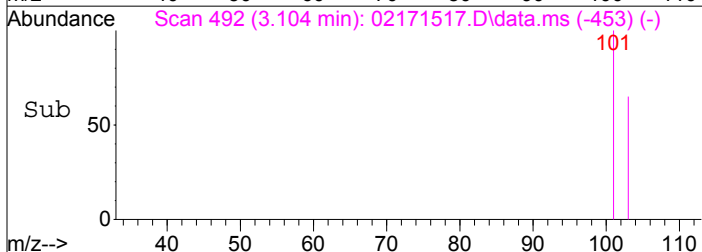
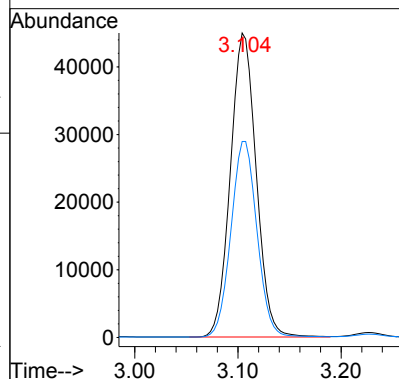
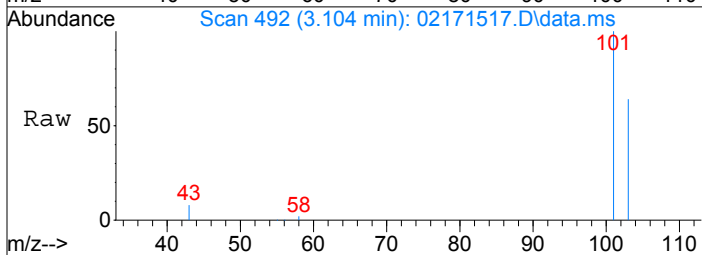
#7
Acetone
Concen: 18659.80 pg
RT: 2.99 min Scan# 458
Delta R.T. -0.016 min
Lab File: 02171517.D
Acq: 17 Feb 2015 13:10

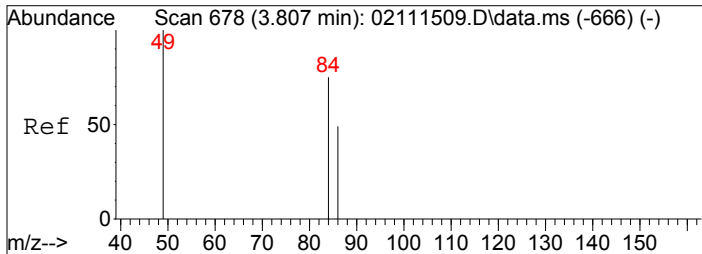
Tgt Ion: 58 Resp: 488818
Ion Ratio Lower Upper
58 100
43 374.1 301.8 341.8#



#8
Trichlorofluoromethane
Concen: 1228.30 pg
RT: 3.10 min Scan# 492
Delta R.T. -0.016 min
Lab File: 02171517.D
Acq: 17 Feb 2015 13:10

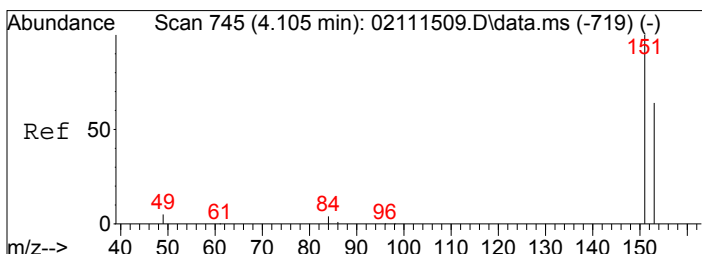
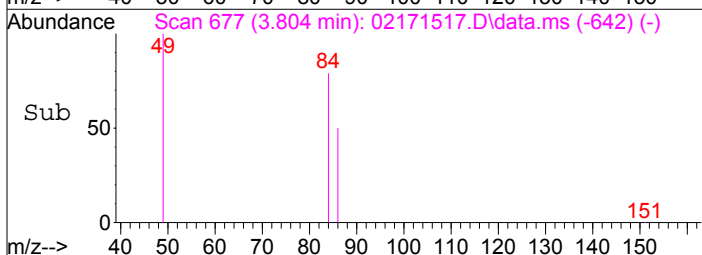
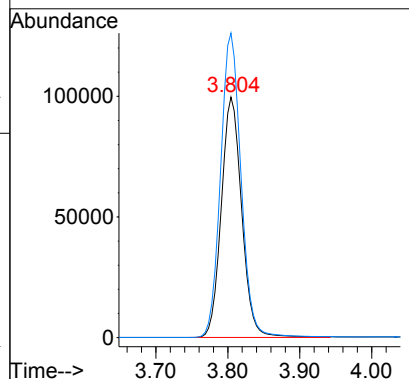
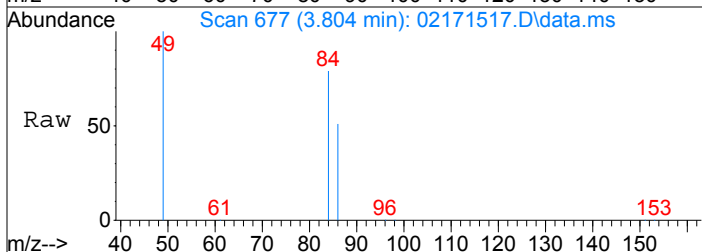
Tgt Ion: 101 Resp: 78269
Ion Ratio Lower Upper
101 100
103 64.8 51.8 77.6





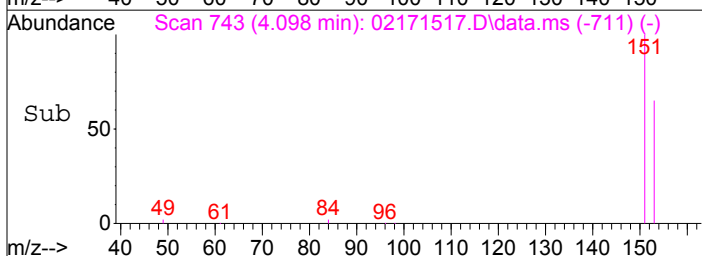
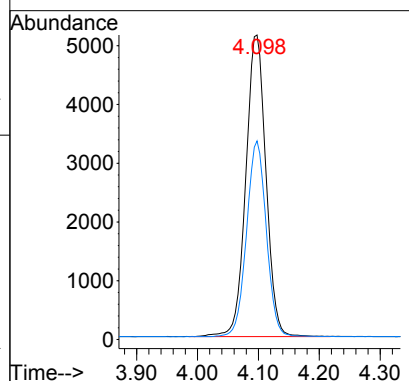
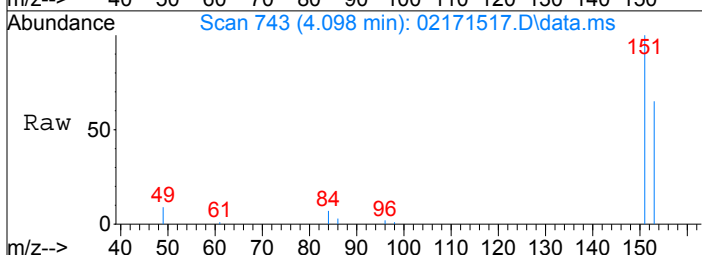
#10
Methylene Chloride
Concen: 6489.94 pg
RT: 3.80 min Scan# 677
Delta R.T. -0.003 min
Lab File: 02171517.D
Acq: 17 Feb 2015 13:10

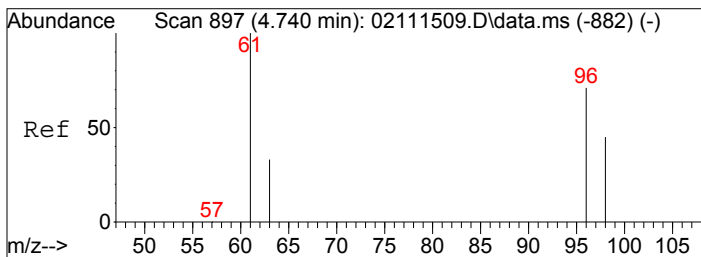
Tgt Ion: 84 Resp: 196231
Ion Ratio Lower Upper
84 100
49 127.2 112.3 152.3



#11
Trichlorotrifluoroethane
Concen: 404.13 pg
RT: 4.10 min Scan# 743
Delta R.T. -0.007 min
Lab File: 02171517.D
Acq: 17 Feb 2015 13:10

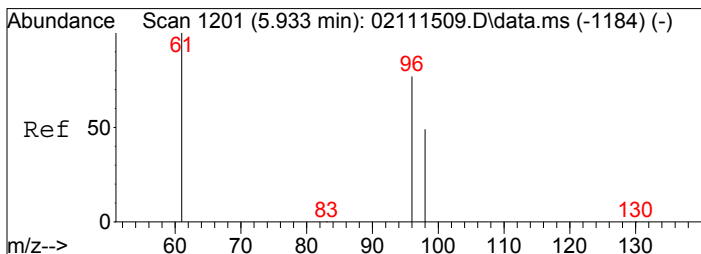
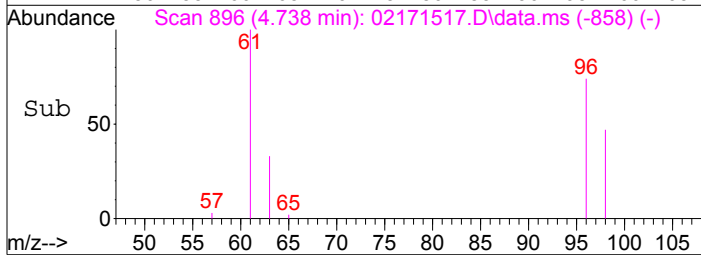
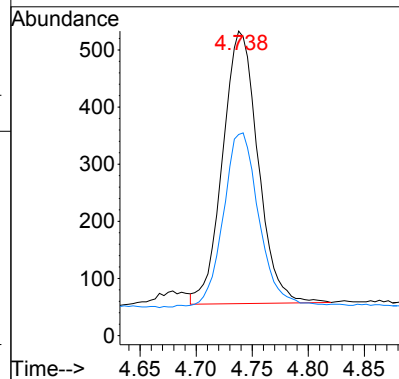
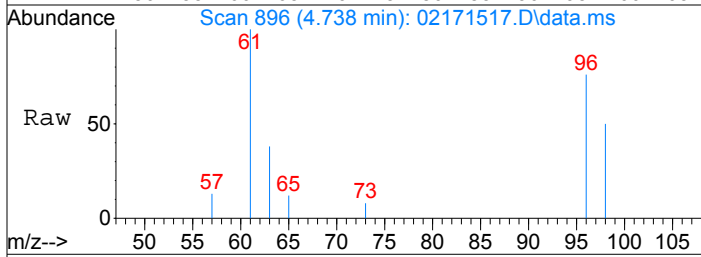
Tgt Ion: 151 Resp: 11833
Ion Ratio Lower Upper
151 100
153 63.8 43.6 83.6





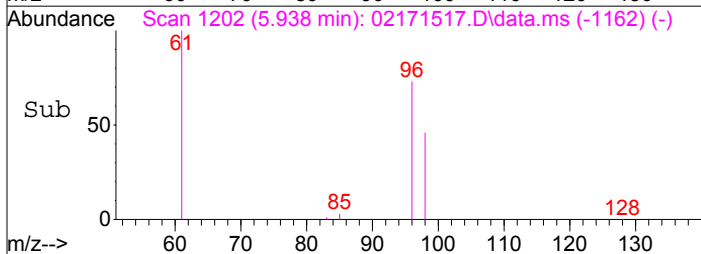
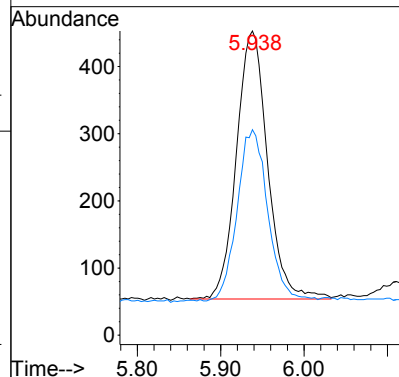
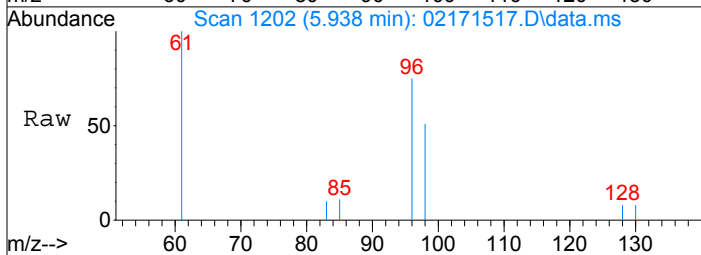
#12
trans-1,2-Dichloroethene
Concen: 35.97 pg
RT: 4.74 min Scan# 896
Delta R.T. -0.002 min
Lab File: 02171517.D
Acq: 17 Feb 2015 13:10

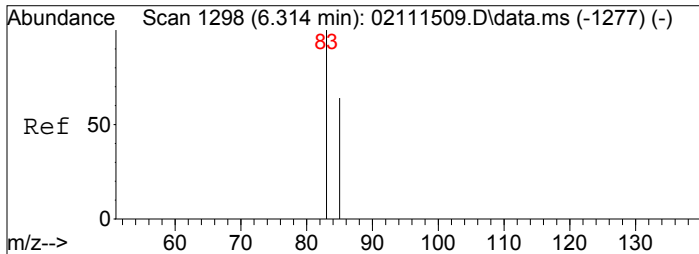
Tgt Ion: 96 Resp: 1045
Ion Ratio Lower Upper
96 100
98 65.8 43.7 83.7



#15
cis-1,2-Dichloroethene
Concen: 31.98 pg
RT: 5.94 min Scan# 1202
Delta R.T. 0.005 min
Lab File: 02171517.D
Acq: 17 Feb 2015 13:10

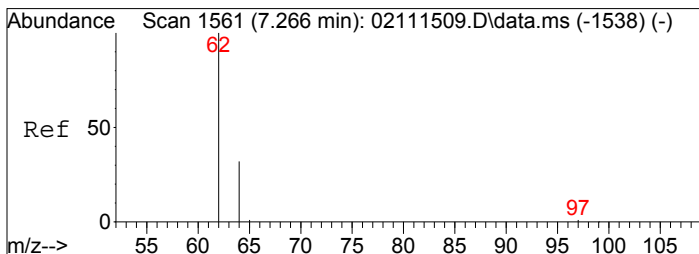
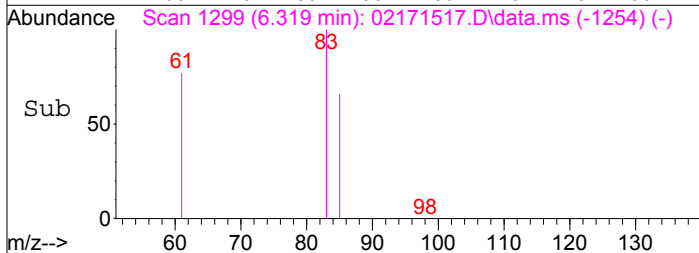
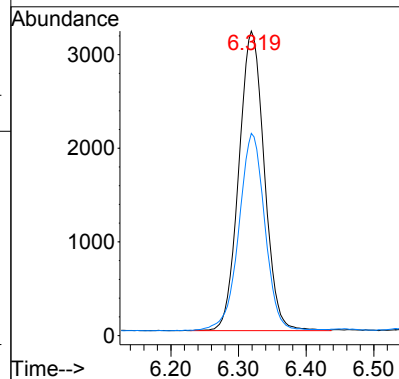
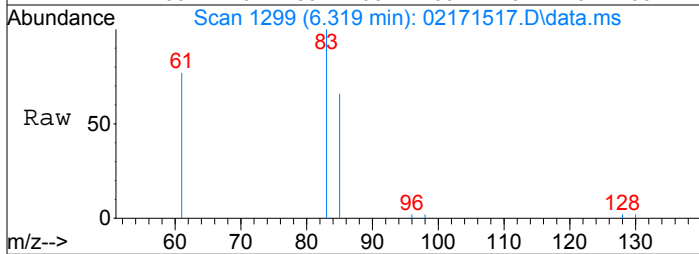
Tgt Ion: 96 Resp: 1033
Ion Ratio Lower Upper
96 100
98 62.9 44.3 84.3





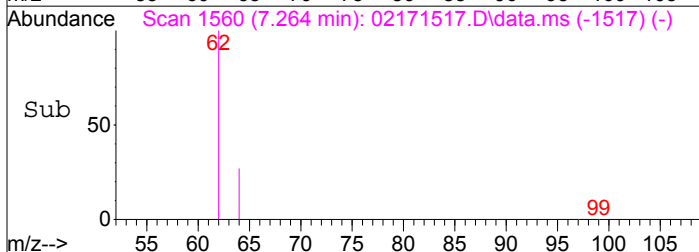
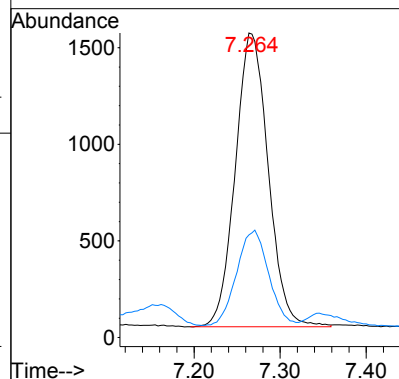
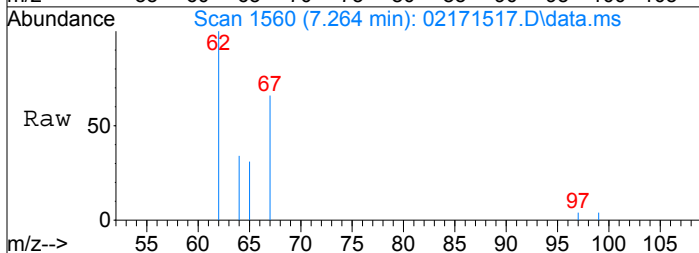
#16
Chloroform
Concen: 149.38 pg
RT: 6.32 min Scan# 1299
Delta R.T. 0.005 min
Lab File: 02171517.D
Acq: 17 Feb 2015 13:10

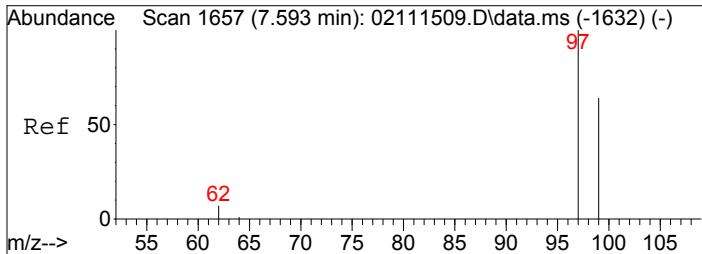
Tgt Ion: 83 Resp: 8360
Ion Ratio Lower Upper
83 100
85 67.7 45.4 85.4



#18
1,2-Dichloroethane
Concen: 90.57 pg
RT: 7.26 min Scan# 1560
Delta R.T. -0.002 min
Lab File: 02171517.D
Acq: 17 Feb 2015 13:10

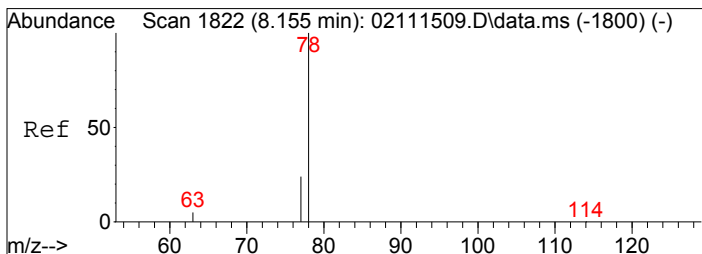
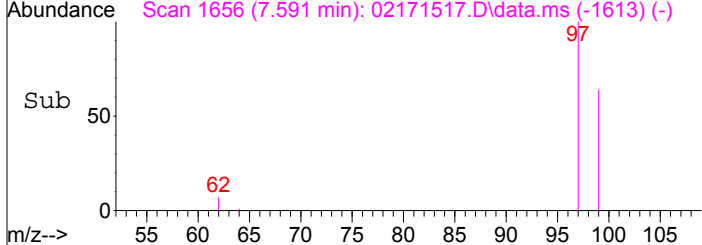
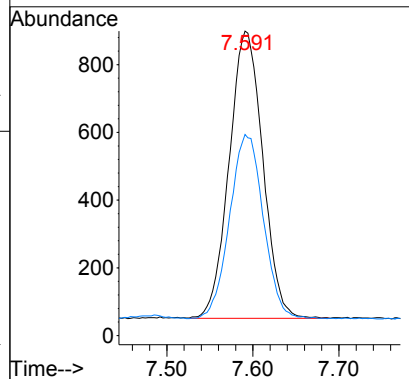
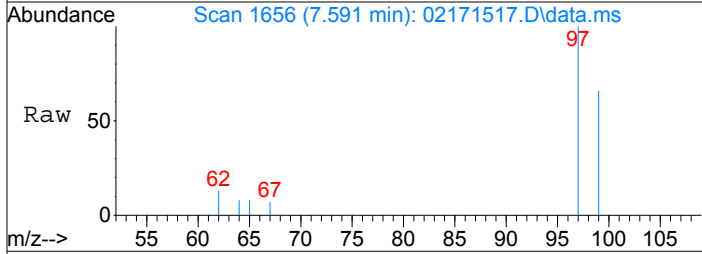
Tgt Ion: 62 Resp: 4036
Ion Ratio Lower Upper
62 100
64 31.5 11.6 51.6





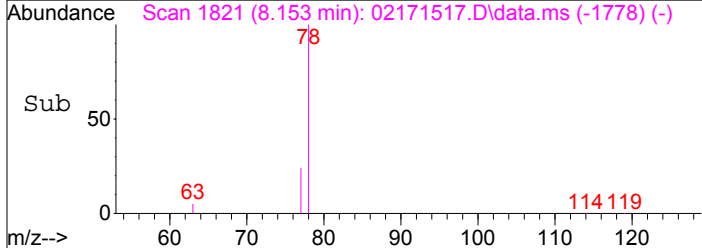
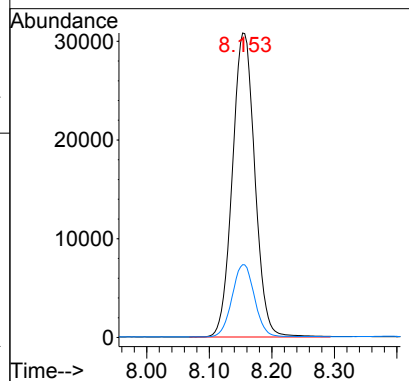
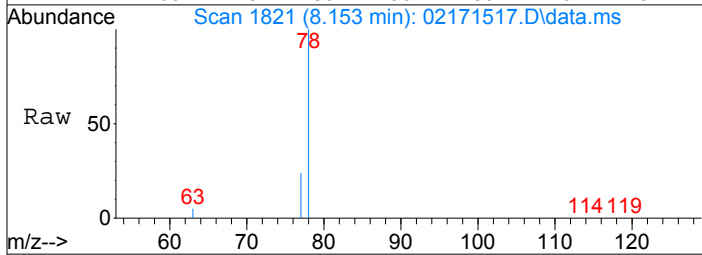
#19
 1,1,1-Trichloroethane
 Concen: 42.30 pg
 RT: 7.59 min Scan# 1656
 Delta R.T. -0.002 min
 Lab File: 02171517.D
 Acq: 17 Feb 2015 13:10

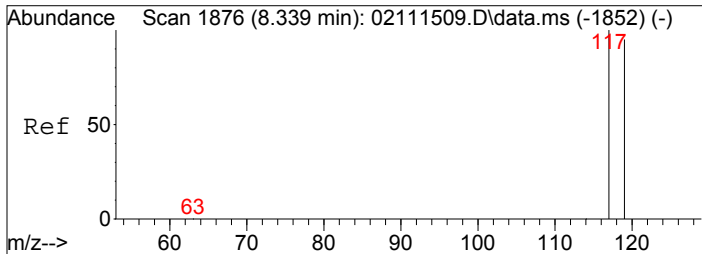
Tgt Ion: 97 Resp: 2302
 Ion Ratio Lower Upper
 97 100
 99 64.2 44.0 84.0



#20
 Benzene
 Concen: 666.44 pg
 RT: 8.15 min Scan# 1821
 Delta R.T. -0.002 min
 Lab File: 02171517.D
 Acq: 17 Feb 2015 13:10

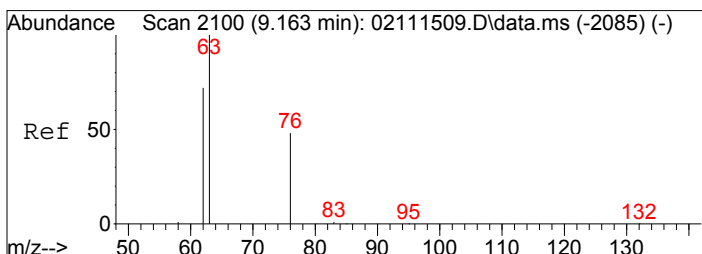
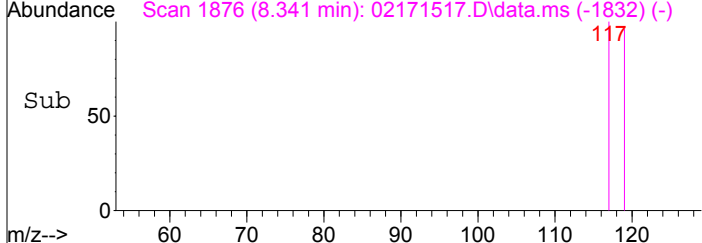
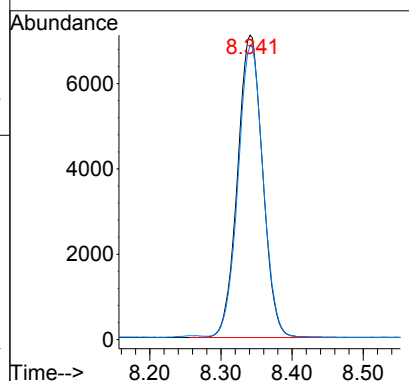
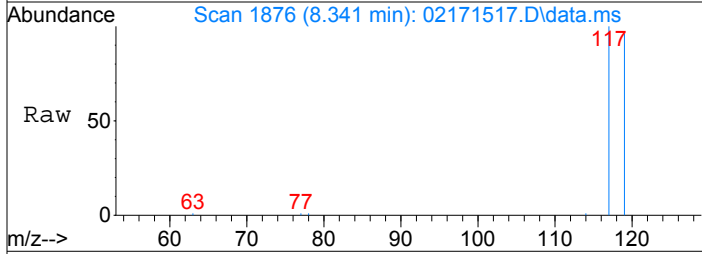
Tgt Ion: 78 Resp: 76714
 Ion Ratio Lower Upper
 78 100
 77 23.9 3.7 43.7





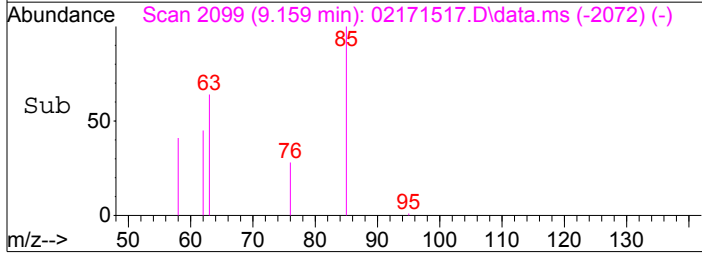
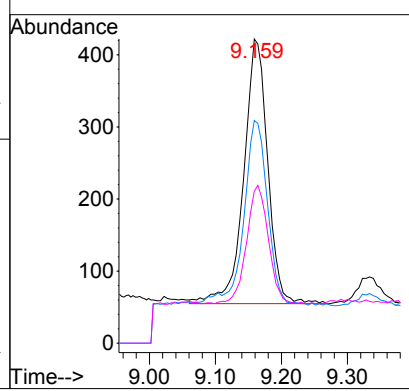
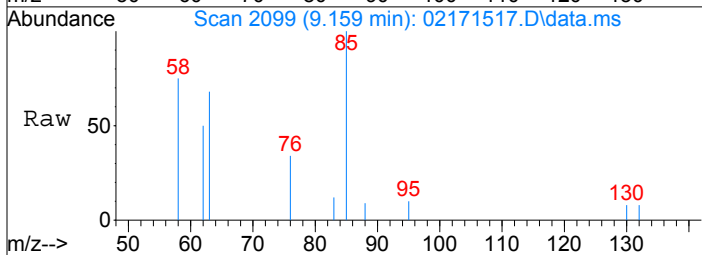
#21
Carbon Tetrachloride
Concen: 425.55 pg
RT: 8.34 min Scan# 1876
Delta R.T. 0.001 min
Lab File: 02171517.D
Acq: 17 Feb 2015 13:10

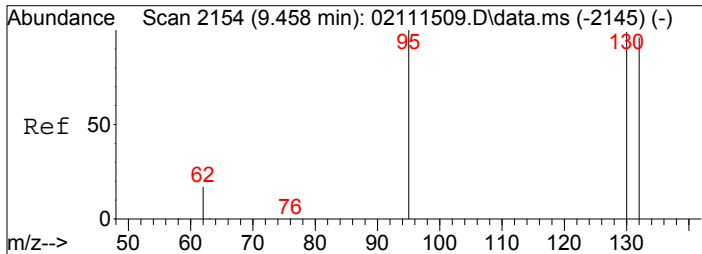
Tgt Ion: 117	Resp: 17339
Ion Ratio	Lower Upper
117	100
119	96.5 75.5 115.5



#23
1,2-Dichloropropane
Concen: 29.61 pg
RT: 9.16 min Scan# 2099
Delta R.T. -0.004 min
Lab File: 02171517.D
Acq: 17 Feb 2015 13:10

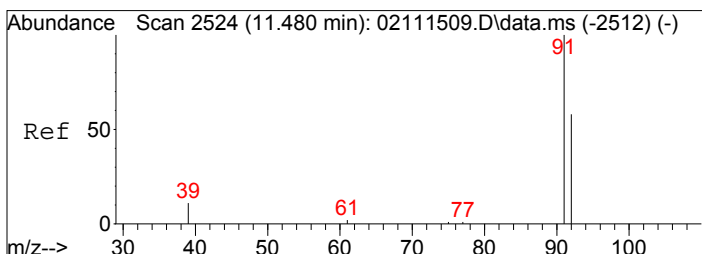
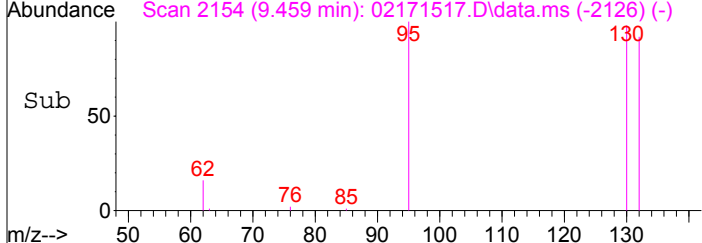
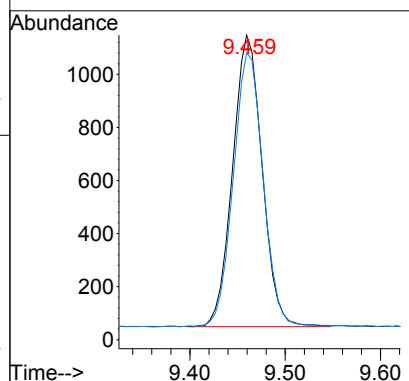
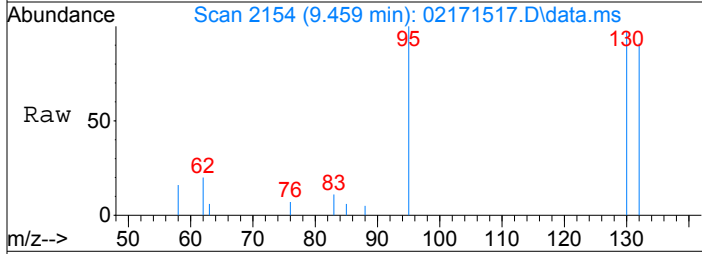
Tgt Ion: 63	Resp: 930
Ion Ratio	Lower Upper
63	100
62	69.2 52.0 92.0
76	40.3 28.1 68.1





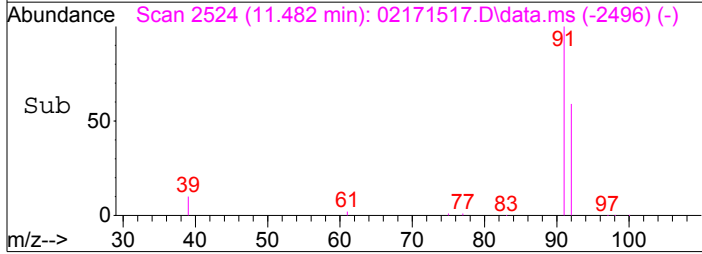
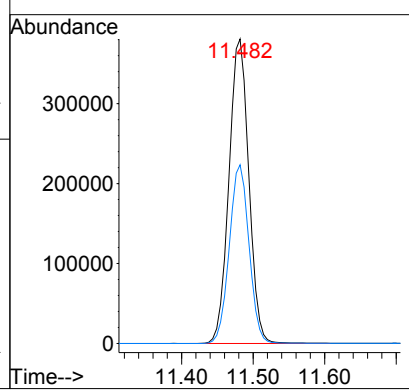
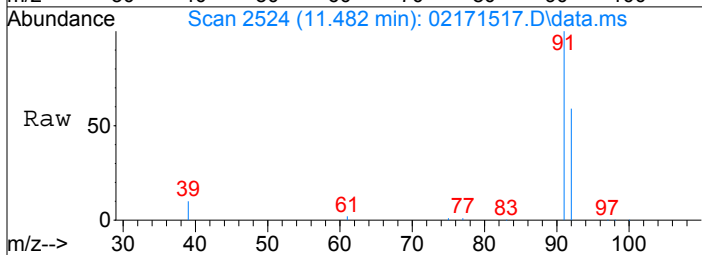
#25
 Trichloroethene
 Concen: 63.96 pg
 RT: 9.46 min Scan# 2154
 Delta R.T. 0.002 min
 Lab File: 02171517.D
 Acq: 17 Feb 2015 13:10

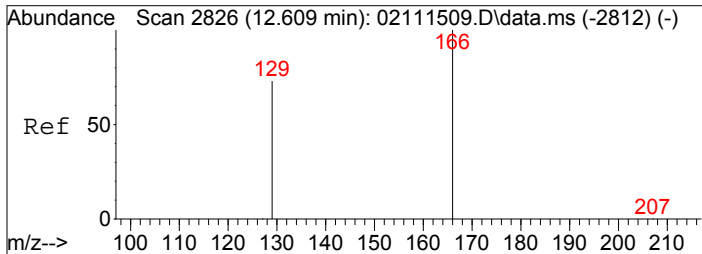
Tgt Ion:130	Resp:	2366
Ion Ratio	Lower	Upper
130	100	
132	95.0	77.1 117.1



#31
 Toluene
 Concen: 5196.85 pg
 RT: 11.48 min Scan# 2524
 Delta R.T. 0.001 min
 Lab File: 02171517.D
 Acq: 17 Feb 2015 13:10

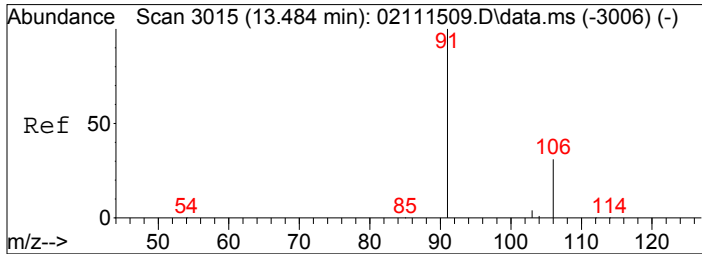
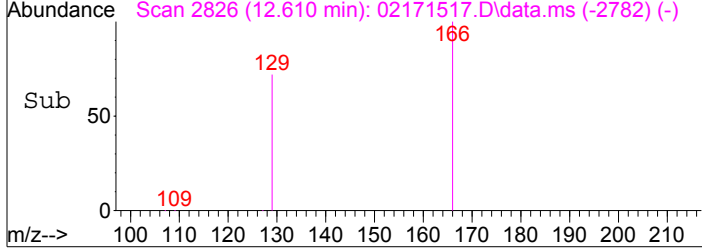
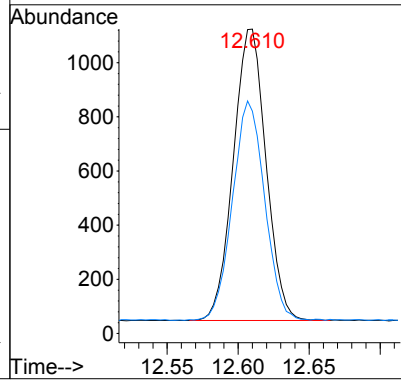
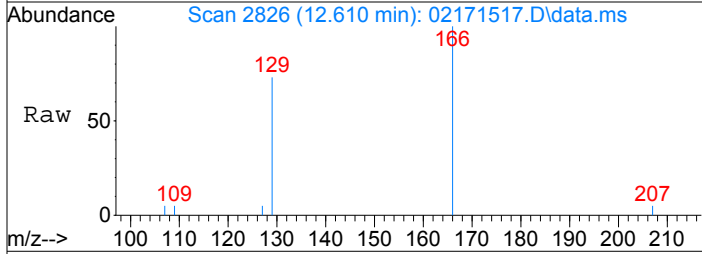
Tgt Ion: 91	Resp:	733976
Ion Ratio	Lower	Upper
91	100	
92	58.3	37.7 77.7





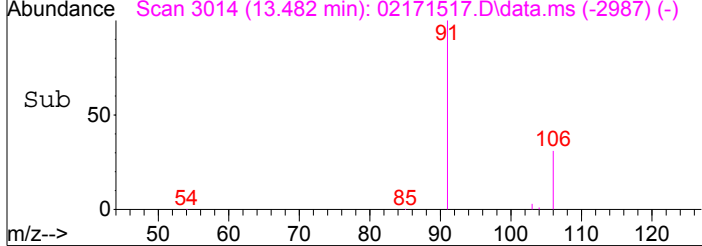
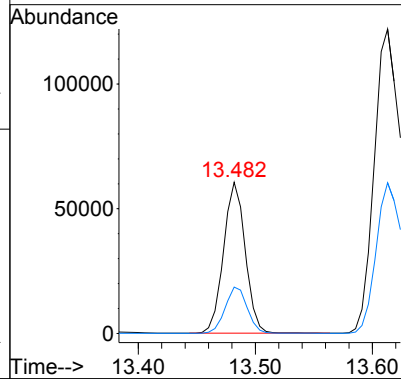
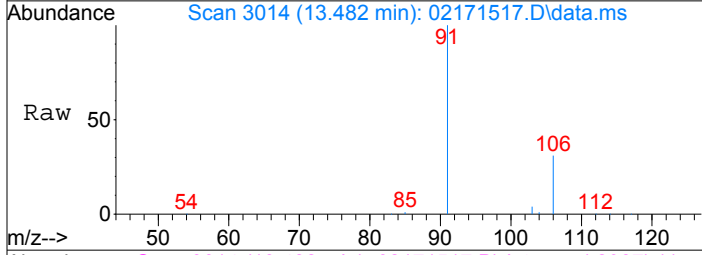
#33
Tetrachloroethene
Concen: 39.42 pg
RT: 12.61 min Scan# 2826
Delta R.T. 0.001 min
Lab File: 02171517.D
Acq: 17 Feb 2015 13:10

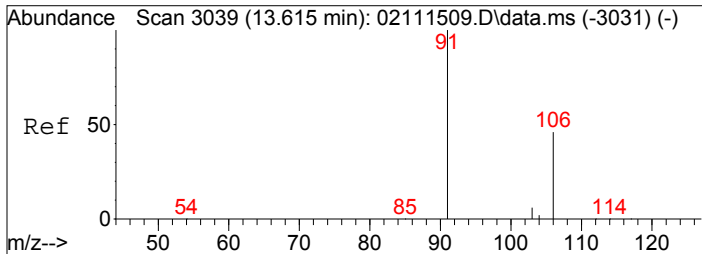
Tgt Ion	166	129	Resp	1724	Lower	Upper
166	100					
129		74.0	53.3	93.3		



#36
Ethylbenzene
Concen: 517.68 pg
RT: 13.48 min Scan# 3014
Delta R.T. -0.002 min
Lab File: 02171517.D
Acq: 17 Feb 2015 13:10

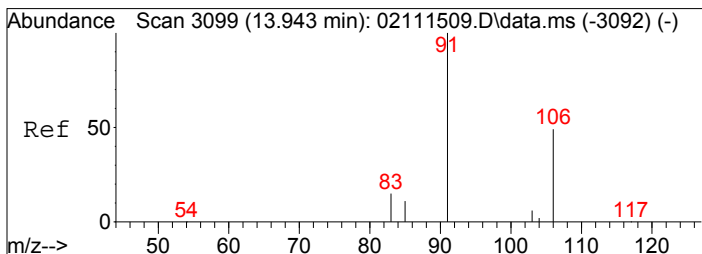
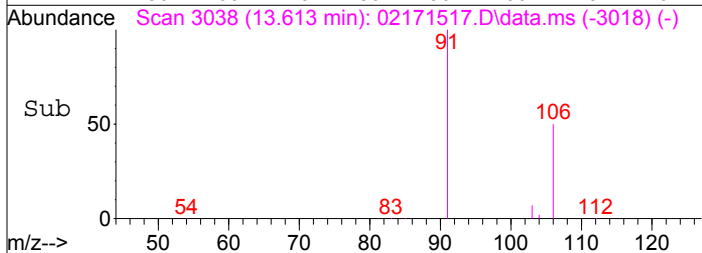
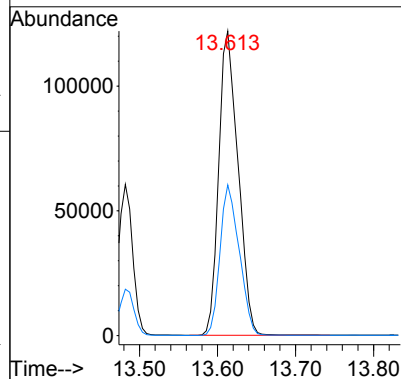
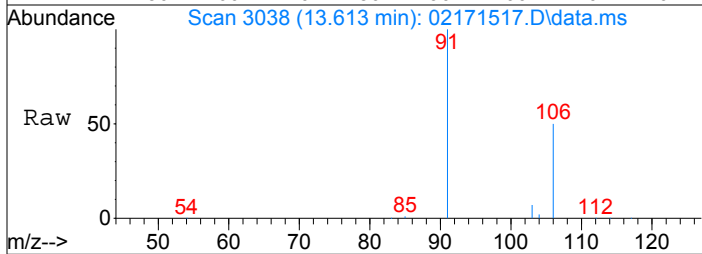
Tgt Ion	91	106	Resp	78093	Lower	Upper
91	100					
106		31.1	10.9	50.9		





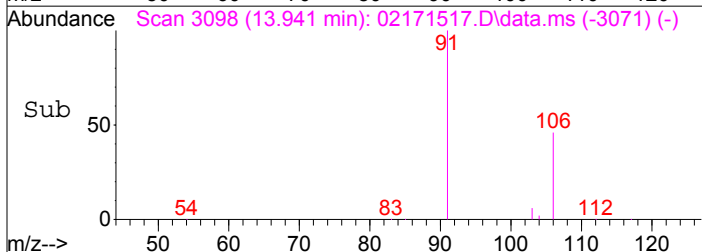
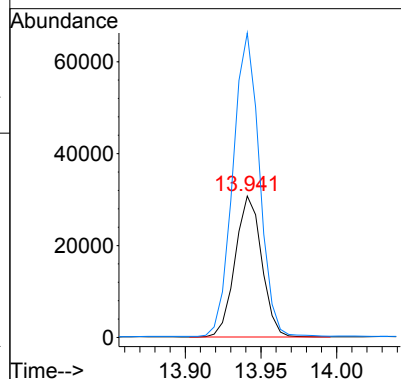
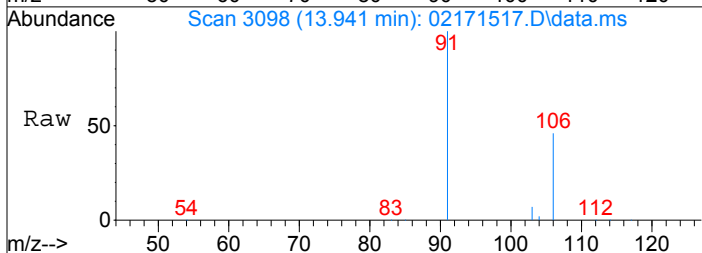
#37
m,p-Xylene
Concen: 1689.24 pg
RT: 13.61 min Scan# 3038
Delta R.T. -0.002 min
Lab File: 02171517.D
Acq: 17 Feb 2015 13:10

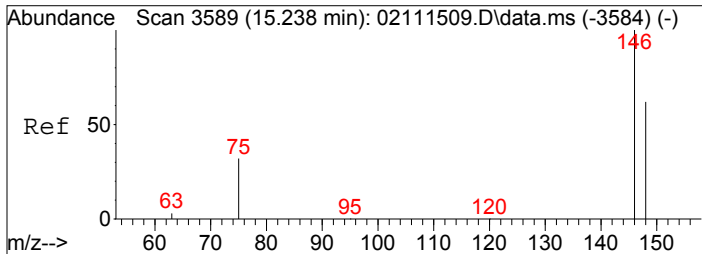
Tgt Ion: 91 Resp: 209436
Ion Ratio Lower Upper
91 100
106 49.1 27.5 67.5



#38
o-Xylene
Concen: 618.78 pg
RT: 13.94 min Scan# 3098
Delta R.T. -0.002 min
Lab File: 02171517.D
Acq: 17 Feb 2015 13:10

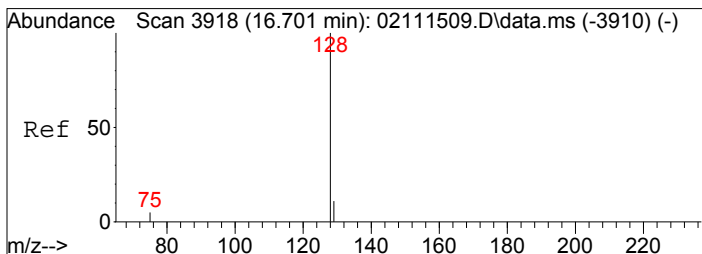
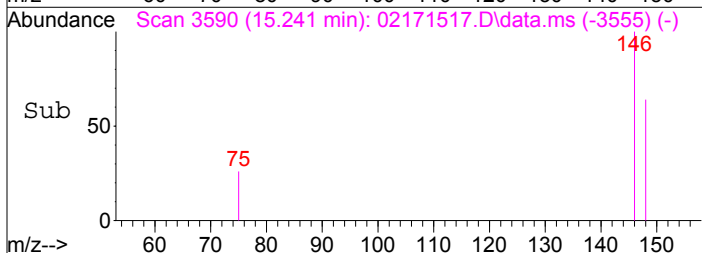
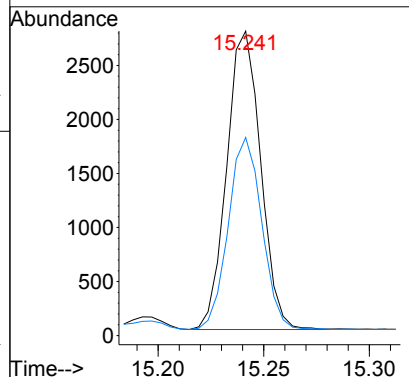
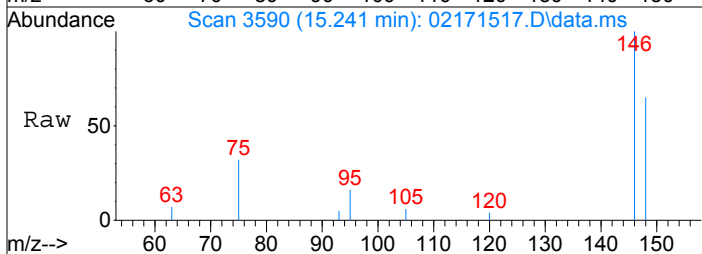
Tgt Ion: 106 Resp: 37494
Ion Ratio Lower Upper
106 100
91 215.9 198.3 238.3





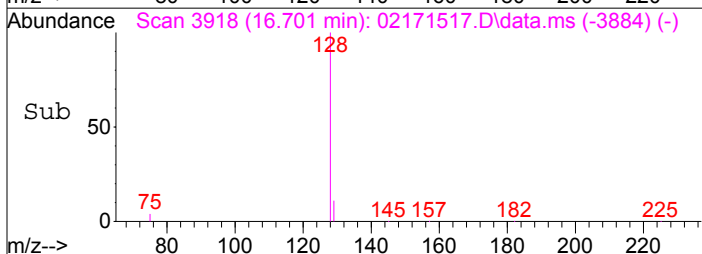
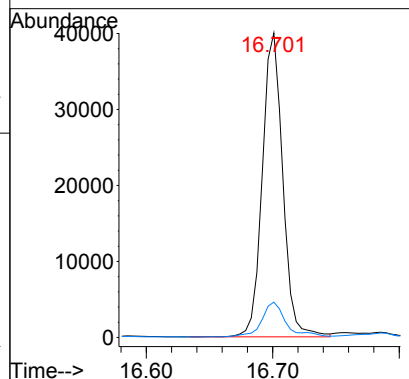
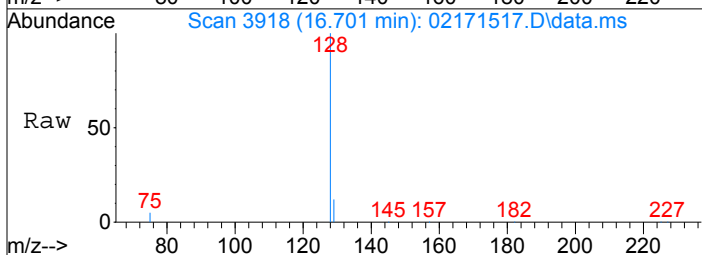
#42
 1,4-Dichlorobenzene
 Concen: 37.19 pg
 RT: 15.24 min Scan# 3590
 Delta R.T. 0.004 min
 Lab File: 02171517.D
 Acq: 17 Feb 2015 13:10

Tgt Ion	Ratio	Lower	Upper
146	100		
148	63.3	43.5	83.5



#45
 Naphthalene
 Concen: 298.15 pg
 RT: 16.70 min Scan# 3918
 Delta R.T. -0.000 min
 Lab File: 02171517.D
 Acq: 17 Feb 2015 13:10

Tgt Ion	Ratio	Lower	Upper
128	100		
129	13.6	0.0	30.9



Data File: I:\MS19\DATA\2015 02\17\02171518.D

Acq On : 17 Feb 2015 13:38

Operator: WA

Sample : P1500566-013 (1000mL)

Misc : S29-02041502

ALS Vial : 11 Sample Multiplier: 1

Quant Time: Feb 17 16:48:17 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

2/18/15

DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	19157	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	134163	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	23304	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	42197	901.968	pg	0.00
Spiked Amount 1000.000			Recovery	=	90.20%	
30) Toluene-d8 (SS2)	11.38	98	128335	1037.277	pg	0.00
Spiked Amount 1000.000			Recovery	=	103.73%	
40) Bromofluorobenzene (SS3)	14.25	174	49668	1055.697	pg	0.00
Spiked Amount 1000.000			Recovery	=	105.57%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.73	85	153199	1967.765	pg	100
3) Chloromethane	1.84	52	9152	588.639	pg	97
4) Vinyl Chloride	0.00	62	0	N.D.	d	
5) Bromomethane	2.32	94	3368	96.205	pg	87
6) Chloroethane	0.00	64	0	N.D.	d	
7) Acetone	3.00	58	213836	7778.057	pg	# 77
8) Trichlorofluoromethane	3.11	101	102166	1527.746	pg	97
9) 1,1-Dichloroethene	3.65	96	32	N.D.		
10) Methylene Chloride	3.80	84	11789	371.519	pg	94
11) Trichlorotrifluoroethane	4.09	151	13863	451.144	pg	99
12) trans-1,2-Dichloroethene	4.74	96	701	22.994	pg	99
13) 1,1-Dichloroethane	4.95	63	312	N.D.		
14) Methyl tert-Butyl Ether	5.11	73	792	N.D.		
15) cis-1,2-Dichloroethene	5.93	96	571	N.D.		
16) Chloroform	6.31	83	7403	126.041	pg	98
18) 1,2-Dichloroethane	7.26	62	4707	100.650	pg	# 1
19) 1,1,1-Trichloroethane	7.59	97	1254	21.955	pg	82
20) Benzene	8.15	78	55277	457.575	pg	98
21) Carbon Tetrachloride	8.34	117	19556	457.340	pg	100
23) 1,2-Dichloropropane	9.16	63	725	24.777	pg	91
24) Bromodichloromethane	0.00	83	0	N.D.	d	
25) Trichloroethene	9.46	130	1492	43.287	pg	93
26) 1,4-Dioxane	9.53	88	606	23.591	pg	# 1
27) cis-1,3-Dichloropropene	10.46	75	27	N.D.		
28) trans-1,3-Dichloropropene	11.04	75	74	N.D.		
29) 1,1,2-Trichloroethane	11.19	83	125	N.D.		
31) Toluene	11.48	91	167758	1274.886	pg	99
32) 1,2-Dibromoethane	12.13	107	73	N.D.		
33) Tetrachloroethene	12.61	166	1761	43.222	pg	98
35) Chlorobenzene	13.17	112	662	N.D.		
36) Ethylbenzene	13.48	91	28612	195.791	pg	99
37) m,p-Xylene	13.61	91	61806	514.591	pg	98
38) o-Xylene	13.94	106	11015	187.653	pg	99
39) 1,1,1,2,2-Tetrachloroethane	13.89	83	285	N.D.		
41) 1,3-Dichlorobenzene	15.24	146	1329	N.D.		
42) 1,4-Dichlorobenzene	15.24	146	1329	N.D.		
43) 1,2-Dichlorobenzene	15.46	146	90	N.D.		
44) 1,2,4-Trichlorobenzene	16.63	182	47	N.D.		
45) Naphthalene	16.70	128	2340	N.D.		
46) Hexachlorobutadiene	16.96	225	30	N.D.		

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\17\02171518.D

Acq On : 17 Feb 2015 13:38

Operator: WA

Sample : P1500566-013 (1000mL)

Misc : S29-02041502

ALS Vial : 11 Sample Multiplier: 1

Quant Time: Feb 17 16:48:17 2015

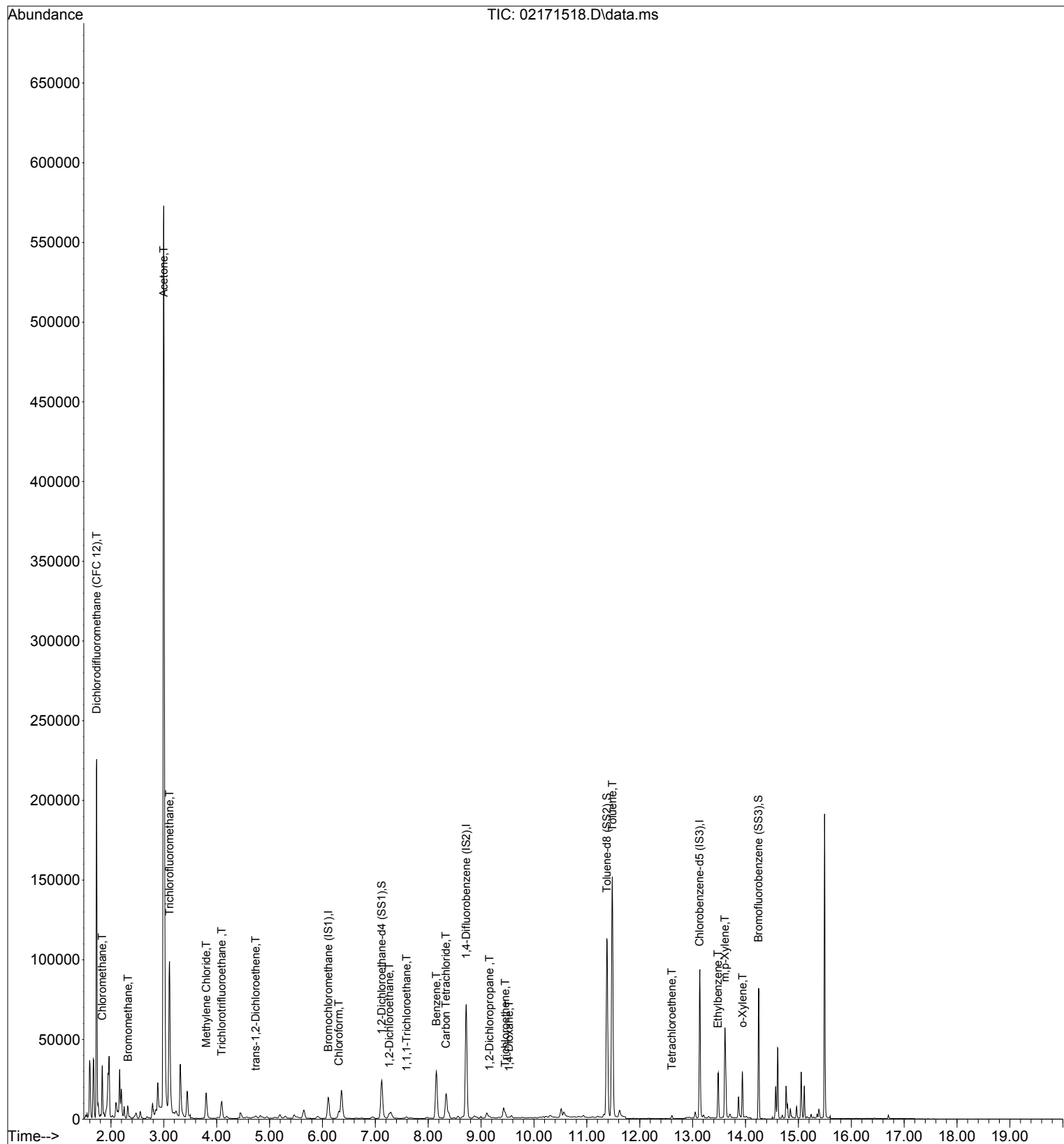
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 02\17\02171518.D

Acq On : 17 Feb 2015 13:38

Operator: WA

Sample : P1500566-013 (1000mL)

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ALS Vial : 11 Sample Multiplier: 1

Quant Time: Feb 17 16:48:17 2015

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Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

2/17/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	19157	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	134163	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	23304	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	42197	901.968	pg	0.00
Spiked Amount 1000.000			Recovery	=	90.20%	
30) Toluene-d8 (SS2)	11.38	98	128335	1037.277	pg	0.00
Spiked Amount 1000.000			Recovery	=	103.73%	
40) Bromofluorobenzene (SS3)	14.25	174	49668	1055.697	pg	0.00
Spiked Amount 1000.000			Recovery	=	105.57%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.73	85	153199	1967.765	pg	100
3) Chloromethane	1.84	52	9152	588.639	pg	97
5) Bromomethane	2.32	94	3368	96.205	pg	87
7) Acetone	3.00	58	213836	7778.057	pg	# 77
8) Trichlorofluoromethane	3.11	101	102166	1527.746	pg	97
10) Methylene Chloride	3.80	84	11789	371.519	pg	94
11) Trichlorotrifluoroethane	4.09	151	13863	451.144	pg	99
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18) 1,2-Dichloroethane	7.26	62	4707	100.650	pg	# 1
19) 1,1,1-Trichloroethane	7.59	97	1254	21.955	pg	82
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23) 1,2-Dichloropropane	9.16	63	725	24.777	pg	91
25) Trichloroethene	9.46	130	1492	43.287	pg	93
26) 1,4-Dioxane	9.53	88	606	23.591	pg	# 1
31) Toluene	11.48	91	167758	1274.886	pg	99
33) Tetrachloroethene	12.61	166	1761	43.222	pg	98
36) Ethylbenzene	13.48	91	28612	195.791	pg	99
37) m,p-Xylene	13.61	91	61806	514.591	pg	98
38) o-Xylene	13.94	106	11015	187.653	pg	99

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\17\02171518.D

Acq On : 17 Feb 2015 13:38

Operator: WA

Sample : P1500566-013 (1000mL)

Misc : S29-02041502

ALS Vial : 11 Sample Multiplier: 1

Quant Time: Feb 17 16:48:17 2015

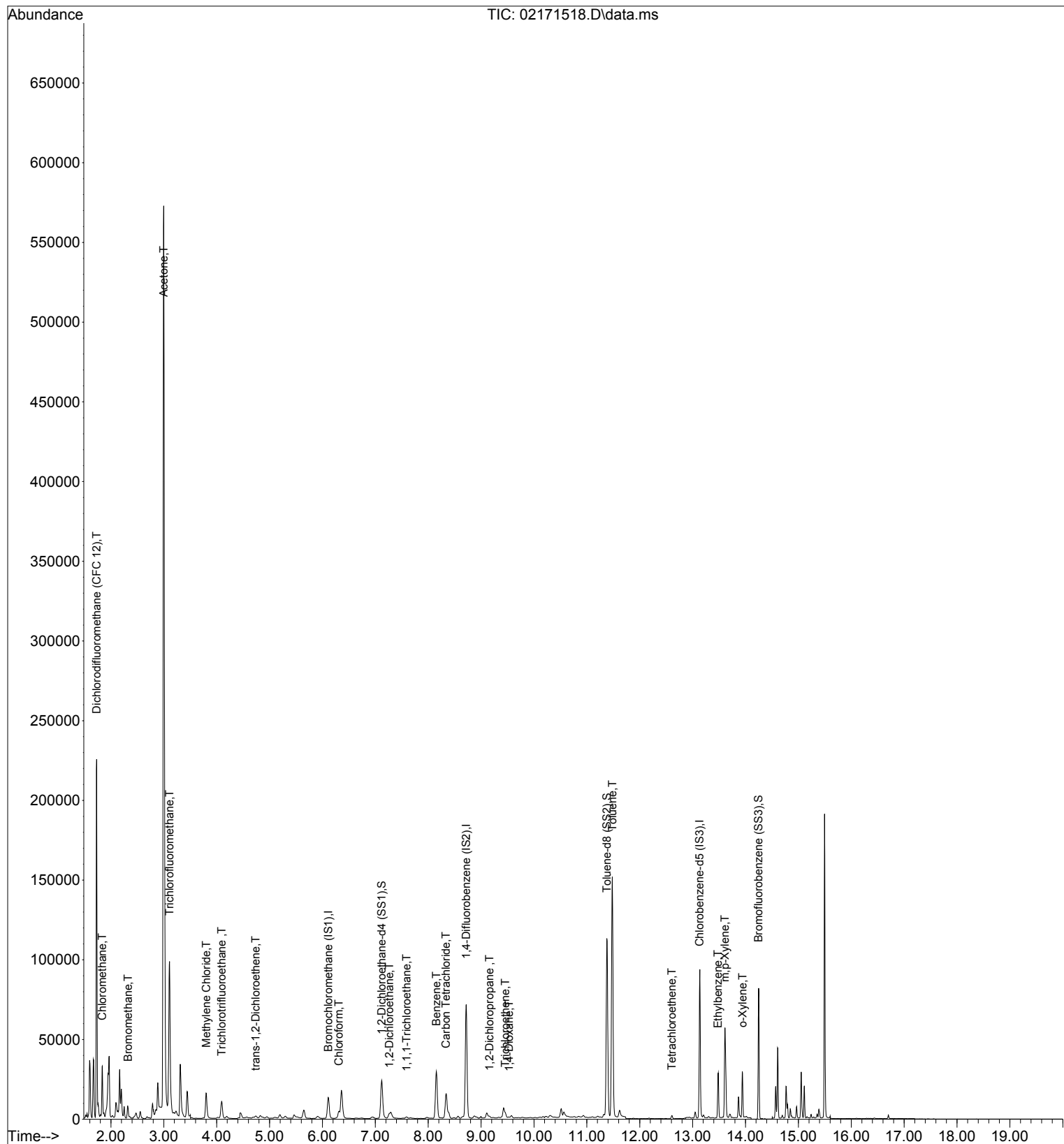
Quant Method : I:\MS19\METHODS\X19021115.M

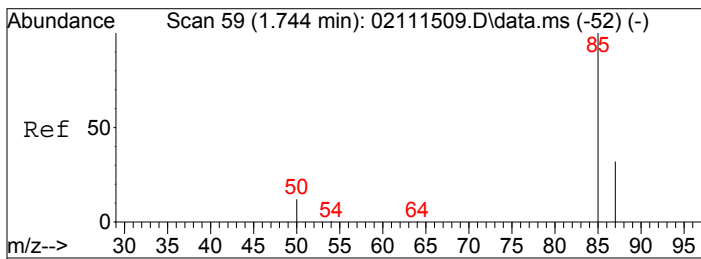
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

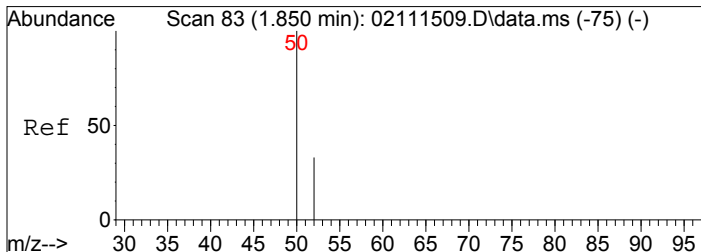
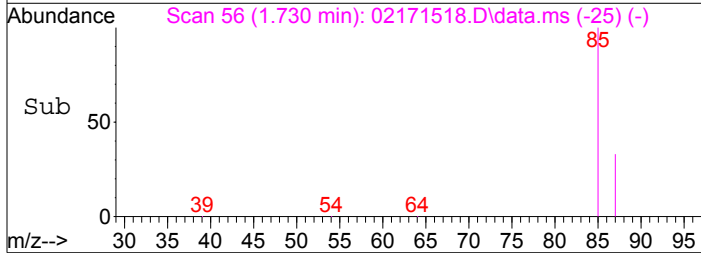
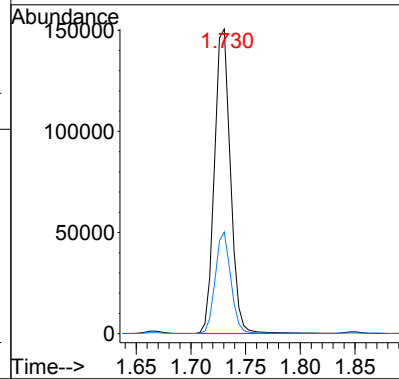
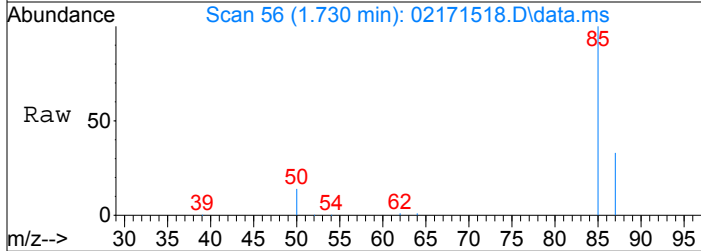
DataAcq Meth:TO15SIM.M





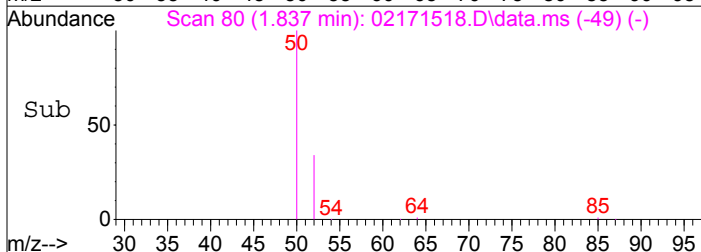
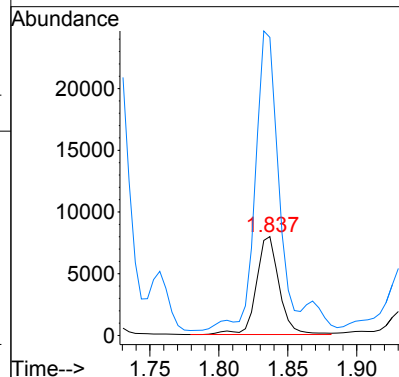
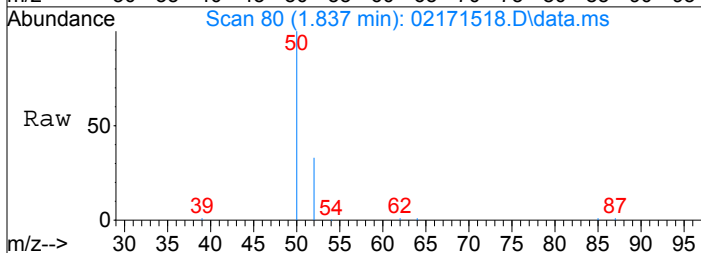
#2
 Dichlorodifluoromethane (CFC 12)
 Concen: 1967.76 pg
 RT: 1.73 min Scan# 56
 Delta R.T. -0.013 min
 Lab File: 02171518.D
 Acq: 17 Feb 2015 13:38

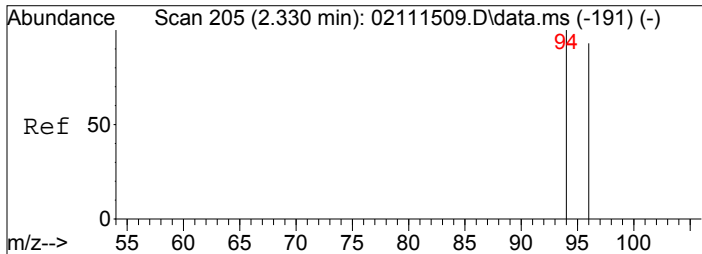
Tgt Ion: 85 Resp: 153199
 Ion Ratio Lower Upper
 85 100
 87 32.6 12.4 52.4



#3
 Chloromethane
 Concen: 588.64 pg
 RT: 1.84 min Scan# 80
 Delta R.T. -0.013 min
 Lab File: 02171518.D
 Acq: 17 Feb 2015 13:38

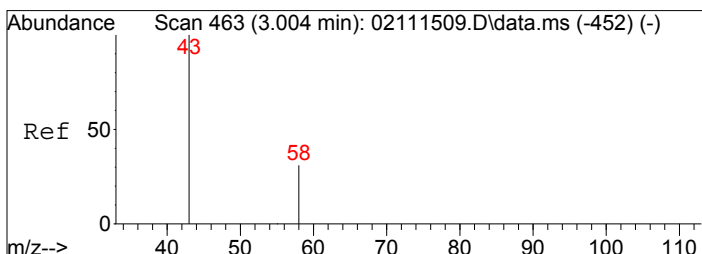
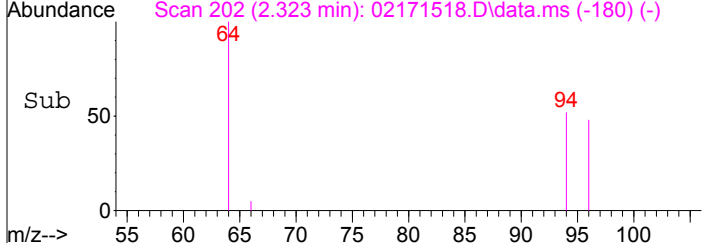
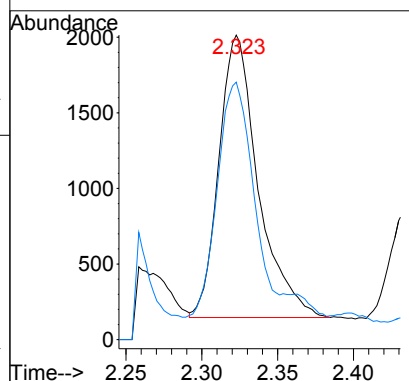
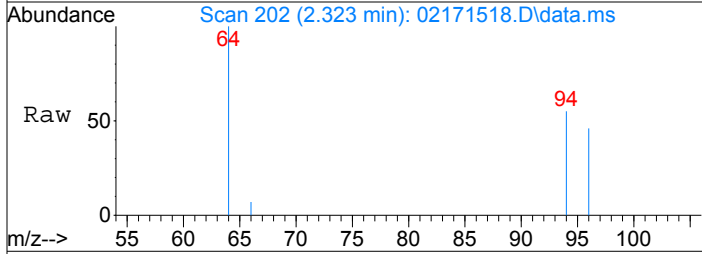
Tgt Ion: 52 Resp: 9152
 Ion Ratio Lower Upper
 52 100
 50 309.8 283.7 323.7





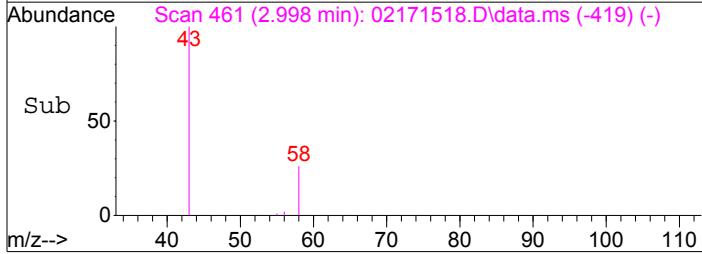
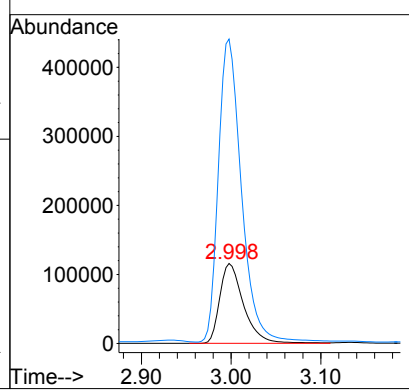
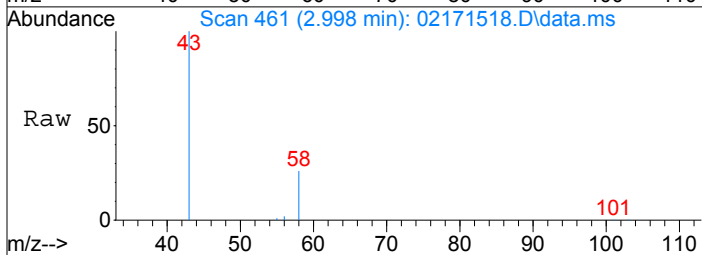
#5
 Bromomethane
 Concen: 96.21 pg
 RT: 2.32 min Scan# 202
 Delta R.T. -0.007 min
 Lab File: 02171518.D
 Acq: 17 Feb 2015 13:38

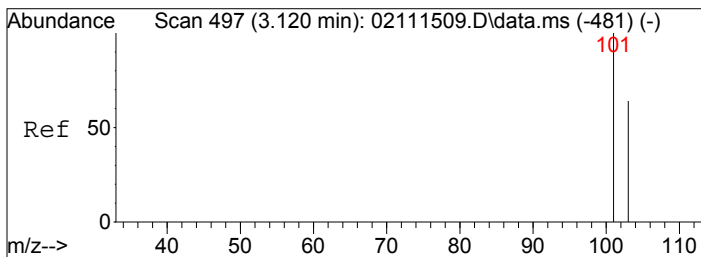
Tgt Ion: 94	Resp: 3368
Ion Ratio	Lower Upper
94	100
96	81.4 75.5 113.3



#7
 Acetone
 Concen: 7778.06 pg
 RT: 3.00 min Scan# 461
 Delta R.T. -0.006 min
 Lab File: 02171518.D
 Acq: 17 Feb 2015 13:38

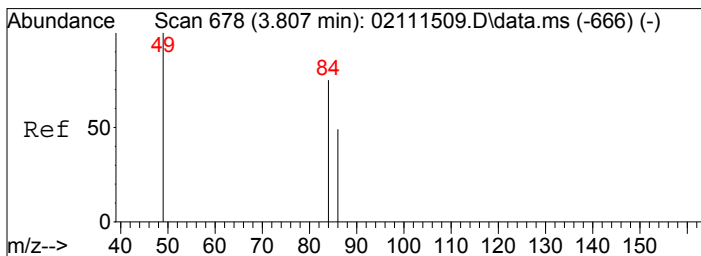
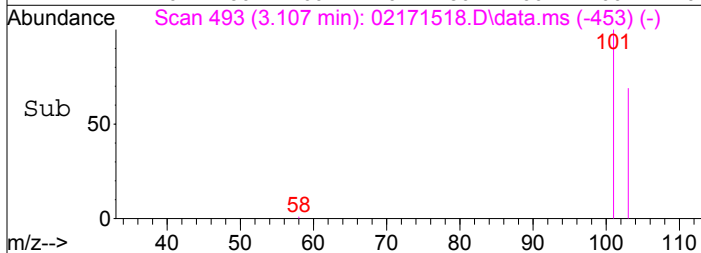
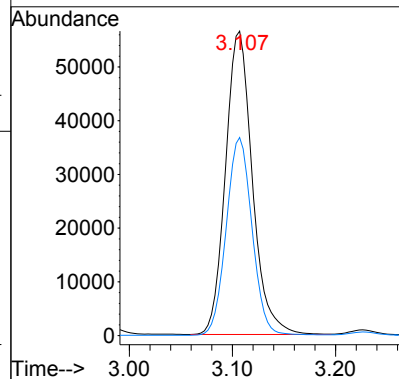
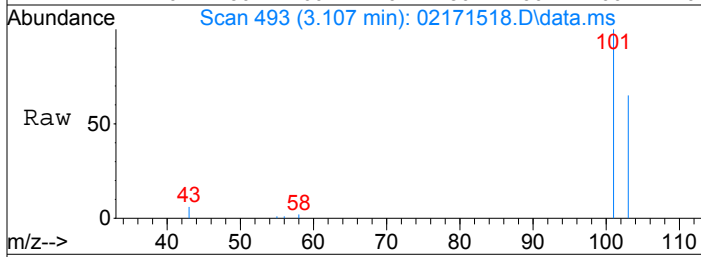
Tgt Ion: 58	Resp: 213836
Ion Ratio	Lower Upper
58	100
43	368.6 301.8 341.8#





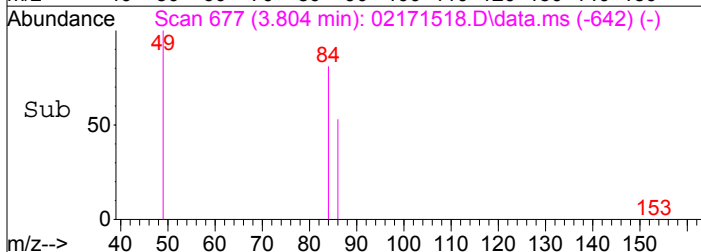
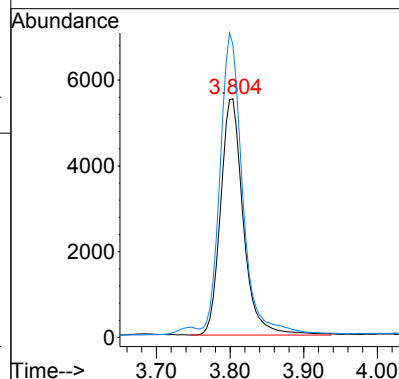
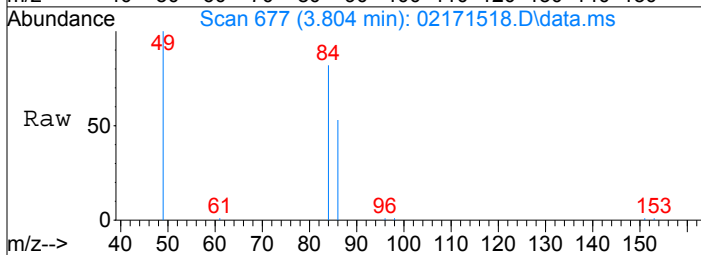
#8
Trichlorofluoromethane
Concen: 1527.75 pg
RT: 3.11 min Scan# 493
Delta R.T. -0.013 min
Lab File: 02171518.D
Acq: 17 Feb 2015 13:38

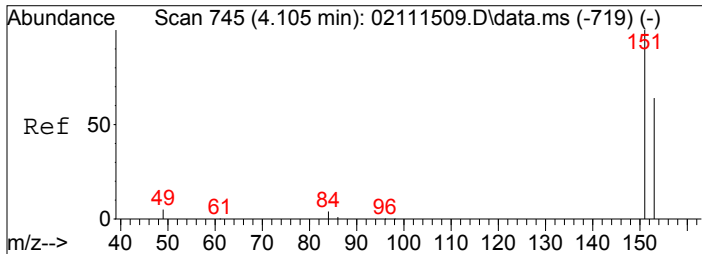
Tgt Ion: 101 Resp: 102166
Ion Ratio Lower Upper
101 100
103 62.7 51.8 77.6



#10
Methylene Chloride
Concen: 371.52 pg
RT: 3.80 min Scan# 677
Delta R.T. -0.003 min
Lab File: 02171518.D
Acq: 17 Feb 2015 13:38

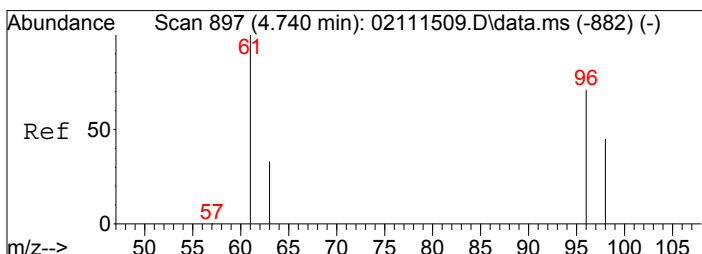
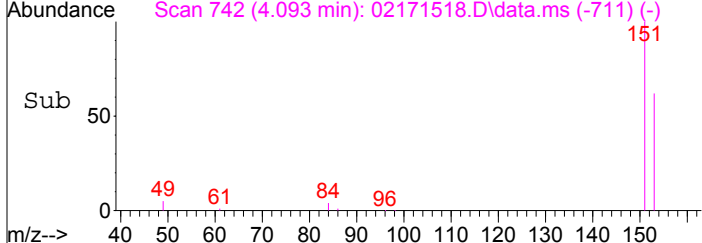
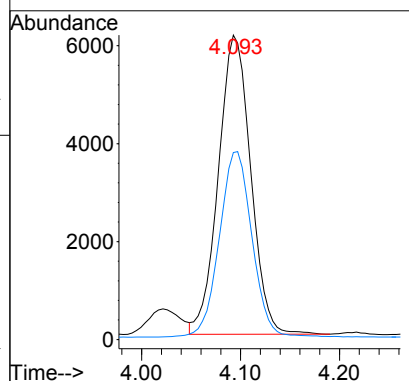
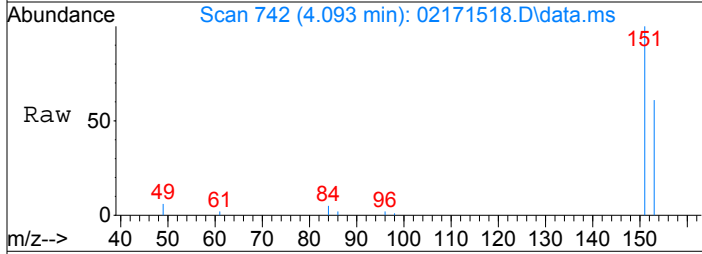
Tgt Ion: 84 Resp: 11789
Ion Ratio Lower Upper
84 100
49 125.2 112.3 152.3





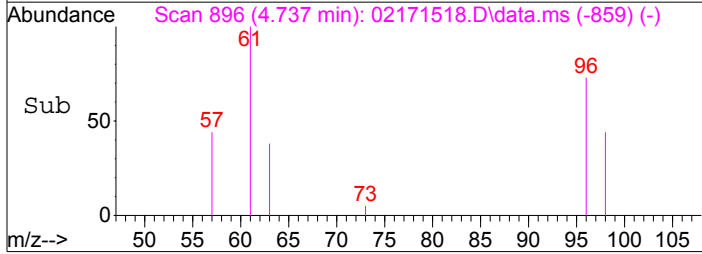
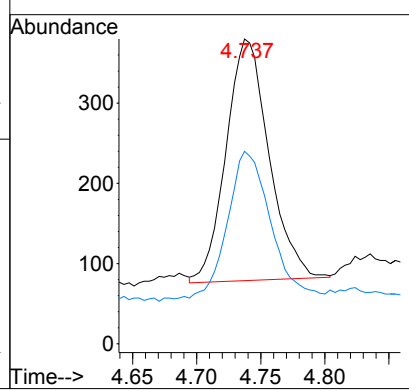
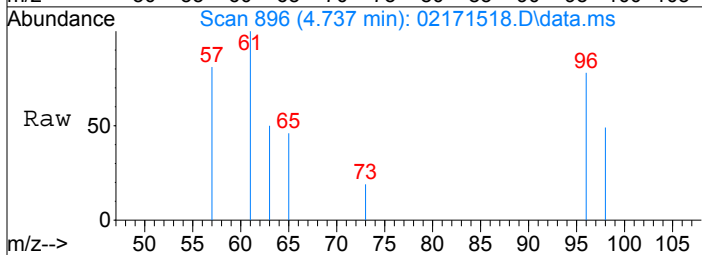
#11
 Trichlorotrifluoroethane
 Concen: 451.14 pg
 RT: 4.09 min Scan# 742
 Delta R.T. -0.012 min
 Lab File: 02171518.D
 Acq: 17 Feb 2015 13:38

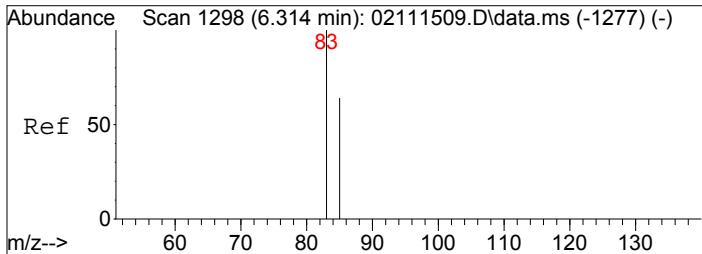
Tgt Ion: 151	Resp: 13863
Ion Ratio	Lower Upper
151	100
153	63.1 43.6 83.6



#12
 trans-1,2-Dichloroethene
 Concen: 22.99 pg
 RT: 4.74 min Scan# 896
 Delta R.T. -0.003 min
 Lab File: 02171518.D
 Acq: 17 Feb 2015 13:38

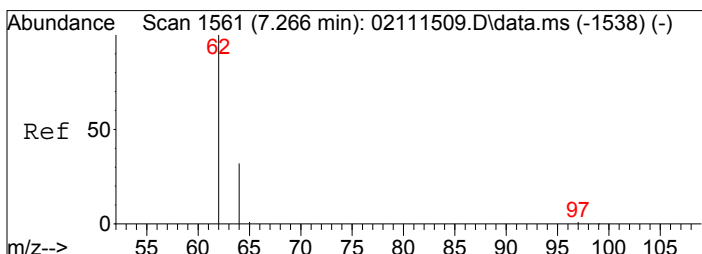
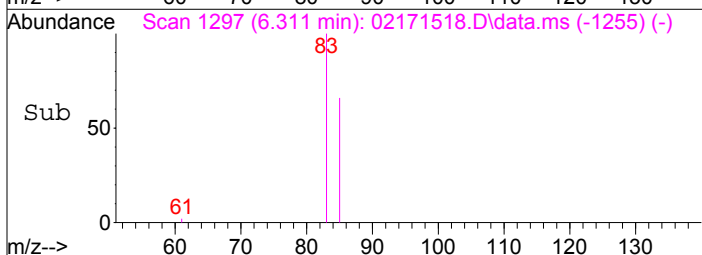
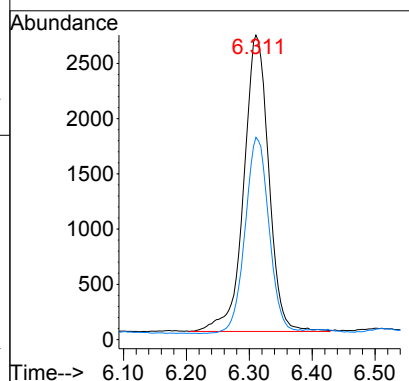
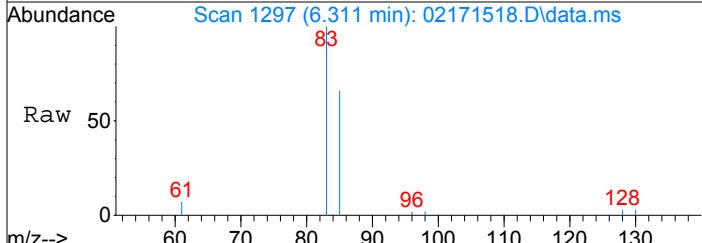
Tgt Ion: 96	Resp: 701
Ion Ratio	Lower Upper
96	100
98	64.8 43.7 83.7





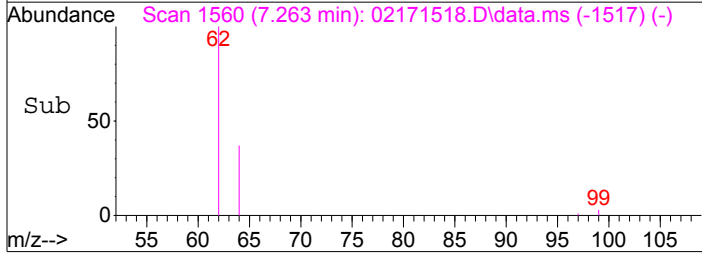
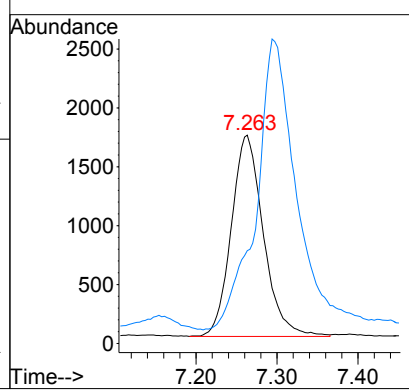
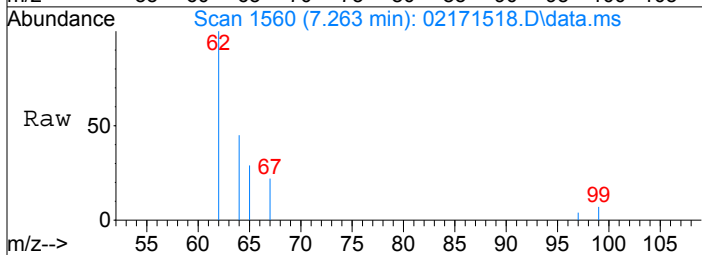
#16
 Chloroform
 Concen: 126.04 pg
 RT: 6.31 min Scan# 1297
 Delta R.T. -0.003 min
 Lab File: 02171518.D
 Acq: 17 Feb 2015 13:38

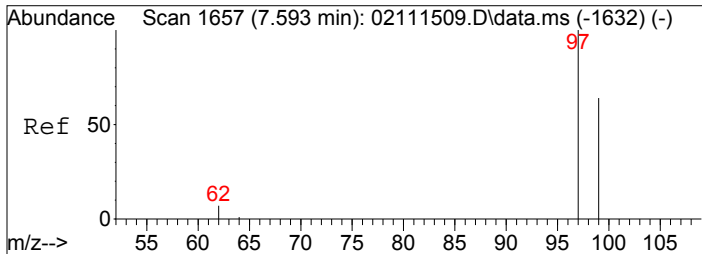
Tgt Ion:	83	Resp:	7403
Ion Ratio	Lower	Upper	
83	100		
85	63.8	45.4	85.4



#18
 1,2-Dichloroethane
 Concen: 100.65 pg
 RT: 7.26 min Scan# 1560
 Delta R.T. -0.002 min
 Lab File: 02171518.D
 Acq: 17 Feb 2015 13:38

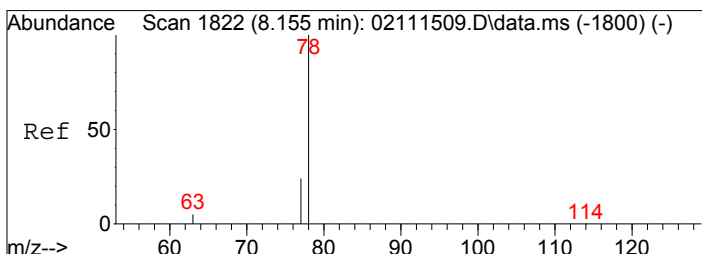
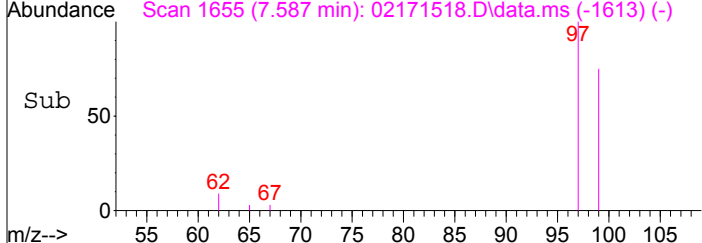
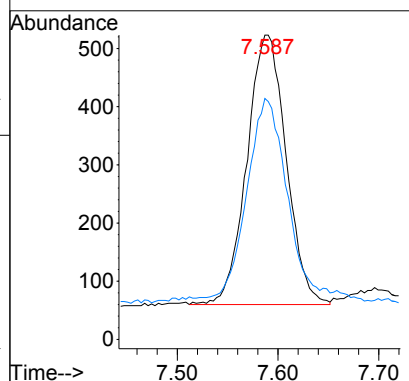
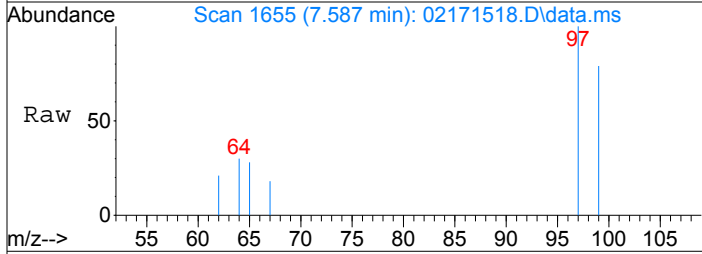
Tgt Ion:	62	Resp:	4707
Ion Ratio	Lower	Upper	
62	100		
64	181.5	11.6	51.6#





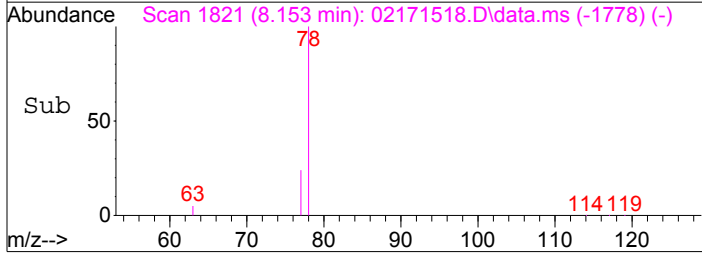
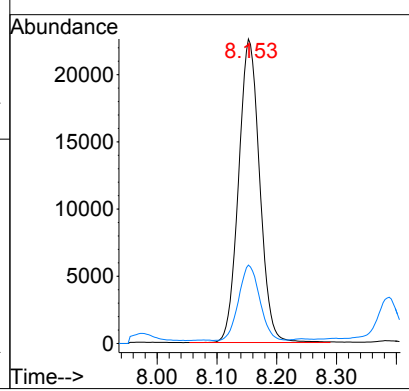
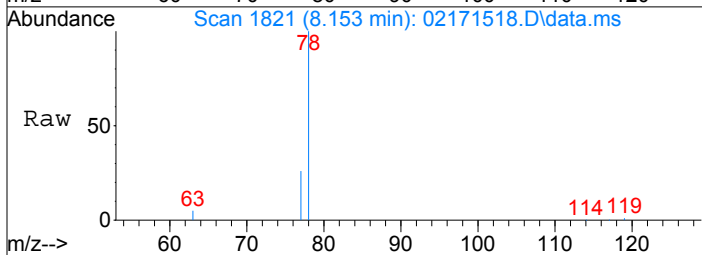
#19
 1,1,1-Trichloroethane
 Concen: 21.96 pg
 RT: 7.59 min Scan# 1655
 Delta R.T. -0.006 min
 Lab File: 02171518.D
 Acq: 17 Feb 2015 13:38

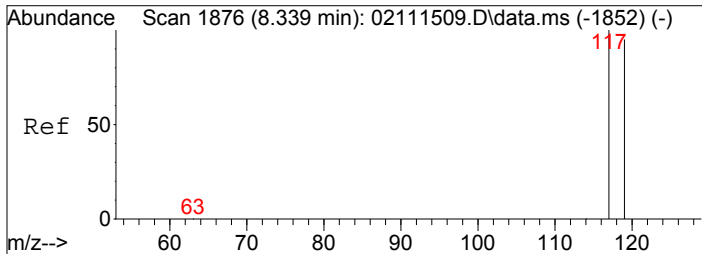
Tgt Ion:	97	Resp:	1254
Ion Ratio	Lower	Upper	
97	100		
99	78.4	44.0	84.0



#20
 Benzene
 Concen: 457.58 pg
 RT: 8.15 min Scan# 1821
 Delta R.T. -0.002 min
 Lab File: 02171518.D
 Acq: 17 Feb 2015 13:38

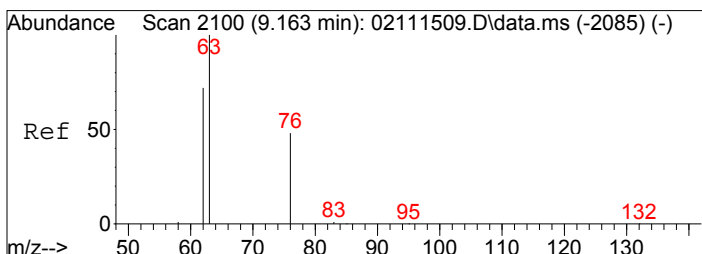
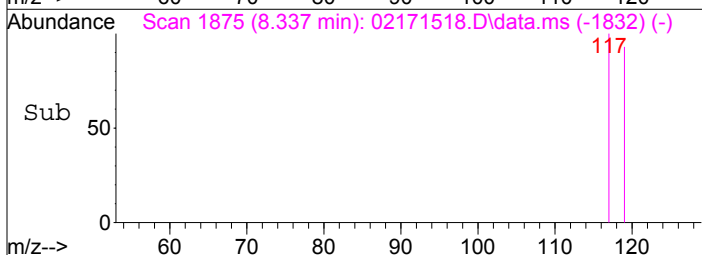
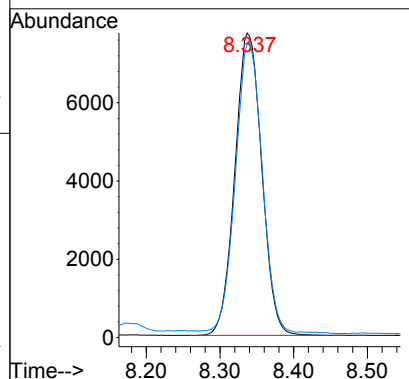
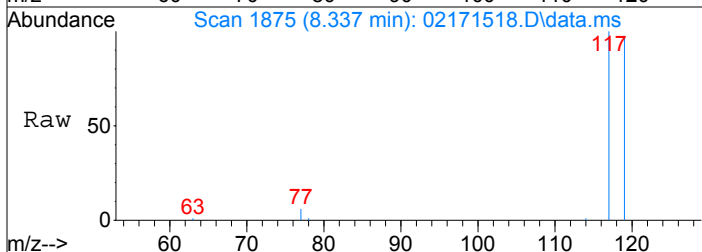
Tgt Ion:	78	Resp:	55277
Ion Ratio	Lower	Upper	
78	100		
77	24.7	3.7	43.7





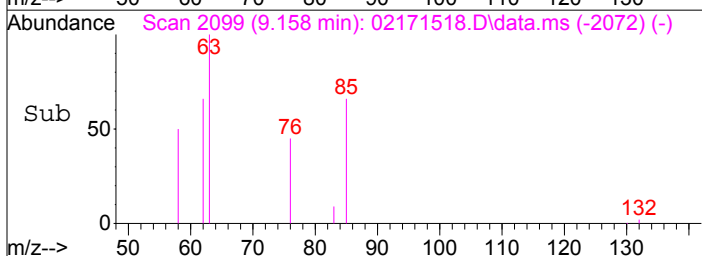
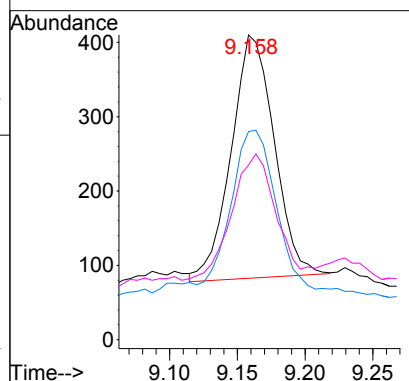
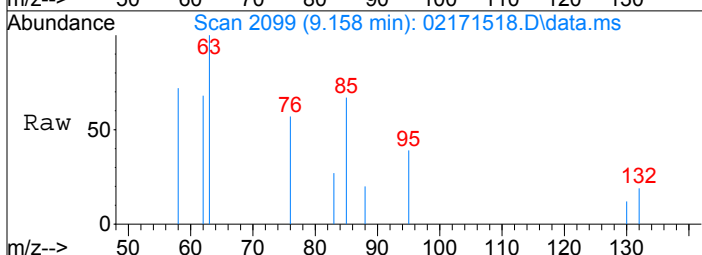
#21
Carbon Tetrachloride
Concen: 457.34 pg
RT: 8.34 min Scan# 1875
Delta R.T. -0.002 min
Lab File: 02171518.D
Acq: 17 Feb 2015 13:38

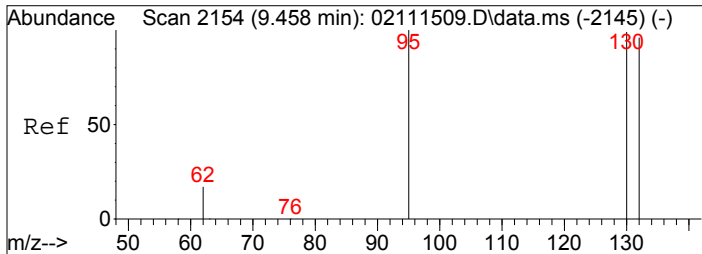
Tgt Ion: 117	Resp: 19556
Ion Ratio	Lower Upper
117	100
119	95.1 75.5 115.5



#23
1,2-Dichloropropane
Concen: 24.78 pg
RT: 9.16 min Scan# 2099
Delta R.T. -0.005 min
Lab File: 02171518.D
Acq: 17 Feb 2015 13:38

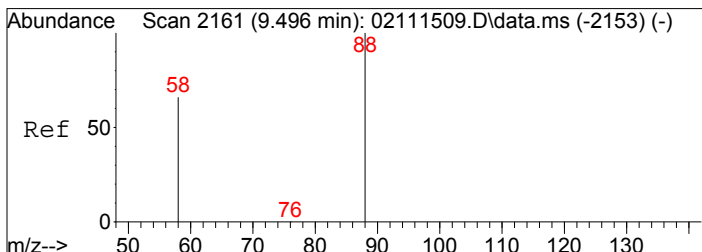
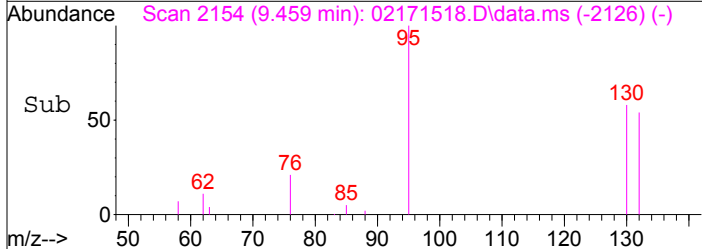
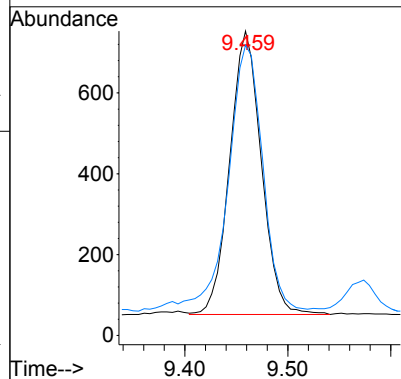
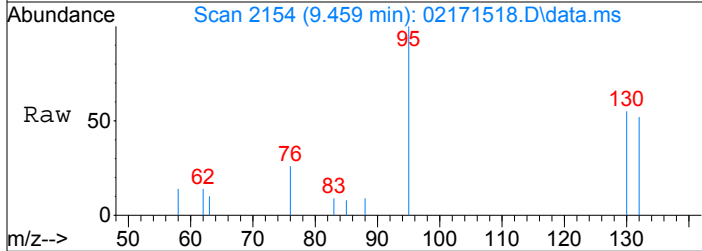
Tgt Ion: 63	Resp: 725
Ion Ratio	Lower Upper
63	100
62	77.4 52.0 92.0
76	57.0 28.1 68.1





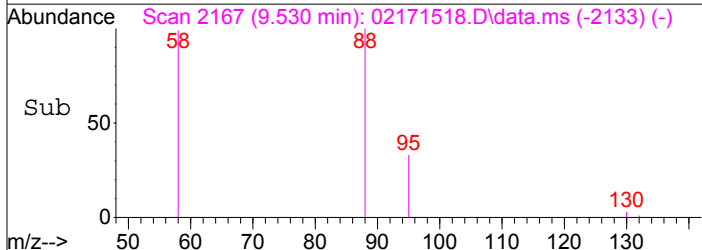
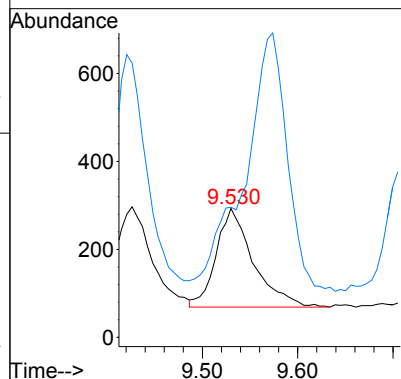
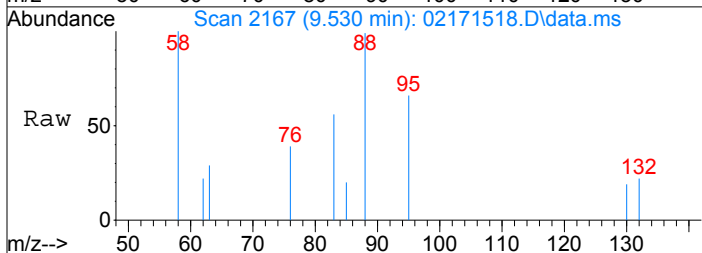
#25
 Trichloroethene
 Concen: 43.29 pg
 RT: 9.46 min Scan# 2154
 Delta R.T. 0.001 min
 Lab File: 02171518.D
 Acq: 17 Feb 2015 13:38

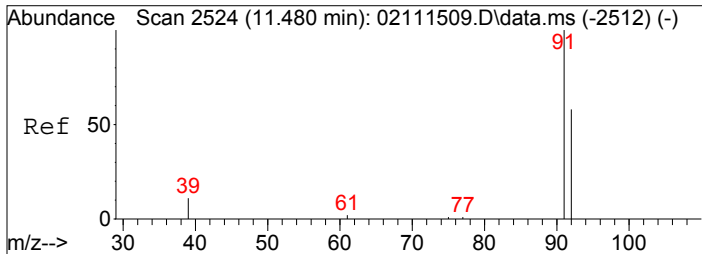
Tgt Ion	Ratio	Lower	Upper
130	100		
132	104.2	77.1	117.1



#26
 1,4-Dioxane
 Concen: 23.59 pg
 RT: 9.53 min Scan# 2167
 Delta R.T. 0.034 min
 Lab File: 02171518.D
 Acq: 17 Feb 2015 13:38

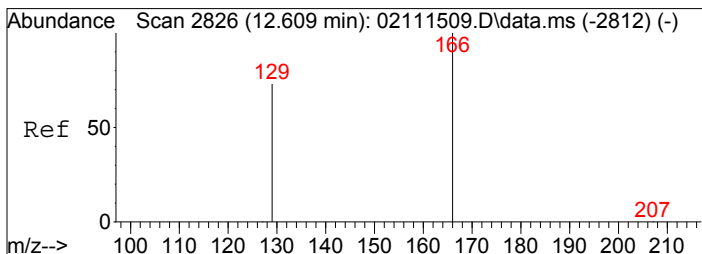
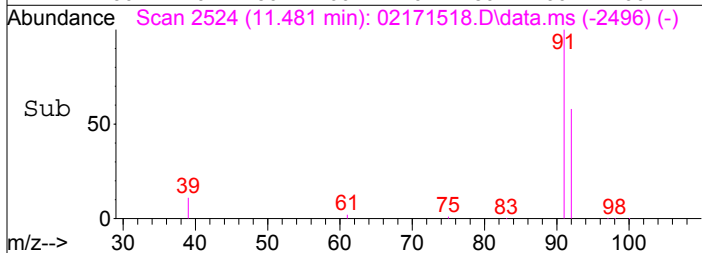
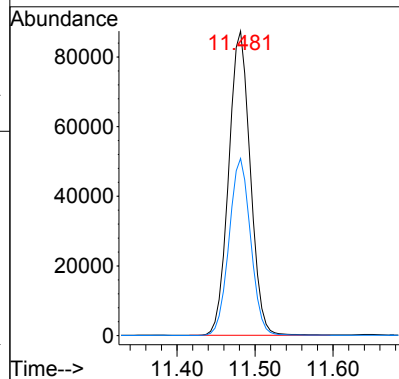
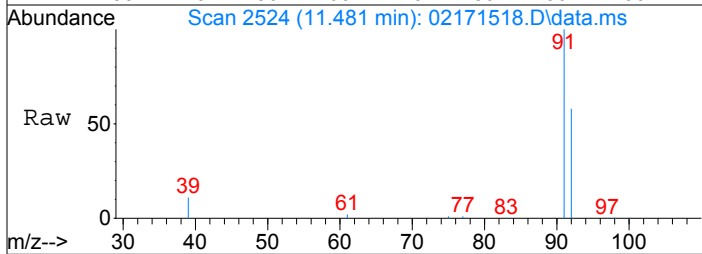
Tgt Ion	Ratio	Lower	Upper
88	100		
58	302.5	38.3	78.3#





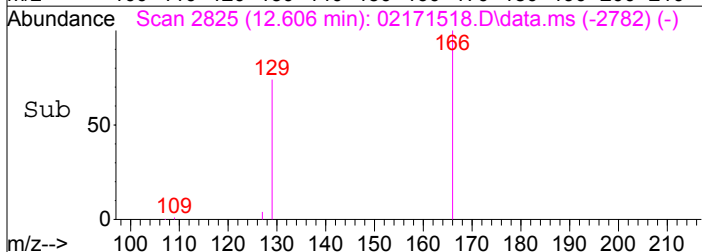
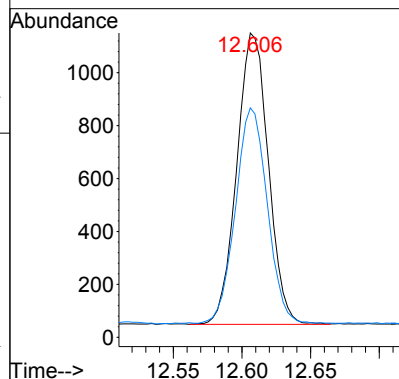
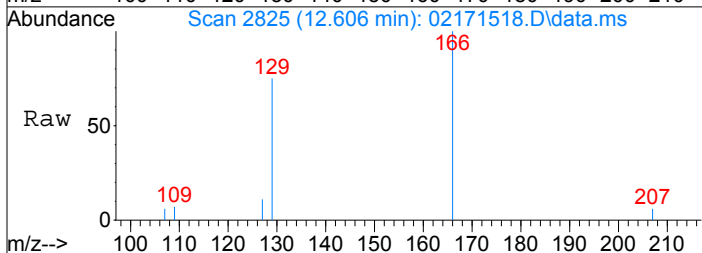
#31
Toluene
Concen: 1274.89 pg
RT: 11.48 min Scan# 2524
Delta R.T. 0.001 min
Lab File: 02171518.D
Acq: 17 Feb 2015 13:38

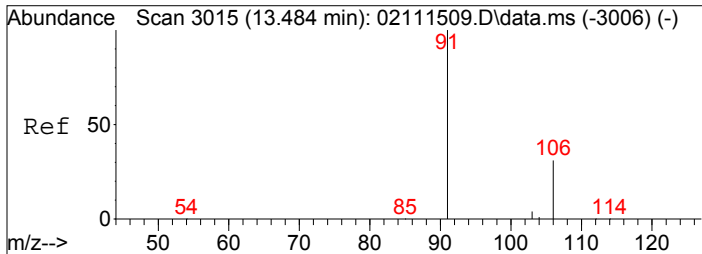
Tgt Ion: 91 Resp: 167758
Ion Ratio Lower Upper
91 100
92 58.1 37.7 77.7



#33
Tetrachloroethene
Concen: 43.22 pg
RT: 12.61 min Scan# 2825
Delta R.T. -0.003 min
Lab File: 02171518.D
Acq: 17 Feb 2015 13:38

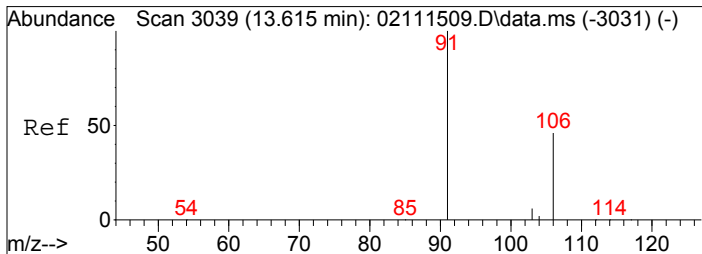
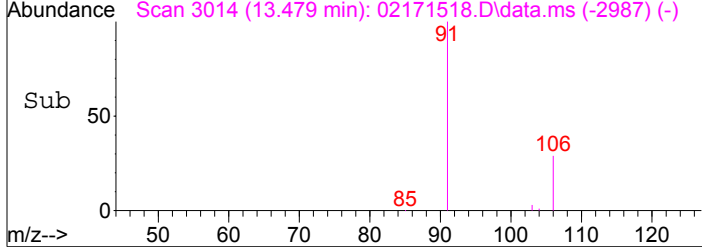
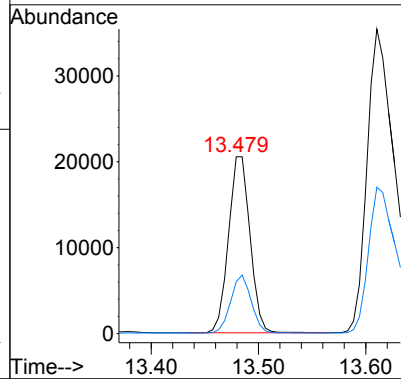
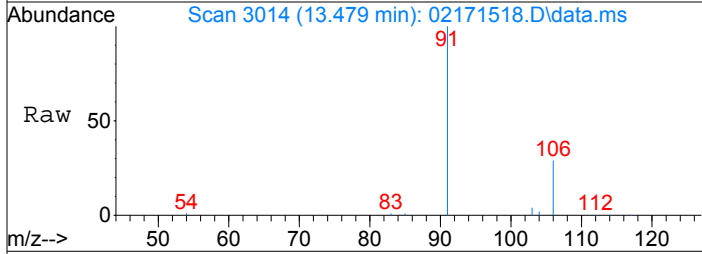
Tgt Ion: 166 Resp: 1761
Ion Ratio Lower Upper
166 100
129 74.7 53.3 93.3





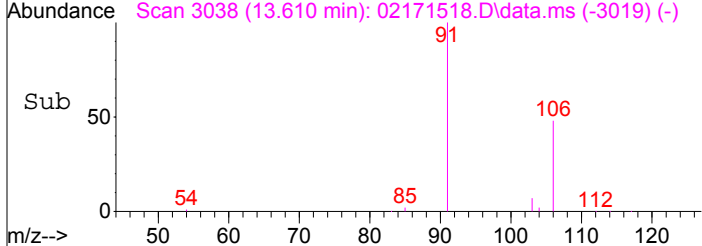
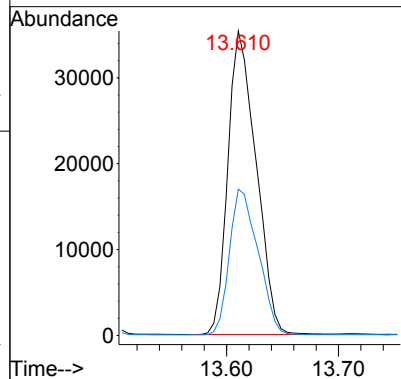
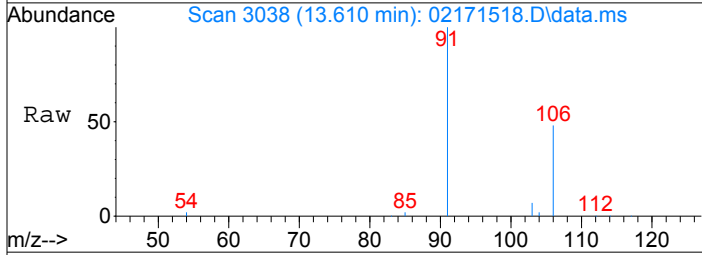
#36
Ethylbenzene
Concen: 195.79 pg
RT: 13.48 min Scan# 3014
Delta R.T. -0.005 min
Lab File: 02171518.D
Acq: 17 Feb 2015 13:38

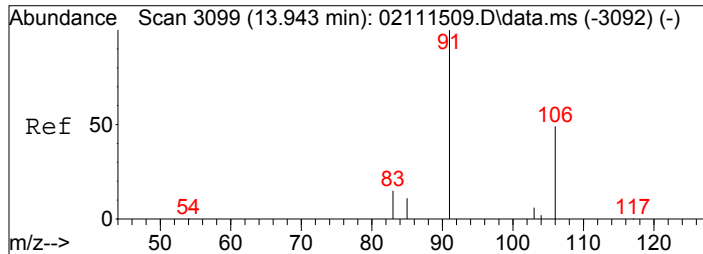
Tgt Ion: 91 Resp: 28612
Ion Ratio Lower Upper
91 100
106 31.2 10.9 50.9



#37
m,p-Xylene
Concen: 514.59 pg
RT: 13.61 min Scan# 3038
Delta R.T. -0.004 min
Lab File: 02171518.D
Acq: 17 Feb 2015 13:38

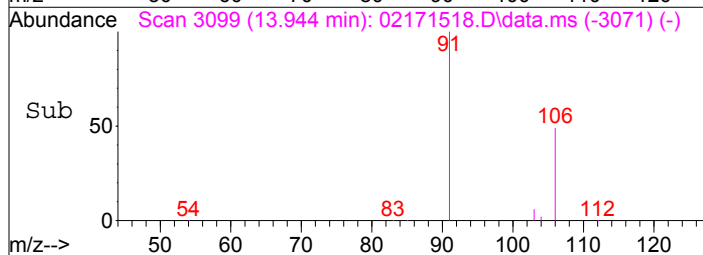
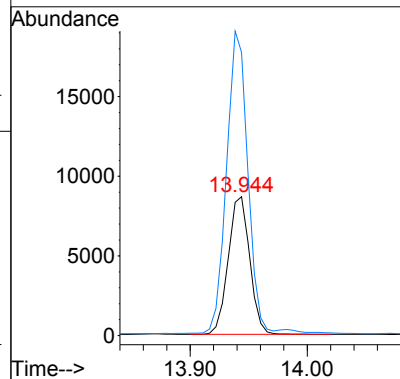
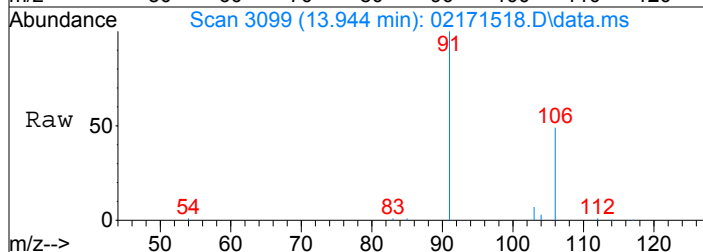
Tgt Ion: 91 Resp: 61806
Ion Ratio Lower Upper
91 100
106 49.0 27.5 67.5





#38
o-Xylene
Concen: 187.65 pg
RT: 13.94 min Scan# 3099
Delta R.T. 0.001 min
Lab File: 02171518.D
Acq: 17 Feb 2015 13:38

Tgt Ion:106 Resp: 11015
Ion Ratio Lower Upper
106 100
91 216.8 198.3 238.3



Data File: I:\MS19\DATA\2015 02\17\02171519.D

Acq On : 17 Feb 2015 14:06

Operator: WA

Sample : P1500566-014 (1000mL)

Misc : S29-02041502

ALS Vial : 13 Sample Multiplier: 1

Quant Time: Feb 17 16:49:44 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

2/18/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	18084	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	131424	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	22822	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	41841	947.425	pg	0.00
Spiked Amount 1000.000			Recovery	=	94.74%	
30) Toluene-d8 (SS2)	11.38	98	124078	1023.770	pg	0.00
Spiked Amount 1000.000			Recovery	=	102.38%	
40) Bromofluorobenzene (SS3)	14.25	174	48302	1048.346	pg	0.00
Spiked Amount 1000.000			Recovery	=	104.83%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.73	85	119406	1624.712	pg	100
3) Chloromethane	1.84	52	7771	529.472	pg	99
4) Vinyl Chloride	0.00	62	0	N.D.		
5) Bromomethane	2.33	94	1869	56.555	pg	90
6) Chloroethane	0.00	64	0	N.D.	d	
7) Acetone	3.00	58	178801	6889.588	pg	# 85
8) Trichlorofluoromethane	3.11	101	76957	1219.063	pg	99
9) 1,1-Dichloroethene	3.66	96	16	N.D.		
10) Methylene Chloride	3.80	84	8338	278.355	pg	92
11) Trichlorotrifluoroethane	4.10	151	10725	369.733	pg	100
12) trans-1,2-Dichloroethene	4.74	96	285	N.D.		
13) 1,1-Dichloroethane	4.95	63	212	N.D.		
14) Methyl tert-Butyl Ether	5.12	73	458	N.D.		
15) cis-1,2-Dichloroethene	5.93	96	212	N.D.		
16) Chloroform	6.31	83	6389	115.231	pg	99
18) 1,2-Dichloroethane	7.26	62	3051	69.111	pg	91
19) 1,1,1-Trichloroethane	7.59	97	874	N.D.		
20) Benzene	8.15	78	34743	304.662	pg	98
21) Carbon Tetrachloride	8.34	117	15396	381.417	pg	100
23) 1,2-Dichloropropane	9.16	63	594	20.723	pg	90
24) Bromodichloromethane	9.40	83	266	N.D.		
25) Trichloroethene	9.46	130	687	20.347	pg	99
26) 1,4-Dioxane	9.54	88	254	N.D.		
27) cis-1,3-Dichloropropene	10.46	75	13	N.D.		
28) trans-1,3-Dichloropropene	11.05	75	31	N.D.		
29) 1,1,2-Trichloroethane	11.19	83	86	N.D.		
31) Toluene	11.48	91	99566	772.427	pg	100
32) 1,2-Dibromoethane	12.13	107	19	N.D.		
33) Tetrachloroethene	12.61	166	1456	36.481	pg	97
35) Chlorobenzene	13.17	112	577	N.D.		
36) Ethylbenzene	13.48	91	23758	166.008	pg	99
37) m,p-Xylene	13.61	91	51444	437.364	pg	98
38) o-Xylene	13.94	106	9495	165.174	pg	98
39) 1,1,2,2-Tetrachloroethane	13.89	83	263	N.D.		
41) 1,3-Dichlorobenzene	0.00	146	0	N.D.	d	
42) 1,4-Dichlorobenzene	15.24	146	1533	N.D.		
43) 1,2-Dichlorobenzene	15.46	146	109	N.D.		
44) 1,2,4-Trichlorobenzene	16.63	182	77	N.D.		
45) Naphthalene	16.70	128	47014	329.232	pg	99
46) Hexachlorobutadiene	16.95	225	33	N.D.		

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\17\02171519.D

Acq On : 17 Feb 2015 14:06

Operator: WA

Sample : P1500566-014 (1000mL)

Misc : S29-02041502

ALS Vial : 13 Sample Multiplier: 1

Quant Time: Feb 17 16:49:44 2015

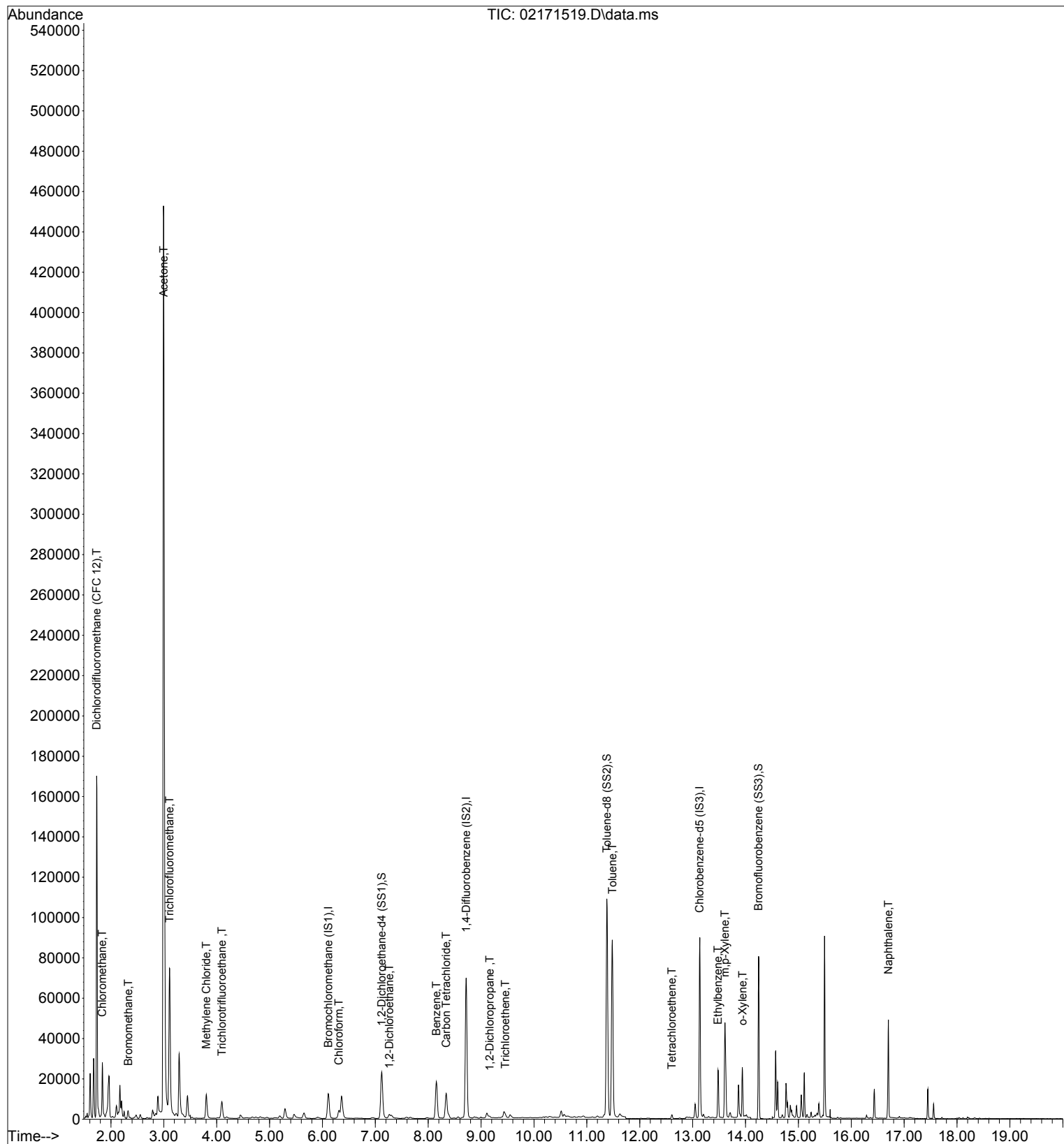
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 02\17\02171519.D

Acq On : 17 Feb 2015 14:06

Operator: WA

Sample : P1500566-014 (1000mL)

Misc : S29-02041502

ALS Vial : 13 Sample Multiplier: 1

Quant Time: Feb 17 16:49:44 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

2/17/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	18084	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	131424	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	22822	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	41841	947.425	pg	0.00
Spiked Amount 1000.000			Recovery	=	94.74%	
30) Toluene-d8 (SS2)	11.38	98	124078	1023.770	pg	0.00
Spiked Amount 1000.000			Recovery	=	102.38%	
40) Bromofluorobenzene (SS3)	14.25	174	48302	1048.346	pg	0.00
Spiked Amount 1000.000			Recovery	=	104.83%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.73	85	119406	1624.712	pg	100
3) Chloromethane	1.84	52	7771	529.472	pg	99
5) Bromomethane	2.33	94	1869	56.555	pg	90
7) Acetone	3.00	58	178801	6889.588	pg	# 85
8) Trichlorofluoromethane	3.11	101	76957	1219.063	pg	99
10) Methylene Chloride	3.80	84	8338	278.355	pg	92
11) Trichlorotrifluoroethane	4.10	151	10725	369.733	pg	100
16) Chloroform	6.31	83	6389	115.231	pg	99
18) 1,2-Dichloroethane	7.26	62	3051	69.111	pg	91
20) Benzene	8.15	78	34743	304.662	pg	98
21) Carbon Tetrachloride	8.34	117	15396	381.417	pg	100
23) 1,2-Dichloropropane	9.16	63	594	20.723	pg	90
25) Trichloroethene	9.46	130	687	20.347	pg	99
31) Toluene	11.48	91	99566	772.427	pg	100
33) Tetrachloroethene	12.61	166	1456	36.481	pg	97
36) Ethylbenzene	13.48	91	23758	166.008	pg	99
37) m,p-Xylene	13.61	91	51444	437.364	pg	98
38) o-Xylene	13.94	106	9495	165.174	pg	98
45) Naphthalene	16.70	128	47014	329.232	pg	99

(#)= qualifier out of range (m)= manual integration (+)= signals summed

Data File: I:\MS19\DATA\2015 02\17\02171519.D

Acq On : 17 Feb 2015 14:06

Operator: WA

Sample : P1500566-014 (1000mL)

Misc : S29-02041502

ALS Vial : 13 Sample Multiplier: 1

Quant Time: Feb 17 16:49:44 2015

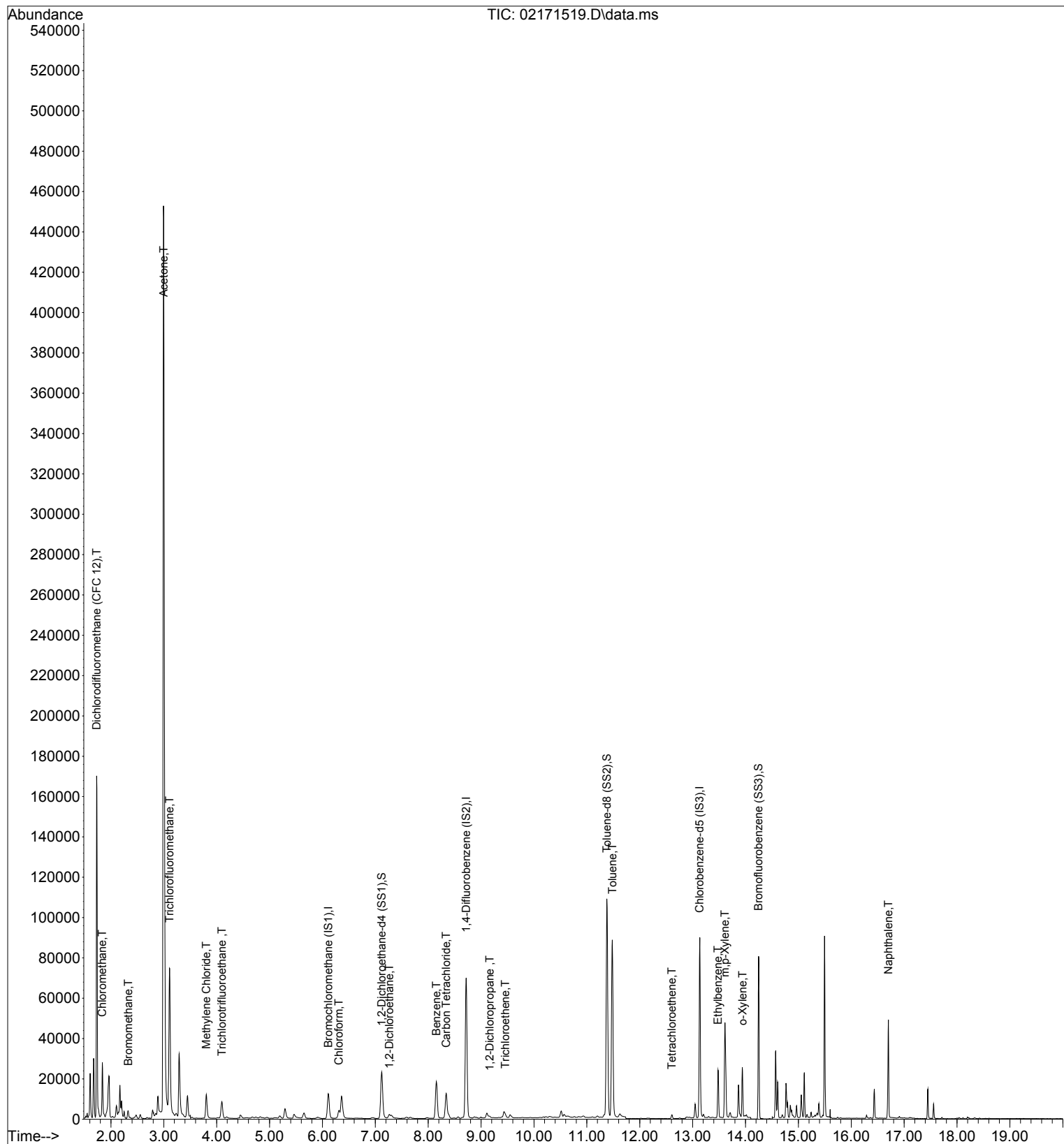
Quant Method : I:\MS19\METHODS\X19021115.M

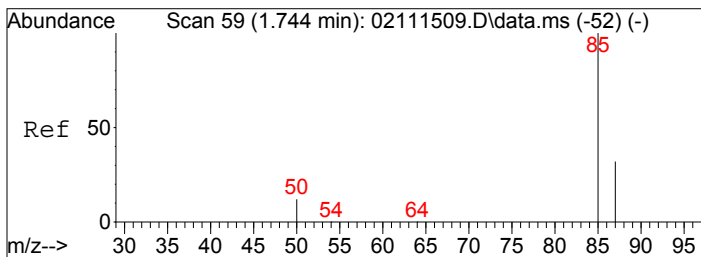
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

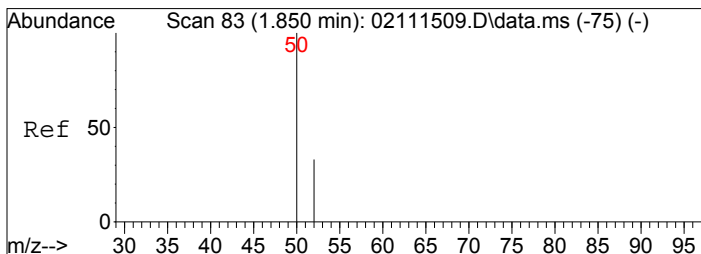
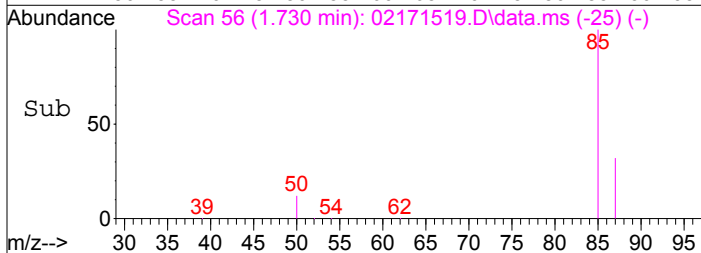
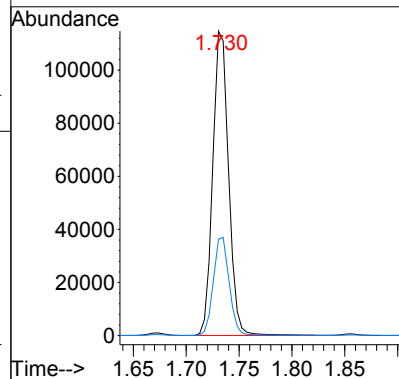
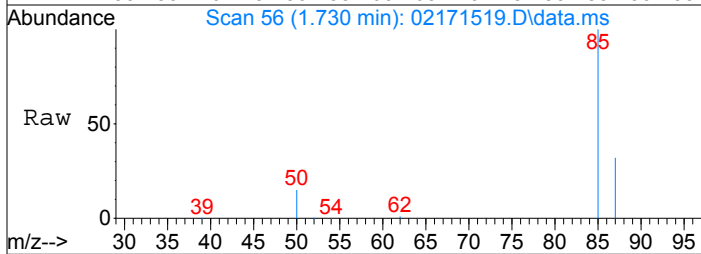
DataAcq Meth:TO15SIM.M





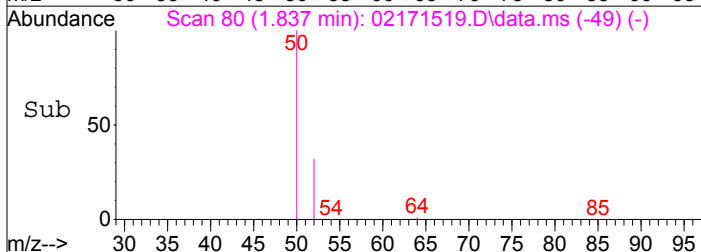
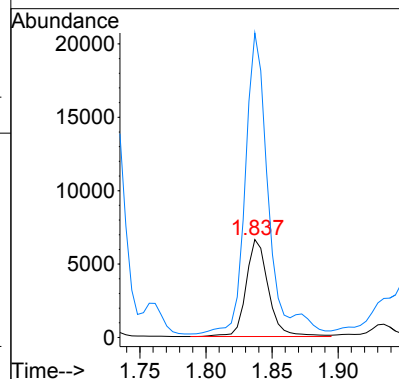
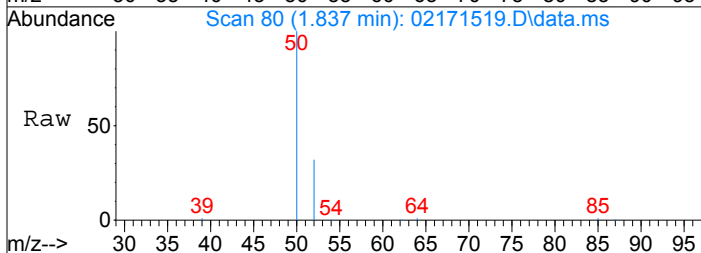
#2
 Dichlorodifluoromethane (CFC 12)
 Concen: 1624.71 pg
 RT: 1.73 min Scan# 56
 Delta R.T. -0.013 min
 Lab File: 02171519.D
 Acq: 17 Feb 2015 14:06

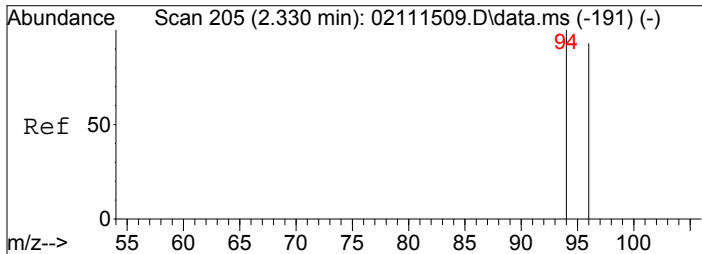
Tgt Ion: 85 Resp: 119406
 Ion Ratio Lower Upper
 85 100
 87 32.4 12.4 52.4



#3
 Chloromethane
 Concen: 529.47 pg
 RT: 1.84 min Scan# 80
 Delta R.T. -0.013 min
 Lab File: 02171519.D
 Acq: 17 Feb 2015 14:06

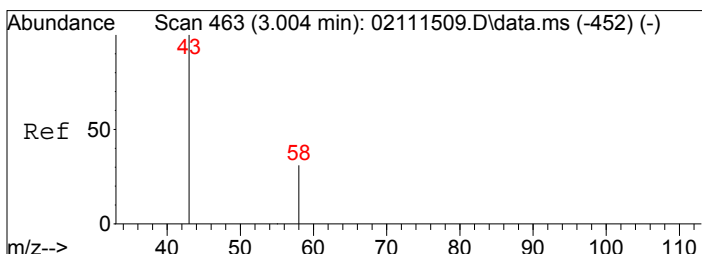
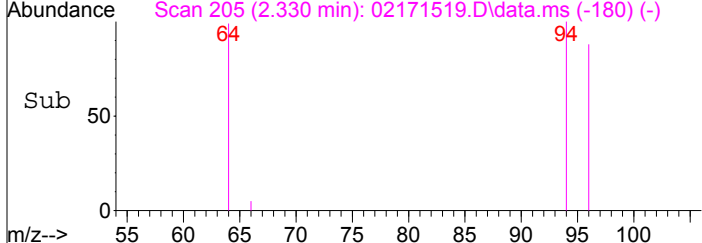
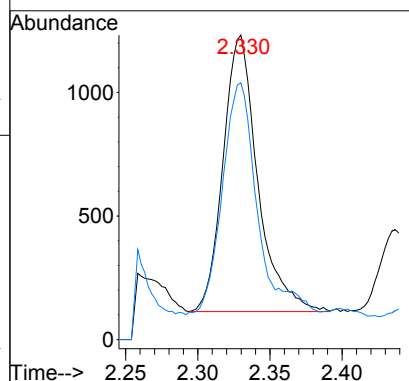
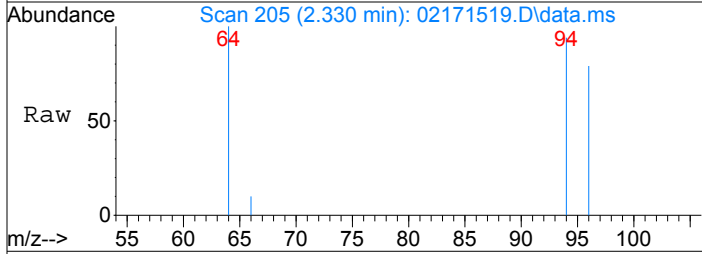
Tgt Ion: 52 Resp: 7771
 Ion Ratio Lower Upper
 52 100
 50 301.6 283.7 323.7





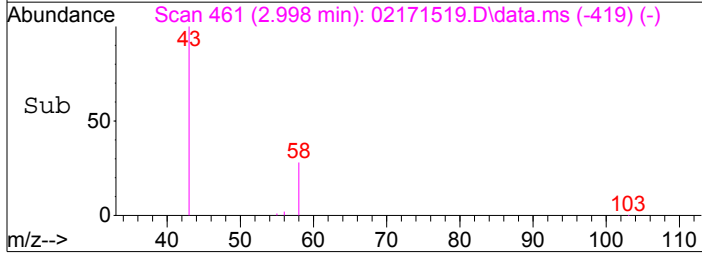
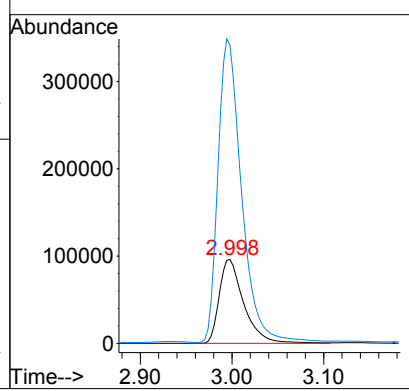
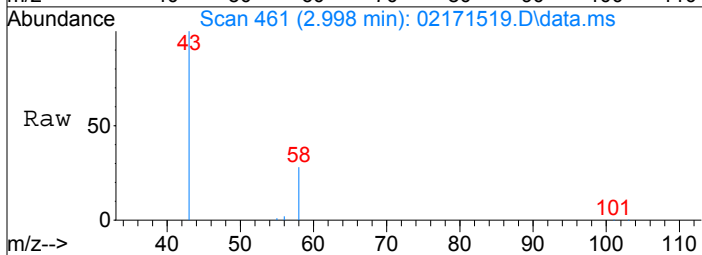
#5
 Bromomethane
 Concen: 56.55 pg
 RT: 2.33 min Scan# 205
 Delta R.T. -0.000 min
 Lab File: 02171519.D
 Acq: 17 Feb 2015 14:06

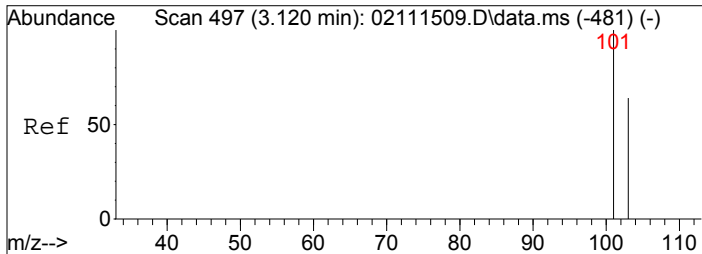
Tgt Ion: 94	Resp: 1869
Ion Ratio	Lower Upper
94	100
96	84.9 75.5 113.3



#7
 Acetone
 Concen: 6889.59 pg
 RT: 3.00 min Scan# 461
 Delta R.T. -0.006 min
 Lab File: 02171519.D
 Acq: 17 Feb 2015 14:06

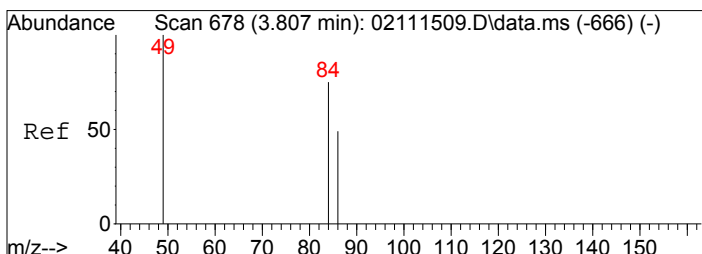
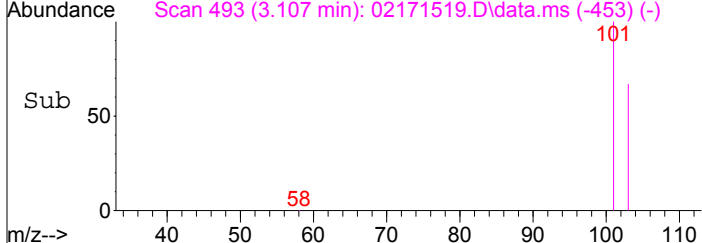
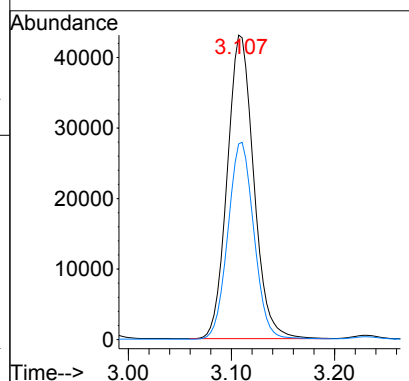
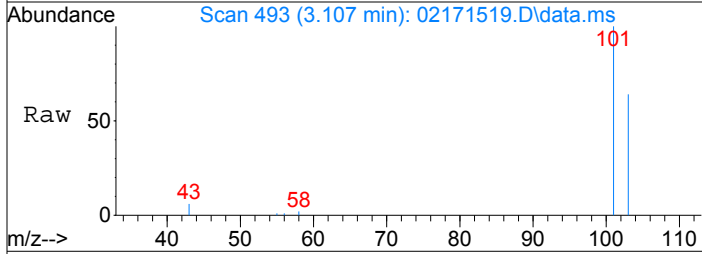
Tgt Ion: 58	Resp: 178801
Ion Ratio	Lower Upper
58	100
43	353.4 301.8 341.8#





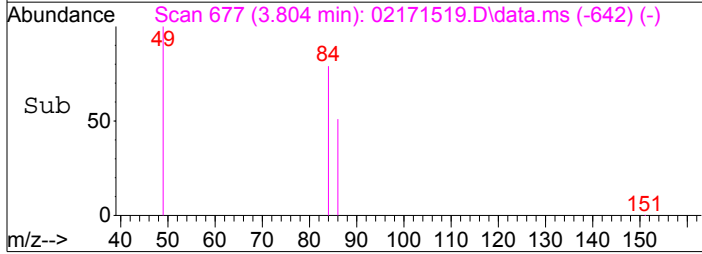
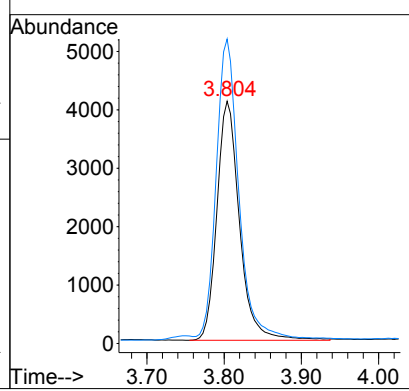
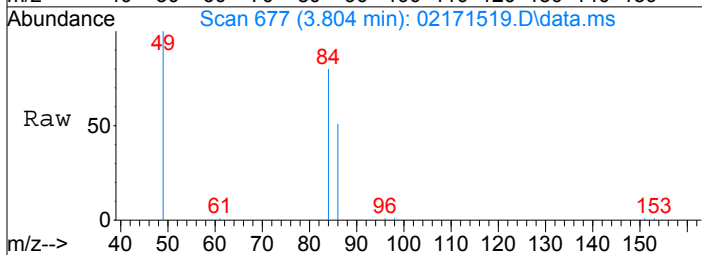
#8
 Trichlorofluoromethane
 Concen: 1219.06 pg
 RT: 3.11 min Scan# 493
 Delta R.T. -0.013 min
 Lab File: 02171519.D
 Acq: 17 Feb 2015 14:06

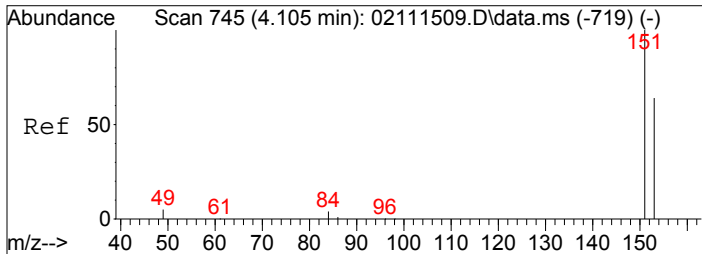
Tgt Ion: 101	Resp:	76957
Ion Ratio	Lower	Upper
101	100	
103	63.6	51.8 77.6



#10
 Methylene Chloride
 Concen: 278.35 pg
 RT: 3.80 min Scan# 677
 Delta R.T. -0.003 min
 Lab File: 02171519.D
 Acq: 17 Feb 2015 14:06

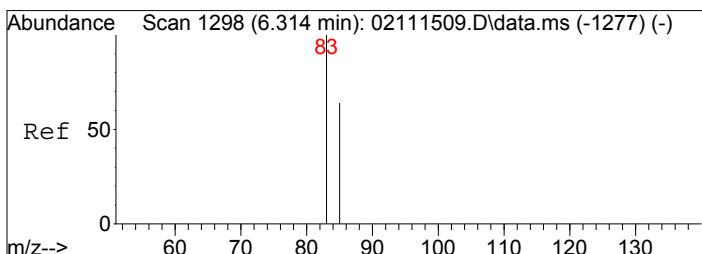
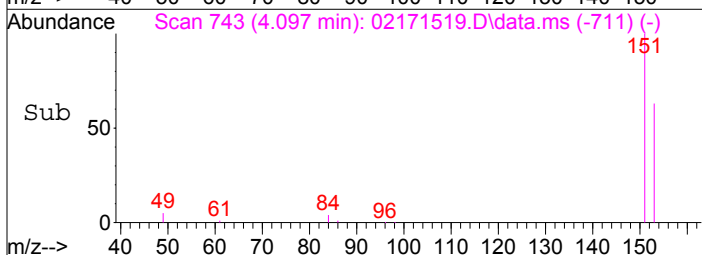
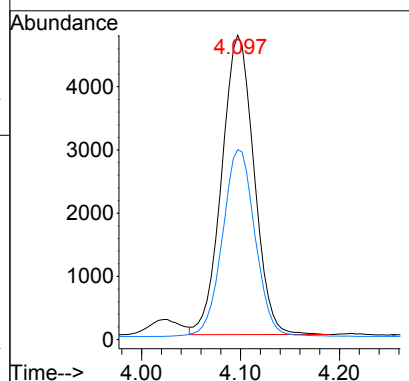
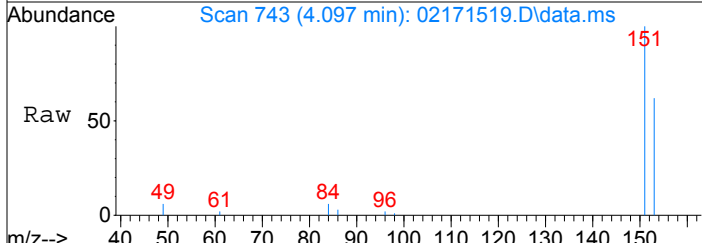
Tgt Ion: 84	Resp:	8338
Ion Ratio	Lower	Upper
84	100	
49	123.3	112.3 152.3





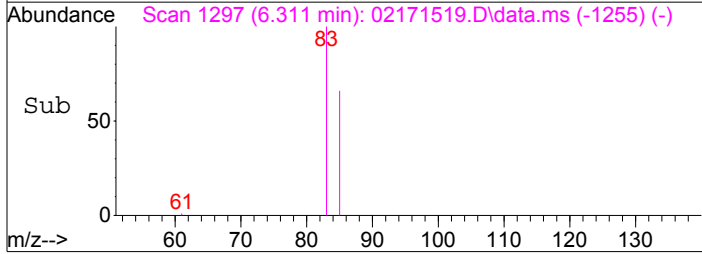
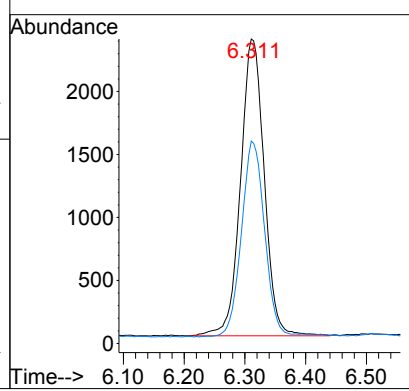
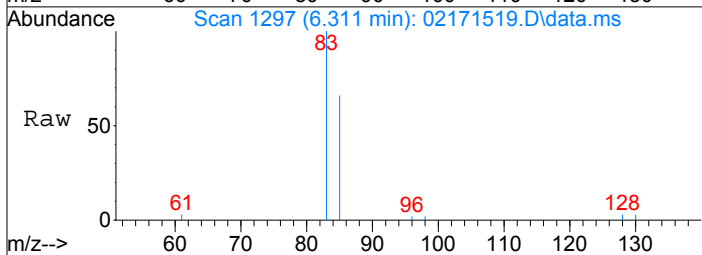
#11
 Trichlorotrifluoroethane
 Concen: 369.73 pg
 RT: 4.10 min Scan# 743
 Delta R.T. -0.008 min
 Lab File: 02171519.D
 Acq: 17 Feb 2015 14:06

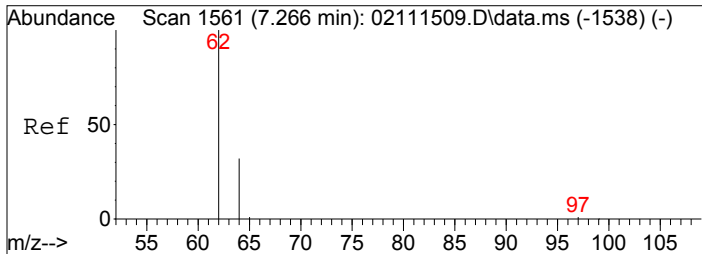
Tgt Ion: 151	Resp: 10725
Ion Ratio	Lower Upper
151	100
153	63.5 43.6 83.6



#16
 Chloroform
 Concen: 115.23 pg
 RT: 6.31 min Scan# 1297
 Delta R.T. -0.003 min
 Lab File: 02171519.D
 Acq: 17 Feb 2015 14:06

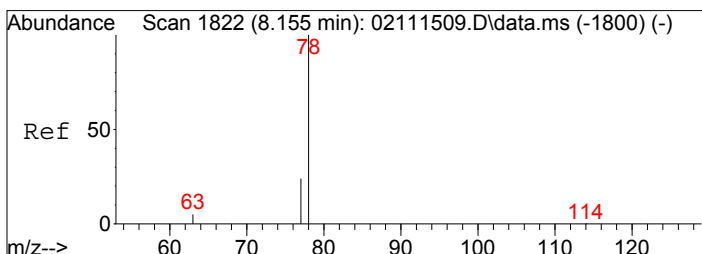
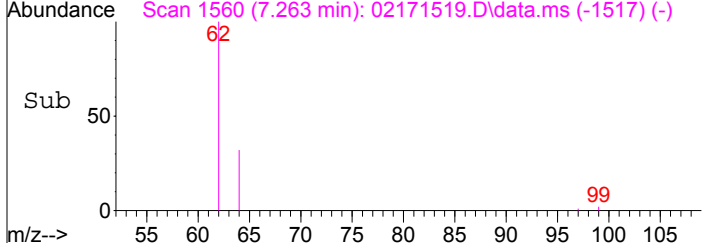
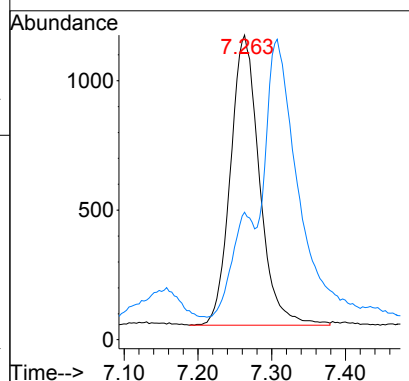
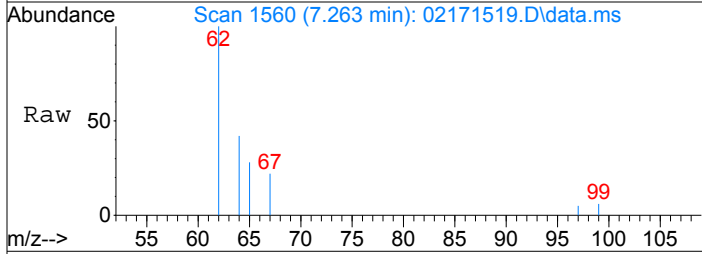
Tgt Ion: 83	Resp: 6389
Ion Ratio	Lower Upper
83	100
85	64.5 45.4 85.4





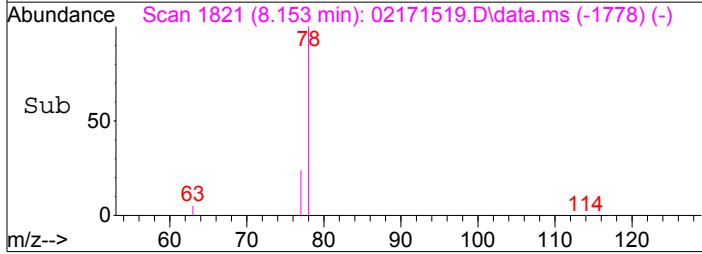
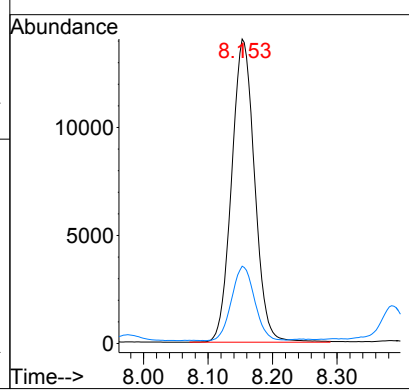
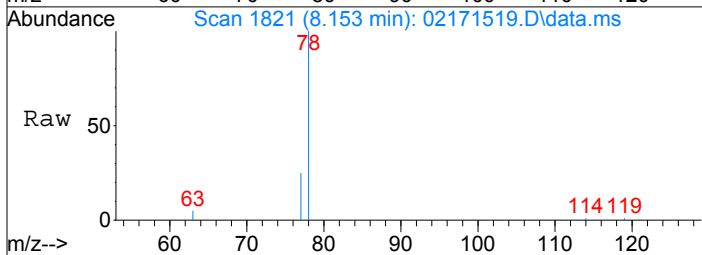
#18
 1,2-Dichloroethane
 Concen: 69.11 pg
 RT: 7.26 min Scan# 1560
 Delta R.T. -0.002 min
 Lab File: 02171519.D
 Acq: 17 Feb 2015 14:06

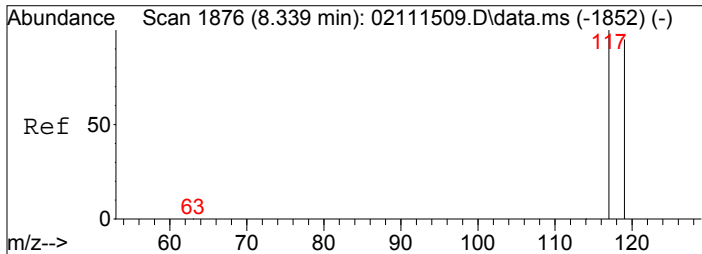
Tgt Ion:	62	Resp:	3051
Ion Ratio	Lower	Upper	
62	100		
64	26.8	11.6	51.6



#20
 Benzene
 Concen: 304.66 pg
 RT: 8.15 min Scan# 1821
 Delta R.T. -0.002 min
 Lab File: 02171519.D
 Acq: 17 Feb 2015 14:06

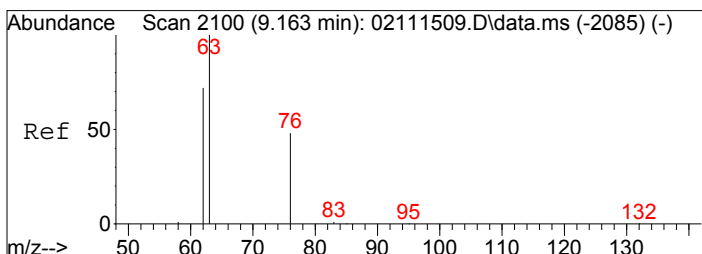
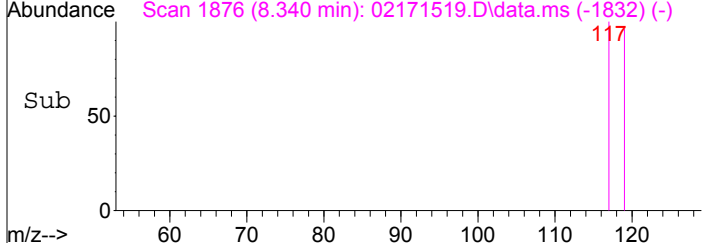
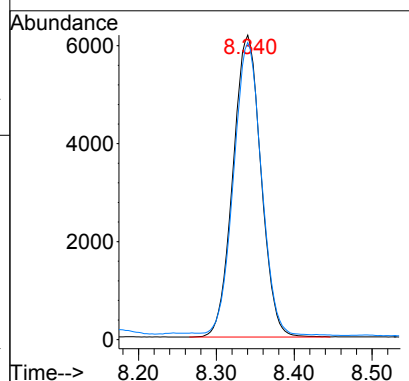
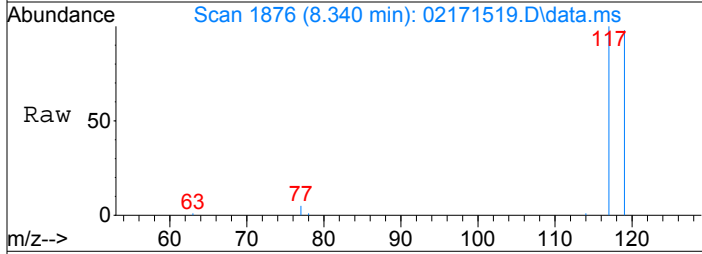
Tgt Ion:	78	Resp:	34743
Ion Ratio	Lower	Upper	
78	100		
77	24.5	3.7	43.7





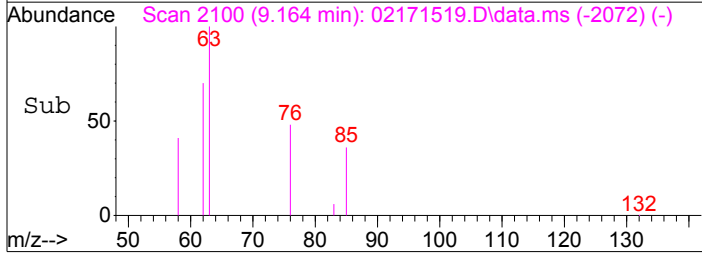
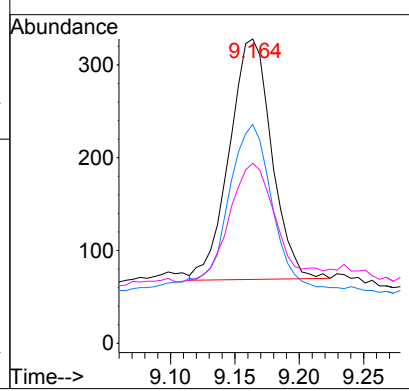
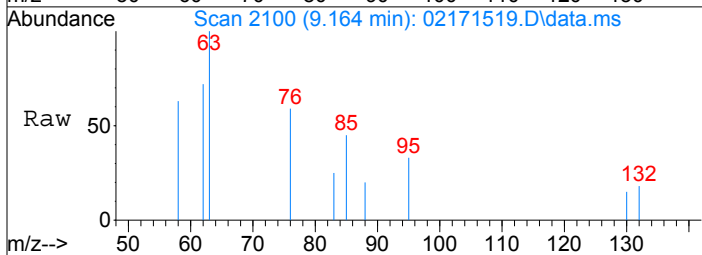
#21
Carbon Tetrachloride
Concen: 381.42 pg
RT: 8.34 min Scan# 1876
Delta R.T. 0.001 min
Lab File: 02171519.D
Acq: 17 Feb 2015 14:06

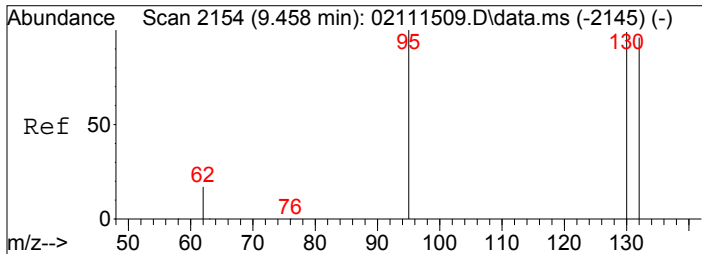
Tgt Ion: 117	Resp: 15396
Ion Ratio	Lower Upper
117	100
119	95.7 75.5 115.5



#23
1,2-Dichloropropane
Concen: 20.72 pg
RT: 9.16 min Scan# 2100
Delta R.T. 0.001 min
Lab File: 02171519.D
Acq: 17 Feb 2015 14:06

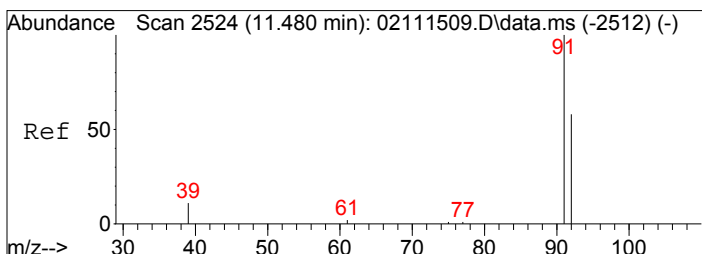
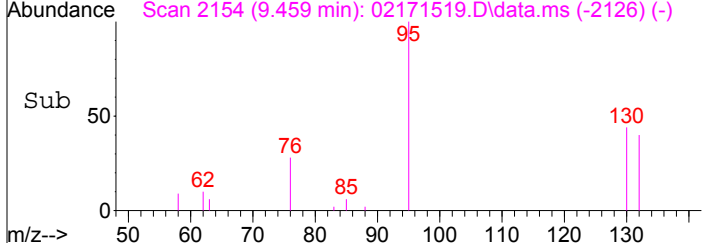
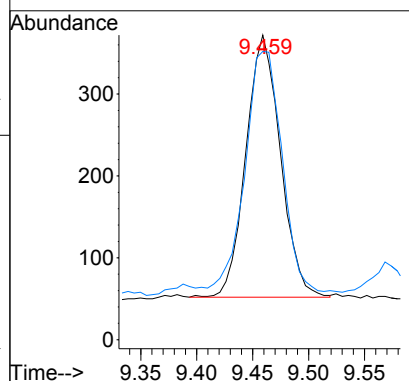
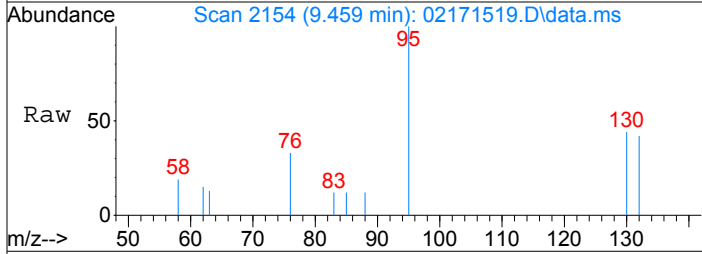
Tgt Ion: 63	Resp: 594
Ion Ratio	Lower Upper
63	100
62	81.1 52.0 92.0
76	53.7 28.1 68.1





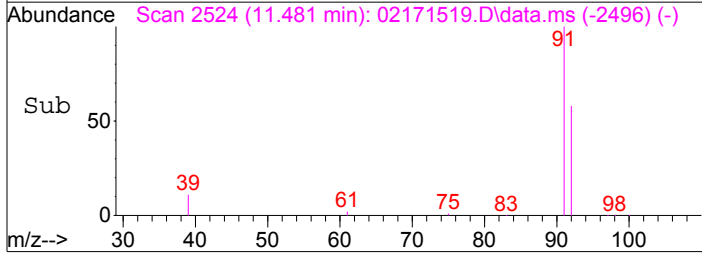
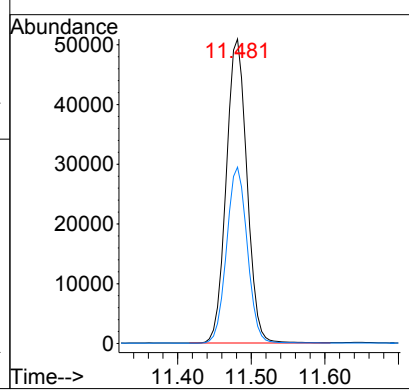
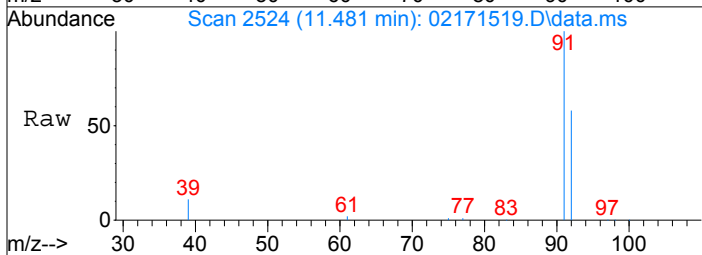
#25
 Trichloroethene
 Concen: 20.35 pg
 RT: 9.46 min Scan# 2154
 Delta R.T. 0.001 min
 Lab File: 02171519.D
 Acq: 17 Feb 2015 14:06

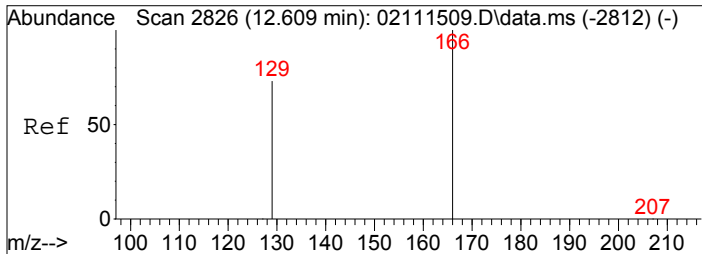
Tgt Ion:130	Resp:	687
Ion Ratio	Lower	Upper
130	100	
132	98.1	77.1 117.1



#31
 Toluene
 Concen: 772.43 pg
 RT: 11.48 min Scan# 2524
 Delta R.T. 0.001 min
 Lab File: 02171519.D
 Acq: 17 Feb 2015 14:06

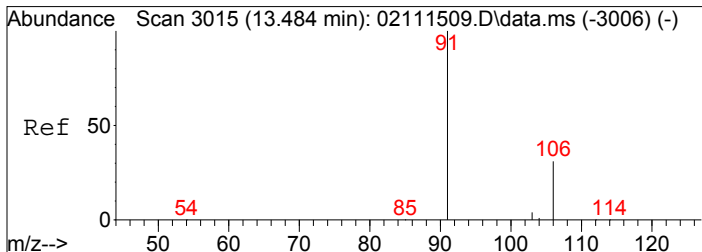
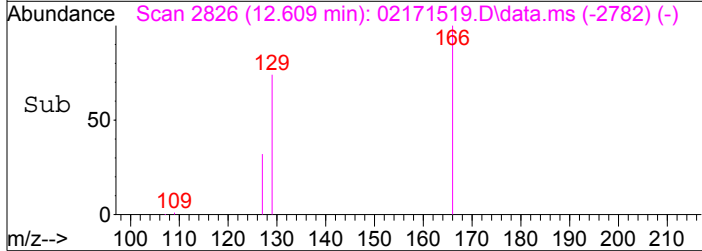
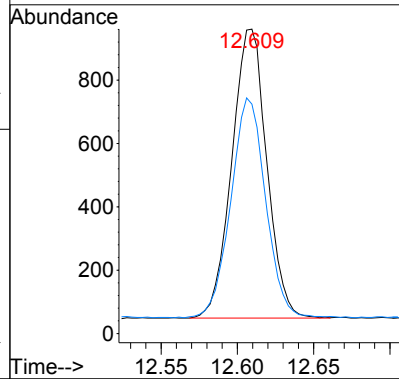
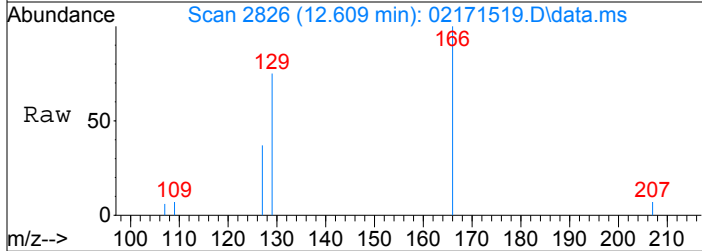
Tgt Ion: 91	Resp:	99566
Ion Ratio	Lower	Upper
91	100	
92	57.9	37.7 77.7





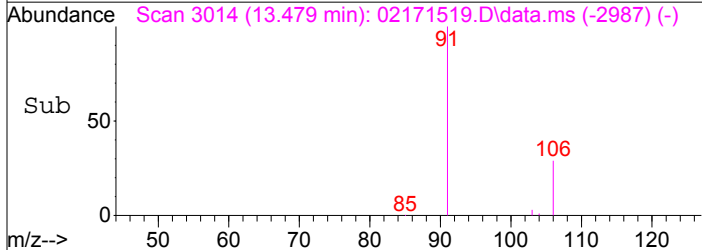
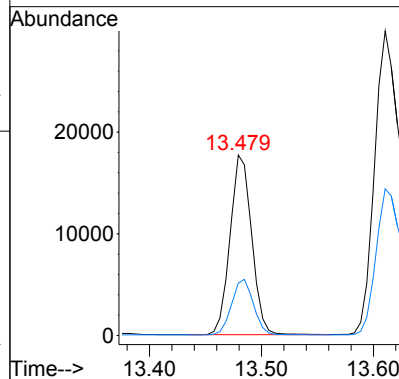
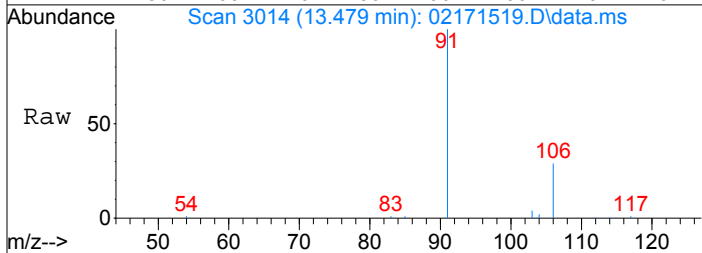
#33
 Tetrachloroethene
 Concen: 36.48 pg
 RT: 12.61 min Scan# 2826
 Delta R.T. 0.000 min
 Lab File: 02171519.D
 Acq: 17 Feb 2015 14:06

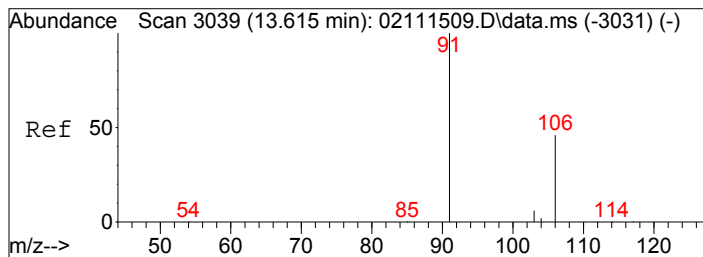
Tgt Ion: 166	Resp:	1456
Ion Ratio	Lower	Upper
166	100	
129	75.8	53.3 93.3



#36
 Ethylbenzene
 Concen: 166.01 pg
 RT: 13.48 min Scan# 3014
 Delta R.T. -0.005 min
 Lab File: 02171519.D
 Acq: 17 Feb 2015 14:06

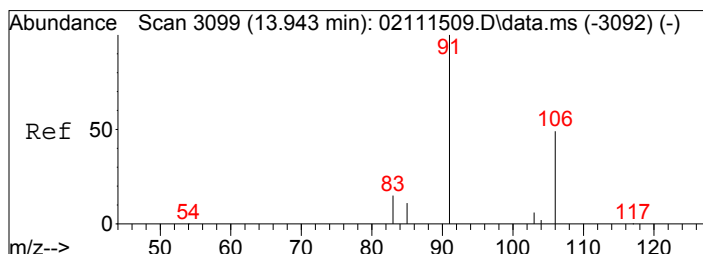
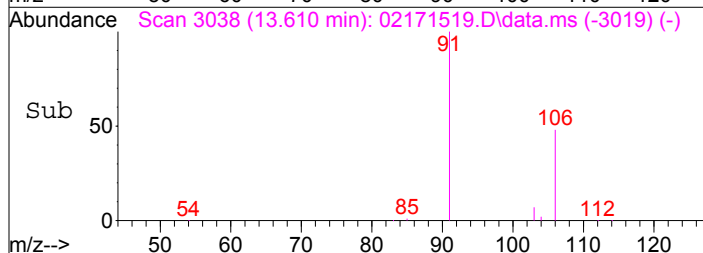
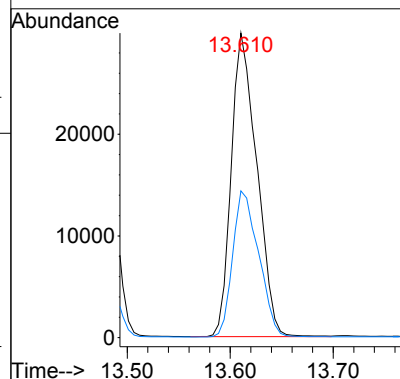
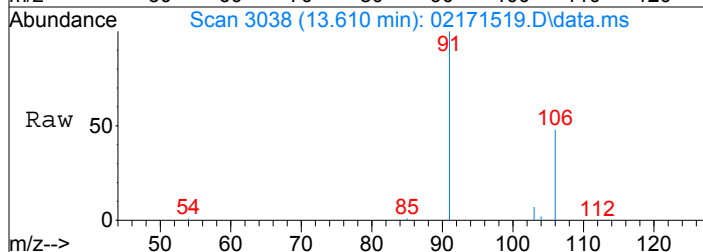
Tgt Ion: 91	Resp:	23758
Ion Ratio	Lower	Upper
91	100	
106	31.2	10.9 50.9





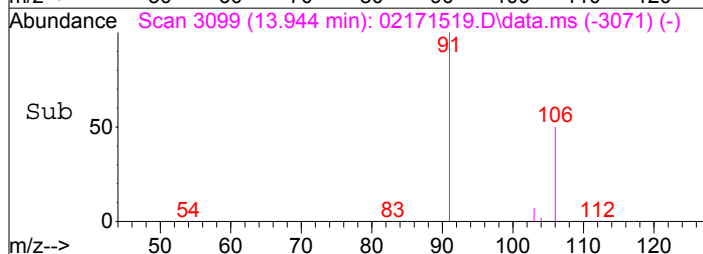
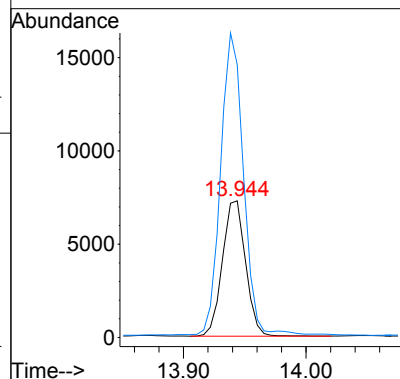
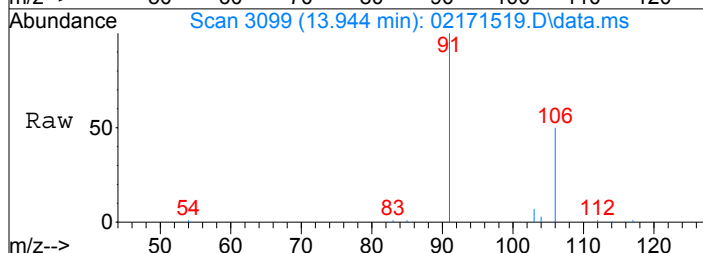
#37
m,p-Xylene
Concen: 437.36 pg
RT: 13.61 min Scan# 3038
Delta R.T. -0.004 min
Lab File: 02171519.D
Acq: 17 Feb 2015 14:06

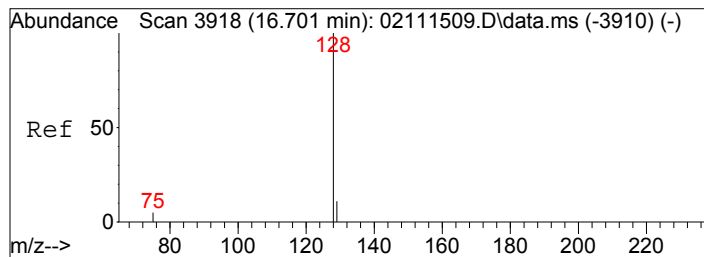
Tgt Ion: 91 Resp: 51444
Ion Ratio Lower Upper
91 100
106 49.0 27.5 67.5



#38
o-Xylene
Concen: 165.17 pg
RT: 13.94 min Scan# 3099
Delta R.T. 0.001 min
Lab File: 02171519.D
Acq: 17 Feb 2015 14:06

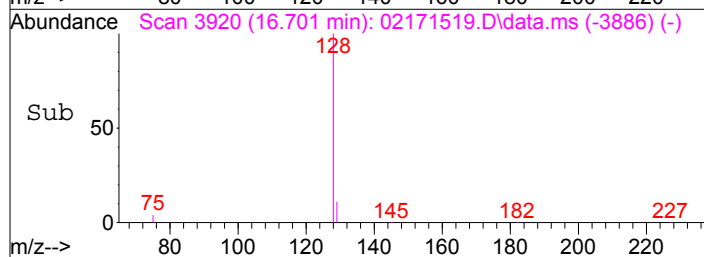
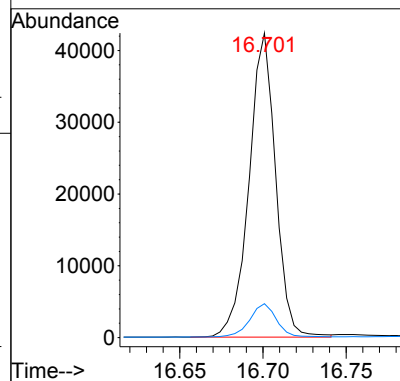
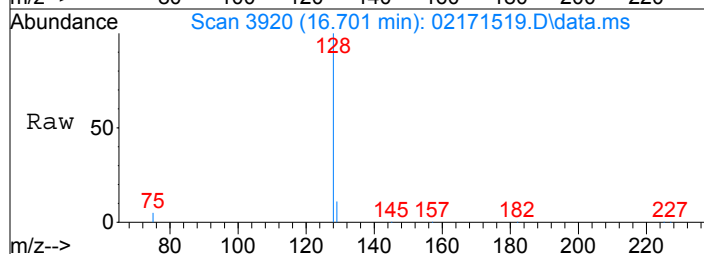
Tgt Ion: 106 Resp: 9495
Ion Ratio Lower Upper
106 100
91 222.1 198.3 238.3





#45
Naphthalene
Concen: 329.23 pg
RT: 16.70 min Scan# 3920
Delta R.T. -0.000 min
Lab File: 02171519.D
Acq: 17 Feb 2015 14:06

Tgt Ion:128 Resp: 47014
Ion Ratio Lower Upper
128 100
129 11.3 0.0 30.9



Data File: I:\MS19\DATA\2015 02\17\02171520.D

Acq On : 17 Feb 2015 14:34

Operator: WA

Sample : P1500566-015 (1000mL)

Misc : S29-02041502

ALS Vial : 14 Sample Multiplier: 1

Quant Time: Feb 18 09:04:56 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

2/18/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.12	130	18951	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	142707	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	23614	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.13	65	42892	926.790	pg	0.00
Spiked Amount 1000.000			Recovery	=	92.68%	
30) Toluene-d8 (SS2)	11.38	98	128972	980.014	pg	0.00
Spiked Amount 1000.000			Recovery	=	98.00%	
40) Bromofluorobenzene (SS3)	14.25	174	50977	1069.296	pg	0.00
Spiked Amount 1000.000			Recovery	=	106.93%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.73	85	152765	1983.519	pg	100
3) Chloromethane	1.83	52	9291	604.075	pg	99
4) Vinyl Chloride	2.02	62	173	N.D.		
5) Bromomethane	2.33	94	1415	40.858	pg	99
6) Chloroethane	2.47	64	412	N.D.		
7) Acetone	2.99	58	435984	16030.838	pg	94
8) Trichlorofluoromethane	3.11	101	247162	3736.130	pg	100
9) 1,1-Dichloroethene	3.67	96	98	N.D.		
10) Methylene Chloride	3.81	84	13520	430.701	pg	95
11) Trichlorotrifluoroethane	4.10	151	14015	461.048	pg	100
12) trans-1,2-Dichloroethene	4.74	96	1204	39.922	pg	97
13) 1,1-Dichloroethane	4.96	63	332	N.D.		
14) Methyl tert-Butyl Ether	5.11	73	951	N.D.		
15) cis-1,2-Dichloroethene	5.94	96	2029	60.503	pg	100
16) Chloroform	6.32	83	8267	142.281	pg	98
18) 1,2-Dichloroethane	7.27	62	3984	86.116	pg	100
19) 1,1,1-Trichloroethane	7.60	97	1947	34.459	pg	99
20) Benzene	8.16	78	74668	624.810	pg	100
21) Carbon Tetrachloride	8.34	117	20650	488.174	pg	99
23) 1,2-Dichloropropane	9.16	63	1022	32.836	pg	92
24) Bromodichloromethane	0.00	83	0	N.D.	d	
25) Trichloroethene	9.46	130	2540	69.281	pg	98
26) 1,4-Dioxane	9.53	88	547	20.019	pg	# 1
27) cis-1,3-Dichloropropene	10.47	75	43	N.D.		
28) trans-1,3-Dichloropropene	11.05	75	47	N.D.		
29) 1,1,2-Trichloroethane	11.20	83	170	N.D.		
31) Toluene	11.48	91	407133	2908.787	pg	100
32) 1,2-Dibromoethane	12.12	107	34	N.D.		
33) Tetrachloroethene	12.61	166	2456	56.671	pg	98
35) Chlorobenzene	13.17	112	991	N.D.		
36) Ethylbenzene	13.48	91	58616	395.841	pg	99
37) m,p-Xylene	13.61	91	140118	1151.295	pg	98
38) o-Xylene	13.94	106	24469	411.385	pg	98
39) 1,1,2,2-Tetrachloroethane	13.89	83	252	N.D.		
41) 1,3-Dichlorobenzene	0.00	146	0	N.D.	d	
42) 1,4-Dichlorobenzene	15.24	146	2853	34.962	pg	100
43) 1,2-Dichlorobenzene	15.46	146	156	N.D.		
44) 1,2,4-Trichlorobenzene	16.63	182	180	N.D.		
45) Naphthalene	16.70	128	9517	64.411	pg	98
46) Hexachlorobutadiene	16.96	225	32	N.D.		

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\17\02171520.D

Acq On : 17 Feb 2015 14:34

Operator: WA

Sample : P1500566-015 (1000mL)

Misc : S29-02041502

ALS Vial : 14 Sample Multiplier: 1

Quant Time: Feb 18 09:04:56 2015

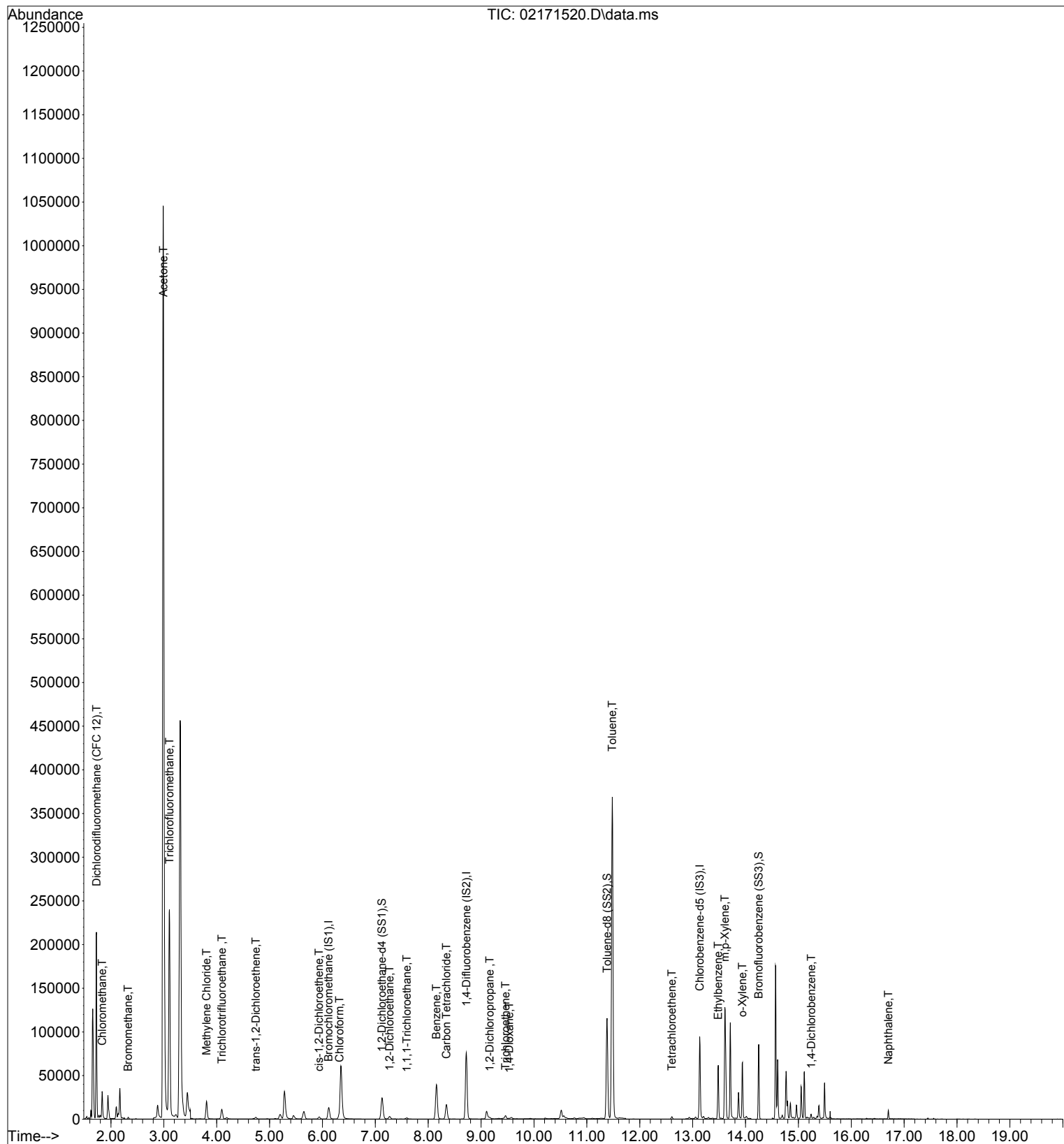
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 02\17\02171520.D

Acq On : 17 Feb 2015 14:34

Operator: WA

Sample : P1500566-015 (1000mL)

Misc : S29-02041502

ALS Vial : 14 Sample Multiplier: 1

Quant Time: Feb 18 09:04:56 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

107 2/18/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.12	130	18951	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	142707	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	23614	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.13	65	42892	926.790	pg	0.00
Spiked Amount 1000.000			Recovery	=	92.68%	
30) Toluene-d8 (SS2)	11.38	98	128972	980.014	pg	0.00
Spiked Amount 1000.000			Recovery	=	98.00%	
40) Bromofluorobenzene (SS3)	14.25	174	50977	1069.296	pg	0.00
Spiked Amount 1000.000			Recovery	=	106.93%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.73	85	152765	1983.519	pg	100
3) Chloromethane	1.83	52	9291	604.075	pg	99
5) Bromomethane	2.33	94	1415	40.858	pg	99
7) Acetone	2.99	58	435984	16030.838	pg	94
8) Trichlorofluoromethane	3.11	101	247162	3736.130	pg	100
10) Methylene Chloride	3.81	84	13520	430.701	pg	95
11) Trichlorotrifluoroethane	4.10	151	14015	461.048	pg	100
12) trans-1,2-Dichloroethene	4.74	96	1204	39.922	pg	97
15) cis-1,2-Dichloroethene	5.94	96	2029	60.503	pg	100
16) Chloroform	6.32	83	8267	142.281	pg	98
18) 1,2-Dichloroethane	7.27	62	3984	86.116	pg	100
19) 1,1,1-Trichloroethane	7.60	97	1947	34.459	pg	99
20) Benzene	8.16	78	74668	624.810	pg	100
21) Carbon Tetrachloride	8.34	117	20650	488.174	pg	99
23) 1,2-Dichloropropane	9.16	63	1022	32.836	pg	92
25) Trichloroethene	9.46	130	2540	69.281	pg	98
26) 1,4-Dioxane	9.53	88	547	20.019	pg	# 1
31) Toluene	11.48	91	407133	2908.787	pg	100
33) Tetrachloroethene	12.61	166	2456	56.671	pg	98
36) Ethylbenzene	13.48	91	58616	395.841	pg	99
37) m,p-Xylene	13.61	91	140118	1151.295	pg	98
38) o-Xylene	13.94	106	24469	411.385	pg	98
42) 1,4-Dichlorobenzene	15.24	146	2853	34.962	pg	100
45) Naphthalene	16.70	128	9517	64.411	pg	98

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\17\02171520.D

Acq On : 17 Feb 2015 14:34

Operator: WA

Sample : P1500566-015 (1000mL)

Misc : S29-02041502

ALS Vial : 14 Sample Multiplier: 1

Quant Time: Feb 18 09:04:56 2015

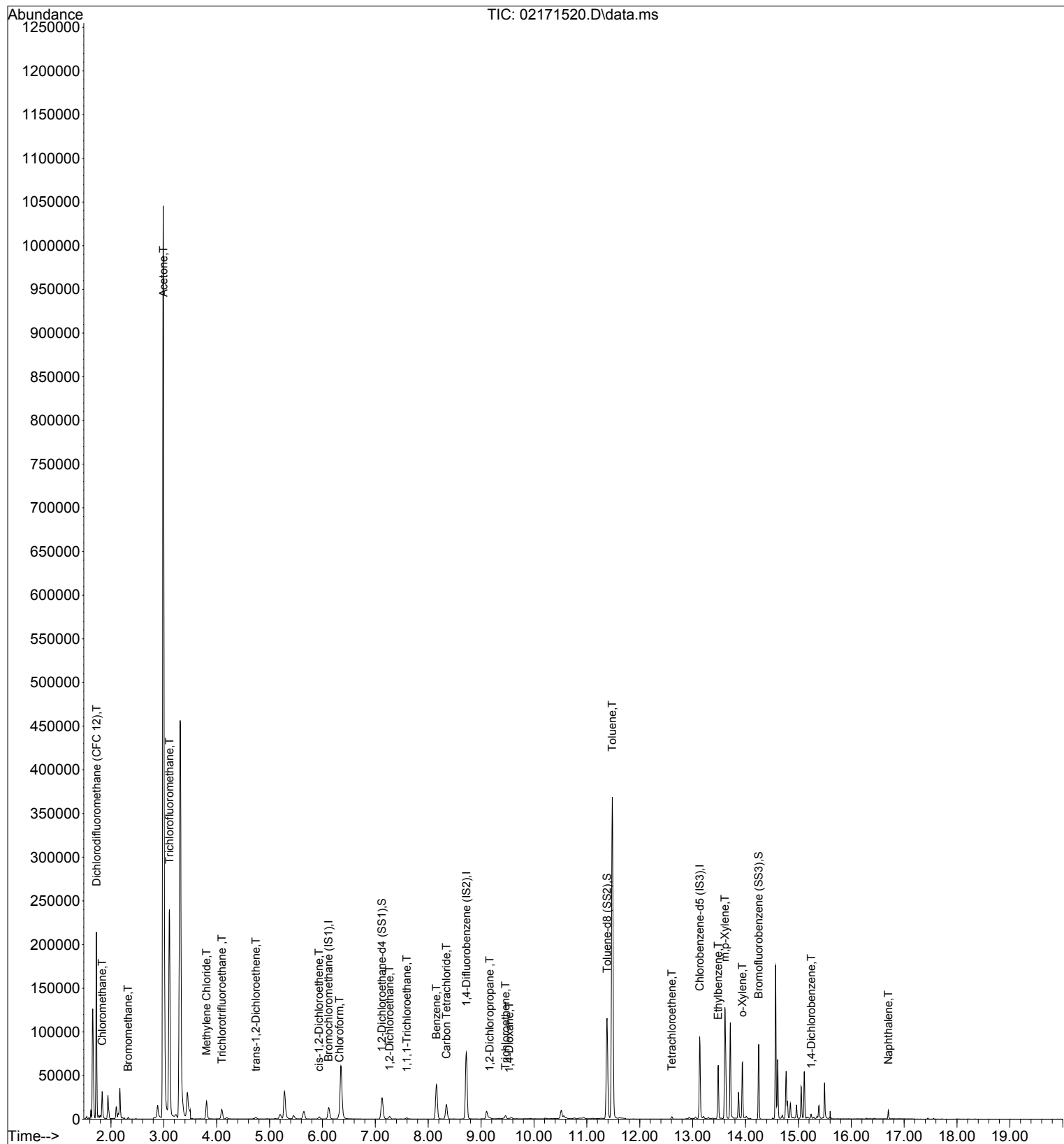
Quant Method : I:\MS19\METHODS\X19021115.M

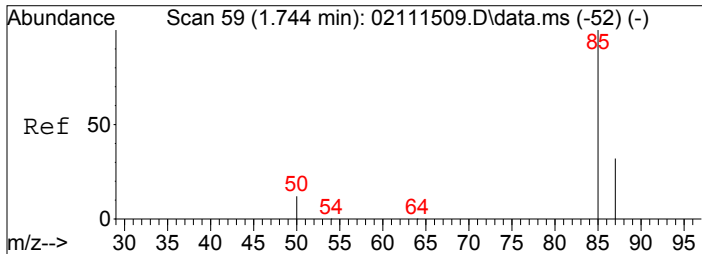
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

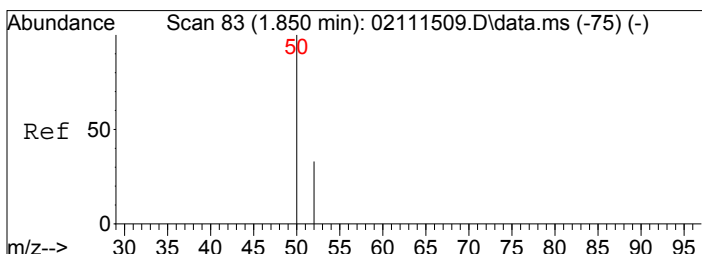
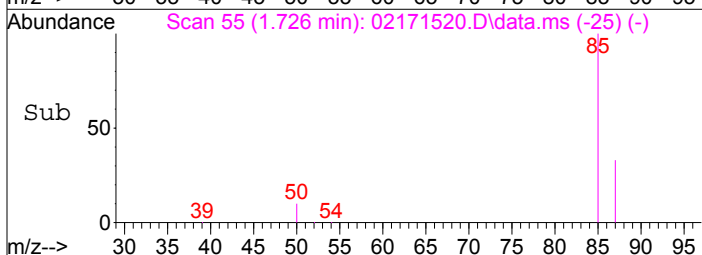
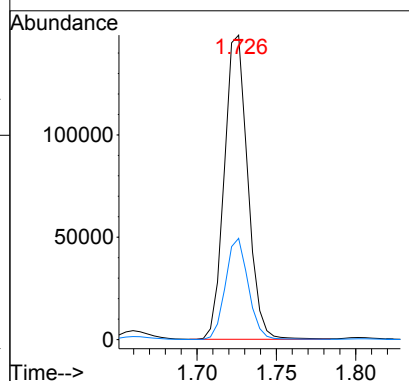
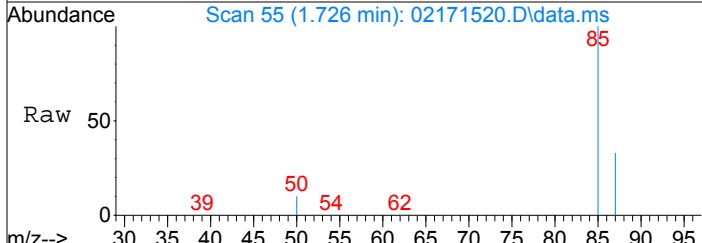
DataAcq Meth:TO15SIM.M





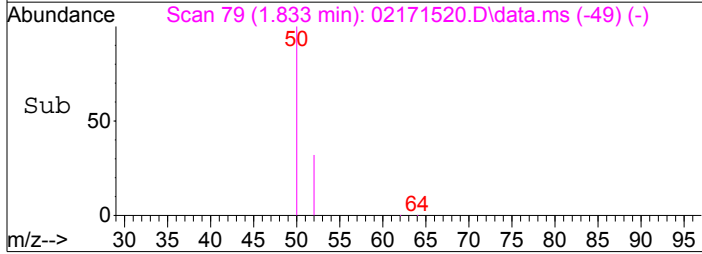
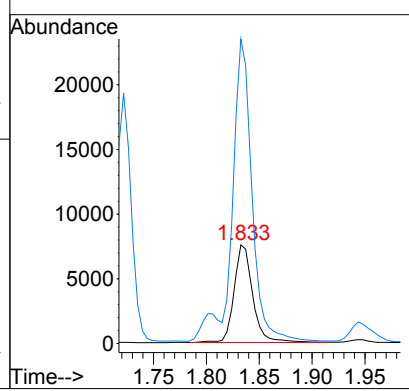
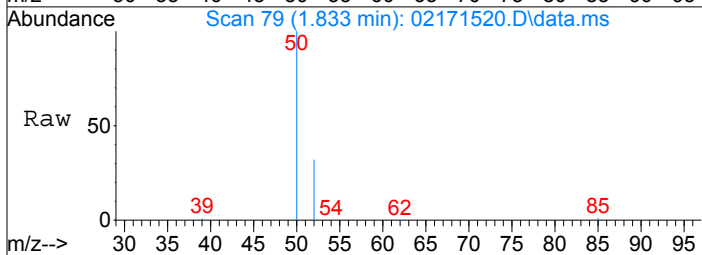
#2
 Dichlorodifluoromethane (CFC 12)
 Concen: 1983.52 pg
 RT: 1.73 min Scan# 55
 Delta R.T. -0.018 min
 Lab File: 02171520.D
 Acq: 17 Feb 2015 14:34

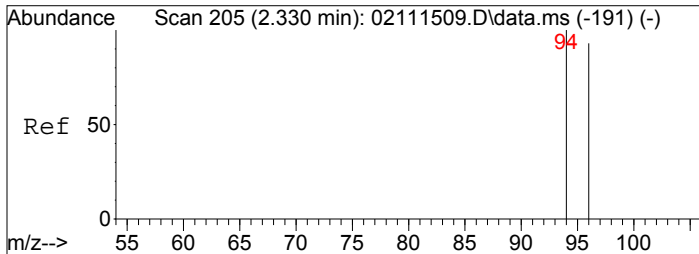
Tgt Ion:	85	Resp:	152765
Ion Ratio	Lower	Upper	
85	100		
87	32.4	12.4	52.4



#3
 Chloromethane
 Concen: 604.08 pg
 RT: 1.83 min Scan# 79
 Delta R.T. -0.017 min
 Lab File: 02171520.D
 Acq: 17 Feb 2015 14:34

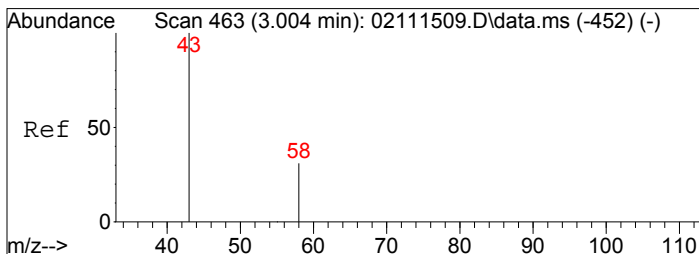
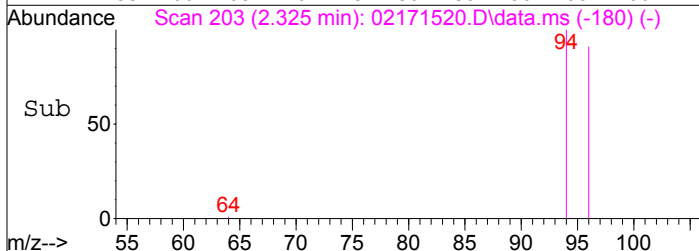
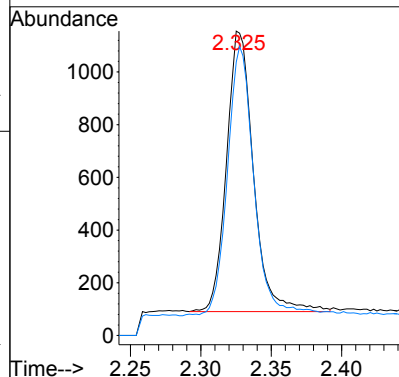
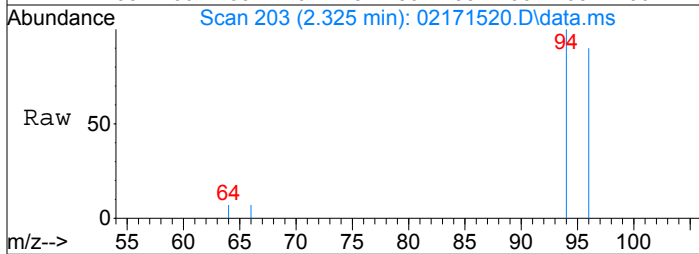
Tgt Ion:	52	Resp:	9291
Ion Ratio	Lower	Upper	
52	100		
50	301.6	283.7	323.7





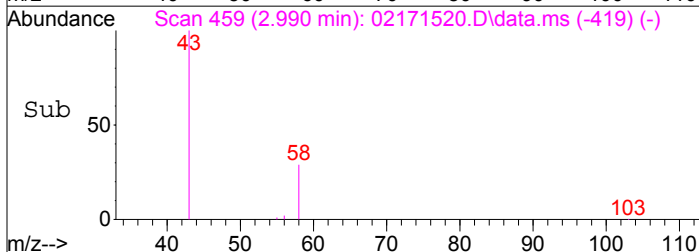
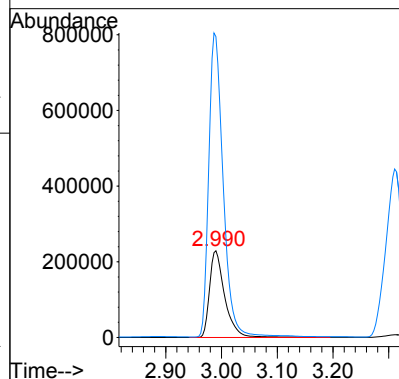
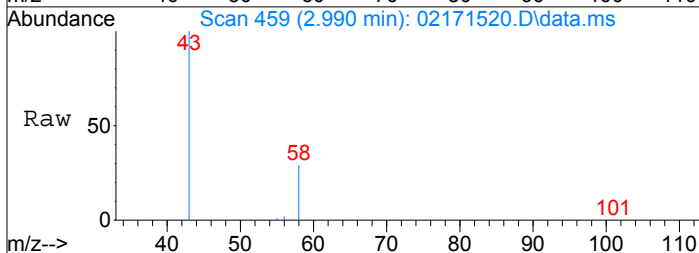
#5
Bromomethane
Concen: 40.86 pg
RT: 2.33 min Scan# 203
Delta R.T. -0.005 min
Lab File: 02171520.D
Acq: 17 Feb 2015 14:34

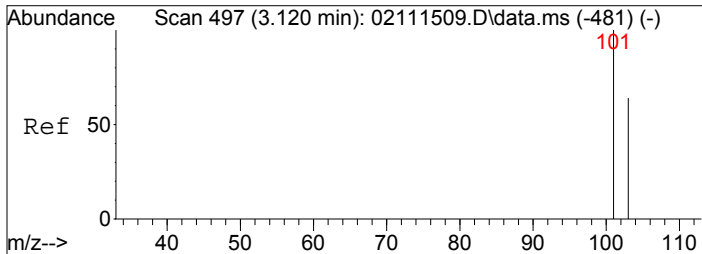
Tgt Ion: 94 Resp: 1415
Ion Ratio Lower Upper
94 100
96 95.0 75.5 113.3



#7
Acetone
Concen: 16030.84 pg
RT: 2.99 min Scan# 459
Delta R.T. -0.014 min
Lab File: 02171520.D
Acq: 17 Feb 2015 14:34

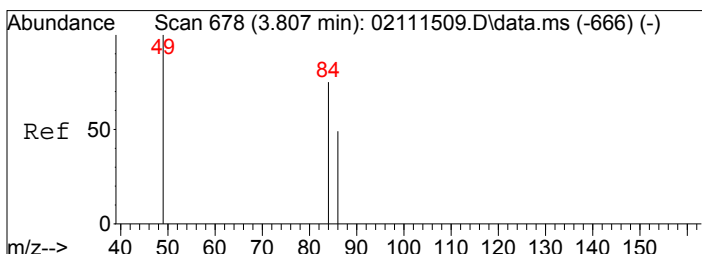
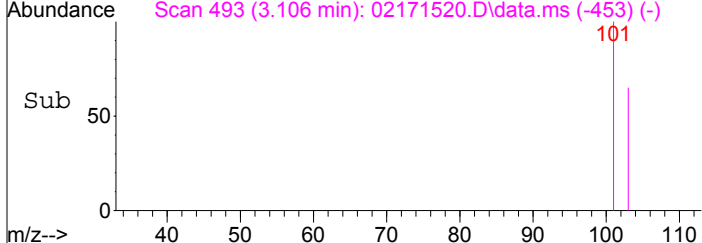
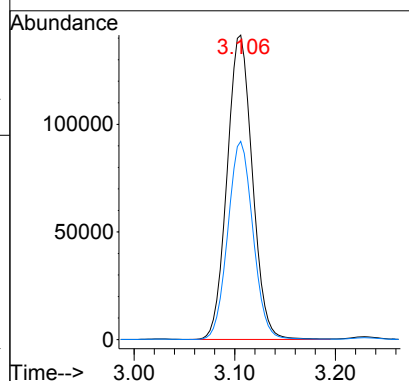
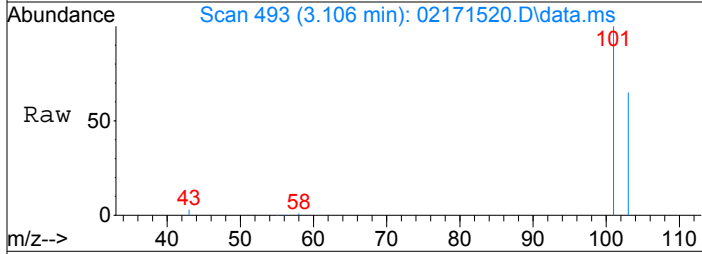
Tgt Ion: 58 Resp: 435984
Ion Ratio Lower Upper
58 100
43 333.2 301.8 341.8





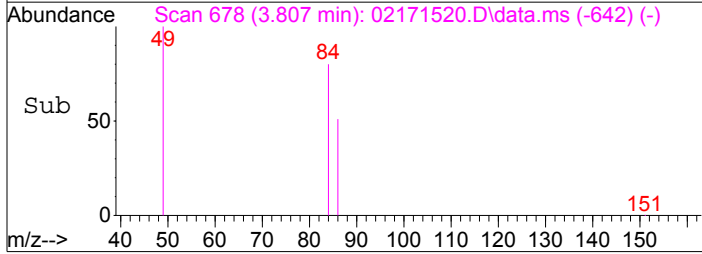
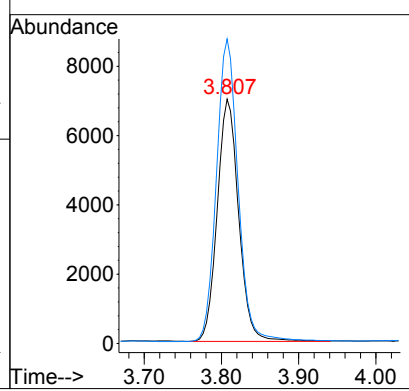
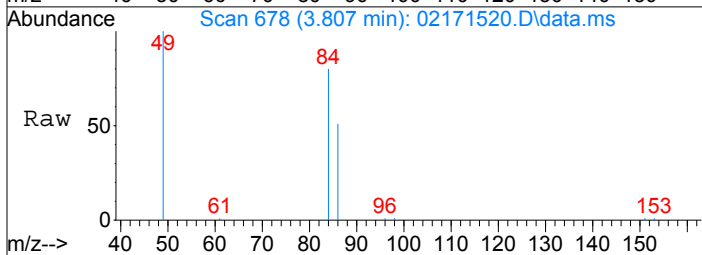
#8
 Trichlorofluoromethane
 Concen: 3736.13 pg
 RT: 3.11 min Scan# 493
 Delta R.T. -0.014 min
 Lab File: 02171520.D
 Acq: 17 Feb 2015 14:34

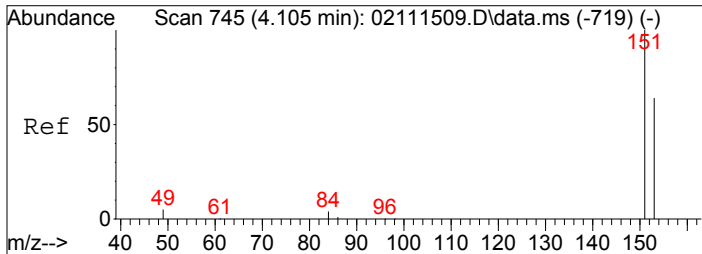
Tgt Ion:	101	Resp:	247162
Ion Ratio	Lower	Upper	
101	100		
103	64.9	51.8	77.6



#10
 Methylene Chloride
 Concen: 430.70 pg
 RT: 3.81 min Scan# 678
 Delta R.T. 0.000 min
 Lab File: 02171520.D
 Acq: 17 Feb 2015 14:34

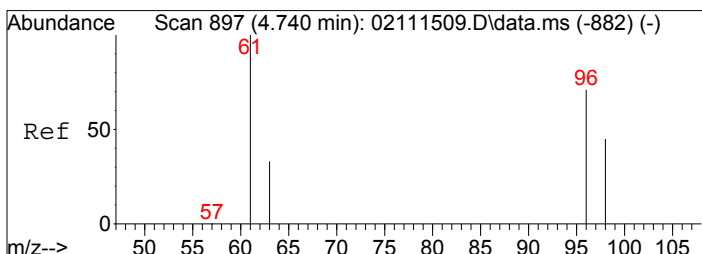
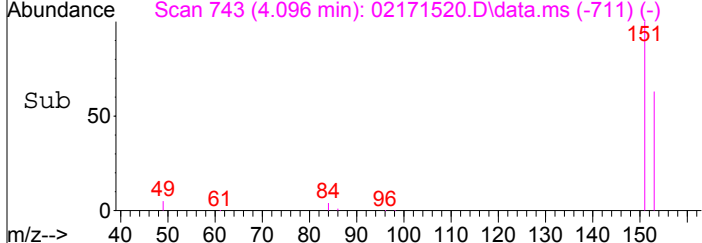
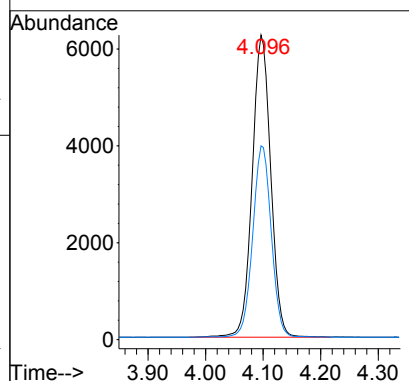
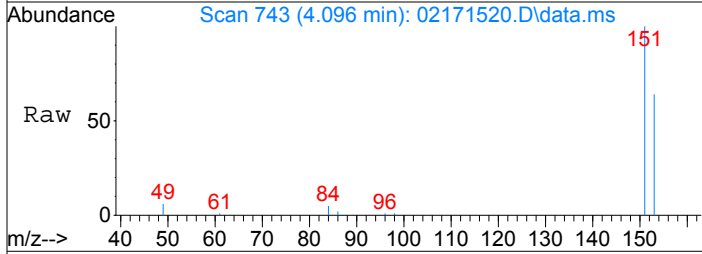
Tgt Ion:	84	Resp:	13520
Ion Ratio	Lower	Upper	
84	100		
49	126.2	112.3	152.3





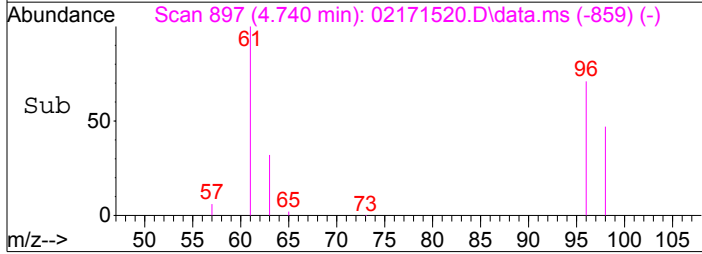
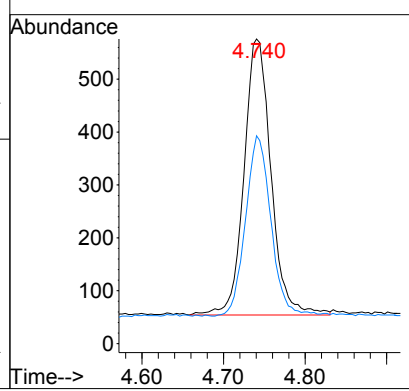
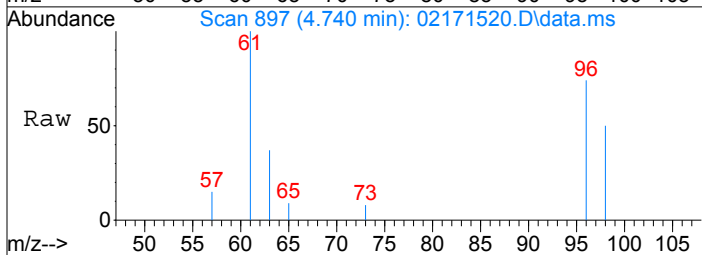
#11
 Trichlorotrifluoroethane
 Concen: 461.05 pg
 RT: 4.10 min Scan# 743
 Delta R.T. -0.009 min
 Lab File: 02171520.D
 Acq: 17 Feb 2015 14:34

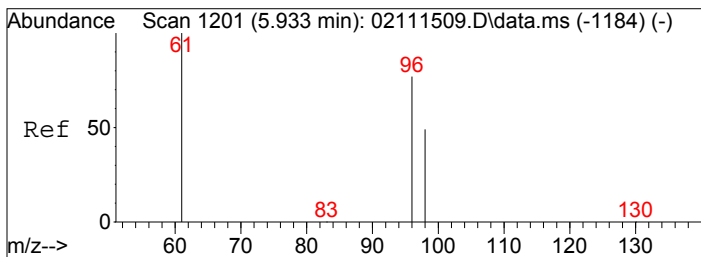
Tgt Ion: 151	Resp: 14015
Ion Ratio	Lower Upper
151	100
153	63.7 43.6 83.6



#12
 trans-1,2-Dichloroethene
 Concen: 39.92 pg
 RT: 4.74 min Scan# 897
 Delta R.T. 0.000 min
 Lab File: 02171520.D
 Acq: 17 Feb 2015 14:34

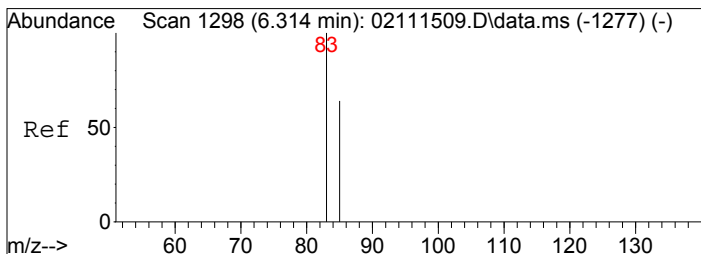
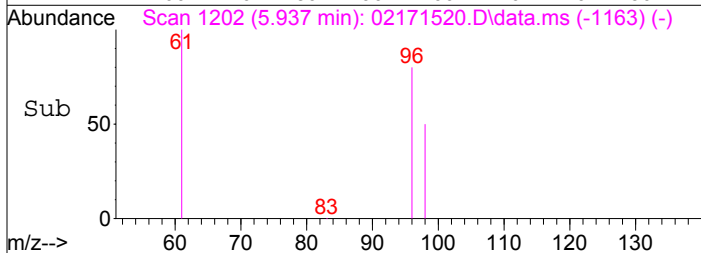
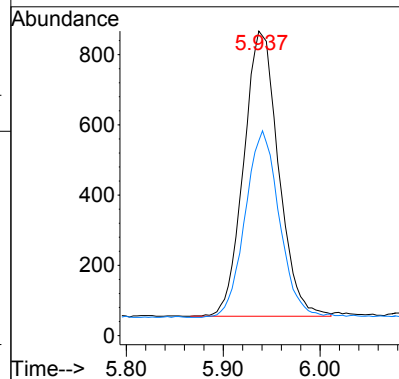
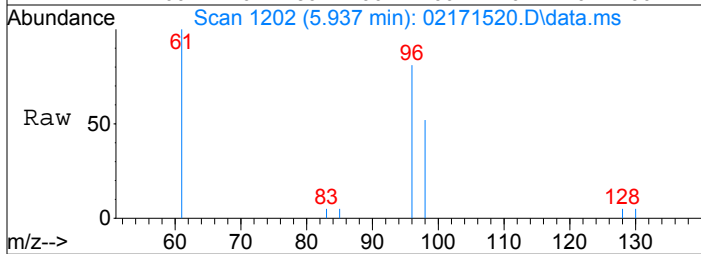
Tgt Ion: 96	Resp: 1204
Ion Ratio	Lower Upper
96	100
98	61.5 43.7 83.7





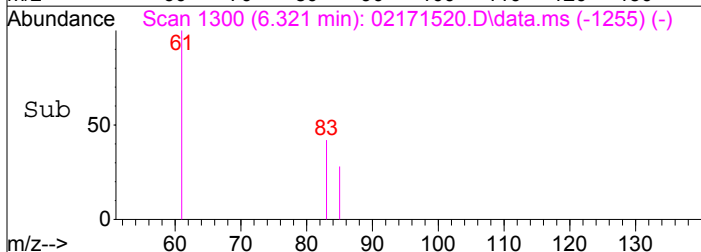
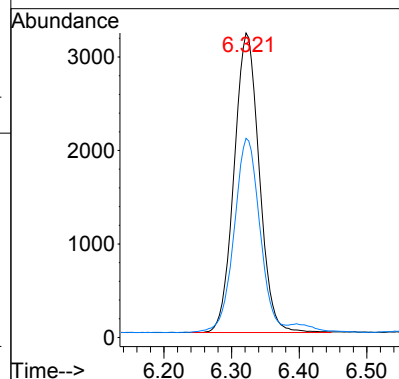
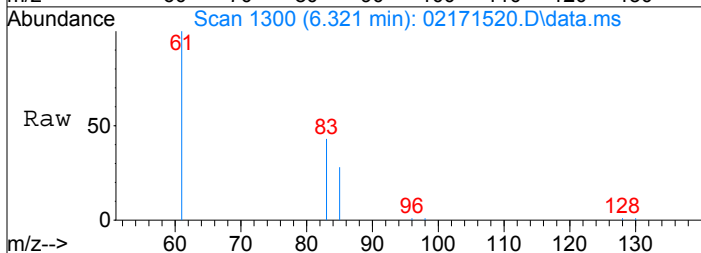
#15
 cis-1,2-Dichloroethene
 Concen: 60.50 pg
 RT: 5.94 min Scan# 1202
 Delta R.T. 0.004 min
 Lab File: 02171520.D
 Acq: 17 Feb 2015 14:34

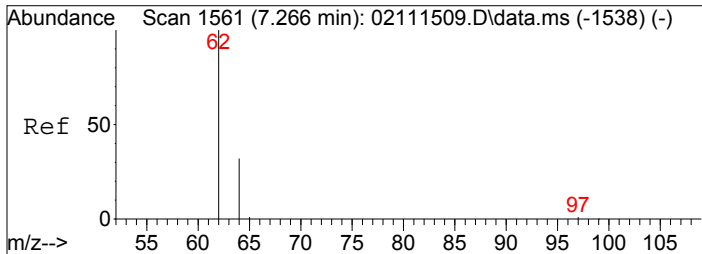
Tgt Ion: 96 Resp: 2029
 Ion Ratio Lower Upper
 96 100
 98 64.1 44.3 84.3



#16
 Chloroform
 Concen: 142.28 pg
 RT: 6.32 min Scan# 1300
 Delta R.T. 0.007 min
 Lab File: 02171520.D
 Acq: 17 Feb 2015 14:34

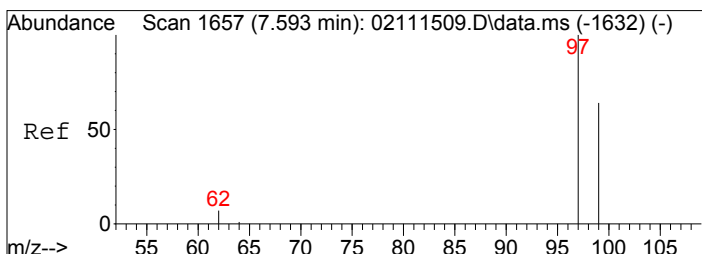
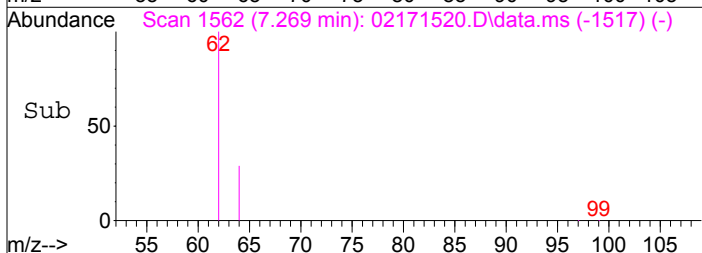
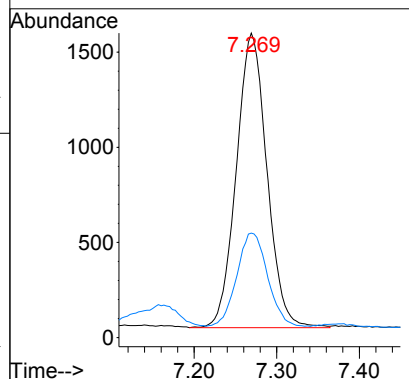
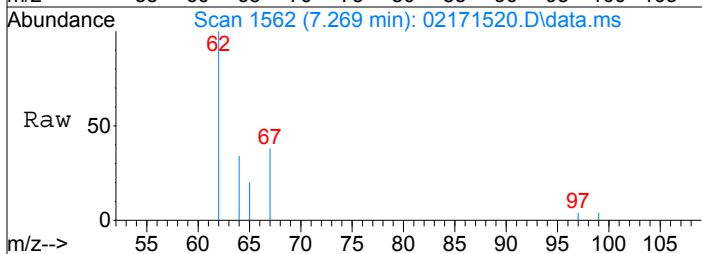
Tgt Ion: 83 Resp: 8267
 Ion Ratio Lower Upper
 83 100
 85 66.8 45.4 85.4





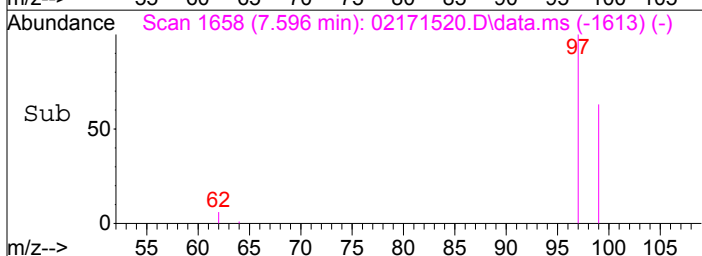
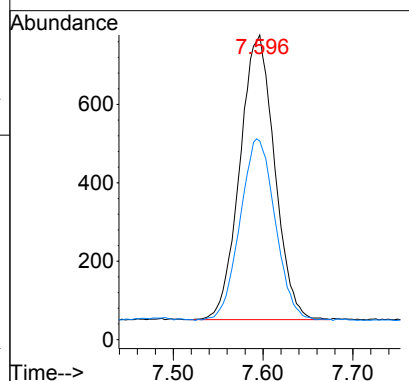
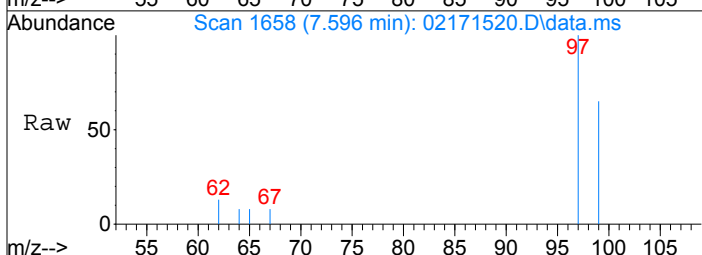
#18
1,2-Dichloroethane
Concen: 86.12 pg
RT: 7.27 min Scan# 1562
Delta R.T. 0.003 min
Lab File: 02171520.D
Acq: 17 Feb 2015 14:34

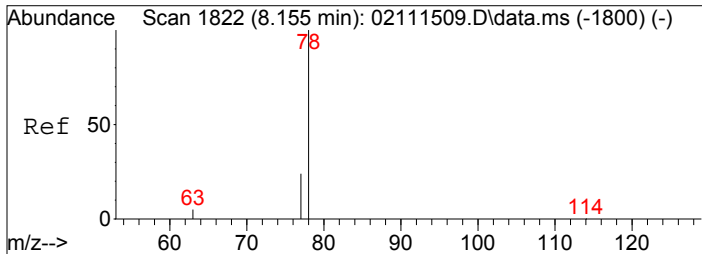
Tgt Ion: 62 Resp: 3984
Ion Ratio Lower Upper
62 100
64 31.7 11.6 51.6



#19
1,1,1-Trichloroethane
Concen: 34.46 pg
RT: 7.60 min Scan# 1658
Delta R.T. 0.003 min
Lab File: 02171520.D
Acq: 17 Feb 2015 14:34

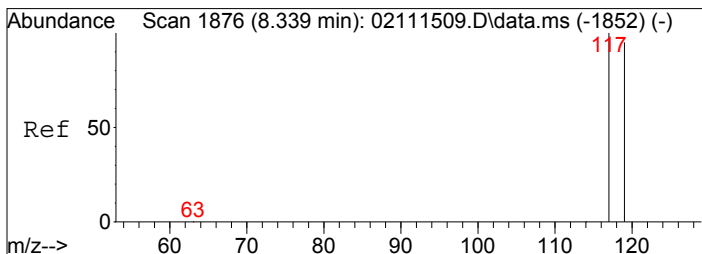
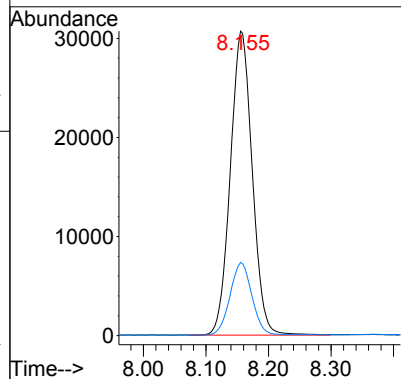
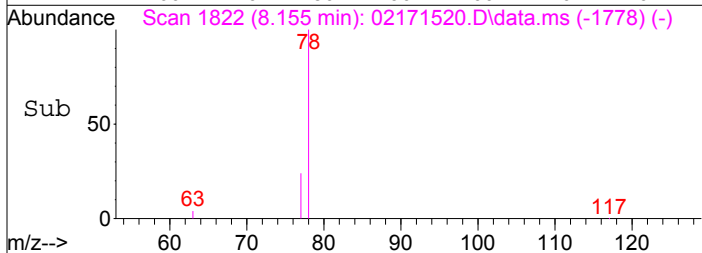
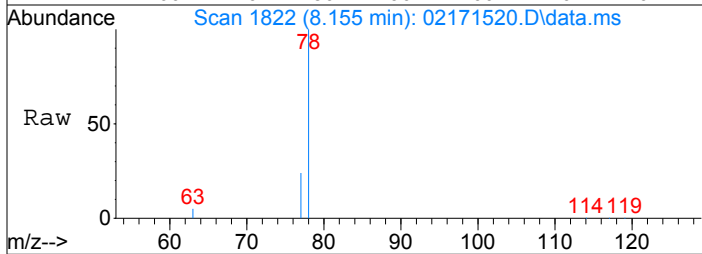
Tgt Ion: 97 Resp: 1947
Ion Ratio Lower Upper
97 100
99 64.7 44.0 84.0





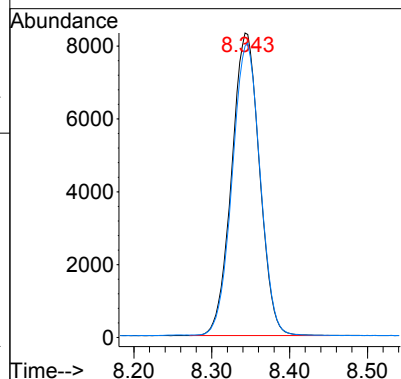
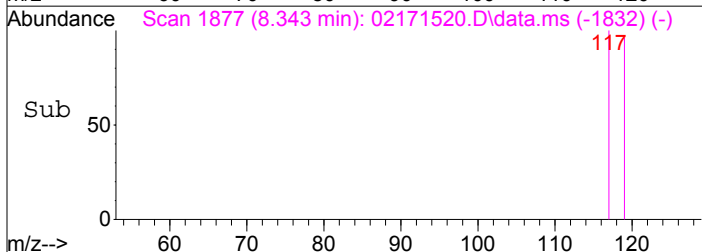
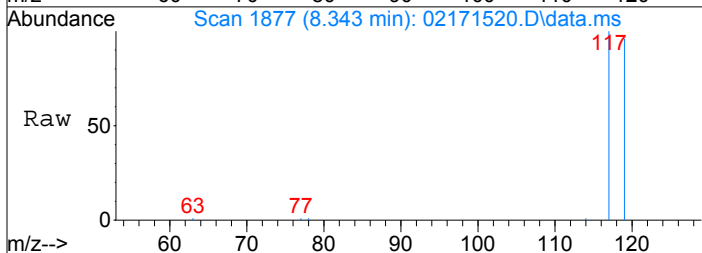
#20
Benzene
Concen: 624.81 pg
RT: 8.16 min Scan# 1822
Delta R.T. 0.000 min
Lab File: 02171520.D
Acq: 17 Feb 2015 14:34

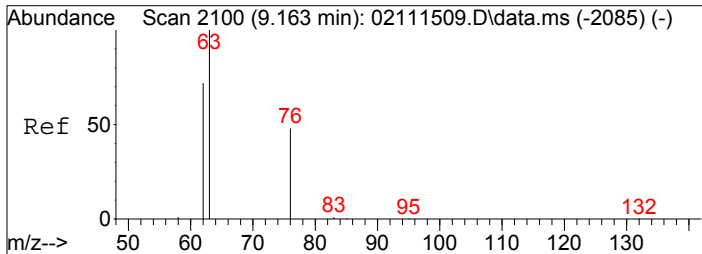
Tgt Ion	78	77	Resp	74668	Lower	Upper
Ion Ratio	100	23.9				
			3.7		43.7	



#21
Carbon Tetrachloride
Concen: 488.17 pg
RT: 8.34 min Scan# 1877
Delta R.T. 0.003 min
Lab File: 02171520.D
Acq: 17 Feb 2015 14:34

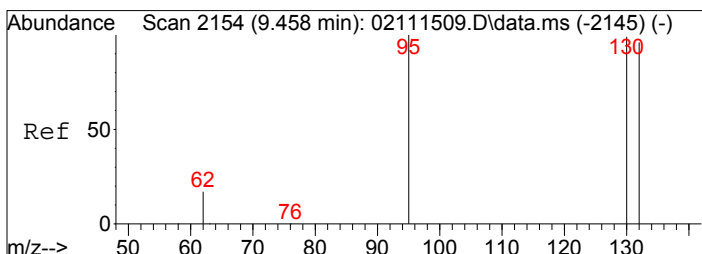
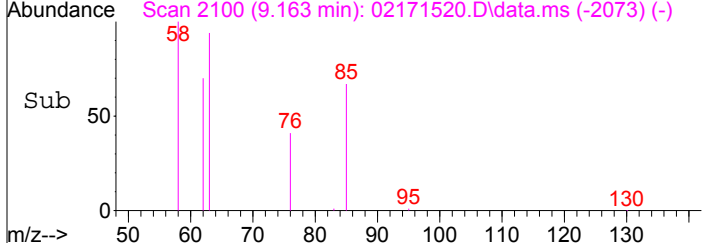
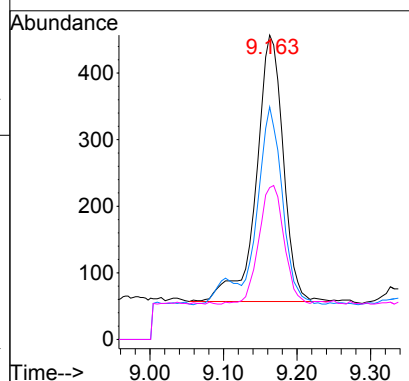
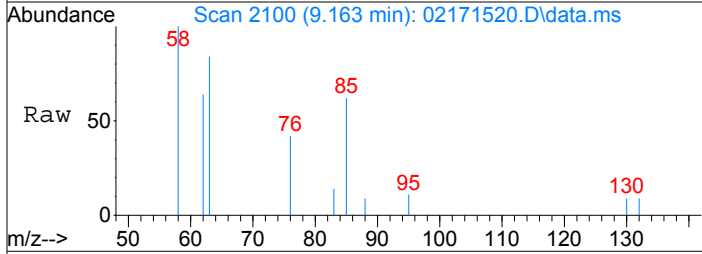
Tgt Ion	117	119	Resp	20650	Lower	Upper
Ion Ratio <td>100</td> <td>96.5</td> <td></td> <td></td> <td></td> <td></td>	100	96.5				
			75.5		115.5	





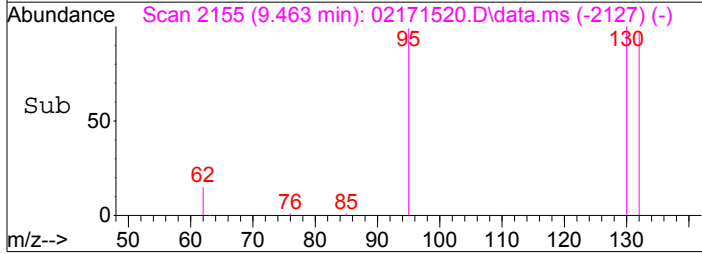
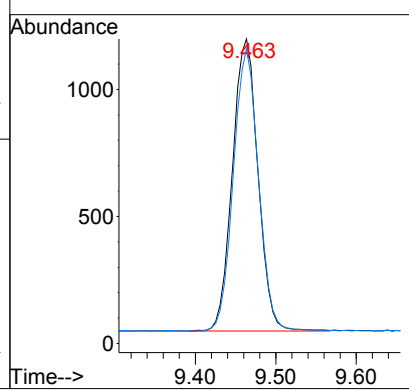
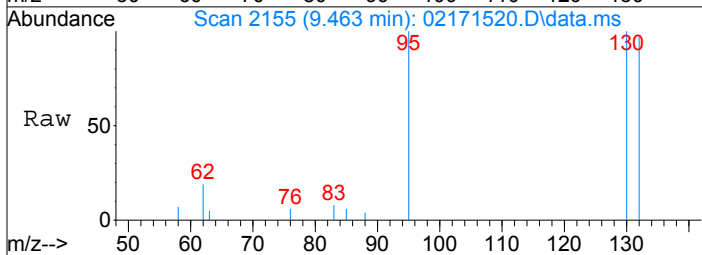
#23
 1,2-Dichloropropane
 Concen: 32.84 pg
 RT: 9.16 min Scan# 2100
 Delta R.T. 0.000 min
 Lab File: 02171520.D
 Acq: 17 Feb 2015 14:34

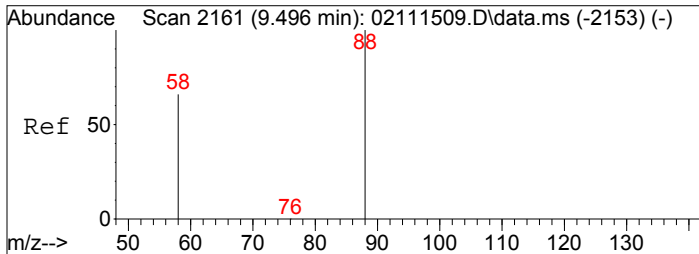
Tgt Ion:	63	Resp:	1022
Ion Ratio	Lower	Upper	
63	100		
62	65.9	52.0	92.0
76	41.6	28.1	68.1



#25
 Trichloroethene
 Concen: 69.28 pg
 RT: 9.46 min Scan# 2155
 Delta R.T. 0.005 min
 Lab File: 02171520.D
 Acq: 17 Feb 2015 14:34

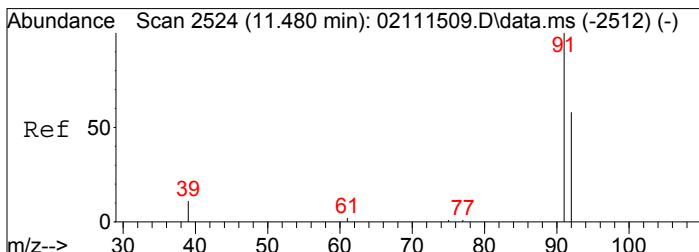
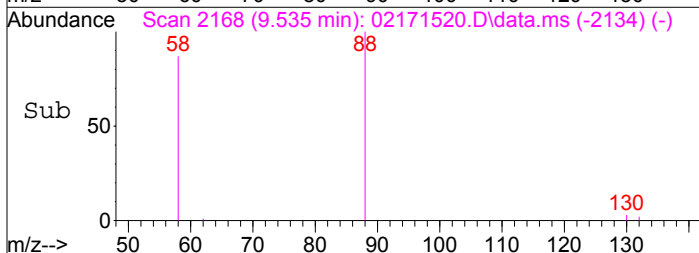
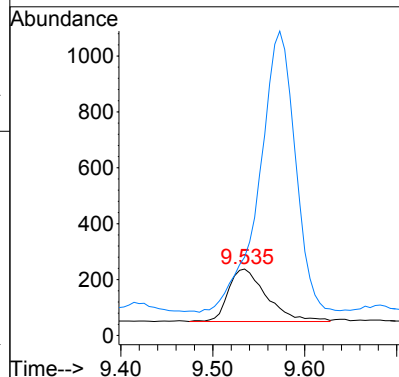
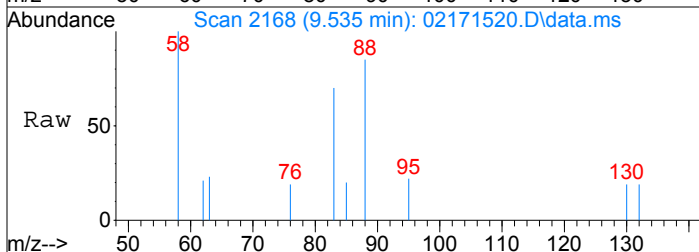
Tgt Ion:	130	Resp:	2540
Ion Ratio	Lower	Upper	
130	100		
132	95.3	77.1	117.1





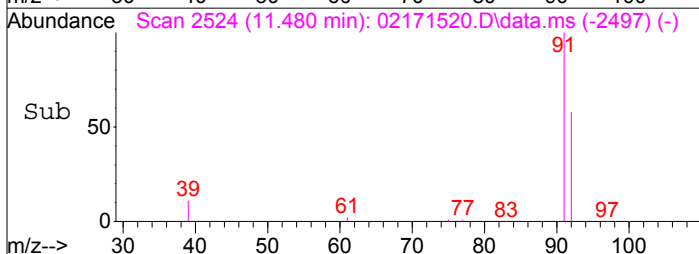
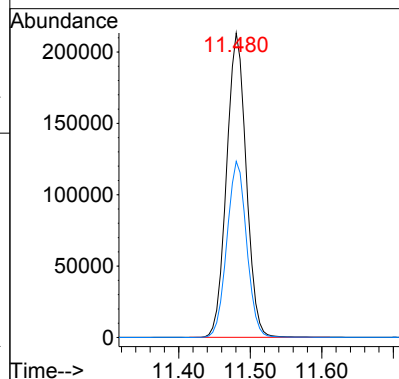
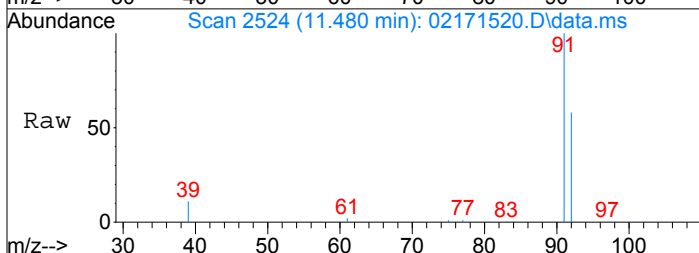
#26
1,4-Dioxane
Concen: 20.02 pg
RT: 9.53 min Scan# 2168
Delta R.T. 0.038 min
Lab File: 02171520.D
Acq: 17 Feb 2015 14:34

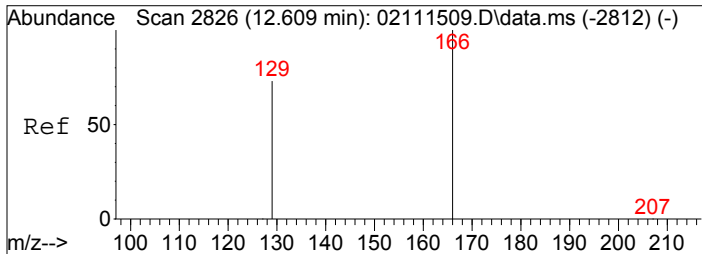
Tgt Ion: 88 Resp: 547
Ion Ratio Lower Upper
88 100
58 507.1 38.3 78.3#



#31
Toluene
Concen: 2908.79 pg
RT: 11.48 min Scan# 2524
Delta R.T. 0.000 min
Lab File: 02171520.D
Acq: 17 Feb 2015 14:34

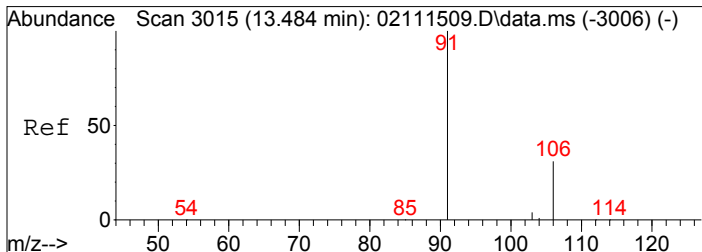
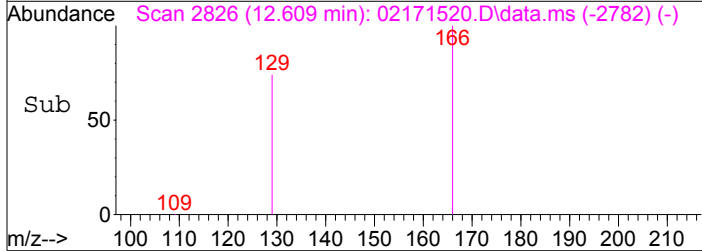
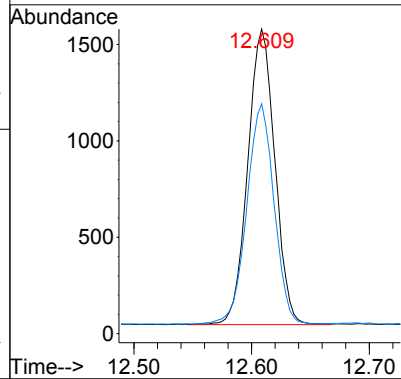
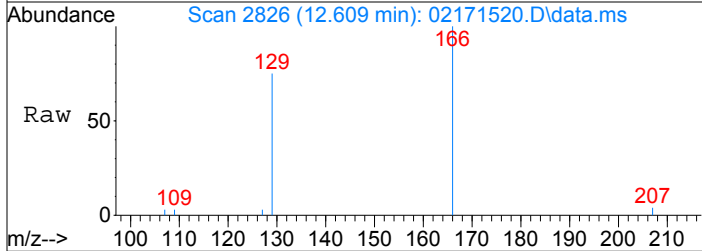
Tgt Ion: 91 Resp: 407133
Ion Ratio Lower Upper
91 100
92 58.0 37.7 77.7





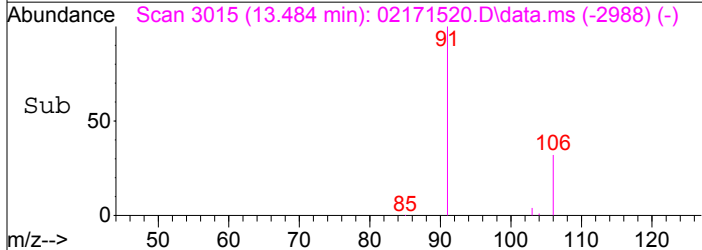
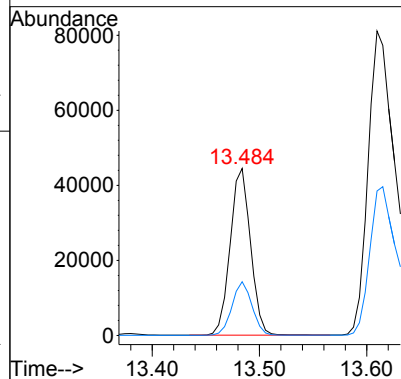
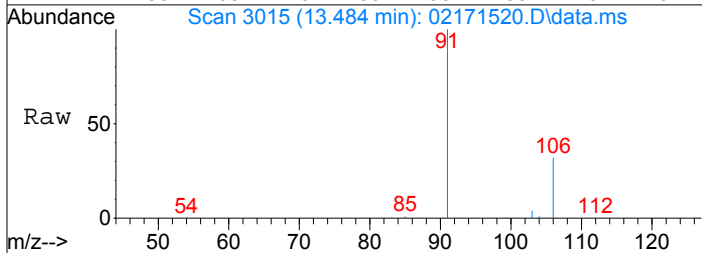
#33
 Tetrachloroethene
 Concen: 56.67 pg
 RT: 12.61 min Scan# 2826
 Delta R.T. -0.000 min
 Lab File: 02171520.D
 Acq: 17 Feb 2015 14:34

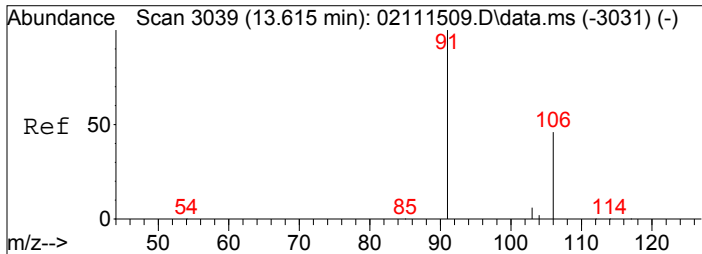
Tgt Ion:	166	Resp:	2456
Ion Ratio	Lower	Upper	
166	100		
129	75.2	53.3	93.3



#36
 Ethylbenzene
 Concen: 395.84 pg
 RT: 13.48 min Scan# 3015
 Delta R.T. 0.000 min
 Lab File: 02171520.D
 Acq: 17 Feb 2015 14:34

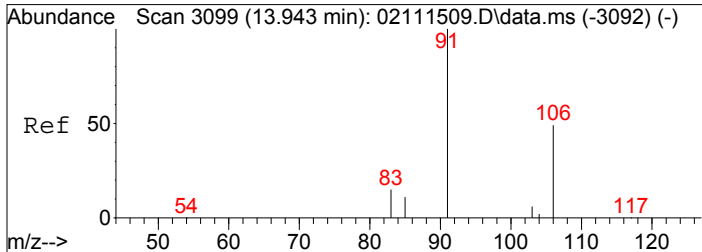
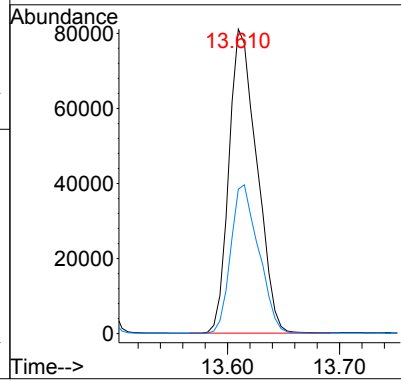
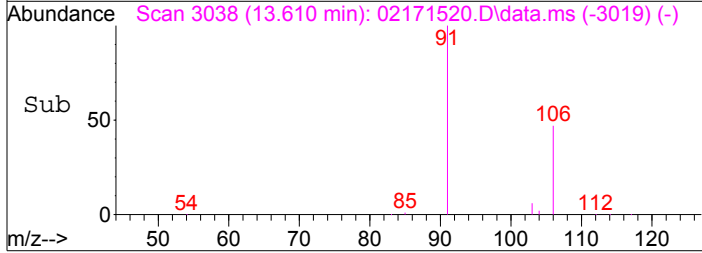
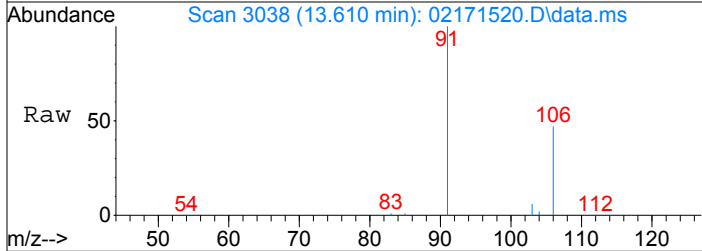
Tgt Ion:	91	Resp:	58616
Ion Ratio	Lower	Upper	
91	100		
106	31.5	10.9	50.9





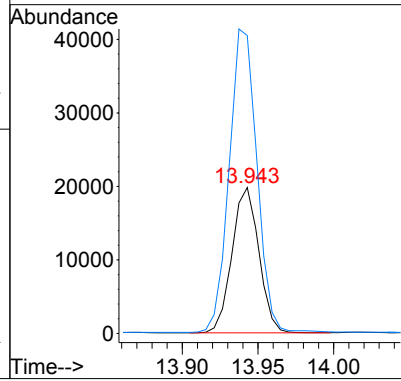
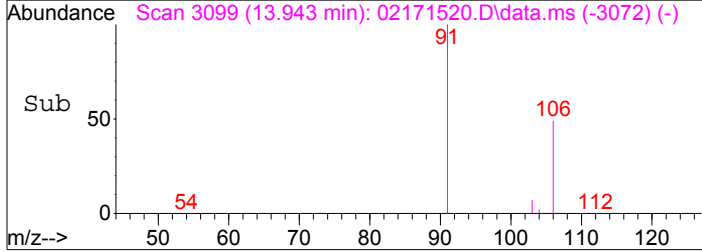
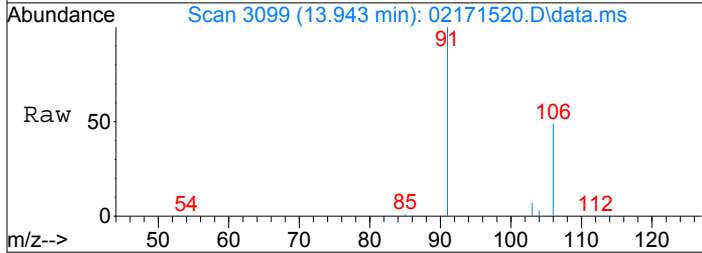
#37
 m,p-Xylene
 Concen: 1151.29 pg
 RT: 13.61 min Scan# 3038
 Delta R.T. -0.005 min
 Lab File: 02171520.D
 Acq: 17 Feb 2015 14:34

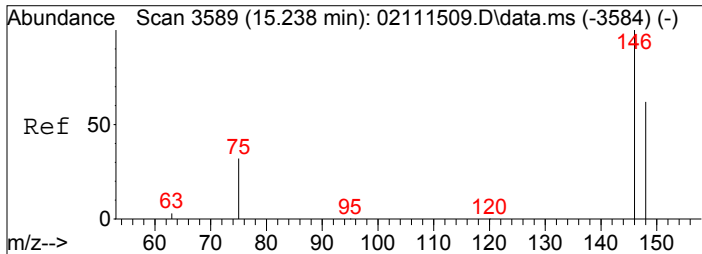
Tgt Ion: 91 Resp: 140118
 Ion Ratio Lower Upper
 91 100
 106 49.1 27.5 67.5



#38
 o-Xylene
 Concen: 411.38 pg
 RT: 13.94 min Scan# 3099
 Delta R.T. 0.000 min
 Lab File: 02171520.D
 Acq: 17 Feb 2015 14:34

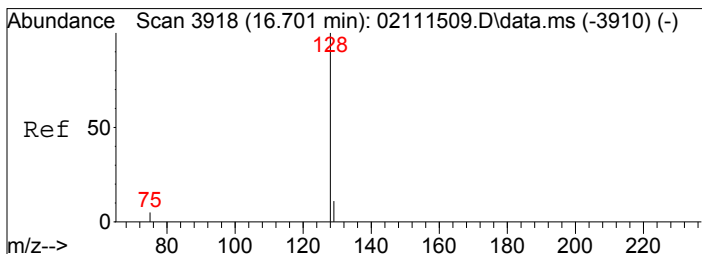
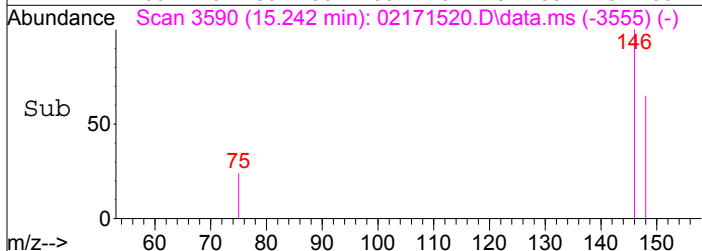
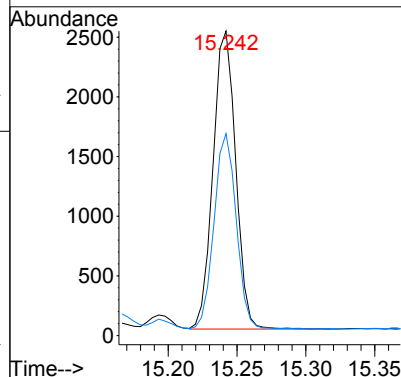
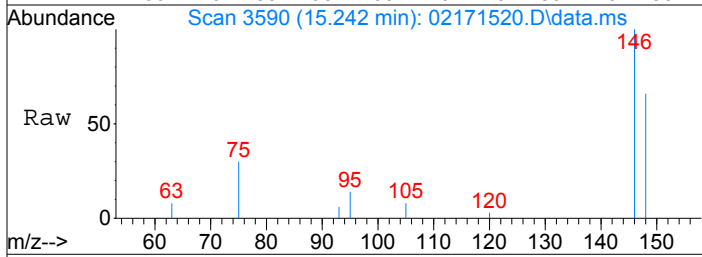
Tgt Ion: 106 Resp: 24469
 Ion Ratio Lower Upper
 106 100
 91 215.9 198.3 238.3





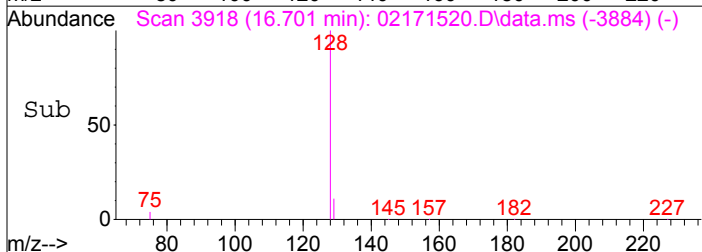
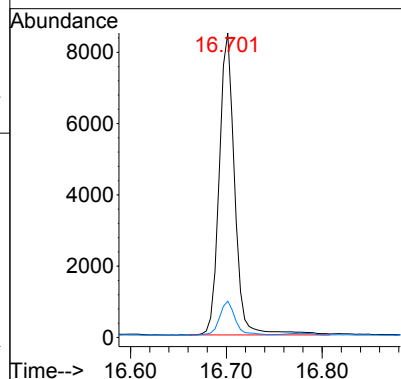
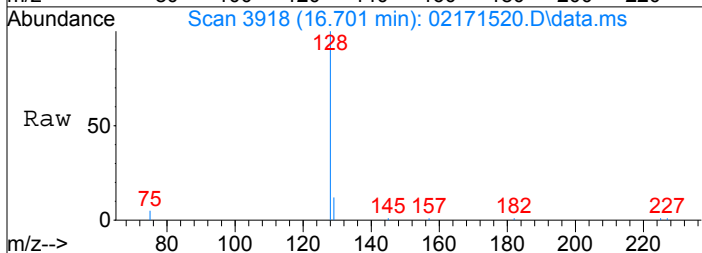
#42
1,4-Dichlorobenzene
Concen: 34.96 pg
RT: 15.24 min Scan# 3590
Delta R.T. 0.004 min
Lab File: 02171520.D
Acq: 17 Feb 2015 14:34

Tgt Ion:146 Resp: 2853
Ion Ratio Lower Upper
146 100
148 63.7 43.5 83.5



#45
Naphthalene
Concen: 64.41 pg
RT: 16.70 min Scan# 3918
Delta R.T. 0.000 min
Lab File: 02171520.D
Acq: 17 Feb 2015 14:34

Tgt Ion:128 Resp: 9517
Ion Ratio Lower Upper
128 100
129 11.6 0.0 30.9



Data File: I:\MS19\DATA\2015 02\17\02171521.D

Acq On : 17 Feb 2015 15:02

Operator: WA

Sample : P1500566-016 (1000mL)

Misc : S29-02041502

ALS Vial : 15 Sample Multiplier: 1

Quant Time: Feb 17 15:28:01 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

2/18/15

DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	18558	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	134797	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	24246	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	42553	938.936	pg	0.00
Spiked Amount 1000.000			Recovery	=	93.89%	
30) Toluene-d8 (SS2)	11.38	98	128305	1032.157	pg	0.00
Spiked Amount 1000.000			Recovery	=	103.22%	
40) Bromofluorobenzene (SS3)	14.25	174	51872	1059.708	pg	0.00
Spiked Amount 1000.000			Recovery	=	105.97%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.72	85	148643	1970.870	pg	100
3) Chloromethane	1.83	52	9154	607.772	pg	98
4) Vinyl Chloride	2.01	62	142	N.D.		
5) Bromomethane	2.33	94	1536	45.291	pg	97
6) Chloroethane	2.47	64	326	N.D.		
7) Acetone	2.99	58	192699	7235.459	pg	# 80
8) Trichlorofluoromethane	3.10	101	127829	1973.198	pg	100
9) 1,1-Dichloroethene	3.66	96	45	N.D.		
10) Methylene Chloride	3.80	84	10599	344.798	pg	95
11) Trichlorotrifluoroethane	4.09	151	13687	459.793	pg	100
12) trans-1,2-Dichloroethene	4.74	96	358	N.D.		
13) 1,1-Dichloroethane	4.95	63	297	N.D.		
14) Methyl tert-Butyl Ether	5.12	73	498	N.D.		
15) cis-1,2-Dichloroethene	5.93	96	1234	37.576	pg	99
16) Chloroform	6.31	83	6063	106.559	pg	99
18) 1,2-Dichloroethane	7.26	62	3618	79.861	pg	98
19) 1,1,1-Trichloroethane	7.59	97	1177	21.272	pg	99
20) Benzene	8.15	78	49339	421.604	pg	100
21) Carbon Tetrachloride	8.34	117	19348	467.080	pg	100
23) 1,2-Dichloropropane	9.16	63	827	28.130	pg	97
24) Bromodichloromethane	9.43	83	760	N.D.		
25) Trichloroethene	9.46	130	1870	53.999	pg	99
26) 1,4-Dioxane	9.51	88	1535	59.475	pg	99
27) cis-1,3-Dichloropropene	10.46	75	48	N.D.		
28) trans-1,3-Dichloropropene	11.04	75	66	N.D.		
29) 1,1,2-Trichloroethane	11.20	83	107	N.D.		
31) Toluene	11.48	91	185288	1401.483	pg	100
32) 1,2-Dibromoethane	12.12	107	41	N.D.		
33) Tetrachloroethene	12.61	166	1611	39.354	pg	100
35) Chlorobenzene	13.17	112	737	N.D.		
36) Ethylbenzene	13.48	91	30462	200.351	pg	99
37) m,p-Xylene	13.61	91	62178	497.575	pg	97
38) o-Xylene	13.94	106	11817	193.494	pg	99
39) 1,1,2,2-Tetrachloroethane	13.89	83	247	N.D.		
41) 1,3-Dichlorobenzene	15.17	146	1095	N.D.		
42) 1,4-Dichlorobenzene	15.24	146	1794	21.411	pg	99
43) 1,2-Dichlorobenzene	15.46	146	147	N.D.		
44) 1,2,4-Trichlorobenzene	16.63	182	209	N.D.		
45) Naphthalene	16.70	128	10404	68.579	pg	98
46) Hexachlorobutadiene	16.95	225	33	N.D.		

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\17\02171521.D

Acq On : 17 Feb 2015 15:02

Operator: WA

Sample : P1500566-016 (1000mL)

Misc : S29-02041502

ALS Vial : 15 Sample Multiplier: 1

Quant Time: Feb 17 15:28:01 2015

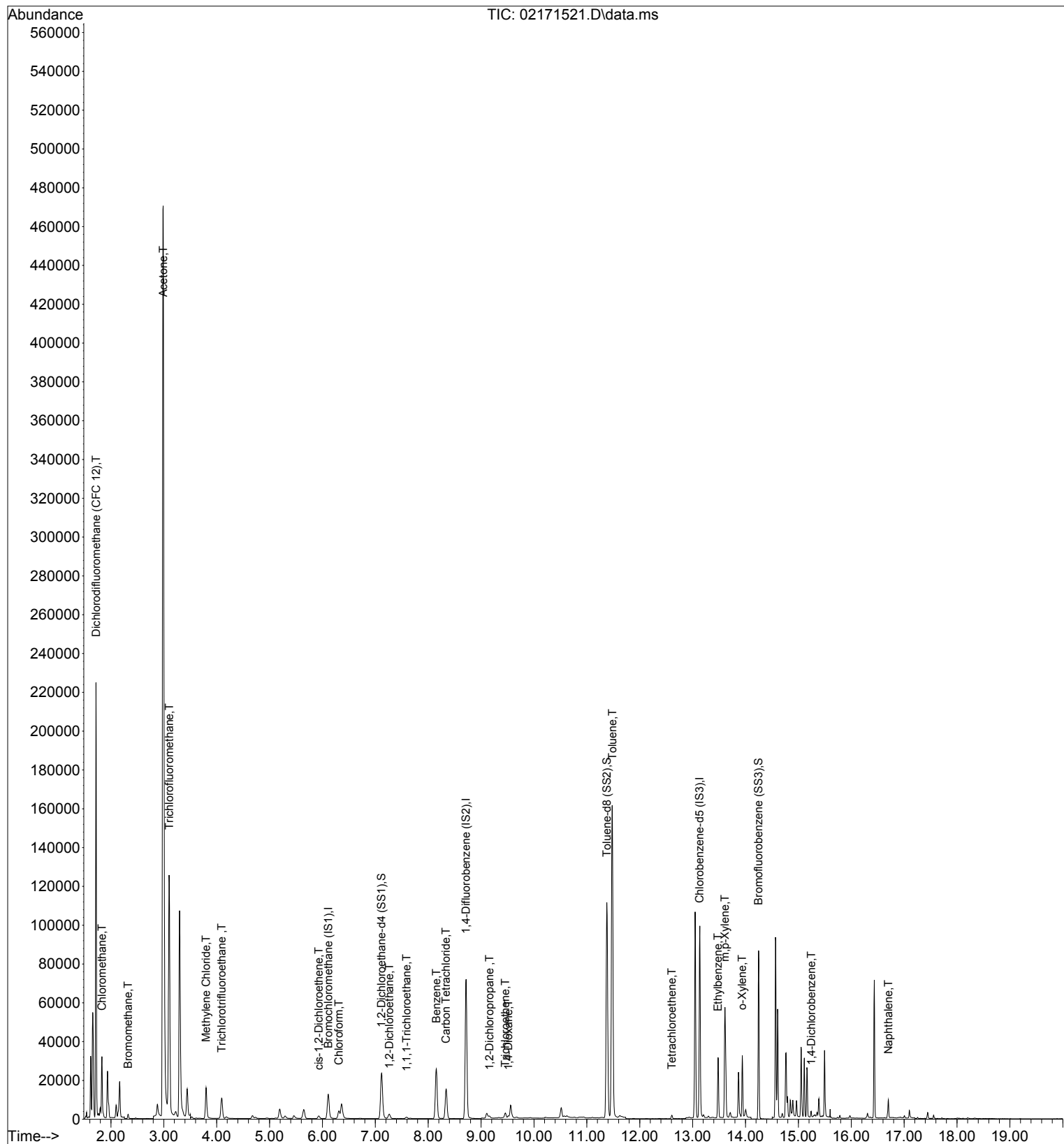
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 02\17\02171521.D

Acq On : 17 Feb 2015 15:02

Operator: WA

Sample : P1500566-016 (1000mL)

Misc : S29-02041502

ALS Vial : 15 Sample Multiplier: 1

Quant Time: Feb 17 15:28:01 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

2/18/15

DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	18558	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	134797	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	24246	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	42553	938.936	pg	0.00
Spiked Amount 1000.000			Recovery	=	93.89%	
30) Toluene-d8 (SS2)	11.38	98	128305	1032.157	pg	0.00
Spiked Amount 1000.000			Recovery	=	103.22%	
40) Bromofluorobenzene (SS3)	14.25	174	51872	1059.708	pg	0.00
Spiked Amount 1000.000			Recovery	=	105.97%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.72	85	148643	1970.870	pg	100
3) Chloromethane	1.83	52	9154	607.772	pg	98
5) Bromomethane	2.33	94	1536	45.291	pg	97
7) Acetone	2.99	58	192699	7235.459	pg	# 80
8) Trichlorofluoromethane	3.10	101	127829	1973.198	pg	100
10) Methylene Chloride	3.80	84	10599	344.798	pg	95
11) Trichlorotrifluoroethane	4.09	151	13687	459.793	pg	100
15) cis-1,2-Dichloroethene	5.93	96	1234	37.576	pg	99
16) Chloroform	6.31	83	6063	106.559	pg	99
18) 1,2-Dichloroethane	7.26	62	3618	79.861	pg	98
19) 1,1,1-Trichloroethane	7.59	97	1177	21.272	pg	99
20) Benzene	8.15	78	49339	421.604	pg	100
21) Carbon Tetrachloride	8.34	117	19348	467.080	pg	100
23) 1,2-Dichloropropane	9.16	63	827	28.130	pg	97
25) Trichloroethene	9.46	130	1870	53.999	pg	99
26) 1,4-Dioxane	9.51	88	1535	59.475	pg	99
31) Toluene	11.48	91	185288	1401.483	pg	100
33) Tetrachloroethene	12.61	166	1611	39.354	pg	100
36) Ethylbenzene	13.48	91	30462	200.351	pg	99
37) m,p-Xylene	13.61	91	62178	497.575	pg	97
38) o-Xylene	13.94	106	11817	193.494	pg	99
42) 1,4-Dichlorobenzene	15.24	146	1794	21.411	pg	99
45) Naphthalene	16.70	128	10404	68.579	pg	98

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\17\02171521.D

Acq On : 17 Feb 2015 15:02

Operator: WA

Sample : P1500566-016 (1000mL)

Misc : S29-02041502

ALS Vial : 15 Sample Multiplier: 1

Quant Time: Feb 17 15:28:01 2015

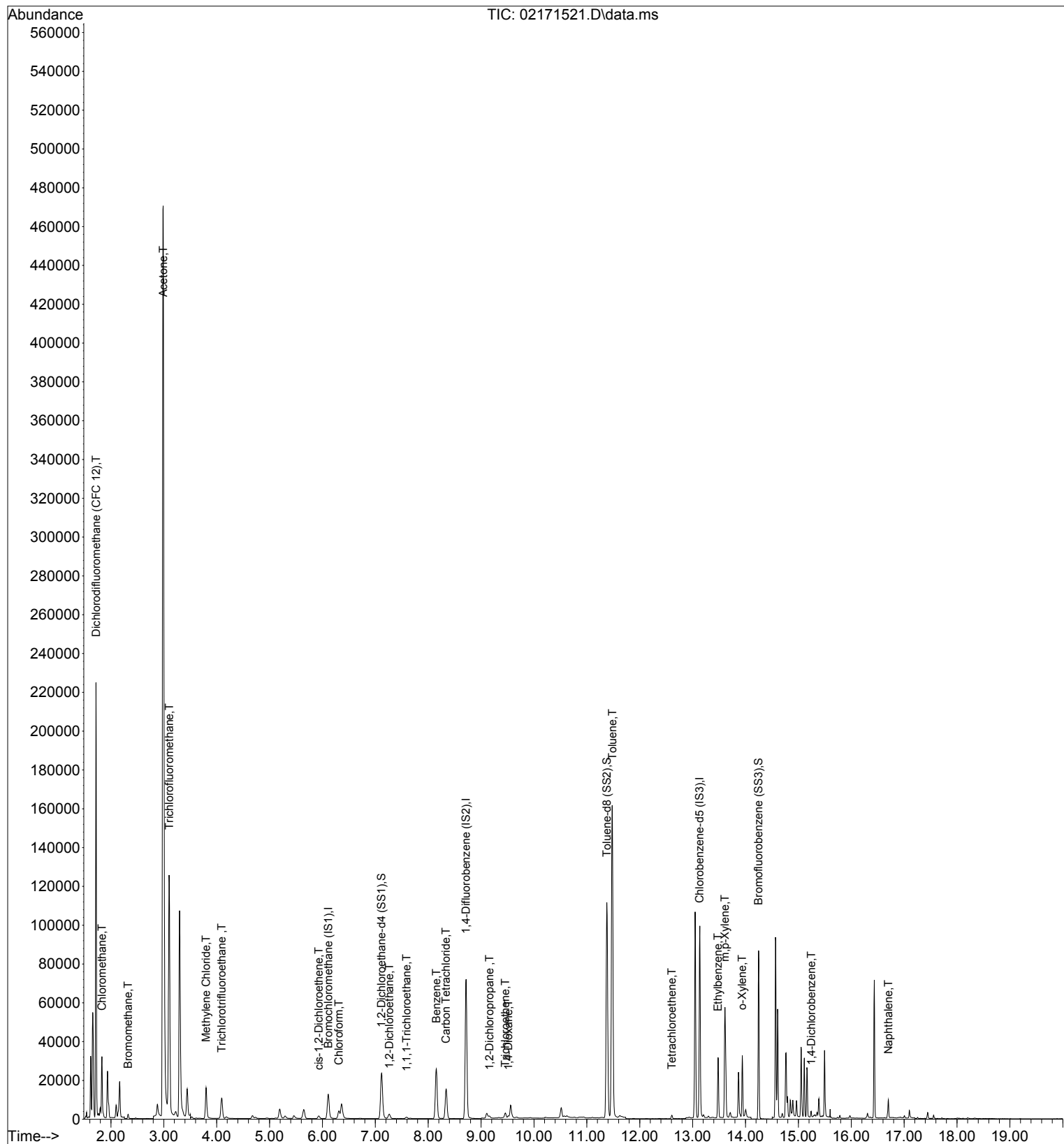
Quant Method : I:\MS19\METHODS\X19021115.M

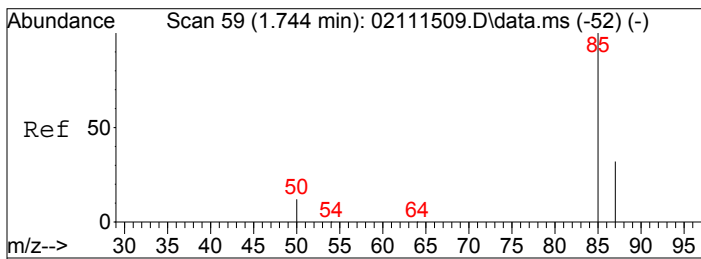
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

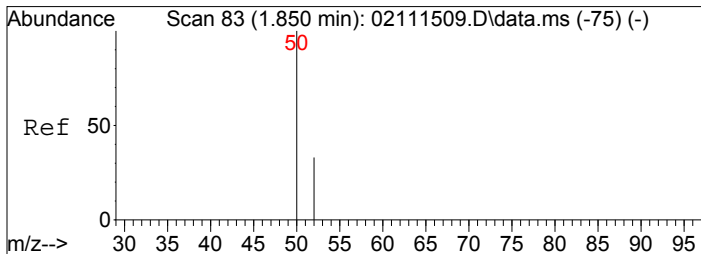
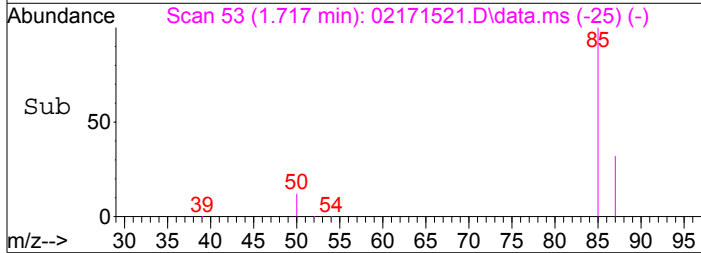
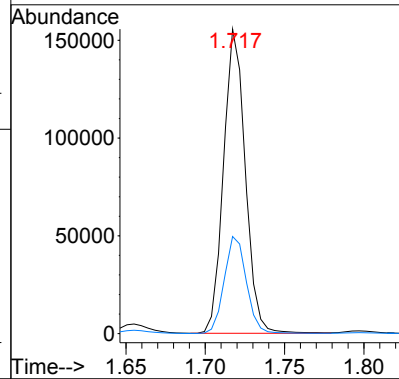
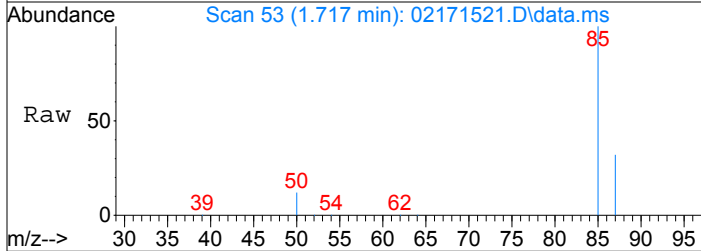
DataAcq Meth:TO15SIM.M





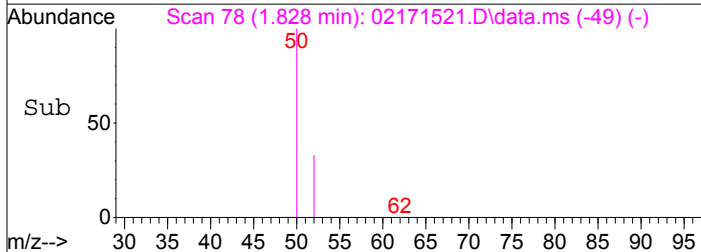
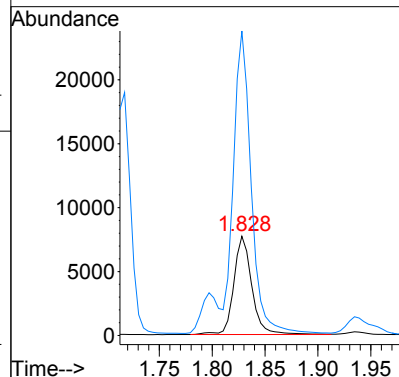
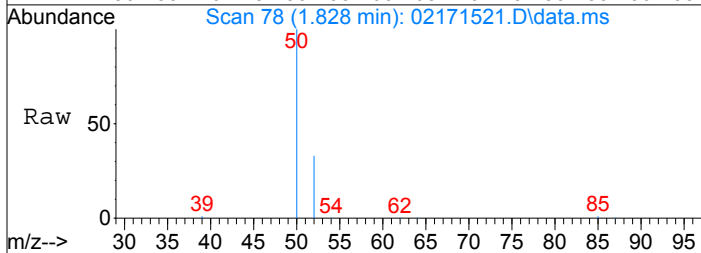
#2
 Dichlorodifluoromethane (CFC 12)
 Concen: 1970.87 pg
 RT: 1.72 min Scan# 53
 Delta R.T. -0.027 min
 Lab File: 02171521.D
 Acq: 17 Feb 2015 15:02

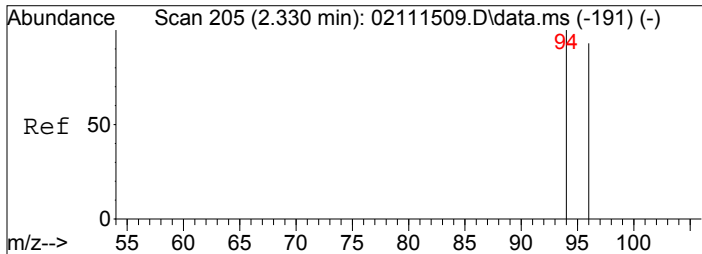
Tgt Ion: 85 Resp: 148643
 Ion Ratio Lower Upper
 85 100
 87 32.4 12.4 52.4



#3
 Chloromethane
 Concen: 607.77 pg
 RT: 1.83 min Scan# 78
 Delta R.T. -0.022 min
 Lab File: 02171521.D
 Acq: 17 Feb 2015 15:02

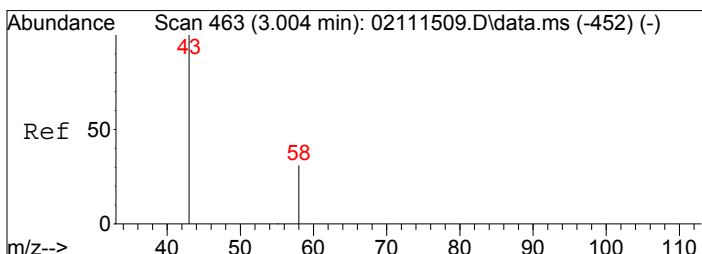
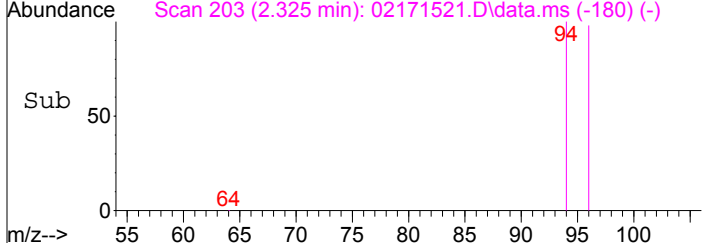
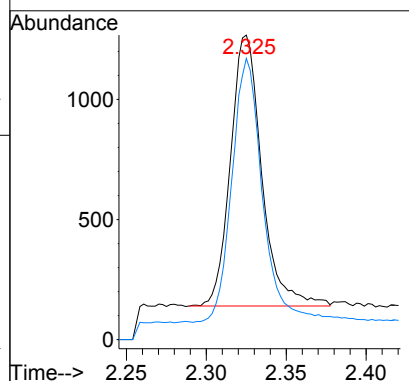
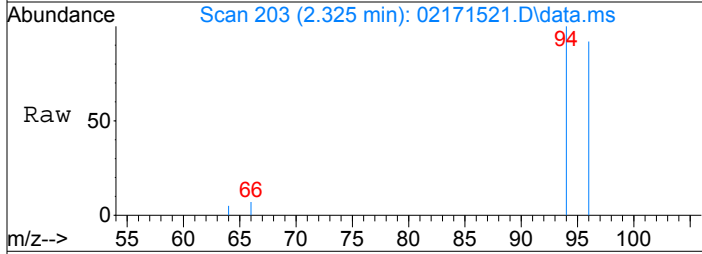
Tgt Ion: 52 Resp: 9154
 Ion Ratio Lower Upper
 52 100
 50 299.7 283.7 323.7





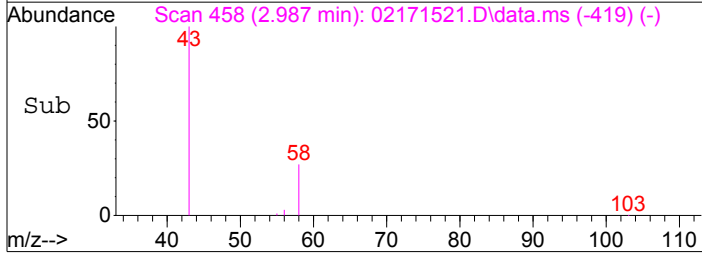
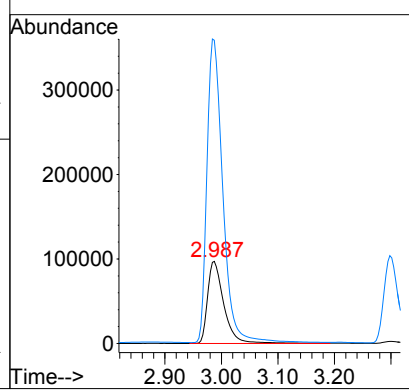
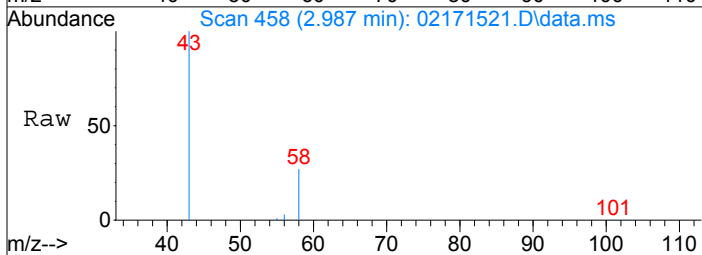
#5
 Bromomethane
 Concen: 45.29 pg
 RT: 2.33 min Scan# 203
 Delta R.T. -0.005 min
 Lab File: 02171521.D
 Acq: 17 Feb 2015 15:02

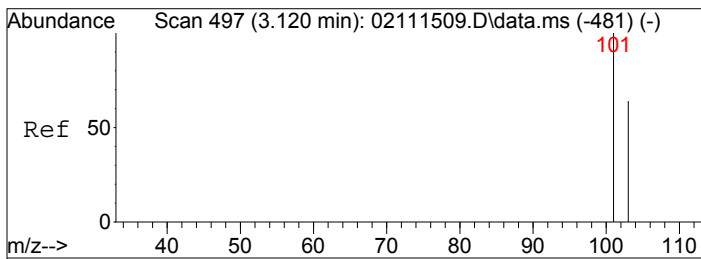
Tgt Ion:	94	Resp:	1536
Ion Ratio	Lower	Upper	
94	100		
96	97.0	75.5	113.3



#7
 Acetone
 Concen: 7235.46 pg
 RT: 2.99 min Scan# 458
 Delta R.T. -0.017 min
 Lab File: 02171521.D
 Acq: 17 Feb 2015 15:02

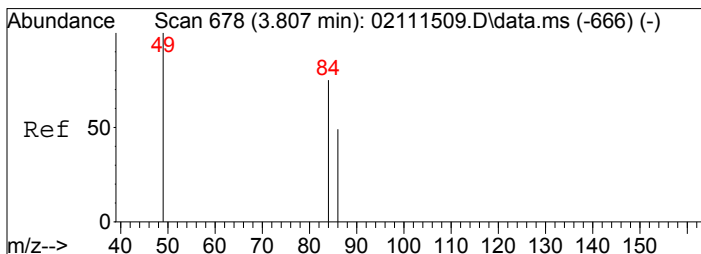
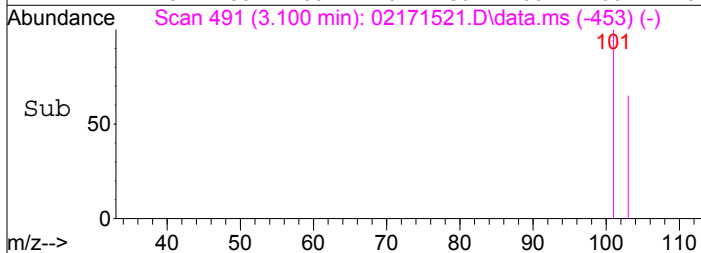
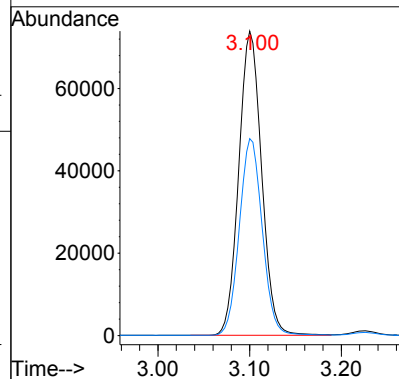
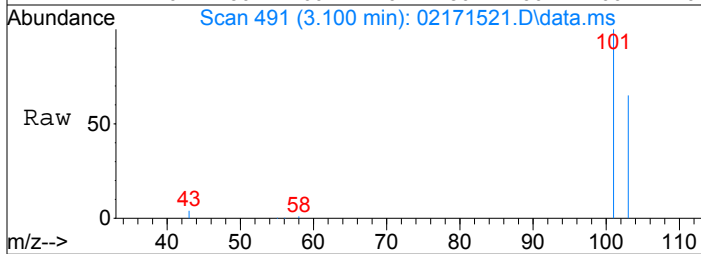
Tgt Ion:	58	Resp:	192699
Ion Ratio	Lower	Upper	
58	100		
43	362.1	301.8	341.8#





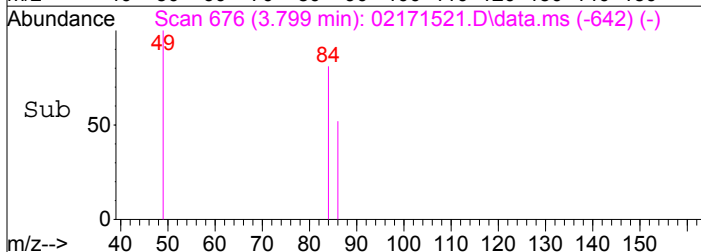
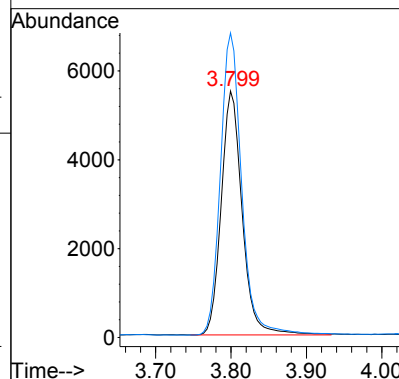
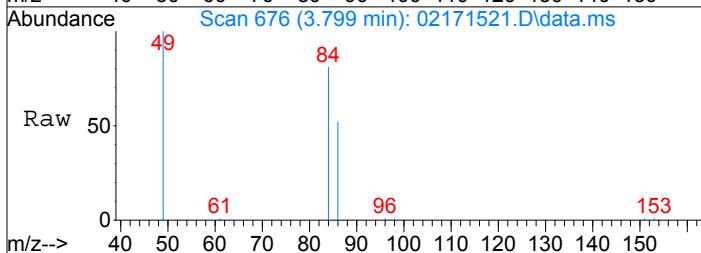
#8
 Trichlorofluoromethane
 Concen: 1973.20 pg
 RT: 3.10 min Scan# 491
 Delta R.T. -0.019 min
 Lab File: 02171521.D
 Acq: 17 Feb 2015 15:02

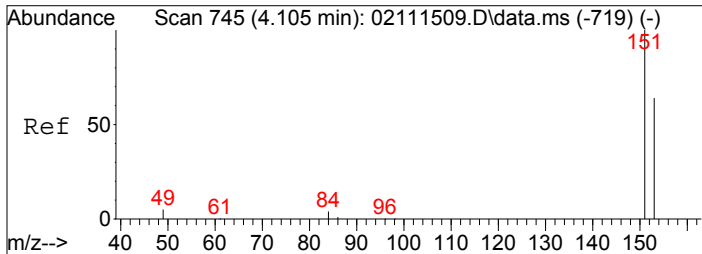
Tgt Ion: 101 Resp: 127829
 Ion Ratio Lower Upper
 101 100
 103 64.9 51.8 77.6



#10
 Methylene Chloride
 Concen: 344.80 pg
 RT: 3.80 min Scan# 676
 Delta R.T. -0.008 min
 Lab File: 02171521.D
 Acq: 17 Feb 2015 15:02

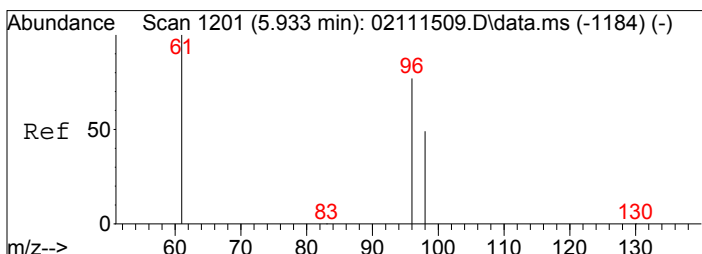
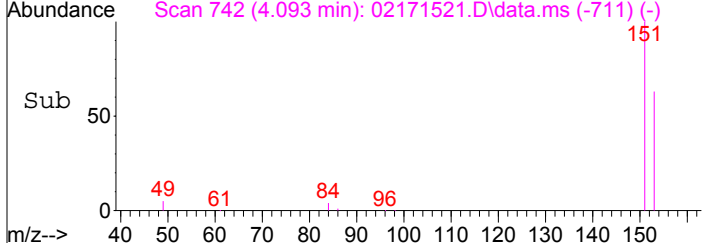
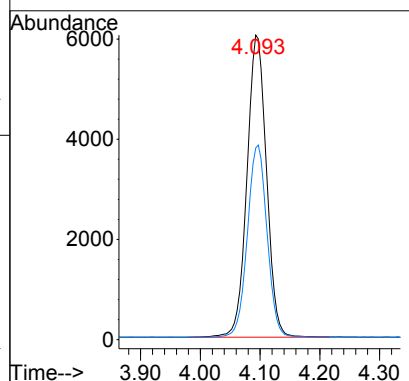
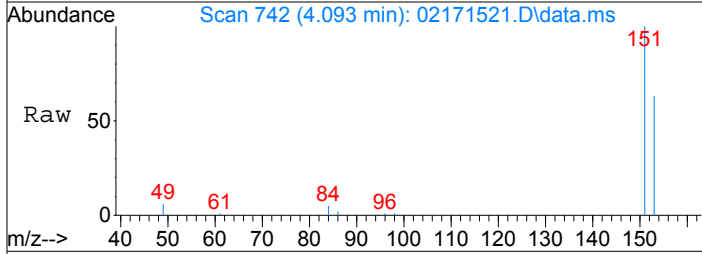
Tgt Ion: 84 Resp: 10599
 Ion Ratio Lower Upper
 84 100
 49 125.9 112.3 152.3





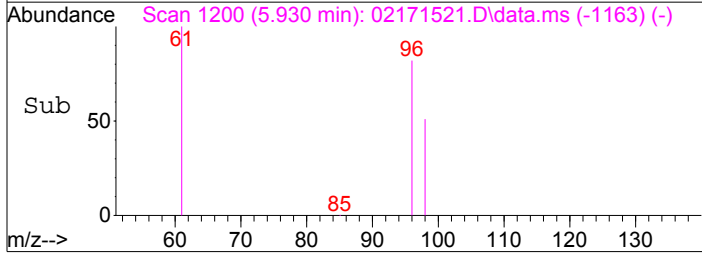
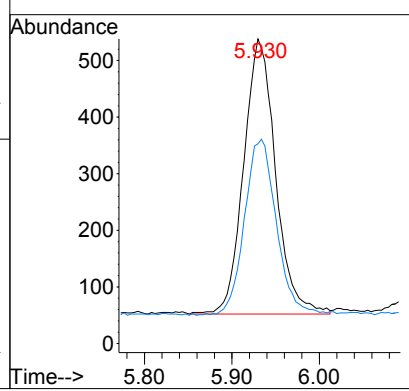
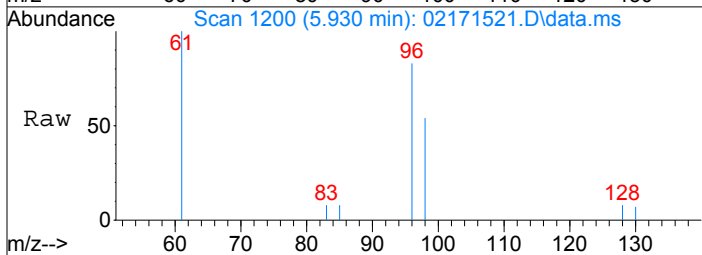
#11
 Trichlorotrifluoroethane
 Concen: 459.79 pg
 RT: 4.09 min Scan# 742
 Delta R.T. -0.012 min
 Lab File: 02171521.D
 Acq: 17 Feb 2015 15:02

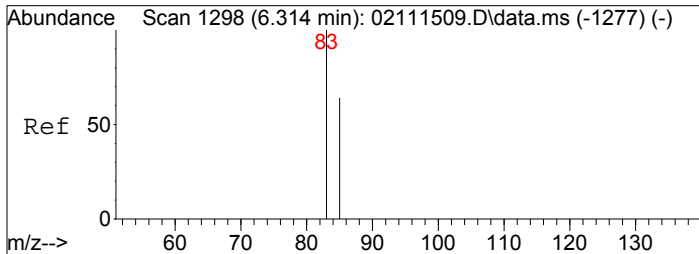
Tgt Ion: 151	Resp: 13687
Ion Ratio	Lower Upper
151	100
153	64.0 43.6 83.6



#15
 cis-1,2-Dichloroethene
 Concen: 37.58 pg
 RT: 5.93 min Scan# 1200
 Delta R.T. -0.003 min
 Lab File: 02171521.D
 Acq: 17 Feb 2015 15:02

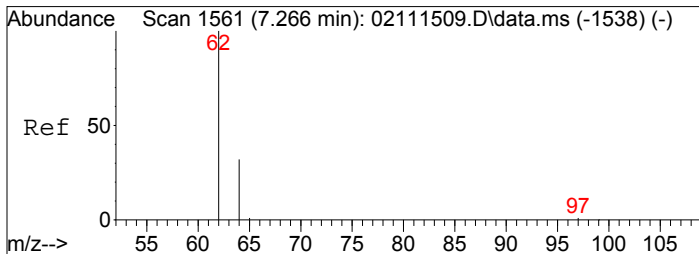
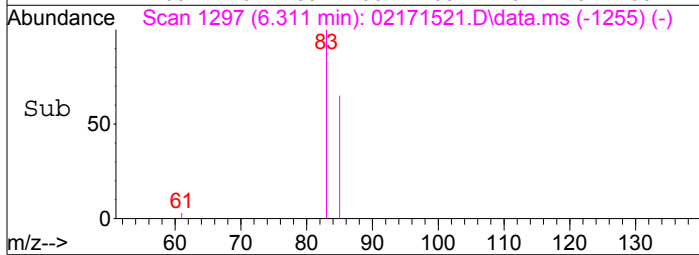
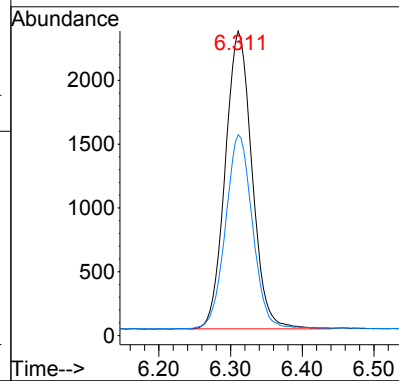
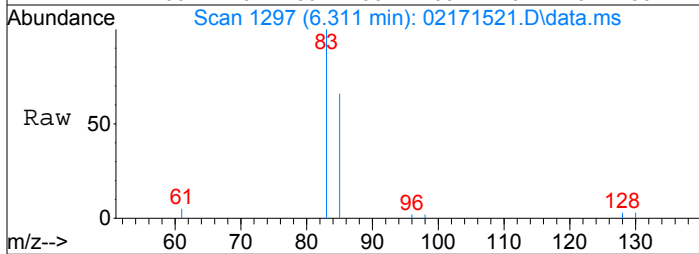
Tgt Ion: 96	Resp: 1234
Ion Ratio	Lower Upper
96	100
98	63.4 44.3 84.3





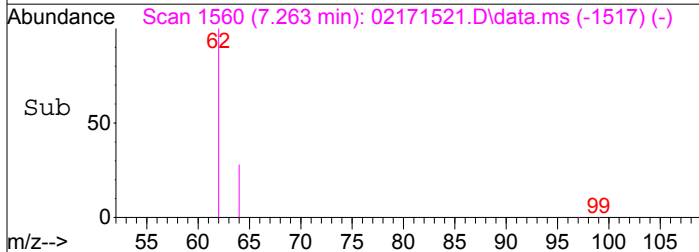
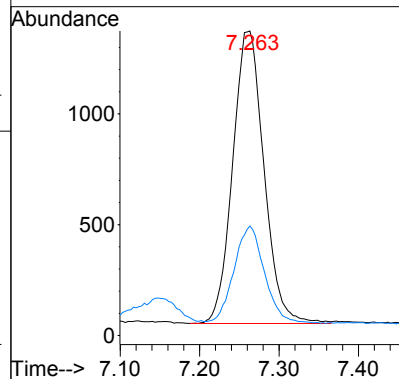
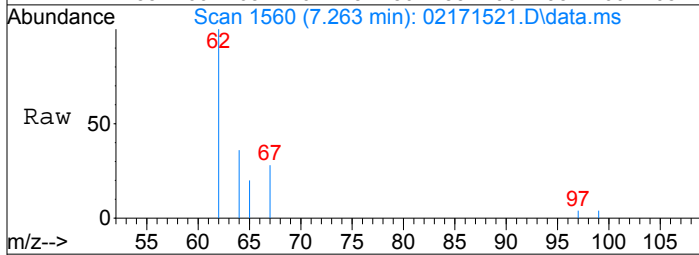
#16
Chloroform
Concen: 106.56 pg
RT: 6.31 min Scan# 1297
Delta R.T. -0.003 min
Lab File: 02171521.D
Acq: 17 Feb 2015 15:02

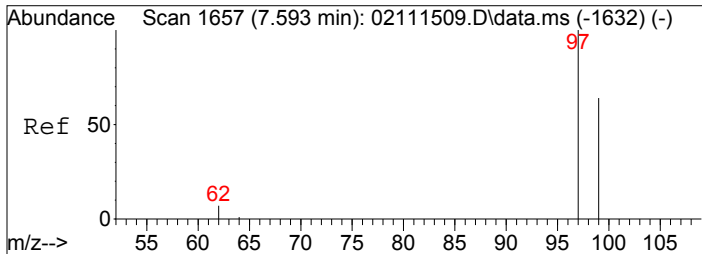
Tgt Ion: 83 Resp: 6063
Ion Ratio Lower Upper
83 100
85 65.8 45.4 85.4



#18
1,2-Dichloroethane
Concen: 79.86 pg
RT: 7.26 min Scan# 1560
Delta R.T. -0.002 min
Lab File: 02171521.D
Acq: 17 Feb 2015 15:02

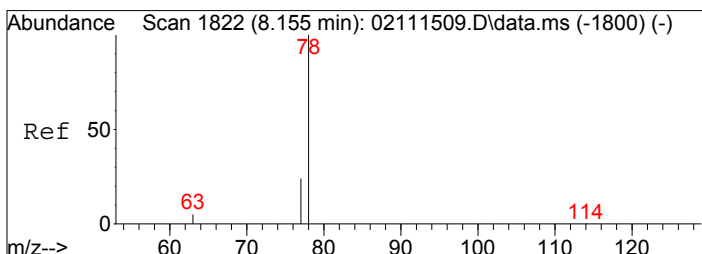
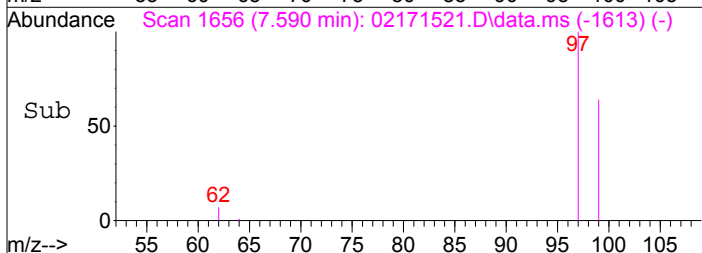
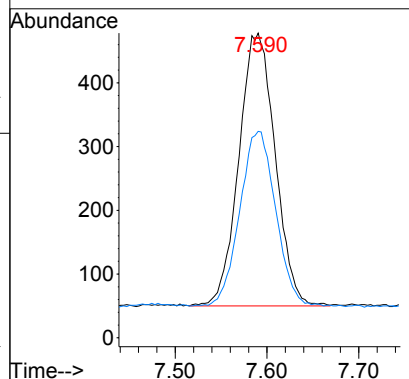
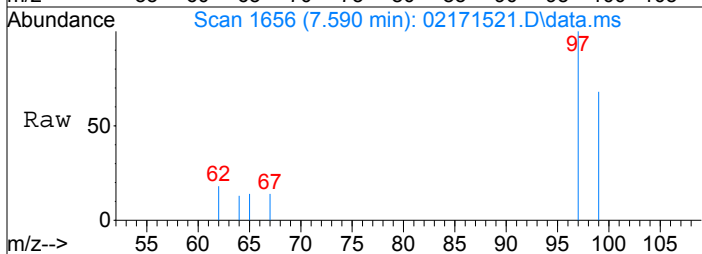
Tgt Ion: 62 Resp: 3618
Ion Ratio Lower Upper
62 100
64 32.4 11.6 51.6





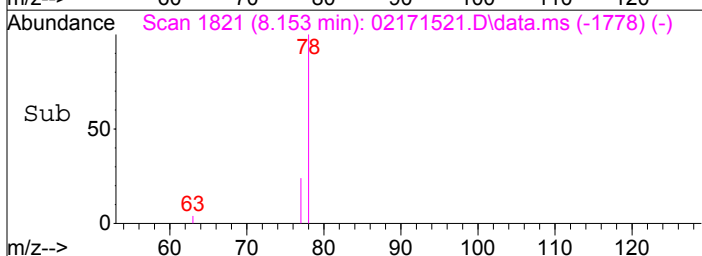
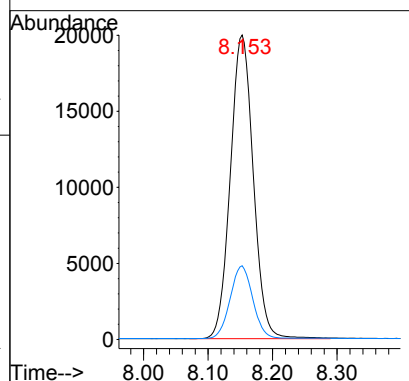
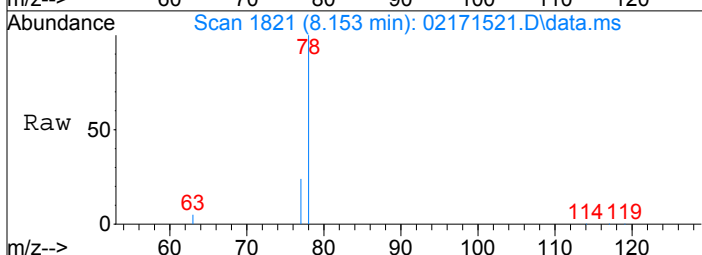
#19
1,1,1-Trichloroethane
Concen: 21.27 pg
RT: 7.59 min Scan# 1656
Delta R.T. -0.002 min
Lab File: 02171521.D
Acq: 17 Feb 2015 15:02

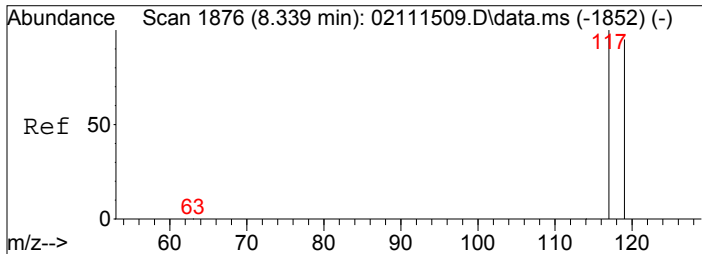
Tgt Ion: 97 Resp: 1177
Ion Ratio Lower Upper
97 100
99 63.0 44.0 84.0



#20
Benzene
Concen: 421.60 pg
RT: 8.15 min Scan# 1821
Delta R.T. -0.002 min
Lab File: 02171521.D
Acq: 17 Feb 2015 15:02

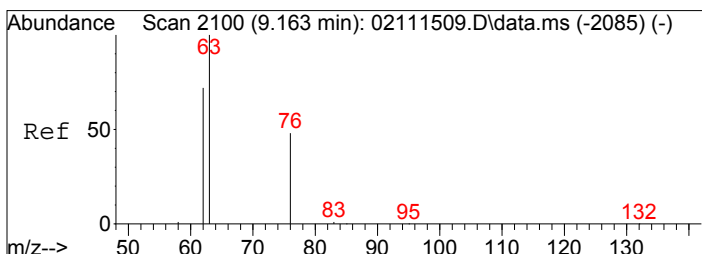
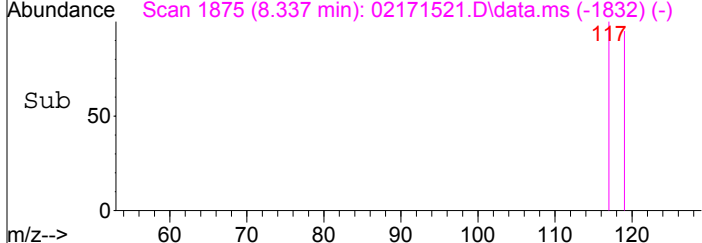
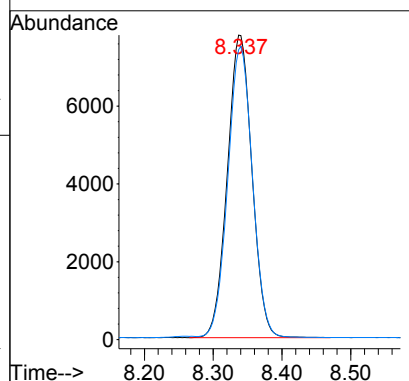
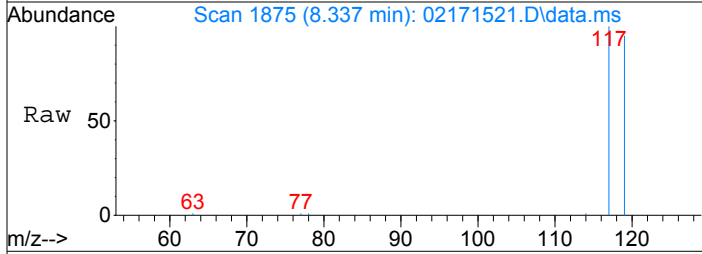
Tgt Ion: 78 Resp: 49339
Ion Ratio Lower Upper
78 100
77 23.7 3.7 43.7





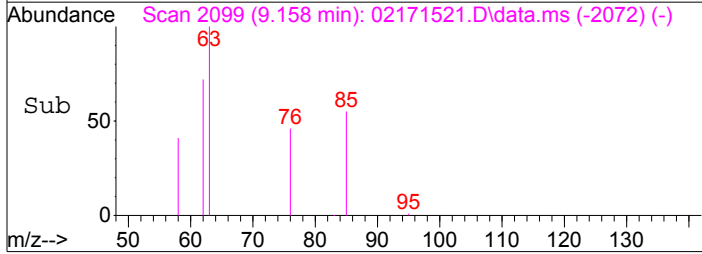
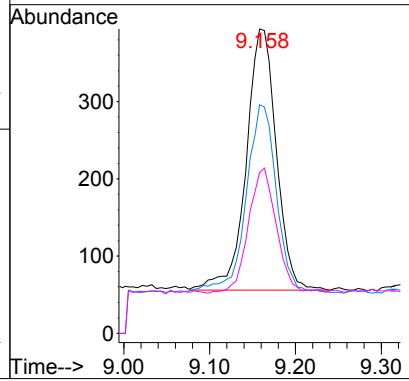
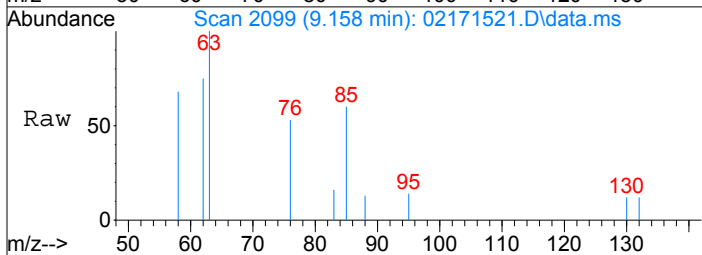
#21
Carbon Tetrachloride
Concen: 467.08 pg
RT: 8.34 min Scan# 1875
Delta R.T. -0.002 min
Lab File: 02171521.D
Acq: 17 Feb 2015 15:02

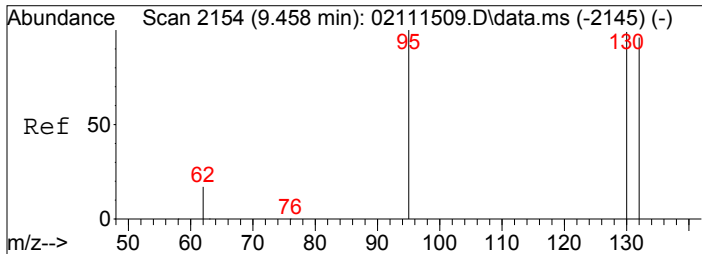
Tgt Ion: 117	Resp: 19348
Ion Ratio	Lower Upper
117	100
119	95.9 75.5 115.5



#23
1,2-Dichloropropane
Concen: 28.13 pg
RT: 9.16 min Scan# 2099
Delta R.T. -0.005 min
Lab File: 02171521.D
Acq: 17 Feb 2015 15:02

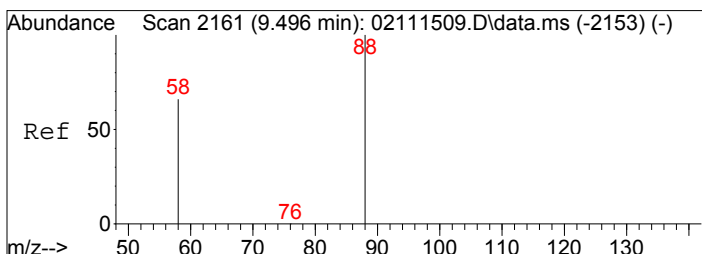
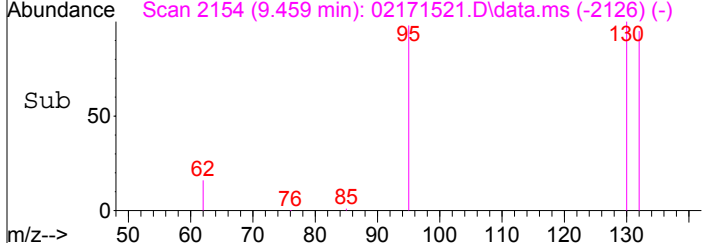
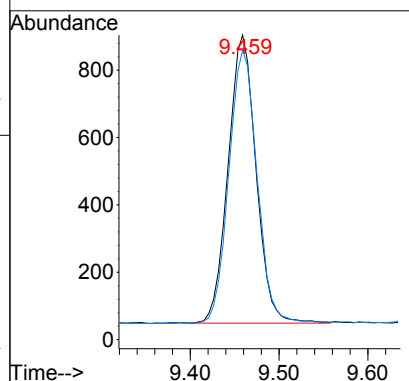
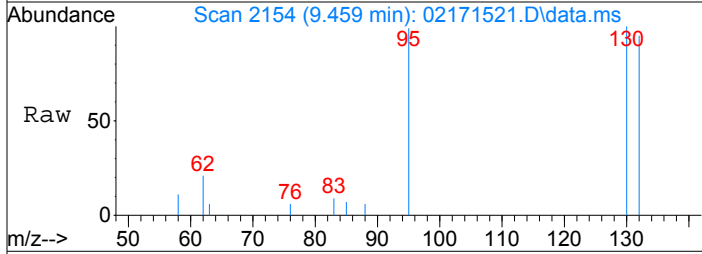
Tgt Ion: 63	Resp: 827
Ion Ratio	Lower Upper
63	100
62	73.4 52.0 92.0
76	44.3 28.1 68.1





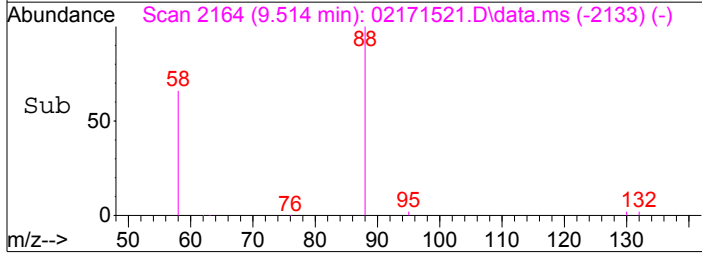
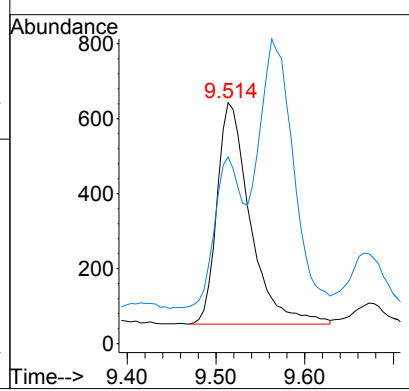
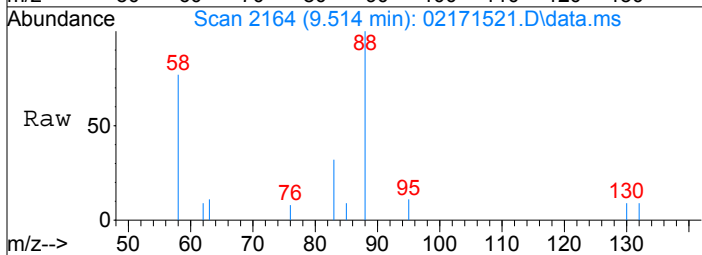
#25
 Trichloroethene
 Concen: 54.00 pg
 RT: 9.46 min Scan# 2154
 Delta R.T. 0.001 min
 Lab File: 02171521.D
 Acq: 17 Feb 2015 15:02

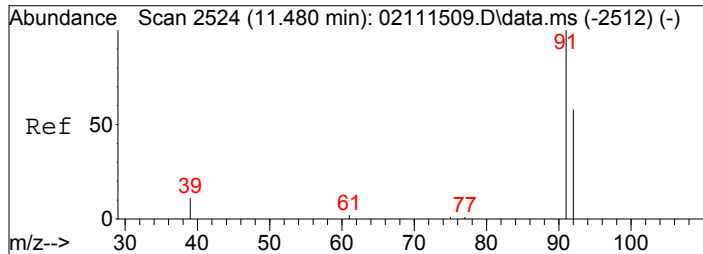
Tgt Ion:130	Resp:	1870
Ion Ratio	Lower	Upper
130	100	
132	96.3	77.1 117.1



#26
 1,4-Dioxane
 Concen: 59.47 pg
 RT: 9.51 min Scan# 2164
 Delta R.T. 0.017 min
 Lab File: 02171521.D
 Acq: 17 Feb 2015 15:02

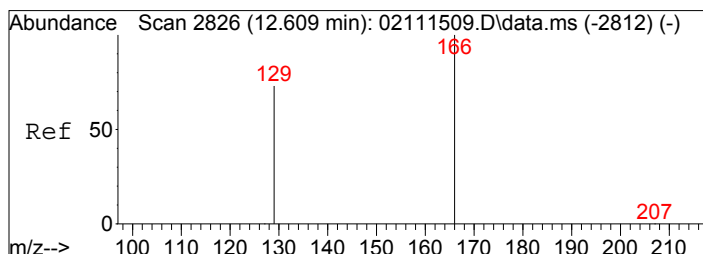
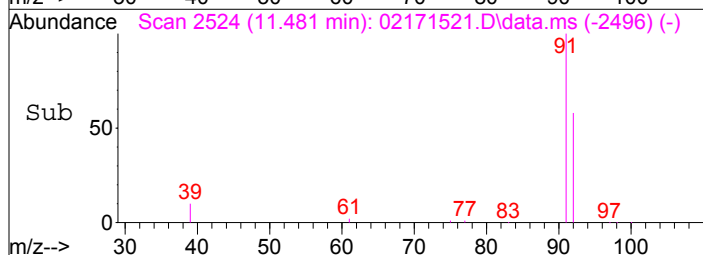
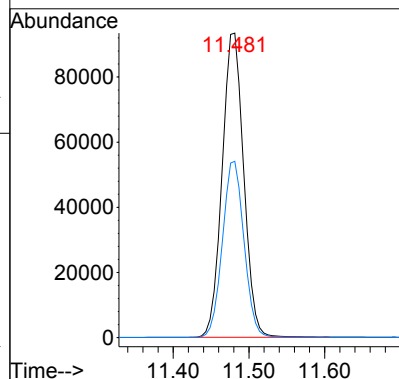
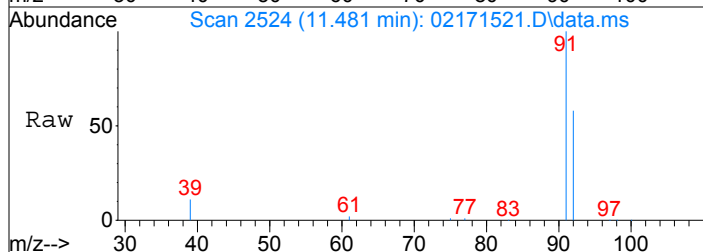
Tgt Ion: 88	Resp:	1535
Ion Ratio	Lower	Upper
88	100	
58	59.0	38.3 78.3





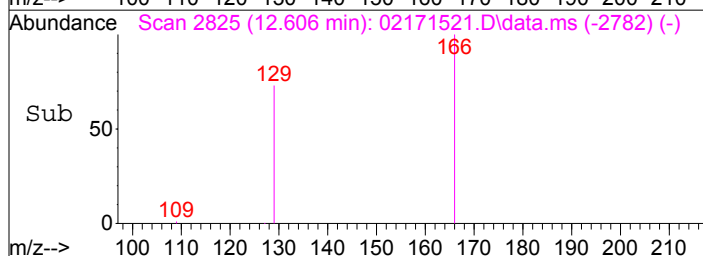
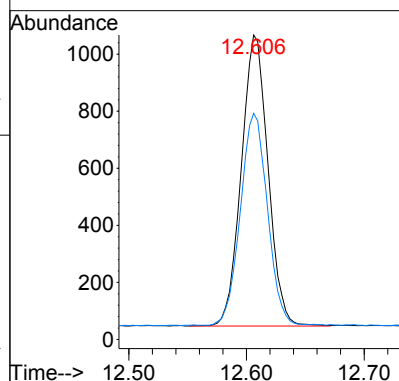
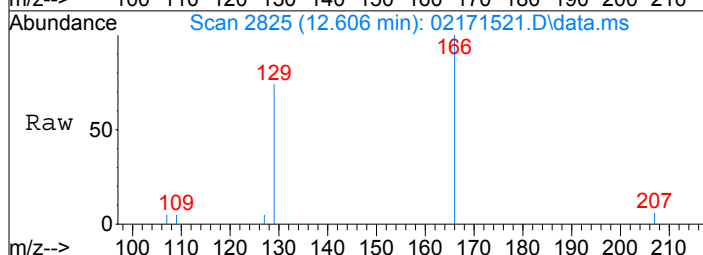
#31
Toluene
Concen: 1401.48 pg
RT: 11.48 min Scan# 2524
Delta R.T. 0.001 min
Lab File: 02171521.D
Acq: 17 Feb 2015 15:02

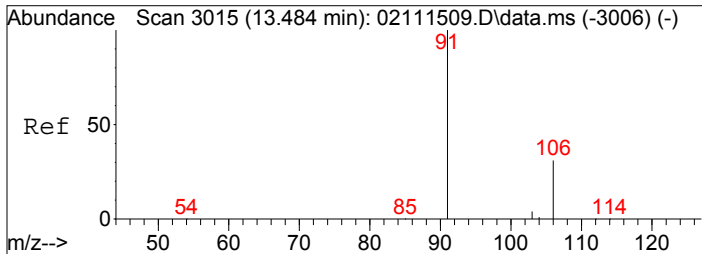
Tgt Ion: 91 Resp: 185288
Ion Ratio Lower Upper
91 100
92 57.9 37.7 77.7



#33
Tetrachloroethene
Concen: 39.35 pg
RT: 12.61 min Scan# 2825
Delta R.T. -0.003 min
Lab File: 02171521.D
Acq: 17 Feb 2015 15:02

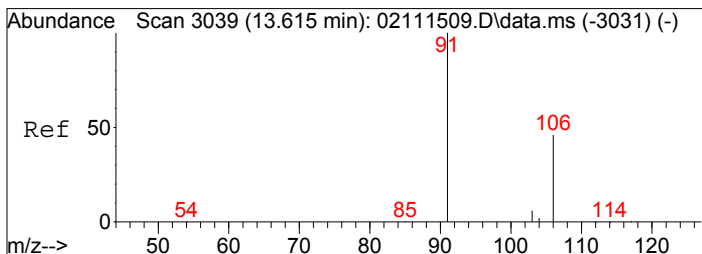
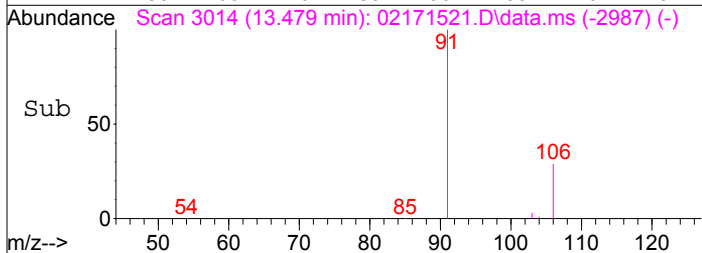
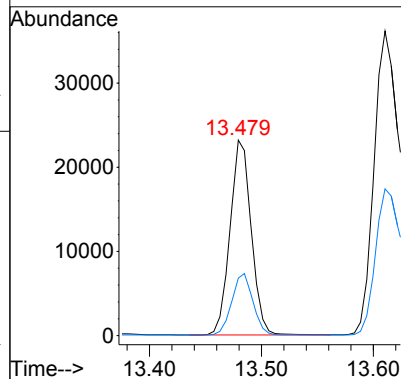
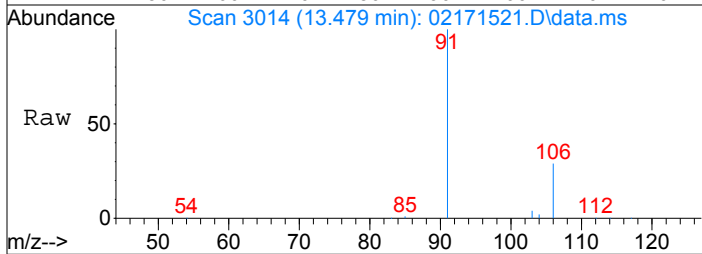
Tgt Ion: 166 Resp: 1611
Ion Ratio Lower Upper
166 100
129 73.5 53.3 93.3





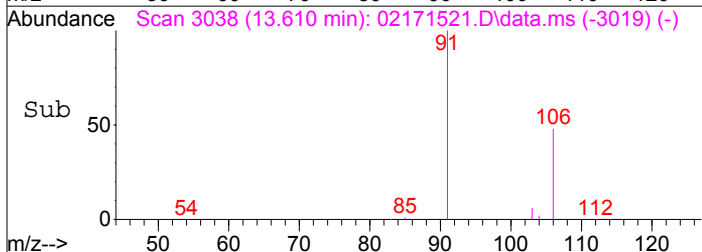
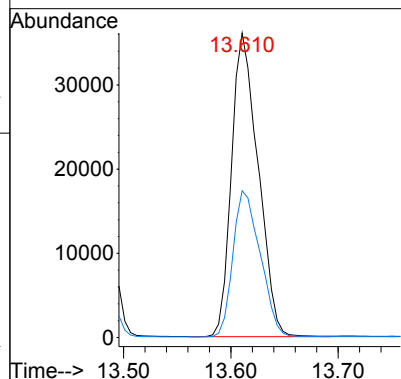
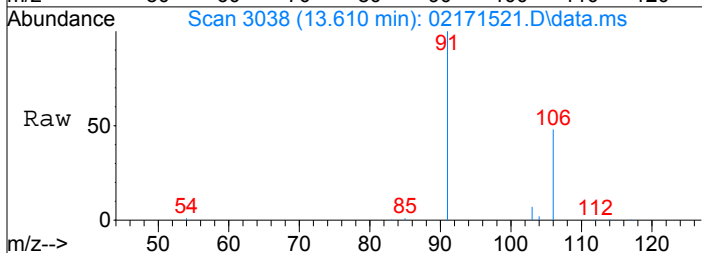
#36
Ethylbenzene
Concen: 200.35 pg
RT: 13.48 min Scan# 3014
Delta R.T. -0.004 min
Lab File: 02171521.D
Acq: 17 Feb 2015 15:02

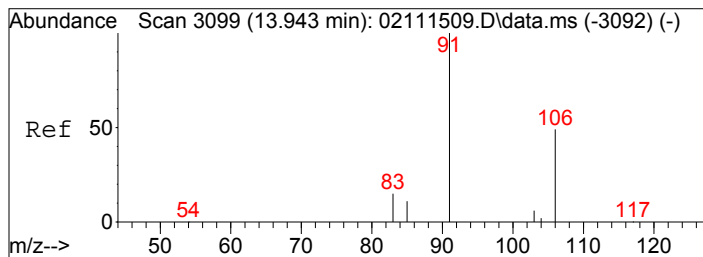
Tgt Ion: 91 Resp: 30462
Ion Ratio Lower Upper
91 100
106 31.4 10.9 50.9



#37
m,p-Xylene
Concen: 497.58 pg
RT: 13.61 min Scan# 3038
Delta R.T. -0.004 min
Lab File: 02171521.D
Acq: 17 Feb 2015 15:02

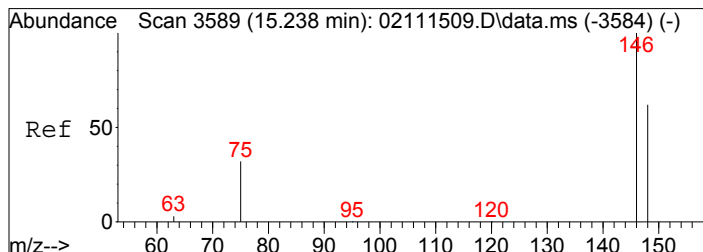
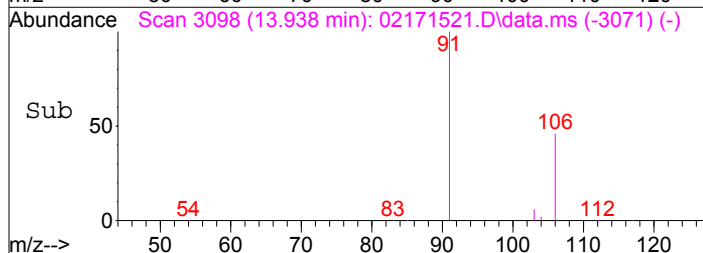
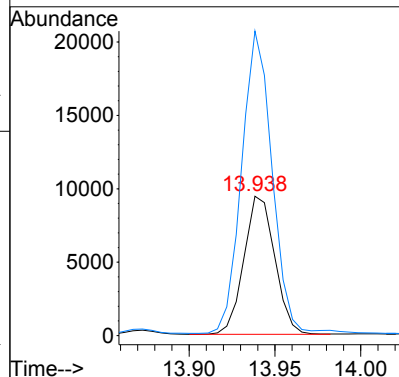
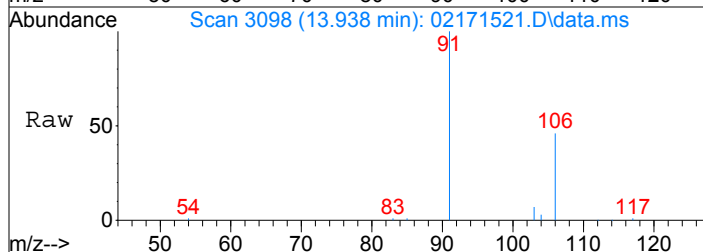
Tgt Ion: 91 Resp: 62178
Ion Ratio Lower Upper
91 100
106 49.3 27.5 67.5





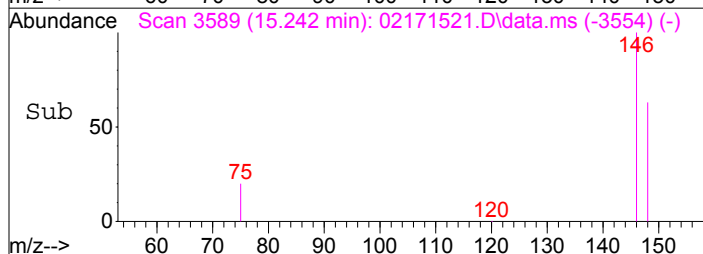
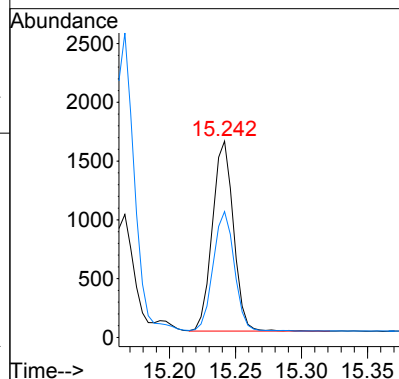
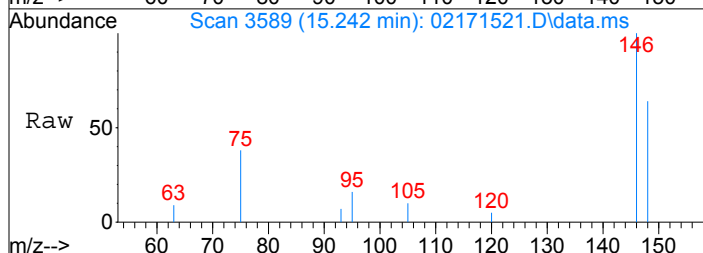
#38
o-Xylene
Concen: 193.49 pg
RT: 13.94 min Scan# 3098
Delta R.T. -0.004 min
Lab File: 02171521.D
Acq: 17 Feb 2015 15:02

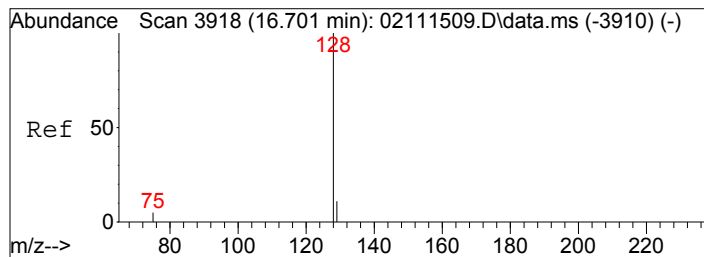
Tgt Ion:106 Resp: 11817
Ion Ratio Lower Upper
106 100
91 217.3 198.3 238.3



#42
1,4-Dichlorobenzene
Concen: 21.41 pg
RT: 15.24 min Scan# 3589
Delta R.T. 0.004 min
Lab File: 02171521.D
Acq: 17 Feb 2015 15:02

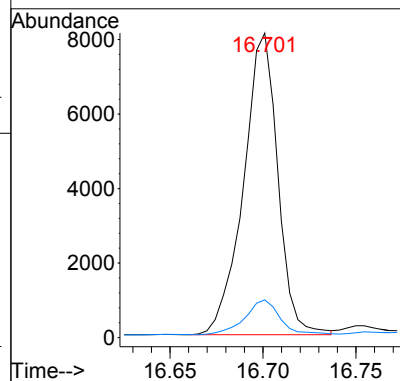
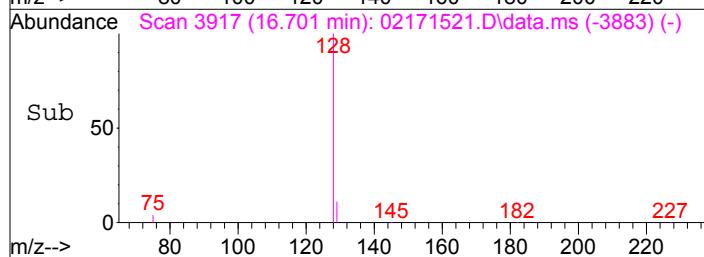
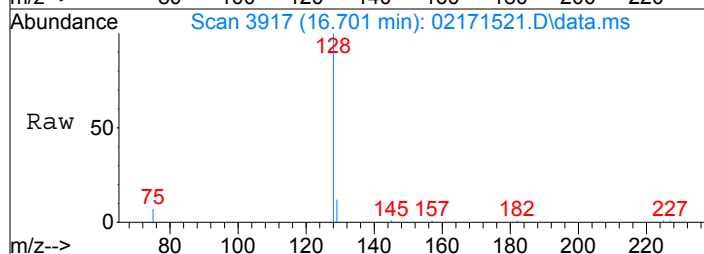
Tgt Ion:146 Resp: 1794
Ion Ratio Lower Upper
146 100
148 62.5 43.5 83.5





#45
Naphthalene
Concen: 68.58 pg
RT: 16.70 min Scan# 3917
Delta R.T. -0.000 min
Lab File: 02171521.D
Acq: 17 Feb 2015 15:02

Tgt Ion:128 Resp: 10404
Ion Ratio Lower Upper
128 100
129 11.8 0.0 30.9



Data File: I:\MS19\DATA\2015 02\17\02171522.D

Acq On : 17 Feb 2015 15:30

Operator: WA

Sample : P1500566-017 (1000mL)

Misc : S29-02041502

ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 18 09:07:13 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

2/18/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	18985	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.71	114	137588	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	24012	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	42812	923.405	pg	0.00
Spiked Amount 1000.000			Recovery	=	92.34%	
30) Toluene-d8 (SS2)	11.38	98	129768	1022.750	pg	0.00
Spiked Amount 1000.000			Recovery	=	102.28%	
40) Bromofluorobenzene (SS3)	14.25	174	54167	1117.377	pg	0.00
Spiked Amount 1000.000			Recovery	=	111.74%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.72	85	152654	1978.528	pg	100
3) Chloromethane	1.83	52	8719	565.870	pg	97
4) Vinyl Chloride	2.01	62	219	N.D.		
5) Bromomethane	2.32	94	1442	41.563	pg	100
6) Chloroethane	2.47	64	343	N.D.		
7) Acetone	2.99	58	245210	9000.059	pg	# 63
8) Trichlorofluoromethane	3.10	101	118747	1791.779	pg	100
9) 1,1-Dichloroethene	3.66	96	152	N.D.		
10) Methylene Chloride	3.80	84	15659	497.949	pg	94
11) Trichlorotrifluoroethane	4.10	151	13762	451.914	pg	99
12) trans-1,2-Dichloroethene	4.74	96	1117	36.971	pg	98
13) 1,1-Dichloroethane	4.95	63	512	N.D.		
14) Methyl tert-Butyl Ether	5.11	73	956	N.D.		
15) cis-1,2-Dichloroethene	5.93	96	3535	105.221	pg	100
16) Chloroform	6.31	83	9754	167.573	pg	99
18) 1,2-Dichloroethane	7.26	62	4172	90.018	pg	99
19) 1,1,1-Trichloroethane	7.59	97	1313	23.196	pg	100
20) Benzene	8.15	78	76873	642.109	pg	100
21) Carbon Tetrachloride	8.34	117	19392	457.613	pg	99
23) 1,2-Dichloropropane	9.16	63	987	32.891	pg	97
24) Bromodichloromethane	0.00	83	0	N.D.	d	
25) Trichloroethene	9.46	130	4430	125.328	pg	99
26) 1,4-Dioxane	9.53	88	167	N.D.		
27) cis-1,3-Dichloropropene	10.46	75	30	N.D.		
28) trans-1,3-Dichloropropene	11.05	75	35	N.D.		
29) 1,1,2-Trichloroethane	11.20	83	117	N.D.		
31) Toluene	11.48	91	302059	2238.371	pg	99
32) 1,2-Dibromoethane	12.12	107	13	N.D.		
33) Tetrachloroethene	12.61	166	2409	57.654	pg	99
35) Chlorobenzene	13.17	112	989	N.D.		
36) Ethylbenzene	13.48	91	49742	330.346	pg	99
37) m,p-Xylene	13.61	91	123020	994.053	pg	97
38) o-Xylene	13.94	106	22360	369.696	pg	98
39) 1,1,2,2-Tetrachloroethane	13.90	83	311	N.D.		
41) 1,3-Dichlorobenzene	15.17	146	456	N.D.		
42) 1,4-Dichlorobenzene	15.24	146	3905	47.060	pg	100
43) 1,2-Dichlorobenzene	15.46	146	157	N.D.		
44) 1,2,4-Trichlorobenzene	16.63	182	116	N.D.		
45) Naphthalene	16.70	128	11415	75.976	pg	98
46) Hexachlorobutadiene	16.98	225	17	N.D.		

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\17\02171522.D

Acq On : 17 Feb 2015 15:30

Operator: WA

Sample : P1500566-017 (1000mL)

Misc : S29-02041502

ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 18 09:07:13 2015

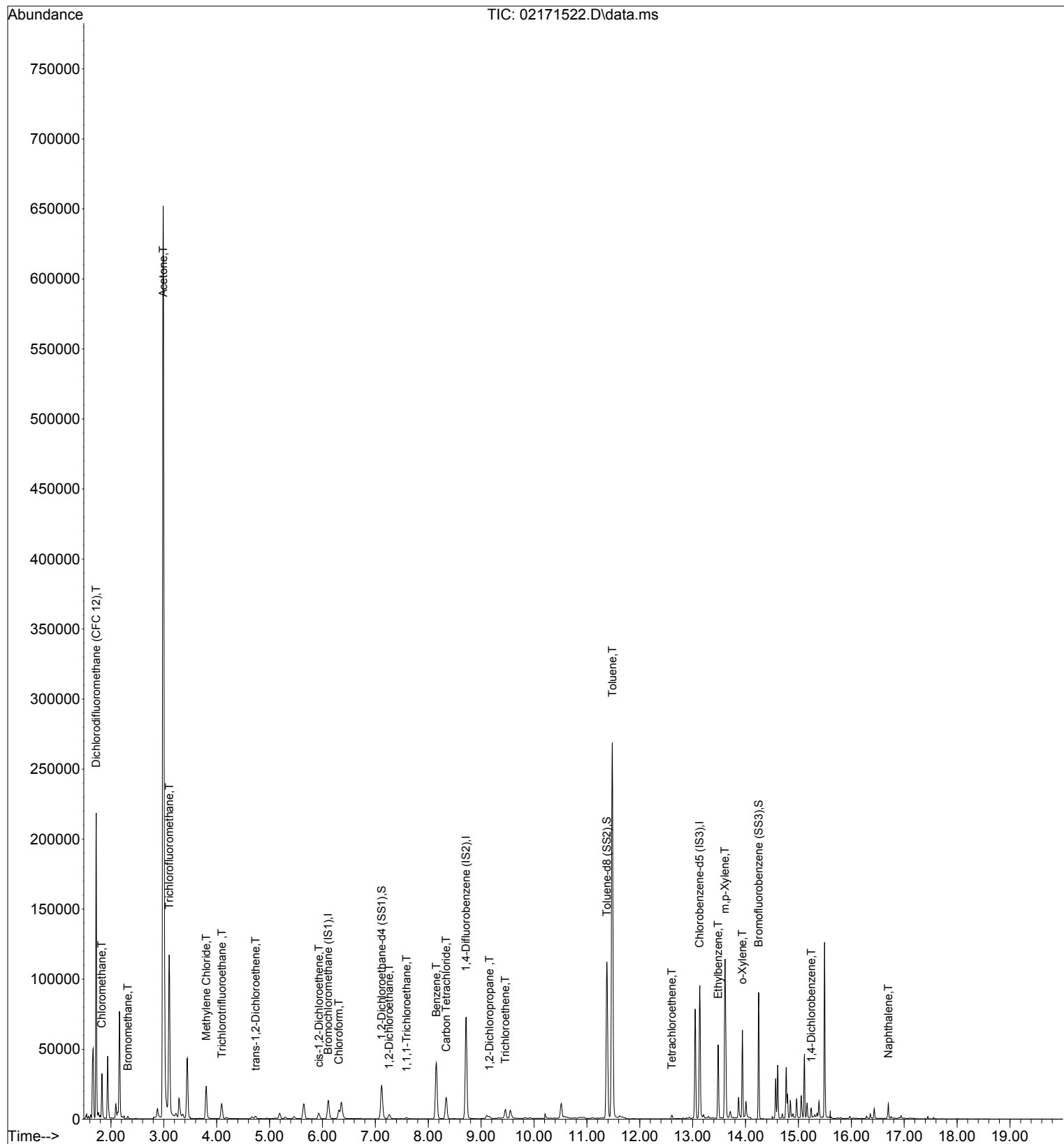
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 02\17\02171522.D

Acq On : 17 Feb 2015 15:30

Operator: WA

Sample : P1500566-017 (1000mL)

Misc : S29-02041502

ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 18 09:07:13 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

WA 2/18/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
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22) 1,4-Difluorobenzene (IS2)	8.71	114	137588	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	24012	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	42812	923.405	pg	0.00
Spiked Amount 1000.000			Recovery	=	92.34%	
30) Toluene-d8 (SS2)	11.38	98	129768	1022.750	pg	0.00
Spiked Amount 1000.000			Recovery	=	102.28%	
40) Bromofluorobenzene (SS3)	14.25	174	54167	1117.377	pg	0.00
Spiked Amount 1000.000			Recovery	=	111.74%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.72	85	152654	1978.528	pg	100
3) Chloromethane	1.83	52	8719	565.870	pg	97
5) Bromomethane	2.32	94	1442	41.563	pg	100
7) Acetone	2.99	58	245210	9000.059	pg	# 63
8) Trichlorofluoromethane	3.10	101	118747	1791.779	pg	100
10) Methylene Chloride	3.80	84	15659	497.949	pg	94
11) Trichlorotrifluoroethane	4.10	151	13762	451.914	pg	99
12) trans-1,2-Dichloroethene	4.74	96	1117	36.971	pg	98
15) cis-1,2-Dichloroethene	5.93	96	3535	105.221	pg	100
16) Chloroform	6.31	83	9754	167.573	pg	99
18) 1,2-Dichloroethane	7.26	62	4172	90.018	pg	99
19) 1,1,1-Trichloroethane	7.59	97	1313	23.196	pg	100
20) Benzene	8.15	78	76873	642.109	pg	100
21) Carbon Tetrachloride	8.34	117	19392	457.613	pg	99
23) 1,2-Dichloropropane	9.16	63	987	32.891	pg	97
25) Trichloroethene	9.46	130	4430	125.328	pg	99
31) Toluene	11.48	91	302059	2238.371	pg	99
33) Tetrachloroethene	12.61	166	2409	57.654	pg	99
36) Ethylbenzene	13.48	91	49742	330.346	pg	99
37) m,p-Xylene	13.61	91	123020	994.053	pg	97
38) o-Xylene	13.94	106	22360	369.696	pg	98
42) 1,4-Dichlorobenzene	15.24	146	3905	47.060	pg	100
45) Naphthalene	16.70	128	11415	75.976	pg	98

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\17\02171522.D

Acq On : 17 Feb 2015 15:30

Operator: WA

Sample : P1500566-017 (1000mL)

Misc : S29-02041502

ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 18 09:07:13 2015

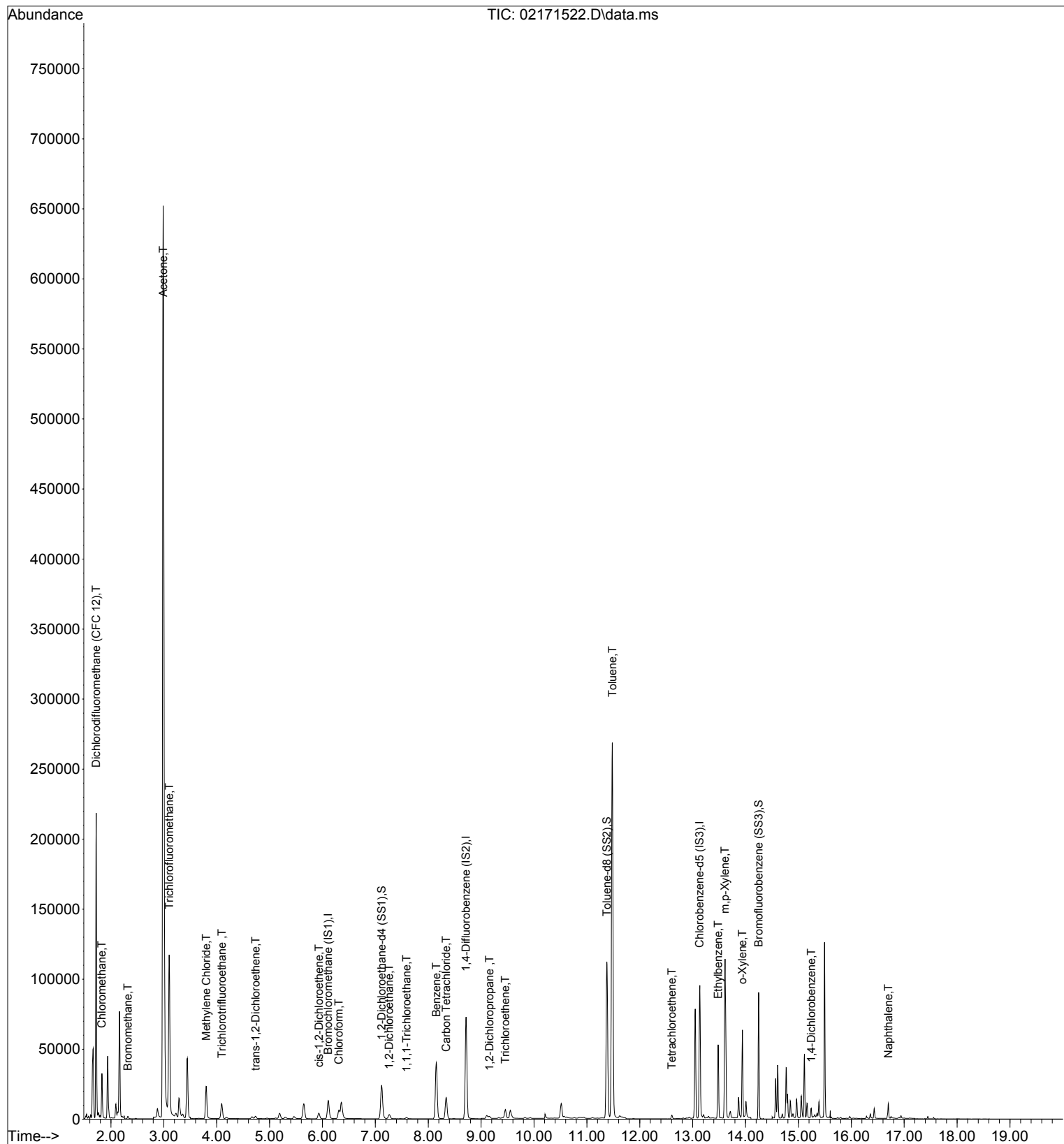
Quant Method : I:\MS19\METHODS\X19021115.M

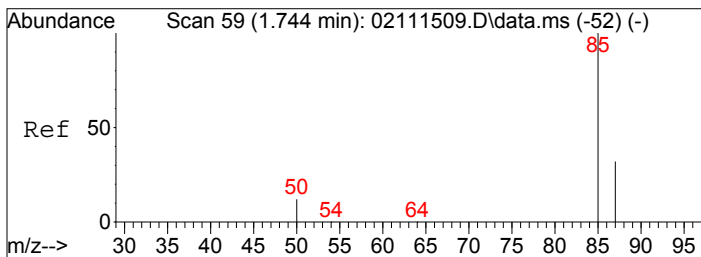
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

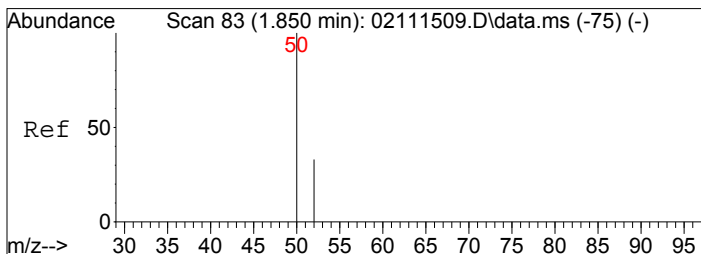
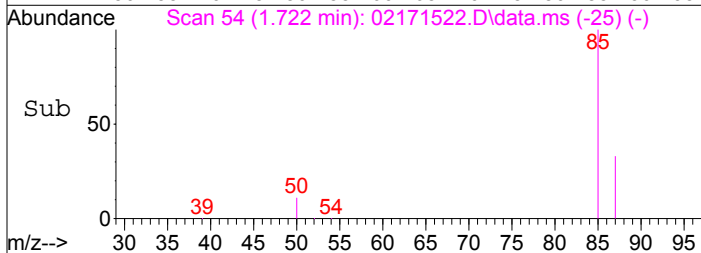
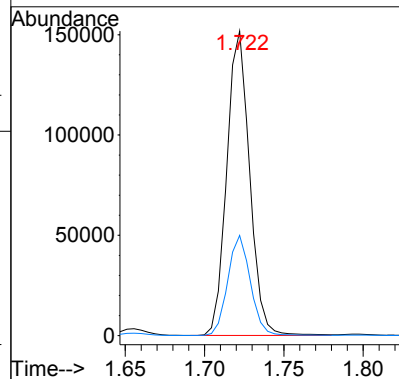
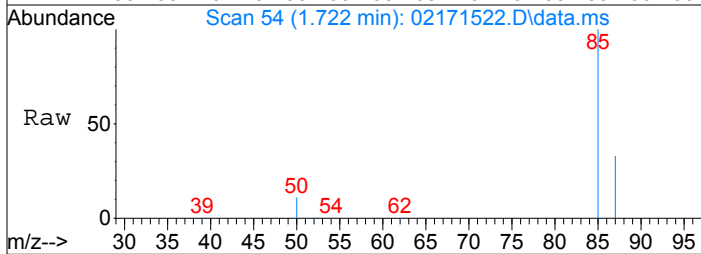
DataAcq Meth:TO15SIM.M





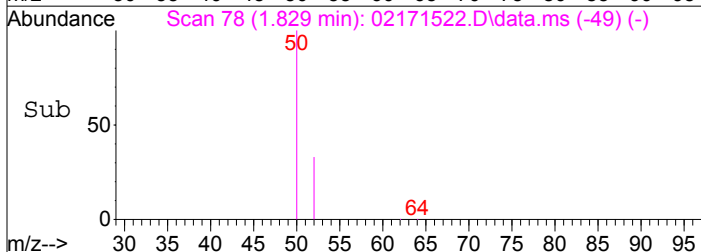
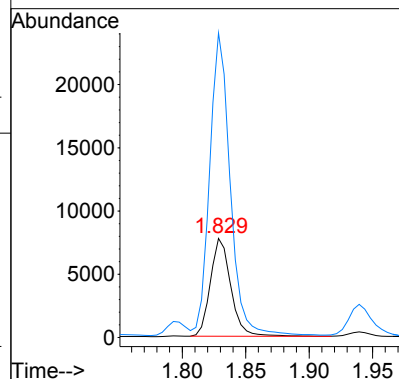
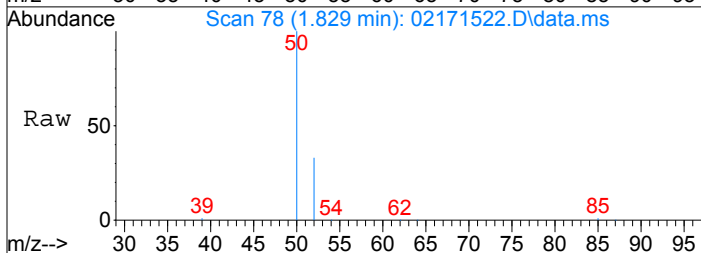
#2
 Dichlorodifluoromethane (CFC 12)
 Concen: 1978.53 pg
 RT: 1.72 min Scan# 54
 Delta R.T. -0.022 min
 Lab File: 02171522.D
 Acq: 17 Feb 2015 15:30

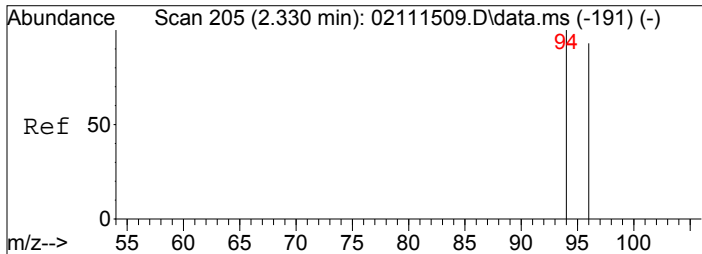
Tgt Ion: 85 Resp: 152654
 Ion Ratio Lower Upper
 85 100
 87 32.5 12.4 52.4



#3
 Chloromethane
 Concen: 565.87 pg
 RT: 1.83 min Scan# 78
 Delta R.T. -0.022 min
 Lab File: 02171522.D
 Acq: 17 Feb 2015 15:30

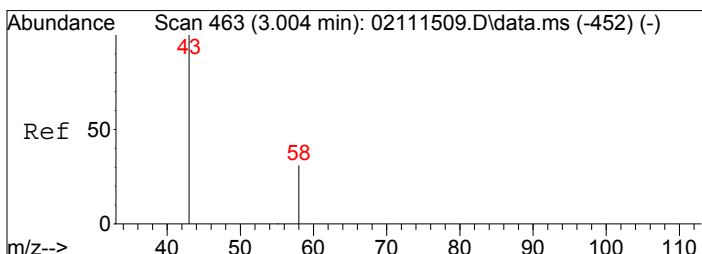
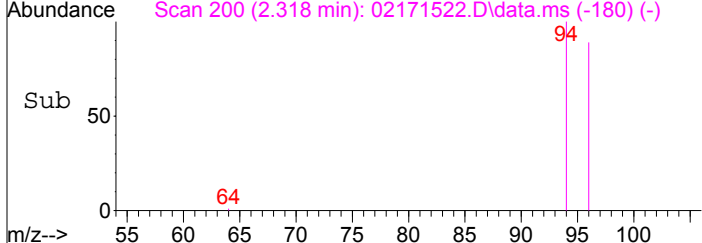
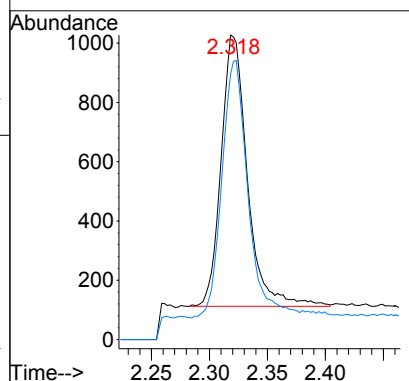
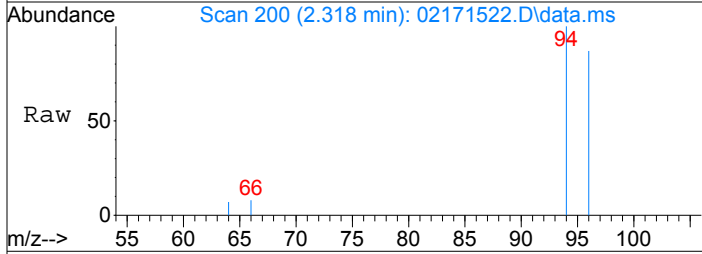
Tgt Ion: 52 Resp: 8719
 Ion Ratio Lower Upper
 52 100
 50 310.2 283.7 323.7





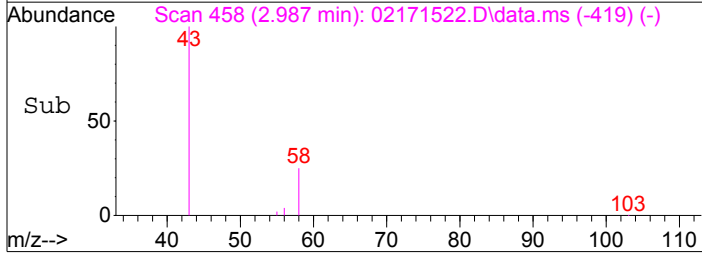
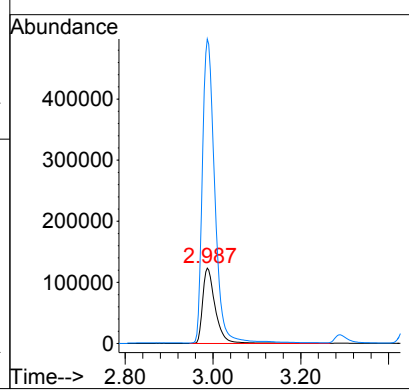
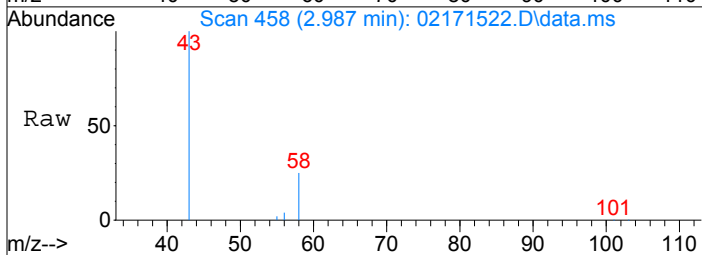
#5
 Bromomethane
 Concen: 41.56 pg
 RT: 2.32 min Scan# 200
 Delta R.T. -0.012 min
 Lab File: 02171522.D
 Acq: 17 Feb 2015 15:30

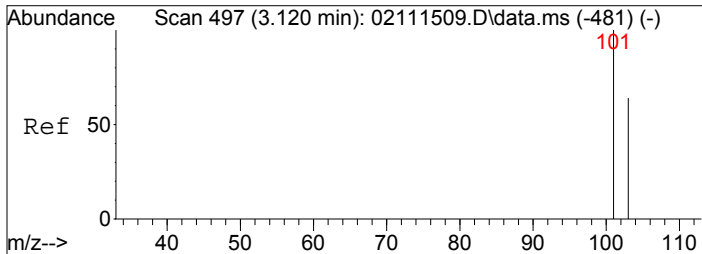
Tgt Ion:	94	Resp:	1442
Ion Ratio	Lower	Upper	
94	100		
96	94.5	75.5	113.3



#7
 Acetone
 Concen: 9000.06 pg
 RT: 2.99 min Scan# 458
 Delta R.T. -0.017 min
 Lab File: 02171522.D
 Acq: 17 Feb 2015 15:30

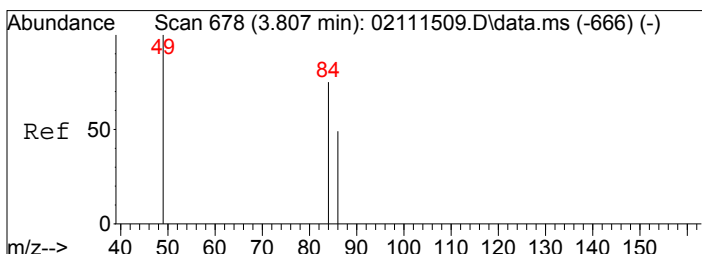
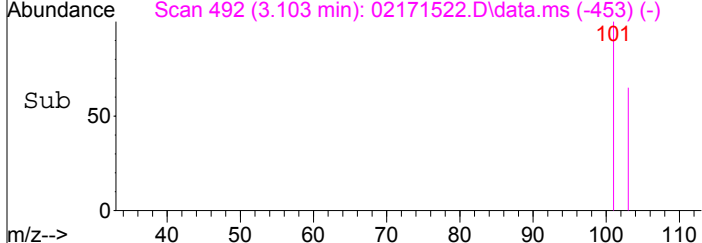
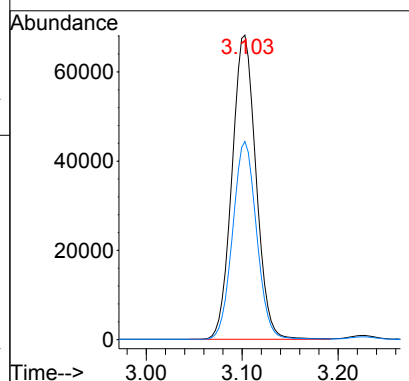
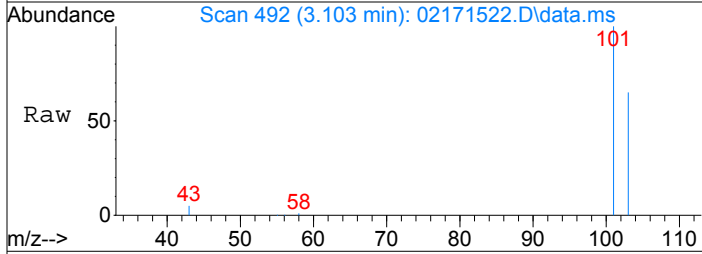
Tgt Ion:	58	Resp:	245210
Ion Ratio	Lower	Upper	
58	100		
43	398.5	301.8	341.8#





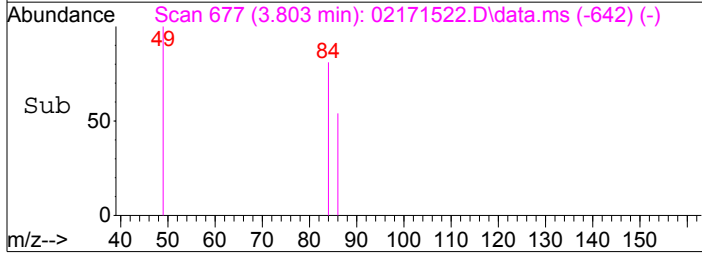
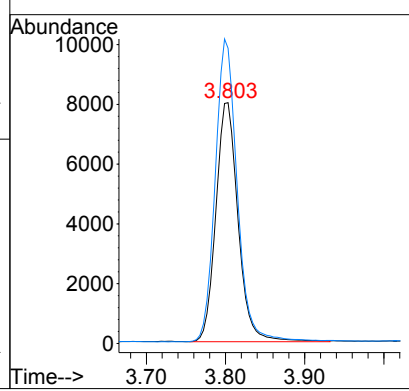
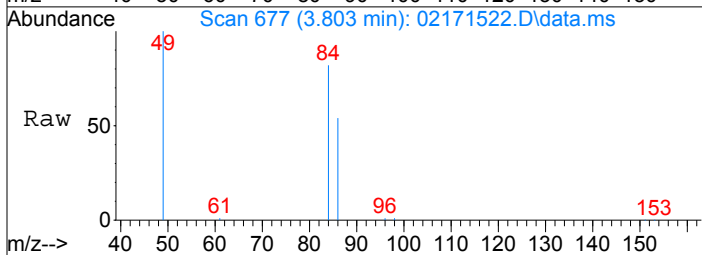
#8
 Trichlorofluoromethane
 Concen: 1791.78 pg
 RT: 3.10 min Scan# 492
 Delta R.T. -0.017 min
 Lab File: 02171522.D
 Acq: 17 Feb 2015 15:30

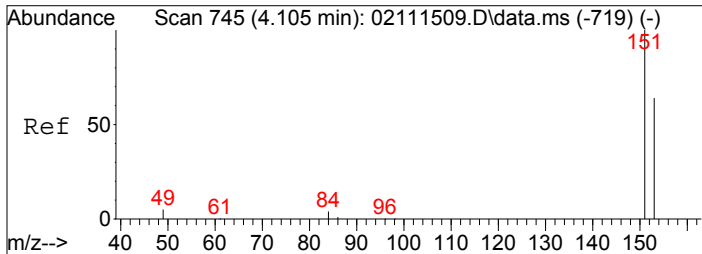
Tgt Ion: 101	Resp: 118747
Ion Ratio	Lower Upper
101	100
103	64.8 51.8 77.6



#10
 Methylene Chloride
 Concen: 497.95 pg
 RT: 3.80 min Scan# 677
 Delta R.T. -0.004 min
 Lab File: 02171522.D
 Acq: 17 Feb 2015 15:30

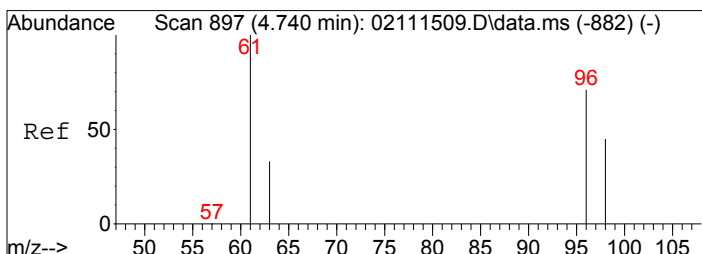
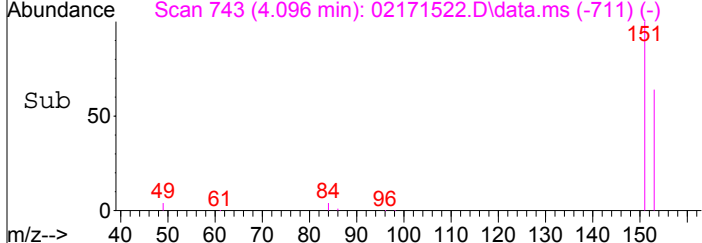
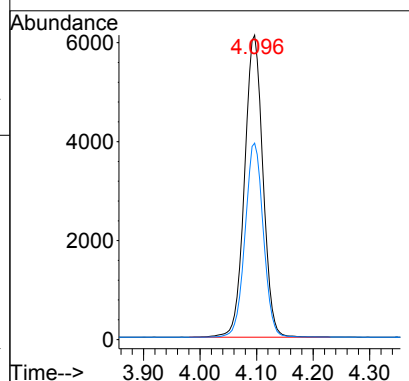
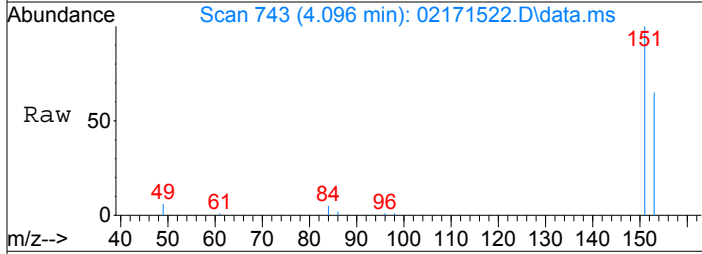
Tgt Ion: 84	Resp: 15659
Ion Ratio	Lower Upper
84	100
49	125.3 112.3 152.3





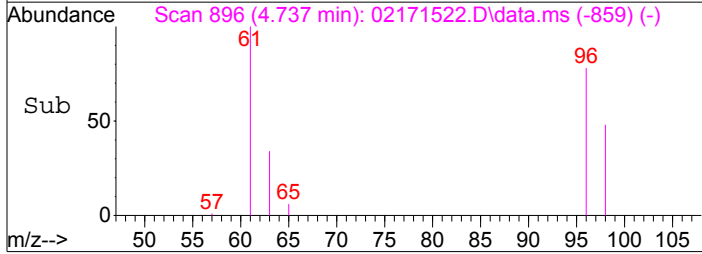
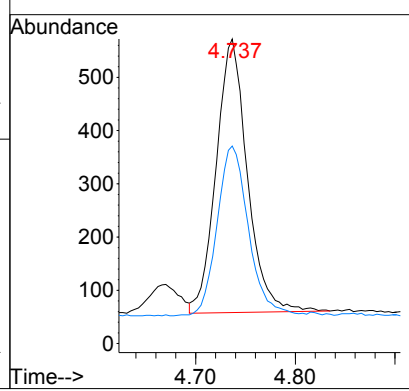
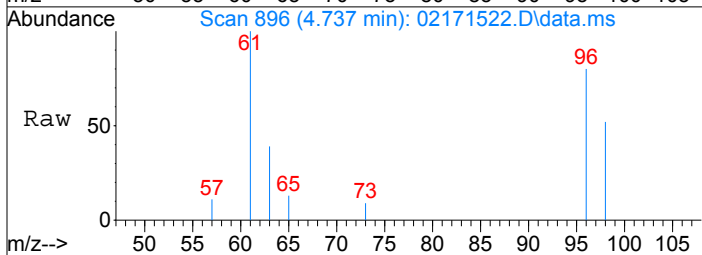
#11
 Trichlorotrifluoroethane
 Concen: 451.91 pg
 RT: 4.10 min Scan# 743
 Delta R.T. -0.009 min
 Lab File: 02171522.D
 Acq: 17 Feb 2015 15:30

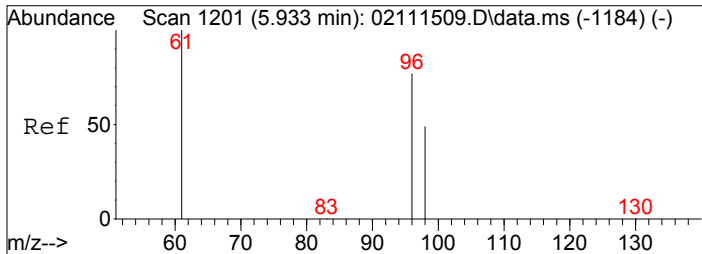
Tgt Ion: 151	Resp: 13762
Ion Ratio	Lower Upper
151	100
153	64.0 43.6 83.6



#12
 trans-1,2-Dichloroethene
 Concen: 36.97 pg
 RT: 4.74 min Scan# 896
 Delta R.T. -0.004 min
 Lab File: 02171522.D
 Acq: 17 Feb 2015 15:30

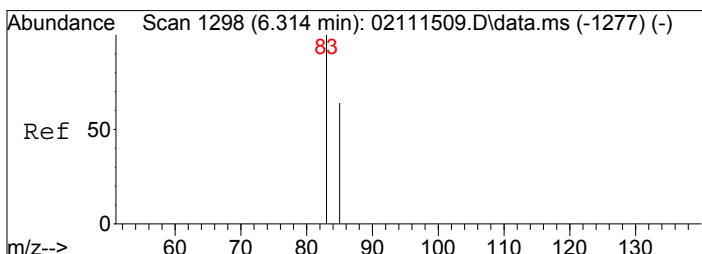
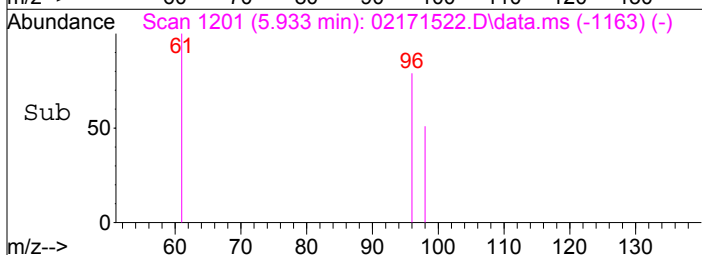
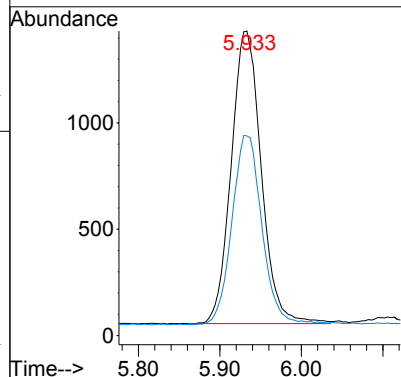
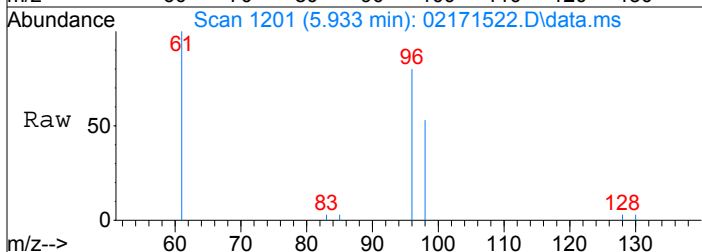
Tgt Ion: 96	Resp: 1117
Ion Ratio	Lower Upper
96	100
98	62.5 43.7 83.7





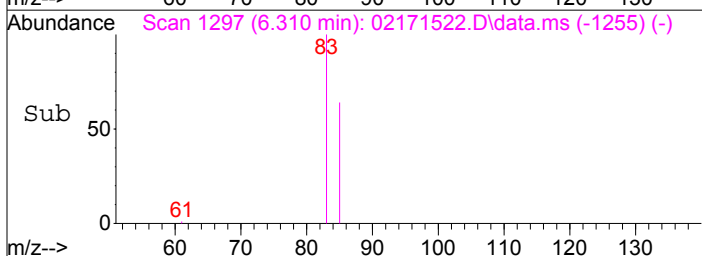
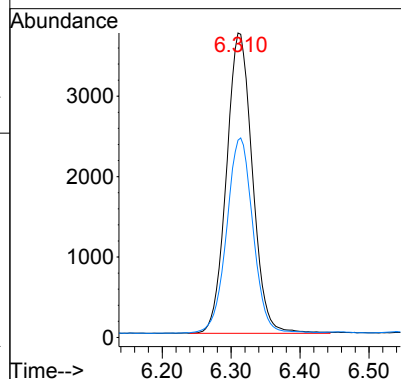
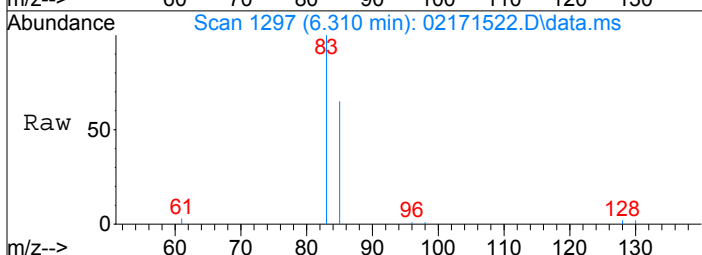
#15
 cis-1,2-Dichloroethene
 Concen: 105.22 pg
 RT: 5.93 min Scan# 1201
 Delta R.T. 0.000 min
 Lab File: 02171522.D
 Acq: 17 Feb 2015 15:30

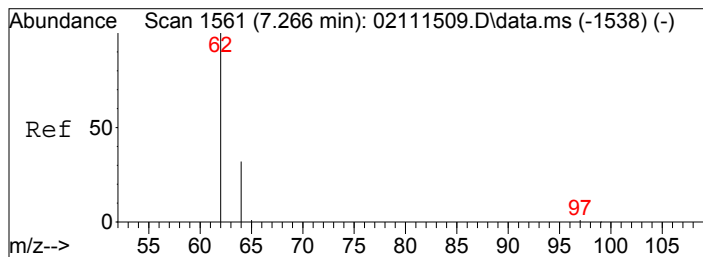
Tgt Ion: 96 Resp: 3535
 Ion Ratio Lower Upper
 96 100
 98 64.4 44.3 84.3



#16
 Chloroform
 Concen: 167.57 pg
 RT: 6.31 min Scan# 1297
 Delta R.T. -0.004 min
 Lab File: 02171522.D
 Acq: 17 Feb 2015 15:30

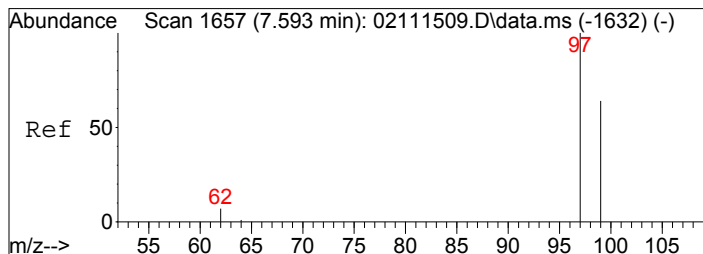
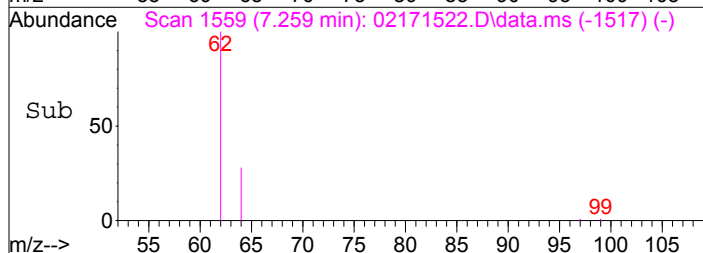
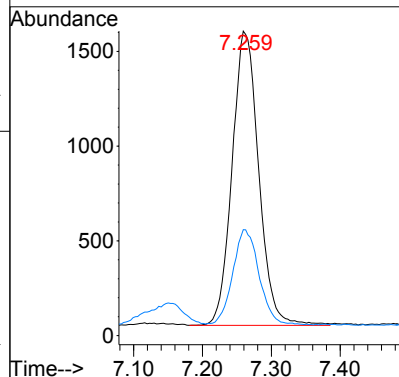
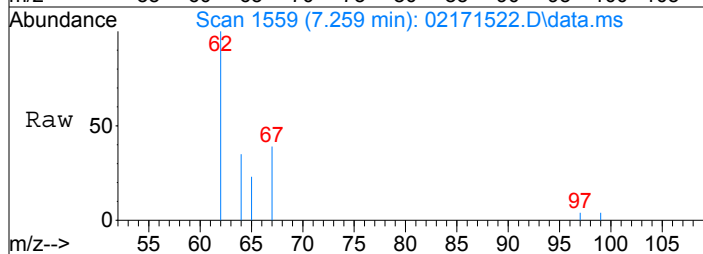
Tgt Ion: 83 Resp: 9754
 Ion Ratio Lower Upper
 83 100
 85 66.3 45.4 85.4





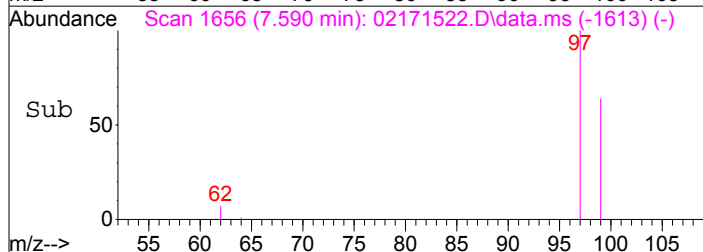
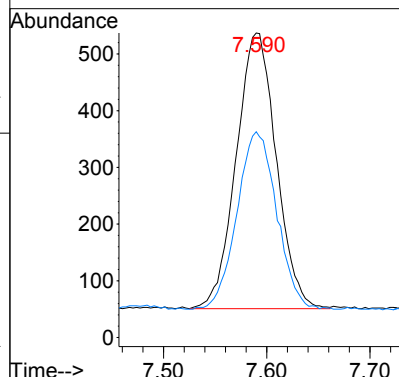
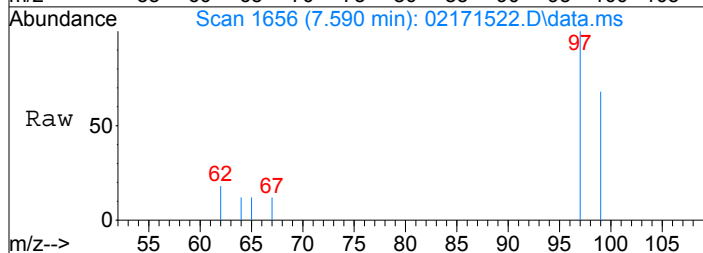
#18
1,2-Dichloroethane
Concen: 90.02 pg
RT: 7.26 min Scan# 1559
Delta R.T. -0.006 min
Lab File: 02171522.D
Acq: 17 Feb 2015 15:30

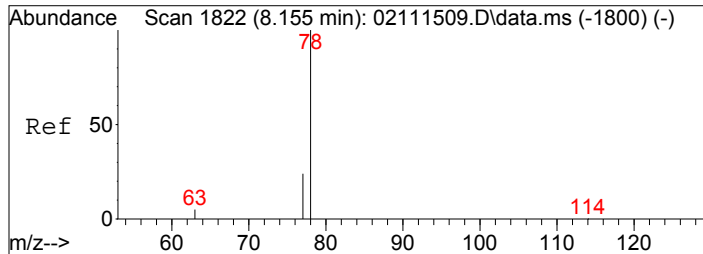
Tgt Ion: 62 Resp: 4172
Ion Ratio Lower Upper
62 100
64 32.0 11.6 51.6



#19
1,1,1-Trichloroethane
Concen: 23.20 pg
RT: 7.59 min Scan# 1656
Delta R.T. -0.003 min
Lab File: 02171522.D
Acq: 17 Feb 2015 15:30

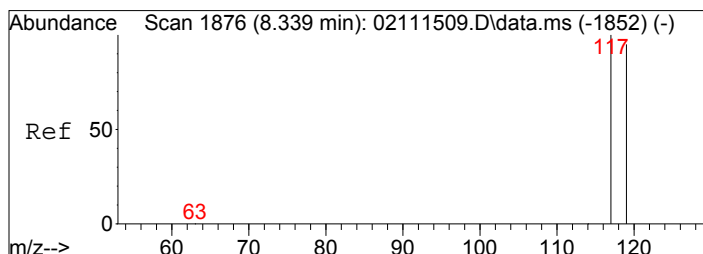
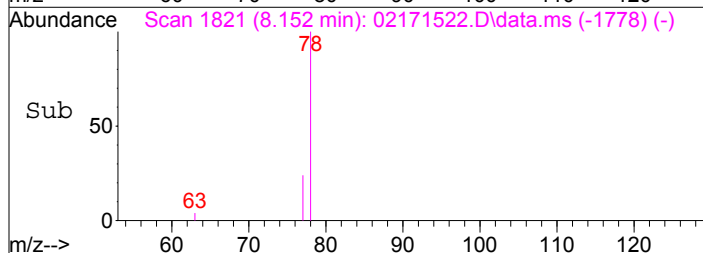
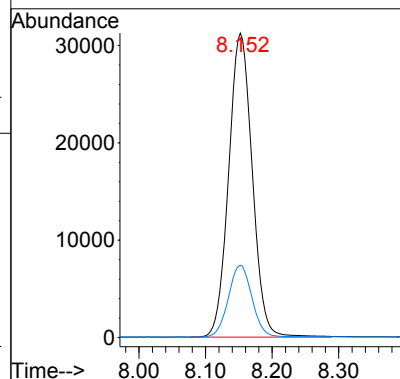
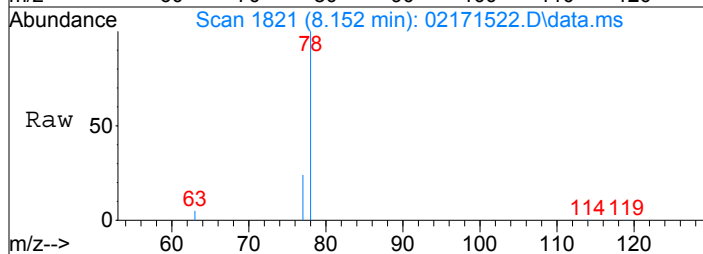
Tgt Ion: 97 Resp: 1313
Ion Ratio Lower Upper
97 100
99 63.8 44.0 84.0





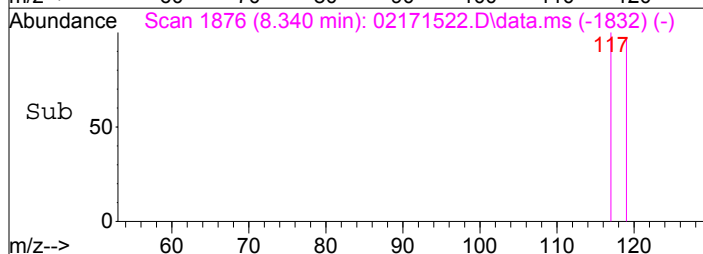
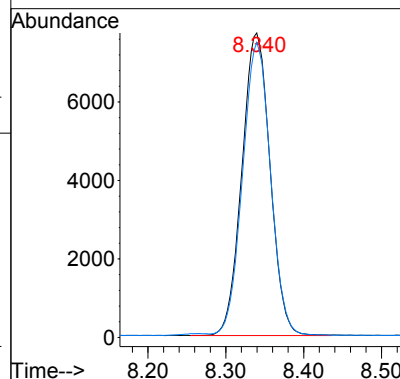
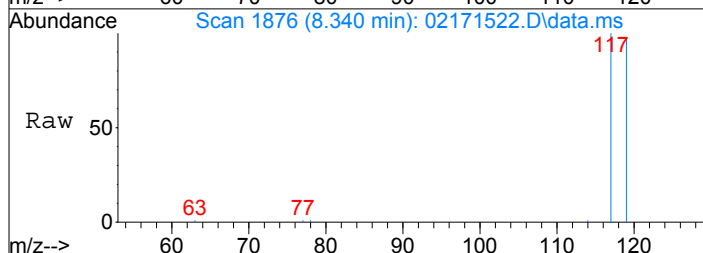
#20
Benzene
Concen: 642.11 pg
RT: 8.15 min Scan# 1821
Delta R.T. -0.003 min
Lab File: 02171522.D
Acq: 17 Feb 2015 15:30

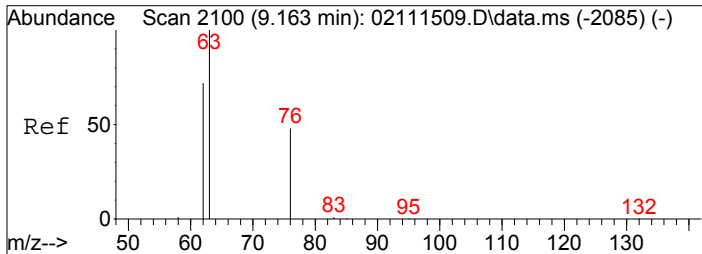
Tgt Ion: 78 Resp: 76873
Ion Ratio Lower Upper
78 100
77 23.7 3.7 43.7



#21
Carbon Tetrachloride
Concen: 457.61 pg
RT: 8.34 min Scan# 1876
Delta R.T. 0.000 min
Lab File: 02171522.D
Acq: 17 Feb 2015 15:30

Tgt Ion: 117 Resp: 19392
Ion Ratio Lower Upper
117 100
119 96.0 75.5 115.5

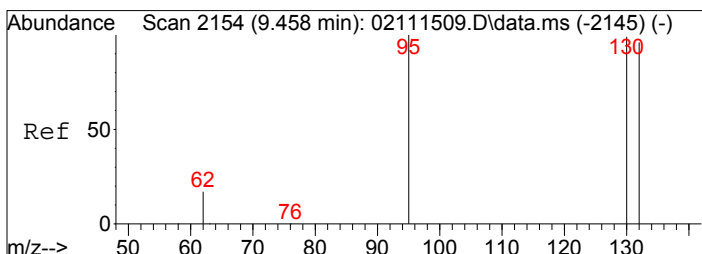
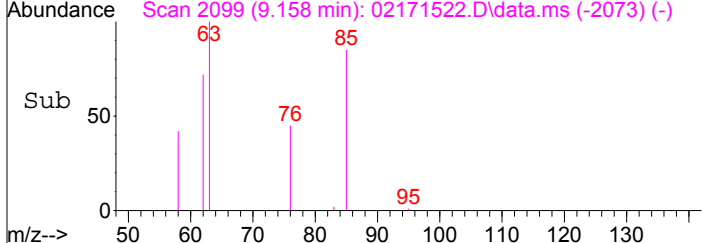
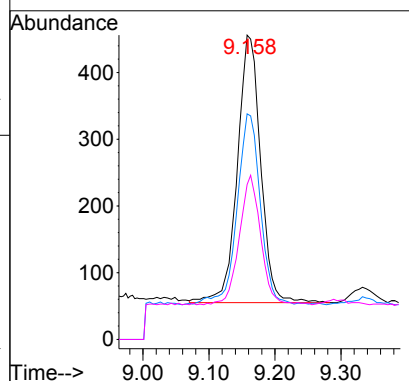
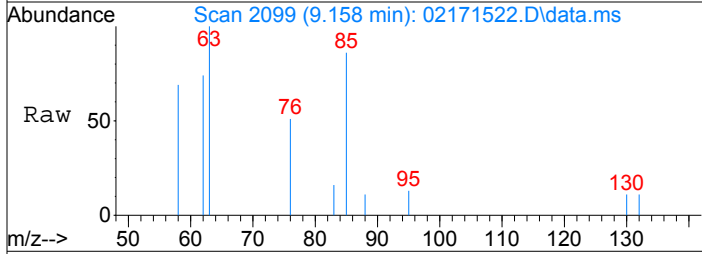




#23
 1,2-Dichloropropane
 Concen: 32.89 pg
 RT: 9.16 min Scan# 2099
 Delta R.T. -0.005 min
 Lab File: 02171522.D
 Acq: 17 Feb 2015 15:30

Tgt Ion: 63 Resp: 987

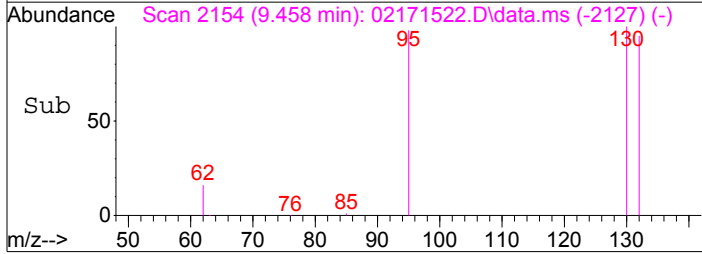
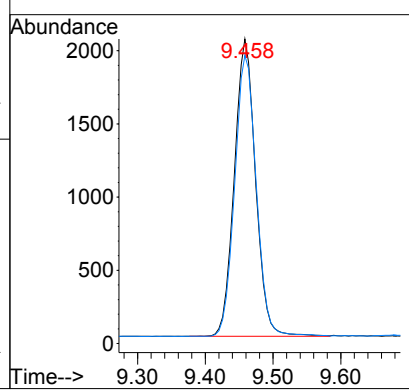
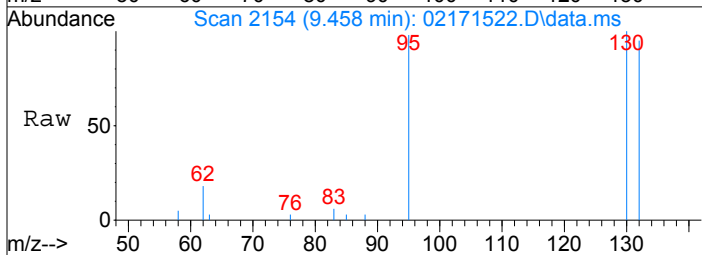
Ion	Ratio	Lower	Upper
63	100		
62	71.0	52.0	92.0
76	44.3	28.1	68.1

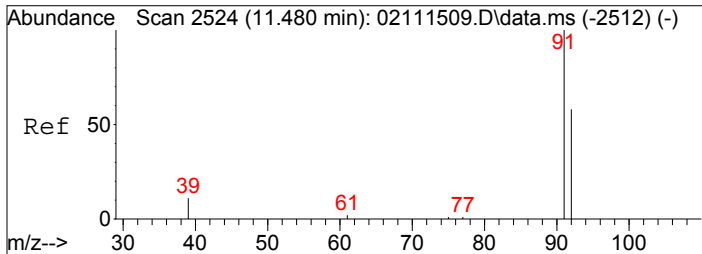


#25
 Trichloroethene
 Concen: 125.33 pg
 RT: 9.46 min Scan# 2154
 Delta R.T. 0.000 min
 Lab File: 02171522.D
 Acq: 17 Feb 2015 15:30

Tgt Ion: 130 Resp: 4430

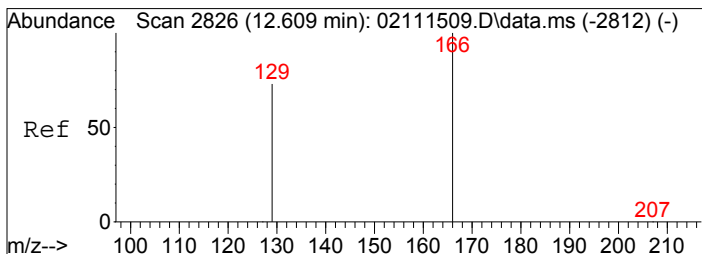
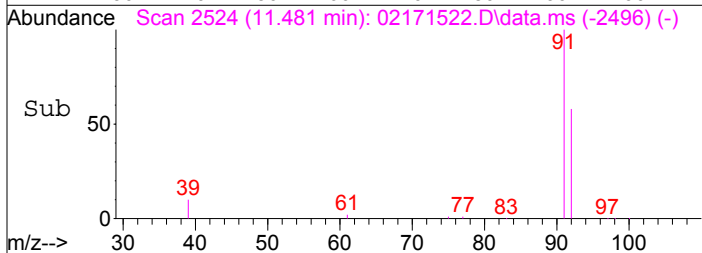
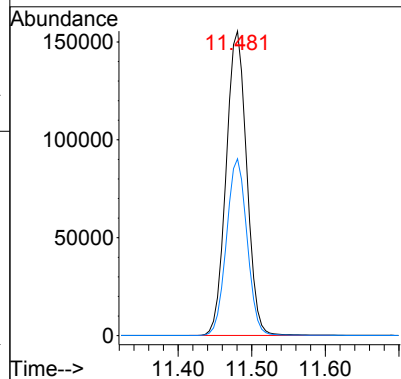
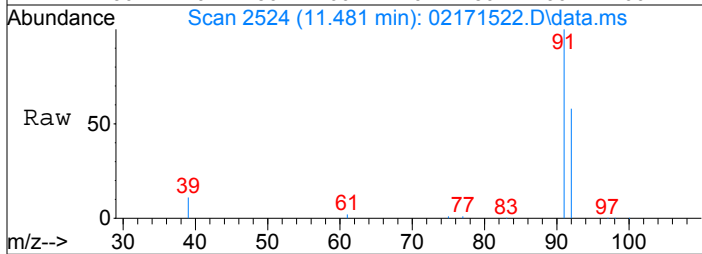
Ion	Ratio	Lower	Upper
130	100		
132	96.0	77.1	117.1





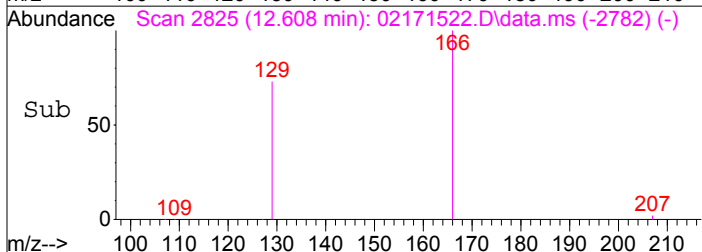
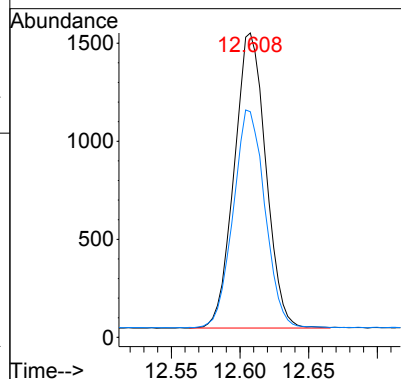
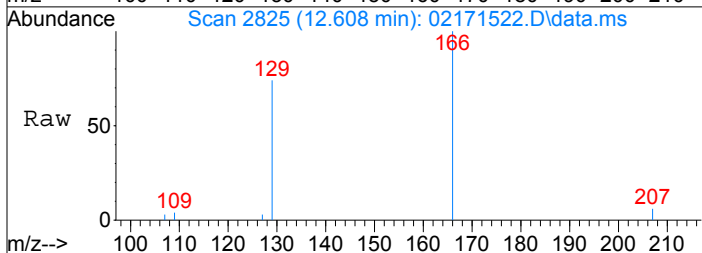
#31
Toluene
Concen: 2238.37 pg
RT: 11.48 min Scan# 2524
Delta R.T. 0.000 min
Lab File: 02171522.D
Acq: 17 Feb 2015 15:30

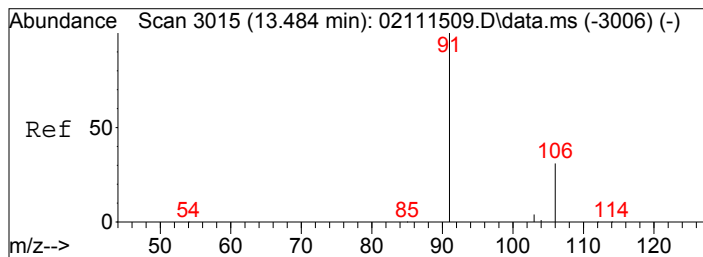
Tgt Ion	91	Resp	302059
Ion Ratio	100	Lower	Upper
91	100		
92	58.1	37.7	77.7



#33
Tetrachloroethene
Concen: 57.65 pg
RT: 12.61 min Scan# 2825
Delta R.T. -0.002 min
Lab File: 02171522.D
Acq: 17 Feb 2015 15:30

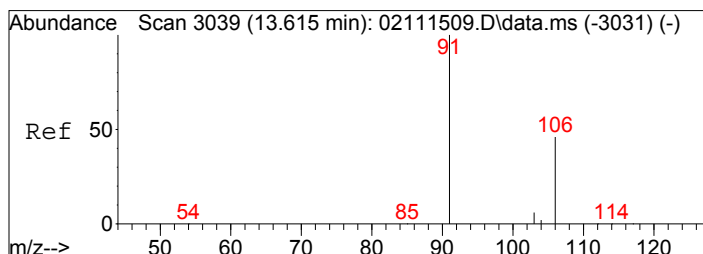
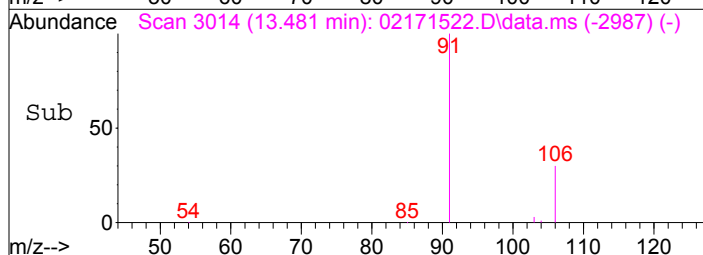
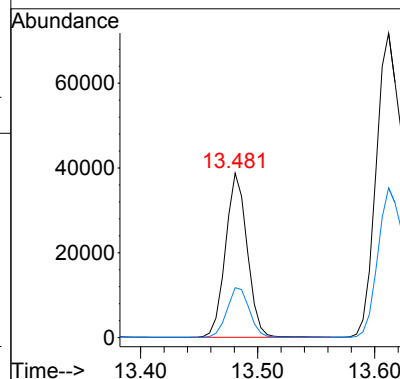
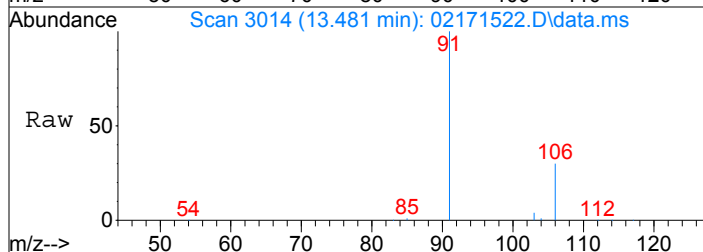
Tgt Ion	166	Resp	2409	
Ion Ratio <th>166</th> <th>100</th> <th>Lower</th> <th>Upper</th>	166	100	Lower	Upper
129	74.1	53.3	93.3	





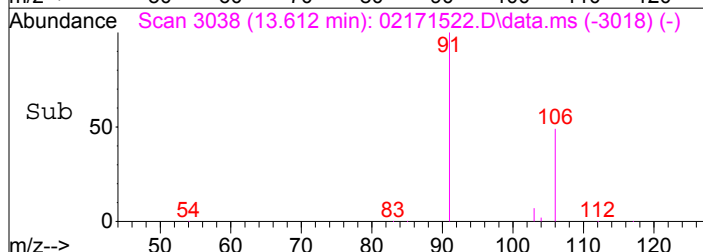
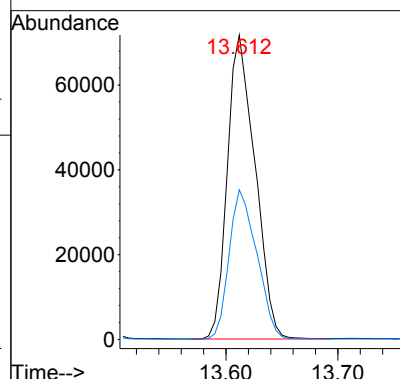
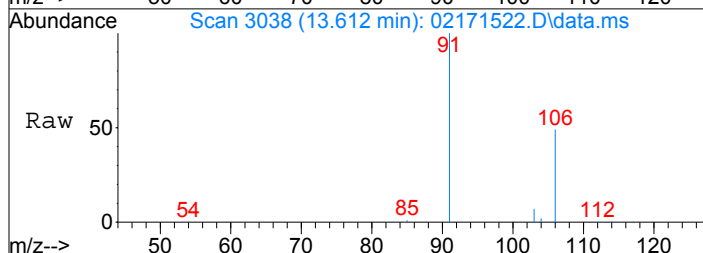
#36
Ethylbenzene
Concen: 330.35 pg
RT: 13.48 min Scan# 3014
Delta R.T. -0.003 min
Lab File: 02171522.D
Acq: 17 Feb 2015 15:30

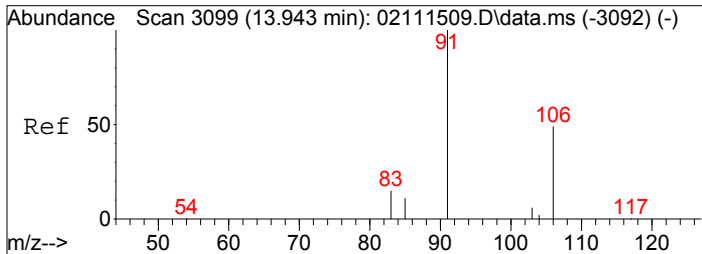
Tgt Ion: 91 Resp: 49742
Ion Ratio Lower Upper
91 100
106 31.3 10.9 50.9



#37
m,p-Xylene
Concen: 994.05 pg
RT: 13.61 min Scan# 3038
Delta R.T. -0.003 min
Lab File: 02171522.D
Acq: 17 Feb 2015 15:30

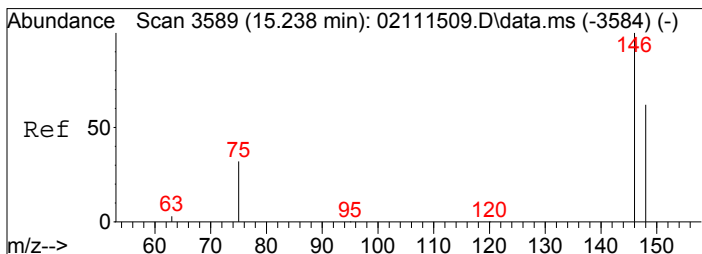
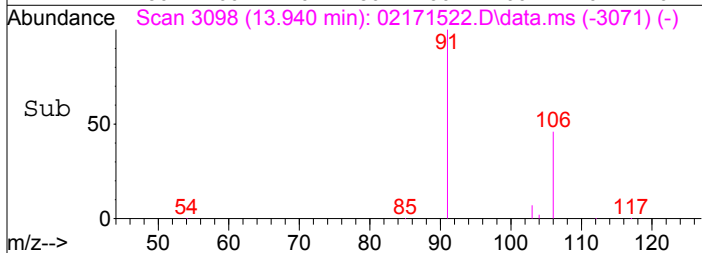
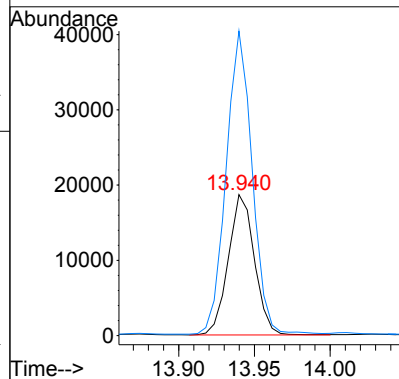
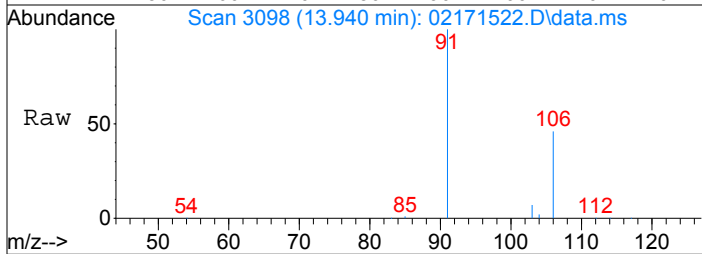
Tgt Ion: 91 Resp: 123020
Ion Ratio Lower Upper
91 100
106 49.4 27.5 67.5





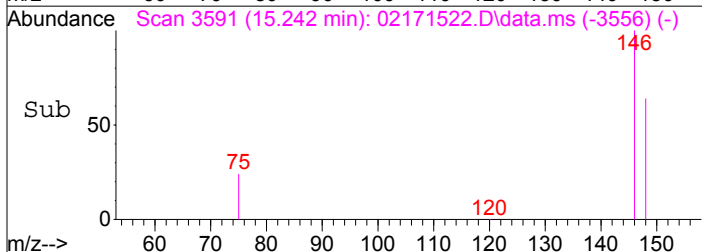
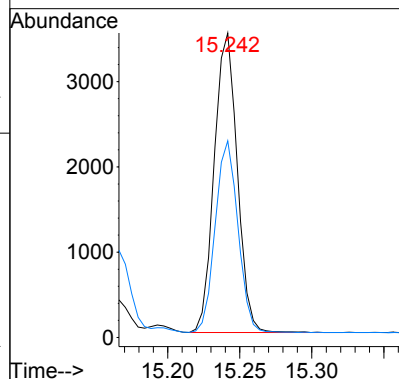
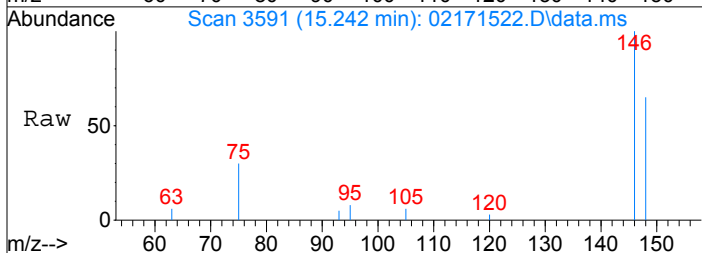
#38
o-Xylene
Concen: 369.70 pg
RT: 13.94 min Scan# 3098
Delta R.T. -0.003 min
Lab File: 02171522.D
Acq: 17 Feb 2015 15:30

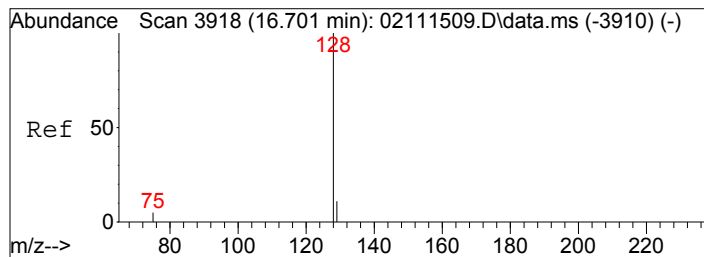
Tgt Ion:106 Resp: 22360
Ion Ratio Lower Upper
106 100
91 214.9 198.3 238.3



#42
1,4-Dichlorobenzene
Concen: 47.06 pg
RT: 15.24 min Scan# 3591
Delta R.T. 0.004 min
Lab File: 02171522.D
Acq: 17 Feb 2015 15:30

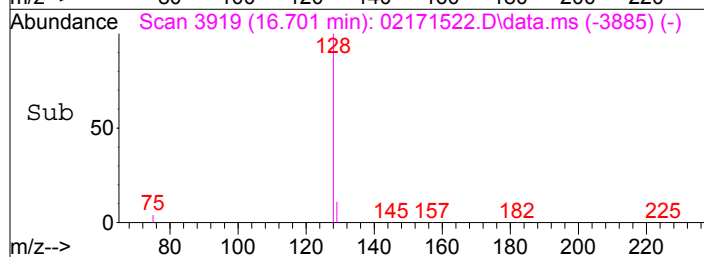
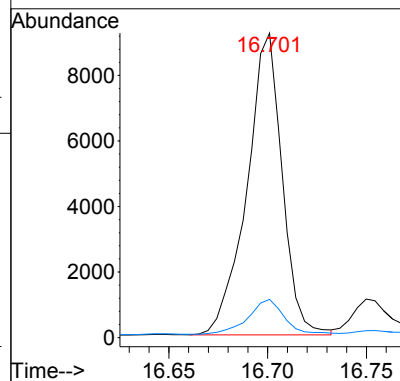
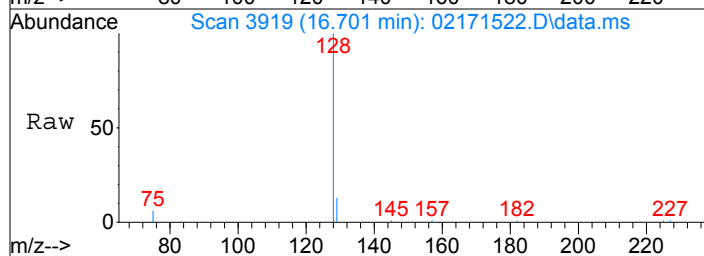
Tgt Ion:146 Resp: 3905
Ion Ratio Lower Upper
146 100
148 63.4 43.5 83.5





#45
Naphthalene
Concen: 75.98 pg
RT: 16.70 min Scan# 3919
Delta R.T. -0.000 min
Lab File: 02171522.D
Acq: 17 Feb 2015 15:30

Tgt Ion:128 Resp: 11415
Ion Ratio Lower Upper
128 100
129 11.8 0.0 30.9



Data File: I:\MS19\DATA\2015 02\17\02171523.D

Acq On : 17 Feb 2015 16:28

Operator: WA

Sample : P1500566-018 (1000mL)

Misc : S29-02041502

ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 18 09:08:30 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

2/18/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	18894	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.71	114	139106	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	23288	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	42759	926.704	pg	0.00
Spiked Amount 1000.000			Recovery	=	92.67%	
30) Toluene-d8 (SS2)	11.38	98	128151	998.984	pg	0.00
Spiked Amount 1000.000			Recovery	=	99.90%	
40) Bromofluorobenzene (SS3)	14.25	174	50038	1064.293	pg	0.00
Spiked Amount 1000.000			Recovery	=	106.43%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.72	85	143976	1875.042	pg	100
3) Chloromethane	1.83	52	8796	573.617	pg	# 80
4) Vinyl Chloride	0.00	62	0	N.D.	d	
5) Bromomethane	2.32	94	2229	64.557	pg	88
6) Chloroethane	0.00	64	0	N.D.	d	
7) Acetone	2.99	58	365294	13472.135	pg	# 79
8) Trichlorofluoromethane	3.10	101	209238	3172.408	pg	99
9) 1,1-Dichloroethene	3.65	96	159	N.D.		
10) Methylene Chloride	3.79	84	15012	479.674	pg	97
11) Trichlorotrifluoroethane	4.09	151	12931	426.671	pg	100
12) trans-1,2-Dichloroethene	4.73	96	1201	39.943	pg	98
13) 1,1-Dichloroethane	4.95	63	477	N.D.		
14) Methyl tert-Butyl Ether	5.11	73	1068	N.D.		
15) cis-1,2-Dichloroethene	5.93	96	2418	72.320	pg	95
16) Chloroform	6.31	83	9675	167.017	pg	99
18) 1,2-Dichloroethane	7.26	62	4626	100.295	pg	95
19) 1,1,1-Trichloroethane	7.59	97	1464	25.989	pg	94
20) Benzene	8.15	78	432142	3627.006	pg	100
21) Carbon Tetrachloride	8.34	117	20279	480.849	pg	99
23) 1,2-Dichloropropane	9.16	63	1204	39.685	pg	94
24) Bromodichloromethane	0.00	83	0	N.D.	d	
25) Trichloroethene	9.45	130	2850	79.749	pg	97
26) 1,4-Dioxane	9.53	88	820	30.787	pg	# 1
27) cis-1,3-Dichloropropene	10.46	75	45	N.D.		
28) trans-1,3-Dichloropropene	11.04	75	93	N.D.		
29) 1,1,2-Trichloroethane	11.19	83	115	N.D.		
31) Toluene	11.48	91	402166	2947.680	pg	99
32) 1,2-Dibromoethane	12.13	107	71	N.D.		
33) Tetrachloroethene	12.61	166	2819	66.731	pg	99
35) Chlorobenzene	13.17	112	1192	N.D.		
36) Ethylbenzene	13.48	91	77450	530.351	pg	99
37) m,p-Xylene	13.61	91	212092	1767.072	pg	97
38) o-Xylene	13.94	106	41866	713.724	pg	98
39) 1,1,2,2-Tetrachloroethane	13.89	83	385	N.D.		
41) 1,3-Dichlorobenzene	0.00	146	0	N.D.	d	
42) 1,4-Dichlorobenzene	15.24	146	3511	43.628	pg	100
43) 1,2-Dichlorobenzene	15.46	146	178	N.D.		
44) 1,2,4-Trichlorobenzene	16.63	182	157	N.D.		
45) Naphthalene	16.70	128	41907	287.596	pg	96
46) Hexachlorobutadiene	16.96	225	32	N.D.		

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\17\02171523.D

Acq On : 17 Feb 2015 16:28

Operator: WA

Sample : P1500566-018 (1000mL)

Misc : S29-02041502

ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 18 09:08:30 2015

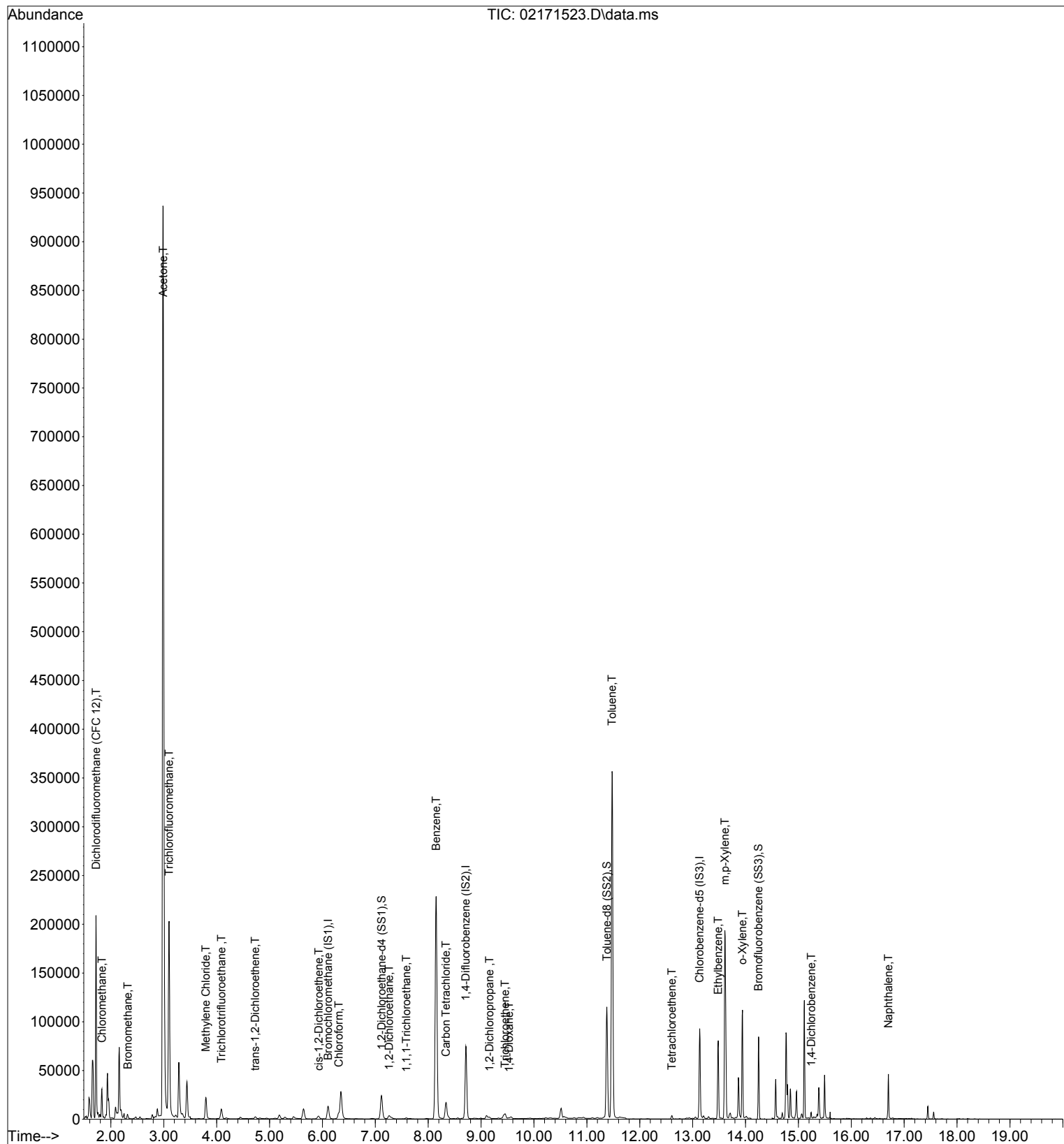
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 02\17\02171523.D

Acq On : 17 Feb 2015 16:28

Operator: WA

Sample : P1500566-018 (1000mL)

Misc : S29-02041502

ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 18 09:08:30 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

2/18/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	18894	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.71	114	139106	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	23288	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	42759	926.704	pg	0.00
Spiked Amount 1000.000			Recovery	=	92.67%	
30) Toluene-d8 (SS2)	11.38	98	128151	998.984	pg	0.00
Spiked Amount 1000.000			Recovery	=	99.90%	
40) Bromofluorobenzene (SS3)	14.25	174	50038	1064.293	pg	0.00
Spiked Amount 1000.000			Recovery	=	106.43%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.72	85	143976	1875.042	pg	100
3) Chloromethane	1.83	52	8796	573.617	pg	# 80
5) Bromomethane	2.32	94	2229	64.557	pg	88
7) Acetone	2.99	58	365294	13472.135	pg	# 79
8) Trichlorofluoromethane	3.10	101	209238	3172.408	pg	99
10) Methylene Chloride	3.79	84	15012	479.674	pg	97
11) Trichlorotrifluoroethane	4.09	151	12931	426.671	pg	100
12) trans-1,2-Dichloroethene	4.73	96	1201	39.943	pg	98
15) cis-1,2-Dichloroethene	5.93	96	2418	72.320	pg	95
16) Chloroform	6.31	83	9675	167.017	pg	99
18) 1,2-Dichloroethane	7.26	62	4626	100.295	pg	95
19) 1,1,1-Trichloroethane	7.59	97	1464	25.989	pg	94
20) Benzene	8.15	78	432142	3627.006	pg	100
21) Carbon Tetrachloride	8.34	117	20279	480.849	pg	99
23) 1,2-Dichloropropane	9.16	63	1204	39.685	pg	94
25) Trichloroethene	9.45	130	2850	79.749	pg	97
26) 1,4-Dioxane	9.53	88	820	30.787	pg	# 1
31) Toluene	11.48	91	402166	2947.680	pg	99
33) Tetrachloroethene	12.61	166	2819	66.731	pg	99
36) Ethylbenzene	13.48	91	77450	530.351	pg	99
37) m,p-Xylene	13.61	91	212092	1767.072	pg	97
38) o-Xylene	13.94	106	41866	713.724	pg	98
42) 1,4-Dichlorobenzene	15.24	146	3511	43.628	pg	100
45) Naphthalene	16.70	128	41907	287.596	pg	96

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\17\02171523.D

Acq On : 17 Feb 2015 16:28

Operator: WA

Sample : P1500566-018 (1000mL)

Misc : S29-02041502

ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 18 09:08:30 2015

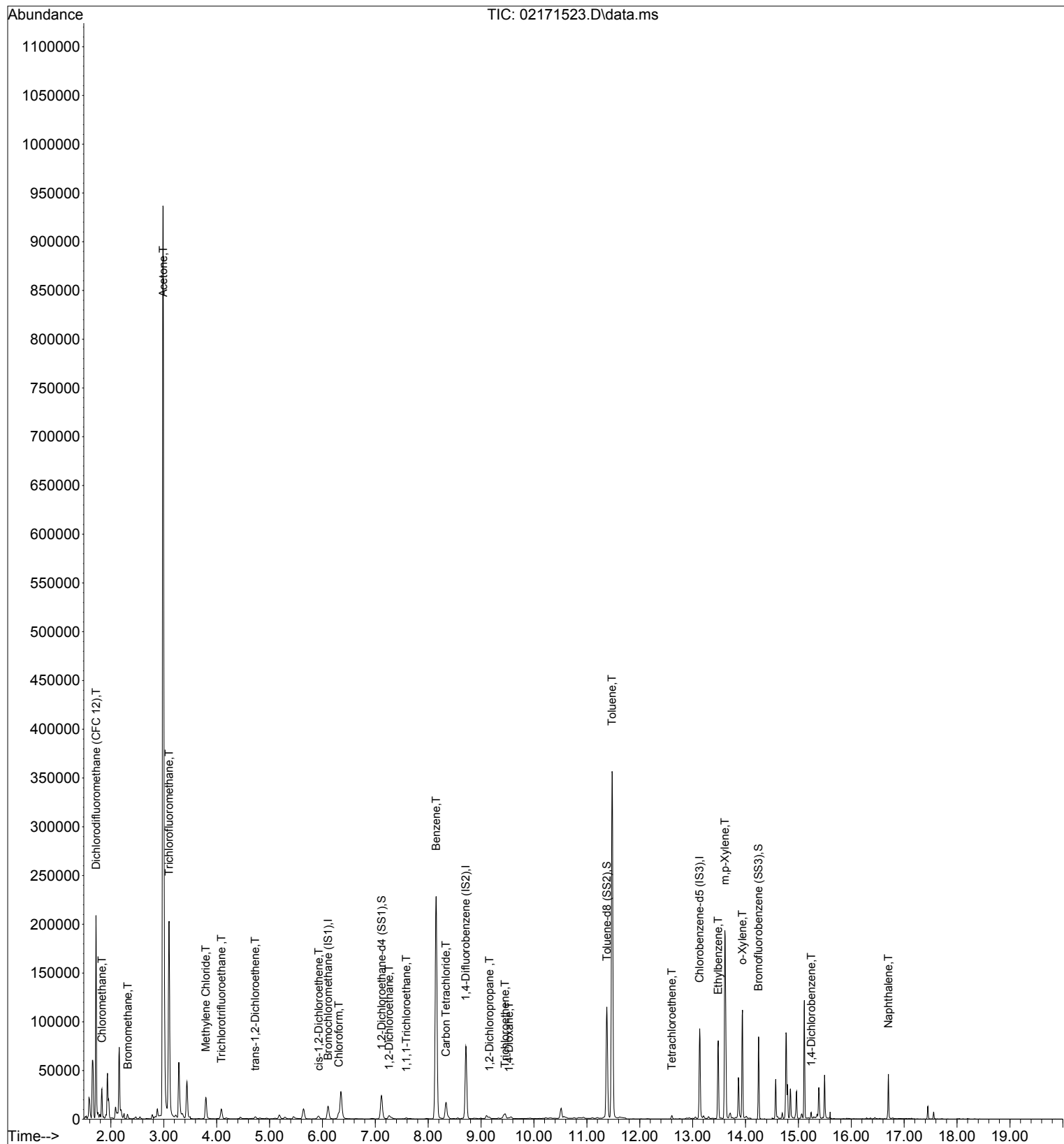
Quant Method : I:\MS19\METHODS\X19021115.M

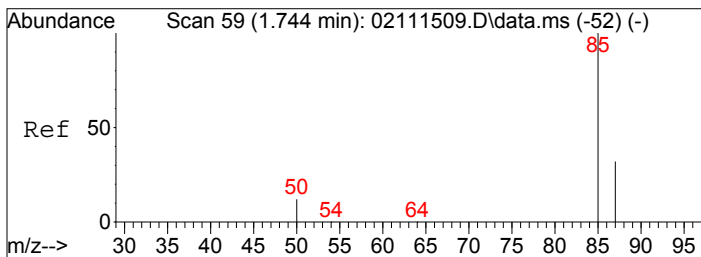
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

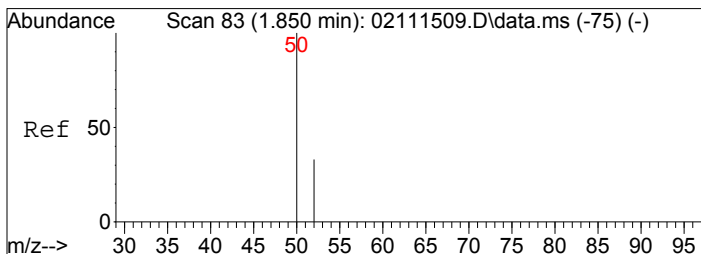
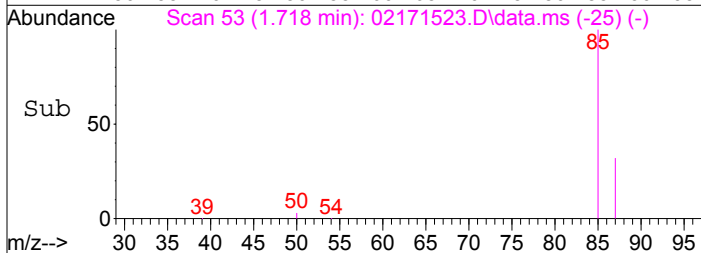
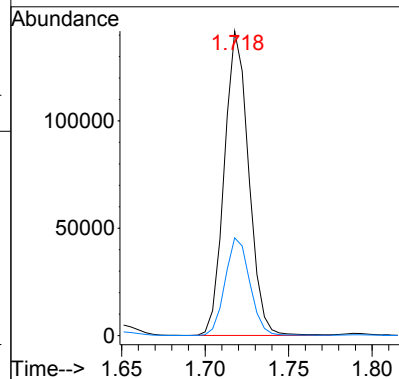
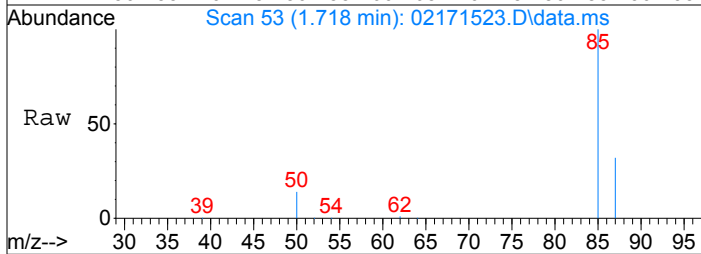
DataAcq Meth:TO15SIM.M





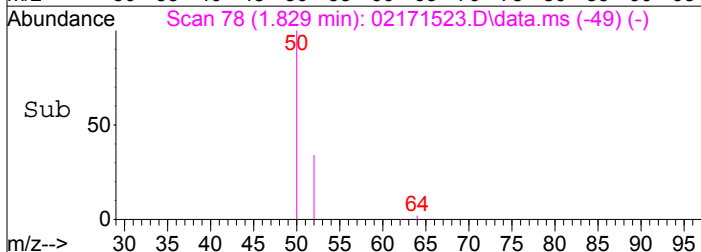
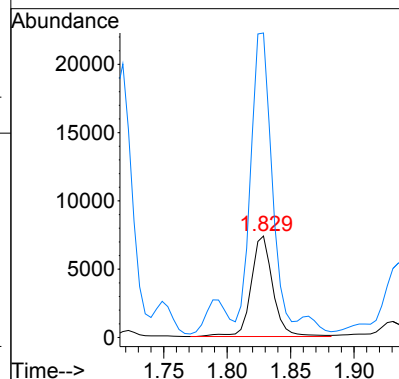
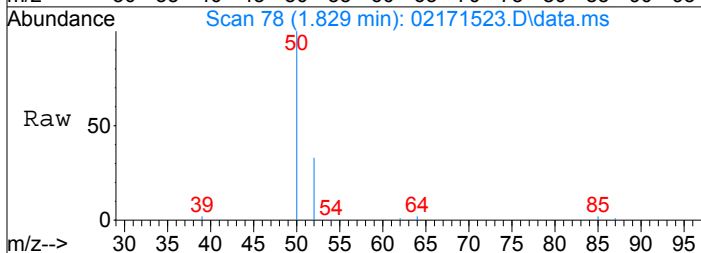
#2
 Dichlorodifluoromethane (CFC 12)
 Concen: 1875.04 pg
 RT: 1.72 min Scan# 53
 Delta R.T. -0.026 min
 Lab File: 02171523.D
 Acq: 17 Feb 2015 16:28

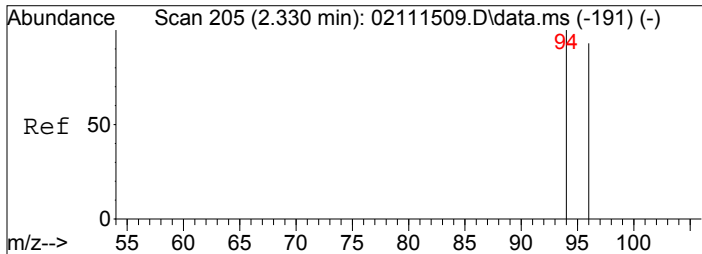
Tgt Ion: 85 Resp: 143976
 Ion Ratio Lower Upper
 85 100
 87 32.5 12.4 52.4



#3
 Chloromethane
 Concen: 573.62 pg
 RT: 1.83 min Scan# 78
 Delta R.T. -0.021 min
 Lab File: 02171523.D
 Acq: 17 Feb 2015 16:28

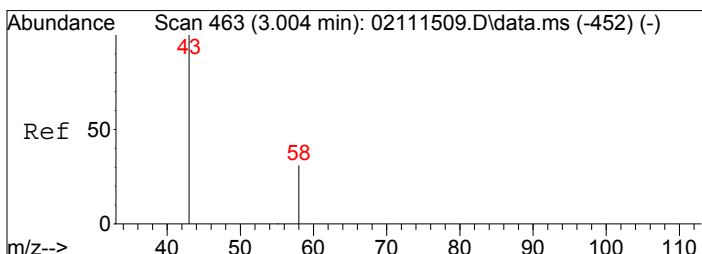
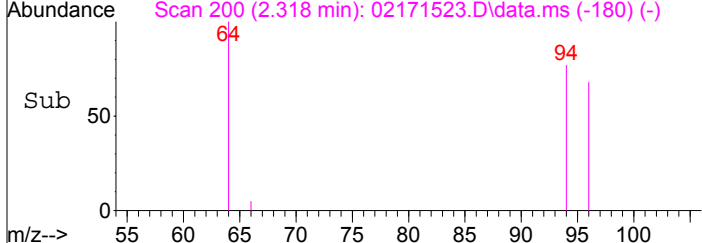
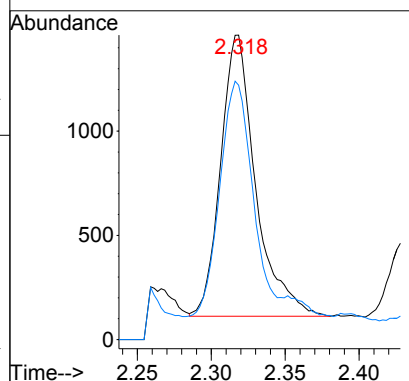
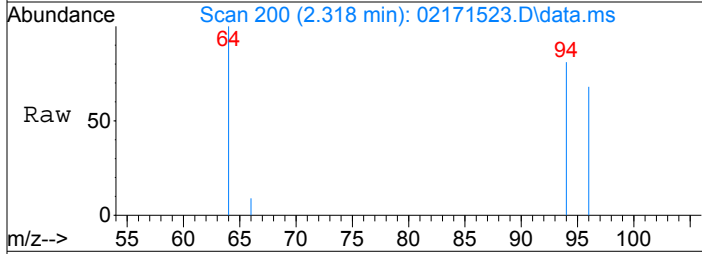
Tgt Ion: 52 Resp: 8796
 Ion Ratio Lower Upper
 52 100
 50 264.9 283.7 323.7#





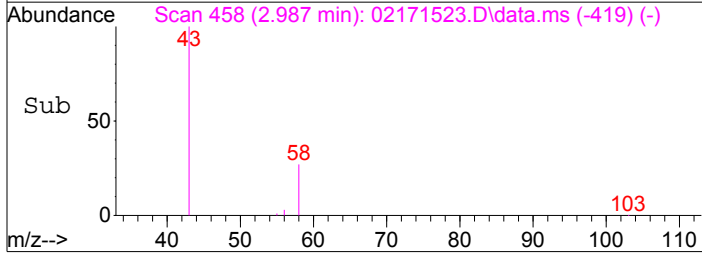
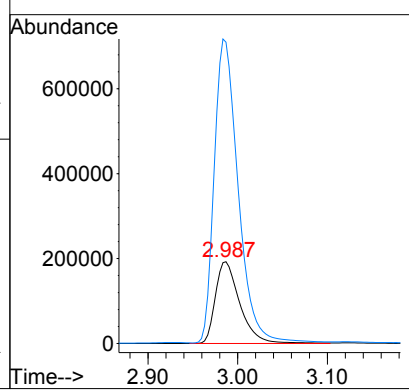
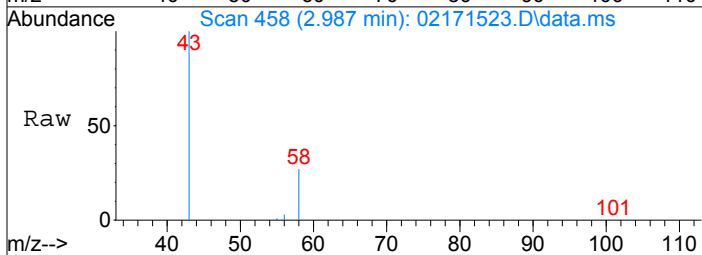
#5
 Bromomethane
 Concen: 64.56 pg
 RT: 2.32 min Scan# 200
 Delta R.T. -0.012 min
 Lab File: 02171523.D
 Acq: 17 Feb 2015 16:28

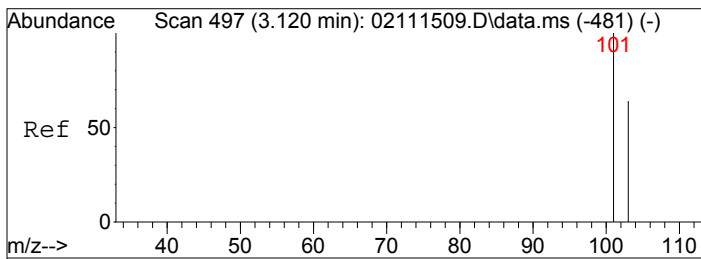
Tgt Ion:	94	Resp:	2229
Ion Ratio	Lower	Upper	
94	100		
96	83.0	75.5	113.3



#7
 Acetone
 Concen: 13472.13 pg
 RT: 2.99 min Scan# 458
 Delta R.T. -0.017 min
 Lab File: 02171523.D
 Acq: 17 Feb 2015 16:28

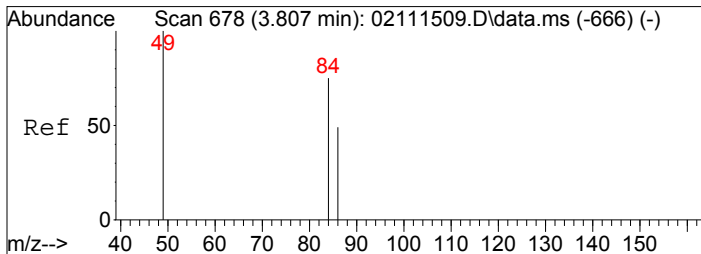
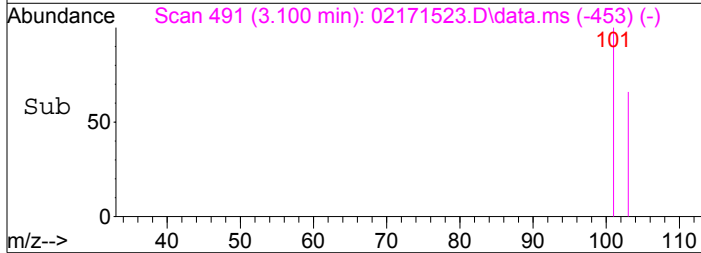
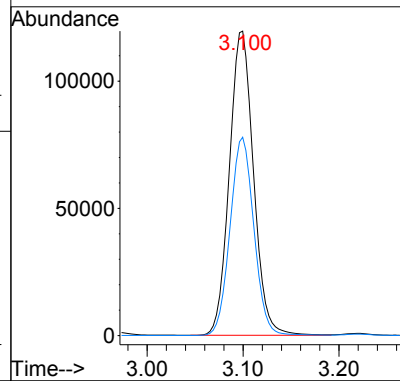
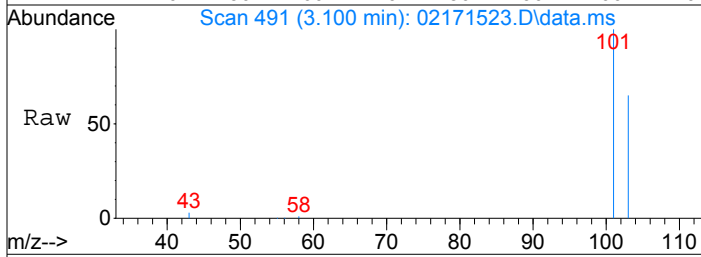
Tgt Ion:	58	Resp:	365294
Ion Ratio	Lower	Upper	
58	100		
43	364.5	301.8	341.8#





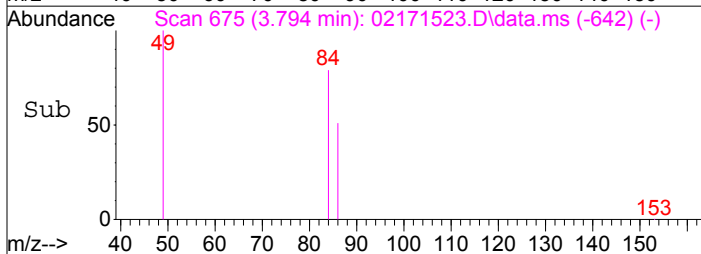
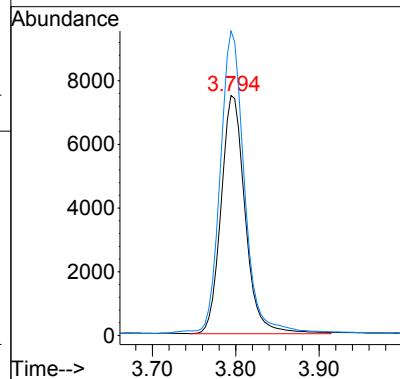
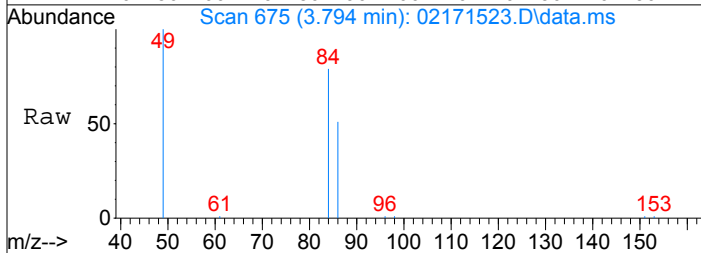
#8
 Trichlorofluoromethane
 Concen: 3172.41 pg
 RT: 3.10 min Scan# 491
 Delta R.T. -0.020 min
 Lab File: 02171523.D
 Acq: 17 Feb 2015 16:28

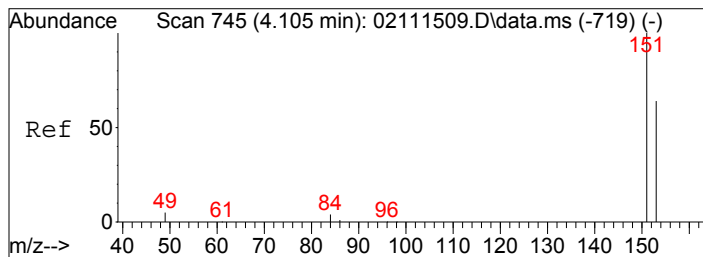
Tgt Ion: 101 Resp: 209238
 Ion Ratio Lower Upper
 101 100
 103 64.3 51.8 77.6



#10
 Methylene Chloride
 Concen: 479.67 pg
 RT: 3.79 min Scan# 675
 Delta R.T. -0.013 min
 Lab File: 02171523.D
 Acq: 17 Feb 2015 16:28

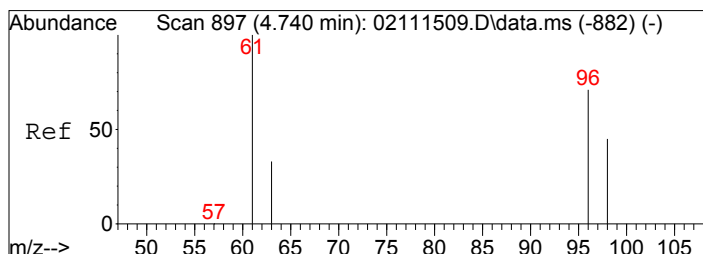
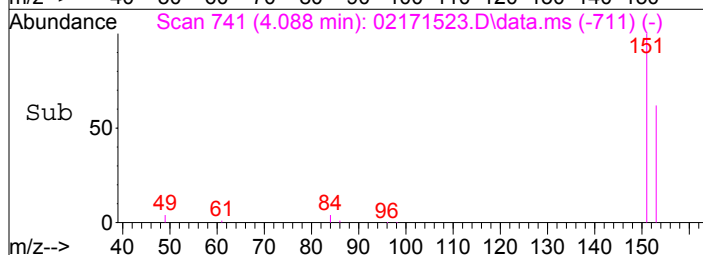
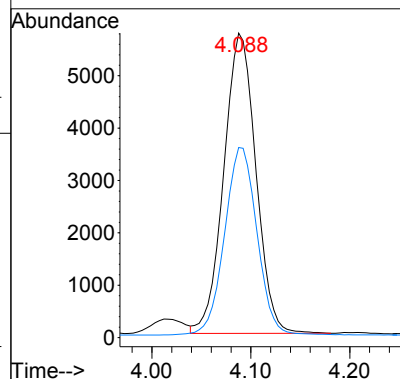
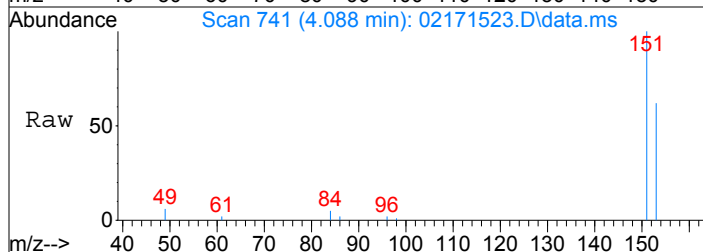
Tgt Ion: 84 Resp: 15012
 Ion Ratio Lower Upper
 84 100
 49 128.6 112.3 152.3





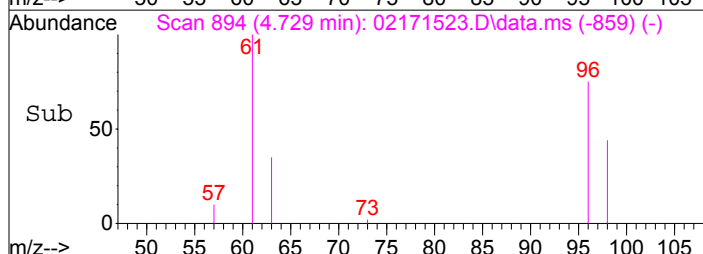
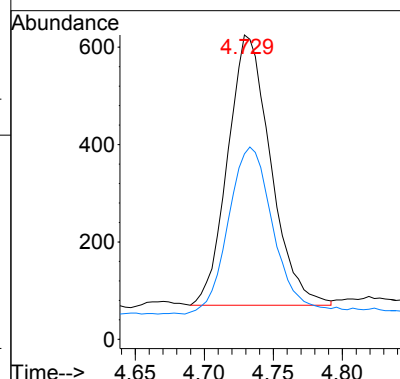
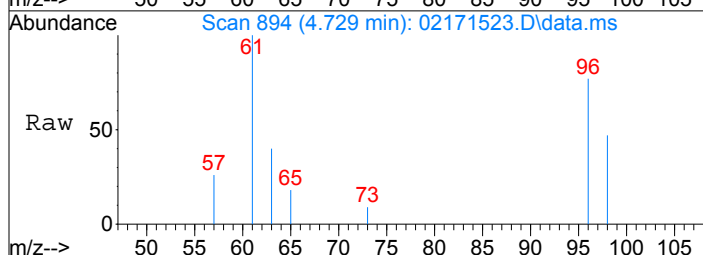
#11
Trichlorotrifluoroethane
Concen: 426.67 pg
RT: 4.09 min Scan# 741
Delta R.T. -0.017 min
Lab File: 02171523.D
Acq: 17 Feb 2015 16:28

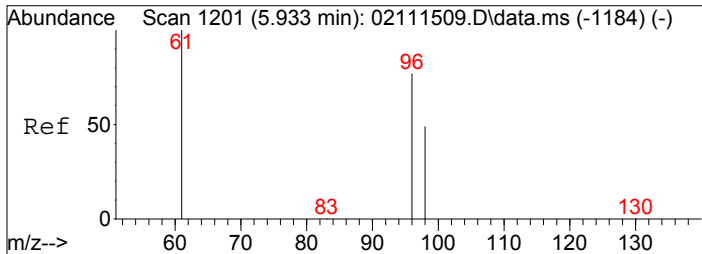
Tgt Ion: 151 Resp: 12931
Ion Ratio Lower Upper
151 100
153 63.3 43.6 83.6



#12
trans-1,2-Dichloroethene
Concen: 39.94 pg
RT: 4.73 min Scan# 894
Delta R.T. -0.011 min
Lab File: 02171523.D
Acq: 17 Feb 2015 16:28

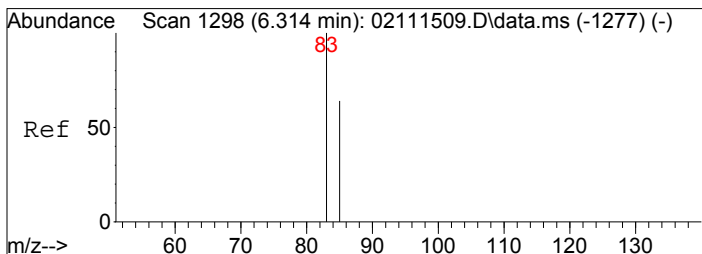
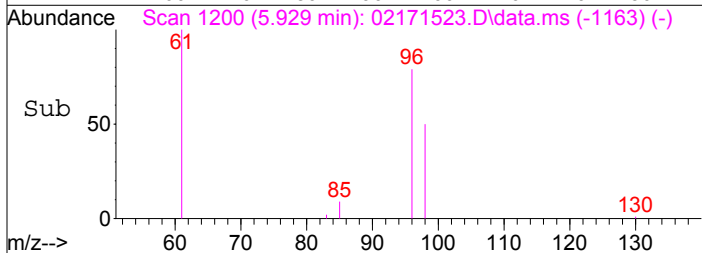
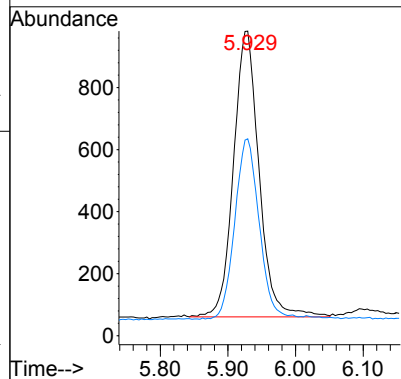
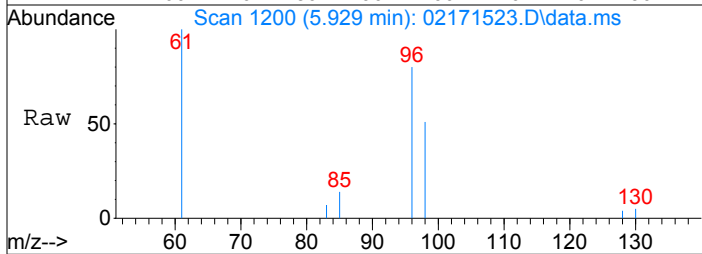
Tgt Ion: 96 Resp: 1201
Ion Ratio Lower Upper
96 100
98 65.4 43.7 83.7





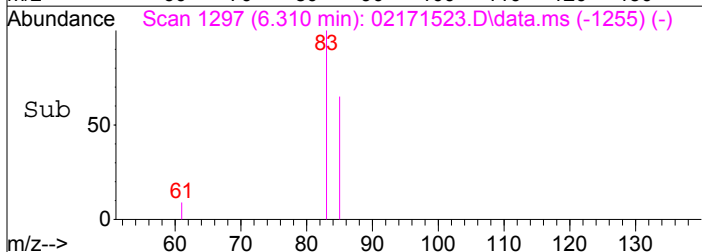
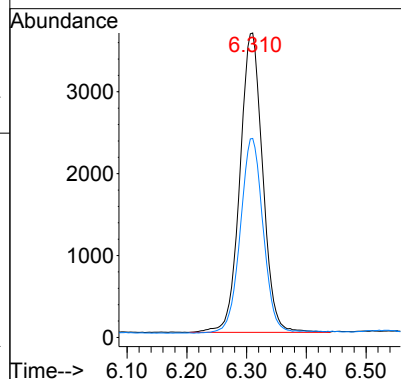
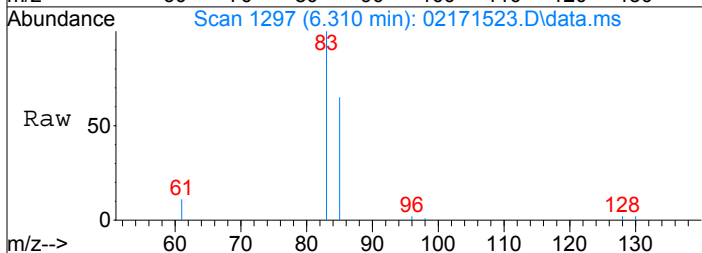
#15
 cis-1,2-Dichloroethene
 Concen: 72.32 pg
 RT: 5.93 min Scan# 1200
 Delta R.T. -0.003 min
 Lab File: 02171523.D
 Acq: 17 Feb 2015 16:28

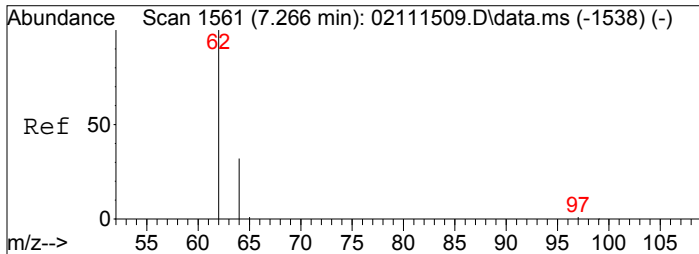
Tgt Ion: 96 Resp: 2418
 Ion Ratio Lower Upper
 96 100
 98 60.0 44.3 84.3



#16
 Chloroform
 Concen: 167.02 pg
 RT: 6.31 min Scan# 1297
 Delta R.T. -0.004 min
 Lab File: 02171523.D
 Acq: 17 Feb 2015 16:28

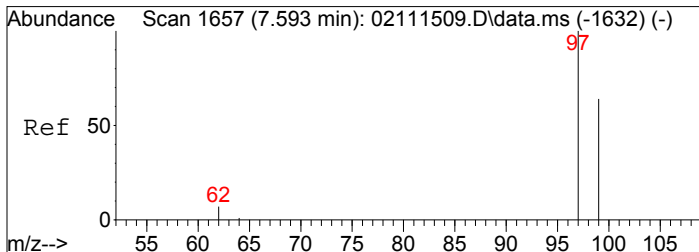
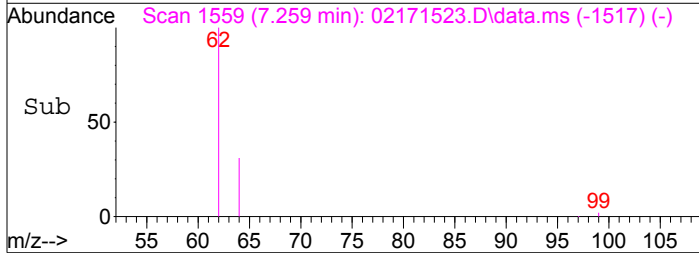
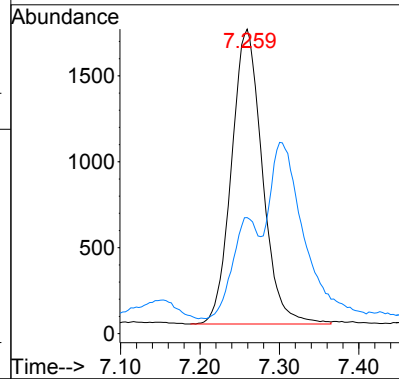
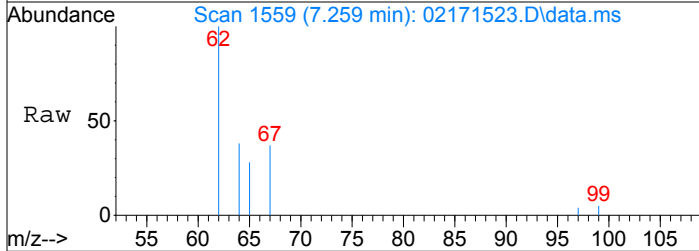
Tgt Ion: 83 Resp: 9675
 Ion Ratio Lower Upper
 83 100
 85 65.9 45.4 85.4





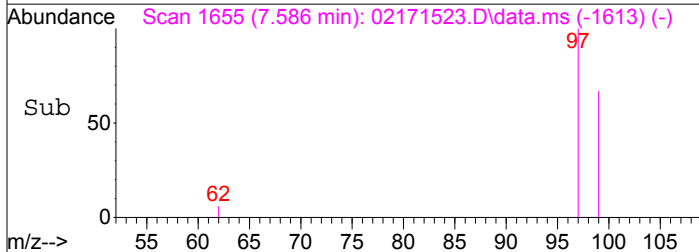
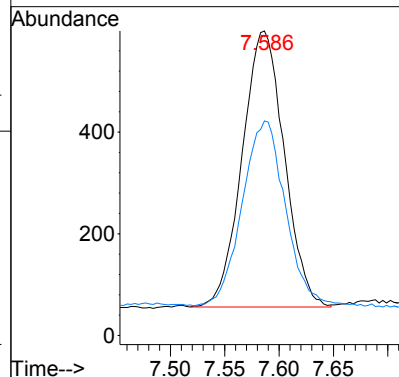
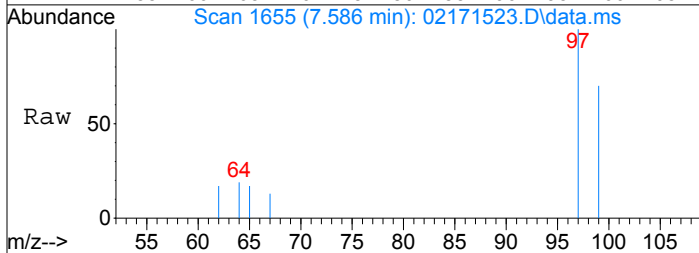
#18
1,2-Dichloroethane
Concen: 100.30 pg
RT: 7.26 min Scan# 1559
Delta R.T. -0.006 min
Lab File: 02171523.D
Acq: 17 Feb 2015 16:28

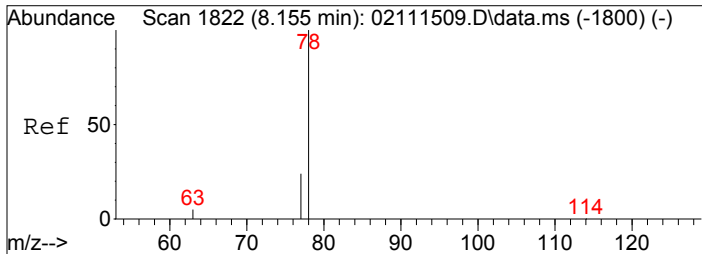
Tgt Ion: 62 Resp: 4626
Ion Ratio Lower Upper
62 100
64 28.9 11.6 51.6



#19
1,1,1-Trichloroethane
Concen: 25.99 pg
RT: 7.59 min Scan# 1655
Delta R.T. -0.006 min
Lab File: 02171523.D
Acq: 17 Feb 2015 16:28

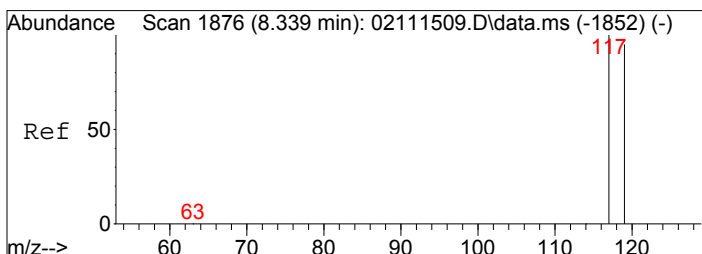
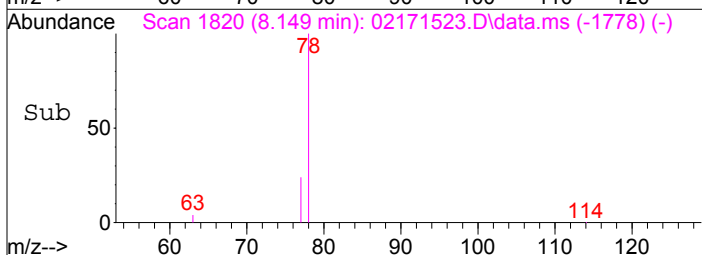
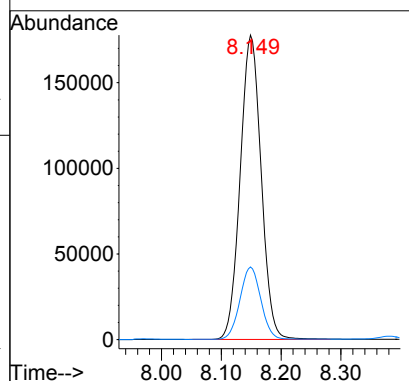
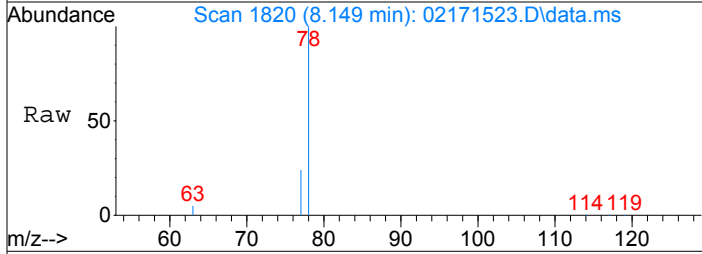
Tgt Ion: 97 Resp: 1464
Ion Ratio Lower Upper
97 100
99 68.9 44.0 84.0





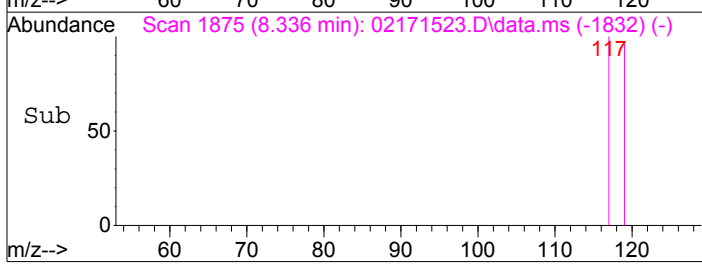
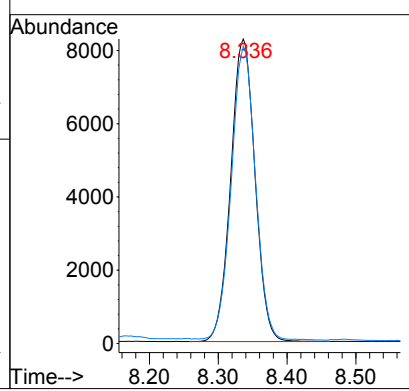
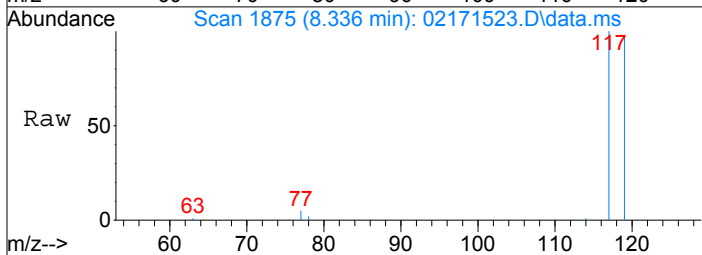
#20
Benzene
Concen: 3627.01 pg
RT: 8.15 min Scan# 1820
Delta R.T. -0.006 min
Lab File: 02171523.D
Acq: 17 Feb 2015 16:28

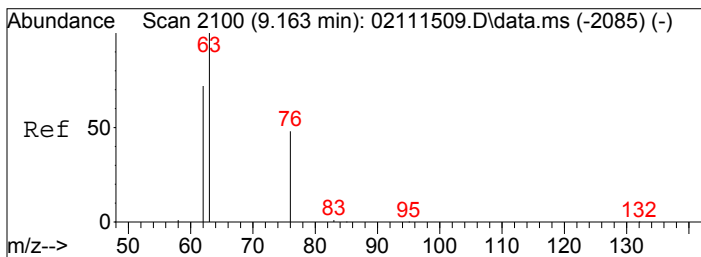
Tgt Ion:	78	Resp:	432142
Ion Ratio	Lower	Upper	
78	100		
77	23.8	3.7	43.7



#21
Carbon Tetrachloride
Concen: 480.85 pg
RT: 8.34 min Scan# 1875
Delta R.T. -0.003 min
Lab File: 02171523.D
Acq: 17 Feb 2015 16:28

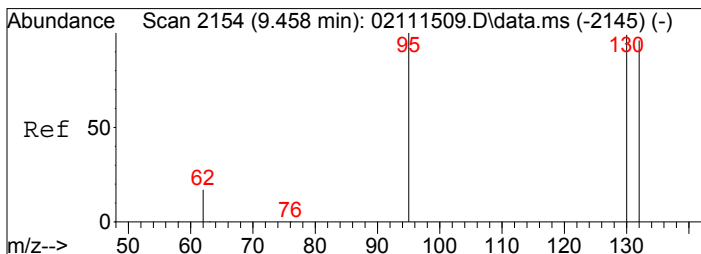
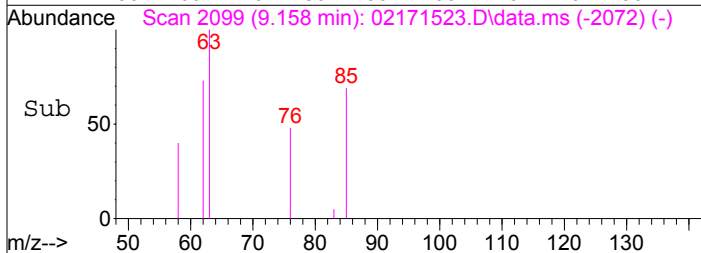
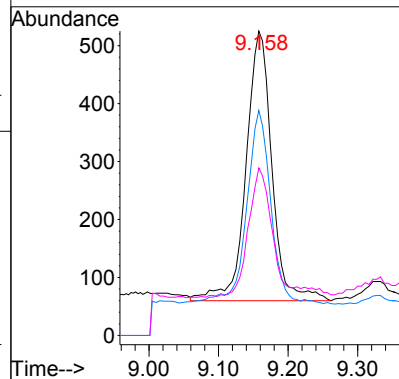
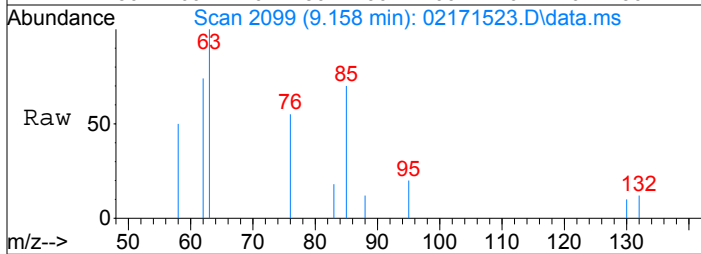
Tgt Ion:	117	Resp:	20279
Ion Ratio	Lower	Upper	
117	100		
119	96.5	75.5	115.5





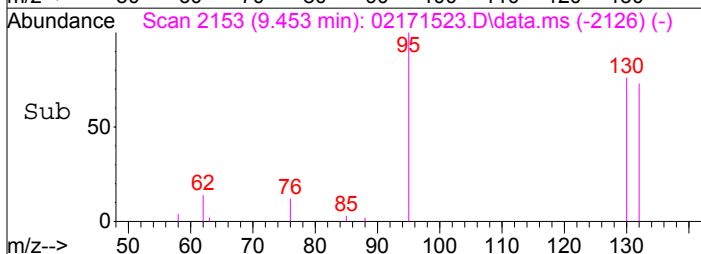
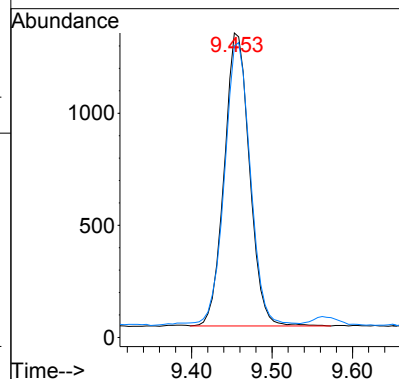
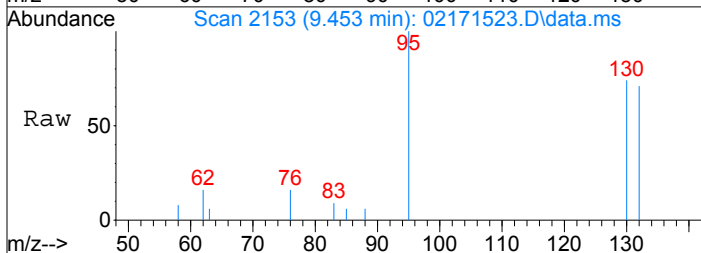
#23
1,2-Dichloropropane
Concen: 39.68 pg
RT: 9.16 min Scan# 2099
Delta R.T. -0.005 min
Lab File: 02171523.D
Acq: 17 Feb 2015 16:28

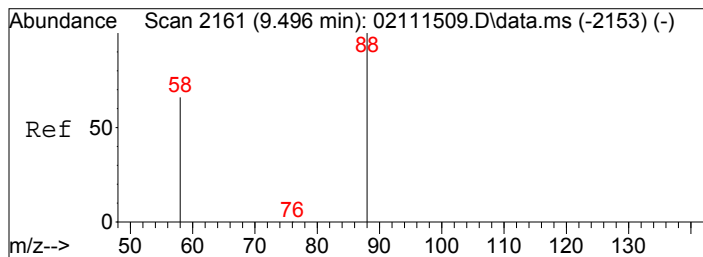
Tgt Ion: 63 Resp: 1204
Ion Ratio Lower Upper
63 100
62 65.9 52.0 92.0
76 45.8 28.1 68.1



#25
Trichloroethene
Concen: 79.75 pg
RT: 9.45 min Scan# 2153
Delta R.T. -0.005 min
Lab File: 02171523.D
Acq: 17 Feb 2015 16:28

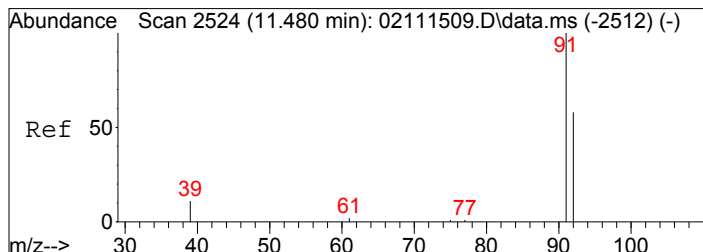
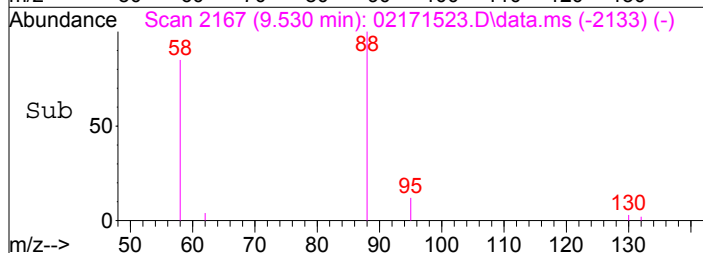
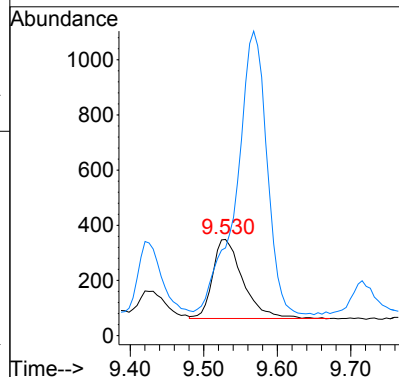
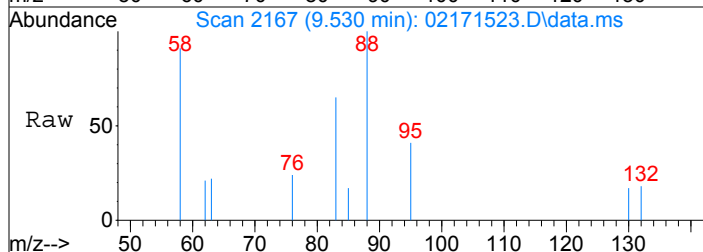
Tgt Ion: 130 Resp: 2850
Ion Ratio Lower Upper
130 100
132 99.9 77.1 117.1





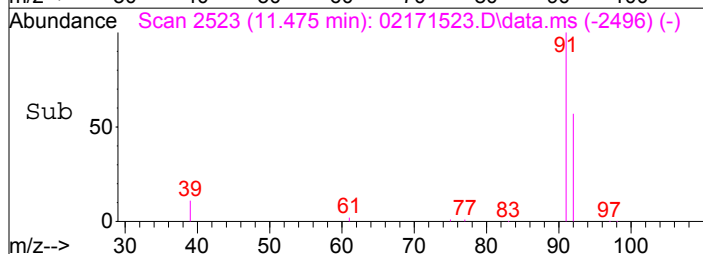
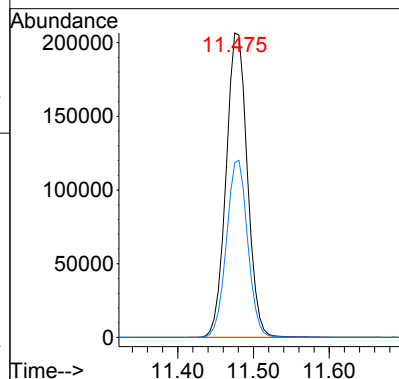
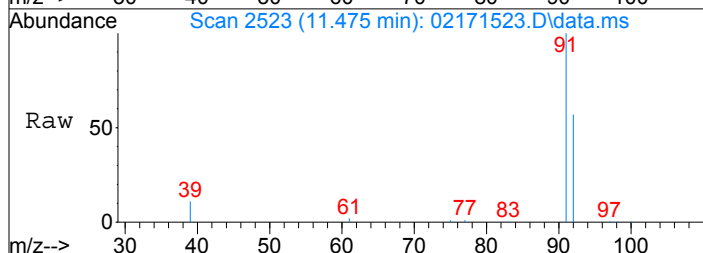
#26
1,4-Dioxane
Concen: 30.79 pg
RT: 9.53 min Scan# 2167
Delta R.T. 0.033 min
Lab File: 02171523.D
Acq: 17 Feb 2015 16:28

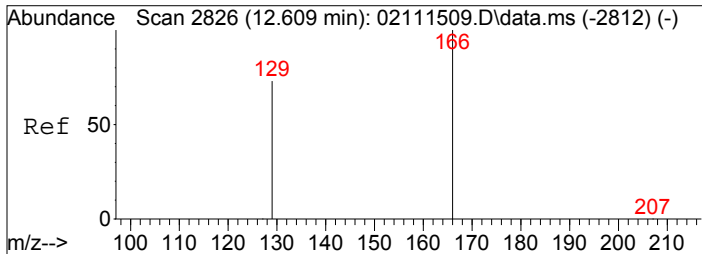
Tgt Ion: 88 Resp: 820
Ion Ratio Lower Upper
88 100
58 365.6 38.3 78.3#



#31
Toluene
Concen: 2947.68 pg
RT: 11.48 min Scan# 2523
Delta R.T. -0.005 min
Lab File: 02171523.D
Acq: 17 Feb 2015 16:28

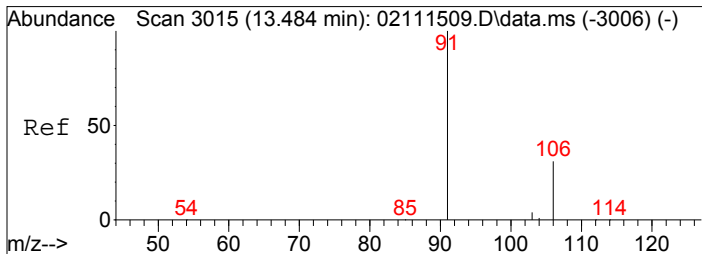
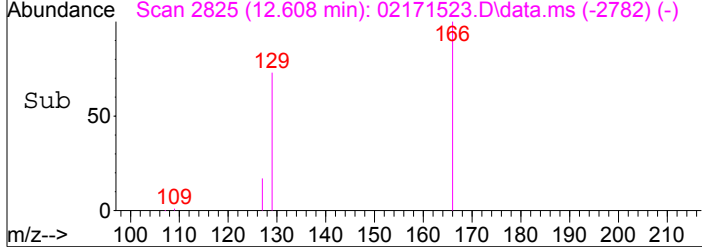
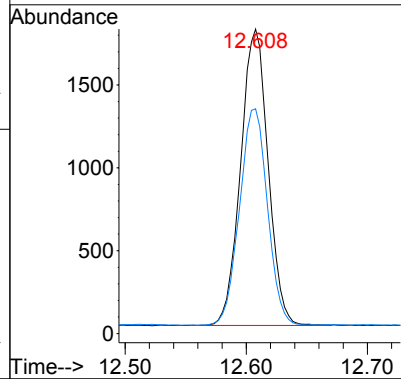
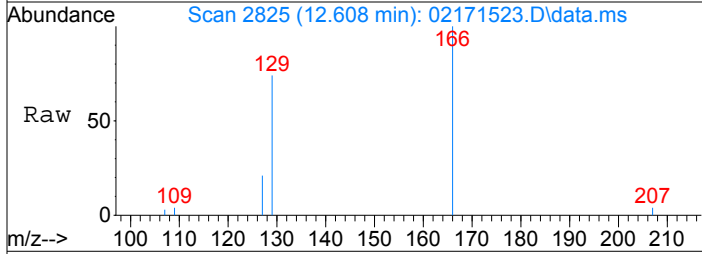
Tgt Ion: 91 Resp: 402166
Ion Ratio Lower Upper
91 100
92 58.1 37.7 77.7





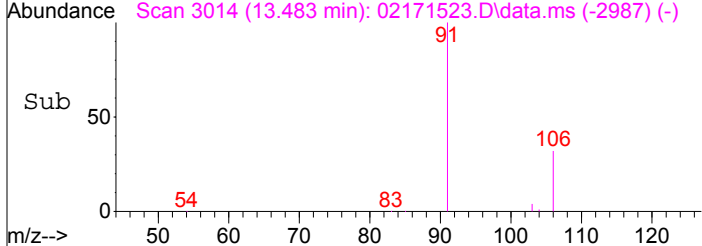
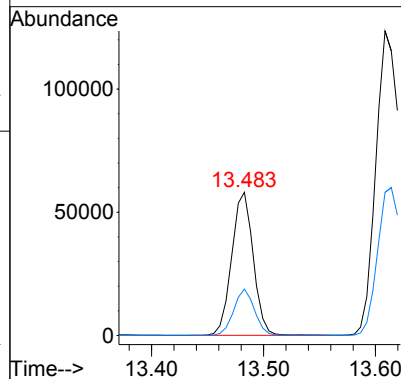
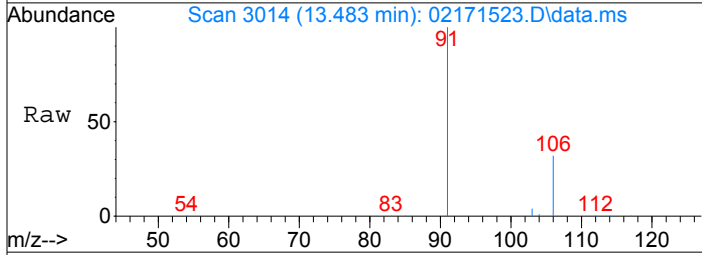
#33
Tetrachloroethene
Concen: 66.73 pg
RT: 12.61 min Scan# 2825
Delta R.T. -0.001 min
Lab File: 02171523.D
Acq: 17 Feb 2015 16:28

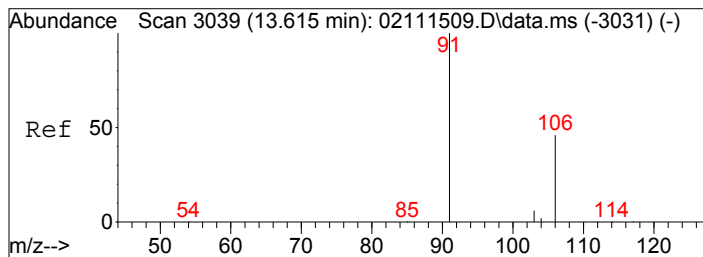
Tgt Ion: 166	Resp: 2819
Ion Ratio	Lower Upper
166	100
129	74.4 53.3 93.3



#36
Ethylbenzene
Concen: 530.35 pg
RT: 13.48 min Scan# 3014
Delta R.T. -0.001 min
Lab File: 02171523.D
Acq: 17 Feb 2015 16:28

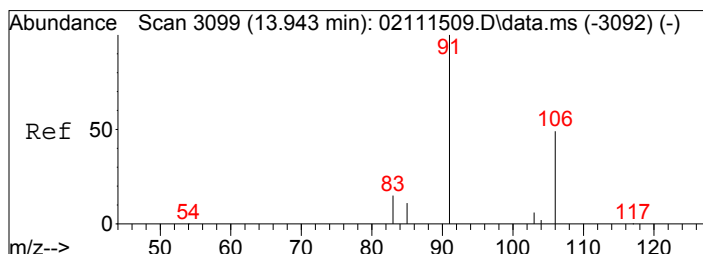
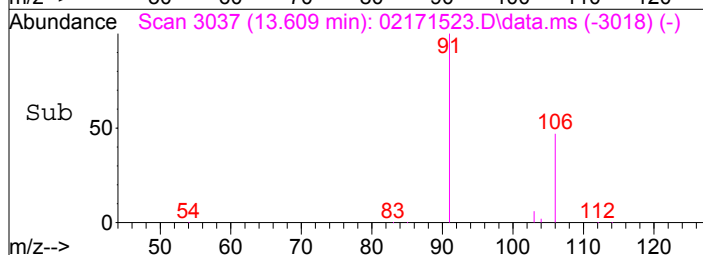
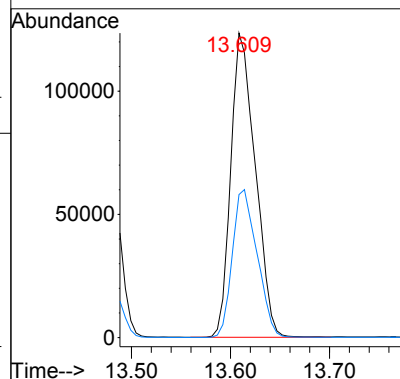
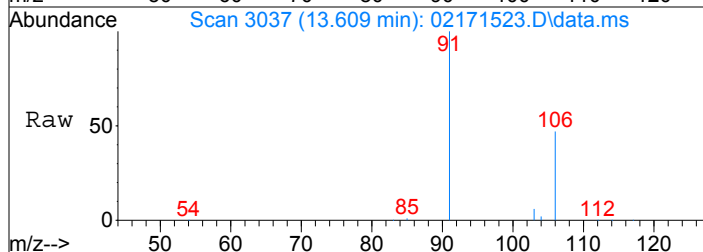
Tgt Ion: 91	Resp: 77450
Ion Ratio	Lower Upper
91	100
106	31.2 10.9 50.9





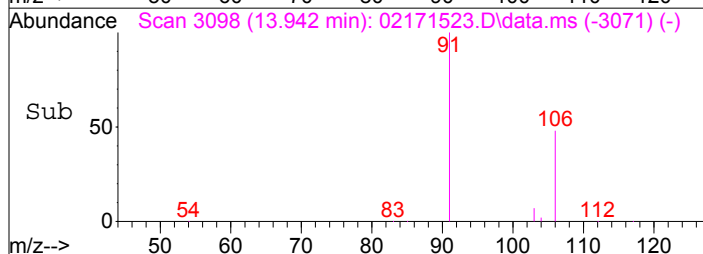
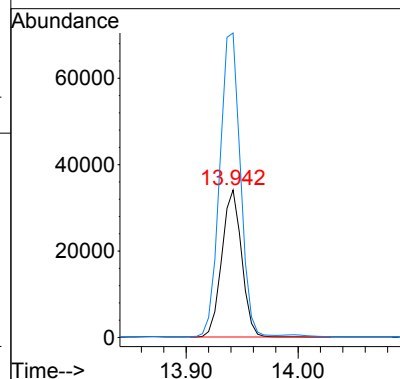
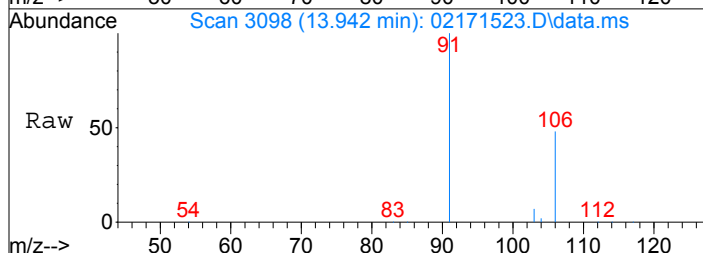
#37
m,p-Xylene
Concen: 1767.07 pg
RT: 13.61 min Scan# 3037
Delta R.T. -0.006 min
Lab File: 02171523.D
Acq: 17 Feb 2015 16:28

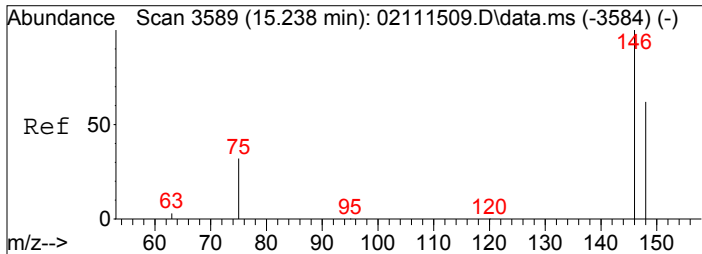
Tgt Ion: 91 Resp: 212092
Ion Ratio Lower Upper
91 100
106 49.3 27.5 67.5



#38
o-Xylene
Concen: 713.72 pg
RT: 13.94 min Scan# 3098
Delta R.T. -0.001 min
Lab File: 02171523.D
Acq: 17 Feb 2015 16:28

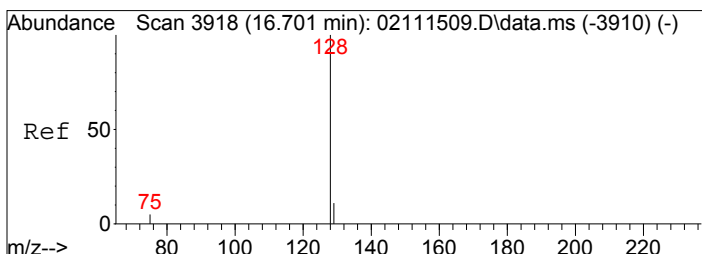
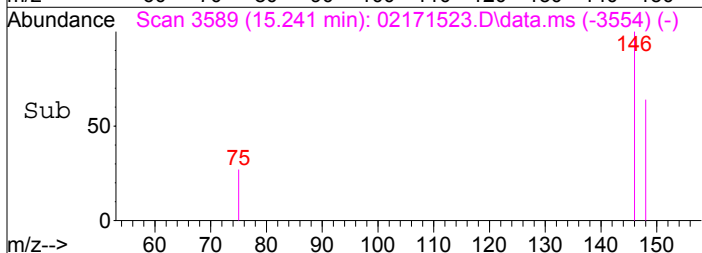
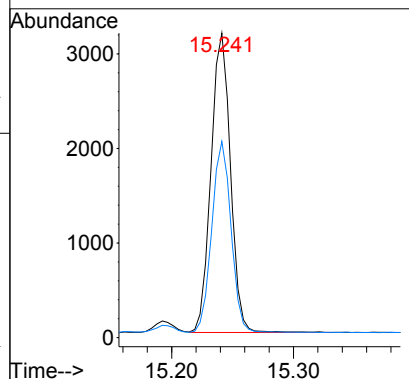
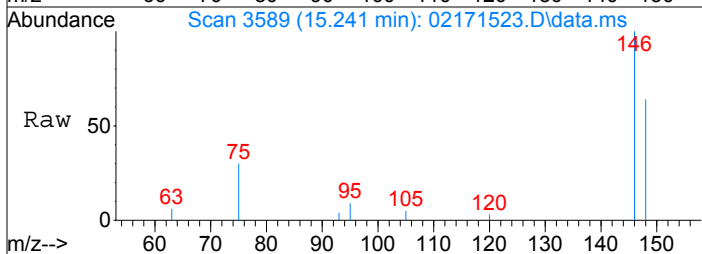
Tgt Ion: 106 Resp: 41866
Ion Ratio Lower Upper
106 100
91 214.8 198.3 238.3





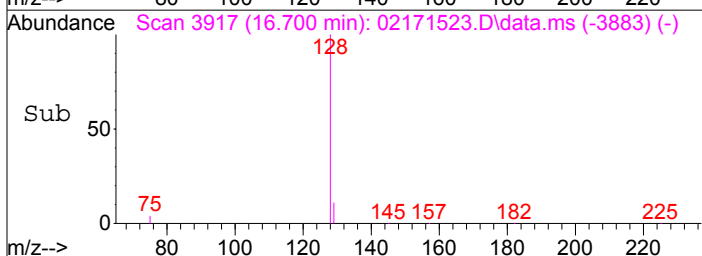
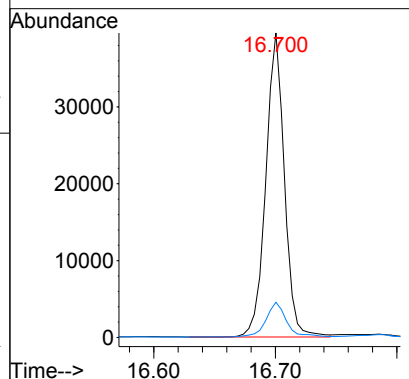
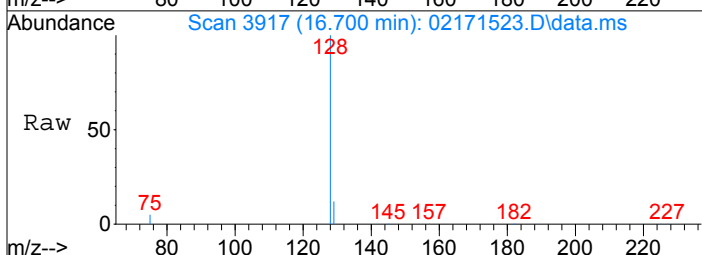
#42
 1,4-Dichlorobenzene
 Concen: 43.63 pg
 RT: 15.24 min Scan# 3589
 Delta R.T. 0.004 min
 Lab File: 02171523.D
 Acq: 17 Feb 2015 16:28

Tgt Ion	Ratio	Lower	Upper
146	100		
148	63.3	43.5	83.5



#45
 Naphthalene
 Concen: 287.60 pg
 RT: 16.70 min Scan# 3917
 Delta R.T. -0.001 min
 Lab File: 02171523.D
 Acq: 17 Feb 2015 16:28

Tgt Ion	Ratio	Lower	Upper
128	100		
129	12.5	0.0	30.9



Data File: I:\MS19\DATA\2015 02\17\02171524.D

Acq On : 17 Feb 2015 16:55

Operator: WA

Sample : P1500566-019 (1000mL)

Misc : S29-02041502

ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 18 09:09:31 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

2/18/15

DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	19326	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	140170	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	23825	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	43572	923.215	pg	0.00
Spiked Amount 1000.000			Recovery	=	92.32%	
30) Toluene-d8 (SS2)	11.38	98	131215	1015.104	pg	0.00
Spiked Amount 1000.000			Recovery	=	101.51%	
40) Bromofluorobenzene (SS3)	14.25	174	51185	1064.150	pg	0.00
Spiked Amount 1000.000			Recovery	=	106.42%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.72	85	156847	1997.004	pg	100
3) Chloromethane	1.83	52	8728	556.459	pg	91
4) Vinyl Chloride	0.00	62	0	N.D.	d	
5) Bromomethane	2.32	94	2877	81.462	pg	88
6) Chloroethane	0.00	64	0	N.D.	d	
7) Acetone	2.99	58	201573	7267.887	pg	# 76
8) Trichlorofluoromethane	3.10	101	192155	2848.276	pg	99
9) 1,1-Dichloroethene	3.66	96	99	N.D.		
10) Methylene Chloride	3.79	84	13783	430.560	pg	92
11) Trichlorotrifluoroethane	4.09	151	13990	451.295	pg	100
12) trans-1,2-Dichloroethene	4.73	96	929	30.206	pg	99
13) 1,1-Dichloroethane	4.94	63	448	N.D.		
14) Methyl tert-Butyl Ether	5.11	73	890	N.D.		
15) cis-1,2-Dichloroethene	5.93	96	2467	72.136	pg	94
16) Chloroform	6.31	83	8373	141.310	pg	99
18) 1,2-Dichloroethane	7.26	62	4266	90.423	pg	# 1
19) 1,1,1-Trichloroethane	7.58	97	1364	23.672	pg	87
20) Benzene	8.15	78	80148	657.652	pg	99
21) Carbon Tetrachloride	8.33	117	20331	471.306	pg	100
23) 1,2-Dichloropropane	9.16	63	1028	33.626	pg	94
24) Bromodichloromethane	0.00	83	0	N.D.	d	
25) Trichloroethene	9.46	130	3650	101.359	pg	98
26) 1,4-Dioxane	9.54	88	314	N.D.		
27) cis-1,3-Dichloropropene	10.48	75	11	N.D.		
28) trans-1,3-Dichloropropene	11.05	75	68	N.D.		
29) 1,1,2-Trichloroethane	11.19	83	93	N.D.		
31) Toluene	11.48	91	233612	1699.264	pg	99
32) 1,2-Dibromoethane	12.12	107	8	N.D.		
33) Tetrachloroethene	12.61	166	2165	50.860	pg	98
35) Chlorobenzene	13.17	112	846	N.D.		
36) Ethylbenzene	13.48	91	43510	291.226	pg	99
37) m,p-Xylene	13.61	91	108065	880.064	pg	98
38) o-Xylene	13.94	106	20155	335.855	pg	99
39) 1,1,1,2,2-Tetrachloroethane	13.89	83	305	N.D.		
41) 1,3-Dichlorobenzene	15.17	146	206	N.D.		
42) 1,4-Dichlorobenzene	15.24	146	2723	33.073	pg	99
43) 1,2-Dichlorobenzene	15.46	146	130	N.D.		
44) 1,2,4-Trichlorobenzene	16.63	182	168	N.D.		
45) Naphthalene	16.70	128	12019	80.624	pg	98
46) Hexachlorobutadiene	16.96	225	29	N.D.		

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\17\02171524.D

Acq On : 17 Feb 2015 16:55

Operator: WA

Sample : P1500566-019 (1000mL)

Misc : S29-02041502

ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 18 09:09:31 2015

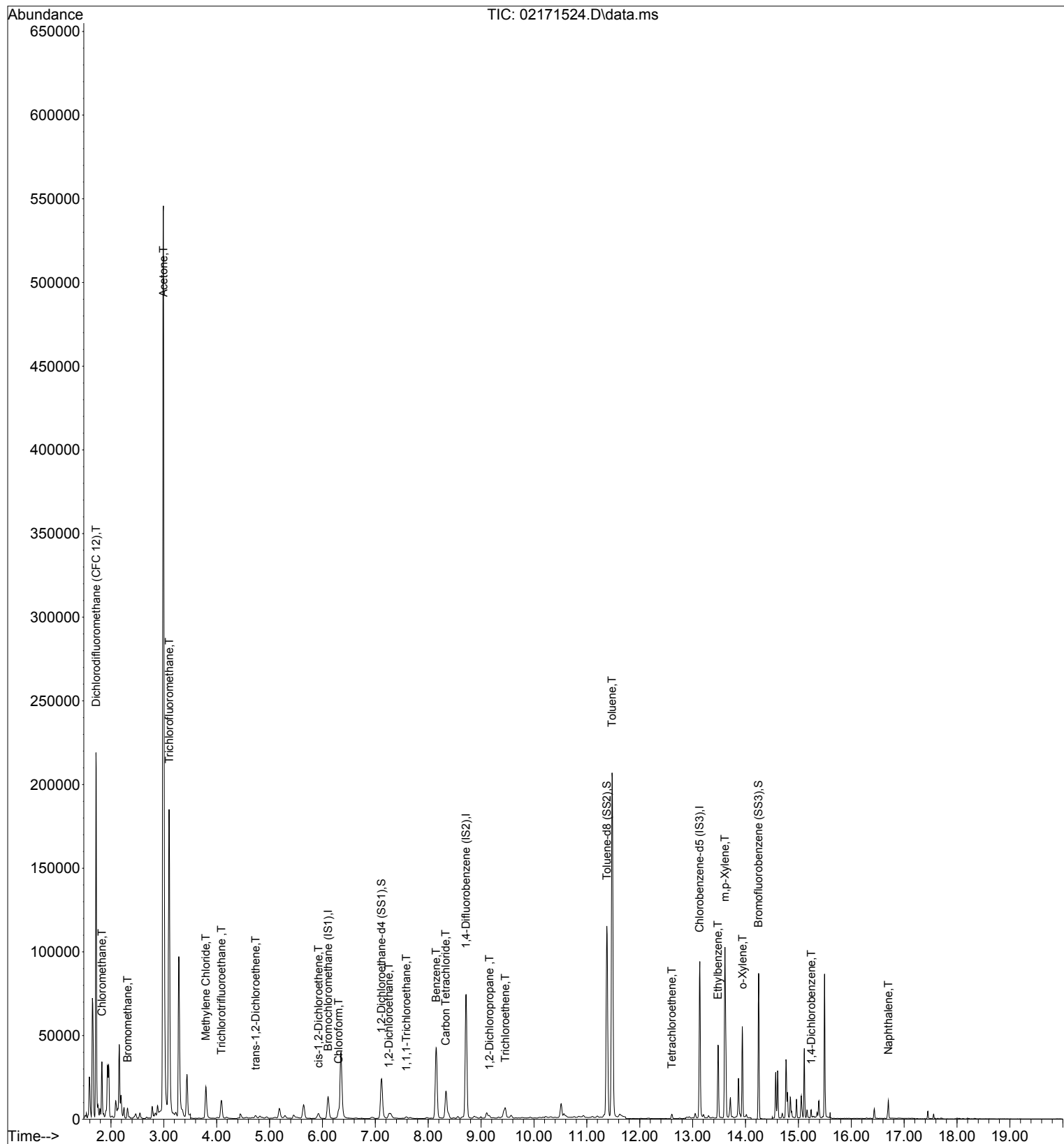
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 02\17\02171524.D

Acq On : 17 Feb 2015 16:55

Operator: WA

Sample : P1500566-019 (1000mL)

Misc : S29-02041502

ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 18 09:09:31 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

2/18/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	19326	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	140170	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	23825	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	43572	923.215	pg	0.00
Spiked Amount 1000.000			Recovery	=	92.32%	
30) Toluene-d8 (SS2)	11.38	98	131215	1015.104	pg	0.00
Spiked Amount 1000.000			Recovery	=	101.51%	
40) Bromofluorobenzene (SS3)	14.25	174	51185	1064.150	pg	0.00
Spiked Amount 1000.000			Recovery	=	106.42%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.72	85	156847	1997.004	pg	100
3) Chloromethane	1.83	52	8728	556.459	pg	91
5) Bromomethane	2.32	94	2877	81.462	pg	88
7) Acetone	2.99	58	201573	7267.887	pg	# 76
8) Trichlorofluoromethane	3.10	101	192155	2848.276	pg	99
10) Methylene Chloride	3.79	84	13783	430.560	pg	92
11) Trichlorotrifluoroethane	4.09	151	13990	451.295	pg	100
12) trans-1,2-Dichloroethene	4.73	96	929	30.206	pg	99
15) cis-1,2-Dichloroethene	5.93	96	2467	72.136	pg	94
16) Chloroform	6.31	83	8373	141.310	pg	99
18) 1,2-Dichloroethane	7.26	62	4266	90.423	pg	# 1
19) 1,1,1-Trichloroethane	7.58	97	1364	23.672	pg	87
20) Benzene	8.15	78	80148	657.652	pg	99
21) Carbon Tetrachloride	8.33	117	20331	471.306	pg	100
23) 1,2-Dichloropropane	9.16	63	1028	33.626	pg	94
25) Trichloroethene	9.46	130	3650	101.359	pg	98
31) Toluene	11.48	91	233612	1699.264	pg	99
33) Tetrachloroethene	12.61	166	2165	50.860	pg	98
36) Ethylbenzene	13.48	91	43510	291.226	pg	99
37) m,p-Xylene	13.61	91	108065	880.064	pg	98
38) o-Xylene	13.94	106	20155	335.855	pg	99
42) 1,4-Dichlorobenzene	15.24	146	2723	33.073	pg	99
45) Naphthalene	16.70	128	12019	80.624	pg	98

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\17\02171524.D

Acq On : 17 Feb 2015 16:55

Operator: WA

Sample : P1500566-019 (1000mL)

Misc : S29-02041502

ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 18 09:09:31 2015

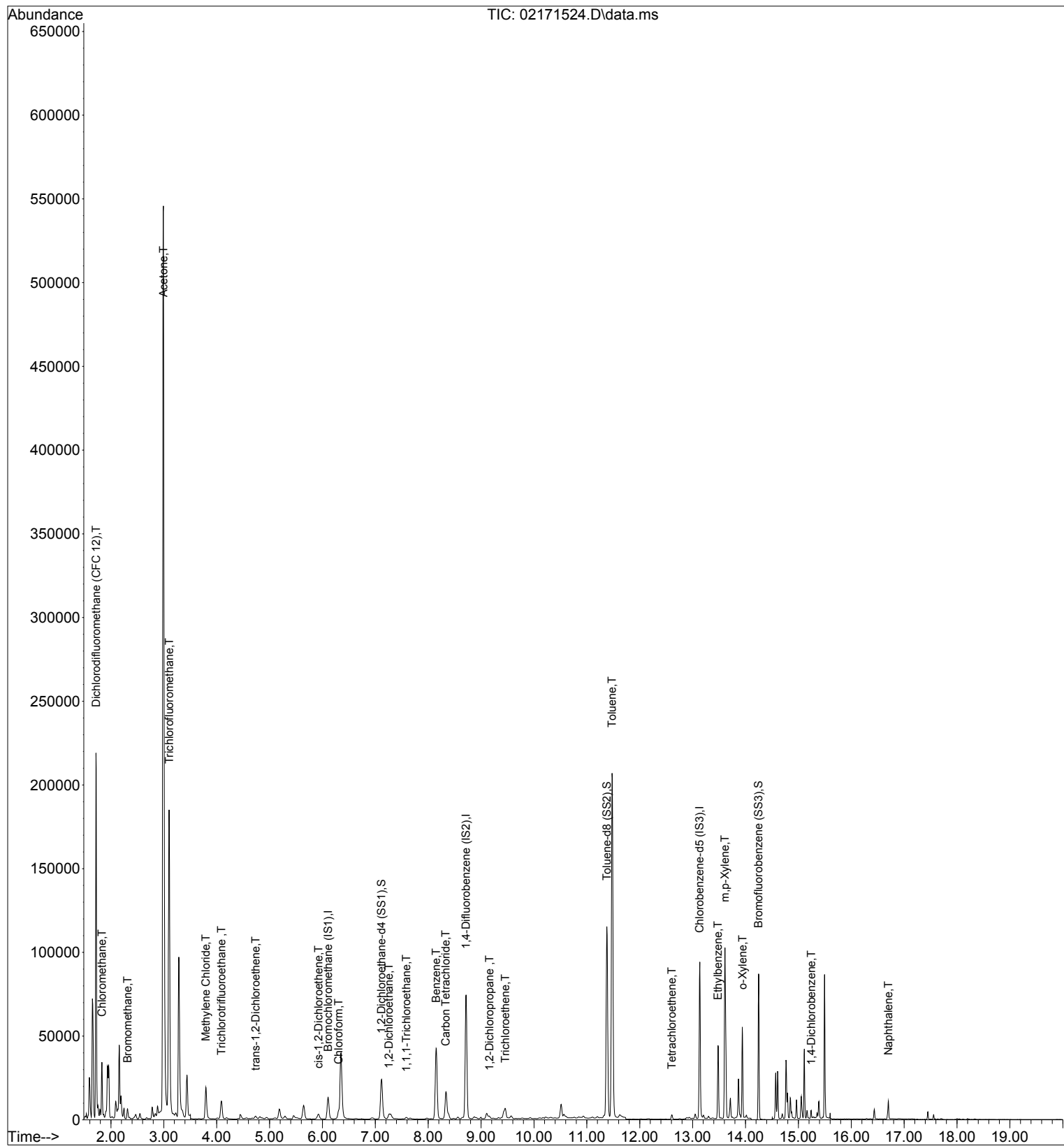
Quant Method : I:\MS19\METHODS\X19021115.M

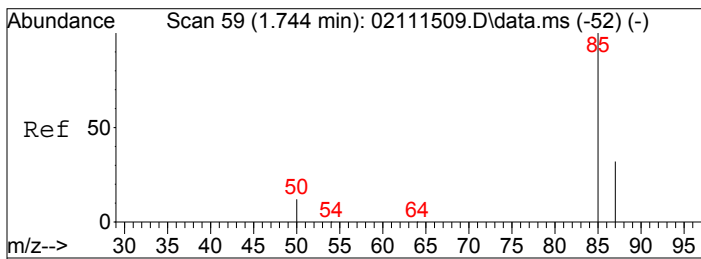
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

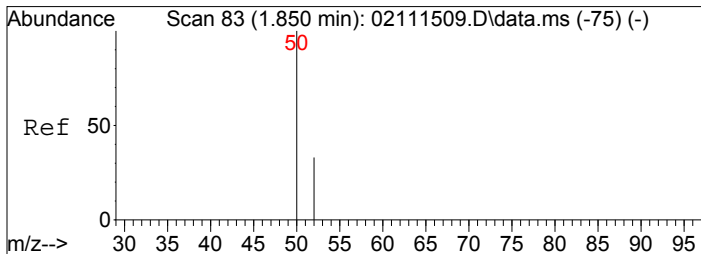
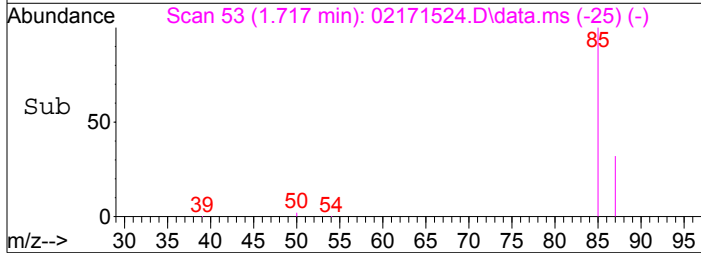
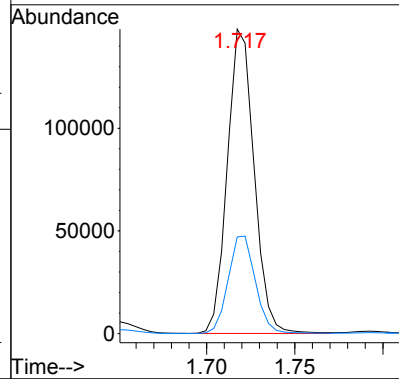
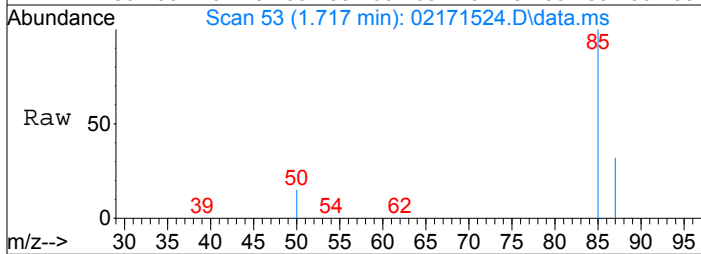
DataAcq Meth:TO15SIM.M





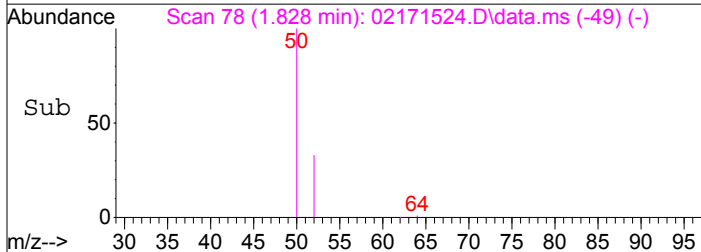
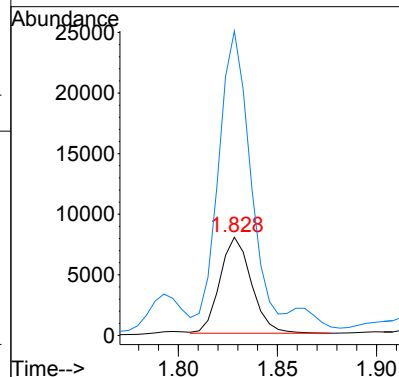
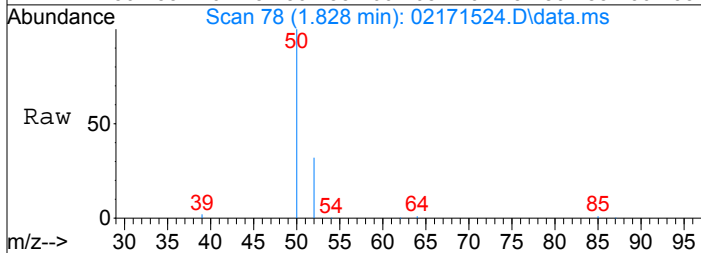
#2
 Dichlorodifluoromethane (CFC 12)
 Concen: 1997.00 pg
 RT: 1.72 min Scan# 53
 Delta R.T. -0.027 min
 Lab File: 02171524.D
 Acq: 17 Feb 2015 16:55

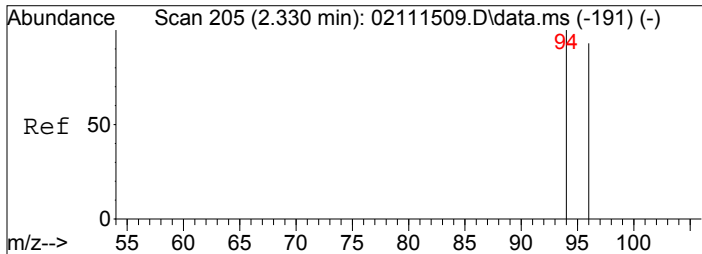
Tgt Ion: 85 Resp: 156847
 Ion Ratio Lower Upper
 85 100
 87 32.5 12.4 52.4



#3
 Chloromethane
 Concen: 556.46 pg
 RT: 1.83 min Scan# 78
 Delta R.T. -0.022 min
 Lab File: 02171524.D
 Acq: 17 Feb 2015 16:55

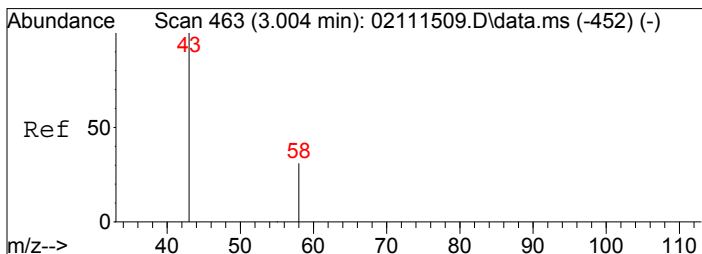
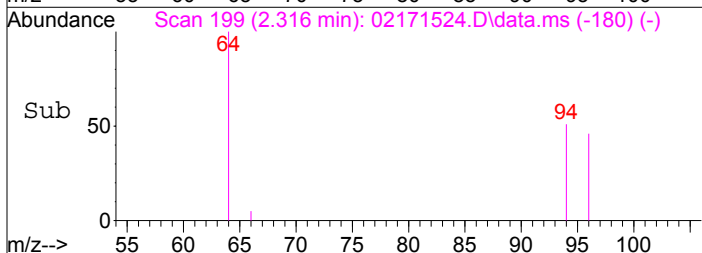
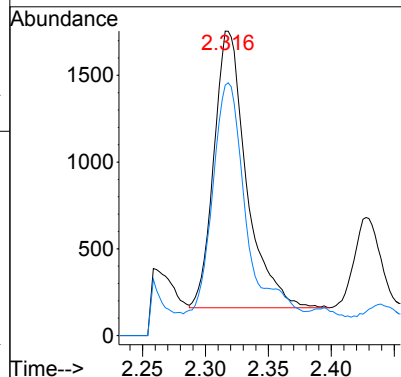
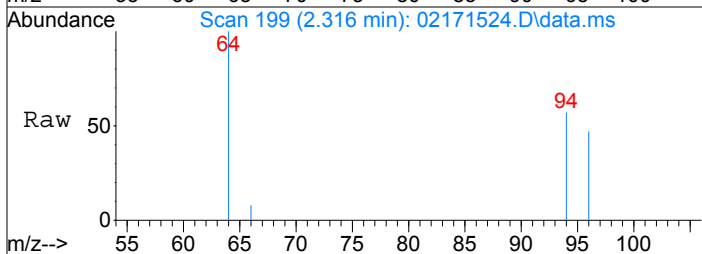
Tgt Ion: 52 Resp: 8728
 Ion Ratio Lower Upper
 52 100
 50 285.6 283.7 323.7





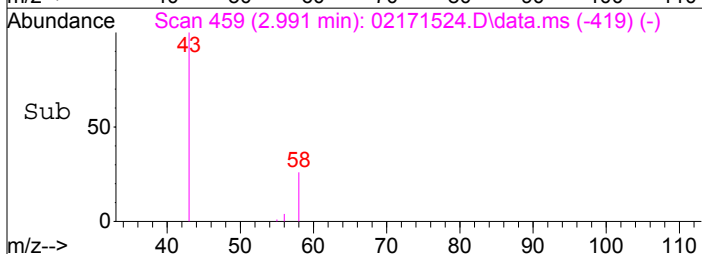
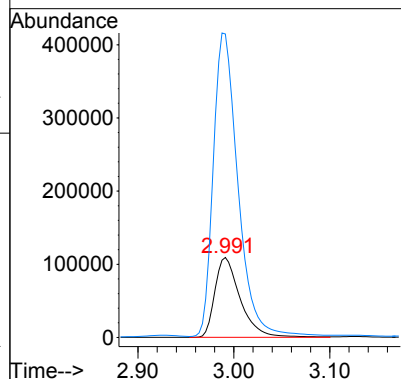
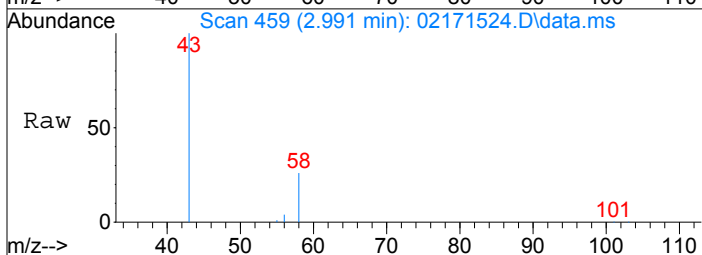
#5
Bromomethane
Concen: 81.46 pg
RT: 2.32 min Scan# 199
Delta R.T. -0.014 min
Lab File: 02171524.D
Acq: 17 Feb 2015 16:55

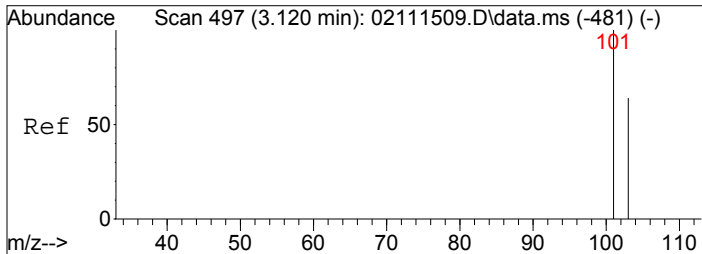
Tgt Ion: 94 Resp: 2877
Ion Ratio Lower Upper
94 100
96 82.5 75.5 113.3



#7
Acetone
Concen: 7267.89 pg
RT: 2.99 min Scan# 459
Delta R.T. -0.013 min
Lab File: 02171524.D
Acq: 17 Feb 2015 16:55

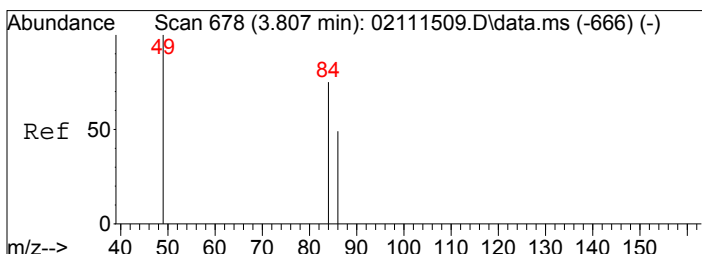
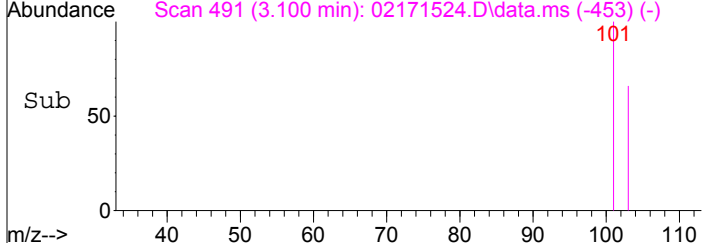
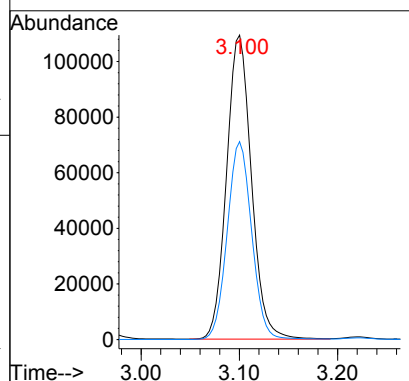
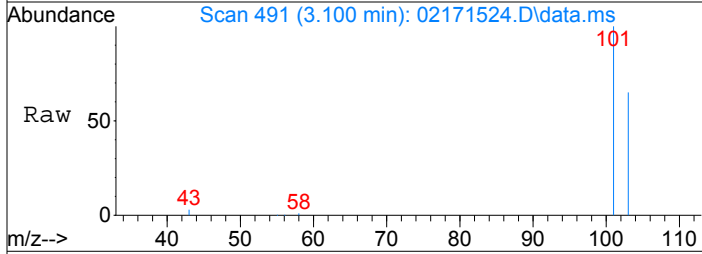
Tgt Ion: 58 Resp: 201573
Ion Ratio Lower Upper
58 100
43 370.6 301.8 341.8#





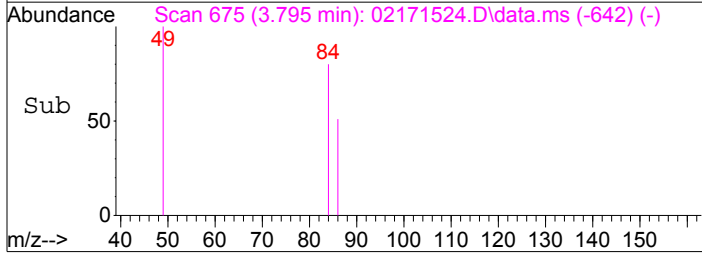
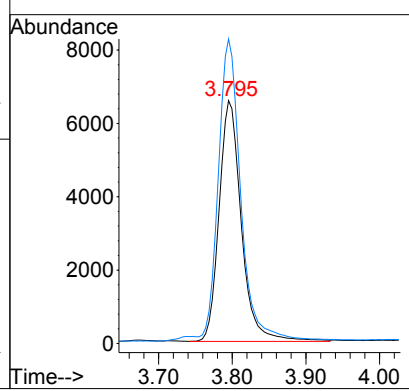
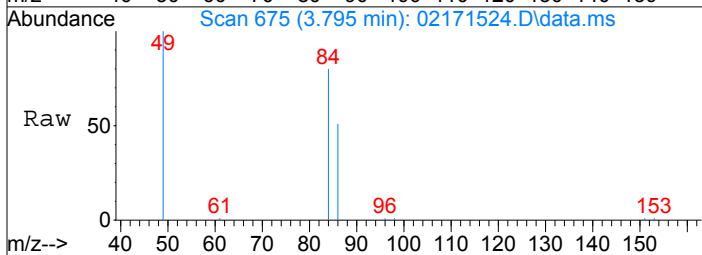
#8
 Trichlorofluoromethane
 Concen: 2848.28 pg
 RT: 3.10 min Scan# 491
 Delta R.T. -0.019 min
 Lab File: 02171524.D
 Acq: 17 Feb 2015 16:55

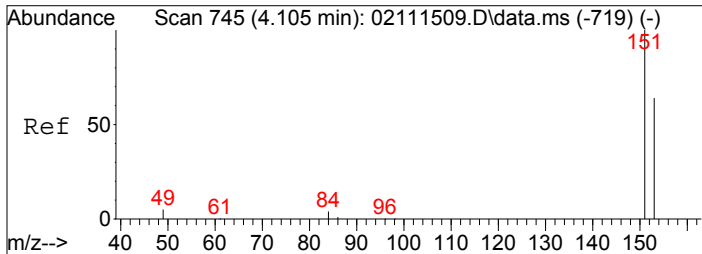
Tgt Ion:	101	Resp:	192155
Ion Ratio	Lower	Upper	
101	100		
103	63.9	51.8	77.6



#10
 Methylene Chloride
 Concen: 430.56 pg
 RT: 3.79 min Scan# 675
 Delta R.T. -0.012 min
 Lab File: 02171524.D
 Acq: 17 Feb 2015 16:55

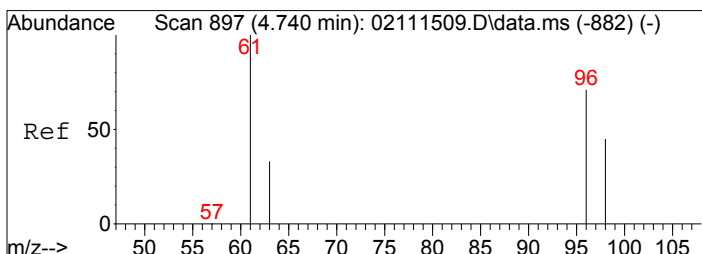
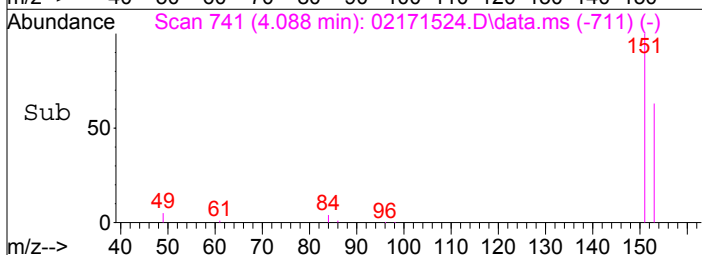
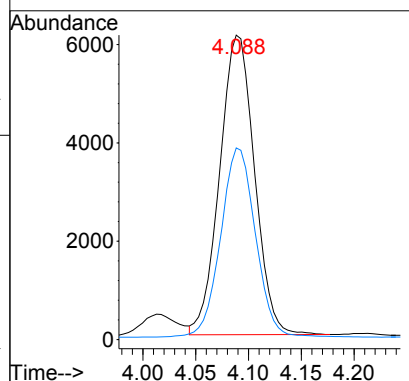
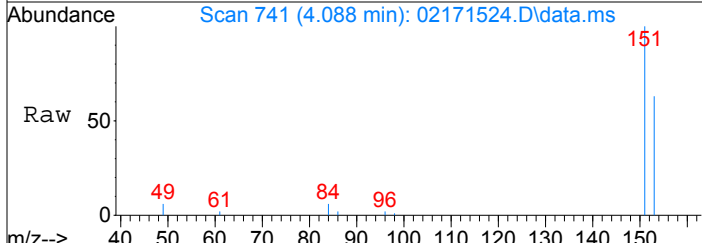
Tgt Ion:	84	Resp:	13783
Ion Ratio	Lower	Upper	
84	100		
49	123.2	112.3	152.3





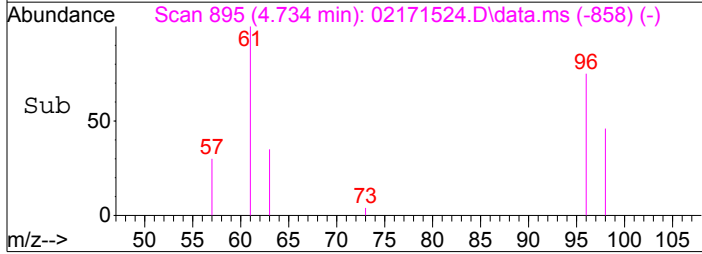
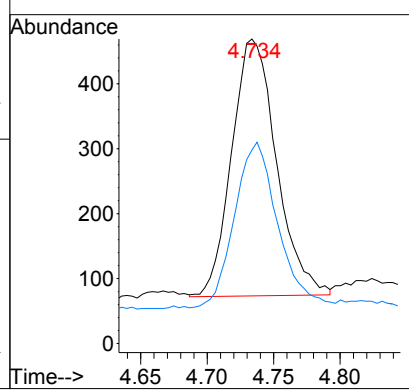
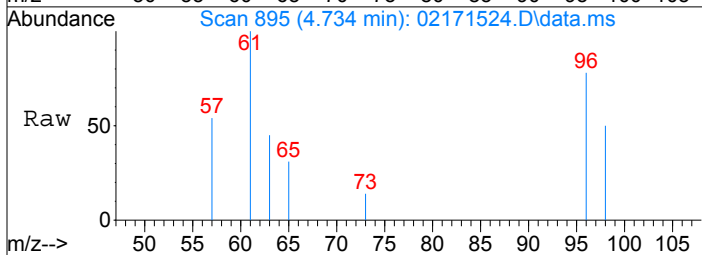
#11
 Trichlorotrifluoroethane
 Concen: 451.30 pg
 RT: 4.09 min Scan# 741
 Delta R.T. -0.017 min
 Lab File: 02171524.D
 Acq: 17 Feb 2015 16:55

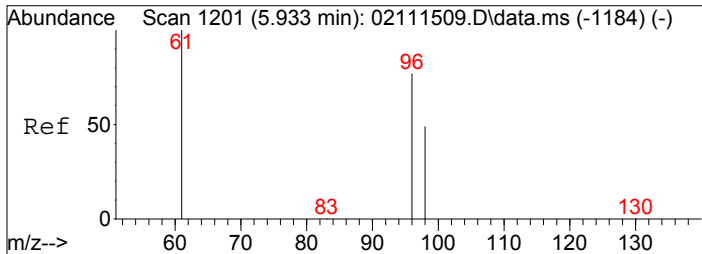
Tgt Ion: 151	Resp: 13990
Ion Ratio	Lower Upper
151	100
153	63.4 43.6 83.6



#12
 trans-1,2-Dichloroethene
 Concen: 30.21 pg
 RT: 4.73 min Scan# 895
 Delta R.T. -0.007 min
 Lab File: 02171524.D
 Acq: 17 Feb 2015 16:55

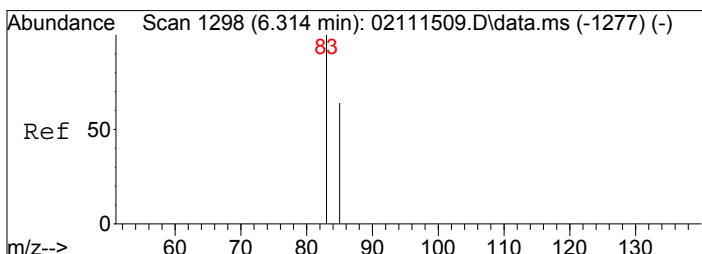
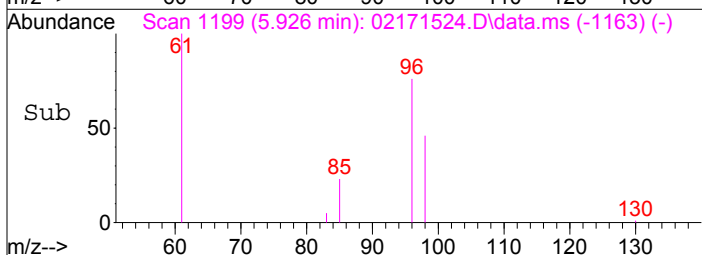
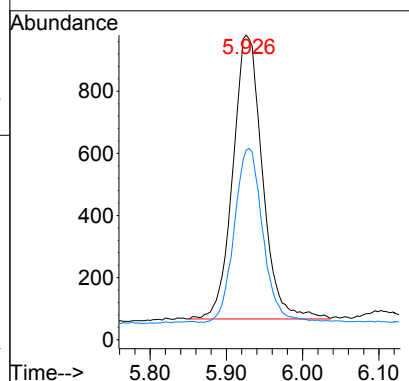
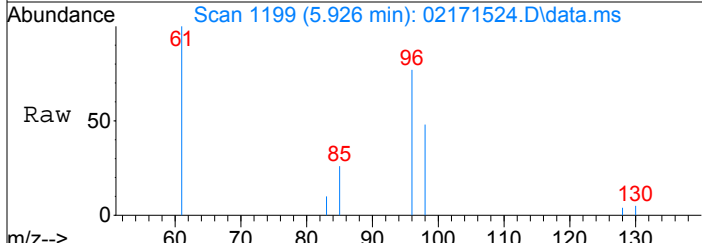
Tgt Ion: 96	Resp: 929
Ion Ratio	Lower Upper
96	100
98	62.5 43.7 83.7





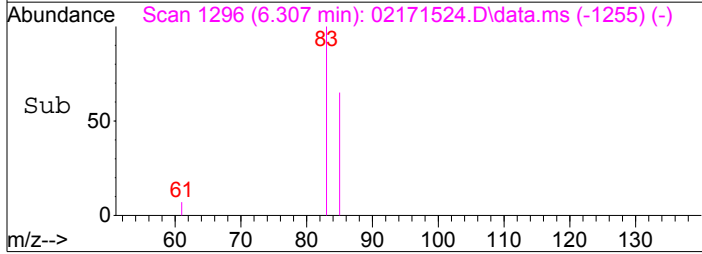
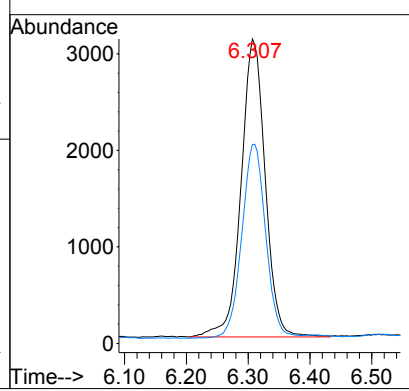
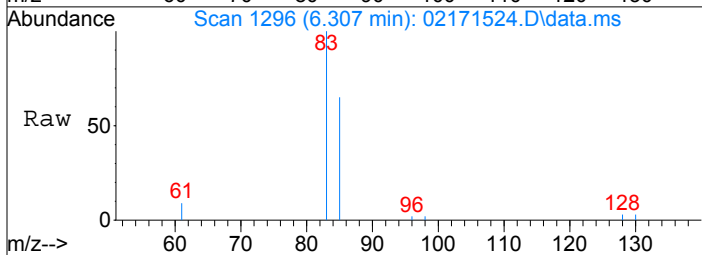
#15
 cis-1,2-Dichloroethene
 Concen: 72.14 pg
 RT: 5.93 min Scan# 1199
 Delta R.T. -0.007 min
 Lab File: 02171524.D
 Acq: 17 Feb 2015 16:55

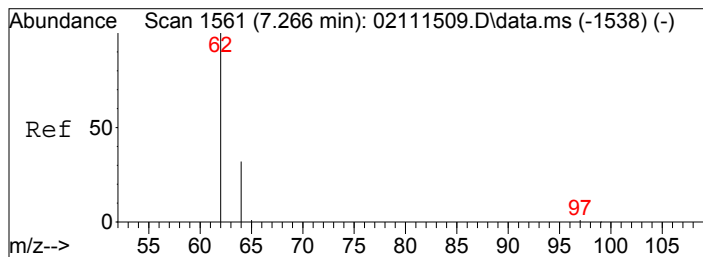
Tgt Ion:	96	Resp:	2467
Ion Ratio	Lower	Upper	
96	100		
98	59.3	44.3	84.3



#16
 Chloroform
 Concen: 141.31 pg
 RT: 6.31 min Scan# 1296
 Delta R.T. -0.007 min
 Lab File: 02171524.D
 Acq: 17 Feb 2015 16:55

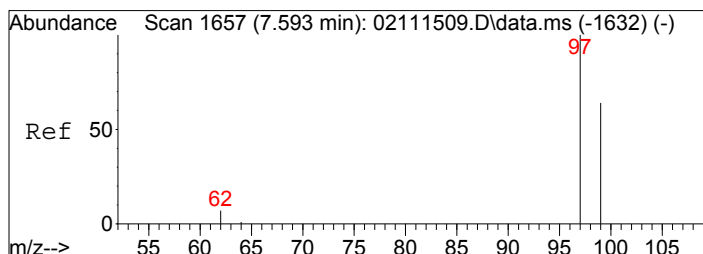
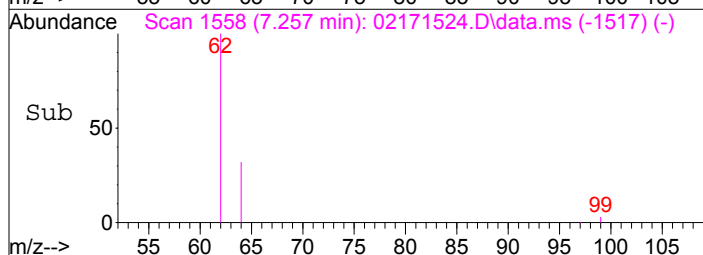
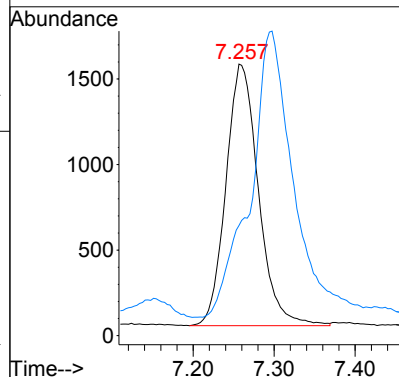
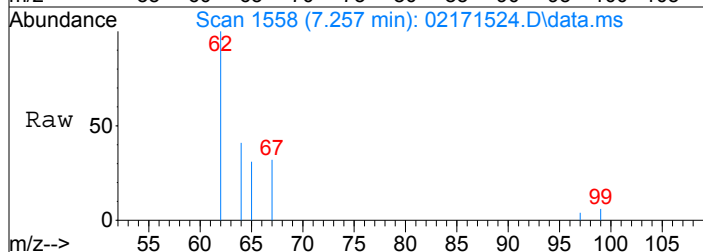
Tgt Ion:	83	Resp:	8373
Ion Ratio	Lower	Upper	
83	100		
85	64.8	45.4	85.4





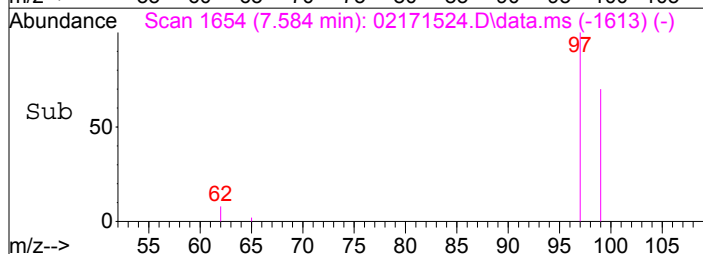
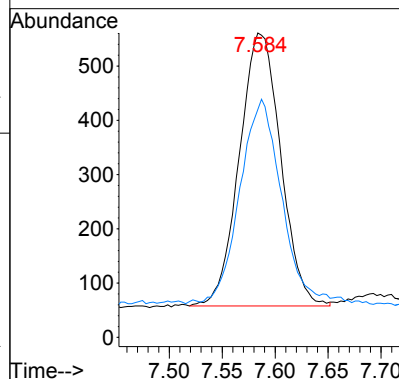
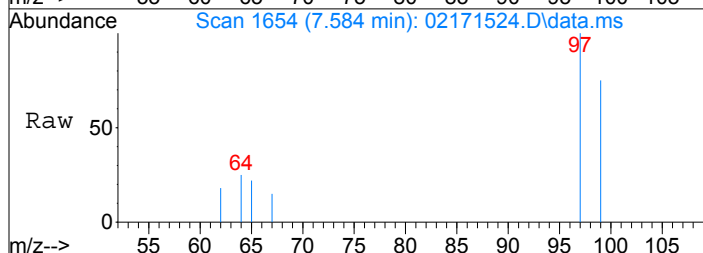
#18
1,2-Dichloroethane
Concen: 90.42 pg
RT: 7.26 min Scan# 1558
Delta R.T. -0.009 min
Lab File: 02171524.D
Acq: 17 Feb 2015 16:55

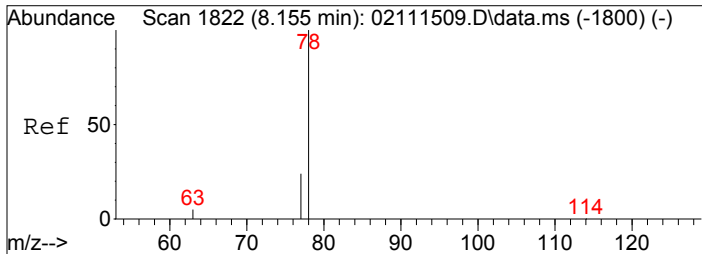
Tgt Ion: 62 Resp: 4266
Ion Ratio Lower Upper
62 100
64 144.0 11.6 51.6#



#19
1,1,1-Trichloroethane
Concen: 23.67 pg
RT: 7.58 min Scan# 1654
Delta R.T. -0.009 min
Lab File: 02171524.D
Acq: 17 Feb 2015 16:55

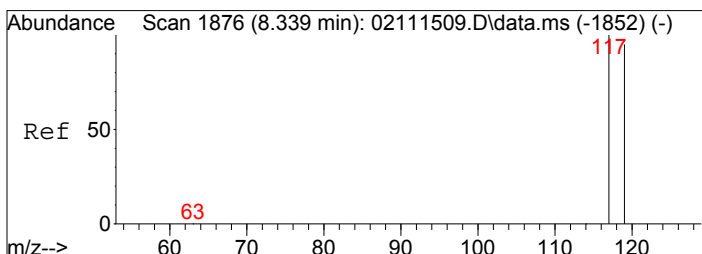
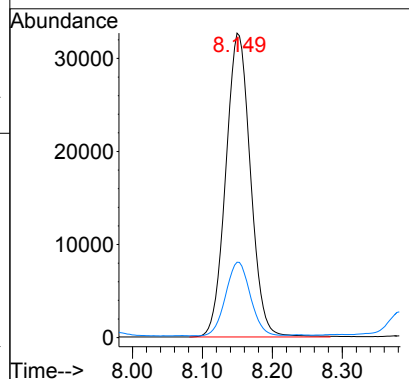
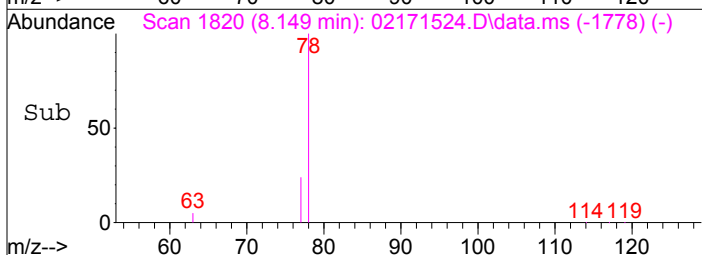
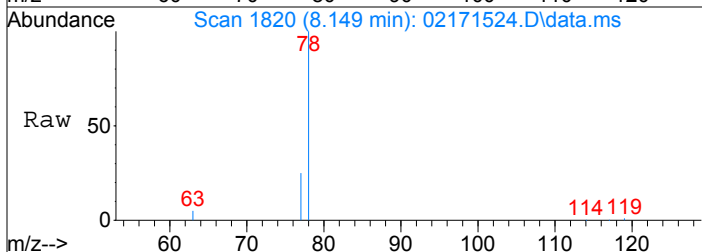
Tgt Ion: 97 Resp: 1364
Ion Ratio Lower Upper
97 100
99 74.3 44.0 84.0





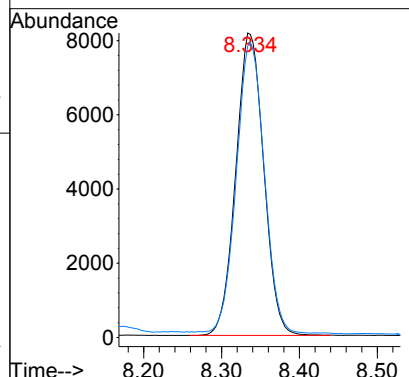
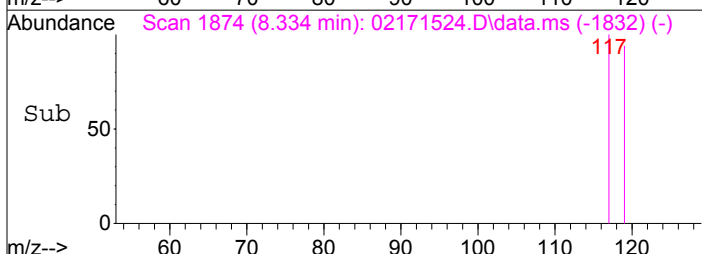
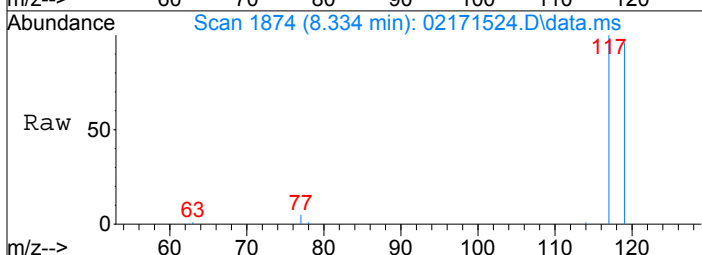
#20
Benzene
Concen: 657.65 pg
RT: 8.15 min Scan# 1820
Delta R.T. -0.006 min
Lab File: 02171524.D
Acq: 17 Feb 2015 16:55

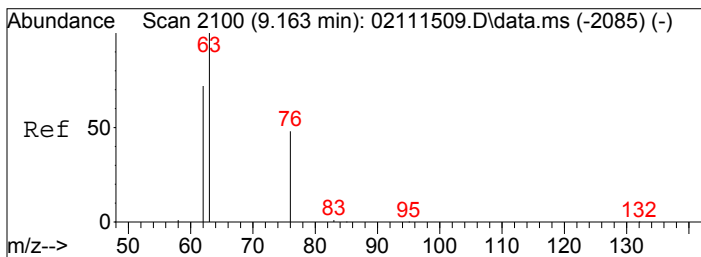
Tgt Ion	78	Resp	80148
Ion Ratio	100	Lower	Upper
77	24.2	3.7	43.7



#21
Carbon Tetrachloride
Concen: 471.31 pg
RT: 8.33 min Scan# 1874
Delta R.T. -0.006 min
Lab File: 02171524.D
Acq: 17 Feb 2015 16:55

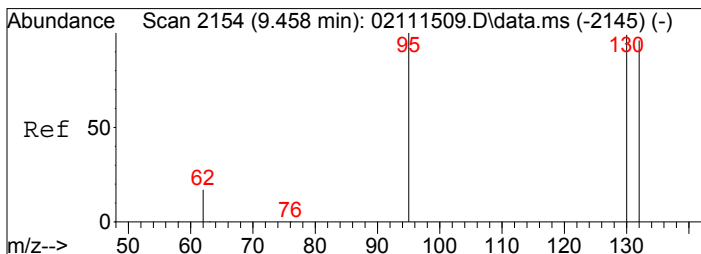
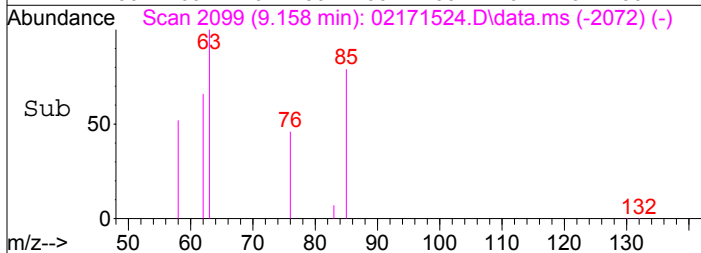
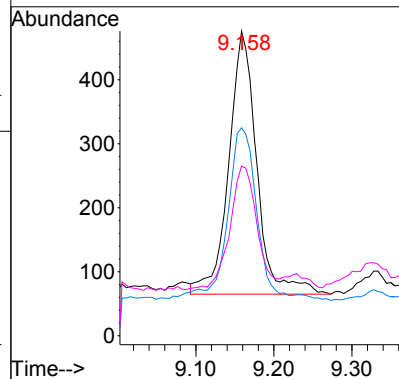
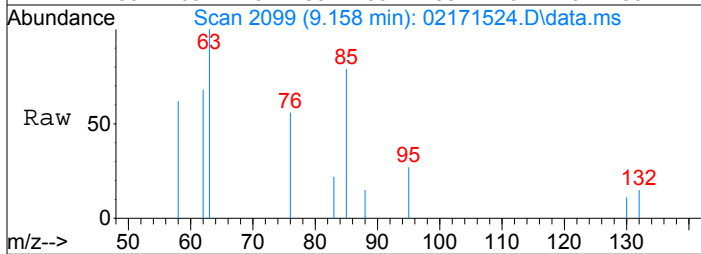
Tgt Ion	117	Resp	20331
Ion Ratio	100	Lower	Upper
119	95.9	75.5	115.5





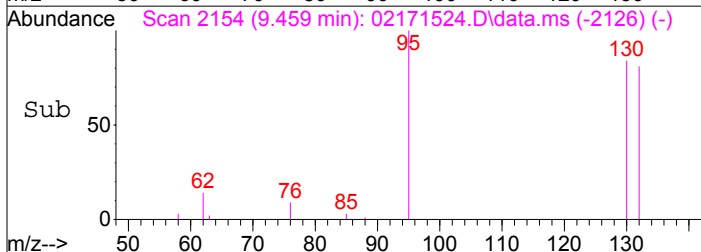
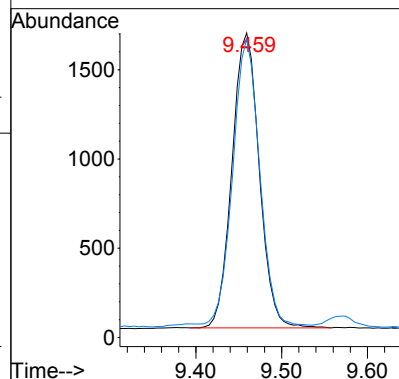
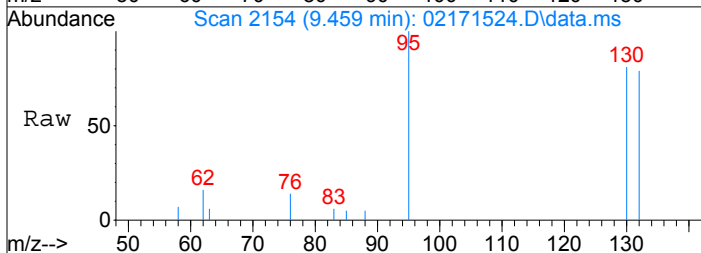
#23
1,2-Dichloropropane
Concen: 33.63 pg
RT: 9.16 min Scan# 2099
Delta R.T. -0.004 min
Lab File: 02171524.D
Acq: 17 Feb 2015 16:55

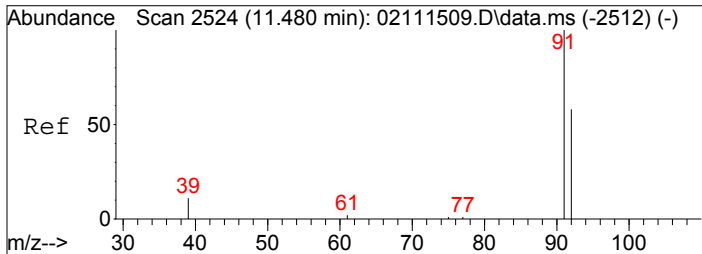
Tgt Ion: 63 Resp: 1028
Ion Ratio Lower Upper
63 100
62 65.5 52.0 92.0
76 45.7 28.1 68.1



#25
Trichloroethene
Concen: 101.36 pg
RT: 9.46 min Scan# 2154
Delta R.T. 0.001 min
Lab File: 02171524.D
Acq: 17 Feb 2015 16:55

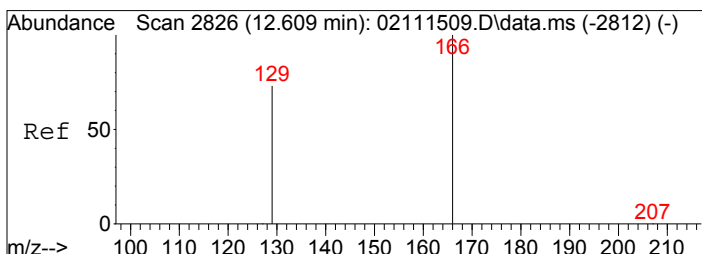
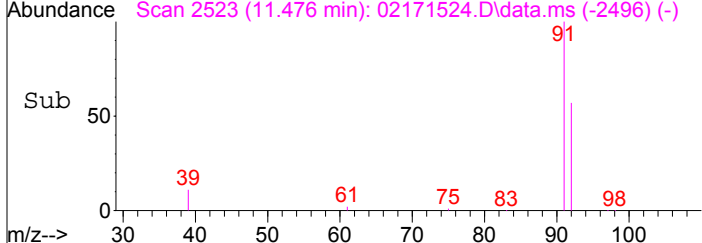
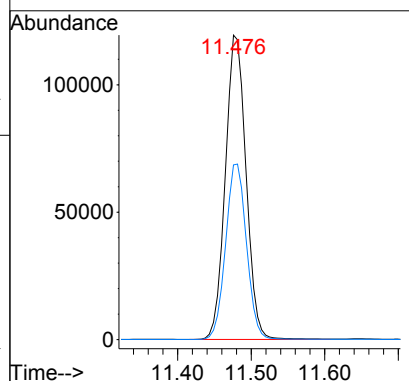
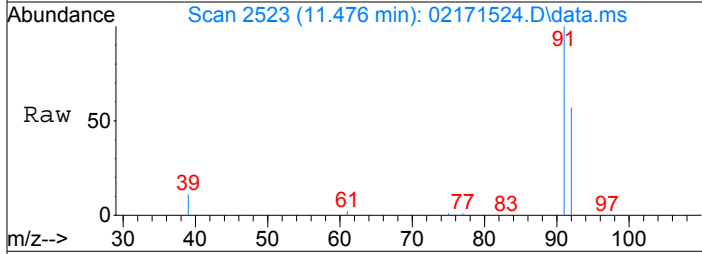
Tgt Ion: 130 Resp: 3650
Ion Ratio Lower Upper
130 100
132 95.0 77.1 117.1





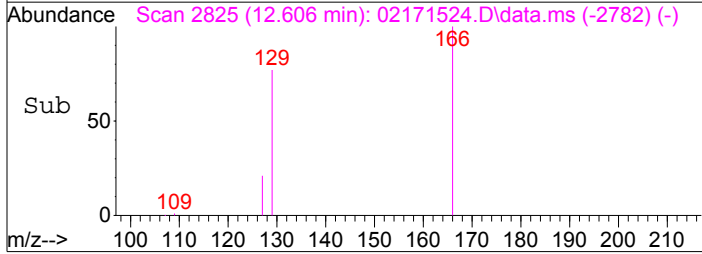
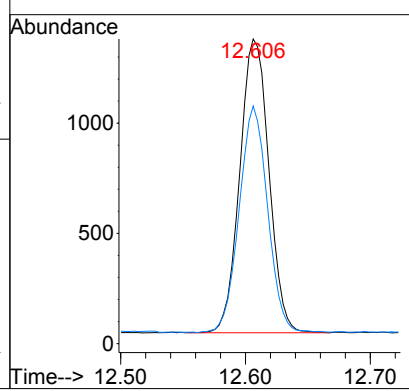
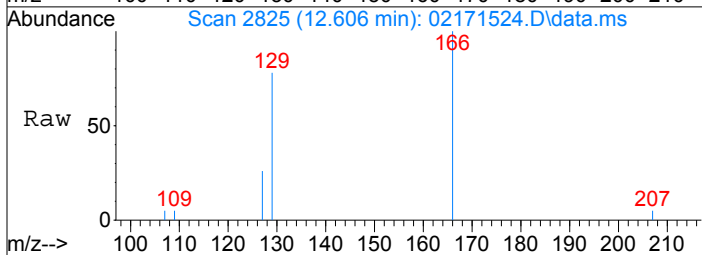
#31
Toluene
Concen: 1699.26 pg
RT: 11.48 min Scan# 2523
Delta R.T. -0.004 min
Lab File: 02171524.D
Acq: 17 Feb 2015 16:55

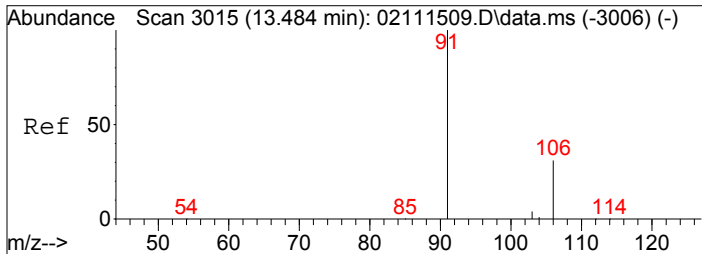
Tgt Ion:	91	Resp:	233612
Ion Ratio	Lower	Upper	
91	100		
92	58.1	37.7	77.7



#33
Tetrachloroethene
Concen: 50.86 pg
RT: 12.61 min Scan# 2825
Delta R.T. -0.003 min
Lab File: 02171524.D
Acq: 17 Feb 2015 16:55

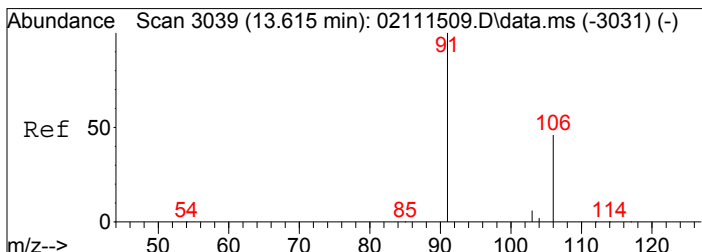
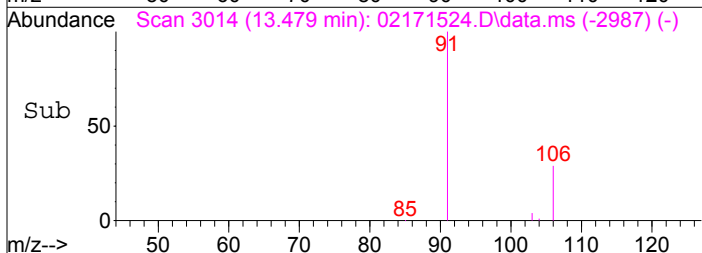
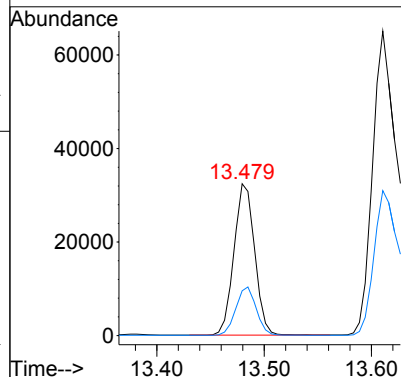
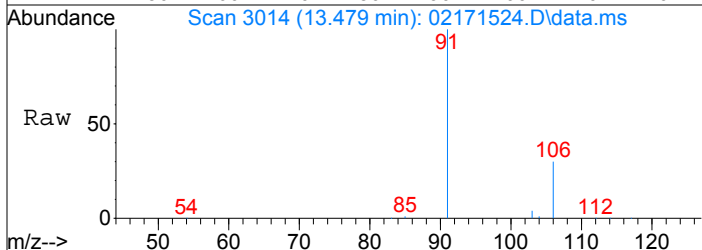
Tgt Ion:	166	Resp:	2165
Ion Ratio	Lower	Upper	
166	100		
129	75.0	53.3	93.3





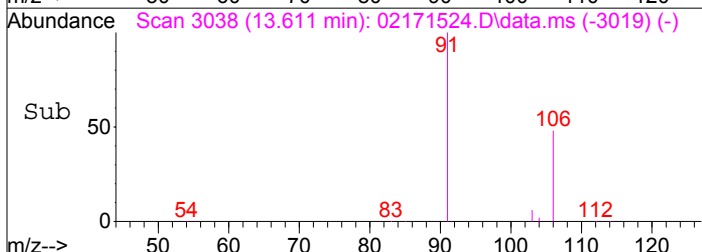
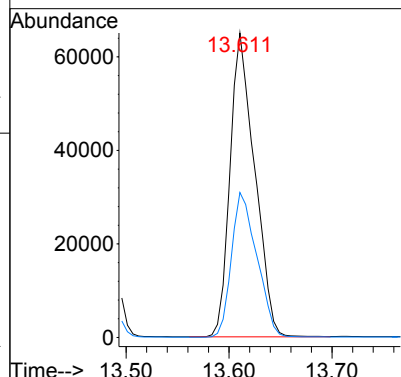
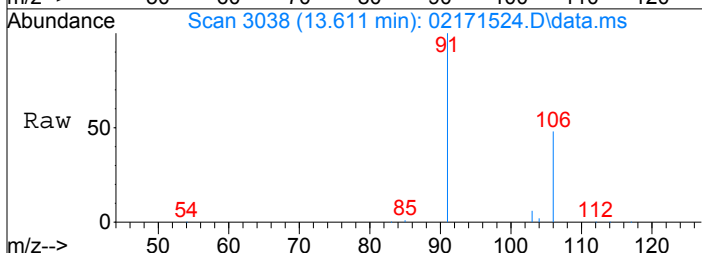
#36
Ethylbenzene
Concen: 291.23 pg
RT: 13.48 min Scan# 3014
Delta R.T. -0.004 min
Lab File: 02171524.D
Acq: 17 Feb 2015 16:55

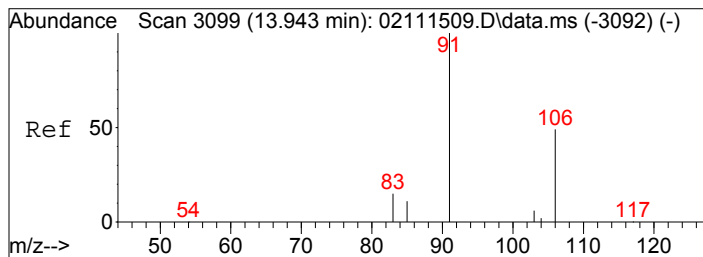
Tgt Ion: 91 Resp: 43510
Ion Ratio Lower Upper
91 100
106 31.4 10.9 50.9



#37
m,p-Xylene
Concen: 880.06 pg
RT: 13.61 min Scan# 3038
Delta R.T. -0.004 min
Lab File: 02171524.D
Acq: 17 Feb 2015 16:55

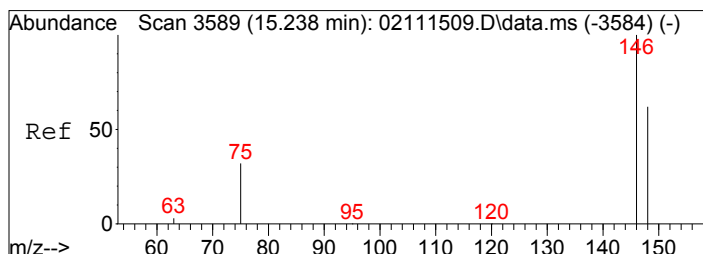
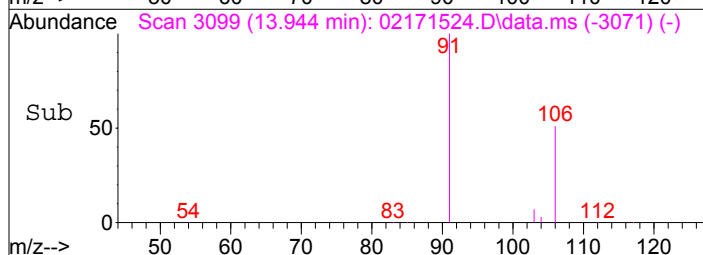
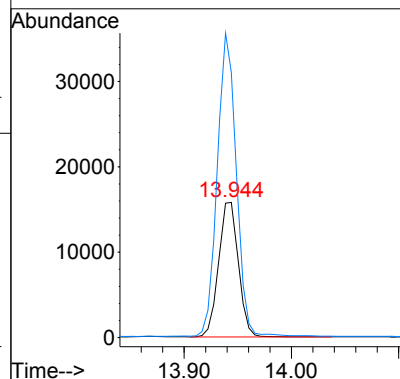
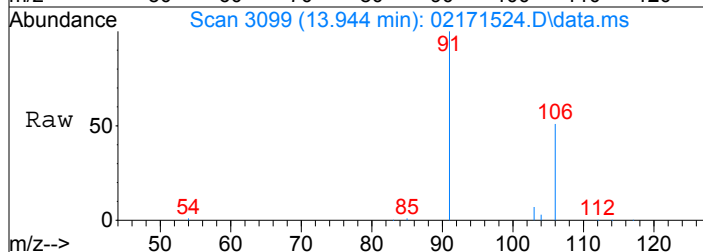
Tgt Ion: 91 Resp: 108065
Ion Ratio Lower Upper
91 100
106 49.1 27.5 67.5





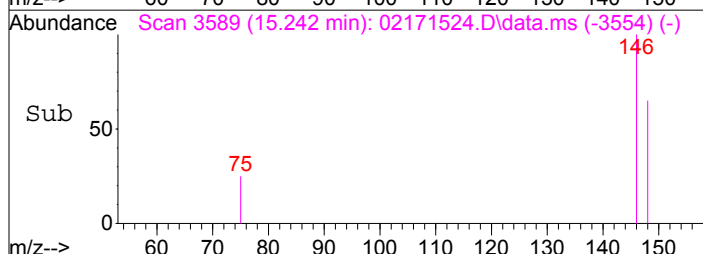
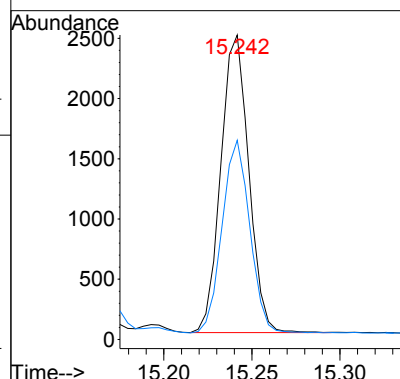
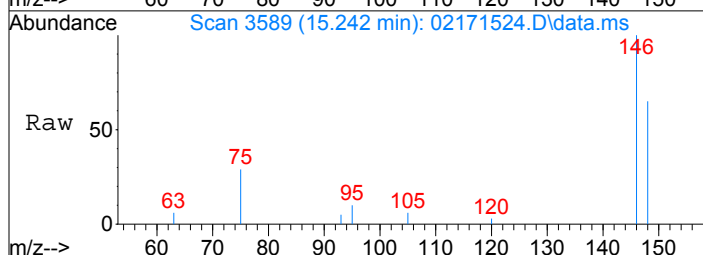
#38
o-Xylene
Concen: 335.85 pg
RT: 13.94 min Scan# 3099
Delta R.T. 0.001 min
Lab File: 02171524.D
Acq: 17 Feb 2015 16:55

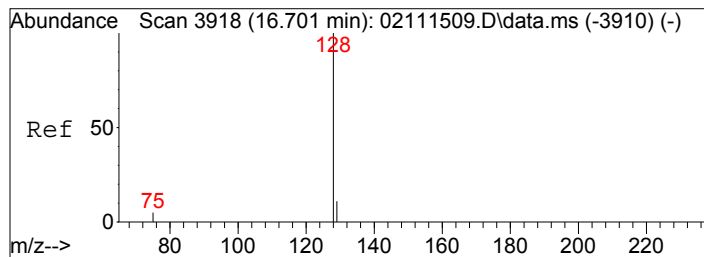
Tgt Ion:106 Resp: 20155
Ion Ratio Lower Upper
106 100
91 217.4 198.3 238.3



#42
1,4-Dichlorobenzene
Concen: 33.07 pg
RT: 15.24 min Scan# 3589
Delta R.T. 0.004 min
Lab File: 02171524.D
Acq: 17 Feb 2015 16:55

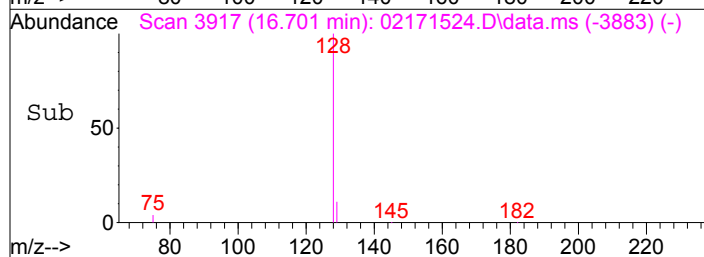
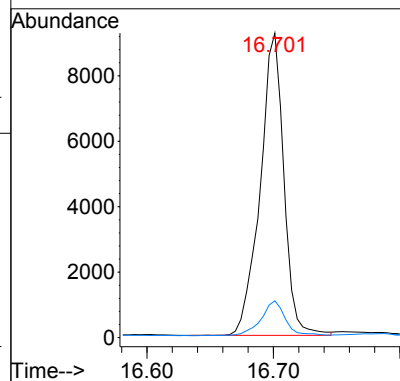
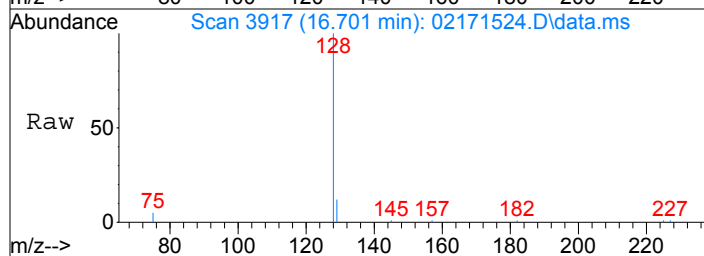
Tgt Ion:146 Resp: 2723
Ion Ratio Lower Upper
146 100
148 64.5 43.5 83.5





#45
Naphthalene
Concen: 80.62 pg
RT: 16.70 min Scan# 3917
Delta R.T. 0.000 min
Lab File: 02171524.D
Acq: 17 Feb 2015 16:55

Tgt Ion:128	Resp:	12019
Ion Ratio	Lower	Upper
128	100	
129	11.8	0.0 30.9



Data File: I:\MS19\DATA\2015 02\17\02171515.D

Acq On : 17 Feb 2015 11:11

Operator: WA

Sample : P1500566-020 (1000mL)

Misc : S29-02041502

ALS Vial : 8 Sample Multiplier: 1

Quant Time: Feb 17 16:44:12 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

2/18/15

DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	18141	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	131704	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	23024	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	41469	936.051	pg	0.00
Spiked Amount 1000.000			Recovery	=	93.60%	
30) Toluene-d8 (SS2)	11.38	98	124369	1023.989	pg	0.00
Spiked Amount 1000.000			Recovery	=	102.40%	
40) Bromofluorobenzene (SS3)	14.25	174	48941	1052.896	pg	0.00
Spiked Amount 1000.000			Recovery	=	105.29%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.73	85	127904	1734.873	pg	100
3) Chloromethane	1.84	52	7874	534.804	pg	100
4) Vinyl Chloride	0.00	62	0	N.D.	d	
5) Bromomethane	2.33	94	2170	65.457	pg	83
6) Chloroethane	0.00	64	0	N.D.	d	
7) Acetone	2.99	58	373006	14327.565	pg	# 86
8) Trichlorofluoromethane	3.11	101	139190	2197.957	pg	99
9) 1,1-Dichloroethene	3.67	96	117	N.D.		
10) Methylene Chloride	3.80	84	13293	442.378	pg	93
11) Trichlorotrifluoroethane	4.10	151	11147	383.073	pg	98
12) trans-1,2-Dichloroethene	4.74	96	1133	39.246	pg	96
13) 1,1-Dichloroethane	4.95	63	390	N.D.		
14) Methyl tert-Butyl Ether	5.12	73	947	N.D.		
15) cis-1,2-Dichloroethene	5.93	96	1669	51.990	pg	96
16) Chloroform	6.31	83	8109	145.794	pg	99
18) 1,2-Dichloroethane	7.26	62	3784	85.445	pg	# 1
19) 1,1,1-Trichloroethane	7.59	97	1166	21.558	pg	85
20) Benzene	8.16	78	67936	593.861	pg	99
21) Carbon Tetrachloride	8.34	117	14090	347.966	pg	99
23) 1,2-Dichloropropane	9.16	63	890	30.984	pg	93
24) Bromodichloromethane	0.00	83	0	N.D.	d	
25) Trichloroethene	9.46	130	2428	71.759	pg	98
26) 1,4-Dioxane	9.43	88	267	N.D.		
27) cis-1,3-Dichloropropene	10.46	75	110	N.D.		
28) trans-1,3-Dichloropropene	11.05	75	264	N.D.		
29) 1,1,2-Trichloroethane	11.20	83	90	N.D.		
31) Toluene	11.48	91	358718	2776.995	pg	99
32) 1,2-Dibromoethane	12.13	107	182	N.D.		
33) Tetrachloroethene	12.61	166	2136	53.404	pg	98
35) Chlorobenzene	13.17	112	800	N.D.		
36) Ethylbenzene	13.48	91	78767	545.554	pg	100
37) m,p-Xylene	13.61	91	230200	1939.933	pg	98
38) o-Xylene	13.94	106	42701	736.306	pg	99
39) 1,1,2,2-Tetrachloroethane	13.89	83	490	N.D.		
41) 1,3-Dichlorobenzene	15.19	146	231	N.D.		
42) 1,4-Dichlorobenzene	15.24	146	3159	39.704	pg	98
43) 1,2-Dichlorobenzene	15.46	146	204	N.D.		
44) 1,2,4-Trichlorobenzene	16.63	182	255	N.D.		
45) Naphthalene	16.70	128	27024	187.585	pg	96
46) Hexachlorobutadiene	16.96	225	32	N.D.		

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\17\02171515.D

Acq On : 17 Feb 2015 11:11

Operator: WA

Sample : P1500566-020 (1000mL)

Misc : S29-02041502

ALS Vial : 8 Sample Multiplier: 1

Quant Time: Feb 17 16:44:12 2015

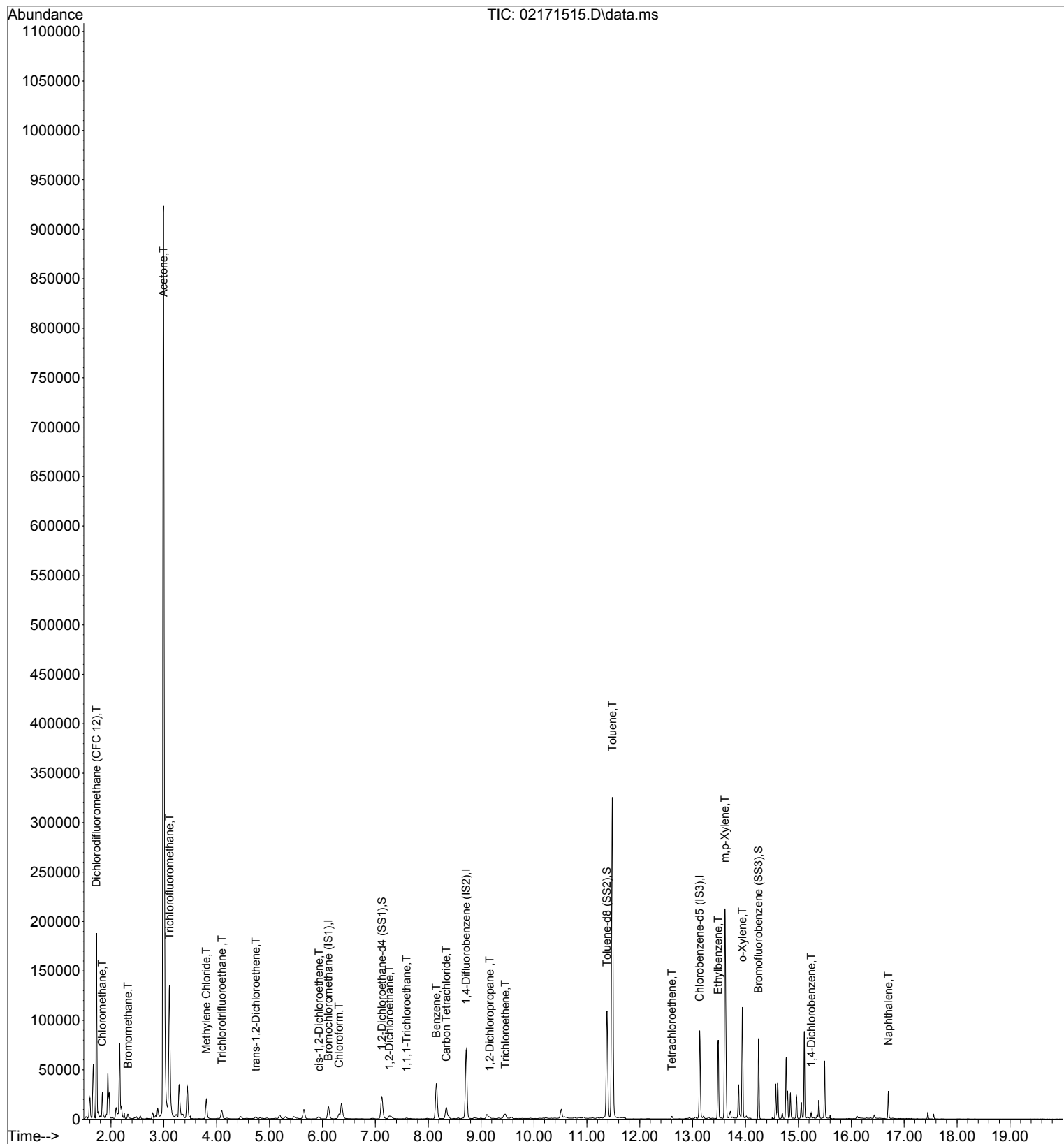
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 02\17\02171515.D

Acq On : 17 Feb 2015 11:11
 Sample : P1500566-020 (1000mL)
 Misc : S29-02041502
 ALS Vial : 8 Sample Multiplier: 1

Operator: WA

Quant Time: Feb 17 16:44:12 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

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DataAcq Meth:TO15SIM.M

2/17/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
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17) 1,2-Dichloroethane-d4 ...	7.12	65	41469	936.051	pg	0.00
Spiked Amount 1000.000			Recovery	=	93.60%	
30) Toluene-d8 (SS2)	11.38	98	124369	1023.989	pg	0.00
Spiked Amount 1000.000			Recovery	=	102.40%	
40) Bromofluorobenzene (SS3)	14.25	174	48941	1052.896	pg	0.00
Spiked Amount 1000.000			Recovery	=	105.29%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.73	85	127904	1734.873	pg	100
3) Chloromethane	1.84	52	7874	534.804	pg	100
5) Bromomethane	2.33	94	2170	65.457	pg	83
7) Acetone	2.99	58	373006	14327.565	pg	# 86
8) Trichlorofluoromethane	3.11	101	139190	2197.957	pg	99
10) Methylene Chloride	3.80	84	13293	442.378	pg	93
11) Trichlorotrifluoroethane	4.10	151	11147	383.073	pg	98
12) trans-1,2-Dichloroethene	4.74	96	1133	39.246	pg	96
15) cis-1,2-Dichloroethene	5.93	96	1669	51.990	pg	96
16) Chloroform	6.31	83	8109	145.794	pg	99
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19) 1,1,1-Trichloroethane	7.59	97	1166	21.558	pg	85
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25) Trichloroethene	9.46	130	2428	71.759	pg	98
31) Toluene	11.48	91	358718	2776.995	pg	99
33) Tetrachloroethene	12.61	166	2136	53.404	pg	98
36) Ethylbenzene	13.48	91	78767	545.554	pg	100
37) m,p-Xylene	13.61	91	230200	1939.933	pg	98
38) o-Xylene	13.94	106	42701	736.306	pg	99
42) 1,4-Dichlorobenzene	15.24	146	3159	39.704	pg	98
45) Naphthalene	16.70	128	27024	187.585	pg	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File: I:\MS19\DATA\2015 02\17\02171515.D

Acq On : 17 Feb 2015 11:11

Operator: WA

Sample : P1500566-020 (1000mL)

Misc : S29-02041502

ALS Vial : 8 Sample Multiplier: 1

Quant Time: Feb 17 16:44:12 2015

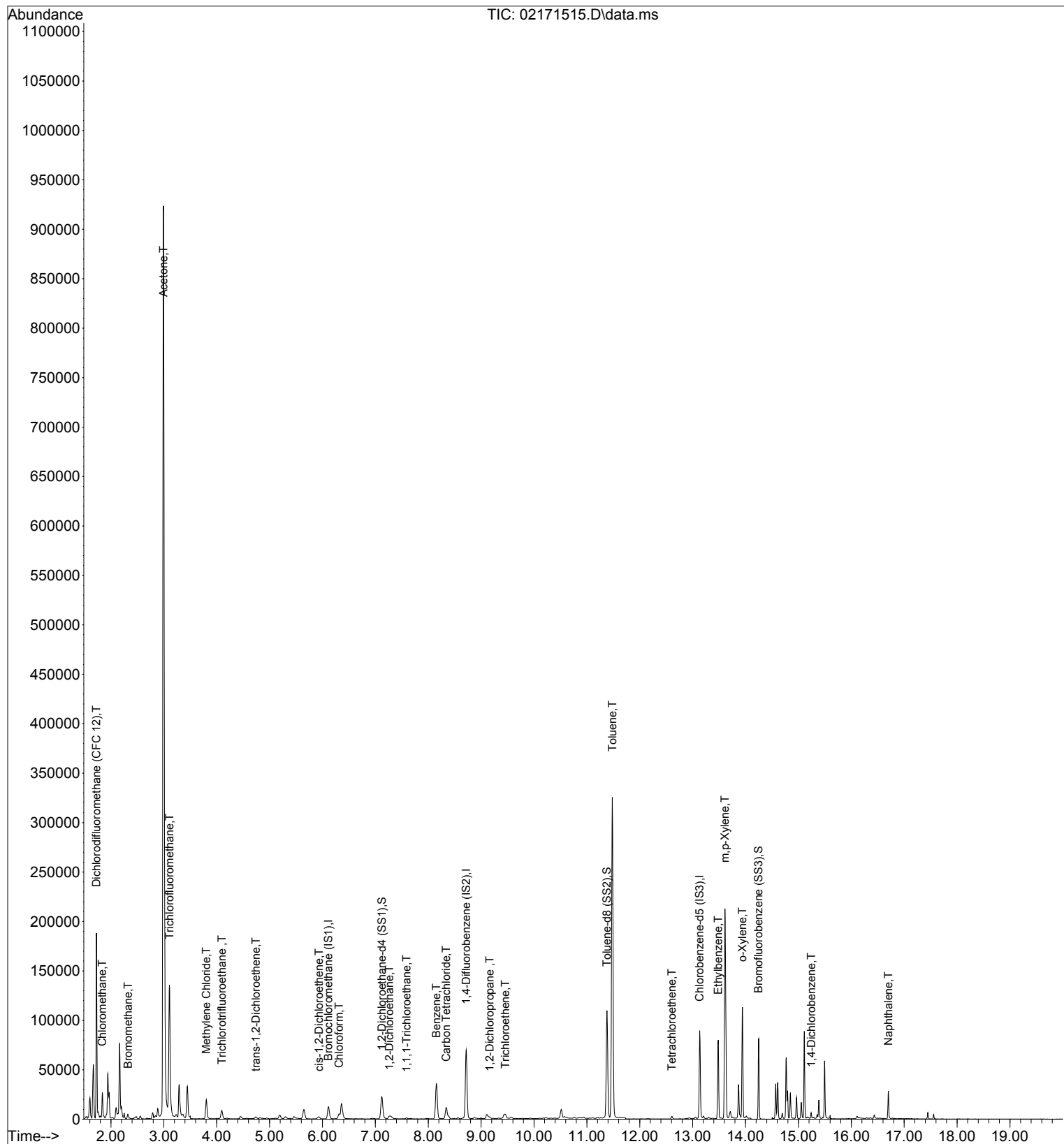
Quant Method : I:\MS19\METHODS\X19021115.M

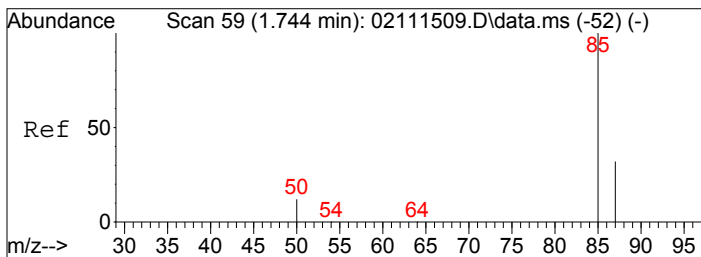
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

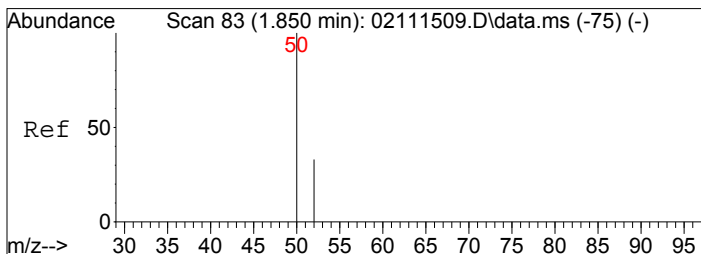
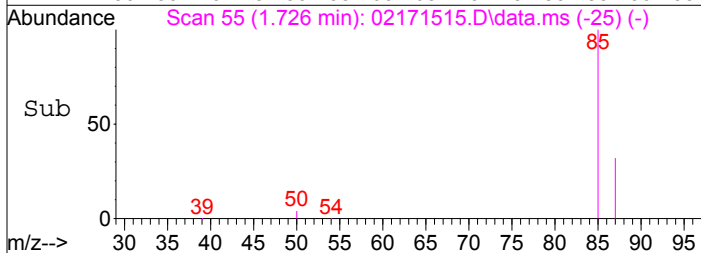
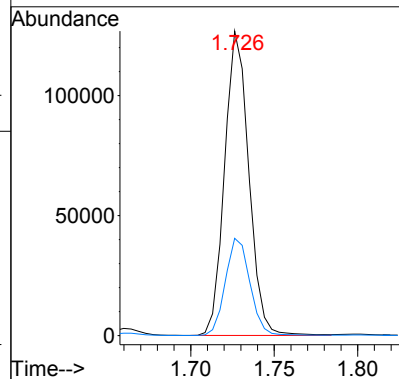
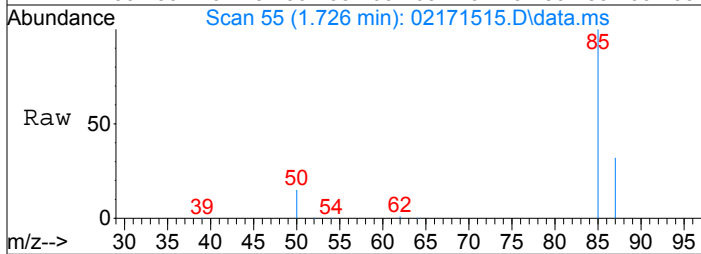
DataAcq Meth:TO15SIM.M





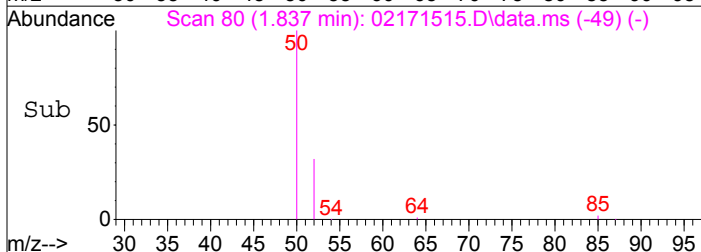
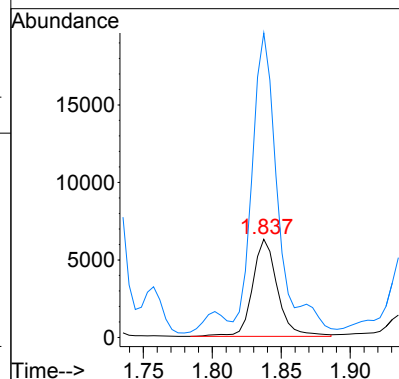
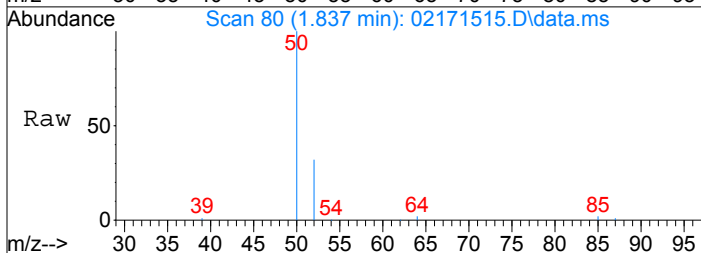
#2
 Dichlorodifluoromethane (CFC 12)
 Concen: 1734.87 pg
 RT: 1.73 min Scan# 55
 Delta R.T. -0.017 min
 Lab File: 02171515.D
 Acq: 17 Feb 2015 11:11

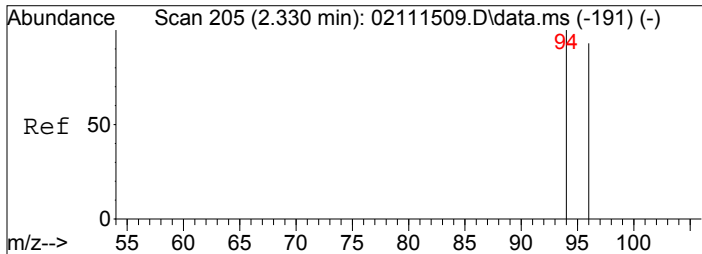
Tgt Ion: 85 Resp: 127904
 Ion Ratio Lower Upper
 85 100
 87 32.4 12.4 52.4



#3
 Chloromethane
 Concen: 534.80 pg
 RT: 1.84 min Scan# 80
 Delta R.T. -0.013 min
 Lab File: 02171515.D
 Acq: 17 Feb 2015 11:11

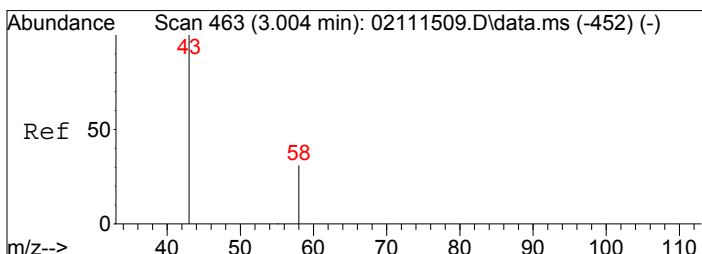
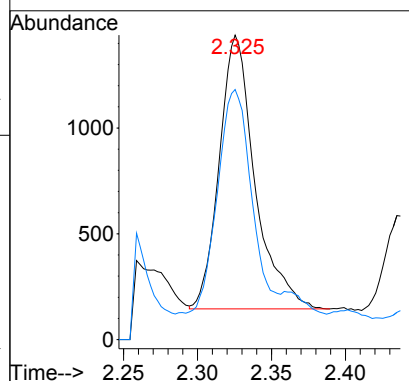
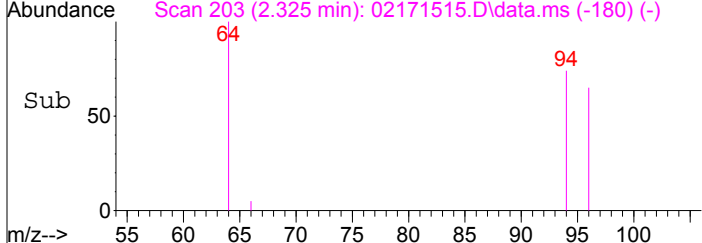
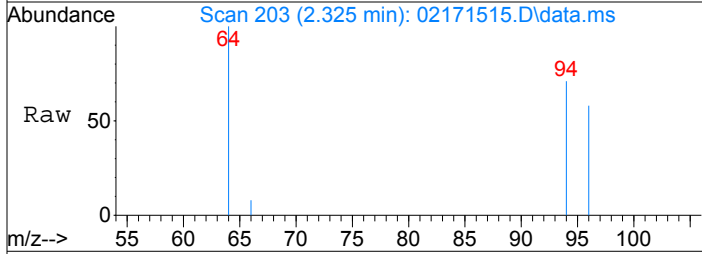
Tgt Ion: 52 Resp: 7874
 Ion Ratio Lower Upper
 52 100
 50 303.7 283.7 323.7





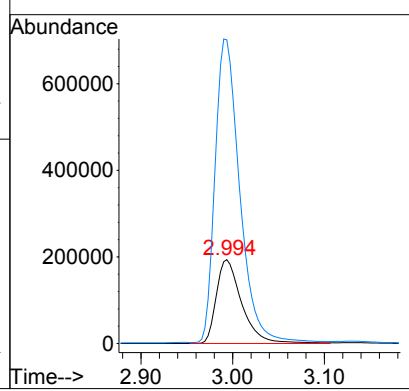
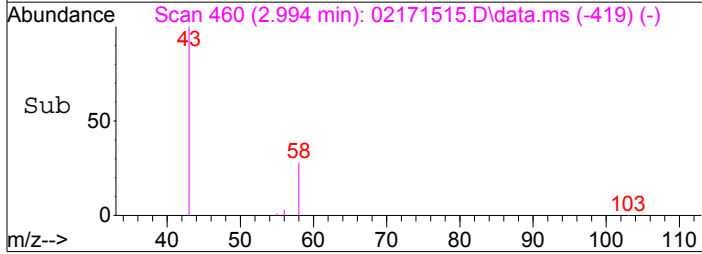
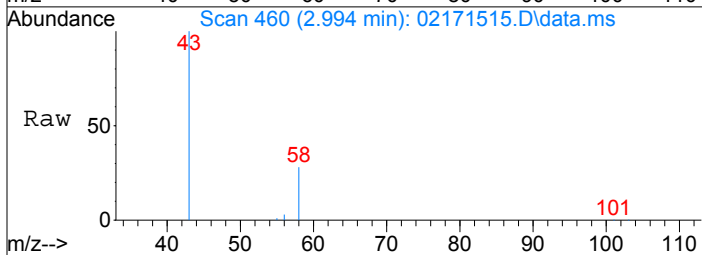
#5
 Bromomethane
 Concen: 65.46 pg
 RT: 2.33 min Scan# 203
 Delta R.T. -0.005 min
 Lab File: 02171515.D
 Acq: 17 Feb 2015 11:11

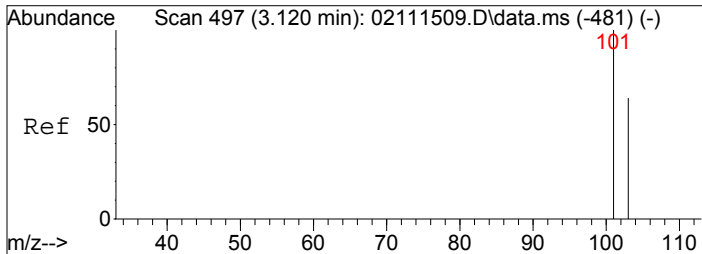
Tgt Ion: 94	Resp: 2170
Ion Ratio	Lower Upper
94	100
96	77.9 75.5 113.3



#7
 Acetone
 Concen: 14327.57 pg
 RT: 2.99 min Scan# 460
 Delta R.T. -0.010 min
 Lab File: 02171515.D
 Acq: 17 Feb 2015 11:11

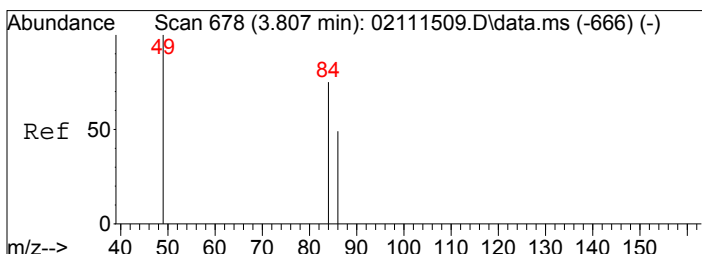
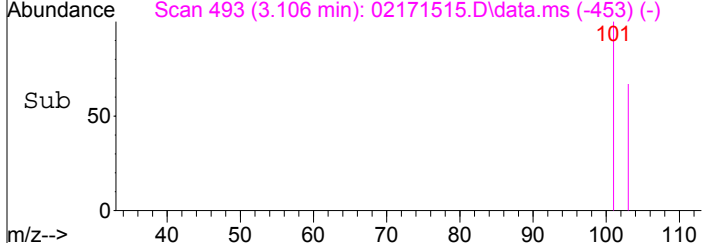
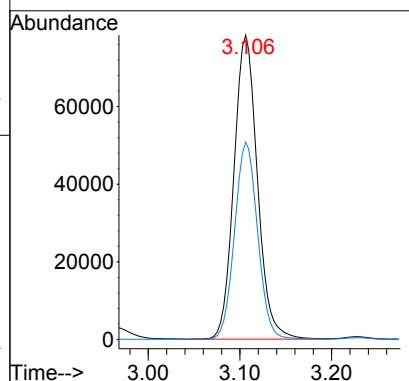
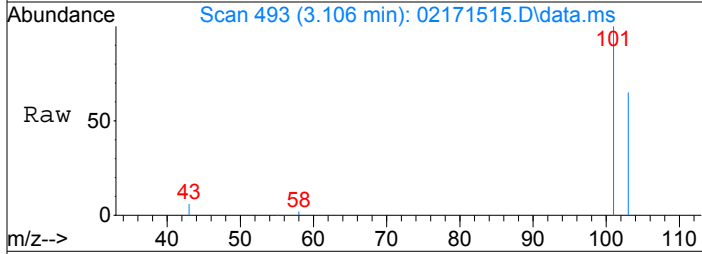
Tgt Ion: 58	Resp: 373006
Ion Ratio	Lower Upper
58	100
43	351.3 301.8 341.8#





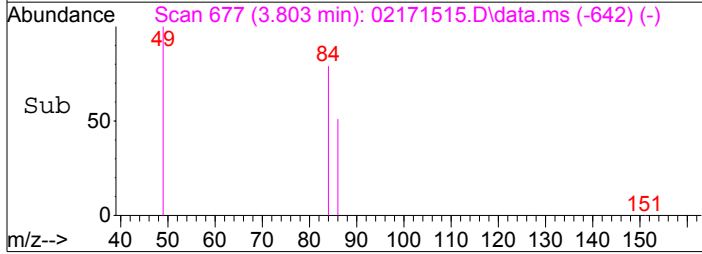
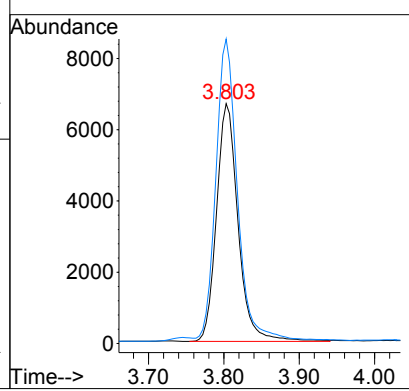
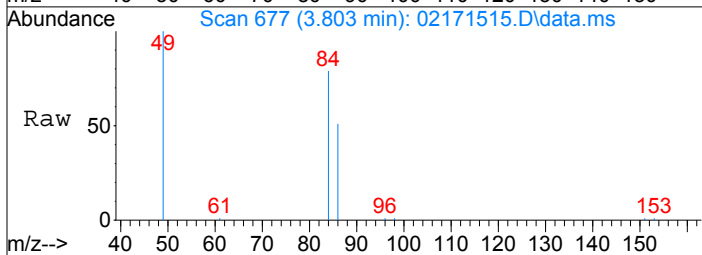
#8
 Trichlorofluoromethane
 Concen: 2197.96 pg
 RT: 3.11 min Scan# 493
 Delta R.T. -0.013 min
 Lab File: 02171515.D
 Acq: 17 Feb 2015 11:11

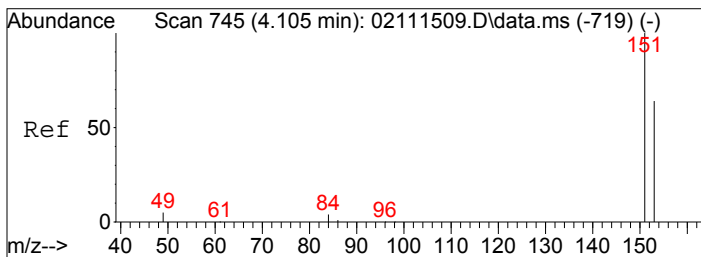
Tgt Ion: 101	Resp: 139190
Ion Ratio	Lower Upper
101	100
103	63.6 51.8 77.6



#10
 Methylene Chloride
 Concen: 442.38 pg
 RT: 3.80 min Scan# 677
 Delta R.T. -0.004 min
 Lab File: 02171515.D
 Acq: 17 Feb 2015 11:11

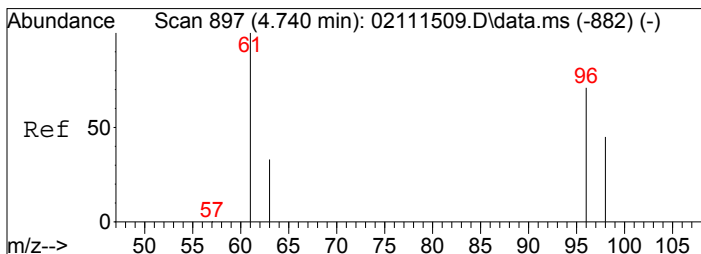
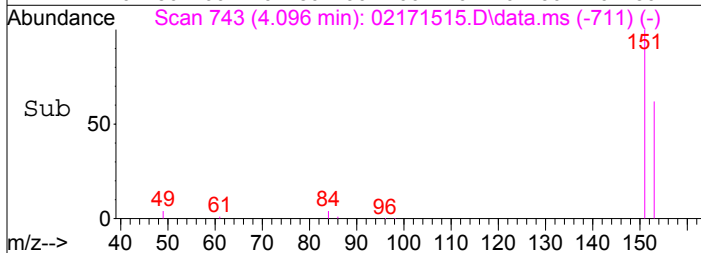
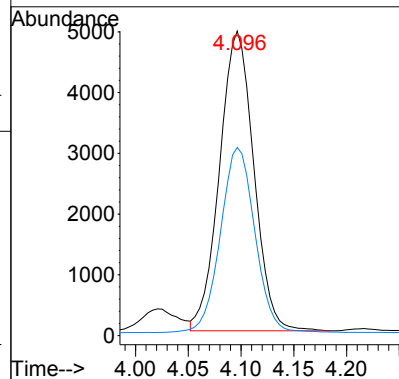
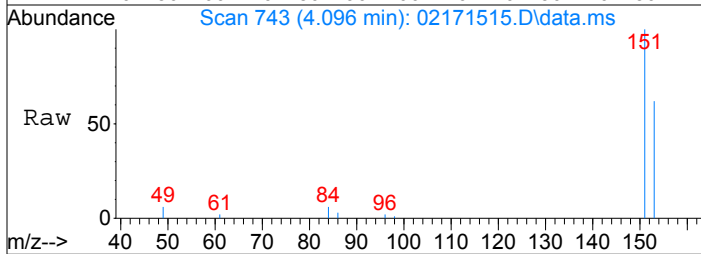
Tgt Ion: 84	Resp: 13293
Ion Ratio	Lower Upper
84	100
49	124.5 112.3 152.3





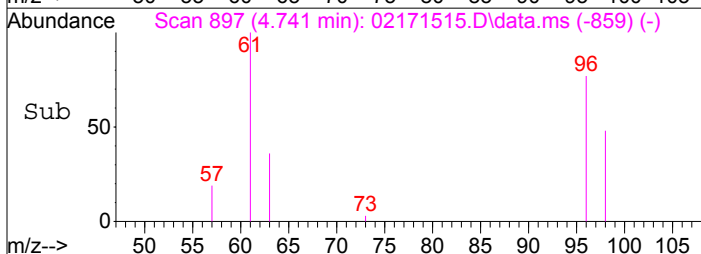
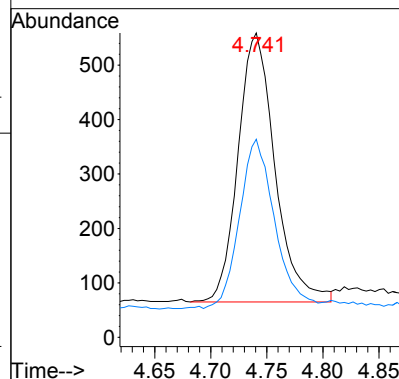
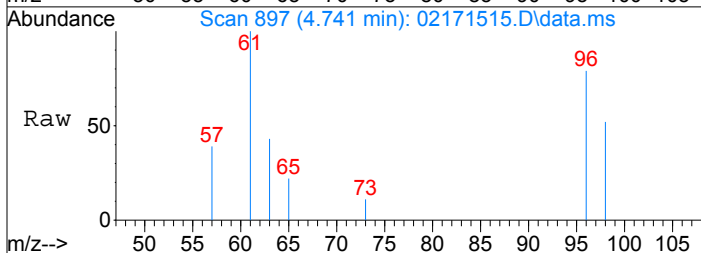
#11
Trichlorotrifluoroethane
Concen: 383.07 pg
RT: 4.10 min Scan# 743
Delta R.T. -0.009 min
Lab File: 02171515.D
Acq: 17 Feb 2015 11:11

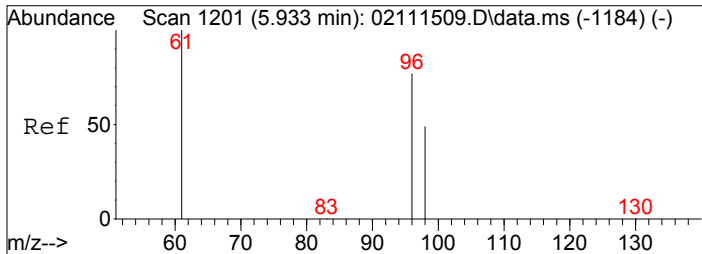
Tgt Ion: 151 Resp: 11147
Ion Ratio Lower Upper
151 100
153 62.4 43.6 83.6



#12
trans-1,2-Dichloroethene
Concen: 39.25 pg
RT: 4.74 min Scan# 897
Delta R.T. 0.000 min
Lab File: 02171515.D
Acq: 17 Feb 2015 11:11

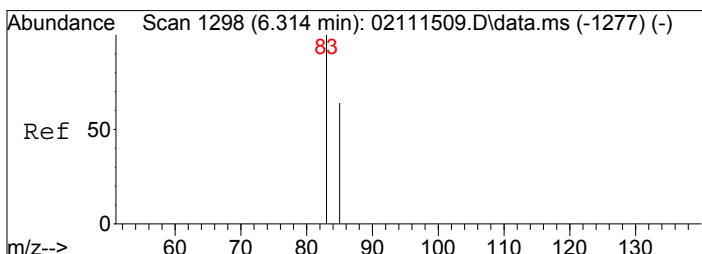
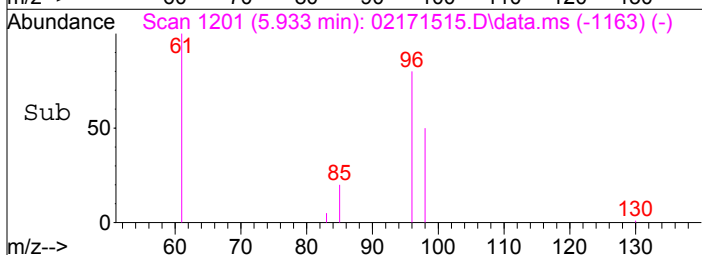
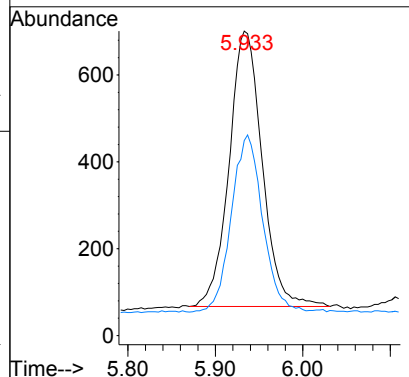
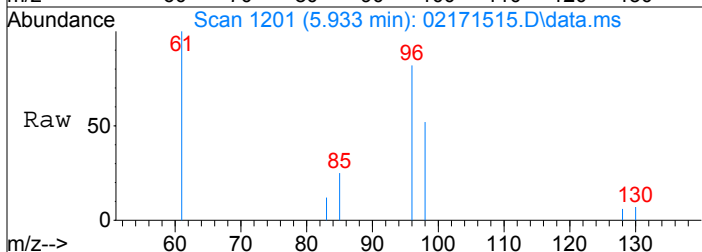
Tgt Ion: 96 Resp: 1133
Ion Ratio Lower Upper
96 100
98 60.5 43.7 83.7





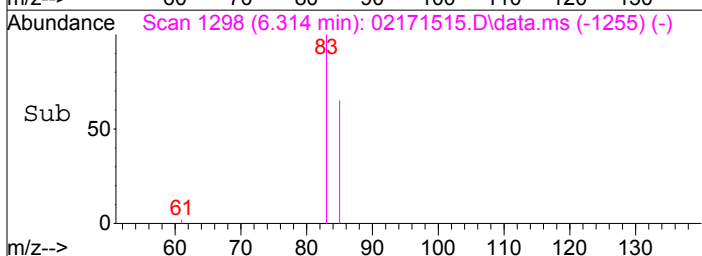
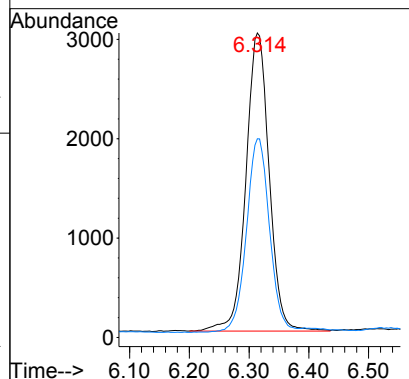
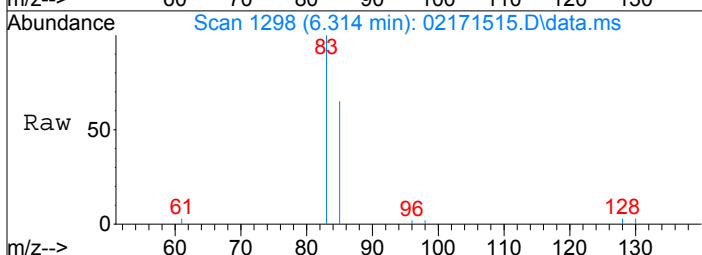
#15
 cis-1,2-Dichloroethene
 Concen: 51.99 pg
 RT: 5.93 min Scan# 1201
 Delta R.T. 0.000 min
 Lab File: 02171515.D
 Acq: 17 Feb 2015 11:11

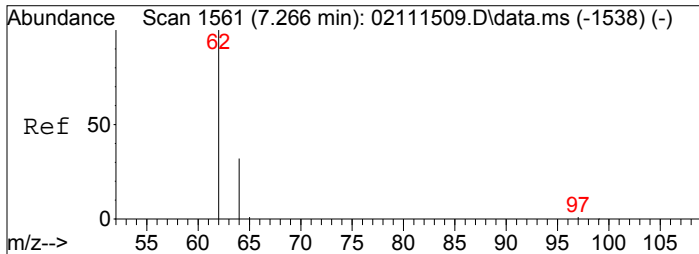
Tgt Ion:	96	Resp:	1669
Ion Ratio	Lower	Upper	
96	100		
98	60.9	44.3	84.3



#16
 Chloroform
 Concen: 145.79 pg
 RT: 6.31 min Scan# 1298
 Delta R.T. -0.000 min
 Lab File: 02171515.D
 Acq: 17 Feb 2015 11:11

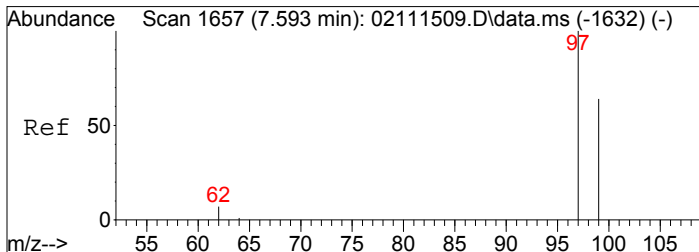
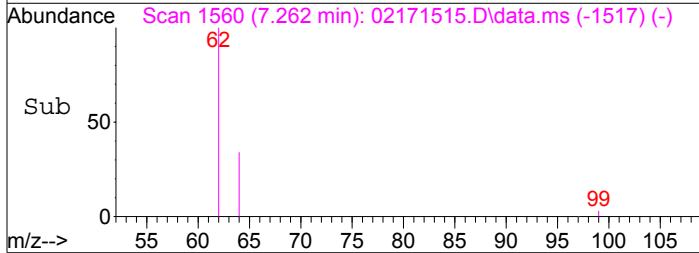
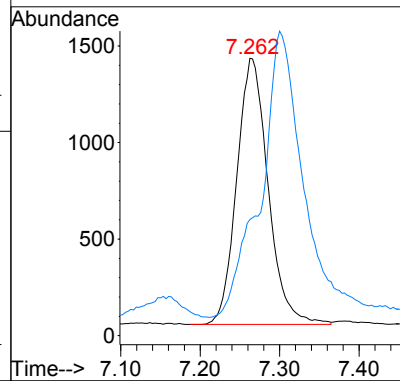
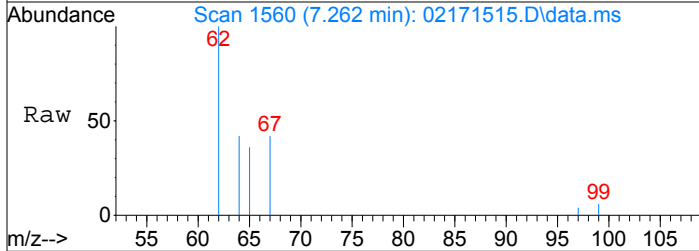
Tgt Ion:	83	Resp:	8109
Ion Ratio	Lower	Upper	
83	100		
85	64.9	45.4	85.4





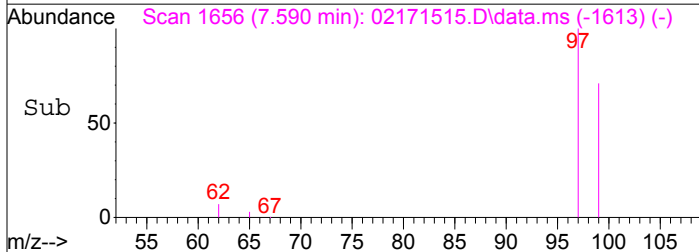
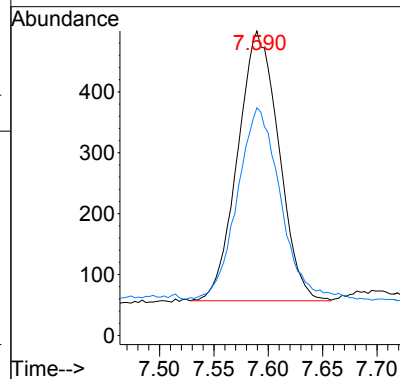
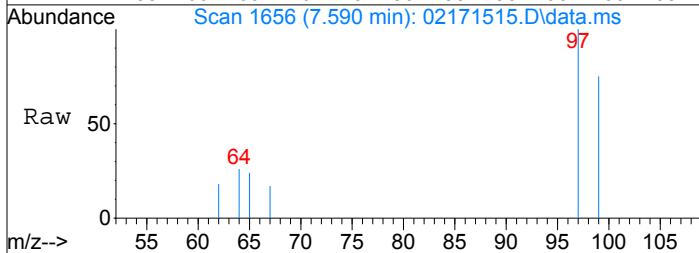
#18
1,2-Dichloroethane
Concen: 85.45 pg
RT: 7.26 min Scan# 1560
Delta R.T. -0.003 min
Lab File: 02171515.D
Acq: 17 Feb 2015 11:11

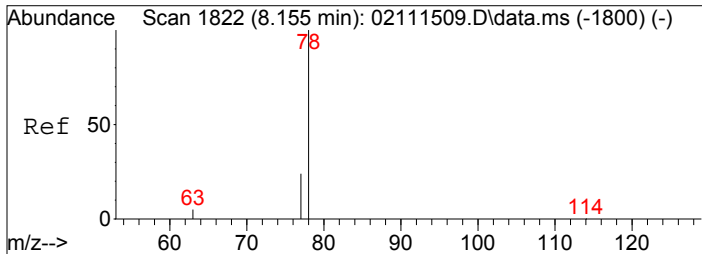
Tgt Ion: 62 Resp: 3784
Ion Ratio Lower Upper
62 100
64 146.0 11.6 51.6#



#19
1,1,1-Trichloroethane
Concen: 21.56 pg
RT: 7.59 min Scan# 1656
Delta R.T. -0.003 min
Lab File: 02171515.D
Acq: 17 Feb 2015 11:11

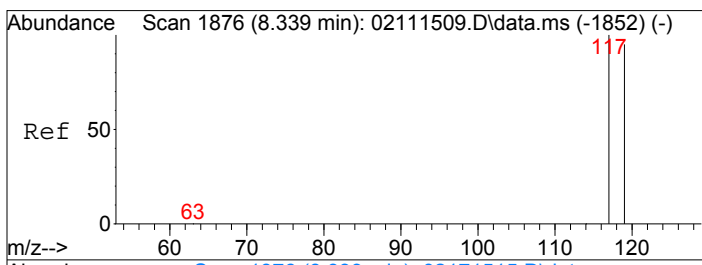
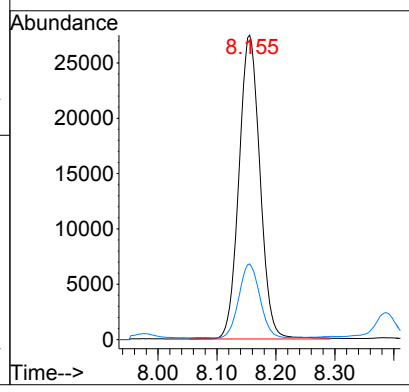
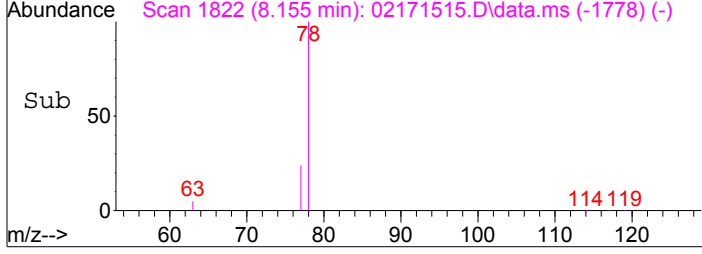
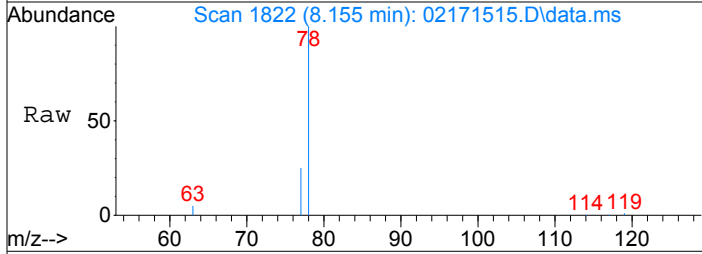
Tgt Ion: 97 Resp: 1166
Ion Ratio Lower Upper
97 100
99 75.5 44.0 84.0





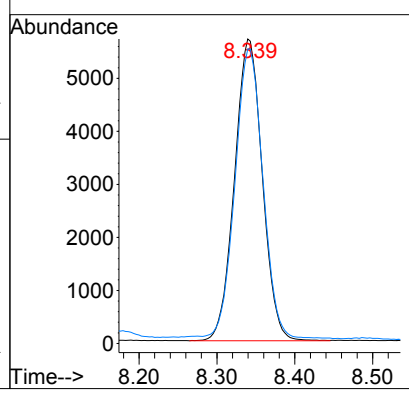
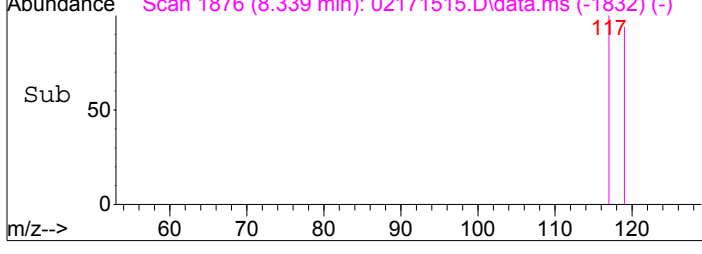
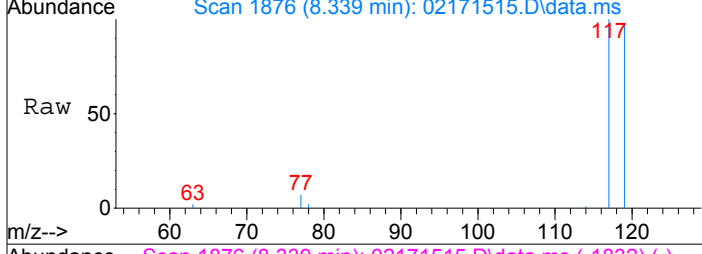
#20
Benzene
Concen: 593.86 pg
RT: 8.16 min Scan# 1822
Delta R.T. 0.000 min
Lab File: 02171515.D
Acq: 17 Feb 2015 11:11

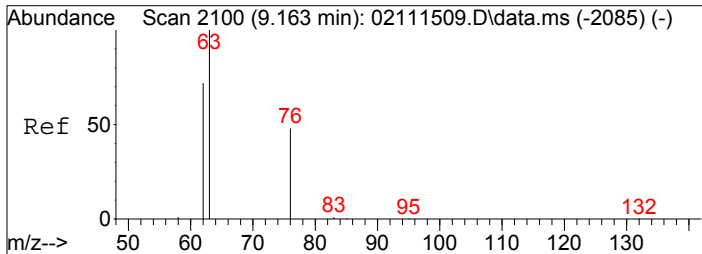
Tgt Ion:	78	Resp:	67936
Ion Ratio	Lower	Upper	
78	100		
77	24.3	3.7	43.7



#21
Carbon Tetrachloride
Concen: 347.97 pg
RT: 8.34 min Scan# 1876
Delta R.T. 0.000 min
Lab File: 02171515.D
Acq: 17 Feb 2015 11:11

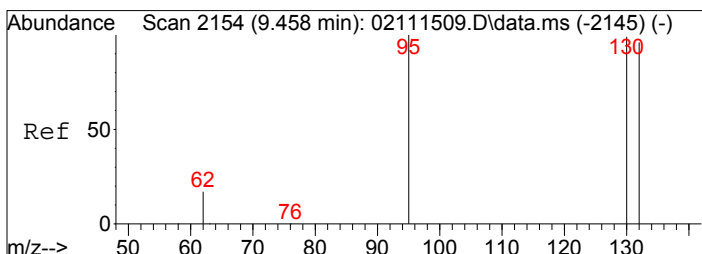
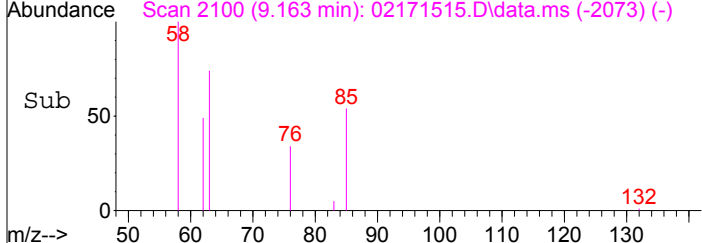
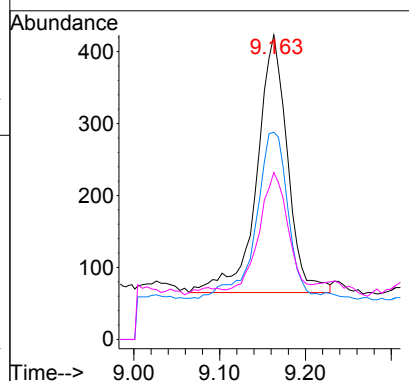
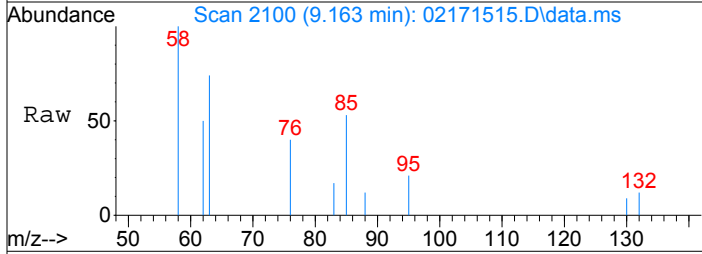
Tgt Ion:	117	Resp:	14090
Ion Ratio	Lower	Upper	
117	100		
119	96.7	75.5	115.5





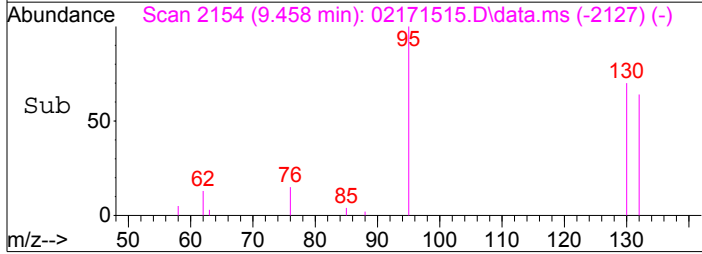
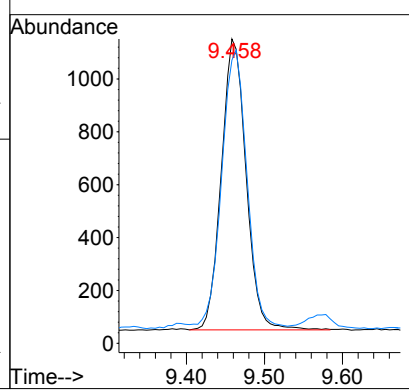
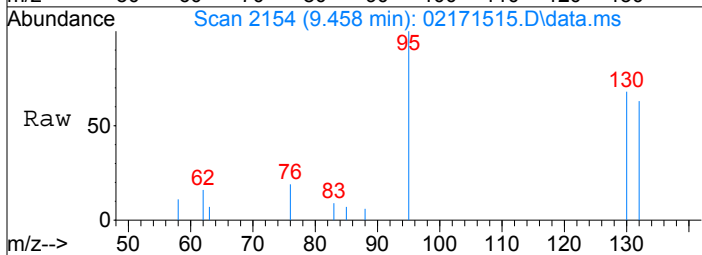
#23
 1,2-Dichloropropane
 Concen: 30.98 pg
 RT: 9.16 min Scan# 2100
 Delta R.T. 0.000 min
 Lab File: 02171515.D
 Acq: 17 Feb 2015 11:11

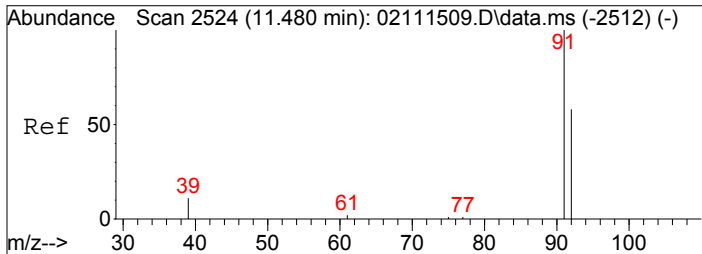
Tgt Ion:	63	Resp:	890
Ion Ratio	Lower	Upper	
63	100		
62	67.3	52.0	92.0
76	42.0	28.1	68.1



#25
 Trichloroethene
 Concen: 71.76 pg
 RT: 9.46 min Scan# 2154
 Delta R.T. 0.000 min
 Lab File: 02171515.D
 Acq: 17 Feb 2015 11:11

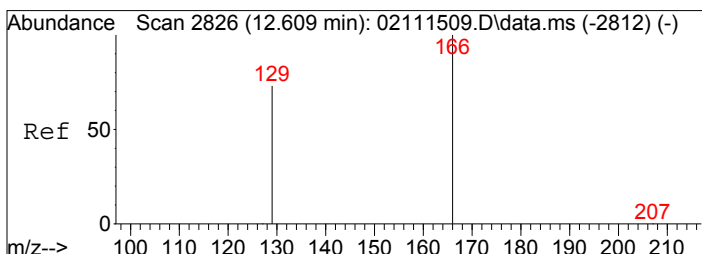
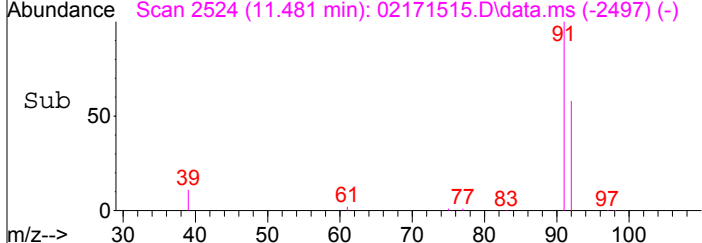
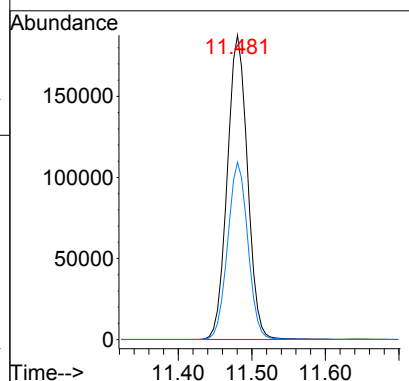
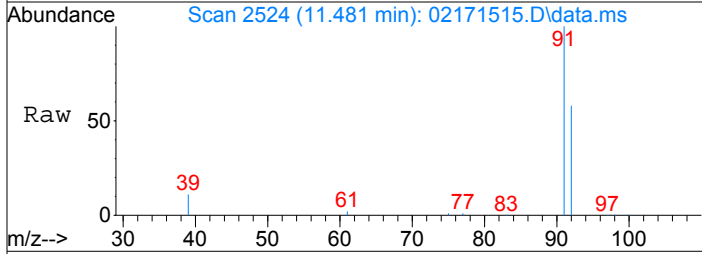
Tgt Ion:	130	Resp:	2428
Ion Ratio	Lower	Upper	
130	100		
132	95.5	77.1	117.1





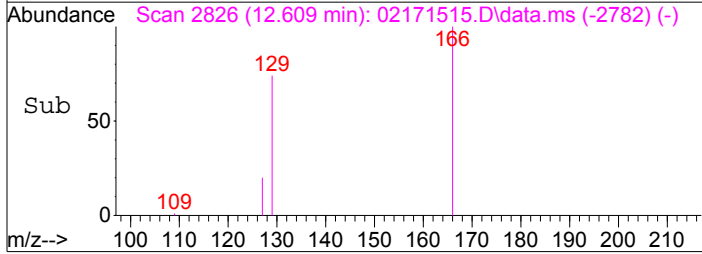
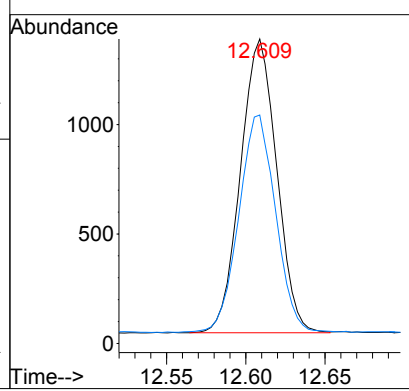
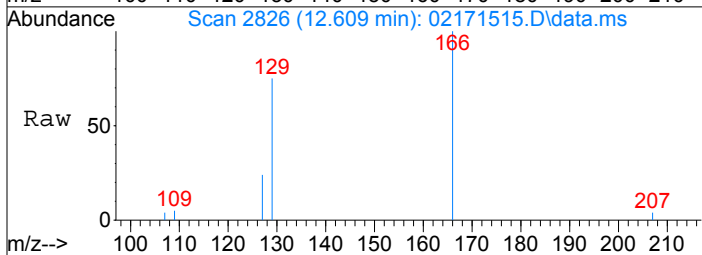
#31
Toluene
Concen: 2776.99 pg
RT: 11.48 min Scan# 2524
Delta R.T. 0.000 min
Lab File: 02171515.D
Acq: 17 Feb 2015 11:11

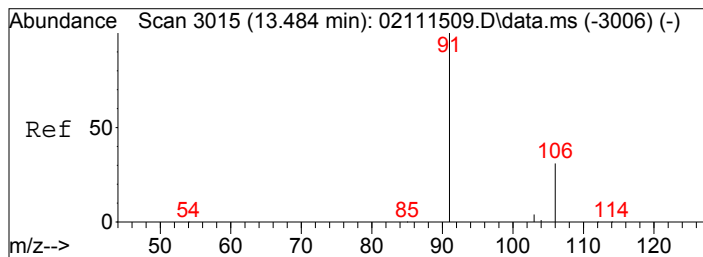
Tgt Ion:	91	Resp:	358718
Ion Ratio	Lower	Upper	
91	100		
92	58.1	37.7	77.7



#33
Tetrachloroethene
Concen: 53.40 pg
RT: 12.61 min Scan# 2826
Delta R.T. -0.000 min
Lab File: 02171515.D
Acq: 17 Feb 2015 11:11

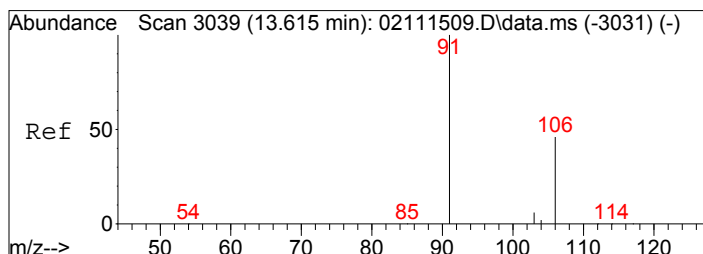
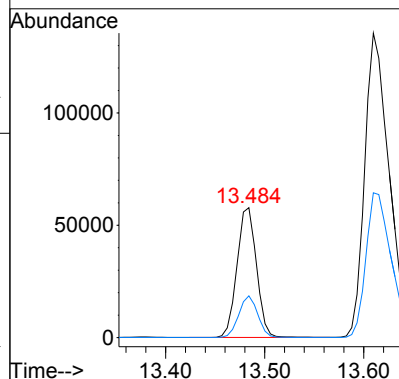
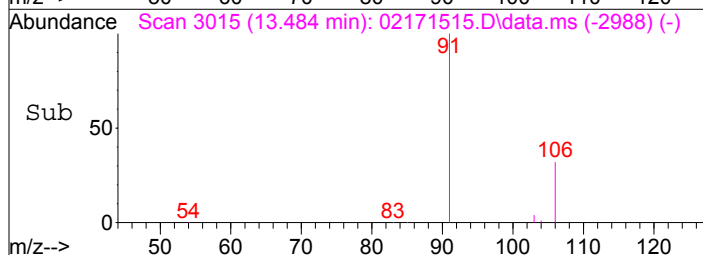
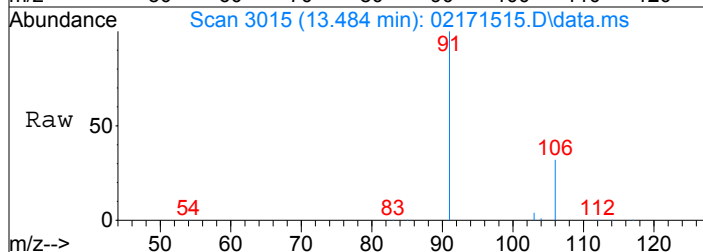
Tgt Ion:	166	Resp:	2136
Ion Ratio	Lower	Upper	
166	100		
129	75.3	53.3	93.3





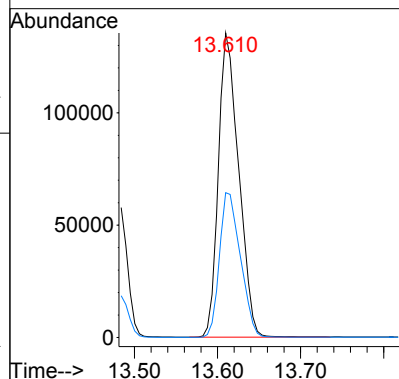
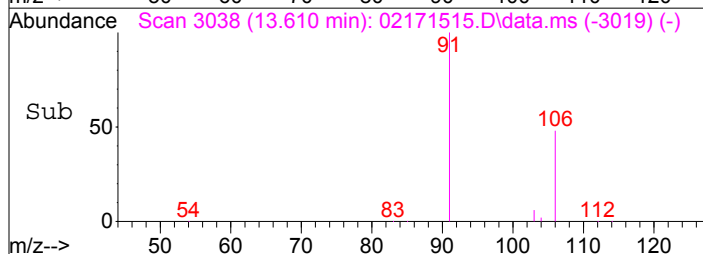
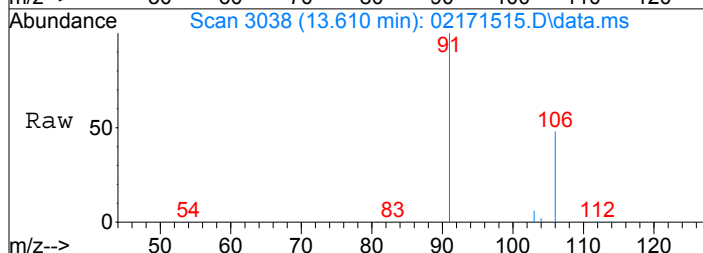
#36
Ethylbenzene
Concen: 545.55 pg
RT: 13.48 min Scan# 3015
Delta R.T. 0.000 min
Lab File: 02171515.D
Acq: 17 Feb 2015 11:11

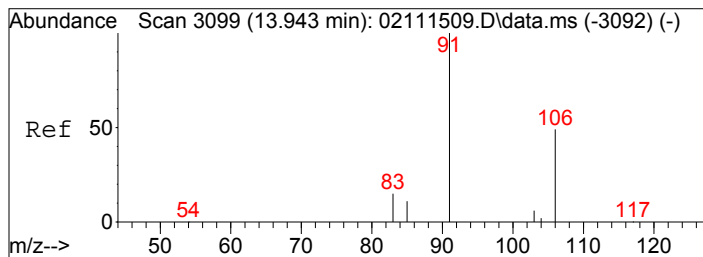
Tgt Ion: 91 Resp: 78767
Ion Ratio Lower Upper
91 100
106 31.1 10.9 50.9



#37
m,p-Xylene
Concen: 1939.93 pg
RT: 13.61 min Scan# 3038
Delta R.T. -0.005 min
Lab File: 02171515.D
Acq: 17 Feb 2015 11:11

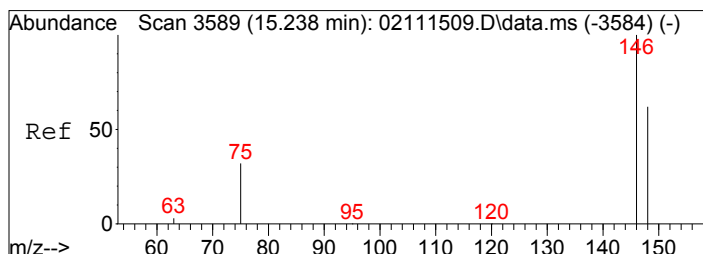
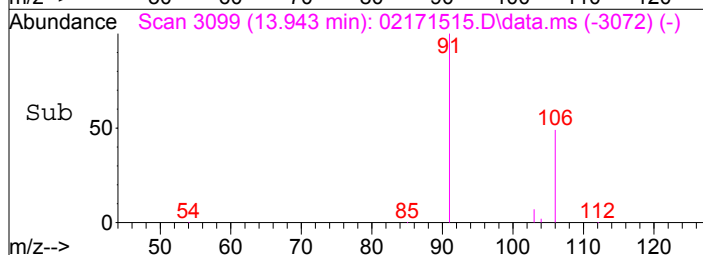
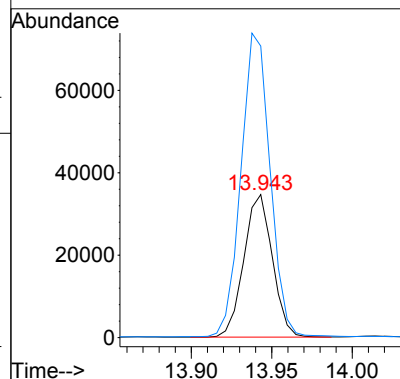
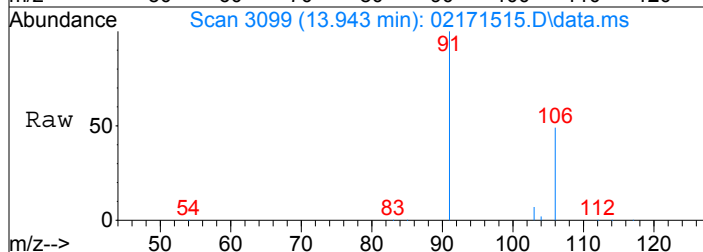
Tgt Ion: 91 Resp: 230200
Ion Ratio Lower Upper
91 100
106 49.1 27.5 67.5





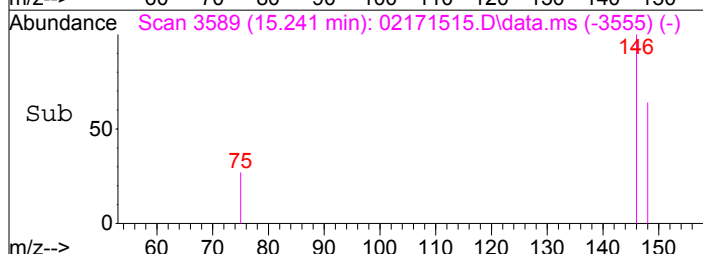
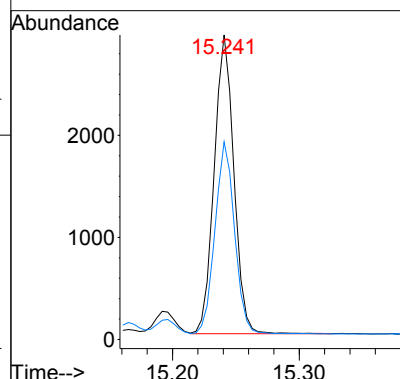
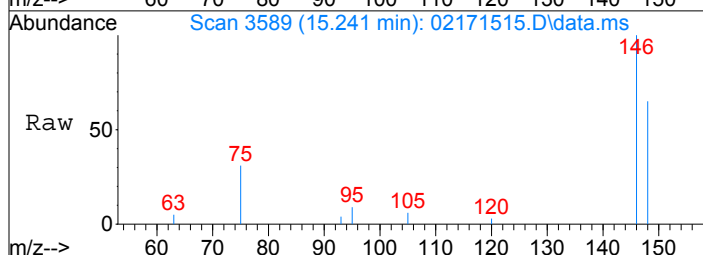
#38
o-Xylene
Concen: 736.31 pg
RT: 13.94 min Scan# 3099
Delta R.T. 0.000 min
Lab File: 02171515.D
Acq: 17 Feb 2015 11:11

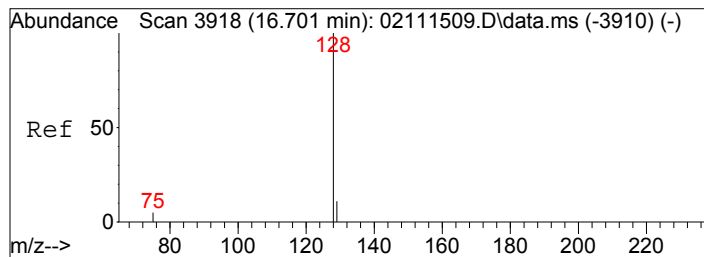
Tgt Ion:106 Resp: 42701
Ion Ratio Lower Upper
106 100
91 217.3 198.3 238.3



#42
1,4-Dichlorobenzene
Concen: 39.70 pg
RT: 15.24 min Scan# 3589
Delta R.T. 0.003 min
Lab File: 02171515.D
Acq: 17 Feb 2015 11:11

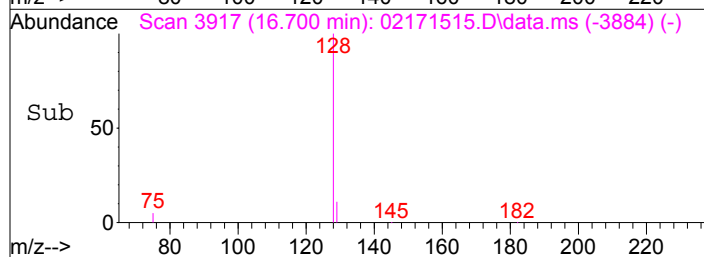
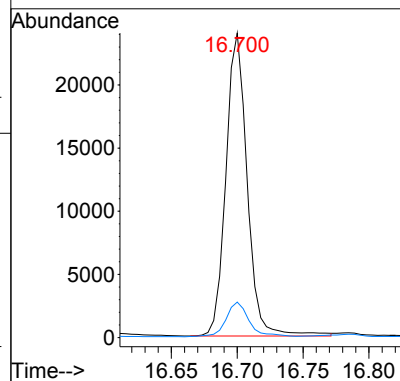
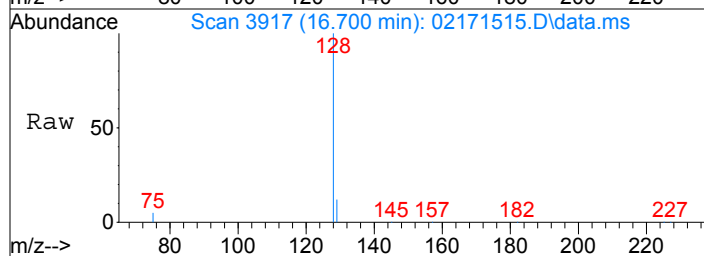
Tgt Ion:146 Resp: 3159
Ion Ratio Lower Upper
146 100
148 64.7 43.5 83.5





#45
Naphthalene
Concen: 187.58 pg
RT: 16.70 min Scan# 3917
Delta R.T. -0.001 min
Lab File: 02171515.D
Acq: 17 Feb 2015 11:11

Tgt Ion:128 Resp: 27024
Ion Ratio Lower Upper
128 100
129 12.3 0.0 30.9



Data File: I:\MS19\DATA\2015 02\17\02171514.D

Acq On : 17 Feb 2015 10:43

Operator: WA

Sample : P1500566-021 (1000mL)

Misc : S29-02041502

ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 17 16:42:35 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

2/18/15

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	18172	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	128693	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	22568	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	41133	926.883	pg	0.00
Spiked Amount 1000.000			Recovery	=	92.69%	
30) Toluene-d8 (SS2)	11.38	98	121828	1026.537	pg	0.00
Spiked Amount 1000.000			Recovery	=	102.65%	
40) Bromofluorobenzene (SS3)	14.25	174	47311	1038.394	pg	0.00
Spiked Amount 1000.000			Recovery	=	103.84%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.73	85	148604	2012.206	pg	100
3) Chloromethane	1.84	52	8856	600.476	pg	95
4) Vinyl Chloride	2.02	62	195	N.D.		
5) Bromomethane	2.33	94	1262	38.002	pg	99
6) Chloroethane	2.48	64	366	N.D.		
7) Acetone	2.99	58	209741	8042.636	pg	# 81
8) Trichlorofluoromethane	3.11	101	1196732	18865.423	pg	100
9) 1,1-Dichloroethene	3.66	96	143	N.D.		
10) Methylene Chloride	3.81	84	11141	370.129	pg	96
11) Trichlorotrifluoroethane	4.10	151	13374	458.822	pg	99
12) trans-1,2-Dichloroethene	4.74	96	404	N.D.		
13) 1,1-Dichloroethane	4.95	63	424	N.D.		
14) Methyl tert-Butyl Ether	5.12	73	539	N.D.		
15) cis-1,2-Dichloroethene	5.94	96	3218	100.071	pg	99
16) Chloroform	6.31	83	7405	132.909	pg	98
18) 1,2-Dichloroethane	7.26	62	4053	91.363	pg	99
19) 1,1,1-Trichloroethane	7.59	97	2008	37.062	pg	99
20) Benzene	8.16	78	59507	519.291	pg	100
21) Carbon Tetrachloride	8.34	117	18684	460.631	pg	99
23) 1,2-Dichloropropane	9.16	63	1078	38.407	pg	95
24) Bromodichloromethane	0.00	83	0	N.D.	d	
25) Trichloroethene	9.46	130	1889	57.135	pg	99
26) 1,4-Dioxane	9.55	88	278	N.D.		
27) cis-1,3-Dichloropropene	10.46	75	141	N.D.		
28) trans-1,3-Dichloropropene	11.05	75	176	N.D.		
29) 1,1,2-Trichloroethane	11.19	83	130	N.D.		
31) Toluene	11.48	91	211703	1677.231	pg	100
32) 1,2-Dibromoethane	12.13	107	108	N.D.		
33) Tetrachloroethene	12.61	166	2433	62.253	pg	99
35) Chlorobenzene	13.17	112	1968	23.580	pg	96
36) Ethylbenzene	13.48	91	43624	308.252	pg	99
37) m,p-Xylene	13.61	91	105816	909.747	pg	98
38) o-Xylene	13.94	106	23265	409.271	pg	99
39) 1,1,1,2,2-Tetrachloroethane	13.90	83	376	N.D.		
41) 1,3-Dichlorobenzene	15.19	146	529	N.D.		
42) 1,4-Dichlorobenzene	15.24	146	3654	46.853	pg	100
43) 1,2-Dichlorobenzene	15.46	146	506	N.D.		
44) 1,2,4-Trichlorobenzene	16.63	182	2449	57.043	pg	99
45) Naphthalene	16.70	128	3018473	21375.803	pg	100
46) Hexachlorobutadiene	16.96	225	274	N.D.		

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\17\02171514.D

Acq On : 17 Feb 2015 10:43

Operator: WA

Sample : P1500566-021 (1000mL)

Misc : S29-02041502

ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 17 16:42:35 2015

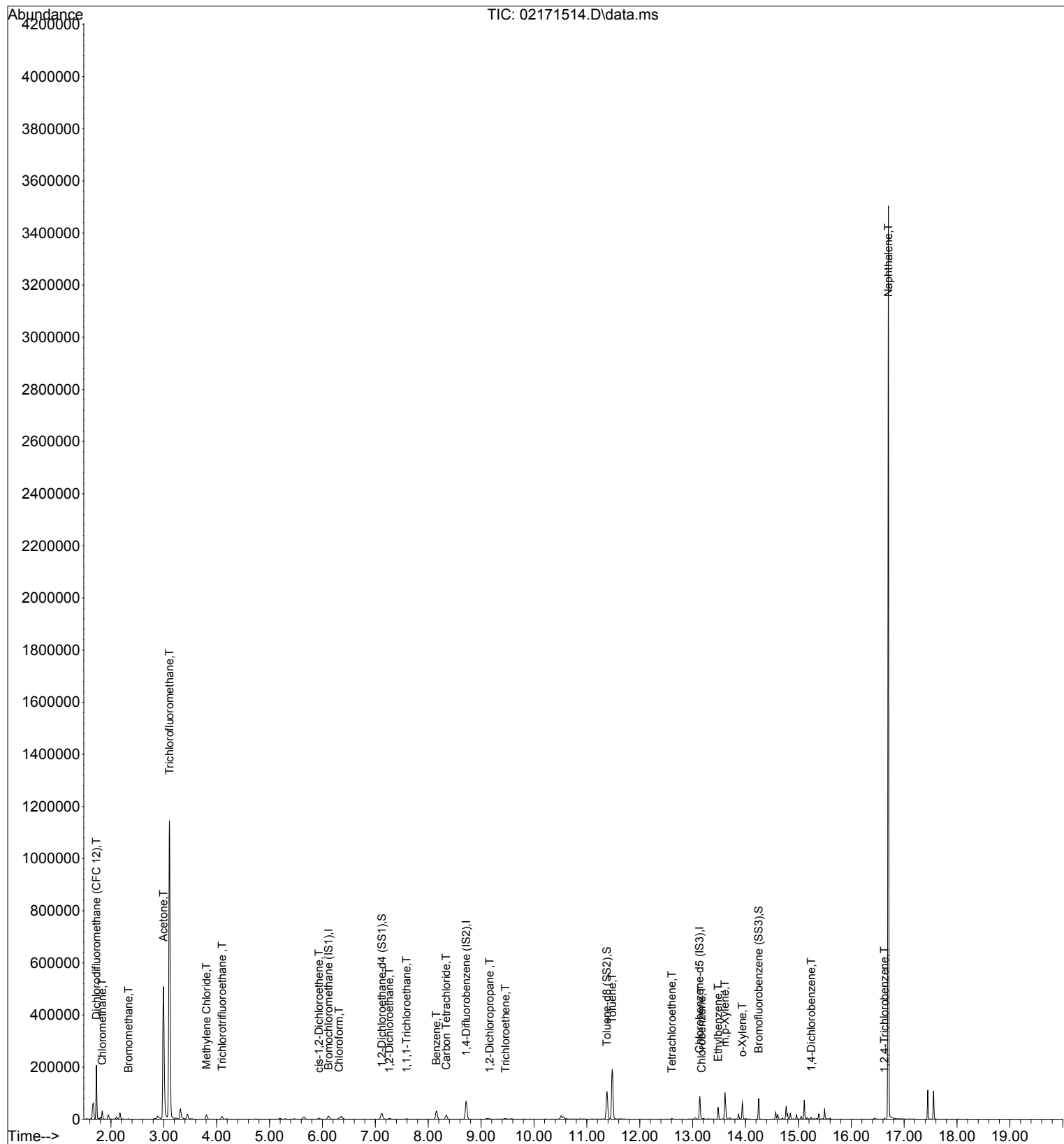
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 02\17\02171514.D

Acq On : 17 Feb 2015 10:43

Operator: WA

Sample : P1500566-021 (1000mL)

Misc : S29-02041502

ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 17 16:42:35 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

2/17/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	18172	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	128693	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	22568	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	41133	926.883	pg	0.00
Spiked Amount 1000.000			Recovery	=	92.69%	
30) Toluene-d8 (SS2)	11.38	98	121828	1026.537	pg	0.00
Spiked Amount 1000.000			Recovery	=	102.65%	
40) Bromofluorobenzene (SS3)	14.25	174	47311	1038.394	pg	0.00
Spiked Amount 1000.000			Recovery	=	103.84%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.73	85	148604	2012.206	pg	100
3) Chloromethane	1.84	52	8856	600.476	pg	95
5) Bromomethane	2.33	94	1262	38.002	pg	99
7) Acetone	2.99	58	209741	8042.636	pg	# 81
8) Trichlorofluoromethane	3.11	101	1196732	18865.423	pg	100
10) Methylene Chloride	3.81	84	11141	370.129	pg	96
11) Trichlorotrifluoroethane	4.10	151	13374	458.822	pg	99
15) cis-1,2-Dichloroethene	5.94	96	3218	100.071	pg	99
16) Chloroform	6.31	83	7405	132.909	pg	98
18) 1,2-Dichloroethane	7.26	62	4053	91.363	pg	99
19) 1,1,1-Trichloroethane	7.59	97	2008	37.062	pg	99
20) Benzene	8.16	78	59507	519.291	pg	100
21) Carbon Tetrachloride	8.34	117	18684	460.631	pg	99
23) 1,2-Dichloropropane	9.16	63	1078	38.407	pg	95
25) Trichloroethene	9.46	130	1889	57.135	pg	99
31) Toluene	11.48	91	211703	1677.231	pg	100
33) Tetrachloroethene	12.61	166	2433	62.253	pg	99
35) Chlorobenzene	13.17	112	1968	23.580	pg	96
36) Ethylbenzene	13.48	91	43624	308.252	pg	99
37) m,p-Xylene	13.61	91	105816	909.747	pg	98
38) o-Xylene	13.94	106	23265	409.271	pg	99
42) 1,4-Dichlorobenzene	15.24	146	3654	46.853	pg	100
44) 1,2,4-Trichlorobenzene	16.63	182	2449	57.043	pg	99
45) Naphthalene	16.70	128	3018473	21375.803	pg	100

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\17\02171514.D

Acq On : 17 Feb 2015 10:43

Operator: WA

Sample : P1500566-021 (1000mL)

Misc : S29-02041502

ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 17 16:42:35 2015

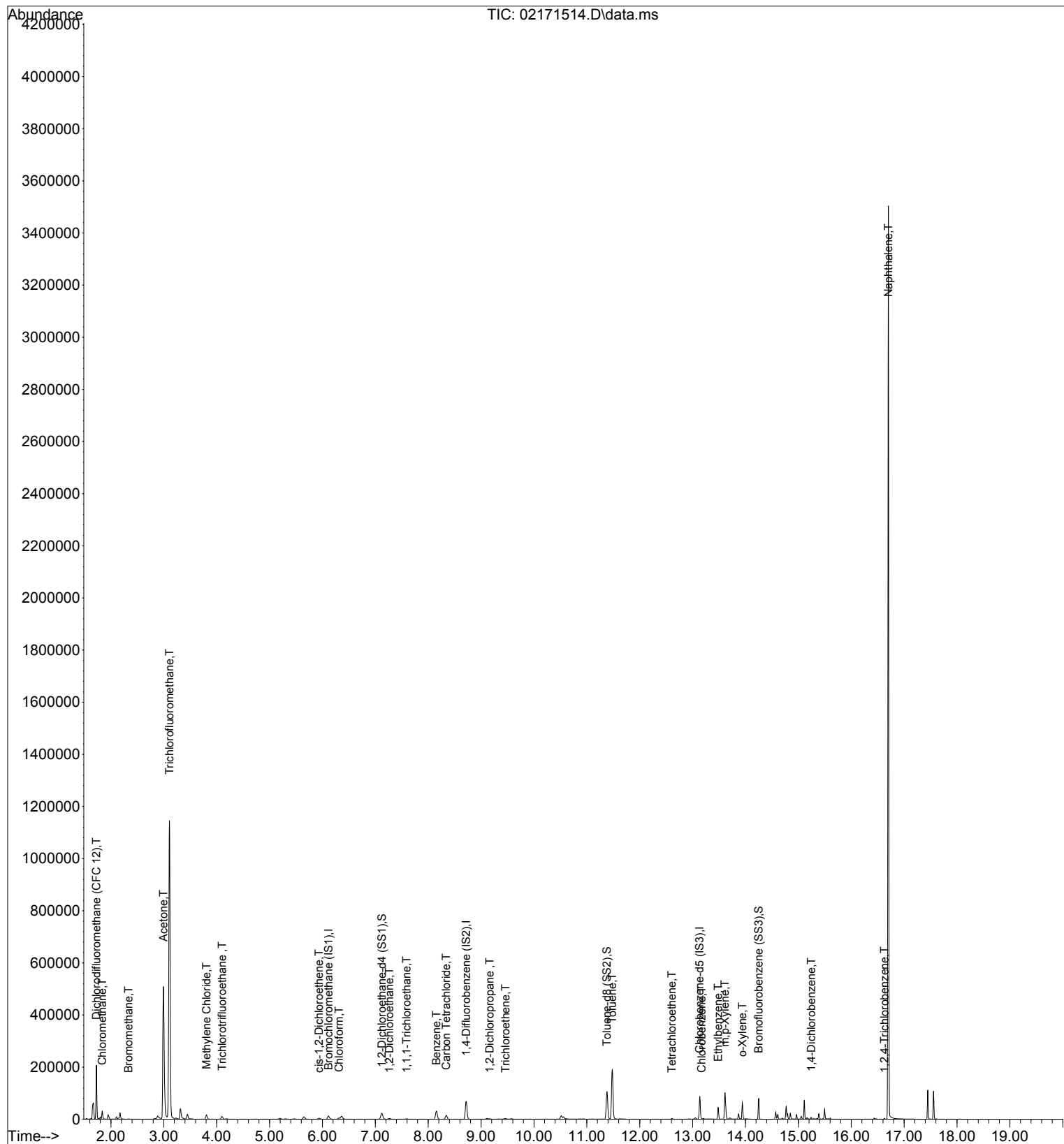
Quant Method : I:\MS19\METHODS\X19021115.M

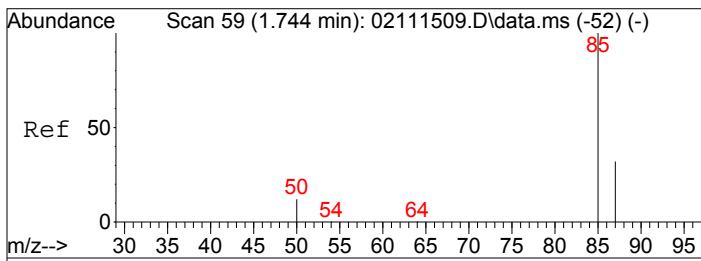
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

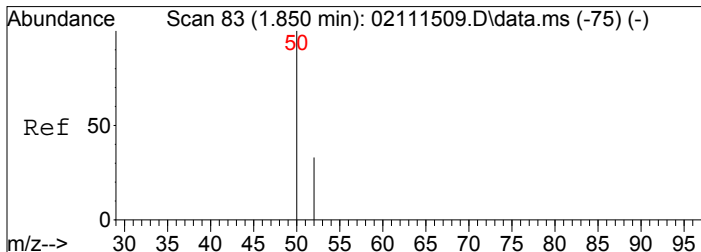
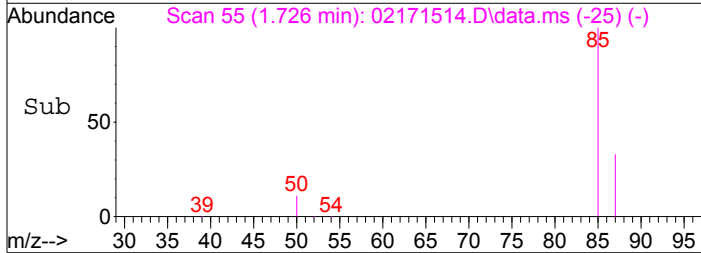
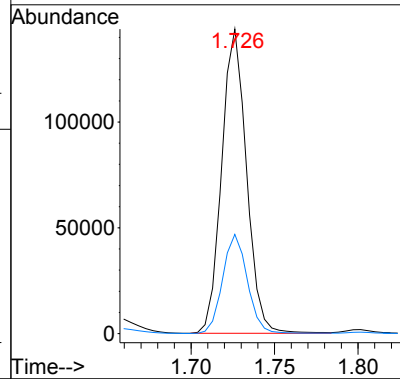
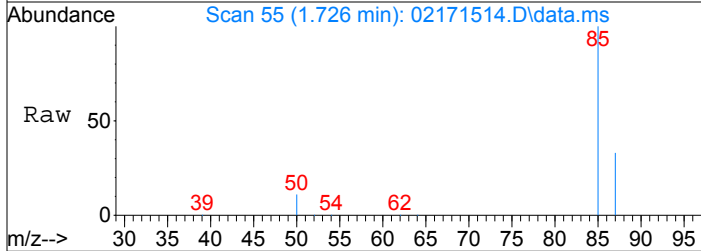
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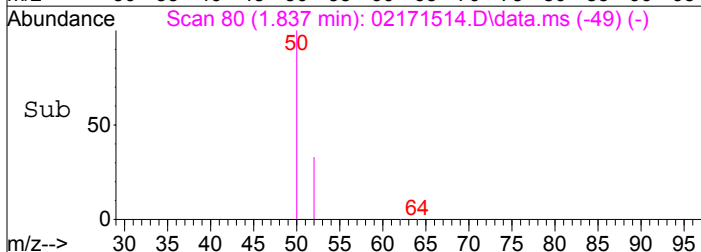
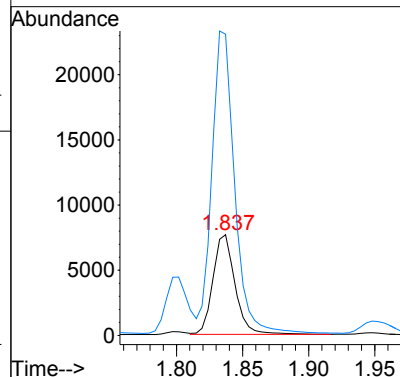
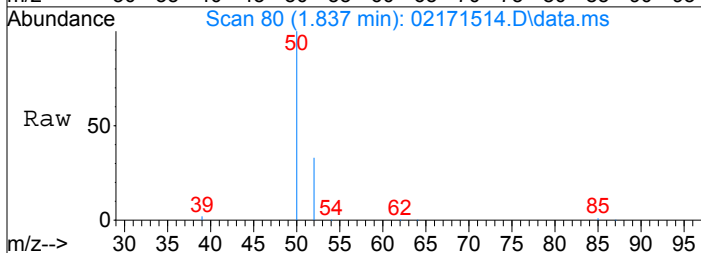
#2
 Dichlorodifluoromethane (CFC 12)
 Concen: 2012.21 pg
 RT: 1.73 min Scan# 55
 Delta R.T. -0.018 min
 Lab File: 02171514.D
 Acq: 17 Feb 2015 10:43

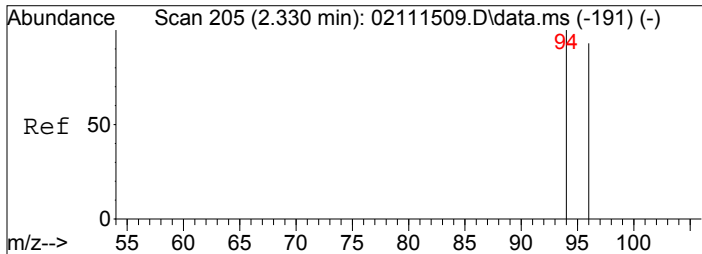
Tgt Ion: 85 Resp: 148604
 Ion Ratio Lower Upper
 85 100
 87 32.4 12.4 52.4



#3
 Chloromethane
 Concen: 600.48 pg
 RT: 1.84 min Scan# 80
 Delta R.T. -0.013 min
 Lab File: 02171514.D
 Acq: 17 Feb 2015 10:43

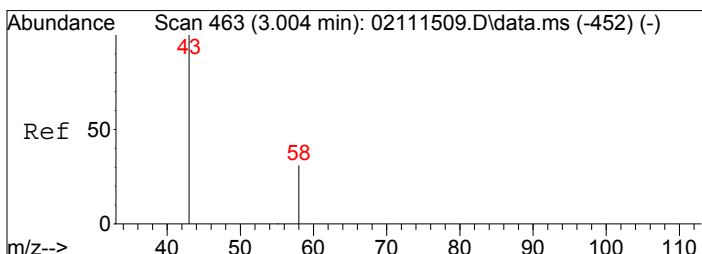
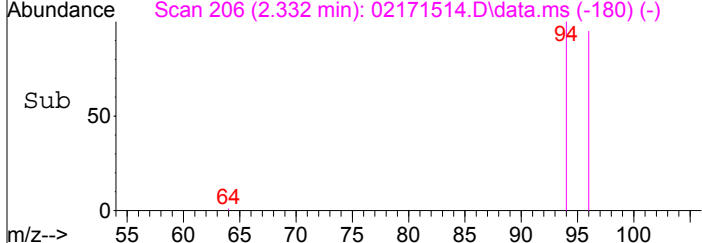
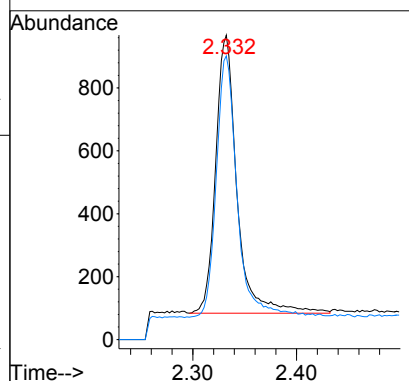
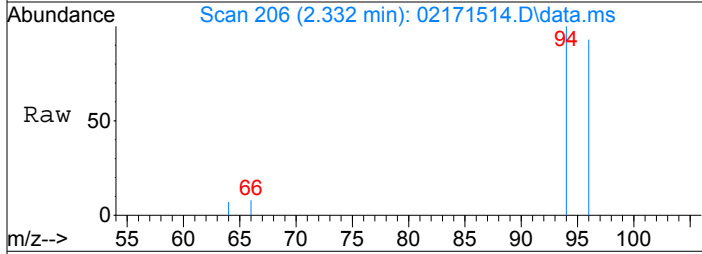
Tgt Ion: 52 Resp: 8856
 Ion Ratio Lower Upper
 52 100
 50 312.8 283.7 323.7





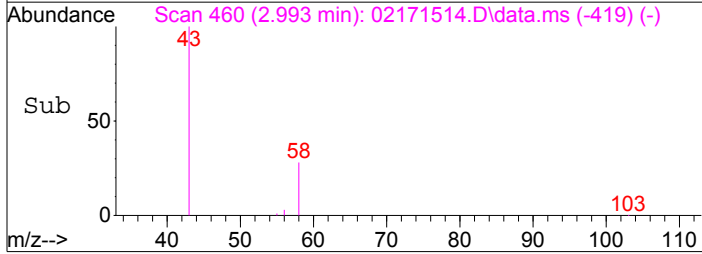
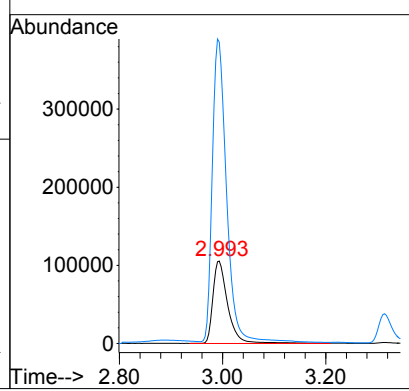
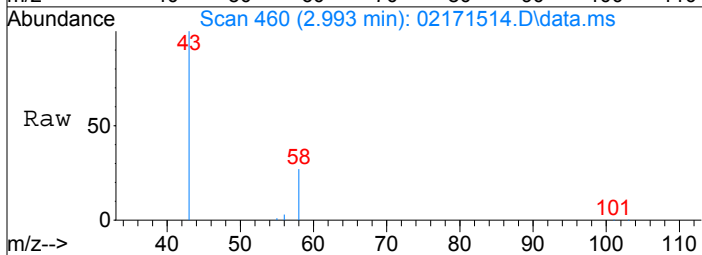
#5
 Bromomethane
 Concen: 38.00 pg
 RT: 2.33 min Scan# 206
 Delta R.T. 0.002 min
 Lab File: 02171514.D
 Acq: 17 Feb 2015 10:43

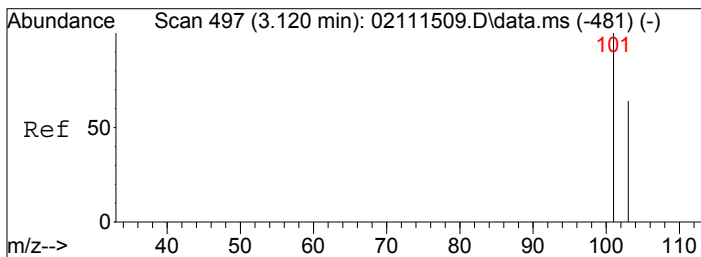
Tgt Ion:	94	Resp:	1262
Ion Ratio	Lower	Upper	
94	100		
96	93.6	75.5	113.3



#7
 Acetone
 Concen: 8042.64 pg
 RT: 2.99 min Scan# 460
 Delta R.T. -0.011 min
 Lab File: 02171514.D
 Acq: 17 Feb 2015 10:43

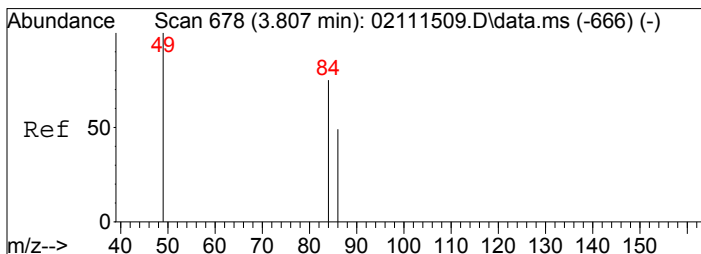
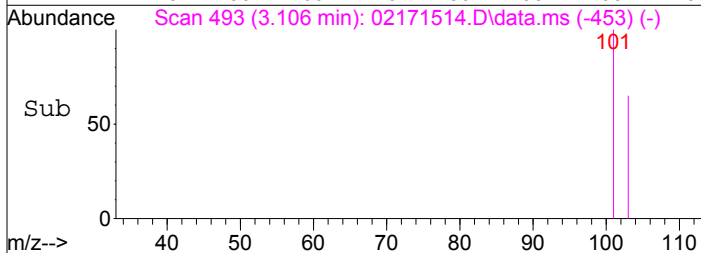
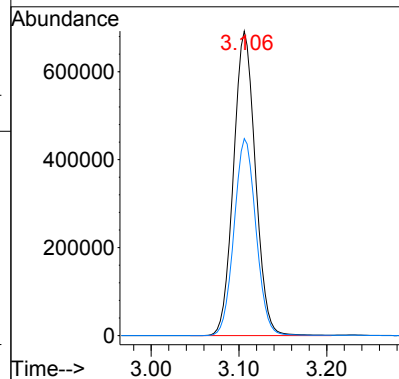
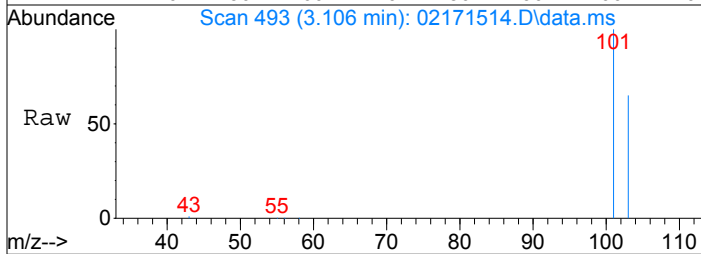
Tgt Ion:	58	Resp:	209741
Ion Ratio	Lower	Upper	
58	100		
43	360.4	301.8	341.8#





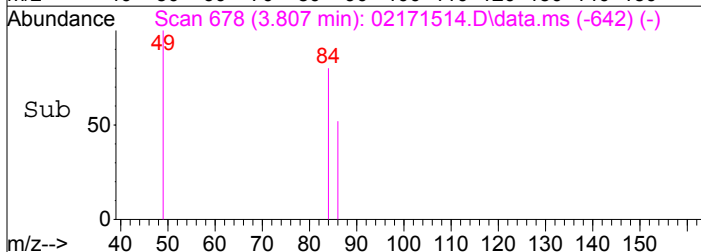
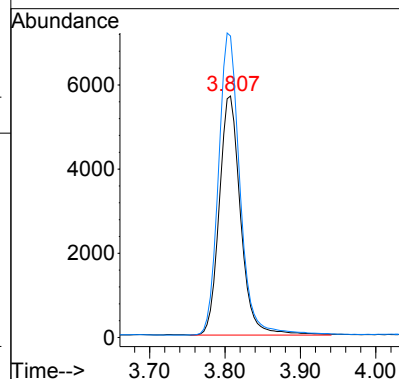
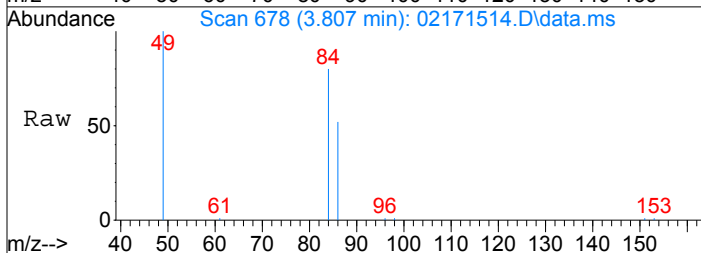
#8
 Trichlorofluoromethane
 Concen: 18865.42 pg
 RT: 3.11 min Scan# 493
 Delta R.T. -0.014 min
 Lab File: 02171514.D
 Acq: 17 Feb 2015 10:43

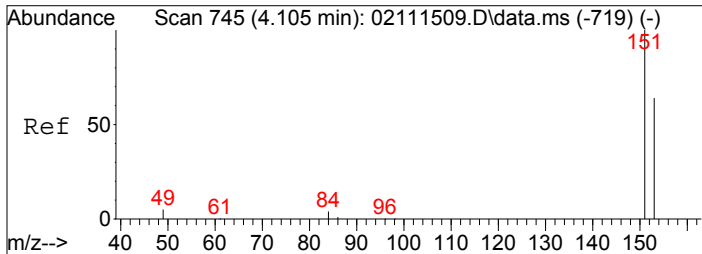
Tgt Ion: 101 Resp: 1196732
 Ion Ratio Lower Upper
 101 100
 103 64.9 51.8 77.6



#10
 Methylene Chloride
 Concen: 370.13 pg
 RT: 3.81 min Scan# 678
 Delta R.T. 0.000 min
 Lab File: 02171514.D
 Acq: 17 Feb 2015 10:43

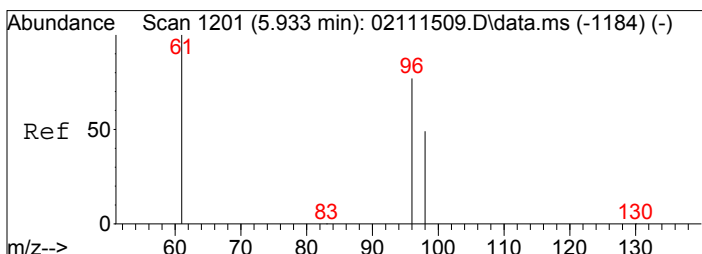
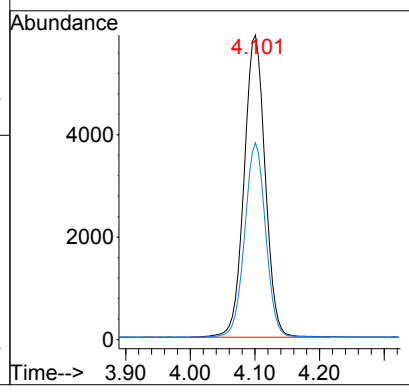
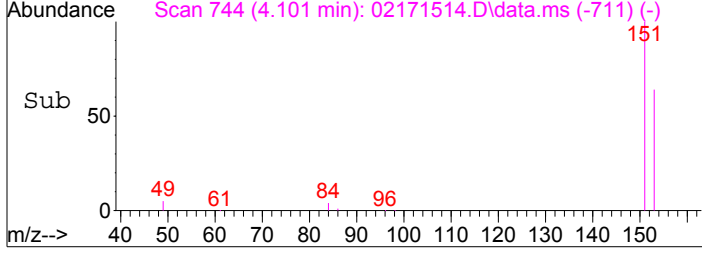
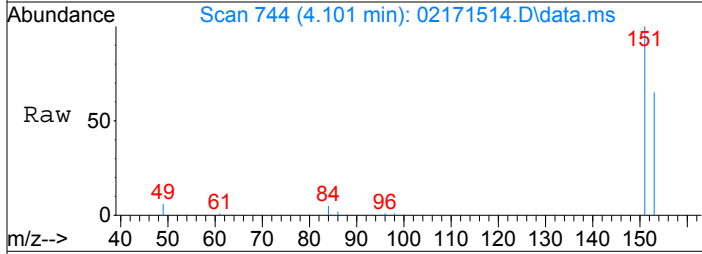
Tgt Ion: 84 Resp: 11141
 Ion Ratio Lower Upper
 84 100
 49 127.7 112.3 152.3





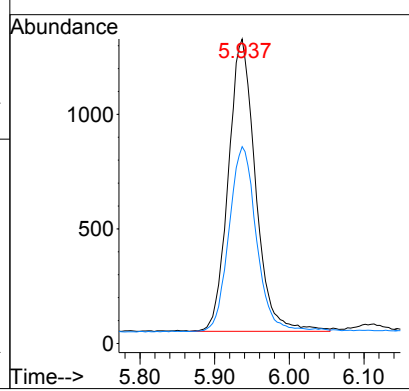
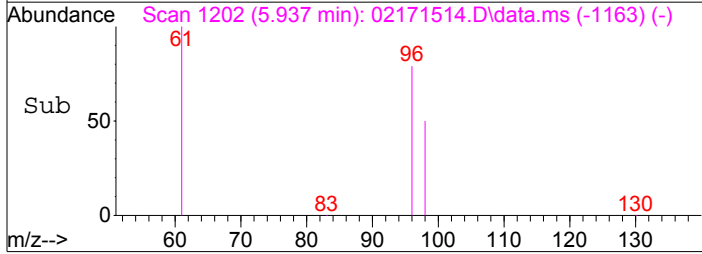
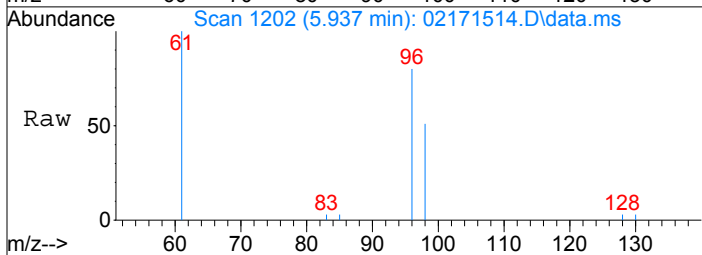
#11
 Trichlorotrifluoroethane
 Concen: 458.82 pg
 RT: 4.10 min Scan# 744
 Delta R.T. -0.004 min
 Lab File: 02171514.D
 Acq: 17 Feb 2015 10:43

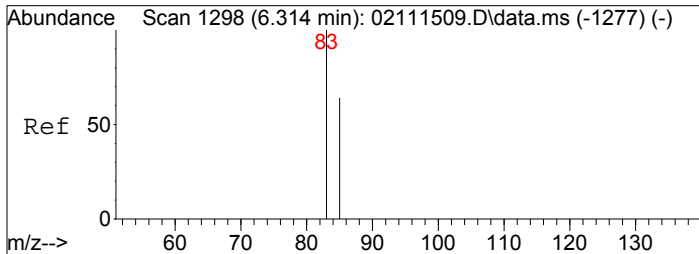
Tgt Ion: 151	Resp: 13374
Ion Ratio	Lower Upper
151	100
153	64.0 43.6 83.6



#15
 cis-1,2-Dichloroethene
 Concen: 100.07 pg
 RT: 5.94 min Scan# 1202
 Delta R.T. 0.004 min
 Lab File: 02171514.D
 Acq: 17 Feb 2015 10:43

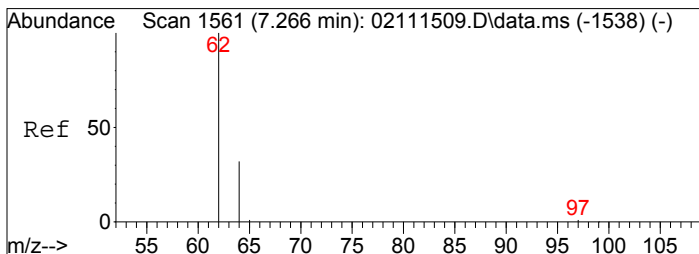
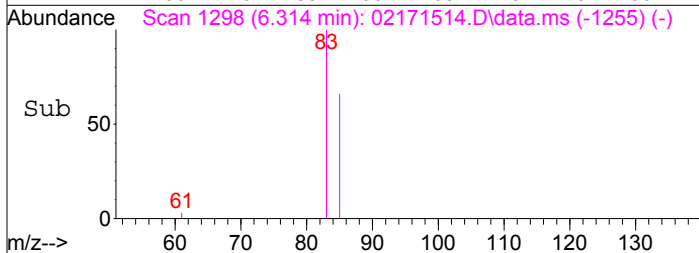
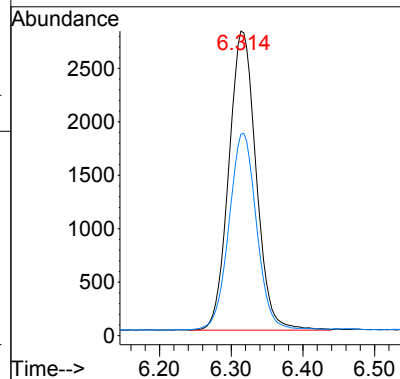
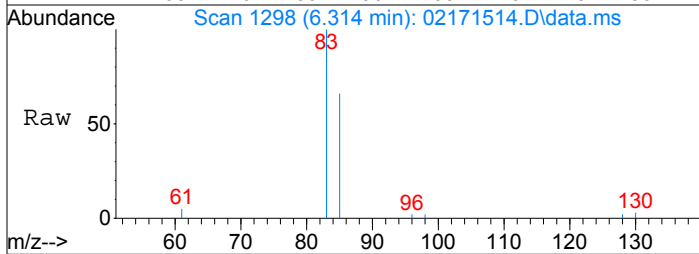
Tgt Ion: 96	Resp: 3218
Ion Ratio	Lower Upper
96	100
98	63.8 44.3 84.3





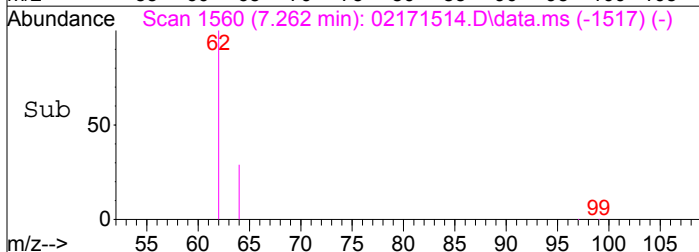
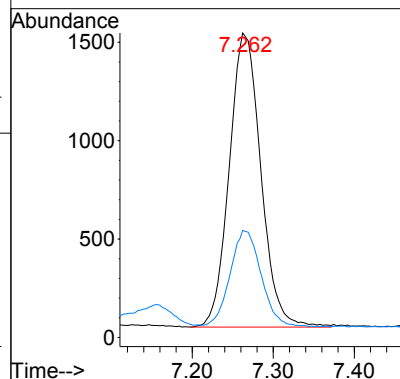
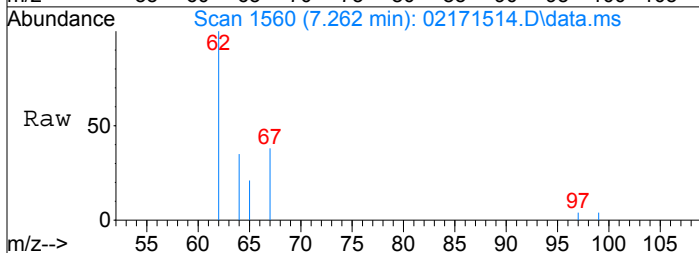
#16
Chloroform
Concen: 132.91 pg
RT: 6.31 min Scan# 1298
Delta R.T. -0.000 min
Lab File: 02171514.D
Acq: 17 Feb 2015 10:43

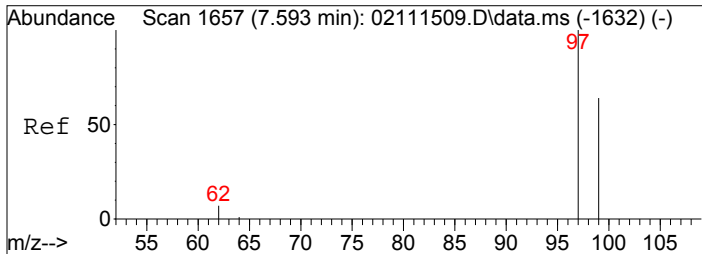
Tgt Ion: 83 Resp: 7405
Ion Ratio Lower Upper
83 100
85 66.9 45.4 85.4



#18
1,2-Dichloroethane
Concen: 91.36 pg
RT: 7.26 min Scan# 1560
Delta R.T. -0.003 min
Lab File: 02171514.D
Acq: 17 Feb 2015 10:43

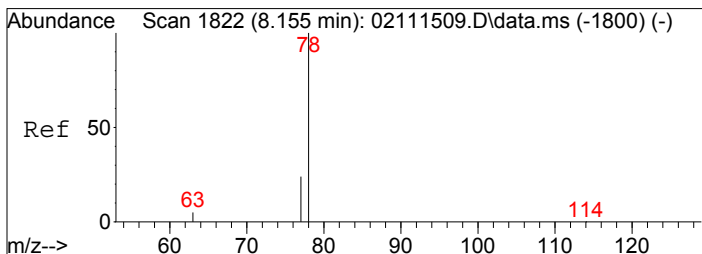
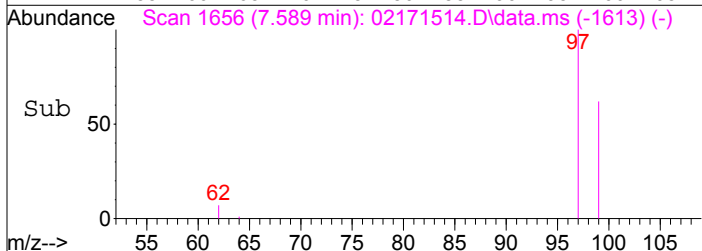
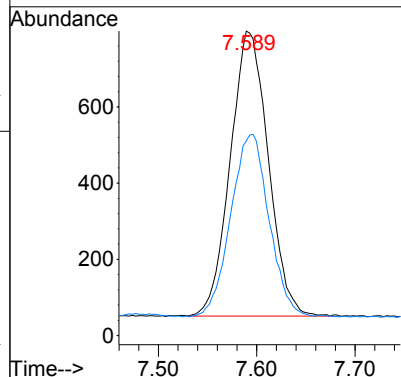
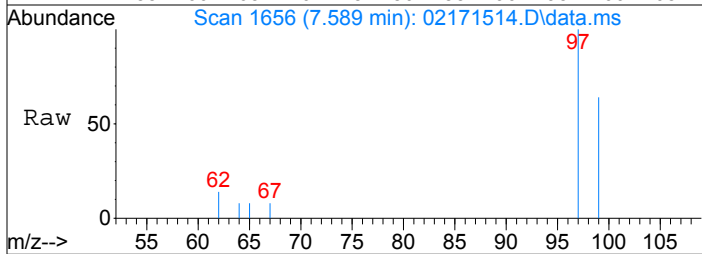
Tgt Ion: 62 Resp: 4053
Ion Ratio Lower Upper
62 100
64 32.0 11.6 51.6





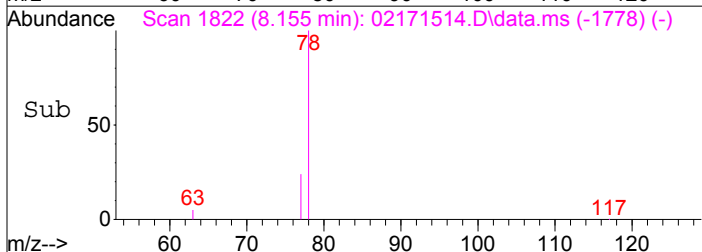
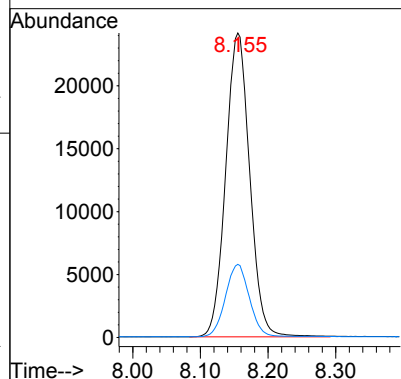
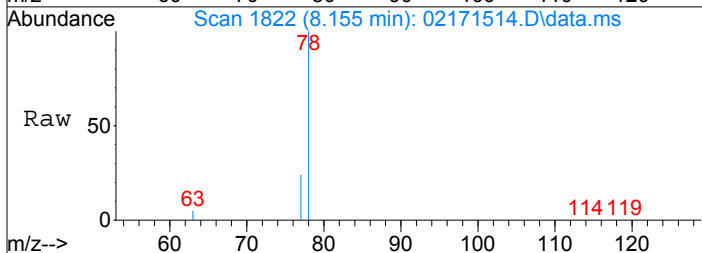
#19
 1,1,1-Trichloroethane
 Concen: 37.06 pg
 RT: 7.59 min Scan# 1656
 Delta R.T. -0.003 min
 Lab File: 02171514.D
 Acq: 17 Feb 2015 10:43

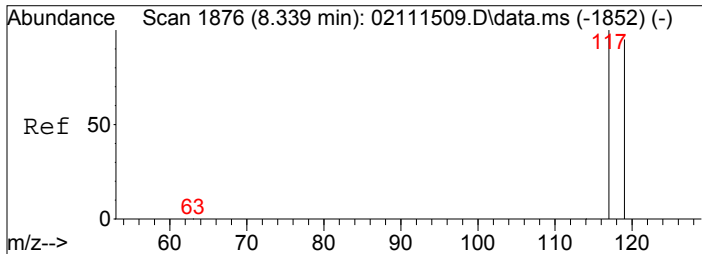
Tgt Ion: 97 Resp: 2008
 Ion Ratio Lower Upper
 97 100
 99 64.6 44.0 84.0



#20
 Benzene
 Concen: 519.29 pg
 RT: 8.16 min Scan# 1822
 Delta R.T. 0.000 min
 Lab File: 02171514.D
 Acq: 17 Feb 2015 10:43

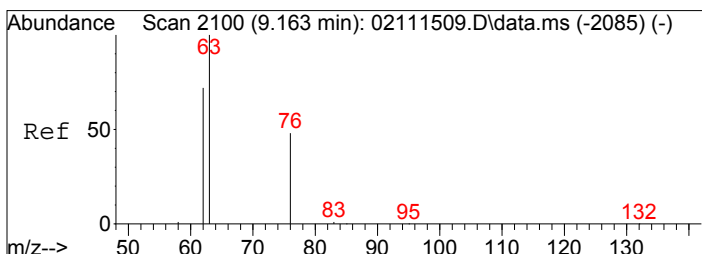
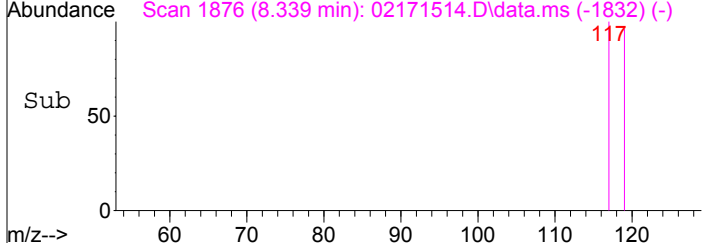
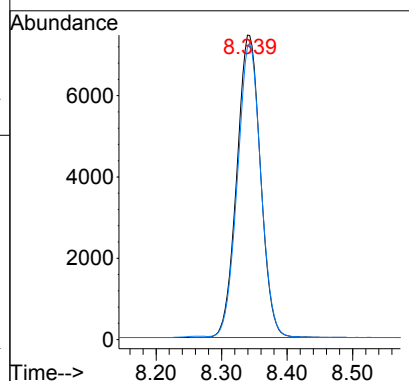
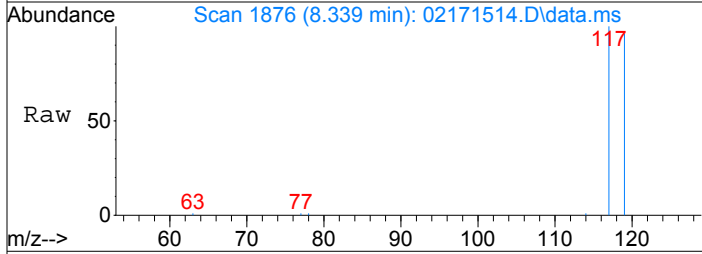
Tgt Ion: 78 Resp: 59507
 Ion Ratio Lower Upper
 78 100
 77 23.7 3.7 43.7





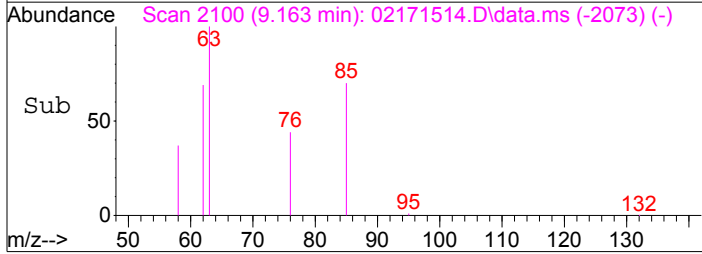
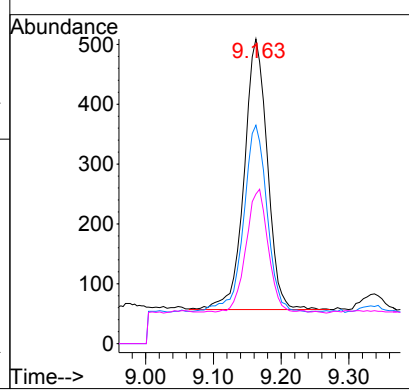
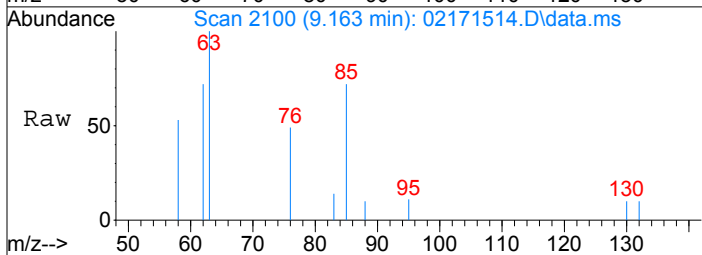
#21
Carbon Tetrachloride
Concen: 460.63 pg
RT: 8.34 min Scan# 1876
Delta R.T. 0.000 min
Lab File: 02171514.D
Acq: 17 Feb 2015 10:43

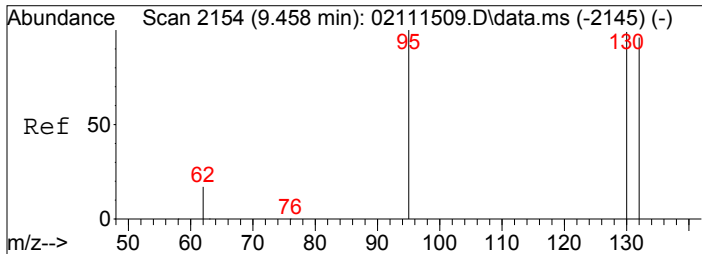
Tgt Ion: 117	Resp:	18684
Ion Ratio	Lower	Upper
117	100	
119	96.0	75.5 115.5



#23
1,2-Dichloropropane
Concen: 38.41 pg
RT: 9.16 min Scan# 2100
Delta R.T. 0.000 min
Lab File: 02171514.D
Acq: 17 Feb 2015 10:43

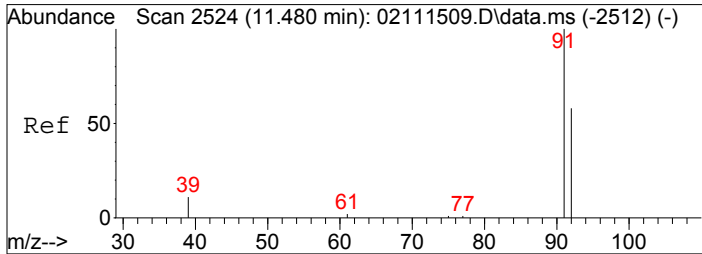
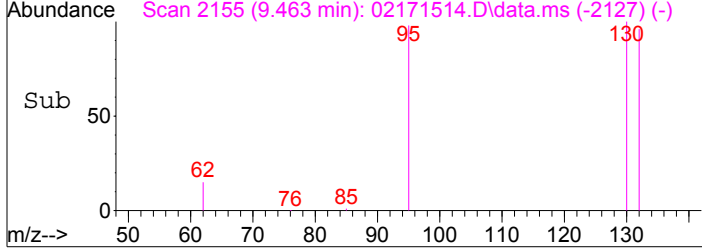
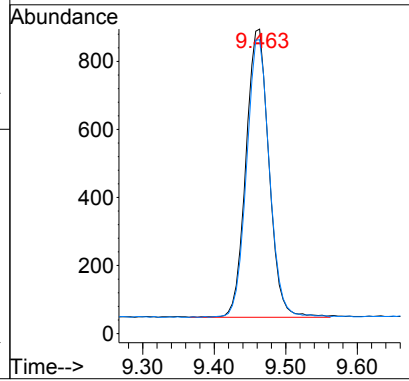
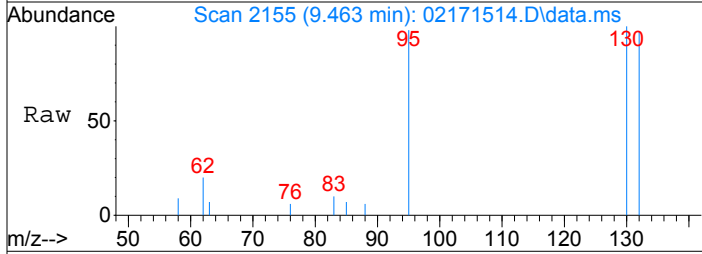
Tgt Ion: 63	Resp:	1078
Ion Ratio	Lower	Upper
63	100	
62	69.9	52.0 92.0
76	42.9	28.1 68.1





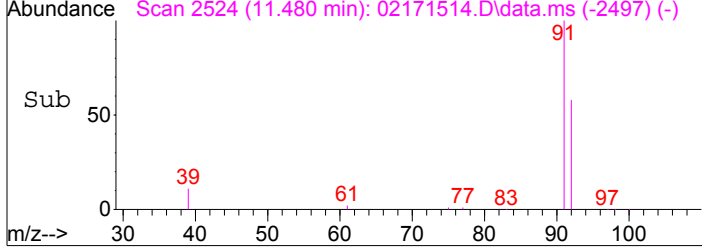
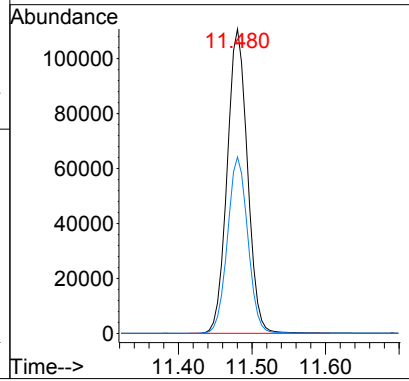
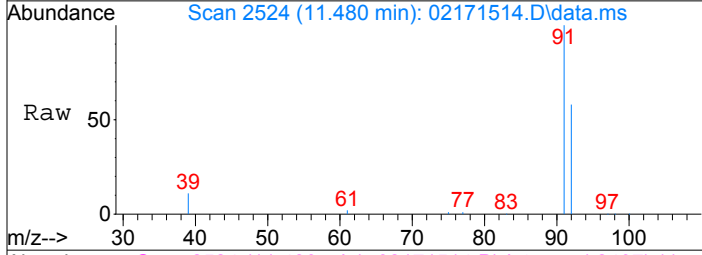
#25
 Trichloroethene
 Concen: 57.14 pg
 RT: 9.46 min Scan# 2155
 Delta R.T. 0.005 min
 Lab File: 02171514.D
 Acq: 17 Feb 2015 10:43

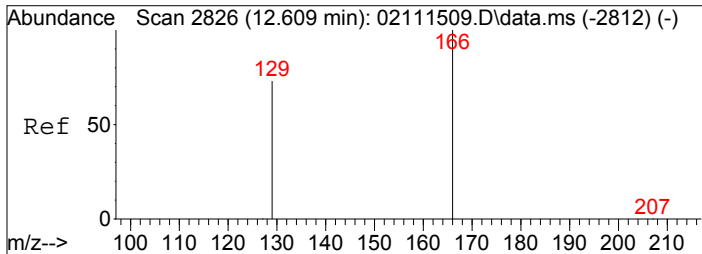
Tgt Ion: 130 Resp: 1889
 Ion Ratio Lower Upper
 130 100
 132 95.9 77.1 117.1



#31
 Toluene
 Concen: 1677.23 pg
 RT: 11.48 min Scan# 2524
 Delta R.T. 0.000 min
 Lab File: 02171514.D
 Acq: 17 Feb 2015 10:43

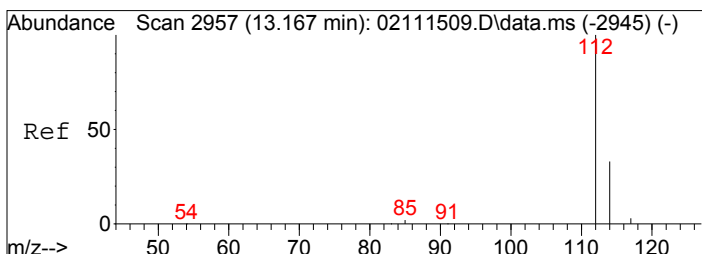
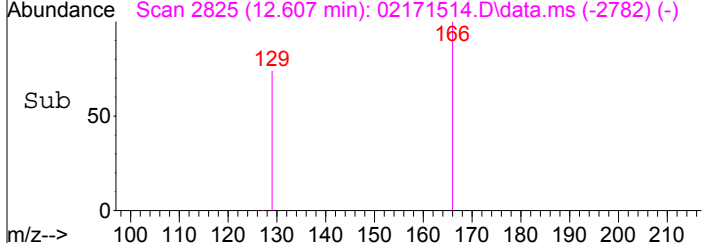
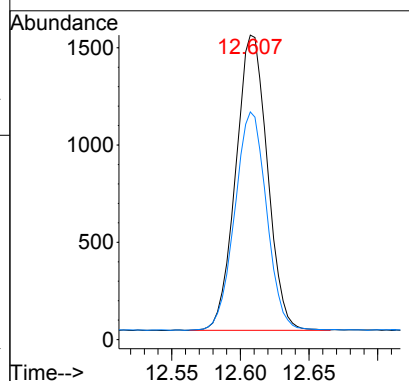
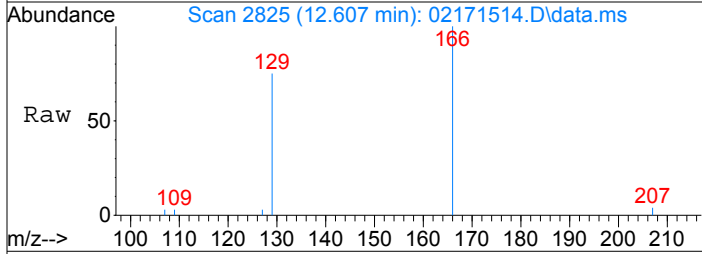
Tgt Ion: 91 Resp: 211703
 Ion Ratio Lower Upper
 91 100
 92 58.1 37.7 77.7





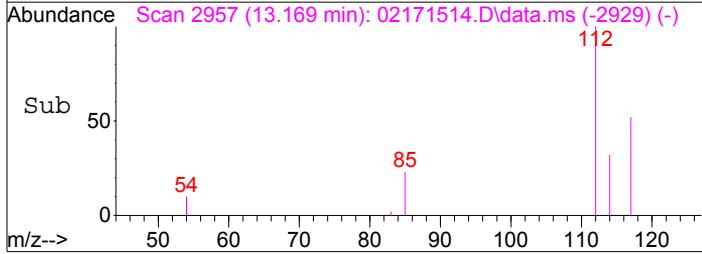
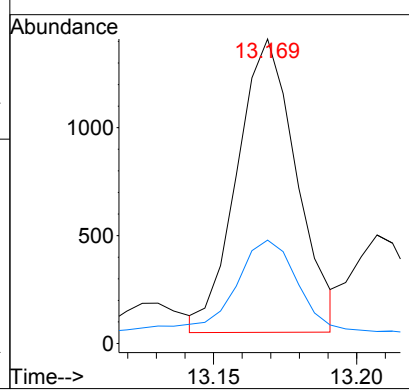
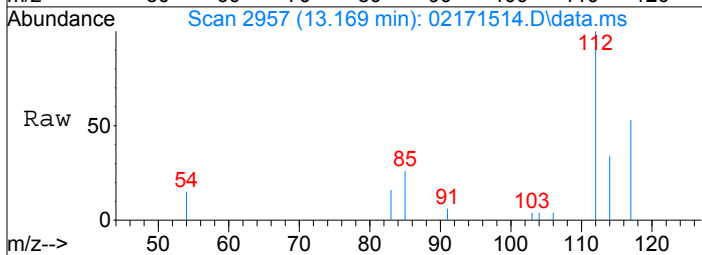
#33
Tetrachloroethene
Concen: 62.25 pg
RT: 12.61 min Scan# 2825
Delta R.T. -0.002 min
Lab File: 02171514.D
Acq: 17 Feb 2015 10:43

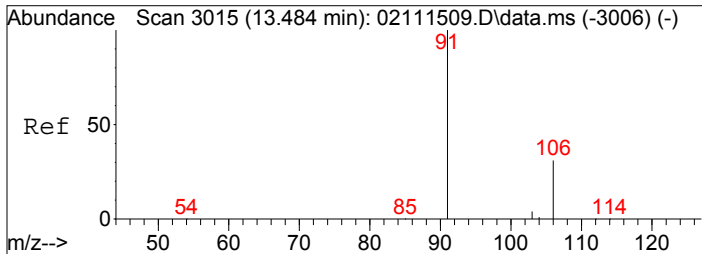
Tgt Ion:166	Resp:	2433
Ion Ratio	Lower	Upper
166	100	
129	74.4	53.3 93.3



#35
Chlorobenzene
Concen: 23.58 pg
RT: 13.17 min Scan# 2957
Delta R.T. 0.002 min
Lab File: 02171514.D
Acq: 17 Feb 2015 10:43

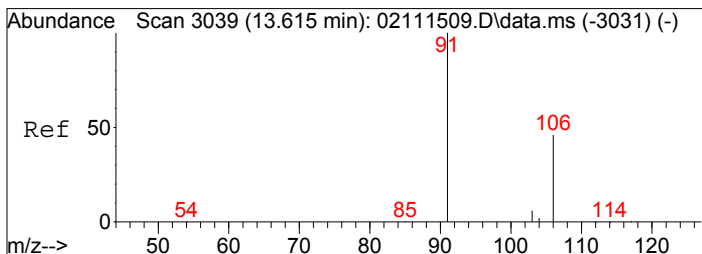
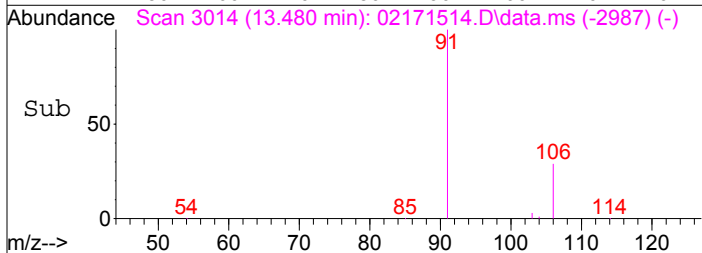
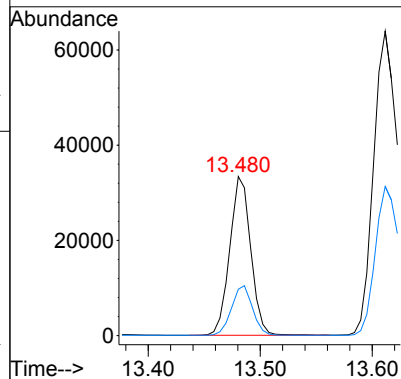
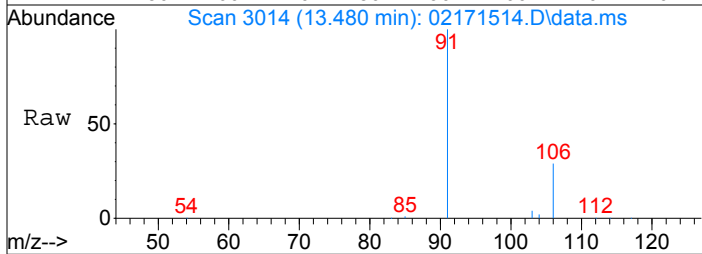
Tgt Ion:112	Resp:	1968
Ion Ratio	Lower	Upper
112	100	
114	34.3	12.3 52.3





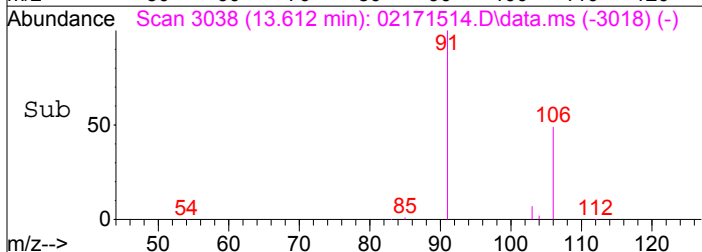
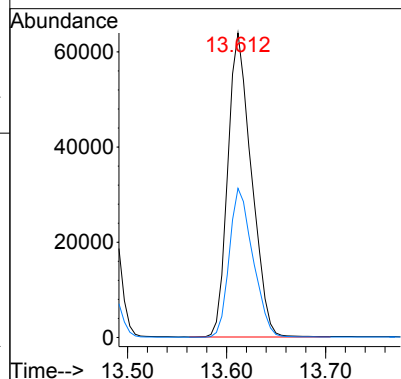
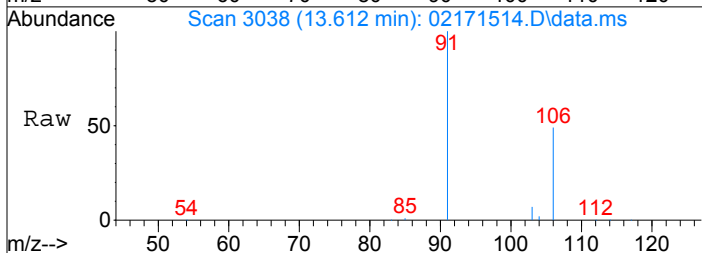
#36
Ethylbenzene
Concen: 308.25 pg
RT: 13.48 min Scan# 3014
Delta R.T. -0.003 min
Lab File: 02171514.D
Acq: 17 Feb 2015 10:43

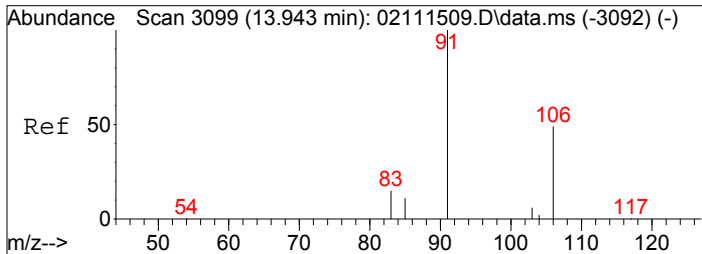
Tgt Ion: 91 Resp: 43624
Ion Ratio Lower Upper
91 100
106 31.2 10.9 50.9



#37
m,p-Xylene
Concen: 909.75 pg
RT: 13.61 min Scan# 3038
Delta R.T. -0.003 min
Lab File: 02171514.D
Acq: 17 Feb 2015 10:43

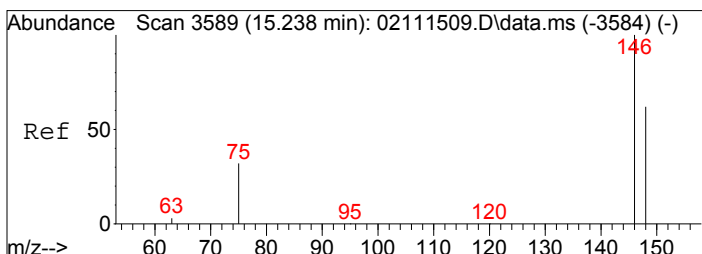
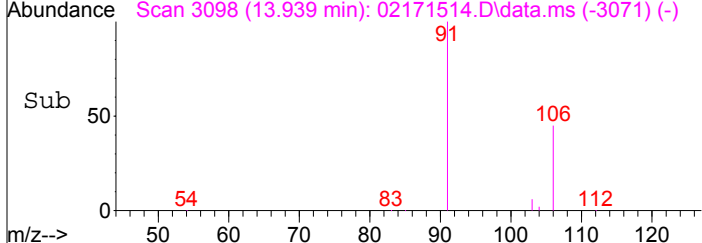
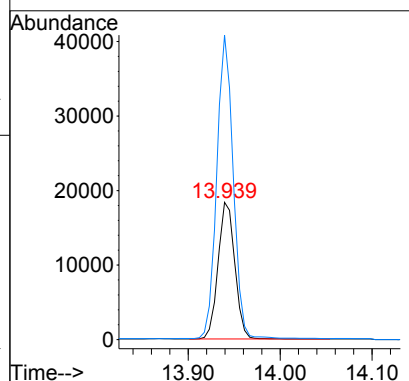
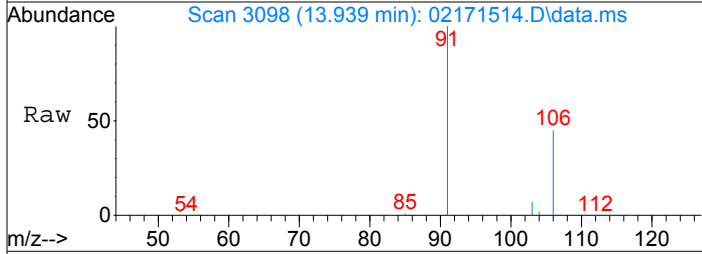
Tgt Ion: 91 Resp: 105816
Ion Ratio Lower Upper
91 100
106 49.1 27.5 67.5





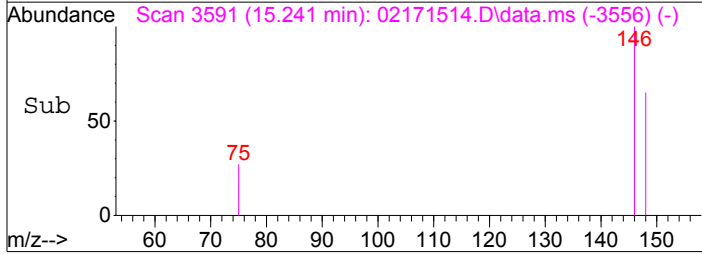
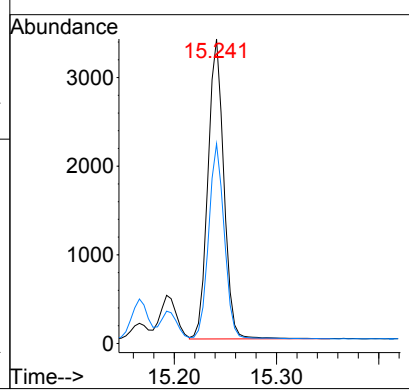
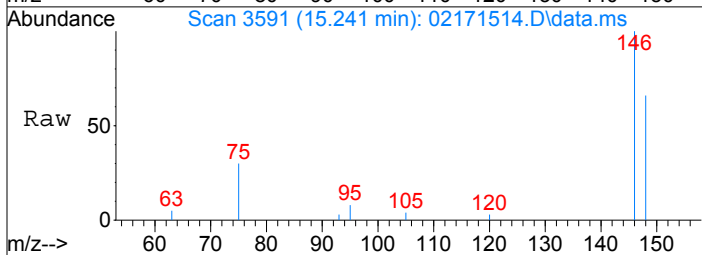
#38
 o-Xylene
 Concen: 409.27 pg
 RT: 13.94 min Scan# 3098
 Delta R.T. -0.003 min
 Lab File: 02171514.D
 Acq: 17 Feb 2015 10:43

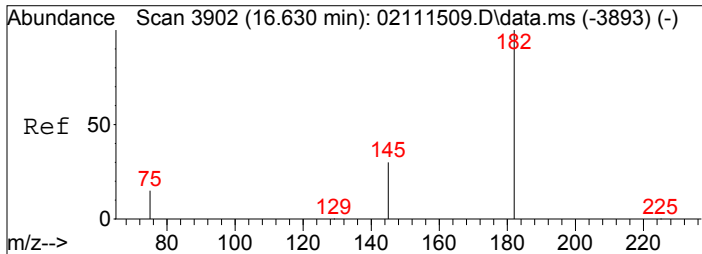
Tgt Ion:106	Resp:	23265
Ion Ratio	Lower	Upper
106	100	
91	217.2	198.3 238.3



#42
 1,4-Dichlorobenzene
 Concen: 46.85 pg
 RT: 15.24 min Scan# 3591
 Delta R.T. 0.004 min
 Lab File: 02171514.D
 Acq: 17 Feb 2015 10:43

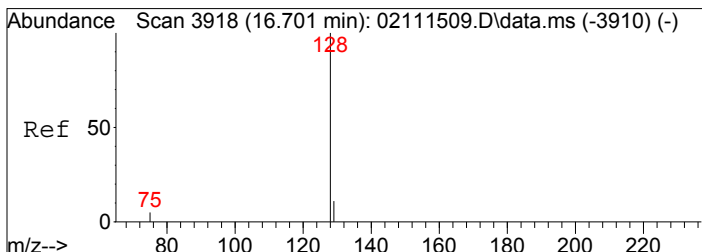
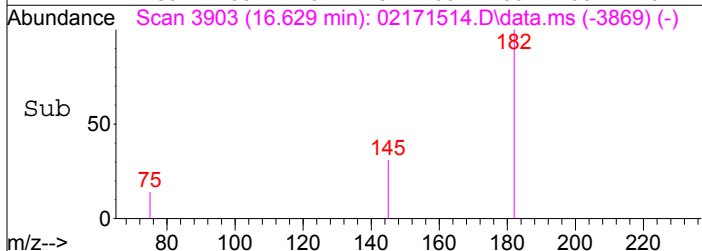
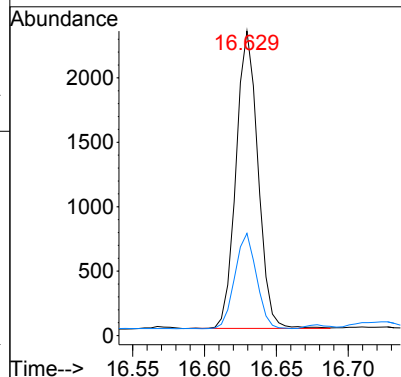
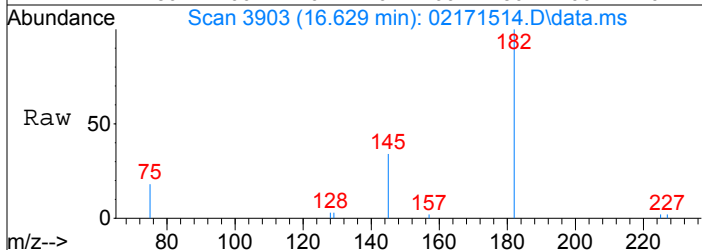
Tgt Ion:146	Resp:	3654
Ion Ratio	Lower	Upper
146	100	
148	63.8	43.5 83.5





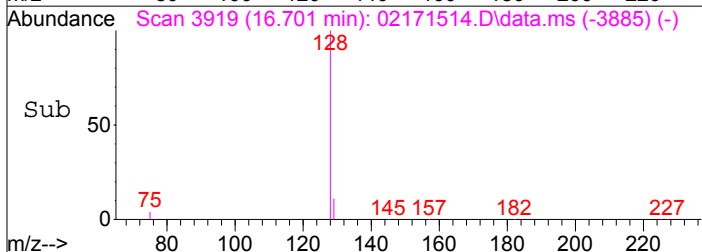
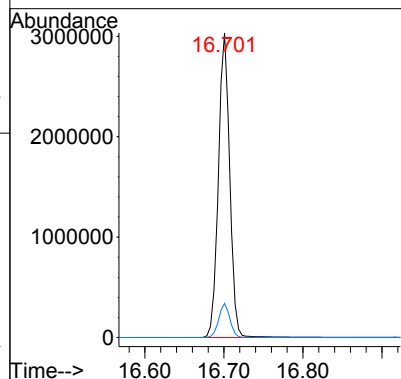
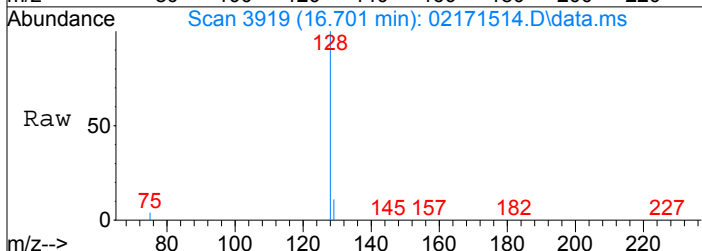
#44
 1,2,4-Trichlorobenzene
 Concen: 57.04 pg
 RT: 16.63 min Scan# 3903
 Delta R.T. -0.001 min
 Lab File: 02171514.D
 Acq: 17 Feb 2015 10:43

Tgt Ion	Resp	Lower	Upper
182	100		
145	31.7	11.3	51.3



#45
 Naphthalene
 Concen: 21375.80 pg
 RT: 16.70 min Scan# 3919
 Delta R.T. -0.000 min
 Lab File: 02171514.D
 Acq: 17 Feb 2015 10:43

Tgt Ion	Resp	Lower	Upper
128	100		
129	11.0	0.0	30.9



Data File: I:\MS19\DATA\2015 02\17\02171513.D

Acq On : 17 Feb 2015 10:15
 Sample : P1500566-022 (1000mL)
 Misc : S29-02041502
 ALS Vial : 6 Sample Multiplier: 1

Operator: WA

Quant Time: Feb 17 16:41:30 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

2/18/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.12	130	18172	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	129114	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	22369	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.13	65	41152	927.311	pg	0.00
Spiked Amount 1000.000			Recovery	=	92.73%	
30) Toluene-d8 (SS2)	11.38	98	121121	1017.252	pg	0.00
Spiked Amount 1000.000			Recovery	=	101.72%	
40) Bromofluorobenzene (SS3)	14.25	174	46882	1038.133	pg	0.00
Spiked Amount 1000.000			Recovery	=	103.81%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.72	85	120002	1624.914	pg	100
3) Chloromethane	1.84	52	7015	475.648	pg	97
4) Vinyl Chloride	2.01	62	171	N.D.		
5) Bromomethane	2.33	94	1232	37.099	pg	99
6) Chloroethane	2.48	64	257	N.D.		
7) Acetone	2.99	58	867894	33279.880	pg	# 84
8) Trichlorofluoromethane	3.11	101	113634	1791.340	pg	100
9) 1,1-Dichloroethene	3.68	96	176	N.D.		
10) Methylene Chloride	3.81	84	13027	432.786	pg	95
11) Trichlorotrifluoroethane	4.10	151	10071	345.506	pg	100
12) trans-1,2-Dichloroethene	4.75	96	1025	35.444	pg	97
13) 1,1-Dichloroethane	4.96	63	343	N.D.		
14) Methyl tert-Butyl Ether	5.12	73	828	N.D.		
15) cis-1,2-Dichloroethene	5.94	96	1466	45.588	pg	99
16) Chloroform	6.32	83	12071	216.657	pg	100
18) 1,2-Dichloroethane	7.27	62	4712	106.219	pg	100
19) 1,1,1-Trichloroethane	7.60	97	2281	42.101	pg	99
20) Benzene	8.16	78	60458	527.590	pg	100
21) Carbon Tetrachloride	8.34	117	13772	339.532	pg	99
23) 1,2-Dichloropropane	9.16	63	1183	42.010	pg	96
24) Bromodichloromethane	9.40	83	912m	22.437	pg	
25) Trichloroethene	9.46	130	2131	64.244	pg	99
26) 1,4-Dioxane	9.55	88	189	N.D.		
27) cis-1,3-Dichloropropene	10.46	75	29	N.D.		
28) trans-1,3-Dichloropropene	11.04	75	30	N.D.		
29) 1,1,2-Trichloroethane	11.19	83	61	N.D.		
31) Toluene	11.48	91	329902	2605.148	pg	99
32) 1,2-Dibromoethane	12.12	107	19	N.D.		
33) Tetrachloroethene	12.61	166	2068	52.741	pg	99
35) Chlorobenzene	13.17	112	1046	N.D.		
36) Ethylbenzene	13.48	91	51748	368.910	pg	100
37) m,p-Xylene	13.61	91	136944	1187.842	pg	98
38) o-Xylene	13.94	106	24560	435.896	pg	99
39) 1,1,2,2-Tetrachloroethane	13.89	83	293	N.D.		
41) 1,3-Dichlorobenzene	0.00	146	0	N.D.	d	
42) 1,4-Dichlorobenzene	15.24	146	3034	39.249	pg	100
43) 1,2-Dichlorobenzene	15.46	146	240	N.D.		
44) 1,2,4-Trichlorobenzene	16.63	182	2441	57.363	pg	99
45) Naphthalene	16.70	128	33254	237.589	pg	100
46) Hexachlorobutadiene	16.96	225	24	N.D.		

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\17\02171513.D

Acq On : 17 Feb 2015 10:15

Operator: WA

Sample : P1500566-022 (1000mL)

Misc : S29-02041502

ALS Vial : 6 Sample Multiplier: 1

Quant Time: Feb 17 16:41:30 2015

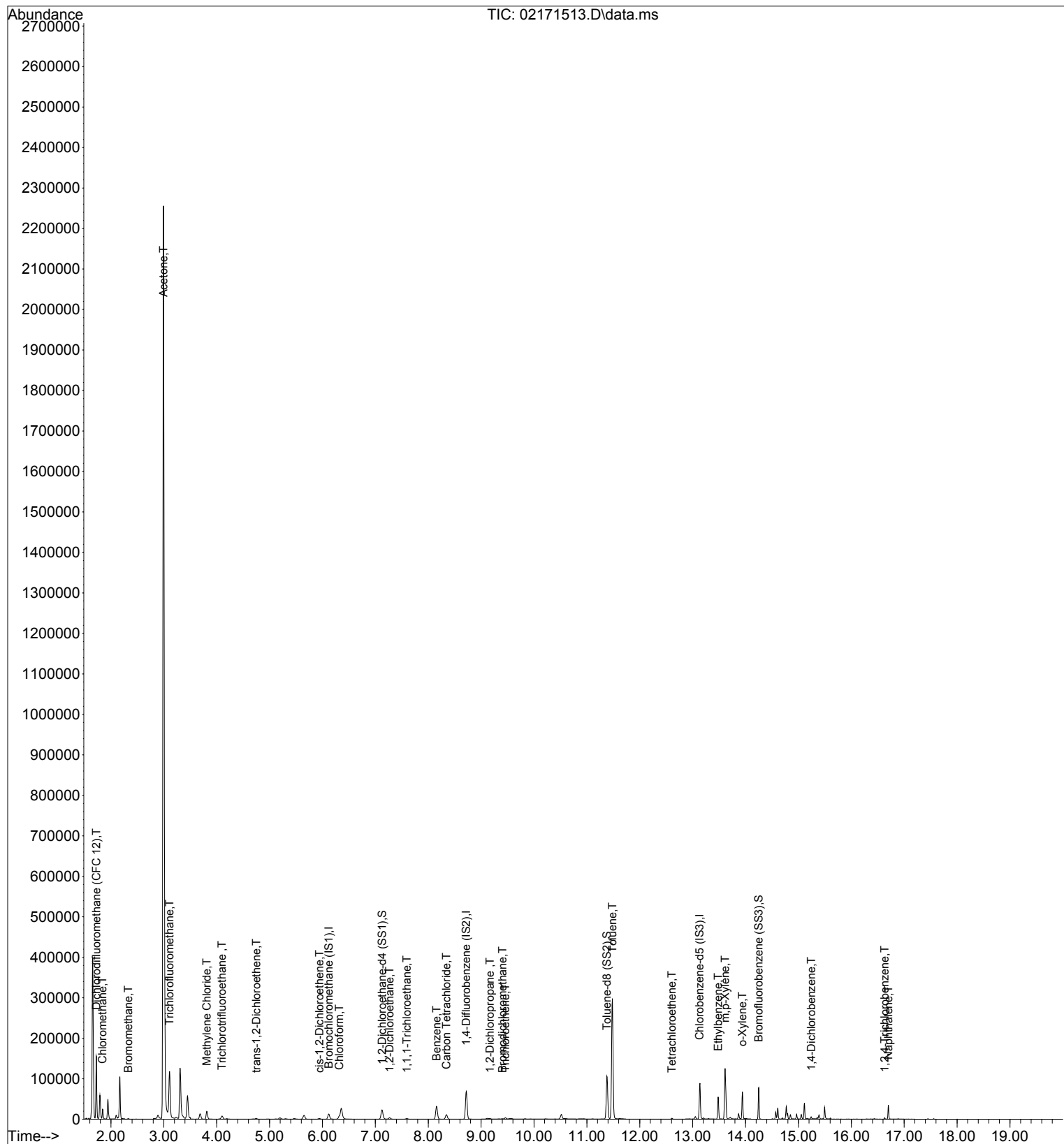
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 02\17\02171513.D

Acq On : 17 Feb 2015 10:15

Operator: WA

Sample : P1500566-022 (1000mL)

Misc : S29-02041502

ALS Vial : 6 Sample Multiplier: 1

Quant Time: Feb 17 16:41:30 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

2/17/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.12	130	18172	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	129114	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	22369	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.13	65	41152	927.311	pg	0.00
Spiked Amount 1000.000			Recovery	=	92.73%	
30) Toluene-d8 (SS2)	11.38	98	121121	1017.252	pg	0.00
Spiked Amount 1000.000			Recovery	=	101.72%	
40) Bromofluorobenzene (SS3)	14.25	174	46882	1038.133	pg	0.00
Spiked Amount 1000.000			Recovery	=	103.81%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.72	85	120002	1624.914	pg	100
3) Chloromethane	1.84	52	7015	475.648	pg	97
5) Bromomethane	2.33	94	1232	37.099	pg	99
7) Acetone	2.99	58	867894	33279.880	pg	# 84
8) Trichlorofluoromethane	3.11	101	113634	1791.340	pg	100
10) Methylene Chloride	3.81	84	13027	432.786	pg	95
11) Trichlorotrifluoroethane	4.10	151	10071	345.506	pg	100
12) trans-1,2-Dichloroethene	4.75	96	1025	35.444	pg	97
15) cis-1,2-Dichloroethene	5.94	96	1466	45.588	pg	99
16) Chloroform	6.32	83	12071	216.657	pg	100
18) 1,2-Dichloroethane	7.27	62	4712	106.219	pg	100
19) 1,1,1-Trichloroethane	7.60	97	2281	42.101	pg	99
20) Benzene	8.16	78	60458	527.590	pg	100
21) Carbon Tetrachloride	8.34	117	13772	339.532	pg	99
23) 1,2-Dichloropropane	9.16	63	1183	42.010	pg	96
24) Bromodichloromethane	9.40	83	912m	22.437	pg	
25) Trichloroethene	9.46	130	2131	64.244	pg	99
31) Toluene	11.48	91	329902	2605.148	pg	99
33) Tetrachloroethene	12.61	166	2068	52.741	pg	99
36) Ethylbenzene	13.48	91	51748	368.910	pg	100
37) m,p-Xylene	13.61	91	136944	1187.842	pg	98
38) o-Xylene	13.94	106	24560	435.896	pg	99
42) 1,4-Dichlorobenzene	15.24	146	3034	39.249	pg	100
44) 1,2,4-Trichlorobenzene	16.63	182	2441	57.363	pg	99
45) Naphthalene	16.70	128	33254	237.589	pg	100

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\17\02171513.D

Acq On : 17 Feb 2015 10:15

Operator: WA

Sample : P1500566-022 (1000mL)

Misc : S29-02041502

ALS Vial : 6 Sample Multiplier: 1

Quant Time: Feb 17 16:41:30 2015

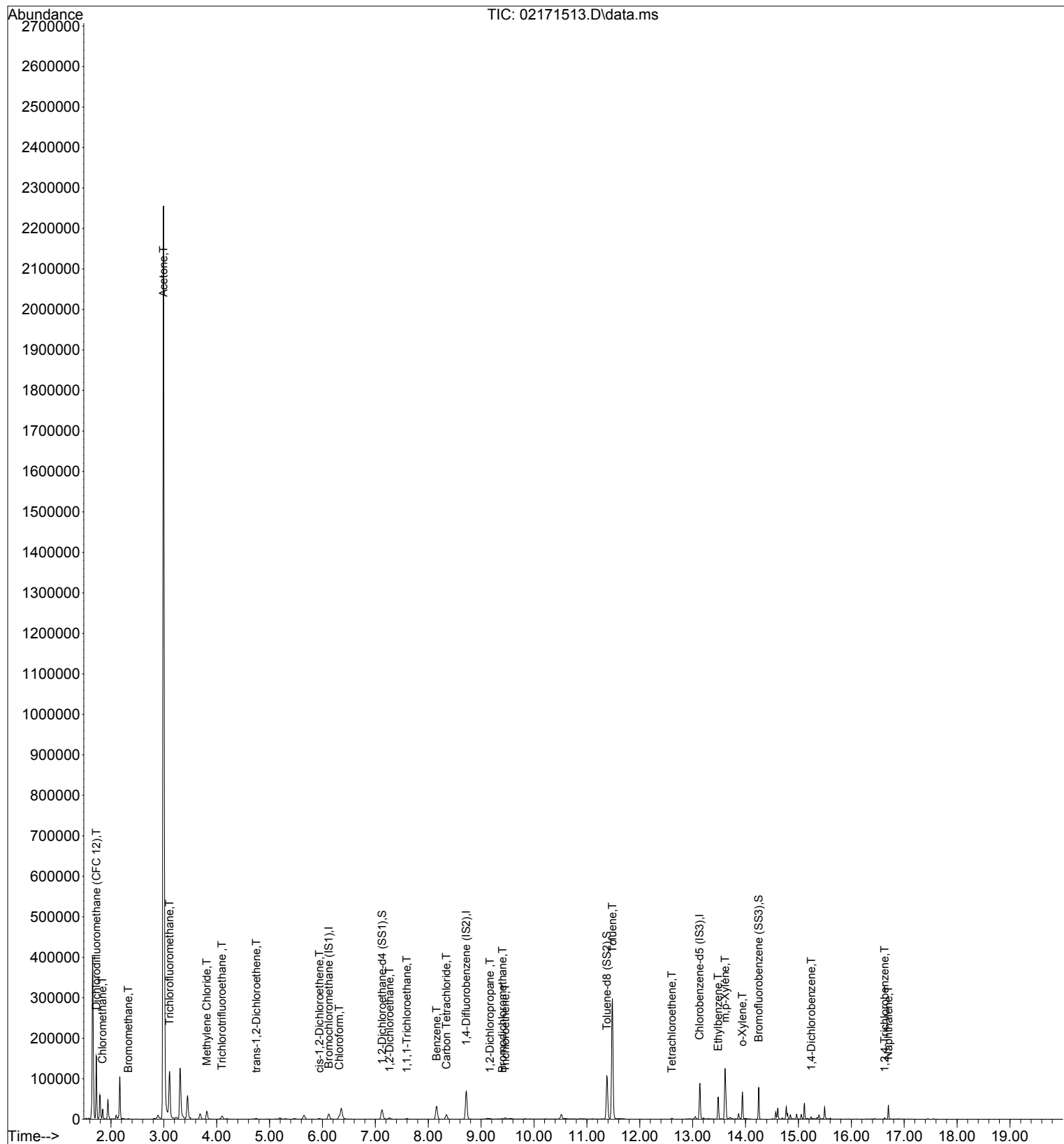
Quant Method : I:\MS19\METHODS\X19021115.M

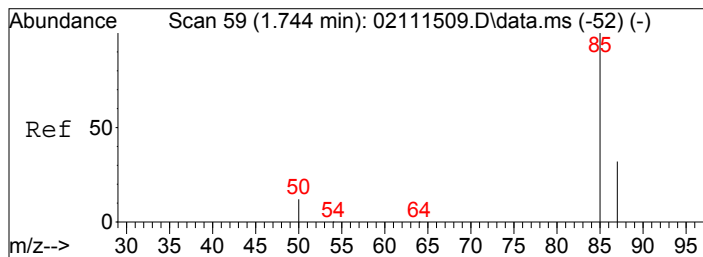
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

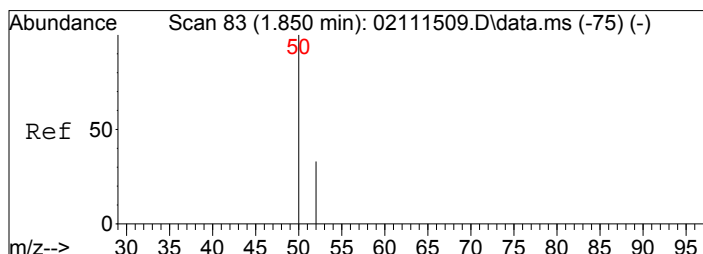
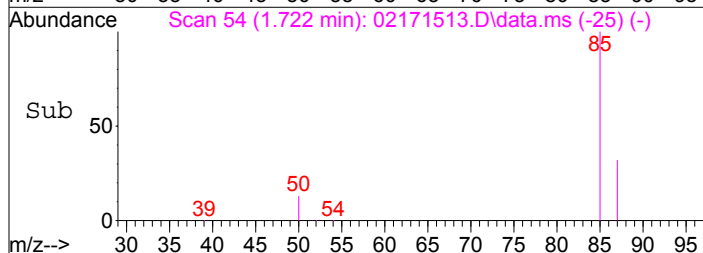
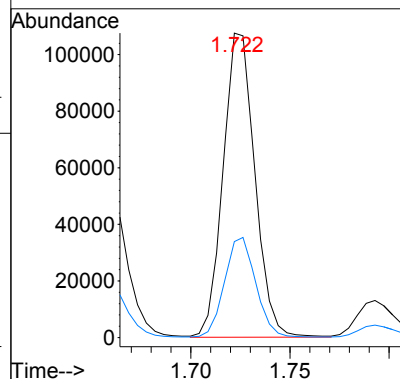
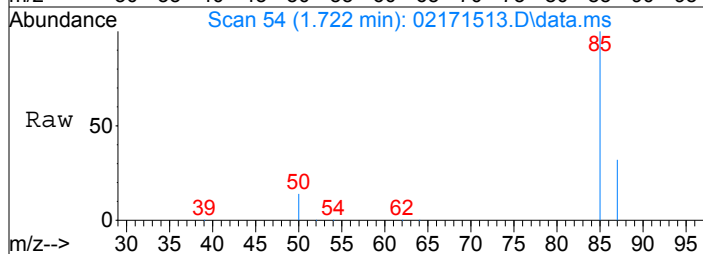
DataAcq Meth:TO15SIM.M





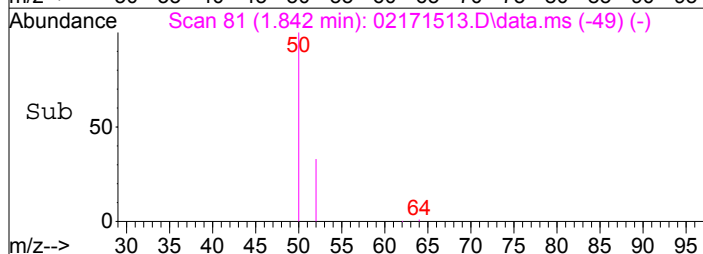
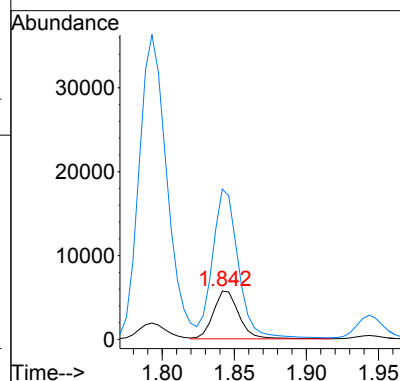
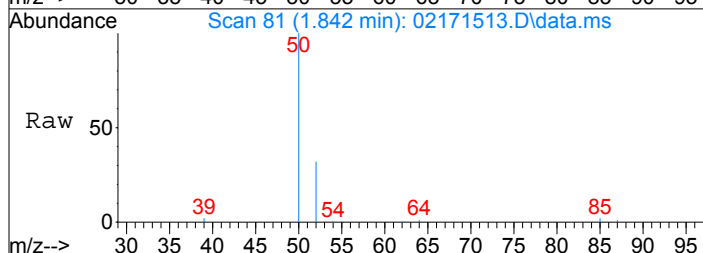
#2
 Dichlorodifluoromethane (CFC 12)
 Concen: 1624.91 pg
 RT: 1.72 min Scan# 54
 Delta R.T. -0.022 min
 Lab File: 02171513.D
 Acq: 17 Feb 2015 10:15

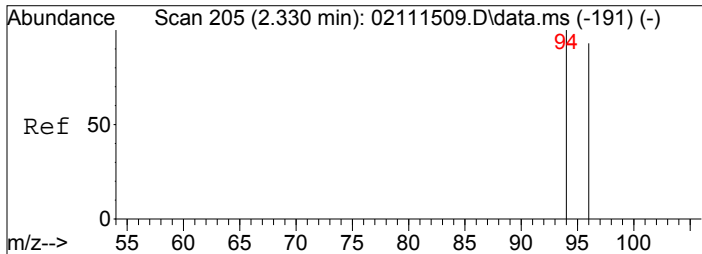
Tgt Ion: 85 Resp: 120002
 Ion Ratio Lower Upper
 85 100
 87 32.4 12.4 52.4



#3
 Chloromethane
 Concen: 475.65 pg
 RT: 1.84 min Scan# 81
 Delta R.T. -0.008 min
 Lab File: 02171513.D
 Acq: 17 Feb 2015 10:15

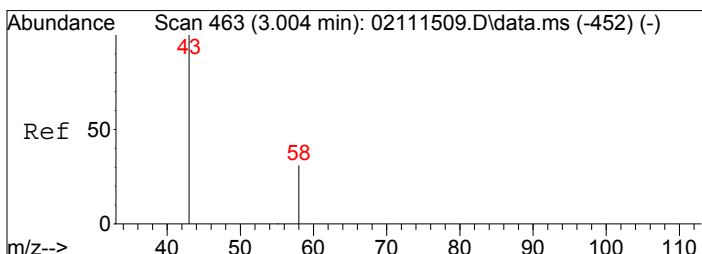
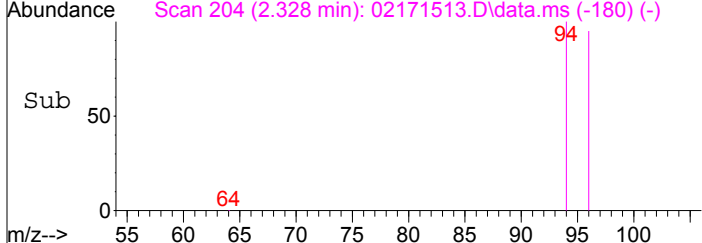
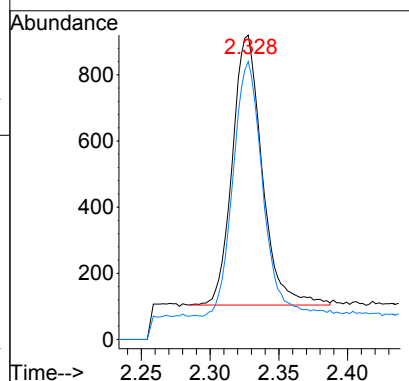
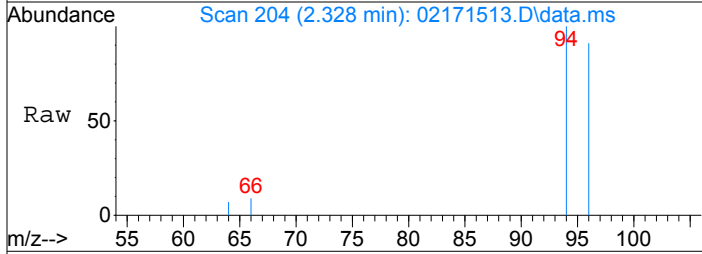
Tgt Ion: 52 Resp: 7015
 Ion Ratio Lower Upper
 52 100
 50 309.2 283.7 323.7





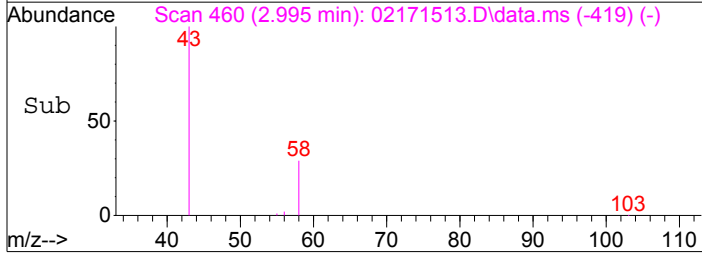
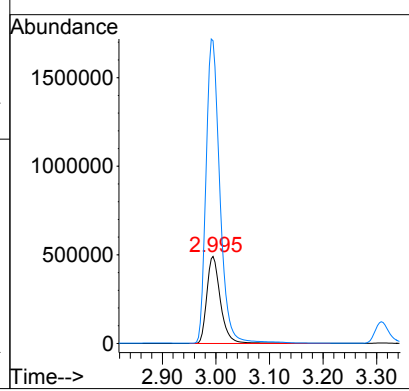
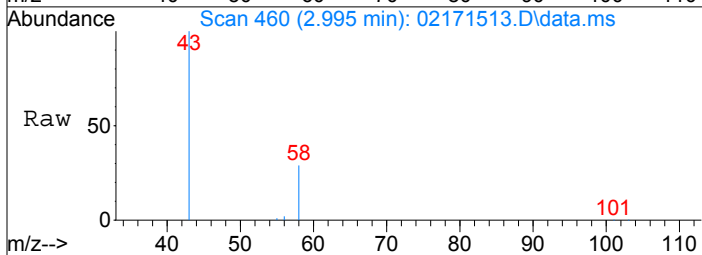
#5
 Bromomethane
 Concen: 37.10 pg
 RT: 2.33 min Scan# 204
 Delta R.T. -0.002 min
 Lab File: 02171513.D
 Acq: 17 Feb 2015 10:15

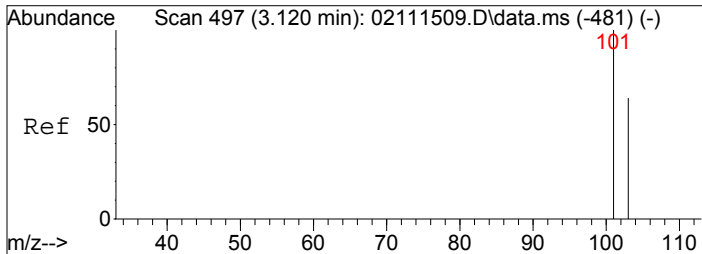
Tgt Ion: 94	Resp: 1232
Ion Ratio	Lower Upper
94	100
96	95.3 75.5 113.3



#7
 Acetone
 Concen: 33279.88 pg
 RT: 2.99 min Scan# 460
 Delta R.T. -0.009 min
 Lab File: 02171513.D
 Acq: 17 Feb 2015 10:15

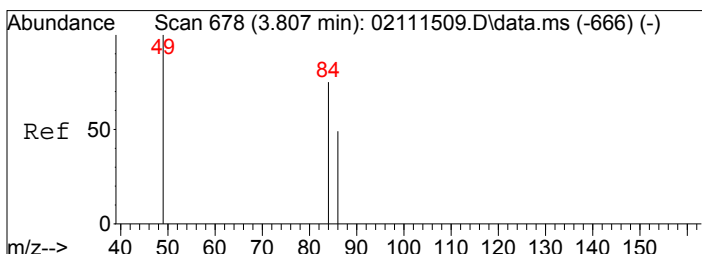
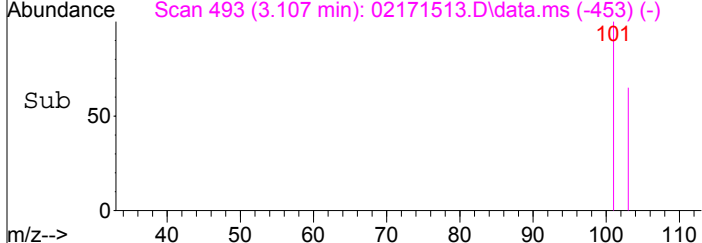
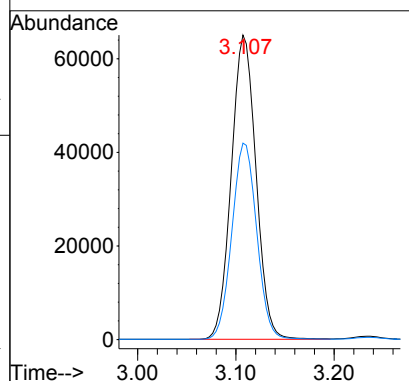
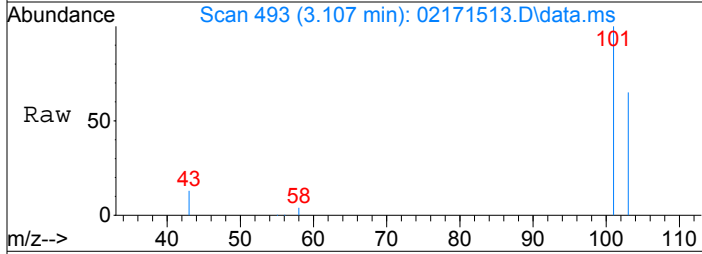
Tgt Ion: 58	Resp: 867894
Ion Ratio	Lower Upper
58	100
43	354.6 301.8 341.8#





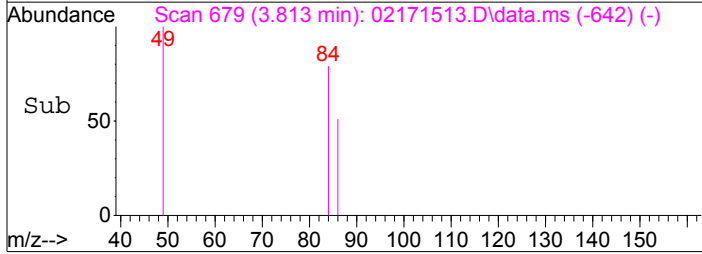
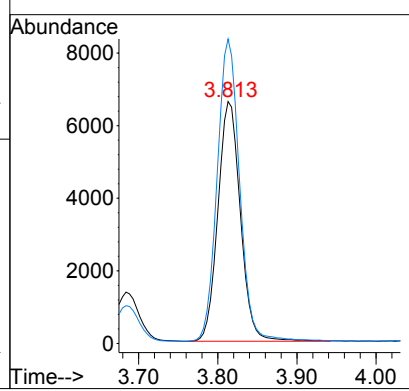
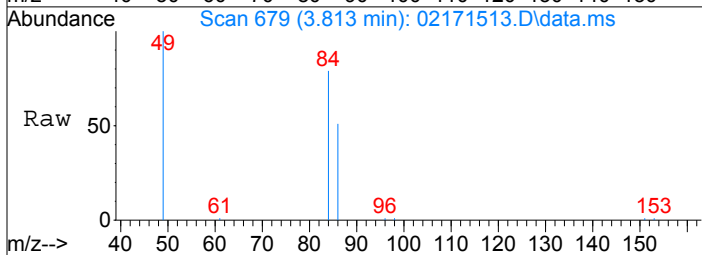
#8
 Trichlorofluoromethane
 Concen: 1791.34 pg
 RT: 3.11 min Scan# 493
 Delta R.T. -0.012 min
 Lab File: 02171513.D
 Acq: 17 Feb 2015 10:15

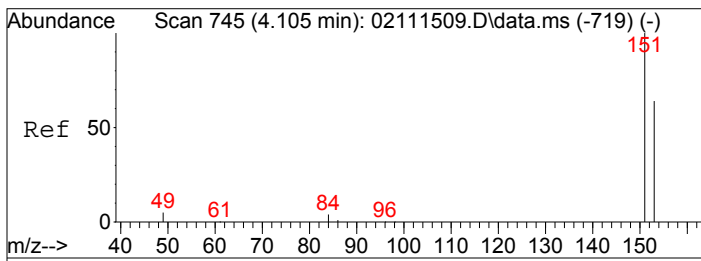
Tgt Ion: 101	Resp: 113634
Ion Ratio	Lower Upper
101	100
103	64.8 51.8 77.6



#10
 Methylene Chloride
 Concen: 432.79 pg
 RT: 3.81 min Scan# 679
 Delta R.T. 0.006 min
 Lab File: 02171513.D
 Acq: 17 Feb 2015 10:15

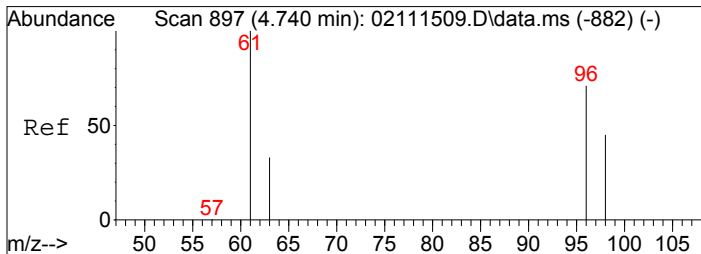
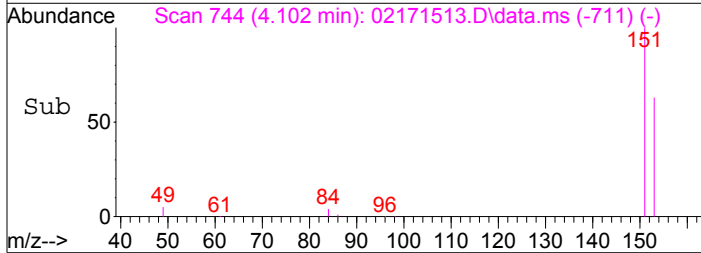
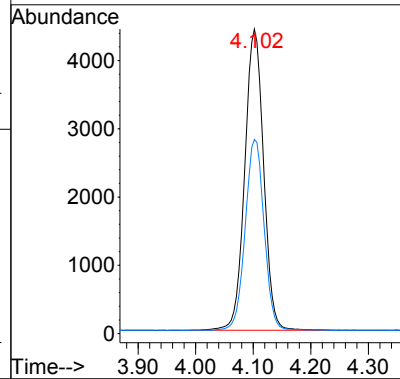
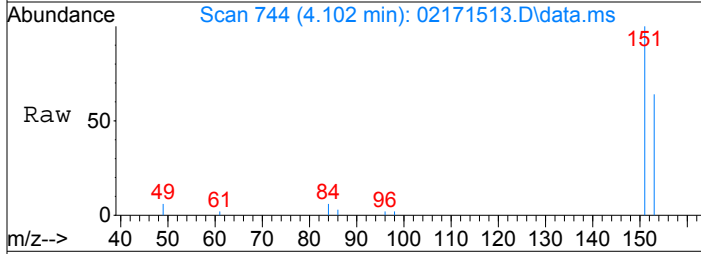
Tgt Ion: 84	Resp: 13027
Ion Ratio	Lower Upper
84	100
49	125.9 112.3 152.3





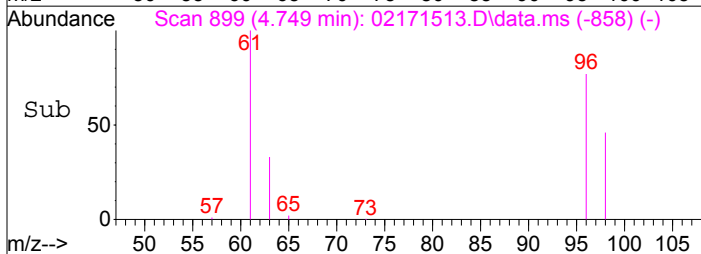
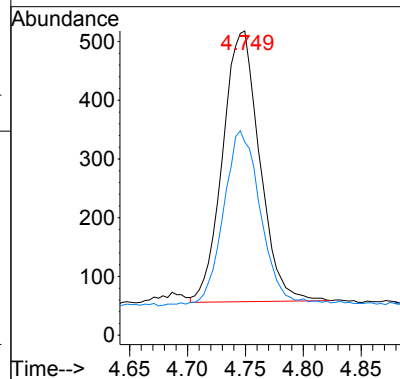
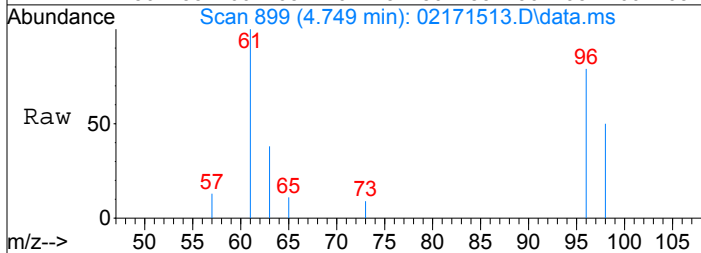
#11
 Trichlorotrifluoroethane
 Concen: 345.51 pg
 RT: 4.10 min Scan# 744
 Delta R.T. -0.003 min
 Lab File: 02171513.D
 Acq: 17 Feb 2015 10:15

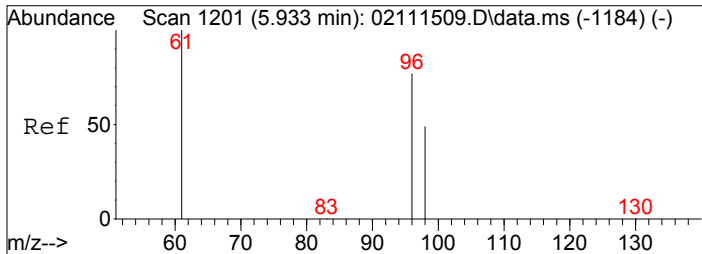
Tgt Ion: 151 Resp: 10071
 Ion Ratio Lower Upper
 151 100
 153 63.4 43.6 83.6



#12
 trans-1,2-Dichloroethene
 Concen: 35.44 pg
 RT: 4.75 min Scan# 899
 Delta R.T. 0.009 min
 Lab File: 02171513.D
 Acq: 17 Feb 2015 10:15

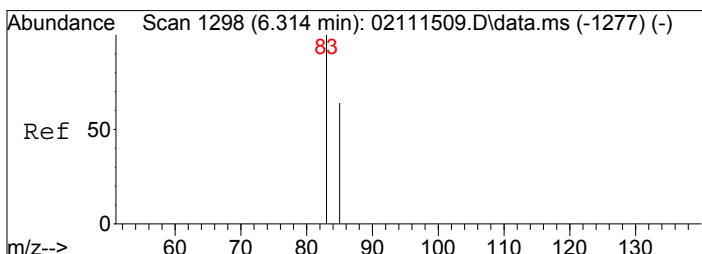
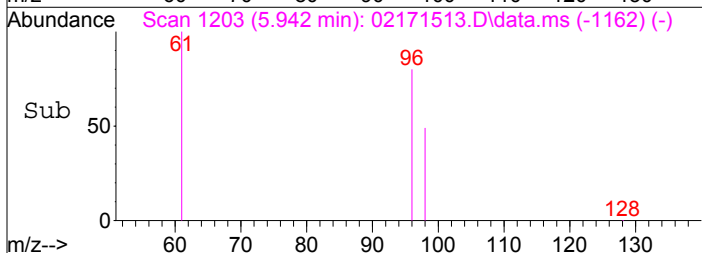
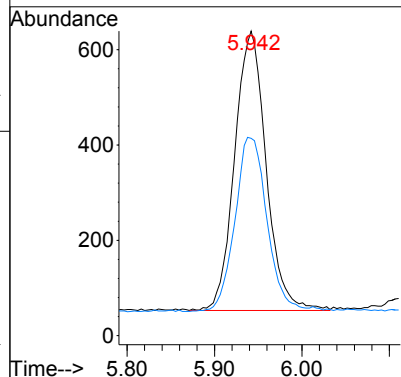
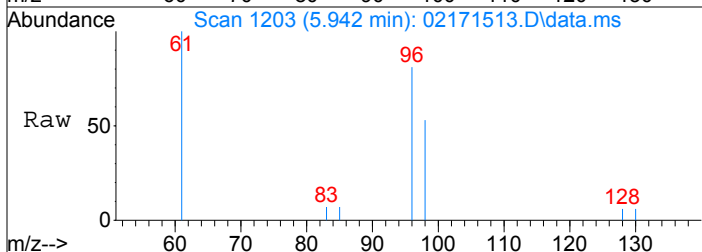
Tgt Ion: 96 Resp: 1025
 Ion Ratio Lower Upper
 96 100
 98 66.1 43.7 83.7





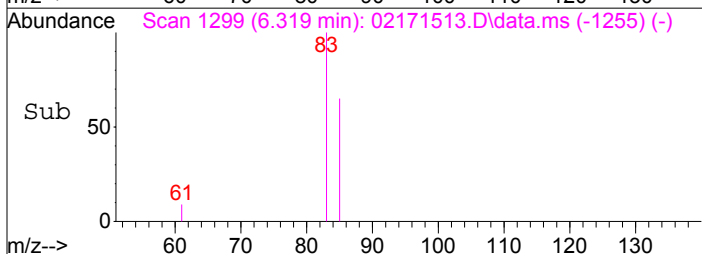
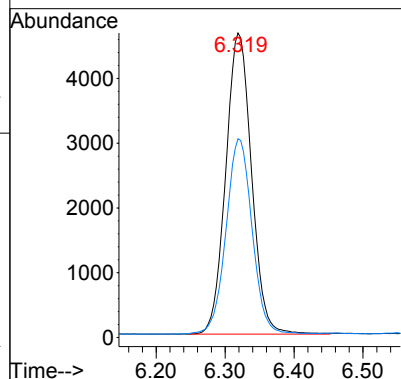
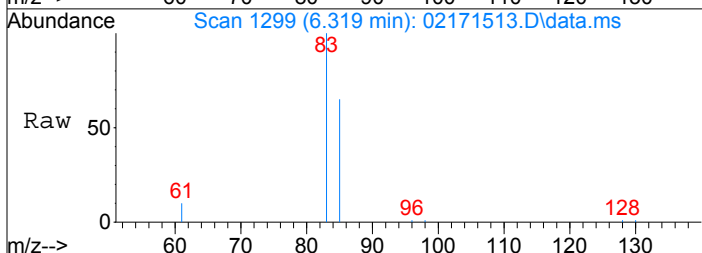
#15
 cis-1,2-Dichloroethene
 Concen: 45.59 pg
 RT: 5.94 min Scan# 1203
 Delta R.T. 0.009 min
 Lab File: 02171513.D
 Acq: 17 Feb 2015 10:15

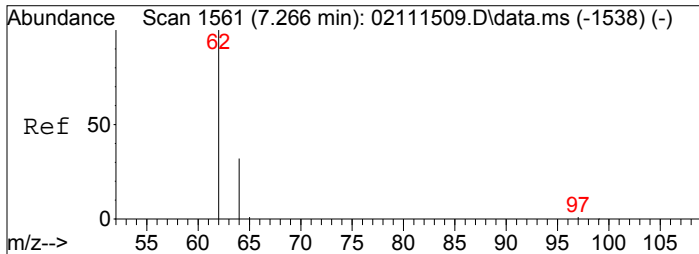
Tgt Ion: 96 Resp: 1466
 Ion Ratio Lower Upper
 96 100
 98 63.2 44.3 84.3



#16
 Chloroform
 Concen: 216.66 pg
 RT: 6.32 min Scan# 1299
 Delta R.T. 0.005 min
 Lab File: 02171513.D
 Acq: 17 Feb 2015 10:15

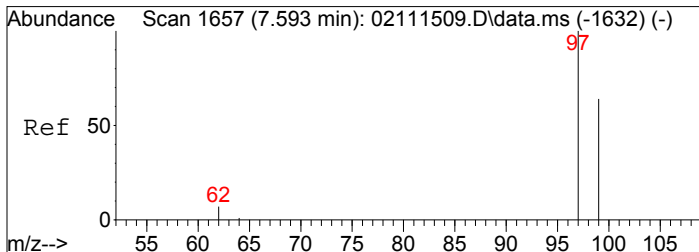
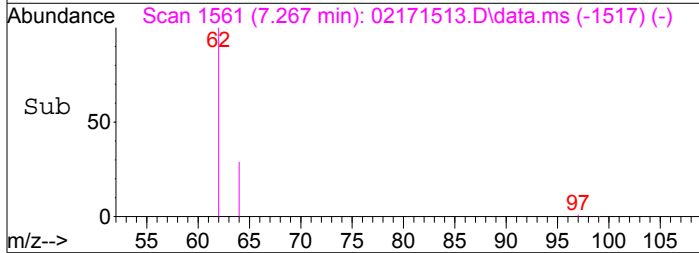
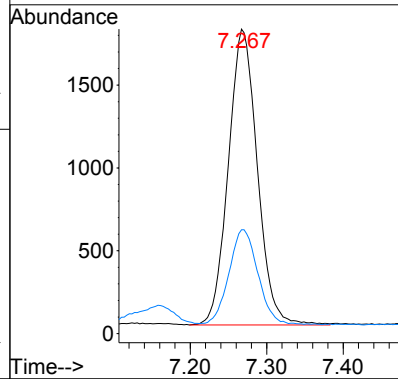
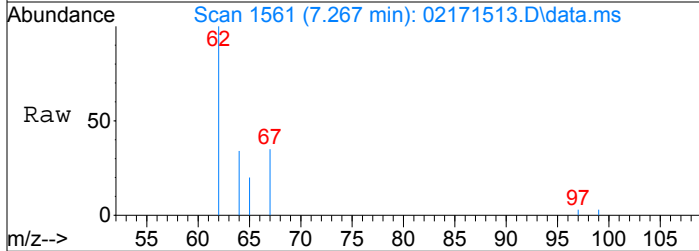
Tgt Ion: 83 Resp: 12071
 Ion Ratio Lower Upper
 83 100
 85 65.6 45.4 85.4





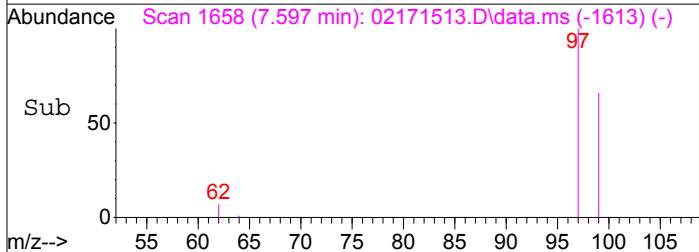
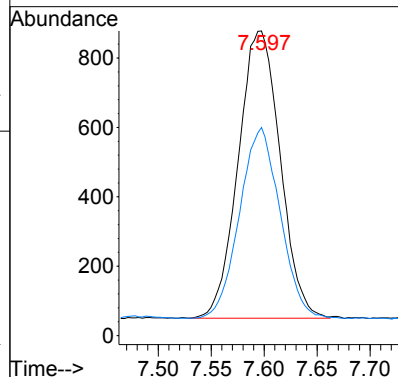
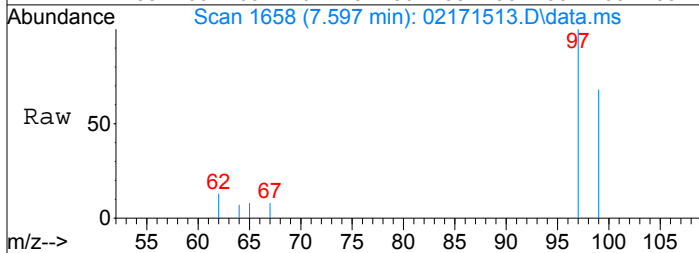
#18
1,2-Dichloroethane
Concen: 106.22 pg
RT: 7.27 min Scan# 1561
Delta R.T. 0.001 min
Lab File: 02171513.D
Acq: 17 Feb 2015 10:15

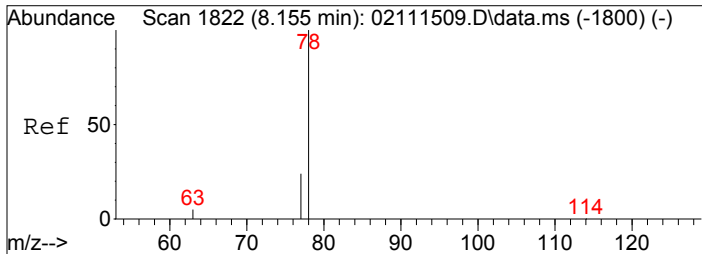
Tgt Ion: 62 Resp: 4712
Ion Ratio Lower Upper
62 100
64 31.8 11.6 51.6



#19
1,1,1-Trichloroethane
Concen: 42.10 pg
RT: 7.60 min Scan# 1658
Delta R.T. 0.005 min
Lab File: 02171513.D
Acq: 17 Feb 2015 10:15

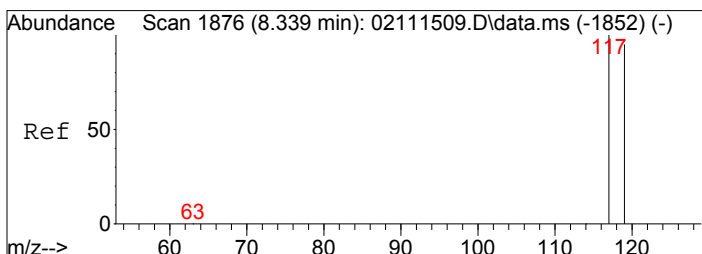
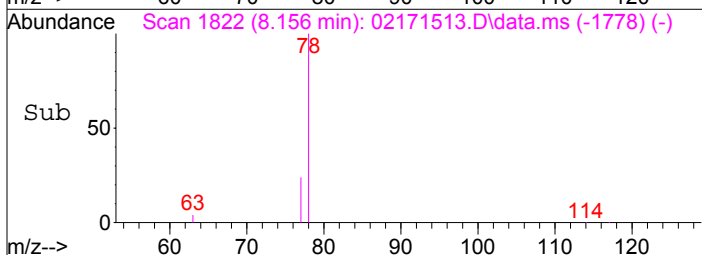
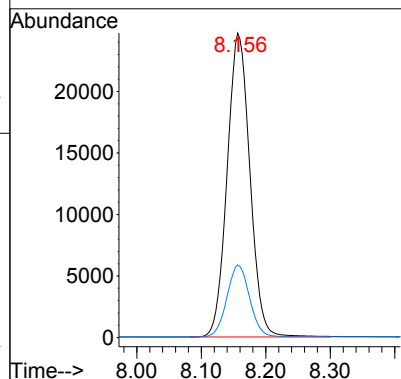
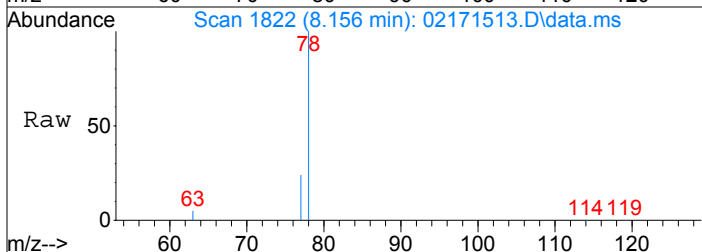
Tgt Ion: 97 Resp: 2281
Ion Ratio Lower Upper
97 100
99 64.5 44.0 84.0





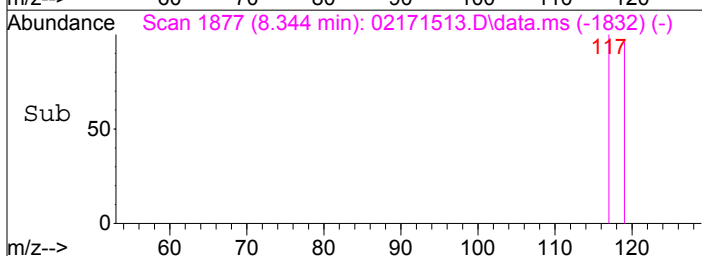
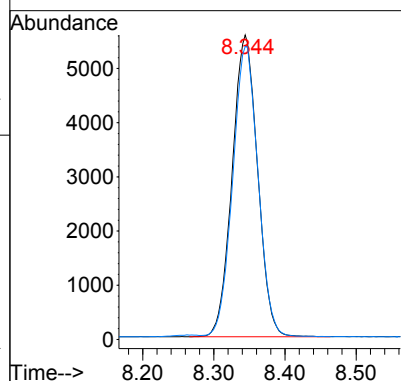
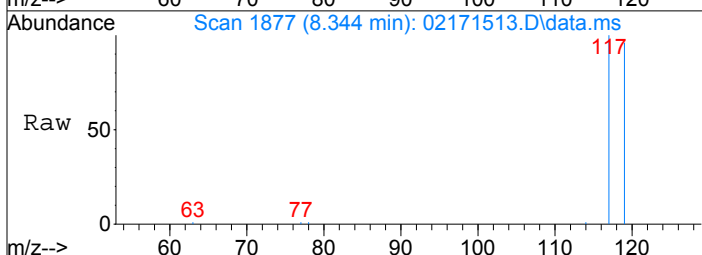
#20
Benzene
Concen: 527.59 pg
RT: 8.16 min Scan# 1822
Delta R.T. 0.001 min
Lab File: 02171513.D
Acq: 17 Feb 2015 10:15

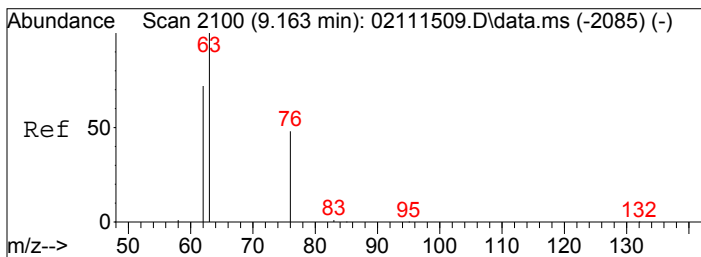
Tgt Ion	78	77	Resp	60458	Lower	Upper
Ion Ratio	100	23.6				
			3.7			43.7



#21
Carbon Tetrachloride
Concen: 339.53 pg
RT: 8.34 min Scan# 1877
Delta R.T. 0.005 min
Lab File: 02171513.D
Acq: 17 Feb 2015 10:15

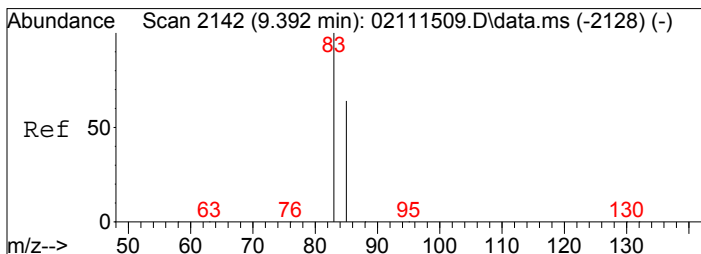
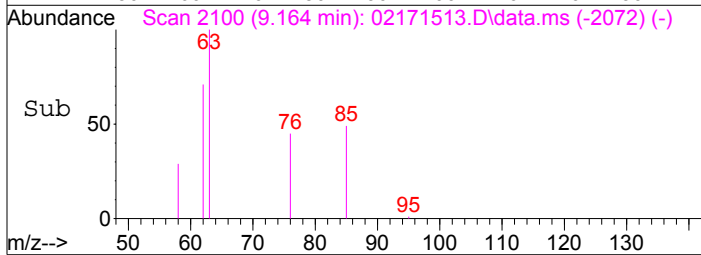
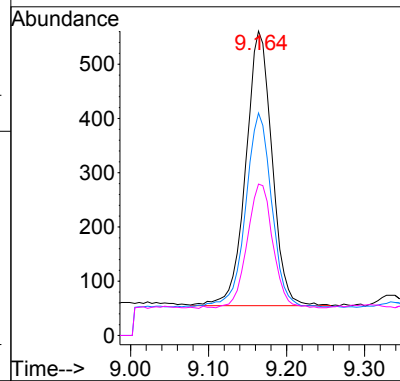
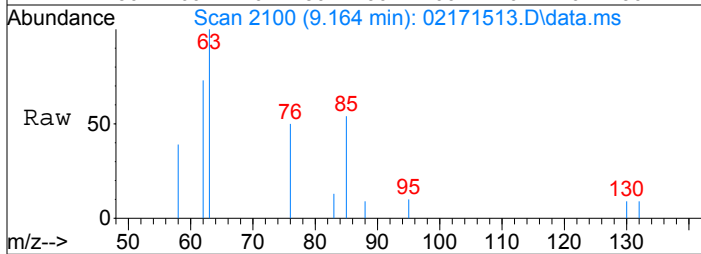
Tgt Ion	117	119	Resp	13772	Lower	Upper
Ion Ratio	100	96.4				
			75.5			115.5





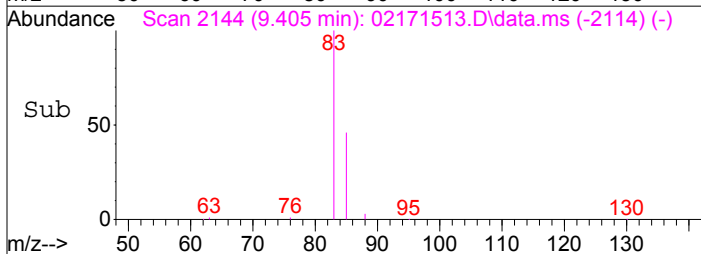
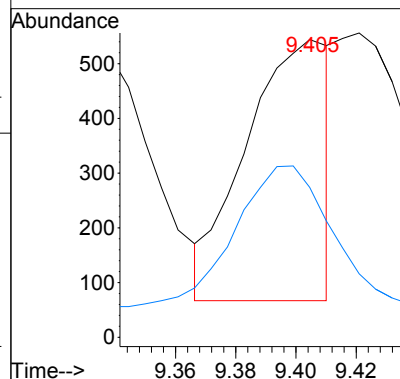
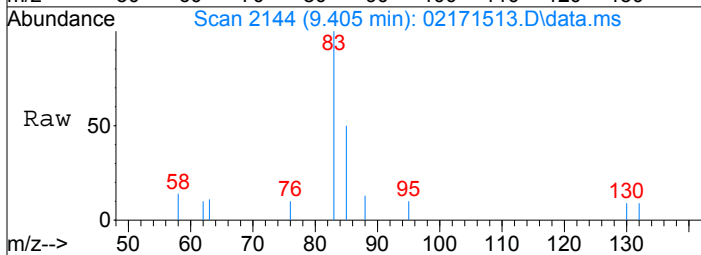
#23
1,2-Dichloropropane
Concen: 42.01 pg
RT: 9.16 min Scan# 2100
Delta R.T. 0.001 min
Lab File: 02171513.D
Acq: 17 Feb 2015 10:15

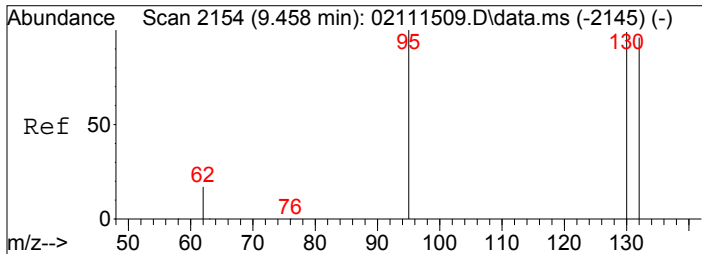
Tgt Ion: 63 Resp: 1183
Ion Ratio Lower Upper
63 100
62 69.8 52.0 92.0
76 44.0 28.1 68.1



#24
Bromodichloromethane
Concen: 22.44 pg m
RT: 9.40 min Scan# 2144
Delta R.T. 0.012 min
Lab File: 02171513.D
Acq: 17 Feb 2015 10:15

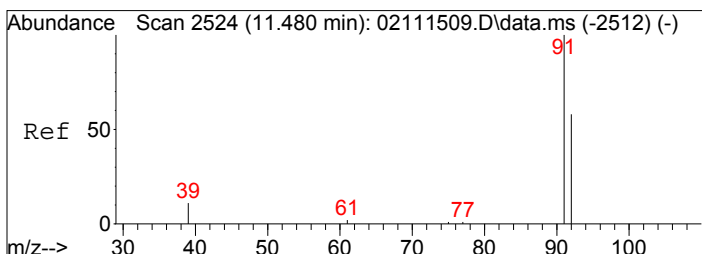
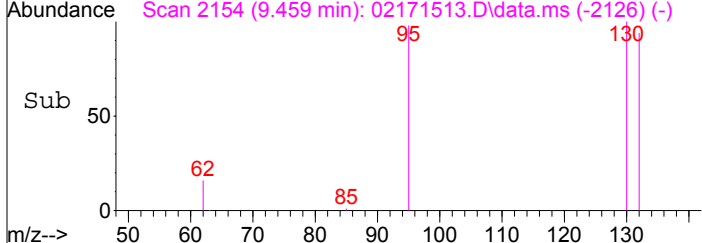
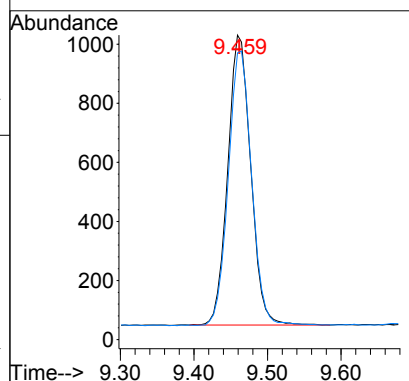
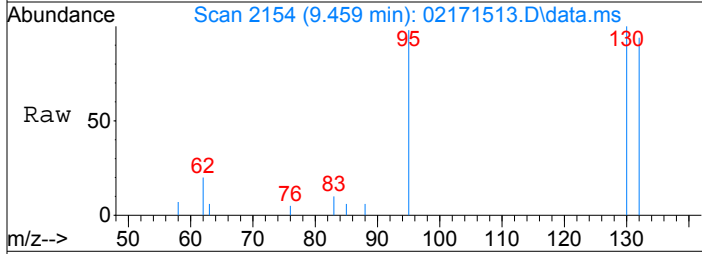
Tgt Ion: 83 Resp: 912
Ion Ratio Lower Upper
83 100
85 65.2 51.4 77.0





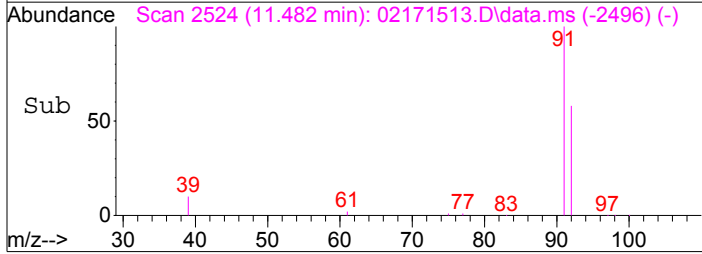
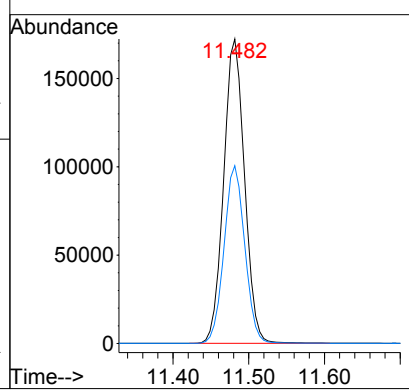
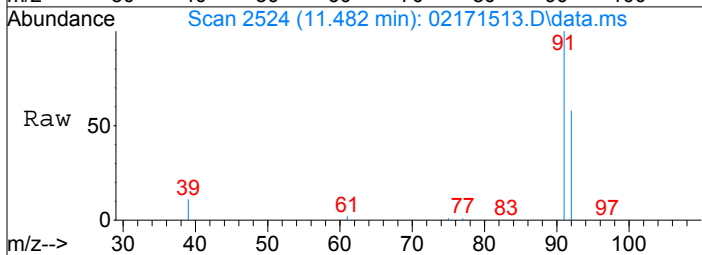
#25
 Trichloroethene
 Concen: 64.24 pg
 RT: 9.46 min Scan# 2154
 Delta R.T. 0.001 min
 Lab File: 02171513.D
 Acq: 17 Feb 2015 10:15

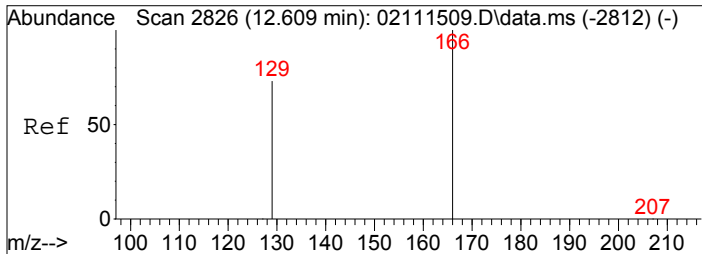
Tgt Ion: 130	Resp: 2131
Ion Ratio	Lower Upper
130	100
132	96.0 77.1 117.1



#31
 Toluene
 Concen: 2605.15 pg
 RT: 11.48 min Scan# 2524
 Delta R.T. 0.001 min
 Lab File: 02171513.D
 Acq: 17 Feb 2015 10:15

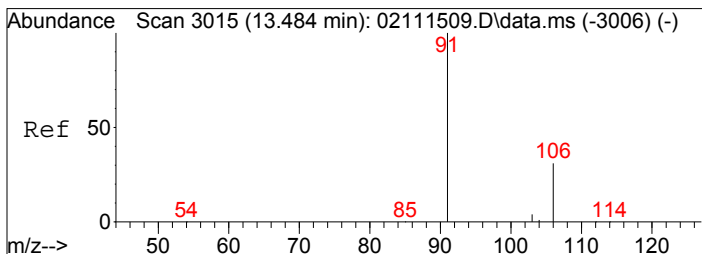
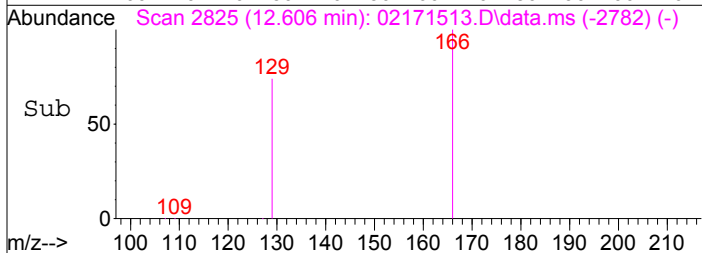
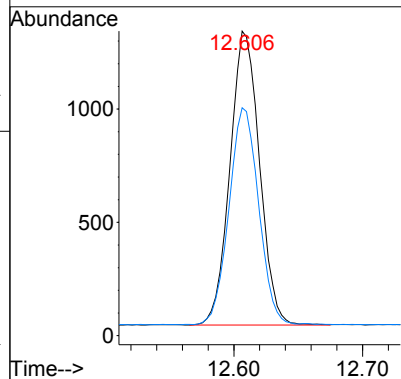
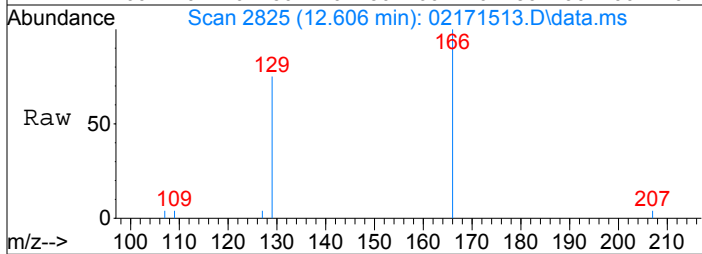
Tgt Ion: 91	Resp: 329902
Ion Ratio	Lower Upper
91	100
92	58.1 37.7 77.7





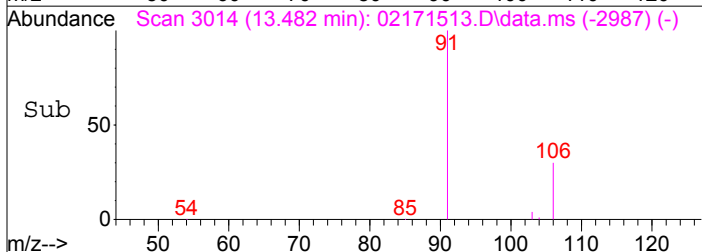
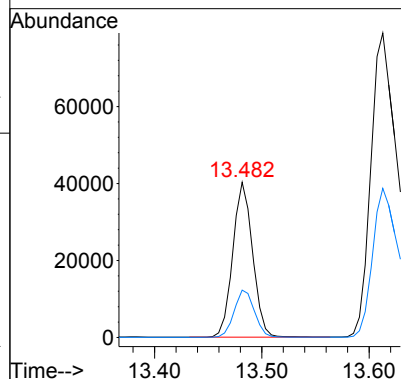
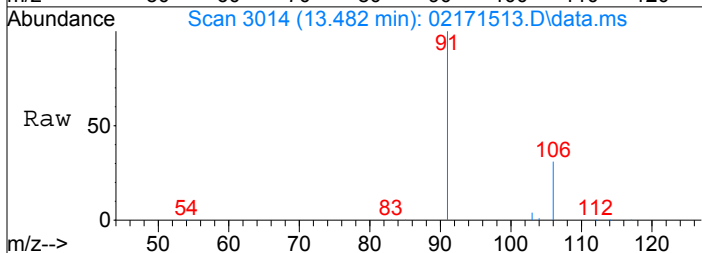
#33
Tetrachloroethene
Concen: 52.74 pg
RT: 12.61 min Scan# 2825
Delta R.T. -0.003 min
Lab File: 02171513.D
Acq: 17 Feb 2015 10:15

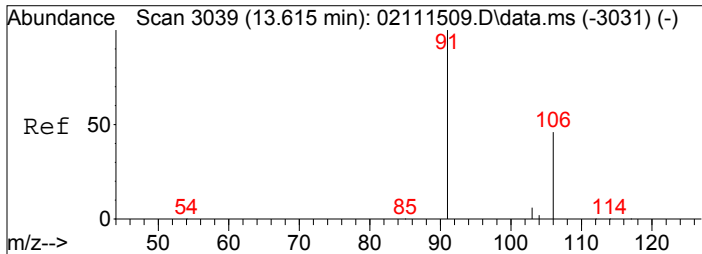
Tgt Ion	166	Resp	2068
Ion Ratio	100	Lower	Upper
129	74.1	53.3	93.3



#36
Ethylbenzene
Concen: 368.91 pg
RT: 13.48 min Scan# 3014
Delta R.T. -0.002 min
Lab File: 02171513.D
Acq: 17 Feb 2015 10:15

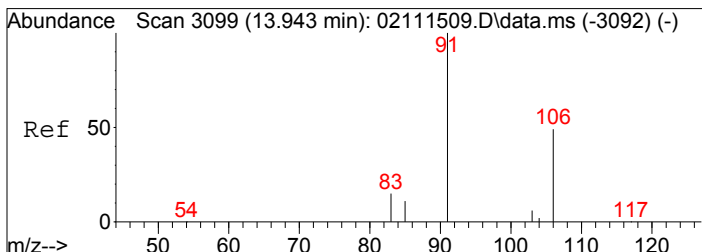
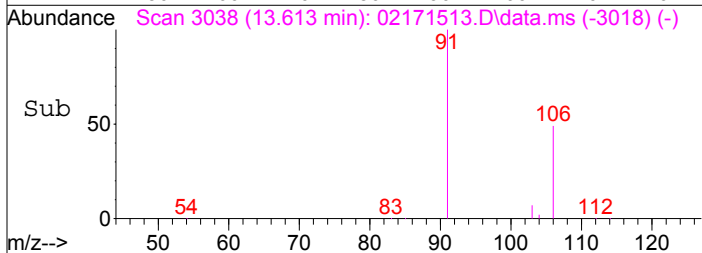
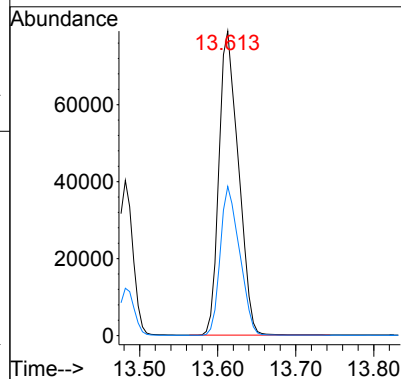
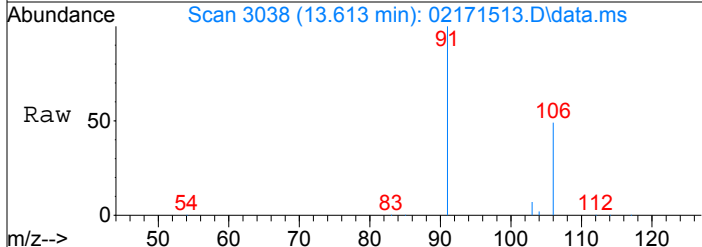
Tgt Ion	91	Resp	51748
Ion Ratio <td>100</td> <td>Lower</td> <td>Upper</td>	100	Lower	Upper
106	31.1	10.9	50.9





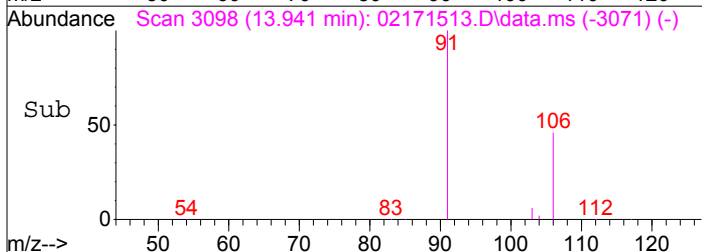
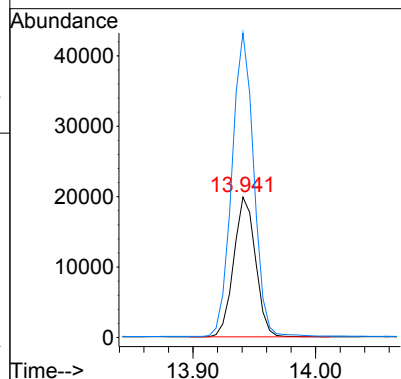
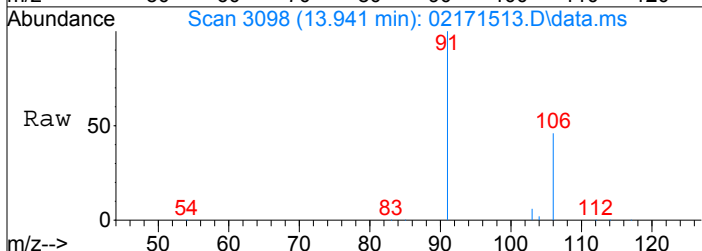
#37
 m,p-Xylene
 Concen: 1187.84 pg
 RT: 13.61 min Scan# 3038
 Delta R.T. -0.002 min
 Lab File: 02171513.D
 Acq: 17 Feb 2015 10:15

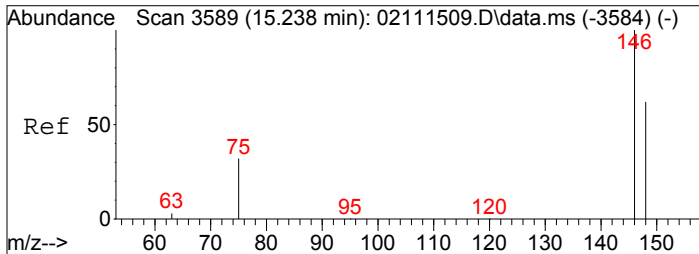
Tgt Ion: 91 Resp: 136944
 Ion Ratio Lower Upper
 91 100
 106 48.7 27.5 67.5



#38
 o-Xylene
 Concen: 435.90 pg
 RT: 13.94 min Scan# 3098
 Delta R.T. -0.002 min
 Lab File: 02171513.D
 Acq: 17 Feb 2015 10:15

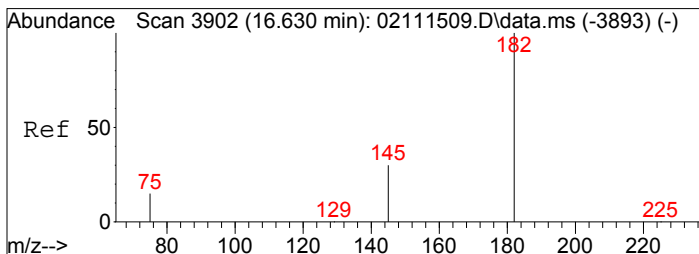
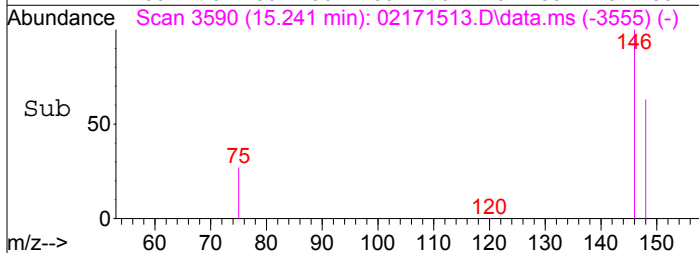
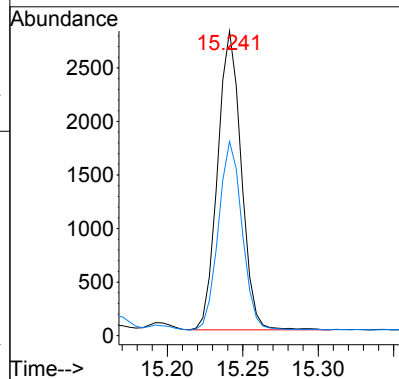
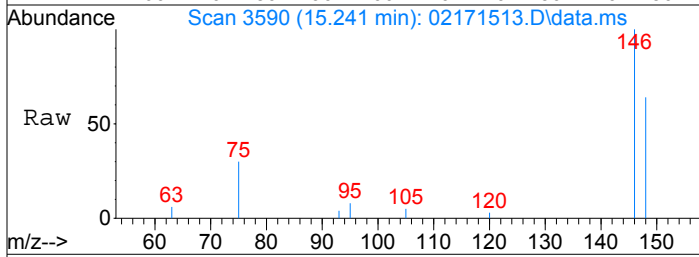
Tgt Ion: 106 Resp: 24560
 Ion Ratio Lower Upper
 106 100
 91 217.3 198.3 238.3





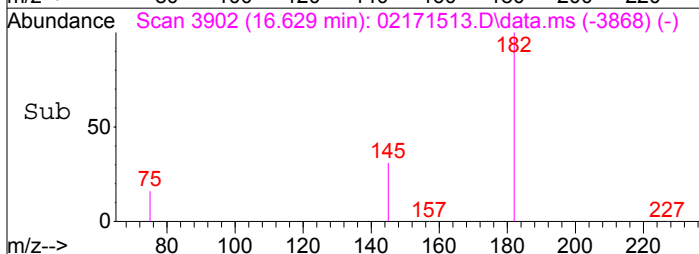
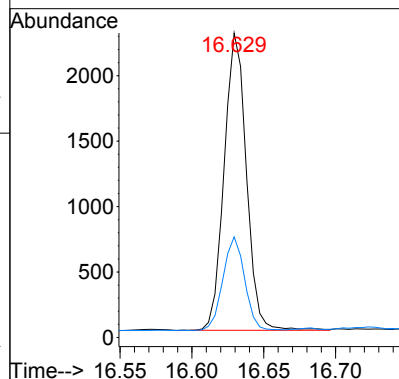
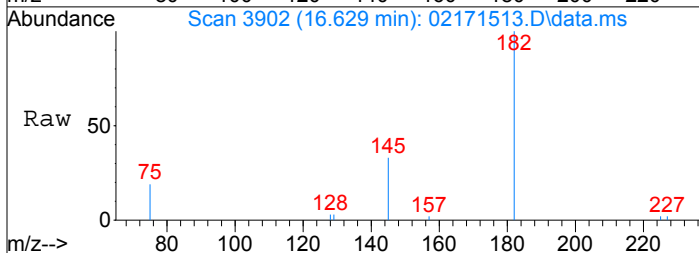
#42
1,4-Dichlorobenzene
Concen: 39.25 pg
RT: 15.24 min Scan# 3590
Delta R.T. 0.004 min
Lab File: 02171513.D
Acq: 17 Feb 2015 10:15

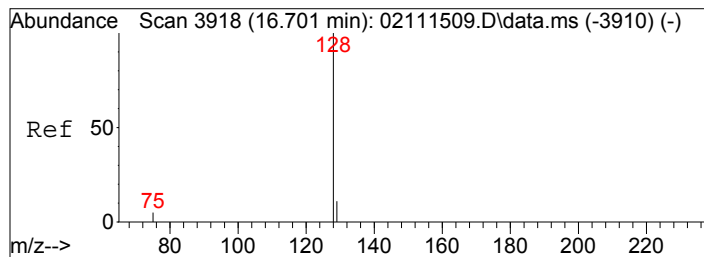
Tgt Ion:146 Resp: 3034
Ion Ratio Lower Upper
146 100
148 63.2 43.5 83.5



#44
1,2,4-Trichlorobenzene
Concen: 57.36 pg
RT: 16.63 min Scan# 3902
Delta R.T. -0.001 min
Lab File: 02171513.D
Acq: 17 Feb 2015 10:15

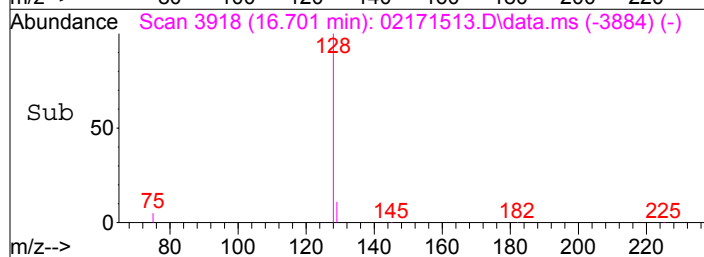
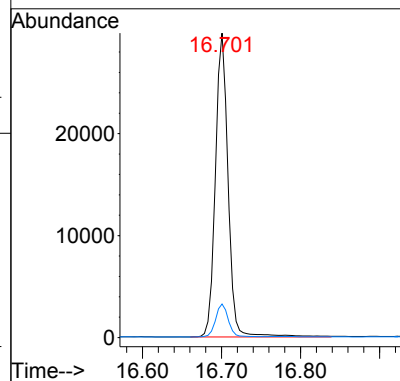
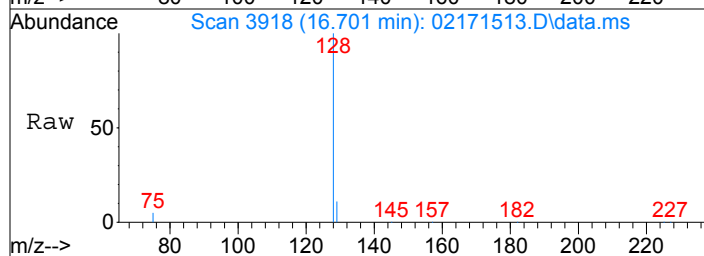
Tgt Ion:182 Resp: 2441
Ion Ratio Lower Upper
182 100
145 30.7 11.3 51.3





#45
Naphthalene
Concen: 237.59 pg
RT: 16.70 min Scan# 3918
Delta R.T. -0.000 min
Lab File: 02171513.D
Acq: 17 Feb 2015 10:15

Tgt Ion:128	Resp:	33254
Ion Ratio	Lower	Upper
128	100	
129	10.8	0.0 30.9



Data File: I:\MS19\DATA\2015 02\17\02171513.D

Acq On : 17 Feb 2015 10:15

Operator: WA

Sample : P1500566-022 (1000mL)

Misc : S29-02041502

ALS Vial : 6 Sample Multiplier: 1

Quant Time: Feb 17 12:00:30 2015

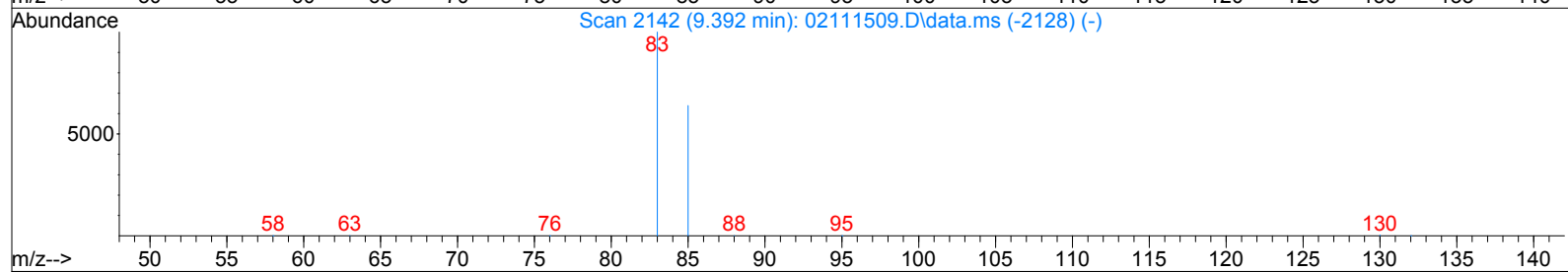
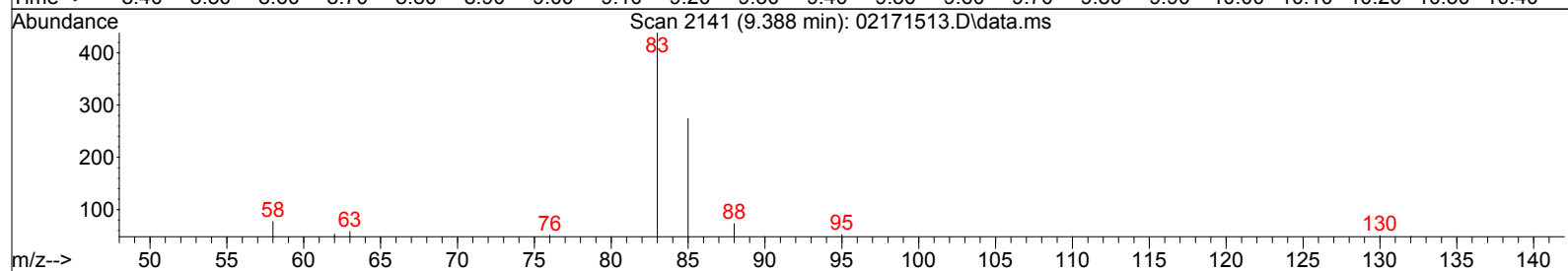
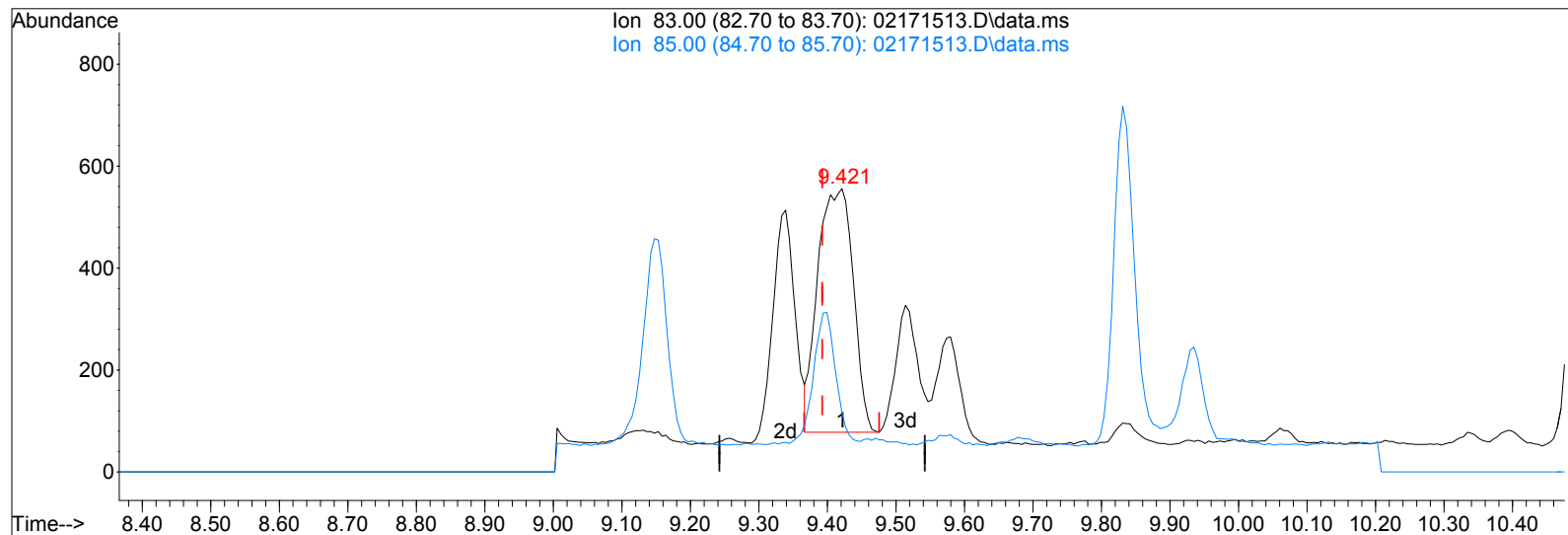
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



TIC: 02171513.D\data.ms

(24) Bromodichloromethane (T)

9.421min (+0.029) 42.12pg

response 1712

Ion	Exp%	Act%
83.00	100	100
85.00	64.20	34.75#
0.00	0.00	0.00
0.00	0.00	0.00

Data File: I:\MS19\DATA\2015 02\17\02171513.D

Acq On : 17 Feb 2015 10:15

Operator: WA

Sample : P1500566-022 (1000mL)

Misc : S29-02041502

ALS Vial : 6 Sample Multiplier: 1

Quant Time: Feb 17 12:00:30 2015

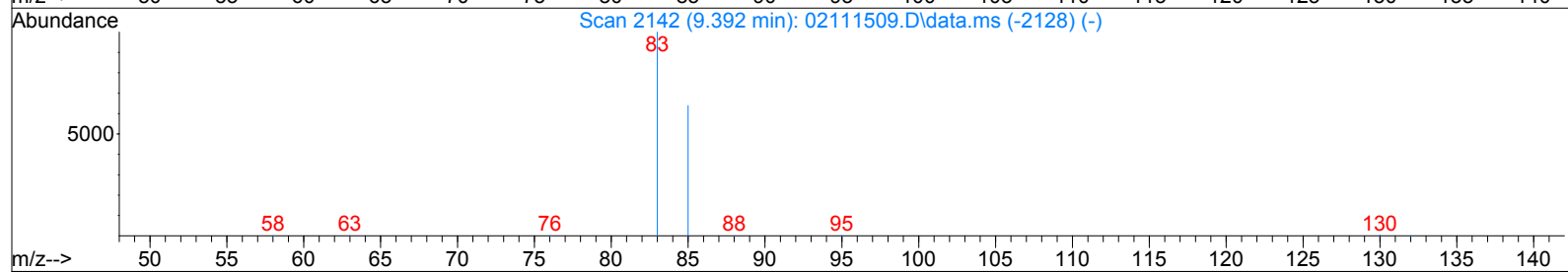
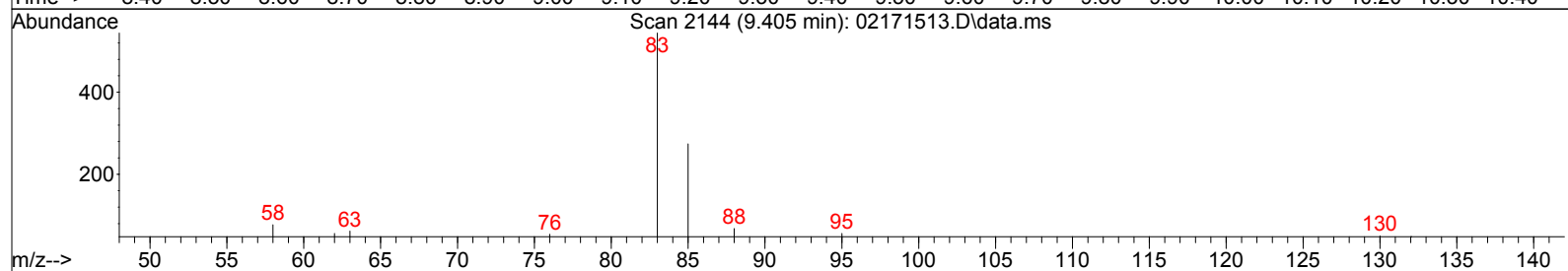
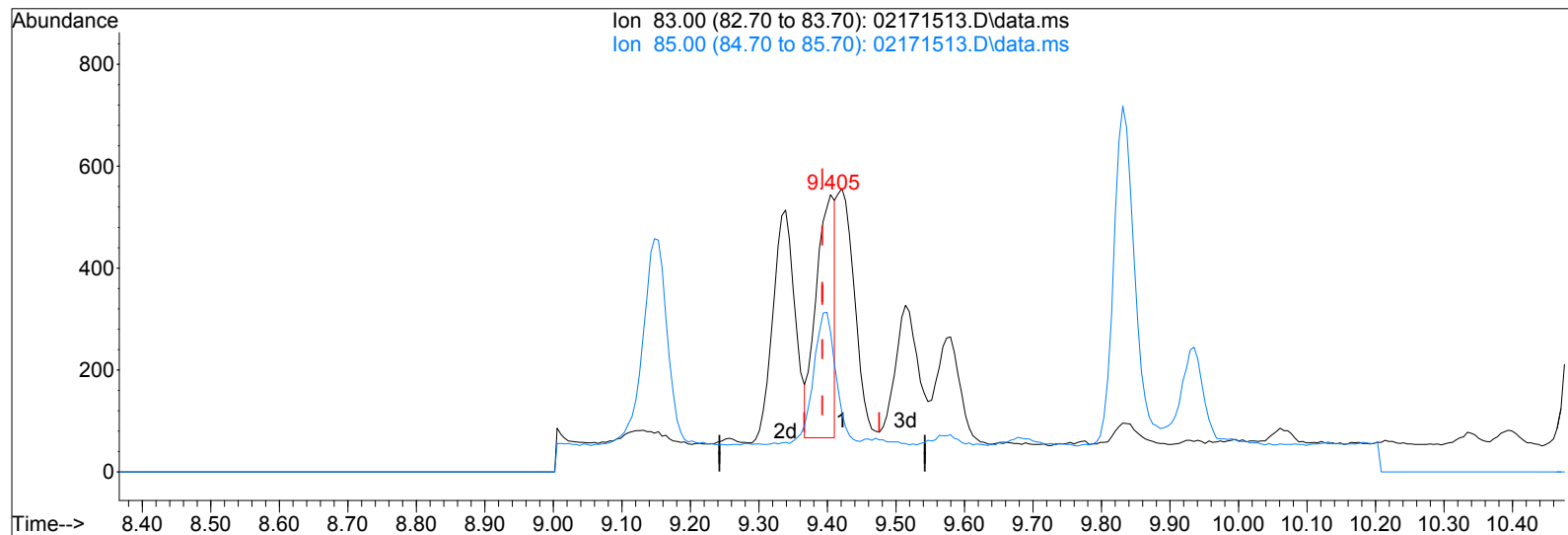
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



TIC: 02171513.D\data.ms

(24) Bromodichloromethane (T)

9.405min (+0.012) 22.44pg m

response 912

Ion	Exp%	Act%
83.00	100	100
85.00	64.20	65.24
0.00	0.00	0.00
0.00	0.00	0.00

IPC

2/17/15

Data File: I:\MS19\DATA\2015 02\17\02171512.D

Acq On : 17 Feb 2015 9:45

Operator: WA

Sample : P1500566-023 (1000mL)

Misc : S29-02041502

ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 17 16:38:46 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

2/18/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	18766	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	147198	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	23545	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	42824	934.443	pg	0.00
Spiked Amount 1000.000			Recovery	=	93.44%	
30) Toluene-d8 (SS2)	11.38	98	129093	951.006	pg	0.00
Spiked Amount 1000.000			Recovery	=	95.10%	
40) Bromofluorobenzene (SS3)	14.25	174	50883	1070.452	pg	0.00
Spiked Amount 1000.000			Recovery	=	107.05%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.72	85	175923	2306.724	pg	100
3) Chloromethane	1.84	52	8637	567.090	pg	90
4) Vinyl Chloride	0.00	62	0	N.D.	d	
5) Bromomethane	2.32	94	2459	71.704	pg	84
6) Chloroethane	0.00	64	0	N.D.	d	
7) Acetone	2.99	58	253459	9411.391	pg	# 20
8) Trichlorofluoromethane	3.10	101	183530	2801.610	pg	99
9) 1,1-Dichloroethene	3.68	96	169	N.D.		
10) Methylene Chloride	3.80	84	13098	421.371	pg	94
11) Trichlorotrifluoroethane	4.09	151	13404	445.295	pg	99
12) trans-1,2-Dichloroethene	4.74	96	411	N.D.		
13) 1,1-Dichloroethane	4.95	63	356	N.D.		
14) Methyl tert-Butyl Ether	5.11	73	815	N.D.		
15) cis-1,2-Dichloroethene	5.93	96	1622	48.843	pg	96
16) Chloroform	6.32	83	6624	115.128	pg	99
18) 1,2-Dichloroethane	7.27	62	8283	180.806	pg	99
19) 1,1,1-Trichloroethane	7.59	97	3522	62.948	pg	97
20) Benzene	8.15	78	59184	500.125	pg	99
21) Carbon Tetrachloride	8.34	117	23266	555.439	pg	99
23) 1,2-Dichloropropane	9.16	63	2470	76.938	pg	97
24) Bromodichloromethane	0.00	83	0	N.D.	d	
25) Trichloroethene	9.46	130	1495	39.533	pg	99
26) 1,4-Dioxane	9.53	88	569	20.189	pg	# 1
27) cis-1,3-Dichloropropene	10.46	75	38	N.D.		
28) trans-1,3-Dichloropropene	11.05	75	35	N.D.		
29) 1,1,2-Trichloroethane	11.20	83	127	N.D.		
31) Toluene	11.48	91	592792	4106.022	pg	99
32) 1,2-Dibromoethane	12.12	107	13	N.D.		
33) Tetrachloroethene	12.61	166	2601	58.185	pg	98
35) Chlorobenzene	13.17	112	1731	N.D.		
36) Ethylbenzene	13.48	91	62152	420.950	pg	100
37) m,p-Xylene	13.61	91	162860	1342.078	pg	97
38) o-Xylene	13.94	106	30017	506.139	pg	98
39) 1,1,2,2-Tetrachloroethane	13.93	83	91	N.D.		
41) 1,3-Dichlorobenzene	15.19	146	180	N.D.		
42) 1,4-Dichlorobenzene	15.24	146	2262	27.801	pg	98
43) 1,2-Dichlorobenzene	15.46	146	373	N.D.		
44) 1,2,4-Trichlorobenzene	16.63	182	3362	75.060	pg	100
45) Naphthalene	16.70	128	11364	77.137	pg	97
46) Hexachlorobutadiene	16.96	225	32	N.D.		

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\17\02171512.D

Acq On : 17 Feb 2015 9:45

Operator: WA

Sample : P1500566-023 (1000mL)

Misc : S29-02041502

ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 17 16:38:46 2015

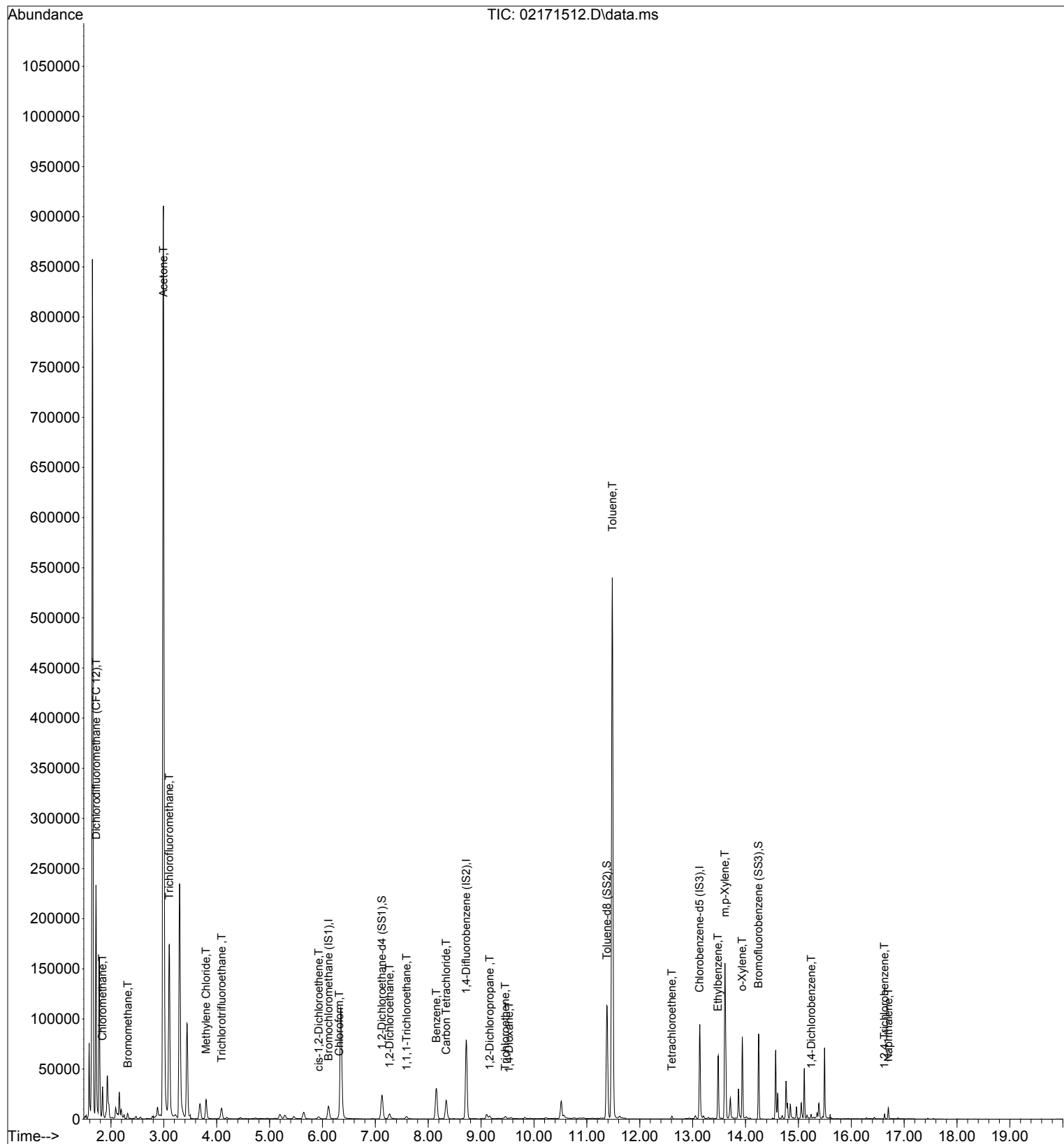
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 02\17\02171512.D

Acq On : 17 Feb 2015 9:45
 Sample : P1500566-023 (1000mL)
 Misc : S29-02041502
 ALS Vial : 5 Sample Multiplier: 1

Operator: WA

Quant Time: Feb 17 16:38:46 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

2/17/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	18766	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	147198	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	23545	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	42824	934.443	pg	0.00
Spiked Amount 1000.000			Recovery	=	93.44%	
30) Toluene-d8 (SS2)	11.38	98	129093	951.006	pg	0.00
Spiked Amount 1000.000			Recovery	=	95.10%	
40) Bromofluorobenzene (SS3)	14.25	174	50883	1070.452	pg	0.00
Spiked Amount 1000.000			Recovery	=	107.05%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.72	85	175923	2306.724	pg	100
3) Chloromethane	1.84	52	8637	567.090	pg	90
5) Bromomethane	2.32	94	2459	71.704	pg	84
7) Acetone	2.99	58	253459	9411.391	pg	# 20
8) Trichlorofluoromethane	3.10	101	183530	2801.610	pg	99
10) Methylene Chloride	3.80	84	13098	421.371	pg	94
11) Trichlorotrifluoroethane	4.09	151	13404	445.295	pg	99
15) cis-1,2-Dichloroethene	5.93	96	1622	48.843	pg	96
16) Chloroform	6.32	83	6624	115.128	pg	99
18) 1,2-Dichloroethane	7.27	62	8283	180.806	pg	99
19) 1,1,1-Trichloroethane	7.59	97	3522	62.948	pg	97
20) Benzene	8.15	78	59184	500.125	pg	99
21) Carbon Tetrachloride	8.34	117	23266	555.439	pg	99
23) 1,2-Dichloropropane	9.16	63	2470	76.938	pg	97
25) Trichloroethene	9.46	130	1495	39.533	pg	99
26) 1,4-Dioxane	9.53	88	569	20.189	pg	# 1
31) Toluene	11.48	91	592792	4106.022	pg	99
33) Tetrachloroethene	12.61	166	2601	58.185	pg	98
36) Ethylbenzene	13.48	91	62152	420.950	pg	100
37) m,p-Xylene	13.61	91	162860	1342.078	pg	97
38) o-Xylene	13.94	106	30017	506.139	pg	98
42) 1,4-Dichlorobenzene	15.24	146	2262	27.801	pg	98
44) 1,2,4-Trichlorobenzene	16.63	182	3362	75.060	pg	100
45) Naphthalene	16.70	128	11364	77.137	pg	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File: I:\MS19\DATA\2015 02\17\02171512.D

Acq On : 17 Feb 2015 9:45

Operator: WA

Sample : P1500566-023 (1000mL)

Misc : S29-02041502

ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 17 16:38:46 2015

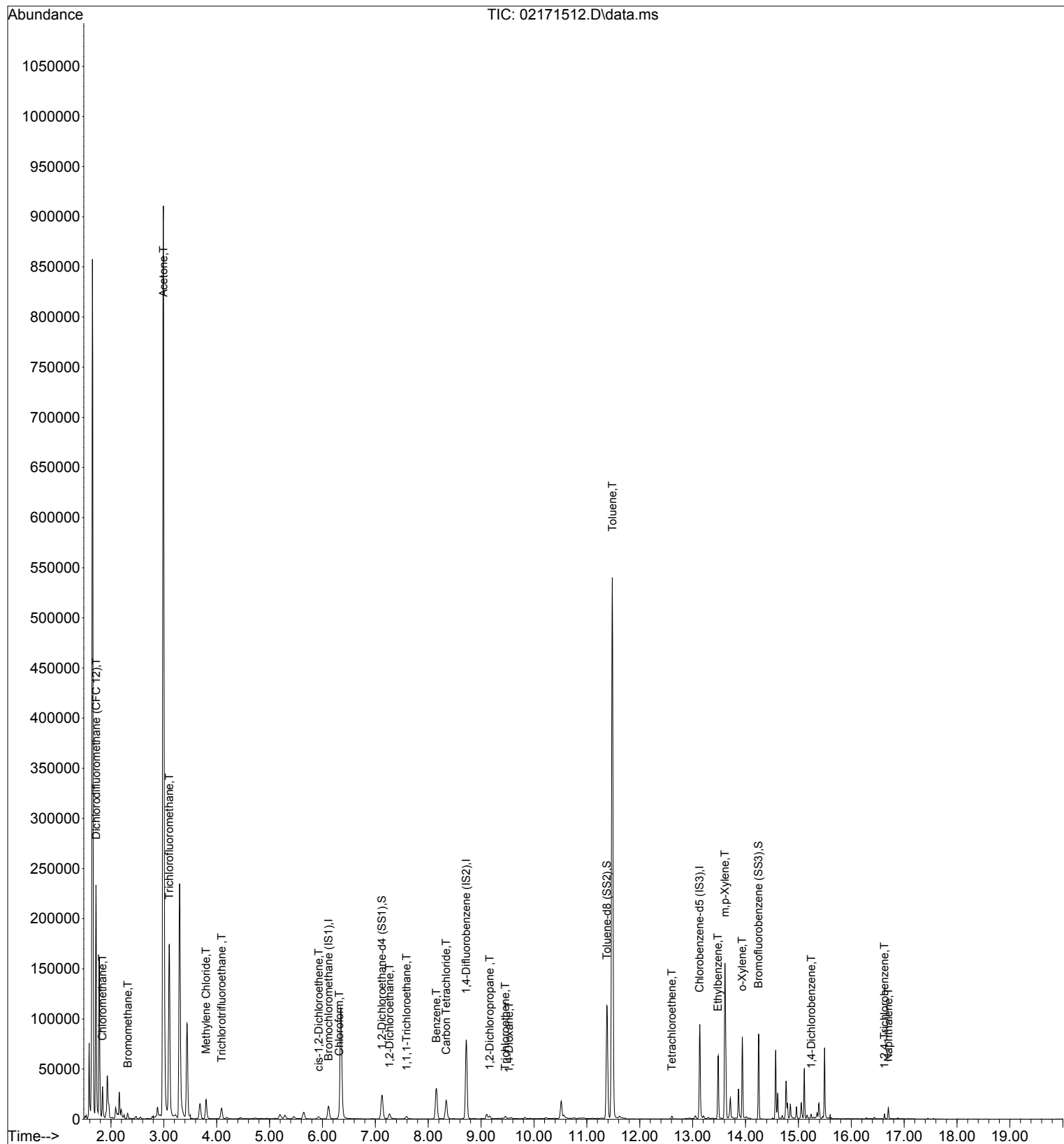
Quant Method : I:\MS19\METHODS\X19021115.M

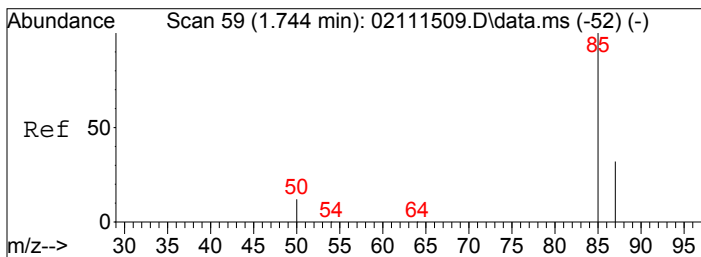
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

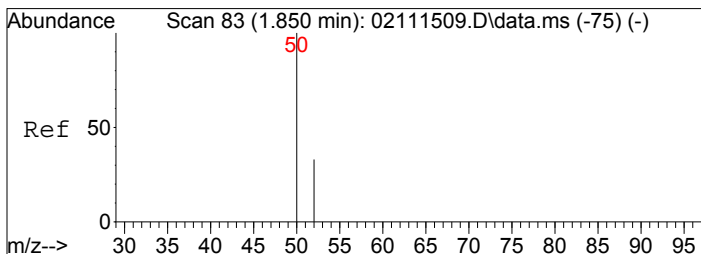
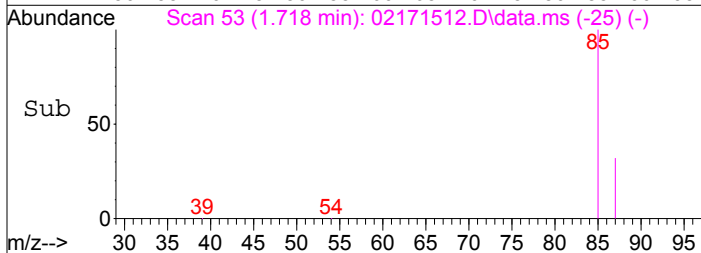
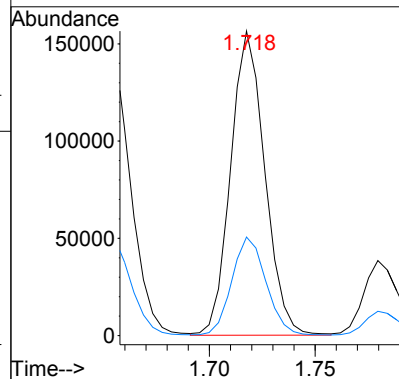
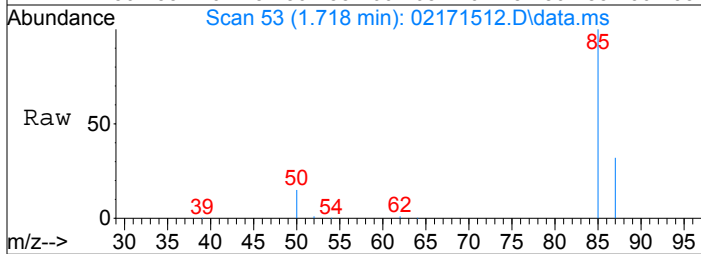
DataAcq Meth:TO15SIM.M





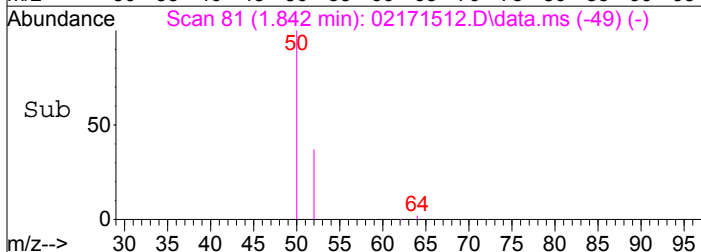
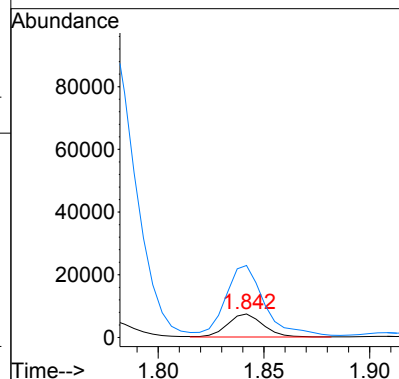
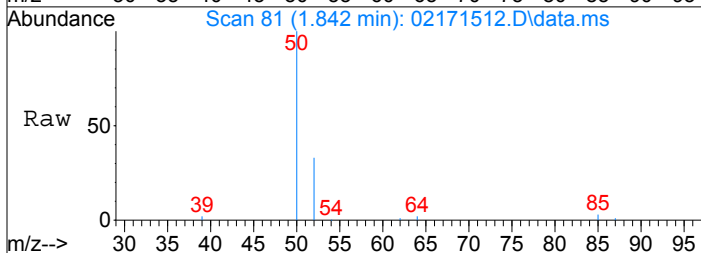
#2
 Dichlorodifluoromethane (CFC 12)
 Concen: 2306.72 pg
 RT: 1.72 min Scan# 53
 Delta R.T. -0.026 min
 Lab File: 02171512.D
 Acq: 17 Feb 2015 9:45

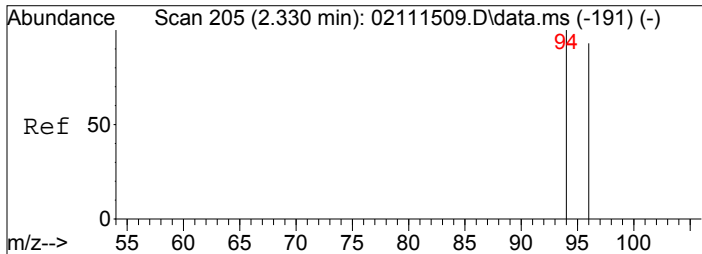
Tgt Ion: 85 Resp: 175923
 Ion Ratio Lower Upper
 85 100
 87 32.5 12.4 52.4



#3
 Chloromethane
 Concen: 567.09 pg
 RT: 1.84 min Scan# 81
 Delta R.T. -0.008 min
 Lab File: 02171512.D
 Acq: 17 Feb 2015 9:45

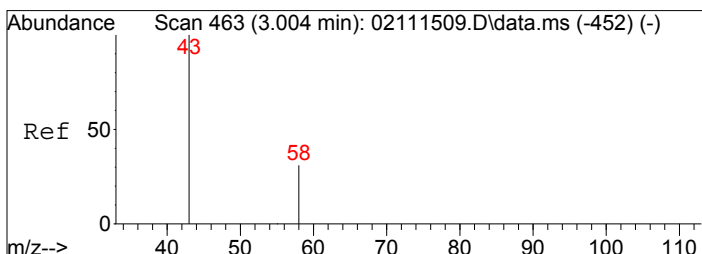
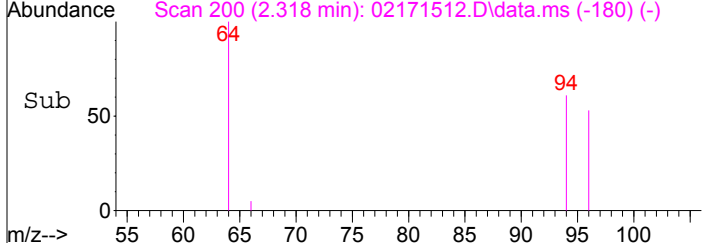
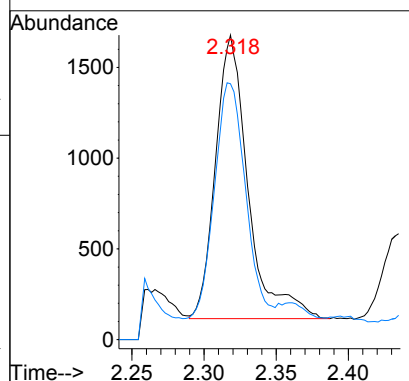
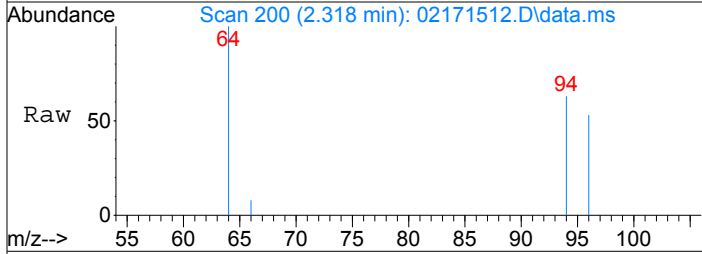
Tgt Ion: 52 Resp: 8637
 Ion Ratio Lower Upper
 52 100
 50 322.7 283.7 323.7





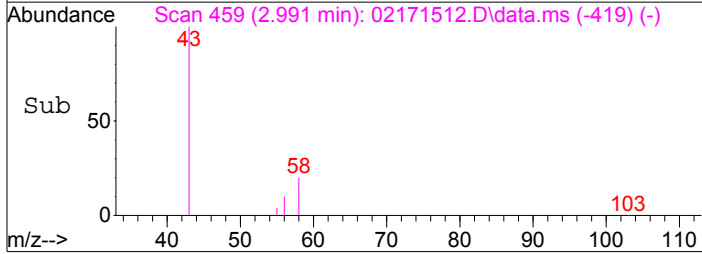
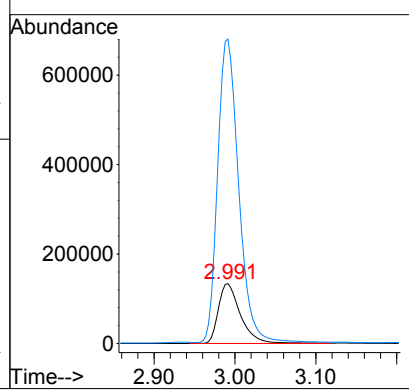
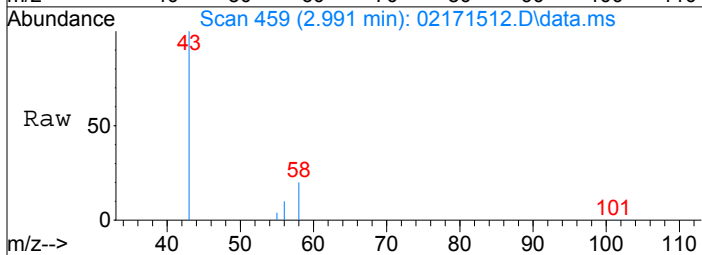
#5
 Bromomethane
 Concen: 71.70 pg
 RT: 2.32 min Scan# 200
 Delta R.T. -0.012 min
 Lab File: 02171512.D
 Acq: 17 Feb 2015 9:45

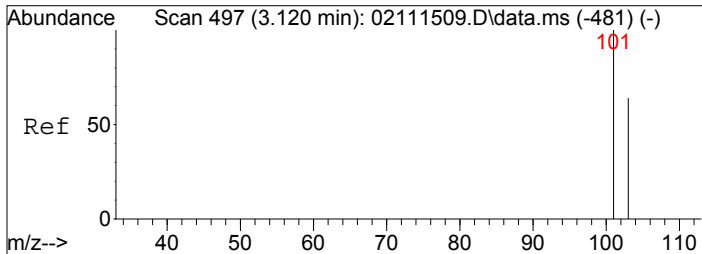
Tgt Ion:	94	Resp:	2459
Ion Ratio	Lower	Upper	
94	100		
96	79.0	75.5	113.3



#7
 Acetone
 Concen: 9411.39 pg
 RT: 2.99 min Scan# 459
 Delta R.T. -0.013 min
 Lab File: 02171512.D
 Acq: 17 Feb 2015 9:45

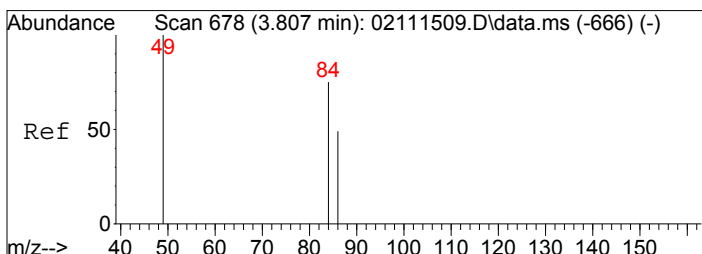
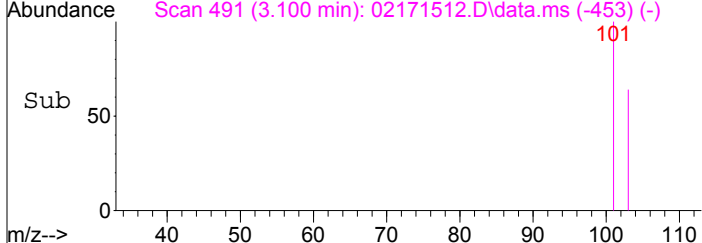
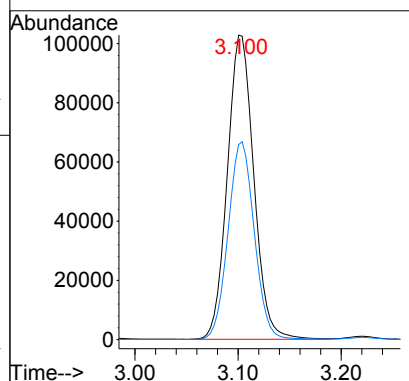
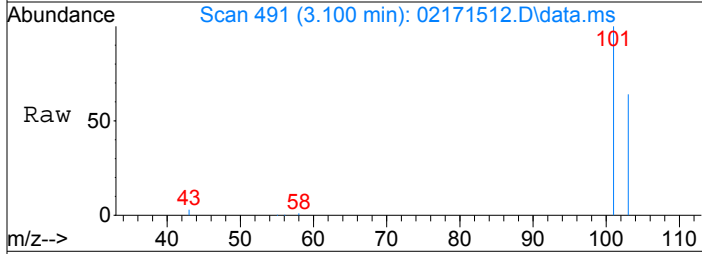
Tgt Ion:	58	Resp:	253459
Ion Ratio	Lower	Upper	
58	100		
43	485.2	301.8	341.8#





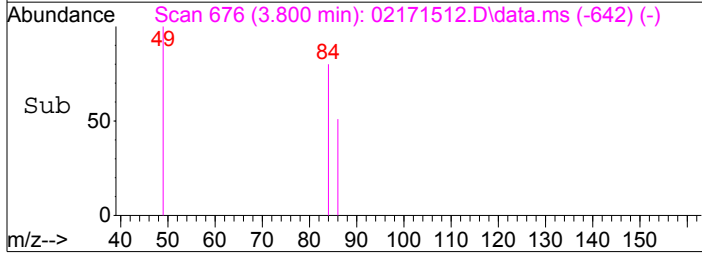
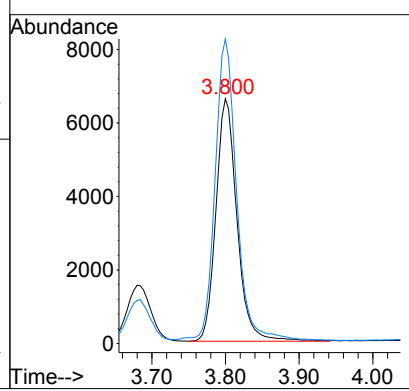
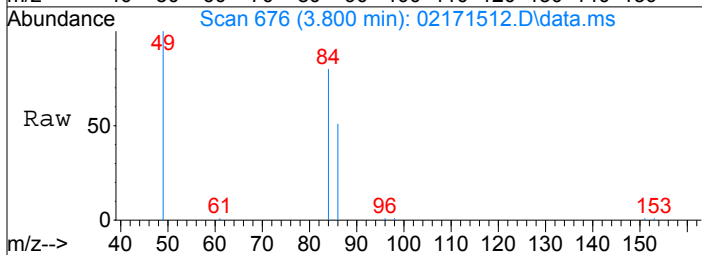
#8
 Trichlorofluoromethane
 Concen: 2801.61 pg
 RT: 3.10 min Scan# 491
 Delta R.T. -0.019 min
 Lab File: 02171512.D
 Acq: 17 Feb 2015 9:45

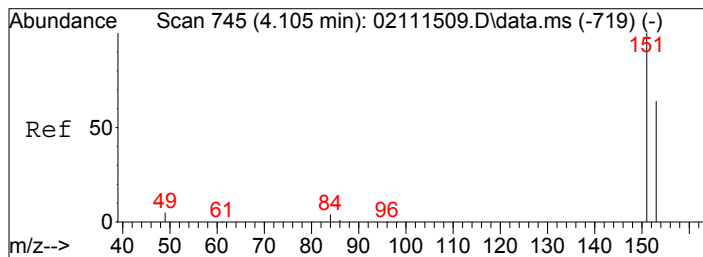
Tgt Ion:	101	Resp:	183530
Ion Ratio	Lower	Upper	
101	100		
103	64.2	51.8	77.6



#10
 Methylene Chloride
 Concen: 421.37 pg
 RT: 3.80 min Scan# 676
 Delta R.T. -0.007 min
 Lab File: 02171512.D
 Acq: 17 Feb 2015 9:45

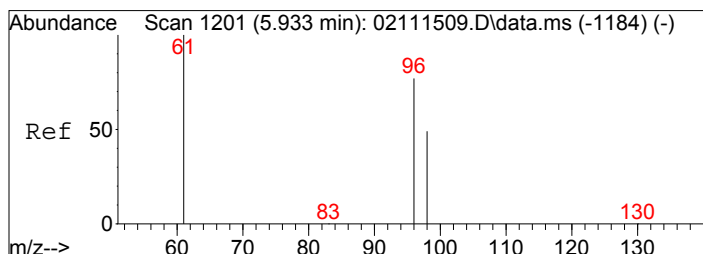
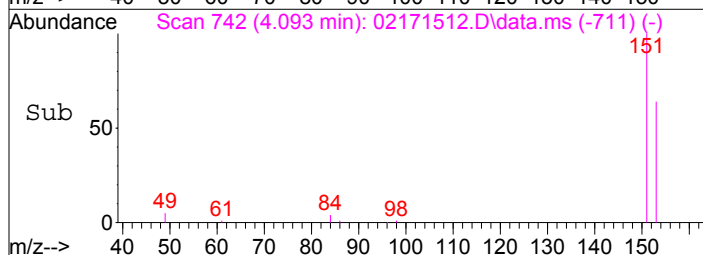
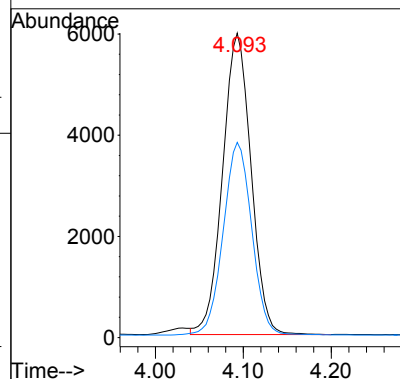
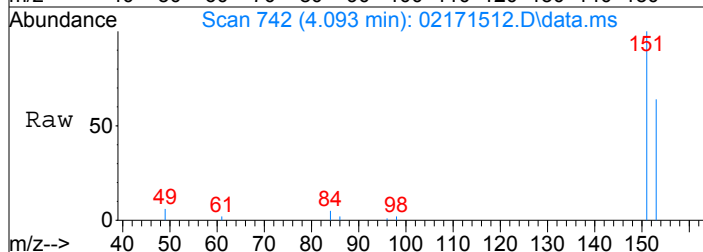
Tgt Ion:	84	Resp:	13098
Ion Ratio	Lower	Upper	
84	100		
49	125.8	112.3	152.3





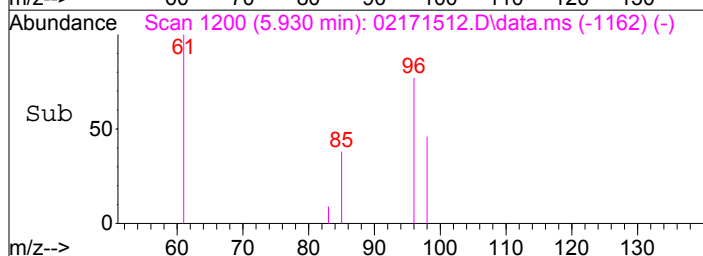
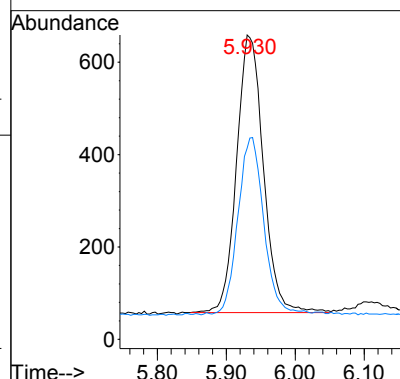
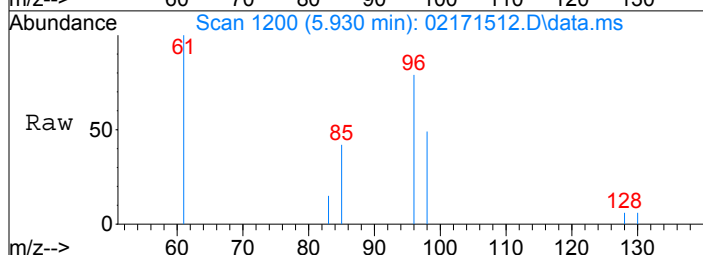
#11
Trichlorotrifluoroethane
Concen: 445.30 pg
RT: 4.09 min Scan# 742
Delta R.T. -0.012 min
Lab File: 02171512.D
Acq: 17 Feb 2015 9:45

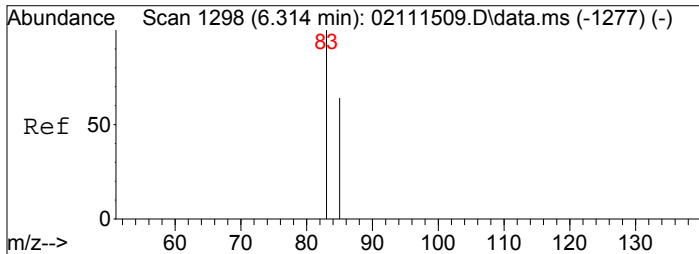
Tgt Ion: 151 Resp: 13404
Ion Ratio Lower Upper
151 100
153 64.4 43.6 83.6



#15
cis-1,2-Dichloroethene
Concen: 48.84 pg
RT: 5.93 min Scan# 1200
Delta R.T. -0.003 min
Lab File: 02171512.D
Acq: 17 Feb 2015 9:45

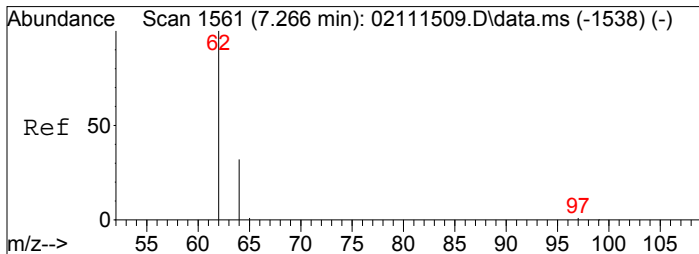
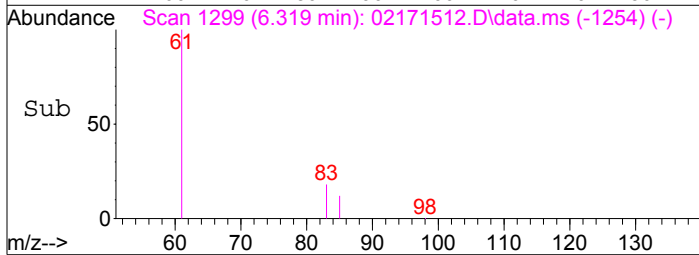
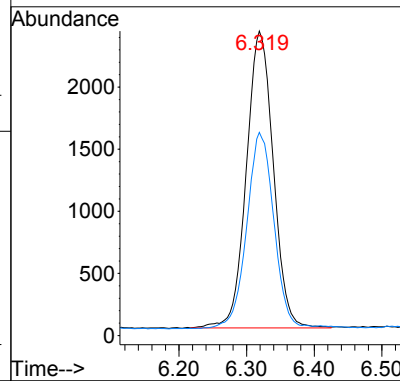
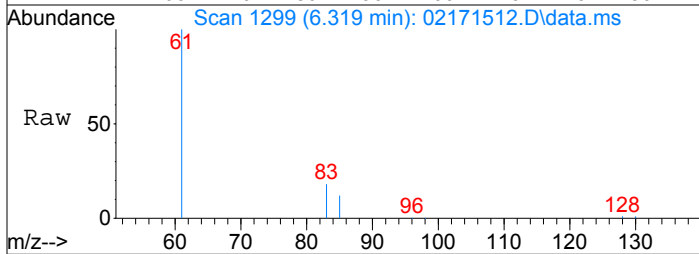
Tgt Ion: 96 Resp: 1622
Ion Ratio Lower Upper
96 100
98 60.9 44.3 84.3





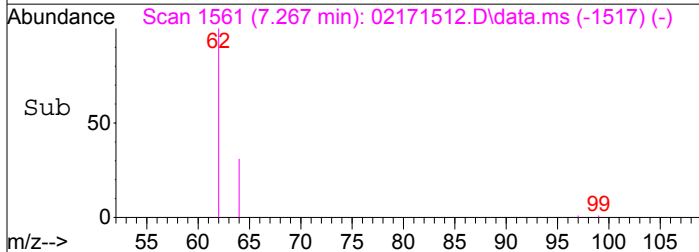
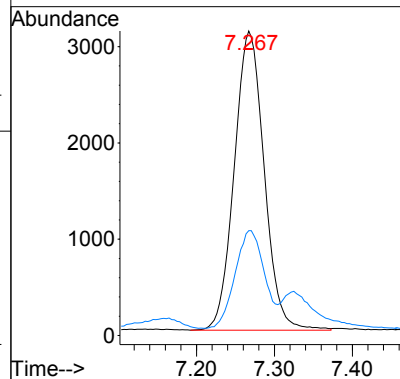
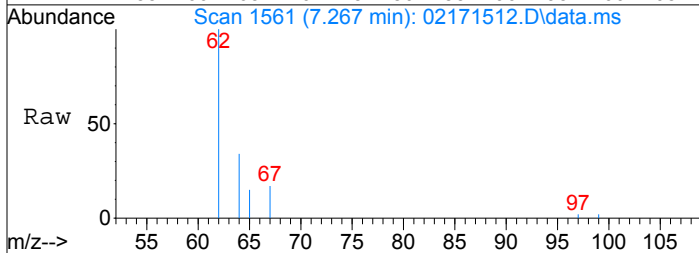
#16
Chloroform
Concen: 115.13 pg
RT: 6.32 min Scan# 1299
Delta R.T. 0.005 min
Lab File: 02171512.D
Acq: 17 Feb 2015 9:45

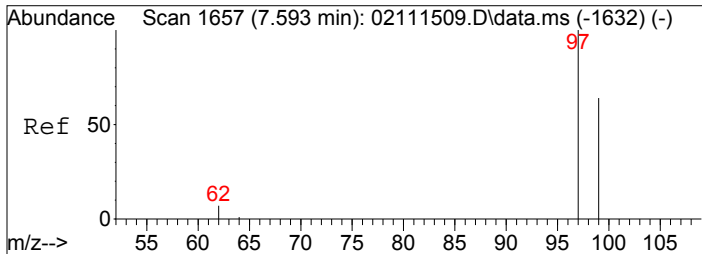
Tgt Ion: 83 Resp: 6624
Ion Ratio Lower Upper
83 100
85 66.4 45.4 85.4



#18
1,2-Dichloroethane
Concen: 180.81 pg
RT: 7.27 min Scan# 1561
Delta R.T. 0.001 min
Lab File: 02171512.D
Acq: 17 Feb 2015 9:45

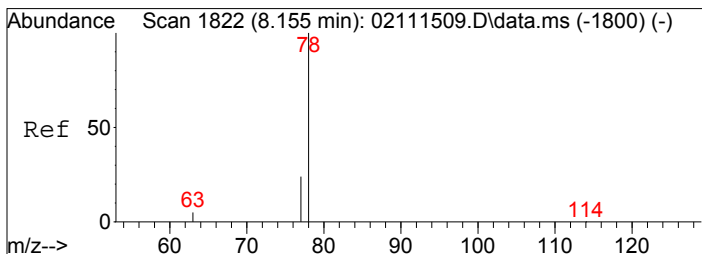
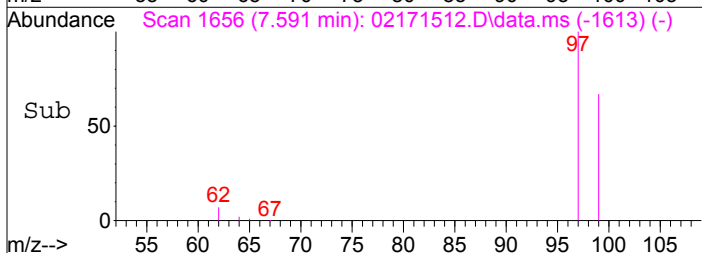
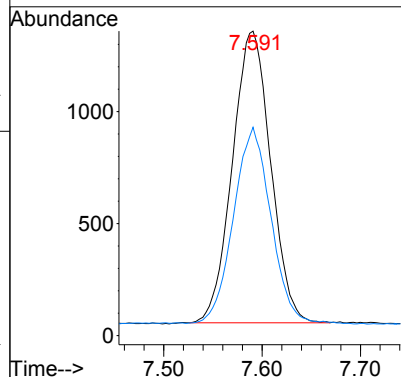
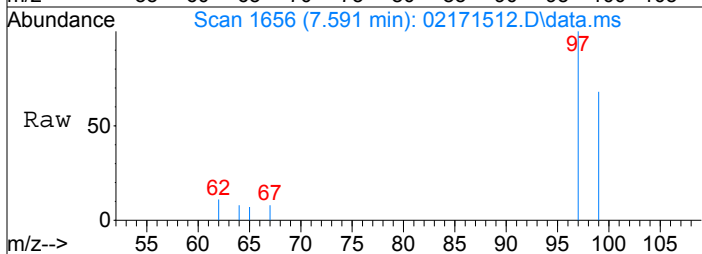
Tgt Ion: 62 Resp: 8283
Ion Ratio Lower Upper
62 100
64 32.2 11.6 51.6





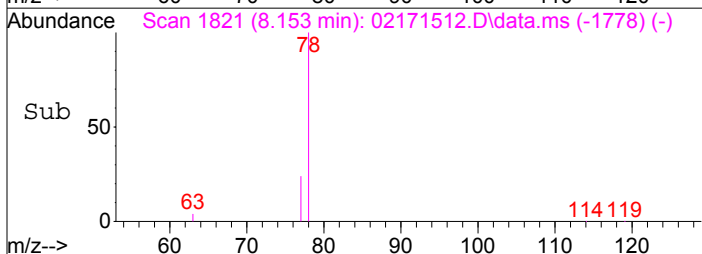
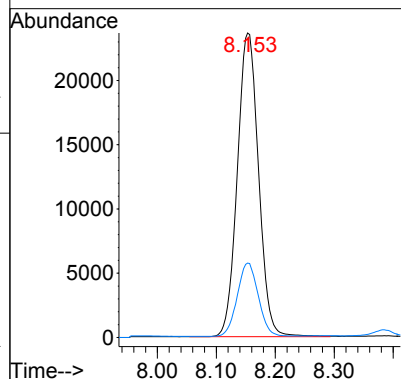
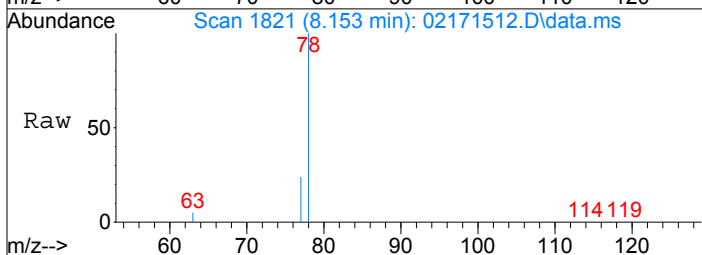
#19
 1,1,1-Trichloroethane
 Concen: 62.95 pg
 RT: 7.59 min Scan# 1656
 Delta R.T. -0.002 min
 Lab File: 02171512.D
 Acq: 17 Feb 2015 9:45

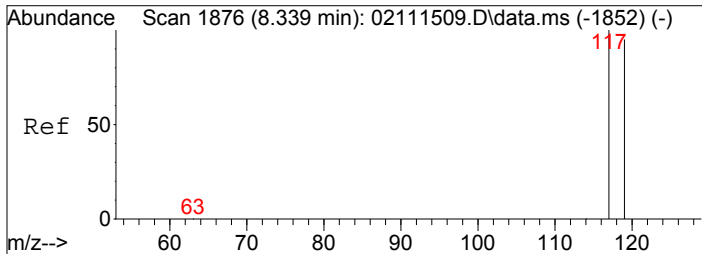
Tgt Ion	97	Resp	3522
Ion Ratio	100	Lower	Upper
99	66.1	44.0	84.0



#20
 Benzene
 Concen: 500.12 pg
 RT: 8.15 min Scan# 1821
 Delta R.T. -0.002 min
 Lab File: 02171512.D
 Acq: 17 Feb 2015 9:45

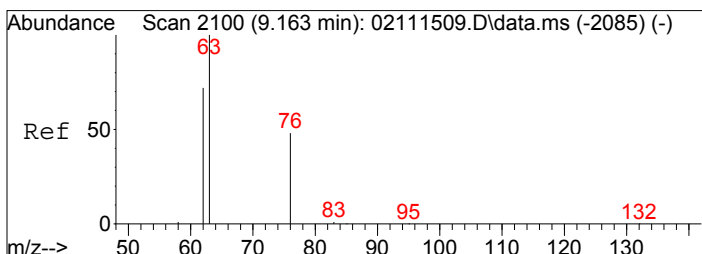
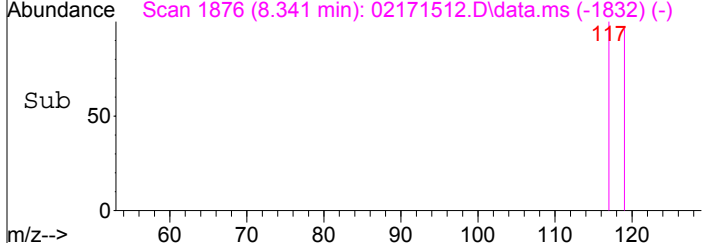
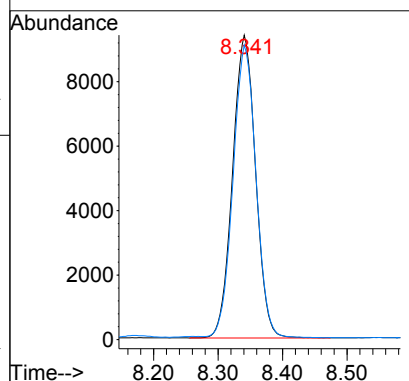
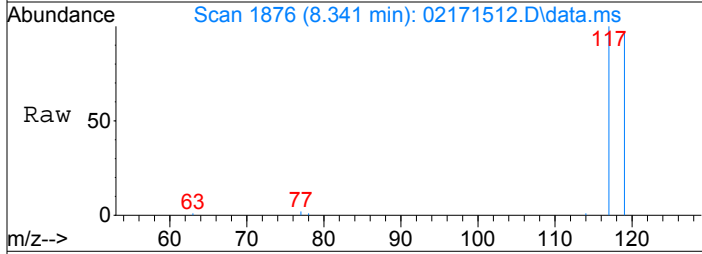
Tgt Ion	78	Resp	59184
Ion Ratio <td>100</td> <td>Lower</td> <td>Upper</td>	100	Lower	Upper
77	24.0	3.7	43.7





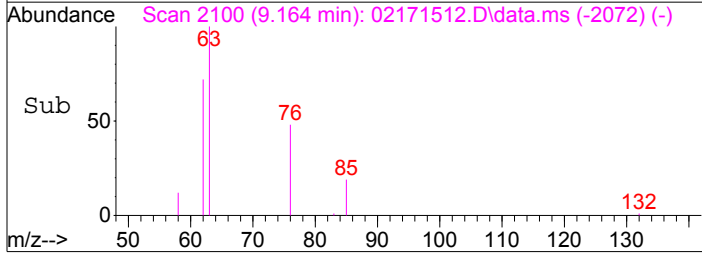
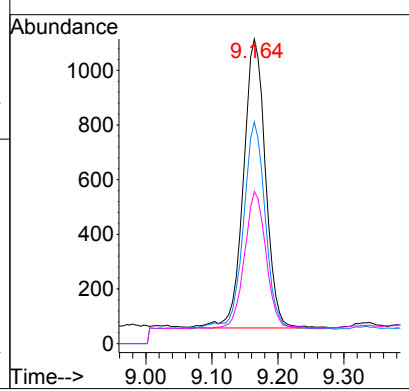
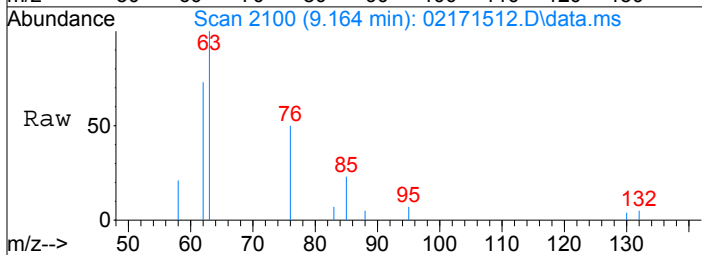
#21
Carbon Tetrachloride
Concen: 555.44 pg
RT: 8.34 min Scan# 1876
Delta R.T. 0.001 min
Lab File: 02171512.D
Acq: 17 Feb 2015 9:45

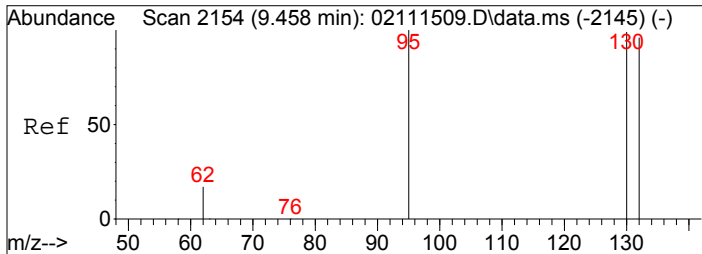
Tgt Ion: 117	Resp: 23266
Ion Ratio	Lower Upper
117	100
119	96.3 75.5 115.5



#23
1,2-Dichloropropane
Concen: 76.94 pg
RT: 9.16 min Scan# 2100
Delta R.T. 0.001 min
Lab File: 02171512.D
Acq: 17 Feb 2015 9:45

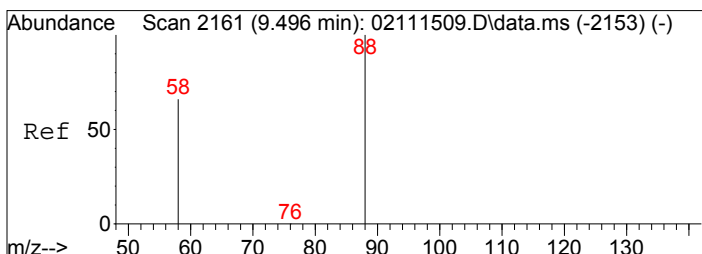
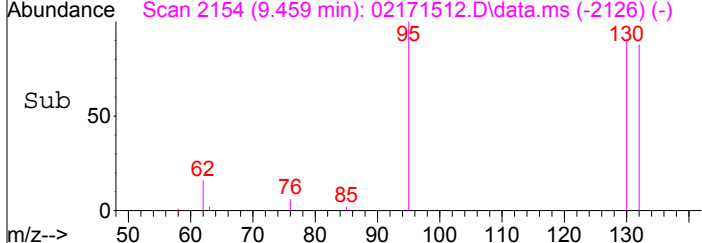
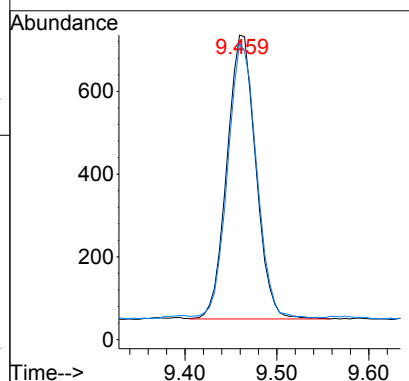
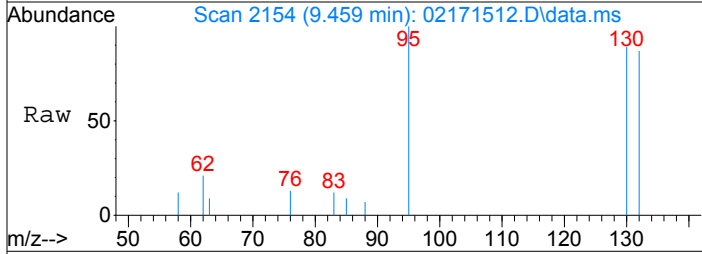
Tgt Ion: 63	Resp: 2470
Ion Ratio	Lower Upper
63	100
62	69.4 52.0 92.0
76	46.0 28.1 68.1





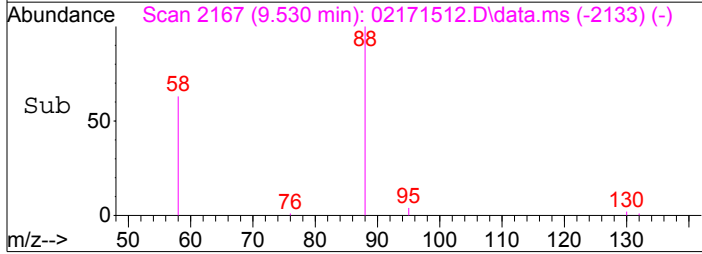
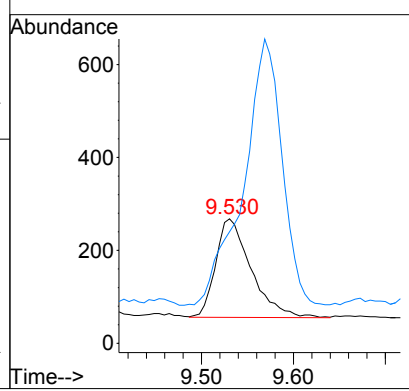
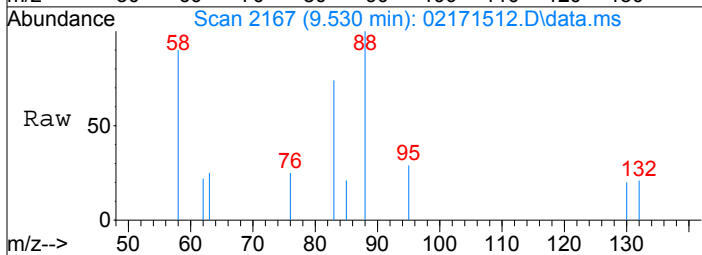
#25
 Trichloroethene
 Concen: 39.53 pg
 RT: 9.46 min Scan# 2154
 Delta R.T. 0.001 min
 Lab File: 02171512.D
 Acq: 17 Feb 2015 9:45

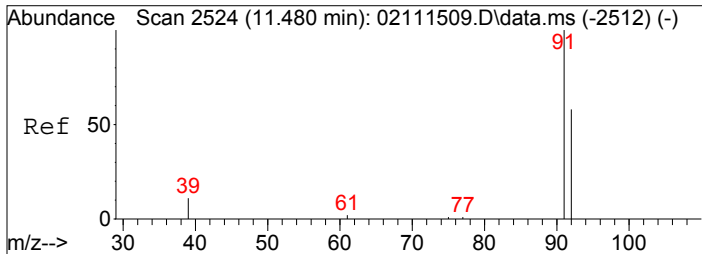
Tgt Ion: 130	Resp:	1495
Ion Ratio	Lower	Upper
130	100	
132	95.9	77.1 117.1



#26
 1,4-Dioxane
 Concen: 20.19 pg
 RT: 9.53 min Scan# 2167
 Delta R.T. 0.034 min
 Lab File: 02171512.D
 Acq: 17 Feb 2015 9:45

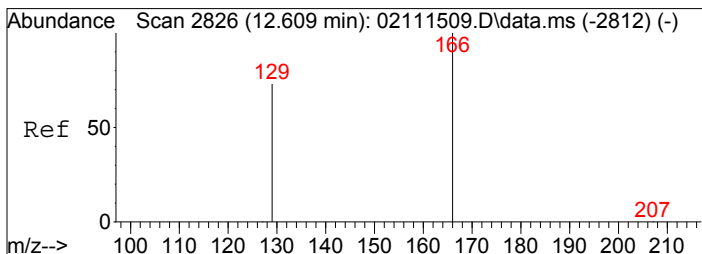
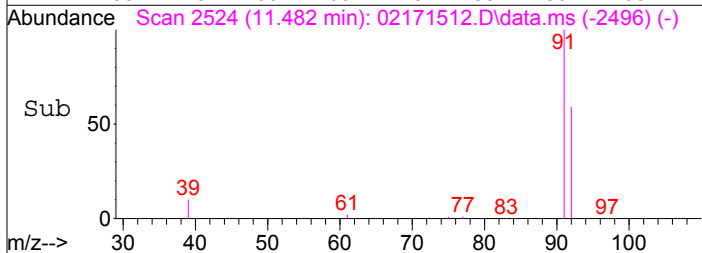
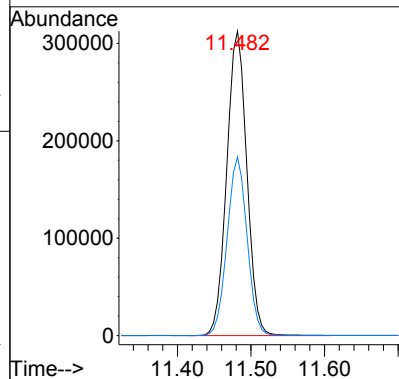
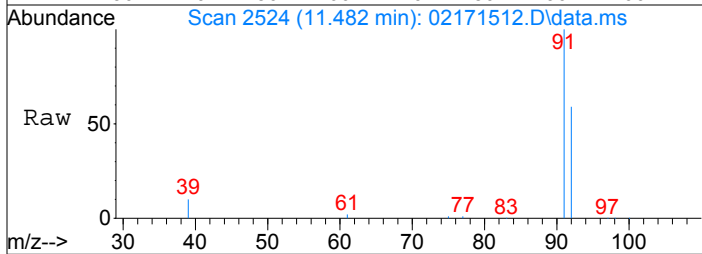
Tgt Ion: 88	Resp:	569
Ion Ratio	Lower	Upper
88	100	
58	294.4	38.3 78.3#





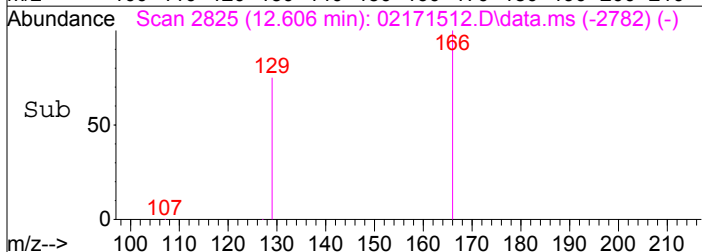
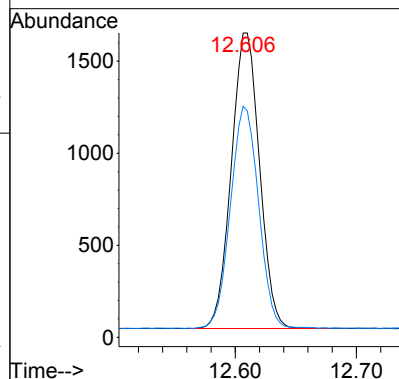
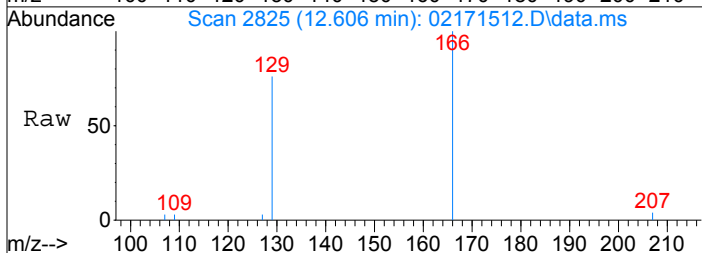
#31
Toluene
Concen: 4106.02 pg
RT: 11.48 min Scan# 2524
Delta R.T. 0.001 min
Lab File: 02171512.D
Acq: 17 Feb 2015 9:45

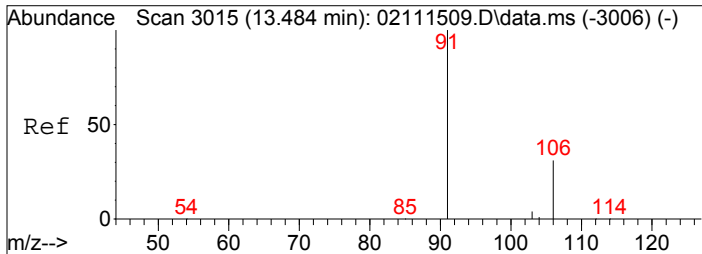
Tgt Ion	91	Resp	592792
Ion Ratio	100	Lower	Upper
91	100		
92	58.2	37.7	77.7



#33
Tetrachloroethene
Concen: 58.19 pg
RT: 12.61 min Scan# 2825
Delta R.T. -0.003 min
Lab File: 02171512.D
Acq: 17 Feb 2015 9:45

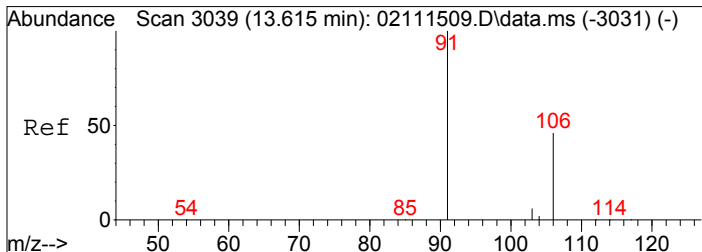
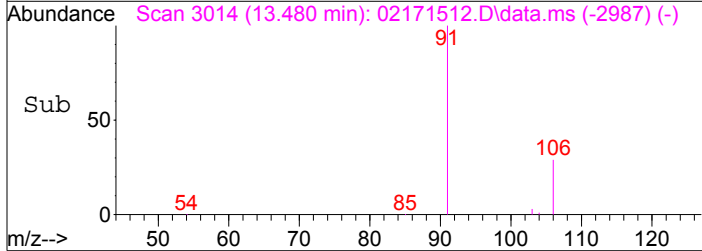
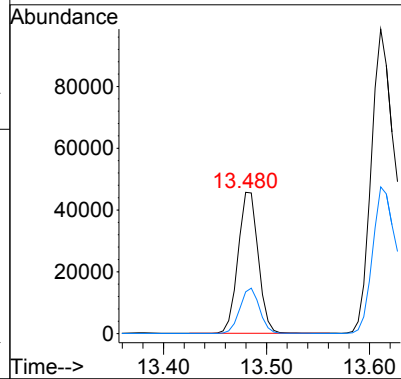
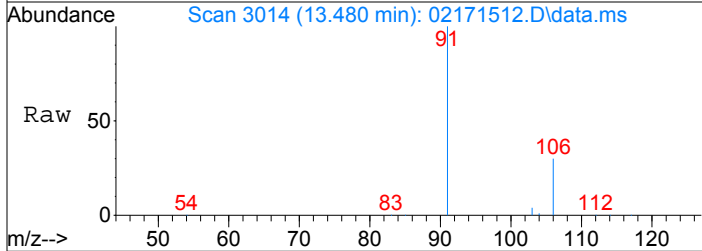
Tgt Ion	166	Resp	2601
Ion Ratio <th>100</th> <th>Lower</th> <th>Upper</th>	100	Lower	Upper
166	100		
129	74.9	53.3	93.3





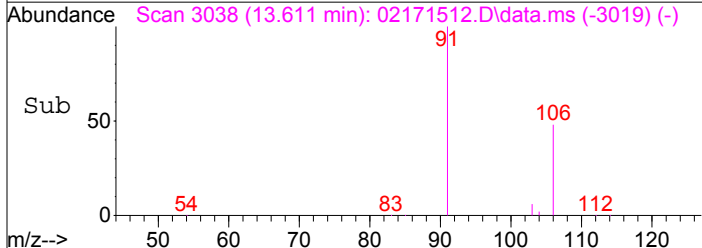
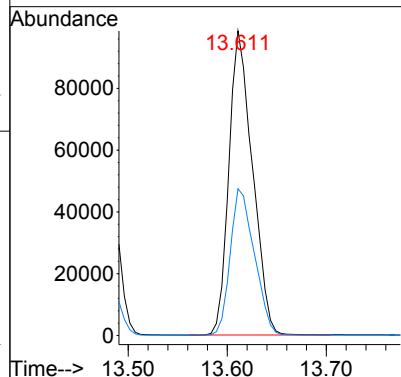
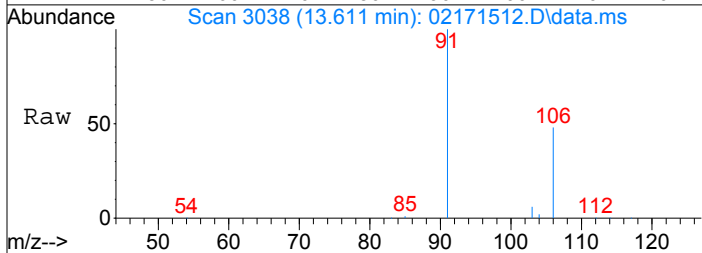
#36
Ethylbenzene
Concen: 420.95 pg
RT: 13.48 min Scan# 3014
Delta R.T. -0.004 min
Lab File: 02171512.D
Acq: 17 Feb 2015 9:45

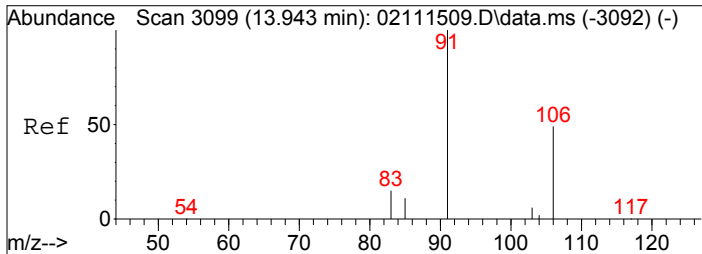
Tgt Ion: 91 Resp: 62152
Ion Ratio Lower Upper
91 100
106 31.2 10.9 50.9



#37
m,p-Xylene
Concen: 1342.08 pg
RT: 13.61 min Scan# 3038
Delta R.T. -0.004 min
Lab File: 02171512.D
Acq: 17 Feb 2015 9:45

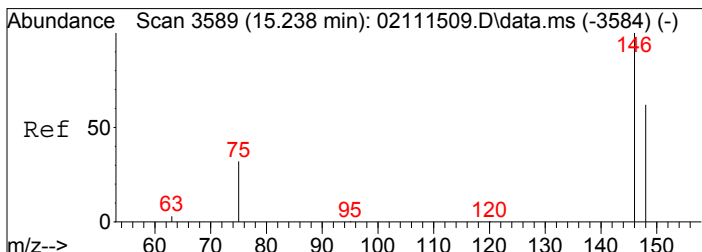
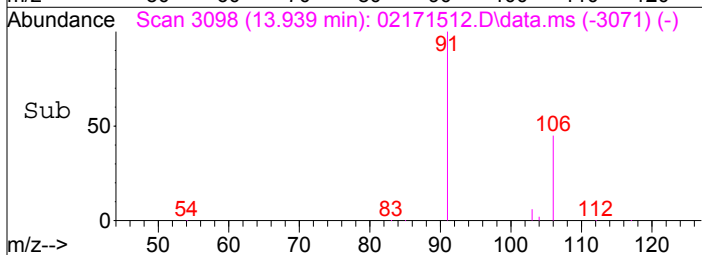
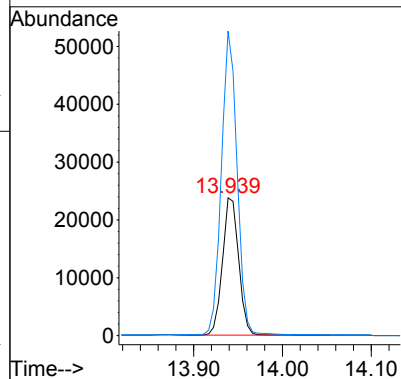
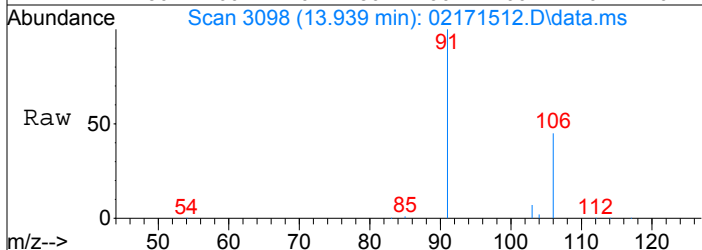
Tgt Ion: 91 Resp: 162860
Ion Ratio Lower Upper
91 100
106 49.4 27.5 67.5





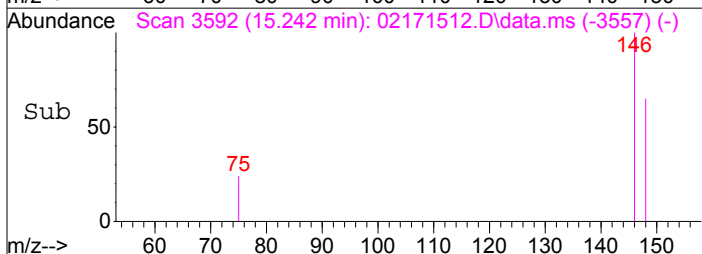
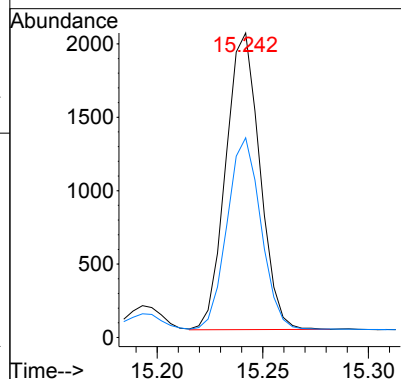
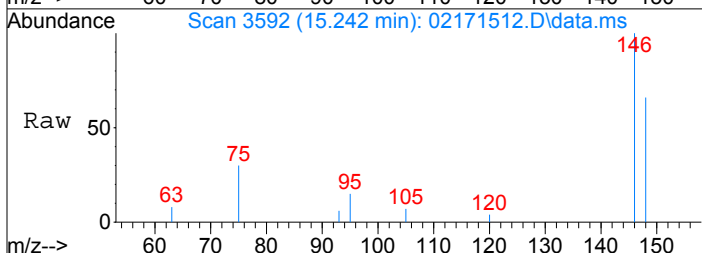
#38
o-Xylene
Concen: 506.14 pg
RT: 13.94 min Scan# 3098
Delta R.T. -0.004 min
Lab File: 02171512.D
Acq: 17 Feb 2015 9:45

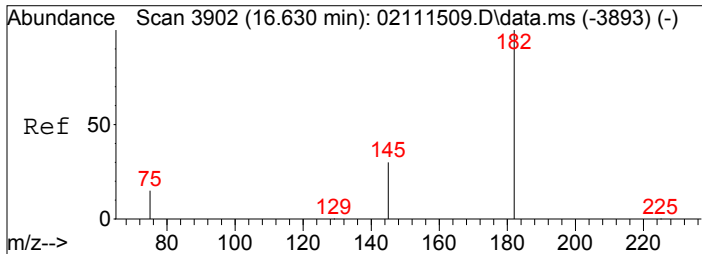
Tgt Ion	106	Resp	30017
Ion Ratio	100	Lower	Upper
91	214.9	198.3	238.3



#42
1,4-Dichlorobenzene
Concen: 27.80 pg
RT: 15.24 min Scan# 3592
Delta R.T. 0.004 min
Lab File: 02171512.D
Acq: 17 Feb 2015 9:45

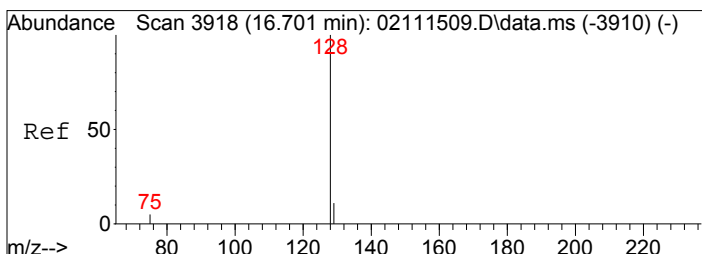
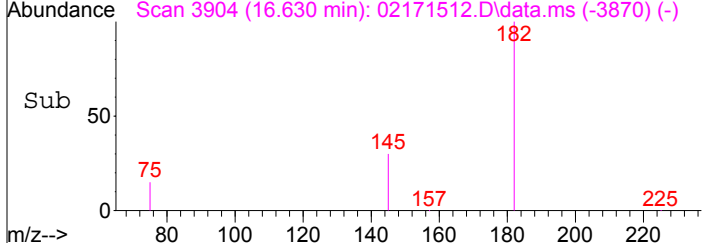
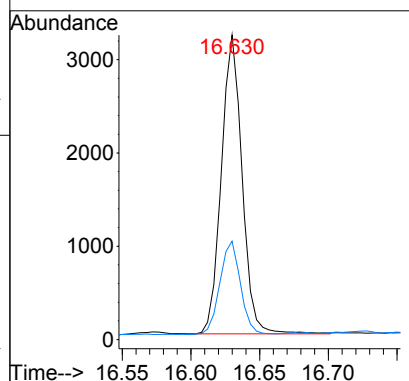
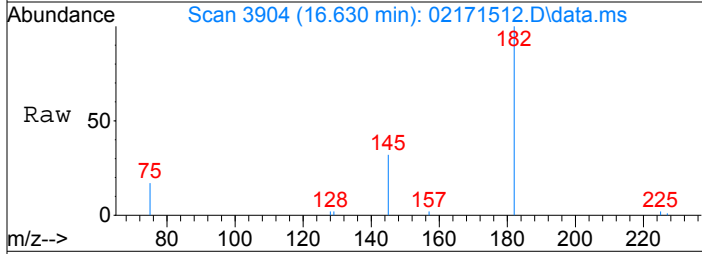
Tgt Ion	146	Resp	2262
Ion Ratio <th>146</th> <th>100</th> <th></th>	146	100	
148	64.8	43.5	83.5





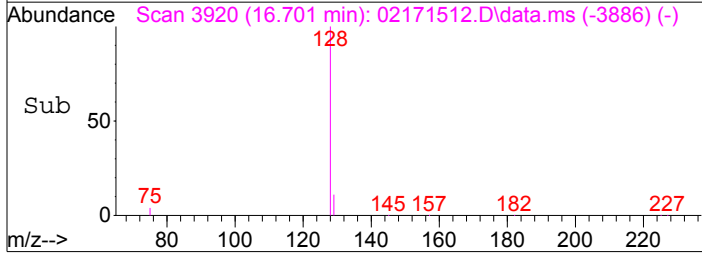
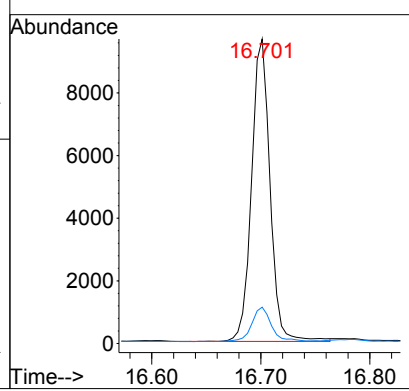
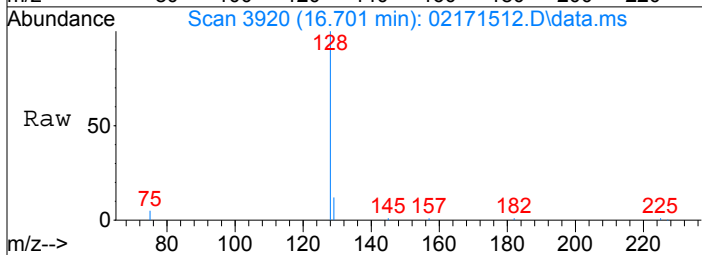
#44
 1,2,4-Trichlorobenzene
 Concen: 75.06 pg
 RT: 16.63 min Scan# 3904
 Delta R.T. -0.000 min
 Lab File: 02171512.D
 Acq: 17 Feb 2015 9:45

Tgt Ion:182	Resp:	3362
Ion Ratio	Lower	Upper
182	100	
145	31.1	11.3 51.3



#45
 Naphthalene
 Concen: 77.14 pg
 RT: 16.70 min Scan# 3920
 Delta R.T. 0.000 min
 Lab File: 02171512.D
 Acq: 17 Feb 2015 9:45

Tgt Ion:128	Resp:	11364
Ion Ratio	Lower	Upper
128	100	
129	12.1	0.0 30.9



Data File: I:\MS19\DATA\2015 02\17\02171511.D

Acq On : 17 Feb 2015 9:17
 Sample : P1500566-024 (1000mL)
 Misc : S29-02041502
 ALS Vial : 4 Sample Multiplier: 1

Operator: WA

Quant Time: Feb 17 16:37:26 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

2/18/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	17242	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.71	114	126319	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	23081	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	40381	959.018	pg	0.00
Spiked Amount 1000.000			Recovery	=	95.90%	
30) Toluene-d8 (SS2)	11.38	98	121591	1043.795	pg	0.00
Spiked Amount 1000.000			Recovery	=	104.38%	
40) Bromofluorobenzene (SS3)	14.25	174	50453	1082.744	pg	0.00
Spiked Amount 1000.000			Recovery	=	108.27%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.73	85	125232	1787.197	pg	100
3) Chloromethane	1.83	52	7970	569.549	pg	98
4) Vinyl Chloride	2.01	62	145	N.D.		
5) Bromomethane	2.33	94	1125	35.704	pg	100
6) Chloroethane	2.47	64	327	N.D.		
7) Acetone	2.99	58	343462	13880.619	pg	# 75
8) Trichlorofluoromethane	3.11	101	78651	1306.739	pg	100
9) 1,1-Dichloroethene	3.66	96	77	N.D.		
10) Methylene Chloride	3.80	84	20206	707.496	pg	96
11) Trichlorotrifluoroethane	4.10	151	10853	392.417	pg	99
12) trans-1,2-Dichloroethene	4.74	96	1040	37.903	pg	98
13) 1,1-Dichloroethane	4.95	63	374	N.D.		
14) Methyl tert-Butyl Ether	5.11	73	820	N.D.		
15) cis-1,2-Dichloroethene	5.93	96	1089	35.691	pg	100
16) Chloroform	6.31	83	8106	153.339	pg	98
18) 1,2-Dichloroethane	7.26	62	3066	72.842	pg	99
19) 1,1,1-Trichloroethane	7.59	97	1020	N.D.		
20) Benzene	8.16	78	63607	585.010	pg	100
21) Carbon Tetrachloride	8.34	117	15351	398.874	pg	100
23) 1,2-Dichloropropane	9.16	63	747	27.114	pg	95
24) Bromodichloromethane	0.00	83	0	N.D.	d	
25) Trichloroethene	9.46	130	3107	95.741	pg	99
26) 1,4-Dioxane	9.55	88	182	N.D.		
27) cis-1,3-Dichloropropene	10.45	75	45	N.D.		
28) trans-1,3-Dichloropropene	11.04	75	26	N.D.		
29) 1,1,2-Trichloroethane	0.00	83	0	N.D.	d	
31) Toluene	11.48	91	351657	2838.386	pg	100
32) 1,2-Dibromoethane	12.12	107	24	N.D.		
33) Tetrachloroethene	12.61	166	2327	60.660	pg	99
35) Chlorobenzene	13.17	112	662	N.D.		
36) Ethylbenzene	13.48	91	69015	476.829	pg	100
37) m,p-Xylene	13.61	91	172308	1448.482	pg	97
38) o-Xylene	13.94	106	27887	479.677	pg	98
39) 1,1,2,2-Tetrachloroethane	13.89	83	475	N.D.		
41) 1,3-Dichlorobenzene	15.17	146	783	N.D.		
42) 1,4-Dichlorobenzene	15.24	146	3750	47.015	pg	100
43) 1,2-Dichlorobenzene	15.46	146	135	N.D.		
44) 1,2,4-Trichlorobenzene	16.63	182	58	N.D.		
45) Naphthalene	16.70	128	13664	94.613	pg	94
46) Hexachlorobutadiene	16.96	225	40	N.D.		

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\17\02171511.D

Acq On : 17 Feb 2015 9:17

Operator: WA

Sample : P1500566-024 (1000mL)

Misc : S29-02041502

ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 17 16:37:26 2015

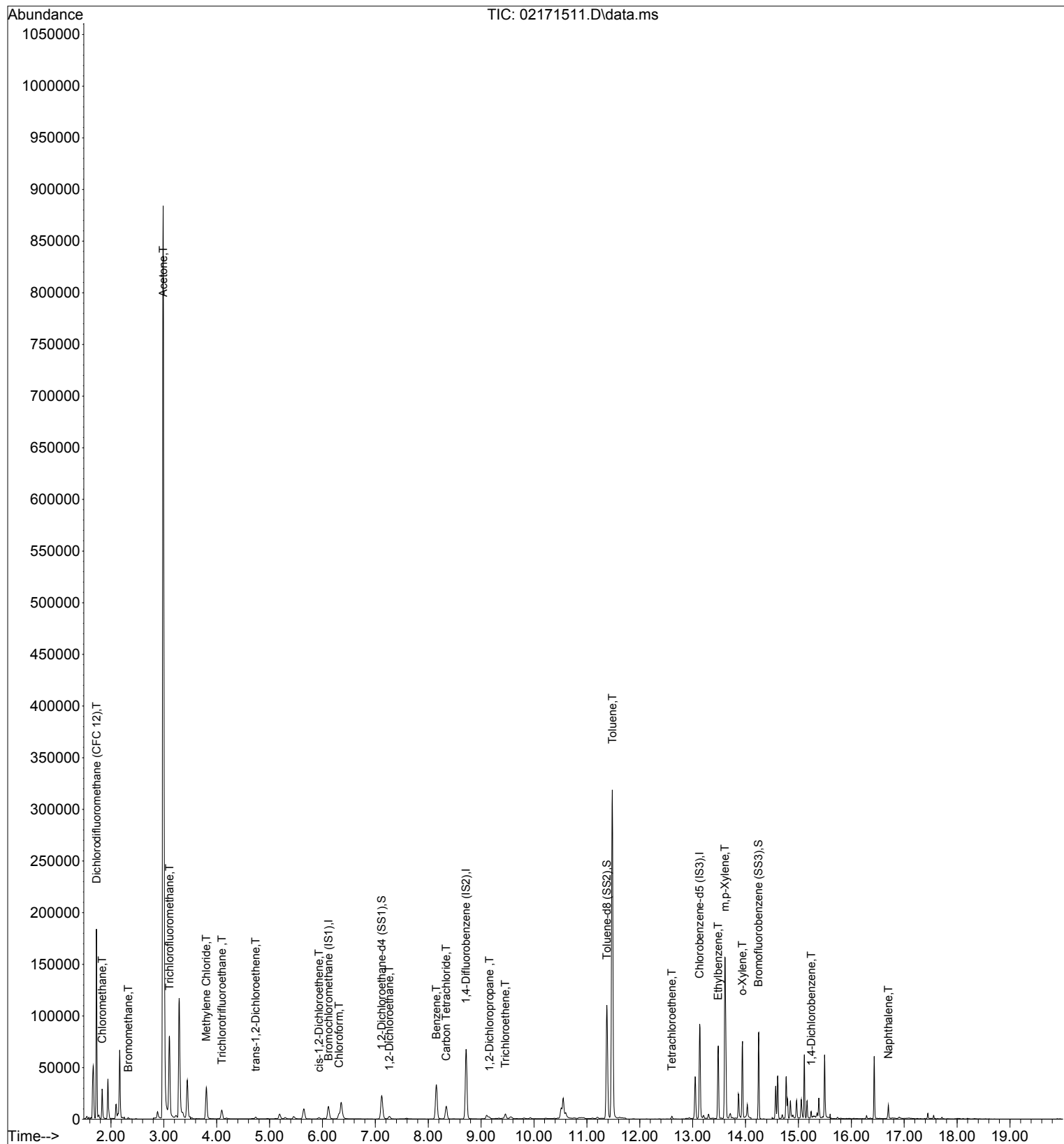
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 02\17\02171511.D

Acq On : 17 Feb 2015 9:17

Operator: WA

Sample : P1500566-024 (1000mL)

Misc : S29-02041502

ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 17 16:37:26 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

2/17/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	17242	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.71	114	126319	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	23081	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	40381	959.018	pg	0.00
Spiked Amount 1000.000			Recovery	=	95.90%	
30) Toluene-d8 (SS2)	11.38	98	121591	1043.795	pg	0.00
Spiked Amount 1000.000			Recovery	=	104.38%	
40) Bromofluorobenzene (SS3)	14.25	174	50453	1082.744	pg	0.00
Spiked Amount 1000.000			Recovery	=	108.27%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.73	85	125232	1787.197	pg	100
3) Chloromethane	1.83	52	7970	569.549	pg	98
5) Bromomethane	2.33	94	1125	35.704	pg	100
7) Acetone	2.99	58	343462	13880.619	pg	# 75
8) Trichlorofluoromethane	3.11	101	78651	1306.739	pg	100
10) Methylene Chloride	3.80	84	20206	707.496	pg	96
11) Trichlorotrifluoroethane	4.10	151	10853	392.417	pg	99
12) trans-1,2-Dichloroethene	4.74	96	1040	37.903	pg	98
15) cis-1,2-Dichloroethene	5.93	96	1089	35.691	pg	100
16) Chloroform	6.31	83	8106	153.339	pg	98
18) 1,2-Dichloroethane	7.26	62	3066	72.842	pg	99
20) Benzene	8.16	78	63607	585.010	pg	100
21) Carbon Tetrachloride	8.34	117	15351	398.874	pg	100
23) 1,2-Dichloropropane	9.16	63	747	27.114	pg	95
25) Trichloroethene	9.46	130	3107	95.741	pg	99
31) Toluene	11.48	91	351657	2838.386	pg	100
33) Tetrachloroethene	12.61	166	2327	60.660	pg	99
36) Ethylbenzene	13.48	91	69015	476.829	pg	100
37) m,p-Xylene	13.61	91	172308	1448.482	pg	97
38) o-Xylene	13.94	106	27887	479.677	pg	98
42) 1,4-Dichlorobenzene	15.24	146	3750	47.015	pg	100
45) Naphthalene	16.70	128	13664	94.613	pg	94

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\17\02171511.D

Acq On : 17 Feb 2015 9:17

Operator: WA

Sample : P1500566-024 (1000mL)

Misc : S29-02041502

ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 17 16:37:26 2015

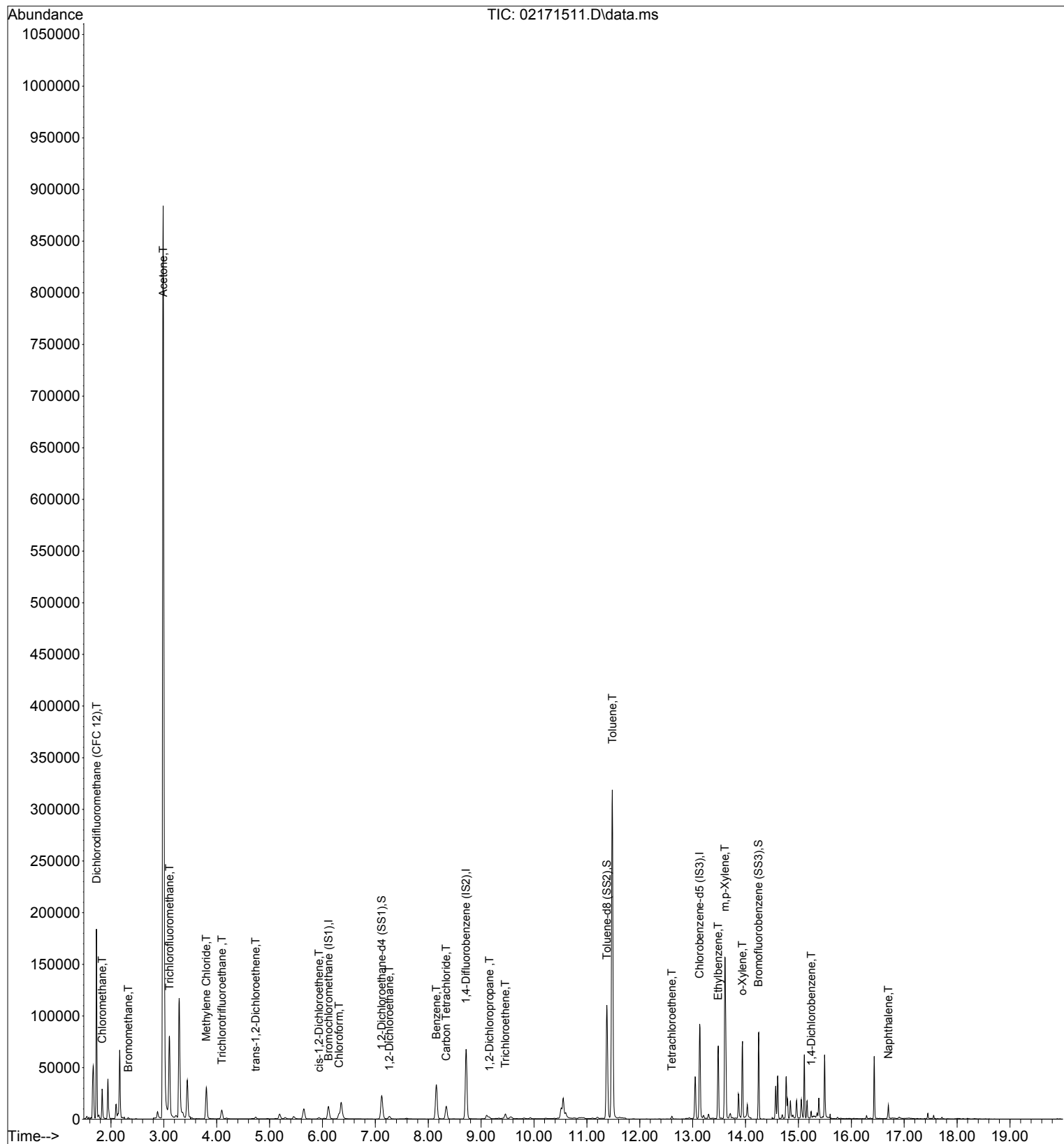
Quant Method : I:\MS19\METHODS\X19021115.M

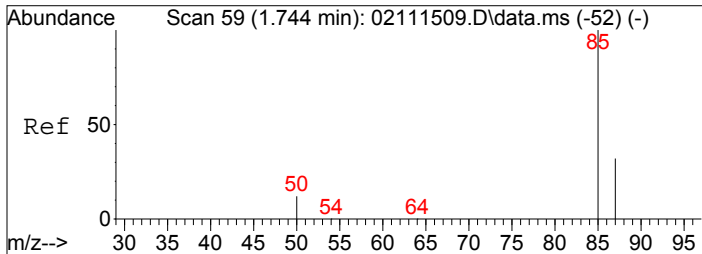
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

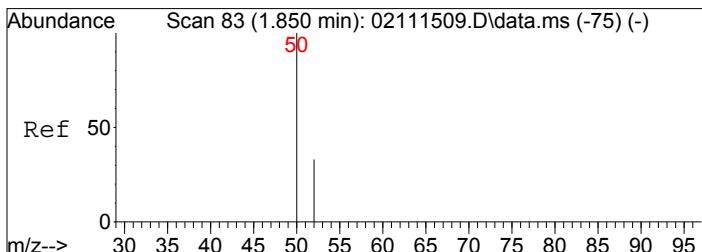
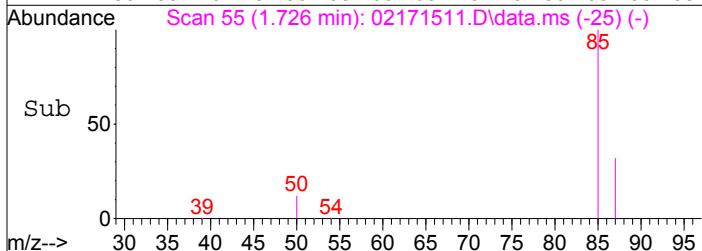
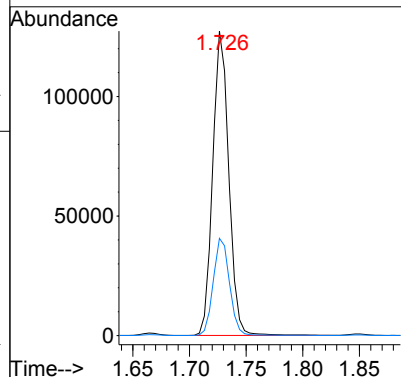
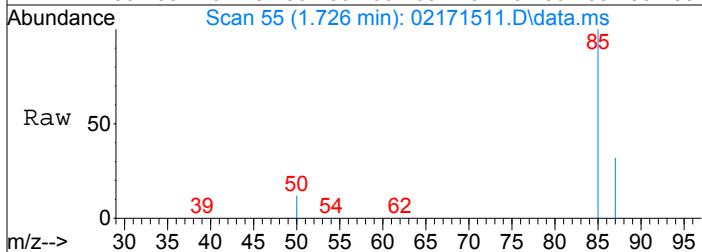
DataAcq Meth:TO15SIM.M





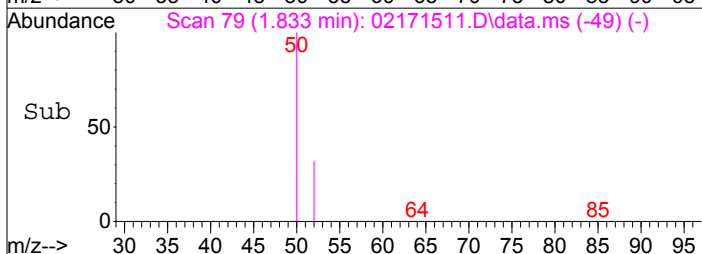
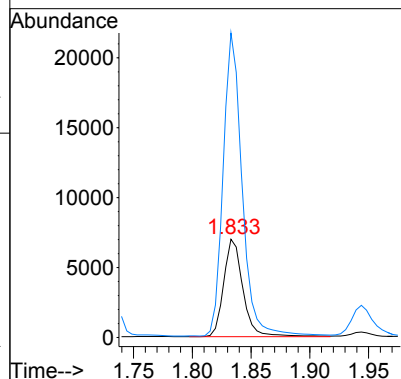
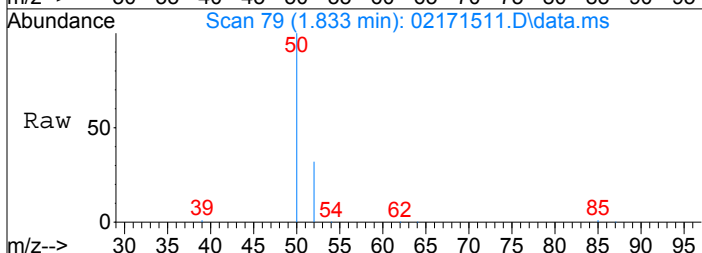
#2
 Dichlorodifluoromethane (CFC 12)
 Concen: 1787.20 pg
 RT: 1.73 min Scan# 55
 Delta R.T. -0.017 min
 Lab File: 02171511.D
 Acq: 17 Feb 2015 9:17

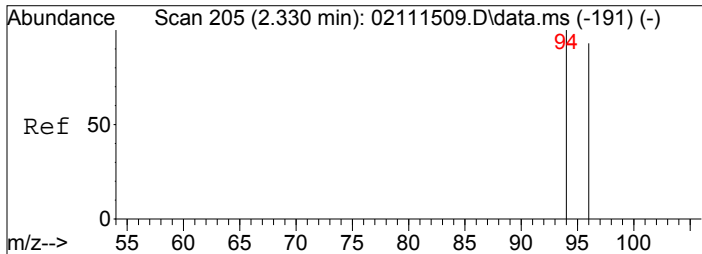
Tgt Ion	85	Resp	125232
Ion Ratio	100	Lower	Upper
87	32.4	12.4	52.4



#3
 Chloromethane
 Concen: 569.55 pg
 RT: 1.83 min Scan# 79
 Delta R.T. -0.017 min
 Lab File: 02171511.D
 Acq: 17 Feb 2015 9:17

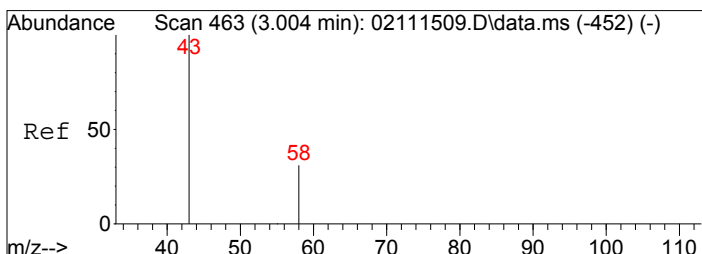
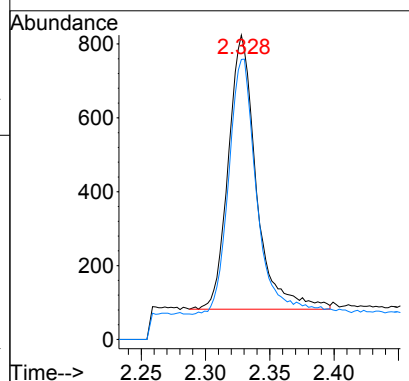
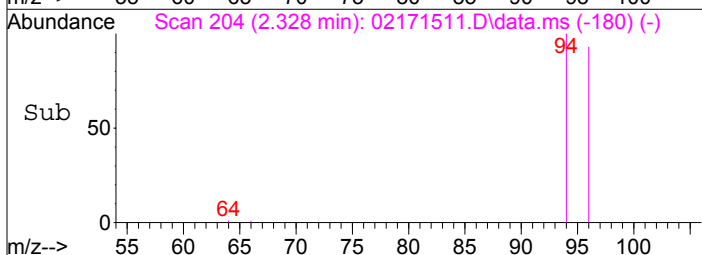
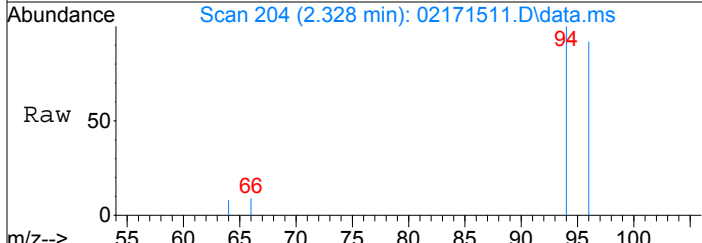
Tgt Ion	52	Resp	7970
Ion Ratio	100	Lower	Upper
50	306.7	283.7	323.7





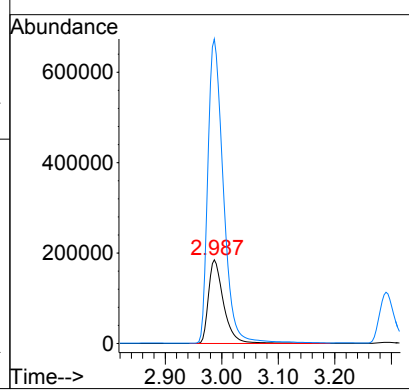
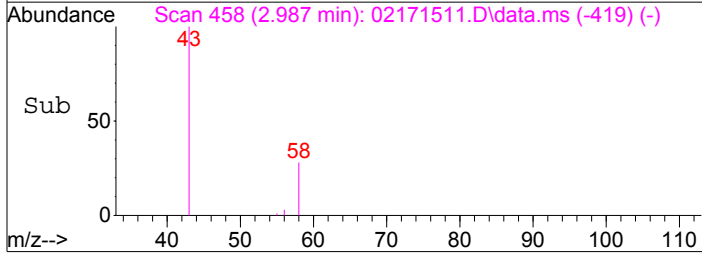
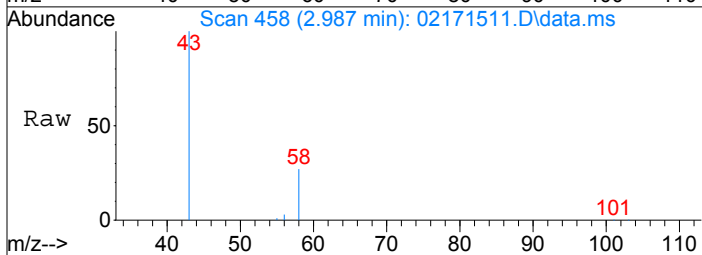
#5
 Bromomethane
 Concen: 35.70 pg
 RT: 2.33 min Scan# 204
 Delta R.T. -0.002 min
 Lab File: 02171511.D
 Acq: 17 Feb 2015 9:17

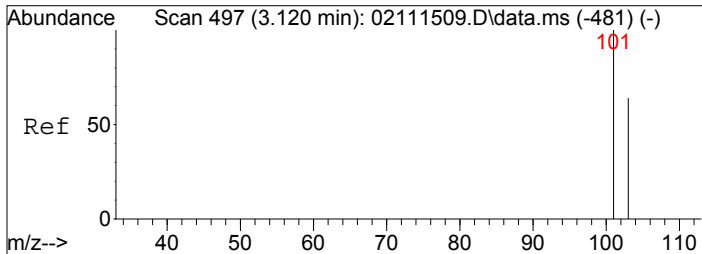
Tgt Ion:	94	Resp:	1125
Ion Ratio	Lower	Upper	
94	100		
96	94.7	75.5	113.3



#7
 Acetone
 Concen: 13880.62 pg
 RT: 2.99 min Scan# 458
 Delta R.T. -0.017 min
 Lab File: 02171511.D
 Acq: 17 Feb 2015 9:17

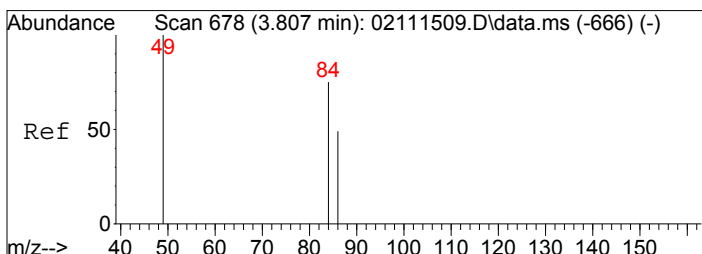
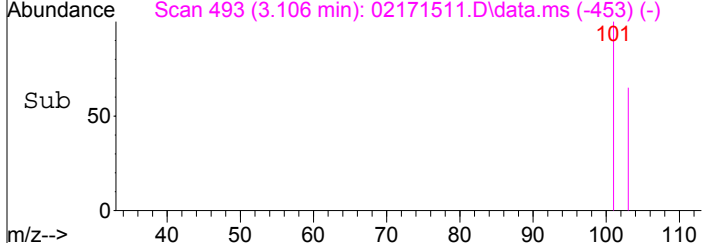
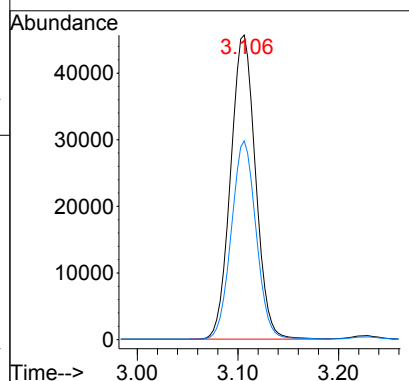
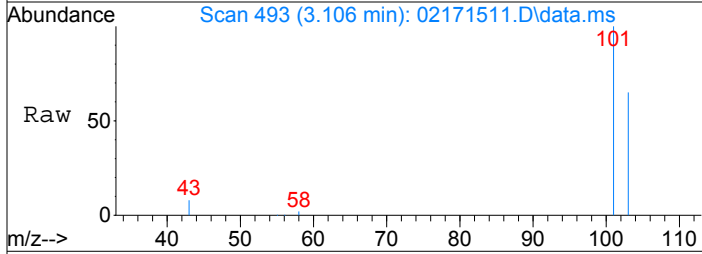
Tgt Ion:	58	Resp:	343462
Ion Ratio	Lower	Upper	
58	100		
43	372.7	301.8	341.8#





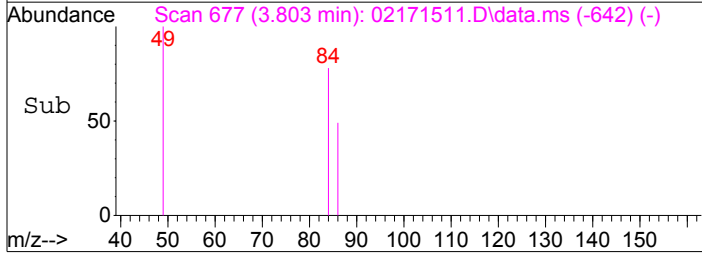
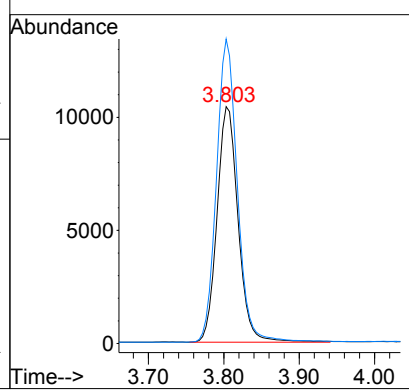
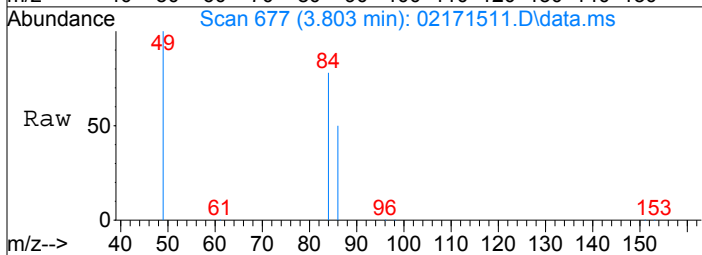
#8
 Trichlorofluoromethane
 Concen: 1306.74 pg
 RT: 3.11 min Scan# 493
 Delta R.T. -0.013 min
 Lab File: 02171511.D
 Acq: 17 Feb 2015 9:17

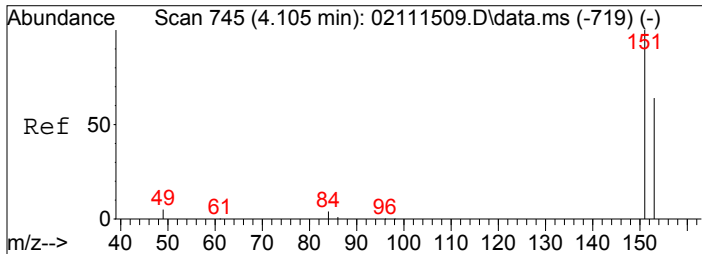
Tgt Ion: 101	Resp: 78651
Ion Ratio	Lower Upper
101	100
103	64.8 51.8 77.6



#10
 Methylene Chloride
 Concen: 707.50 pg
 RT: 3.80 min Scan# 677
 Delta R.T. -0.004 min
 Lab File: 02171511.D
 Acq: 17 Feb 2015 9:17

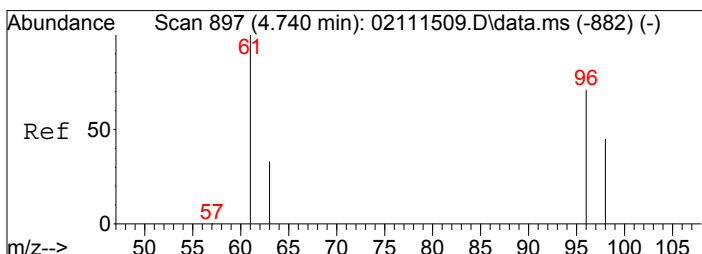
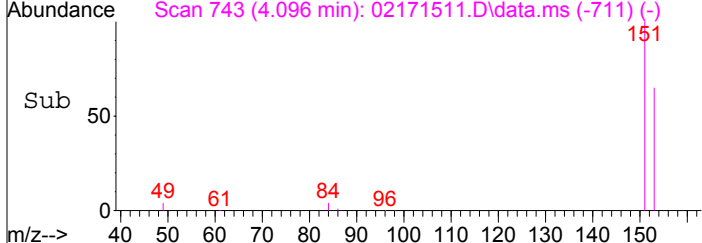
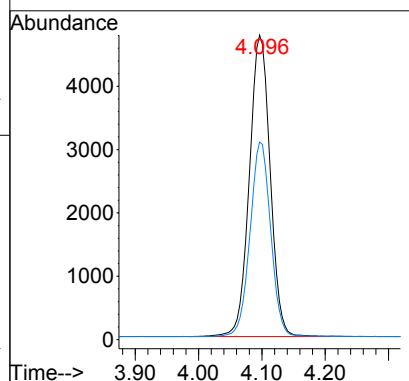
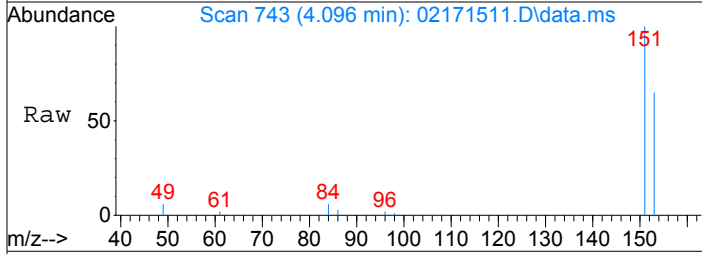
Tgt Ion: 84	Resp: 20206
Ion Ratio	Lower Upper
84	100
49	127.8 112.3 152.3





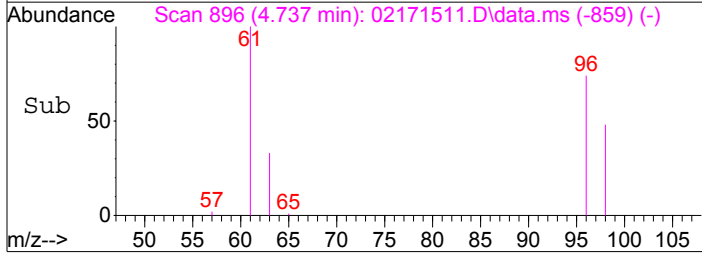
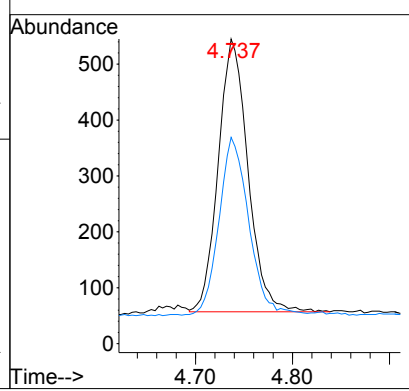
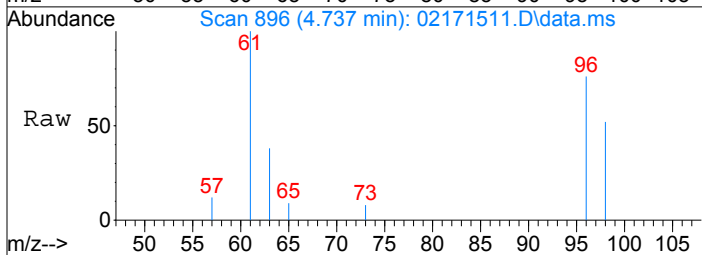
#11
 Trichlorotrifluoroethane
 Concen: 392.42 pg
 RT: 4.10 min Scan# 743
 Delta R.T. -0.009 min
 Lab File: 02171511.D
 Acq: 17 Feb 2015 9:17

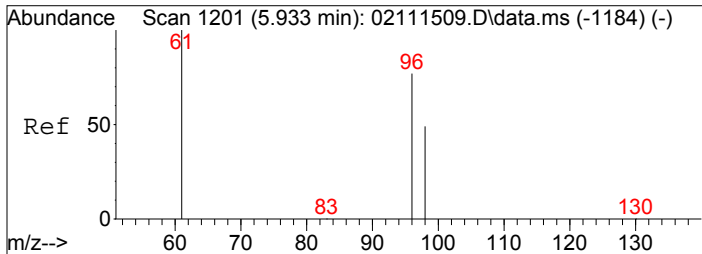
Tgt Ion: 151	Resp: 10853
Ion Ratio	Lower Upper
151	100
153	64.1 43.6 83.6



#12
 trans-1,2-Dichloroethene
 Concen: 37.90 pg
 RT: 4.74 min Scan# 896
 Delta R.T. -0.004 min
 Lab File: 02171511.D
 Acq: 17 Feb 2015 9:17

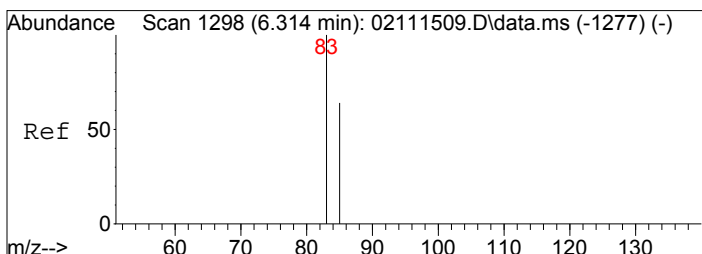
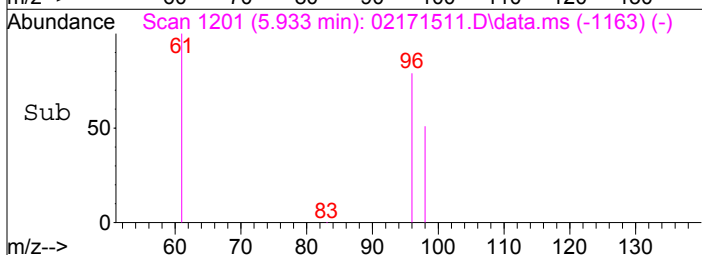
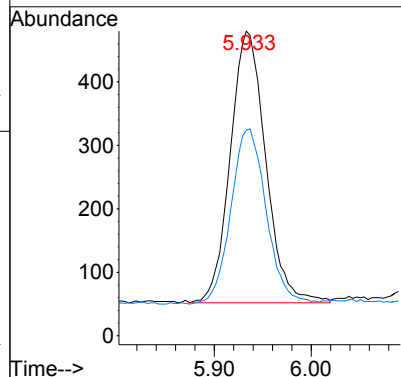
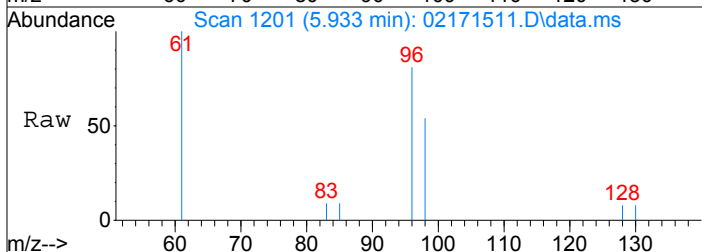
Tgt Ion: 96	Resp: 1040
Ion Ratio	Lower Upper
96	100
98	65.4 43.7 83.7





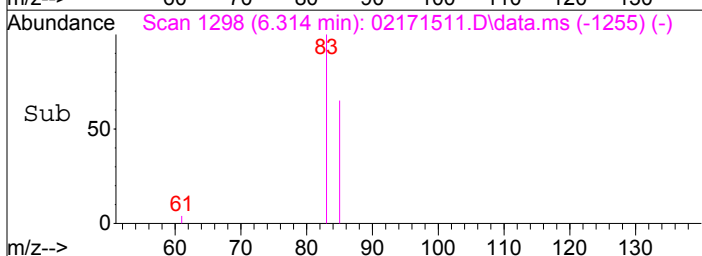
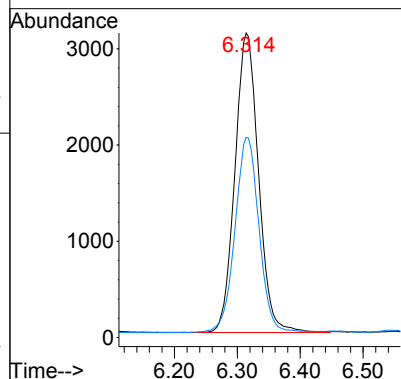
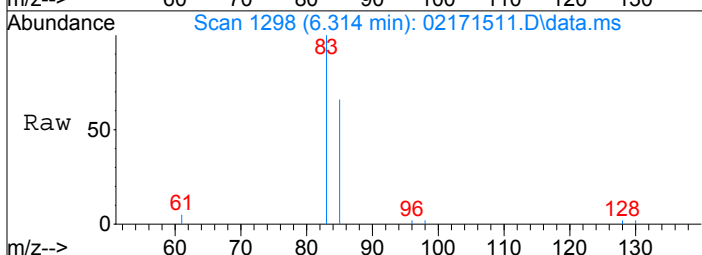
#15
 cis-1,2-Dichloroethene
 Concen: 35.69 pg
 RT: 5.93 min Scan# 1201
 Delta R.T. 0.000 min
 Lab File: 02171511.D
 Acq: 17 Feb 2015 9:17

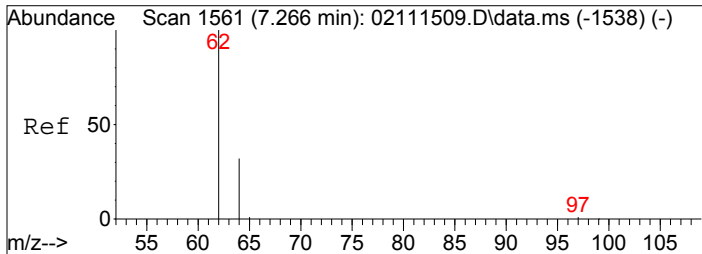
Tgt Ion	96	Resp	1089
Ion Ratio	Lower	Upper	
96	100		
98	64.5	44.3	84.3



#16
 Chloroform
 Concen: 153.34 pg
 RT: 6.31 min Scan# 1298
 Delta R.T. -0.000 min
 Lab File: 02171511.D
 Acq: 17 Feb 2015 9:17

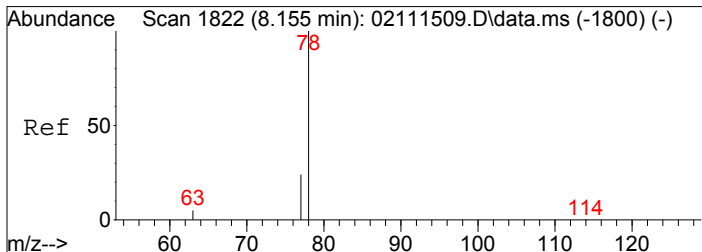
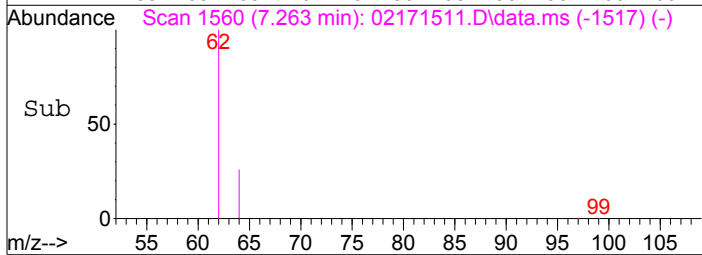
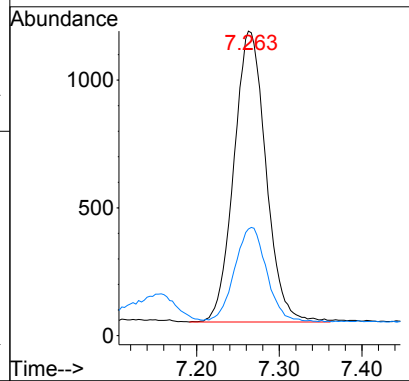
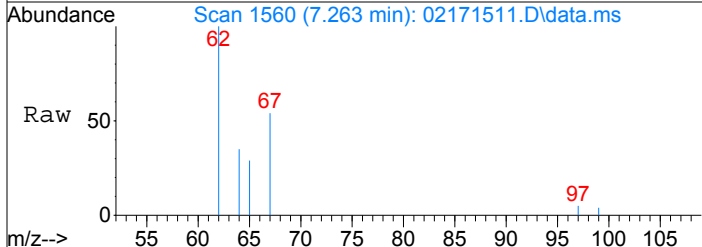
Tgt Ion	83	Resp	8106
Ion Ratio	Lower	Upper	
83	100		
85	66.6	45.4	85.4





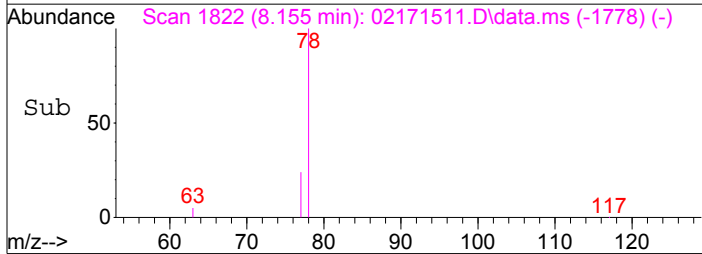
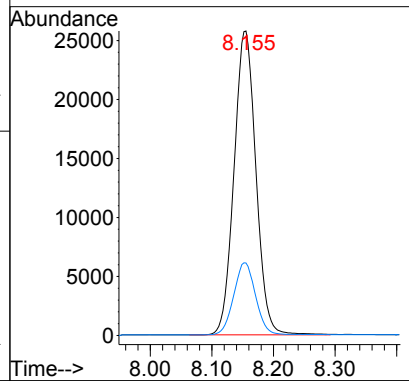
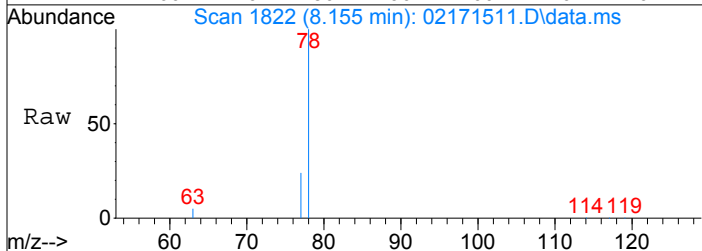
#18
1,2-Dichloroethane
Concen: 72.84 pg
RT: 7.26 min Scan# 1560
Delta R.T. -0.003 min
Lab File: 02171511.D
Acq: 17 Feb 2015 9:17

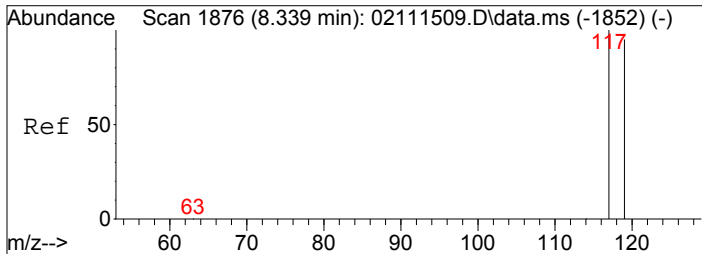
Tgt Ion: 62 Resp: 3066
Ion Ratio Lower Upper
62 100
64 32.2 11.6 51.6



#20
Benzene
Concen: 585.01 pg
RT: 8.16 min Scan# 1822
Delta R.T. 0.000 min
Lab File: 02171511.D
Acq: 17 Feb 2015 9:17

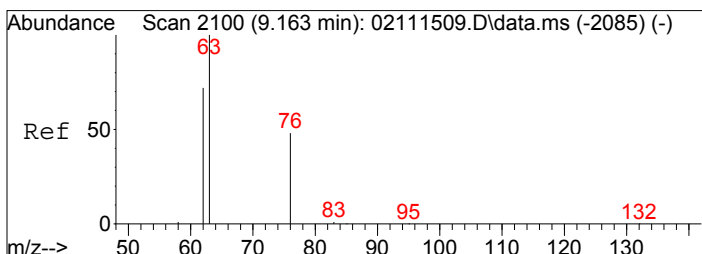
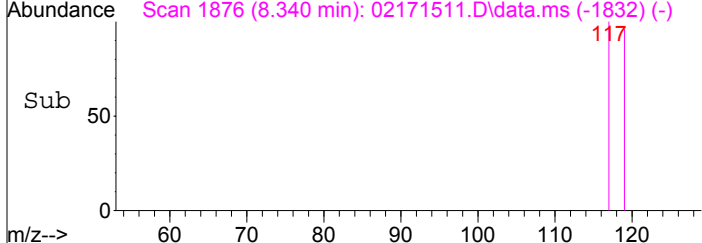
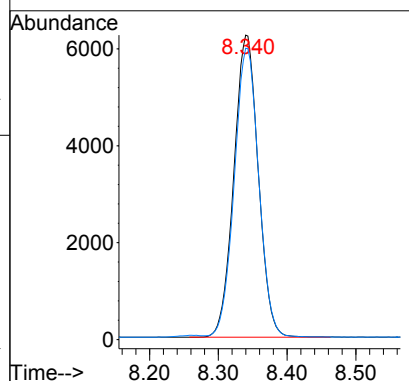
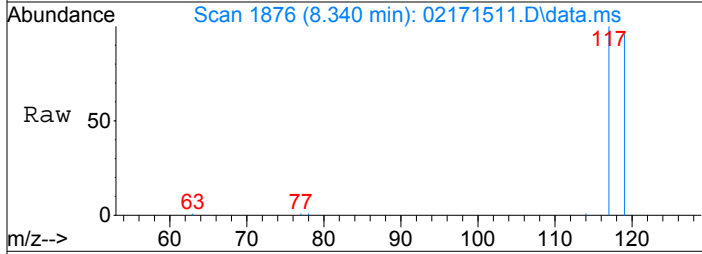
Tgt Ion: 78 Resp: 63607
Ion Ratio Lower Upper
78 100
77 23.8 3.7 43.7





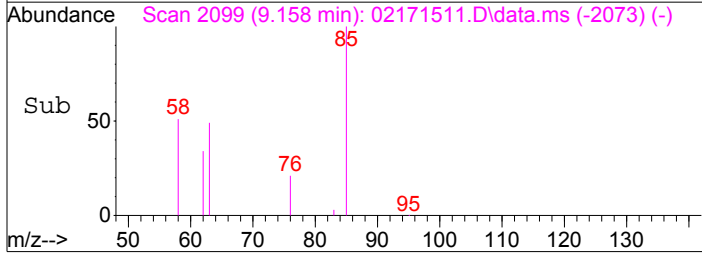
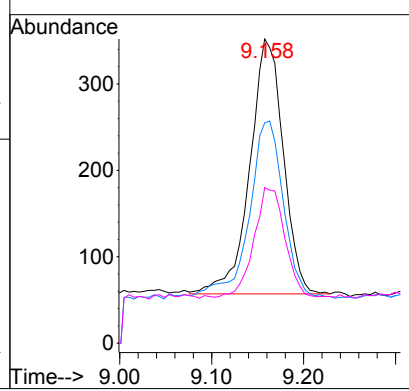
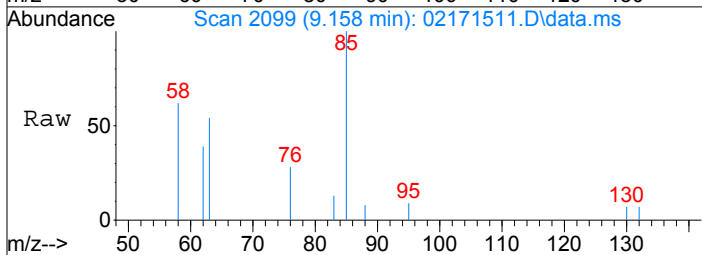
#21
Carbon Tetrachloride
Concen: 398.87 pg
RT: 8.34 min Scan# 1876
Delta R.T. 0.000 min
Lab File: 02171511.D
Acq: 17 Feb 2015 9:17

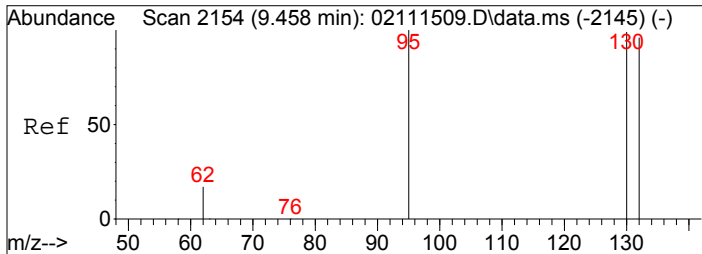
Tgt Ion: 117	Resp: 15351
Ion Ratio	Lower Upper
117	100
119	95.9 75.5 115.5



#23
1,2-Dichloropropane
Concen: 27.11 pg
RT: 9.16 min Scan# 2099
Delta R.T. -0.005 min
Lab File: 02171511.D
Acq: 17 Feb 2015 9:17

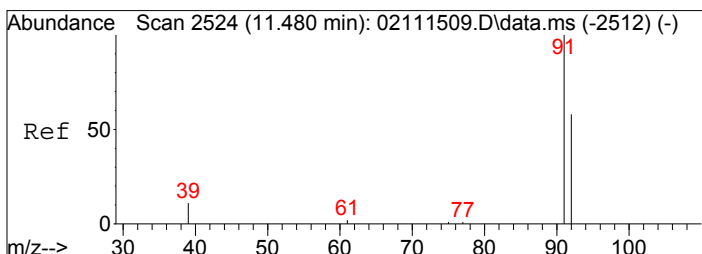
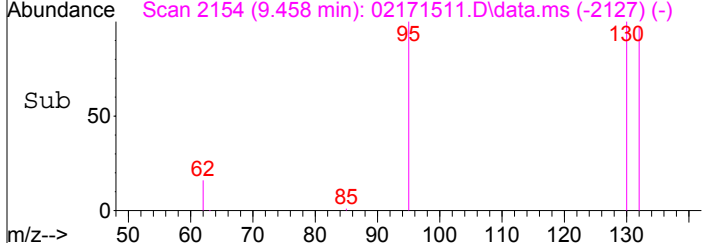
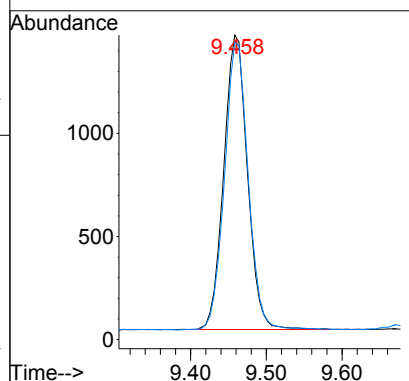
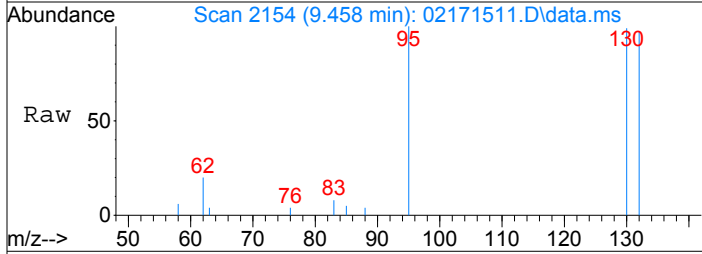
Tgt Ion: 63	Resp: 747
Ion Ratio	Lower Upper
63	100
62	71.8 52.0 92.0
76	39.6 28.1 68.1





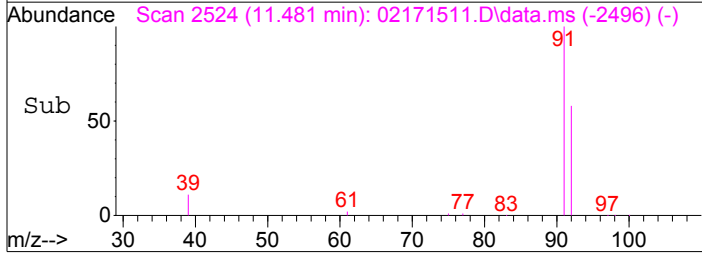
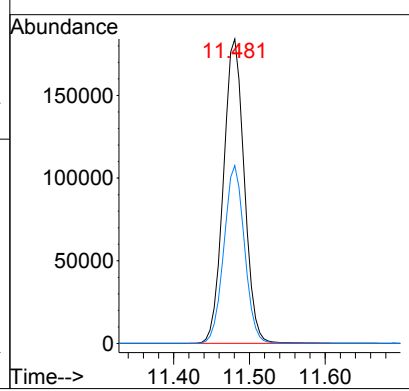
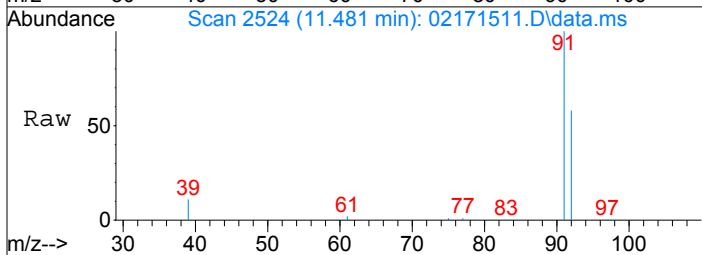
#25
 Trichloroethene
 Concen: 95.74 pg
 RT: 9.46 min Scan# 2154
 Delta R.T. 0.000 min
 Lab File: 02171511.D
 Acq: 17 Feb 2015 9:17

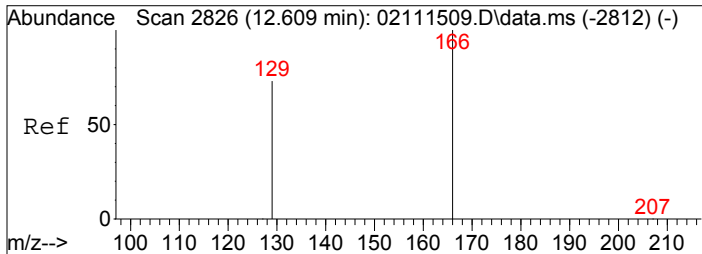
Tgt Ion: 130	Resp:	3107
Ion Ratio	Lower	Upper
130	100	
132	98.0	77.1 117.1



#31
 Toluene
 Concen: 2838.39 pg
 RT: 11.48 min Scan# 2524
 Delta R.T. 0.000 min
 Lab File: 02171511.D
 Acq: 17 Feb 2015 9:17

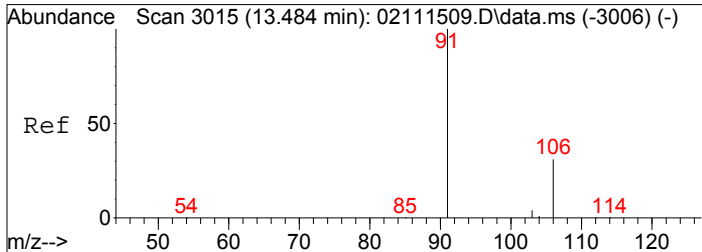
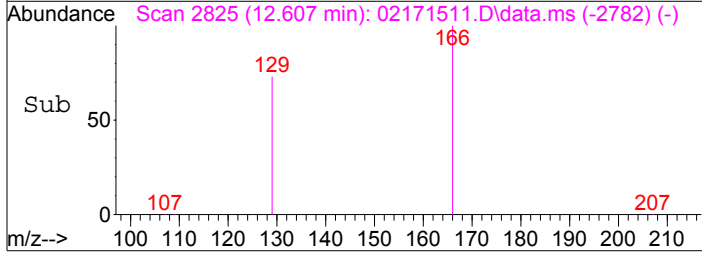
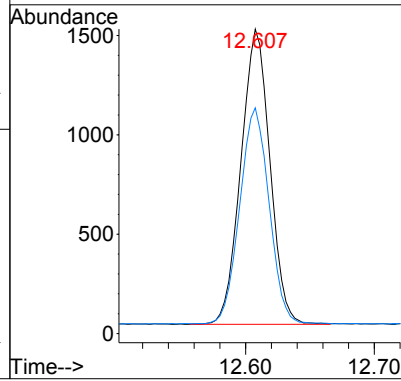
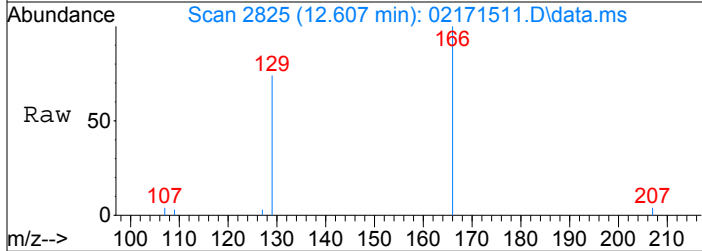
Tgt Ion: 91	Resp:	351657
Ion Ratio	Lower	Upper
91	100	
92	58.0	37.7 77.7





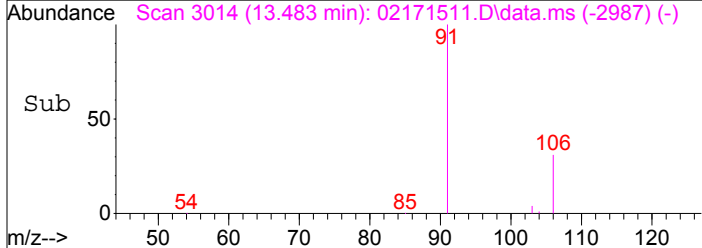
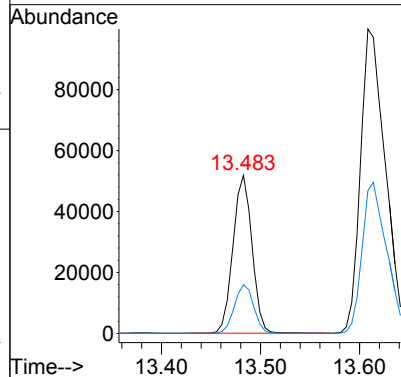
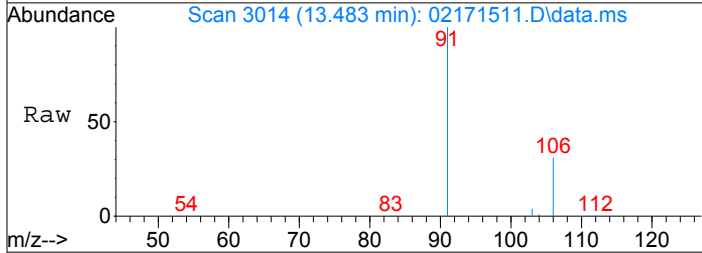
#33
Tetrachloroethene
Concen: 60.66 pg
RT: 12.61 min Scan# 2825
Delta R.T. -0.002 min
Lab File: 02171511.D
Acq: 17 Feb 2015 9:17

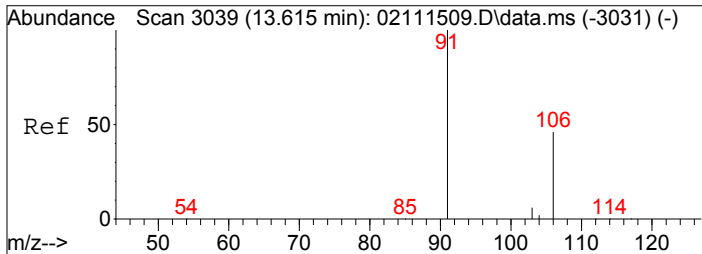
Tgt Ion	166	129	Resp	2327	Lower	Upper
166	100					
129		74.0	53.3	93.3		



#36
Ethylbenzene
Concen: 476.83 pg
RT: 13.48 min Scan# 3014
Delta R.T. -0.001 min
Lab File: 02171511.D
Acq: 17 Feb 2015 9:17

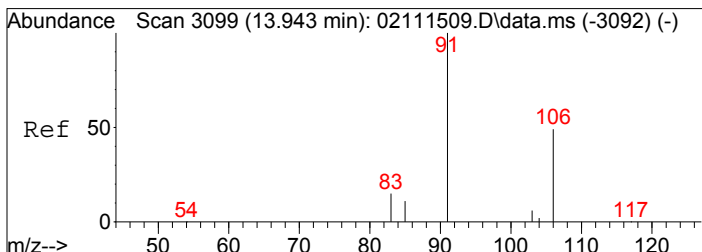
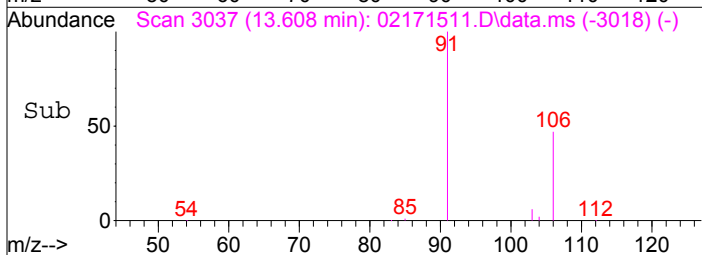
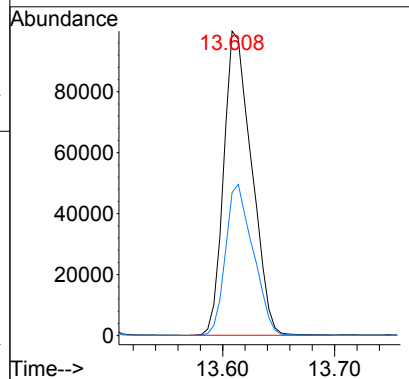
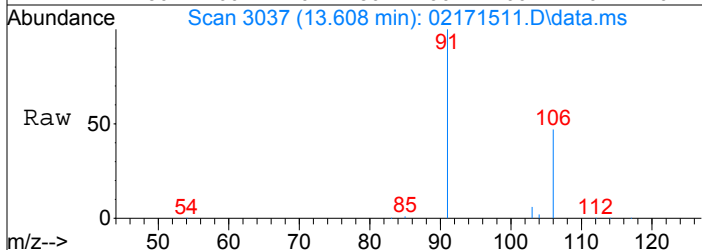
Tgt Ion	91	106	Resp	69015	Lower	Upper
91	100					
106		31.1	10.9	50.9		





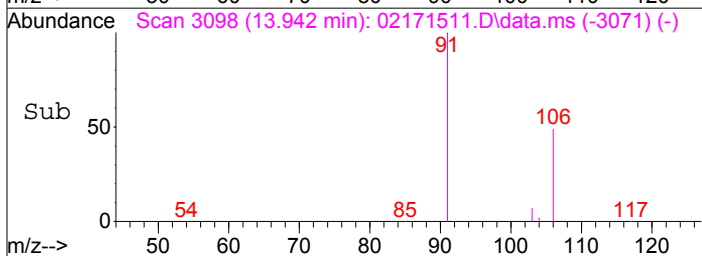
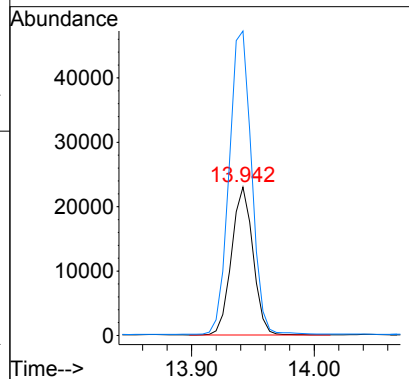
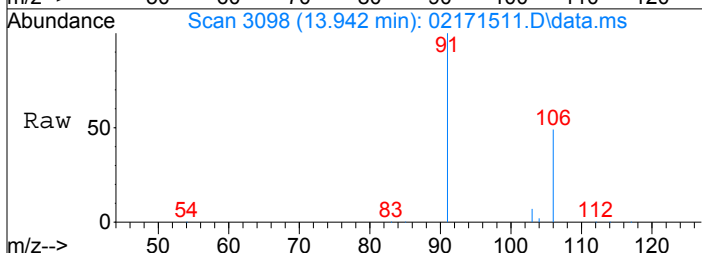
#37
 m,p-Xylene
 Concen: 1448.48 pg
 RT: 13.61 min Scan# 3037
 Delta R.T. -0.006 min
 Lab File: 02171511.D
 Acq: 17 Feb 2015 9:17

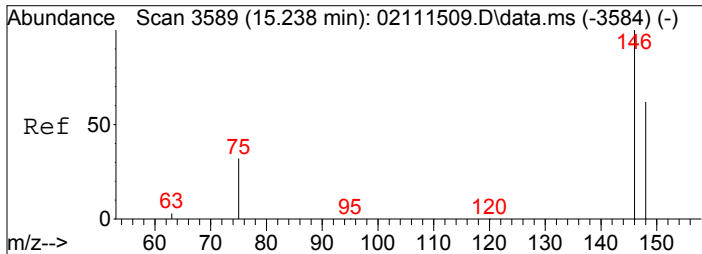
Tgt Ion	91	106	Resp	172308
Ion Ratio	100	49.2	27.5	67.5



#38
 o-Xylene
 Concen: 479.68 pg
 RT: 13.94 min Scan# 3098
 Delta R.T. -0.001 min
 Lab File: 02171511.D
 Acq: 17 Feb 2015 9:17

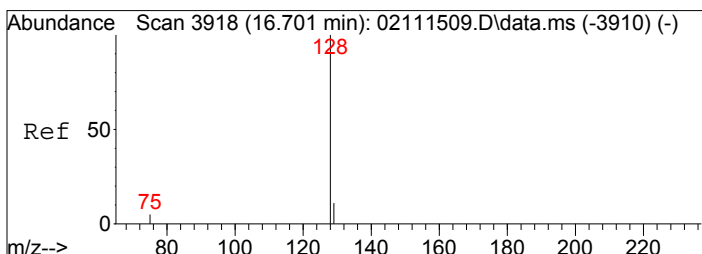
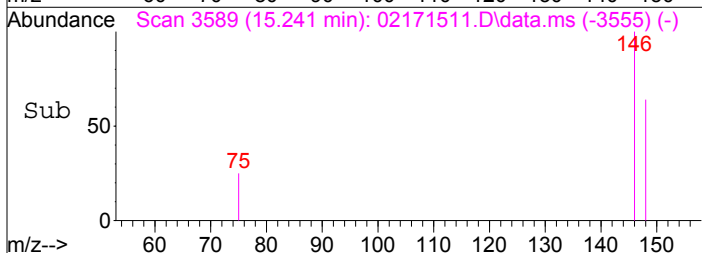
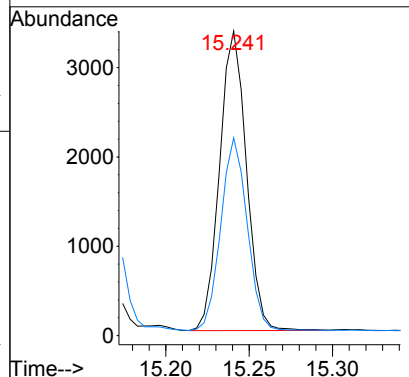
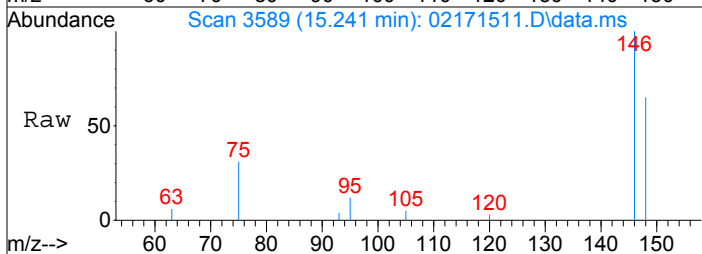
Tgt Ion	106	Resp	27887
Ion Ratio	100	214.7	198.3
	91	238.3	





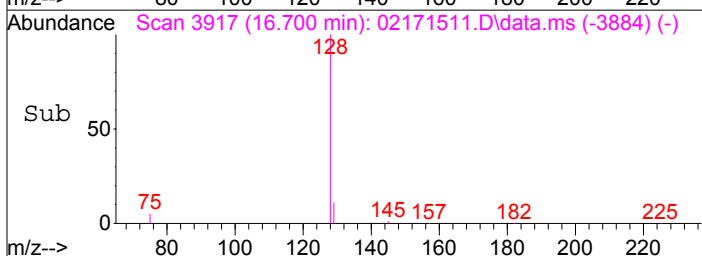
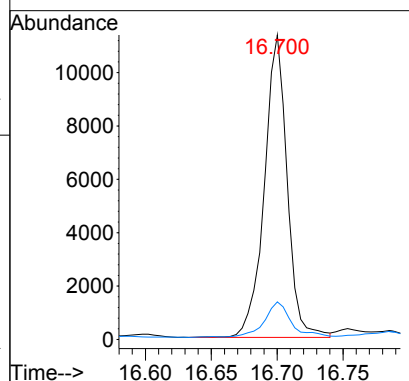
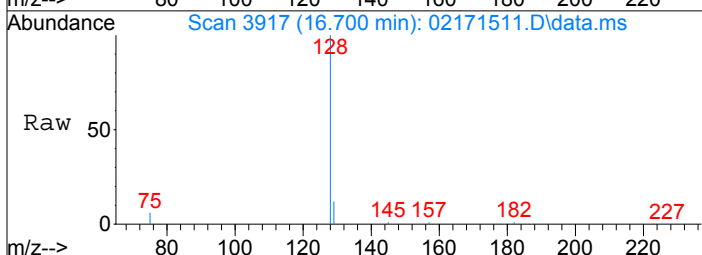
#42
 1,4-Dichlorobenzene
 Concen: 47.02 pg
 RT: 15.24 min Scan# 3589
 Delta R.T. 0.003 min
 Lab File: 02171511.D
 Acq: 17 Feb 2015 9:17

Tgt Ion	Ratio	Lower	Upper
146	100		
148	63.4	43.5	83.5



#45
 Naphthalene
 Concen: 94.61 pg
 RT: 16.70 min Scan# 3917
 Delta R.T. -0.001 min
 Lab File: 02171511.D
 Acq: 17 Feb 2015 9:17

Tgt Ion	Ratio	Lower	Upper
128	100		
129	13.3	0.0	30.9



Data File: I:\MS19\DATA\2015 02\17\02171510.D

Acq On : 17 Feb 2015 8:49

Operator: WA

Sample : P1500566-025 (1000mL)

Misc : S29-02041502

ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 17 16:36:24 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

2/18/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	16524	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	120635	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	21659	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	38820	962.005	pg	0.00
Spiked Amount 1000.000			Recovery	=	96.20%	
30) Toluene-d8 (SS2)	11.38	98	115149	1035.069	pg	0.00
Spiked Amount 1000.000			Recovery	=	103.51%	
40) Bromofluorobenzene (SS3)	14.25	174	45209	1033.903	pg	0.00
Spiked Amount 1000.000			Recovery	=	103.39%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.73	85	142507	2122.099	pg	100
3) Chloromethane	1.84	52	8442	629.493	pg	99
4) Vinyl Chloride	2.01	62	182	N.D.		
5) Bromomethane	2.33	94	1966	65.106	pg	98
6) Chloroethane	2.47	64	341	N.D.		
7) Acetone	2.99	58	146725	6187.379	pg	# 65
8) Trichlorofluoromethane	3.11	101	87947	1524.678	pg	100
9) 1,1-Dichloroethene	3.66	96	118	N.D.		
10) Methylene Chloride	3.80	84	13755	502.547	pg	97
11) Trichlorotrifluoroethane	4.10	151	12123	457.383	pg	99
12) trans-1,2-Dichloroethene	4.74	96	1185	45.064	pg	96
13) 1,1-Dichloroethane	4.95	63	367	N.D.		
14) Methyl tert-Butyl Ether	5.12	73	942	N.D.		
15) cis-1,2-Dichloroethene	5.93	96	1886	64.499	pg	100
16) Chloroform	6.31	83	10295	203.209	pg	98
18) 1,2-Dichloroethane	7.26	62	3373	83.618	pg	100
19) 1,1,1-Trichloroethane	7.59	97	1057	21.455	pg	99
20) Benzene	8.15	78	71675	687.857	pg	100
21) Carbon Tetrachloride	8.34	117	14960	405.605	pg	99
23) 1,2-Dichloropropane	9.16	63	780	29.646	pg	96
24) Bromodichloromethane	0.00	83	0	N.D.	d	
25) Trichloroethene	9.46	130	4613	148.846	pg	100
26) 1,4-Dioxane	9.55	88	134	N.D.		
27) cis-1,3-Dichloropropene	10.47	75	16	N.D.		
28) trans-1,3-Dichloropropene	11.05	75	17	N.D.		
29) 1,1,2-Trichloroethane	11.20	83	182	N.D.		
31) Toluene	11.48	91	291008	2459.532	pg	100
32) 1,2-Dibromoethane	12.13	107	9	N.D.		
33) Tetrachloroethene	12.61	166	2274	62.072	pg	100
35) Chlorobenzene	13.17	112	641	N.D.		
36) Ethylbenzene	13.48	91	47780	351.789	pg	100
37) m,p-Xylene	13.61	91	126818	1136.069	pg	98
38) o-Xylene	13.94	106	22247	407.788	pg	100
39) 1,1,2,2-Tetrachloroethane	13.90	83	427	N.D.		
41) 1,3-Dichlorobenzene	0.00	146	0	N.D.	d	
42) 1,4-Dichlorobenzene	15.24	146	3840	51.305	pg	99
43) 1,2-Dichlorobenzene	15.46	146	161	N.D.		
44) 1,2,4-Trichlorobenzene	16.63	182	223	N.D.		
45) Naphthalene	16.70	128	9675	71.391	pg	94
46) Hexachlorobutadiene	16.96	225	25	N.D.		

(#)= qualifier out of range (m)= manual integration (+)= signals summed

Data File: I:\MS19\DATA\2015 02\17\02171510.D

Acq On : 17 Feb 2015 8:49

Operator: WA

Sample : P1500566-025 (1000mL)

Misc : S29-02041502

ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 17 16:36:24 2015

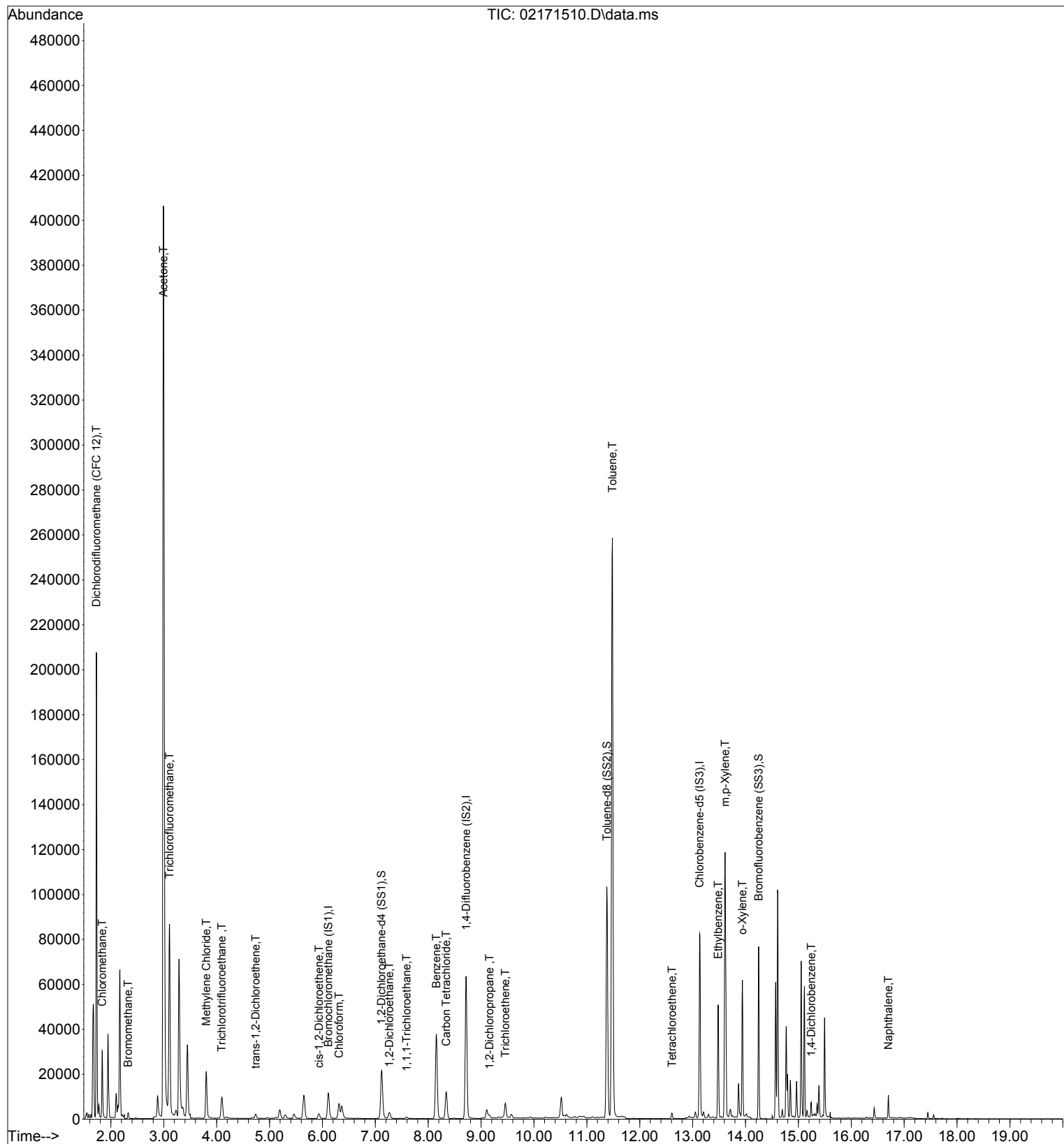
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 02\17\02171510.D

Acq On : 17 Feb 2015 8:49

Operator: WA

Sample : P1500566-025 (1000mL)

Misc : S29-02041502

ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 17 16:36:24 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

2/17/15

DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	16524	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	120635	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	21659	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	38820	962.005	pg	0.00
Spiked Amount 1000.000			Recovery	=	96.20%	
30) Toluene-d8 (SS2)	11.38	98	115149	1035.069	pg	0.00
Spiked Amount 1000.000			Recovery	=	103.51%	
40) Bromofluorobenzene (SS3)	14.25	174	45209	1033.903	pg	0.00
Spiked Amount 1000.000			Recovery	=	103.39%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.73	85	142507	2122.099	pg	100
3) Chloromethane	1.84	52	8442	629.493	pg	99
5) Bromomethane	2.33	94	1966	65.106	pg	98
7) Acetone	2.99	58	146725	6187.379	pg	# 65
8) Trichlorofluoromethane	3.11	101	87947	1524.678	pg	100
10) Methylene Chloride	3.80	84	13755	502.547	pg	97
11) Trichlorotrifluoroethane	4.10	151	12123	457.383	pg	99
12) trans-1,2-Dichloroethene	4.74	96	1185	45.064	pg	96
15) cis-1,2-Dichloroethene	5.93	96	1886	64.499	pg	100
16) Chloroform	6.31	83	10295	203.209	pg	98
18) 1,2-Dichloroethane	7.26	62	3373	83.618	pg	100
19) 1,1,1-Trichloroethane	7.59	97	1057	21.455	pg	99
20) Benzene	8.15	78	71675	687.857	pg	100
21) Carbon Tetrachloride	8.34	117	14960	405.605	pg	99
23) 1,2-Dichloropropane	9.16	63	780	29.646	pg	96
25) Trichloroethene	9.46	130	4613	148.846	pg	100
31) Toluene	11.48	91	291008	2459.532	pg	100
33) Tetrachloroethene	12.61	166	2274	62.072	pg	100
36) Ethylbenzene	13.48	91	47780	351.789	pg	100
37) m,p-Xylene	13.61	91	126818	1136.069	pg	98
38) o-Xylene	13.94	106	22247	407.788	pg	100
42) 1,4-Dichlorobenzene	15.24	146	3840	51.305	pg	99
45) Naphthalene	16.70	128	9675	71.391	pg	94

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\17\02171510.D

Acq On : 17 Feb 2015 8:49

Operator: WA

Sample : P1500566-025 (1000mL)

Misc : S29-02041502

ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 17 16:36:24 2015

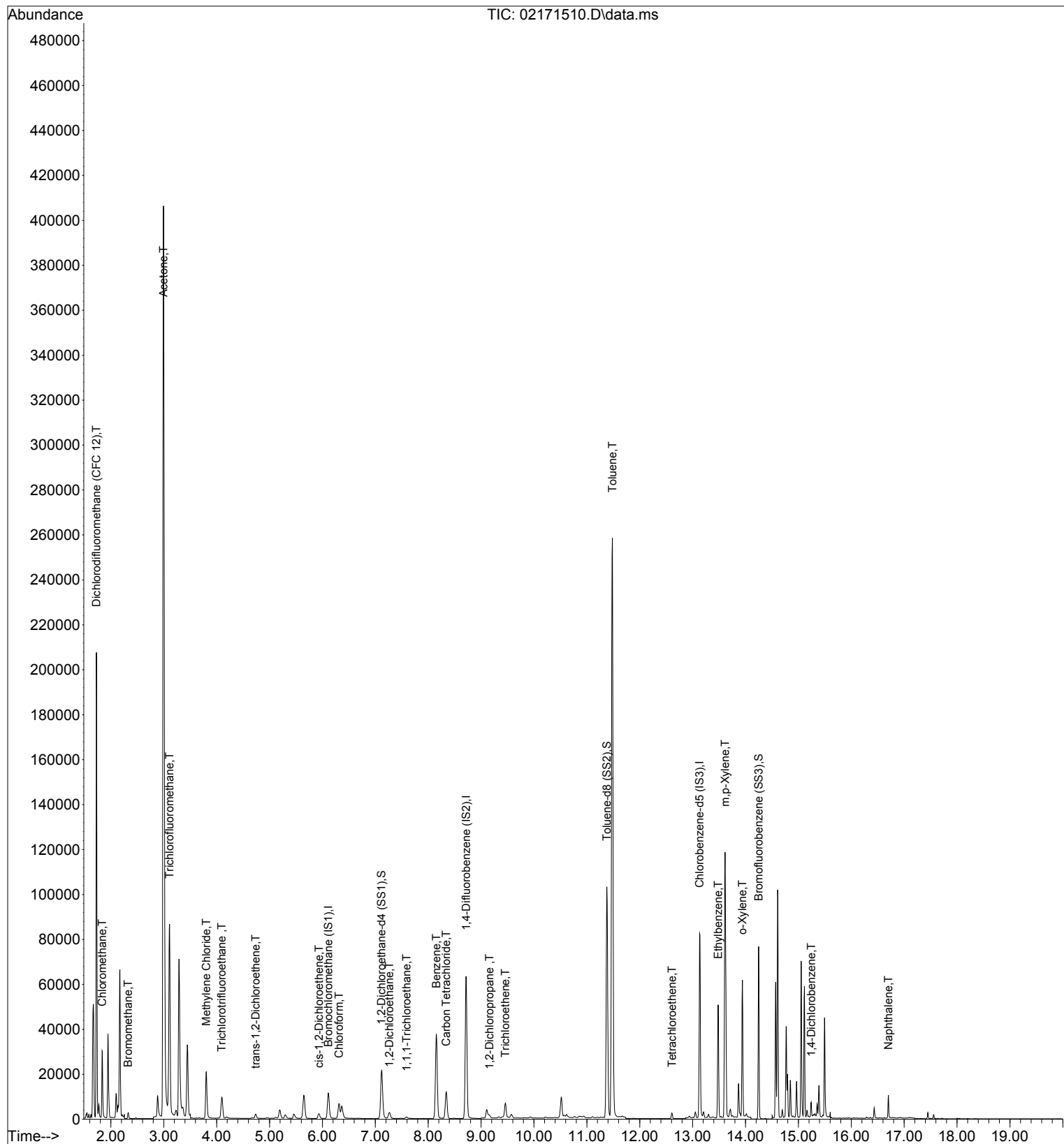
Quant Method : I:\MS19\METHODS\X19021115.M

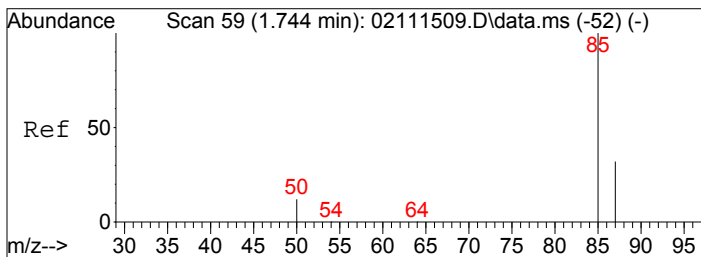
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

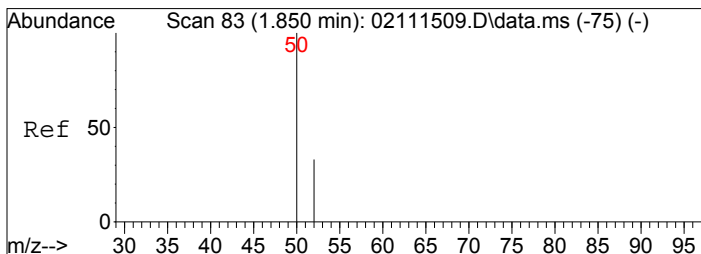
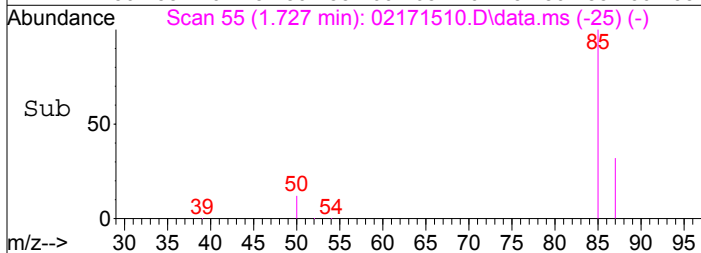
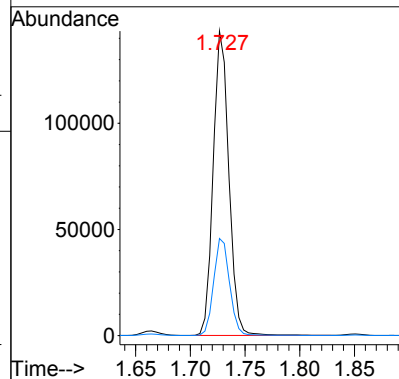
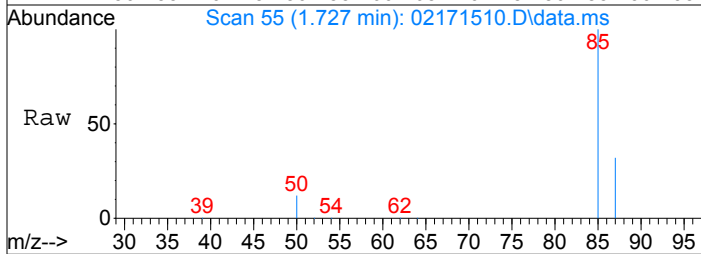
DataAcq Meth:TO15SIM.M





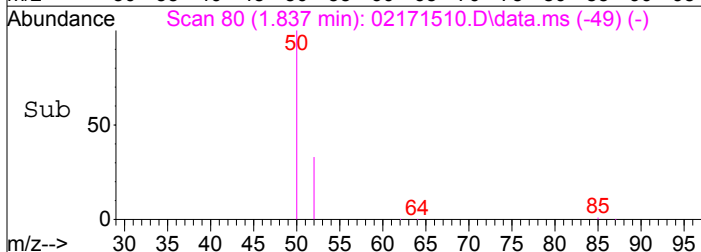
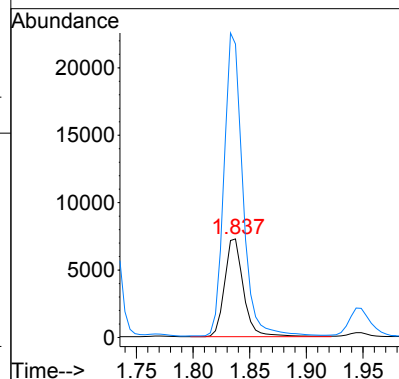
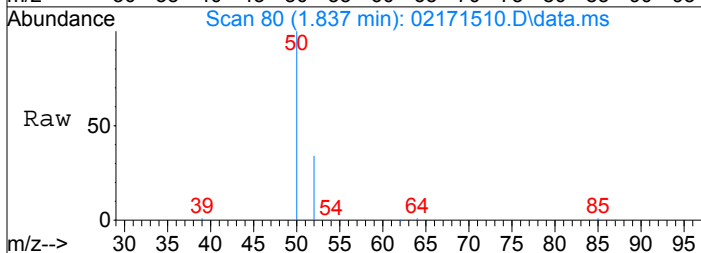
#2
 Dichlorodifluoromethane (CFC 12)
 Concen: 2122.10 pg
 RT: 1.73 min Scan# 55
 Delta R.T. -0.017 min
 Lab File: 02171510.D
 Acq: 17 Feb 2015 8:49

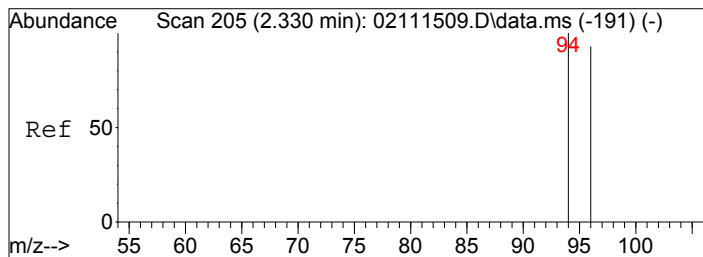
Tgt Ion: 85 Resp: 142507
 Ion Ratio Lower Upper
 85 100
 87 32.4 12.4 52.4



#3
 Chloromethane
 Concen: 629.49 pg
 RT: 1.84 min Scan# 80
 Delta R.T. -0.013 min
 Lab File: 02171510.D
 Acq: 17 Feb 2015 8:49

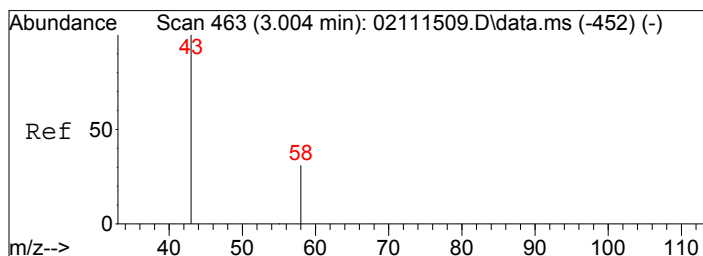
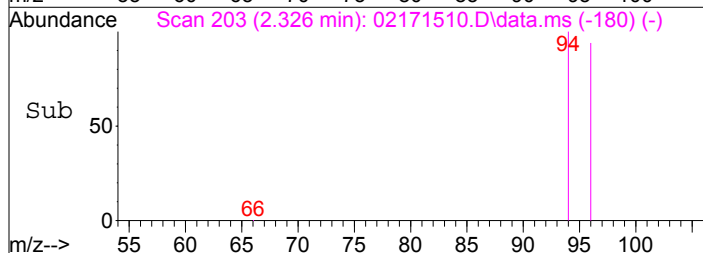
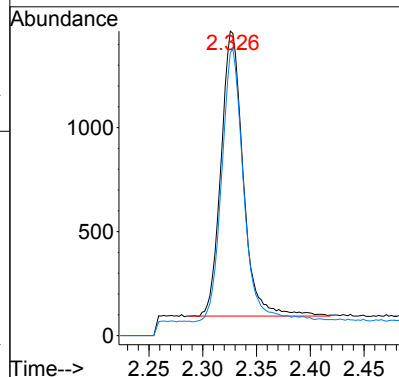
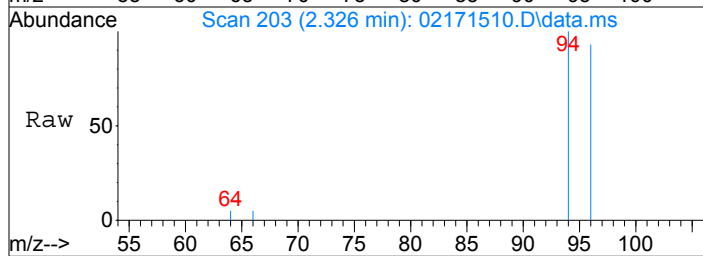
Tgt Ion: 52 Resp: 8442
 Ion Ratio Lower Upper
 52 100
 50 305.8 283.7 323.7





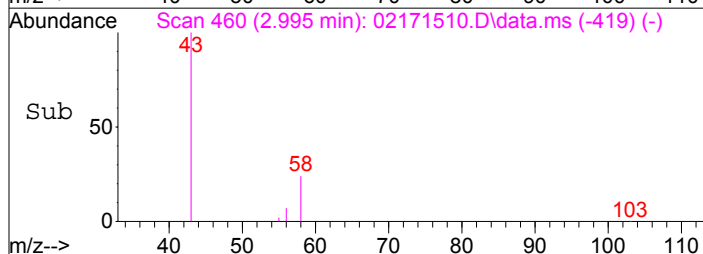
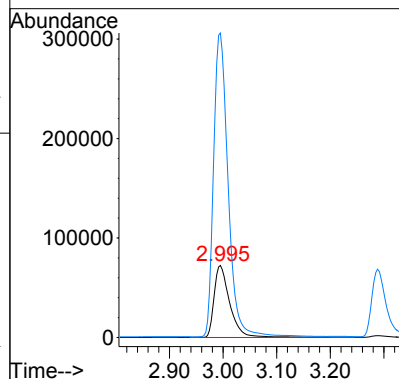
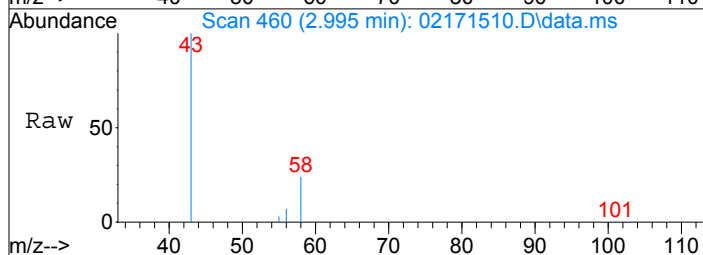
#5
Bromomethane
Concen: 65.11 pg
RT: 2.33 min Scan# 203
Delta R.T. -0.004 min
Lab File: 02171510.D
Acq: 17 Feb 2015 8:49

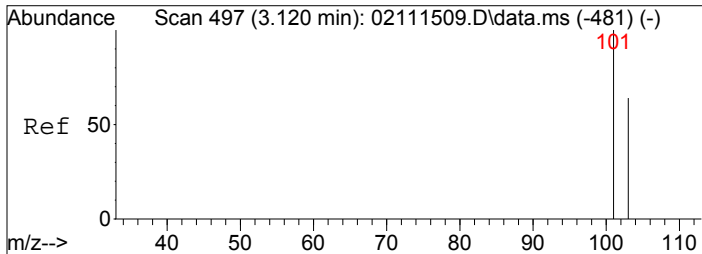
Tgt Ion: 94 Resp: 1966
Ion Ratio Lower Upper
94 100
96 96.2 75.5 113.3



#7
Acetone
Concen: 6187.38 pg
RT: 2.99 min Scan# 460
Delta R.T. -0.009 min
Lab File: 02171510.D
Acq: 17 Feb 2015 8:49

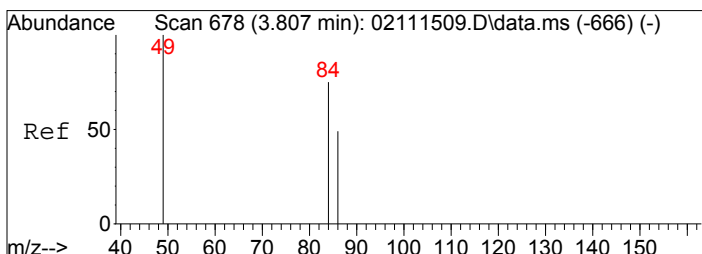
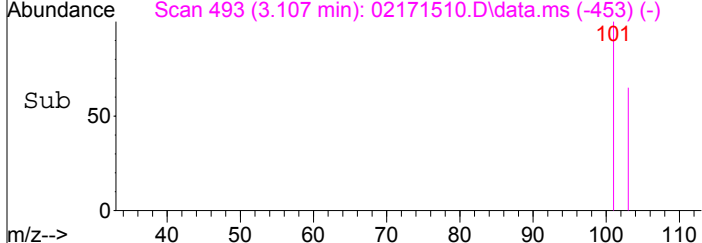
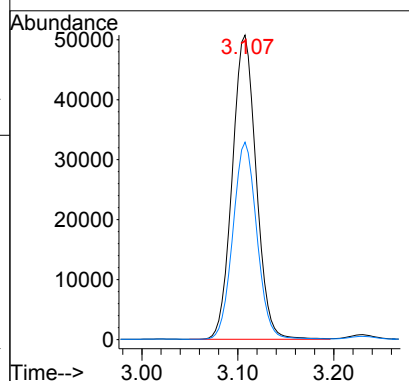
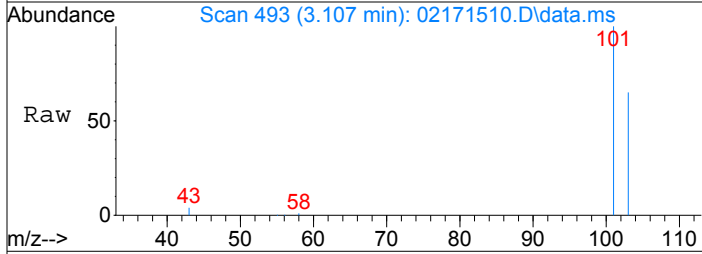
Tgt Ion: 58 Resp: 146725
Ion Ratio Lower Upper
58 100
43 393.7 301.8 341.8#





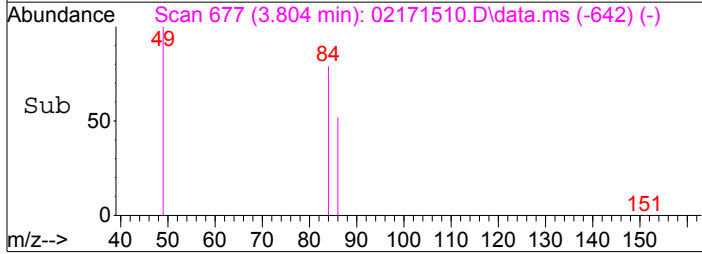
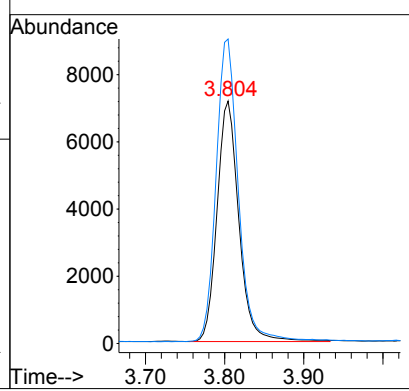
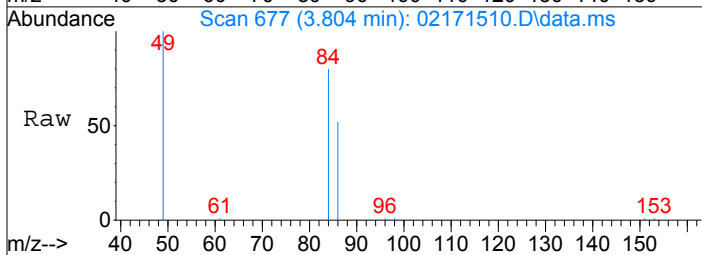
#8
 Trichlorofluoromethane
 Concen: 1524.68 pg
 RT: 3.11 min Scan# 493
 Delta R.T. -0.012 min
 Lab File: 02171510.D
 Acq: 17 Feb 2015 8:49

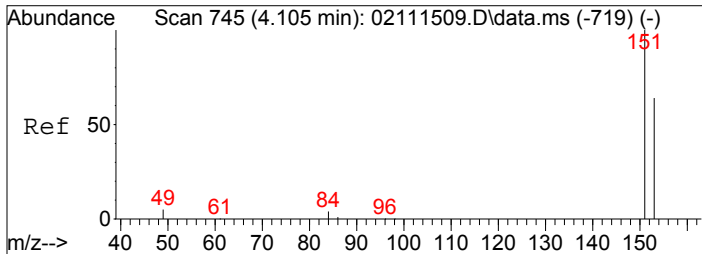
Tgt Ion: 101	Resp: 87947
Ion Ratio	Lower Upper
101	100
103	64.8 51.8 77.6



#10
 Methylene Chloride
 Concen: 502.55 pg
 RT: 3.80 min Scan# 677
 Delta R.T. -0.003 min
 Lab File: 02171510.D
 Acq: 17 Feb 2015 8:49

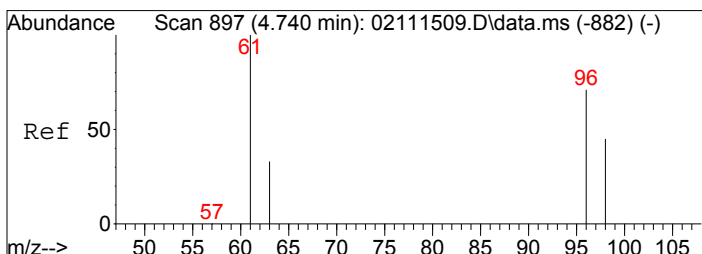
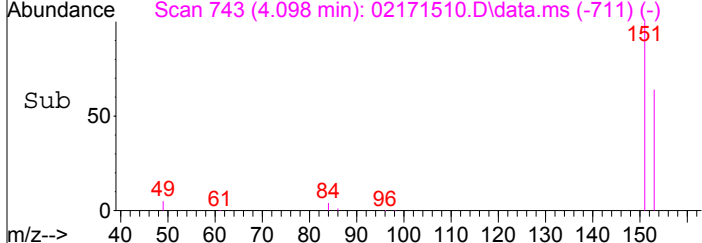
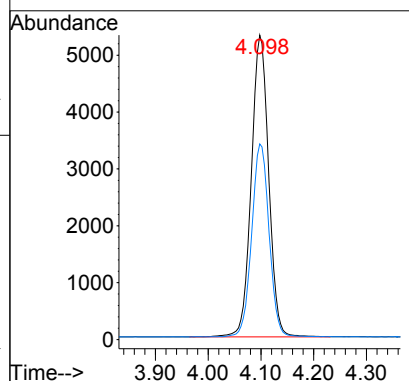
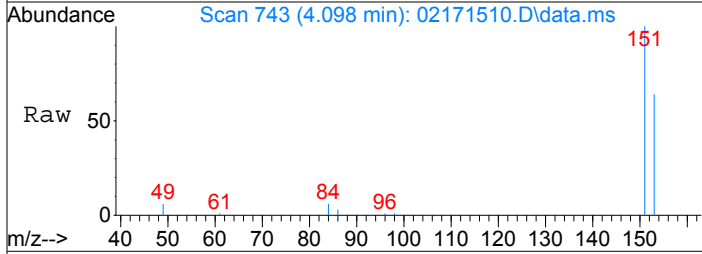
Tgt Ion: 84	Resp: 13755
Ion Ratio	Lower Upper
84	100
49	128.7 112.3 152.3





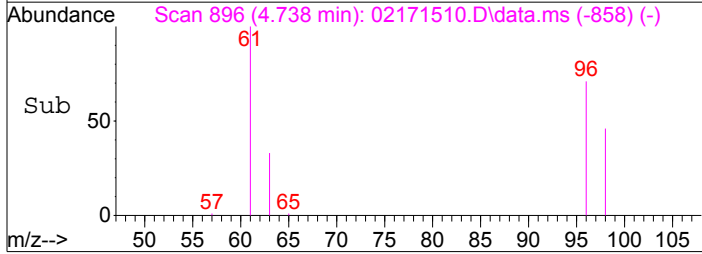
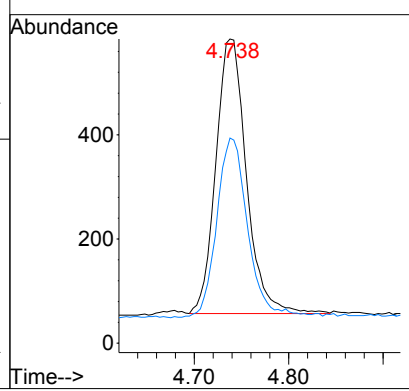
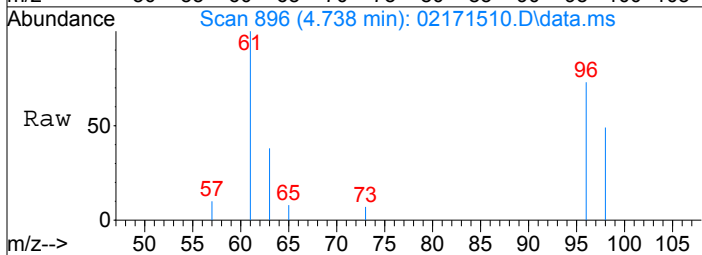
#11
 Trichlorotrifluoroethane
 Concen: 457.38 pg
 RT: 4.10 min Scan# 743
 Delta R.T. -0.007 min
 Lab File: 02171510.D
 Acq: 17 Feb 2015 8:49

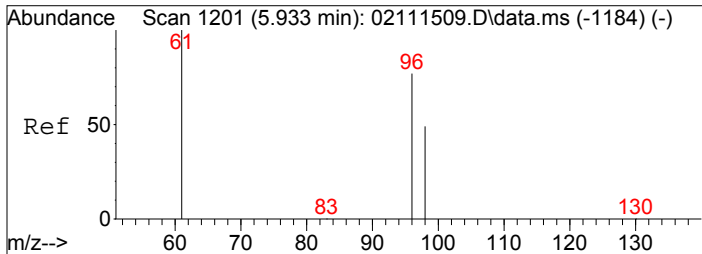
Tgt Ion: 151	Resp:	12123
Ion Ratio	Lower	Upper
151	100	
153	64.1	43.6 83.6



#12
 trans-1,2-Dichloroethene
 Concen: 45.06 pg
 RT: 4.74 min Scan# 896
 Delta R.T. -0.002 min
 Lab File: 02171510.D
 Acq: 17 Feb 2015 8:49

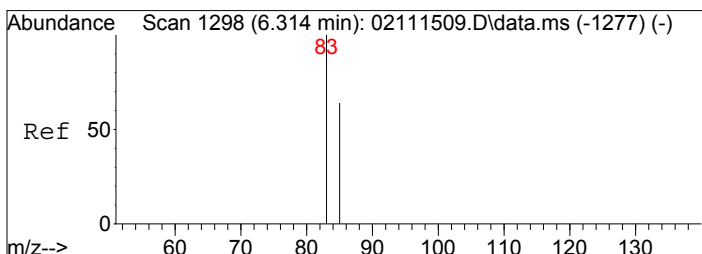
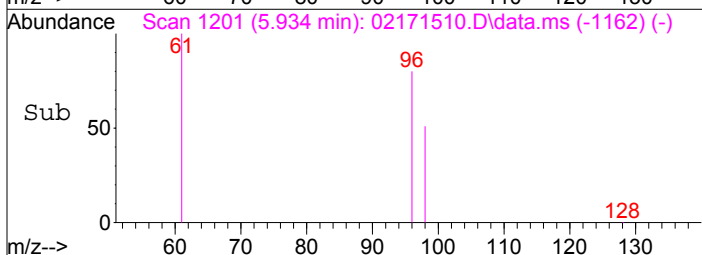
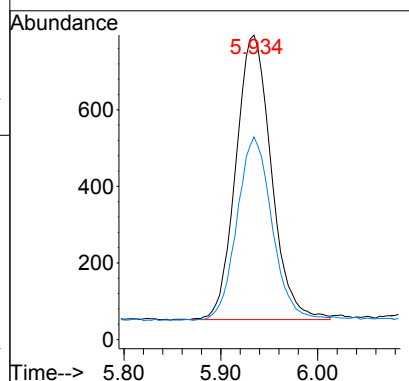
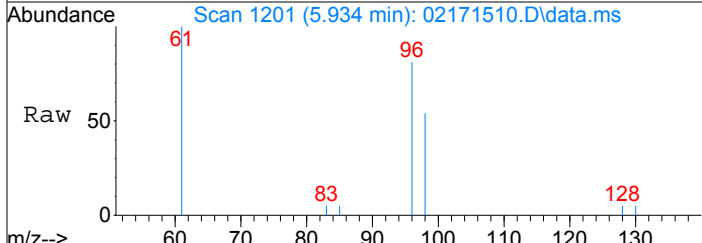
Tgt Ion: 96	Resp:	1185
Ion Ratio	Lower	Upper
96	100	
98	66.7	43.7 83.7





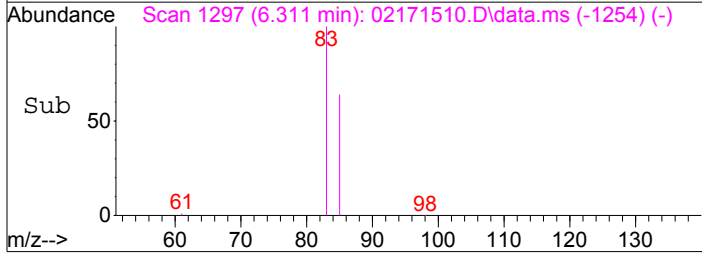
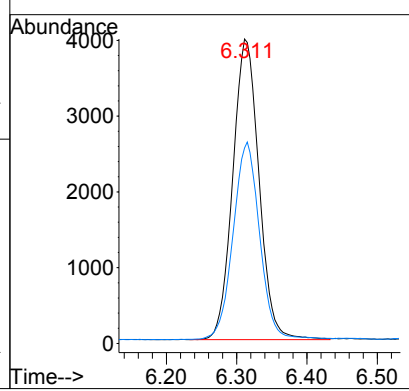
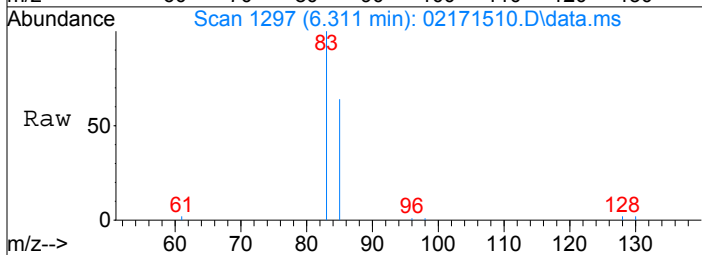
#15
 cis-1,2-Dichloroethene
 Concen: 64.50 pg
 RT: 5.93 min Scan# 1201
 Delta R.T. 0.001 min
 Lab File: 02171510.D
 Acq: 17 Feb 2015 8:49

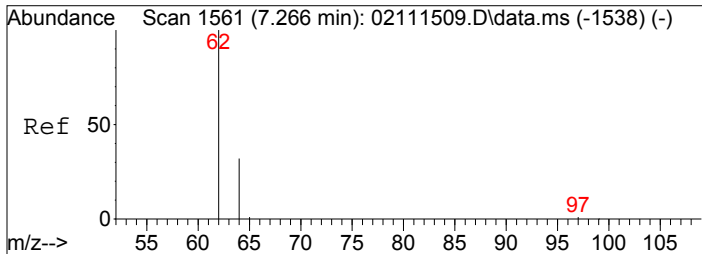
Tgt Ion:	96	Resp:	1886
Ion Ratio	Lower	Upper	
96	100		
98	64.5	44.3	84.3



#16
 Chloroform
 Concen: 203.21 pg
 RT: 6.31 min Scan# 1297
 Delta R.T. -0.003 min
 Lab File: 02171510.D
 Acq: 17 Feb 2015 8:49

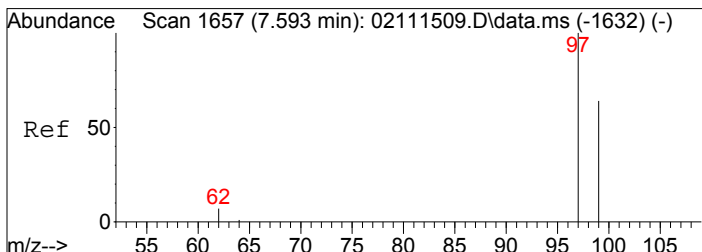
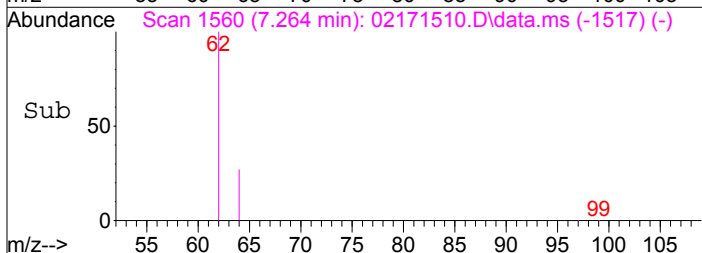
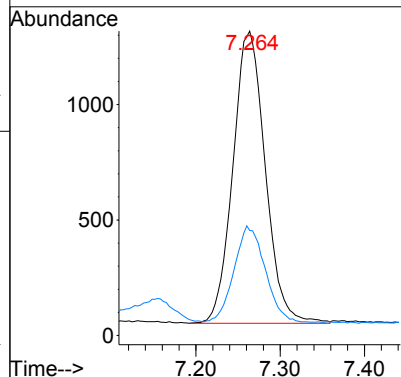
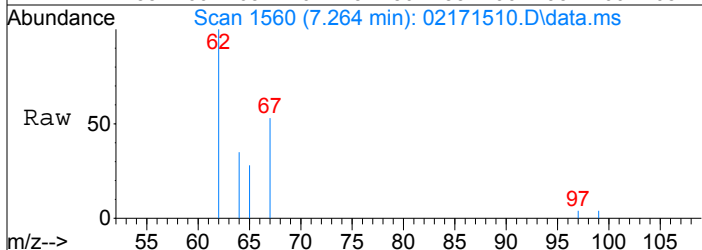
Tgt Ion:	83	Resp:	10295
Ion Ratio	Lower	Upper	
83	100		
85	66.7	45.4	85.4





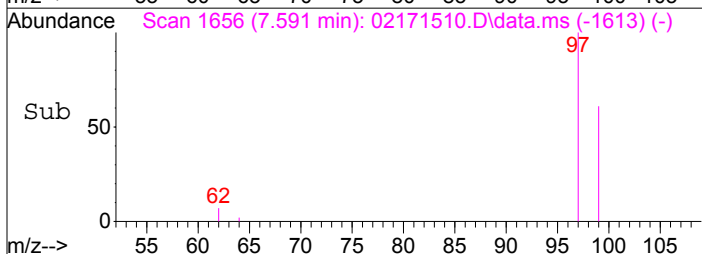
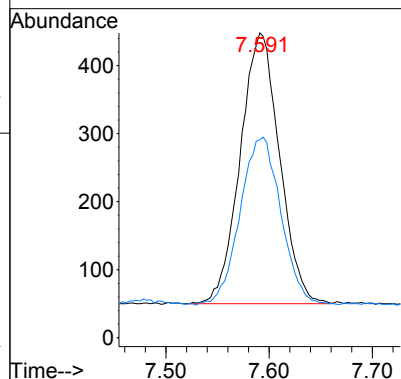
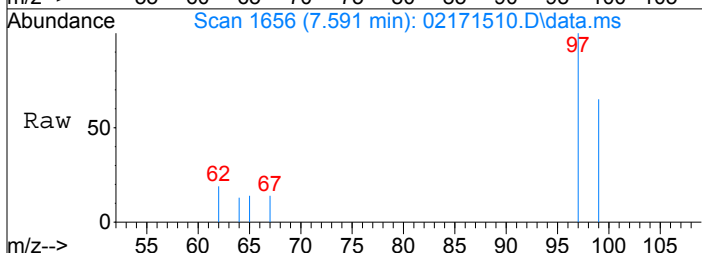
#18
 1,2-Dichloroethane
 Concen: 83.62 pg
 RT: 7.26 min Scan# 1560
 Delta R.T. -0.002 min
 Lab File: 02171510.D
 Acq: 17 Feb 2015 8:49

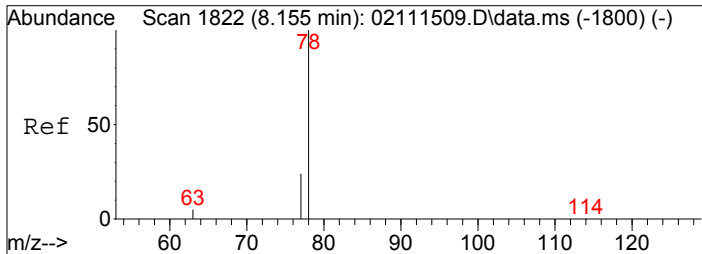
Tgt Ion: 62 Resp: 3373
 Ion Ratio Lower Upper
 62 100
 64 31.7 11.6 51.6



#19
 1,1,1-Trichloroethane
 Concen: 21.45 pg
 RT: 7.59 min Scan# 1656
 Delta R.T. -0.002 min
 Lab File: 02171510.D
 Acq: 17 Feb 2015 8:49

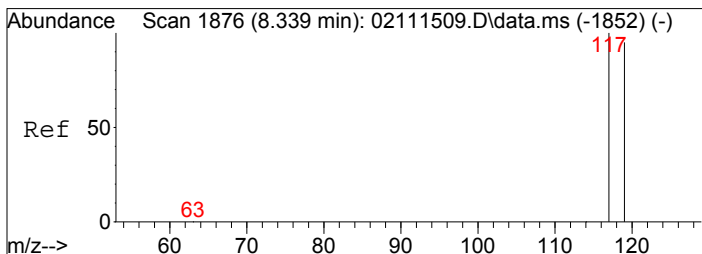
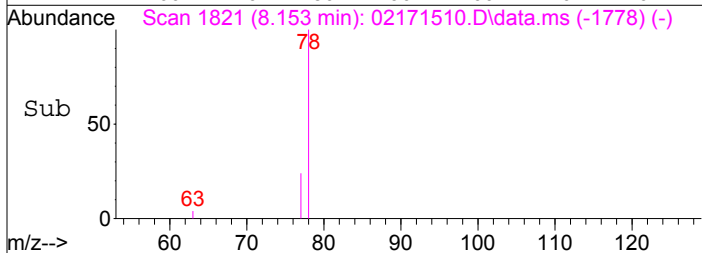
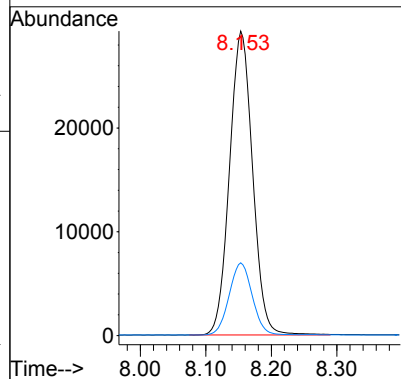
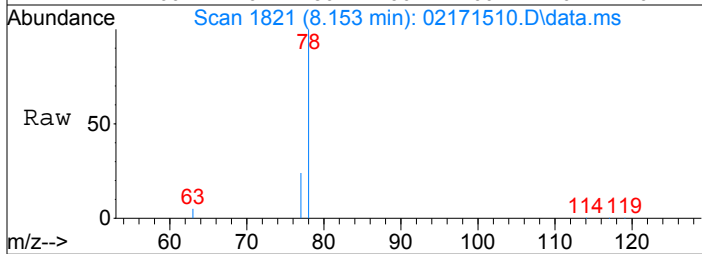
Tgt Ion: 97 Resp: 1057
 Ion Ratio Lower Upper
 97 100
 99 64.6 44.0 84.0





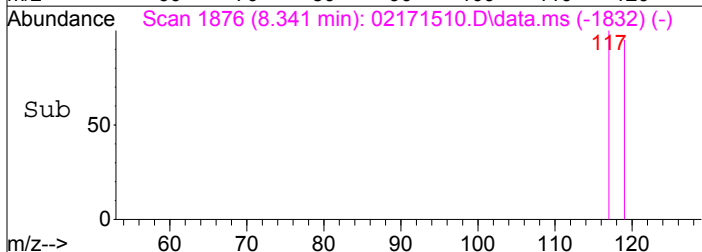
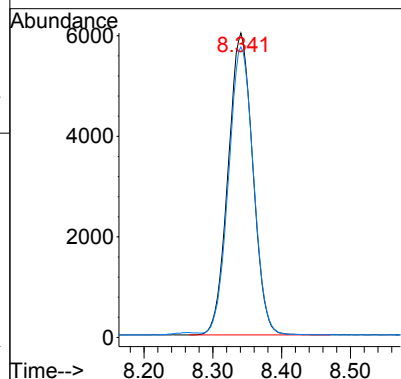
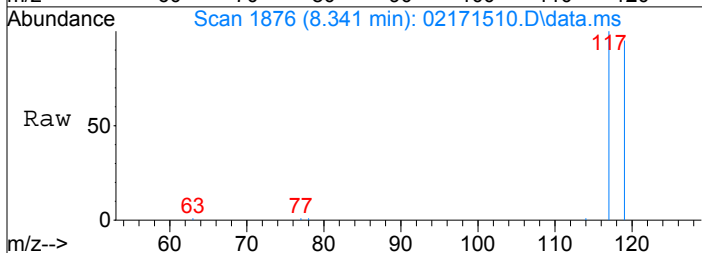
#20
Benzene
Concen: 687.86 pg
RT: 8.15 min Scan# 1821
Delta R.T. -0.002 min
Lab File: 02171510.D
Acq: 17 Feb 2015 8:49

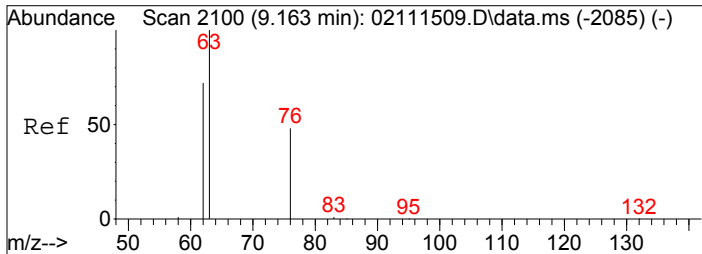
Tgt Ion	78	77	Resp	71675	Lower	Upper
Ion Ratio	100	23.7				
			3.7			43.7



#21
Carbon Tetrachloride
Concen: 405.60 pg
RT: 8.34 min Scan# 1876
Delta R.T. 0.001 min
Lab File: 02171510.D
Acq: 17 Feb 2015 8:49

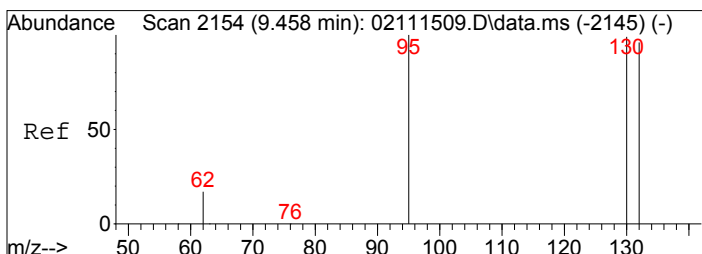
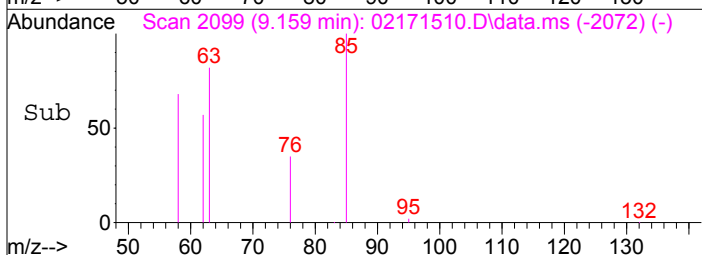
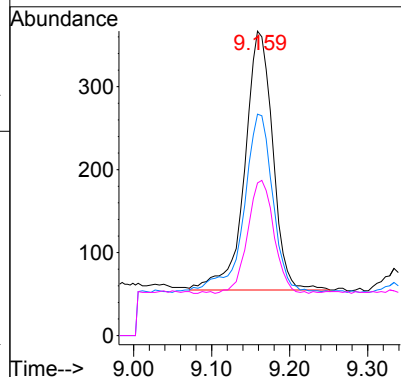
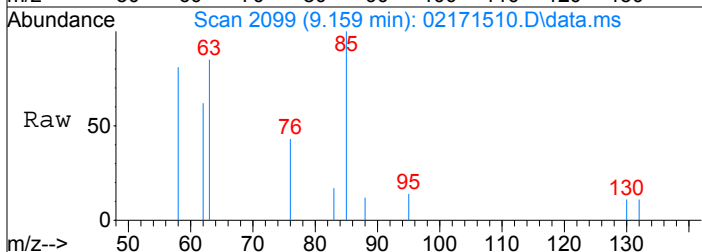
Tgt Ion	117	119	Resp	14960	Lower	Upper
Ion Ratio	100	96.1				
			75.5			115.5





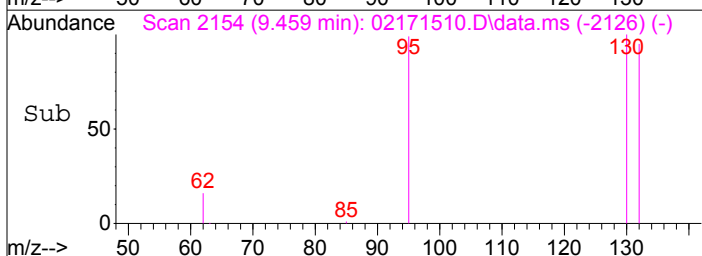
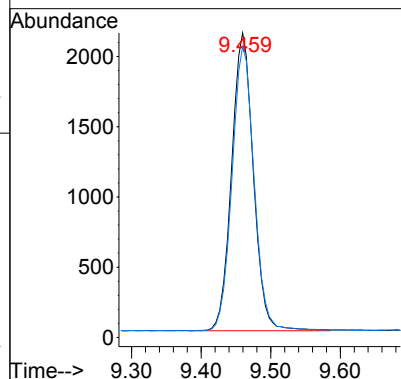
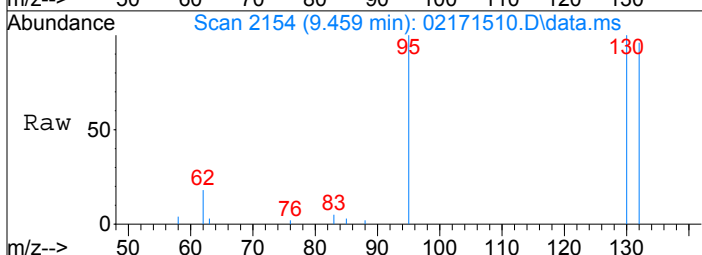
#23
 1,2-Dichloropropane
 Concen: 29.65 pg
 RT: 9.16 min Scan# 2099
 Delta R.T. -0.004 min
 Lab File: 02171510.D
 Acq: 17 Feb 2015 8:49

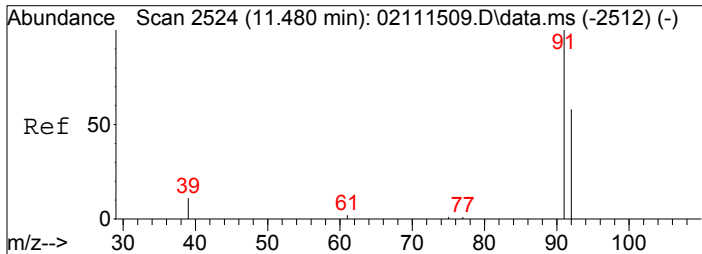
Tgt Ion:	63	Resp:	780
Ion Ratio	Lower	Upper	
63	100		
62	71.9	52.0	92.0
76	40.9	28.1	68.1



#25
 Trichloroethene
 Concen: 148.85 pg
 RT: 9.46 min Scan# 2154
 Delta R.T. 0.001 min
 Lab File: 02171510.D
 Acq: 17 Feb 2015 8:49

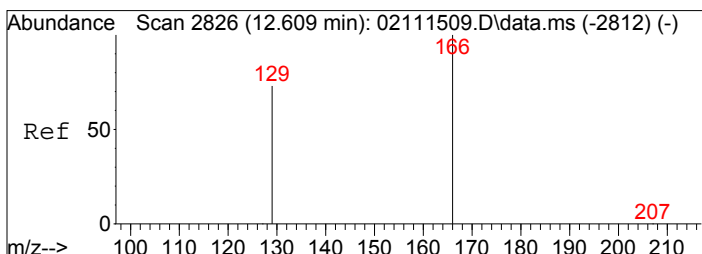
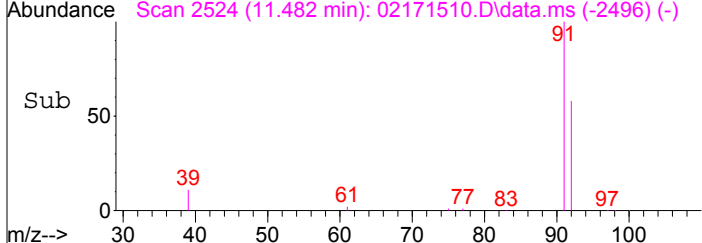
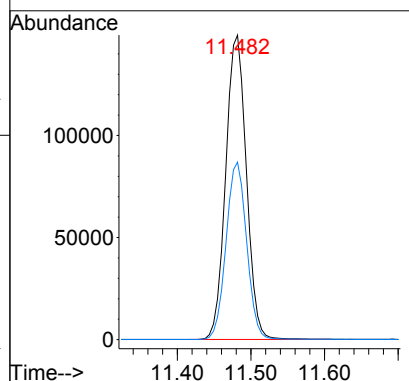
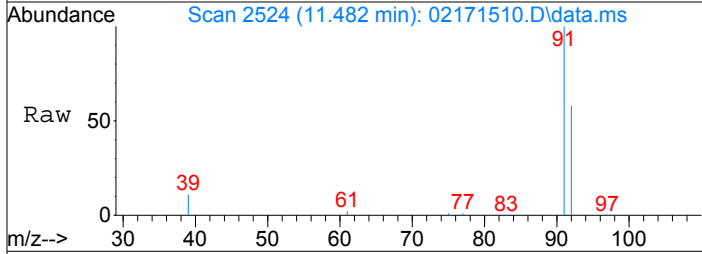
Tgt Ion:	130	Resp:	4613
Ion Ratio	Lower	Upper	
130	100		
132	96.7	77.1	117.1





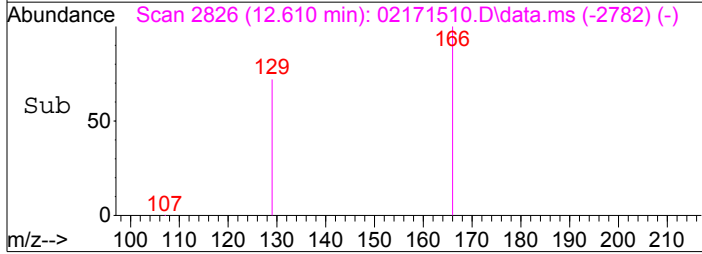
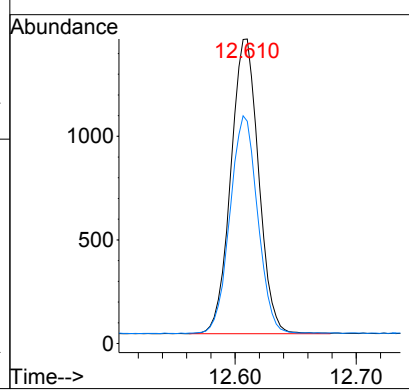
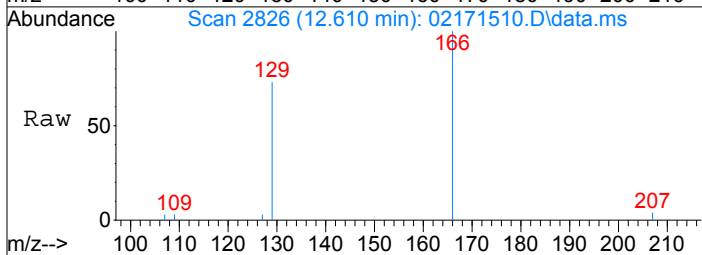
#31
Toluene
Concen: 2459.53 pg
RT: 11.48 min Scan# 2524
Delta R.T. 0.001 min
Lab File: 02171510.D
Acq: 17 Feb 2015 8:49

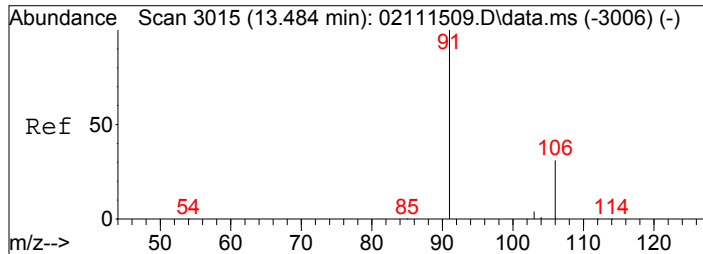
Tgt Ion:	91	Resp:	291008
Ion Ratio	Lower	Upper	
91	100		
92	58.0	37.7	77.7



#33
Tetrachloroethene
Concen: 62.07 pg
RT: 12.61 min Scan# 2826
Delta R.T. 0.001 min
Lab File: 02171510.D
Acq: 17 Feb 2015 8:49

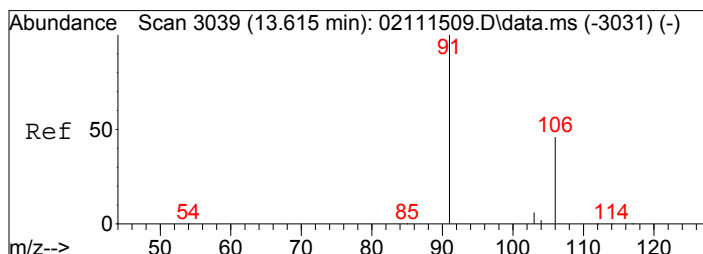
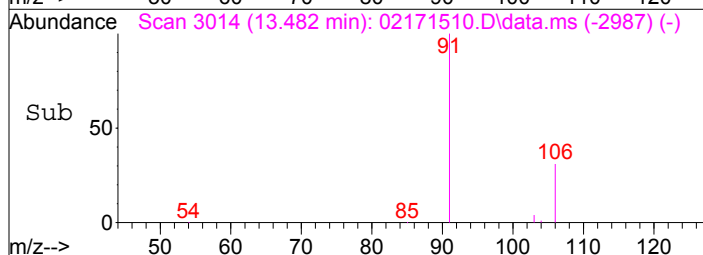
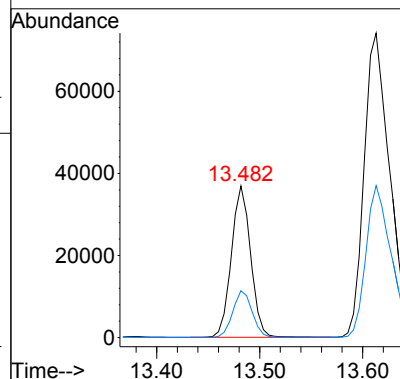
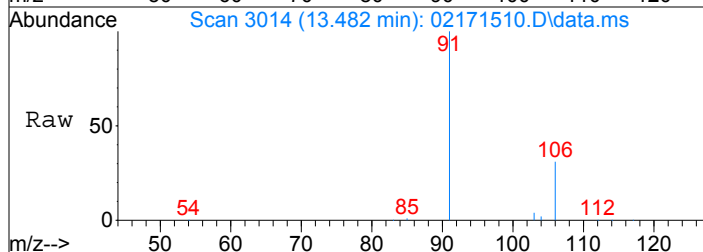
Tgt Ion:	166	Resp:	2274
Ion Ratio	Lower	Upper	
166	100		
129	73.4	53.3	93.3





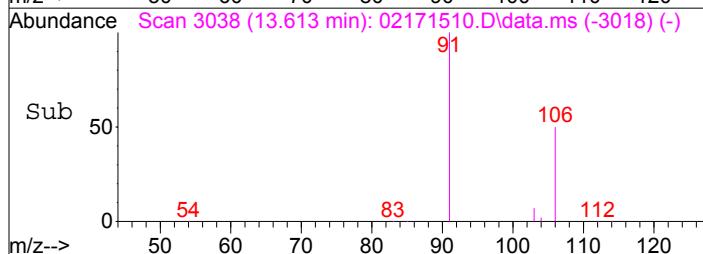
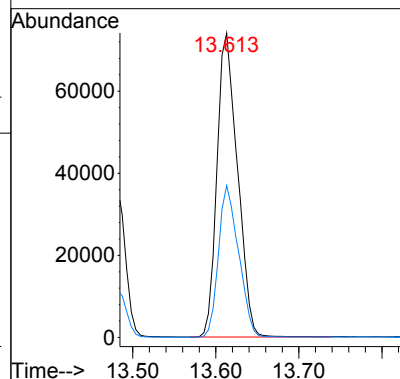
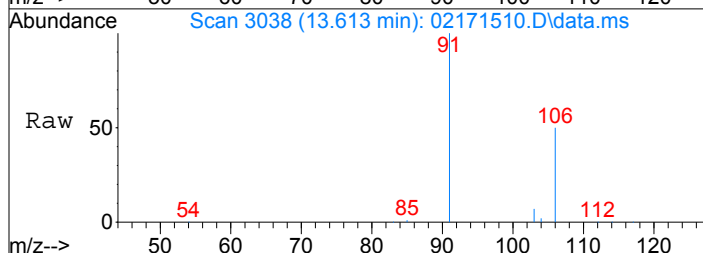
#36
Ethylbenzene
Concen: 351.79 pg
RT: 13.48 min Scan# 3014
Delta R.T. -0.002 min
Lab File: 02171510.D
Acq: 17 Feb 2015 8:49

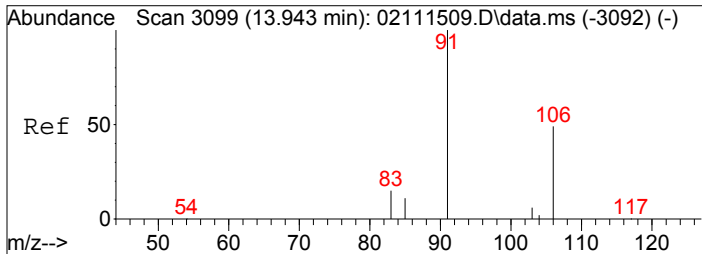
Tgt Ion: 91 Resp: 47780
Ion Ratio Lower Upper
91 100
106 31.0 10.9 50.9



#37
m,p-Xylene
Concen: 1136.07 pg
RT: 13.61 min Scan# 3038
Delta R.T. -0.002 min
Lab File: 02171510.D
Acq: 17 Feb 2015 8:49

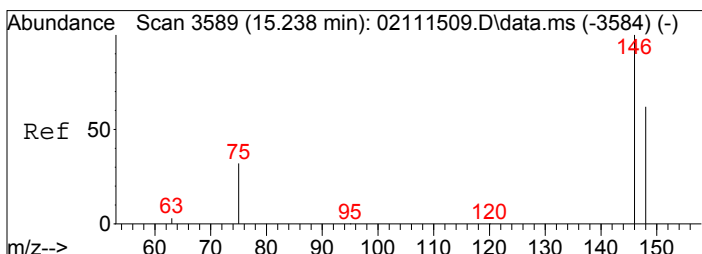
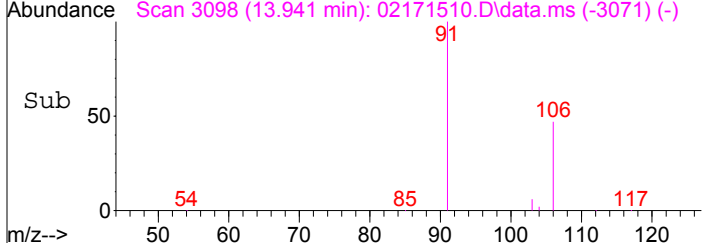
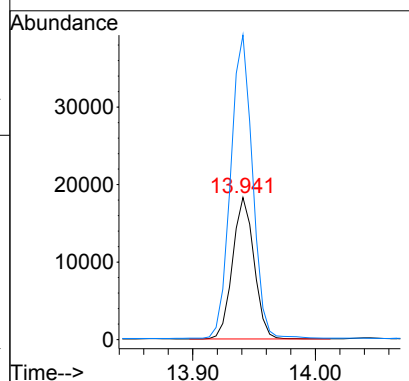
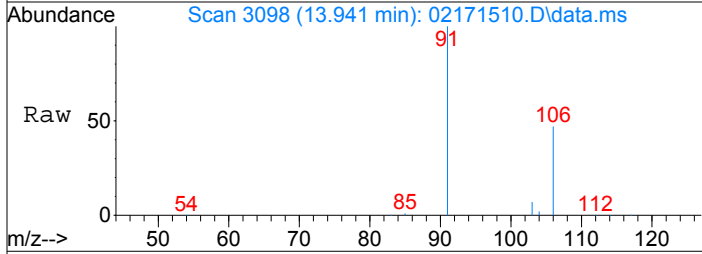
Tgt Ion: 91 Resp: 126818
Ion Ratio Lower Upper
91 100
106 49.1 27.5 67.5





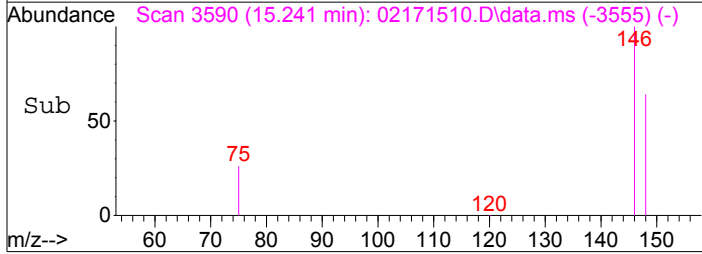
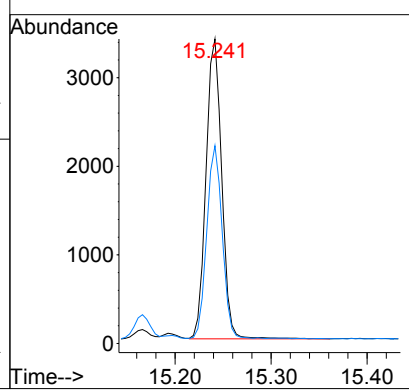
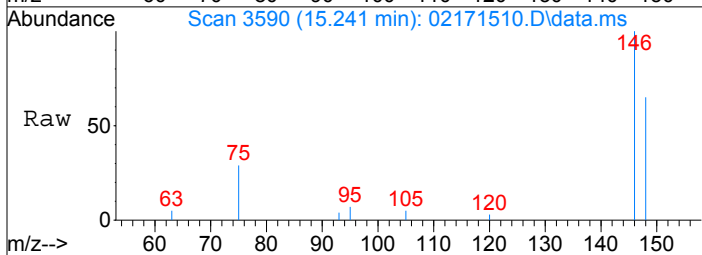
#38
 o-Xylene
 Concen: 407.79 pg
 RT: 13.94 min Scan# 3098
 Delta R.T. -0.002 min
 Lab File: 02171510.D
 Acq: 17 Feb 2015 8:49

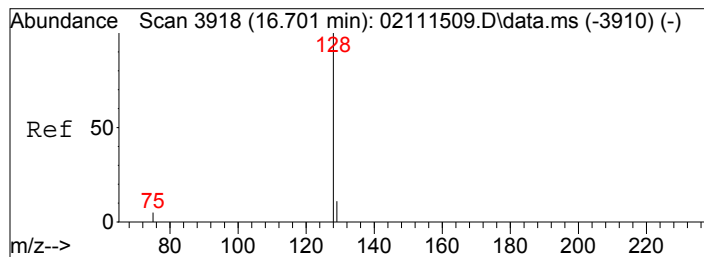
Tgt Ion:106	Resp:	22247
Ion Ratio	Lower	Upper
106	100	
91	217.8	198.3 238.3



#42
 1,4-Dichlorobenzene
 Concen: 51.30 pg
 RT: 15.24 min Scan# 3590
 Delta R.T. 0.004 min
 Lab File: 02171510.D
 Acq: 17 Feb 2015 8:49

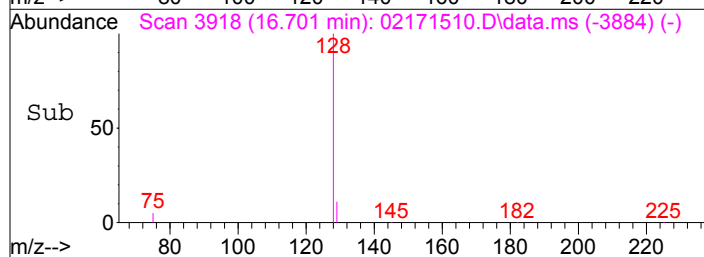
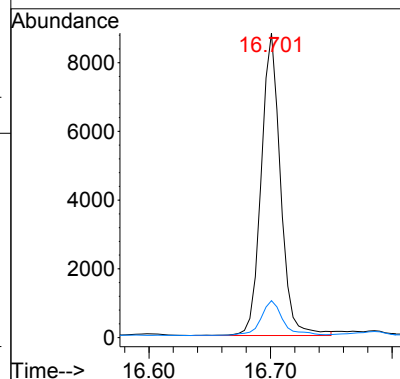
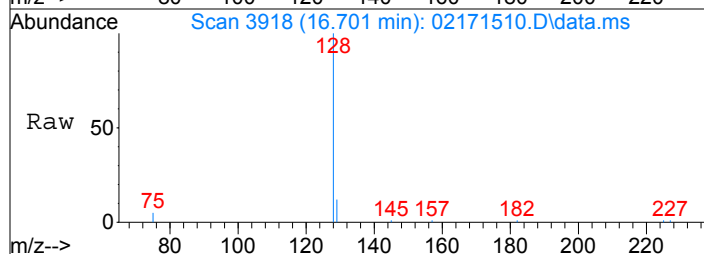
Tgt Ion:146	Resp:	3840
Ion Ratio	Lower	Upper
146	100	
148	63.0	43.5 83.5





#45
Naphthalene
Concen: 71.39 pg
RT: 16.70 min Scan# 3918
Delta R.T. -0.000 min
Lab File: 02171510.D
Acq: 17 Feb 2015 8:49

Tgt Ion	Ratio	Resp	Lower	Upper
128	100	9675		
129	13.1	0.0		30.9



Data File: I:\MS19\DATA\2015 02\17\02171509.D

Acq On : 17 Feb 2015 8:20

Operator: WA

Sample : P1500566-026 (1000mL)

Misc : S29-02041502

ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 17 16:34:21 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

2/18/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	16591	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	118605	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	21652	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	39039	963.526	pg	0.00
Spiked Amount 1000.000			Recovery	=	96.35%	
30) Toluene-d8 (SS2)	11.38	98	113851	1040.917	pg	0.00
Spiked Amount 1000.000			Recovery	=	104.09%	
40) Bromofluorobenzene (SS3)	14.25	174	44592	1020.122	pg	0.00
Spiked Amount 1000.000			Recovery	=	102.01%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.73	85	134940	2001.303	pg	100
3) Chloromethane	1.83	52	7696	571.549	pg	99
4) Vinyl Chloride	2.01	62	229	N.D.		
5) Bromomethane	2.32	94	1567	51.683	pg	99
6) Chloroethane	2.47	64	346	N.D.		
7) Acetone	2.99	58	138898	5833.661	pg	# 62
8) Trichlorofluoromethane	3.10	101	88246	1523.684	pg	100
9) 1,1-Dichloroethene	3.66	96	89	N.D.		
10) Methylene Chloride	3.80	84	10025	364.790	pg	98
11) Trichlorotrifluoroethane	4.09	151	11748	441.445	pg	100
12) trans-1,2-Dichloroethene	4.74	96	505	N.D.		
13) 1,1-Dichloroethane	4.95	63	308	N.D.		
14) Methyl tert-Butyl Ether	5.11	73	607	N.D.		
15) cis-1,2-Dichloroethene	5.93	96	974	33.175	pg	97
16) Chloroform	6.31	83	6883	135.312	pg	98
18) 1,2-Dichloroethane	7.26	62	3350	82.712	pg	99
19) 1,1,1-Trichloroethane	7.59	97	895	N.D.		
20) Benzene	8.15	78	58557	559.696	pg	100
21) Carbon Tetrachloride	8.34	117	17028	459.809	pg	100
23) 1,2-Dichloropropane	9.16	63	792	30.617	pg	96
24) Bromodichloromethane	0.00	83	0	N.D.	d	
25) Trichloroethene	9.46	130	3155	103.543	pg	99
26) 1,4-Dioxane	9.55	88	103	N.D.		
27) cis-1,3-Dichloropropene	10.45	75	36	N.D.		
28) trans-1,3-Dichloropropene	11.04	75	28	N.D.		
29) 1,1,2-Trichloroethane	11.19	83	90	N.D.		
31) Toluene	11.48	91	285718	2456.153	pg	100
32) 1,2-Dibromoethane	12.12	107	29	N.D.		
33) Tetrachloroethene	12.61	166	1641	45.560	pg	98
35) Chlorobenzene	13.17	112	655	N.D.		
36) Ethylbenzene	13.48	91	41955	309.001	pg	100
37) m,p-Xylene	13.61	91	102692	920.239	pg	98
38) o-Xylene	13.94	106	18140	332.614	pg	100
39) 1,1,2,2-Tetrachloroethane	13.90	83	421	N.D.		
41) 1,3-Dichlorobenzene	15.17	146	342	N.D.		
42) 1,4-Dichlorobenzene	15.24	146	1534	20.502	pg	99
43) 1,2-Dichlorobenzene	15.46	146	131	N.D.		
44) 1,2,4-Trichlorobenzene	16.63	182	167	N.D.		
45) Naphthalene	16.70	128	17250	127.327	pg	97
46) Hexachlorobutadiene	16.96	225	36	N.D.		

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\17\02171509.D

Acq On : 17 Feb 2015 8:20

Operator: WA

Sample : P1500566-026 (1000mL)

Misc : S29-02041502

ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 17 16:34:21 2015

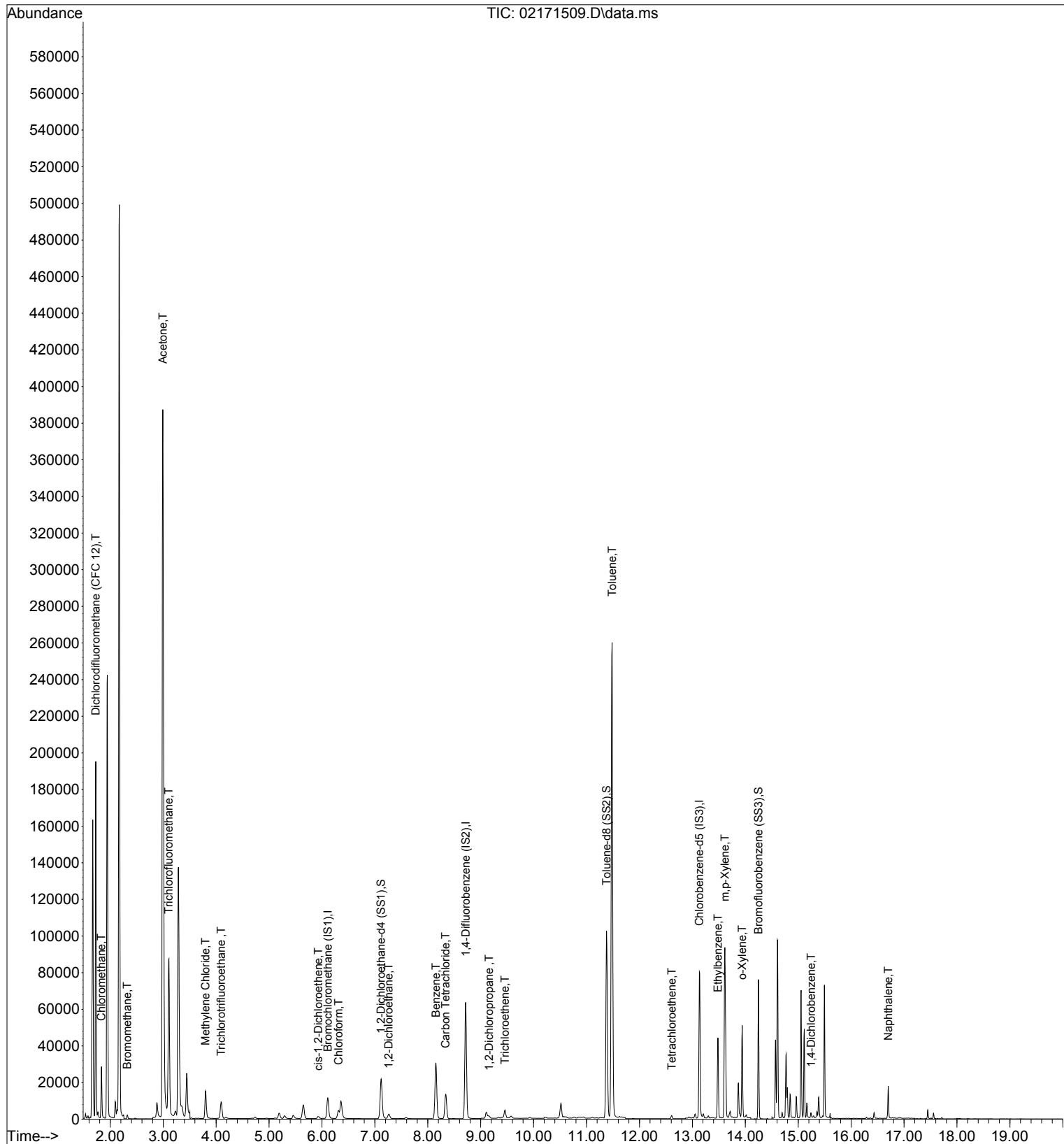
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 02\17\02171509.D

Acq On : 17 Feb 2015 8:20

Operator: WA

Sample : P1500566-026 (1000mL)

Misc : S29-02041502

ALS Vial : 1 Sample Multiplier: 1

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Quant Method : I:\MS19\METHODS\X19021115.M

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Spiked Amount 1000.000			Recovery	=	96.35%	
30) Toluene-d8 (SS2)	11.38	98	113851	1040.917	pg	0.00
Spiked Amount 1000.000			Recovery	=	104.09%	
40) Bromofluorobenzene (SS3)	14.25	174	44592	1020.122	pg	0.00
Spiked Amount 1000.000			Recovery	=	102.01%	

Target Compounds

						Qvalue
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5) Bromomethane	2.32	94	1567	51.683	pg	99
7) Acetone	2.99	58	138898	5833.661	pg	# 62
8) Trichlorofluoromethane	3.10	101	88246	1523.684	pg	100
10) Methylene Chloride	3.80	84	10025	364.790	pg	98
11) Trichlorotrifluoroethane	4.09	151	11748	441.445	pg	100
15) cis-1,2-Dichloroethene	5.93	96	974	33.175	pg	97
16) Chloroform	6.31	83	6883	135.312	pg	98
18) 1,2-Dichloroethane	7.26	62	3350	82.712	pg	99
20) Benzene	8.15	78	58557	559.696	pg	100
21) Carbon Tetrachloride	8.34	117	17028	459.809	pg	100
23) 1,2-Dichloropropane	9.16	63	792	30.617	pg	96
25) Trichloroethene	9.46	130	3155	103.543	pg	99
31) Toluene	11.48	91	285718	2456.153	pg	100
33) Tetrachloroethene	12.61	166	1641	45.560	pg	98
36) Ethylbenzene	13.48	91	41955	309.001	pg	100
37) m,p-Xylene	13.61	91	102692	920.239	pg	98
38) o-Xylene	13.94	106	18140	332.614	pg	100
42) 1,4-Dichlorobenzene	15.24	146	1534	20.502	pg	99
45) Naphthalene	16.70	128	17250	127.327	pg	97

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\17\02171509.D

Acq On : 17 Feb 2015 8:20

Operator: WA

Sample : P1500566-026 (1000mL)

Misc : S29-02041502

ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 17 16:34:21 2015

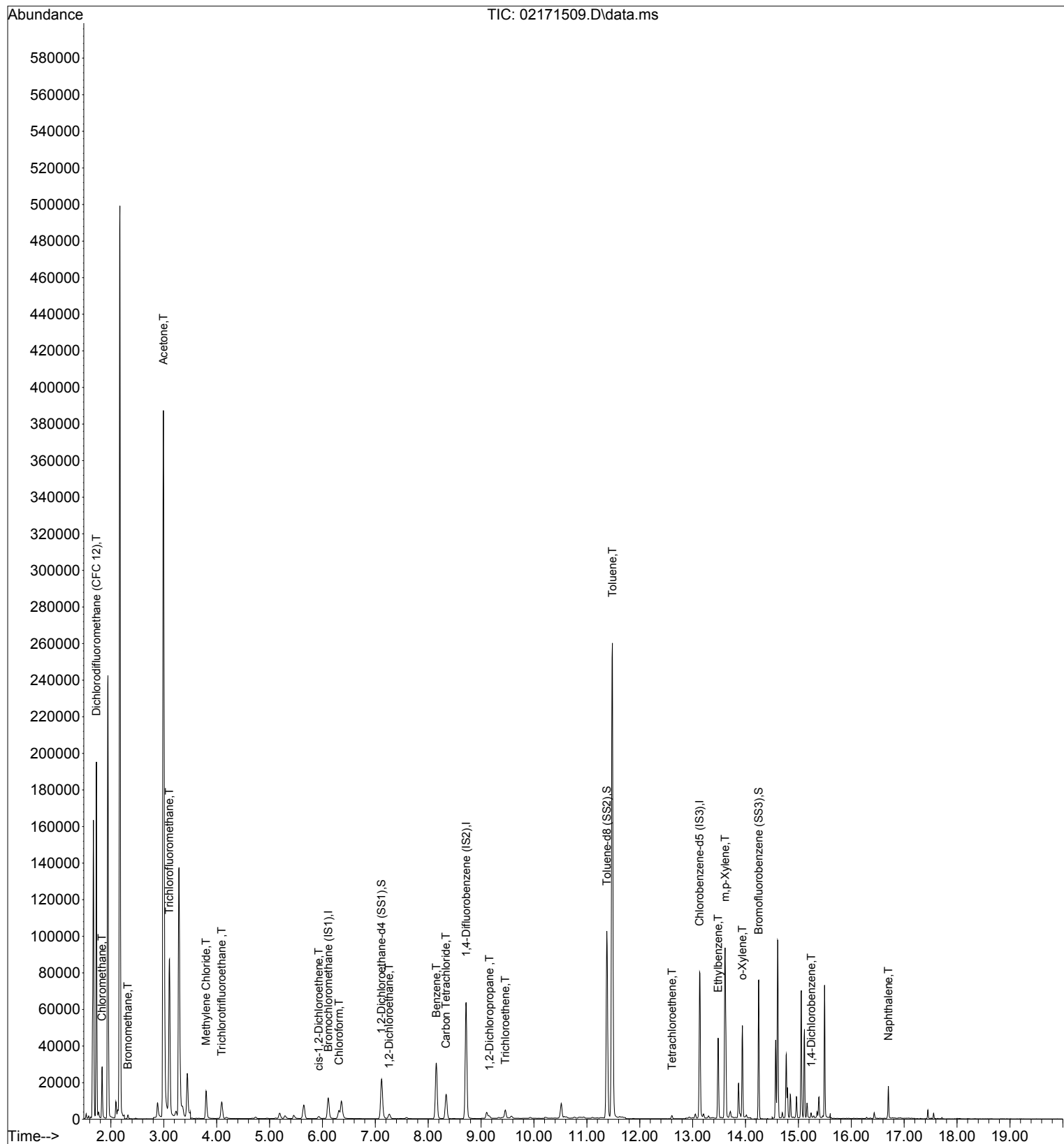
Quant Method : I:\MS19\METHODS\X19021115.M

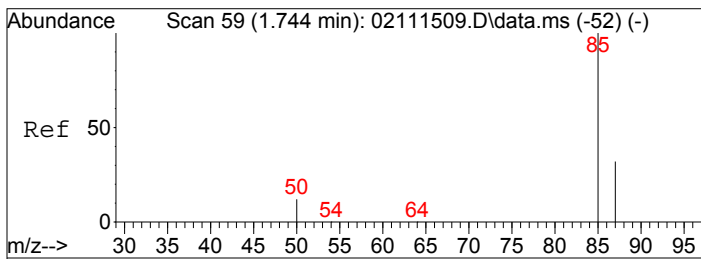
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

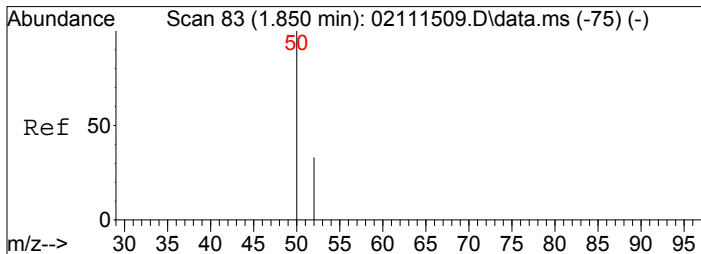
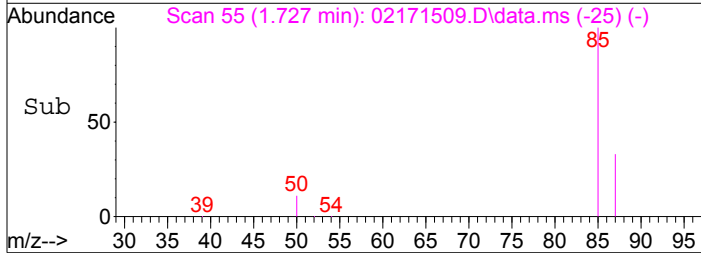
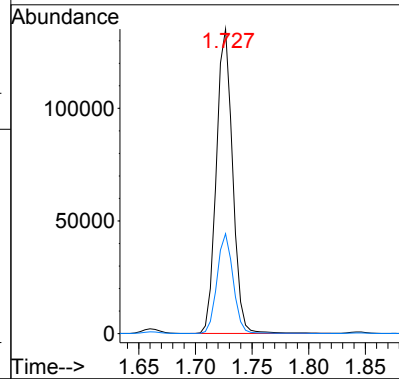
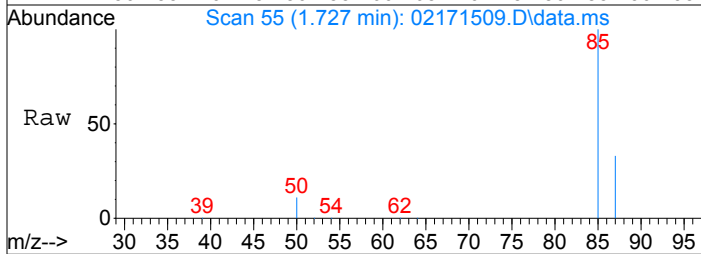
DataAcq Meth:TO15SIM.M





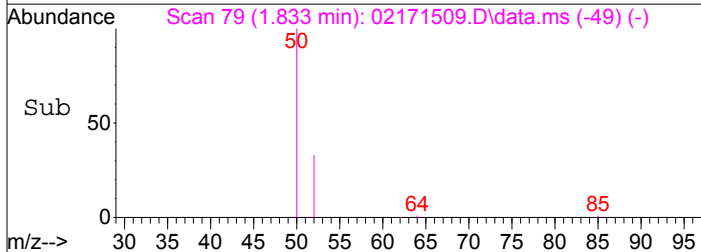
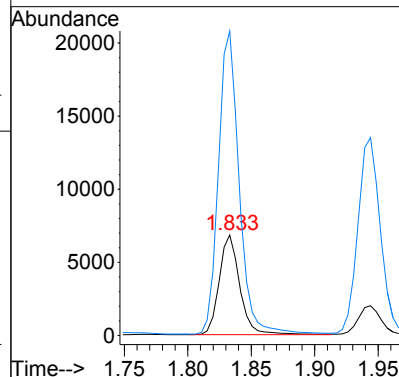
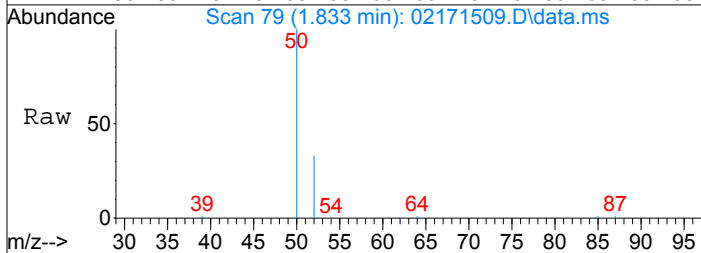
#2
 Dichlorodifluoromethane (CFC 12)
 Concen: 2001.30 pg
 RT: 1.73 min Scan# 55
 Delta R.T. -0.017 min
 Lab File: 02171509.D
 Acq: 17 Feb 2015 8:20

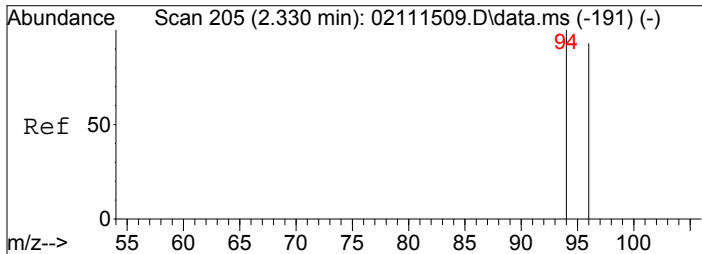
Tgt Ion: 85 Resp: 134940
 Ion Ratio Lower Upper
 85 100
 87 32.4 12.4 52.4



#3
 Chloromethane
 Concen: 571.55 pg
 RT: 1.83 min Scan# 79
 Delta R.T. -0.017 min
 Lab File: 02171509.D
 Acq: 17 Feb 2015 8:20

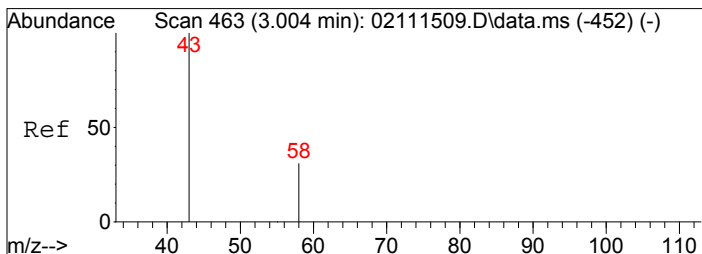
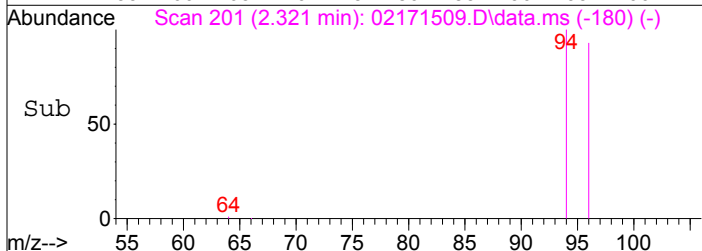
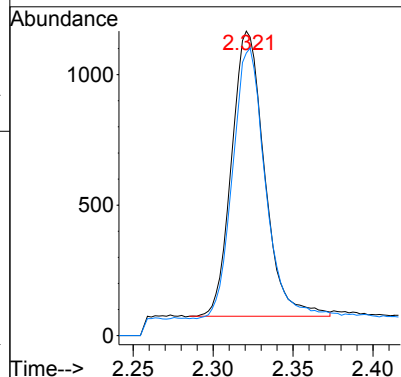
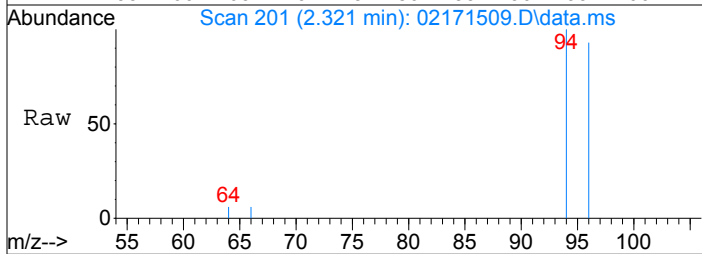
Tgt Ion: 52 Resp: 7696
 Ion Ratio Lower Upper
 52 100
 50 305.6 283.7 323.7





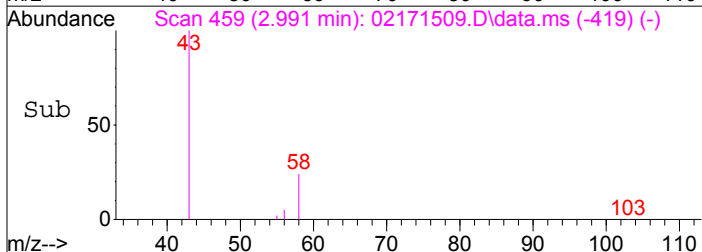
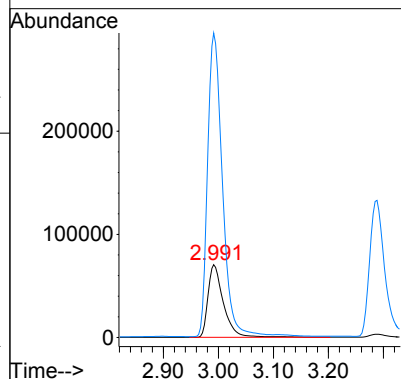
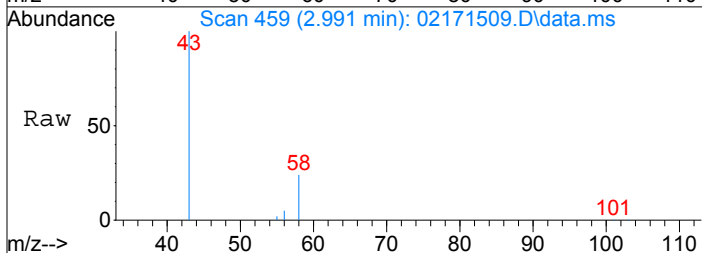
#5
Bromomethane
Concen: 51.68 pg
RT: 2.32 min Scan# 201
Delta R.T. -0.009 min
Lab File: 02171509.D
Acq: 17 Feb 2015 8:20

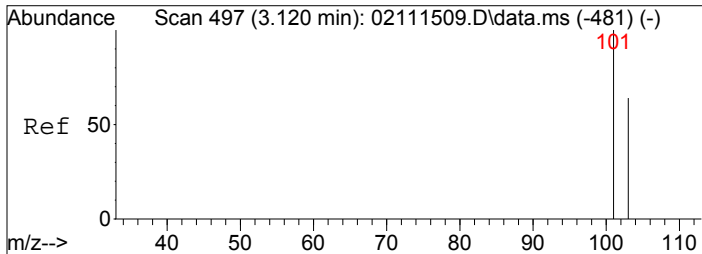
Tgt Ion: 94 Resp: 1567
Ion Ratio Lower Upper
94 100
96 95.6 75.5 113.3



#7
Acetone
Concen: 5833.66 pg
RT: 2.99 min Scan# 459
Delta R.T. -0.013 min
Lab File: 02171509.D
Acq: 17 Feb 2015 8:20

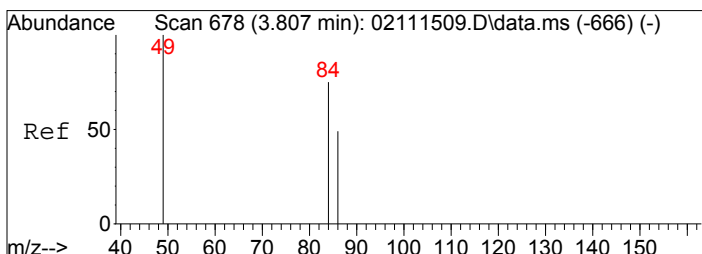
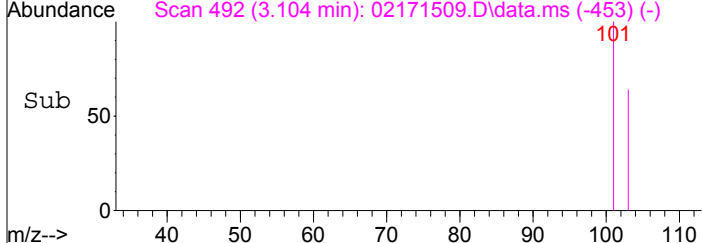
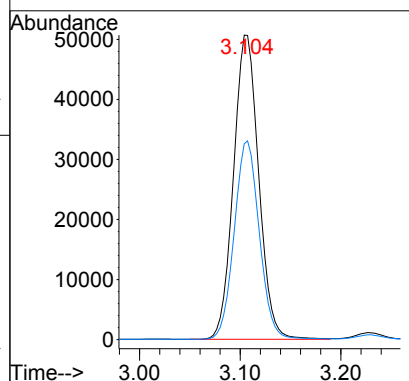
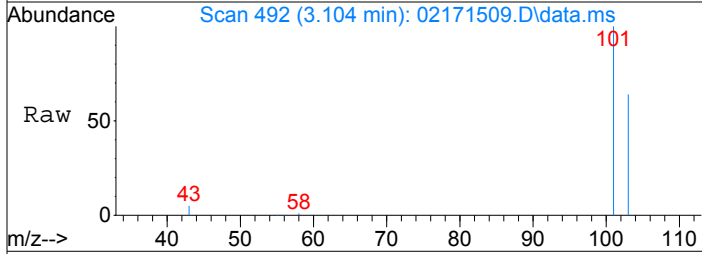
Tgt Ion: 58 Resp: 138898
Ion Ratio Lower Upper
58 100
43 400.6 301.8 341.8#





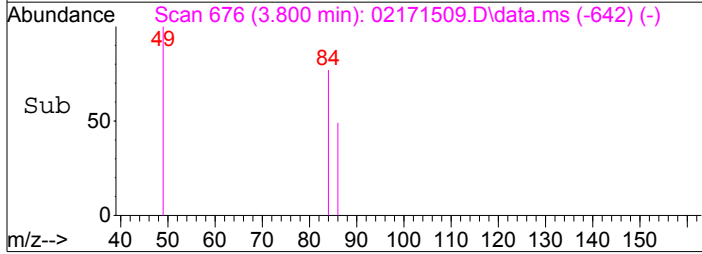
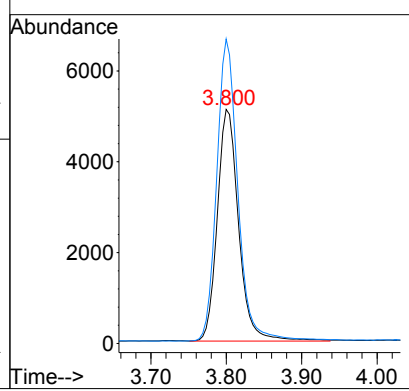
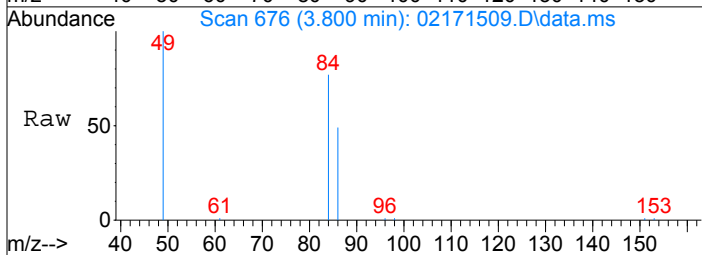
#8
 Trichlorofluoromethane
 Concen: 1523.68 pg
 RT: 3.10 min Scan# 492
 Delta R.T. -0.016 min
 Lab File: 02171509.D
 Acq: 17 Feb 2015 8:20

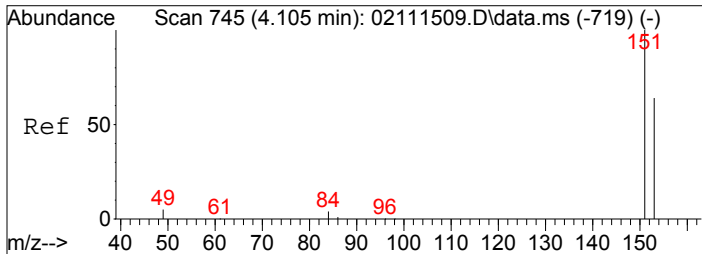
Tgt Ion: 101	Resp: 88246
Ion Ratio	Lower Upper
101	100
103	64.8 51.8 77.6



#10
 Methylene Chloride
 Concen: 364.79 pg
 RT: 3.80 min Scan# 676
 Delta R.T. -0.007 min
 Lab File: 02171509.D
 Acq: 17 Feb 2015 8:20

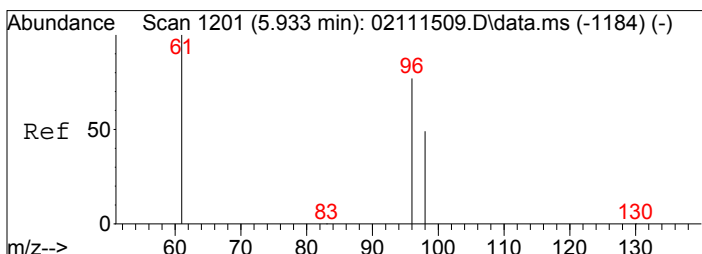
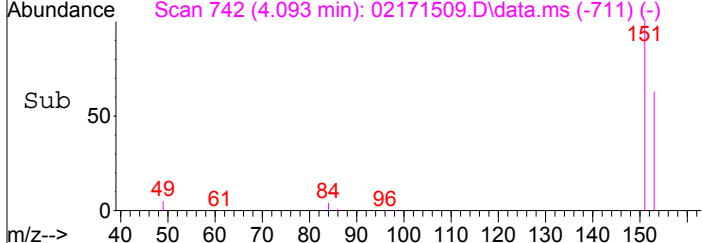
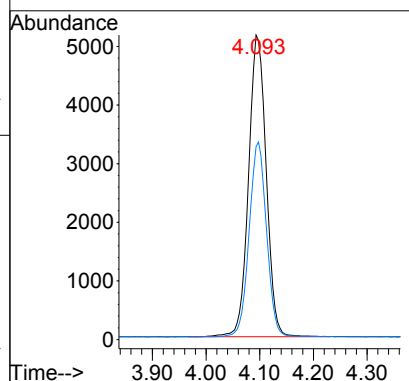
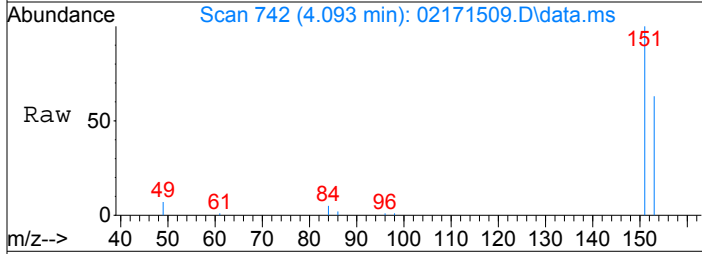
Tgt Ion: 84	Resp: 10025
Ion Ratio	Lower Upper
84	100
49	129.5 112.3 152.3





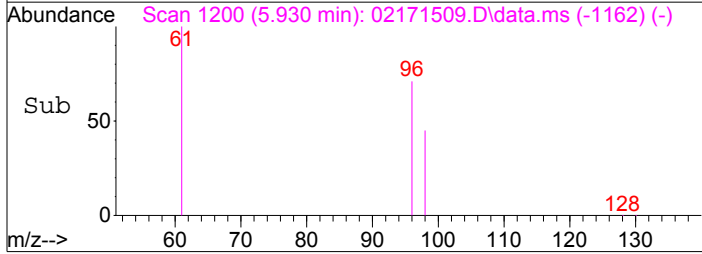
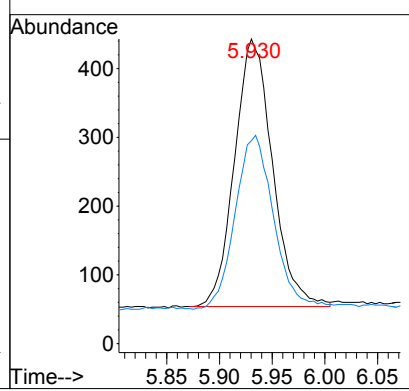
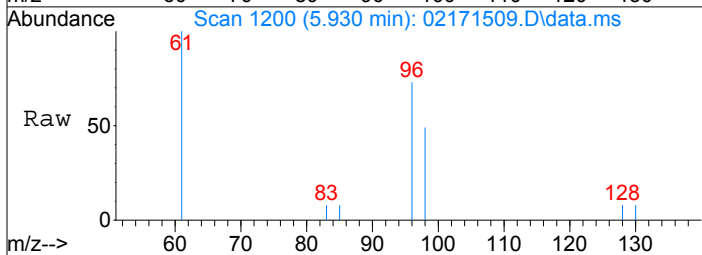
#11
 Trichlorotrifluoroethane
 Concen: 441.45 pg
 RT: 4.09 min Scan# 742
 Delta R.T. -0.012 min
 Lab File: 02171509.D
 Acq: 17 Feb 2015 8:20

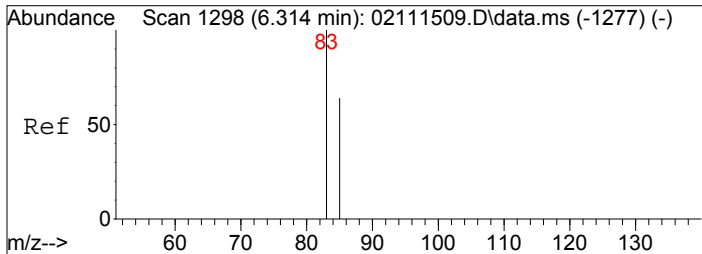
Tgt Ion: 151	Resp: 11748
Ion Ratio	Lower Upper
151	100
153	63.5 43.6 83.6



#15
 cis-1,2-Dichloroethene
 Concen: 33.17 pg
 RT: 5.93 min Scan# 1200
 Delta R.T. -0.002 min
 Lab File: 02171509.D
 Acq: 17 Feb 2015 8:20

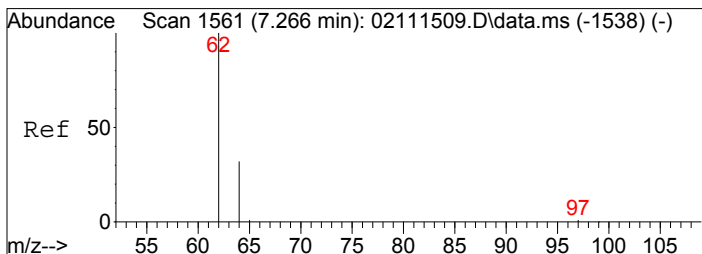
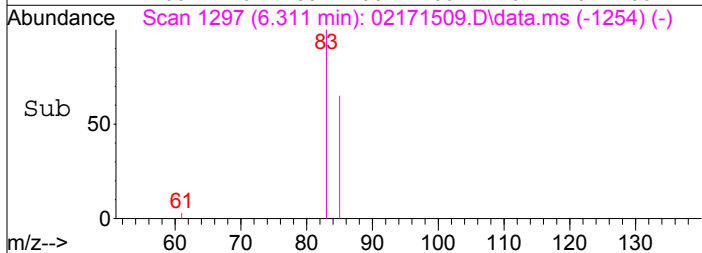
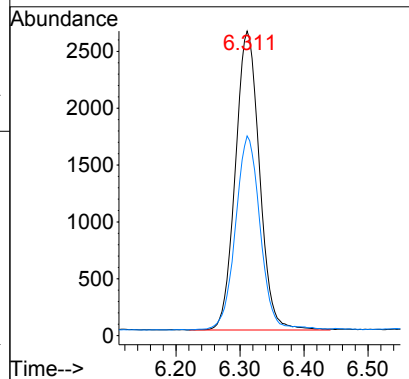
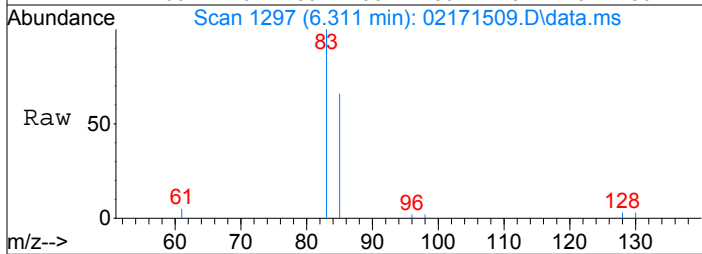
Tgt Ion: 96	Resp: 974
Ion Ratio	Lower Upper
96	100
98	66.4 44.3 84.3





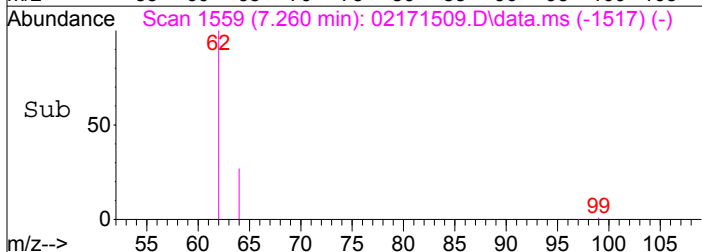
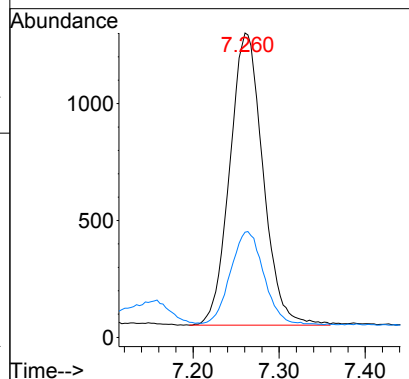
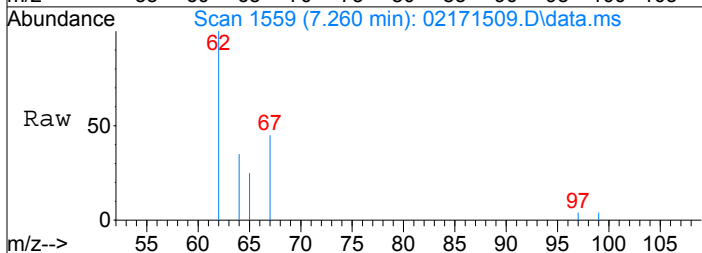
#16
 Chloroform
 Concen: 135.31 pg
 RT: 6.31 min Scan# 1297
 Delta R.T. -0.003 min
 Lab File: 02171509.D
 Acq: 17 Feb 2015 8:20

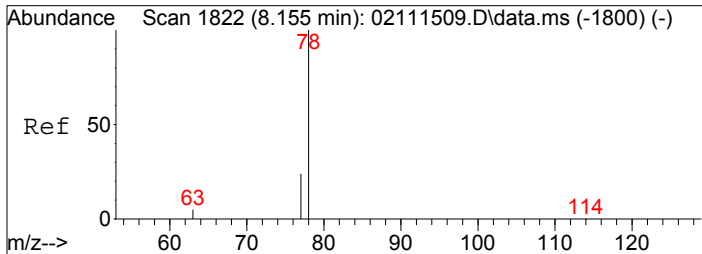
Tgt Ion: 83 Resp: 6883
 Ion Ratio Lower Upper
 83 100
 85 66.7 45.4 85.4



#18
 1,2-Dichloroethane
 Concen: 82.71 pg
 RT: 7.26 min Scan# 1559
 Delta R.T. -0.005 min
 Lab File: 02171509.D
 Acq: 17 Feb 2015 8:20

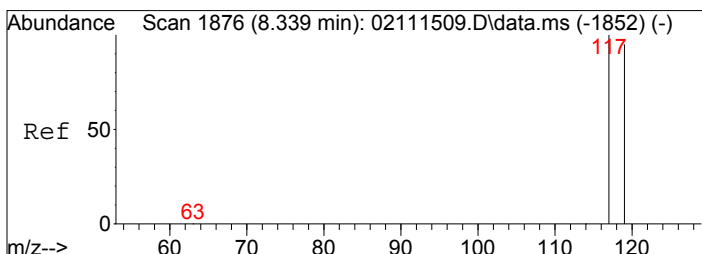
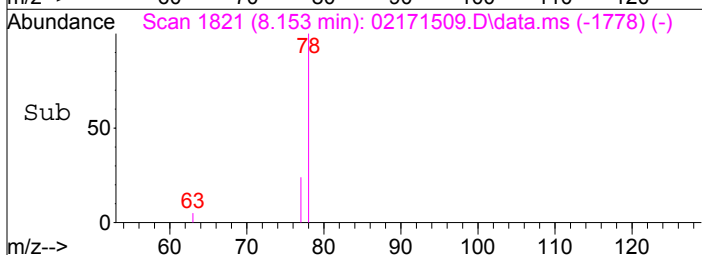
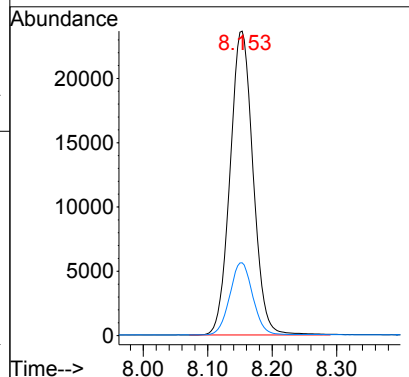
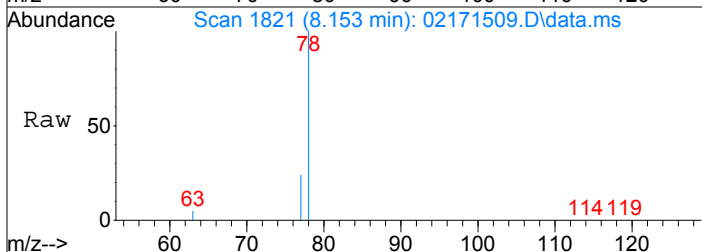
Tgt Ion: 62 Resp: 3350
 Ion Ratio Lower Upper
 62 100
 64 32.1 11.6 51.6





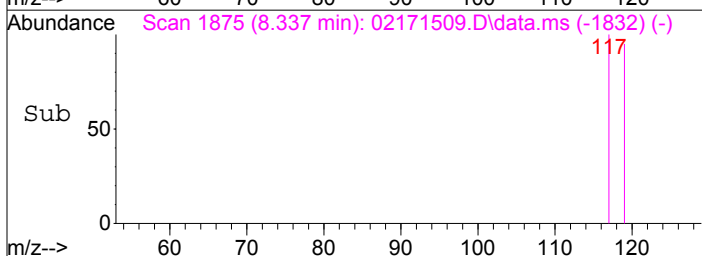
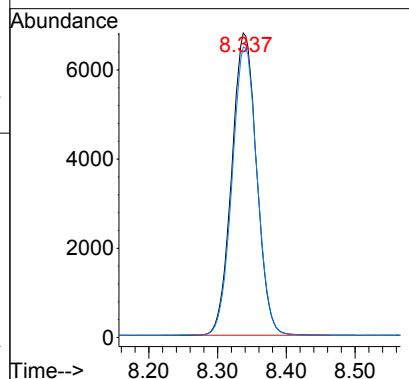
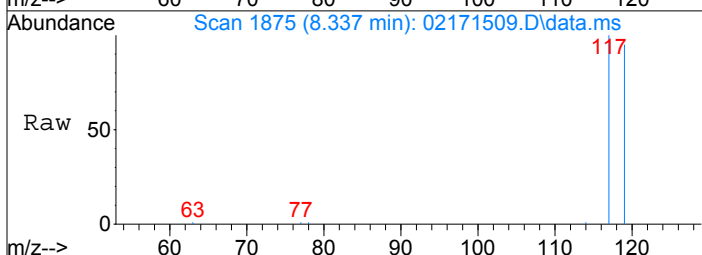
#20
Benzene
Concen: 559.70 pg
RT: 8.15 min Scan# 1821
Delta R.T. -0.002 min
Lab File: 02171509.D
Acq: 17 Feb 2015 8:20

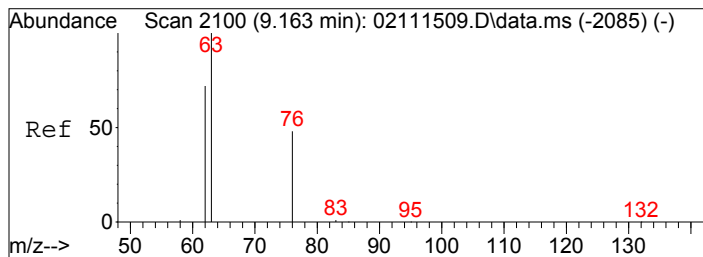
Tgt Ion: 78 Resp: 58557
Ion Ratio Lower Upper
78 100
77 23.8 3.7 43.7



#21
Carbon Tetrachloride
Concen: 459.81 pg
RT: 8.34 min Scan# 1875
Delta R.T. -0.002 min
Lab File: 02171509.D
Acq: 17 Feb 2015 8:20

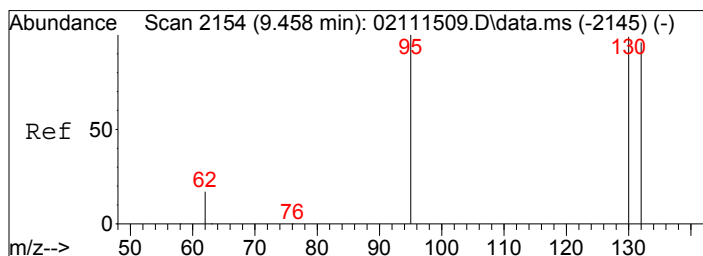
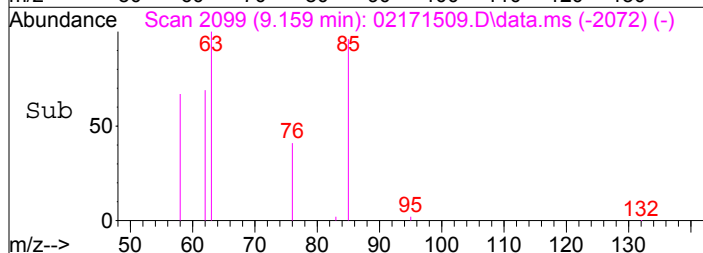
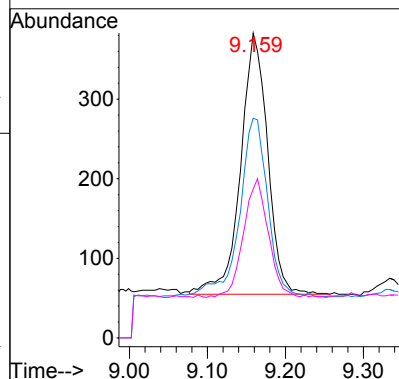
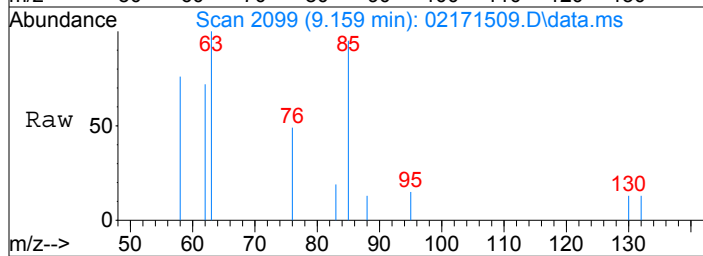
Tgt Ion: 117 Resp: 17028
Ion Ratio Lower Upper
117 100
119 95.6 75.5 115.5





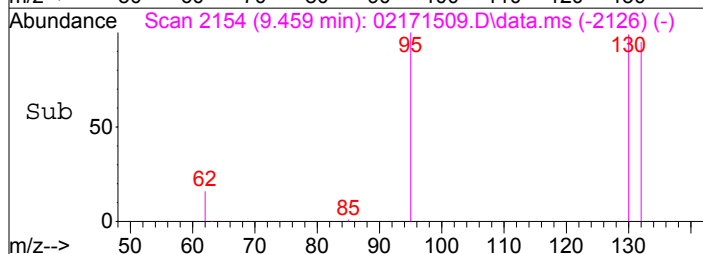
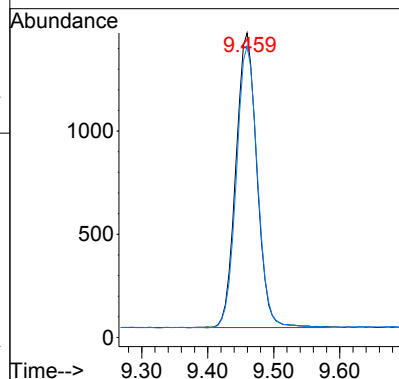
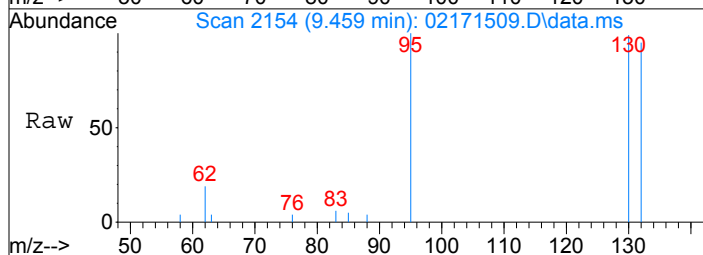
#23
1,2-Dichloropropane
Concen: 30.62 pg
RT: 9.16 min Scan# 2099
Delta R.T. -0.004 min
Lab File: 02171509.D
Acq: 17 Feb 2015 8:20

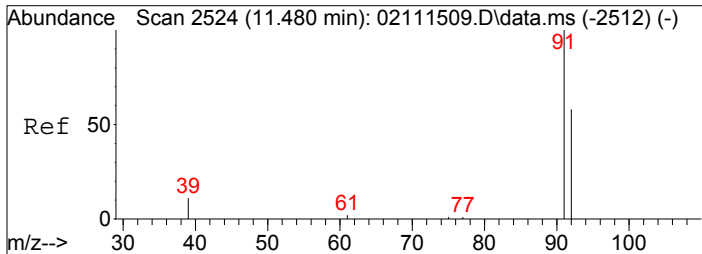
Tgt Ion: 63 Resp: 792
Ion Ratio Lower Upper
63 100
62 71.3 52.0 92.0
76 41.8 28.1 68.1



#25
Trichloroethene
Concen: 103.54 pg
RT: 9.46 min Scan# 2154
Delta R.T. 0.001 min
Lab File: 02171509.D
Acq: 17 Feb 2015 8:20

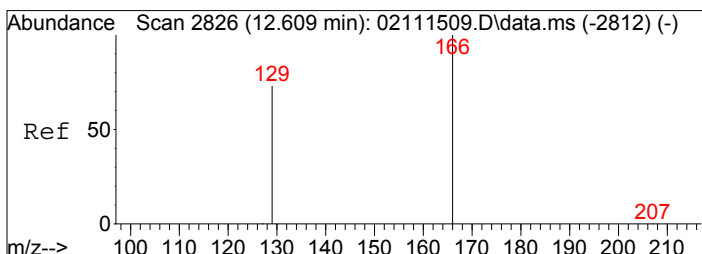
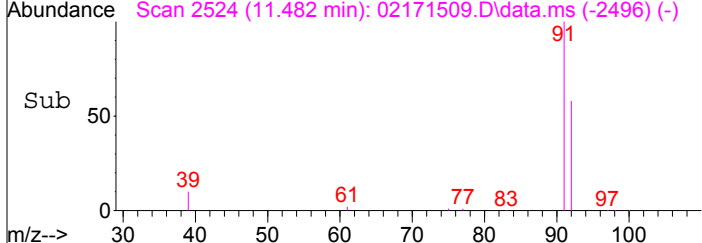
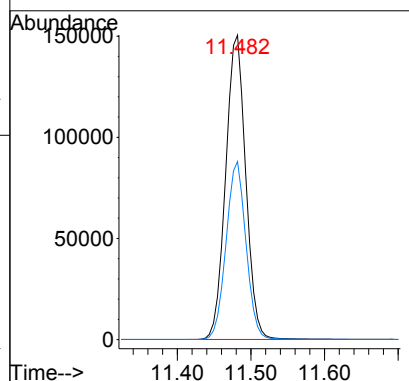
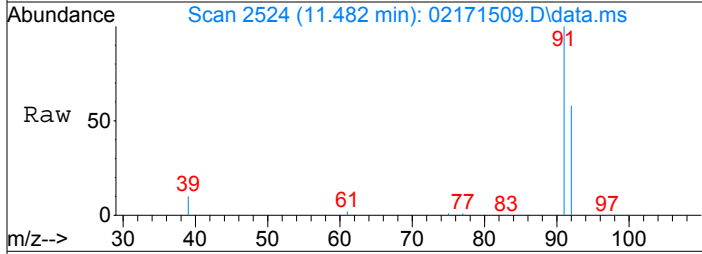
Tgt Ion: 130 Resp: 3155
Ion Ratio Lower Upper
130 100
132 96.3 77.1 117.1





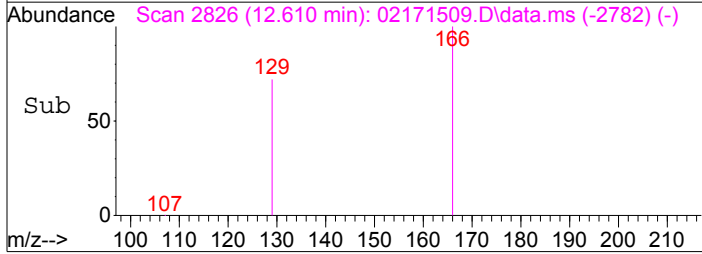
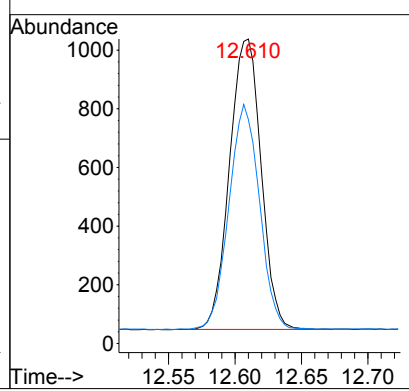
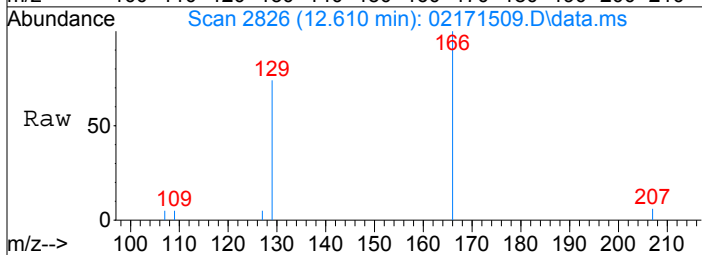
#31
Toluene
Concen: 2456.15 pg
RT: 11.48 min Scan# 2524
Delta R.T. 0.001 min
Lab File: 02171509.D
Acq: 17 Feb 2015 8:20

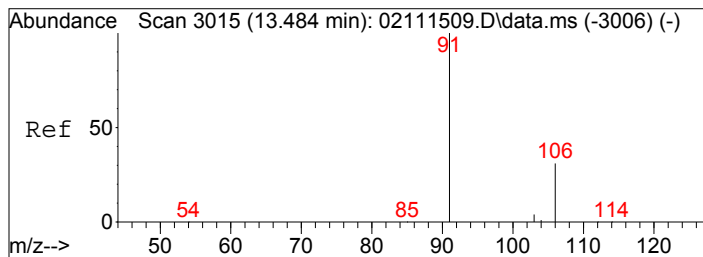
Tgt Ion:	91	Resp:	285718
Ion Ratio	Lower	Upper	
91	100		
92	58.0	37.7	77.7



#33
Tetrachloroethene
Concen: 45.56 pg
RT: 12.61 min Scan# 2826
Delta R.T. 0.001 min
Lab File: 02171509.D
Acq: 17 Feb 2015 8:20

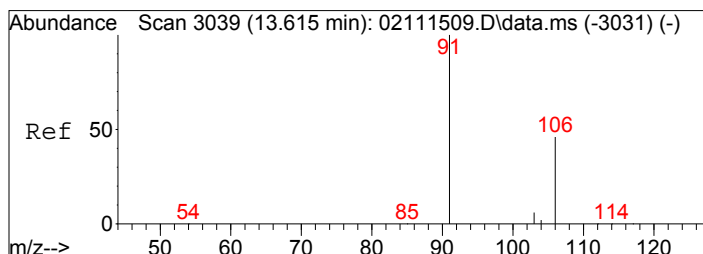
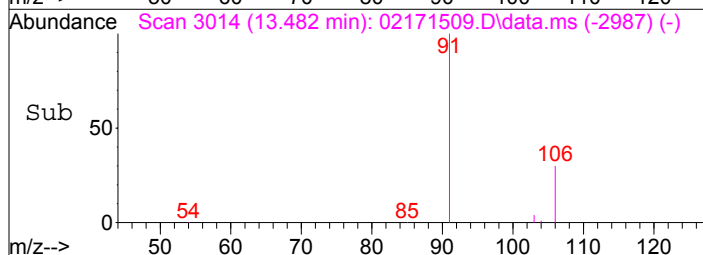
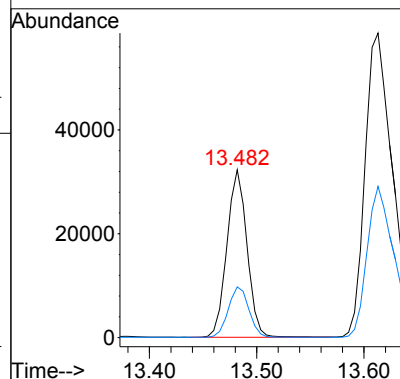
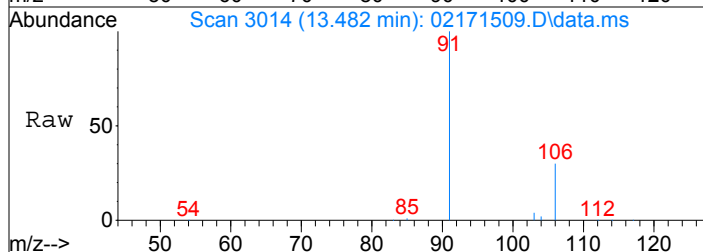
Tgt Ion:	166	Resp:	1641
Ion Ratio	Lower	Upper	
166	100		
129	75.0	53.3	93.3





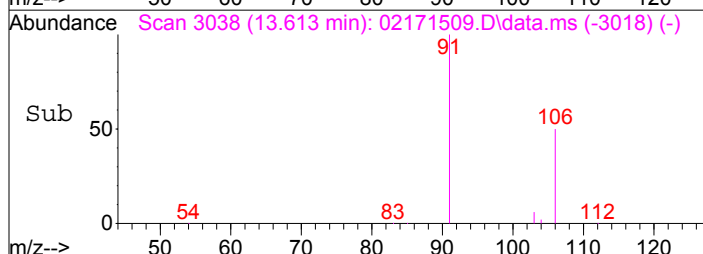
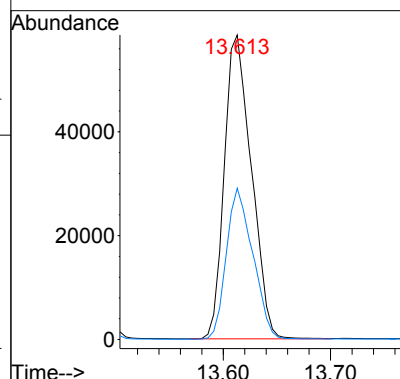
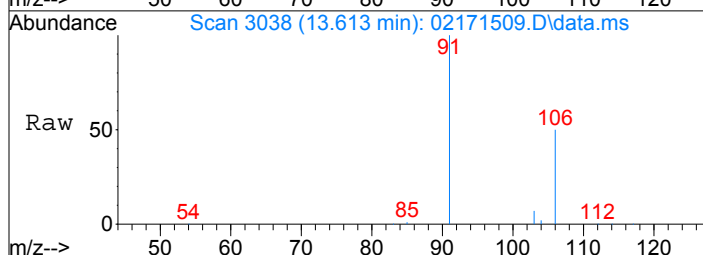
#36
Ethylbenzene
Concen: 309.00 pg
RT: 13.48 min Scan# 3014
Delta R.T. -0.002 min
Lab File: 02171509.D
Acq: 17 Feb 2015 8:20

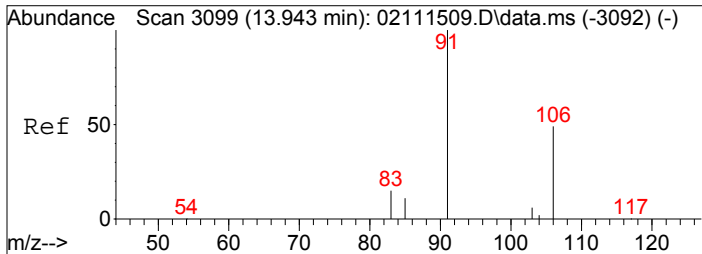
Tgt Ion: 91 Resp: 41955
Ion Ratio Lower Upper
91 100
106 31.1 10.9 50.9



#37
m,p-Xylene
Concen: 920.24 pg
RT: 13.61 min Scan# 3038
Delta R.T. -0.002 min
Lab File: 02171509.D
Acq: 17 Feb 2015 8:20

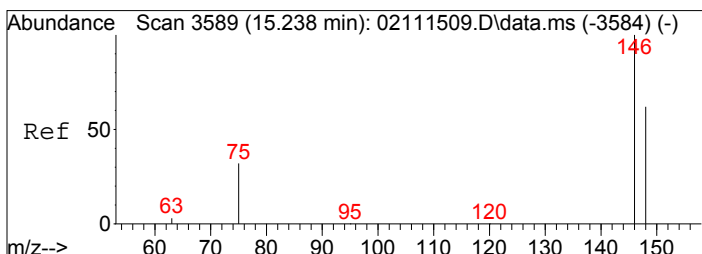
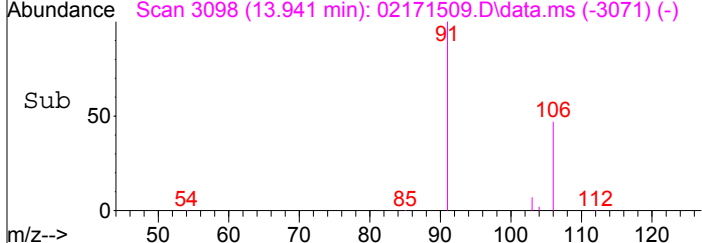
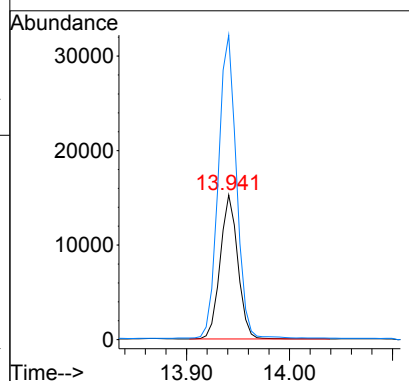
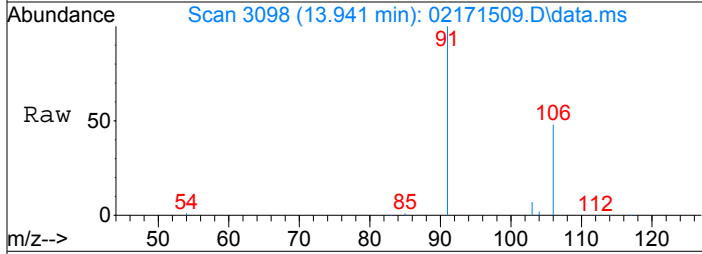
Tgt Ion: 91 Resp: 102692
Ion Ratio Lower Upper
91 100
106 48.6 27.5 67.5





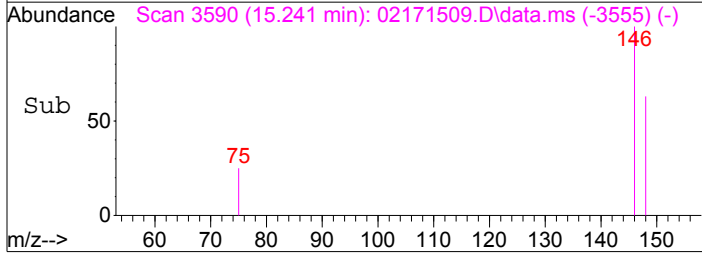
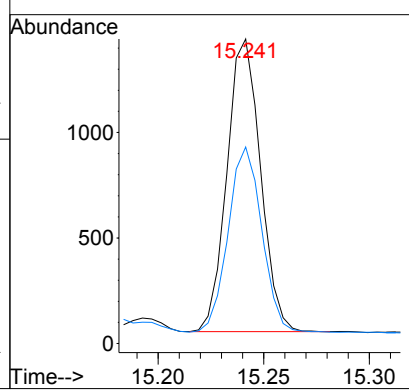
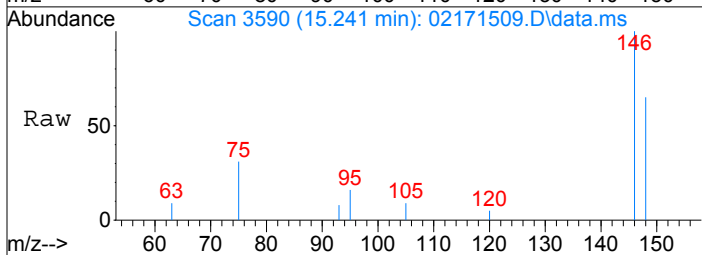
#38
 o-Xylene
 Concen: 332.61 pg
 RT: 13.94 min Scan# 3098
 Delta R.T. -0.002 min
 Lab File: 02171509.D
 Acq: 17 Feb 2015 8:20

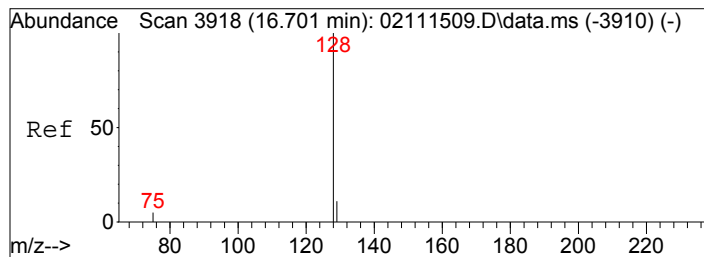
Tgt Ion:106	Resp:	18140
Ion Ratio	Lower	Upper
106	100	
91	217.7	198.3 238.3



#42
 1,4-Dichlorobenzene
 Concen: 20.50 pg
 RT: 15.24 min Scan# 3590
 Delta R.T. 0.004 min
 Lab File: 02171509.D
 Acq: 17 Feb 2015 8:20

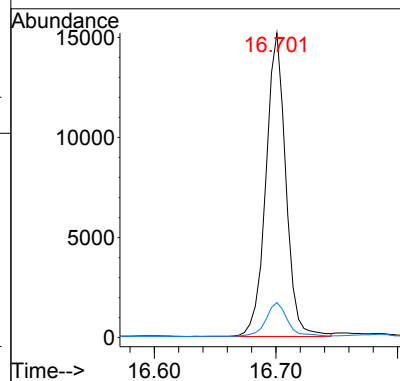
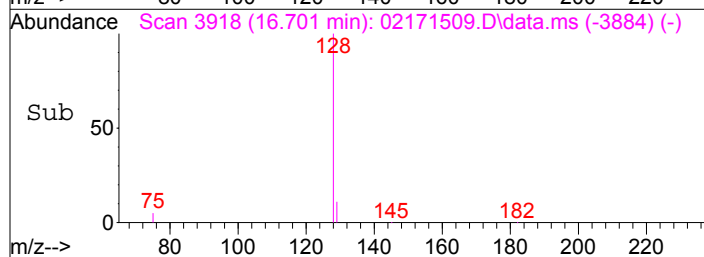
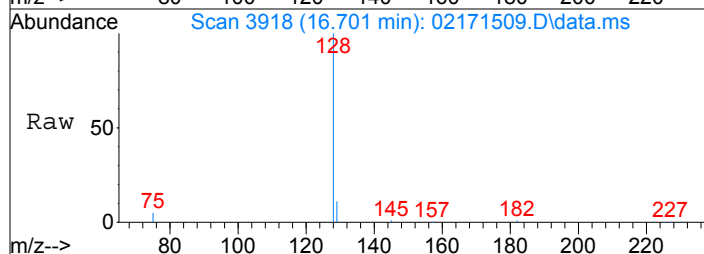
Tgt Ion:146	Resp:	1534
Ion Ratio	Lower	Upper
146	100	
148	64.4	43.5 83.5





#45
Naphthalene
Concen: 127.33 pg
RT: 16.70 min Scan# 3918
Delta R.T. -0.000 min
Lab File: 02171509.D
Acq: 17 Feb 2015 8:20

Tgt Ion	Ratio	Lower	Upper
128	100		
129	12.0	0.0	30.9



Data File: I:\MS19\DATA\2015 02\16\02161529.D

Acq On : 17 Feb 2015 00:55

Operator: WA

Sample : P1500566-027 (1000mL)

Misc : S29-02041502

ALS Vial : 13 Sample Multiplier: 1

Quant Time: Feb 17 11:17:24 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

2/17/15

DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	19346	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	145856	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	24583	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	43549	921.773	pg	0.00
Spiked Amount 1000.000			Recovery	=	92.18%	
30) Toluene-d8 (SS2)	11.38	98	134458	999.642	pg	0.00
Spiked Amount 1000.000			Recovery	=	99.96%	
40) Bromofluorobenzene (SS3)	14.25	174	54683	1101.820	pg	0.00
Spiked Amount 1000.000			Recovery	=	110.18%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.72	85	156230	1987.092	pg	100
3) Chloromethane	1.83	52	9286	591.423	pg	99
4) Vinyl Chloride	2.01	62	633	N.D.		
5) Bromomethane	2.32	94	1221	34.537	pg	98
6) Chloroethane	2.47	64	495	N.D.		
7) Acetone	2.98	58	219660	7911.842	pg	92
8) Trichlorofluoromethane	3.10	101	91361	1352.826	pg	100
9) 1,1-Dichloroethene	3.66	96	256	N.D.		
10) Methylene Chloride	3.80	84	9713	303.105	pg	94
11) Trichlorotrifluoroethane	4.09	151	14355	462.591	pg	100
12) trans-1,2-Dichloroethene	4.73	96	491	N.D.		
13) 1,1-Dichloroethane	4.94	63	580	N.D.		
14) Methyl tert-Butyl Ether	5.10	73	649	N.D.		
15) cis-1,2-Dichloroethene	5.93	96	5194	151.717	pg	99
16) Chloroform	6.31	83	6548	110.395	pg	98
18) 1,2-Dichloroethane	7.26	62	3572	75.634	pg	99
19) 1,1,1-Trichloroethane	7.59	97	936	N.D.		
20) Benzene	8.15	78	48071	394.038	pg	100
21) Carbon Tetrachloride	8.34	117	17090	395.765	pg	99
23) 1,2-Dichloropropane	9.16	63	984	30.932	pg	89
24) Bromodichloromethane	0.00	83	0	N.D.	d	
25) Trichloroethene	9.46	130	11628	310.318	pg	99
26) 1,4-Dioxane	9.54	88	445	N.D.		
27) cis-1,3-Dichloropropene	10.45	75	21	N.D.		
28) trans-1,3-Dichloropropene	11.06	75	28	N.D.		
29) 1,1,2-Trichloroethane	11.20	83	195	N.D.		
31) Toluene	11.48	91	277642	1940.804	pg	99
32) 1,2-Dibromoethane	12.12	107	50	N.D.		
33) Tetrachloroethene	12.61	166	1417	31.990	pg	99
35) Chlorobenzene	13.17	112	880	N.D.		
36) Ethylbenzene	13.48	91	40622	263.512	pg	99
37) m,p-Xylene	13.61	91	104091	821.562	pg	97
38) o-Xylene	13.94	106	18926	305.651	pg	99
39) 1,1,1,2,2-Tetrachloroethane	13.90	83	408	N.D.		
41) 1,3-Dichlorobenzene	15.17	146	107	N.D.		
42) 1,4-Dichlorobenzene	15.24	146	1549	N.D.		
43) 1,2-Dichlorobenzene	15.46	146	200	N.D.		
44) 1,2,4-Trichlorobenzene	16.63	182	212	N.D.		
45) Naphthalene	16.70	128	8693	56.515	pg	90
46) Hexachlorobutadiene	16.96	225	40	N.D.		

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\16\02161529.D

Acq On : 17 Feb 2015 00:55

Operator: WA

Sample : P1500566-027 (1000mL)

Misc : S29-02041502

ALS Vial : 13 Sample Multiplier: 1

Quant Time: Feb 17 11:17:24 2015

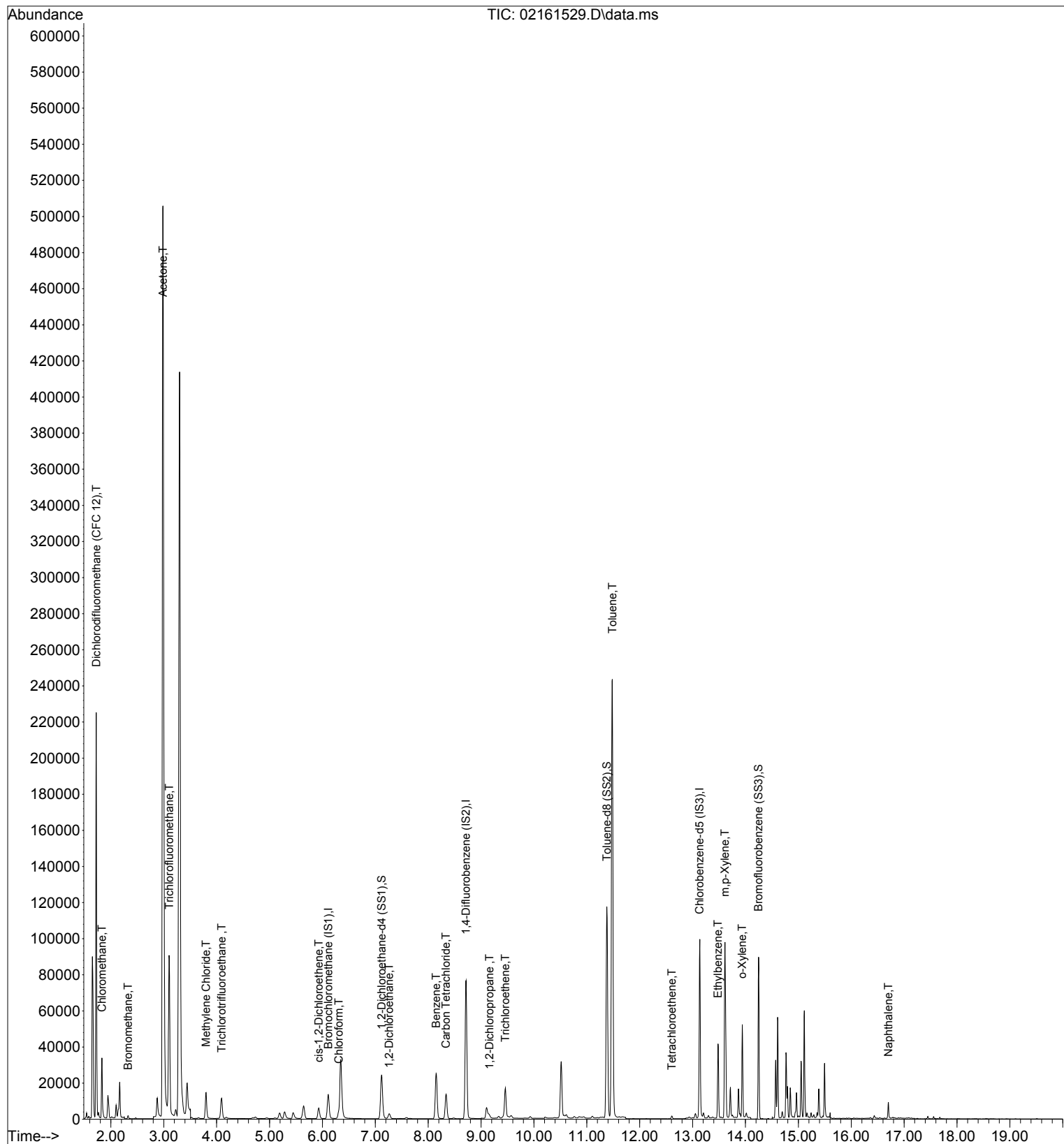
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 02\16\02161529.D

Acq On : 17 Feb 2015 00:55

Operator: WA

Sample : P1500566-027 (1000mL)

Misc : S29-02041502

ALS Vial : 13 Sample Multiplier: 1

Quant Time: Feb 17 11:17:24 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

2/17/15

DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	19346	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	145856	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	24583	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	43549	921.773	pg	0.00
Spiked Amount 1000.000			Recovery	=	92.18%	
30) Toluene-d8 (SS2)	11.38	98	134458	999.642	pg	0.00
Spiked Amount 1000.000			Recovery	=	99.96%	
40) Bromofluorobenzene (SS3)	14.25	174	54683	1101.820	pg	0.00
Spiked Amount 1000.000			Recovery	=	110.18%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.72	85	156230	1987.092	pg	100
3) Chloromethane	1.83	52	9286	591.423	pg	99
5) Bromomethane	2.32	94	1221	34.537	pg	98
7) Acetone	2.98	58	219660	7911.842	pg	92
8) Trichlorofluoromethane	3.10	101	91361	1352.826	pg	100
10) Methylene Chloride	3.80	84	9713	303.105	pg	94
11) Trichlorotrifluoroethane	4.09	151	14355	462.591	pg	100
15) cis-1,2-Dichloroethene	5.93	96	5194	151.717	pg	99
16) Chloroform	6.31	83	6548	110.395	pg	98
18) 1,2-Dichloroethane	7.26	62	3572	75.634	pg	99
20) Benzene	8.15	78	48071	394.038	pg	100
21) Carbon Tetrachloride	8.34	117	17090	395.765	pg	99
23) 1,2-Dichloropropane	9.16	63	984	30.932	pg	89
25) Trichloroethene	9.46	130	11628	310.318	pg	99
31) Toluene	11.48	91	277642	1940.804	pg	99
33) Tetrachloroethene	12.61	166	1417	31.990	pg	99
36) Ethylbenzene	13.48	91	40622	263.512	pg	99
37) m,p-Xylene	13.61	91	104091	821.562	pg	97
38) o-Xylene	13.94	106	18926	305.651	pg	99
45) Naphthalene	16.70	128	8693	56.515	pg	90

(#)= qualifier out of range (m)= manual integration (+)= signals summed

Data File: I:\MS19\DATA\2015 02\16\02161529.D

Acq On : 17 Feb 2015 00:55

Operator: WA

Sample : P1500566-027 (1000mL)

Misc : S29-02041502

ALS Vial : 13 Sample Multiplier: 1

Quant Time: Feb 17 11:17:24 2015

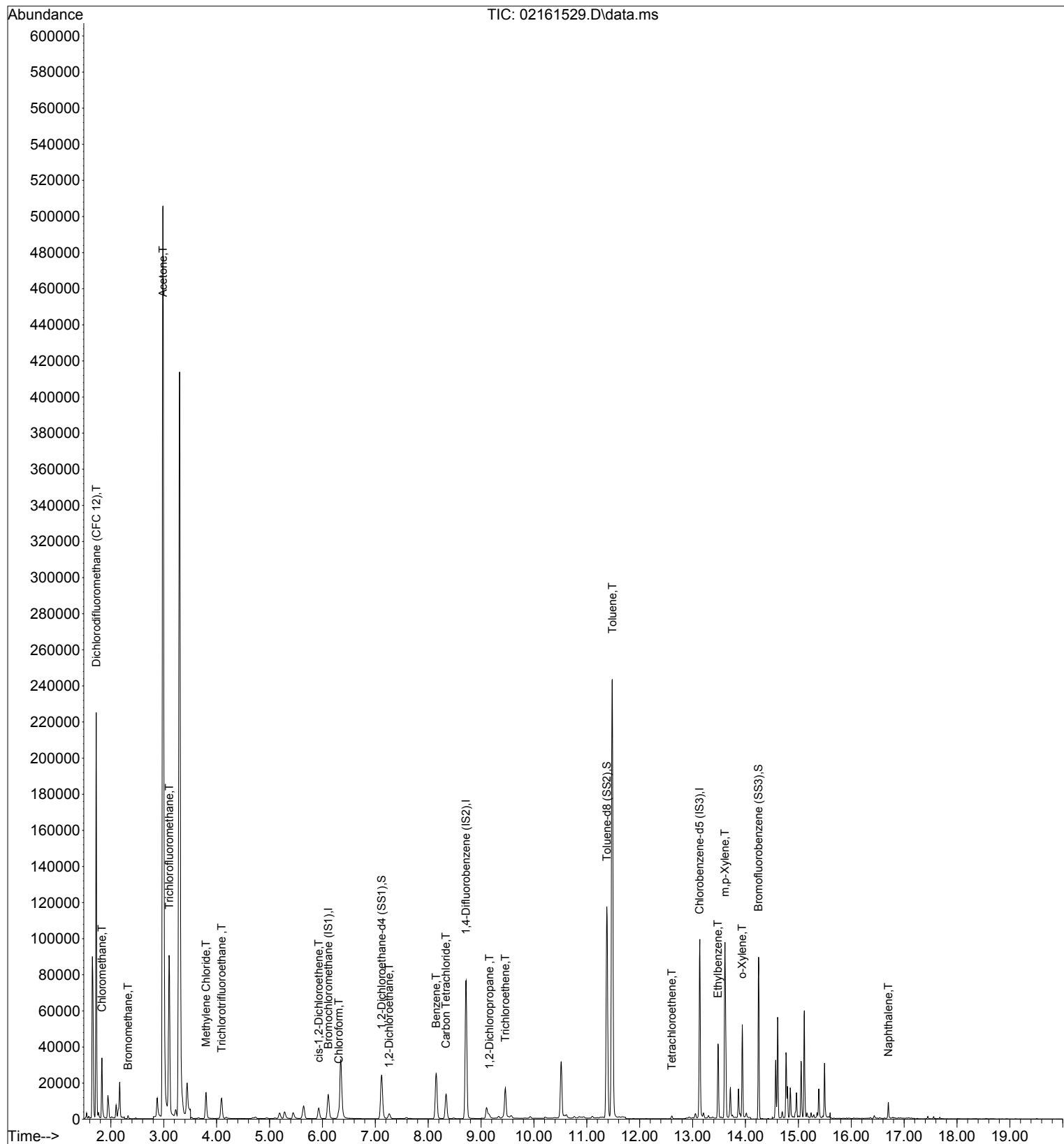
Quant Method : I:\MS19\METHODS\X19021115.M

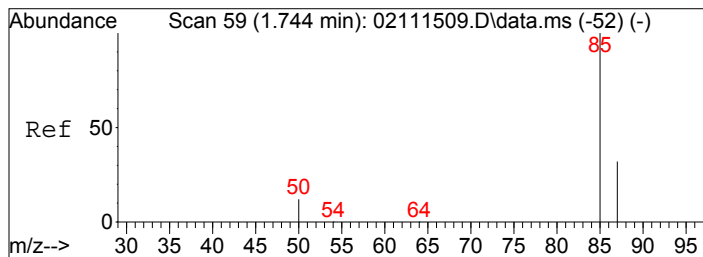
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

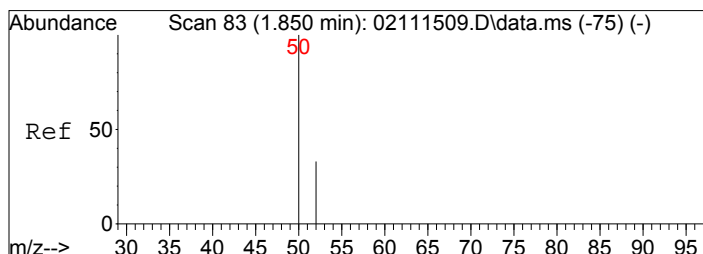
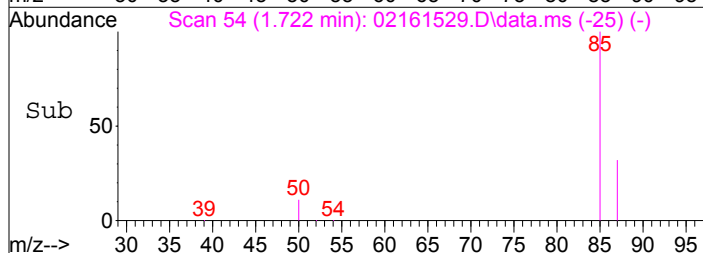
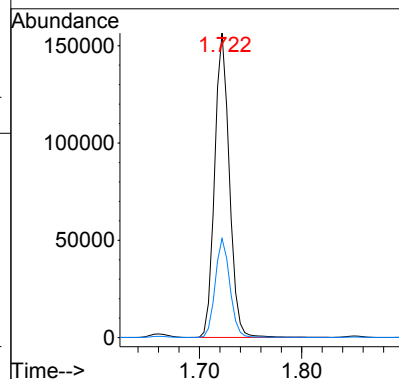
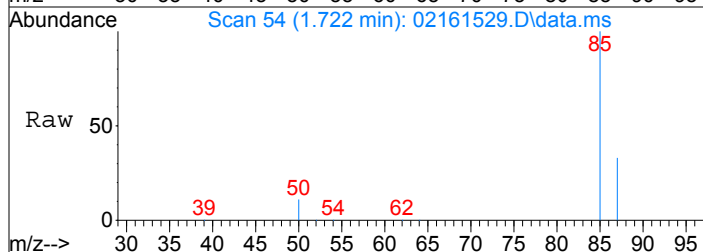
DataAcq Meth:TO15SIM.M





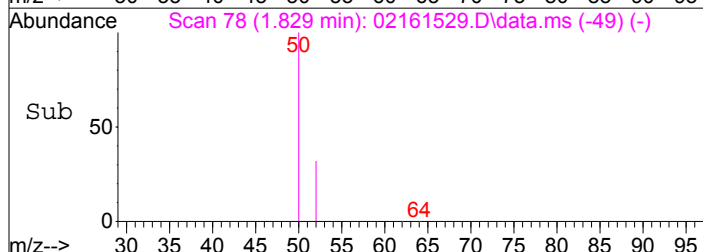
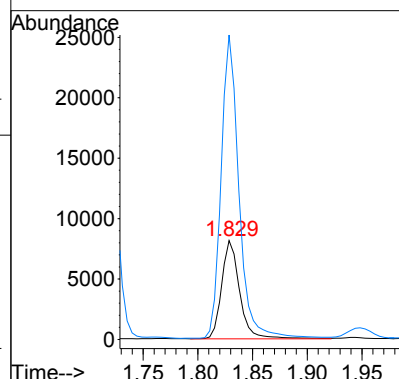
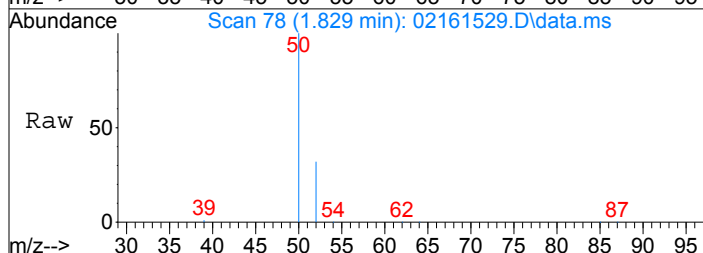
#2
 Dichlorodifluoromethane (CFC 12)
 Concen: 1987.09 pg
 RT: 1.72 min Scan# 54
 Delta R.T. -0.022 min
 Lab File: 02161529.D
 Acq: 17 Feb 2015 00:55

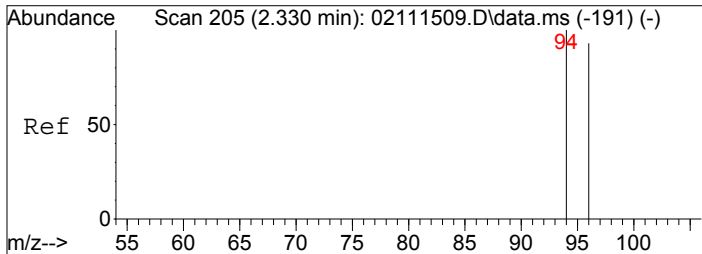
Tgt Ion: 85 Resp: 156230
 Ion Ratio Lower Upper
 85 100
 87 32.4 12.4 52.4



#3
 Chloromethane
 Concen: 591.42 pg
 RT: 1.83 min Scan# 78
 Delta R.T. -0.021 min
 Lab File: 02161529.D
 Acq: 17 Feb 2015 00:55

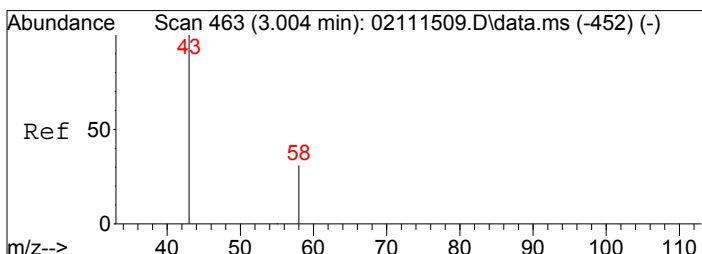
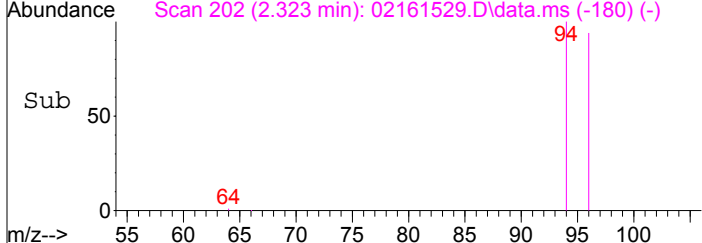
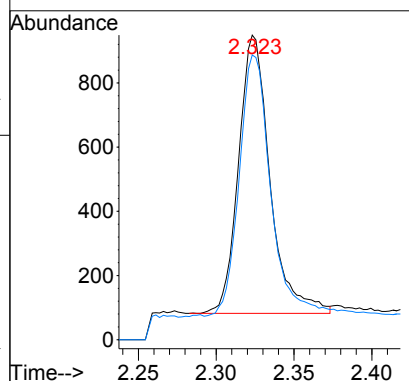
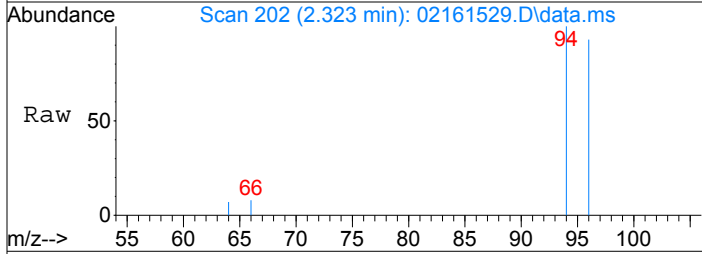
Tgt Ion: 52 Resp: 9286
 Ion Ratio Lower Upper
 52 100
 50 306.3 283.7 323.7





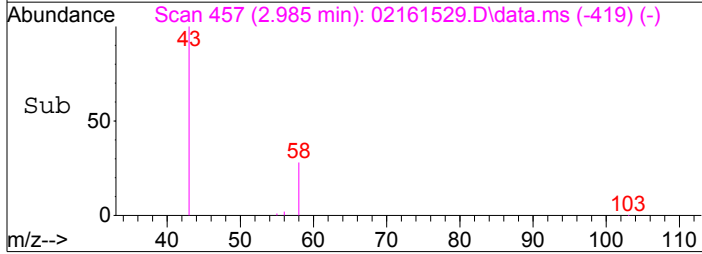
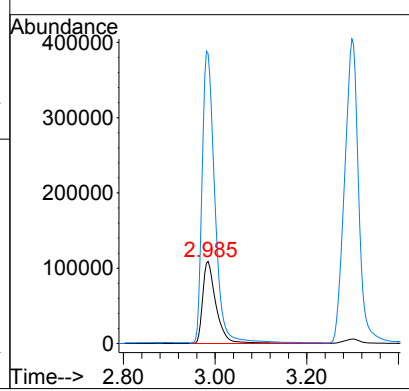
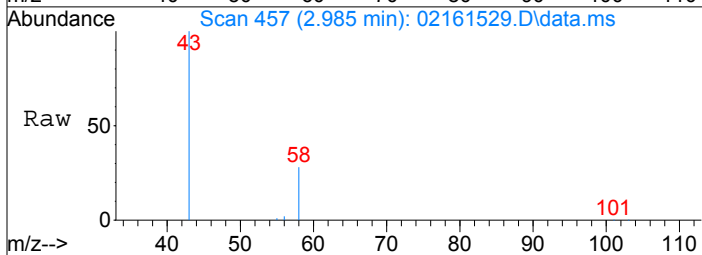
#5
 Bromomethane
 Concen: 34.54 pg
 RT: 2.32 min Scan# 202
 Delta R.T. -0.007 min
 Lab File: 02161529.D
 Acq: 17 Feb 2015 00:55

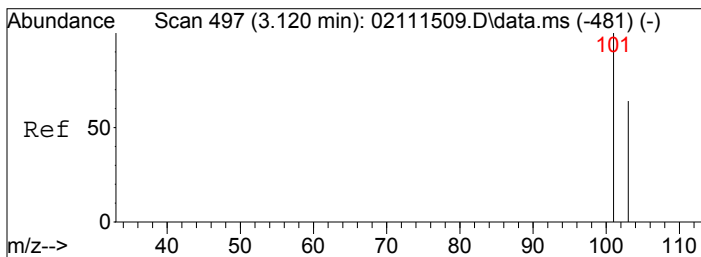
Tgt Ion: 94	Resp: 1221
Ion Ratio	Lower Upper
94	100
96	96.7 75.5 113.3



#7
 Acetone
 Concen: 7911.84 pg
 RT: 2.98 min Scan# 457
 Delta R.T. -0.019 min
 Lab File: 02161529.D
 Acq: 17 Feb 2015 00:55

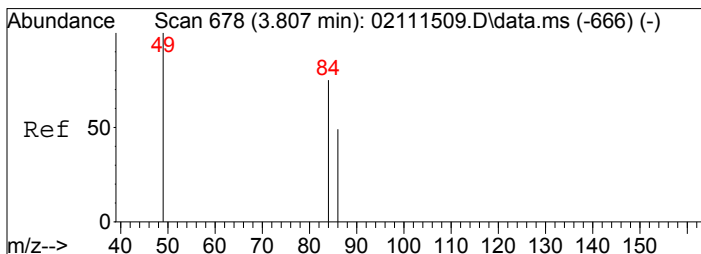
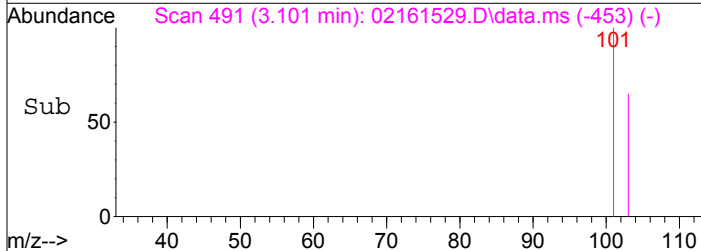
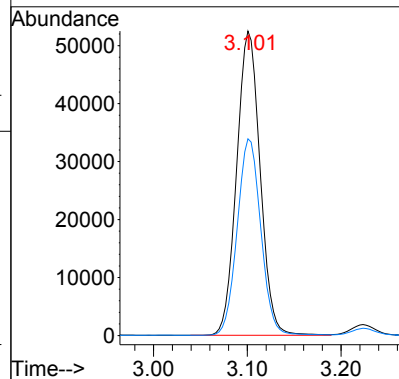
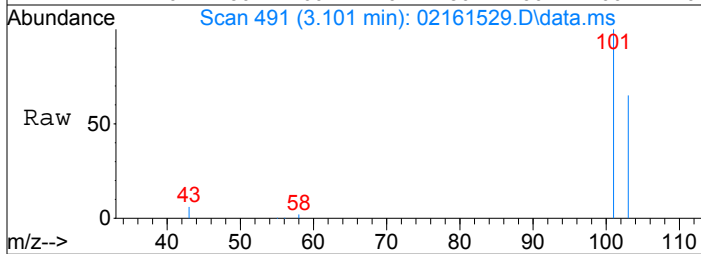
Tgt Ion: 58	Resp: 219660
Ion Ratio	Lower Upper
58	100
43	338.4 301.8 341.8





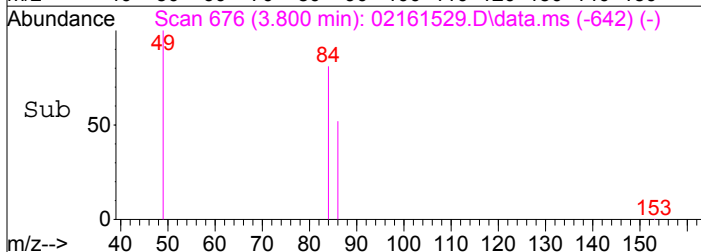
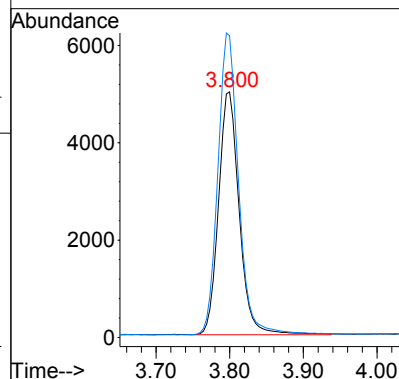
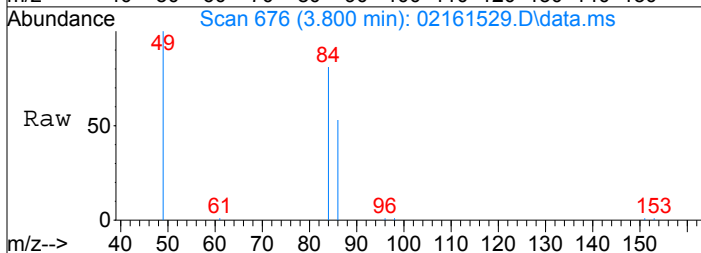
#8
 Trichlorofluoromethane
 Concen: 1352.83 pg
 RT: 3.10 min Scan# 491
 Delta R.T. -0.019 min
 Lab File: 02161529.D
 Acq: 17 Feb 2015 00:55

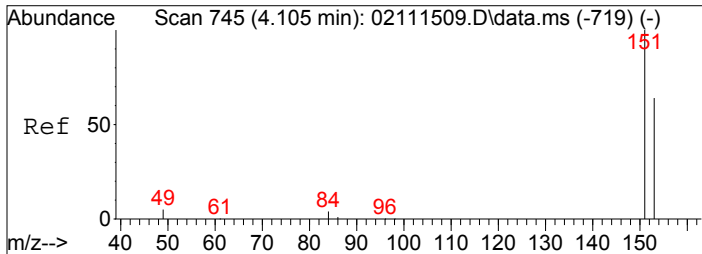
Tgt Ion: 101 Resp: 91361
 Ion Ratio Lower Upper
 101 100
 103 64.8 51.8 77.6



#10
 Methylene Chloride
 Concen: 303.11 pg
 RT: 3.80 min Scan# 676
 Delta R.T. -0.007 min
 Lab File: 02161529.D
 Acq: 17 Feb 2015 00:55

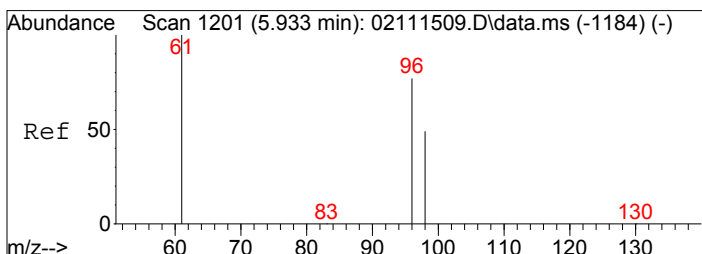
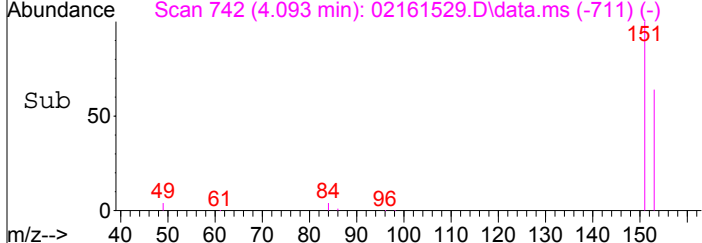
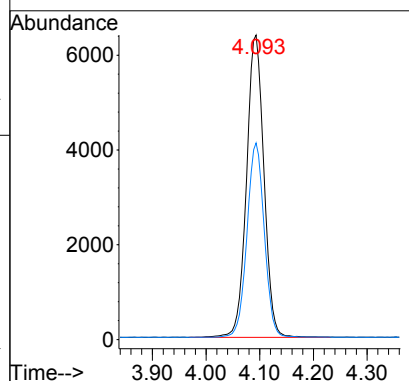
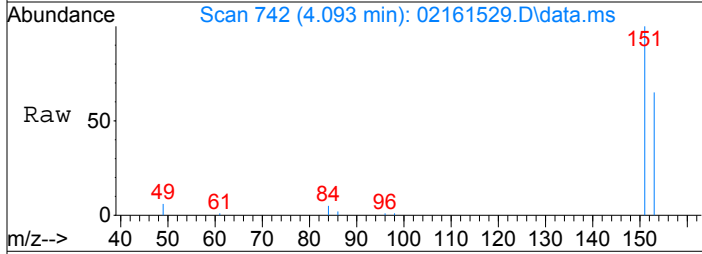
Tgt Ion: 84 Resp: 9713
 Ion Ratio Lower Upper
 84 100
 49 125.4 112.3 152.3





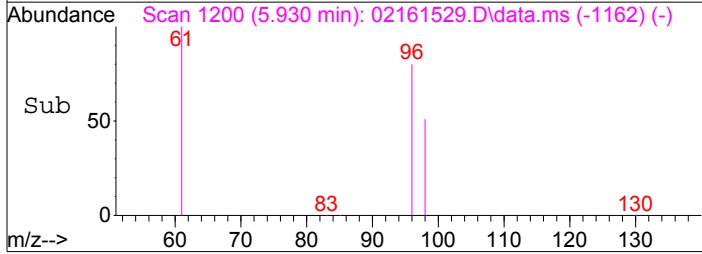
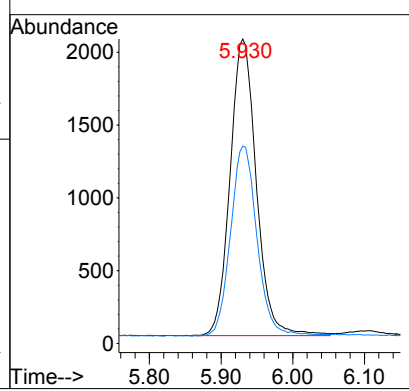
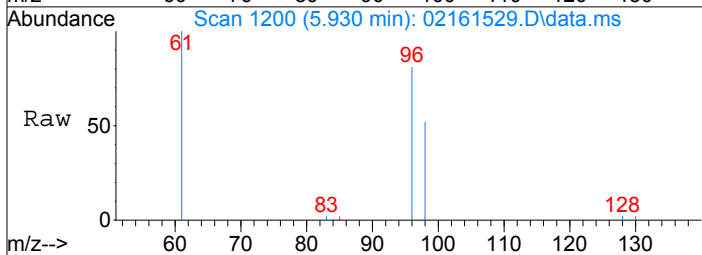
#11
 Trichlorotrifluoroethane
 Concen: 462.59 pg
 RT: 4.09 min Scan# 742
 Delta R.T. -0.012 min
 Lab File: 02161529.D
 Acq: 17 Feb 2015 00:55

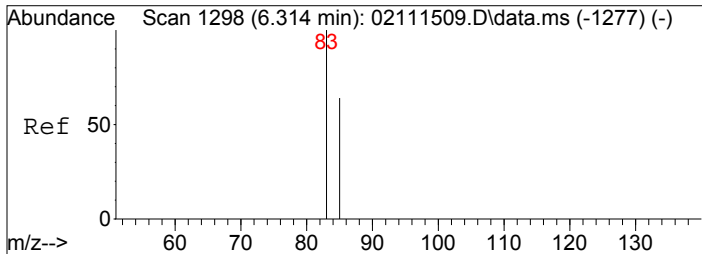
Tgt Ion: 151	Resp: 14355
Ion Ratio	Lower Upper
151	100
153	63.9 43.6 83.6



#15
 cis-1,2-Dichloroethene
 Concen: 151.72 pg
 RT: 5.93 min Scan# 1200
 Delta R.T. -0.002 min
 Lab File: 02161529.D
 Acq: 17 Feb 2015 00:55

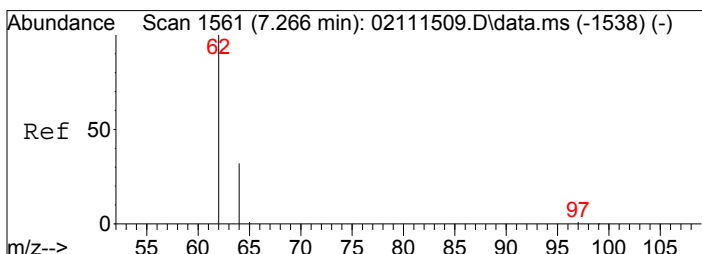
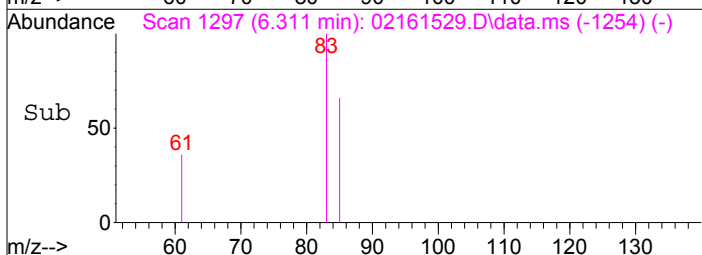
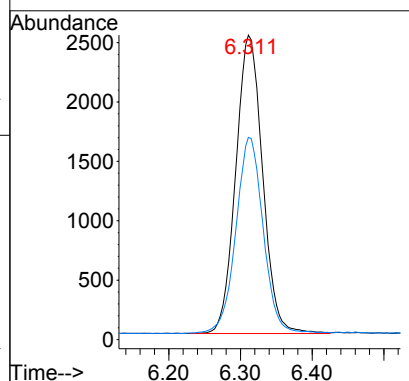
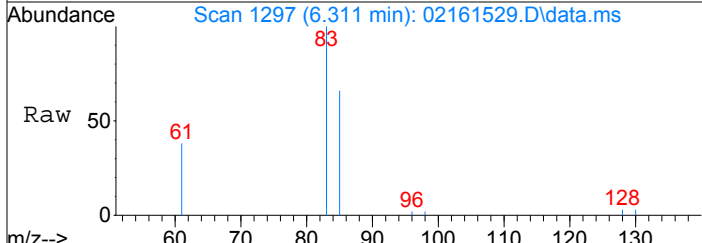
Tgt Ion: 96	Resp: 5194
Ion Ratio	Lower Upper
96	100
98	64.8 44.3 84.3





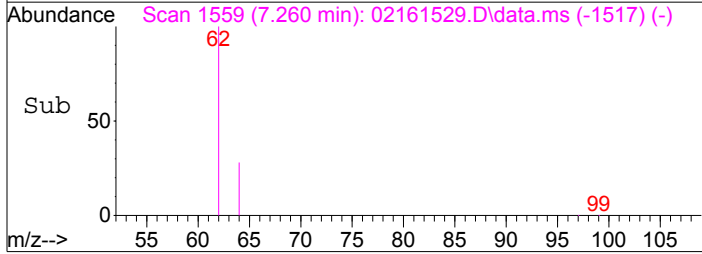
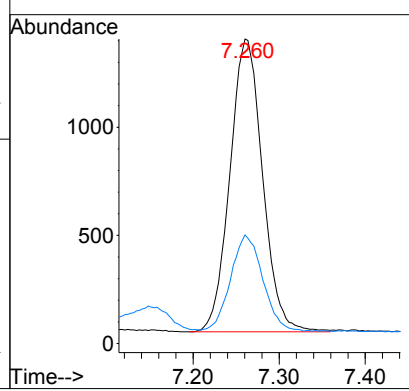
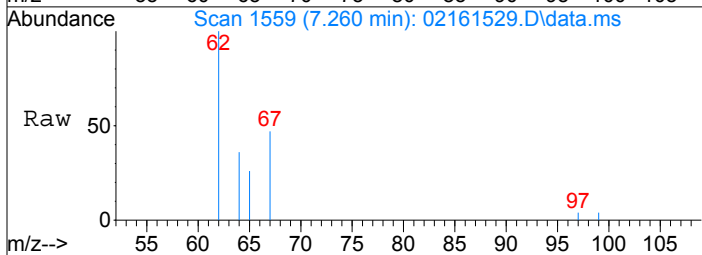
#16
 Chloroform
 Concen: 110.40 pg
 RT: 6.31 min Scan# 1297
 Delta R.T. -0.003 min
 Lab File: 02161529.D
 Acq: 17 Feb 2015 00:55

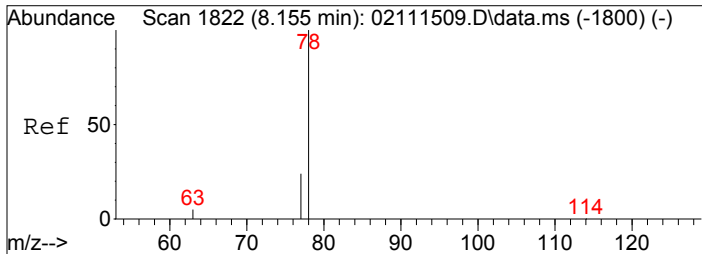
Tgt Ion:	83	Resp:	6548
Ion Ratio	Lower	Upper	
83	100		
85	66.7	45.4	85.4



#18
 1,2-Dichloroethane
 Concen: 75.63 pg
 RT: 7.26 min Scan# 1559
 Delta R.T. -0.005 min
 Lab File: 02161529.D
 Acq: 17 Feb 2015 00:55

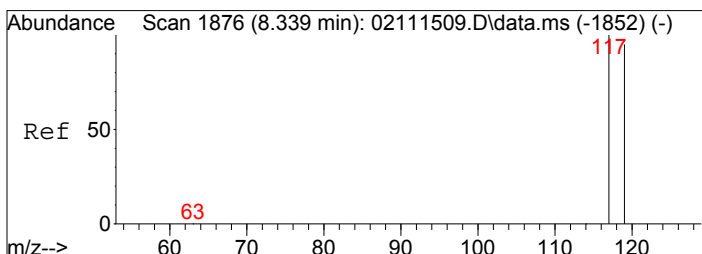
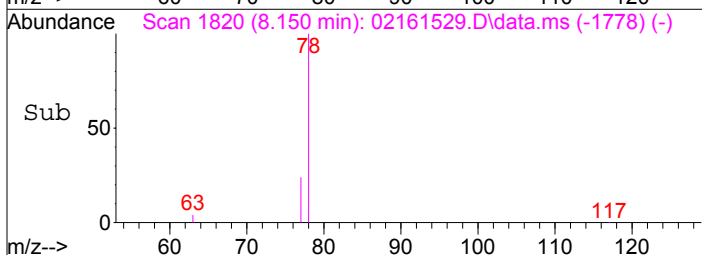
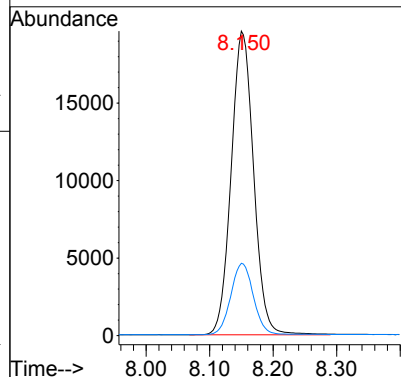
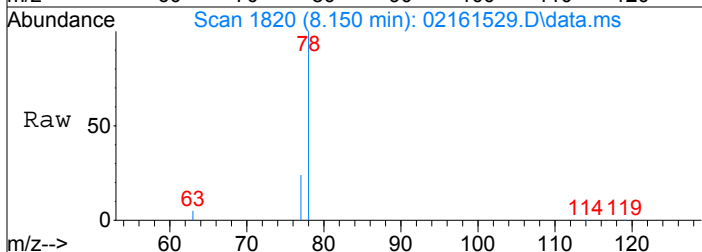
Tgt Ion:	62	Resp:	3572
Ion Ratio	Lower	Upper	
62	100		
64	32.3	11.6	51.6





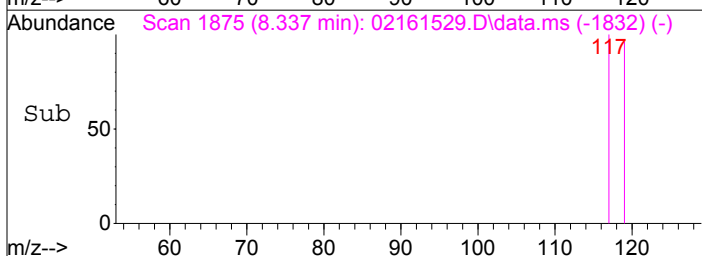
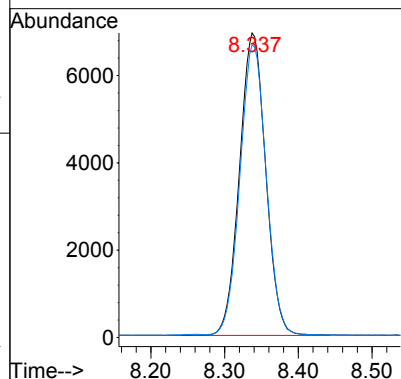
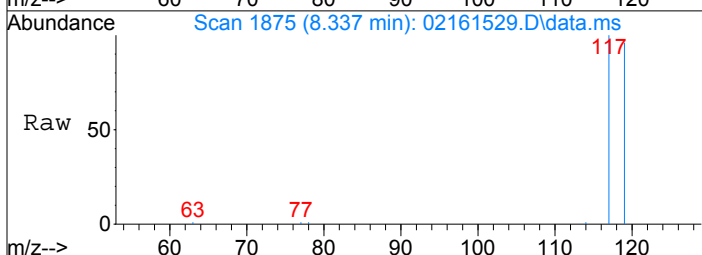
#20
Benzene
Concen: 394.04 pg
RT: 8.15 min Scan# 1820
Delta R.T. -0.005 min
Lab File: 02161529.D
Acq: 17 Feb 2015 00:55

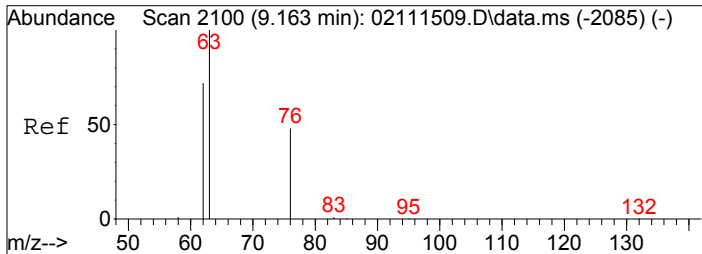
Tgt Ion	78	77	Ratio	Lower	Upper
Resp	48071				
Ion	100	23.6			
Ratio			3.7		43.7



#21
Carbon Tetrachloride
Concen: 395.76 pg
RT: 8.34 min Scan# 1875
Delta R.T. -0.002 min
Lab File: 02161529.D
Acq: 17 Feb 2015 00:55

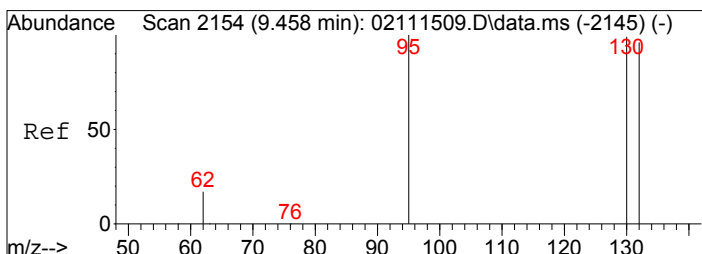
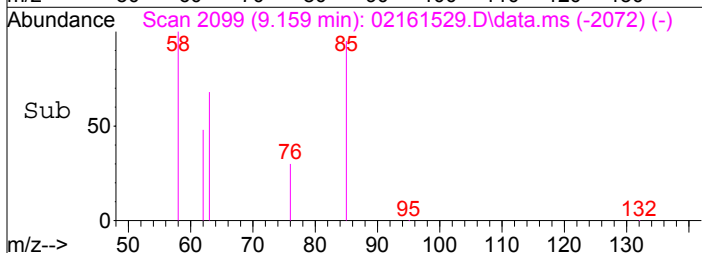
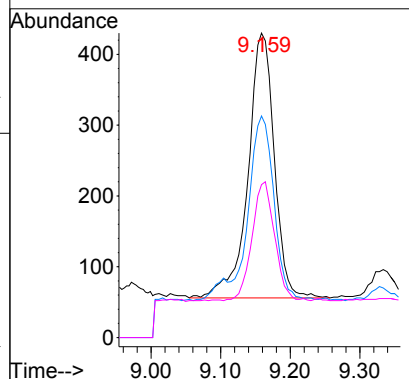
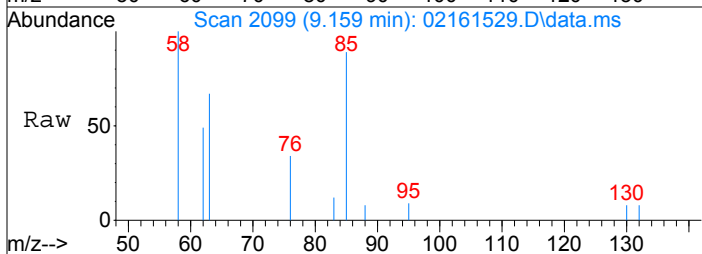
Tgt Ion	117	119	Ratio	Lower	Upper
Resp	17090				
Ion	100	96.3			
Ratio			75.5		115.5





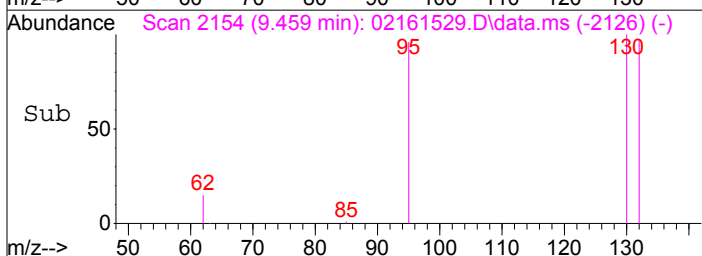
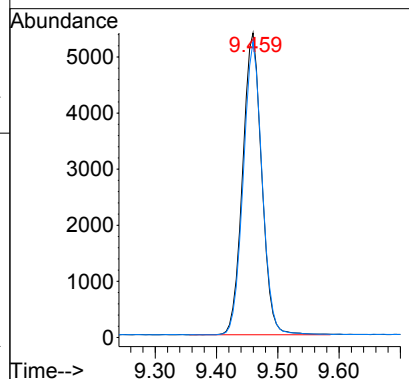
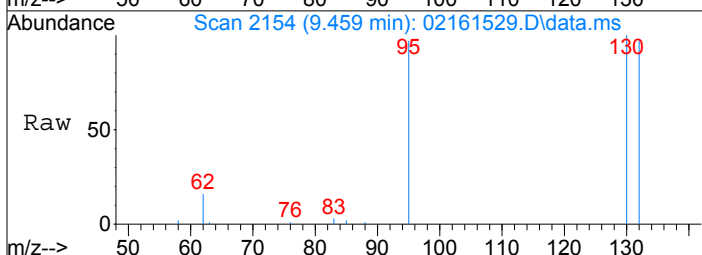
#23
 1,2-Dichloropropane
 Concen: 30.93 pg
 RT: 9.16 min Scan# 2099
 Delta R.T. -0.004 min
 Lab File: 02161529.D
 Acq: 17 Feb 2015 00:55

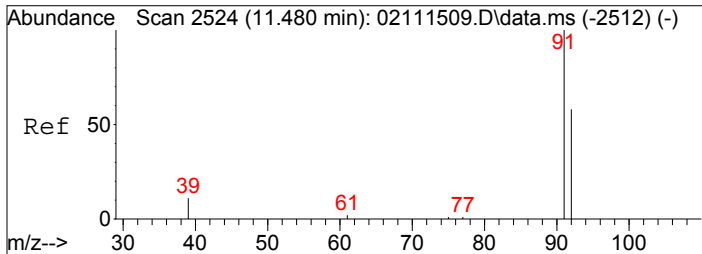
Tgt Ion:	63	Resp:	984
Ion Ratio	Lower	Upper	
63	100		
62	64.7	52.0	92.0
76	38.6	28.1	68.1



#25
 Trichloroethene
 Concen: 310.32 pg
 RT: 9.46 min Scan# 2154
 Delta R.T. 0.001 min
 Lab File: 02161529.D
 Acq: 17 Feb 2015 00:55

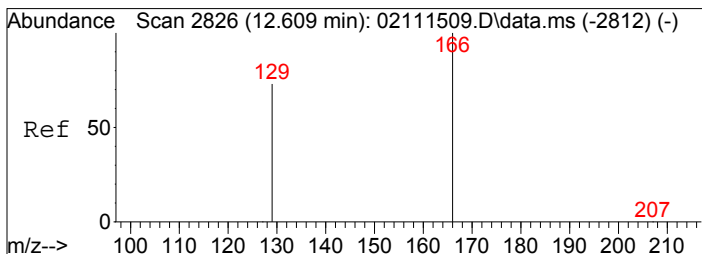
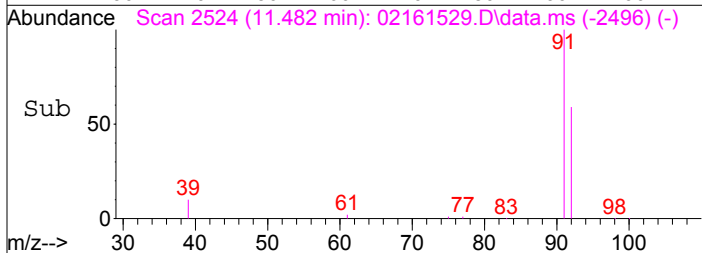
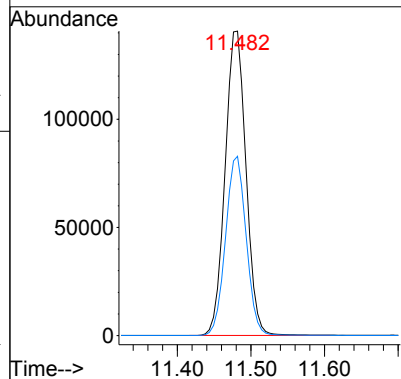
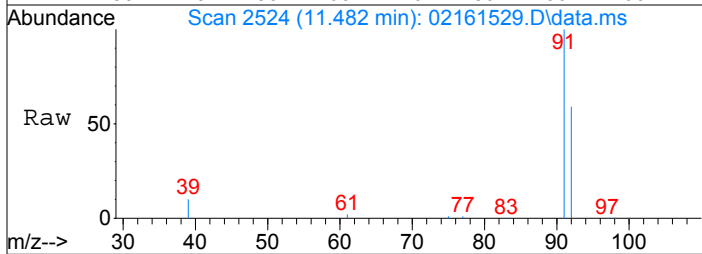
Tgt Ion:	130	Resp:	11628
Ion Ratio	Lower	Upper	
130	100		
132	96.1	77.1	117.1





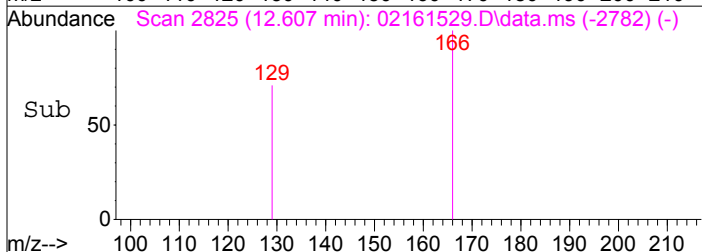
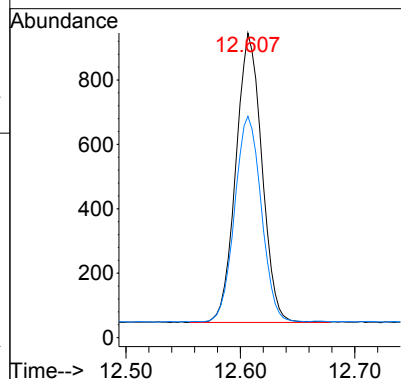
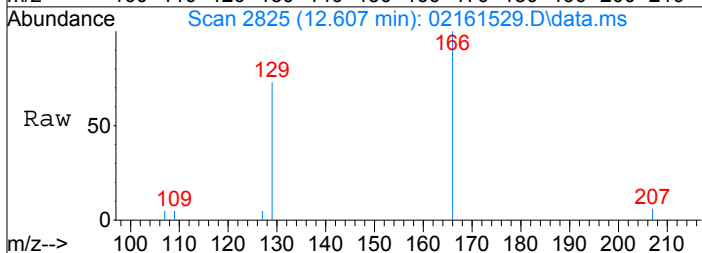
#31
Toluene
Concen: 1940.80 pg
RT: 11.48 min Scan# 2524
Delta R.T. 0.001 min
Lab File: 02161529.D
Acq: 17 Feb 2015 00:55

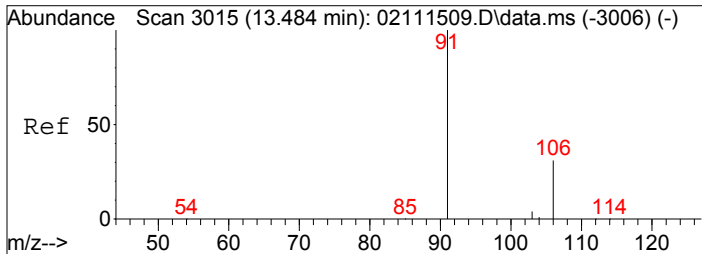
Tgt Ion	91	92	Resp	277642	Lower	Upper
Ion Ratio	100	58.2			37.7	77.7



#33
Tetrachloroethene
Concen: 31.99 pg
RT: 12.61 min Scan# 2825
Delta R.T. -0.002 min
Lab File: 02161529.D
Acq: 17 Feb 2015 00:55

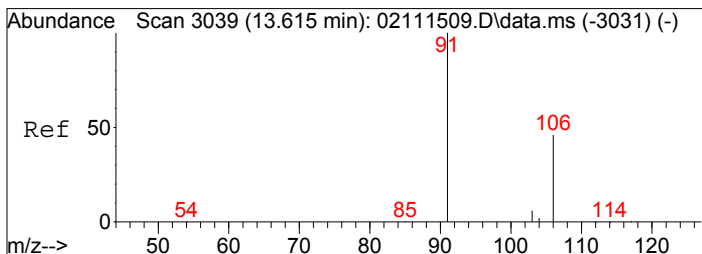
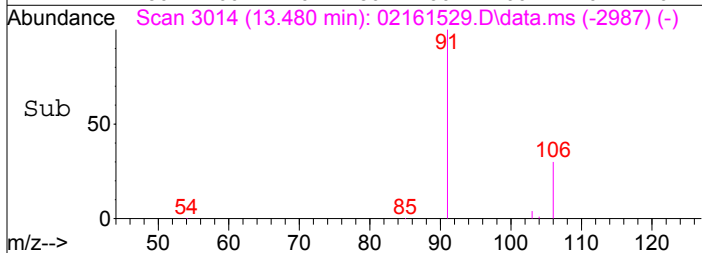
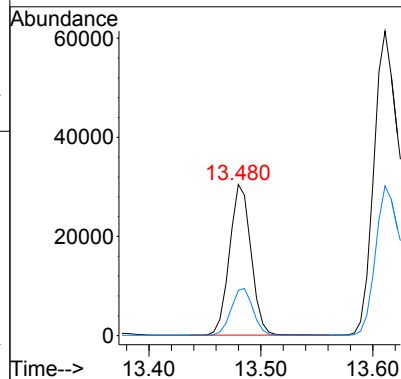
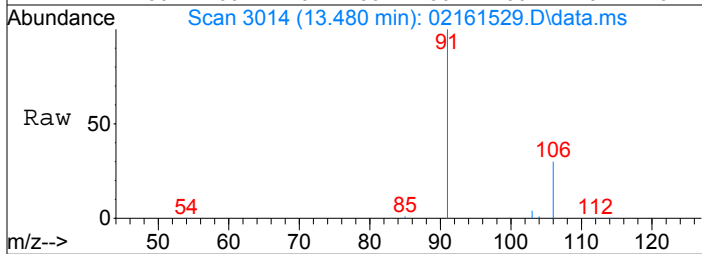
Tgt Ion	166	129	Resp	1417	Lower	Upper
Ion Ratio	100	72.8			53.3	93.3





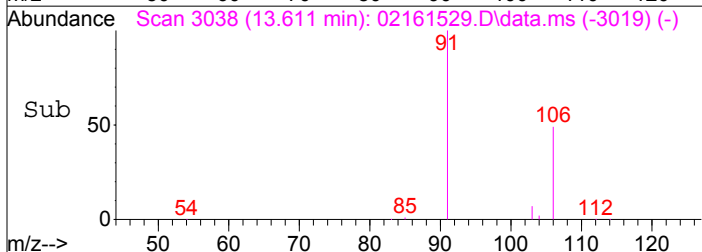
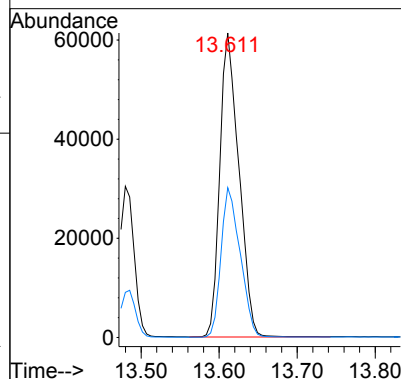
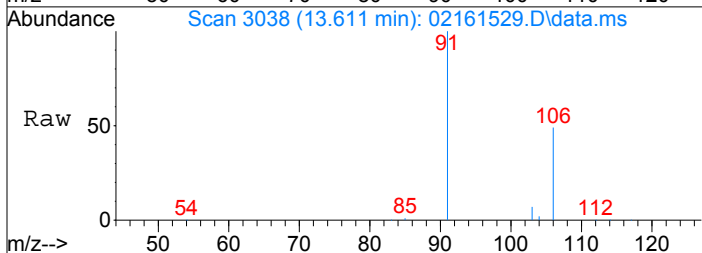
#36
Ethylbenzene
Concen: 263.51 pg
RT: 13.48 min Scan# 3014
Delta R.T. -0.004 min
Lab File: 02161529.D
Acq: 17 Feb 2015 00:55

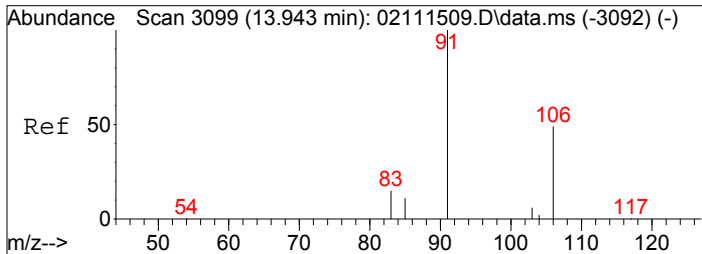
Tgt Ion: 91 Resp: 40622
Ion Ratio Lower Upper
91 100
106 31.5 10.9 50.9



#37
m,p-Xylene
Concen: 821.56 pg
RT: 13.61 min Scan# 3038
Delta R.T. -0.004 min
Lab File: 02161529.D
Acq: 17 Feb 2015 00:55

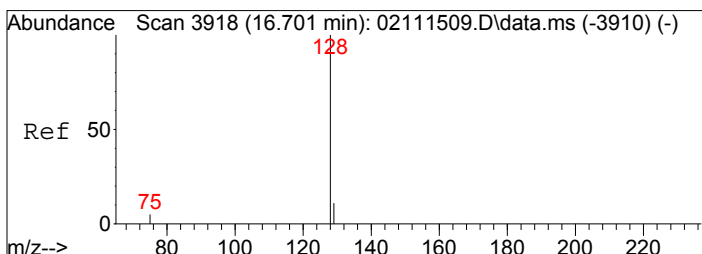
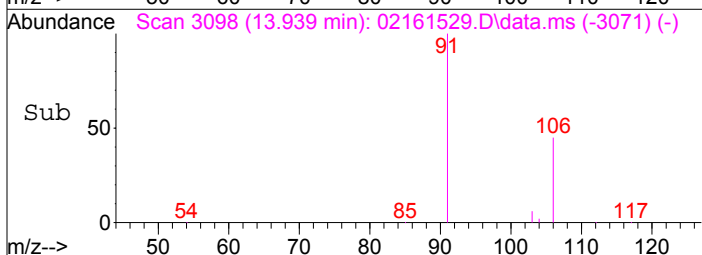
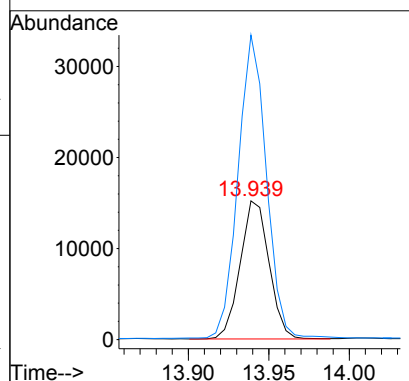
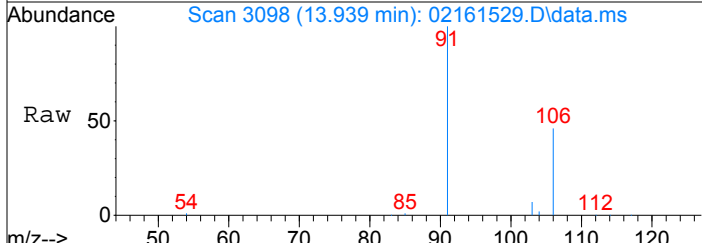
Tgt Ion: 91 Resp: 104091
Ion Ratio Lower Upper
91 100
106 49.3 27.5 67.5





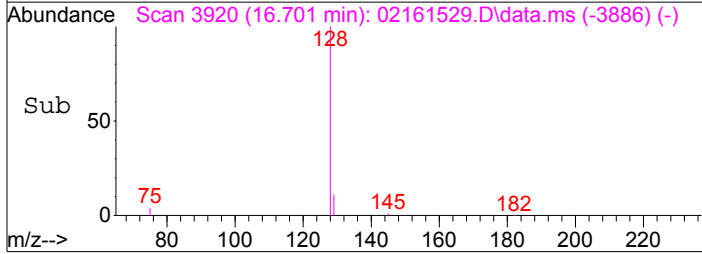
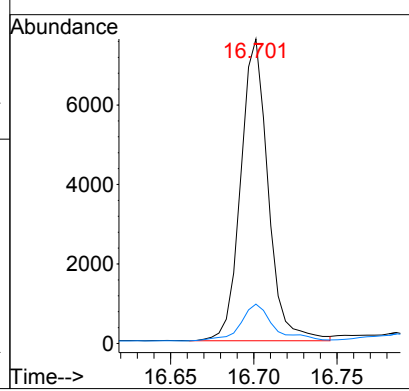
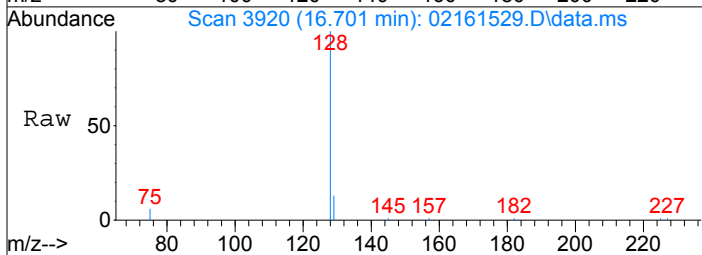
#38
o-Xylene
Concen: 305.65 pg
RT: 13.94 min Scan# 3098
Delta R.T. -0.004 min
Lab File: 02161529.D
Acq: 17 Feb 2015 00:55

Tgt Ion:106	Resp:	18926
Ion Ratio	Lower	Upper
106	100	
91	216.4	198.3 238.3



#45
Naphthalene
Concen: 56.51 pg
RT: 16.70 min Scan# 3920
Delta R.T. 0.000 min
Lab File: 02161529.D
Acq: 17 Feb 2015 00:55

Tgt Ion:128	Resp:	8693
Ion Ratio	Lower	Upper
128	100	
129	14.7	0.0 30.9



Data File: I:\MS19\DATA\2015 02\16\02161530.D

Acq On : 17 Feb 2015 1:23

Operator: WA

Sample : P1500566-028 (1000mL)

Misc : S29-02041502

ALS Vial : 14 Sample Multiplier: 1

Quant Time: Feb 17 11:18:52 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

WA 2/17/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	19745	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	142240	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	24252	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	44049	913.516	pg	0.00
Spiked Amount 1000.000			Recovery	=	91.35%	
30) Toluene-d8 (SS2)	11.38	98	134802	1027.678	pg	0.00
Spiked Amount 1000.000			Recovery	=	102.77%	
40) Bromofluorobenzene (SS3)	14.25	174	54535	1113.835	pg	0.00
Spiked Amount 1000.000			Recovery	=	111.38%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.72	85	151680	1890.235	pg	100
3) Chloromethane	1.83	52	9006	561.999	pg	97
4) Vinyl Chloride	2.01	62	358	N.D.		
5) Bromomethane	2.32	94	1555	43.095	pg	99
6) Chloroethane	2.47	64	672	22.137	pg	84
7) Acetone	2.98	58	300517	10605.465	pg	# 42
8) Trichlorofluoromethane	3.10	101	99704	1446.531	pg	100
9) 1,1-Dichloroethene	3.65	96	238	N.D.		
10) Methylene Chloride	3.79	84	30777	941.024	pg	93
11) Trichlorotrifluoroethane	4.09	151	13898	438.814	pg	100
12) trans-1,2-Dichloroethene	4.73	96	1512	48.119	pg	100
13) 1,1-Dichloroethane	4.95	63	516	N.D.		
14) Methyl tert-Butyl Ether	5.10	73	1057	N.D.		
15) cis-1,2-Dichloroethene	5.93	96	5899	168.828	pg	99
16) Chloroform	6.31	83	8562	141.433	pg	98
18) 1,2-Dichloroethane	7.26	62	5772	119.748	pg	99
19) 1,1,1-Trichloroethane	7.59	97	1506	25.582	pg	100
20) Benzene	8.15	78	78391	629.586	pg	100
21) Carbon Tetrachloride	8.34	117	18323	415.744	pg	100
23) 1,2-Dichloropropane	9.16	63	1602	51.640	pg	98
24) Bromodichloromethane	0.00	83	0	N.D.	d	
25) Trichloroethene	9.46	130	34604	946.957	pg	99
26) 1,4-Dioxane	9.45	88	21	N.D.		
27) cis-1,3-Dichloropropene	10.46	75	45	N.D.		
28) trans-1,3-Dichloropropene	11.05	75	56	N.D.		
29) 1,1,2-Trichloroethane	11.20	83	159	N.D.		
31) Toluene	11.48	91	461117	3305.295	pg	99
32) 1,2-Dibromoethane	12.13	107	41	N.D.		
33) Tetrachloroethene	12.61	166	3942	91.258	pg	100
35) Chlorobenzene	13.17	112	1171	N.D.		
36) Ethylbenzene	13.48	91	52514	345.304	pg	99
37) m,p-Xylene	13.61	91	132235	1057.940	pg	97
38) o-Xylene	13.94	106	23829	390.085	pg	98
39) 1,1,1,2,2-Tetrachloroethane	13.89	83	516	N.D.		
41) 1,3-Dichlorobenzene	0.00	146	0	N.D.	d	
42) 1,4-Dichlorobenzene	15.24	146	2942	35.104	pg	100
43) 1,2-Dichlorobenzene	15.46	146	177	N.D.		
44) 1,2,4-Trichlorobenzene	16.63	182	84	N.D.		
45) Naphthalene	16.70	128	9045	59.606	pg	92
46) Hexachlorobutadiene	16.96	225	40	N.D.		

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\16\02161530.D

Acq On : 17 Feb 2015 1:23

Operator: WA

Sample : P1500566-028 (1000mL)

Misc : S29-02041502

ALS Vial : 14 Sample Multiplier: 1

Quant Time: Feb 17 11:18:52 2015

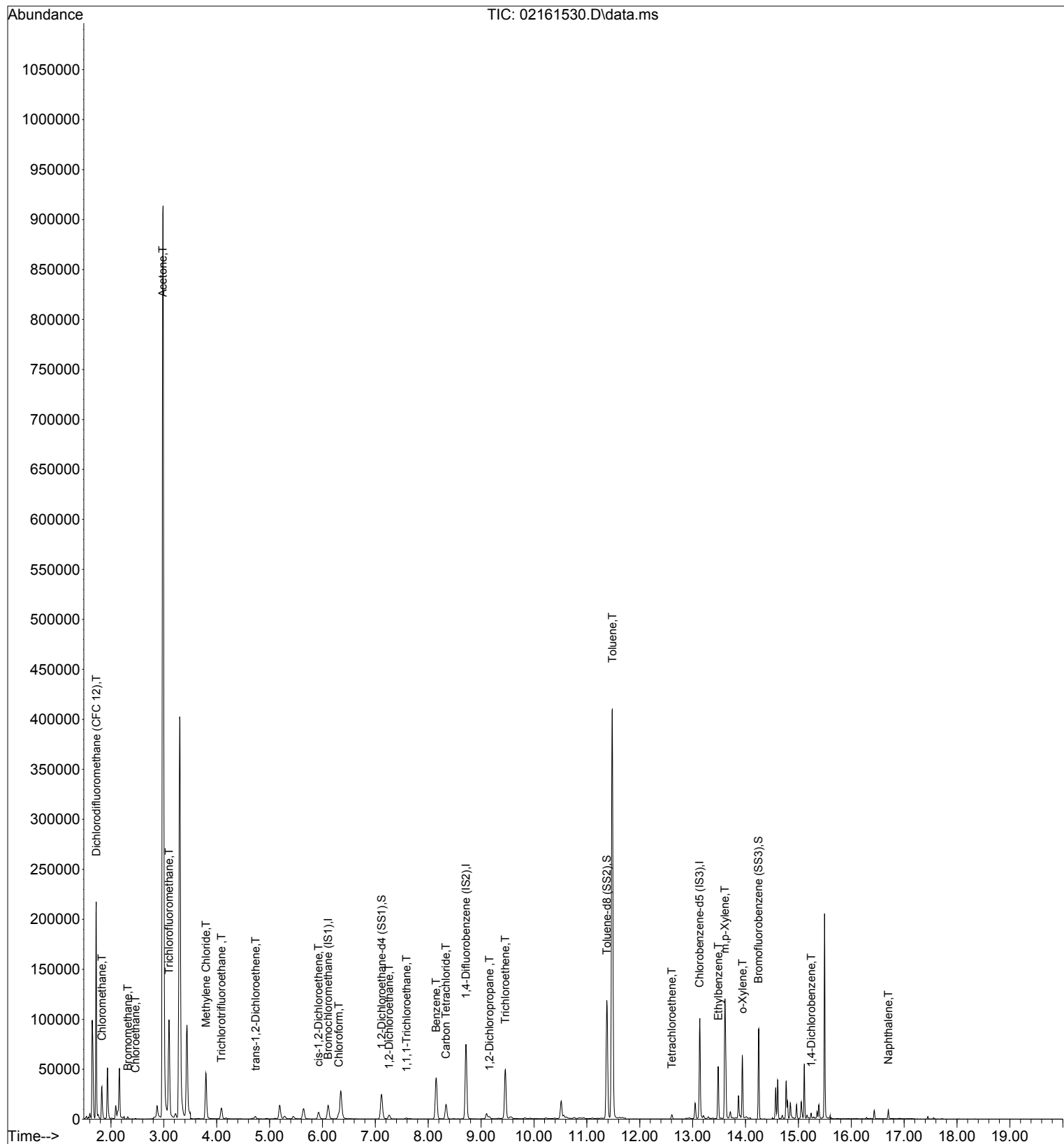
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 02\16\02161530.D

Acq On : 17 Feb 2015 1:23

Operator: WA

Sample : P1500566-028 (1000mL)

Misc : S29-02041502

ALS Vial : 14 Sample Multiplier: 1

Quant Time: Feb 17 11:18:52 2015

Quant Method : I:\MS19\METHODS\X19021115.M

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QLast Update : Thu Feb 12 14:42:03 2015

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WA 2/17/15

DataAcq Meth:TO15SIM.M

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17) 1,2-Dichloroethane-d4 ...	7.12	65	44049	913.516	pg	0.00
Spiked Amount 1000.000			Recovery	=	91.35%	
30) Toluene-d8 (SS2)	11.38	98	134802	1027.678	pg	0.00
Spiked Amount 1000.000			Recovery	=	102.77%	
40) Bromofluorobenzene (SS3)	14.25	174	54535	1113.835	pg	0.00
Spiked Amount 1000.000			Recovery	=	111.38%	

Target Compounds

						Qvalue
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7) Acetone	2.98	58	300517	10605.465	pg	# 42
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10) Methylene Chloride	3.79	84	30777	941.024	pg	93
11) Trichlorotrifluoroethane	4.09	151	13898	438.814	pg	100
12) trans-1,2-Dichloroethene	4.73	96	1512	48.119	pg	100
15) cis-1,2-Dichloroethene	5.93	96	5899	168.828	pg	99
16) Chloroform	6.31	83	8562	141.433	pg	98
18) 1,2-Dichloroethane	7.26	62	5772	119.748	pg	99
19) 1,1,1-Trichloroethane	7.59	97	1506	25.582	pg	100
20) Benzene	8.15	78	78391	629.586	pg	100
21) Carbon Tetrachloride	8.34	117	18323	415.744	pg	100
23) 1,2-Dichloropropane	9.16	63	1602	51.640	pg	98
25) Trichloroethene	9.46	130	34604	946.957	pg	99
31) Toluene	11.48	91	461117	3305.295	pg	99
33) Tetrachloroethene	12.61	166	3942	91.258	pg	100
36) Ethylbenzene	13.48	91	52514	345.304	pg	99
37) m,p-Xylene	13.61	91	132235	1057.940	pg	97
38) o-Xylene	13.94	106	23829	390.085	pg	98
42) 1,4-Dichlorobenzene	15.24	146	2942	35.104	pg	100
45) Naphthalene	16.70	128	9045	59.606	pg	92

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\16\02161530.D

Acq On : 17 Feb 2015 1:23

Operator: WA

Sample : P1500566-028 (1000mL)

Misc : S29-02041502

ALS Vial : 14 Sample Multiplier: 1

Quant Time: Feb 17 11:18:52 2015

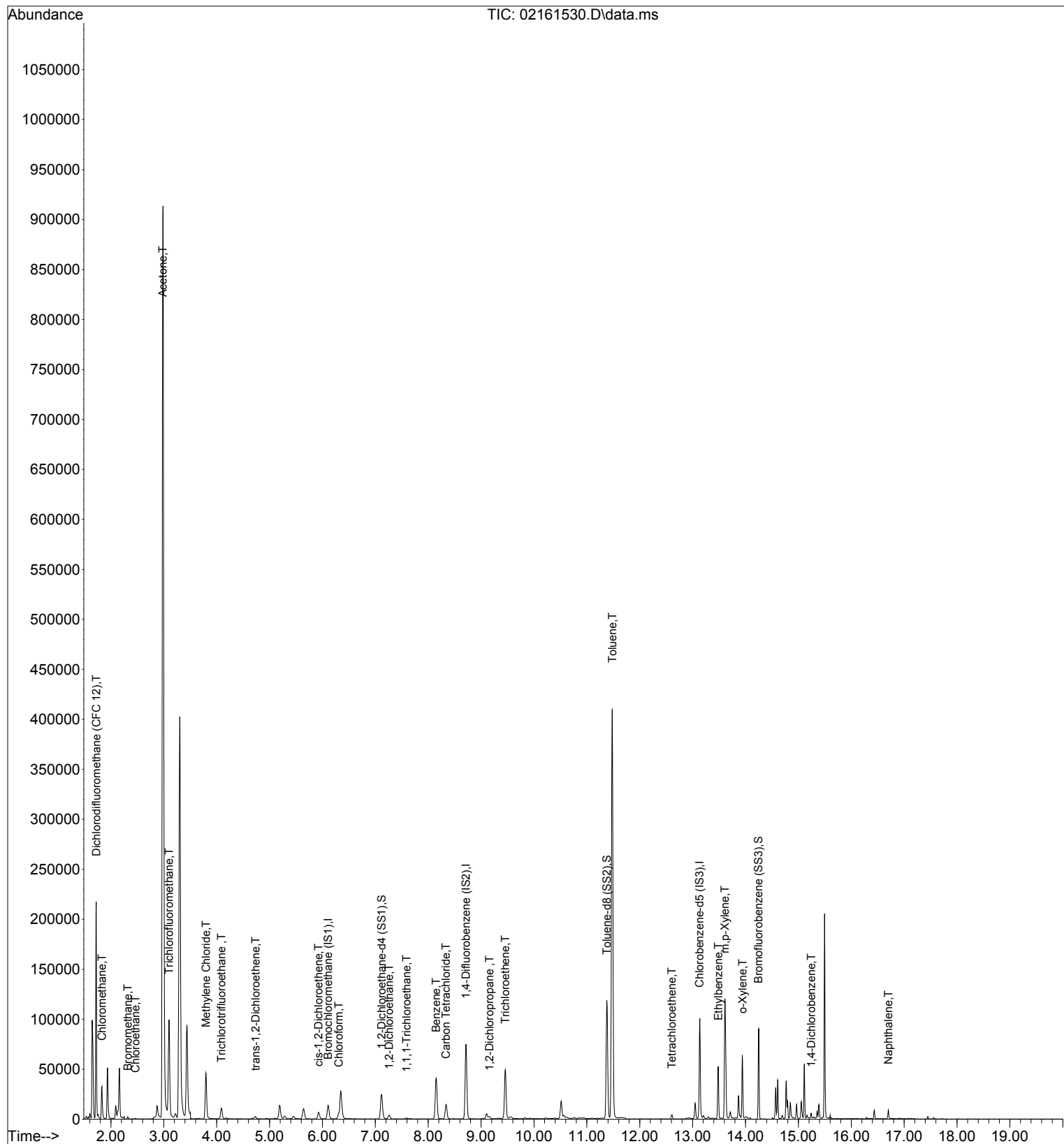
Quant Method : I:\MS19\METHODS\X19021115.M

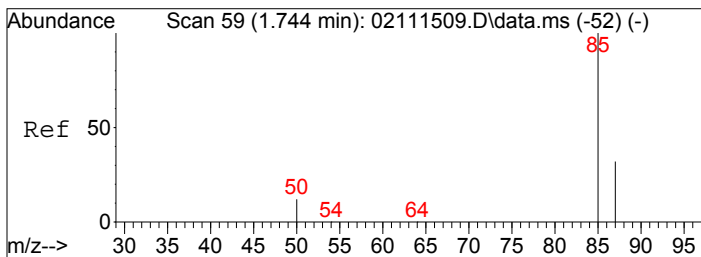
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

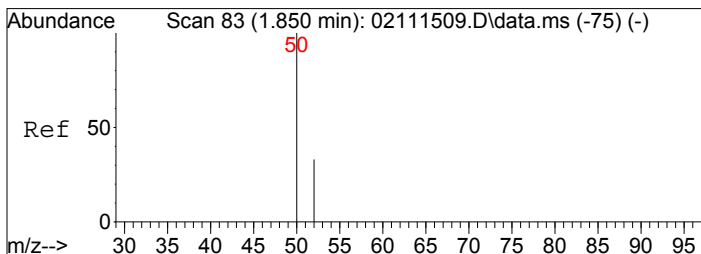
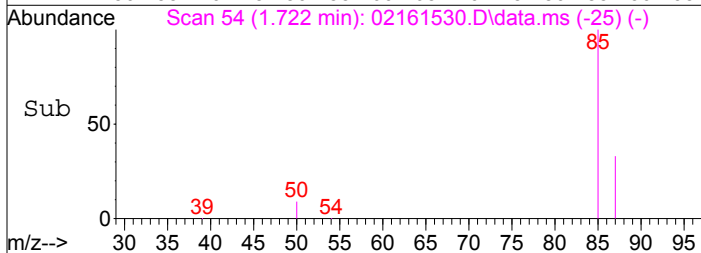
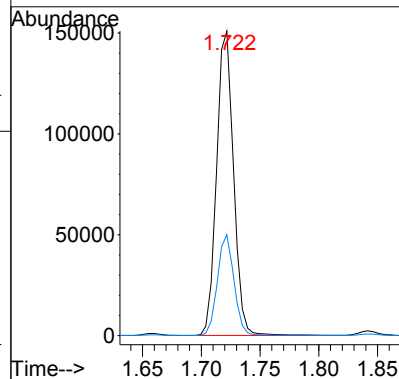
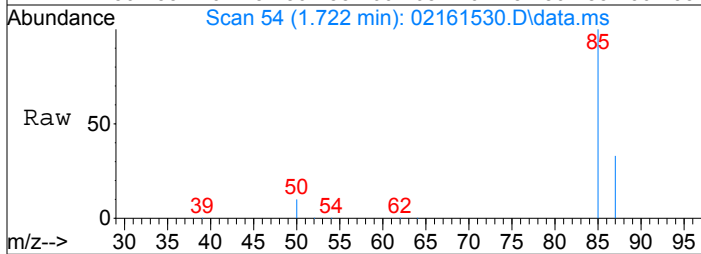
DataAcq Meth:TO15SIM.M





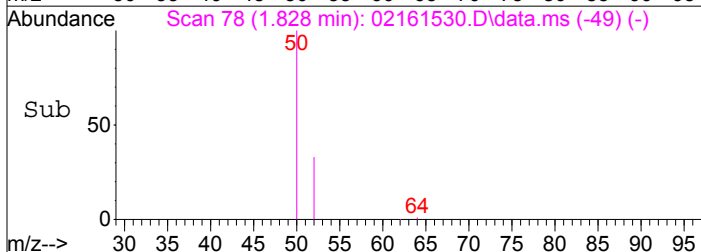
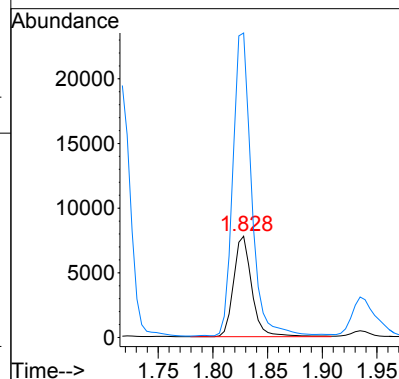
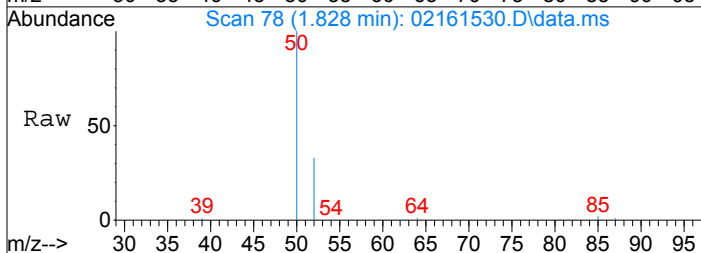
#2
 Dichlorodifluoromethane (CFC 12)
 Concen: 1890.24 pg
 RT: 1.72 min Scan# 54
 Delta R.T. -0.022 min
 Lab File: 02161530.D
 Acq: 17 Feb 2015 1:23

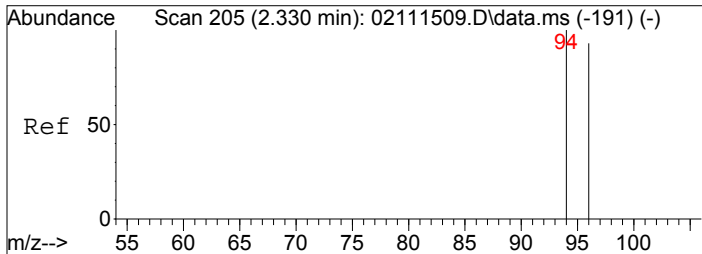
Tgt Ion: 85 Resp: 151680
 Ion Ratio Lower Upper
 85 100
 87 32.4 12.4 52.4



#3
 Chloromethane
 Concen: 562.00 pg
 RT: 1.83 min Scan# 78
 Delta R.T. -0.022 min
 Lab File: 02161530.D
 Acq: 17 Feb 2015 1:23

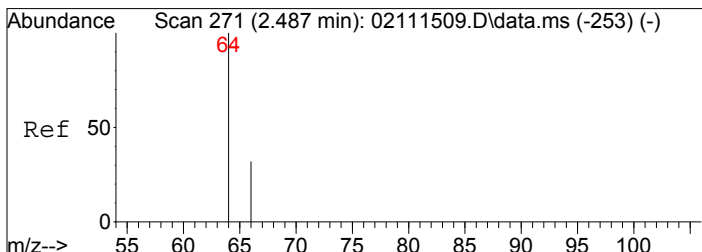
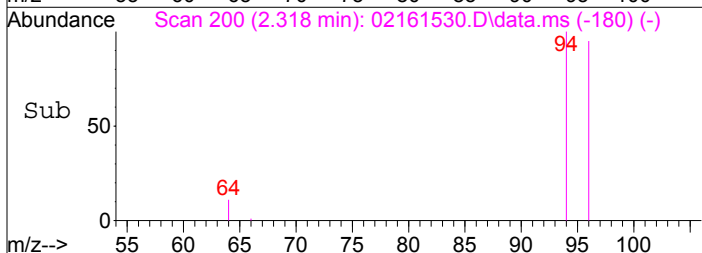
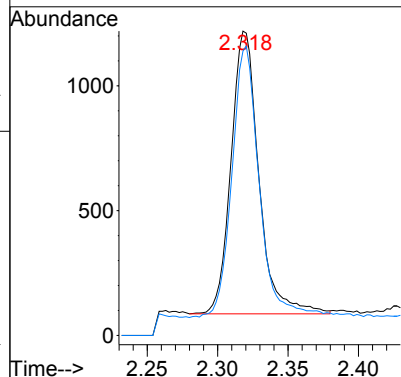
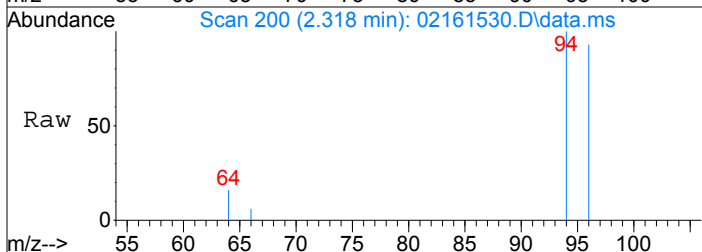
Tgt Ion: 52 Resp: 9006
 Ion Ratio Lower Upper
 52 100
 50 310.2 283.7 323.7





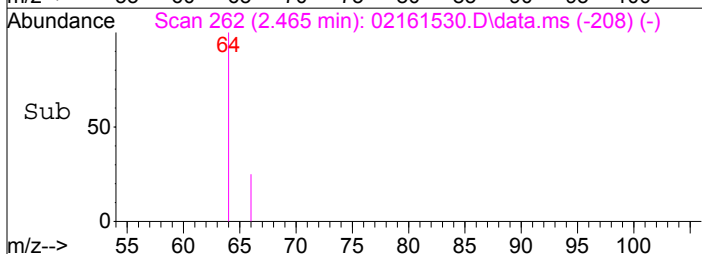
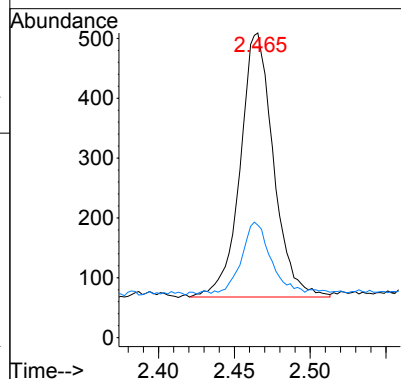
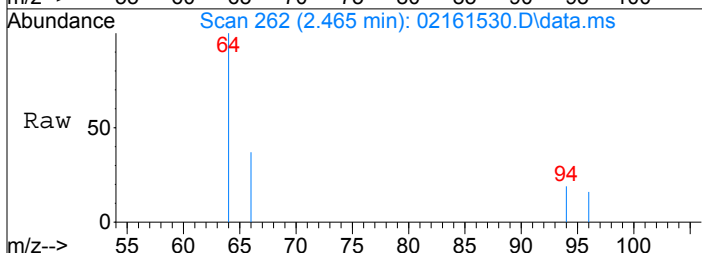
#5
 Bromomethane
 Concen: 43.10 pg
 RT: 2.32 min Scan# 200
 Delta R.T. -0.012 min
 Lab File: 02161530.D
 Acq: 17 Feb 2015 1:23

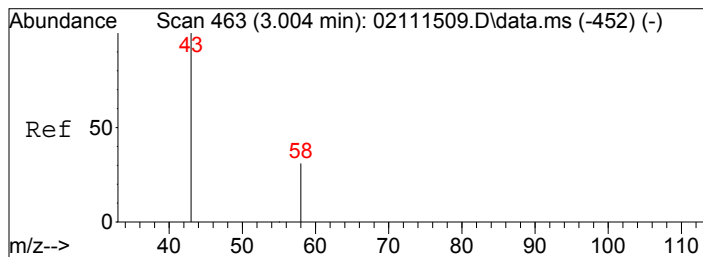
Tgt Ion: 94 Resp: 1555
 Ion Ratio Lower Upper
 94 100
 96 95.7 75.5 113.3



#6
 Chloroethane
 Concen: 22.14 pg
 RT: 2.47 min Scan# 262
 Delta R.T. -0.021 min
 Lab File: 02161530.D
 Acq: 17 Feb 2015 1:23

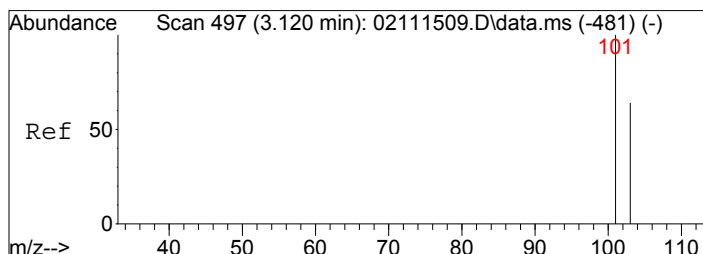
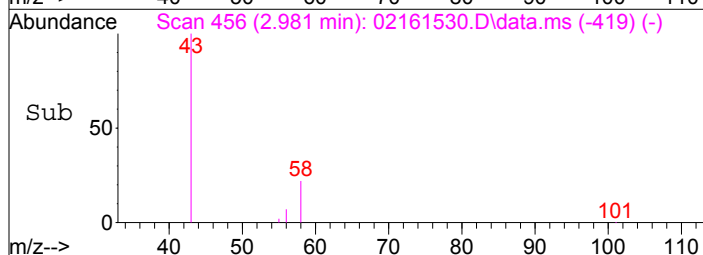
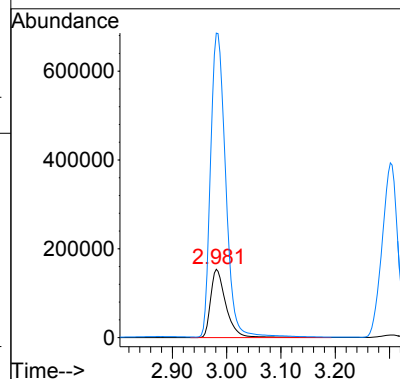
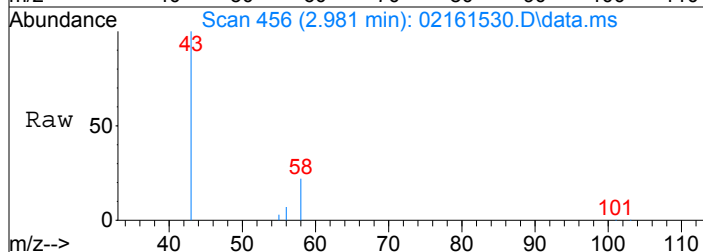
Tgt Ion: 64 Resp: 672
 Ion Ratio Lower Upper
 64 100
 66 23.4 12.2 52.2





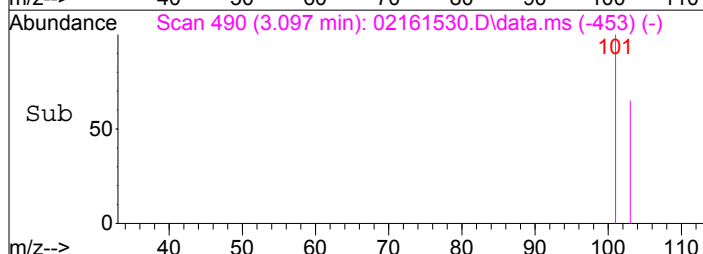
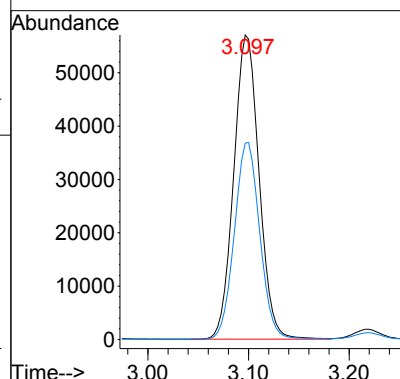
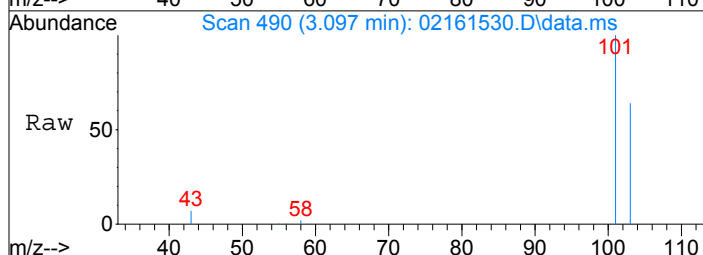
#7
Acetone
Concen: 10605.46 pg
RT: 2.98 min Scan# 456
Delta R.T. -0.023 min
Lab File: 02161530.D
Acq: 17 Feb 2015 1:23

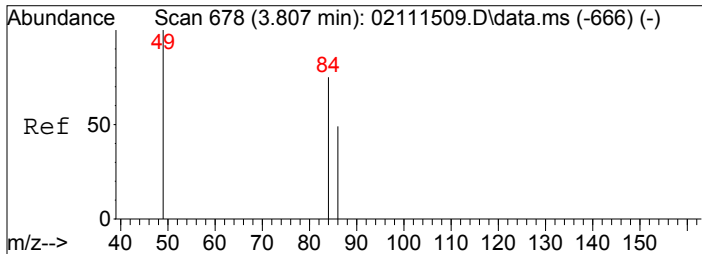
Tgt Ion: 58 Resp: 300517
Ion Ratio Lower Upper
58 100
43 440.4 301.8 341.8#



#8
Trichlorofluoromethane
Concen: 1446.53 pg
RT: 3.10 min Scan# 490
Delta R.T. -0.023 min
Lab File: 02161530.D
Acq: 17 Feb 2015 1:23

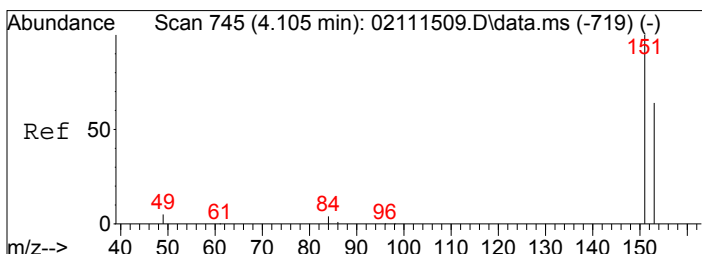
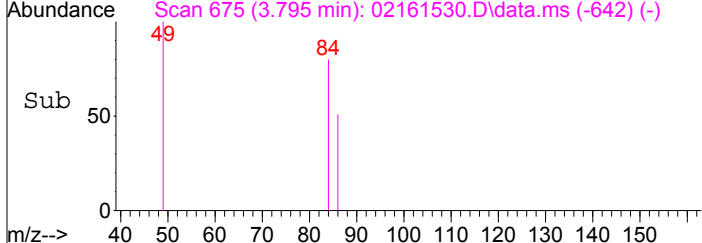
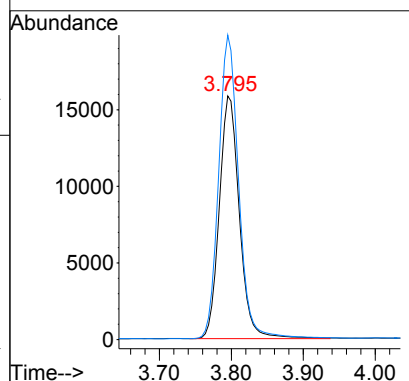
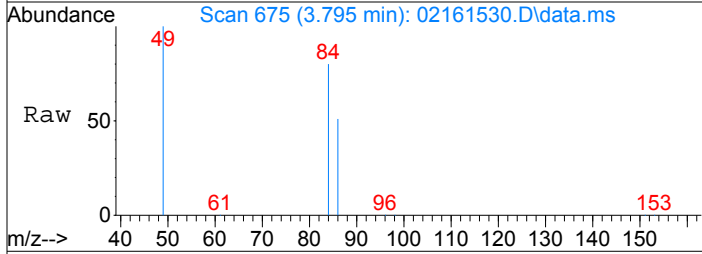
Tgt Ion: 101 Resp: 99704
Ion Ratio Lower Upper
101 100
103 64.8 51.8 77.6





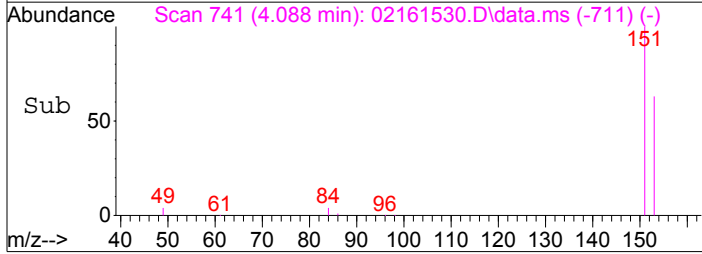
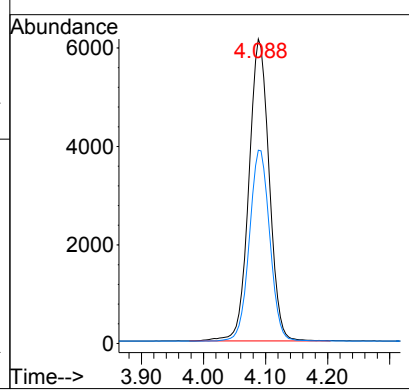
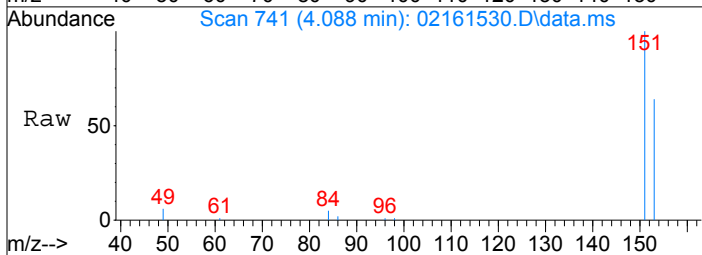
#10
Methylene Chloride
Concen: 941.02 pg
RT: 3.79 min Scan# 675
Delta R.T. -0.012 min
Lab File: 02161530.D
Acq: 17 Feb 2015 1:23

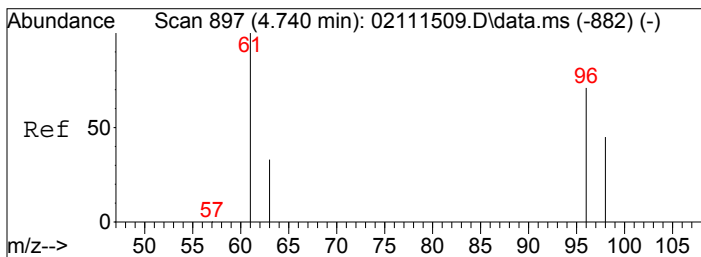
Tgt Ion: 84	Resp: 30777
Ion Ratio	Lower Upper
84	100
49	124.6 112.3 152.3



#11
Trichlorotrifluoroethane
Concen: 438.81 pg
RT: 4.09 min Scan# 741
Delta R.T. -0.017 min
Lab File: 02161530.D
Acq: 17 Feb 2015 1:23

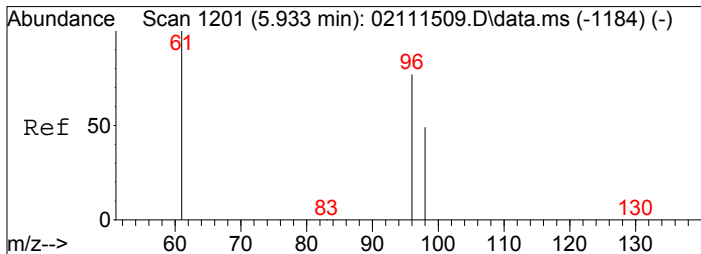
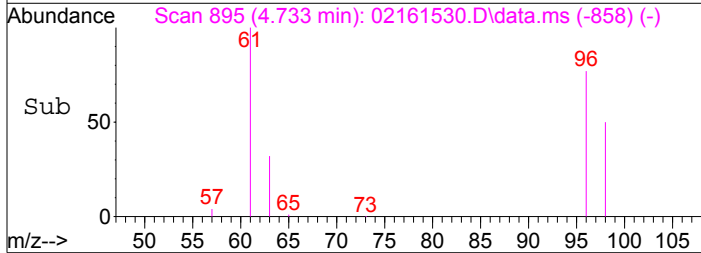
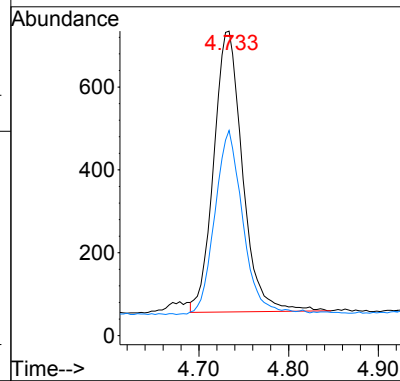
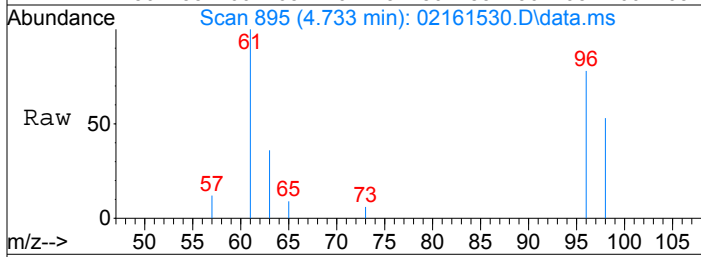
Tgt Ion: 151	Resp: 13898
Ion Ratio	Lower Upper
151	100
153	63.7 43.6 83.6





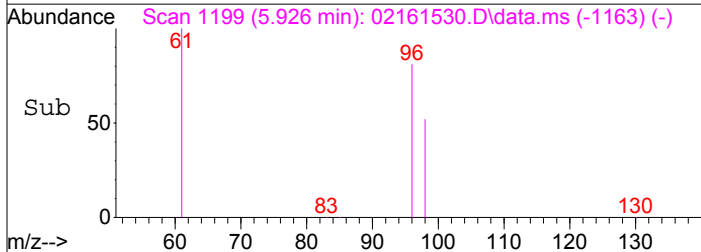
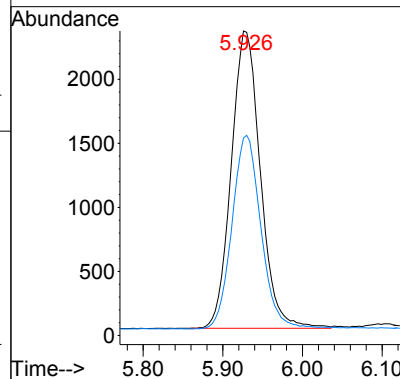
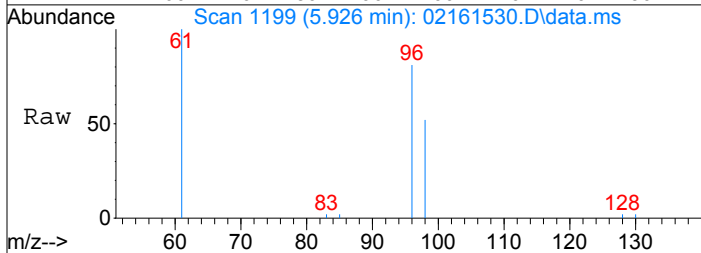
#12
trans-1,2-Dichloroethene
Concen: 48.12 pg
RT: 4.73 min Scan# 895
Delta R.T. -0.007 min
Lab File: 02161530.D
Acq: 17 Feb 2015 1:23

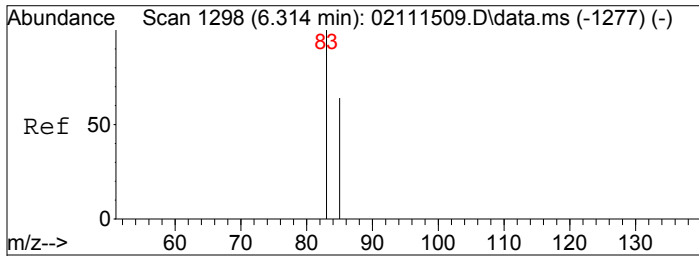
Tgt Ion: 96 Resp: 1512
Ion Ratio Lower Upper
96 100
98 63.8 43.7 83.7



#15
cis-1,2-Dichloroethene
Concen: 168.83 pg
RT: 5.93 min Scan# 1199
Delta R.T. -0.007 min
Lab File: 02161530.D
Acq: 17 Feb 2015 1:23

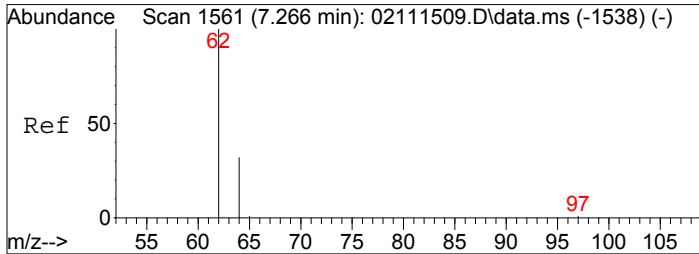
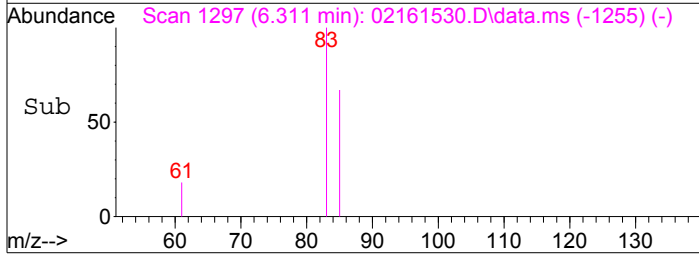
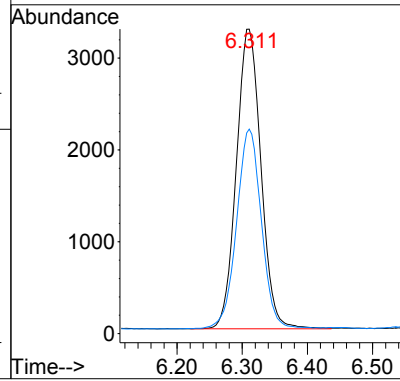
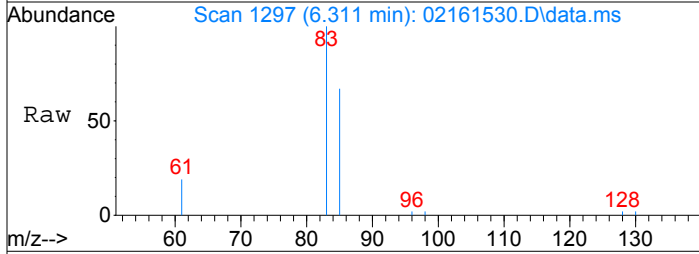
Tgt Ion: 96 Resp: 5899
Ion Ratio Lower Upper
96 100
98 65.0 44.3 84.3





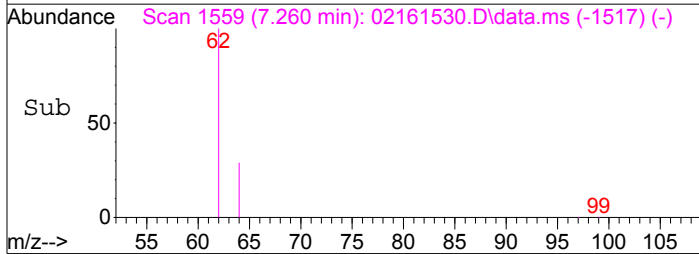
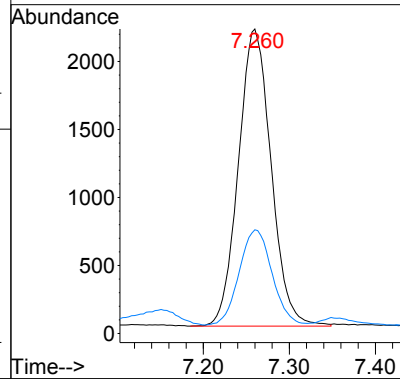
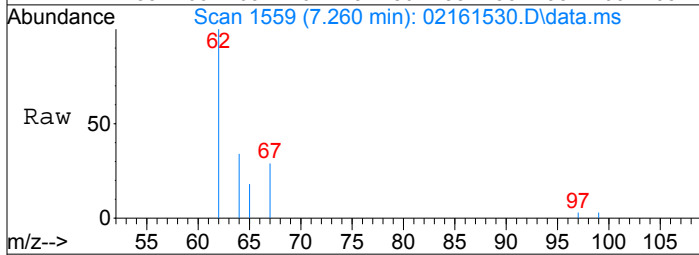
#16
Chloroform
Concen: 141.43 pg
RT: 6.31 min Scan# 1297
Delta R.T. -0.003 min
Lab File: 02161530.D
Acq: 17 Feb 2015 1:23

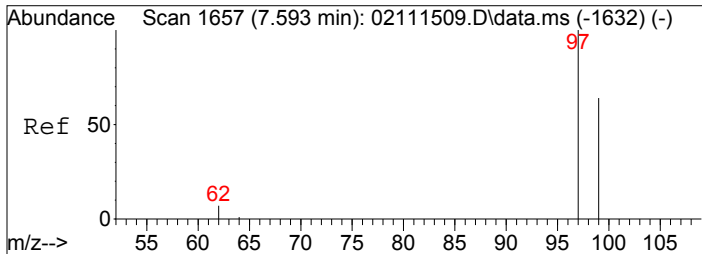
Tgt Ion	83	Resp	8562
Ion Ratio	Lower	Upper	
83	100		
85	67.2	45.4	85.4



#18
1,2-Dichloroethane
Concen: 119.75 pg
RT: 7.26 min Scan# 1559
Delta R.T. -0.006 min
Lab File: 02161530.D
Acq: 17 Feb 2015 1:23

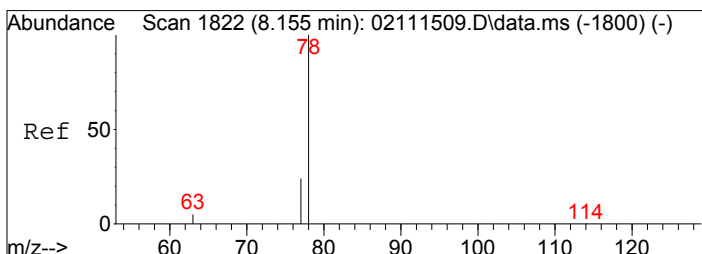
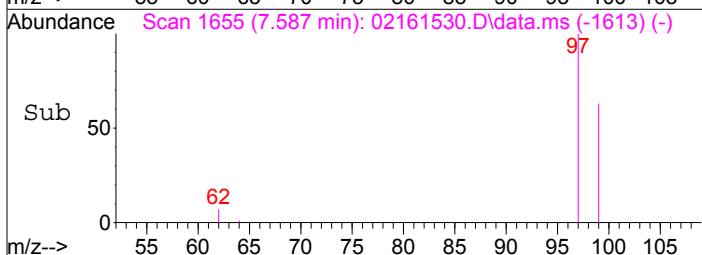
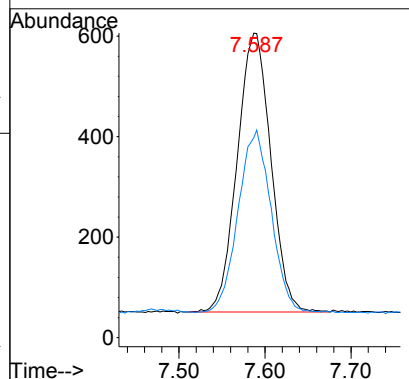
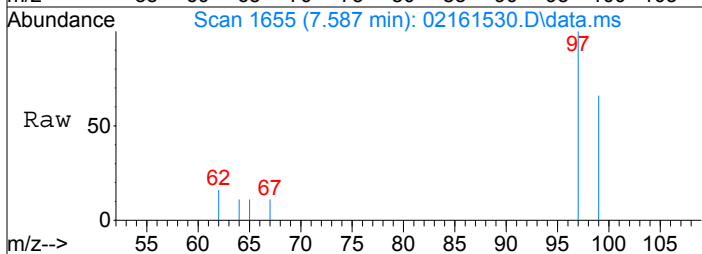
Tgt Ion	62	Resp	5772
Ion Ratio	Lower	Upper	
62	100		
64	32.0	11.6	51.6





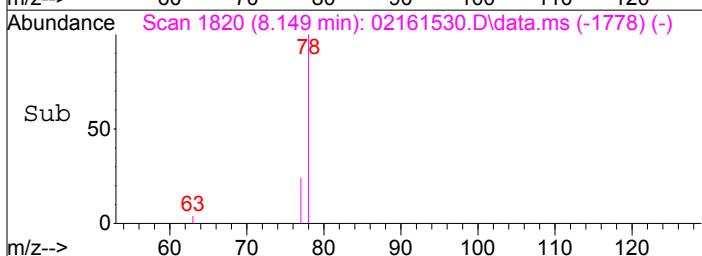
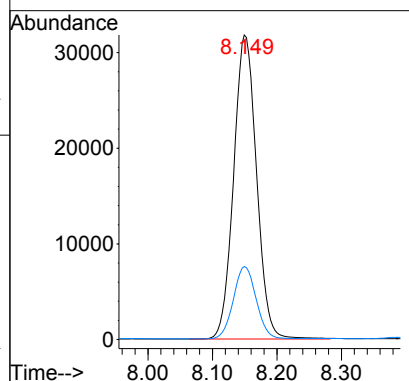
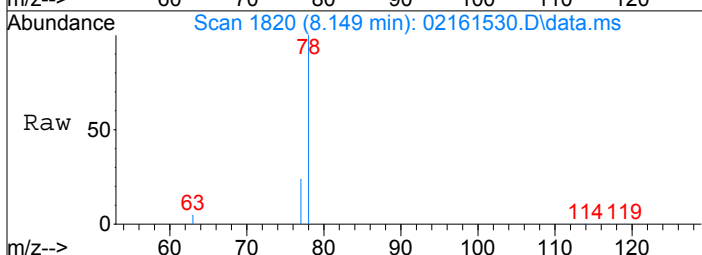
#19
 1,1,1-Trichloroethane
 Concen: 25.58 pg
 RT: 7.59 min Scan# 1655
 Delta R.T. -0.006 min
 Lab File: 02161530.D
 Acq: 17 Feb 2015 1:23

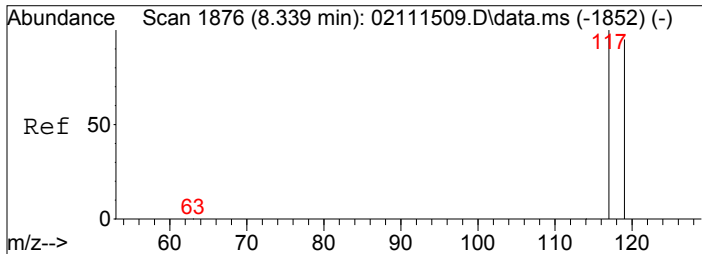
Tgt Ion: 97 Resp: 1506
 Ion Ratio Lower Upper
 97 100
 99 64.3 44.0 84.0



#20
 Benzene
 Concen: 629.59 pg
 RT: 8.15 min Scan# 1820
 Delta R.T. -0.006 min
 Lab File: 02161530.D
 Acq: 17 Feb 2015 1:23

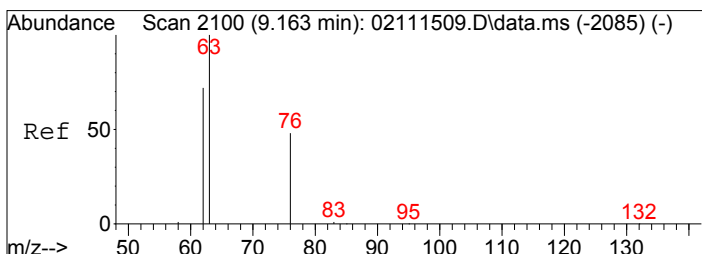
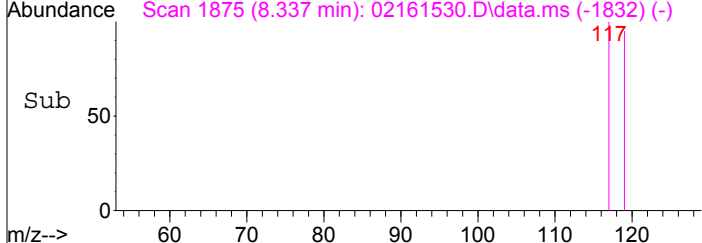
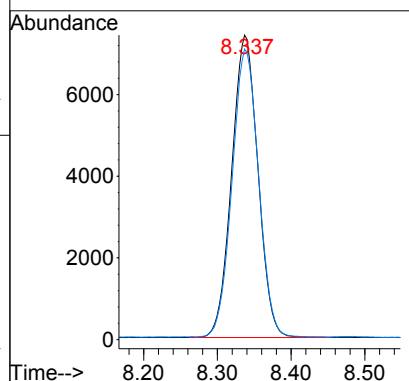
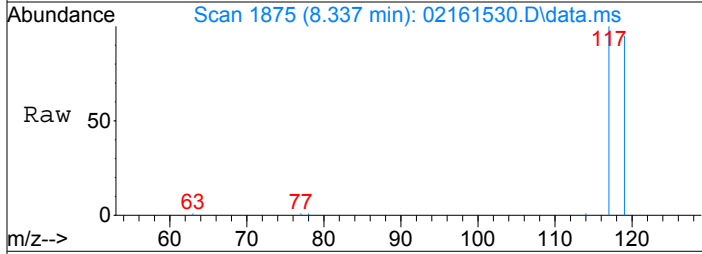
Tgt Ion: 78 Resp: 78391
 Ion Ratio Lower Upper
 78 100
 77 23.8 3.7 43.7





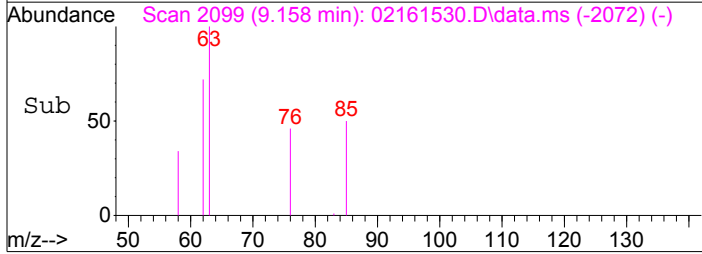
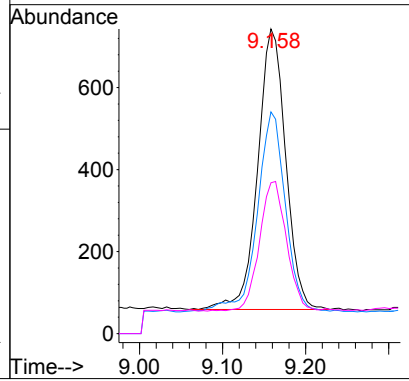
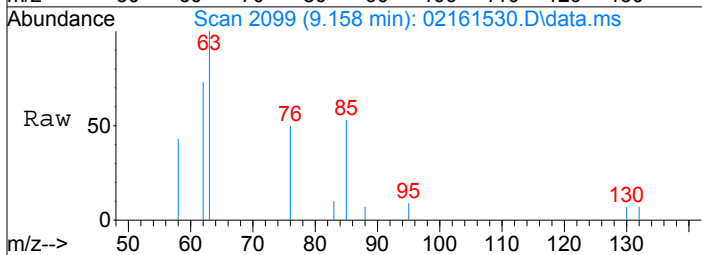
#21
Carbon Tetrachloride
Concen: 415.74 pg
RT: 8.34 min Scan# 1875
Delta R.T. -0.002 min
Lab File: 02161530.D
Acq: 17 Feb 2015 1:23

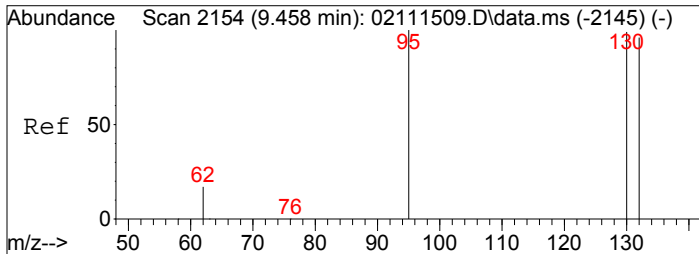
Tgt Ion: 117	Resp: 18323
Ion Ratio	Lower Upper
117	100
119	95.9 75.5 115.5



#23
1,2-Dichloropropane
Concen: 51.64 pg
RT: 9.16 min Scan# 2099
Delta R.T. -0.004 min
Lab File: 02161530.D
Acq: 17 Feb 2015 1:23

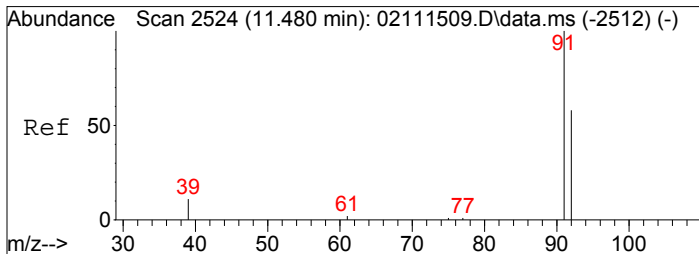
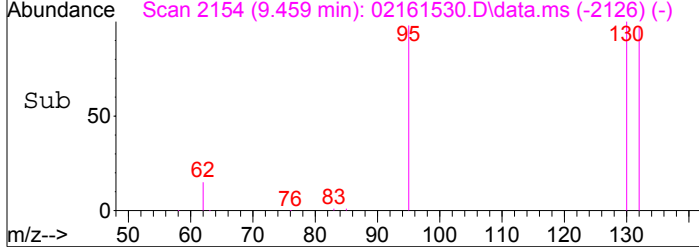
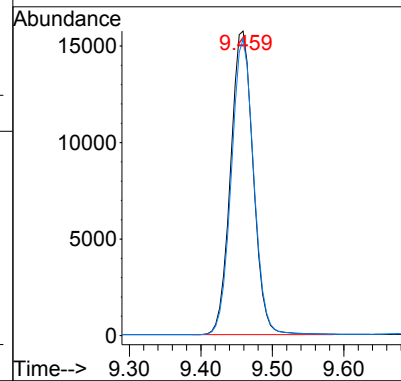
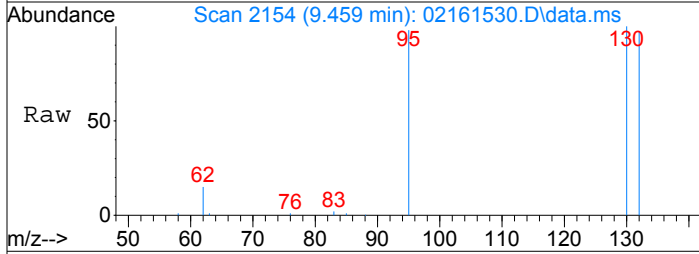
Tgt Ion: 63	Resp: 1602
Ion Ratio	Lower Upper
63	100
62	72.0 52.0 92.0
76	44.8 28.1 68.1





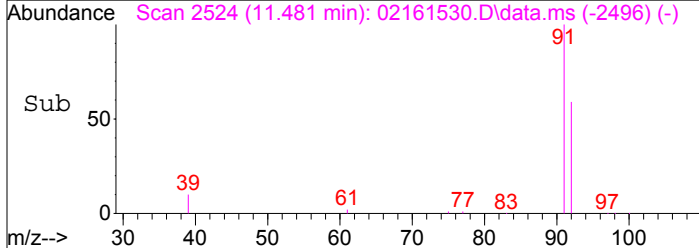
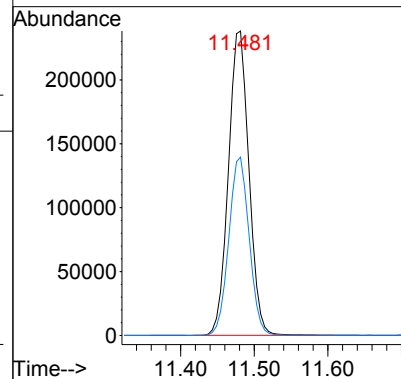
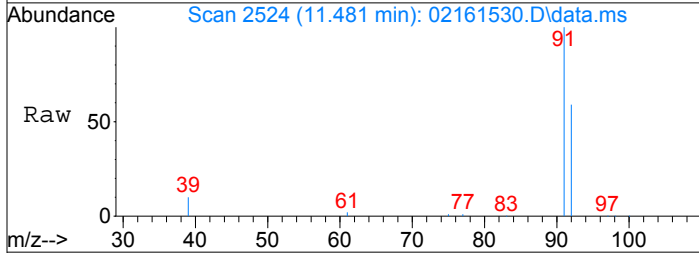
#25
Trichloroethene
Concen: 946.96 pg
RT: 9.46 min Scan# 2154
Delta R.T. 0.001 min
Lab File: 02161530.D
Acq: 17 Feb 2015 1:23

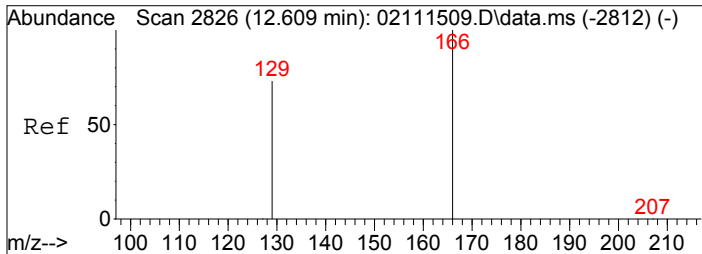
Tgt Ion: 130 Resp: 34604
Ion Ratio Lower Upper
130 100
132 96.1 77.1 117.1



#31
Toluene
Concen: 3305.29 pg
RT: 11.48 min Scan# 2524
Delta R.T. 0.001 min
Lab File: 02161530.D
Acq: 17 Feb 2015 1:23

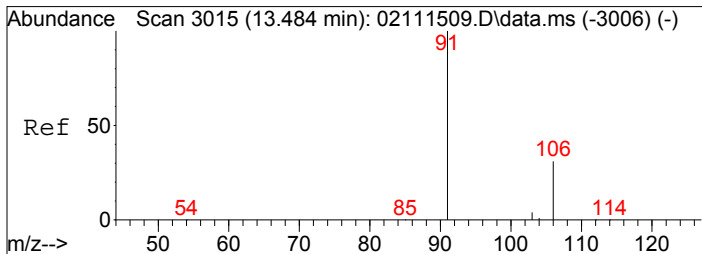
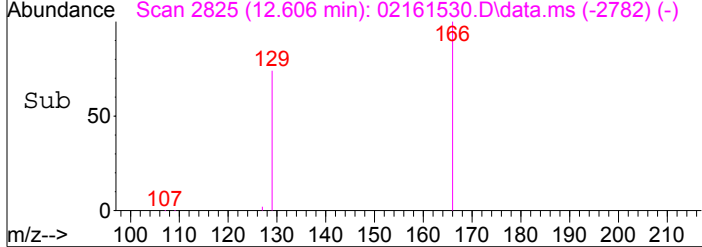
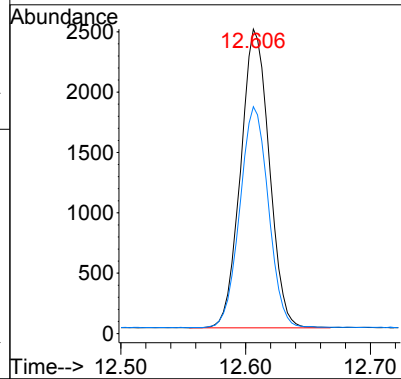
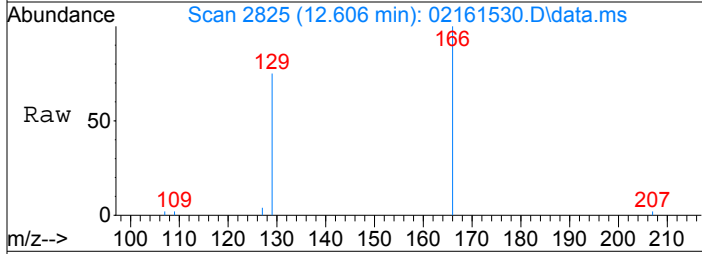
Tgt Ion: 91 Resp: 461117
Ion Ratio Lower Upper
91 100
92 58.3 37.7 77.7





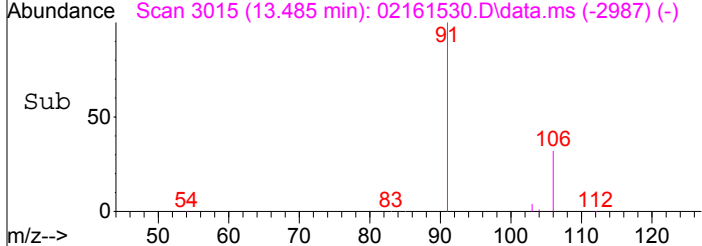
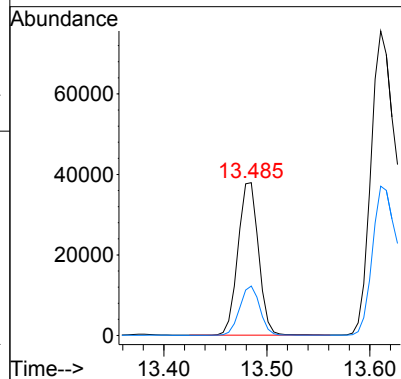
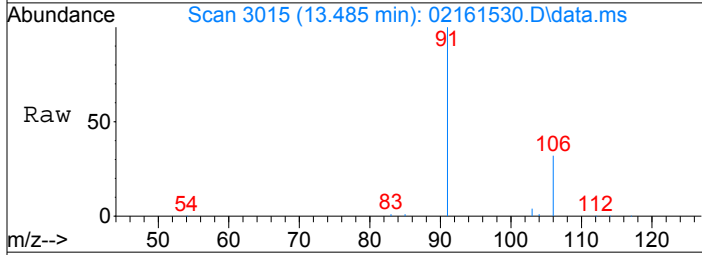
#33
Tetrachloroethene
Concen: 91.26 pg
RT: 12.61 min Scan# 2825
Delta R.T. -0.003 min
Lab File: 02161530.D
Acq: 17 Feb 2015 1:23

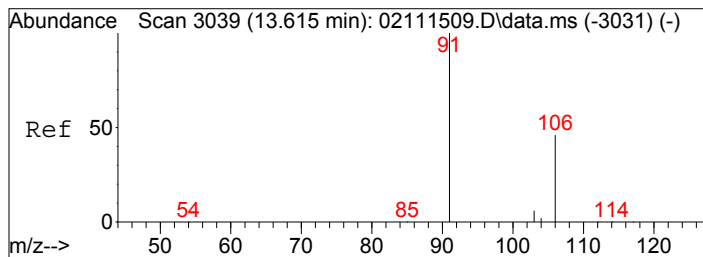
Tgt Ion	166	Resp	3942
Ion Ratio	100	Lower	Upper
129	73.6	53.3	93.3



#36
Ethylbenzene
Concen: 345.30 pg
RT: 13.48 min Scan# 3015
Delta R.T. 0.001 min
Lab File: 02161530.D
Acq: 17 Feb 2015 1:23

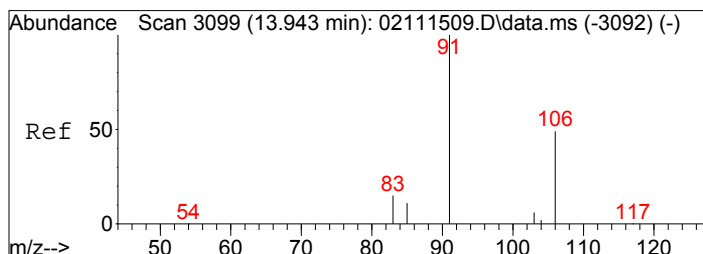
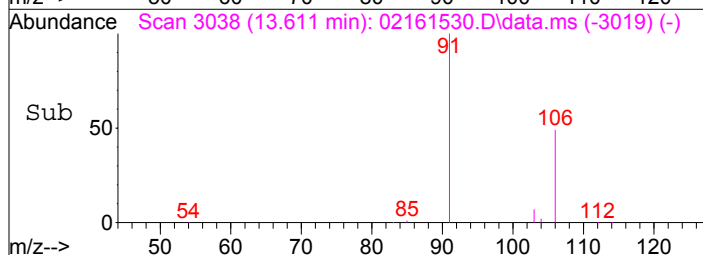
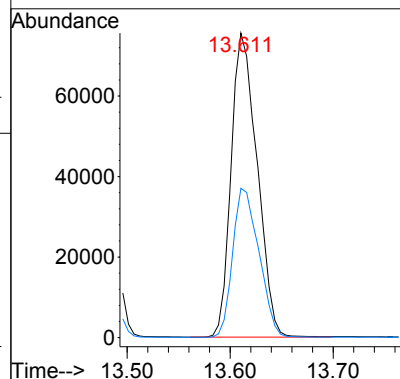
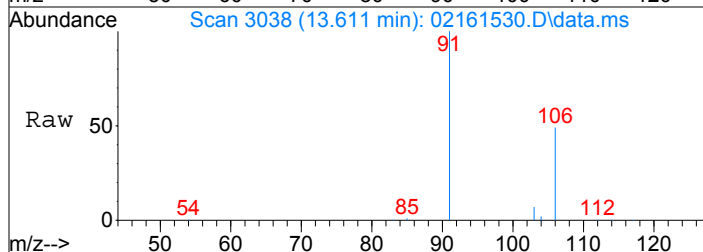
Tgt Ion	91	Resp	52514
Ion Ratio	100	Lower	Upper
106	31.5	10.9	50.9





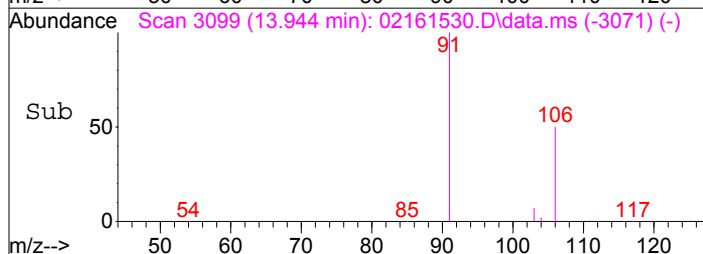
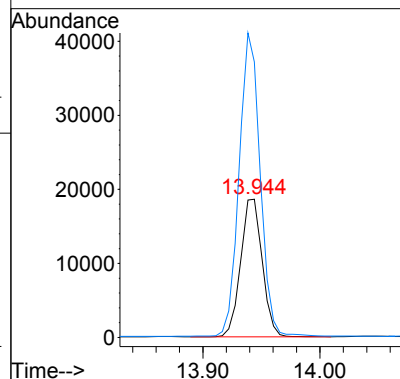
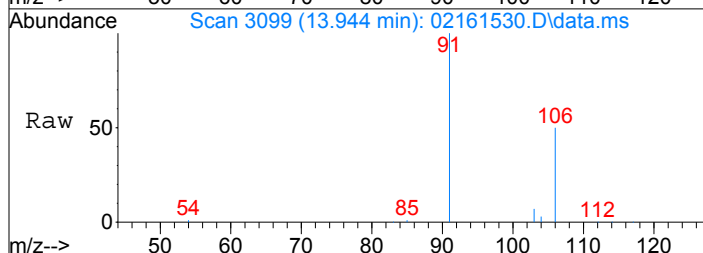
#37
m,p-Xylene
Concen: 1057.94 pg
RT: 13.61 min Scan# 3038
Delta R.T. -0.004 min
Lab File: 02161530.D
Acq: 17 Feb 2015 1:23

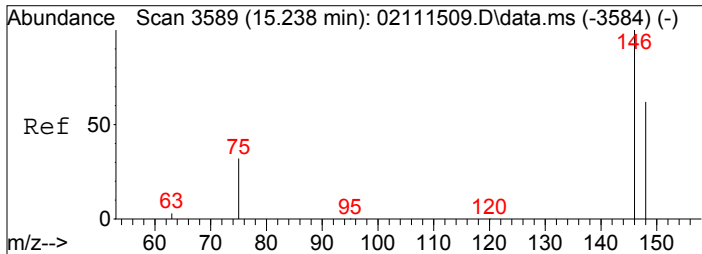
Tgt Ion: 91 Resp: 132235
Ion Ratio Lower Upper
91 100
106 49.6 27.5 67.5



#38
o-Xylene
Concen: 390.09 pg
RT: 13.94 min Scan# 3099
Delta R.T. 0.001 min
Lab File: 02161530.D
Acq: 17 Feb 2015 1:23

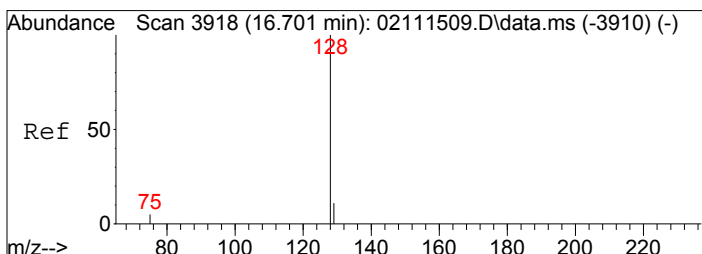
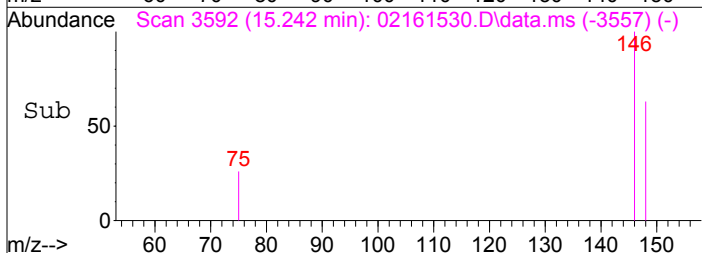
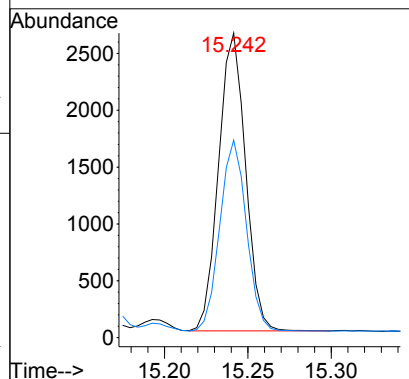
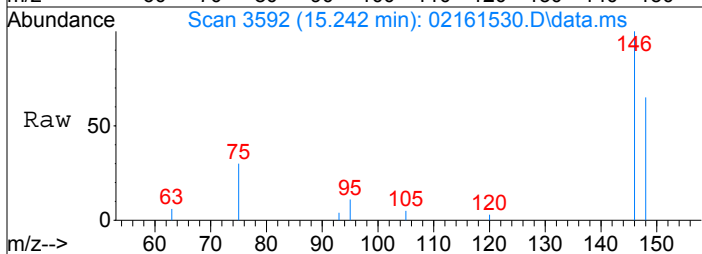
Tgt Ion: 106 Resp: 23829
Ion Ratio Lower Upper
106 100
91 215.2 198.3 238.3





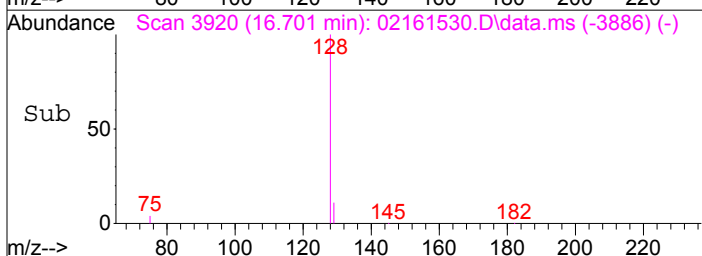
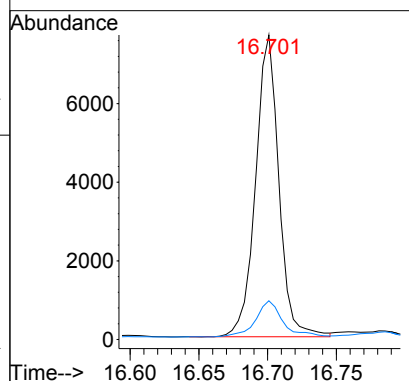
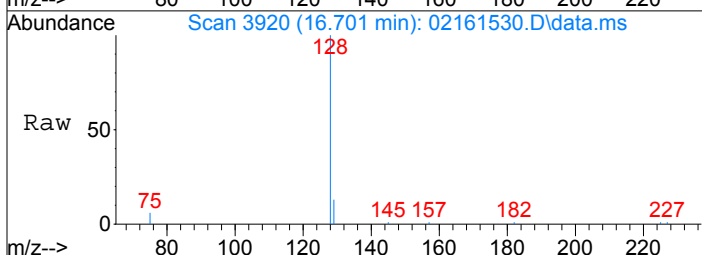
#42
 1,4-Dichlorobenzene
 Concen: 35.10 pg
 RT: 15.24 min Scan# 3592
 Delta R.T. 0.004 min
 Lab File: 02161530.D
 Acq: 17 Feb 2015 1:23

Tgt Ion	Ratio	Resp	Lower	Upper
146	100	2942		
148	63.3	43.5		83.5



#45
 Naphthalene
 Concen: 59.61 pg
 RT: 16.70 min Scan# 3920
 Delta R.T. -0.000 min
 Lab File: 02161530.D
 Acq: 17 Feb 2015 1:23

Tgt Ion	Ratio	Resp	Lower	Upper
128	100	9045		
129	14.0	0.0		30.9



Data File: I:\MS19\DATA\2015 02\16\02161531.D

Acq On : 17 Feb 2015 1:53

Operator: WA

Sample : P1500566-029 (1000mL)

Misc : S29-02041502

ALS Vial : 15 Sample Multiplier: 1

Quant Time: Feb 17 06:52:08 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

2/17/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.12	130	19687	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	161829	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	24934	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.13	65	44736	930.497	pg	0.00
Spiked Amount 1000.000			Recovery	=	93.05%	
30) Toluene-d8 (SS2)	11.38	98	138804	930.096	pg	0.00
Spiked Amount 1000.000			Recovery	=	93.01%	
40) Bromofluorobenzene (SS3)	14.25	174	56955	1131.444	pg	0.00
Spiked Amount 1000.000			Recovery	=	113.14%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.73	85	153090	1913.427	pg	100
3) Chloromethane	1.83	52	8724	546.005	pg	97
4) Vinyl Chloride	2.01	62	297	N.D.		
5) Bromomethane	2.32	94	1366	37.969	pg	98
6) Chloroethane	2.47	64	402	N.D.		
7) Acetone	2.99	58	297863	10542.772	pg	# 88
8) Trichlorofluoromethane	3.10	101	95500	1389.620	pg	100
9) 1,1-Dichloroethene	3.66	96	145	N.D.		
10) Methylene Chloride	3.80	84	20144	617.728	pg	94
11) Trichlorotrifluoroethane	4.09	151	13957	441.975	pg	100
12) trans-1,2-Dichloroethene	4.74	96	1194	38.111	pg	98
13) 1,1-Dichloroethane	4.95	63	359	N.D.		
14) Methyl tert-Butyl Ether	5.11	73	827	N.D.		
15) cis-1,2-Dichloroethene	5.94	96	3110	89.270	pg	99
16) Chloroform	6.33	83	7820	129.557	pg	98
18) 1,2-Dichloroethane	7.27	62	5669	117.957	pg	97
19) 1,1,1-Trichloroethane	7.59	97	1845	31.433	pg	99
20) Benzene	8.15	78	118381	953.560	pg	100
21) Carbon Tetrachloride	8.34	117	22505	512.137	pg	100
23) 1,2-Dichloropropane	9.17	63	1423	40.317	pg	96
24) Bromodichloromethane	9.41	83	984	N.D.		
25) Trichloroethene	9.46	130	18314	440.507	pg	99
26) 1,4-Dioxane	9.52	88	1176	37.954	pg	89
27) cis-1,3-Dichloropropene	10.46	75	89	N.D.		
28) trans-1,3-Dichloropropene	11.05	75	165	N.D.		
29) 1,1,2-Trichloroethane	11.20	83	203	N.D.		
31) Toluene	11.48	91	459704	2896.295	pg	99
32) 1,2-Dibromoethane	12.13	107	91	N.D.		
33) Tetrachloroethene	12.61	166	2886	58.724	pg	94
35) Chlorobenzene	13.17	112	2321	25.170	pg	100
36) Ethylbenzene	13.48	91	60645	387.862	pg	99
37) m,p-Xylene	13.61	91	137446	1069.553	pg	97
38) o-Xylene	13.94	106	25915	412.630	pg	99
39) 1,1,2,2-Tetrachloroethane	13.93	83	659	N.D.		
41) 1,3-Dichlorobenzene	15.19	146	350	N.D.		
42) 1,4-Dichlorobenzene	15.24	146	3222	37.394	pg	99
43) 1,2-Dichlorobenzene	15.46	146	340	N.D.		
44) 1,2,4-Trichlorobenzene	16.63	182	159	N.D.		
45) Naphthalene	16.70	128	20035	128.418	pg	97
46) Hexachlorobutadiene	16.96	225	48	N.D.		

(#)= qualifier out of range (m) = manual integration (+) = signals summed

Data File: I:\MS19\DATA\2015 02\16\02161531.D

Acq On : 17 Feb 2015 1:53

Operator: WA

Sample : P1500566-029 (1000mL)

Misc : S29-02041502

ALS Vial : 15 Sample Multiplier: 1

Quant Time: Feb 17 06:52:08 2015

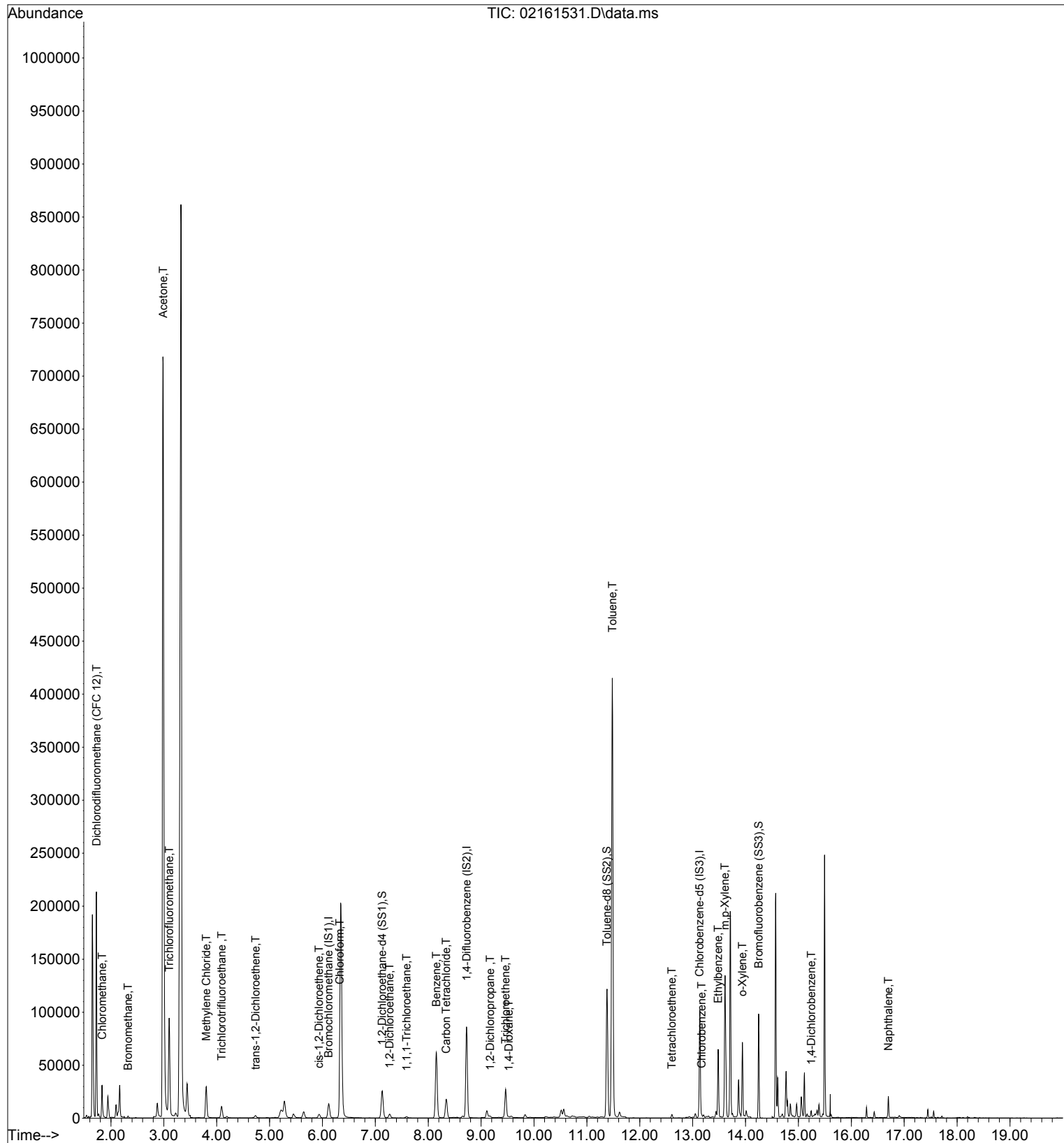
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 02\16\02161531.D

Acq On : 17 Feb 2015 1:53

Operator: WA

Sample : P1500566-029 (1000mL)

Misc : S29-02041502

ALS Vial : 15 Sample Multiplier: 1

Quant Time: Feb 17 06:52:08 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

2/17/15

DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.12	130	19687	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	161829	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	24934	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.13	65	44736	930.497	pg	0.00
Spiked Amount 1000.000			Recovery	=	93.05%	
30) Toluene-d8 (SS2)	11.38	98	138804	930.096	pg	0.00
Spiked Amount 1000.000			Recovery	=	93.01%	
40) Bromofluorobenzene (SS3)	14.25	174	56955	1131.444	pg	0.00
Spiked Amount 1000.000			Recovery	=	113.14%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.73	85	153090	1913.427	pg	100
3) Chloromethane	1.83	52	8724	546.005	pg	97
5) Bromomethane	2.32	94	1366	37.969	pg	98
7) Acetone	2.99	58	297863	10542.772	pg	# 88
8) Trichlorofluoromethane	3.10	101	95500	1389.620	pg	100
10) Methylene Chloride	3.80	84	20144	617.728	pg	94
11) Trichlorotrifluoroethane	4.09	151	13957	441.975	pg	100
12) trans-1,2-Dichloroethene	4.74	96	1194	38.111	pg	98
15) cis-1,2-Dichloroethene	5.94	96	3110	89.270	pg	99
16) Chloroform	6.33	83	7820	129.557	pg	98
18) 1,2-Dichloroethane	7.27	62	5669	117.957	pg	97
19) 1,1,1-Trichloroethane	7.59	97	1845	31.433	pg	99
20) Benzene	8.15	78	118381	953.560	pg	100
21) Carbon Tetrachloride	8.34	117	22505	512.137	pg	100
23) 1,2-Dichloropropane	9.17	63	1423	40.317	pg	96
25) Trichloroethene	9.46	130	18314	440.507	pg	99
26) 1,4-Dioxane	9.52	88	1176	37.954	pg	89
31) Toluene	11.48	91	459704	2896.295	pg	99
33) Tetrachloroethene	12.61	166	2886	58.724	pg	94
35) Chlorobenzene	13.17	112	2321	25.170	pg	100
36) Ethylbenzene	13.48	91	60645	387.862	pg	99
37) m,p-Xylene	13.61	91	137446	1069.553	pg	97
38) o-Xylene	13.94	106	25915	412.630	pg	99
42) 1,4-Dichlorobenzene	15.24	146	3222	37.394	pg	99
45) Naphthalene	16.70	128	20035	128.418	pg	97

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\16\02161531.D

Acq On : 17 Feb 2015 1:53

Operator: WA

Sample : P1500566-029 (1000mL)

Misc : S29-02041502

ALS Vial : 15 Sample Multiplier: 1

Quant Time: Feb 17 06:52:08 2015

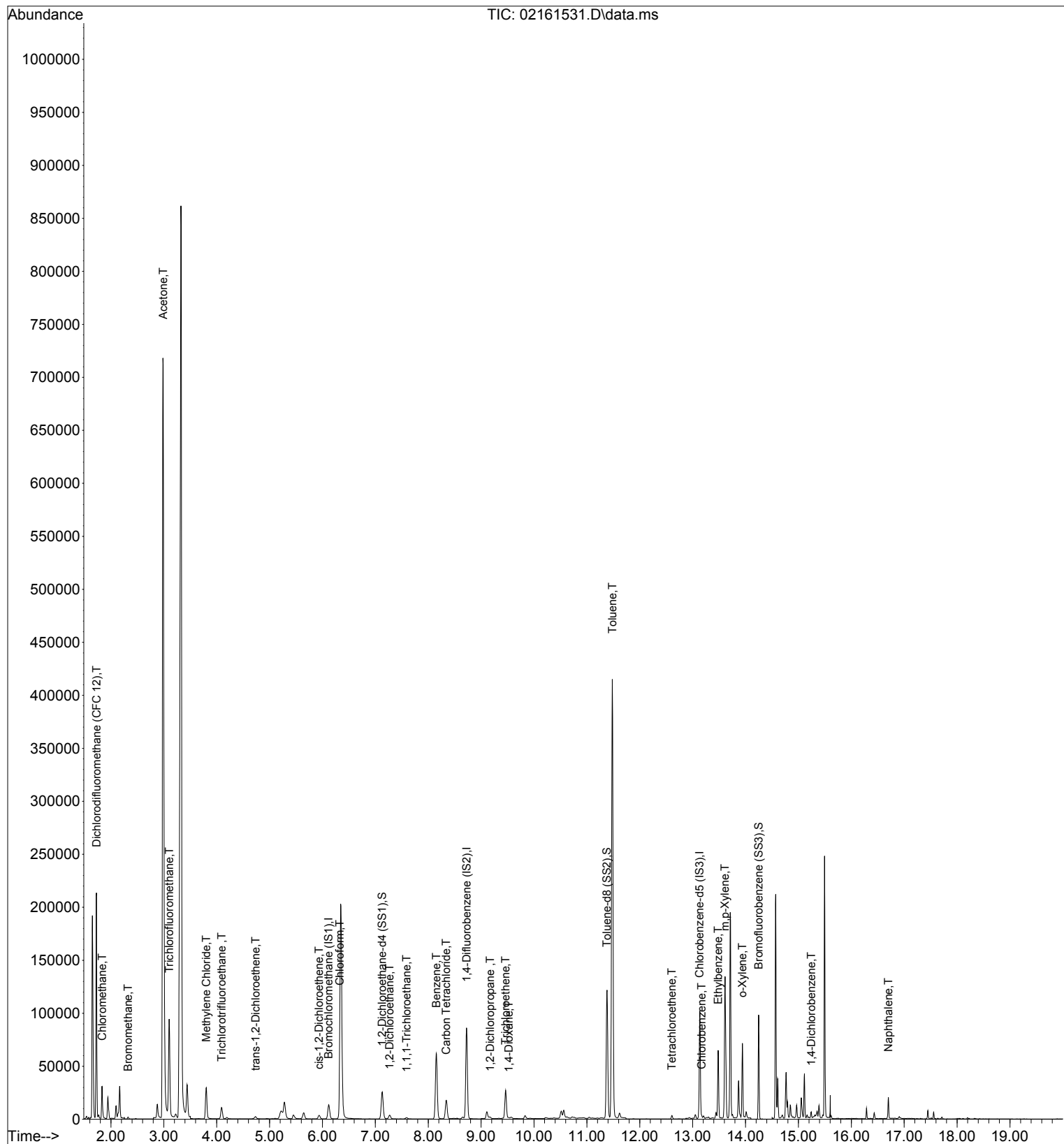
Quant Method : I:\MS19\METHODS\X19021115.M

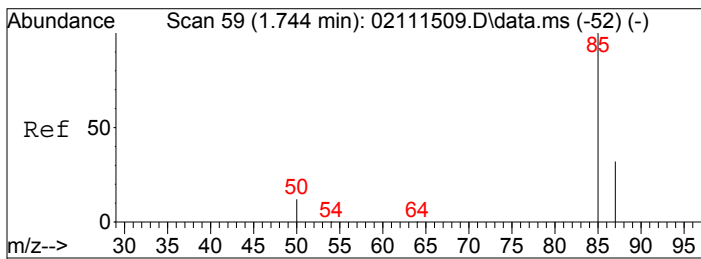
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

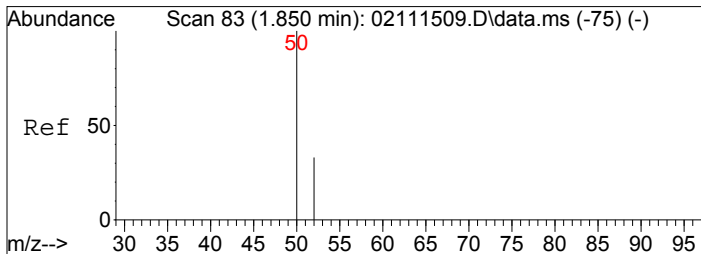
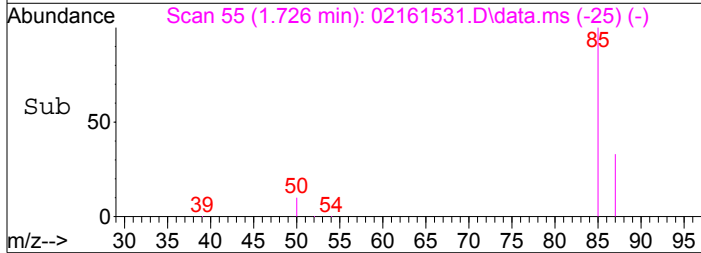
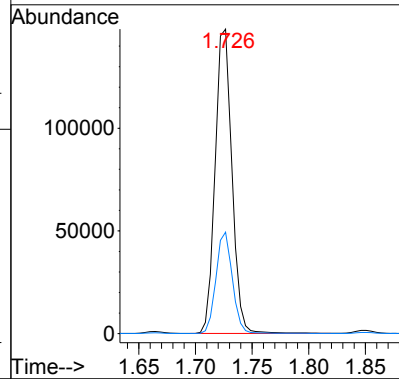
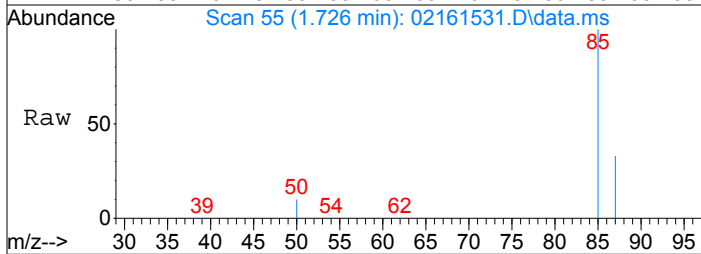
DataAcq Meth:TO15SIM.M





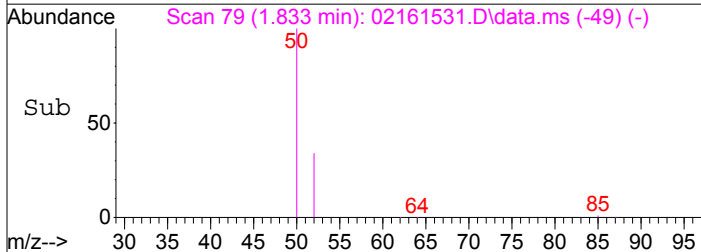
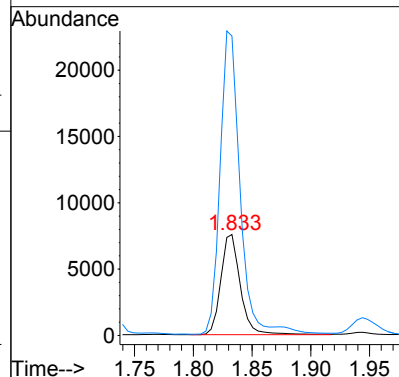
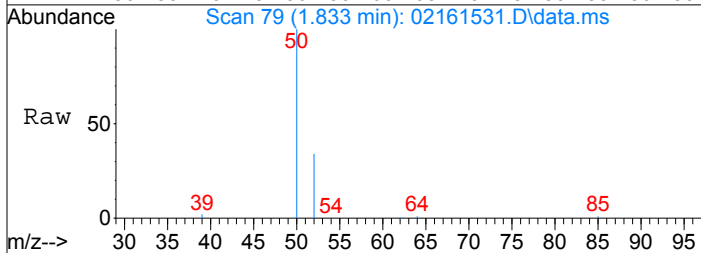
#2
 Dichlorodifluoromethane (CFC 12)
 Concen: 1913.43 pg
 RT: 1.73 min Scan# 55
 Delta R.T. -0.017 min
 Lab File: 02161531.D
 Acq: 17 Feb 2015 1:53

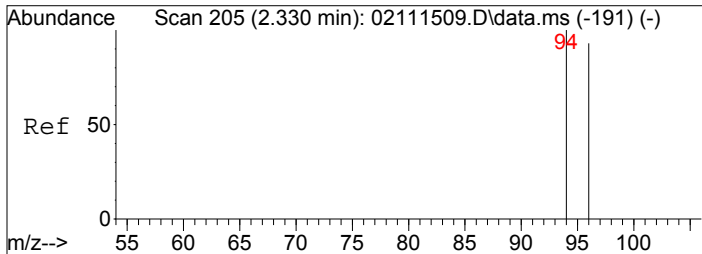
Tgt Ion: 85 Resp: 153090
 Ion Ratio Lower Upper
 85 100
 87 32.5 12.4 52.4



#3
 Chloromethane
 Concen: 546.01 pg
 RT: 1.83 min Scan# 79
 Delta R.T. -0.017 min
 Lab File: 02161531.D
 Acq: 17 Feb 2015 1:53

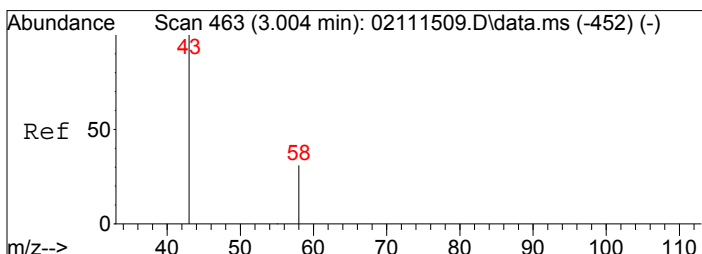
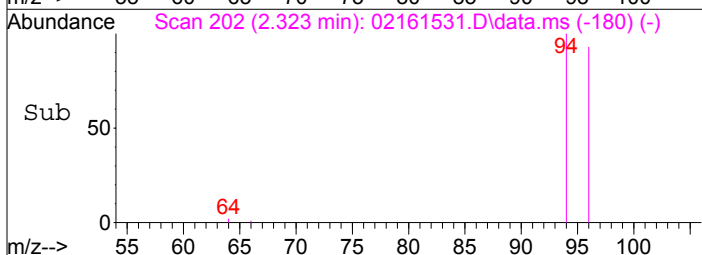
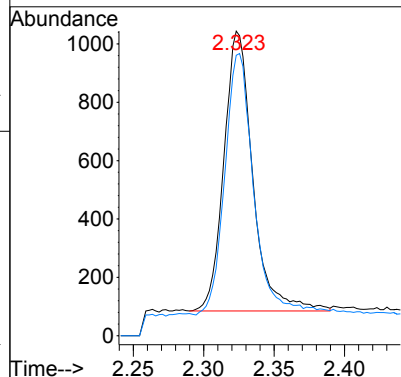
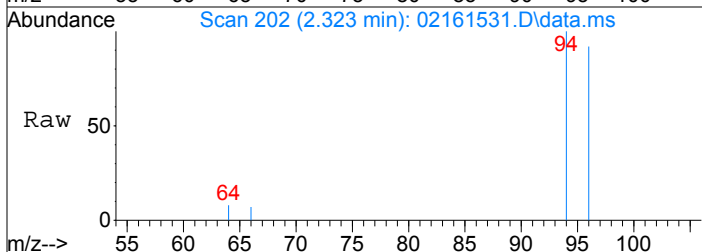
Tgt Ion: 52 Resp: 8724
 Ion Ratio Lower Upper
 52 100
 50 309.9 283.7 323.7





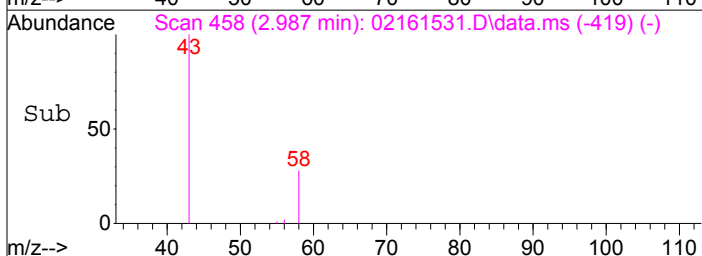
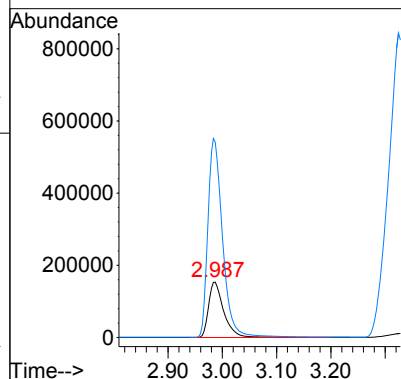
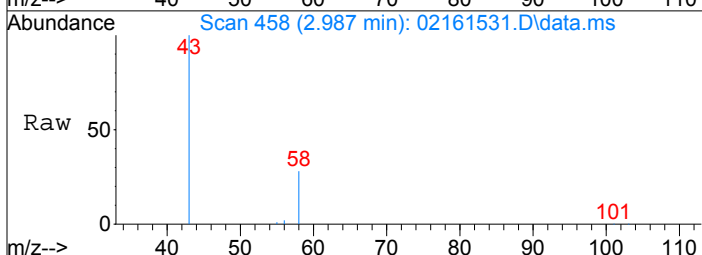
#5
Bromomethane
Concen: 37.97 pg
RT: 2.32 min Scan# 202
Delta R.T. -0.007 min
Lab File: 02161531.D
Acq: 17 Feb 2015 1:53

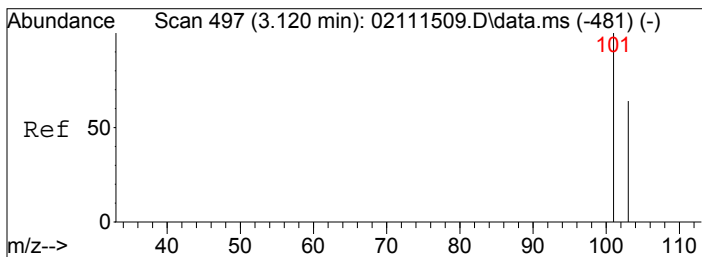
Tgt Ion: 94 Resp: 1366
Ion Ratio Lower Upper
94 100
96 95.9 75.5 113.3



#7
Acetone
Concen: 10542.77 pg
RT: 2.99 min Scan# 458
Delta R.T. -0.017 min
Lab File: 02161531.D
Acq: 17 Feb 2015 1:53

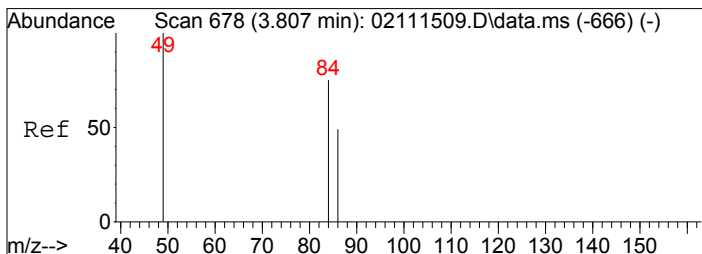
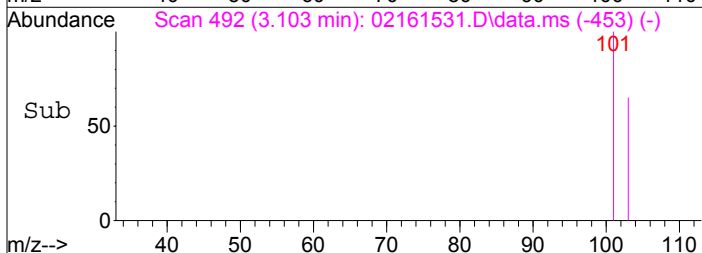
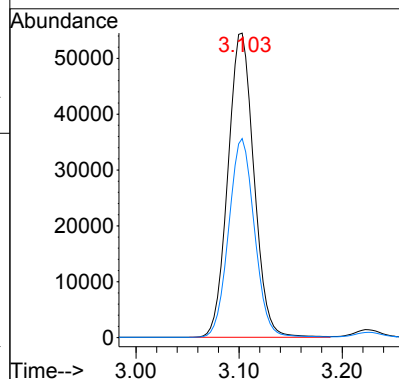
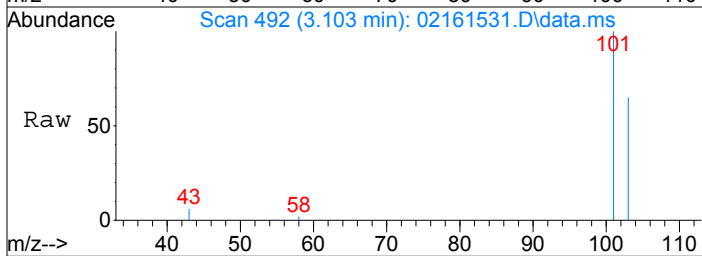
Tgt Ion: 58 Resp: 297863
Ion Ratio Lower Upper
58 100
43 346.1 301.8 341.8#





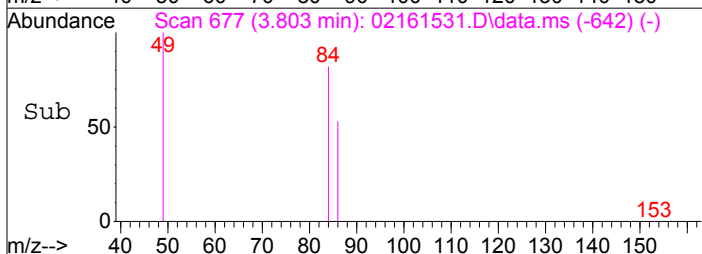
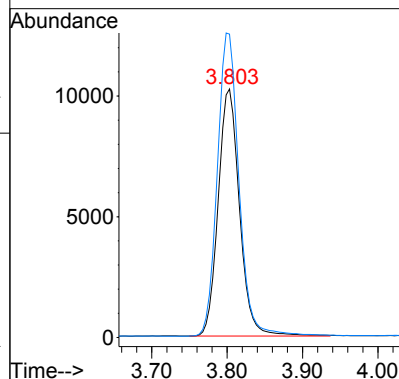
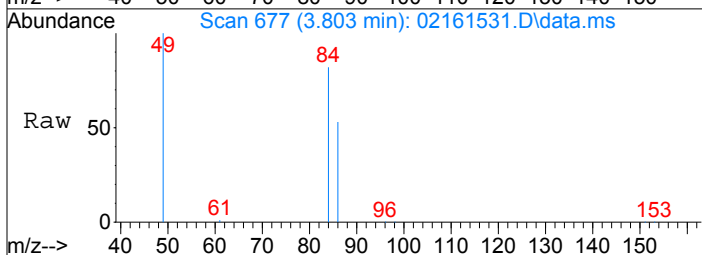
#8
 Trichlorofluoromethane
 Concen: 1389.62 pg
 RT: 3.10 min Scan# 492
 Delta R.T. -0.017 min
 Lab File: 02161531.D
 Acq: 17 Feb 2015 1:53

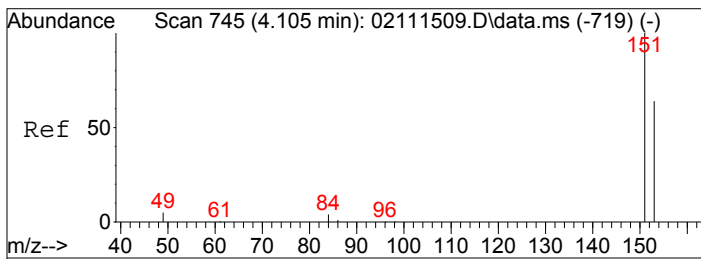
Tgt Ion: 101 Resp: 95500
 Ion Ratio Lower Upper
 101 100
 103 64.9 51.8 77.6



#10
 Methylene Chloride
 Concen: 617.73 pg
 RT: 3.80 min Scan# 677
 Delta R.T. -0.004 min
 Lab File: 02161531.D
 Acq: 17 Feb 2015 1:53

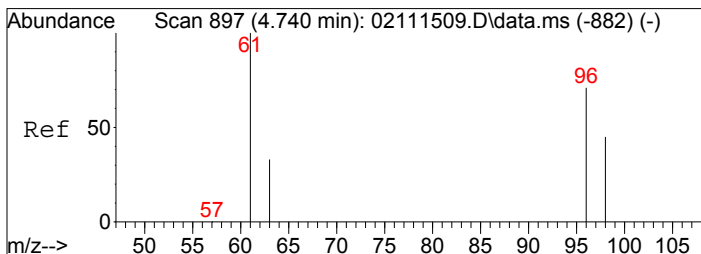
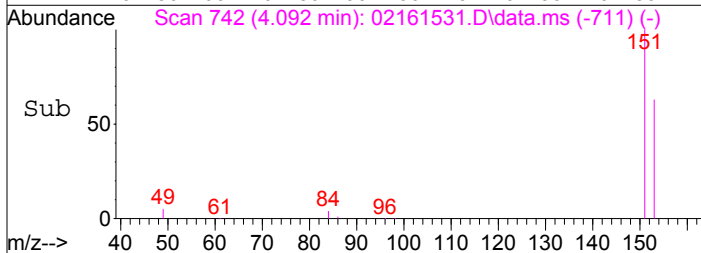
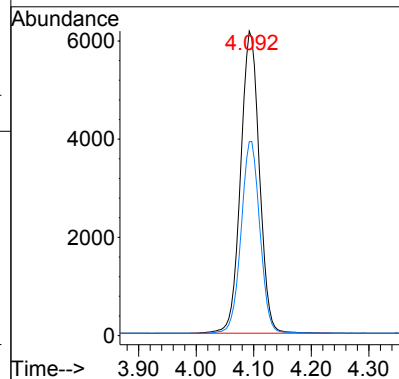
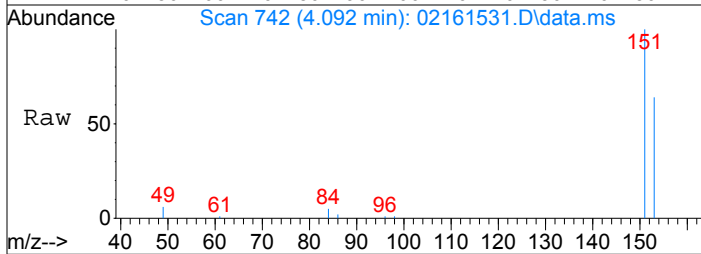
Tgt Ion: 84 Resp: 20144
 Ion Ratio Lower Upper
 84 100
 49 124.7 112.3 152.3





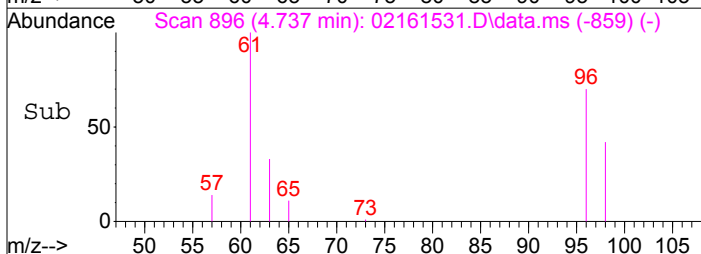
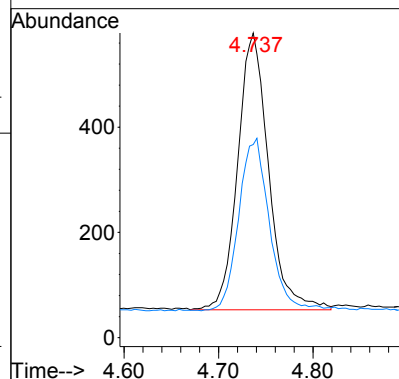
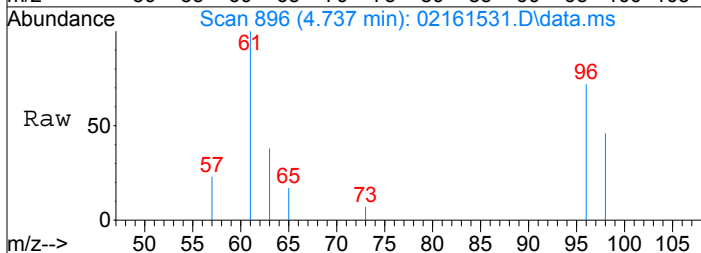
#11
Trichlorotrifluoroethane
Concen: 441.98 pg
RT: 4.09 min Scan# 742
Delta R.T. -0.013 min
Lab File: 02161531.D
Acq: 17 Feb 2015 1:53

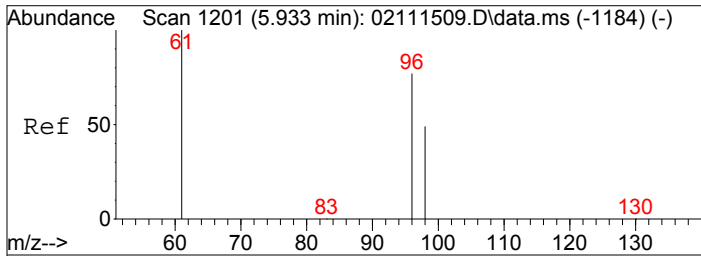
Tgt Ion: 151 Resp: 13957
Ion Ratio Lower Upper
151 100
153 63.6 43.6 83.6



#12
trans-1,2-Dichloroethene
Concen: 38.11 pg
RT: 4.74 min Scan# 896
Delta R.T. -0.004 min
Lab File: 02161531.D
Acq: 17 Feb 2015 1:53

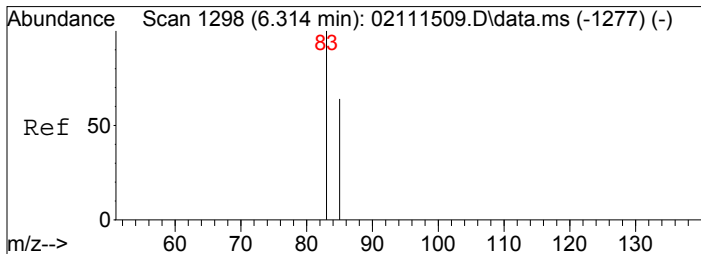
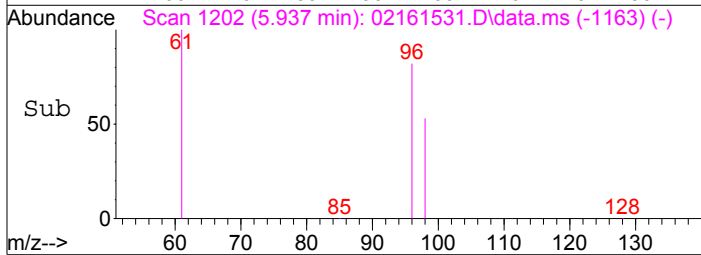
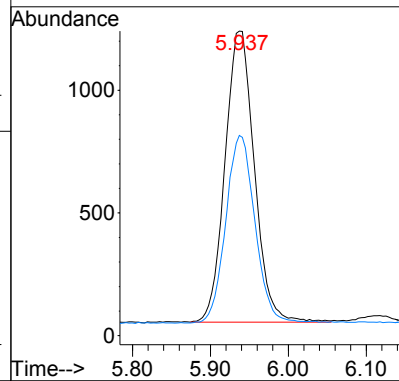
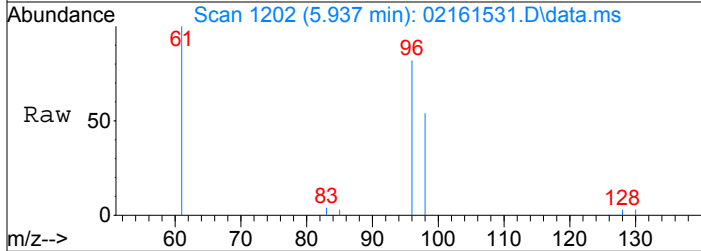
Tgt Ion: 96 Resp: 1194
Ion Ratio Lower Upper
96 100
98 62.1 43.7 83.7





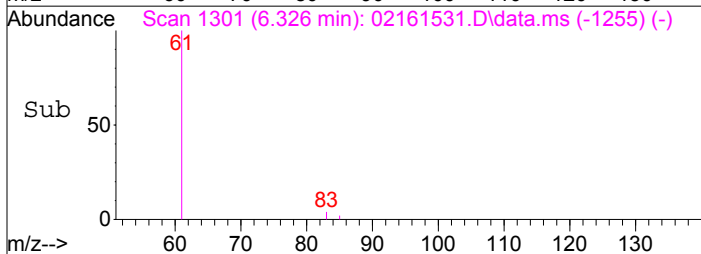
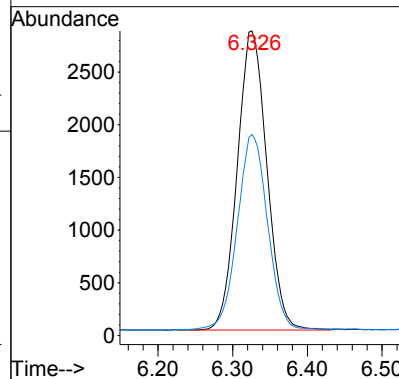
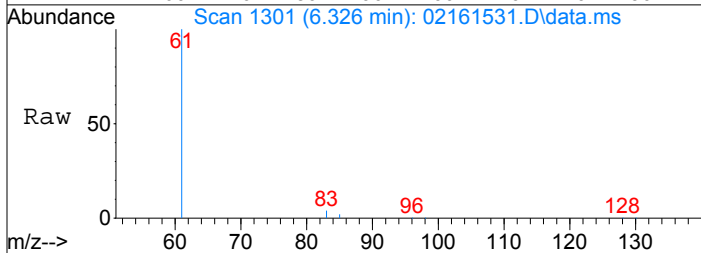
#15
 cis-1,2-Dichloroethene
 Concen: 89.27 pg
 RT: 5.94 min Scan# 1202
 Delta R.T. 0.004 min
 Lab File: 02161531.D
 Acq: 17 Feb 2015 1:53

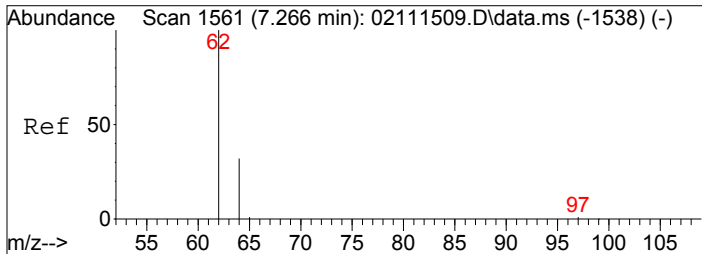
Tgt Ion: 96 Resp: 3110
 Ion Ratio Lower Upper
 96 100
 98 63.7 44.3 84.3



#16
 Chloroform
 Concen: 129.56 pg
 RT: 6.33 min Scan# 1301
 Delta R.T. 0.012 min
 Lab File: 02161531.D
 Acq: 17 Feb 2015 1:53

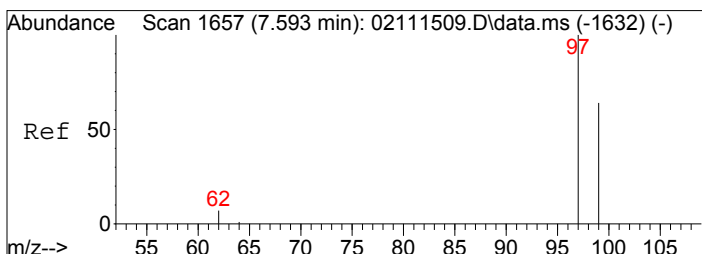
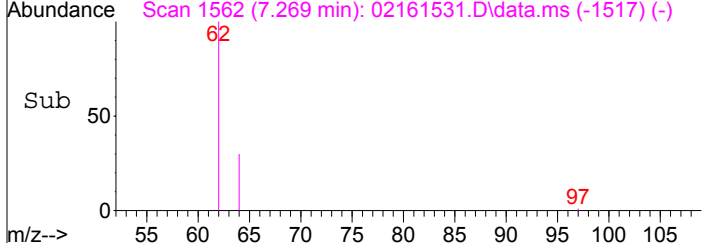
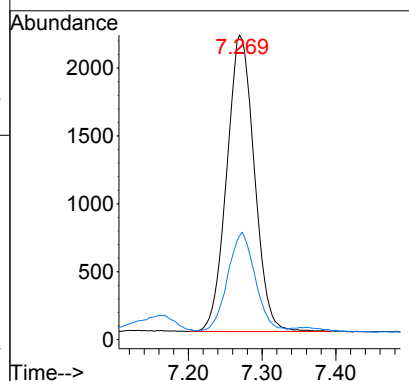
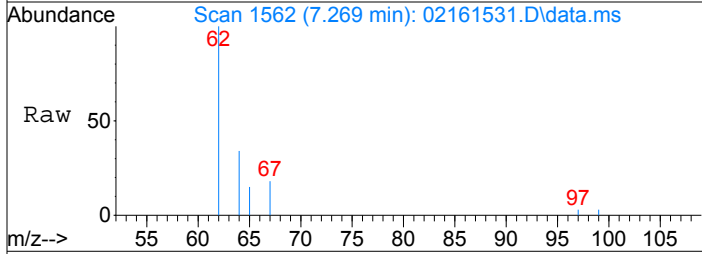
Tgt Ion: 83 Resp: 7820
 Ion Ratio Lower Upper
 83 100
 85 66.6 45.4 85.4





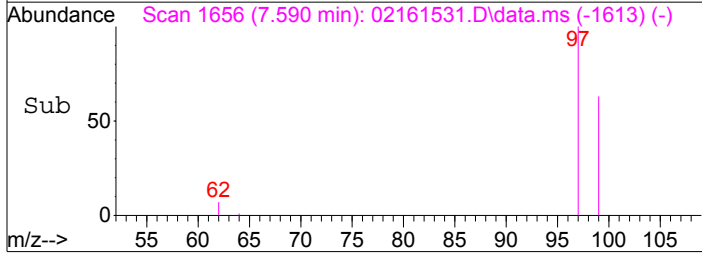
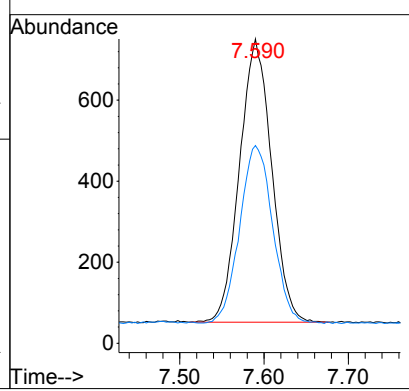
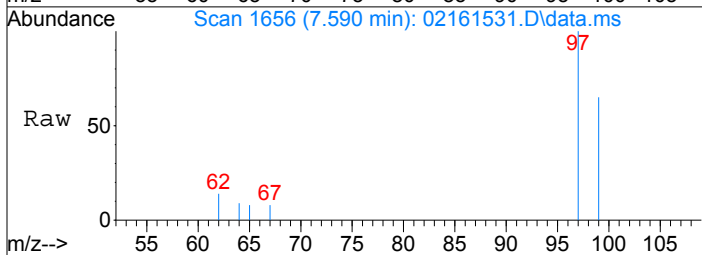
#18
 1,2-Dichloroethane
 Concen: 117.96 pg
 RT: 7.27 min Scan# 1562
 Delta R.T. 0.004 min
 Lab File: 02161531.D
 Acq: 17 Feb 2015 1:53

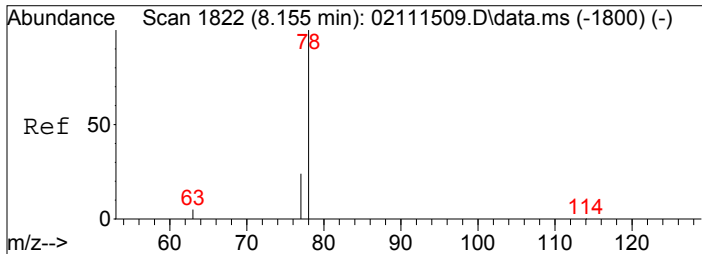
Tgt Ion:	62	Resp:	5669
Ion Ratio	Lower	Upper	
62	100		
64	33.3	11.6	51.6



#19
 1,1,1-Trichloroethane
 Concen: 31.43 pg
 RT: 7.59 min Scan# 1656
 Delta R.T. -0.003 min
 Lab File: 02161531.D
 Acq: 17 Feb 2015 1:53

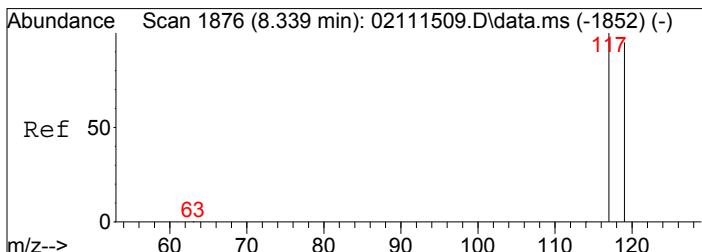
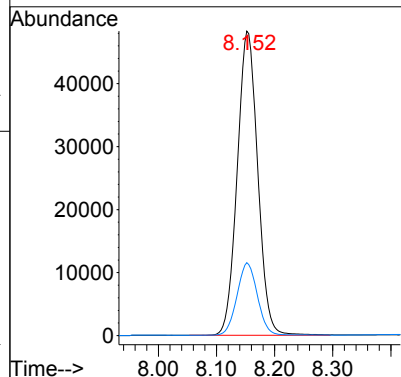
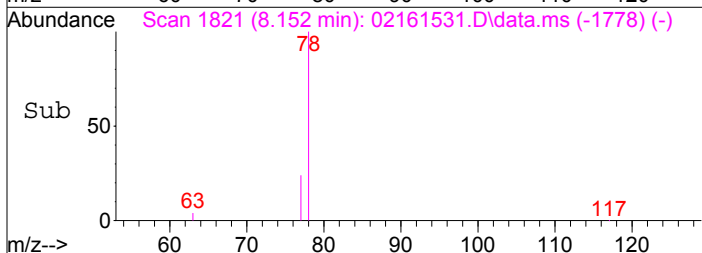
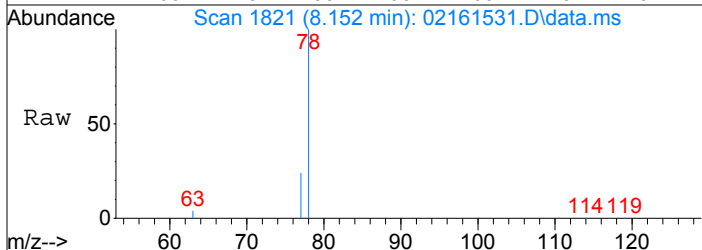
Tgt Ion:	97	Resp:	1845
Ion Ratio	Lower	Upper	
97	100		
99	65.0	44.0	84.0





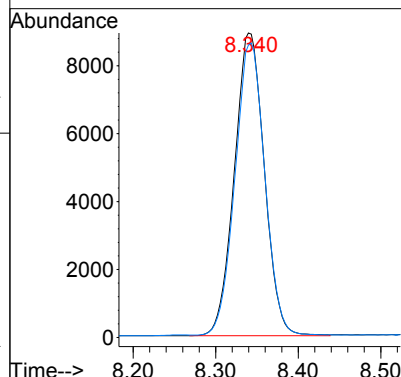
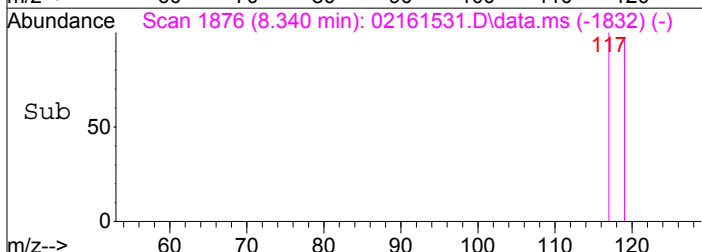
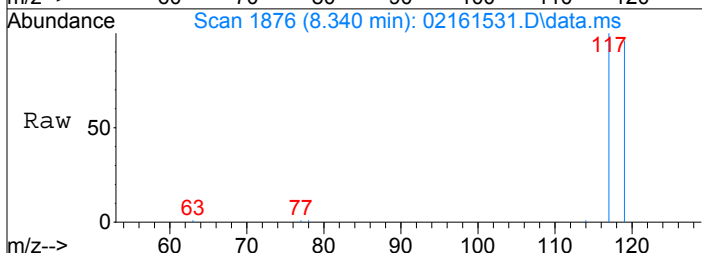
#20
Benzene
Concen: 953.56 pg
RT: 8.15 min Scan# 1821
Delta R.T. -0.003 min
Lab File: 02161531.D
Acq: 17 Feb 2015 1:53

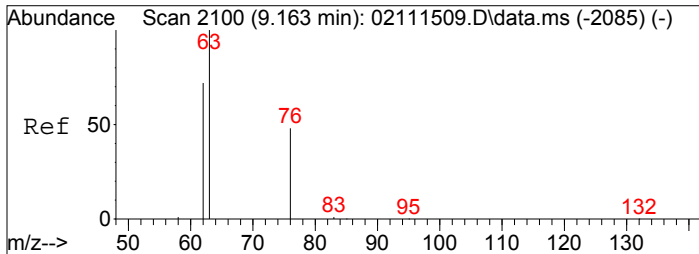
Tgt Ion: 78 Resp: 118381
Ion Ratio Lower Upper
78 100
77 23.8 3.7 43.7



#21
Carbon Tetrachloride
Concen: 512.14 pg
RT: 8.34 min Scan# 1876
Delta R.T. 0.000 min
Lab File: 02161531.D
Acq: 17 Feb 2015 1:53

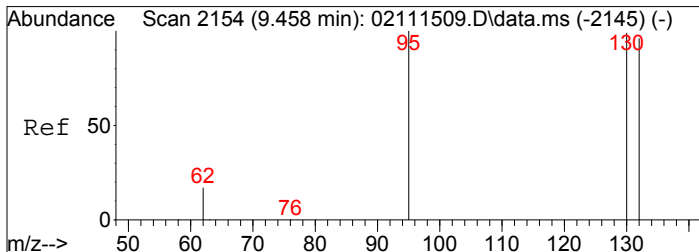
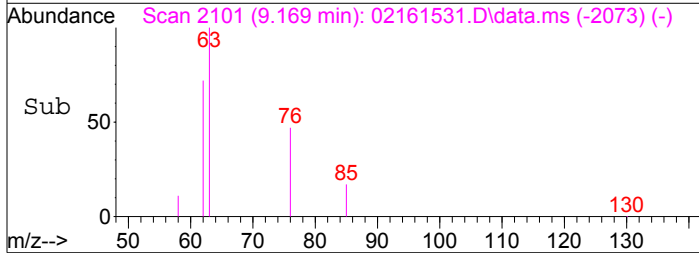
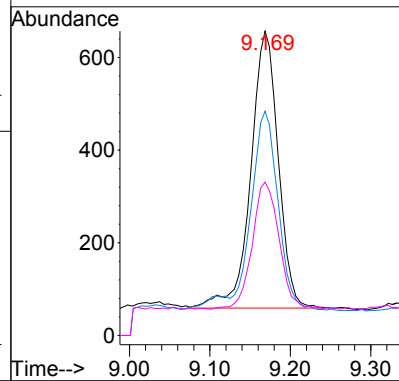
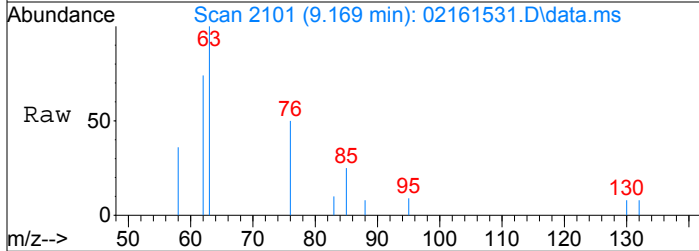
Tgt Ion: 117 Resp: 22505
Ion Ratio Lower Upper
117 100
119 95.7 75.5 115.5





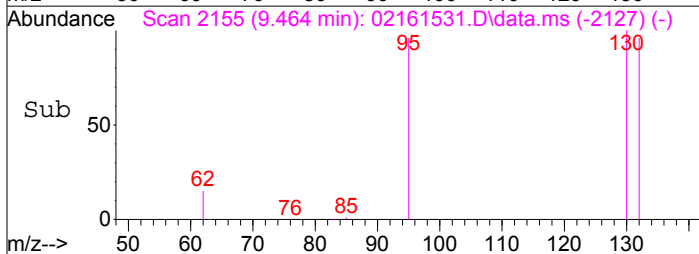
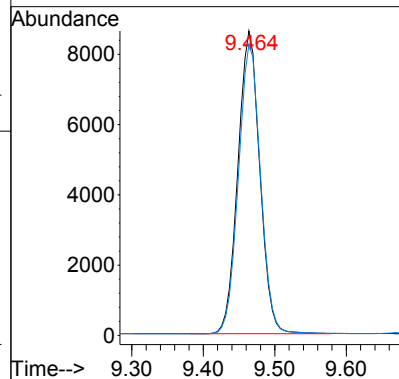
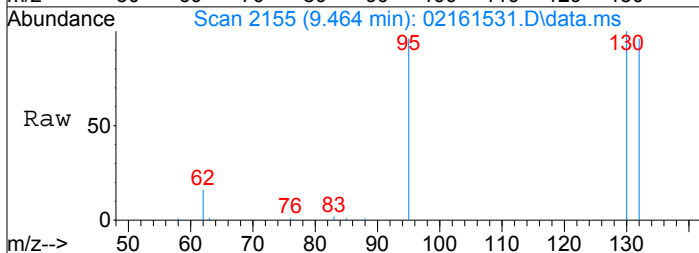
#23
1,2-Dichloropropane
Concen: 40.32 pg
RT: 9.17 min Scan# 2101
Delta R.T. 0.006 min
Lab File: 02161531.D
Acq: 17 Feb 2015 1:53

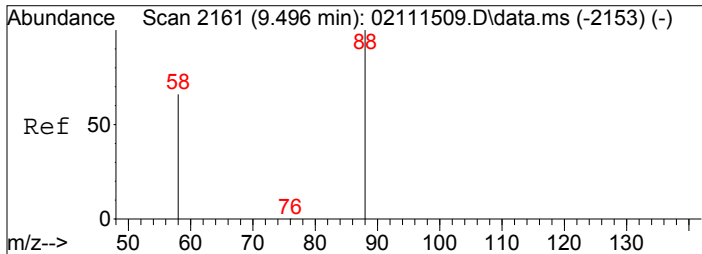
Tgt Ion: 63 Resp: 1423
Ion Ratio Lower Upper
63 100
62 68.9 52.0 92.0
76 44.9 28.1 68.1



#25
Trichloroethene
Concen: 440.51 pg
RT: 9.46 min Scan# 2155
Delta R.T. 0.006 min
Lab File: 02161531.D
Acq: 17 Feb 2015 1:53

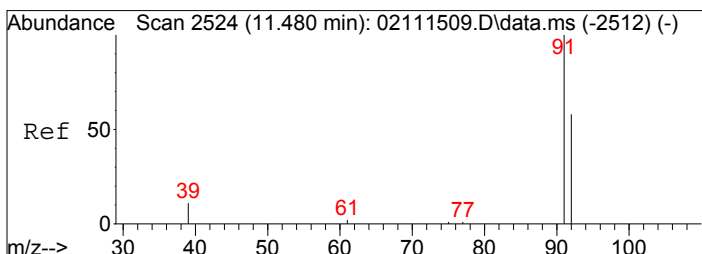
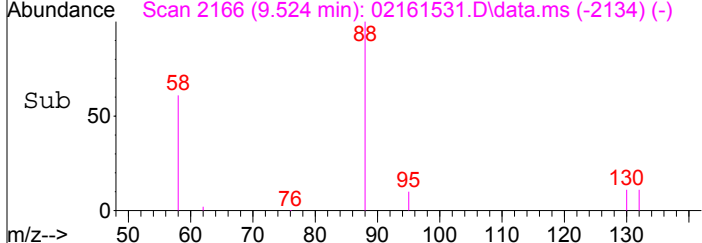
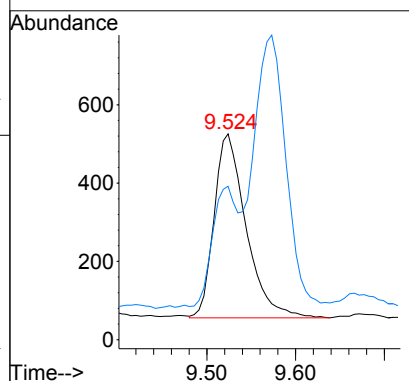
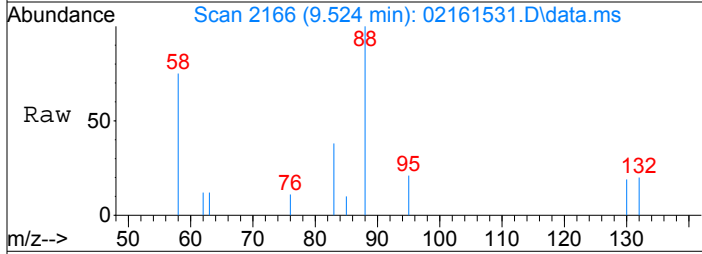
Tgt Ion: 130 Resp: 18314
Ion Ratio Lower Upper
130 100
132 96.5 77.1 117.1





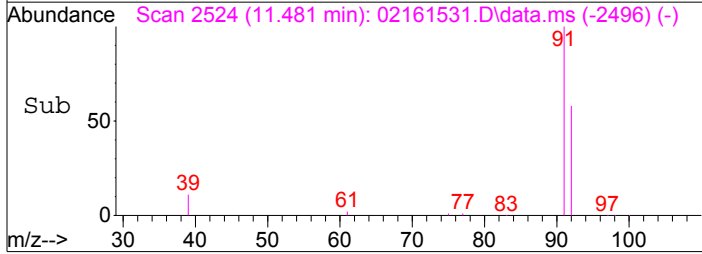
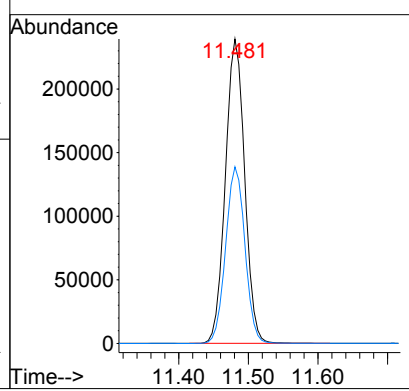
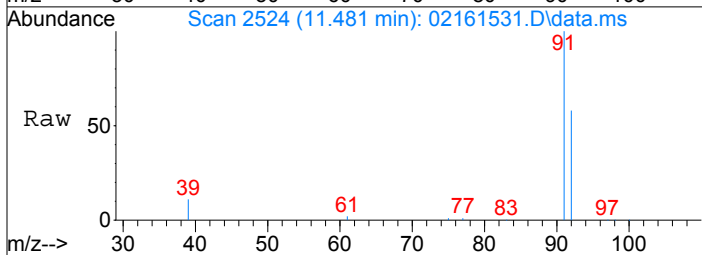
#26
 1,4-Dioxane
 Concen: 37.95 pg
 RT: 9.52 min Scan# 2166
 Delta R.T. 0.028 min
 Lab File: 02161531.D
 Acq: 17 Feb 2015 1:53

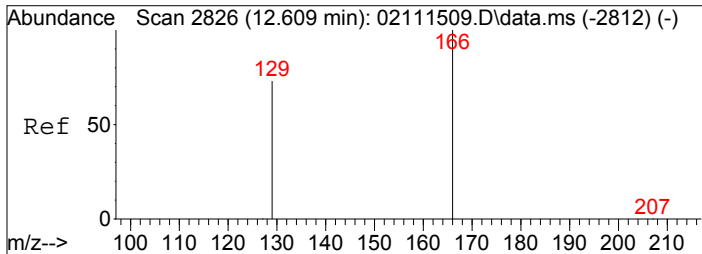
Tgt Ion: 88	Resp: 1176
Ion Ratio	Lower Upper
88	100
58	50.3 38.3 78.3



#31
 Toluene
 Concen: 2896.29 pg
 RT: 11.48 min Scan# 2524
 Delta R.T. 0.000 min
 Lab File: 02161531.D
 Acq: 17 Feb 2015 1:53

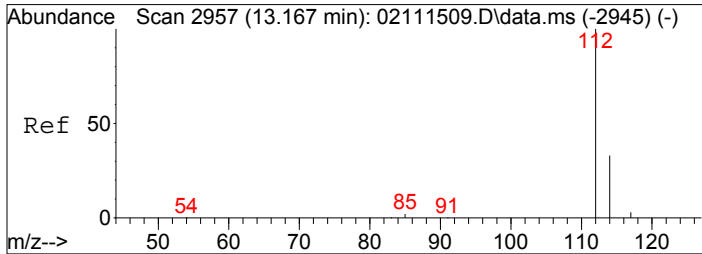
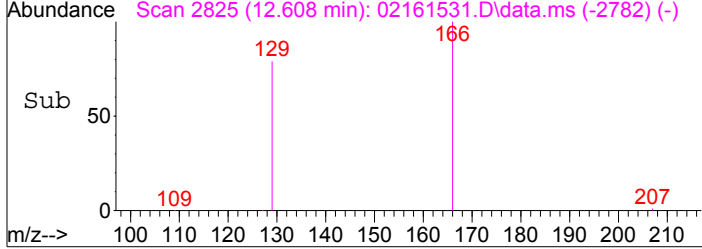
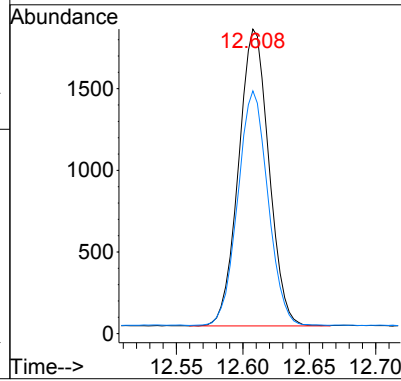
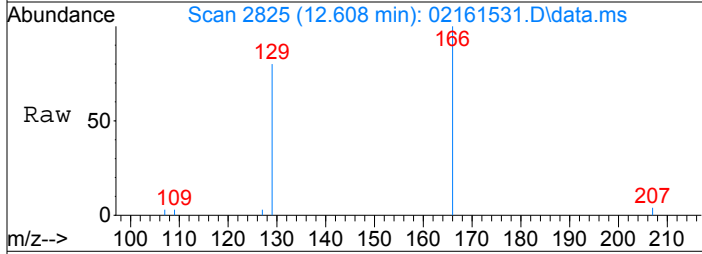
Tgt Ion: 91	Resp: 459704
Ion Ratio	Lower Upper
91	100
92	58.1 37.7 77.7





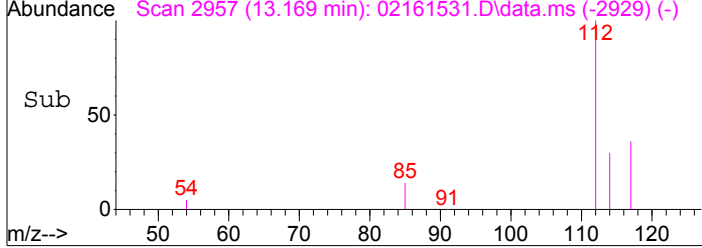
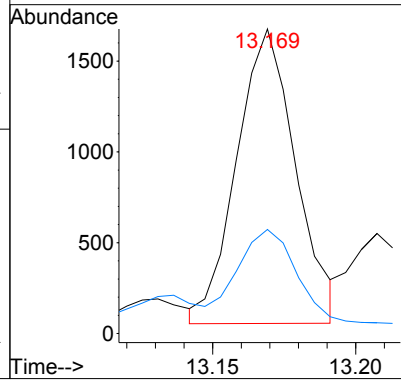
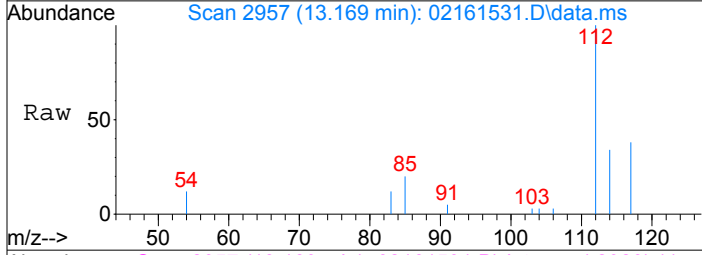
#33
Tetrachloroethene
Concen: 58.72 pg
RT: 12.61 min Scan# 2825
Delta R.T. -0.002 min
Lab File: 02161531.D
Acq: 17 Feb 2015 1:53

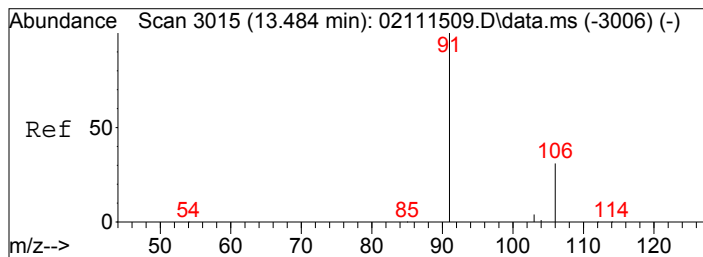
Tgt Ion	166	Resp	2886
Ion Ratio	100	Lower	Upper
129	78.6	53.3	93.3



#35
Chlorobenzene
Concen: 25.17 pg
RT: 13.17 min Scan# 2957
Delta R.T. 0.002 min
Lab File: 02161531.D
Acq: 17 Feb 2015 1:53

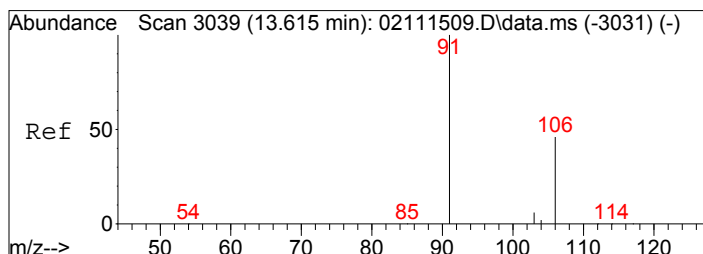
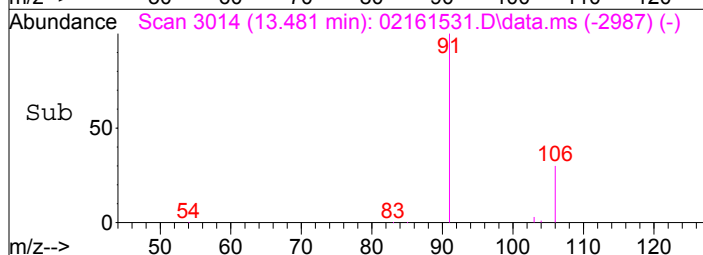
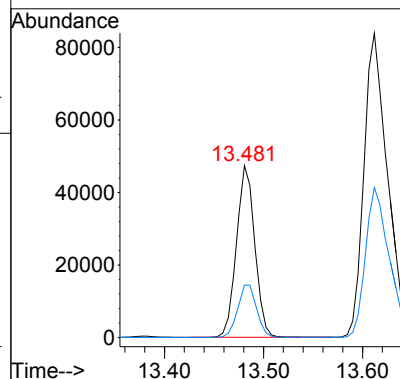
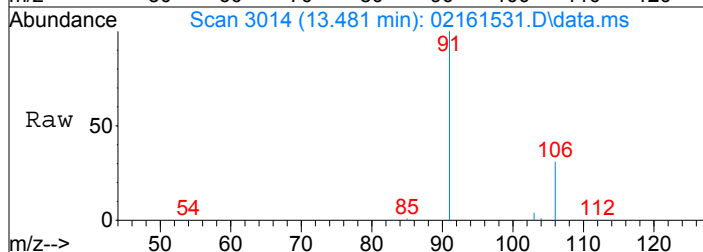
Tgt Ion	112	Resp	2321
Ion Ratio <td>100</td> <td>Lower</td> <td>Upper</td>	100	Lower	Upper
114	32.1	12.3	52.3





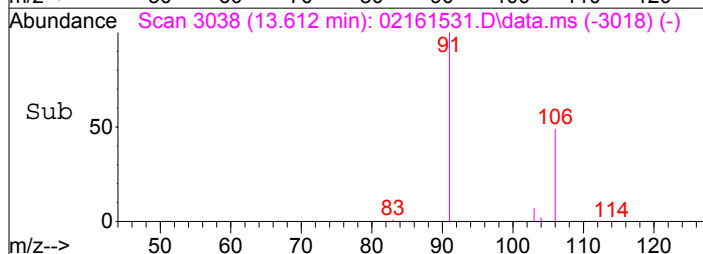
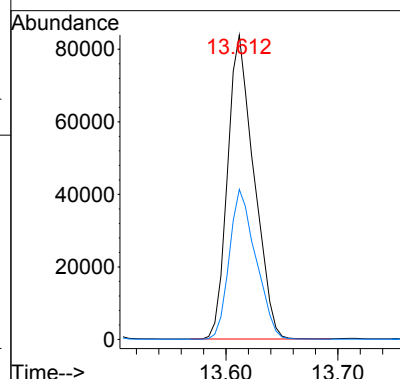
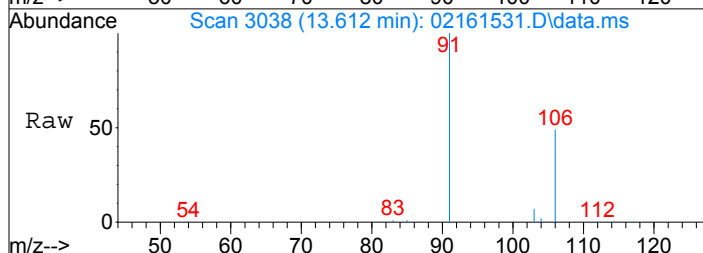
#36
Ethylbenzene
Concen: 387.86 pg
RT: 13.48 min Scan# 3014
Delta R.T. -0.003 min
Lab File: 02161531.D
Acq: 17 Feb 2015 1:53

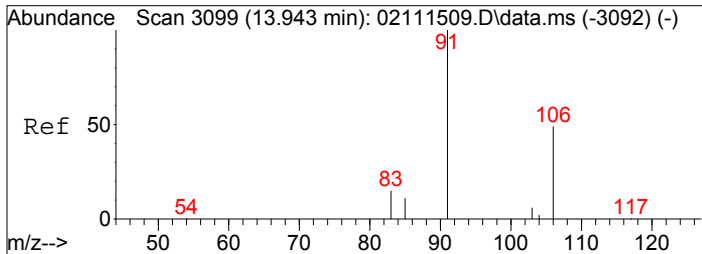
Tgt Ion: 91 Resp: 60645
Ion Ratio Lower Upper
91 100
106 31.7 10.9 50.9



#37
m,p-Xylene
Concen: 1069.55 pg
RT: 13.61 min Scan# 3038
Delta R.T. -0.003 min
Lab File: 02161531.D
Acq: 17 Feb 2015 1:53

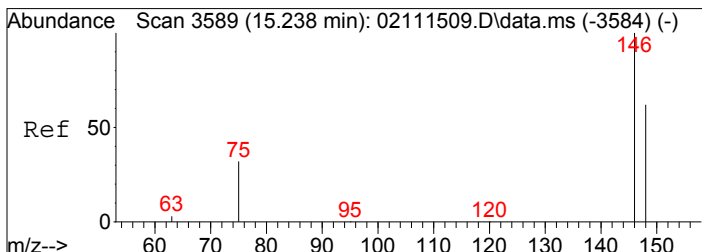
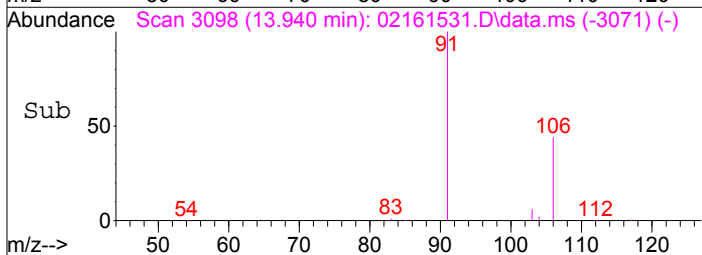
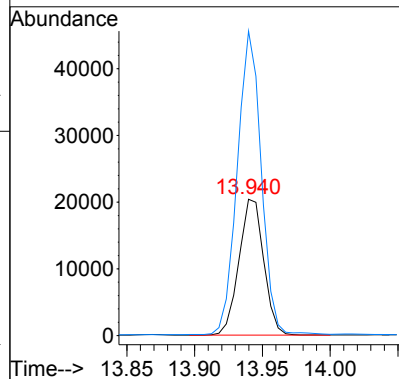
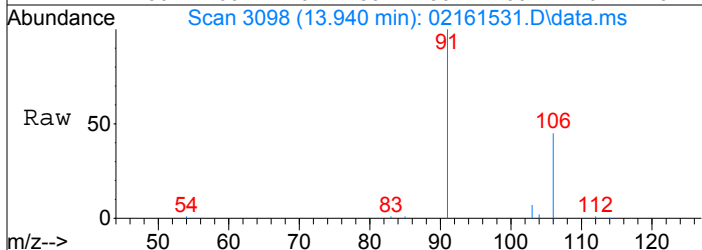
Tgt Ion: 91 Resp: 137446
Ion Ratio Lower Upper
91 100
106 49.6 27.5 67.5





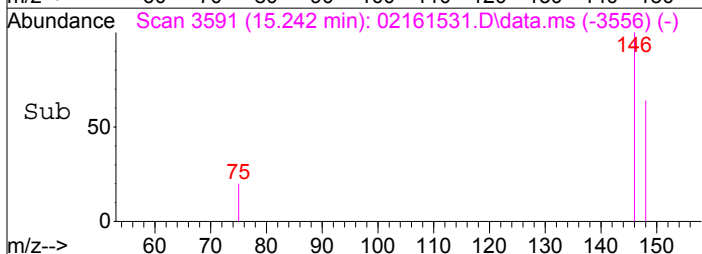
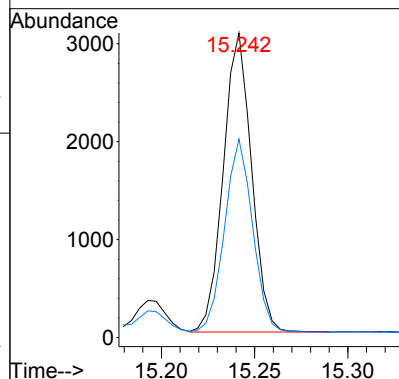
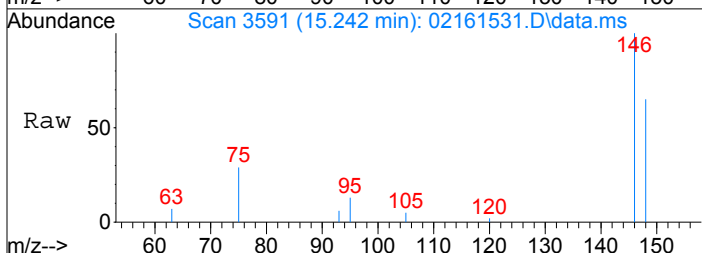
#38
o-Xylene
Concen: 412.63 pg
RT: 13.94 min Scan# 3098
Delta R.T. -0.003 min
Lab File: 02161531.D
Acq: 17 Feb 2015 1:53

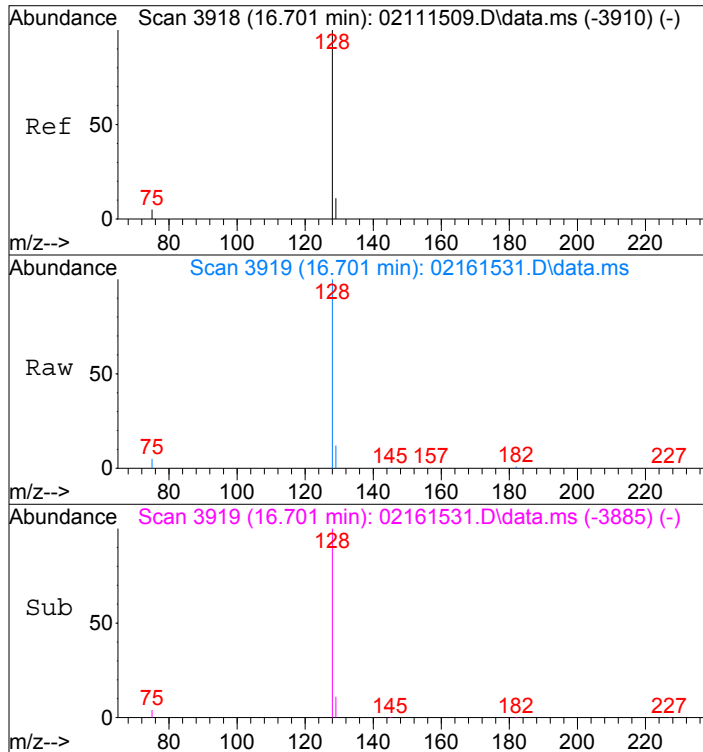
Tgt Ion	106	Resp	25915
Ion Ratio	Lower	Upper	
106	100		
91	216.2	198.3	238.3



#42
1,4-Dichlorobenzene
Concen: 37.39 pg
RT: 15.24 min Scan# 3591
Delta R.T. 0.004 min
Lab File: 02161531.D
Acq: 17 Feb 2015 1:53

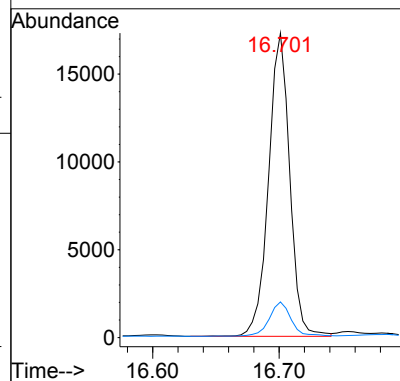
Tgt Ion	146	Resp	3222
Ion Ratio <td>Lower</td> <td>Upper</td> <td></td>	Lower	Upper	
146	100		
148	63.9	43.5	83.5





#45
Naphthalene
Concen: 128.42 pg
RT: 16.70 min Scan# 3919
Delta R.T. -0.000 min
Lab File: 02161531.D
Acq: 17 Feb 2015 1:53

Tgt Ion	Ratio	Resp	Lower	Upper
128	100	20035		
129	12.0	0.0	30.9	



Data File: I:\MS19\DATA\2015 02\17\02171552.D

Acq On : 18 Feb 2015 11:45
 Sample : P1500566-030 (1000mL)
 Misc : S29-02041502
 ALS Vial : 4 Sample Multiplier: 1

Operator: WA

Quant Time: Feb 18 12:34:08 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

2/18/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	14475	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	107253	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	20437	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	35099	992.918	pg	0.00
Spiked Amount 1000.000			Recovery	=	99.29%	
30) Toluene-d8 (SS2)	11.38	98	103893	1050.411	pg	0.00
Spiked Amount 1000.000			Recovery	=	105.04%	
40) Bromofluorobenzene (SS3)	14.25	174	41977	1017.390	pg	0.00
Spiked Amount 1000.000			Recovery	=	101.74%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.73	85	101815	1730.764	pg	100
3) Chloromethane	1.84	52	6161	524.437	pg	99
4) Vinyl Chloride	2.02	62	121	N.D.		
5) Bromomethane	2.33	94	1268	47.935	pg	99
6) Chloroethane	2.48	64	275	N.D.		
7) Acetone	2.99	58	143539	6909.858	pg	# 65
8) Trichlorofluoromethane	3.11	101	115899	2293.683	pg	100
9) 1,1-Dichloroethene	3.67	96	80	N.D.		
10) Methylene Chloride	3.80	84	12824	534.855	pg	99
11) Trichlorotrifluoroethane	4.10	151	9245	398.175	pg	100
12) trans-1,2-Dichloroethene	4.74	96	749	32.515	pg	98
13) 1,1-Dichloroethane	4.96	63	284	N.D.		
14) Methyl tert-Butyl Ether	5.11	73	651	N.D.		
15) cis-1,2-Dichloroethene	5.93	96	763	29.787	pg	97
16) Chloroform	6.31	83	9094	204.913	pg	99
18) 1,2-Dichloroethane	7.26	62	2968	83.993	pg	98
19) 1,1,1-Trichloroethane	7.59	97	1757	40.712	pg	99
20) Benzene	8.15	78	51209	561.014	pg	100
21) Carbon Tetrachloride	8.34	117	13043	403.688	pg	99
23) 1,2-Dichloropropane	9.16	63	599	25.607	pg	94
24) Bromodichloromethane	0.00	83	0	N.D.	d	
25) Trichloroethene	9.46	130	4183	151.811	pg	98
26) 1,4-Dioxane	9.54	88	213	N.D.		
27) cis-1,3-Dichloropropene	10.47	75	65	N.D.		
28) trans-1,3-Dichloropropene	11.06	75	50	N.D.		
29) 1,1,2-Trichloroethane	11.19	83	82	N.D.		
31) Toluene	11.48	91	166379	1581.648	pg	100
32) 1,2-Dibromoethane	12.12	107	45	N.D.		
33) Tetrachloroethene	12.61	166	1517	46.575	pg	99
35) Chlorobenzene	13.17	112	587	N.D.		
36) Ethylbenzene	13.48	91	37089	289.402	pg	100
37) m,p-Xylene	13.61	91	72568	688.954	pg	98
38) o-Xylene	13.94	106	12859	249.799	pg	99
39) 1,1,1,2,2-Tetrachloroethane	13.93	83	69	N.D.		
41) 1,3-Dichlorobenzene	15.19	146	149	N.D.		
42) 1,4-Dichlorobenzene	15.24	146	1814	25.685	pg	99
43) 1,2-Dichlorobenzene	15.46	146	193	N.D.		
44) 1,2,4-Trichlorobenzene	16.63	182	127	N.D.		
45) Naphthalene	16.70	128	1980	N.D.		
46) Hexachlorobutadiene	16.96	225	36	N.D.		

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\17\02171552.D

Acq On : 18 Feb 2015 11:45

Operator: WA

Sample : P1500566-030 (1000mL)

Misc : S29-02041502

ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 18 12:34:08 2015

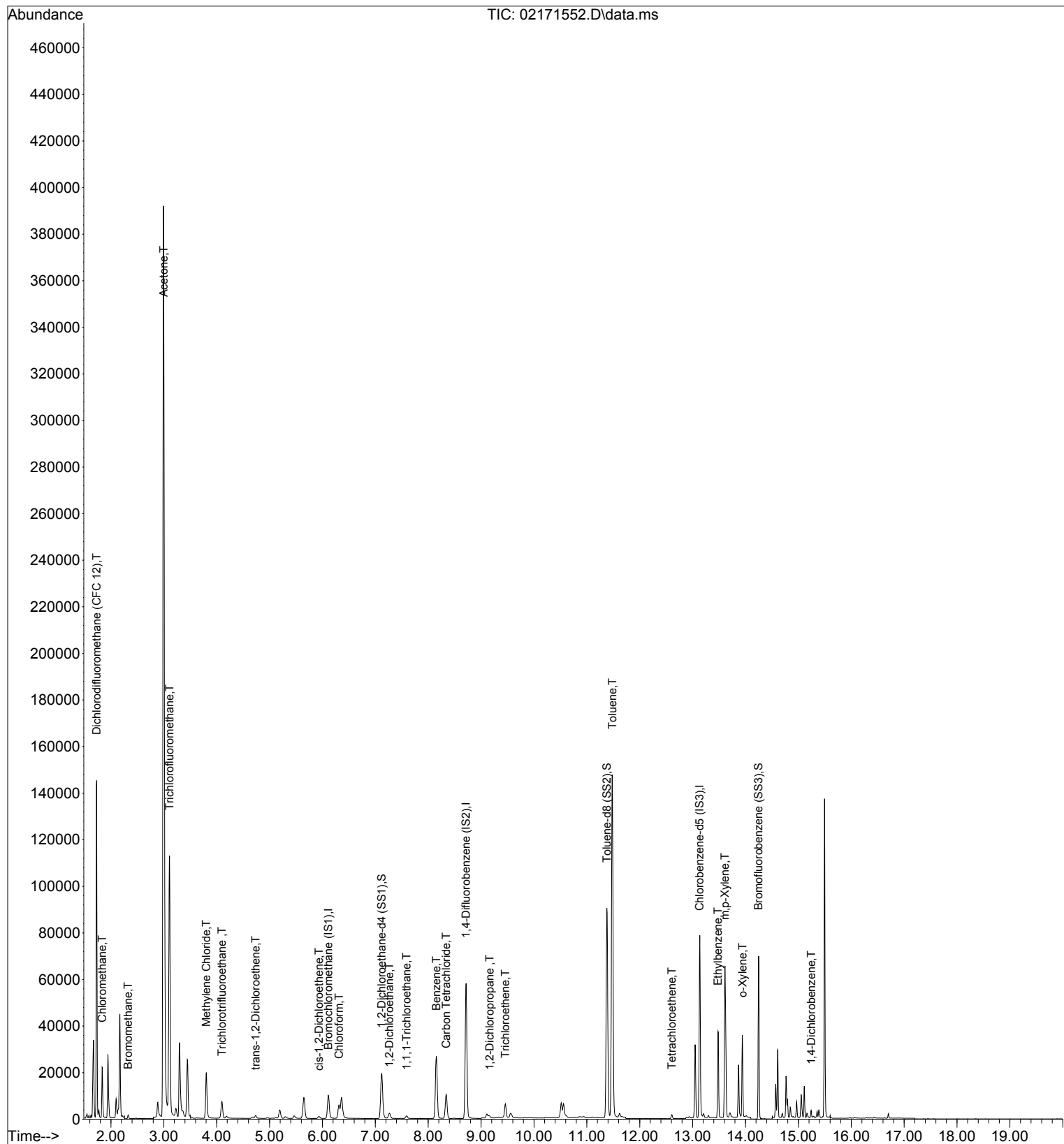
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 02\17\02171552.D

Acq On : 18 Feb 2015 11:45

Operator: WA

Sample : P1500566-030 (1000mL)

Misc : S29-02041502

ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 18 12:34:08 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

2/18/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	14475	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	107253	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	20437	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	35099	992.918	pg	0.00
Spiked Amount 1000.000			Recovery	=	99.29%	
30) Toluene-d8 (SS2)	11.38	98	103893	1050.411	pg	0.00
Spiked Amount 1000.000			Recovery	=	105.04%	
40) Bromofluorobenzene (SS3)	14.25	174	41977	1017.390	pg	0.00
Spiked Amount 1000.000			Recovery	=	101.74%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.73	85	101815	1730.764	pg	100
3) Chloromethane	1.84	52	6161	524.437	pg	99
5) Bromomethane	2.33	94	1268	47.935	pg	99
7) Acetone	2.99	58	143539	6909.858	pg	# 65
8) Trichlorofluoromethane	3.11	101	115899	2293.683	pg	100
10) Methylene Chloride	3.80	84	12824	534.855	pg	99
11) Trichlorotrifluoroethane	4.10	151	9245	398.175	pg	100
12) trans-1,2-Dichloroethene	4.74	96	749	32.515	pg	98
15) cis-1,2-Dichloroethene	5.93	96	763	29.787	pg	97
16) Chloroform	6.31	83	9094	204.913	pg	99
18) 1,2-Dichloroethane	7.26	62	2968	83.993	pg	98
19) 1,1,1-Trichloroethane	7.59	97	1757	40.712	pg	99
20) Benzene	8.15	78	51209	561.014	pg	100
21) Carbon Tetrachloride	8.34	117	13043	403.688	pg	99
23) 1,2-Dichloropropane	9.16	63	599	25.607	pg	94
25) Trichloroethene	9.46	130	4183	151.811	pg	98
31) Toluene	11.48	91	166379	1581.648	pg	100
33) Tetrachloroethene	12.61	166	1517	46.575	pg	99
36) Ethylbenzene	13.48	91	37089	289.402	pg	100
37) m,p-Xylene	13.61	91	72568	688.954	pg	98
38) o-Xylene	13.94	106	12859	249.799	pg	99
42) 1,4-Dichlorobenzene	15.24	146	1814	25.685	pg	99

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\17\02171552.D

Acq On : 18 Feb 2015 11:45

Operator: WA

Sample : P1500566-030 (1000mL)

Misc : S29-02041502

ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 18 12:34:08 2015

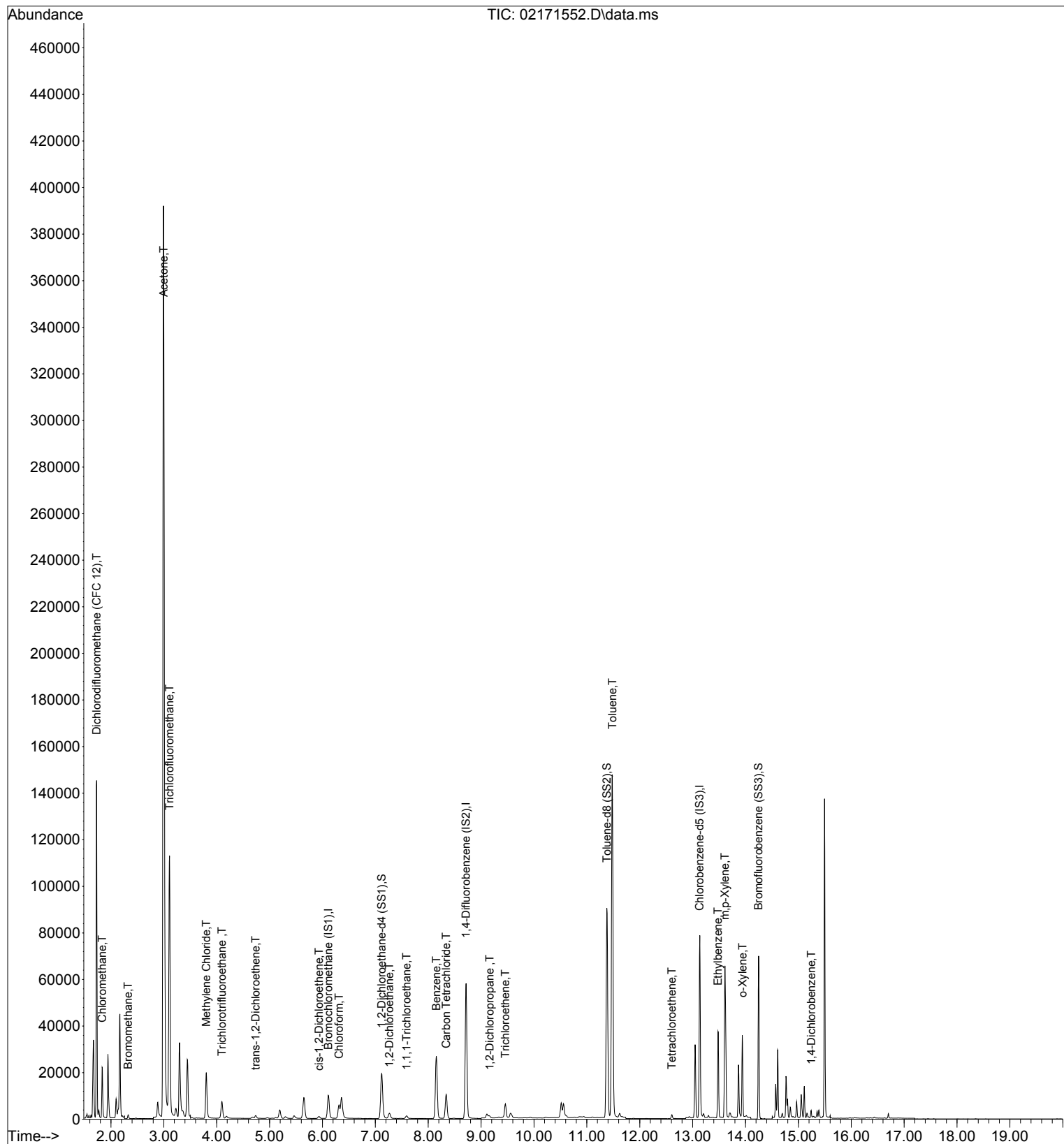
Quant Method : I:\MS19\METHODS\X19021115.M

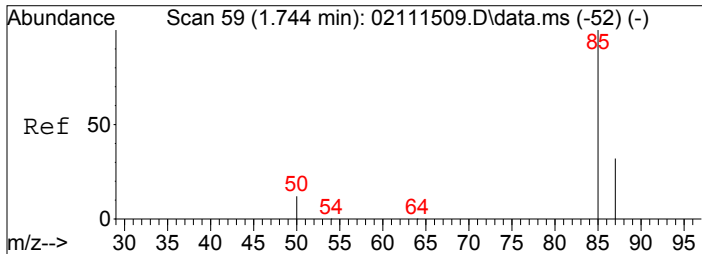
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

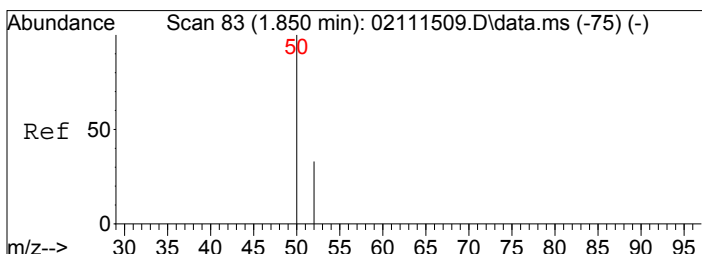
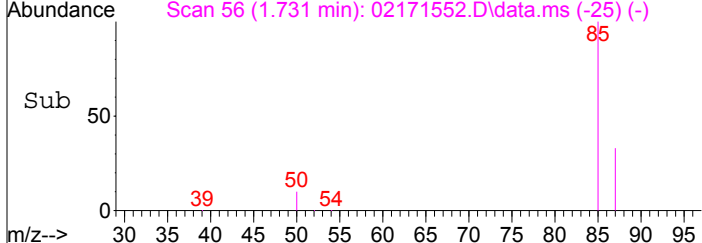
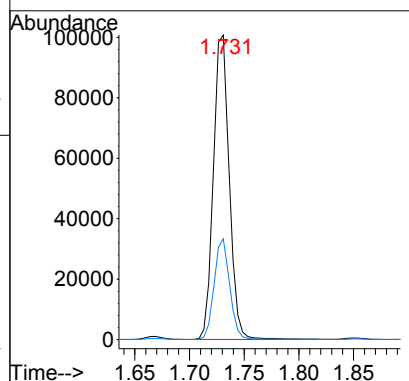
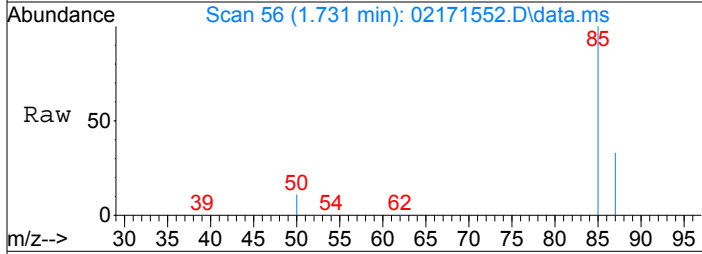
DataAcq Meth:TO15SIM.M





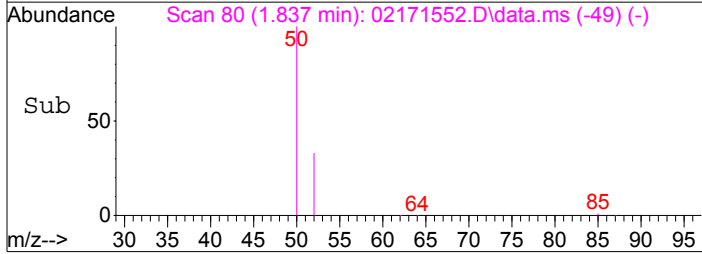
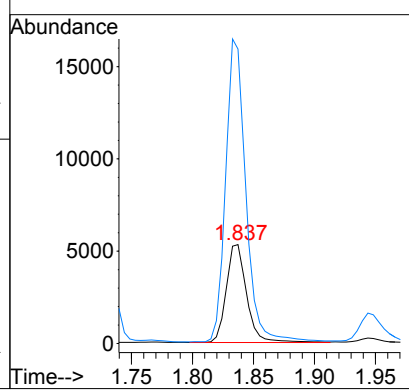
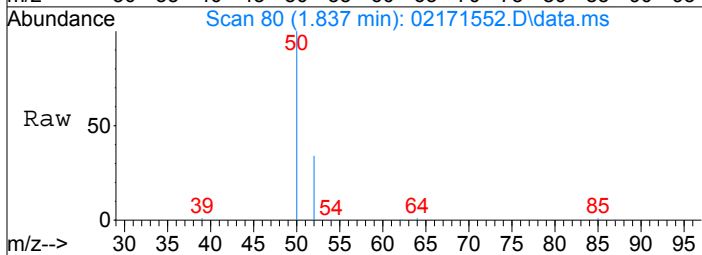
#2
 Dichlorodifluoromethane (CFC 12)
 Concen: 1730.76 pg
 RT: 1.73 min Scan# 56
 Delta R.T. -0.013 min
 Lab File: 02171552.D
 Acq: 18 Feb 2015 11:45

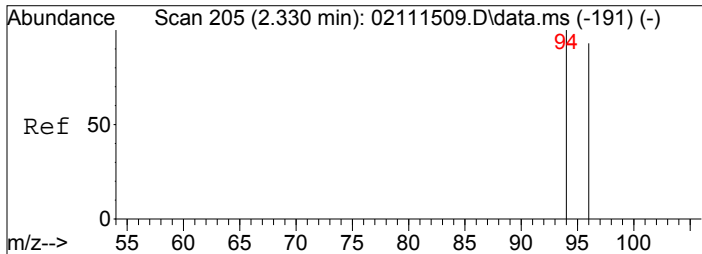
Tgt Ion:	85	Resp:	101815
Ion Ratio	Lower	Upper	
85	100		
87	32.3	12.4	52.4



#3
 Chloromethane
 Concen: 524.44 pg
 RT: 1.84 min Scan# 80
 Delta R.T. -0.013 min
 Lab File: 02171552.D
 Acq: 18 Feb 2015 11:45

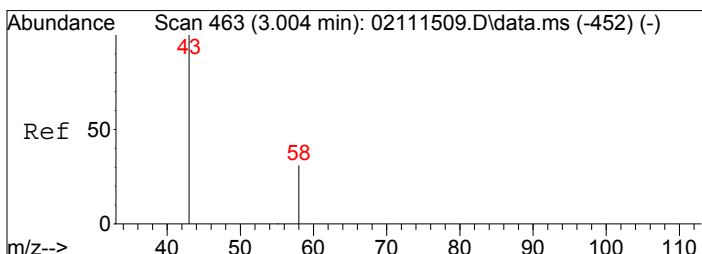
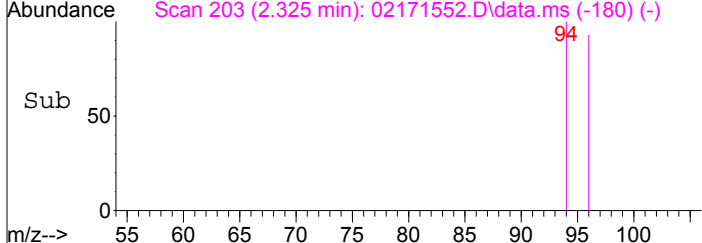
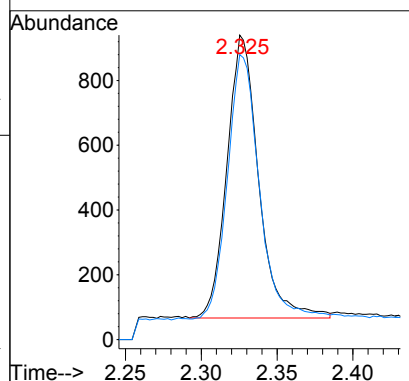
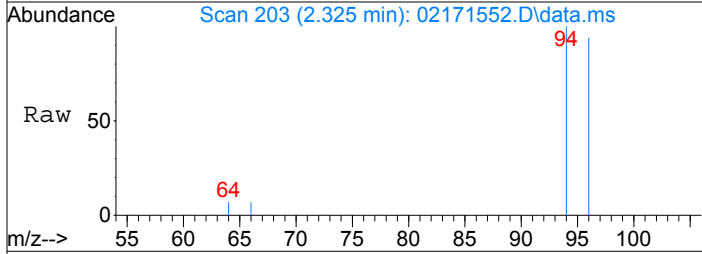
Tgt Ion:	52	Resp:	6161
Ion Ratio	Lower	Upper	
52	100		
50	305.9	283.7	323.7





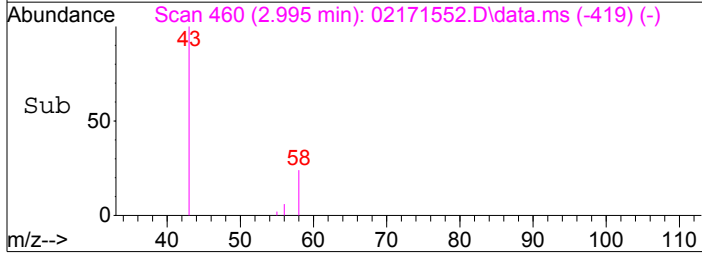
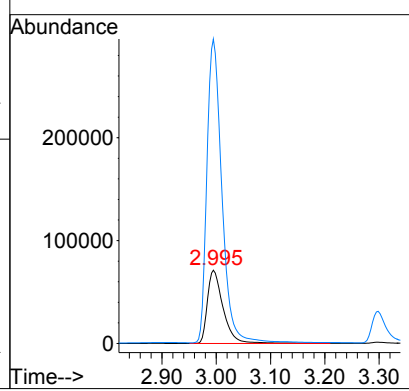
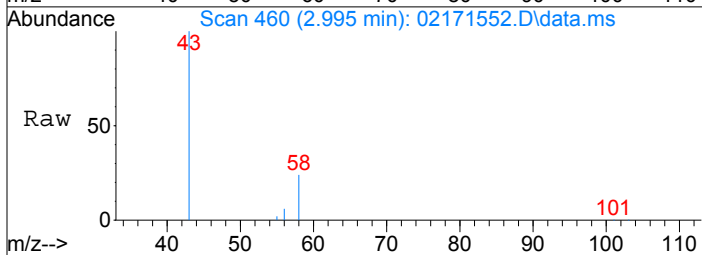
#5
 Bromomethane
 Concen: 47.94 pg
 RT: 2.33 min Scan# 203
 Delta R.T. -0.005 min
 Lab File: 02171552.D
 Acq: 18 Feb 2015 11:45

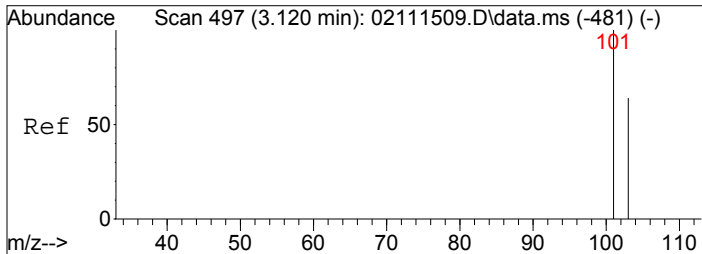
Tgt Ion:	94	Resp:	1268
Ion Ratio	Lower	Upper	
94	100		
96	95.3	75.5	113.3



#7
 Acetone
 Concen: 6909.86 pg
 RT: 2.99 min Scan# 460
 Delta R.T. -0.009 min
 Lab File: 02171552.D
 Acq: 18 Feb 2015 11:45

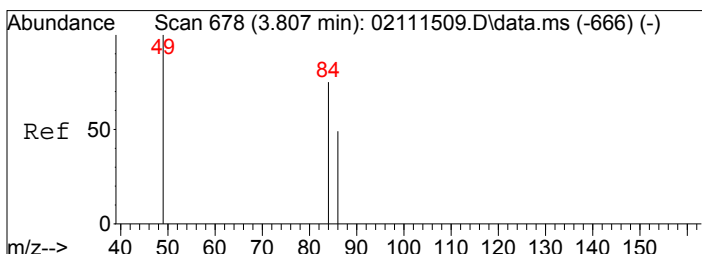
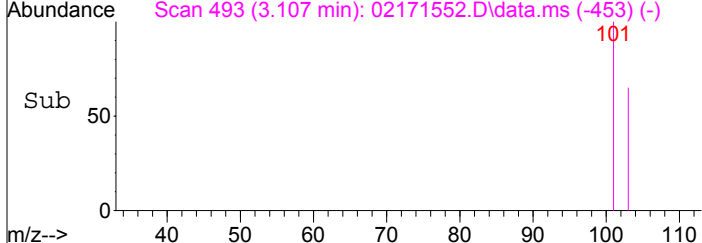
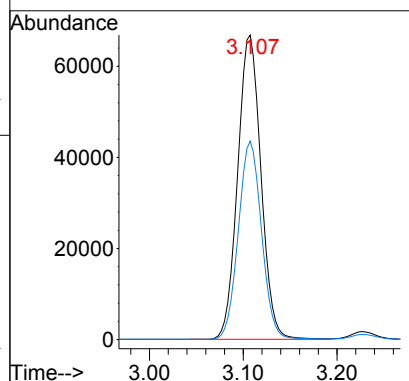
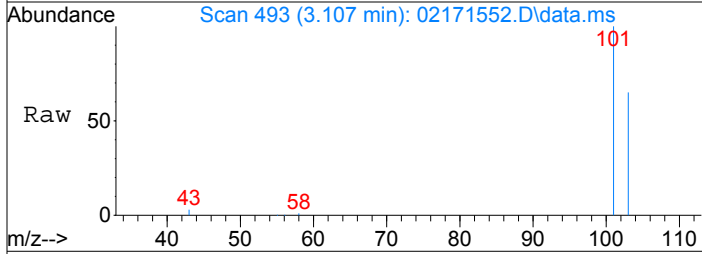
Tgt Ion:	58	Resp:	143539
Ion Ratio	Lower	Upper	
58	100		
43	393.6	301.8	341.8#





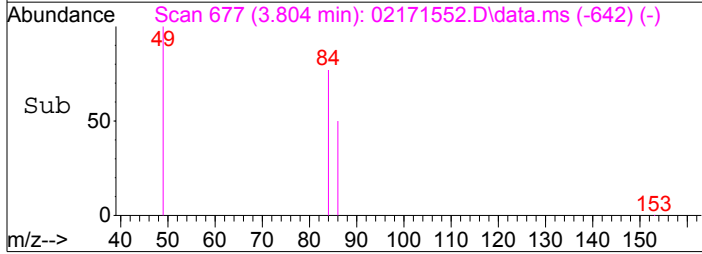
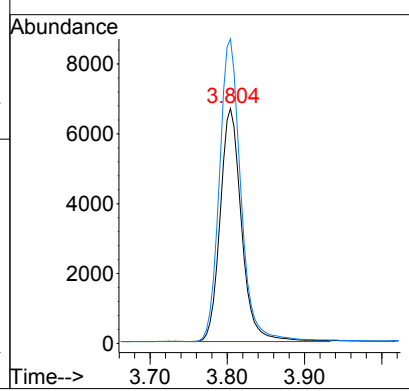
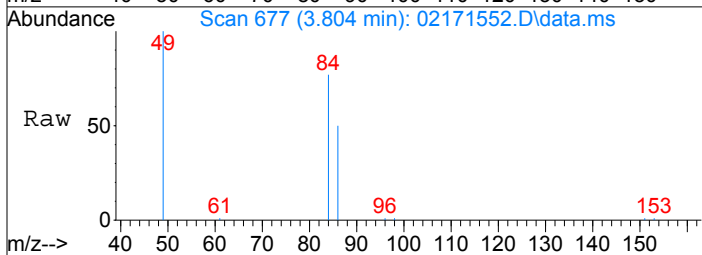
#8
 Trichlorofluoromethane
 Concen: 2293.68 pg
 RT: 3.11 min Scan# 493
 Delta R.T. -0.012 min
 Lab File: 02171552.D
 Acq: 18 Feb 2015 11:45

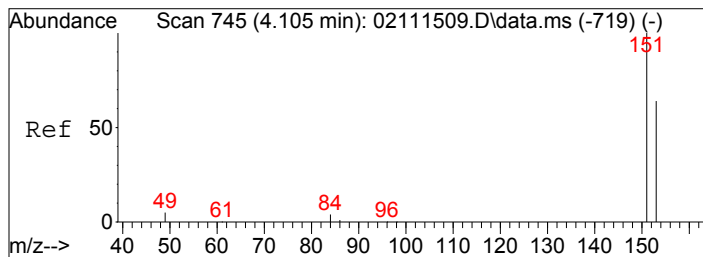
Tgt Ion:	101	Resp:	115899
Ion Ratio	Lower	Upper	
101	100		
103	64.8	51.8	77.6



#10
 Methylene Chloride
 Concen: 534.86 pg
 RT: 3.80 min Scan# 677
 Delta R.T. -0.003 min
 Lab File: 02171552.D
 Acq: 18 Feb 2015 11:45

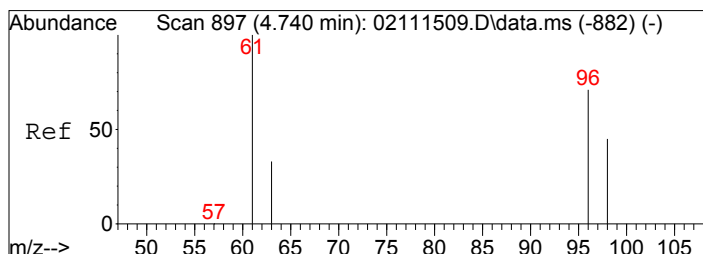
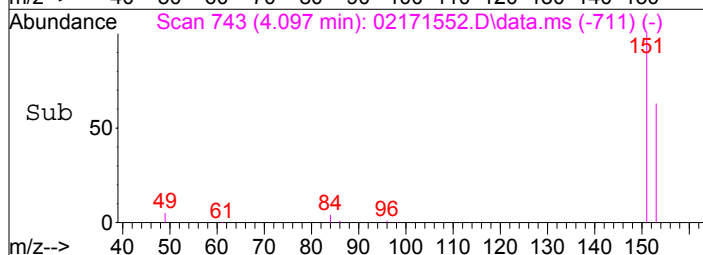
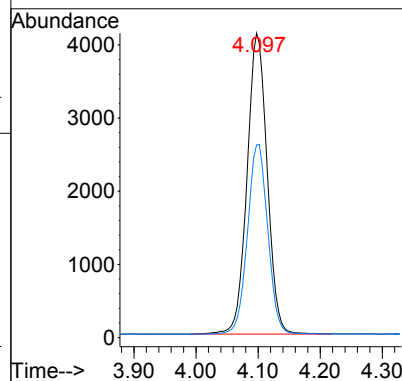
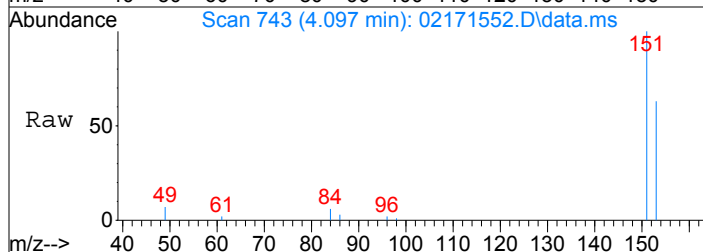
Tgt Ion:	84	Resp:	12824
Ion Ratio	Lower	Upper	
84	100		
49	131.0	112.3	152.3





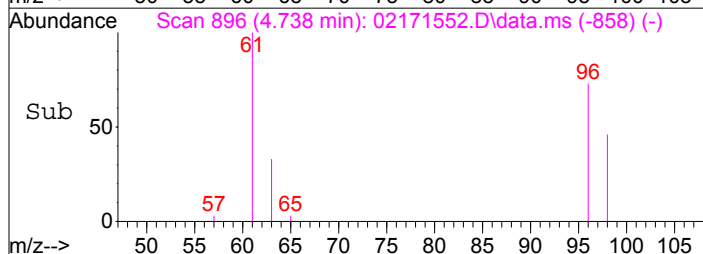
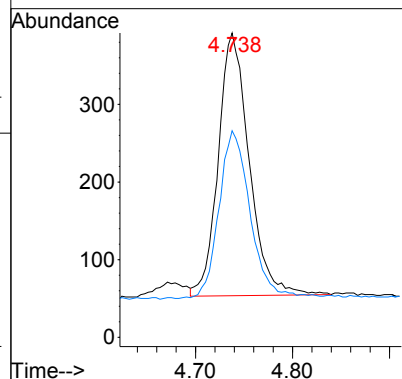
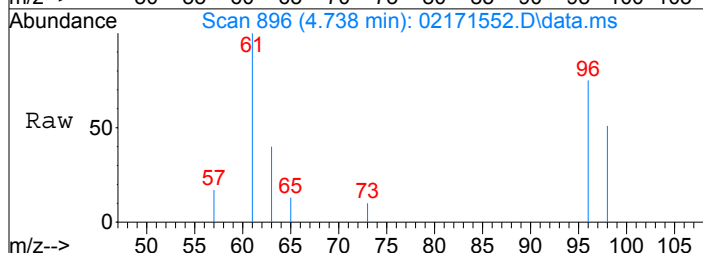
#11
Trichlorotrifluoroethane
Concen: 398.17 pg
RT: 4.10 min Scan# 743
Delta R.T. -0.008 min
Lab File: 02171552.D
Acq: 18 Feb 2015 11:45

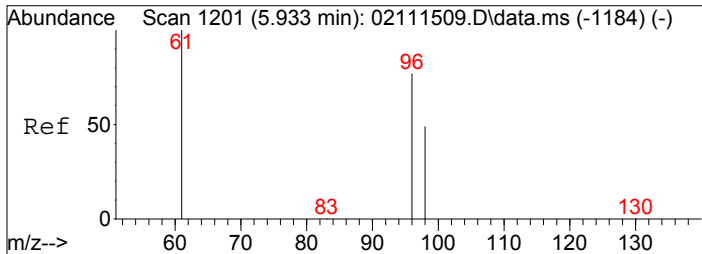
Tgt Ion: 151 Resp: 9245
Ion Ratio Lower Upper
151 100
153 63.8 43.6 83.6



#12
trans-1,2-Dichloroethene
Concen: 32.52 pg
RT: 4.74 min Scan# 896
Delta R.T. -0.003 min
Lab File: 02171552.D
Acq: 18 Feb 2015 11:45

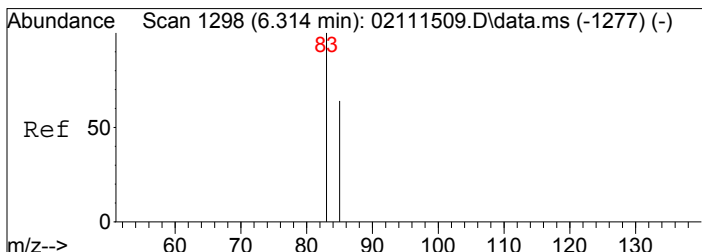
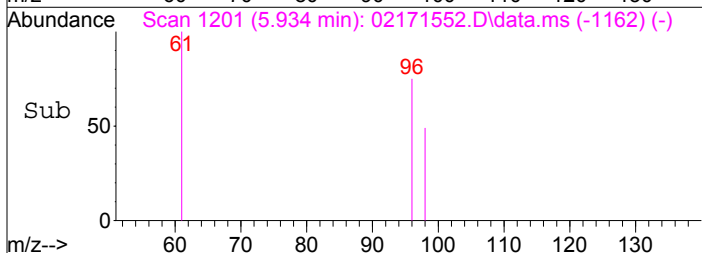
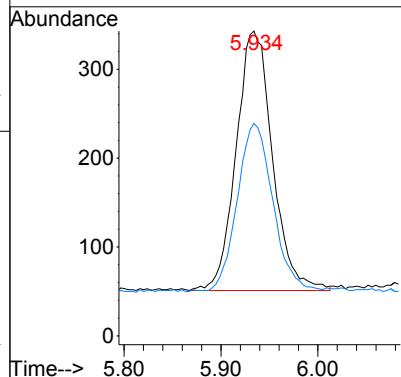
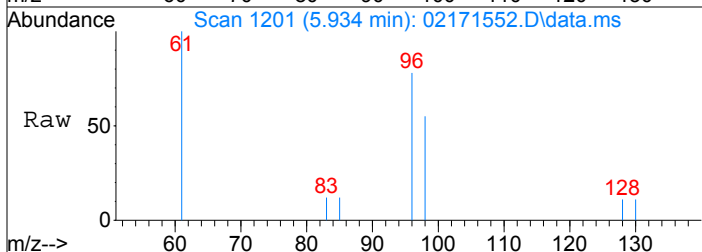
Tgt Ion: 96 Resp: 749
Ion Ratio Lower Upper
96 100
98 64.9 43.7 83.7





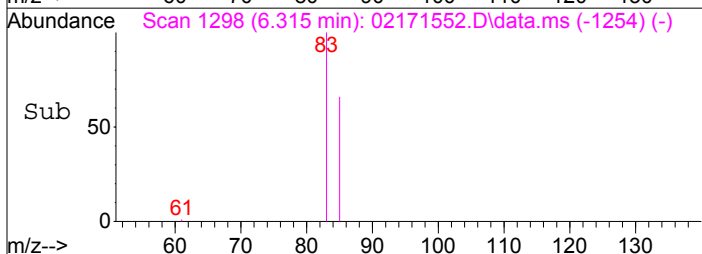
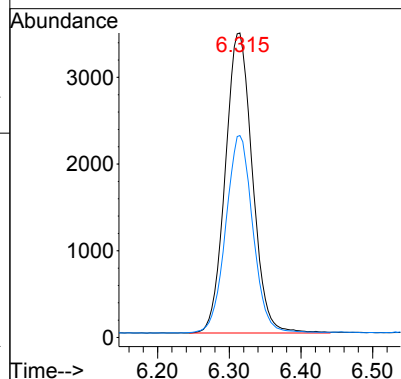
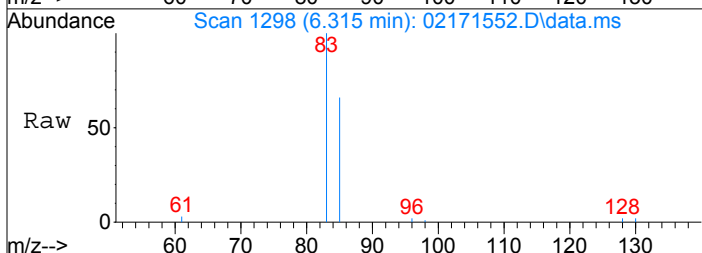
#15
 cis-1,2-Dichloroethene
 Concen: 29.79 pg
 RT: 5.93 min Scan# 1201
 Delta R.T. 0.001 min
 Lab File: 02171552.D
 Acq: 18 Feb 2015 11:45

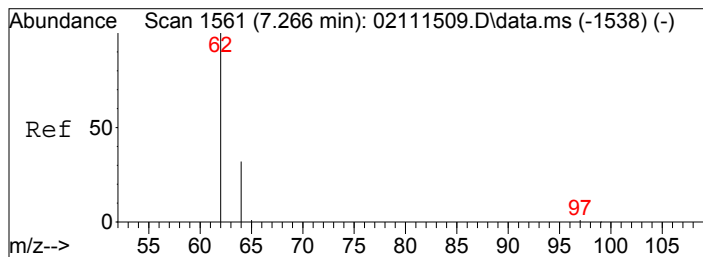
Tgt Ion: 96 Resp: 763
 Ion Ratio Lower Upper
 96 100
 98 62.1 44.3 84.3



#16
 Chloroform
 Concen: 204.91 pg
 RT: 6.31 min Scan# 1298
 Delta R.T. 0.001 min
 Lab File: 02171552.D
 Acq: 18 Feb 2015 11:45

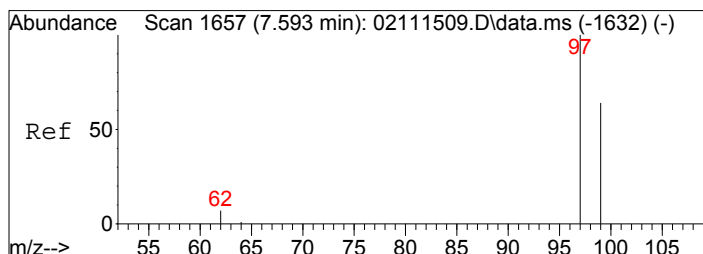
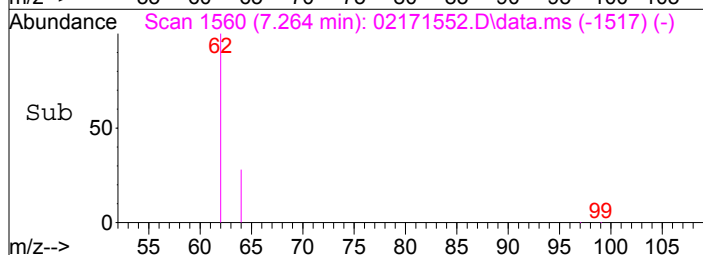
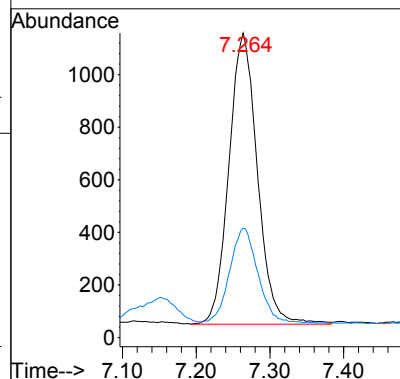
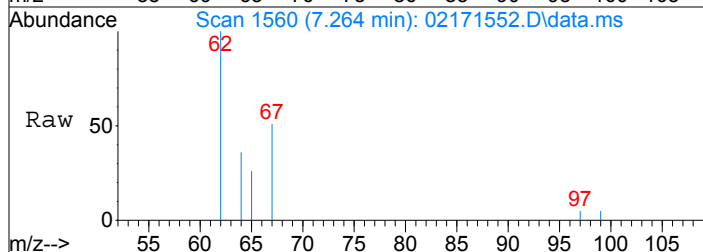
Tgt Ion: 83 Resp: 9094
 Ion Ratio Lower Upper
 83 100
 85 66.0 45.4 85.4





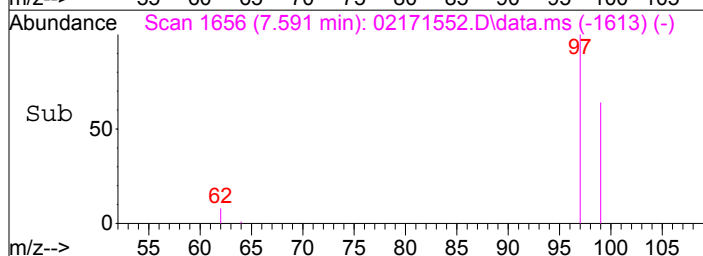
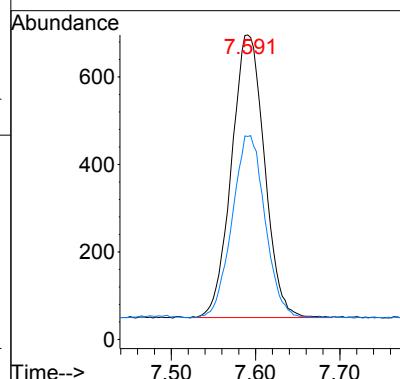
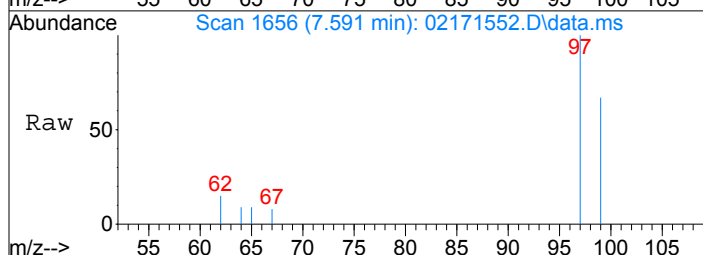
#18
1,2-Dichloroethane
Concen: 83.99 pg
RT: 7.26 min Scan# 1560
Delta R.T. -0.002 min
Lab File: 02171552.D
Acq: 18 Feb 2015 11:45

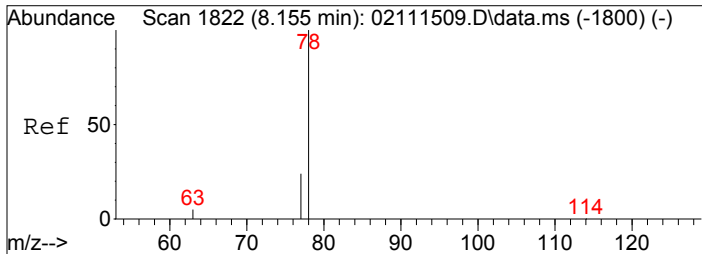
Tgt Ion: 62 Resp: 2968
Ion Ratio Lower Upper
62 100
64 32.7 11.6 51.6



#19
1,1,1-Trichloroethane
Concen: 40.71 pg
RT: 7.59 min Scan# 1656
Delta R.T. -0.002 min
Lab File: 02171552.D
Acq: 18 Feb 2015 11:45

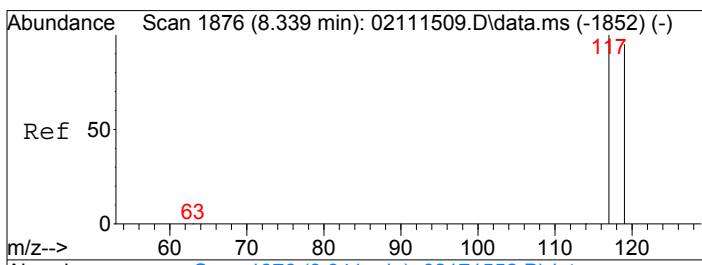
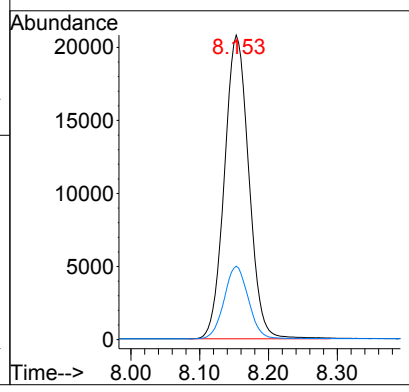
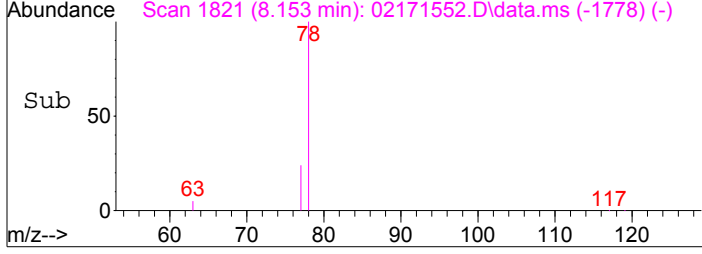
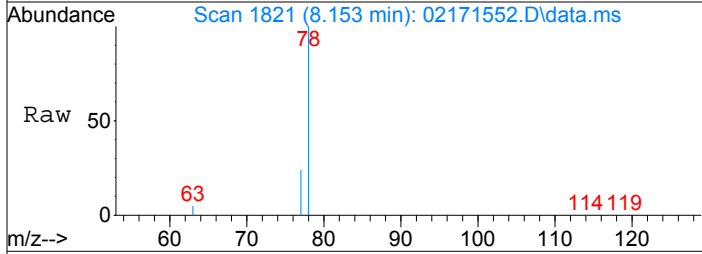
Tgt Ion: 97 Resp: 1757
Ion Ratio Lower Upper
97 100
99 64.6 44.0 84.0





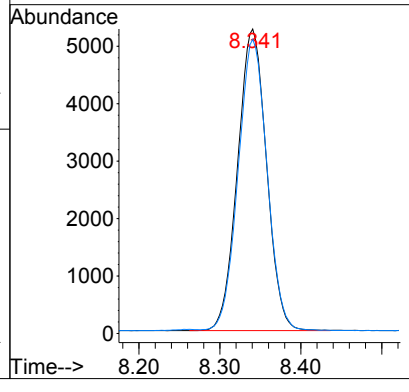
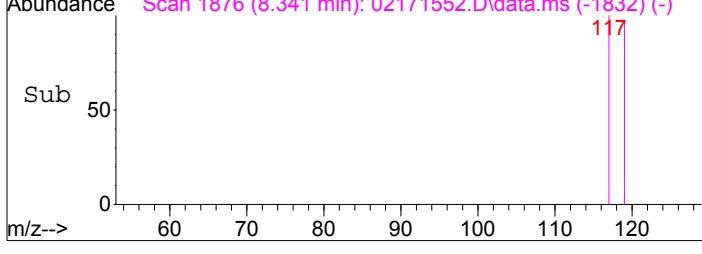
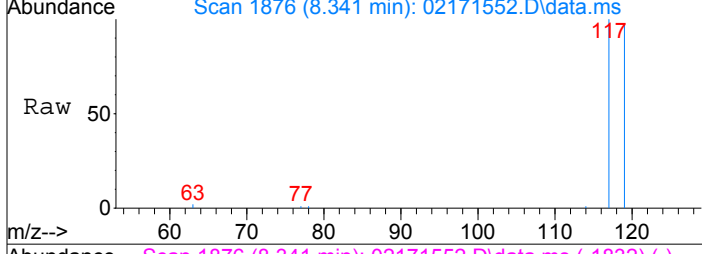
#20
Benzene
Concen: 561.01 pg
RT: 8.15 min Scan# 1821
Delta R.T. -0.002 min
Lab File: 02171552.D
Acq: 18 Feb 2015 11:45

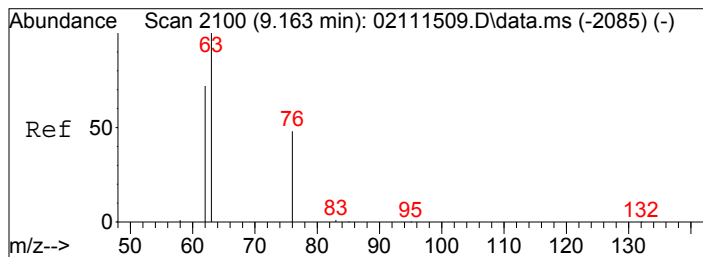
Tgt Ion:	78	Resp:	51209
Ion Ratio	Lower	Upper	
78	100		
77	23.7	3.7	43.7



#21
Carbon Tetrachloride
Concen: 403.69 pg
RT: 8.34 min Scan# 1876
Delta R.T. 0.001 min
Lab File: 02171552.D
Acq: 18 Feb 2015 11:45

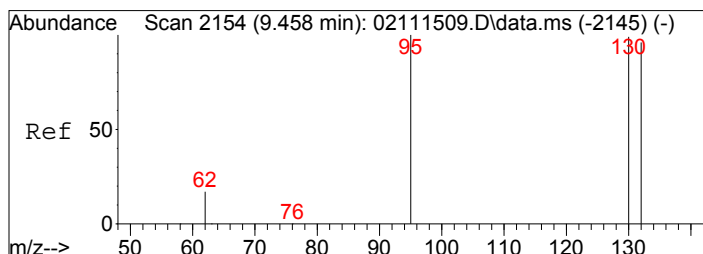
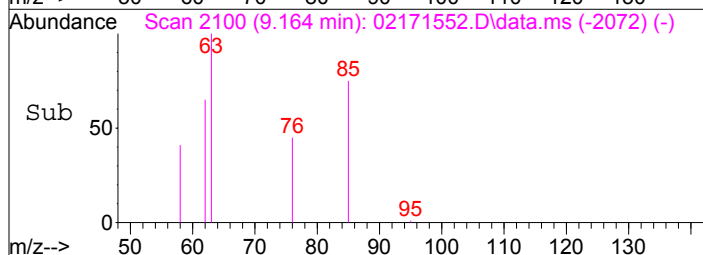
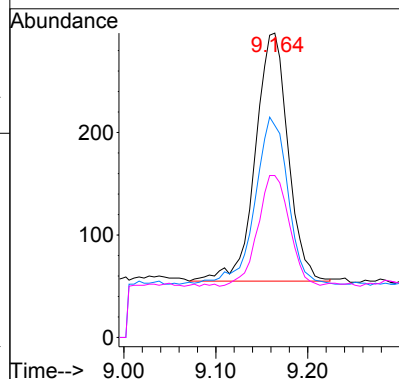
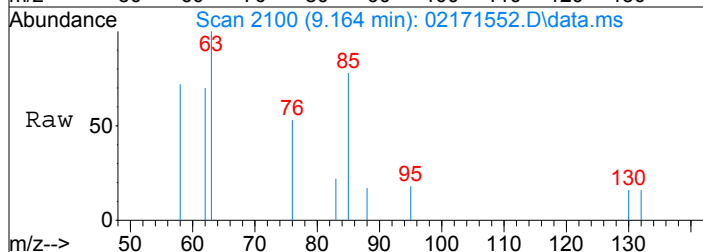
Tgt Ion:	117	Resp:	13043
Ion Ratio	Lower	Upper	
117	100		
119	96.1	75.5	115.5





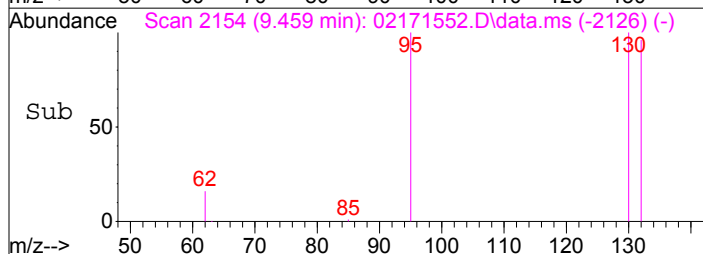
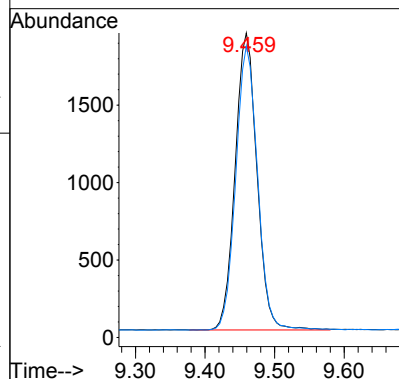
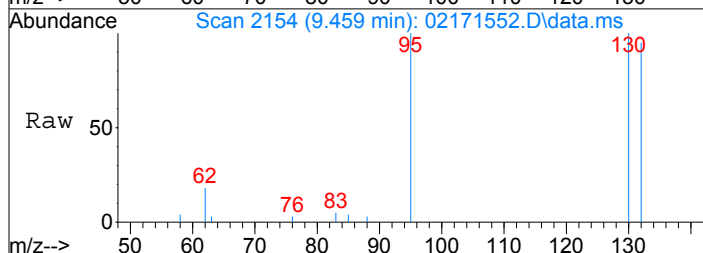
#23
1,2-Dichloropropane
Concen: 25.61 pg
RT: 9.16 min Scan# 2100
Delta R.T. 0.001 min
Lab File: 02171552.D
Acq: 18 Feb 2015 11:45

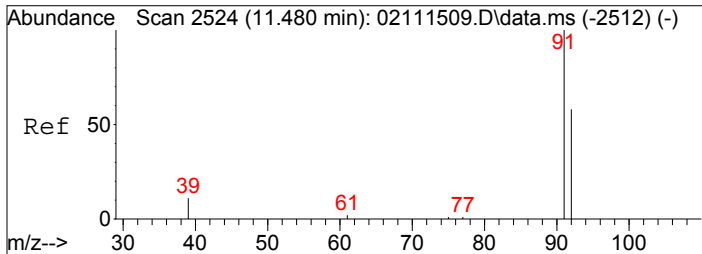
Tgt Ion: 63 Resp: 599
Ion Ratio Lower Upper
63 100
62 68.1 52.0 92.0
76 43.4 28.1 68.1



#25
Trichloroethene
Concen: 151.81 pg
RT: 9.46 min Scan# 2154
Delta R.T. 0.001 min
Lab File: 02171552.D
Acq: 18 Feb 2015 11:45

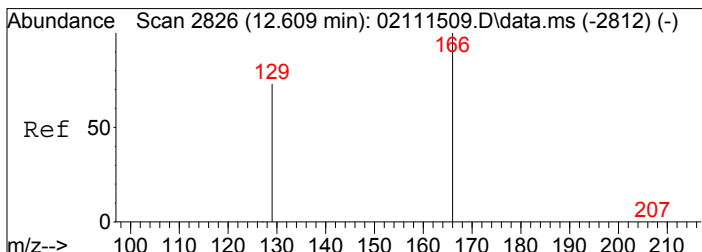
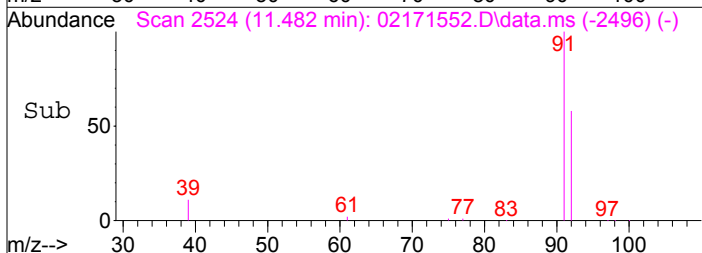
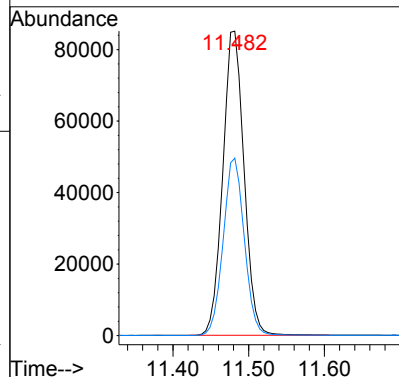
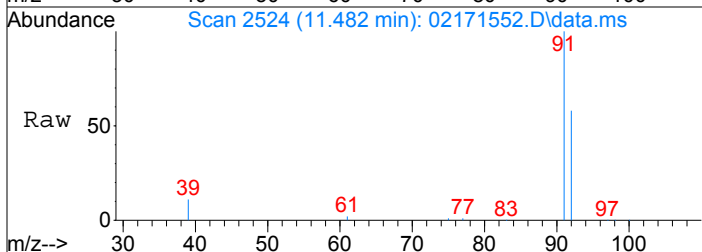
Tgt Ion: 130 Resp: 4183
Ion Ratio Lower Upper
130 100
132 95.5 77.1 117.1





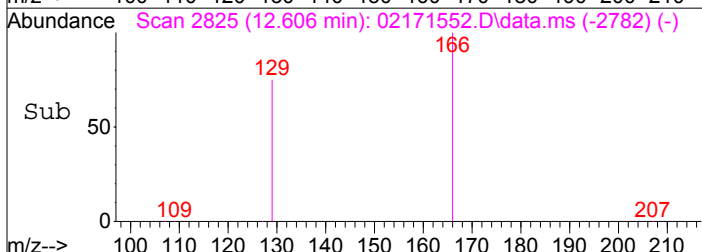
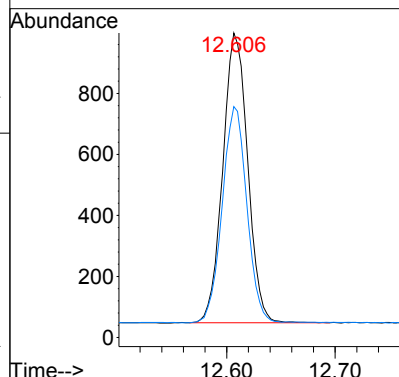
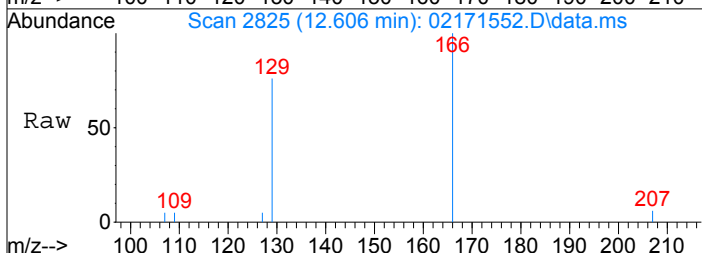
#31
Toluene
Concen: 1581.65 pg
RT: 11.48 min Scan# 2524
Delta R.T. 0.001 min
Lab File: 02171552.D
Acq: 18 Feb 2015 11:45

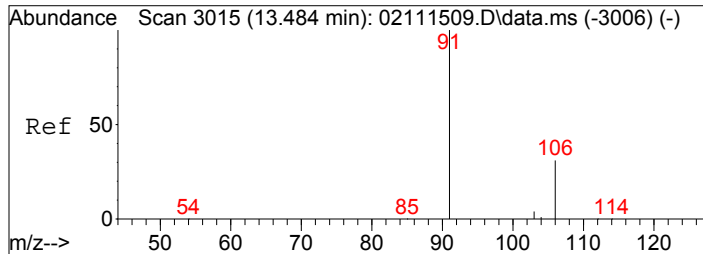
Tgt Ion: 91 Resp: 166379
Ion Ratio Lower Upper
91 100
92 57.8 37.7 77.7



#33
Tetrachloroethene
Concen: 46.57 pg
RT: 12.61 min Scan# 2825
Delta R.T. -0.003 min
Lab File: 02171552.D
Acq: 18 Feb 2015 11:45

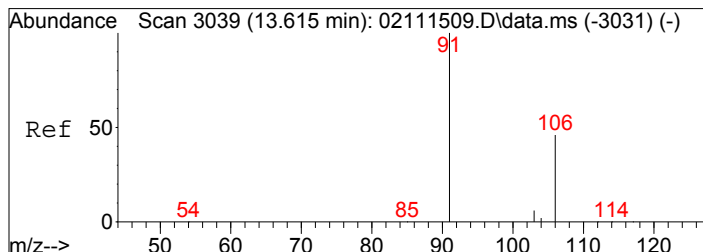
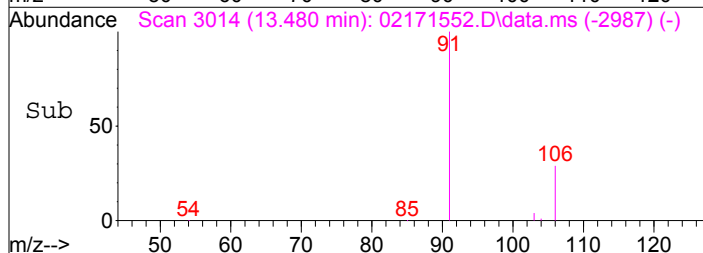
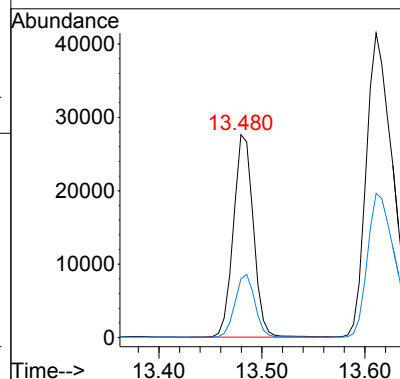
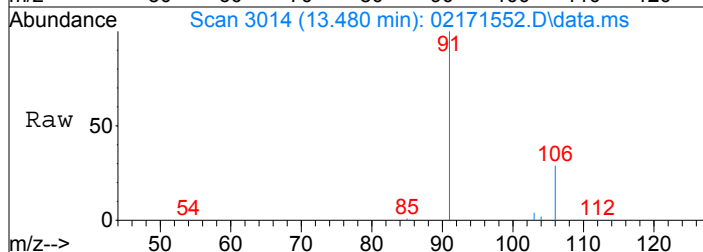
Tgt Ion: 166 Resp: 1517
Ion Ratio Lower Upper
166 100
129 74.1 53.3 93.3





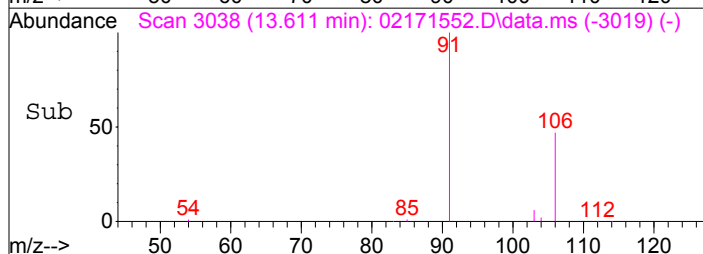
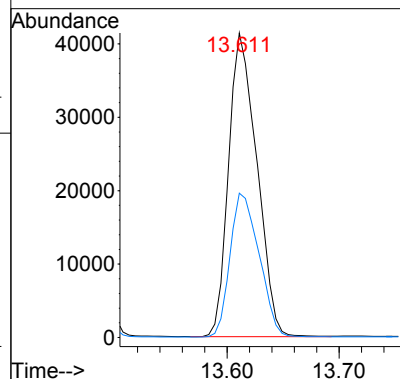
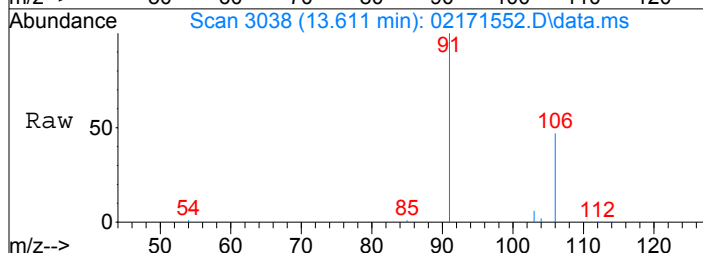
#36
Ethylbenzene
Concen: 289.40 pg
RT: 13.48 min Scan# 3014
Delta R.T. -0.004 min
Lab File: 02171552.D
Acq: 18 Feb 2015 11:45

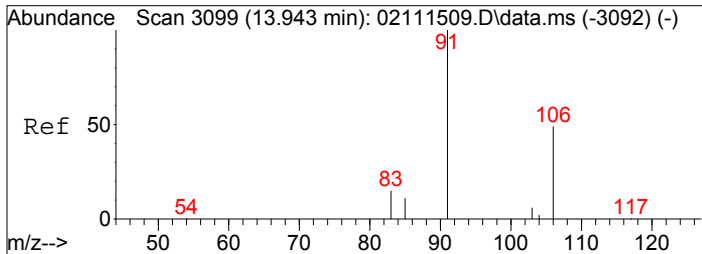
Tgt Ion: 91 Resp: 37089
Ion Ratio Lower Upper
91 100
106 30.8 10.9 50.9



#37
m,p-Xylene
Concen: 688.95 pg
RT: 13.61 min Scan# 3038
Delta R.T. -0.004 min
Lab File: 02171552.D
Acq: 18 Feb 2015 11:45

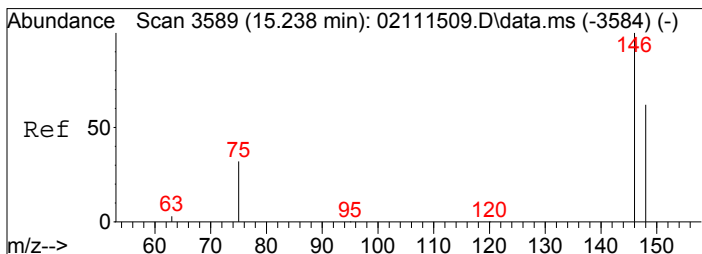
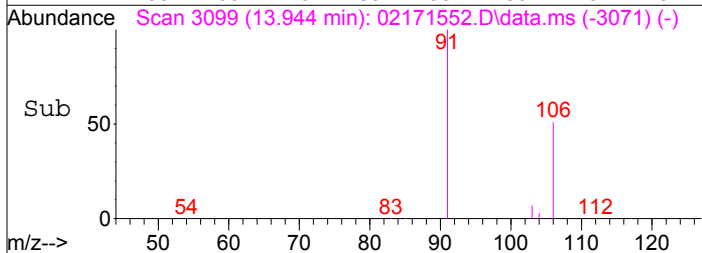
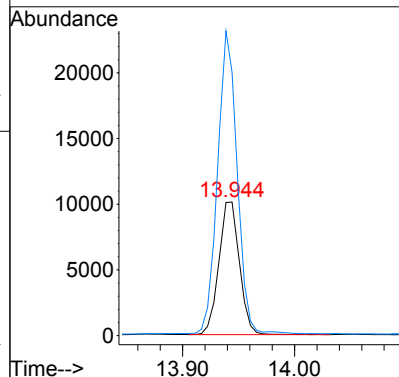
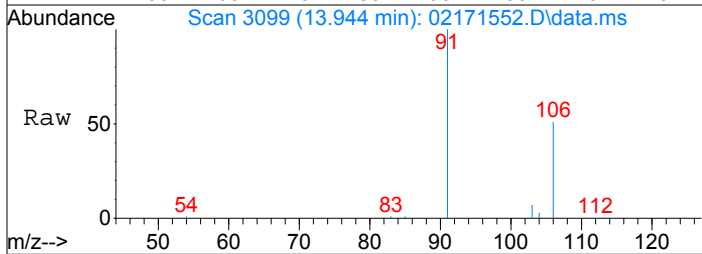
Tgt Ion: 91 Resp: 72568
Ion Ratio Lower Upper
91 100
106 48.7 27.5 67.5





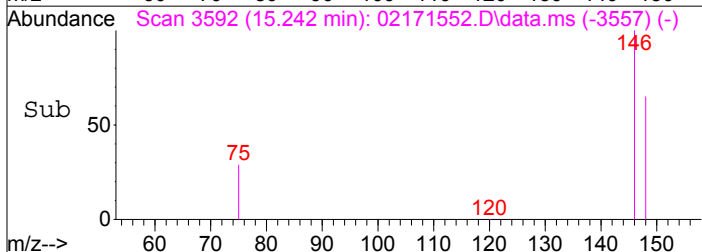
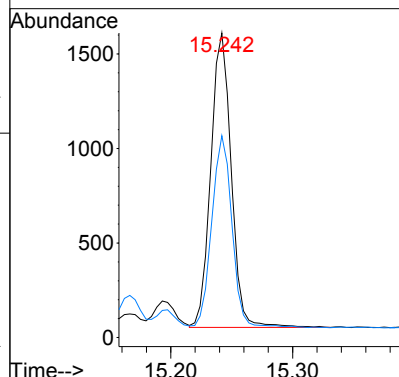
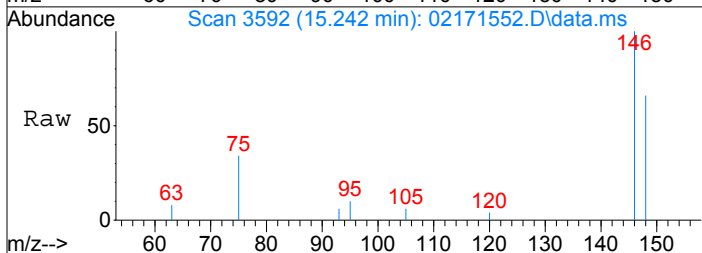
#38
o-Xylene
Concen: 249.80 pg
RT: 13.94 min Scan# 3099
Delta R.T. 0.001 min
Lab File: 02171552.D
Acq: 18 Feb 2015 11:45

Tgt Ion:106 Resp: 12859
Ion Ratio Lower Upper
106 100
91 219.5 198.3 238.3



#42
1,4-Dichlorobenzene
Concen: 25.69 pg
RT: 15.24 min Scan# 3592
Delta R.T. 0.004 min
Lab File: 02171552.D
Acq: 18 Feb 2015 11:45

Tgt Ion:146 Resp: 1814
Ion Ratio Lower Upper
146 100
148 64.4 43.5 83.5



Data File: I:\MS19\DATA\2015 02\16\02161511.D

Acq On : 16 Feb 2015 16:17
 Sample : MB X19021615_1000mL
 Misc : S29-02041502
 ALS Vial : 1 Sample Multiplier: 1

Operator: WA

Quant Time: Feb 17 06:51:44 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

2/17/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.12	130	15623	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	116275	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	20860	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.13	65	38766	1016.070	pg	0.00
Spiked Amount 1000.000			Recovery	=	101.61%	
30) Toluene-d8 (SS2)	11.38	98	111339	1038.349	pg	0.00
Spiked Amount 1000.000			Recovery	=	103.83%	
40) Bromofluorobenzene (SS3)	14.25	174	41418	983.486	pg	0.00
Spiked Amount 1000.000			Recovery	=	98.35%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.75	85	1246	N.D.		
3) Chloromethane	1.85	52	194	N.D.		
4) Vinyl Chloride	2.04	62	21	N.D.		
5) Bromomethane	2.35	94	235	N.D.		
6) Chloroethane	2.51	64	21	N.D.		
7) Acetone	3.05	58	6946	309.805	pg	# 90
8) Trichlorofluoromethane	3.13	101	763	N.D.		
9) 1,1-Dichloroethene	3.71	96	2	N.D.		
10) Methylene Chloride	3.82	84	926	35.783	pg	97
11) Trichlorotrifluoroethane	4.11	151	123	N.D.		
12) trans-1,2-Dichloroethene	4.74	96	1	N.D.		
13) 1,1-Dichloroethane	4.96	63	31	N.D.		
14) Methyl tert-Butyl Ether	5.22	73	134	N.D.		
15) cis-1,2-Dichloroethene	5.91	96	6	N.D.		
16) Chloroform	6.32	83	894	N.D.		
18) 1,2-Dichloroethane	7.26	62	34	N.D.		
19) 1,1,1-Trichloroethane	7.59	97	11	N.D.		
20) Benzene	8.16	78	2590	26.289	pg	100
21) Carbon Tetrachloride	8.34	117	134	N.D.		
23) 1,2-Dichloropropane	9.14	63	2	N.D.		
24) Bromodichloromethane	9.40	83	10	N.D.		
25) Trichloroethene	9.46	130	13	N.D.		
26) 1,4-Dioxane	9.59	88	44	N.D.		
27) cis-1,3-Dichloropropene	10.47	75	21	N.D.		
28) trans-1,3-Dichloropropene	11.07	75	15	N.D.		
29) 1,1,2-Trichloroethane	11.19	83	2	N.D.		
31) Toluene	11.48	91	2528	22.167	pg	99
32) 1,2-Dibromoethane	12.13	107	7	N.D.		
33) Tetrachloroethene	12.61	166	58	N.D.		
35) Chlorobenzene	13.17	112	42	N.D.		
36) Ethylbenzene	13.48	91	262	N.D.		
37) m,p-Xylene	13.61	91	487	N.D.		
38) o-Xylene	13.94	106	85	N.D.		
39) 1,1,2,2-Tetrachloroethane	13.90	83	27	N.D.		
41) 1,3-Dichlorobenzene	15.19	146	22	N.D.		
42) 1,4-Dichlorobenzene	15.24	146	55	N.D.		
43) 1,2-Dichlorobenzene	15.46	146	22	N.D.		
44) 1,2,4-Trichlorobenzene	16.63	182	28	N.D.		
45) Naphthalene	16.70	128	640	N.D.		
46) Hexachlorobutadiene	16.95	225	5	N.D.		

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\16\02161511.D

Acq On : 16 Feb 2015 16:17

Operator: WA

Sample : MB X19021615_1000mL

Misc : S29-02041502

ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 17 06:51:44 2015

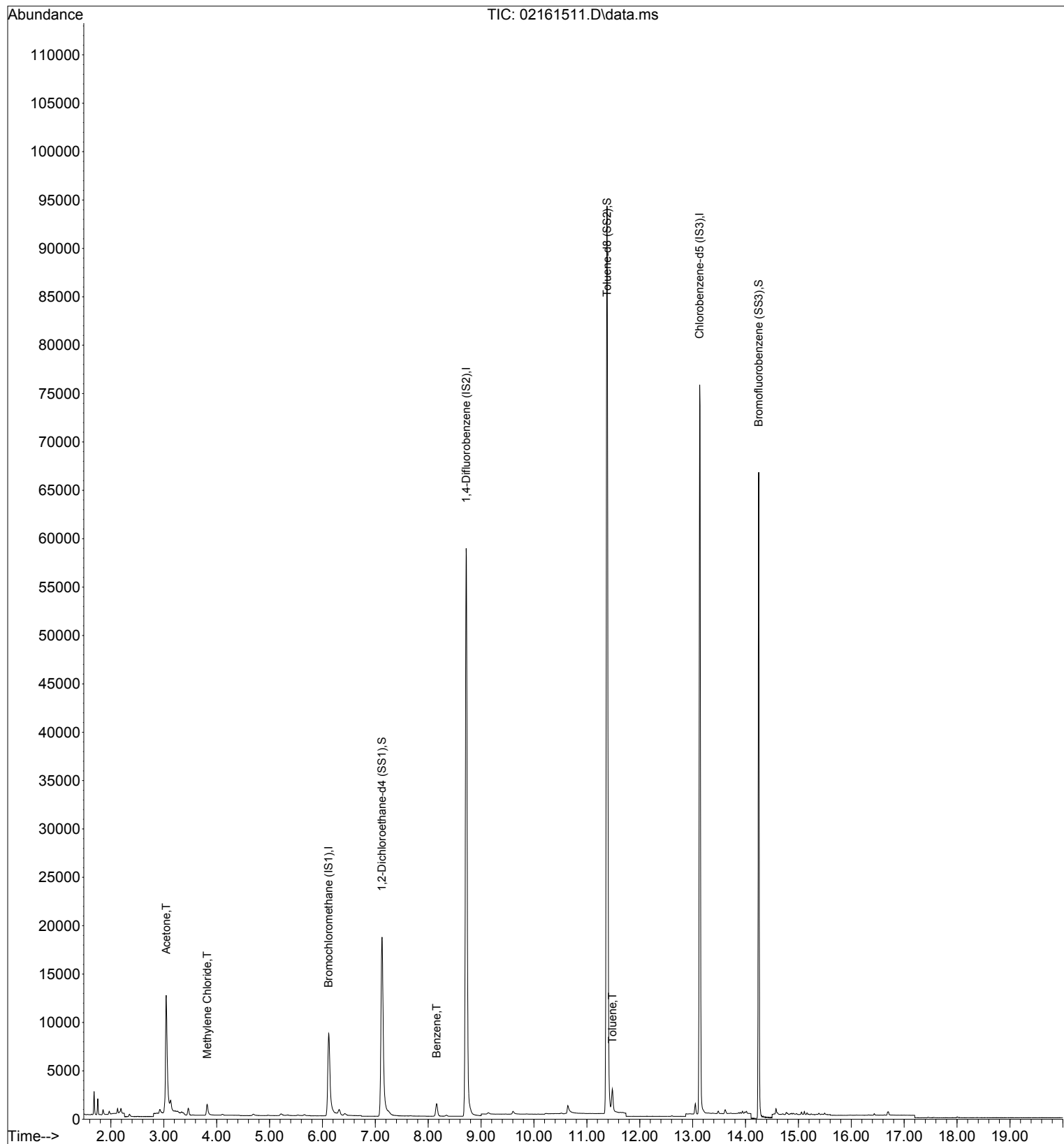
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 02\17\02171503.D

Acq On : 17 Feb 2015 3:11

Operator: WA

Sample : MB X19021715_1000ml

Misc : S29-02041502

ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 17 06:52:11 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

2/17/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.12	130	17796	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	134601	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.14	54	22802	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	42124	969.269	pg	0.00
Spiked Amount 1000.000			Recovery	=	96.93%	
30) Toluene-d8 (SS2)	11.38	98	127543	1027.521	pg	0.00
Spiked Amount 1000.000			Recovery	=	102.75%	
40) Bromofluorobenzene (SS3)	14.25	174	49111	1066.840	pg	0.00
Spiked Amount 1000.000			Recovery	=	106.68%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.75	85	1384	N.D.		
3) Chloromethane	1.86	52	211	N.D.		
4) Vinyl Chloride	2.04	62	15	N.D.		
5) Bromomethane	2.35	94	260	N.D.		
6) Chloroethane	2.50	64	31	N.D.		
7) Acetone	3.04	58	8640	338.306	pg	96
8) Trichlorofluoromethane	3.13	101	813	N.D.		
9) 1,1-Dichloroethene	3.68	96	4	N.D.		
10) Methylene Chloride	3.82	84	971	32.940	pg	92
11) Trichlorotrifluoroethane	4.11	151	125	N.D.		
12) trans-1,2-Dichloroethene	4.75	96	8	N.D.		
13) 1,1-Dichloroethane	4.98	63	23	N.D.		
14) Methyl tert-Butyl Ether	5.21	73	291	N.D.		
15) cis-1,2-Dichloroethene	5.92	96	7	N.D.		
16) Chloroform	6.31	83	572	N.D.		
18) 1,2-Dichloroethane	7.27	62	40	N.D.		
19) 1,1,1-Trichloroethane	7.59	97	12	N.D.		
20) Benzene	8.16	78	2217	N.D.		
21) Carbon Tetrachloride	8.35	117	138	N.D.		
23) 1,2-Dichloropropane	9.18	63	9	N.D.		
24) Bromodichloromethane	9.40	83	3	N.D.		
25) Trichloroethene	9.45	130	23	N.D.		
26) 1,4-Dioxane	9.52	88	3	N.D.		
27) cis-1,3-Dichloropropene	10.47	75	11	N.D.		
28) trans-1,3-Dichloropropene	11.06	75	10	N.D.		
29) 1,1,2-Trichloroethane	11.19	83	4	N.D.		
31) Toluene	11.48	91	2919	22.111	pg	99
32) 1,2-Dibromoethane	12.14	107	7	N.D.		
33) Tetrachloroethene	12.61	166	82	N.D.		
35) Chlorobenzene	13.17	112	73	N.D.		
36) Ethylbenzene	13.49	91	299	N.D.		
37) m,p-Xylene	13.62	91	582	N.D.		
38) o-Xylene	13.94	106	118	N.D.		
39) 1,1,2,2-Tetrachloroethane	13.90	83	27	N.D.		
41) 1,3-Dichlorobenzene	15.19	146	38	N.D.		
42) 1,4-Dichlorobenzene	15.24	146	78	N.D.		
43) 1,2-Dichlorobenzene	15.46	146	38	N.D.		
44) 1,2,4-Trichlorobenzene	16.63	182	50	N.D.		
45) Naphthalene	16.70	128	575	N.D.		
46) Hexachlorobutadiene	16.95	225	13	N.D.		

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\17\02171503.D

Acq On : 17 Feb 2015 3:11

Operator: WA

Sample : MB X19021715_1000ml

Misc : S29-02041502

ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 17 06:52:11 2015

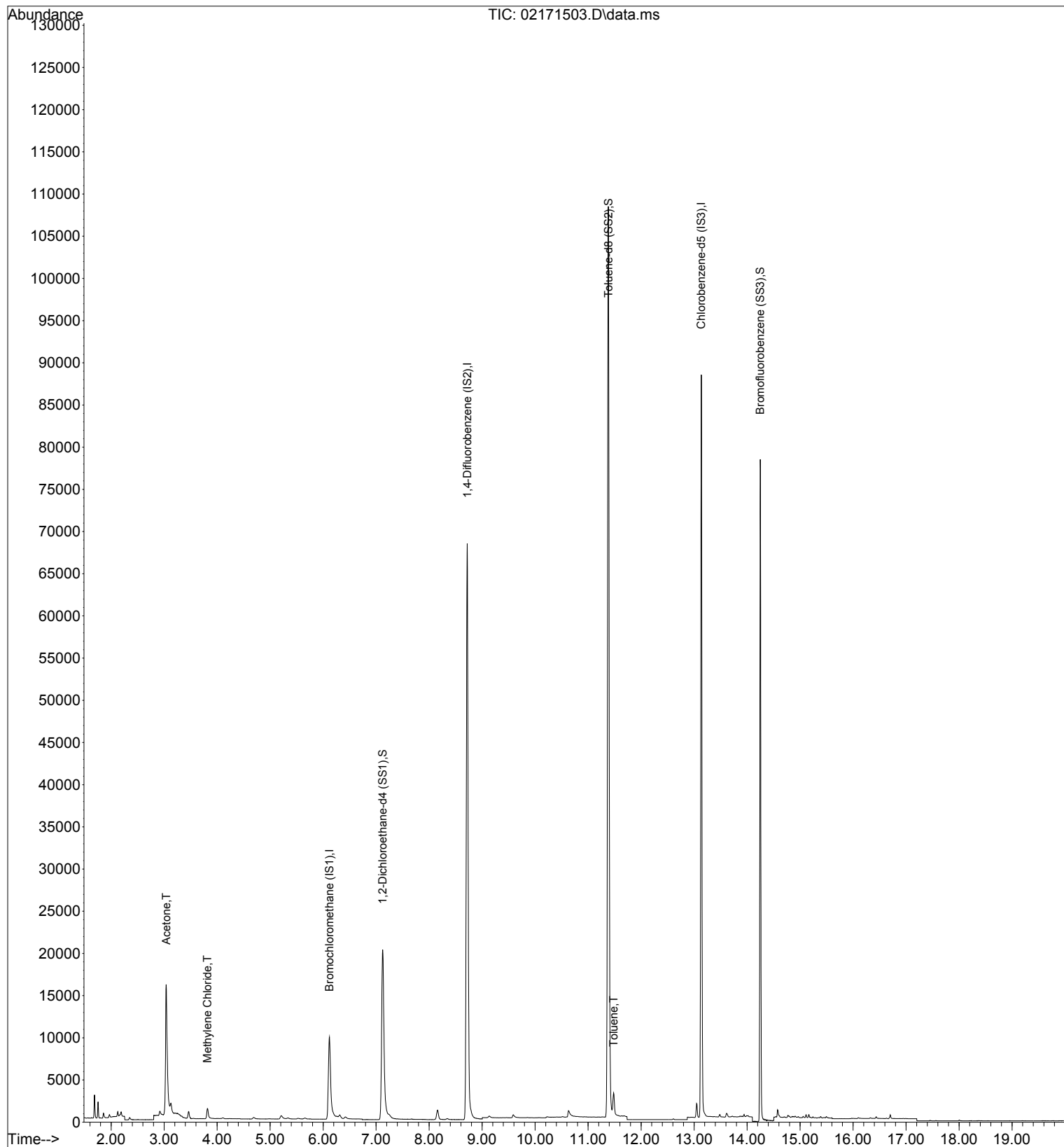
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 02\17\02171530.D

Acq On : 17 Feb 2015 19:39

Operator: WA

Sample : MB2 X19021715_1000ml

Misc : S29-02041502

ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 18 07:50:12 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

WA 2/18/15

DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.12	130	15497	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	115570	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	20470	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.13	65	37871	1000.683	pg	0.00
Spiked Amount	1000.000		Recovery	=	100.07%	
30) Toluene-d8 (SS2)	11.38	98	110300	1034.934	pg	0.00
Spiked Amount	1000.000		Recovery	=	103.49%	
40) Bromofluorobenzene (SS3)	14.25	174	41218	997.384	pg	0.00
Spiked Amount	1000.000		Recovery	=	99.74%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.75	85	979	15.545	pg	100
3) Chloromethane	1.85	52	173	13.755	pg	# 89
4) Vinyl Chloride	2.04	62	20	N.D.		
5) Bromomethane	2.35	94	168	5.932	pg	82
6) Chloroethane	2.47	64	2	N.D.		
7) Acetone	3.04	58	8504	382.378	pg	99
8) Trichlorofluoromethane	3.13	101	611	11.294	pg	98
9) 1,1-Dichloroethene	3.71	96	6	N.D.		
10) Methylene Chloride	3.82	84	834	32.490	pg	94
11) Trichlorotrifluoroethane	4.11	151	91	N.D.		
12) trans-1,2-Dichloroethene	4.73	96	5	N.D.		
13) 1,1-Dichloroethane	4.98	63	18	N.D.		
14) Methyl tert-Butyl Ether	5.22	73	200	N.D.		
15) cis-1,2-Dichloroethene	5.93	96	1	N.D.		
16) Chloroform	6.31	83	496	10.439	pg	97
18) 1,2-Dichloroethane	7.27	62	30	N.D.		
19) 1,1,1-Trichloroethane	7.59	97	14	N.D.		
20) Benzene	8.16	78	1807	18.491	pg	100
21) Carbon Tetrachloride	8.34	117	103	N.D.		
23) 1,2-Dichloropropane	9.15	63	2	N.D.		
24) Bromodichloromethane	9.40	83	4	N.D.		
25) Trichloroethene	9.46	130	12	N.D.		
26) 1,4-Dioxane	9.51	88	1	N.D.		
27) cis-1,3-Dichloropropene	10.47	75	10	N.D.		
28) trans-1,3-Dichloropropene	11.06	75	10	N.D.		
29) 1,1,2-Trichloroethane	11.20	83	8	N.D.		
31) Toluene	11.48	91	2193	19.347	pg	99
32) 1,2-Dibromoethane	12.13	107	9	N.D.		
33) Tetrachloroethene	12.61	166	73	N.D.		
35) Chlorobenzene	13.16	112	65	N.D.		
36) Ethylbenzene	13.48	91	213	N.D.		
37) m,p-Xylene	13.61	91	423	N.D.		
38) o-Xylene	13.94	106	83	N.D.		
39) 1,1,2,2-Tetrachloroethane	13.94	83	6	N.D.		
41) 1,3-Dichlorobenzene	15.20	146	33	N.D.		
42) 1,4-Dichlorobenzene	15.25	146	64	N.D.		
43) 1,2-Dichlorobenzene	15.46	146	32	N.D.		
44) 1,2,4-Trichlorobenzene	16.63	182	45	N.D.		
45) Naphthalene	16.70	128	468	N.D.		
46) Hexachlorobutadiene	16.95	225	6	N.D.		

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\17\02171530.D

Acq On : 17 Feb 2015 19:39

Operator: WA

Sample : MB2 X19021715_1000ml

Misc : S29-02041502

ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 18 07:50:12 2015

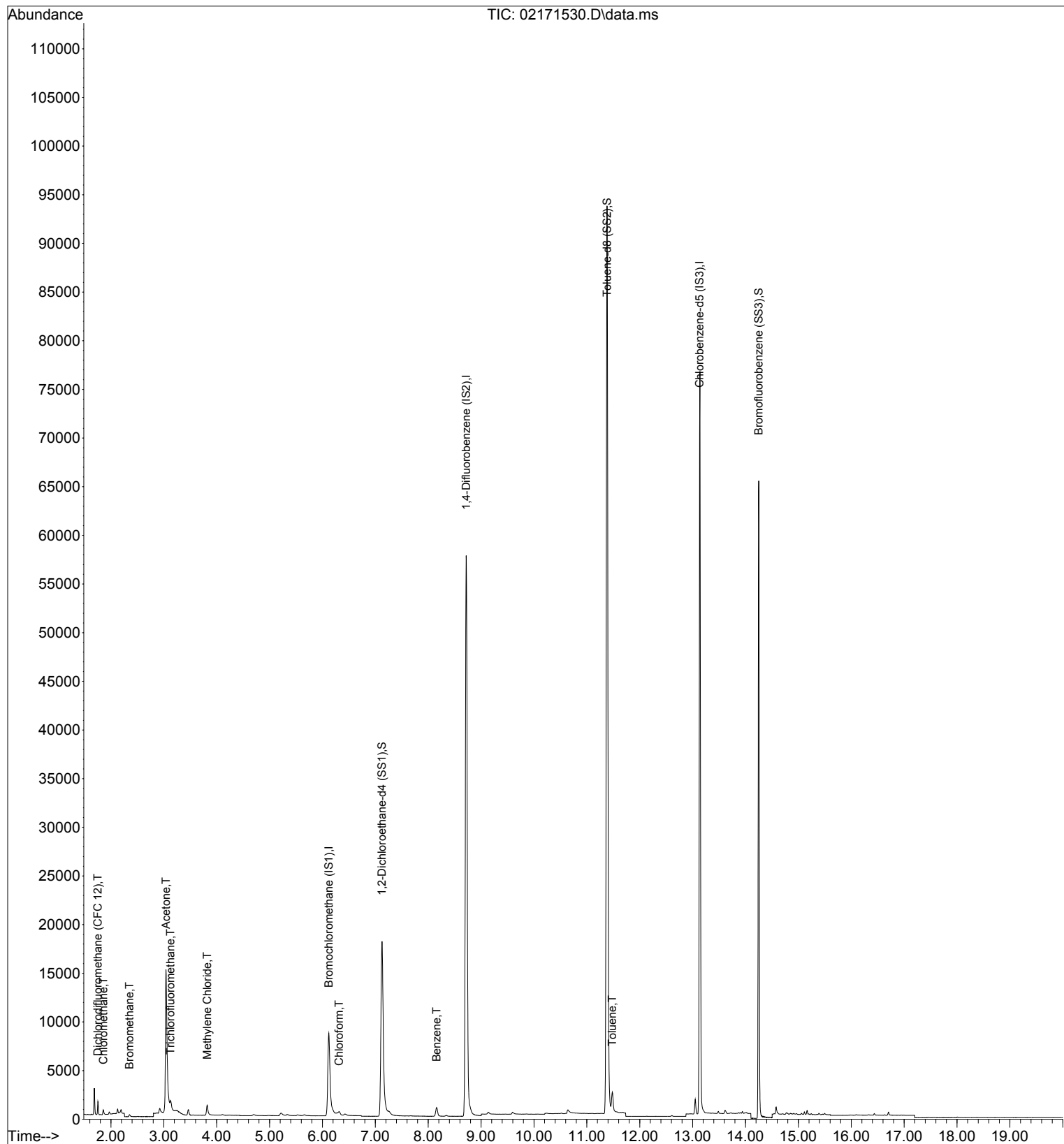
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 02\17\02171530.D

Acq On : 17 Feb 2015 19:39

Operator: WA

Sample : MB2 X19021715_1000ml

Misc : S29-02041502

ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 18 11:04:04 2015

Quant Method : I:\MS19\METHODS\A19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Mon Feb 16 11:36:24 2015

~~107~~ 2/18/15

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.12	130	15122	1000.000	pg	-0.05
5) 1,4-Difluorobenzene (IS2)	8.72	114	115291	1000.000	pg	-0.03
7) Chlorobenzene-d5 (IS3)	13.13	54	20423	1000.000	pg	0.00

System Monitoring Compounds

4) 1,2-Dichloroethane-d4 ...	7.13	65	38222	1050.954	pg	-0.05
Spiked Amount 1000.000			Recovery	=	105.10%	
6) Toluene-d8 (SS2)	11.38	98	110504	1036.340	pg	-0.01
Spiked Amount 1000.000			Recovery	=	103.63%	
10) Bromofluorobenzene (SS3)	14.25	174	41218	990.800	pg	0.00
Spiked Amount 1000.000			Recovery	=	99.08%	

Target Compounds

					Qvalue
2) 1,3-Butadiene	2.13	54	30	N.D.	
3) Acrolein	2.93	56	684m	52.648	pg
8) Dibromochloromethane	11.88	129	8	N.D.	
9) Styrene	13.87	104	91	N.D.	
11) 1,3,5-Trimethylbenzene	14.85	105	62	N.D.	
12) 1,2,4-Trimethylbenzene	15.11	105	191	N.D.	
13) 1,2-Dibromo-3-chloropr...	15.75	157	8	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File: I:\MS19\DATA\2015 02\17\02171530.D

Acq On : 17 Feb 2015 19:39

Operator: WA

Sample : MB2 X19021715_1000ml

Misc : S29-02041502

ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 18 11:04:04 2015

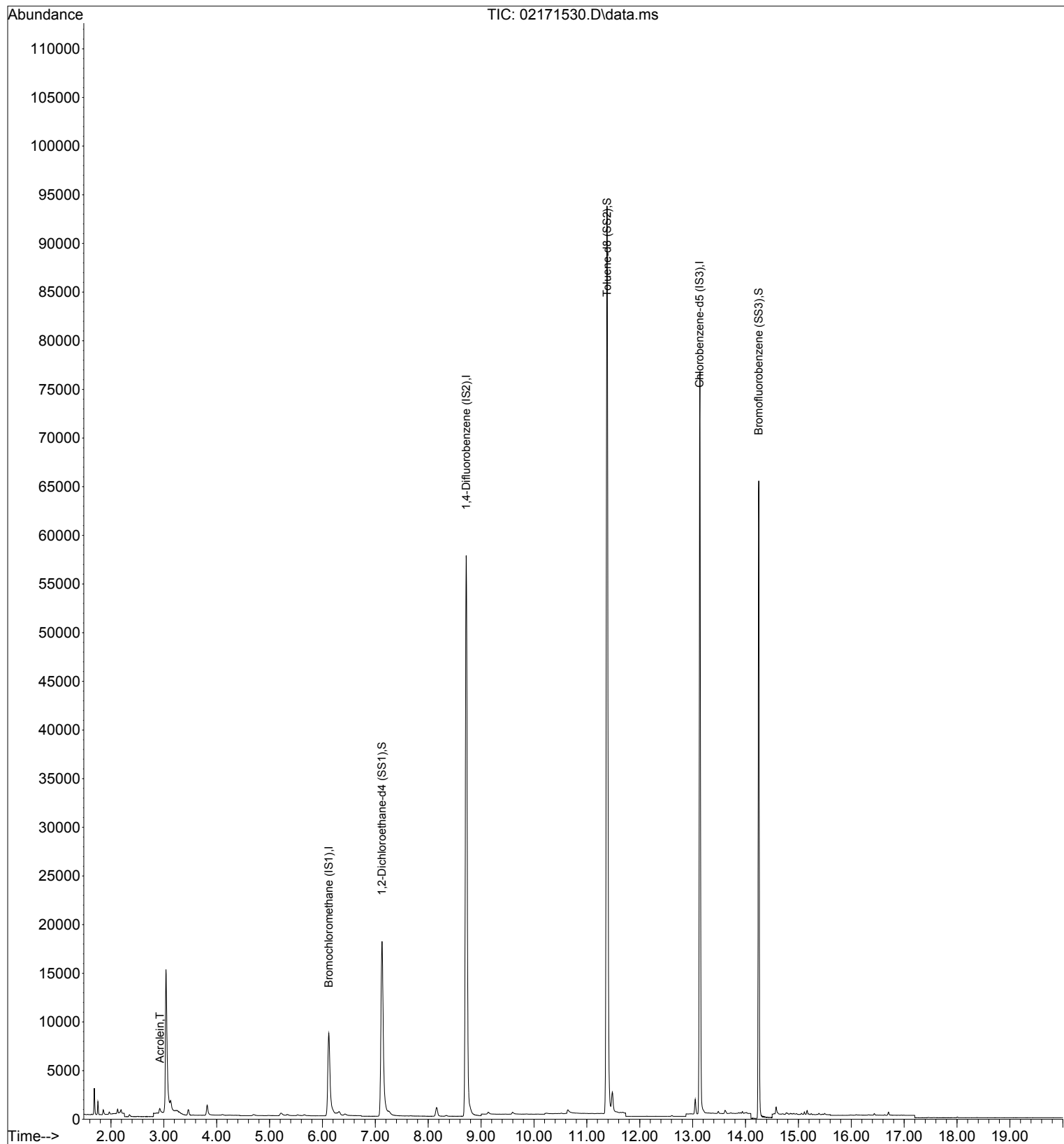
Quant Method : I:\MS19\METHODS\A19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Mon Feb 16 11:36:24 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 02\17\02171530.D

Acq On : 17 Feb 2015 19:39

Operator: WA

Sample : MB2 X19021715_1000ml

Misc : S29-02041502

ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 18 10:59:33 2015

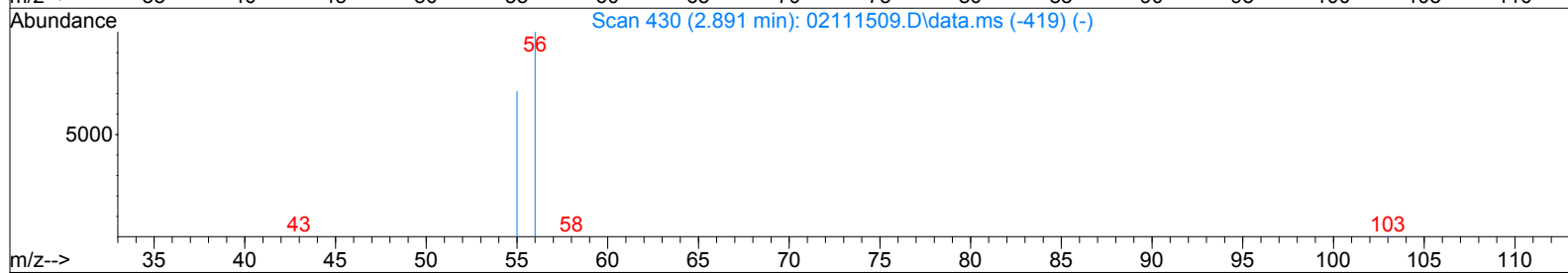
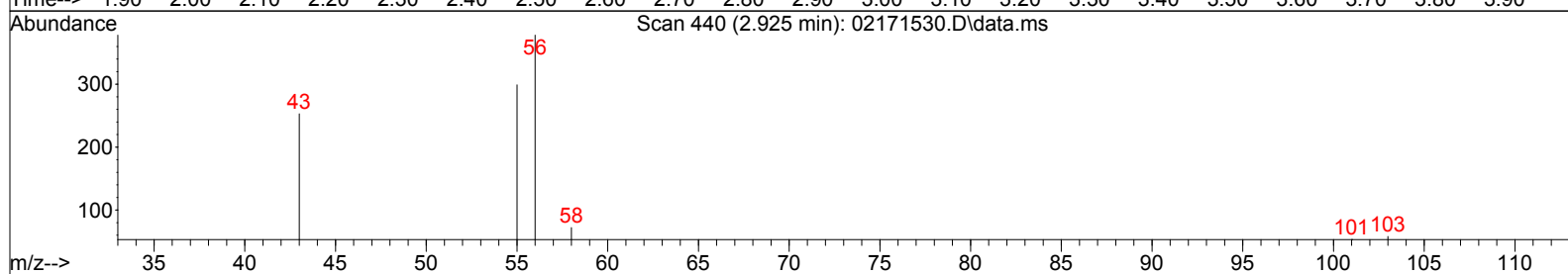
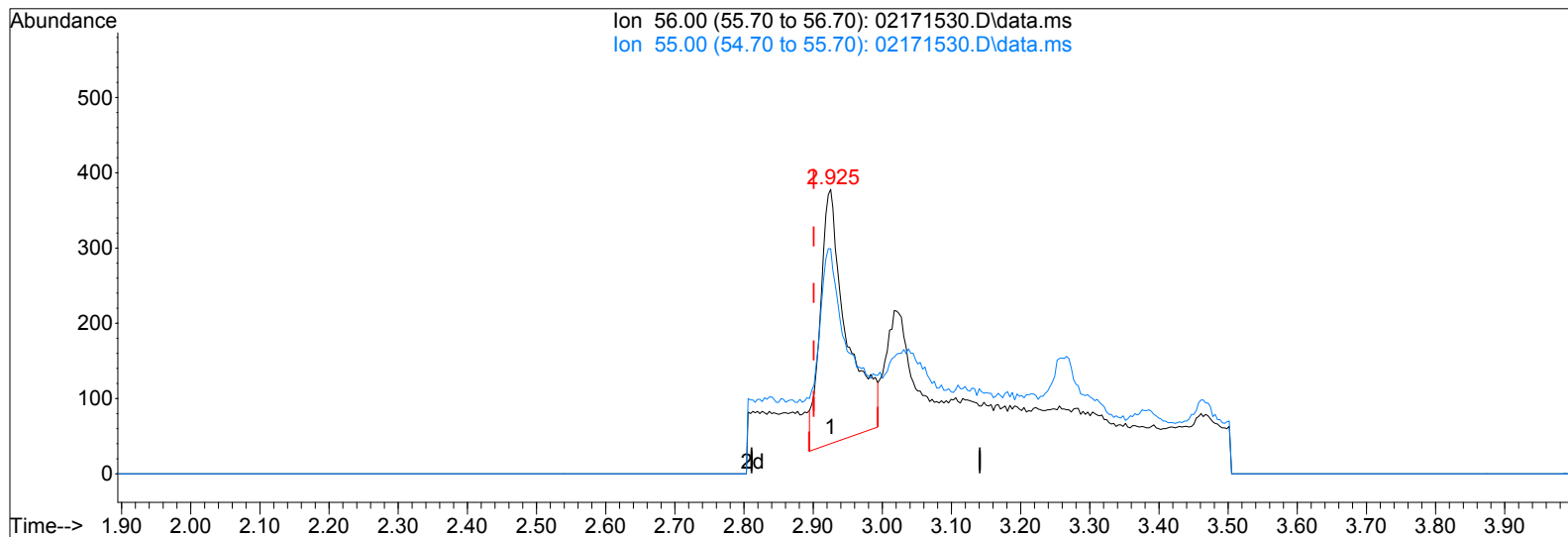
Quant Method : I:\MS19\METHODS\A19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Mon Feb 16 11:36:24 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



TIC: 02171530.D\data.ms

(3) Acrolein (T)

2.925min (+0.024) 68.35pg

response 888

Ion	Exp%	Act%
56.00	100	100
55.00	70.20	51.24#
0.00	0.00	0.00
0.00	0.00	0.00

Data File: I:\MS19\DATA\2015 02\17\02171530.D

Acq On : 17 Feb 2015 19:39

Operator: WA

Sample : MB2 X19021715_1000ml

Misc : S29-02041502

ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 18 10:59:33 2015

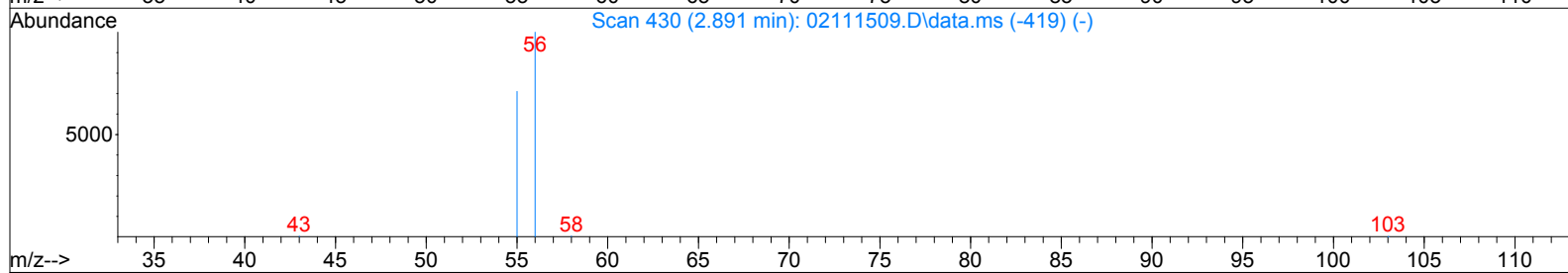
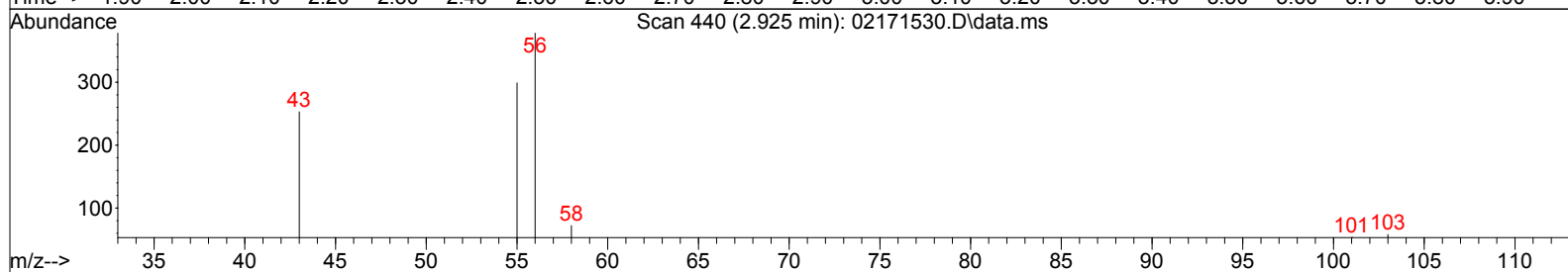
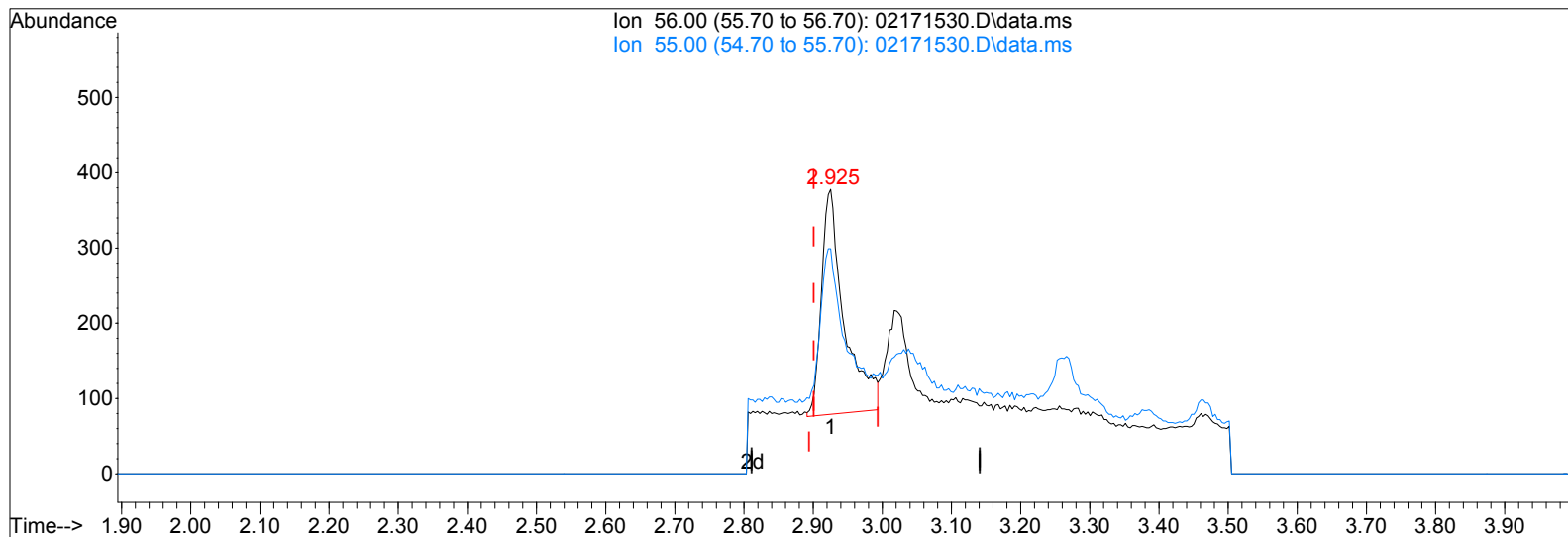
Quant Method : I:\MS19\METHODS\A19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Mon Feb 16 11:36:24 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



TIC: 02171530.D\data.ms

(3) Acrolein (T)

2.925min (+0.024) 52.65pg m

response 684

Ion	Exp%	Act%
56.00	100	100
55.00	70.20	66.52
0.00	0.00	0.00
0.00	0.00	0.00

BLC

107 2/18/15

Data File: I:\MS19\DATA\2015 02\16\02161514.D

Acq On : 16 Feb 2015 17:59

Operator: WA

Sample : LCS X19021615 500pg

Misc : S29-02041502/S29-01291510 (2/27)

ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 17 06:51:47 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

2/17/15

DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	15669	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	116292	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	21083	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	40135	1048.864	pg	0.00
Spiked Amount 1000.000			Recovery	=	104.89%	
30) Toluene-d8 (SS2)	11.38	98	109526	1021.291	pg	0.00
Spiked Amount 1000.000			Recovery	=	102.13%	
40) Bromofluorobenzene (SS3)	14.25	174	43391	1019.437	pg	0.00
Spiked Amount 1000.000			Recovery	=	101.94%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.74	85	33978	533.582	pg	100
3) Chloromethane	1.85	52	6779	533.071	pg	99
4) Vinyl Chloride	2.02	62	25763	520.227	pg	100
5) Bromomethane	2.33	94	15408	538.096	pg	100
6) Chloroethane	2.48	64	12973	538.518	pg	99
7) Acetone	3.00	58	64820	2882.608	pg	97
8) Trichlorofluoromethane	3.11	101	28742	525.470	pg	100
9) 1,1-Dichloroethene	3.67	96	13523	553.823	pg	99
10) Methylene Chloride	3.80	84	14454	556.901	pg	99
11) Trichlorotrifluoroethane	4.10	151	12992	516.916	pg	100
12) trans-1,2-Dichloroethene	4.74	96	13862	555.914	pg	100
13) 1,1-Dichloroethane	4.95	63	25176	562.436	pg	100
14) Methyl tert-Butyl Ether	5.09	73	41767	526.405	pg	100
15) cis-1,2-Dichloroethene	5.93	96	14895	537.184	pg	100
16) Chloroform	6.31	83	27236	566.937	pg	100
18) 1,2-Dichloroethane	7.26	62	20953	547.776	pg	99
19) 1,1,1-Trichloroethane	7.59	97	23912	511.848	pg	100
20) Benzene	8.15	78	57490	581.831	pg	100
21) Carbon Tetrachloride	8.34	117	18994	543.077	pg	100
23) 1,2-Dichloropropane	9.16	63	14010	552.372	pg	100
24) Bromodichloromethane	9.39	83	19941	544.681	pg	100
25) Trichloroethene	9.46	130	15388	515.060	pg	98
26) 1,4-Dioxane	9.50	88	11183	502.240	pg	99
27) cis-1,3-Dichloropropene	10.46	75	20082	582.218	pg	99
28) trans-1,3-Dichloropropene	11.05	75	15230	545.335	pg	100
29) 1,1,2-Trichloroethane	11.19	83	11990	549.432	pg	99
31) Toluene	11.48	91	57206	501.548	pg	100
32) 1,2-Dibromoethane	12.12	107	15262	551.226	pg	100
33) Tetrachloroethene	12.61	166	16088	455.541	pg	100
35) Chlorobenzene	13.17	112	39150	502.115	pg	100
36) Ethylbenzene	13.48	91	65691	496.875	pg	100
37) m,p-Xylene	13.62	91	107735	991.486	pg	100
38) o-Xylene	13.94	106	25591	481.899	pg	100
39) 1,1,2,2-Tetrachloroethane	13.93	83	25661	490.949	pg	99
41) 1,3-Dichlorobenzene	15.19	146	34452	508.528	pg	100
42) 1,4-Dichlorobenzene	15.24	146	35500	487.258	pg	99
43) 1,2-Dichlorobenzene	15.46	146	33869	518.725	pg	99
44) 1,2,4-Trichlorobenzene	16.63	182	21609	538.781	pg	100
45) Naphthalene	16.70	128	71825	544.467	pg	100
46) Hexachlorobutadiene	16.96	225	14293	534.244	pg	100

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\16\02161514.D

Acq On : 16 Feb 2015 17:59

Operator: WA

Sample : LCS X19021615 500pg

Misc : S29-02041502/S29-01291510 (2/27)

ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 17 06:51:47 2015

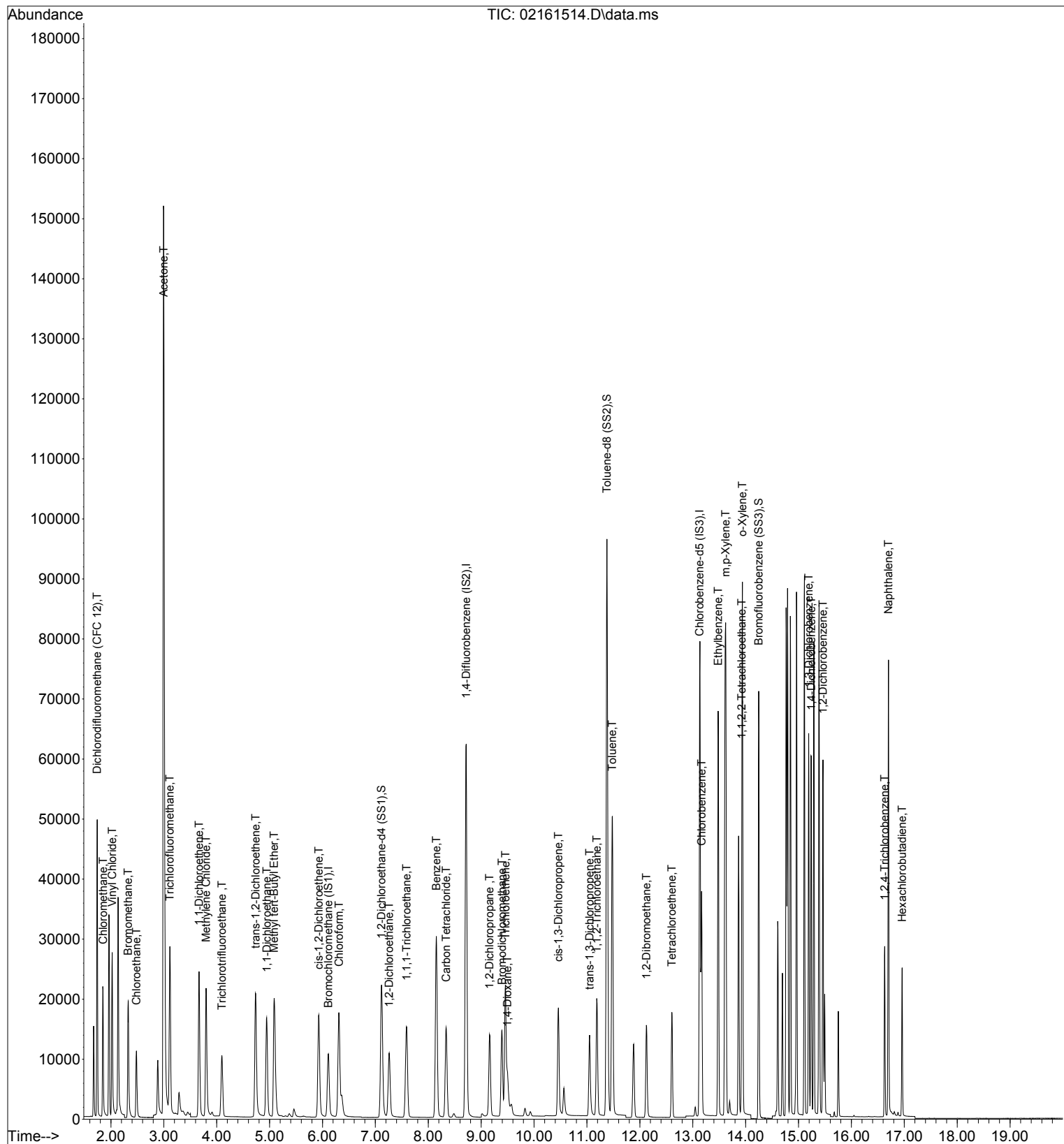
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 02\17\02171504.D

Acq On : 17 Feb 2015 3:38

Operator: WA

Sample : LCS X19021715 500pg

Misc : S29-02041502/S29-01291510 (2/27)

ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 17 06:52:12 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

WA 2/17/15

DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	19044	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.71	114	138990	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	23271	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	44699	961.118	pg	0.00
Spiked Amount 1000.000			Recovery	=	96.11%	
30) Toluene-d8 (SS2)	11.38	98	128817	1005.013	pg	0.00
Spiked Amount 1000.000			Recovery	=	100.50%	
40) Bromofluorobenzene (SS3)	14.25	174	51221	1090.250	pg	0.00
Spiked Amount 1000.000			Recovery	=	109.02%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.74	85	37544	485.095	pg	100
3) Chloromethane	1.85	52	7417	479.878	pg	100
4) Vinyl Chloride	2.02	62	27683	459.931	pg	100
5) Bromomethane	2.33	94	16372	470.434	pg	100
6) Chloroethane	2.48	64	13746	469.482	pg	99
7) Acetone	2.99	58	68742	2515.254	pg	97
8) Trichlorofluoromethane	3.11	101	31889	479.684	pg	100
9) 1,1-Dichloroethene	3.67	96	15829	533.377	pg	96
10) Methylene Chloride	3.80	84	16683	528.868	pg	94
11) Trichlorotrifluoroethane	4.10	151	15403	504.234	pg	100
12) trans-1,2-Dichloroethene	4.73	96	16345	539.324	pg	100
13) 1,1-Dichloroethane	4.94	63	28336	520.845	pg	100
14) Methyl tert-Butyl Ether	5.09	73	48739	505.413	pg	99
15) cis-1,2-Dichloroethene	5.93	96	17501	519.312	pg	100
16) Chloroform	6.31	83	31011	531.117	pg	100
18) 1,2-Dichloroethane	7.26	62	23142	497.784	pg	100
19) 1,1,1-Trichloroethane	7.59	97	27866	490.775	pg	100
20) Benzene	8.15	78	67655	563.362	pg	100
21) Carbon Tetrachloride	8.34	117	22767	535.592	pg	99
23) 1,2-Dichloropropane	9.16	63	15811	521.578	pg	99
24) Bromodichloromethane	9.39	83	22812	521.345	pg	100
25) Trichloroethene	9.46	130	18195	509.559	pg	99
26) 1,4-Dioxane	9.50	88	13161	494.548	pg	96
27) cis-1,3-Dichloropropene	10.46	75	23345	566.290	pg	97
28) trans-1,3-Dichloropropene	11.05	75	17977	538.576	pg	100
29) 1,1,2-Trichloroethane	11.19	83	13717	525.921	pg	98
31) Toluene	11.48	91	65559	480.916	pg	99
32) 1,2-Dibromoethane	12.13	107	17826	538.690	pg	100
33) Tetrachloroethene	12.61	166	18696	442.935	pg	100
35) Chlorobenzene	13.17	112	45376	527.248	pg	100
36) Ethylbenzene	13.48	91	75427	516.875	pg	99
37) m,p-Xylene	13.62	91	122349	1020.111	pg	99
38) o-Xylene	13.94	106	29161	497.495	pg	99
39) 1,1,2,2-Tetrachloroethane	13.93	83	28753	498.383	pg	99
41) 1,3-Dichlorobenzene	15.19	146	38711	517.669	pg	100
42) 1,4-Dichlorobenzene	15.24	146	39440	490.439	pg	99
43) 1,2-Dichlorobenzene	15.46	146	37644	522.333	pg	100
44) 1,2,4-Trichlorobenzene	16.63	182	24671	557.290	pg	99
45) Naphthalene	16.70	128	82426	566.079	pg	100
46) Hexachlorobutadiene	16.96	225	16145	546.728	pg	100

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\17\02171504.D

Acq On : 17 Feb 2015 3:38

Operator: WA

Sample : LCS X19021715 500pg

Misc : S29-02041502/S29-01291510 (2/27)

ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 17 06:52:12 2015

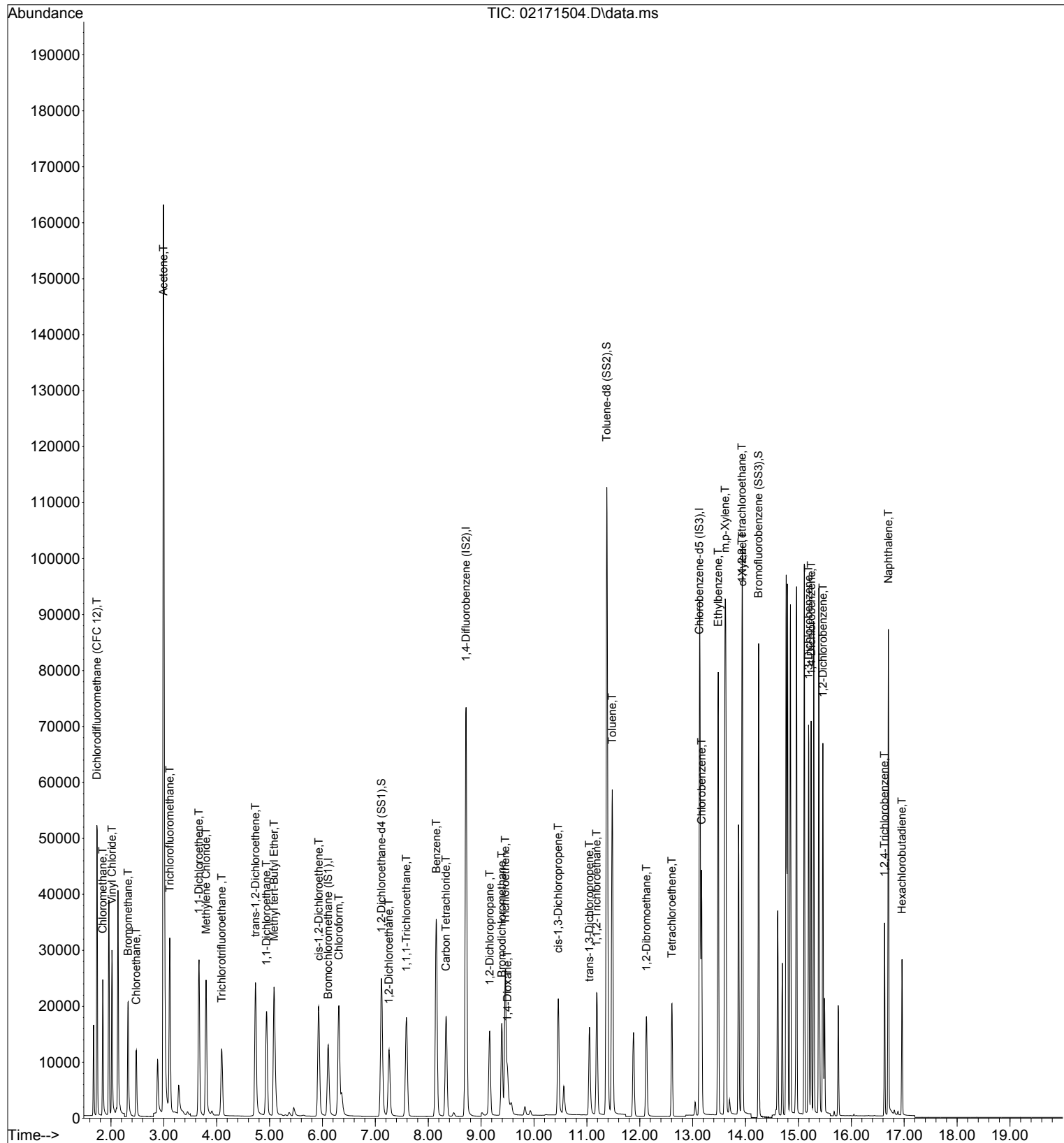
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 02\17\02171531.D

Acq On : 17 Feb 2015 20:06

Operator: WA

Sample : LCS2 X19021715 500pg

Misc : S29-02041502/S29-01291510 (2/27)

ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 18 07:50:14 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

2/18/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	16708	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	122602	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	21713	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	41281	1011.726	pg	0.00
Spiked Amount 1000.000			Recovery	=	101.17%	
30) Toluene-d8 (SS2)	11.38	98	114782	1015.216	pg	0.00
Spiked Amount 1000.000			Recovery	=	101.52%	
40) Bromofluorobenzene (SS3)	14.25	174	45684	1042.168	pg	0.00
Spiked Amount 1000.000			Recovery	=	104.22%	

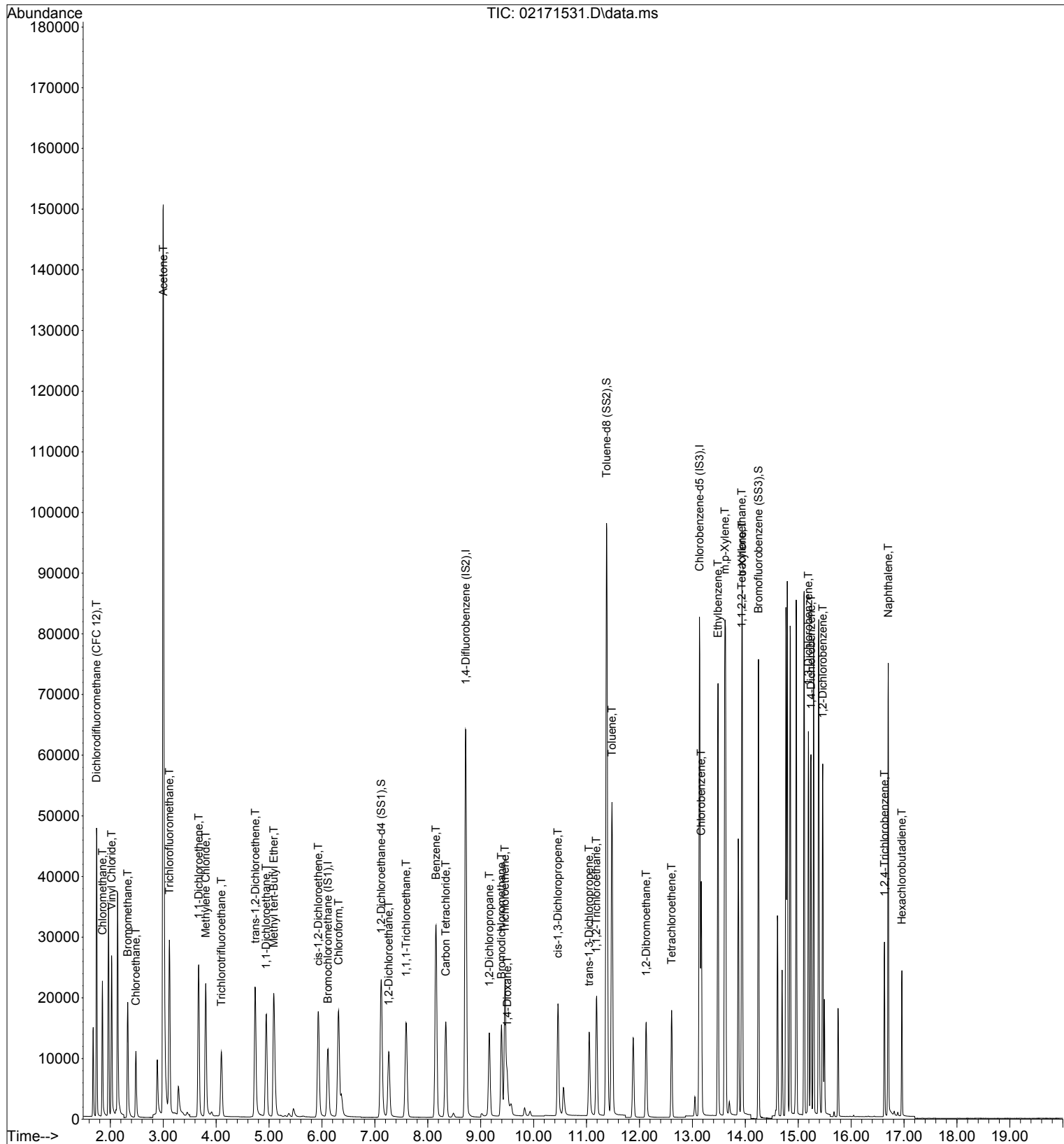
Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.74	85	34174	503.287	pg	100
3) Chloromethane	1.85	52	6862	506.042	pg	99
4) Vinyl Chloride	2.02	62	25478	482.479	pg	100
5) Bromomethane	2.33	94	15248	499.394	pg	100
6) Chloroethane	2.48	64	12781	497.555	pg	100
7) Acetone	3.00	58	64655	2696.469	pg	98
8) Trichlorofluoromethane	3.12	101	29494	505.687	pg	100
9) 1,1-Dichloroethene	3.67	96	14187	544.885	pg	97
10) Methylene Chloride	3.80	84	15041	543.480	pg	96
11) Trichlorotrifluoroethane	4.10	151	13609	507.793	pg	100
12) trans-1,2-Dichloroethene	4.74	96	14506	545.565	pg	100
13) 1,1-Dichloroethane	4.94	63	25921	543.069	pg	100
14) Methyl tert-Butyl Ether	5.09	73	42912	507.203	pg	100
15) cis-1,2-Dichloroethene	5.93	96	15547	525.830	pg	100
16) Chloroform	6.31	83	27863	543.921	pg	100
18) 1,2-Dichloroethane	7.26	62	21184	519.375	pg	100
19) 1,1,1-Trichloroethane	7.59	97	24649	494.813	pg	100
20) Benzene	8.16	78	61610	584.753	pg	100
21) Carbon Tetrachloride	8.34	117	20091	538.721	pg	100
23) 1,2-Dichloropropane	9.16	63	14303	534.900	pg	99
24) Bromodichloromethane	9.39	83	20613	534.058	pg	100
25) Trichloroethene	9.46	130	15603	495.378	pg	100
26) 1,4-Dioxane	9.50	88	11547	491.897	pg	98
27) cis-1,3-Dichloropropene	10.46	75	20694	569.083	pg	98
28) trans-1,3-Dichloropropene	11.05	75	15825	537.477	pg	100
29) 1,1,2-Trichloroethane	11.19	83	12273	533.455	pg	99
31) Toluene	11.48	91	58373	485.440	pg	100
32) 1,2-Dibromoethane	12.13	107	15699	537.827	pg	100
33) Tetrachloroethene	12.61	166	16254	436.554	pg	99
35) Chlorobenzene	13.17	112	39895	496.824	pg	100
36) Ethylbenzene	13.48	91	67177	493.372	pg	100
37) m,p-Xylene	13.61	91	108850	972.682	pg	100
38) o-Xylene	13.94	106	25898	473.530	pg	99
39) 1,1,2,2-Tetrachloroethane	13.93	83	25891	480.977	pg	100
41) 1,3-Dichlorobenzene	15.19	146	34032	487.754	pg	100
42) 1,4-Dichlorobenzene	15.24	146	34841	464.337	pg	100
43) 1,2-Dichlorobenzene	15.46	146	33324	495.569	pg	99
44) 1,2,4-Trichlorobenzene	16.63	182	21552	521.768	pg	100
45) Naphthalene	16.70	128	72193	531.378	pg	100
46) Hexachlorobutadiene	16.96	225	14051	509.960	pg	99

(#)=qualifier out of range (m)=manual integration (+)=signals summed

ALS Vial : 3 Sample Multiplier: 1

DataAcq Meth:T015SIM.M



TO-15/SIM LCS Recovery Summary - MS19

Data File Name: 02171531.D
 Data File Path: I:\MS19\DATA\2015_02\17\
 Operator: WA
 Instrument Name: MS19
 Sample Name: LCS2 X19021715_500pg
 Misc Info: S29-02041502/S29-01291510 (2/27)
 Date Acquired: 2/17/2015 20:06
 Acq. Method File: TO15SIM.M

#	Compound Name	Ret. Time	Amount Spiked (pg)	Amount Found (pg)	Percent Recovery	Lower Limit	Upper Limit	Flag
2)	Dichlorodifluoromethane (CFC 12)	1.74	510.0	503.3	98.7	63	120	*
3)	Chloromethane	1.85	495.0	506.0	102.2	60	118	*
4)	Vinyl Chloride	2.02	505.0	482.5	95.5	63	120	*
5)	Bromomethane	2.33	505.0	499.4	98.9	65	118	*
6)	Chloroethane	2.48	505.0	497.6	98.5	63	118	*
7)	Acetone	3.00	2700.0	2696.5	99.9	62	136	*
8)	Trichlorofluoromethane	3.12	495.0	505.7	102.2	59	116	*
9)	1,1-Dichloroethene	3.67	535.0	544.9	101.8	67	114	*
10)	Methylene Chloride	3.80	540.0	543.5	100.6	66	111	*
11)	Trichlorotrifluoroethane	4.10	540.0	507.8	94.0	68	114	*
12)	trans-1,2-Dichloroethene	4.74	530.0	545.6	102.9	66	115	*
13)	1,1-Dichloroethane	4.94	520.0	543.1	104.4	65	117	*
14)	Methyl tert-Butyl Ether	5.09	530.0	507.2	95.7	64	114	*
15)	cis-1,2-Dichloroethene	5.93	535.0	525.8	98.3	66	116	*
16)	Chloroform	6.31	540.0	543.9	100.7	63	114	*
18)	1,2-Dichloroethane	7.26	525.0	519.4	98.9	61	118	*
19)	1,1,1-Trichloroethane	7.59	520.0	494.8	95.2	65	114	*
20)	Benzene	8.16	550.0	584.8	106.3	67	118	*
21)	Carbon Tetrachloride	8.34	535.0	538.7	100.7	65	117	*
23)	1,2-Dichloropropane	9.16	530.0	534.9	100.9	63	116	*
24)	Bromodichloromethane	9.39	540.0	534.1	98.9	62	118	*
25)	Trichloroethene	9.46	520.0	495.4	95.3	66	116	*
26)	1,4-Dioxane	9.50	545.0	491.9	90.3	62	117	*
27)	cis-1,3-Dichloropropene	10.46	565.0	569.1	100.7	63	117	*
28)	trans-1,3-Dichloropropene	11.05	540.0	537.5	99.5	61	119	*
29)	1,1,2-Trichloroethane	11.19	530.0	533.5	100.7	64	117	*
31)	Toluene	11.48	530.0	485.4	91.6	66	113	*
32)	1,2-Dibromoethane	12.13	540.0	537.8	99.6	64	116	*
33)	Tetrachloroethene	12.61	495.0	436.6	88.2	65	118	*
35)	Chlorobenzene	13.17	540.0	496.8	92.0	67	126	*
36)	Ethylbenzene	13.48	530.0	493.4	93.1	67	124	*
37)	m,p-Xylene	13.61	1050.0	972.7	92.6	66	128	*
38)	o-Xylene	13.94	515.0	473.5	91.9	65	127	*
39)	1,1,2,2-Tetrachloroethane	13.93	505.0	481.0	95.2	62	129	*
41)	1,3-Dichlorobenzene	15.19	545.0	487.8	89.5	62	131	*
42)	1,4-Dichlorobenzene	15.24	530.0	464.3	87.6	59	126	*
43)	1,2-Dichlorobenzene	15.46	535.0	495.6	92.6	59	131	*
44)	1,2,4-Trichlorobenzene	16.63	525.0	521.8	99.4	43	137	*
45)	Naphthalene	16.70	490.0	531.4	108.4	40	142	*
46)	Hexachlorobutadiene	16.96	535.0	510.0	95.3	49	133	*

Acetone limits 70 - 130 as advisory limits

2/18/15

Data File: I:\MS19\DATA\2015 02\16\02161520.D

Acq On : 16 Feb 2015 20:45
 Sample : P1500566-002 dup (1000mL)
 Misc : S29-02041502
 ALS Vial : 3 Sample Multiplier: 1

Operator: WA

Quant Time: Feb 17 09:59:42 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

WA 2/17/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	19836	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.71	114	143033	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	26287	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	44681	922.372	pg	0.00
Spiked Amount 1000.000			Recovery	=	92.24%	
30) Toluene-d8 (SS2)	11.38	98	134264	1017.901	pg	0.00
Spiked Amount 1000.000			Recovery	=	101.79%	
40) Bromofluorobenzene (SS3)	14.25	174	58373	1099.928	pg	0.00
Spiked Amount 1000.000			Recovery	=	109.99%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.72	85	148371	1840.516	pg	100
3) Chloromethane	1.84	52	8073	501.466	pg	93
4) Vinyl Chloride	0.00	62	0	N.D.		
5) Bromomethane	2.32	94	2761	76.167	pg	94
6) Chloroethane	0.00	64	0	N.D.	d	
7) Acetone	2.99	58	201521	7079.197	pg	# 57
8) Trichlorofluoromethane	3.10	101	128527	1856.148	pg	99
9) 1,1-Dichloroethene	3.66	96	374	N.D.		
10) Methylene Chloride	3.79	84	16452	500.721	pg	92
11) Trichlorotrifluoroethane	4.09	151	13166	413.795	pg	100
12) trans-1,2-Dichloroethene	4.73	96	1221	38.680	pg	95
13) 1,1-Dichloroethane	4.95	63	342	N.D.		
14) Methyl tert-Butyl Ether	5.11	73	795	N.D.		
15) cis-1,2-Dichloroethene	5.93	96	1029	29.315	pg	91
16) Chloroform	6.31	83	13040	214.415	pg	100
18) 1,2-Dichloroethane	7.26	62	3553	73.373	pg	91
19) 1,1,1-Trichloroethane	7.59	97	3093	52.299	pg	97
20) Benzene	8.15	78	65572	524.216	pg	99
21) Carbon Tetrachloride	8.34	117	18456	416.841	pg	99
23) 1,2-Dichloropropane	9.16	63	1144	36.672	pg	95
24) Bromodichloromethane	0.00	83	0	N.D.	d	
25) Trichloroethene	9.46	130	5159	140.396	pg	98
26) 1,4-Dioxane	9.52	88	482	N.D.		
27) cis-1,3-Dichloropropene	10.46	75	21	N.D.		
28) trans-1,3-Dichloropropene	11.05	75	51	N.D.		
29) 1,1,2-Trichloroethane	11.20	83	132	N.D.		
31) Toluene	11.48	91	500480	3567.560	pg	99
32) 1,2-Dibromoethane	12.12	107	34	N.D.		
33) Tetrachloroethene	12.61	166	3768	86.746	pg	99
35) Chlorobenzene	13.16	112	1239	N.D.		
36) Ethylbenzene	13.48	91	69746	423.109	pg	98
37) m,p-Xylene	13.61	91	159724	1178.939	pg	97
38) o-Xylene	13.94	106	24896	376.002	pg	98
39) 1,1,2,2-Tetrachloroethane	13.89	83	665	N.D.		
41) 1,3-Dichlorobenzene	0.00	146	0	N.D.	d	
42) 1,4-Dichlorobenzene	15.24	146	2878	31.682	pg	99
43) 1,2-Dichlorobenzene	15.46	146	180	N.D.		
44) 1,2,4-Trichlorobenzene	16.63	182	71	N.D.		
45) Naphthalene	16.70	128	17263	104.955	pg	98
46) Hexachlorobutadiene	16.96	225	34	N.D.		

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\16\02161520.D

Acq On : 16 Feb 2015 20:45

Operator: WA

Sample : P1500566-002 dup (1000mL)

Misc : S29-02041502

ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 17 09:59:42 2015

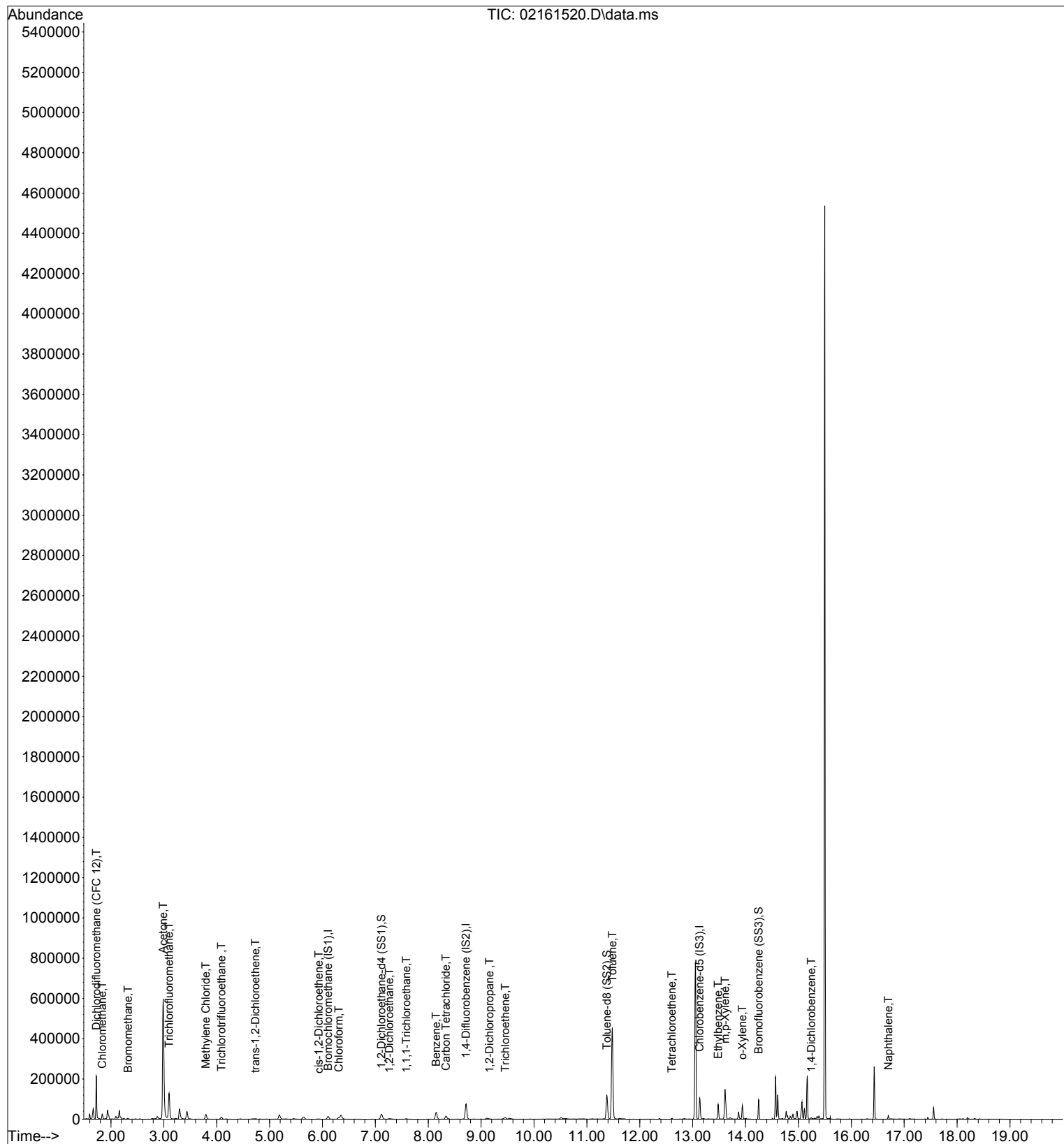
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 02\16\02161520.D

Acq On : 16 Feb 2015 20:45
 Sample : P1500566-002 dup (1000mL)
 Misc : S29-02041502
 ALS Vial : 3 Sample Multiplier: 1

Operator: WA

Quant Time: Feb 17 09:59:42 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

2/17/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	19836	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.71	114	143033	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	26287	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	44681	922.372	pg	0.00
Spiked Amount 1000.000			Recovery	=	92.24%	
30) Toluene-d8 (SS2)	11.38	98	134264	1017.901	pg	0.00
Spiked Amount 1000.000			Recovery	=	101.79%	
40) Bromofluorobenzene (SS3)	14.25	174	58373	1099.928	pg	0.00
Spiked Amount 1000.000			Recovery	=	109.99%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.72	85	148371	1840.516	pg	100
3) Chloromethane	1.84	52	8073	501.466	pg	93
5) Bromomethane	2.32	94	2761	76.167	pg	94
7) Acetone	2.99	58	201521	7079.197	pg	# 57
8) Trichlorofluoromethane	3.10	101	128527	1856.148	pg	99
10) Methylene Chloride	3.79	84	16452	500.721	pg	92
11) Trichlorotrifluoroethane	4.09	151	13166	413.795	pg	100
12) trans-1,2-Dichloroethene	4.73	96	1221	38.680	pg	95
15) cis-1,2-Dichloroethene	5.93	96	1029	29.315	pg	91
16) Chloroform	6.31	83	13040	214.415	pg	100
18) 1,2-Dichloroethane	7.26	62	3553	73.373	pg	91
19) 1,1,1-Trichloroethane	7.59	97	3093	52.299	pg	97
20) Benzene	8.15	78	65572	524.216	pg	99
21) Carbon Tetrachloride	8.34	117	18456	416.841	pg	99
23) 1,2-Dichloropropane	9.16	63	1144	36.672	pg	95
25) Trichloroethene	9.46	130	5159	140.396	pg	98
31) Toluene	11.48	91	500480	3567.560	pg	99
33) Tetrachloroethene	12.61	166	3768	86.746	pg	99
36) Ethylbenzene	13.48	91	69746	423.109	pg	98
37) m,p-Xylene	13.61	91	159724	1178.939	pg	97
38) o-Xylene	13.94	106	24896	376.002	pg	98
42) 1,4-Dichlorobenzene	15.24	146	2878	31.682	pg	99
45) Naphthalene	16.70	128	17263	104.955	pg	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File: I:\MS19\DATA\2015 02\16\02161520.D

Acq On : 16 Feb 2015 20:45

Operator: WA

Sample : P1500566-002 dup (1000mL)

Misc : S29-02041502

ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 17 09:59:42 2015

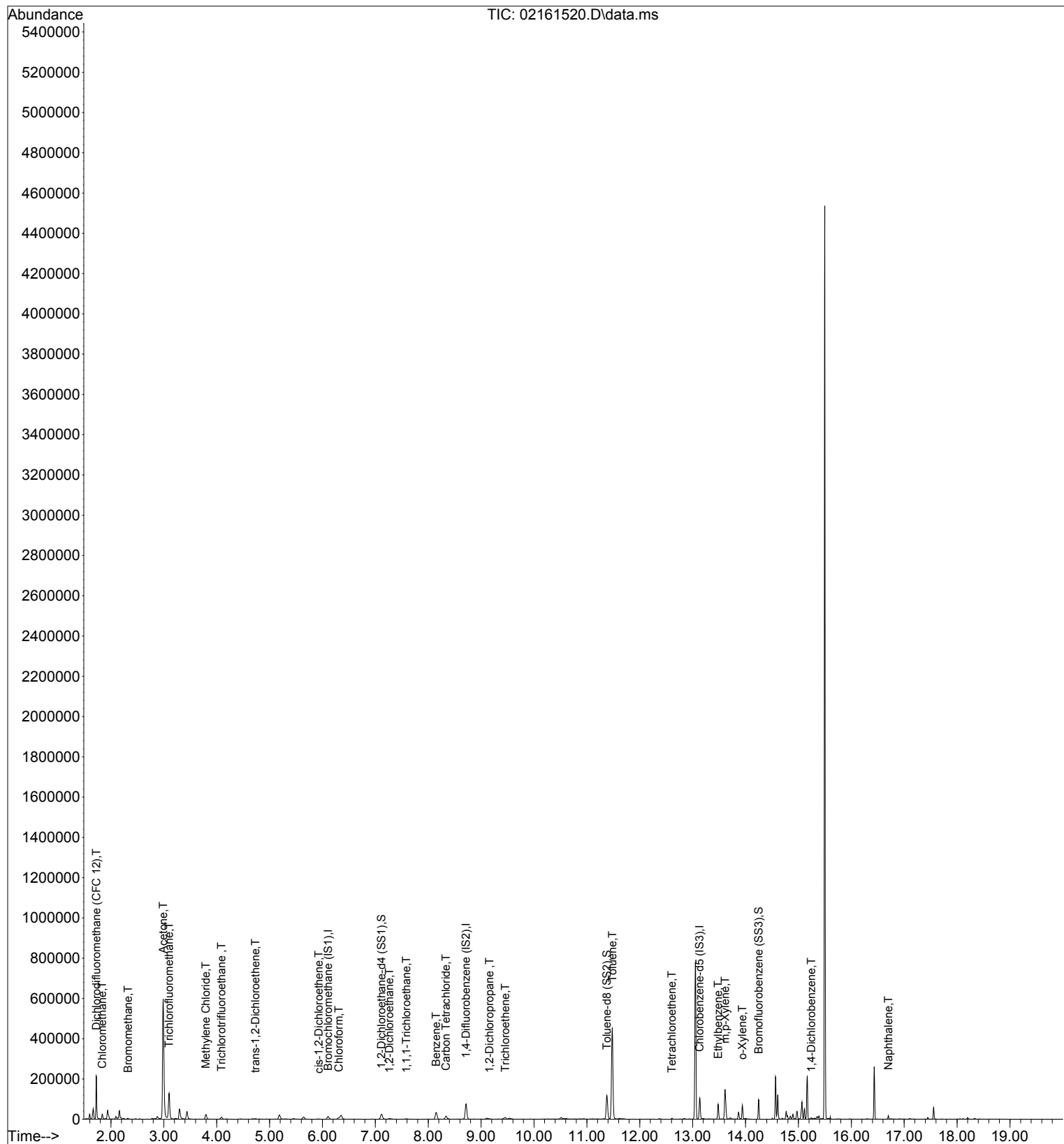
Quant Method : I:\MS19\METHODS\X19021115.M

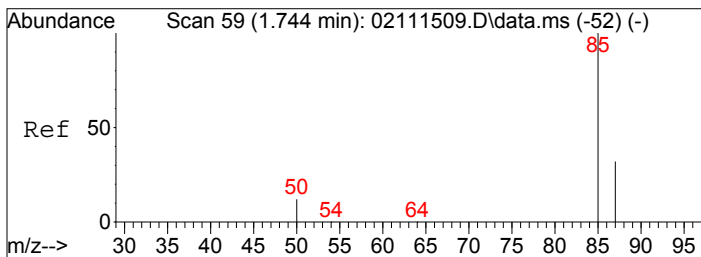
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

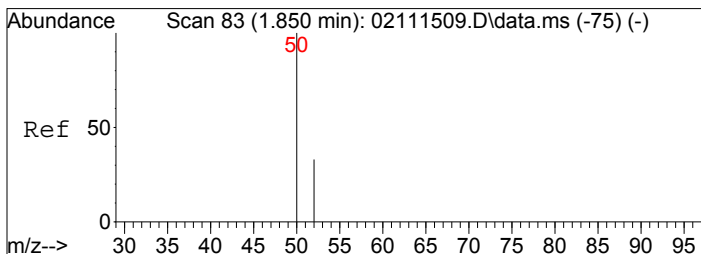
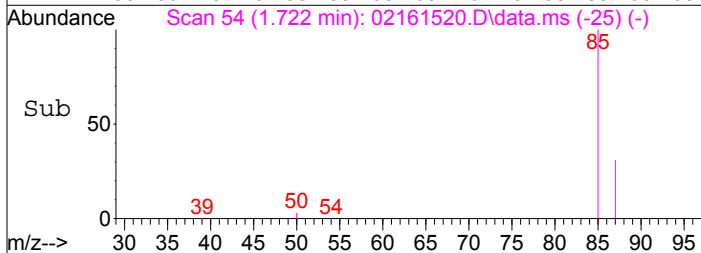
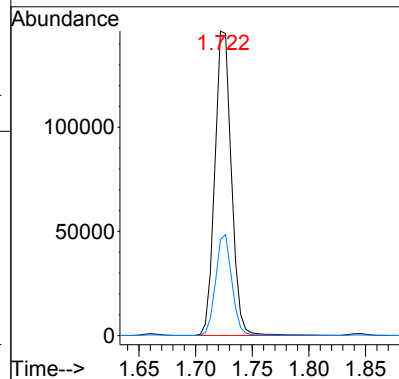
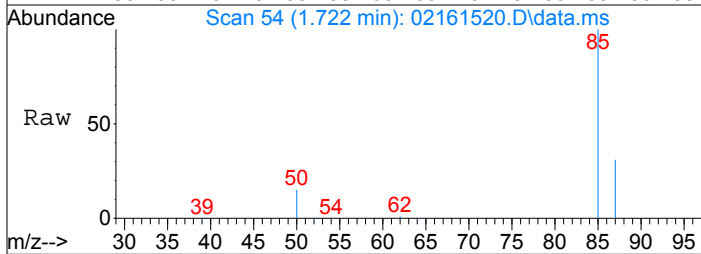
DataAcq Meth:TO15SIM.M





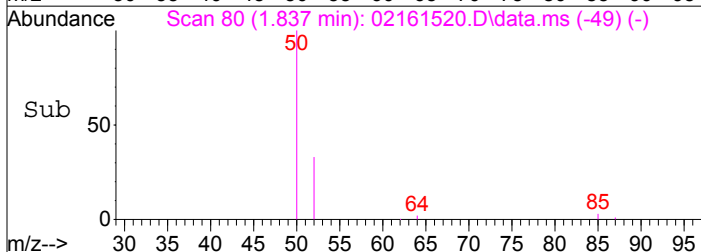
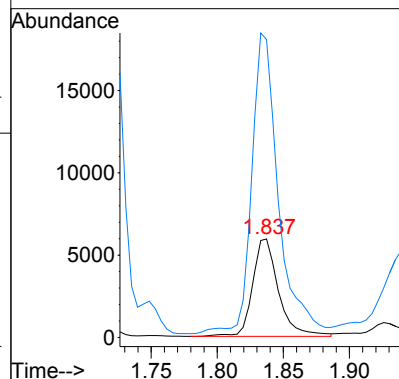
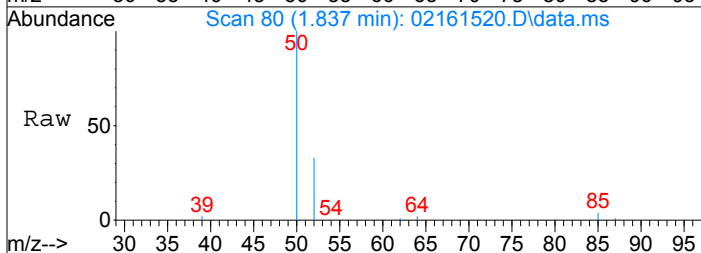
#2
 Dichlorodifluoromethane (CFC 12)
 Concen: 1840.52 pg
 RT: 1.72 min Scan# 54
 Delta R.T. -0.022 min
 Lab File: 02161520.D
 Acq: 16 Feb 2015 20:45

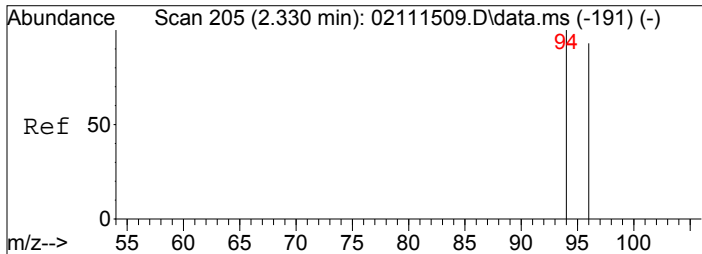
Tgt Ion: 85 Resp: 148371
 Ion Ratio Lower Upper
 85 100
 87 32.5 12.4 52.4



#3
 Chloromethane
 Concen: 501.47 pg
 RT: 1.84 min Scan# 80
 Delta R.T. -0.013 min
 Lab File: 02161520.D
 Acq: 16 Feb 2015 20:45

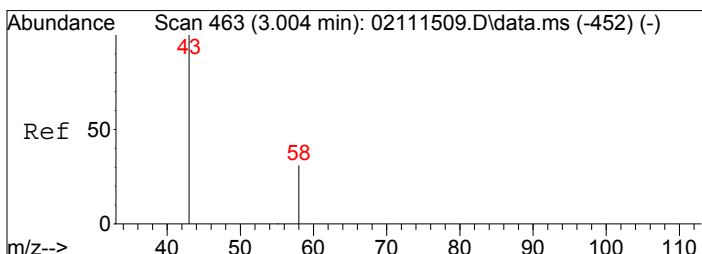
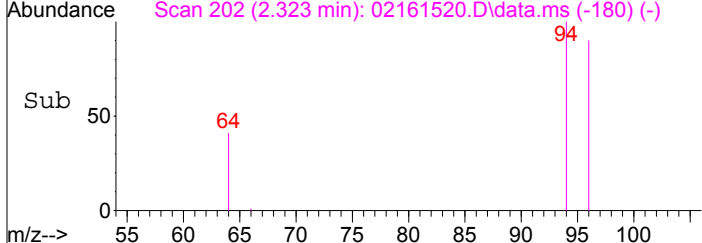
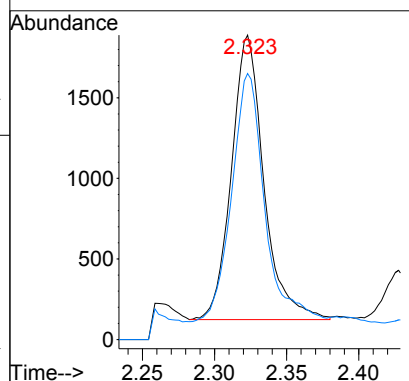
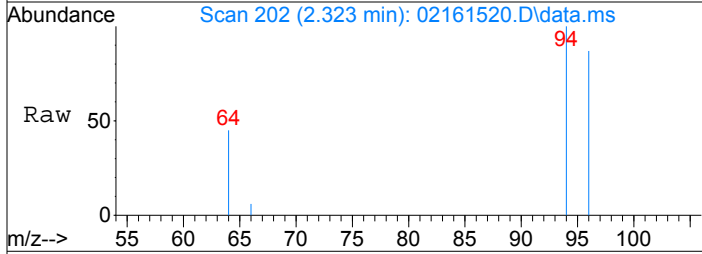
Tgt Ion: 52 Resp: 8073
 Ion Ratio Lower Upper
 52 100
 50 316.8 283.7 323.7





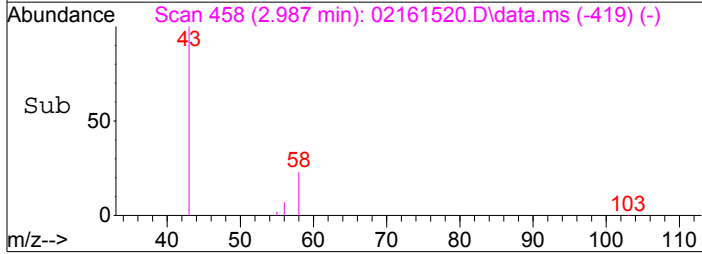
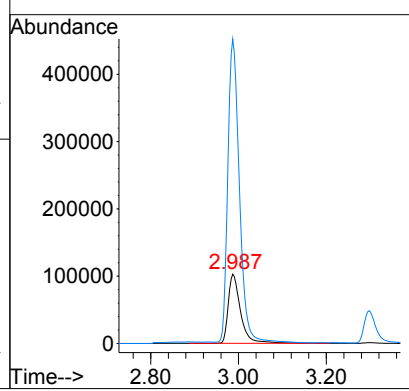
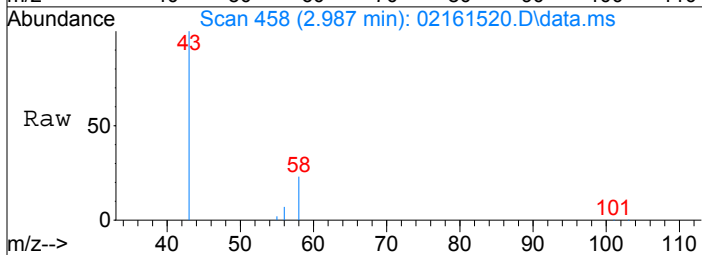
#5
 Bromomethane
 Concen: 76.17 pg
 RT: 2.32 min Scan# 202
 Delta R.T. -0.007 min
 Lab File: 02161520.D
 Acq: 16 Feb 2015 20:45

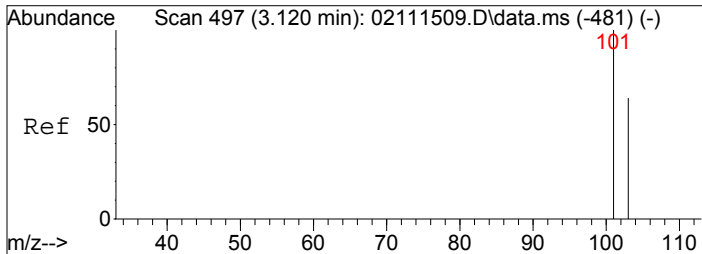
Tgt Ion:	94	Resp:	2761
Ion Ratio	Lower	Upper	
94	100		
96	88.8	75.5	113.3



#7
 Acetone
 Concen: 7079.20 pg
 RT: 2.99 min Scan# 458
 Delta R.T. -0.017 min
 Lab File: 02161520.D
 Acq: 16 Feb 2015 20:45

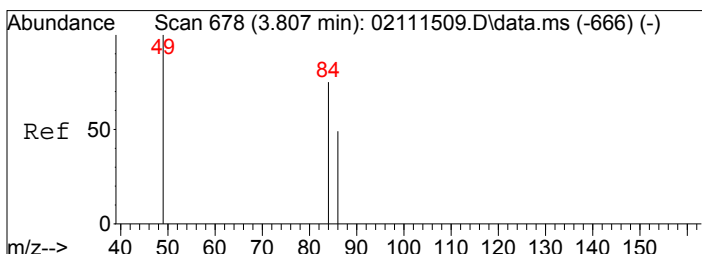
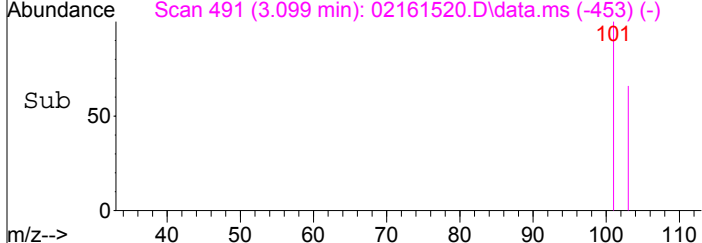
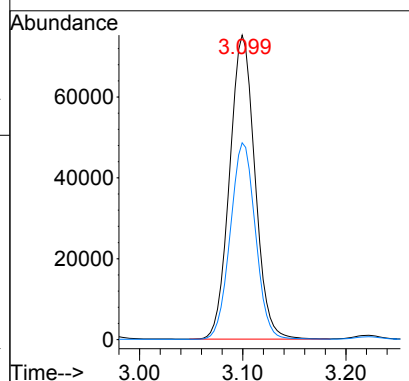
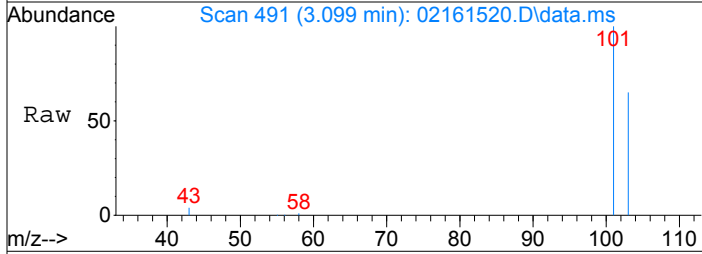
Tgt Ion:	58	Resp:	201521
Ion Ratio	Lower	Upper	
58	100		
43	411.1	301.8	341.8#





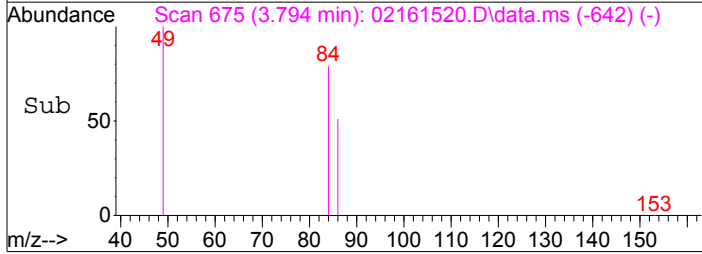
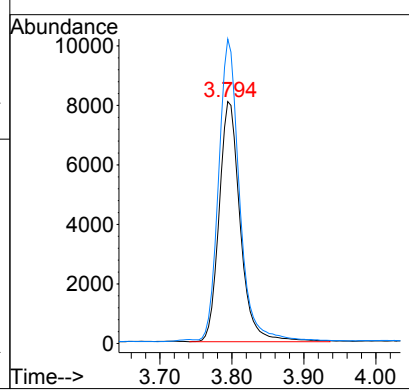
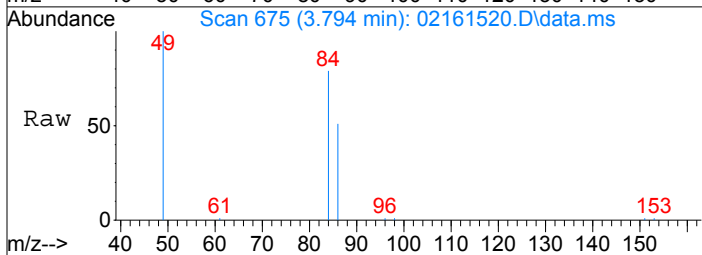
#8
 Trichlorofluoromethane
 Concen: 1856.15 pg
 RT: 3.10 min Scan# 491
 Delta R.T. -0.020 min
 Lab File: 02161520.D
 Acq: 16 Feb 2015 20:45

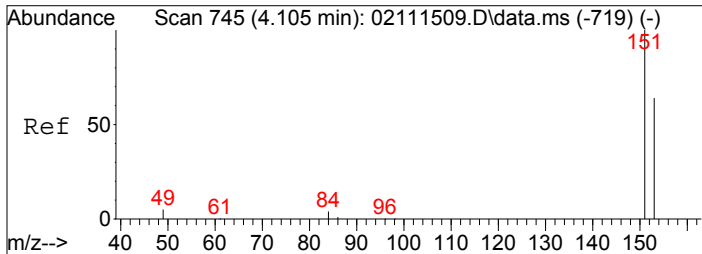
Tgt Ion: 101	Resp:	128527
Ion Ratio	Lower	Upper
101	100	
103	64.3	51.8 77.6



#10
 Methylene Chloride
 Concen: 500.72 pg
 RT: 3.79 min Scan# 675
 Delta R.T. -0.013 min
 Lab File: 02161520.D
 Acq: 16 Feb 2015 20:45

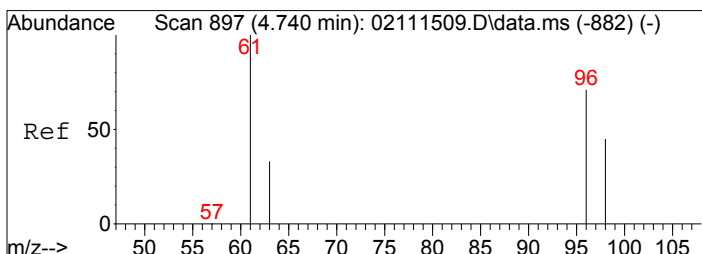
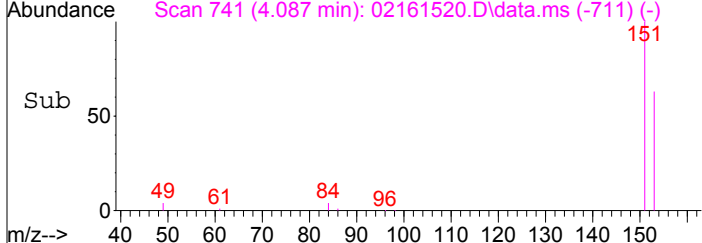
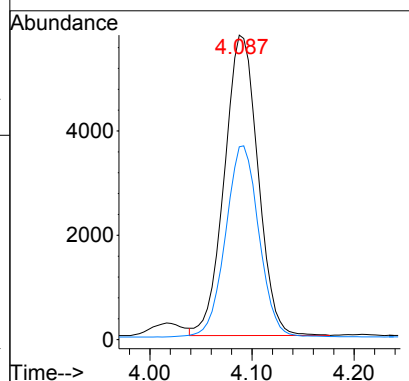
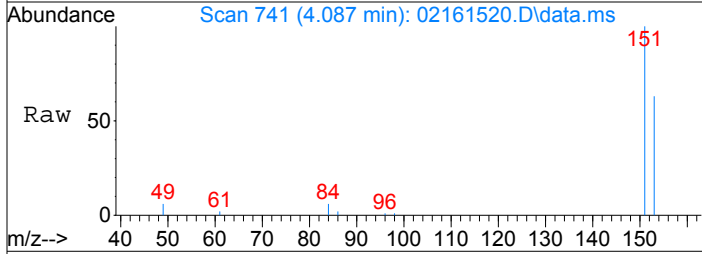
Tgt Ion: 84	Resp:	16452
Ion Ratio	Lower	Upper
84	100	
49	122.8	112.3 152.3





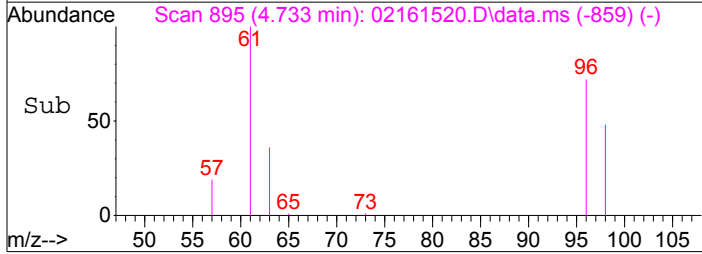
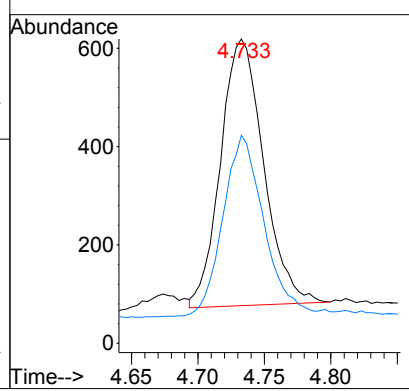
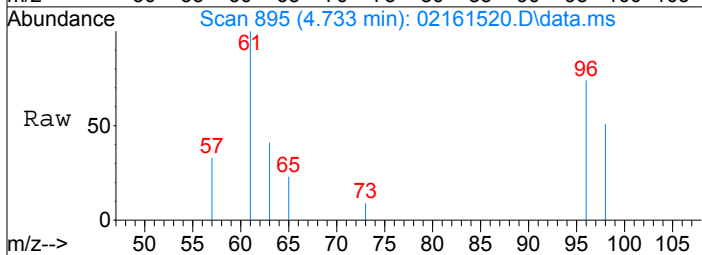
#11
 Trichlorotrifluoroethane
 Concen: 413.79 pg
 RT: 4.09 min Scan# 741
 Delta R.T. -0.018 min
 Lab File: 02161520.D
 Acq: 16 Feb 2015 20:45

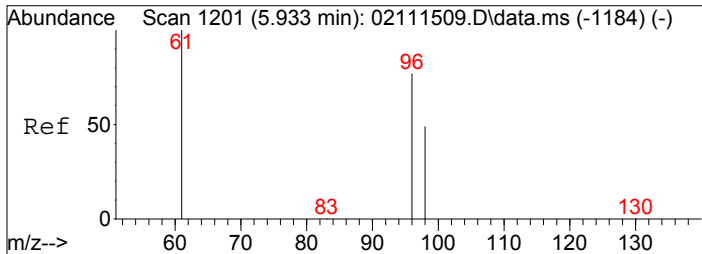
Tgt Ion: 151	Resp: 13166
Ion Ratio	Lower Upper
151	100
153	63.6 43.6 83.6



#12
 trans-1,2-Dichloroethene
 Concen: 38.68 pg
 RT: 4.73 min Scan# 895
 Delta R.T. -0.008 min
 Lab File: 02161520.D
 Acq: 16 Feb 2015 20:45

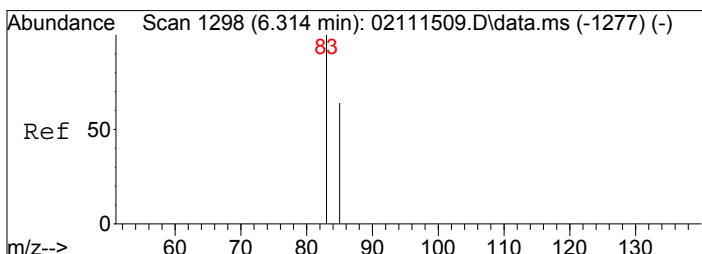
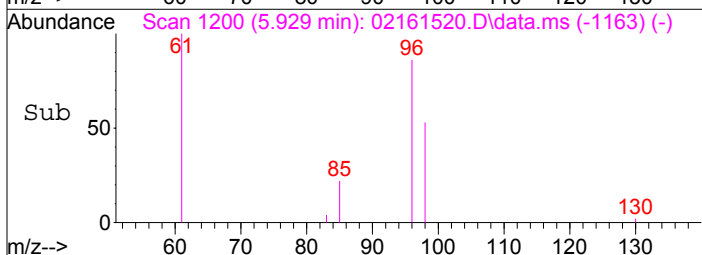
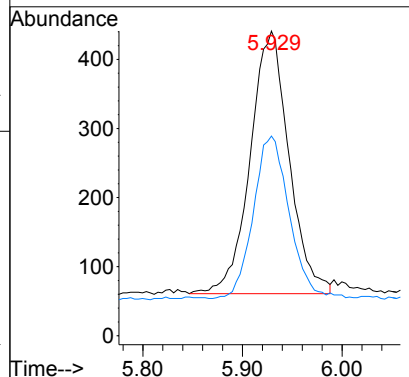
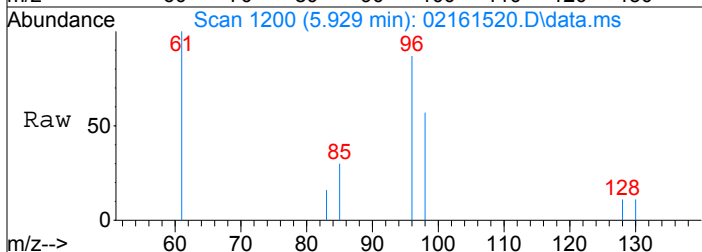
Tgt Ion: 96	Resp: 1221
Ion Ratio	Lower Upper
96	100
98	67.6 43.7 83.7





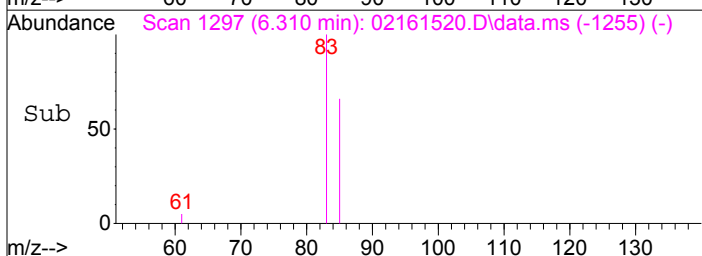
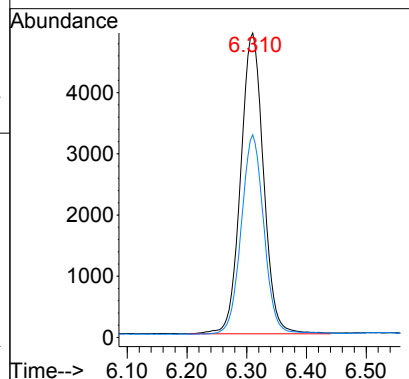
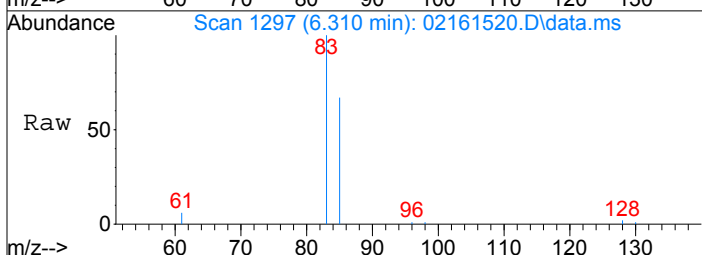
#15
 cis-1,2-Dichloroethene
 Concen: 29.31 pg
 RT: 5.93 min Scan# 1200
 Delta R.T. -0.004 min
 Lab File: 02161520.D
 Acq: 16 Feb 2015 20:45

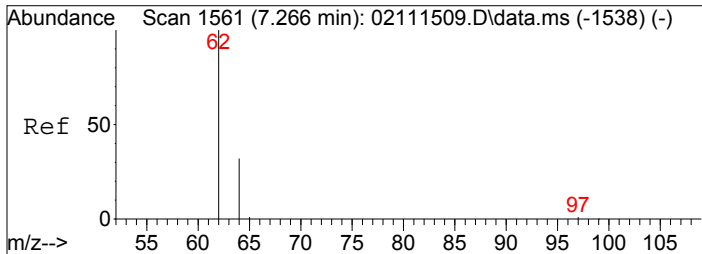
Tgt Ion: 96 Resp: 1029
 Ion Ratio Lower Upper
 96 100
 98 57.2 44.3 84.3



#16
 Chloroform
 Concen: 214.42 pg
 RT: 6.31 min Scan# 1297
 Delta R.T. -0.004 min
 Lab File: 02161520.D
 Acq: 16 Feb 2015 20:45

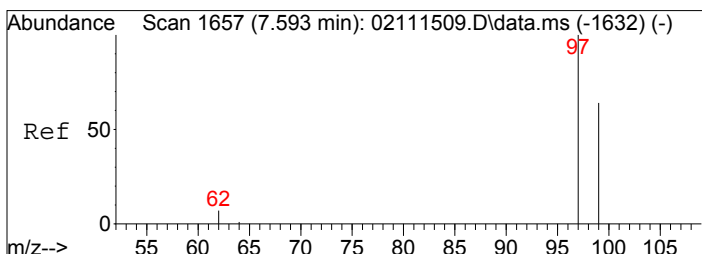
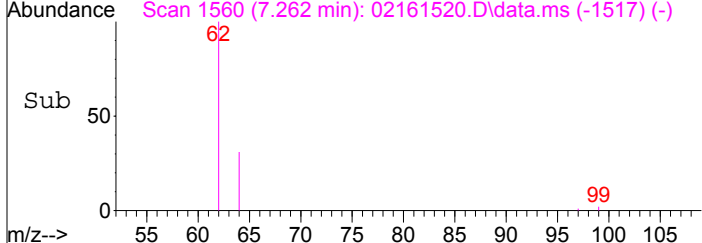
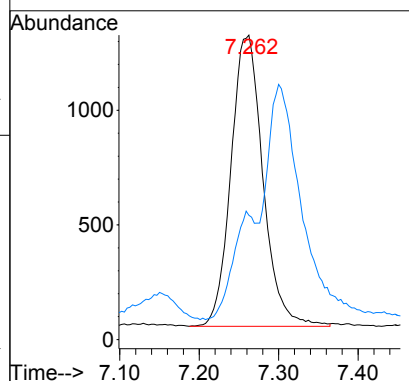
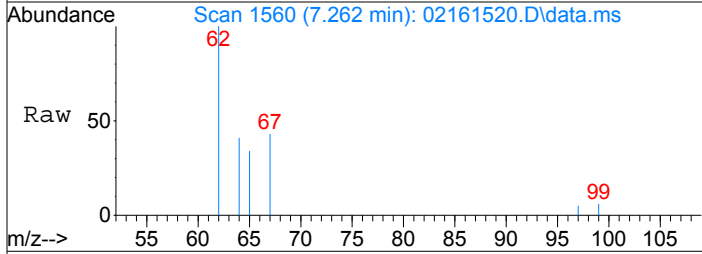
Tgt Ion: 83 Resp: 13040
 Ion Ratio Lower Upper
 83 100
 85 65.8 45.4 85.4





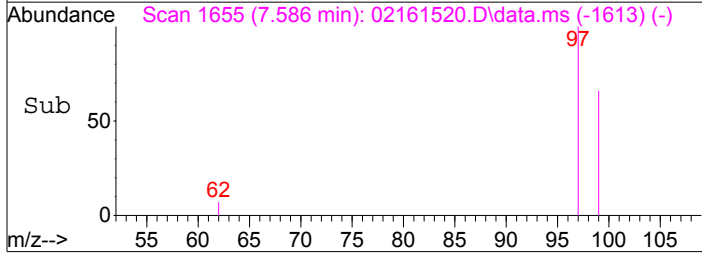
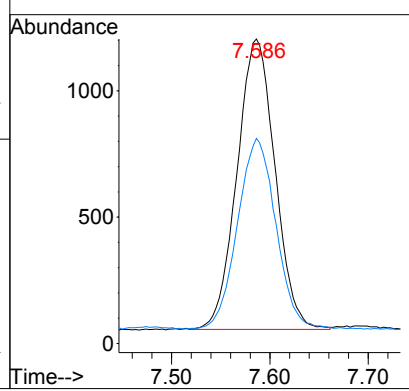
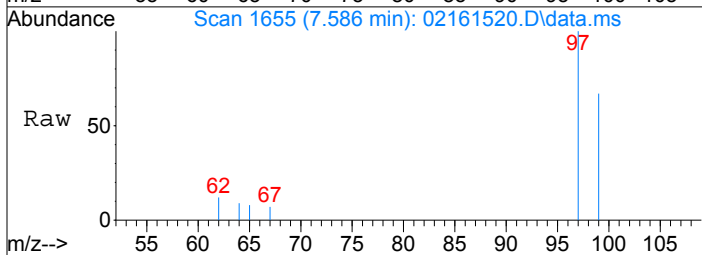
#18
 1,2-Dichloroethane
 Concen: 73.37 pg
 RT: 7.26 min Scan# 1560
 Delta R.T. -0.003 min
 Lab File: 02161520.D
 Acq: 16 Feb 2015 20:45

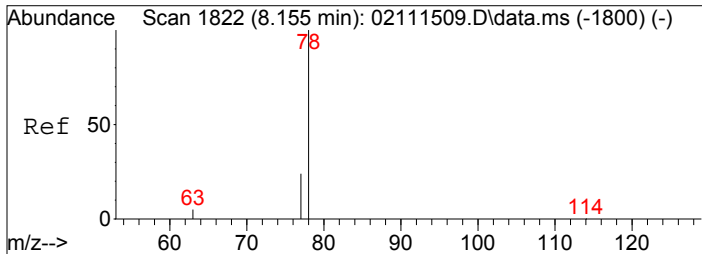
Tgt Ion:	62	Resp:	3553
Ion Ratio	Lower	Upper	
62	100		
64	26.6	11.6	51.6



#19
 1,1,1-Trichloroethane
 Concen: 52.30 pg
 RT: 7.59 min Scan# 1655
 Delta R.T. -0.007 min
 Lab File: 02161520.D
 Acq: 16 Feb 2015 20:45

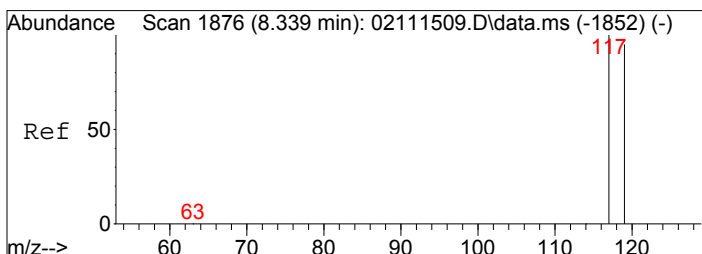
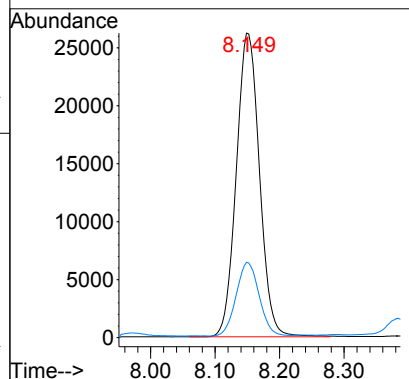
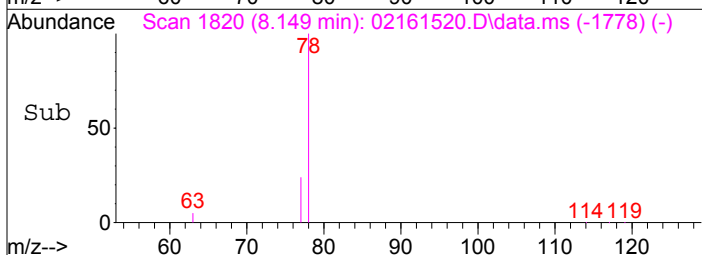
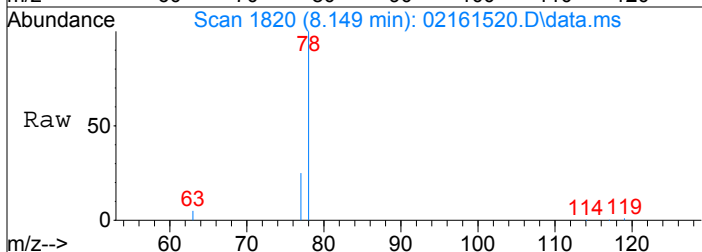
Tgt Ion:	97	Resp:	3093
Ion Ratio	Lower	Upper	
97	100		
99	66.0	44.0	84.0





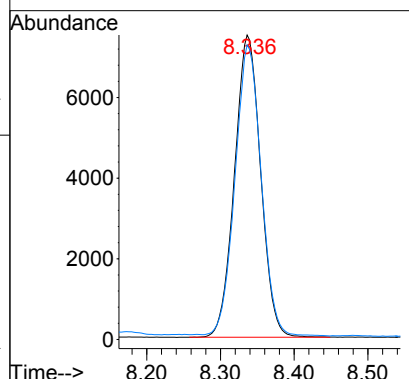
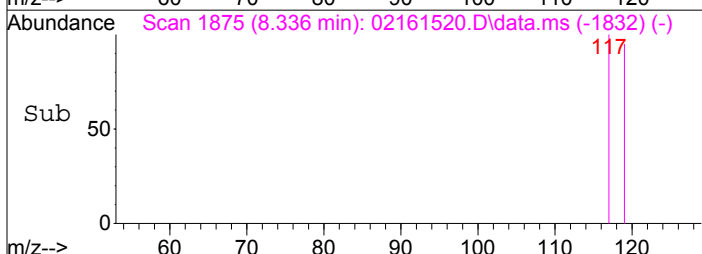
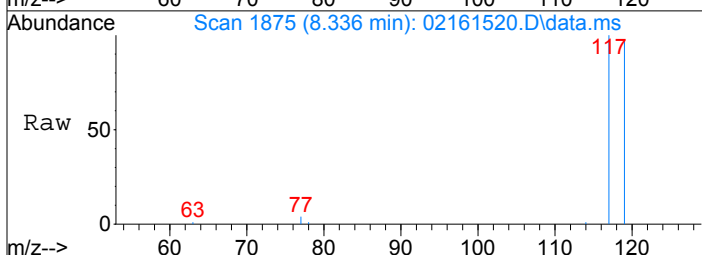
#20
Benzene
Concen: 524.22 pg
RT: 8.15 min Scan# 1820
Delta R.T. -0.006 min
Lab File: 02161520.D
Acq: 16 Feb 2015 20:45

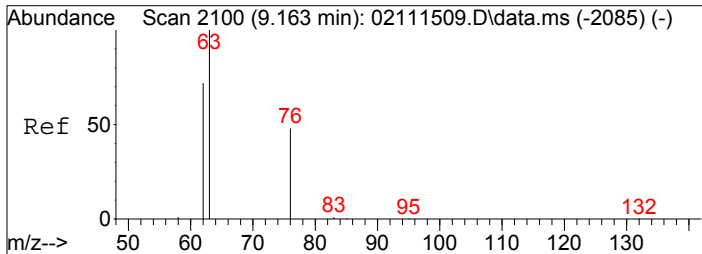
Tgt Ion	78	77	Ratio	Lower	Upper
Resp	65572				
Ion Ratio	100	24.0			
			3.7		43.7



#21
Carbon Tetrachloride
Concen: 416.84 pg
RT: 8.34 min Scan# 1875
Delta R.T. -0.003 min
Lab File: 02161520.D
Acq: 16 Feb 2015 20:45

Tgt Ion	117	119	Ratio	Lower	Upper
Resp	18456				
Ion Ratio	100	96.4			
			75.5		115.5

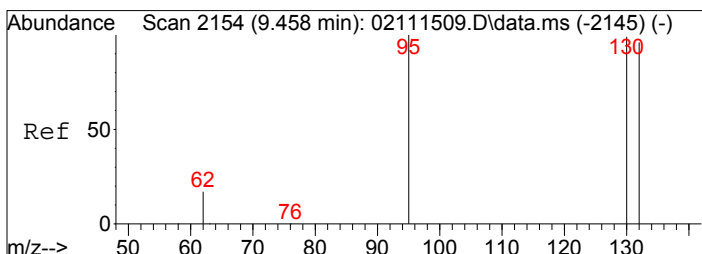
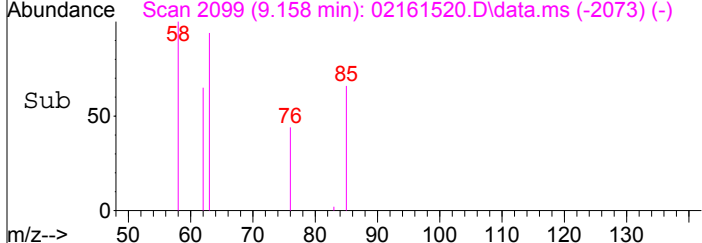
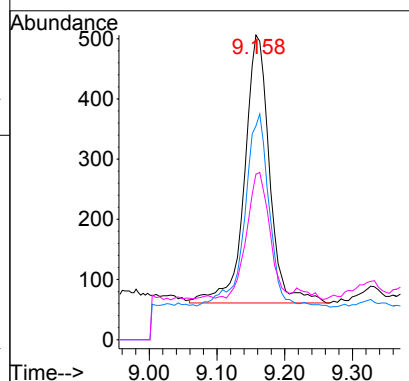
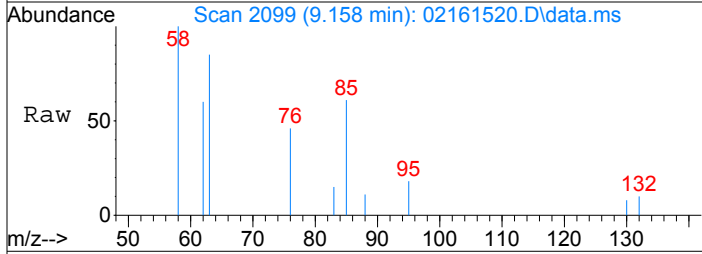




#23
 1,2-Dichloropropane
 Concen: 36.67 pg
 RT: 9.16 min Scan# 2099
 Delta R.T. -0.005 min
 Lab File: 02161520.D
 Acq: 16 Feb 2015 20:45

Tgt Ion: 63 Resp: 1144

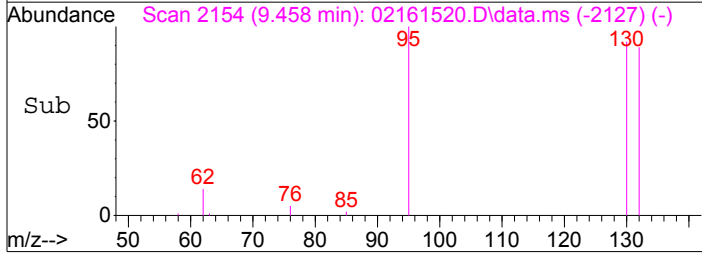
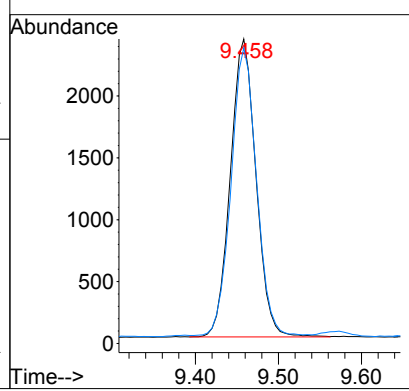
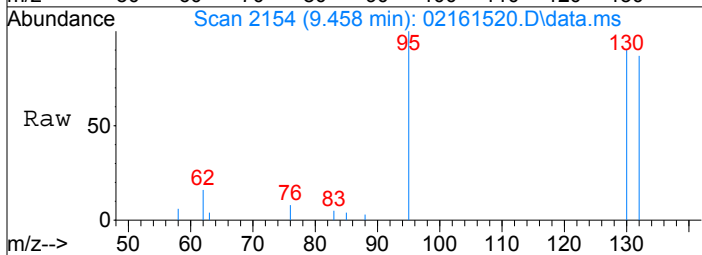
Ion	Ratio	Lower	Upper
63	100		
62	68.8	52.0	92.0
76	42.8	28.1	68.1

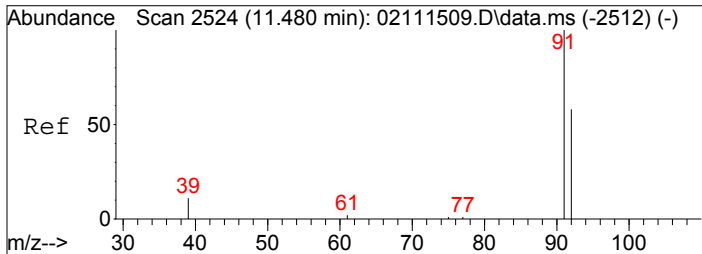


#25
 Trichloroethene
 Concen: 140.40 pg
 RT: 9.46 min Scan# 2154
 Delta R.T. 0.000 min
 Lab File: 02161520.D
 Acq: 16 Feb 2015 20:45

Tgt Ion: 130 Resp: 5159

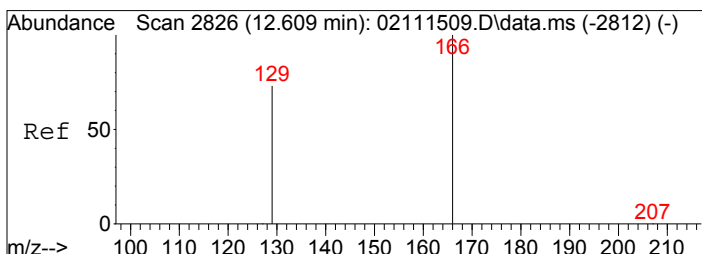
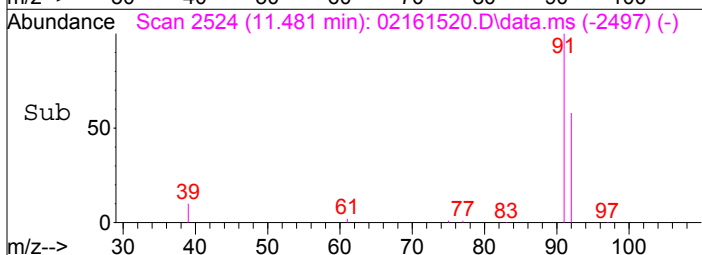
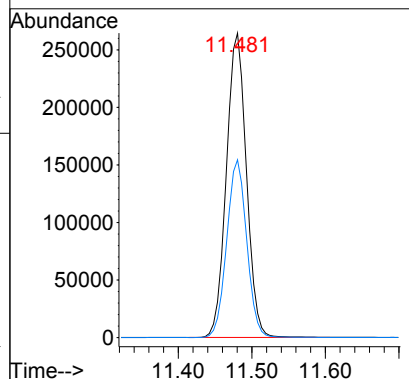
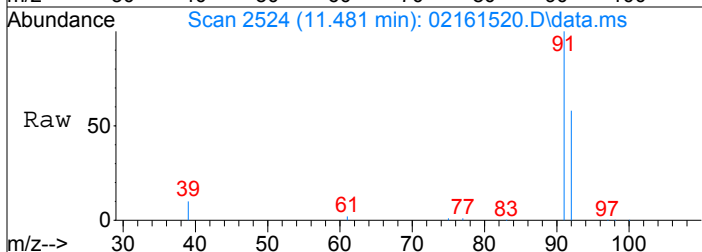
Ion	Ratio	Lower	Upper
130	100		
132	95.6	77.1	117.1





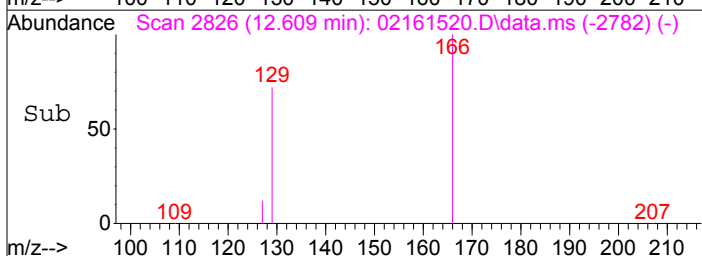
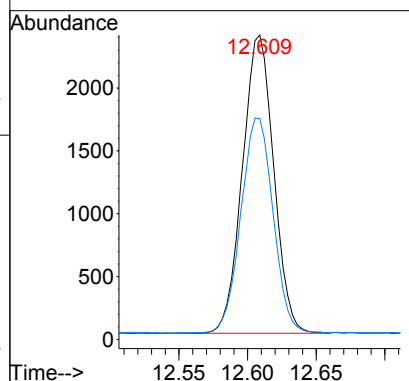
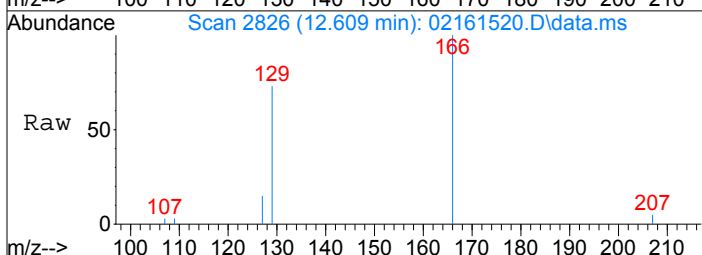
#31
Toluene
Concen: 3567.56 pg
RT: 11.48 min Scan# 2524
Delta R.T. 0.000 min
Lab File: 02161520.D
Acq: 16 Feb 2015 20:45

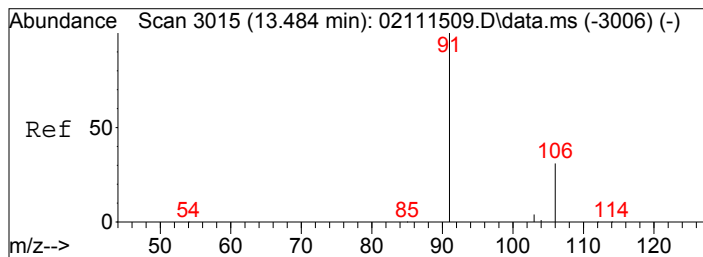
Tgt Ion	91	92	Resp	500480	Lower	Upper
Ion Ratio	100	58.2			37.7	77.7



#33
Tetrachloroethene
Concen: 86.75 pg
RT: 12.61 min Scan# 2826
Delta R.T. -0.000 min
Lab File: 02161520.D
Acq: 16 Feb 2015 20:45

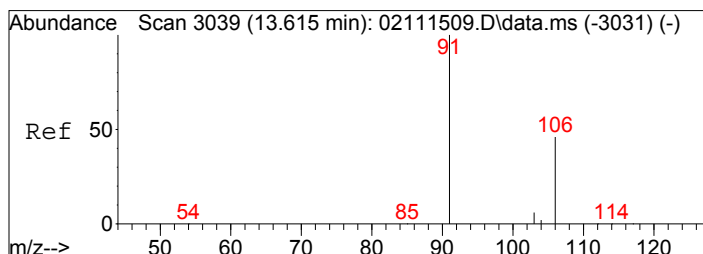
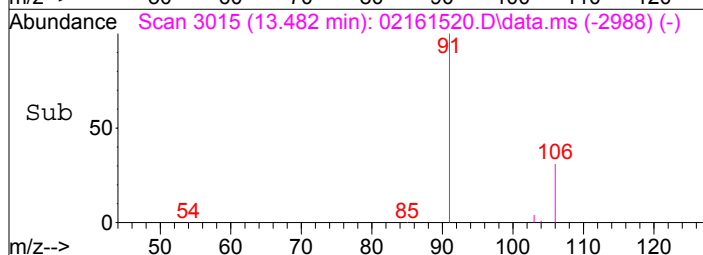
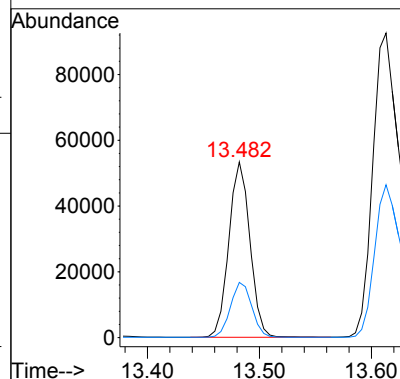
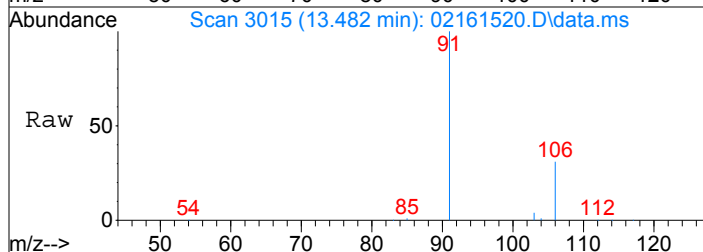
Tgt Ion	166	129	Resp	3768	Lower	Upper
Ion Ratio	100	74.2			53.3	93.3





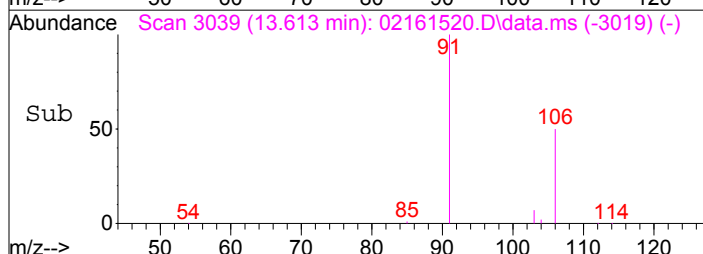
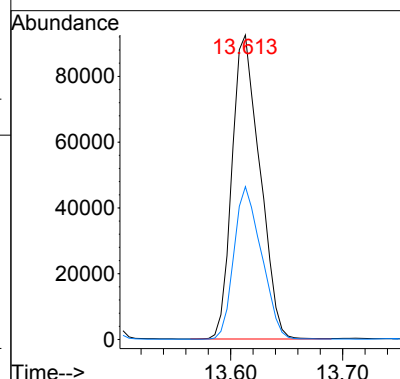
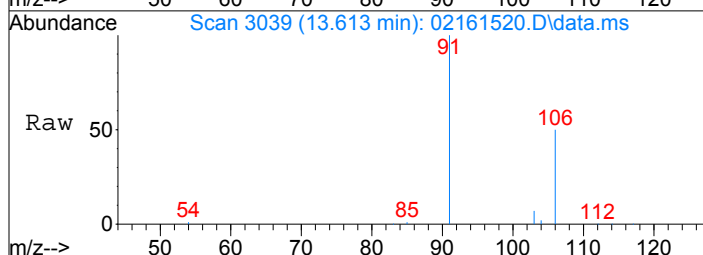
#36
Ethylbenzene
Concen: 423.11 pg
RT: 13.48 min Scan# 3015
Delta R.T. -0.002 min
Lab File: 02161520.D
Acq: 16 Feb 2015 20:45

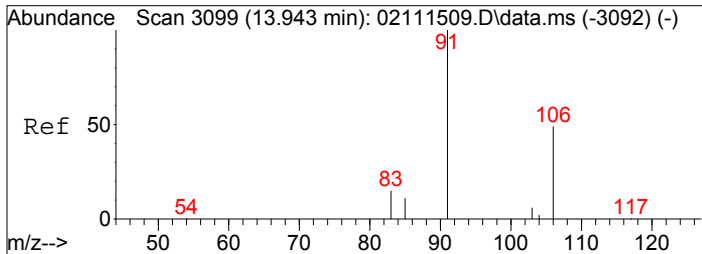
Tgt Ion: 91 Resp: 69746
Ion Ratio Lower Upper
91 100
106 31.8 10.9 50.9



#37
m,p-Xylene
Concen: 1178.94 pg
RT: 13.61 min Scan# 3039
Delta R.T. -0.002 min
Lab File: 02161520.D
Acq: 16 Feb 2015 20:45

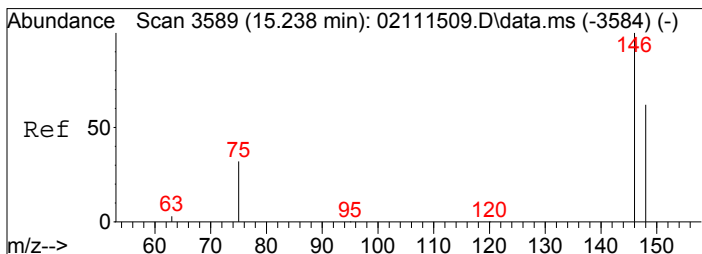
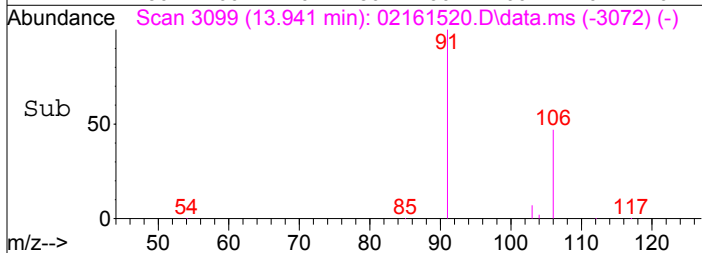
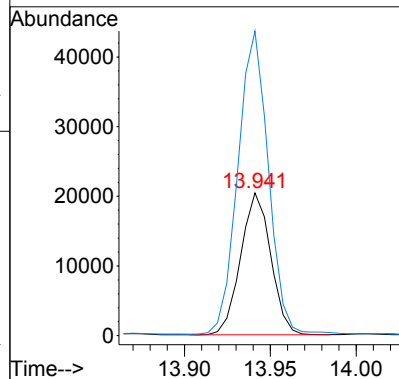
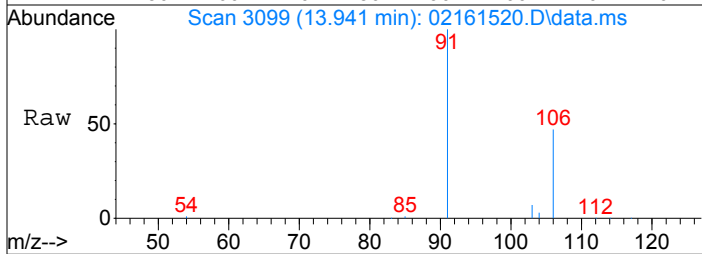
Tgt Ion: 91 Resp: 159724
Ion Ratio Lower Upper
91 100
106 49.7 27.5 67.5





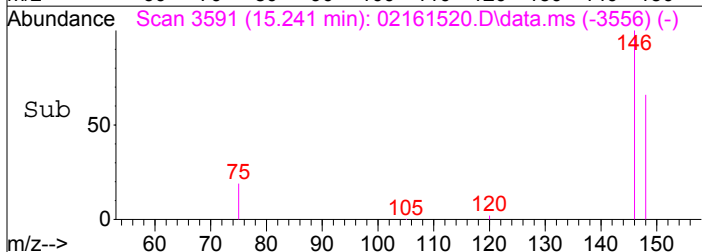
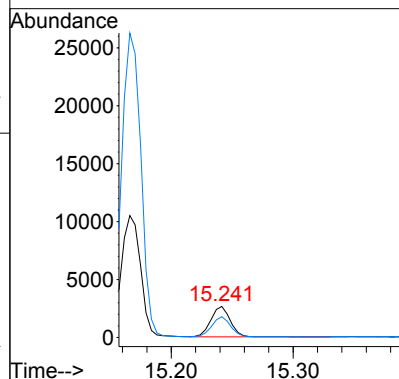
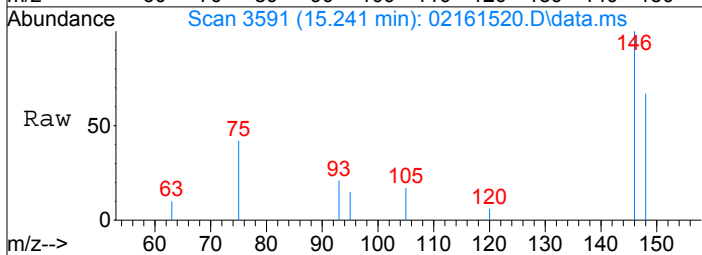
#38
o-Xylene
Concen: 376.00 pg
RT: 13.94 min Scan# 3099
Delta R.T. -0.002 min
Lab File: 02161520.D
Acq: 16 Feb 2015 20:45

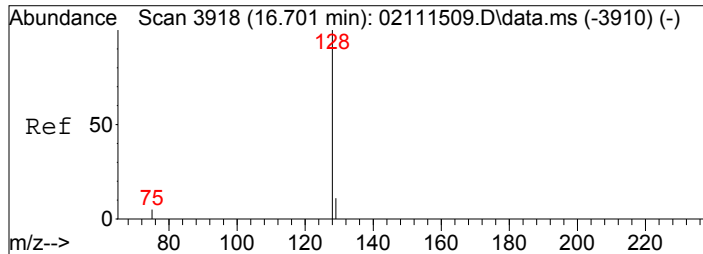
Tgt Ion	106	Resp	24896
Ion Ratio	100	Lower	Upper
91	215.1	198.3	238.3



#42
1,4-Dichlorobenzene
Concen: 31.68 pg
RT: 15.24 min Scan# 3591
Delta R.T. 0.004 min
Lab File: 02161520.D
Acq: 16 Feb 2015 20:45

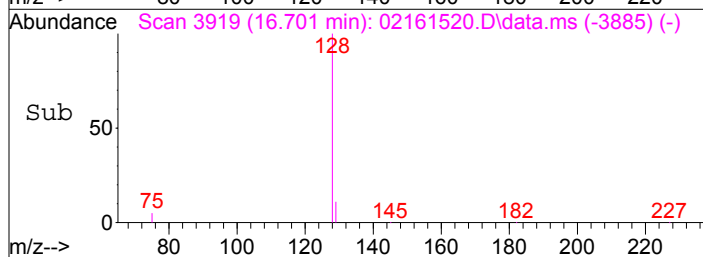
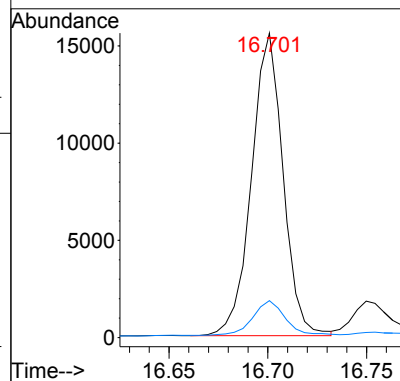
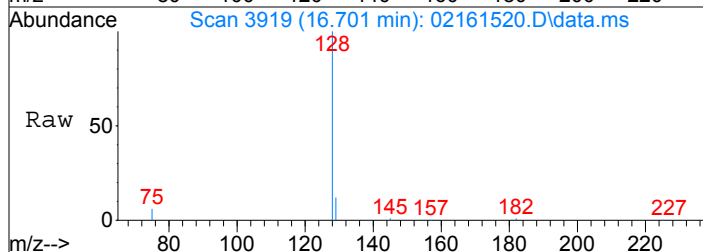
Tgt Ion	146	Resp	2878
Ion Ratio <td>100</td> <td>Lower</td> <td>Upper</td>	100	Lower	Upper
148	64.6	43.5	83.5





#45
Naphthalene
Concen: 104.96 pg
RT: 16.70 min Scan# 3919
Delta R.T. -0.000 min
Lab File: 02161520.D
Acq: 16 Feb 2015 20:45

Tgt Ion:128 Resp: 17263
Ion Ratio Lower Upper
128 100
129 11.8 0.0 30.9



Data File: I:\MS19\DATA\2015 02\17\02171525.D

Acq On : 17 Feb 2015 17:25

Operator: WA

Sample : P1500566-019 dup (1000mL)

Misc : S29-02041502

ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 18 09:11:06 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

2/18/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	18691	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	137068	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	23168	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	42641	934.183	pg	0.00
Spiked Amount 1000.000			Recovery	=	93.42%	
30) Toluene-d8 (SS2)	11.38	98	128245	1014.581	pg	0.00
Spiked Amount 1000.000			Recovery	=	101.46%	
40) Bromofluorobenzene (SS3)	14.25	174	50012	1069.249	pg	0.00
Spiked Amount 1000.000			Recovery	=	106.93%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.72	85	155759	2050.526	pg	100
3) Chloromethane	1.83	52	7494	494.017	pg	90
4) Vinyl Chloride	0.00	62	0	N.D.	d	
5) Bromomethane	2.32	94	2779	81.360	pg	89
6) Chloroethane	0.00	64	0	N.D.	d	
7) Acetone	2.99	58	200816	7486.582	pg	# 76
8) Trichlorofluoromethane	3.10	101	183216	2808.040	pg	99
9) 1,1-Dichloroethene	3.65	96	104	N.D.		
10) Methylene Chloride	3.80	84	13641	440.601	pg	92
11) Trichlorotrifluoroethane	4.09	151	13801	460.324	pg	99
12) trans-1,2-Dichloroethene	4.74	96	931	31.300	pg	98
13) 1,1-Dichloroethane	4.94	63	466	N.D.		
14) Methyl tert-Butyl Ether	5.11	73	951	N.D.		
15) cis-1,2-Dichloroethene	5.93	96	2531	76.521	pg	93
16) Chloroform	6.31	83	8366	145.988	pg	99
18) 1,2-Dichloroethane	7.26	62	4189	91.807	pg	# 1
19) 1,1,1-Trichloroethane	7.59	97	1371	24.602	pg	91
20) Benzene	8.15	78	80080	679.418	pg	99
21) Carbon Tetrachloride	8.34	117	20394	488.828	pg	99
23) 1,2-Dichloropropane	9.16	63	879	29.403	pg	91
24) Bromodichloromethane	0.00	83	0	N.D.	d	
25) Trichloroethene	9.46	130	3650	103.653	pg	98
26) 1,4-Dioxane	9.55	88	319	N.D.		
27) cis-1,3-Dichloropropene	10.46	75	19	N.D.		
28) trans-1,3-Dichloropropene	11.05	75	39	N.D.		
29) 1,1,2-Trichloroethane	11.19	83	85	N.D.		
31) Toluene	11.48	91	234729	1746.029	pg	100
32) 1,2-Dibromoethane	12.12	107	21	N.D.		
33) Tetrachloroethene	12.61	166	2148	51.603	pg	96
35) Chlorobenzene	13.17	112	817	N.D.		
36) Ethylbenzene	13.48	91	43408	298.783	pg	99
37) m,p-Xylene	13.61	91	108182	906.001	pg	98
38) o-Xylene	13.94	106	20211	346.338	pg	99
39) 1,1,1,2,2-Tetrachloroethane	13.89	83	296	N.D.		
41) 1,3-Dichlorobenzene	15.17	146	195	N.D.		
42) 1,4-Dichlorobenzene	15.24	146	2752	34.373	pg	100
43) 1,2-Dichlorobenzene	15.46	146	126	N.D.		
44) 1,2,4-Trichlorobenzene	16.63	182	129	N.D.		
45) Naphthalene	16.70	128	12138	83.731	pg	98
46) Hexachlorobutadiene	16.96	225	32	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File: I:\MS19\DATA\2015 02\17\02171525.D

Acq On : 17 Feb 2015 17:25

Operator: WA

Sample : P1500566-019 dup (1000mL)

Misc : S29-02041502

ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 18 09:11:06 2015

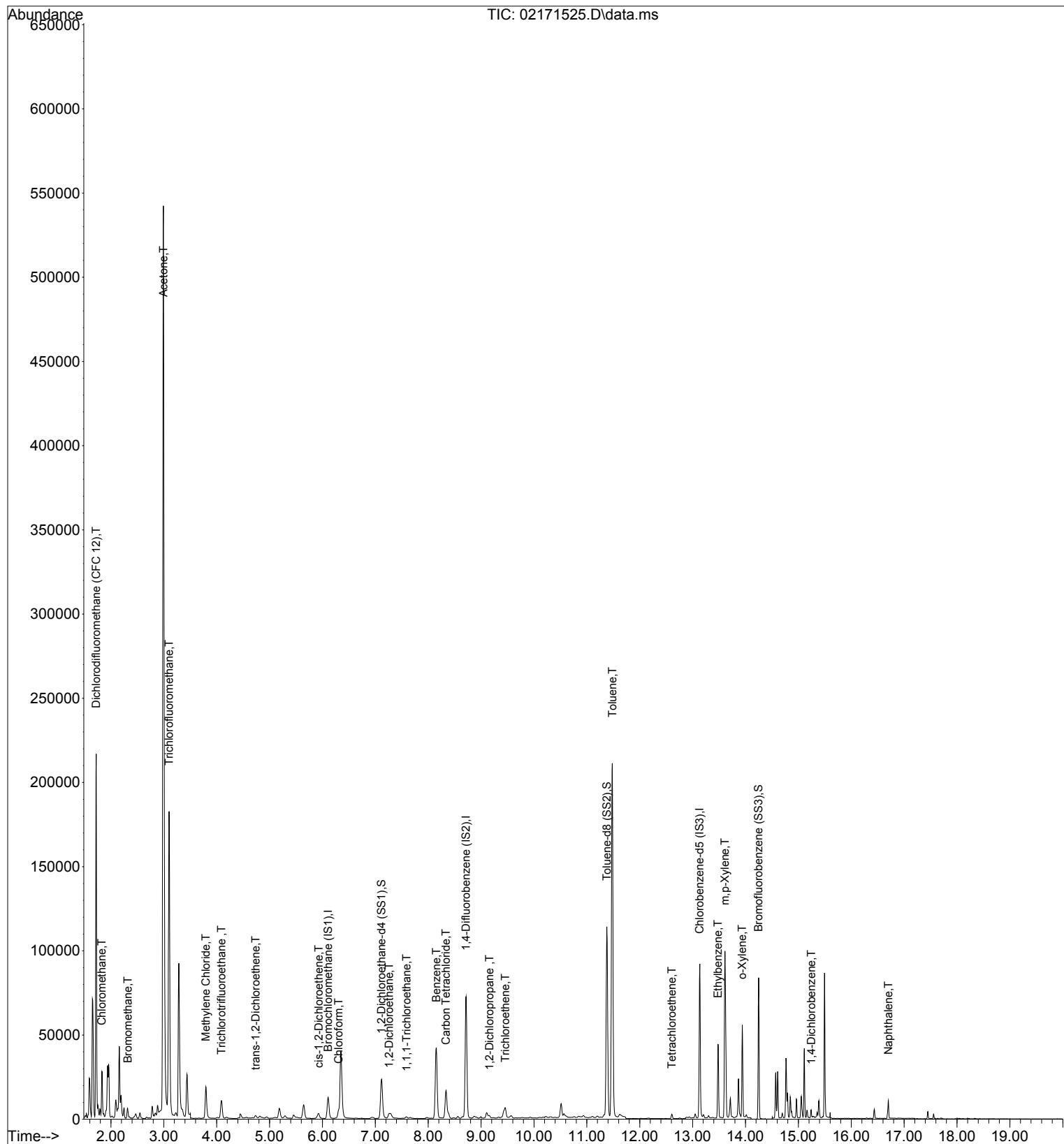
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 02\17\02171525.D

Acq On : 17 Feb 2015 17:25
 Sample : P1500566-019 dup (1000mL)
 Misc : S29-02041502
 ALS Vial : 4 Sample Multiplier: 1

Operator: WA

Quant Time: Feb 18 09:11:06 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

WA 2/18/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	18691	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	137068	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	23168	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	42641	934.183	pg	0.00
Spiked Amount 1000.000			Recovery	=	93.42%	
30) Toluene-d8 (SS2)	11.38	98	128245	1014.581	pg	0.00
Spiked Amount 1000.000			Recovery	=	101.46%	
40) Bromofluorobenzene (SS3)	14.25	174	50012	1069.249	pg	0.00
Spiked Amount 1000.000			Recovery	=	106.93%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.72	85	155759	2050.526	pg	100
3) Chloromethane	1.83	52	7494	494.017	pg	90
5) Bromomethane	2.32	94	2779	81.360	pg	89
7) Acetone	2.99	58	200816	7486.582	pg	# 76
8) Trichlorofluoromethane	3.10	101	183216	2808.040	pg	99
10) Methylene Chloride	3.80	84	13641	440.601	pg	92
11) Trichlorotrifluoroethane	4.09	151	13801	460.324	pg	99
12) trans-1,2-Dichloroethene	4.74	96	931	31.300	pg	98
15) cis-1,2-Dichloroethene	5.93	96	2531	76.521	pg	93
16) Chloroform	6.31	83	8366	145.988	pg	99
18) 1,2-Dichloroethane	7.26	62	4189	91.807	pg	# 1
19) 1,1,1-Trichloroethane	7.59	97	1371	24.602	pg	91
20) Benzene	8.15	78	80080	679.418	pg	99
21) Carbon Tetrachloride	8.34	117	20394	488.828	pg	99
23) 1,2-Dichloropropane	9.16	63	879	29.403	pg	91
25) Trichloroethene	9.46	130	3650	103.653	pg	98
31) Toluene	11.48	91	234729	1746.029	pg	100
33) Tetrachloroethene	12.61	166	2148	51.603	pg	96
36) Ethylbenzene	13.48	91	43408	298.783	pg	99
37) m,p-Xylene	13.61	91	108182	906.001	pg	98
38) o-Xylene	13.94	106	20211	346.338	pg	99
42) 1,4-Dichlorobenzene	15.24	146	2752	34.373	pg	100
45) Naphthalene	16.70	128	12138	83.731	pg	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File: I:\MS19\DATA\2015 02\17\02171525.D

Acq On : 17 Feb 2015 17:25

Operator: WA

Sample : P1500566-019 dup (1000mL)

Misc : S29-02041502

ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 18 09:11:06 2015

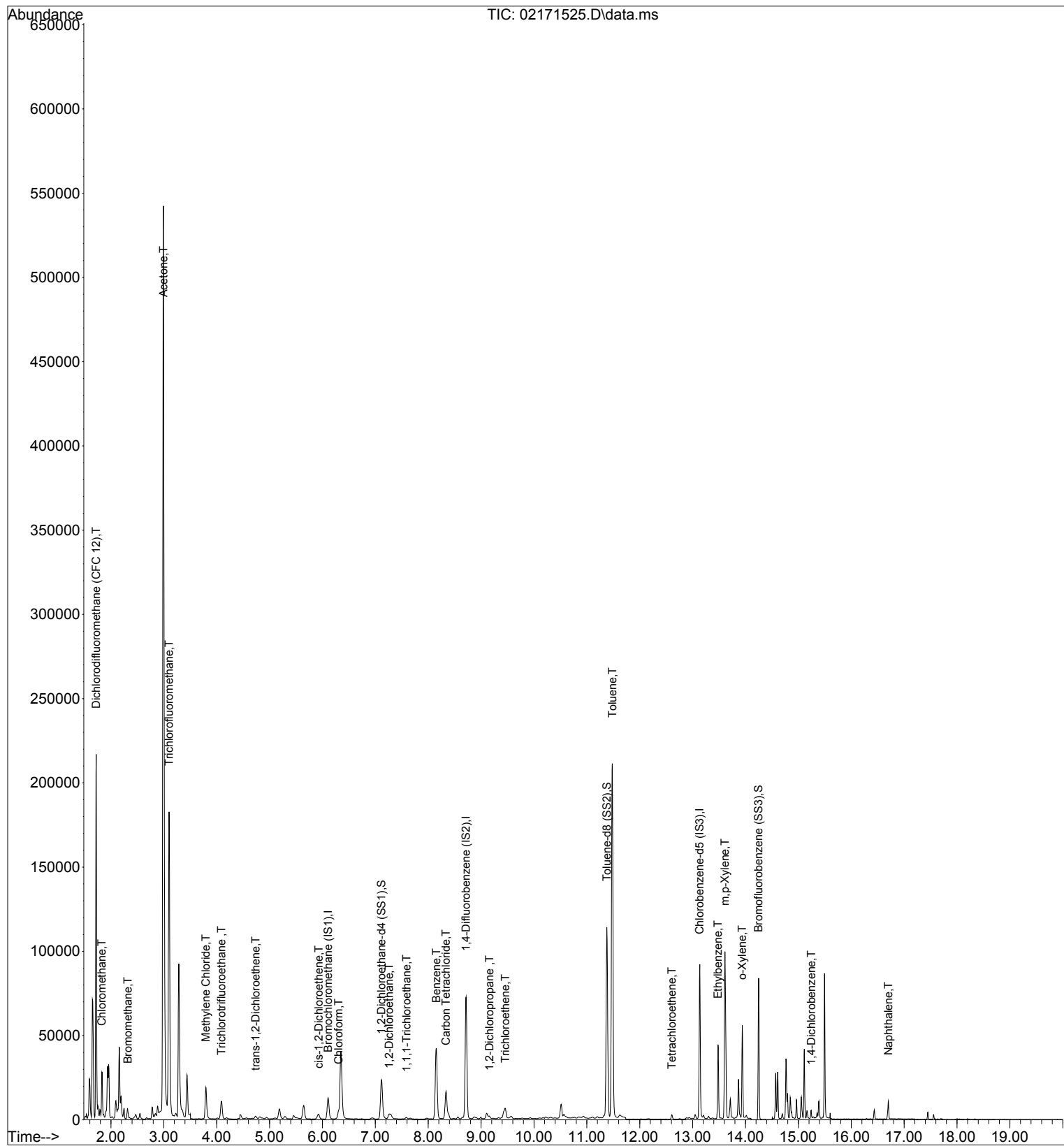
Quant Method : I:\MS19\METHODS\X19021115.M

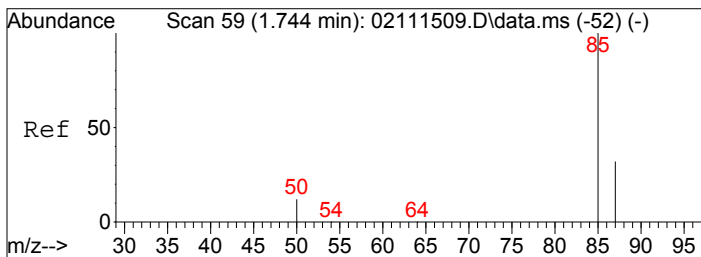
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

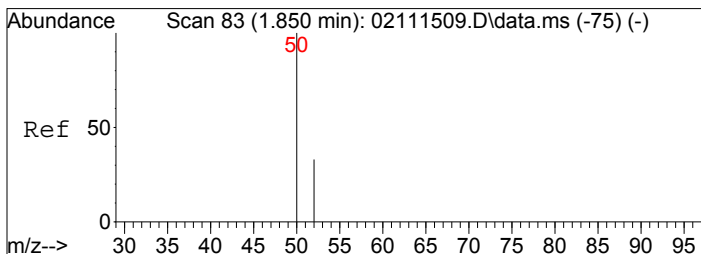
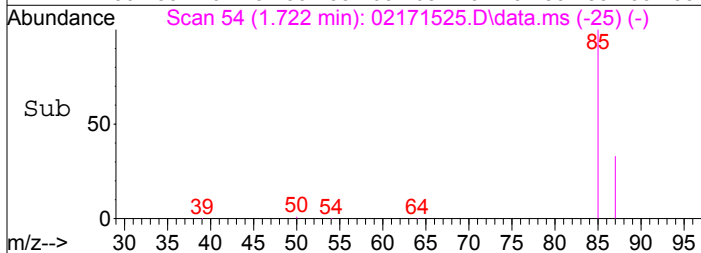
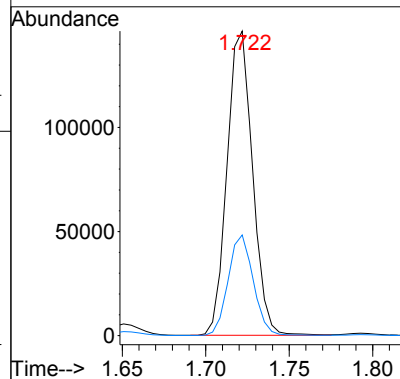
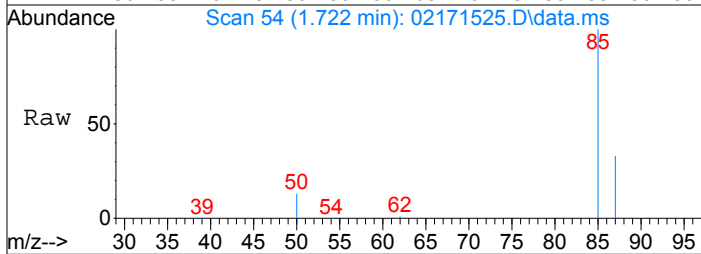
DataAcq Meth:TO15SIM.M





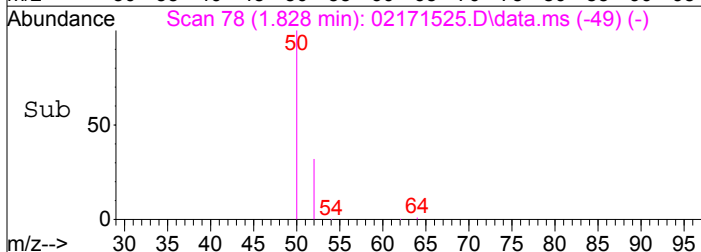
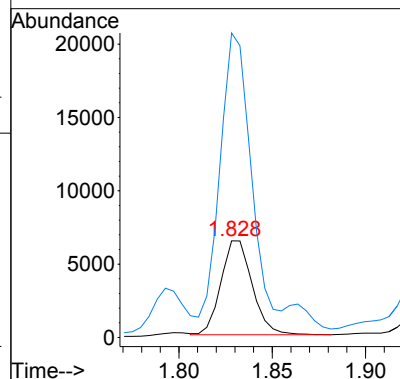
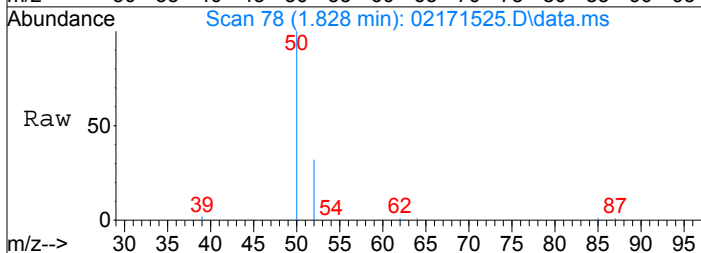
#2
 Dichlorodifluoromethane (CFC 12)
 Concen: 2050.53 pg
 RT: 1.72 min Scan# 54
 Delta R.T. -0.022 min
 Lab File: 02171525.D
 Acq: 17 Feb 2015 17:25

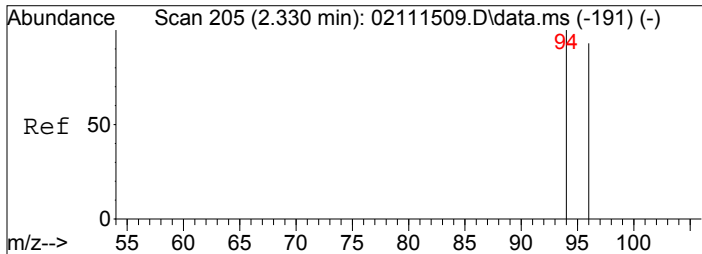
Tgt Ion: 85 Resp: 155759
 Ion Ratio Lower Upper
 85 100
 87 32.5 12.4 52.4



#3
 Chloromethane
 Concen: 494.02 pg
 RT: 1.83 min Scan# 78
 Delta R.T. -0.022 min
 Lab File: 02171525.D
 Acq: 17 Feb 2015 17:25

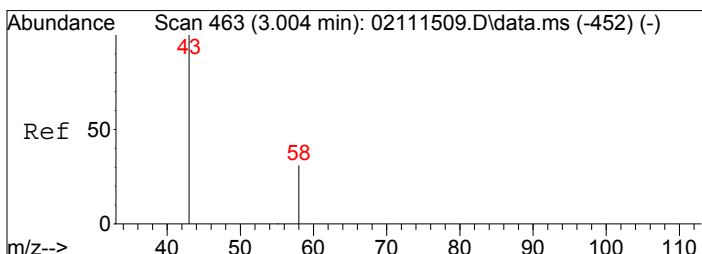
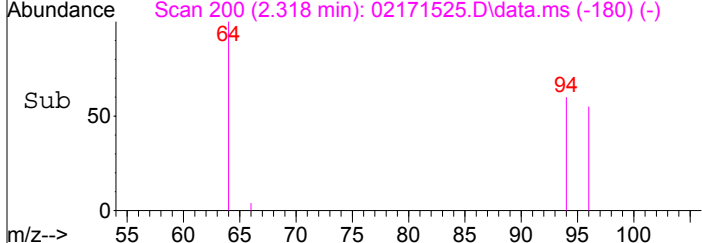
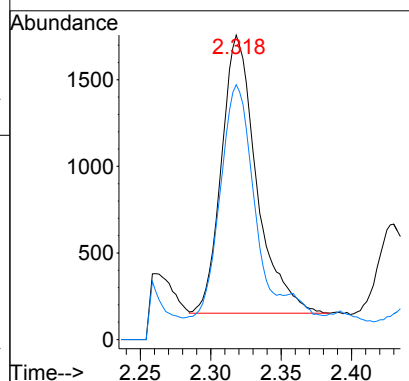
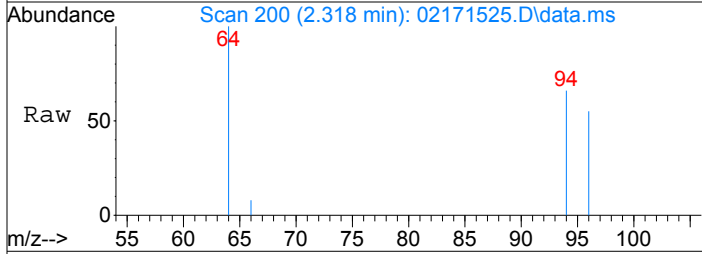
Tgt Ion: 52 Resp: 7494
 Ion Ratio Lower Upper
 52 100
 50 284.6 283.7 323.7





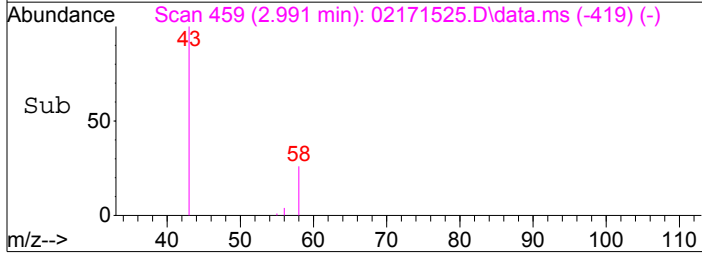
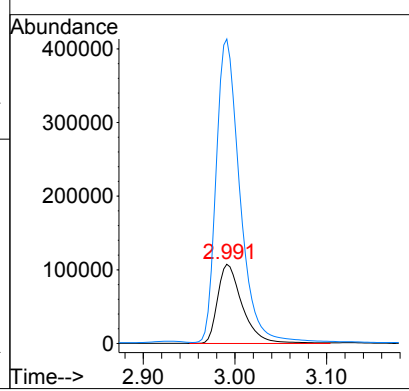
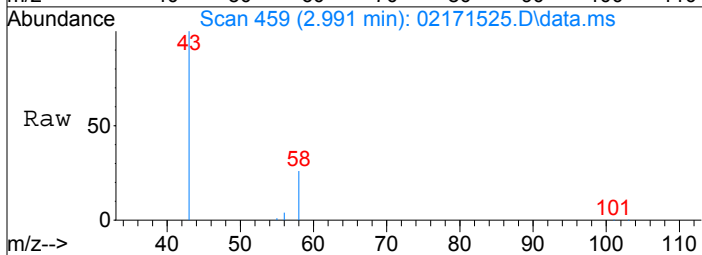
#5
 Bromomethane
 Concen: 81.36 pg
 RT: 2.32 min Scan# 200
 Delta R.T. -0.012 min
 Lab File: 02171525.D
 Acq: 17 Feb 2015 17:25

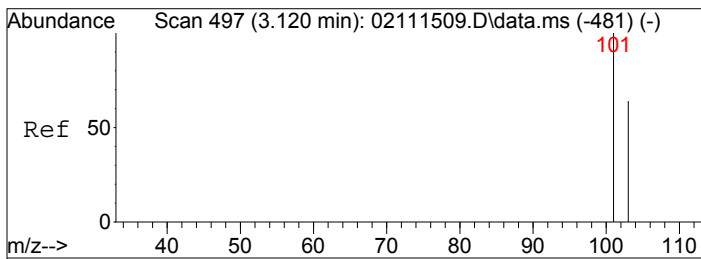
Tgt Ion:	94	Resp:	2779
Ion Ratio	Lower	Upper	
94	100		
96	83.8	75.5	113.3



#7
 Acetone
 Concen: 7486.58 pg
 RT: 2.99 min Scan# 459
 Delta R.T. -0.013 min
 Lab File: 02171525.D
 Acq: 17 Feb 2015 17:25

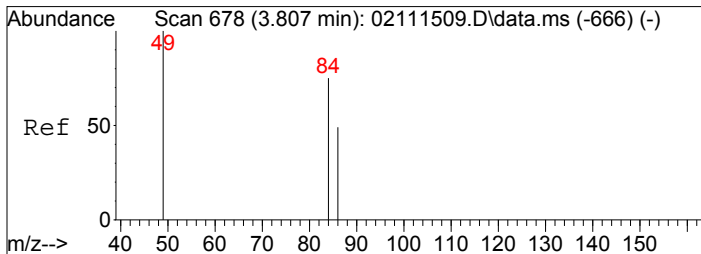
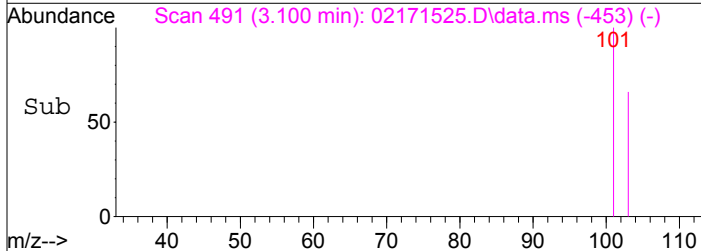
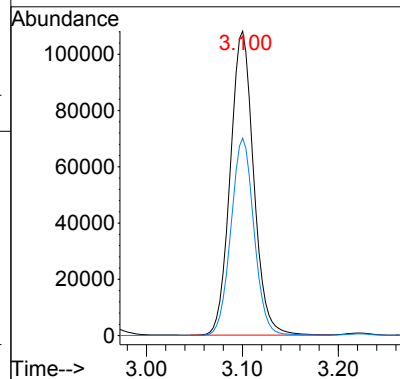
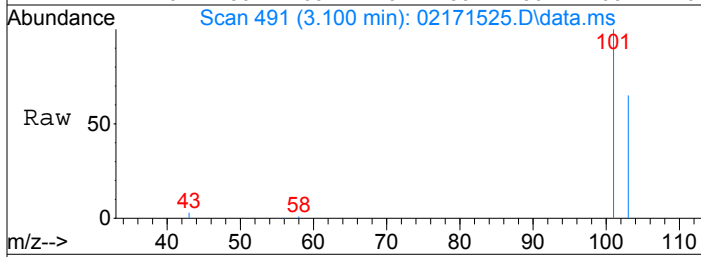
Tgt Ion:	58	Resp:	200816
Ion Ratio	Lower	Upper	
58	100		
43	370.3	301.8	341.8#





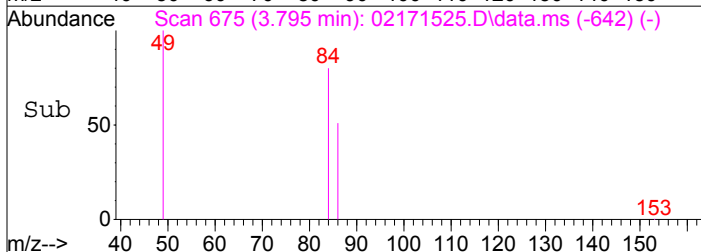
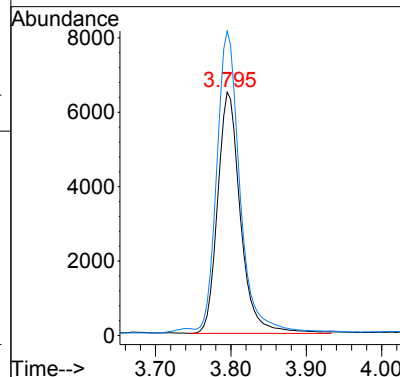
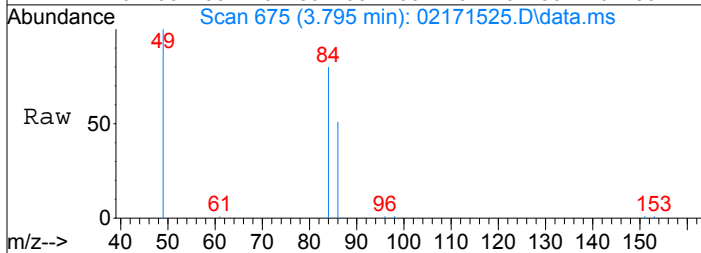
#8
 Trichlorofluoromethane
 Concen: 2808.04 pg
 RT: 3.10 min Scan# 491
 Delta R.T. -0.019 min
 Lab File: 02171525.D
 Acq: 17 Feb 2015 17:25

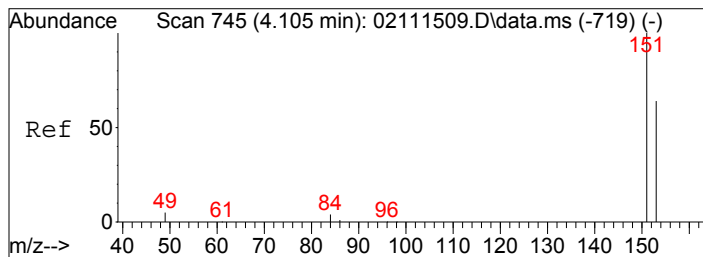
Tgt Ion: 101 Resp: 183216
 Ion Ratio Lower Upper
 101 100
 103 64.0 51.8 77.6



#10
 Methylene Chloride
 Concen: 440.60 pg
 RT: 3.80 min Scan# 675
 Delta R.T. -0.012 min
 Lab File: 02171525.D
 Acq: 17 Feb 2015 17:25

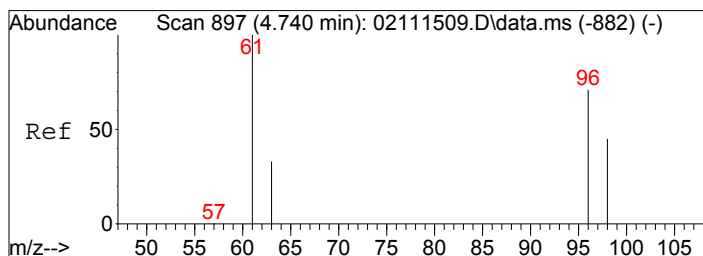
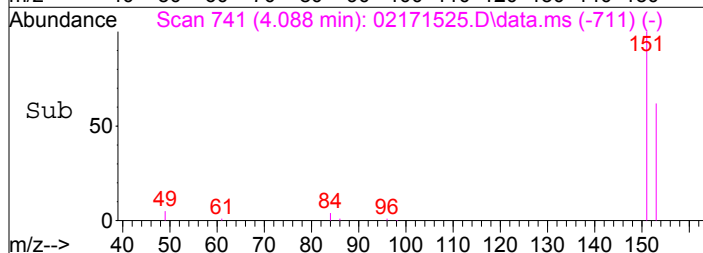
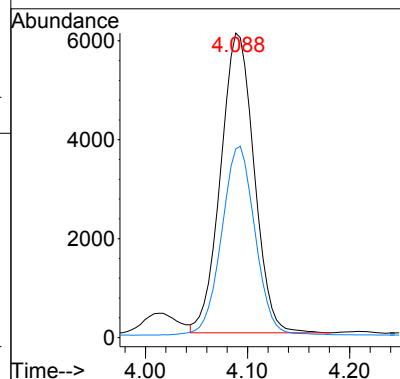
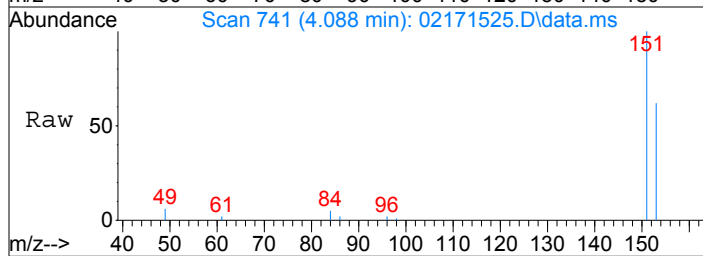
Tgt Ion: 84 Resp: 13641
 Ion Ratio Lower Upper
 84 100
 49 123.4 112.3 152.3





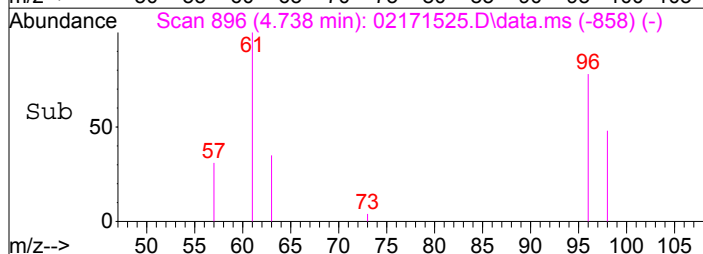
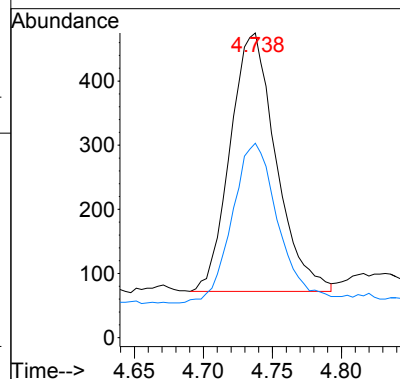
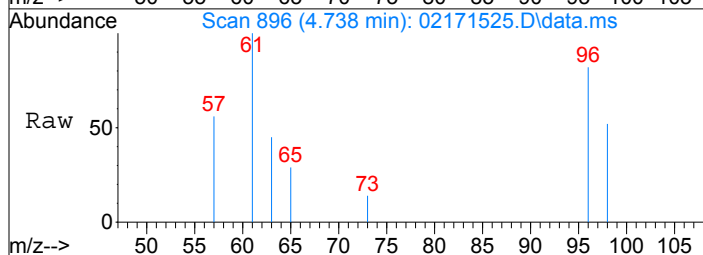
#11
 Trichlorotrifluoroethane
 Concen: 460.32 pg
 RT: 4.09 min Scan# 741
 Delta R.T. -0.017 min
 Lab File: 02171525.D
 Acq: 17 Feb 2015 17:25

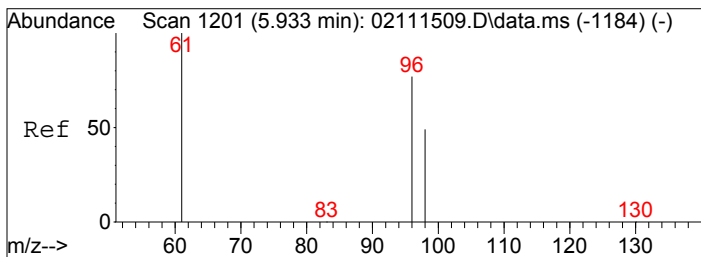
Tgt Ion: 151 Resp: 13801
 Ion Ratio Lower Upper
 151 100
 153 63.2 43.6 83.6



#12
 trans-1,2-Dichloroethene
 Concen: 31.30 pg
 RT: 4.74 min Scan# 896
 Delta R.T. -0.003 min
 Lab File: 02171525.D
 Acq: 17 Feb 2015 17:25

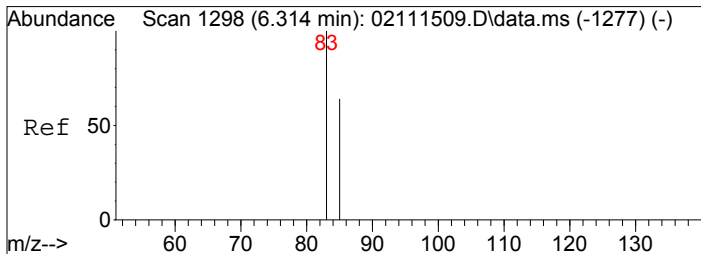
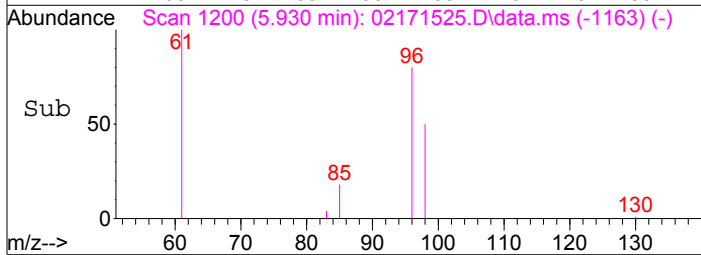
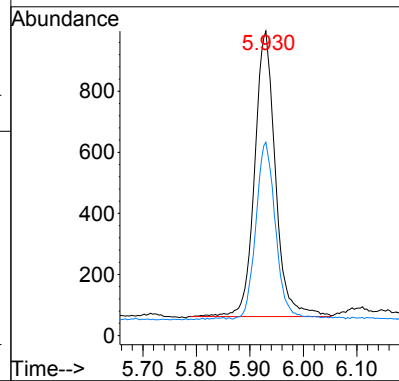
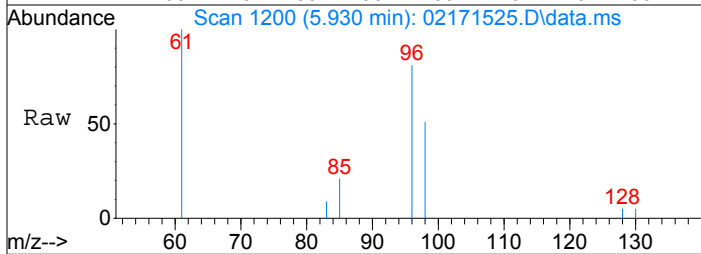
Tgt Ion: 96 Resp: 931
 Ion Ratio Lower Upper
 96 100
 98 62.3 43.7 83.7





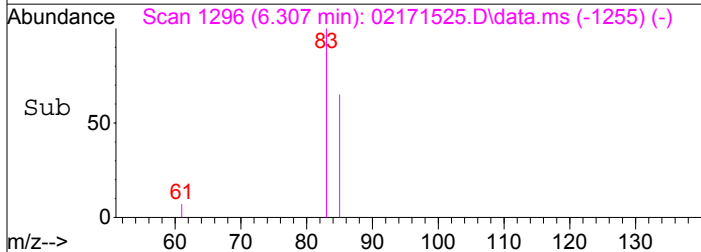
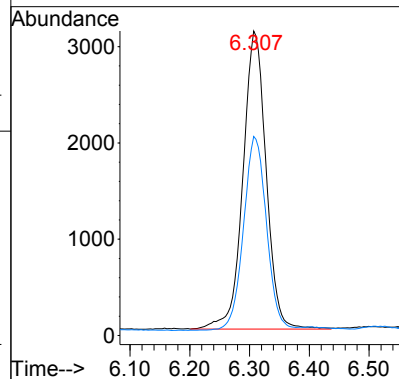
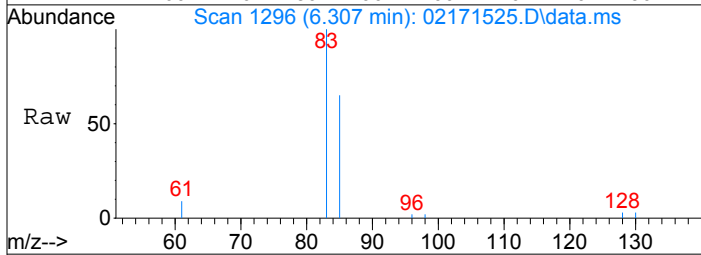
#15
 cis-1,2-Dichloroethene
 Concen: 76.52 pg
 RT: 5.93 min Scan# 1200
 Delta R.T. -0.003 min
 Lab File: 02171525.D
 Acq: 17 Feb 2015 17:25

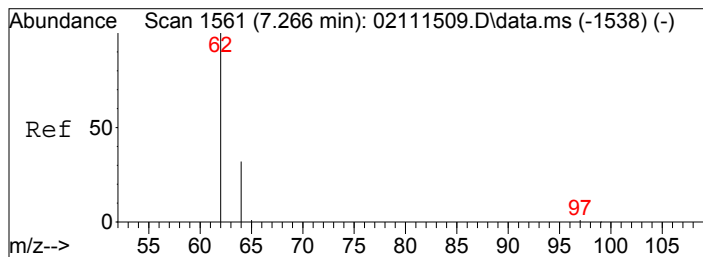
Tgt Ion: 96 Resp: 2531
 Ion Ratio Lower Upper
 96 100
 98 58.6 44.3 84.3



#16
 Chloroform
 Concen: 145.99 pg
 RT: 6.31 min Scan# 1296
 Delta R.T. -0.007 min
 Lab File: 02171525.D
 Acq: 17 Feb 2015 17:25

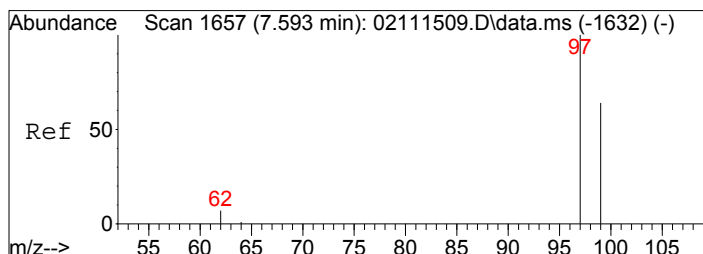
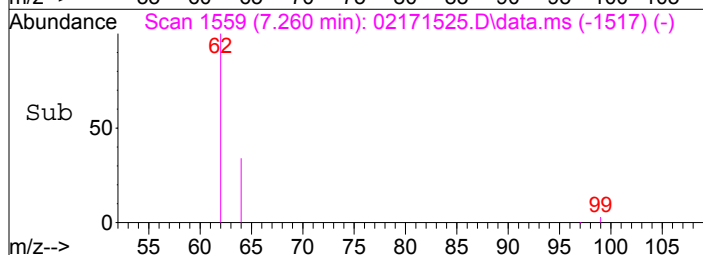
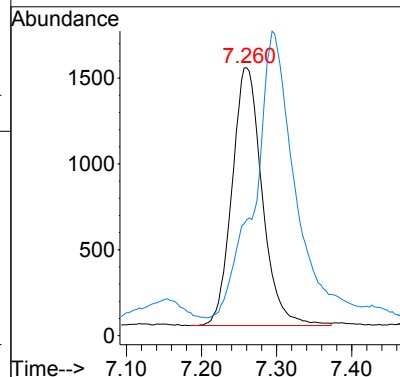
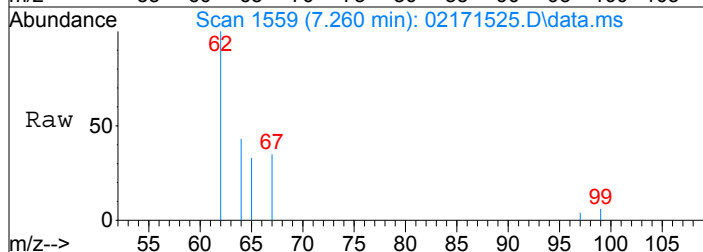
Tgt Ion: 83 Resp: 8366
 Ion Ratio Lower Upper
 83 100
 85 64.9 45.4 85.4





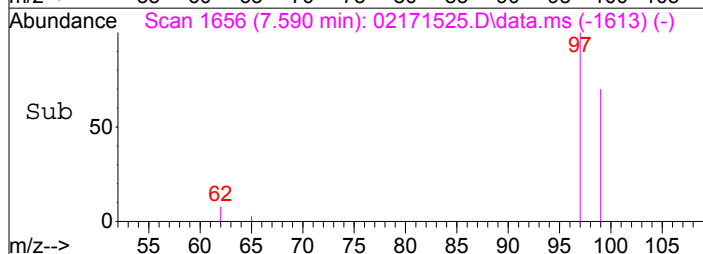
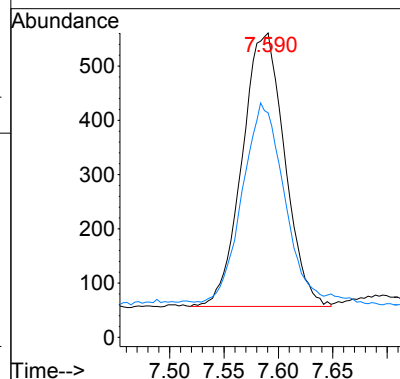
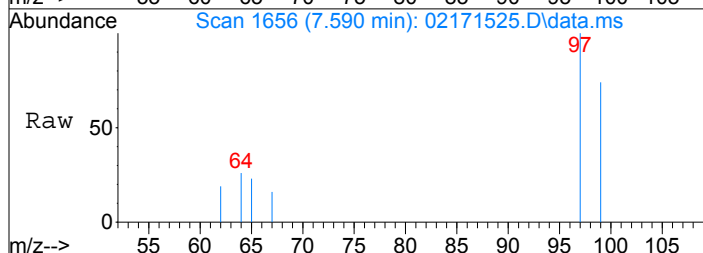
#18
1,2-Dichloroethane
Concen: 91.81 pg
RT: 7.26 min Scan# 1559
Delta R.T. -0.006 min
Lab File: 02171525.D
Acq: 17 Feb 2015 17:25

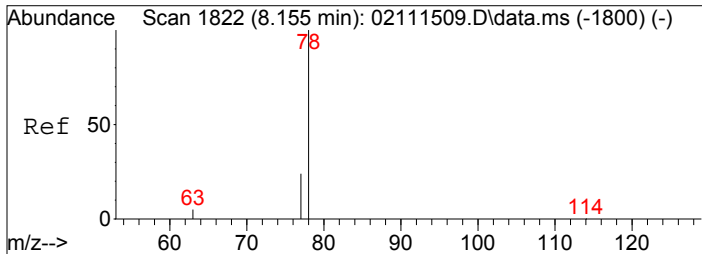
Tgt Ion: 62 Resp: 4189
Ion Ratio Lower Upper
62 100
64 146.6 11.6 51.6#



#19
1,1,1-Trichloroethane
Concen: 24.60 pg
RT: 7.59 min Scan# 1656
Delta R.T. -0.002 min
Lab File: 02171525.D
Acq: 17 Feb 2015 17:25

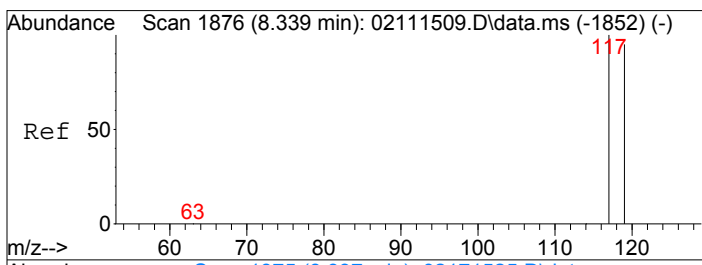
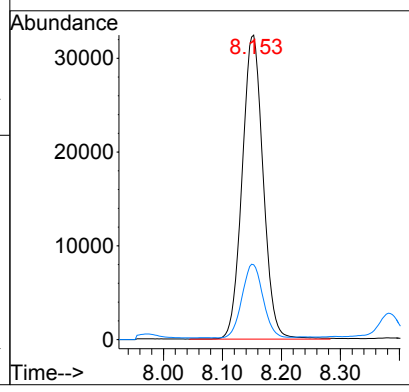
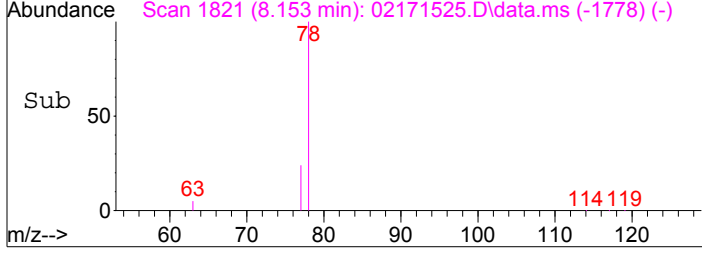
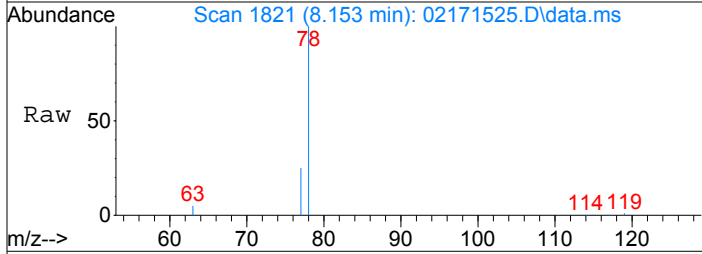
Tgt Ion: 97 Resp: 1371
Ion Ratio Lower Upper
97 100
99 70.8 44.0 84.0





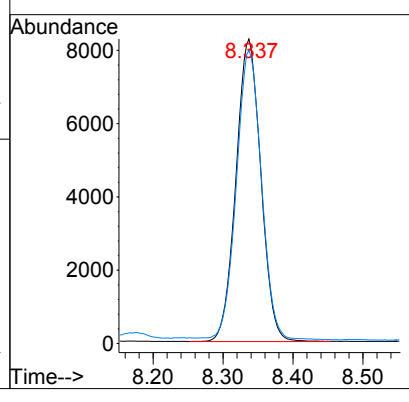
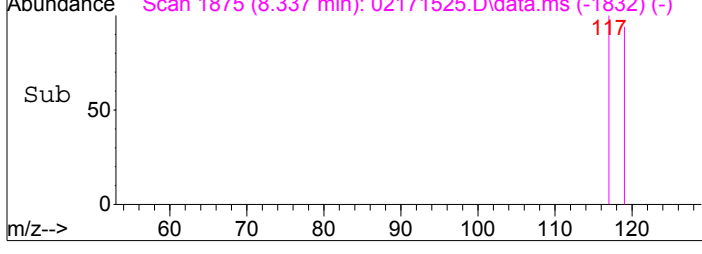
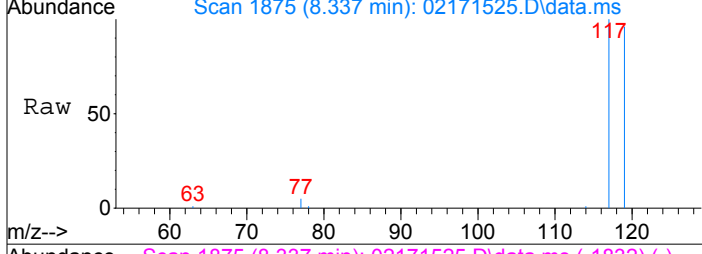
#20
Benzene
Concen: 679.42 pg
RT: 8.15 min Scan# 1821
Delta R.T. -0.002 min
Lab File: 02171525.D
Acq: 17 Feb 2015 17:25

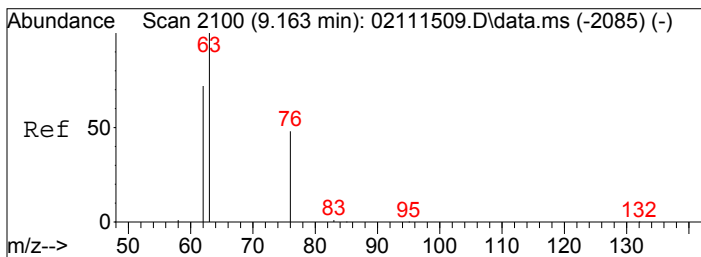
Tgt Ion:	78	Resp:	80080
Ion Ratio	Lower	Upper	
78	100		
77	24.2	3.7	43.7



#21
Carbon Tetrachloride
Concen: 488.83 pg
RT: 8.34 min Scan# 1875
Delta R.T. -0.002 min
Lab File: 02171525.D
Acq: 17 Feb 2015 17:25

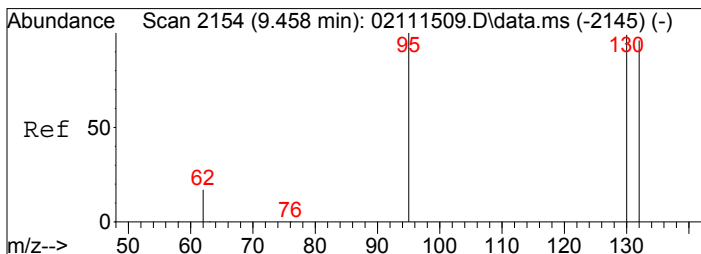
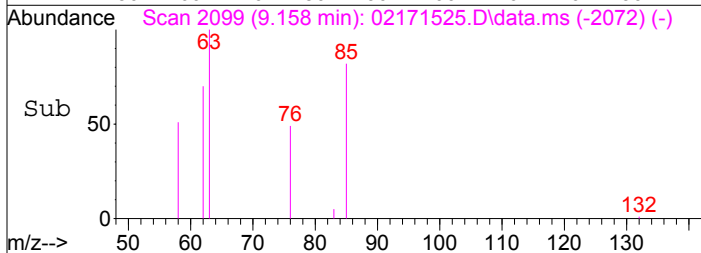
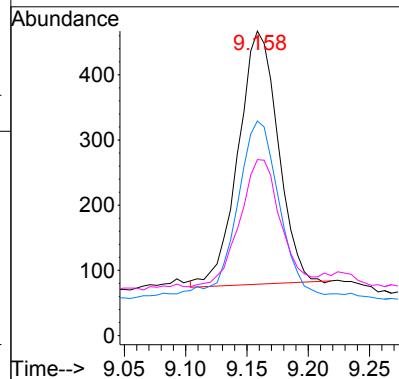
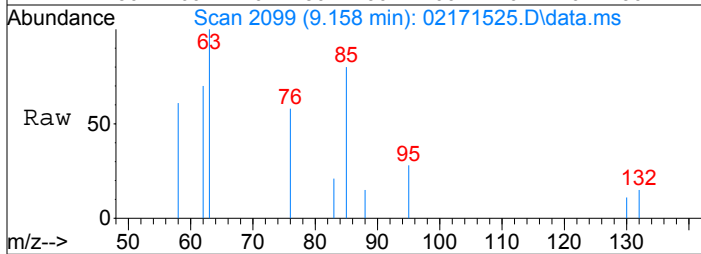
Tgt Ion:	117	Resp:	20394
Ion Ratio	Lower	Upper	
117	100		
119	96.6	75.5	115.5





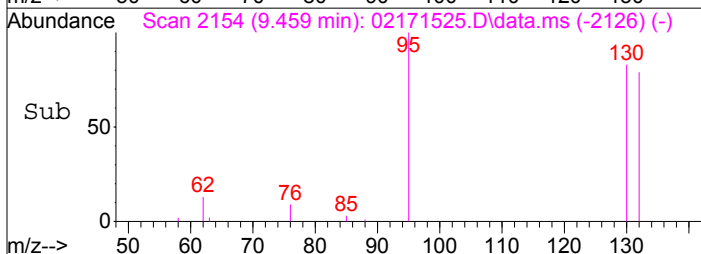
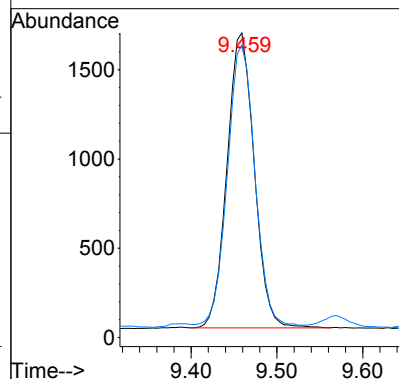
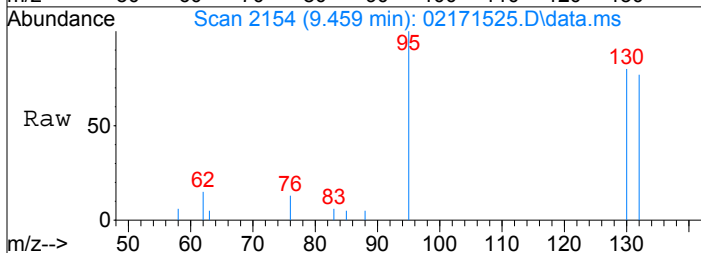
#23
1,2-Dichloropropane
Concen: 29.40 pg
RT: 9.16 min Scan# 2099
Delta R.T. -0.004 min
Lab File: 02171525.D
Acq: 17 Feb 2015 17:25

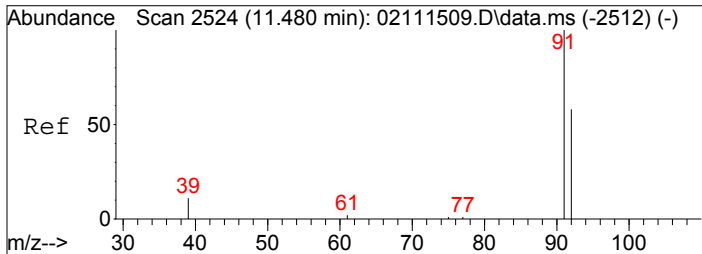
Tgt Ion: 63 Resp: 879
Ion Ratio Lower Upper
63 100
62 79.3 52.0 92.0
76 53.7 28.1 68.1



#25
Trichloroethene
Concen: 103.65 pg
RT: 9.46 min Scan# 2154
Delta R.T. 0.001 min
Lab File: 02171525.D
Acq: 17 Feb 2015 17:25

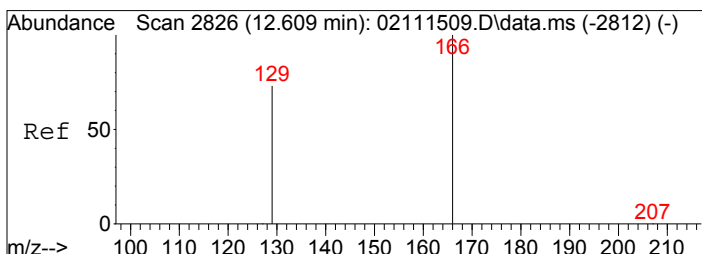
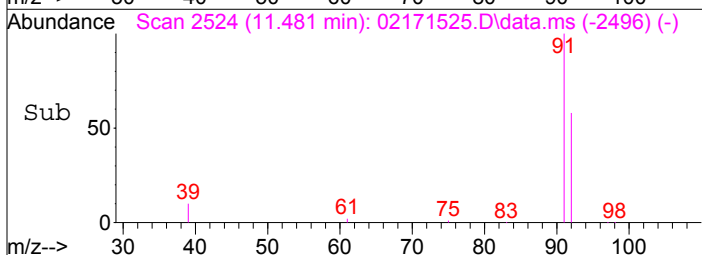
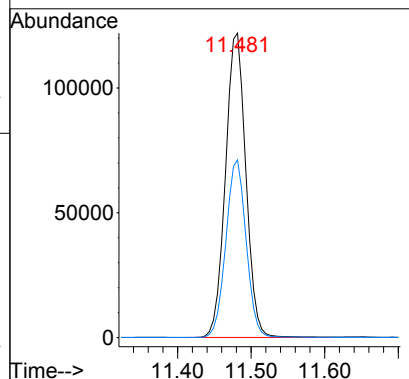
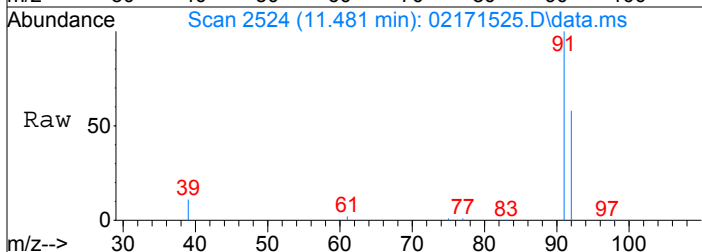
Tgt Ion: 130 Resp: 3650
Ion Ratio Lower Upper
130 100
132 95.0 77.1 117.1





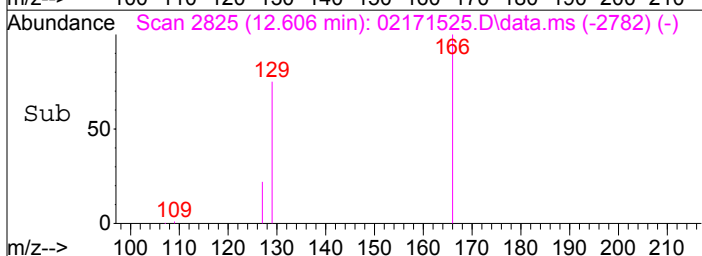
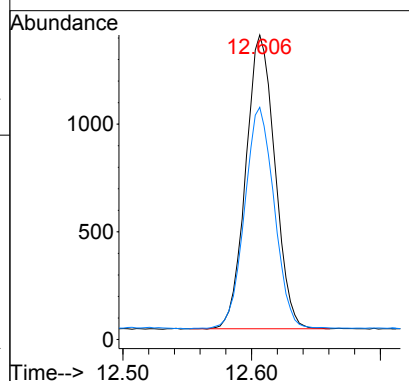
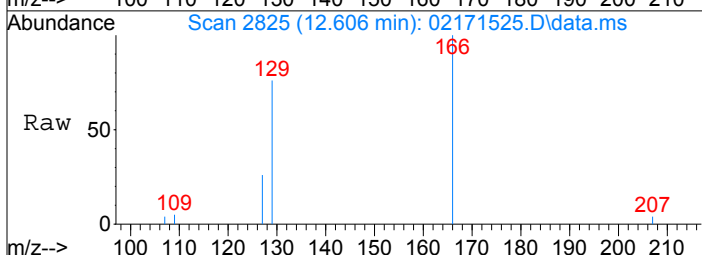
#31
Toluene
Concen: 1746.03 pg
RT: 11.48 min Scan# 2524
Delta R.T. 0.001 min
Lab File: 02171525.D
Acq: 17 Feb 2015 17:25

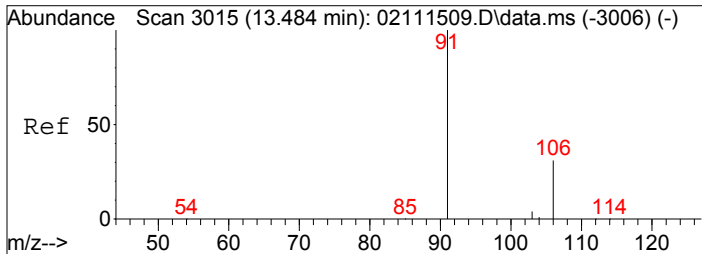
Tgt Ion: 91 Resp: 234729
Ion Ratio Lower Upper
91 100
92 58.1 37.7 77.7



#33
Tetrachloroethene
Concen: 51.60 pg
RT: 12.61 min Scan# 2825
Delta R.T. -0.003 min
Lab File: 02171525.D
Acq: 17 Feb 2015 17:25

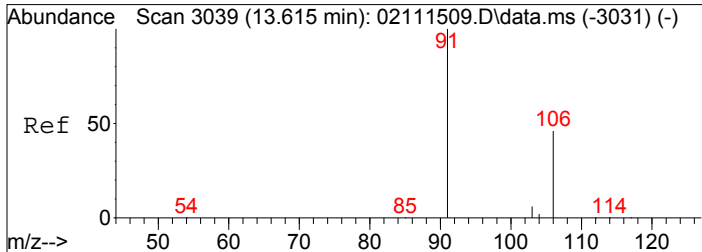
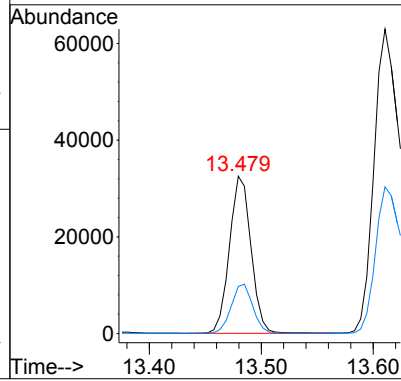
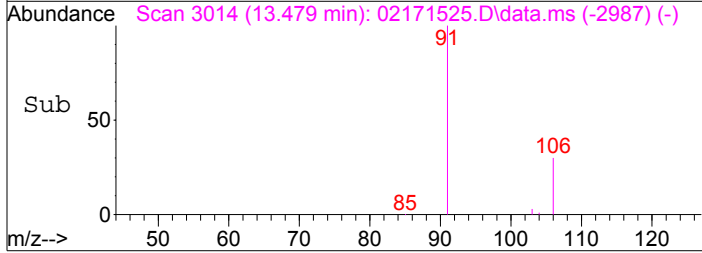
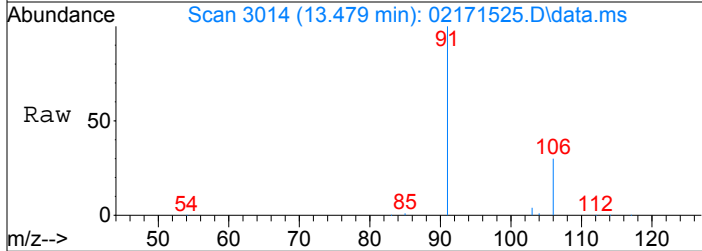
Tgt Ion: 166 Resp: 2148
Ion Ratio Lower Upper
166 100
129 77.0 53.3 93.3





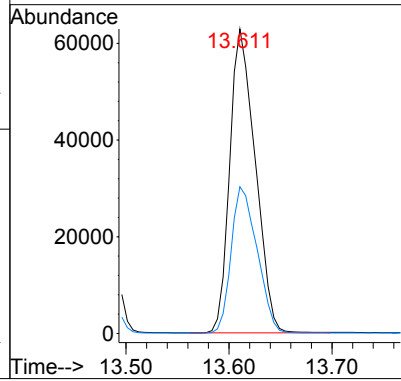
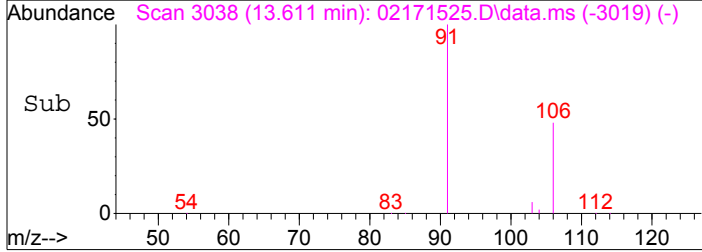
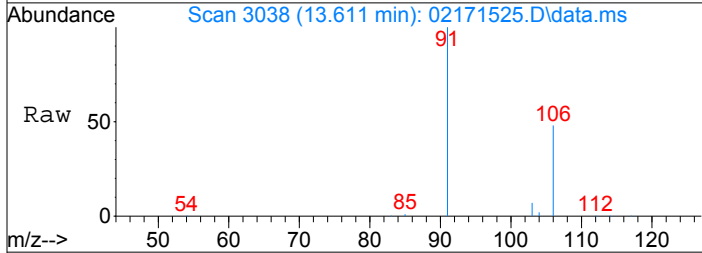
#36
Ethylbenzene
Concen: 298.78 pg
RT: 13.48 min Scan# 3014
Delta R.T. -0.004 min
Lab File: 02171525.D
Acq: 17 Feb 2015 17:25

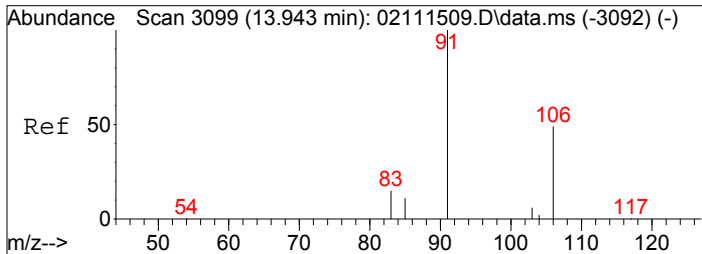
Tgt Ion: 91 Resp: 43408
Ion Ratio Lower Upper
91 100
106 31.4 10.9 50.9



#37
m,p-Xylene
Concen: 906.00 pg
RT: 13.61 min Scan# 3038
Delta R.T. -0.004 min
Lab File: 02171525.D
Acq: 17 Feb 2015 17:25

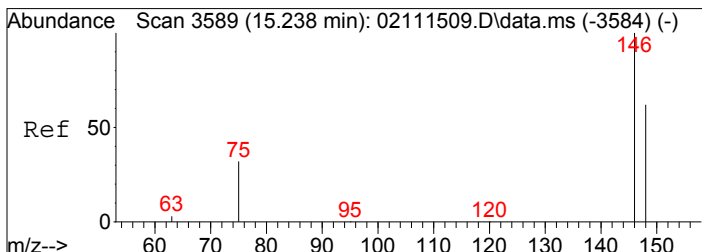
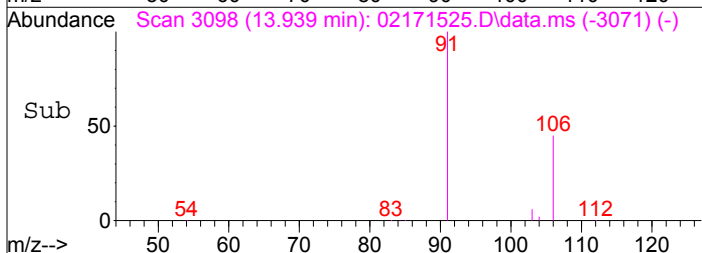
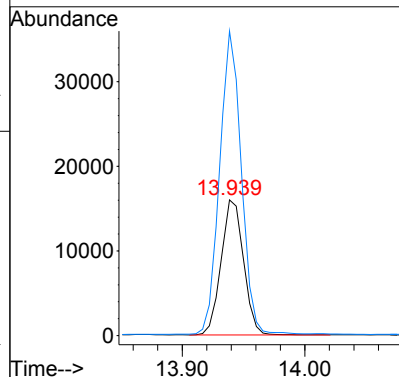
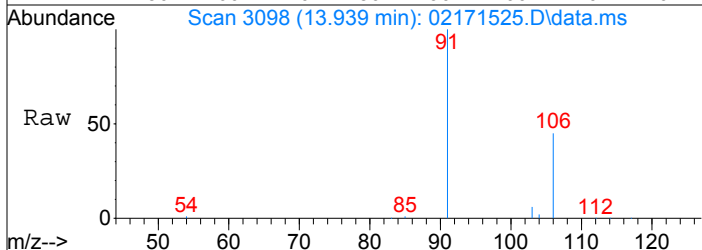
Tgt Ion: 91 Resp: 108182
Ion Ratio Lower Upper
91 100
106 49.0 27.5 67.5





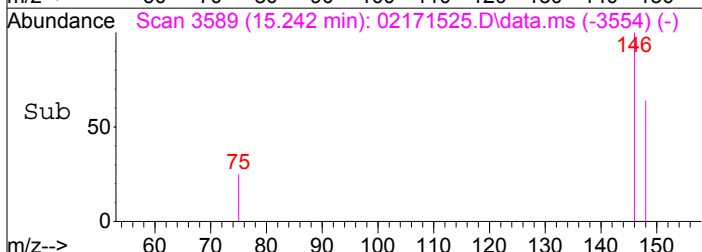
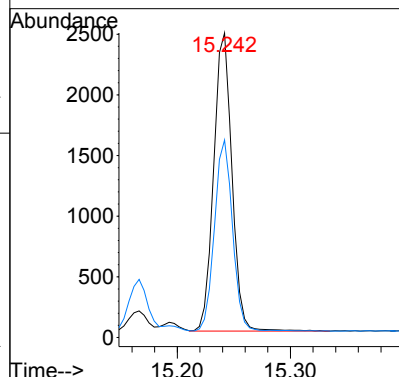
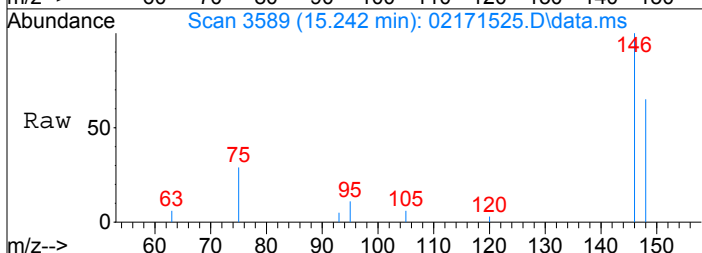
#38
o-Xylene
Concen: 346.34 pg
RT: 13.94 min Scan# 3098
Delta R.T. -0.004 min
Lab File: 02171525.D
Acq: 17 Feb 2015 17:25

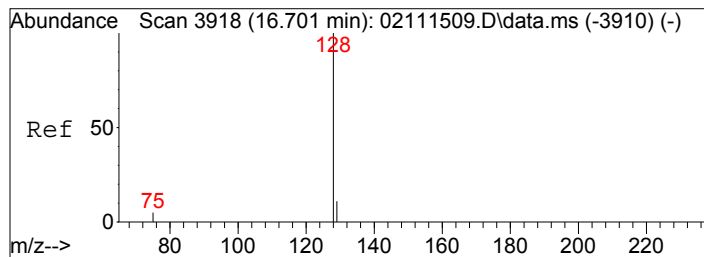
Tgt Ion	106	Resp	20211
Ion Ratio	100	Lower	Upper
91	217.1	198.3	238.3



#42
1,4-Dichlorobenzene
Concen: 34.37 pg
RT: 15.24 min Scan# 3589
Delta R.T. 0.004 min
Lab File: 02171525.D
Acq: 17 Feb 2015 17:25

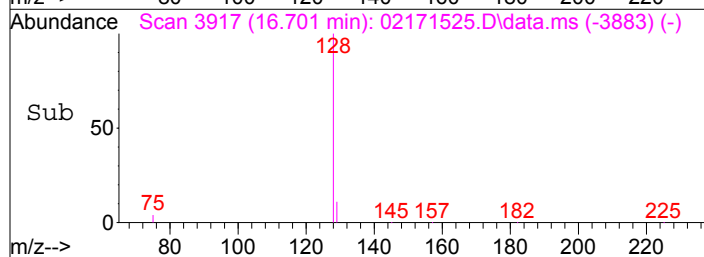
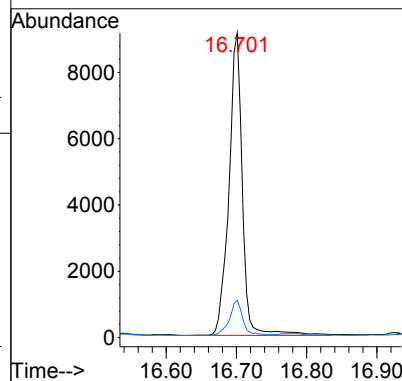
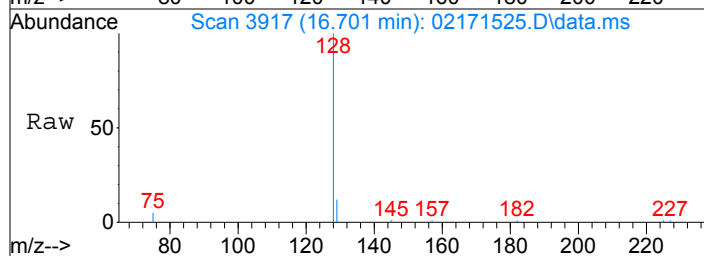
Tgt Ion	146	Resp	2752
Ion Ratio <td>100</td> <td>Lower</td> <td>Upper</td>	100	Lower	Upper
148	63.7	43.5	83.5





#45
Naphthalene
Concen: 83.73 pg
RT: 16.70 min Scan# 3917
Delta R.T. 0.000 min
Lab File: 02171525.D
Acq: 17 Feb 2015 17:25

Tgt Ion:128 Resp: 12138
Ion Ratio Lower Upper
128 100
129 11.7 0.0 30.9



Method Path : I:\MS19\METHODS\
Method File : X19021115.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
Last Update : Thu Feb 12 14:42:03 2015
Response Via : Initial Calibration

2/12/15

Calibration Files

10 =021111505.D 20 =021111506.D 50 =021111507.D 100 =021111508.D 500 =021111509.D 1000=021111510.D 2500=021111514.D
20K =021111512.D 50K =021111513.D

Compound		10	20	50	100	500	1000	2500	20K	50K	Avg	%RSD

1) I	Bromochloromethane...	-----ISTD-----										
2) T	Dichlorodifluo...	5.674	4.401	4.088	4.017	4.078	3.833	3.537	3.282	3.667	4.064	16.97
3) T	Chloromethane	1.107	0.953	0.838	0.822	0.822	0.765	0.688	0.647	0.672	0.812	19.32
4) T	Vinyl Chloride	4.549	3.494	3.276	3.292	3.175	2.965	2.519	2.603	2.572	3.161	19.93
5) T	Bromomethane	2.525	1.972	1.670	1.883	1.731	1.542	1.665	1.632	1.632	1.827	17.20
6) T	Chloroethane	2.213	1.693	1.568	1.546	1.559	1.456	1.542	1.301	1.256	1.537	19.37
7) T	Acetone	1.808	1.978	1.832	1.371	1.516	0.903	1.057	1.016	1.435		28.90
8) T	Trichlorofluor...	4.241	3.423	4.573	4.451	3.206	3.074	2.721	2.853	2.876	3.491	20.98
9) T	1,1-Dichloroet...	1.958	1.613	1.494	1.483	1.553	1.487	1.428	1.492	1.515	1.558	10.16
10) T	Methylene Chlo...	2.206	1.874	1.598	1.521	1.417	1.503	1.475	1.656			17.15
11) T	Trichlorotrifl...	2.301	1.652	1.578	1.525	1.516	1.445	1.429	1.466	1.524	1.604	16.84
12) T	trans-1,2-Dich...	1.866	1.557	1.527	1.496	1.618	1.567	1.499	1.591	1.602	1.591	7.03
13) T	1,1-Dichloroet...	3.843	3.165	2.876	2.475	2.981	2.756	2.528	2.588	2.499	2.857	15.41
14) T	Methyl tert-Bu...	6.824	5.281	4.946	4.850	5.031	4.791	4.480	4.688	4.684	5.064	13.80
15) T	cis-1,2-Dichlo...	2.223	1.866	1.729	1.707	1.761	1.694	1.573	1.703	1.670	1.770	10.56
16) T	Chloroform	3.529	3.139	3.141	2.962	2.612	2.990	3.089	3.066			8.92
17) S	1,2-Dichloroet...	2.646	2.642	2.679	2.657	2.513	2.455	2.222	2.187	1.978	2.442	10.42
18) T	1,2-Dichloroet...	3.260	2.548	2.468	2.423	2.532	2.385	2.047	2.190	2.116	2.441	14.61
19) T	1,1,1-Trichlor...	3.850	3.125	2.919	2.864	3.016	2.858	2.592	2.828	2.780	2.981	12.00
20) T	Benzene	8.203	6.815	6.387	6.279	5.936	5.302	5.841	5.685	6.306		14.20
21) T	Carbon Tetrach...	2.276	1.947	1.863	1.896	2.269	2.218	2.096	2.690	2.834	2.232	15.23

22) I	1,4-Difluorobenzen...	-----ISTD-----										
23) T	1,2-Dichloropr...	0.263	0.225	0.210	0.204	0.224	0.215	0.193	0.209	0.219	0.218	9.00
24) T	Bromodichlorom...	0.364	0.304	0.284	0.287	0.320	0.313	0.287	0.329	0.345	0.315	8.83
25) T	Trichloroethene	0.309	0.253	0.233	0.232	0.245	0.239	0.226	0.271	0.306	0.257	12.27
26) T	1,4-Dioxane	0.238	0.179	0.164	0.162	0.204	0.200	0.165	0.195	0.216	0.191	13.63
27) T	cis-1,3-Dichlo...	0.242	0.234	0.246	0.303	0.308	0.302	0.356	0.380	0.297		18.09
28) T	trans-1,3-Dich...	0.162	0.180	0.242	0.256	0.265	0.336		0.240			26.19
29) T	1,1,2-Trichlor...	0.223	0.188	0.172	0.174	0.189	0.185	0.164	0.192	0.201	0.188	9.37
30) S	Toluene-d8 (SS2)	0.910	0.923	0.930	0.935	0.925	0.924	0.905	0.928	0.920	0.922	1.04
31) T	Toluene	1.476	0.994	0.887	0.871	0.913	0.889	0.819	0.962	1.016	0.981	19.98
32) T	1,2-Dibromoethane	0.266	0.216	0.207	0.211	0.238	0.236	0.218	0.269	0.281	0.238	11.75
33) T	Tetrachloroethene	0.285	0.265	0.264	0.280	0.272	0.255	0.354	0.454	0.304		22.46

34) I	Chlorobenzene-d5 (...)	-----ISTD-----										
35) T	Chlorobenzene	4.919	3.630	3.298	3.245	3.590	3.519	3.341	3.924	3.818	3.698	13.85
36) T	Ethylbenzene	7.828	5.941	5.342	5.354	6.291	6.206	5.916	7.004	6.557	6.271	12.59
37) T	m,p-Xylene	5.953	4.562	4.210	4.164	5.185	5.142	4.953	6.397		5.071	15.62
38) T	o-Xylene	2.834	2.200	1.986	2.021	2.491	2.473	2.370	3.083	3.211	2.519	17.51
39) T	1,1,2,2-Tetrac...	2.995	2.295	2.124	2.154	2.458	2.405	2.088	2.892	2.902	2.479	14.54
40) S	Bromofluoroben...	1.822	1.890	1.933	2.006	2.023	2.065	2.236	2.196	1.999	2.019	6.64
41) T	1,3-Dichlorobe...	2.847	2.639	2.662	2.998	2.986	2.715	4.311	4.550	3.213		23.83

Method Path : I:\MS19\METHODS\
Method File : X19021115.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

42) T	1,4-Dichlorob...	3.944	3.183	2.894	2.905	3.265	3.249	2.924	4.335	4.403	3.456	17.61
43) T	1,2-Dichlorob...	3.640	2.813	2.594	2.641	2.986	2.977	2.590	3.818	3.813	3.097	16.75
44) T	1,2,4-Trichlor...		1.796	1.707	1.734	1.809	1.828	1.796	2.646		1.902	17.38
45) T	Naphthalene	7.829	5.345	4.905	5.051	6.007	6.228	6.232	8.458		6.257	20.48
46) T	Hexachlorobuta...		1.273	1.150	1.159	1.208	1.207	1.099	1.788		1.269	18.54

(#) = Out of Range

TO-15 (SIM) INITIAL CALIBRATION CONCENTRATIONS

0.2ng/L Working Standard ID: **S29-01221514**4ng/L Working Standard ID: **S29-01221510**5ng/L Working Standard ID: **0**20ng/L Working Standard ID: **S29-01221506**50ng/L Working Standard ID: **0**200ng/L Working Standard ID: **S29-02031501**

Std. Canister Utilized (ng/L) Injection Amt(mL)	0.2 50	0.2 100	0.2 250	0.2 500	4 125	4 250	20 125	NA FALSE	200 100	200 250
Compound Name	Conc. 10pg	Conc. 20pg	Conc. 50pg	Conc. 100pg	Conc. 500pg	Conc. 1000pg	Conc. 2500pg	Conc. 10,000pg	Conc. 20,000pg	Conc. 50,000pg
Freon-12	9.50	19.00	47.50	95.0	475	950	2375	FALSE	19000	47500
Chloromethane	10.10	20.20	50.50	101.0	505	1010	2525	FALSE	20200	50500
Vinyl Chloride	10.00	20.00	50.00	100.0	500	1000	2500	FALSE	20000	50000
1,3-Butadiene	10.40	20.80	52.00	104.0	520	1040	2600	FALSE	20800	52000
Bromomethane	10.20	20.40	51.00	102.0	510	1020	2550	FALSE	20400	51000
Chloroethane	10.10	20.20	50.50	101.0	505	1010	2525	FALSE	20200	50500
Acrolein	11.30	22.60	56.50	113.0	565	1130	2825	FALSE	22600	56500
Acetone	54.60	109.20	273.00	546.0	2730	5460	13650	FALSE	109200	273000
Freon-11	10.80	21.60	54.00	108.0	540	1080	2700	FALSE	21600	54000
1,1-Dichloroethene	10.90	21.80	54.50	109.0	545	1090	2725	FALSE	21800	54500
Methylene Chloride	11.30	22.60	56.50	113.0	565	1130	2825	FALSE	22600	56500
Freon-113	10.90	21.80	54.50	109.0	545	1090	2725	FALSE	21800	54500
trans-1,2-Dichloroethene	10.60	21.20	53.00	106.0	530	1060	2650	FALSE	21200	53000
1,1-Dichloroethane	10.70	21.40	53.50	107.0	535	1070	2675	FALSE	21400	53500
Methyl tert-Butyl Ether	10.90	21.80	54.50	109.0	545	1090	2725	FALSE	21800	54500
cis-1,2-Dichloroethene	11.00	22.00	55.00	110.0	550	1100	2750	FALSE	22000	55000
Chloroform	11.20	22.40	56.00	112.0	560	1120	2800	FALSE	22400	56000
1,2-Dichloroethane	10.80	21.60	54.00	108.0	540	1080	2700	FALSE	21600	54000
1,1,1-Trichloroethane	10.50	21.00	52.50	105.0	525	1050	2625	FALSE	21000	52500
Benzene	11.30	22.60	56.50	113.0	565	1130	2825	FALSE	22600	56500
Carbon Tetrachloride	11.50	23.00	57.50	115.0	575	1150	2875	FALSE	23000	57500
1,2-Dichloropropane	10.90	21.80	54.50	109.0	545	1090	2725	FALSE	21800	54500
Bromodichloromethane	10.90	21.80	54.50	109.0	545	1090	2725	FALSE	21800	54500
Trichloroethene	10.80	21.60	54.00	108.0	540	1080	2700	FALSE	21600	54000
1,4-Dioxane	10.90	21.80	54.50	109.0	545	1090	2725	FALSE	21800	54500
cis-1,3-Dichloropropene	10.50	21.00	52.50	105.0	525	1050	2625	FALSE	21000	52500
trans-1,3-Dichloropropene	10.60	21.20	53.00	106.0	530	1060	2650	FALSE	21200	53000
1,1,2-Trichloroethane	10.90	21.80	54.50	109.0	545	1090	2725	FALSE	21800	54500
Toluene	11.00	22.00	55.00	110.0	550	1100	2750	FALSE	22000	55000
1,2-Dibromoethane	11.00	22.00	55.00	110.0	550	1100	2750	FALSE	22000	55000
Tetrachloroethene	10.10	20.20	50.50	101.0	505	1010	2525	FALSE	20200	50500
Chlorobenzene	11.10	22.20	55.50	111.0	555	1110	2775	FALSE	22200	55500
Ethylbenzene	11.00	22.00	55.00	110.0	550	1100	2750	FALSE	22000	55000
m,p-Xylenes	21.60	43.20	108.00	216.0	1080	2160	5400	FALSE	43200	108000
o-Xylene	10.60	21.20	53.00	106.0	530	1060	2650	FALSE	21200	53000
1,1,2,2-Tetrachloroethane	10.50	21.00	52.50	105.0	525	1050	2625	FALSE	21000	52500
1,3-Dichlorobenzene	11.40	22.80	57.00	114.0	570	1140	2850	FALSE	22800	57000
1,4-Dichlorobenzene	10.60	21.20	53.00	106.0	530	1060	2650	FALSE	21200	53000
1,2-Dichlorobenzene	11.10	22.20	55.50	111.0	555	1110	2775	FALSE	22200	55500
1,2-Dibromo-3-chloropropane	11.00	22.00	55.00	110.0	550	1100	2750	FALSE	22000	55000
1,2,4-Trichlorobenzene	11.30	22.60	56.50	113.0	565	1130	2825	FALSE	22600	56500
Naphthalene	11.10	22.20	55.50	111.0	555	1110	2775	FALSE	22200	55500
Hexachloro-1,3-butadiene	11.20	22.40	56.00	112.0	560	1120	2800	FALSE	22400	56000

Method : I:\MS19\METHODS\X19021115.M (RTE Integrator)
 Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 Last Update : Thu Feb 12 14:42:03 2015
 Response via : Initial Calibration

EA 2/12/15

#	ID	Conc	ISTD Conc	Path\File
1	10	10	1000	I:\MS19\DATA\2015_02\11\02111505.D
2	20	19	1000	I:\MS19\DATA\2015_02\11\02111506.D
3	50	48	1000	I:\MS19\DATA\2015_02\11\02111507.D
4	100	95	1000	I:\MS19\DATA\2015_02\11\02111508.D
5	500	475	1000	I:\MS19\DATA\2015_02\11\02111509.D
6	1000	950	1000	I:\MS19\DATA\2015_02\11\02111510.D
7	2500	2375	1000	I:\MS19\DATA\2015_02\11\02111514.D
8	20K	19000	1000	I:\MS19\DATA\2015_02\11\02111512.D
9	50K	47500	1000	I:\MS19\DATA\2015_02\11\02111513.D

#	ID	Update Time	Quant Time	Acquisition Time
1	10	Feb 12 14:16 2015	Feb 12 14:16 2015	11 Feb 2015 12:19
2	20	Feb 12 14:16 2015	Feb 12 14:16 2015	11 Feb 2015 12:48
3	50	Feb 12 14:16 2015	Feb 12 14:16 2015	11 Feb 2015 13:19
4	100	Feb 12 14:16 2015	Feb 12 14:16 2015	11 Feb 2015 13:46
5	500	Feb 12 14:16 2015	Feb 12 14:16 2015	11 Feb 2015 14:14
6	1000	Feb 12 14:16 2015	Feb 12 14:16 2015	11 Feb 2015 14:41
7	2500	Feb 12 14:16 2015	Feb 12 14:16 2015	11 Feb 2015 16:36
8	20K	Feb 12 14:41 2015	Feb 12 14:16 2015	11 Feb 2015 15:39
9	50K	Feb 12 14:42 2015	Feb 12 14:16 2015	11 Feb 2015 16:06

X19021115.M

Thu Feb 12 15:06:36 2015

Data File : I:\MS19\DATA\2015 02\11\02111505.D
 Acq On : 11 Feb 2015 12:19
 Sample : 10pg TO-15-SIM Std
 Misc : S29-02041502/S29-01221514 (2/20)

Vial: 5
 Operator: EA
 Inst : MS19

EA 2/12/15

Quant Time: Feb 12 14:46:58 2015
 Quant Method : I:\MS19\METHODS\X19021115.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Thu Feb 12 14:42:03 2015
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.12	130	12839	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	101008	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.14	54	16409	1000.000	pg	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev(Min)
17) 1,2-Dichloroethane-d4 ...	7.13	65	33976	1083.623	pg	0.00
Spiked Amount 1000.000			Recovery	=	108.36%	
30) Toluene-d8 (SS2)	11.38	98	91896	986.559	pg	0.00
Spiked Amount 1000.000			Recovery	=	98.66%	
40) Bromofluorobenzene (SS3)	14.25	174	29897	902.482	pg	0.00
Spiked Amount 1000.000			Recovery	=	90.25%	

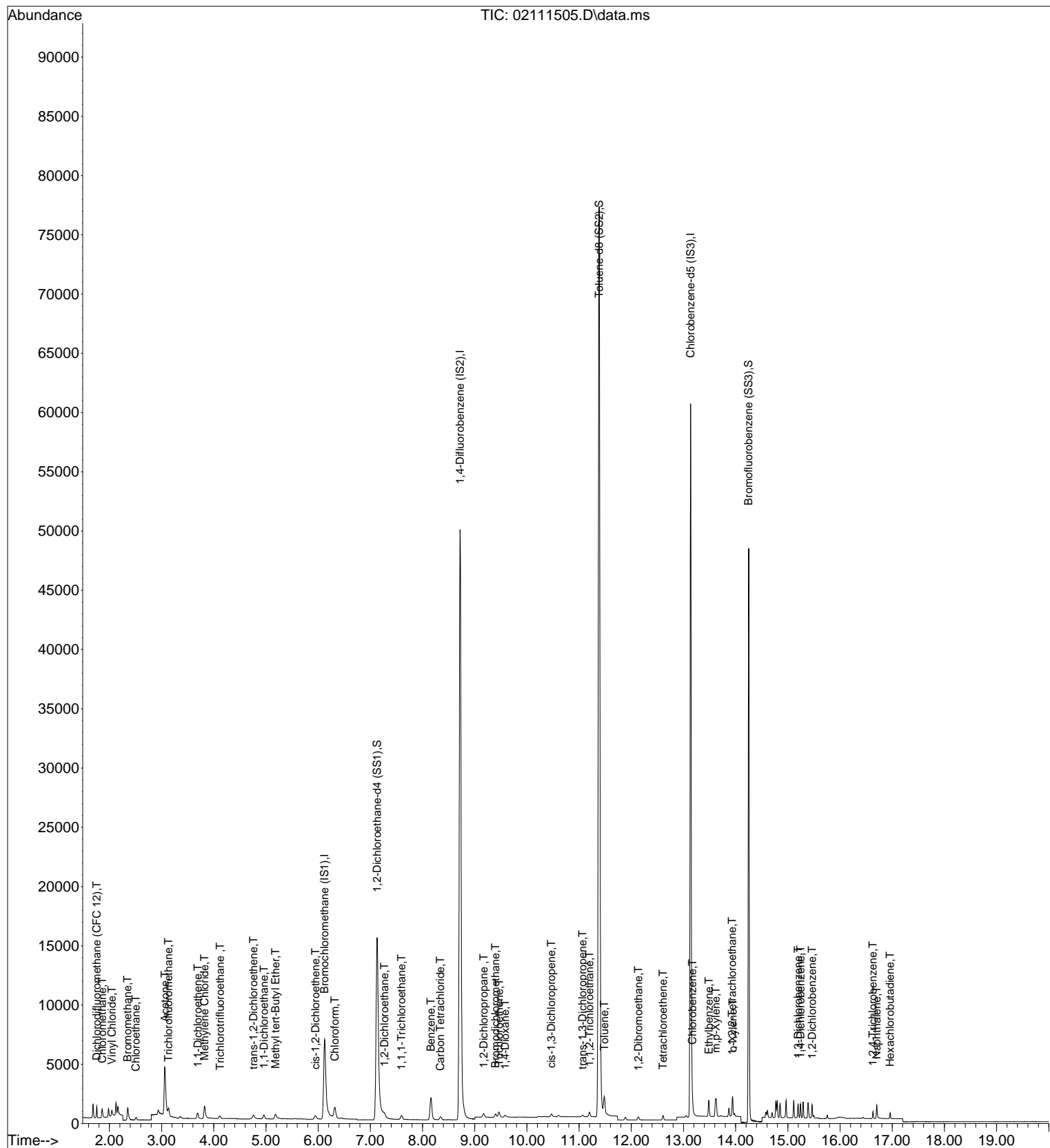
Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethan...	1.76	85	692	13.262	pg	99
3) Chloromethane	1.86	52	295	28.311	pg	99
4) Vinyl Chloride	2.05	62	584	14.392	pg	95
5) Bromomethane	2.35	94	1022	43.559	pg	98
6) Chloroethane	2.51	64	287	14.540	pg	98
7) Acetone	3.06	58	2564	139.157	pg	# 90
8) Trichlorofluoromethane	3.13	101	588	13.120	pg	99
9) 1,1-Dichloroethene	3.69	96	274	13.695	pg	94
10) Methylene Chloride	3.82	84	821	38.605	pg	98
11) Trichlorotrifluoroethane	4.12	151	322	15.635	pg	94
12) trans-1,2-Dichloroethene	4.76	96	254	12.432	pg	98
13) 1,1-Dichloroethane	4.96	63	528	14.396	pg	98
14) Methyl tert-Butyl Ether	5.18	73	955	14.689	pg	100
15) cis-1,2-Dichloroethene	5.95	96	314	13.820	pg	99
16) Chloroform	6.32	83	1568	39.833	pg	99
18) 1,2-Dichloroethane	7.27	62	452	14.421	pg	97
19) 1,1,1-Trichloroethane	7.59	97	519	13.558	pg	100
20) Benzene	8.16	78	3818	47.157	pg	99
21) Carbon Tetrachloride	8.34	117	336	11.725	pg	97
23) 1,2-Dichloropropane	9.17	63	290	13.164	pg	95
24) Bromodichloromethane	9.40	83	401	12.611	pg	95
25) Trichloroethene	9.46	130	337	12.987	pg	97
26) 1,4-Dioxane	9.58	88	262	13.547	pg	# 51
27) cis-1,3-Dichloropropene	10.47	75	323	10.781	pg	99
28) trans-1,3-Dichloropropene	11.07	75	193	7.956	pg	# 87
29) 1,1,2-Trichloroethane	11.20	83	246	12.978	pg	98
31) Toluene	11.48	91	1640	16.554	pg	98
32) 1,2-Dibromoethane	12.14	107	296	12.308	pg	98
33) Tetrachloroethene	12.61	166	352	11.475	pg	97
35) Chlorobenzene	13.17	112	896	14.765	pg	99
36) Ethylbenzene	13.49	91	1413	13.732	pg	99
37) m,p-Xylene	13.62	91	2110	24.950	pg	99
38) o-Xylene	13.94	106	493	11.928	pg	97
39) 1,1,2,2-Tetrachloroethane	13.93	83	516	12.684	pg	100
41) 1,3-Dichlorobenzene	15.20	146	680	12.896	pg	99
42) 1,4-Dichlorobenzene	15.24	146	686	12.098	pg	97
43) 1,2-Dichlorobenzene	15.46	146	663	13.047	pg	99
44) 1,2,4-Trichlorobenzene	16.63	182	462	14.800	pg	98
45) Naphthalene	16.70	128	1426	13.819	pg	100
46) Hexachlorobutadiene	16.96	225	289	13.879	pg	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File : I:\MS19\DATA\2015 02\11\02111505.D
Acq On : 11 Feb 2015 12:19
Sample : 10pg TO-15-SIM Std
Misc : S29-02041502/S29-01221514 (2/20)

Vial: 5
Operator: EA
Inst : MS19

Quant Time: Feb 12 14:46:58 2015
Quant Method : I:\MS19\METHODS\X19021115.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 12 14:42:03 2015
Response via : Initial Calibration
DataAcq Meth:TO15SIM.M



Data File : I:\MS19\DATA\2015 02\11\02111506.D
 Acq On : 11 Feb 2015 12:48
 Sample : 20pg TO-15-SIM Std
 Misc : S29-02041502/S29-01221514 (2/20)

Vial: 5
 Operator: EA
 Inst : MS19

EA 2/12/15

Quant Time: Feb 12 14:16:18 2015
 Quant Method : I:\MS19\METHODS\X19021115.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Thu Feb 12 14:16:17 2015
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.12	130	15297	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	118372	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	19855	1000.000	pg	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev(Min)
17) 1,2-Dichloroethane-d4 ...	7.13	65	40410	998.255	pg	0.00
Spiked Amount 1000.000			Recovery	=	99.83%	
30) Toluene-d8 (SS2)	11.38	98	109244	1014.397	pg	0.00
Spiked Amount 1000.000			Recovery	=	101.44%	
40) Bromofluorobenzene (SS3)	14.25	174	37529	1037.413	pg	0.00
Spiked Amount 1000.000			Recovery	=	103.74%	

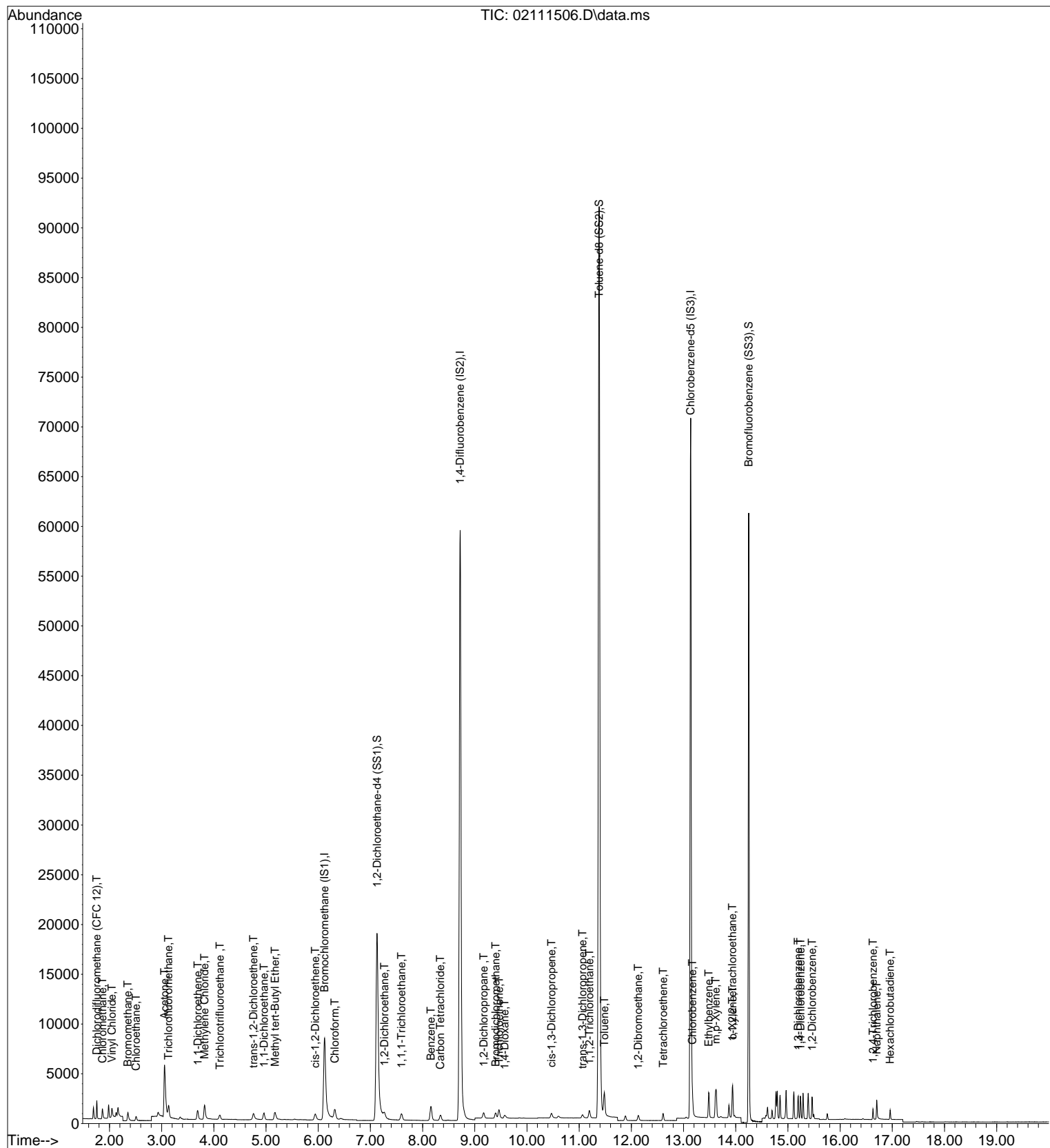
Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethan...	1.76	85	1279	14.737	pg	99
3) Chloromethane	1.87	52	342	9.828	pg	93
4) Vinyl Chloride	2.05	62	1069	15.363	pg	95
5) Bromomethane	2.35	94	788	6.601	pg	98
6) Chloroethane	2.51	64	523	15.448	pg	98
7) Acetone	3.06	58	3020	53.977	pg	92
8) Trichlorofluoromethane	3.13	101	1131	17.435	pg	100
9) 1,1-Dichloroethene	3.69	96	538	17.963	pg	99
10) Methylene Chloride	3.82	84	1117	12.904	pg	99
11) Trichlorotrifluoroethane	4.12	151	551	15.655	pg	99
12) trans-1,2-Dichloroethene	4.76	96	505	17.688	pg	97
13) 1,1-Dichloroethane	4.96	63	1036	17.621	pg	100
14) Methyl tert-Butyl Ether	5.17	73	1761	16.870	pg	98
15) cis-1,2-Dichloroethene	5.94	96	628	18.465	pg	98
16) Chloroform	6.31	83	1612	9.664	pg	98
18) 1,2-Dichloroethane	7.27	62	842	16.886	pg	100
19) 1,1,1-Trichloroethane	7.60	97	1004	17.048	pg	99
20) Benzene	8.16	78	2836	7.045	pg	99
21) Carbon Tetrachloride	8.34	117	685	19.678	pg	99
23) 1,2-Dichloropropane	9.17	63	580	18.602	pg	100
24) Bromodichloromethane	9.40	83	785	18.208	pg	97
25) Trichloroethene	9.46	130	647	17.693	pg	98
26) 1,4-Dioxane	9.57	88	461	16.366	pg	# 57
27) cis-1,3-Dichloropropene	10.47	75	602	16.699	pg	97
28) trans-1,3-Dichloropropene	11.07	75	452	21.183	pg	96
29) 1,1,2-Trichloroethane	11.20	83	484	18.300	pg	98
31) Toluene	11.48	91	2589	14.818	pg	99
32) 1,2-Dibromoethane	12.13	107	562	17.821	pg	99
33) Tetrachloroethene	12.61	166	682	16.698	pg	99
35) Chlorobenzene	13.17	112	1600	16.381	pg	96
36) Ethylbenzene	13.48	91	2595	16.696	pg	99
37) m,p-Xylene	13.62	91	3913	33.105	pg	100
38) o-Xylene	13.94	106	926	16.454	pg	98
39) 1,1,2,2-Tetrachloroethane	13.94	83	957	16.094	pg	97
41) 1,3-Dichlorobenzene	15.20	146	1289	17.859	pg	100
42) 1,4-Dichlorobenzene	15.24	146	1340	17.112	pg	99
43) 1,2-Dichlorobenzene	15.46	146	1240	17.157	pg	100
44) 1,2,4-Trichlorobenzene	16.63	182	806	16.292	pg	99
45) Naphthalene	16.70	128	2356	15.156	pg	100
46) Hexachlorobutadiene	16.96	225	566	18.128	pg	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File : I:\MS19\DATA\2015 02\11\02111506.D
Acq On : 11 Feb 2015 12:48
Sample : 20pg TO-15-SIM Std
Misc : S29-02041502/S29-01221514 (2/20)

Vial: 5
Operator: EA
Inst : MS19

Quant Time: Feb 12 14:16:18 2015
Quant Method : I:\MS19\METHODS\X19021115.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 12 14:16:17 2015
Response via : Initial Calibration
DataAcq Meth:TO15SIM.M



Data File : I:\MS19\DATA\2015 02\11\02111507.D
 Acq On : 11 Feb 2015 13:19
 Sample : 50pg TO-15-SIM Std
 Misc : S29-02041502/S29-01221514 (2/20)

Vial: 5
 Operator: EA
 Inst : MS19

EA 2/12/15

Quant Time: Feb 12 14:16:19 2015
 Quant Method : I:\MS19\METHODS\X19021115.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Thu Feb 12 14:16:18 2015
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.12	130	15141	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	117882	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	20349	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	40563	1013.243	pg	0.00
Spiked Amount 1000.000			Recovery	=	101.32%	
30) Toluene-d8 (SS2)	11.38	98	109649	1015.083	pg	0.00
Spiked Amount 1000.000			Recovery	=	101.51%	
40) Bromofluorobenzene (SS3)	14.25	174	39340	1041.590	pg	0.00
Spiked Amount 1000.000			Recovery	=	104.16%	

Target Compounds

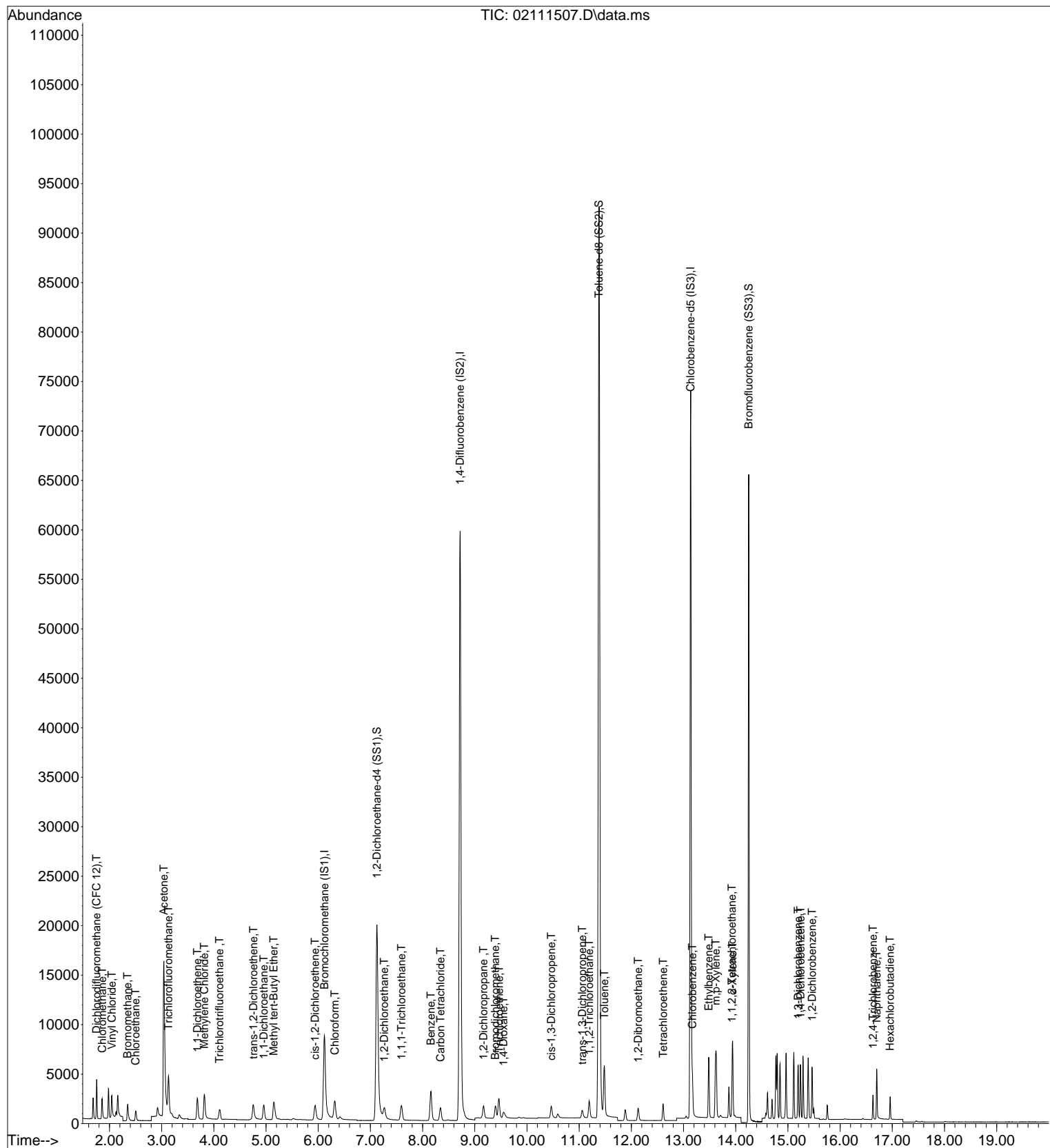
						Qvalue
2) Dichlorodifluoromethan...	1.75	85	2940	38.549	pg	99
3) Chloromethane	1.86	52	729	28.475	pg	98
4) Vinyl Chloride	2.05	62	2480	40.731	pg	97
5) Bromomethane	2.35	94	1523	19.476	pg	99
6) Chloroethane	2.50	64	1199	40.549	pg	100
7) Acetone	3.04	58	8176	197.600	pg	# 86
8) Trichlorofluoromethane	3.13	101	3739	64.447	pg	98
9) 1,1-Dichloroethene	3.68	96	1233	45.606	pg	98
10) Methylene Chloride	3.82	84	1887	28.038	pg	99
11) Trichlorotrifluoroethane	4.11	151	1302	43.505	pg	100
12) trans-1,2-Dichloroethene	4.76	96	1225	47.264	pg	100
13) 1,1-Dichloroethane	4.96	63	2330	43.916	pg	100
14) Methyl tert-Butyl Ether	5.15	73	4081	44.533	pg	100
15) cis-1,2-Dichloroethene	5.94	96	1440	46.513	pg	99
16) Chloroform	6.32	83	2992	25.320	pg	99
18) 1,2-Dichloroethane	7.27	62	2018	45.895	pg	93
19) 1,1,1-Trichloroethane	7.59	97	2320	43.934	pg	100
20) Benzene	8.16	78	5830	22.309	pg	100
21) Carbon Tetrachloride	8.34	117	1622	50.739	pg	99
23) 1,2-Dichloropropane	9.17	63	1352	46.989	pg	99
24) Bromodichloromethane	9.39	83	1824	46.297	pg	98
25) Trichloroethene	9.46	130	1482	44.742	pg	99
26) 1,4-Dioxane	9.55	88	1053	42.882	pg	# 58
27) cis-1,3-Dichloropropene	10.47	75	1451	45.028	pg	97
28) trans-1,3-Dichloropropene	11.06	75	1013	47.691	pg	98
29) 1,1,2-Trichloroethane	11.19	83	1108	45.739	pg	99
31) Toluene	11.48	91	5750	39.493	pg	100
32) 1,2-Dibromoethane	12.13	107	1339	47.111	pg	99
33) Tetrachloroethene	12.61	166	1577	42.452	pg	99
35) Chlorobenzene	13.17	112	3725	42.824	pg	100
36) Ethylbenzene	13.48	91	5979	42.679	pg	100
37) m,p-Xylene	13.62	91	9252	86.478	pg	99
38) o-Xylene	13.94	106	2142	41.818	pg	99
39) 1,1,2,2-Tetrachloroethane	13.93	83	2269	42.156	pg	98
41) 1,3-Dichlorobenzene	15.20	146	3061	46.409	pg	100
42) 1,4-Dichlorobenzene	15.24	146	3121	43.037	pg	100
43) 1,2-Dichlorobenzene	15.46	146	2930	44.625	pg	99
44) 1,2,4-Trichlorobenzene	16.63	182	1963	44.996	pg	99
45) Naphthalene	16.70	128	5540	41.331	pg	99
46) Hexachlorobutadiene	16.96	225	1310	45.254	pg	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File : I:\MS19\DATA\2015 02\11\02111507.D
Acq On : 11 Feb 2015 13:19
Sample : 50pg TO-15-SIM Std
Misc : S29-02041502/S29-01221514 (2/20)

Vial: 5
Operator: EA
Inst : MS19

Quant Time: Feb 12 14:16:19 2015
Quant Method : I:\MS19\METHODS\X19021115.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 12 14:16:18 2015
Response via : Initial Calibration
DataAcq Meth:TO15SIM.M



Data File : I:\MS19\DATA\2015 02\11\02111508.D
 Acq On : 11 Feb 2015 13:46
 Sample : 100pg TO-15-SIM Std
 Misc : S29-02041502/S29-01221514 (2/20)

Vial: 5
 Operator: EA
 Inst : MS19

EA 2/12/15

Quant Time: Feb 12 14:16:21 2015
 Quant Method : I:\MS19\METHODS\X19021115.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Thu Feb 12 14:16:20 2015
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	15096	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	116197	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	20087	1000.000	pg	0.00

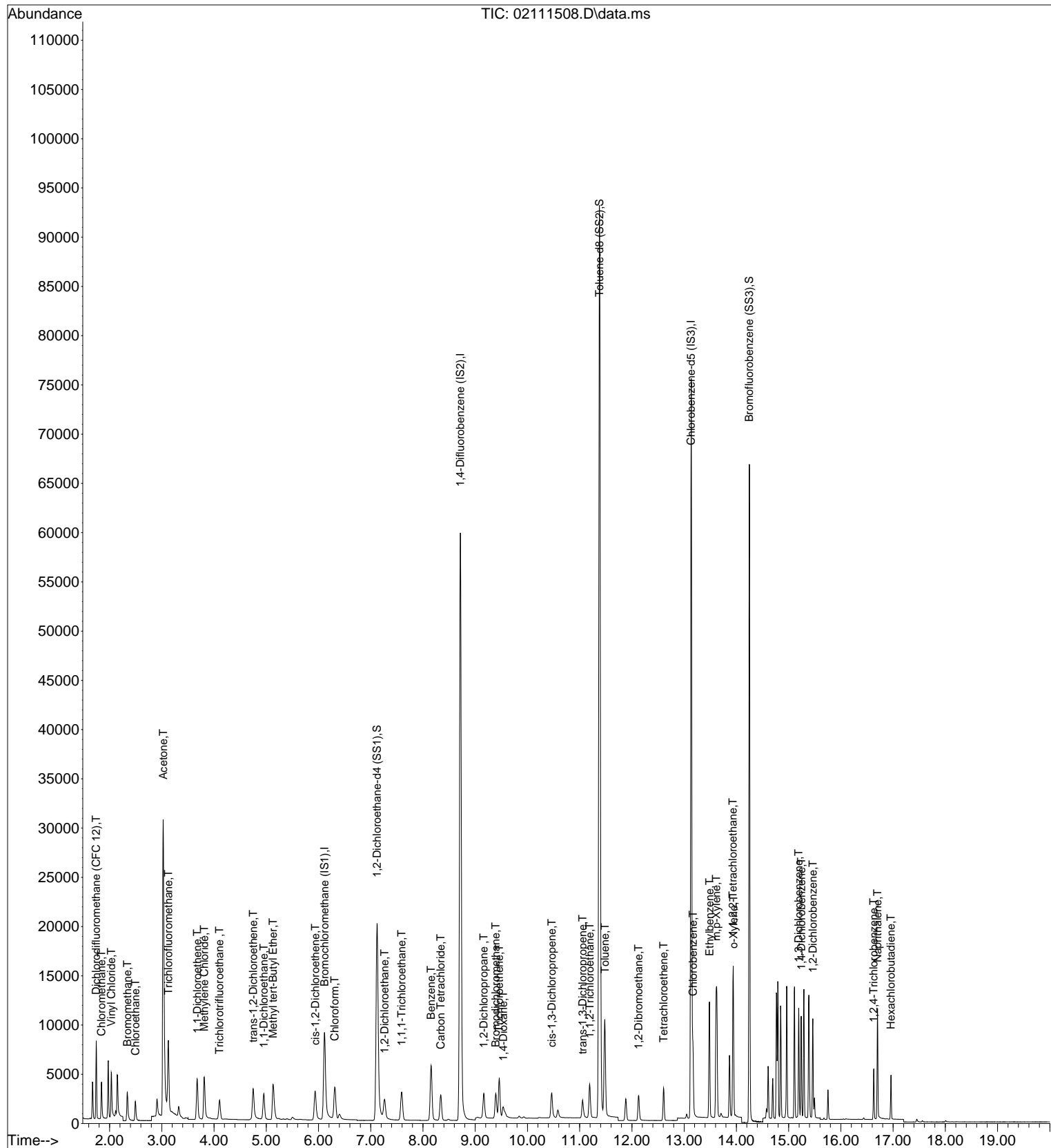
System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	40106	1000.398	pg	0.00
Spiked Amount 1000.000			Recovery	=	100.04%	
30) Toluene-d8 (SS2)	11.38	98	108595	1014.802	pg	0.00
Spiked Amount 1000.000			Recovery	=	101.48%	
40) Bromofluorobenzene (SS3)	14.25	174	40293	1065.959	pg	0.00
Spiked Amount 1000.000			Recovery	=	106.60%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.74	85	5761	80.841	pg	100
3) Chloromethane	1.85	52	1278	58.585	pg	100
4) Vinyl Chloride	2.03	62	4969	87.244	pg	99
5) Bromomethane	2.34	94	2571	41.534	pg	99
6) Chloroethane	2.49	64	2357	85.570	pg	100
7) Acetone	3.03	58	15102	403.197	pg	94
8) Trichlorofluoromethane	3.12	101	7257	117.857	pg	100
9) 1,1-Dichloroethene	3.68	96	2441	95.766	pg	100
10) Methylene Chloride	3.81	84	3196	57.241	pg	100
11) Trichlorotrifluoroethane	4.11	151	2509	90.148	pg	99
12) trans-1,2-Dichloroethene	4.75	96	2394	96.110	pg	99
13) 1,1-Dichloroethane	4.95	63	3997	80.359	pg	99
14) Methyl tert-Butyl Ether	5.13	73	7980	93.009	pg	100
15) cis-1,2-Dichloroethene	5.94	96	2835	96.826	pg	98
16) Chloroform	6.31	83	5307	55.109	pg	100
18) 1,2-Dichloroethane	7.26	62	3951	94.871	pg	100
19) 1,1,1-Trichloroethane	7.59	97	4540	91.190	pg	100
20) Benzene	8.16	78	10895	52.381	pg	99
21) Carbon Tetrachloride	8.34	117	3291	107.467	pg	100
23) 1,2-Dichloropropane	9.16	63	2590	95.718	pg	99
24) Bromodichloromethane	9.39	83	3629	98.384	pg	99
25) Trichloroethene	9.46	130	2909	94.498	pg	99
26) 1,4-Dioxane	9.54	88	2058	91.529	pg	# 61
27) cis-1,3-Dichloropropene	10.47	75	3004	99.283	pg	99
28) trans-1,3-Dichloropropene	11.06	75	2218	109.595	pg	99
29) 1,1,2-Trichloroethane	11.19	83	2200	97.351	pg	99
31) Toluene	11.48	91	11133	85.621	pg	100
32) 1,2-Dibromoethane	12.13	107	2701	101.251	pg	100
33) Tetrachloroethene	12.61	166	3099	89.381	pg	99
35) Chlorobenzene	13.17	112	7235	91.205	pg	100
36) Ethylbenzene	13.49	91	11829	92.441	pg	100
37) m,p-Xylene	13.62	91	18067	183.247	pg	100
38) o-Xylene	13.94	106	4303	91.541	pg	99
39) 1,1,2,2-Tetrachloroethane	13.93	83	4544	91.536	pg	100
41) 1,3-Dichlorobenzene	15.19	146	6095	99.795	pg	100
42) 1,4-Dichlorobenzene	15.24	146	6185	92.177	pg	99
43) 1,2-Dichlorobenzene	15.46	146	5888	97.194	pg	100
44) 1,2,4-Trichlorobenzene	16.63	182	3935	98.027	pg	100
45) Naphthalene	16.70	128	11263	93.040	pg	99
46) Hexachlorobutadiene	16.96	225	2608	97.505	pg	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed



Data File : I:\MS19\DATA\2015 02\11\02111509.D
 Acq On : 11 Feb 2015 14:14
 Sample : 500pg TO-15-SIM Std
 Misc : S29-02041502/S29-01221510 (2/20)

Vial: 15
 Operator: EA
 Inst : MS19

EA 2/12/15

Quant Time: Feb 12 14:16:23 2015
 Quant Method : I:\MS19\METHODS\X19021115.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Thu Feb 12 14:16:22 2015
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	16085	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	120298	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	20216	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	40423	946.214	pg	0.00
Spiked Amount 1000.000			Recovery	=	94.62%	
30) Toluene-d8 (SS2)	11.38	98	111252	1000.487	pg	0.00
Spiked Amount 1000.000			Recovery	=	100.05%	
40) Bromofluorobenzene (SS3)	14.25	174	40901	1057.698	pg	0.00
Spiked Amount 1000.000			Recovery	=	105.77%	

Target Compounds

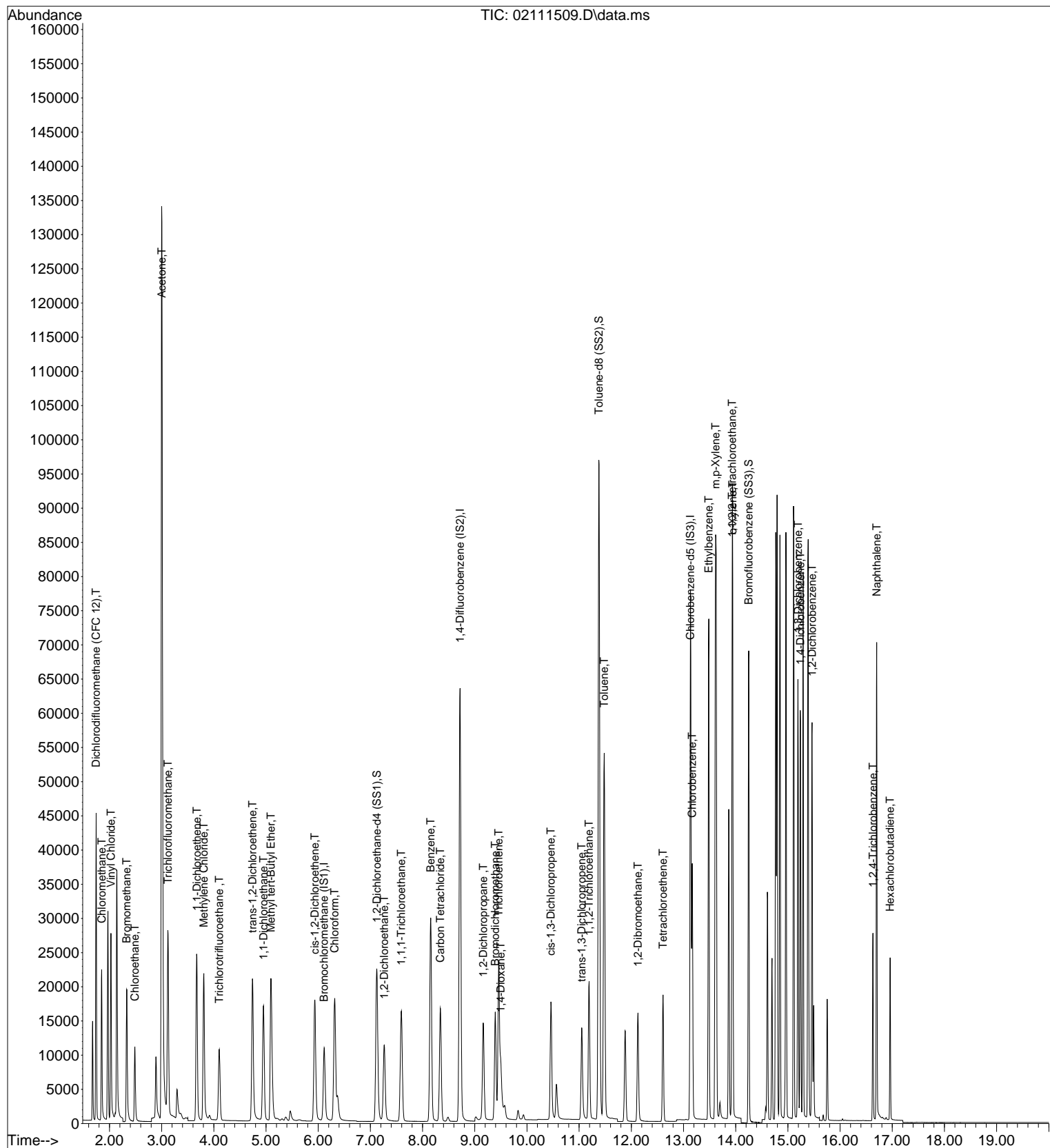
						Qvalue
2) Dichlorodifluoromethan...	1.74	85	31157	426.209	pg	100
3) Chloromethane	1.85	52	6681	321.150	pg	100
4) Vinyl Chloride	2.03	62	25538	434.678	pg	100
5) Bromomethane	2.33	94	15446	274.929	pg	100
6) Chloroethane	2.49	64	12666	448.699	pg	100
7) Acetone	3.00	58	60194	1613.781	pg	100
8) Trichlorofluoromethane	3.12	101	27843	414.914	pg	100
9) 1,1-Dichloroethene	3.67	96	13612	516.882	pg	100
10) Methylene Chloride	3.81	84	14524	278.489	pg	100
11) Trichlorotrifluoroethane	4.10	151	13292	468.469	pg	100
12) trans-1,2-Dichloroethene	4.74	96	13790	531.985	pg	100
13) 1,1-Dichloroethane	4.95	63	25656	516.228	pg	100
14) Methyl tert-Butyl Ether	5.09	73	44101	500.773	pg	100
15) cis-1,2-Dichloroethene	5.93	96	15575	514.648	pg	100
16) Chloroform	6.31	83	28294	315.856	pg	100
18) 1,2-Dichloroethane	7.27	62	21996	511.229	pg	100
19) 1,1,1-Trichloroethane	7.59	97	25473	496.516	pg	100
20) Benzene	8.16	78	57066	297.373	pg	100
21) Carbon Tetrachloride	8.34	117	20985	653.837	pg	100
23) 1,2-Dichloropropane	9.16	63	14657	539.650	pg	100
24) Bromodichloromethane	9.39	83	21004	563.744	pg	100
25) Trichloroethene	9.46	130	15892	514.735	pg	100
26) 1,4-Dioxane	9.50	88	13366	598.151	pg	100
27) cis-1,3-Dichloropropene	10.46	75	19166	620.291	pg	100
28) trans-1,3-Dichloropropene	11.05	75	15425	730.002	pg	100
29) 1,1,2-Trichloroethane	11.19	83	12410	544.987	pg	100
31) Toluene	11.48	91	60430	475.238	pg	100
32) 1,2-Dibromoethane	12.13	107	15753	581.964	pg	100
33) Tetrachloroethene	12.61	166	17012	487.964	pg	100
35) Chlorobenzene	13.17	112	40274	527.996	pg	100
36) Ethylbenzene	13.48	91	69944	565.682	pg	100
37) m,p-Xylene	13.61	91	113197	1185.738	pg	100
38) o-Xylene	13.94	106	26689	584.070	pg	100
39) 1,1,2,2-Tetrachloroethane	13.93	83	26083	539.365	pg	100
41) 1,3-Dichlorobenzene	15.19	146	34549	580.143	pg	100
42) 1,4-Dichlorobenzene	15.24	146	34983	535.493	pg	100
43) 1,2-Dichlorobenzene	15.46	146	33498	567.060	pg	100
44) 1,2,4-Trichlorobenzene	16.63	182	20666	529.064	pg	100
45) Naphthalene	16.70	128	67395	576.497	pg	100
46) Hexachlorobutadiene	16.96	225	13676	525.027	pg	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File : I:\MS19\DATA\2015 02\11\02111509.D
Acq On : 11 Feb 2015 14:14
Sample : 500pg TO-15-SIM Std
Misc : S29-02041502/S29-01221510 (2/20)

Vial: 15
Operator: EA
Inst : MS19

Quant Time: Feb 12 14:16:23 2015
Quant Method : I:\MS19\METHODS\X19021115.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 12 14:16:22 2015
Response via : Initial Calibration
DataAcq Meth:TO15SIM.M



Data File : I:\MS19\DATA\2015 02\11\02111510.D
 Acq On : 11 Feb 2015 14:41
 Sample : 1000pg TO-15-SIM Std
 Misc : S29-02041502/S29-01221510 (2/20)

Vial: 15
 Operator: EA
 Inst : MS19

Quant Time: Feb 12 14:16:24 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:16:24 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

EA 2/12/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.12	130	17049	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	125008	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	20857	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.13	65	41862	934.545	pg	0.00
Spiked Amount 1000.000			Recovery	=	93.45%	
30) Toluene-d8 (SS2)	11.38	98	115558	999.959	pg	0.00
Spiked Amount 1000.000			Recovery	=	100.00%	
40) Bromofluorobenzene (SS3)	14.25	174	43063	1067.069	pg	0.00
Spiked Amount 1000.000			Recovery	=	106.71%	

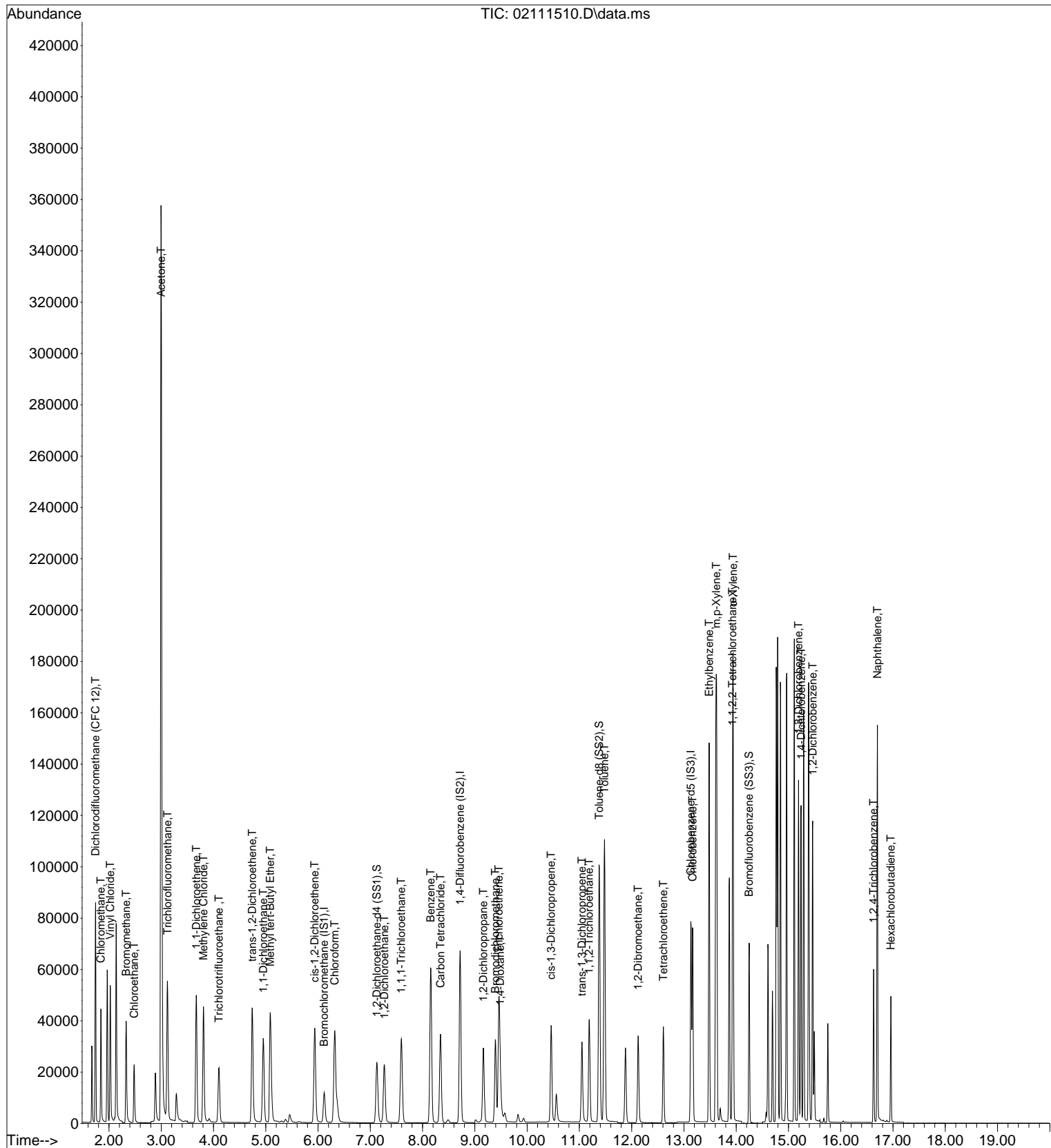
Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.74	85	62078	817.978	pg	100
3) Chloromethane	1.85	52	13169	644.131	pg	100
4) Vinyl Chloride	2.02	62	50542	833.401	pg	100
5) Bromomethane	2.33	94	30107	556.925	pg	100
6) Chloroethane	2.48	64	25063	856.769	pg	100
7) Acetone	3.00	58	141112	3887.122	pg	96
8) Trichlorofluoromethane	3.12	101	56600	834.414	pg	100
9) 1,1-Dichloroethene	3.67	96	27640	1000.540	pg	99
10) Methylene Chloride	3.81	84	29309	590.050	pg	99
11) Trichlorotrifluoroethane	4.10	151	26854	918.742	pg	99
12) trans-1,2-Dichloroethene	4.74	96	28320	1029.972	pg	100
13) 1,1-Dichloroethane	4.95	63	50280	961.233	pg	100
14) Methyl tert-Butyl Ether	5.09	73	89027	969.489	pg	100
15) cis-1,2-Dichloroethene	5.94	96	31769	1003.291	pg	100
16) Chloroform	6.32	83	56566	652.671	pg	100
18) 1,2-Dichloroethane	7.27	62	43916	973.351	pg	99
19) 1,1,1-Trichloroethane	7.59	97	51167	951.269	pg	100
20) Benzene	8.16	78	114365	621.103	pg	100
21) Carbon Tetrachloride	8.34	117	43494	1244.409	pg	99
23) 1,2-Dichloropropane	9.16	63	29289	1039.791	pg	100
24) Bromodichloromethane	9.39	83	42717	1095.782	pg	100
25) Trichloroethene	9.46	130	32223	1013.852	pg	100
26) 1,4-Dioxane	9.49	88	27269	1151.886	pg	97
27) cis-1,3-Dichloropropene	10.46	75	40380	1213.570	pg	99
28) trans-1,3-Dichloropropene	11.05	75	33903	1435.682	pg	100
29) 1,1,2-Trichloroethane	11.19	83	25193	1064.675	pg	99
31) Toluene	11.48	91	122179	950.487	pg	100
32) 1,2-Dibromoethane	12.12	107	32518	1142.769	pg	100
33) Tetrachloroethene	12.61	166	34320	953.763	pg	100
35) Chlorobenzene	13.16	112	81474	1045.479	pg	100
36) Ethylbenzene	13.48	91	142378	1109.785	pg	100
37) m,p-Xylene	13.62	91	231649	2306.778	pg	100
38) o-Xylene	13.94	106	54677	1136.603	pg	99
39) 1,1,2,2-Tetrachloroethane	13.93	83	52662	1049.773	pg	99
41) 1,3-Dichlorobenzene	15.19	146	70989	1151.307	pg	100
42) 1,4-Dichlorobenzene	15.24	146	71821	1063.390	pg	100
43) 1,2-Dichlorobenzene	15.46	146	68925	1126.023	pg	100
44) 1,2,4-Trichlorobenzene	16.63	182	43093	1083.084	pg	100
45) Naphthalene	16.70	128	144193	1186.330	pg	100
46) Hexachlorobutadiene	16.96	225	28194	1062.384	pg	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Vial: 15
Operator: EA
Inst : MS19

Quant Time: Feb 12 14:16:24 2015
Quant Method : I:\MS19\METHODS\X19021115.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 12 14:16:24 2015
Response via : Initial Calibration
DataAcq Meth:TO15SIM.M



Data File : I:\MS19\DATA\2015 02\11\02111514.D
 Acq On : 11 Feb 2015 16:36
 Sample : 2500pg TO-15-SIM Std
 Misc : S29-02041502/S29-01221506 (2/20)

Vial: 6
 Operator: EA
 Inst : MS19

EA 2/12/15

Quant Time: Feb 12 14:16:26 2015
 Quant Method : I:\MS19\METHODS\X19021115.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Thu Feb 12 14:16:25 2015
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.12	130	19999	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	142519	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	22557	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.13	65	44439	855.065	pg	0.00
Spiked Amount 1000.000			Recovery	=	85.51%	
30) Toluene-d8 (SS2)	11.38	98	128917	978.499	pg	0.00
Spiked Amount 1000.000			Recovery	=	97.85%	
40) Bromofluorobenzene (SS3)	14.25	174	50432	1142.713	pg	0.00
Spiked Amount 1000.000			Recovery	=	114.27%	

Target Compounds

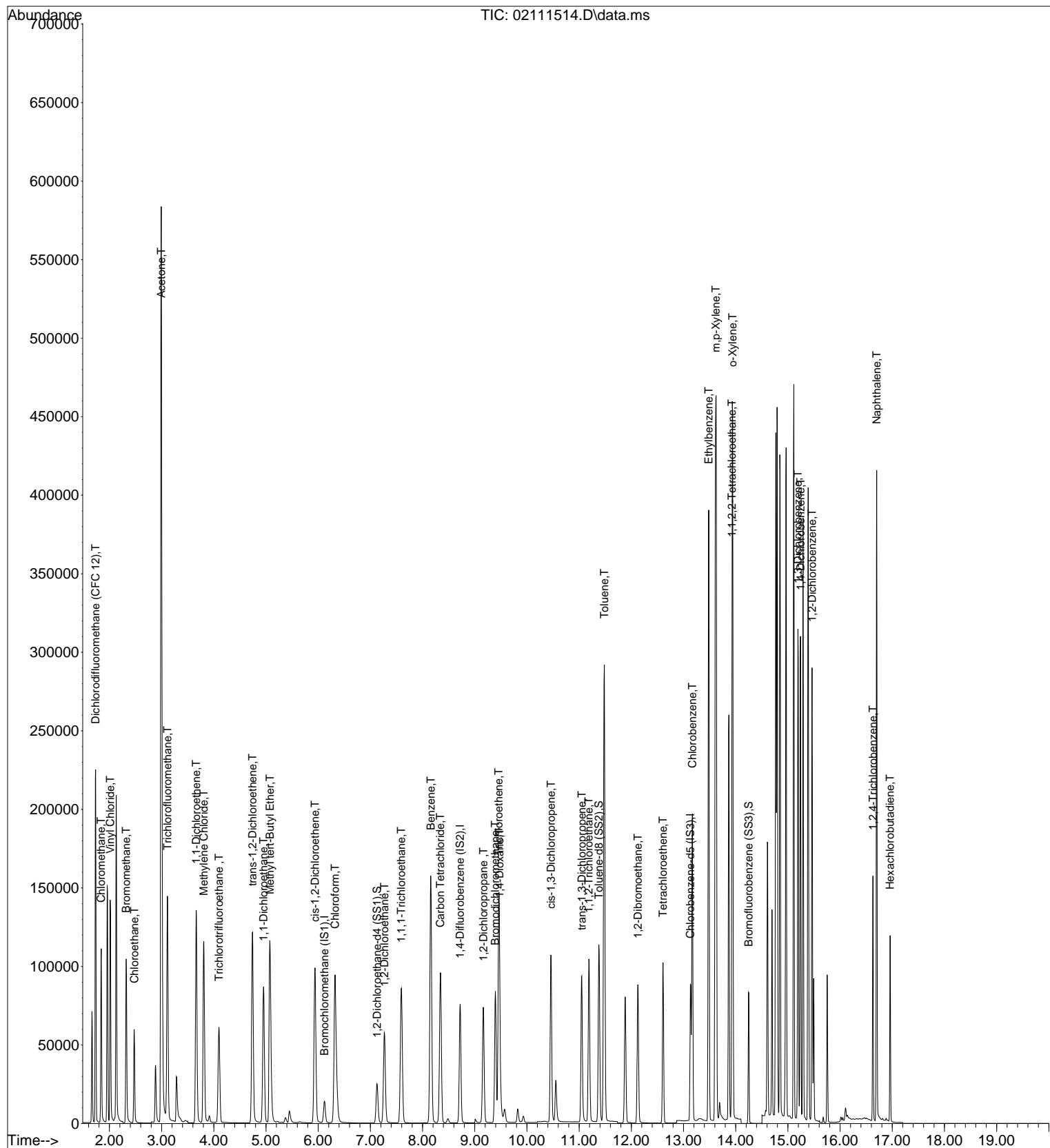
						Qvalue
2) Dichlorodifluoromethan...	1.74	85	168004	1931.931	pg	100
3) Chloromethane	1.84	52	34728	1541.122	pg	100
4) Vinyl Chloride	2.01	62	125955	1821.113	pg	100
5) Bromomethane	2.32	94	78615	1341.208	pg	100
6) Chloroethane	2.48	64	62915	1881.040	pg	100
7) Acetone	2.99	58	246584	6082.587	pg	98
8) Trichlorofluoromethane	3.11	101	146912	1919.077	pg	100
9) 1,1-Dichloroethene	3.66	96	77847	2435.626	pg	94
10) Methylene Chloride	3.81	84	80073	1493.159	pg	93
11) Trichlorotrifluoroethane	4.10	151	77871	2332.250	pg	100
12) trans-1,2-Dichloroethene	4.74	96	79429	2474.328	pg	100
13) 1,1-Dichloroethane	4.95	63	135243	2242.124	pg	99
14) Methyl tert-Butyl Ether	5.08	73	244123	2308.860	pg	99
15) cis-1,2-Dichloroethene	5.94	96	86492	2363.200	pg	100
16) Chloroform	6.32	83	146238	1545.944	pg	100
18) 1,2-Dichloroethane	7.27	62	110526	2123.288	pg	99
19) 1,1,1-Trichloroethane	7.59	97	136070	2190.919	pg	100
20) Benzene	8.16	78	299538	1499.336	pg	100
21) Carbon Tetrachloride	8.34	117	120516	2899.794	pg	99
23) 1,2-Dichloropropane	9.16	63	74958	2352.185	pg	99
24) Bromodichloromethane	9.39	83	111568	2508.096	pg	100
25) Trichloroethene	9.46	130	86855	2421.723	pg	100
26) 1,4-Dioxane	9.48	88	64196	2356.260	pg	98
27) cis-1,3-Dichloropropene	10.46	75	113024	2904.039	pg	97
28) trans-1,3-Dichloropropene	11.05	75	99950	3505.447	pg	100
29) 1,1,2-Trichloroethane	11.19	83	63795	2373.962	pg	98
31) Toluene	11.48	91	321039	2241.422	pg	99
32) 1,2-Dibromoethane	12.12	107	85325	2613.189	pg	100
33) Tetrachloroethene	12.61	166	91874	2260.477	pg	98
35) Chlorobenzene	13.17	112	209127	2505.560	pg	100
36) Ethylbenzene	13.48	91	366983	2641.003	pg	99
37) m,p-Xylene	13.62	91	603359	5493.267	pg	98
38) o-Xylene	13.94	106	141650	2690.244	pg	97
39) 1,1,2,2-Tetrachloroethane	13.93	83	123631	2278.829	pg	100
41) 1,3-Dichlorobenzene	15.19	146	174513	2612.649	pg	100
42) 1,4-Dichlorobenzene	15.24	146	174802	2391.809	pg	99
43) 1,2-Dichlorobenzene	15.46	146	162141	2443.375	pg	100
44) 1,2,4-Trichlorobenzene	16.63	182	114424	2677.680	pg	99
45) Naphthalene	16.70	128	390111	2934.074	pg	100
46) Hexachlorobutadiene	16.96	225	69382	2438.270	pg	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File : I:\MS19\DATA\2015 02\11\02111514.D
Acq On : 11 Feb 2015 16:36
Sample : 2500pg TO-15-SIM Std
Misc : S29-02041502/S29-01221506 (2/20)

Vial: 6
Operator: EA
Inst : MS19

Quant Time: Feb 12 14:16:26 2015
Quant Method : I:\MS19\METHODS\X19021115.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 12 14:16:25 2015
Response via : Initial Calibration
DataAcq Meth:TO15SIM.M



Data File : I:\MS19\DATA\2015 02\11\02111512.D
 Acq On : 11 Feb 2015 15:39
 Sample : 20000pg TO-15-SIM Std
 Misc : S29-02041502/S29-02031501 (3/4)

Vial: 7
 Operator: EA
 Inst : MS19

Quant Time: Feb 12 14:16:28 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:16:27 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

EA 2/12/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.15	130	21067	1000.000	pg	0.04
22) 1,4-Difluorobenzene (IS2)	8.74	114	149917	1000.000	pg	0.02
34) Chlorobenzene-d5 (IS3)	13.13	54	25271	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.15	65	46065	859.207	pg	0.03
Spiked Amount 1000.000			Recovery	=	85.92%	
30) Toluene-d8 (SS2)	11.39	98	139171	1007.295	pg	0.01
Spiked Amount 1000.000			Recovery	=	100.73%	
40) Bromofluorobenzene (SS3)	14.25	174	55485	1099.766	pg	0.00
Spiked Amount 1000.000			Recovery	=	109.98%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.73	85	1313757	14734.112	pg	100
3) Chloromethane	1.84	52	275355	12283.710	pg	100
4) Vinyl Chloride	2.02	62	1096906	15663.177	pg	100
5) Bromomethane	2.33	94	715521	12430.030	pg	100
6) Chloroethane	2.48	64	553577	16305.938	pg	100
7) Acetone	3.02	58	2226627	56625.289	pg	98
8) Trichlorofluoromethane	3.11	101	1298323	16793.807	pg	100
9) 1,1-Dichloroethene	3.67	96	685316	20668.270	pg	93
10) Methylene Chloride	3.83	84	715830	13586.781	pg	93
11) Trichlorotrifluoroethane	4.10	151	673456	19550.123	pg	99
12) trans-1,2-Dichloroethene	4.76	96	710419	21209.514	pg	100
13) 1,1-Dichloroethane	4.98	63	1166548	18793.634	pg	100
14) Methyl tert-Butyl Ether	5.07	73	2153128	19762.588	pg	99
15) cis-1,2-Dichloroethene	5.96	96	789346	20893.586	pg	100
16) Chloroform	6.35	83	1411126	15129.370	pg	100
18) 1,2-Dichloroethane	7.29	62	996736	18749.451	pg	98
19) 1,1,1-Trichloroethane	7.61	97	1251330	19589.534	pg	99
20) Benzene	8.18	78	2780931	14163.758	pg	100
21) Carbon Tetrachloride	8.36	117	1303647	29740.848	pg	100
23) 1,2-Dichloropropane	9.18	63	684537	20827.850	pg	100
24) Bromodichloromethane	9.41	83	1073842	23213.118	pg	100
25) Trichloroethene	9.47	130	877553	23608.414	pg	99
26) 1,4-Dioxane	9.47	88	637589	22685.873	pg	98
27) cis-1,3-Dichloropropene	10.47	75	1122250	27002.113	pg	96
28) trans-1,3-Dichloropropene	11.05	75	1068731	34062.082	pg	100
29) 1,1,2-Trichloroethane	11.20	83	626897	22592.900	pg	96
31) Toluene	11.49	91	3173858	21637.321	pg	98
32) 1,2-Dibromoethane	12.13	107	887704	26030.477	pg	100
33) Tetrachloroethene	12.61	166	1070981	25430.793	pg	96
35) Chlorobenzene	13.17	112	2201289	23872.445	pg	99
36) Ethylbenzene	13.48	91	3893702	25154.207	pg	97
37) m,p-Xylene	13.62	91	6984006	56617.173	pg	96
38) o-Xylene	13.94	106	1651727	27940.300	pg	93
39) 1,1,2,2-Tetrachloroethane	13.93	83	1534837	25737.439	pg	99
41) 1,3-Dichlorobenzene	15.20	146	2483787	33591.122	pg	99
42) 1,4-Dichlorobenzene	15.24	146	2322203	28762.488	pg	99
43) 1,2-Dichlorobenzene	15.46	146	2141930	29311.622	pg	100
44) 1,2,4-Trichlorobenzene	16.63	182	1511133	31801.728	pg	98
45) Naphthalene	16.70	128	4745255	31597.978	pg	99
46) Hexachlorobutadiene	16.96	225	1012054	32343.543	pg	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File : I:\MS19\DATA\2015 02\11\02111513.D
 Acq On : 11 Feb 2015 16:06
 Sample : 50000pg TO-15-SIM Std
 Misc : S29-02041502/S29-02031501 (3/4)

Vial: 7
 Operator: EA
 Inst : MS19

EA 2/12/15

Quant Time: Feb 12 14:16:30 2015
 Quant Method : I:\MS19\METHODS\X19021115.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Thu Feb 12 14:16:29 2015
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.17	130	23612	1000.000	pg	0.06
22) 1,4-Difluorobenzene (IS2)	8.75	114	157211	1000.000	pg	0.03
34) Chlorobenzene-d5 (IS3)	13.14	54	29867	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.17	65	46704	791.156	pg	0.05
Spiked Amount 1000.000			Recovery	=	79.12%	
30) Toluene-d8 (SS2)	11.39	98	144659	997.529	pg	0.02
Spiked Amount 1000.000			Recovery	=	99.75%	
40) Bromofluorobenzene (SS3)	14.25	174	59710	989.055	pg	0.00
Spiked Amount 1000.000			Recovery	=	98.91%	

Target Compounds

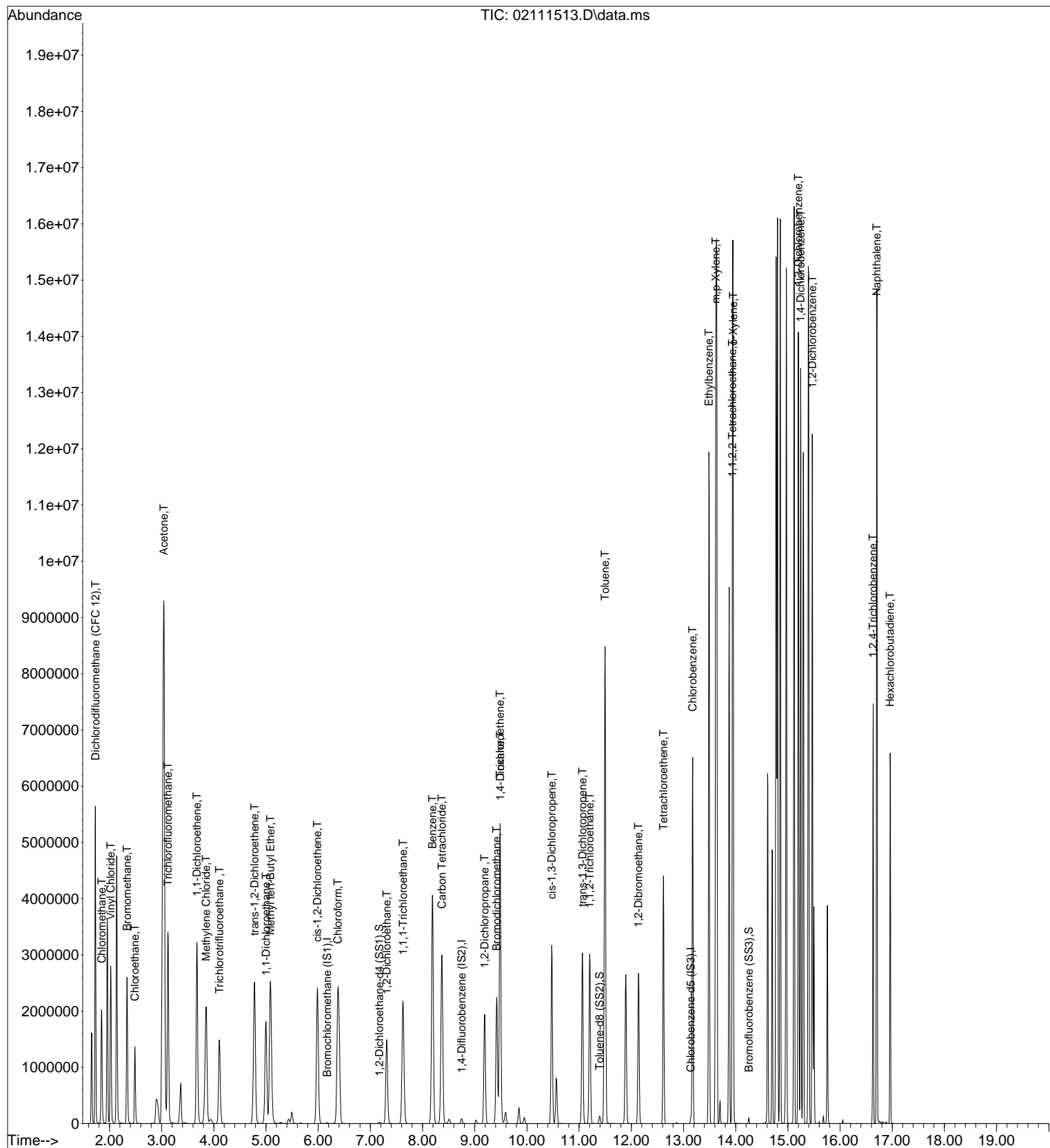
						Qvalue
2) Dichlorodifluoromethan...	1.73	85	4112873	42343.519	pg	98
3) Chloromethane	1.85	52	801676	33552.040	pg	99
4) Vinyl Chloride	2.02	62	3036723	39766.708	pg	99
5) Bromomethane	2.34	94	1964997	32020.345	pg	100
6) Chloroethane	2.49	64	1497263	40320.794	pg	100
7) Acetone	3.04	58	6547708	157083.771	pg	92
8) Trichlorofluoromethane	3.12	101	3667435	43536.070	pg	99
9) 1,1-Dichloroethene	3.67	96	1950013	52813.886	pg	92
10) Methylene Chloride	3.85	84	1968122	35078.201	pg	93
11) Trichlorotrifluoroethane	4.11	151	1961060	51456.497	pg	99
12) trans-1,2-Dichloroethene	4.78	96	2005139	53407.985	pg	99
13) 1,1-Dichloroethane	5.00	63	3156258	46069.463	pg	100
14) Methyl tert-Butyl Ether	5.09	73	6028184	49949.813	pg	100
15) cis-1,2-Dichloroethene	5.98	96	2169119	51551.066	pg	100
16) Chloroform	6.38	83	4084339	40722.525	pg	100
18) 1,2-Dichloroethane	7.31	62	2698537	46050.110	pg	98
19) 1,1,1-Trichloroethane	7.62	97	3446414	48545.746	pg	99
20) Benzene	8.19	78	7583659	36148.433	pg	99
21) Carbon Tetrachloride	8.37	117	3847287	75542.604	pg	100
23) 1,2-Dichloropropane	9.19	63	1874972	54706.369	pg	100
24) Bromodichloromethane	9.42	83	2953877	60401.630	pg	100
25) Trichloroethene	9.49	130	2593830	65778.553	pg	99
26) 1,4-Dioxane	9.49	88	1849222	62426.824	pg	98
27) cis-1,3-Dichloropropene	10.47	75	3138578	69528.647	pg	97
28) trans-1,3-Dichloropropene	11.07	75	3018924	85285.684	pg	99
29) 1,1,2-Trichloroethane	11.20	83	1726084	59052.140	pg	96
31) Toluene	11.50	91	8783250	57218.314	pg	97
32) 1,2-Dibromoethane	12.14	107	2432141	66487.084	pg	99
33) Tetrachloroethene	12.62	166	3608209	79141.251	pg	93
35) Chlorobenzene	13.18	112	6329502	57537.319	pg	98
36) Ethylbenzene	13.49	91	10770641	57837.026	pg	92
37) m,p-Xylene	13.62	91	18769950	123935.588	pg	86
38) o-Xylene	13.95	106	5083425	69976.838	pg	# 86
39) 1,1,2,2-Tetrachloroethane	13.94	83	4549980	62786.488	pg	98
41) 1,3-Dichlorobenzene	15.20	146	7746022	83686.881	pg	98
42) 1,4-Dichlorobenzene	15.25	146	6969520	69922.031	pg	97
43) 1,2-Dichlorobenzene	15.47	146	6320666	70368.287	pg	98
44) 1,2,4-Trichlorobenzene	16.63	182	4877913	82652.078	pg	98
45) Naphthalene	16.70	128	10842812	58020.109	pg	88
46) Hexachlorobutadiene	16.96	225	3473978	88999.647	pg	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File : I:\MS19\DATA\2015 02\11\02111513.D
Acq On : 11 Feb 2015 16:06
Sample : 50000pg TO-15-SIM Std
Misc : S29-02041502/S29-02031501 (3/4)

Vial: 7
Operator: EA
Inst : MS19

Quant Time: Feb 12 14:16:30 2015
Quant Method : I:\MS19\METHODS\X19021115.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 12 14:16:29 2015
Response via : Initial Calibration
DataAcq Meth:TO15SIM.M



Data File : I:\MS19\DATA\2015 02\11\02111515.D
 Acq On : 11 Feb 2015 17:05
 Sample : 500pg TO-15-SIM ICV Std
 Misc : S29-02041502/S29-01291510 (2/27)

Vial: 16
 Operator: EA
 Inst : MS19

EA 2/12/15

Quant Time: Feb 12 15:13:20 2015
 Quant Method : I:\MS19\METHODS\X19021115.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Thu Feb 12 14:42:03 2015
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	18013	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	133680	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	21848	1000.000	pg	0.00

System Monitoring Compounds						
17) 1,2-Dichloroethane-d4 ...	7.12	65	42920	975.688	pg	0.00
Spiked Amount 1000.000			Recovery	=	97.57%	
30) Toluene-d8 (SS2)	11.38	98	121238	983.455	pg	0.00
Spiked Amount 1000.000			Recovery	=	98.35%	
40) Bromofluorobenzene (SS3)	14.25	174	45495	1031.443	pg	0.00
Spiked Amount 1000.000			Recovery	=	103.14%	

Target Compounds						Qvalue
2) Dichlorodifluoromethan...	1.74	85	39472	539.197	pg	100
3) Chloromethane	1.86	52	7719	528.002	pg	100
4) Vinyl Chloride	2.03	62	28496	500.536	pg	99
5) Bromomethane	2.33	94	16808	510.605	pg	100
6) Chloroethane	2.49	64	13898	501.842	pg	99
7) Acetone	3.01	58	64204	2483.670	pg	96
8) Trichlorofluoromethane	3.12	101	32689	519.862	pg	100
9) 1,1-Dichloroethene	3.68	96	16483	587.204	pg	95
10) Methylene Chloride	3.81	84	16997	569.662	pg	94
11) Trichlorotrifluoroethane	4.11	151	16050	555.487	pg	100
12) trans-1,2-Dichloroethene	4.74	96	16624	579.926	pg	100
13) 1,1-Dichloroethane	4.95	63	28983	563.229	pg	100
14) Methyl tert-Butyl Ether	5.09	73	51042	559.589	pg	99
15) cis-1,2-Dichloroethene	5.93	96	17780	557.788	pg	100
16) Chloroform	6.31	83	30905	559.597	pg	100
18) 1,2-Dichloroethane	7.26	62	23575	536.122	pg	100
19) 1,1,1-Trichloroethane	7.59	97	28398	528.771	pg	100
20) Benzene	8.15	78	63658	560.419	pg	100
21) Carbon Tetrachloride	8.34	117	23345	580.623	pg	100
23) 1,2-Dichloropropane	9.16	63	15897	545.245	pg	100
24) Bromodichloromethane	9.39	83	23267	552.865	pg	100
25) Trichloroethene	9.46	130	17801	518.327	pg	100
26) 1,4-Dioxane	9.50	88	13327	520.677	pg	97
27) cis-1,3-Dichloropropene	10.46	75	23820	600.764	pg	98
28) trans-1,3-Dichloropropene	11.05	75	18332	571.027	pg	100
29) 1,1,2-Trichloroethane	11.19	83	13532	539.436	pg	99
31) Toluene	11.48	91	65842	502.178	pg	99
32) 1,2-Dibromoethane	12.12	107	17523	550.567	pg	100
33) Tetrachloroethene	12.61	166	18681	460.160	pg	99
35) Chlorobenzene	13.16	112	44788	554.312	pg	100
36) Ethylbenzene	13.48	91	76658	559.525	pg	100
37) m,p-Xylene	13.62	91	124817	1126.644	pg	100
38) o-Xylene	13.94	106	29388	534.023	pg	99
39) 1,1,2,2-Tetrachloroethane	13.93	83	28448	525.213	pg	100
41) 1,3-Dichlorobenzene	15.19	146	39066	556.443	pg	100
42) 1,4-Dichlorobenzene	15.24	146	39922	528.766	pg	99
43) 1,2-Dichlorobenzene	15.46	146	37979	561.305	pg	100
44) 1,2,4-Trichlorobenzene	16.63	182	25507	613.702	pg	100
45) Naphthalene	16.70	128	85798	627.616	pg	100
46) Hexachlorobutadiene	16.96	225	16709	602.681	pg	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

INITIAL CALIBRATION VERIFICATION CHECK SHEET - MS19

EA 2/12/15

Data File Name: 02111515.D
 Data File Path: I:\MS19\DATA\2015_02\11\
 Operator: EA
 Instrument Name: MS19
 Sample Name: 500pg TO-15-SIM ICV Std
 Misc Info: S29-02041502/S29-01291510 (2/27)
 Date Acquired: 2/11/2015 17:05
 Acq. Method File: TO15SIM.M

#	Compound Name	Ret. Time	Amount Spiked (pg)	Amount Found (pg)	Percent Recovery	Lower Limit	Upper Limit	Flag
2)	Dichlorodifluoromethane (CFC 12)	1.74	510.0	539.2	105.7	70	130	*
3)	Chloromethane	1.86	495.0	528.0	106.7	70	130	*
4)	Vinyl Chloride	2.03	505.0	500.5	99.1	70	130	*
5)	Bromomethane	2.33	505.0	510.6	101.1	70	130	*
6)	Chloroethane	2.49	505.0	501.8	99.4	70	130	*
7)	Acetone	3.01	2700.0	2483.7	92.0	70	130	*
8)	Trichlorofluoromethane	3.12	495.0	519.9	105.0	70	130	*
9)	1,1-Dichloroethene	3.68	535.0	587.2	109.8	70	130	*
10)	Methylene Chloride	3.81	540.0	569.7	105.5	70	130	*
11)	Trichlorotrifluoroethane	4.11	540.0	555.5	102.9	70	130	*
12)	trans-1,2-Dichloroethene	4.74	530.0	579.9	109.4	70	130	*
13)	1,1-Dichloroethane	4.95	520.0	563.2	108.3	70	130	*
14)	Methyl tert-Butyl Ether	5.09	530.0	559.6	105.6	70	130	*
15)	cis-1,2-Dichloroethene	5.93	535.0	557.8	104.3	70	130	*
16)	Chloroform	6.31	540.0	559.6	103.6	70	130	*
18)	1,2-Dichloroethane	7.26	525.0	536.1	102.1	70	130	*
19)	1,1,1-Trichloroethane	7.59	520.0	528.8	101.7	70	130	*
20)	Benzene	8.15	550.0	560.4	101.9	70	130	*
21)	Carbon Tetrachloride	8.34	535.0	580.6	108.5	70	130	*
23)	1,2-Dichloropropane	9.16	530.0	545.2	102.9	70	130	*
24)	Bromodichloromethane	9.39	540.0	552.9	102.4	70	130	*
25)	Trichloroethene	9.46	520.0	518.3	99.7	70	130	*
26)	1,4-Dioxane	9.50	545.0	520.7	95.5	70	130	*
27)	cis-1,3-Dichloropropene	10.46	565.0	600.8	106.3	70	130	*
28)	trans-1,3-Dichloropropene	11.05	540.0	571.0	105.7	70	130	*
29)	1,1,2-Trichloroethane	11.19	530.0	539.4	101.8	70	130	*
31)	Toluene	11.48	530.0	502.2	94.8	70	130	*
32)	1,2-Dibromoethane	12.12	540.0	550.6	102.0	70	130	*
33)	Tetrachloroethene	12.61	495.0	460.2	93.0	70	130	*
35)	Chlorobenzene	13.16	540.0	554.3	102.7	70	130	*
36)	Ethylbenzene	13.48	530.0	559.5	105.6	70	130	*
37)	m,p-Xylene	13.62	1050.0	1126.6	107.3	70	130	*
38)	o-Xylene	13.94	515.0	534.0	103.7	70	130	*
39)	1,1,2,2-Tetrachloroethane	13.93	505.0	525.2	104.0	70	130	*
41)	1,3-Dichlorobenzene	15.19	545.0	556.4	102.1	70	130	*
42)	1,4-Dichlorobenzene	15.24	530.0	528.8	99.8	70	130	*
43)	1,2-Dichlorobenzene	15.46	535.0	561.3	104.9	70	130	*
44)	1,2,4-Trichlorobenzene	16.63	525.0	613.7	116.9	70	130	*
45)	Naphthalene	16.70	490.0	627.6	128.1	70	130	*
46)	Hexachlorobutadiene	16.96	535.0	602.7	112.7	70	130	*

Acetone limits 70 - 130 as advisory limits

Data File: I:\MS19\DATA\2015 02\16\02161502.D

Acq On : 16 Feb 2015 8:59

Operator: WA

Sample : CCV X19021615 500pg

Misc : S29-02041502/S29-01221510 (2/20)

ALS Vial : 16 Sample Multiplier: 1

Quant Time: Feb 16 09:21:12 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

~~WA~~ 2/17/15

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min

Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1 I	Bromochloromethane (IS1)	1.000	1.000	0.0	132	0.00
2 T	Dichlorodifluoromethane (CF	4.064	3.939	3.1	128	0.00
3 T	Chloromethane	0.812	0.791	2.6	127	0.00
4 T	Vinyl Chloride	3.161	2.874	9.1	120	0.00
5 T	Bromomethane	1.827	1.707	6.6	120	0.00
6 T	Chloroethane	1.537	1.390	9.6	118	0.00
7 T	Acetone	1.435	1.627	-13.4	157	0.00
8 T	Trichlorofluoromethane	3.491	3.015	13.6	124	0.00
9 T	1,1-Dichloroethene	1.558	1.524	2.2	130	0.00
10 T	Methylene Chloride	1.656	1.534	7.4	127	0.00
11 T	Trichlorotrifluoroethane	1.604	1.468	8.5	128	0.00
12 T	trans-1,2-Dichloroethene	1.591	1.553	2.4	127	0.00
13 T	1,1-Dichloroethane	2.857	2.748	3.8	122	0.00
14 T	Methyl tert-Butyl Ether	5.064	4.857	4.1	128	0.00
15 T	cis-1,2-Dichloroethene	1.770	1.659	6.3	125	0.00
16 T	Chloroform	3.066	3.133	-2.2	132	0.00
17 S	1,2-Dichloroethane-d4 (SS1)	2.442	2.313	5.3	122	0.00
18 T	1,2-Dichloroethane	2.441	2.212	9.4	115	0.00
19 T	1,1,1-Trichloroethane	2.981	2.780	6.7	122	0.00
20 T	Benzene	6.306	5.832	7.5	123	0.00
21 T	Carbon Tetrachloride	2.232	2.144	3.9	125	0.00
22 I	1,4-Difluorobenzene (IS2)	1.000	1.000	0.0	127	0.00
23 T	1,2-Dichloropropane	0.218	0.209	4.1	119	0.00
24 T	Bromodichloromethane	0.315	0.303	3.8	120	0.00
25 T	Trichloroethene	0.257	0.235	8.6	122	0.00
26 T	1,4-Dioxane	0.191	0.195	-2.1	121	0.00
27 T	cis-1,3-Dichloropropene	0.297	0.305	-2.7	127	0.00
28 T	trans-1,3-Dichloropropene	0.240	0.253	-5.4	133	0.00
29 T	1,1,2-Trichloroethane	0.188	0.177	5.9	119	0.00
30 S	Toluene-d8 (SS2)	0.922	0.926	-0.4	127	0.00
31 T	Toluene	0.981	0.863	12.0	120	0.00
32 T	1,2-Dibromoethane	0.238	0.228	4.2	122	0.00
33 T	Tetrachloroethene	0.304	0.266	12.5	121	0.00
34 I	Chlorobenzene-d5 (IS3)	1.000	1.000	0.0	125	0.00
35 T	Chlorobenzene	3.698	3.471	6.1	120	0.00
36 T	Ethylbenzene	6.271	5.933	5.4	117	0.00
37 T	m,p-Xylene	5.154	4.921	4.5	118	0.00
38 T	o-Xylene	2.519	2.371	5.9	119	0.00
39 T	1,1,2,2-Tetrachloroethane	2.479	2.303	7.1	117	0.00
40 S	Bromofluorobenzene (SS3)	2.019	2.161	-7.0	133	0.00
41 T	1,3-Dichlorobenzene	3.213	2.855	11.1	119	0.00
42 T	1,4-Dichlorobenzene	3.456	3.097	10.4	118	0.00
43 T	1,2-Dichlorobenzene	3.097	2.841	8.3	119	0.00
44 T	1,2,4-Trichlorobenzene	1.902	1.767	7.1	122	0.00
45 T	Naphthalene	6.257	5.755	8.0	119	0.00
46 T	Hexachlorobutadiene	1.269	1.169	7.9	121	0.00

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

Data File: I:\MS19\DATA\2015 02\16\02161502.D

Acq On : 16 Feb 2015 8:59

Operator: WA

Sample : CCV X19021615 500pg

Misc : S29-02041502/S29-01221510 (2/20)

ALS Vial : 16 Sample Multiplier: 1

Quant Time: Feb 16 09:21:12 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

2/17/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	21265	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.71	114	152654	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	25184	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	49182	947.061	pg	0.00
Spiked Amount 1000.000			Recovery	=	94.71%	
30) Toluene-d8 (SS2)	11.38	98	141373	1004.247	pg	0.00
Spiked Amount 1000.000			Recovery	=	100.43%	
40) Bromofluorobenzene (SS3)	14.25	174	54429	1070.530	pg	0.00
Spiked Amount 1000.000			Recovery	=	107.05%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.74	85	39785	460.361	pg	100
3) Chloromethane	1.85	52	8495	492.219	pg	99
4) Vinyl Chloride	2.03	62	30562	454.730	pg	100
5) Bromomethane	2.33	94	18517	476.497	pg	100
6) Chloroethane	2.48	64	14932	456.724	pg	99
7) Acetone	3.00	58	94453	3095.054	pg	98
8) Trichlorofluoromethane	3.12	101	34621	466.387	pg	100
9) 1,1-Dichloroethene	3.67	96	17658	532.862	pg	95
10) Methylene Chloride	3.80	84	18430	523.228	pg	94
11) Trichlorotrifluoroethane	4.10	151	17009	498.653	pg	100
12) trans-1,2-Dichloroethene	4.74	96	17499	517.096	pg	99
13) 1,1-Dichloroethane	4.95	63	31269	514.726	pg	100
14) Methyl tert-Butyl Ether	5.09	73	56287	522.722	pg	99
15) cis-1,2-Dichloroethene	5.93	96	19402	515.590	pg	100
16) Chloroform	6.31	83	37305	572.182	pg	100
18) 1,2-Dichloroethane	7.26	62	25395	489.194	pg	100
19) 1,1,1-Trichloroethane	7.59	97	31035	489.500	pg	100
20) Benzene	8.16	78	70072	522.546	pg	100
21) Carbon Tetrachloride	8.34	117	26216	552.316	pg	99
23) 1,2-Dichloropropane	9.16	63	17382	522.077	pg	99
24) Bromodichloromethane	9.39	83	25190	524.161	pg	100
25) Trichloroethene	9.46	130	19369	493.884	pg	100
26) 1,4-Dioxane	9.50	88	16190	553.913	pg	98
27) cis-1,3-Dichloropropene	10.46	75	24404	538.991	pg	98
28) trans-1,3-Dichloropropene	11.05	75	20503	559.272	pg	99
29) 1,1,2-Trichloroethane	11.19	83	14718	513.790	pg	98
31) Toluene	11.48	91	72440	483.828	pg	99
32) 1,2-Dibromoethane	12.12	107	19163	527.259	pg	100
33) Tetrachloroethene	12.61	166	20515	442.526	pg	99
35) Chlorobenzene	13.17	112	48508	520.826	pg	100
36) Ethylbenzene	13.48	91	82184	520.399	pg	99
37) m,p-Xylene	13.62	91	133851	1031.238	pg	99
38) o-Xylene	13.94	106	31641	498.800	pg	98
39) 1,1,2,2-Tetrachloroethane	13.93	83	30455	487.786	pg	100
41) 1,3-Dichlorobenzene	15.19	146	40986	506.459	pg	100
42) 1,4-Dichlorobenzene	15.24	146	41337	474.982	pg	99
43) 1,2-Dichlorobenzene	15.46	146	39715	509.210	pg	100
44) 1,2,4-Trichlorobenzene	16.63	182	25144	524.831	pg	100
45) Naphthalene	16.70	128	80443	510.495	pg	100
46) Hexachlorobutadiene	16.96	225	16480	515.681	pg	100

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\16\02161502.D

Acq On : 16 Feb 2015 8:59

Operator: WA

Sample : CCV X19021615 500pg

Misc : S29-02041502/S29-01221510 (2/20)

ALS Vial : 16 Sample Multiplier: 1

Quant Time: Feb 16 09:21:12 2015

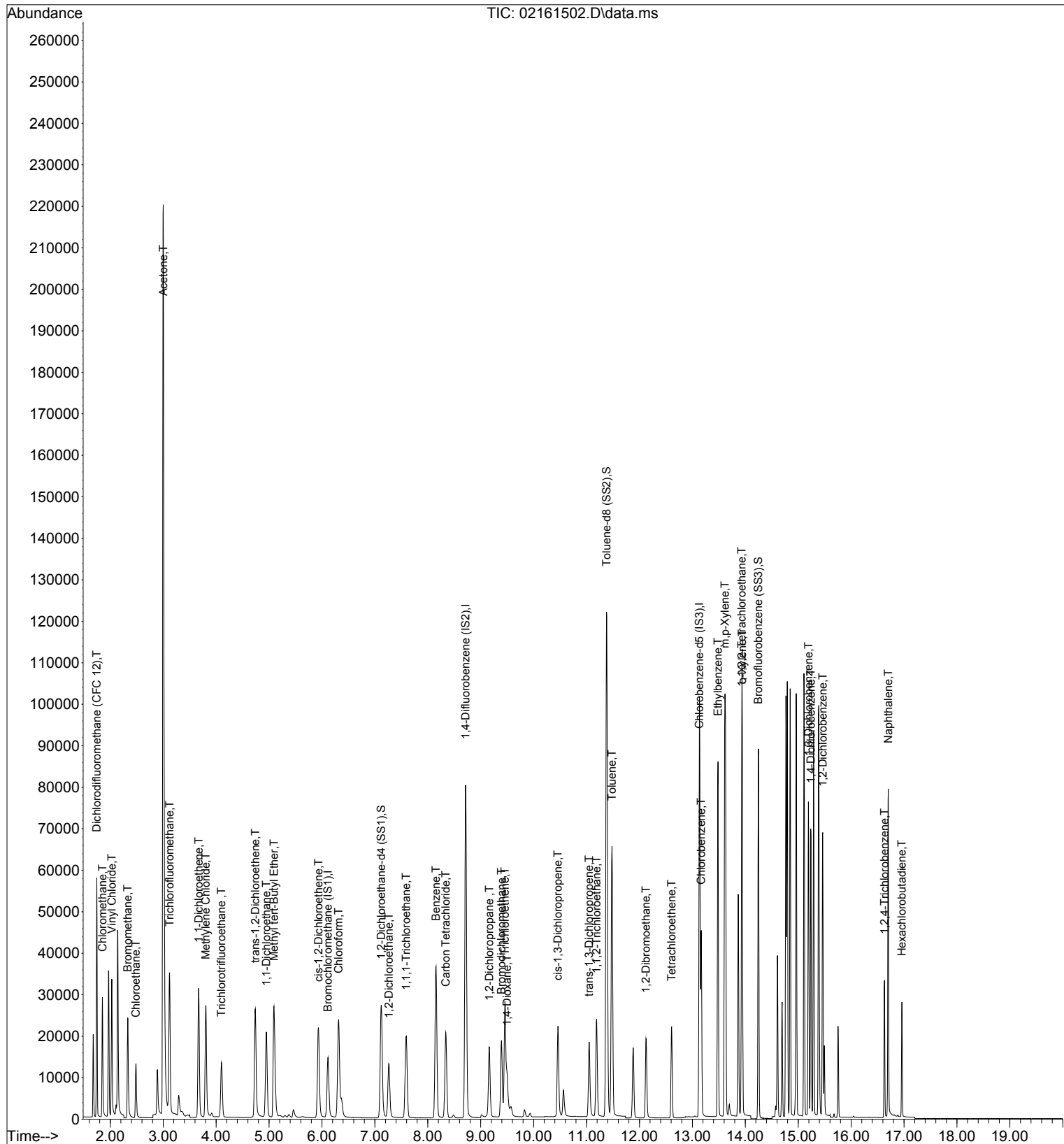
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:T015SIM.M



Data File: I:\MS19\DATA\2015 02\17\02171502.D

Acq On : 17 Feb 2015 2:43

Operator: WA

Sample : CCV X19021715 500pg

Misc : S29-02041502/S29-01221510 (2/20)

ALS Vial : 16 Sample Multiplier: 1

Quant Time: Feb 17 06:52:09 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

2/17/15

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min

Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1 I	Bromochloromethane (IS1)	1.000	1.000	0.0	123	0.00
2 T	Dichlorodifluoromethane (CF	4.064	3.846	5.4	116	0.00
3 T	Chloromethane	0.812	0.765	5.8	114	0.00
4 T	Vinyl Chloride	3.161	2.800	11.4	108	0.00
5 T	Bromomethane	1.827	1.661	9.1	108	0.00
6 T	Chloroethane	1.537	1.348	12.3	106	0.00
7 T	Acetone	1.435	1.268	11.6	113	0.00
8 T	Trichlorofluoromethane	3.491	2.917	16.4	112	0.00
9 T	1,1-Dichloroethene	1.558	1.495	4.0	118	0.00
10 T	Methylene Chloride	1.656	1.507	9.0	116	0.00
11 T	Trichlorotrifluoroethane	1.604	1.436	10.5	116	0.00
12 T	trans-1,2-Dichloroethene	1.591	1.522	4.3	115	0.00
13 T	1,1-Dichloroethane	2.857	2.682	6.1	110	0.00
14 T	Methyl tert-Butyl Ether	5.064	4.622	8.7	113	0.00
15 T	cis-1,2-Dichloroethene	1.770	1.625	8.2	113	0.00
16 T	Chloroform	3.066	2.811	8.3	110	0.00
17 S	1,2-Dichloroethane-d4 (SS1)	2.442	2.339	4.2	114	0.00
18 T	1,2-Dichloroethane	2.441	2.173	11.0	105	0.00
19 T	1,1,1-Trichloroethane	2.981	2.699	9.5	110	0.00
20 T	Benzene	6.306	5.755	8.7	112	0.00
21 T	Carbon Tetrachloride	2.232	2.040	8.6	110	0.00
22 I	1,4-Difluorobenzene (IS2)	1.000	1.000	0.0	120	0.00
23 T	1,2-Dichloropropane	0.218	0.201	7.8	108	0.00
24 T	Bromodichloromethane	0.315	0.284	9.8	107	0.00
25 T	Trichloroethene	0.257	0.228	11.3	112	0.00
26 T	1,4-Dioxane	0.191	0.189	1.0	112	0.00
27 T	cis-1,3-Dichloropropene	0.297	0.280	5.7	111	0.00
28 T	trans-1,3-Dichloropropene	0.240	0.226	5.8	112	0.00
29 T	1,1,2-Trichloroethane	0.188	0.172	8.5	110	0.00
30 S	Toluene-d8 (SS2)	0.922	0.931	-1.0	121	0.00
31 T	Toluene	0.981	0.838	14.6	111	0.00
32 T	1,2-Dibromoethane	0.238	0.219	8.0	111	0.00
33 T	Tetrachloroethene	0.304	0.258	15.1	111	0.00
34 I	Chlorobenzene-d5 (IS3)	1.000	1.000	0.0	118	0.00
35 T	Chlorobenzene	3.698	3.383	8.5	111	0.00
36 T	Ethylbenzene	6.271	5.791	7.7	109	0.00
37 T	m,p-Xylene	5.154	4.759	7.7	109	0.00
38 T	o-Xylene	2.519	2.314	8.1	110	0.00
39 T	1,1,2,2-Tetrachloroethane	2.479	2.222	10.4	107	0.00
40 S	Bromofluorobenzene (SS3)	2.019	2.272	-12.5	133	0.00
41 T	1,3-Dichlorobenzene	3.213	2.790	13.2	110	0.00
42 T	1,4-Dichlorobenzene	3.456	3.002	13.1	109	0.00
43 T	1,2-Dichlorobenzene	3.097	2.763	10.8	109	0.00
44 T	1,2,4-Trichlorobenzene	1.902	1.696	10.8	111	0.00
45 T	Naphthalene	6.257	5.490	12.3	108	0.00
46 T	Hexachlorobutadiene	1.269	1.133	10.7	111	0.00

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

Data File: I:\MS19\DATA\2015 02\17\02171502.D

Acq On : 17 Feb 2015 2:43

Operator: WA

Sample : CCV X19021715 500pg

Misc : S29-02041502/S29-01221510 (2/20)

ALS Vial : 16 Sample Multiplier: 1

Quant Time: Feb 17 06:52:09 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

2/17/15

DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	19714	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	144828	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	23900	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	46114	957.845	pg	0.00
Spiked Amount 1000.000			Recovery	=	95.78%	
30) Toluene-d8 (SS2)	11.38	98	134859	1009.740	pg	0.00
Spiked Amount 1000.000			Recovery	=	100.97%	
40) Bromofluorobenzene (SS3)	14.25	174	54299	1125.349	pg	0.00
Spiked Amount 1000.000			Recovery	=	112.53%	

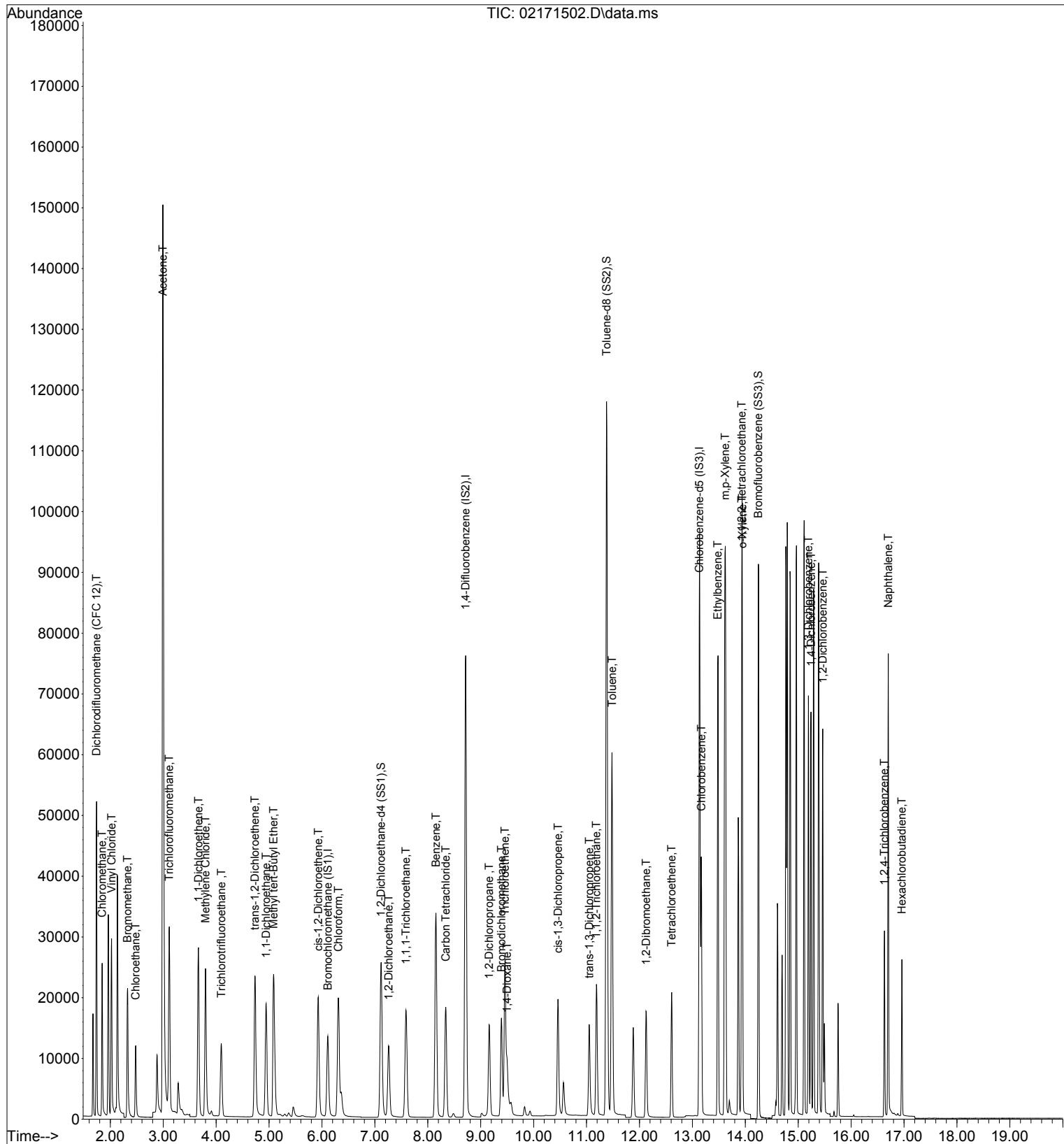
Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.74	85	36018	449.562	pg	100
3) Chloromethane	1.85	52	7614	475.881	pg	98
4) Vinyl Chloride	2.02	62	27604	443.032	pg	100
5) Bromomethane	2.33	94	16697	463.467	pg	100
6) Chloroethane	2.48	64	13418	442.705	pg	100
7) Acetone	2.99	58	68231	2411.708	pg	94
8) Trichlorofluoromethane	3.11	101	31049	451.175	pg	100
9) 1,1-Dichloroethene	3.67	96	16058	522.704	pg	94
10) Methylene Chloride	3.80	84	16788	514.109	pg	93
11) Trichlorotrifluoroethane	4.10	151	15429	487.920	pg	99
12) trans-1,2-Dichloroethene	4.73	96	15906	507.002	pg	100
13) 1,1-Dichloroethane	4.95	63	28292	502.362	pg	100
14) Methyl tert-Butyl Ether	5.09	73	49663	497.492	pg	99
15) cis-1,2-Dichloroethene	5.93	96	17624	505.188	pg	100
16) Chloroform	6.31	83	31034	513.447	pg	100
18) 1,2-Dichloroethane	7.26	62	23131	480.637	pg	100
19) 1,1,1-Trichloroethane	7.59	97	27935	475.270	pg	99
20) Benzene	8.15	78	64102	515.635	pg	100
21) Carbon Tetrachloride	8.34	117	23129	525.616	pg	100
23) 1,2-Dichloropropane	9.16	63	15878	502.674	pg	99
24) Bromodichloromethane	9.39	83	22412	491.556	pg	100
25) Trichloroethene	9.46	130	17870	480.284	pg	100
26) 1,4-Dioxane	9.50	88	14920	538.046	pg	96
27) cis-1,3-Dichloropropene	10.46	75	21270	495.158	pg	97
28) trans-1,3-Dichloropropene	11.05	75	17310	497.689	pg	100
29) 1,1,2-Trichloroethane	11.19	83	13602	500.489	pg	98
31) Toluene	11.48	91	66785	470.162	pg	100
32) 1,2-Dibromoethane	12.12	107	17483	507.028	pg	100
33) Tetrachloroethene	12.61	166	18906	429.855	pg	99
35) Chlorobenzene	13.17	112	44868	507.625	pg	100
36) Ethylbenzene	13.48	91	76129	507.956	pg	99
37) m,p-Xylene	13.62	91	122830	997.169	pg	98
38) o-Xylene	13.94	106	29310	486.877	pg	98
39) 1,1,2,2-Tetrachloroethane	13.93	83	27881	470.550	pg	99
41) 1,3-Dichlorobenzene	15.19	146	38007	494.879	pg	100
42) 1,4-Dichlorobenzene	15.24	146	38029	460.447	pg	99
43) 1,2-Dichlorobenzene	15.46	146	36645	495.090	pg	100
44) 1,2,4-Trichlorobenzene	16.63	182	22898	503.627	pg	100
45) Naphthalene	16.70	128	72827	486.993	pg	100
46) Hexachlorobutadiene	16.96	225	15161	499.895	pg	100

(#)=qualifier out of range (m)=manual integration (+)=signals summed

ALS Vial : 16 Sample Multiplier: 1

DataAcq Meth:T015SIM.M



Data File: I:\MS19\DATA\2015 02\17\02171528.D

Acq On : 17 Feb 2015 18:42

Operator: WA

Sample : CCV2 X19021715 500pg

Misc : S29-02041502/S29-01221510 (2/20)

ALS Vial : 16 Sample Multiplier: 1

Quant Time: Feb 18 07:50:08 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

2/18/15

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min

Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1 I	Bromochloromethane (IS1)	1.000	1.000	0.0	111	0.00
2 T	Dichlorodifluoromethane (CF	4.064	3.786	6.8	103	0.00
3 T	Chloromethane	0.812	0.764	5.9	103	0.00
4 T	Vinyl Chloride	3.161	2.786	11.9	98	0.00
5 T	Bromomethane	1.827	1.680	8.0	99	0.00
6 T	Chloroethane	1.537	1.390	9.6	99	0.00
7 T	Acetone	1.435	1.306	9.0	106	0.00
8 T	Trichlorofluoromethane	3.491	2.903	16.8	101	0.00
9 T	1,1-Dichloroethene	1.558	1.487	4.6	107	0.00
10 T	Methylene Chloride	1.656	1.527	7.8	106	0.00
11 T	Trichlorotrifluoroethane	1.604	1.442	10.1	106	0.00
12 T	trans-1,2-Dichloroethene	1.591	1.539	3.3	106	0.00
13 T	1,1-Dichloroethane	2.857	2.746	3.9	103	0.00
14 T	Methyl tert-Butyl Ether	5.064	4.557	10.0	101	0.00
15 T	cis-1,2-Dichloroethene	1.770	1.646	7.0	104	0.00
16 T	Chloroform	3.066	2.856	6.8	101	0.00
17 S	1,2-Dichloroethane-d4 (SS1)	2.442	2.391	2.1	106	0.00
18 T	1,2-Dichloroethane	2.441	2.229	8.7	98	0.00
19 T	1,1,1-Trichloroethane	2.981	2.717	8.9	100	0.00
20 T	Benzene	6.306	5.797	8.1	103	0.00
21 T	Carbon Tetrachloride	2.232	2.034	8.9	100	0.00
22 I	1,4-Difluorobenzene (IS2)	1.000	1.000	0.0	109	0.00
23 T	1,2-Dichloropropane	0.218	0.207	5.0	101	0.00
24 T	Bromodichloromethane	0.315	0.292	7.3	99	0.00
25 T	Trichloroethene	0.257	0.229	10.9	102	0.00
26 T	1,4-Dioxane	0.191	0.189	1.0	101	0.00
27 T	cis-1,3-Dichloropropene	0.297	0.281	5.4	101	0.00
28 T	trans-1,3-Dichloropropene	0.240	0.224	6.7	101	0.00
29 T	1,1,2-Trichloroethane	0.188	0.176	6.4	101	0.00
30 S	Toluene-d8 (SS2)	0.922	0.933	-1.2	110	0.00
31 T	Toluene	0.981	0.847	13.7	101	0.00
32 T	1,2-Dibromoethane	0.238	0.221	7.1	101	0.00
33 T	Tetrachloroethene	0.304	0.256	15.8	100	0.00
34 I	Chlorobenzene-d5 (IS3)	1.000	1.000	0.0	110	0.00
35 T	Chlorobenzene	3.698	3.293	11.0	101	0.00
36 T	Ethylbenzene	6.271	5.658	9.8	99	0.00
37 T	m,p-Xylene	5.154	4.608	10.6	98	0.00
38 T	o-Xylene	2.519	2.239	11.1	99	0.00
39 T	1,1,2,2-Tetrachloroethane	2.479	2.197	11.4	98	0.00
40 S	Bromofluorobenzene (SS3)	2.019	2.173	-7.6	118	0.00
41 T	1,3-Dichlorobenzene	3.213	2.673	16.8	98	0.00
42 T	1,4-Dichlorobenzene	3.456	2.884	16.6	97	0.00
43 T	1,2-Dichlorobenzene	3.097	2.643	14.7	97	0.00
44 T	1,2,4-Trichlorobenzene	1.902	1.599	15.9	97	0.00
45 T	Naphthalene	6.257	5.205	16.8	95	0.00
46 T	Hexachlorobutadiene	1.269	1.065	16.1	97	0.00

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

Data File: I:\MS19\DATA\2015 02\17\02171528.D

Acq On : 17 Feb 2015 18:42

Operator: WA

Sample : CCV2 X19021715 500pg

Misc : S29-02041502/S29-01221510 (2/20)

ALS Vial : 16 Sample Multiplier: 1

Quant Time: Feb 18 07:50:08 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

WA 2/18/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	17906	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.71	114	131112	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	22260	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	42817	979.163	pg	0.00
Spiked Amount 1000.000			Recovery	=	97.92%	
30) Toluene-d8 (SS2)	11.38	98	122270	1011.253	pg	0.00
Spiked Amount 1000.000			Recovery	=	101.13%	
40) Bromofluorobenzene (SS3)	14.25	174	48379	1076.527	pg	0.00
Spiked Amount 1000.000			Recovery	=	107.65%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.74	85	32198	442.461	pg	100
3) Chloromethane	1.85	52	6913	475.695	pg	99
4) Vinyl Chloride	2.03	62	24940	440.692	pg	100
5) Bromomethane	2.33	94	15345	468.947	pg	100
6) Chloroethane	2.48	64	12566	456.457	pg	100
7) Acetone	3.00	58	63826	2483.801	pg	94
8) Trichlorofluoromethane	3.12	101	28065	448.992	pg	100
9) 1,1-Dichloroethene	3.67	96	14507	519.898	pg	96
10) Methylene Chloride	3.80	84	15448	520.841	pg	94
11) Trichlorotrifluoroethane	4.10	151	14072	489.940	pg	100
12) trans-1,2-Dichloroethene	4.74	96	14607	512.608	pg	100
13) 1,1-Dichloroethane	4.95	63	26304	514.222	pg	100
14) Methyl tert-Butyl Ether	5.09	73	44468	490.430	pg	100
15) cis-1,2-Dichloroethene	5.93	96	16215	511.731	pg	100
16) Chloroform	6.31	83	28642	521.720	pg	100
18) 1,2-Dichloroethane	7.26	62	21557	493.160	pg	100
19) 1,1,1-Trichloroethane	7.59	97	25544	478.472	pg	100
20) Benzene	8.16	78	58648	519.398	pg	100
21) Carbon Tetrachloride	8.34	117	20942	523.970	pg	100
23) 1,2-Dichloropropane	9.16	63	14784	517.003	pg	99
24) Bromodichloromethane	9.39	83	20895	506.227	pg	100
25) Trichloroethene	9.46	130	16194	480.770	pg	100
26) 1,4-Dioxane	9.50	88	13516	538.404	pg	95
27) cis-1,3-Dichloropropene	10.46	75	19313	496.634	pg	97
28) trans-1,3-Dichloropropene	11.05	75	15565	494.334	pg	100
29) 1,1,2-Trichloroethane	11.19	83	12561	510.536	pg	99
31) Toluene	11.48	91	61067	474.881	pg	100
32) 1,2-Dibromoethane	12.13	107	15965	511.440	pg	100
33) Tetrachloroethene	12.61	166	16949	425.674	pg	100
35) Chlorobenzene	13.17	112	40686	494.224	pg	100
36) Ethylbenzene	13.48	91	69276	496.286	pg	100
37) m,p-Xylene	13.62	91	110776	965.568	pg	99
38) o-Xylene	13.94	106	26420	471.204	pg	99
39) 1,1,2,2-Tetrachloroethane	13.93	83	25678	465.298	pg	99
41) 1,3-Dichlorobenzene	15.19	146	33911	474.077	pg	100
42) 1,4-Dichlorobenzene	15.24	146	34029	442.371	pg	99
43) 1,2-Dichlorobenzene	15.46	146	32658	473.731	pg	100
44) 1,2,4-Trichlorobenzene	16.63	182	20108	474.847	pg	100
45) Naphthalene	16.70	128	64302	461.666	pg	100
46) Hexachlorobutadiene	16.96	225	13276	469.992	pg	100

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\17\02171528.D

Acq On : 17 Feb 2015 18:42

Operator: WA

Sample : CCV2 X19021715 500pg

Misc : S29-02041502/S29-01221510 (2/20)

ALS Vial : 16 Sample Multiplier: 1

Quant Time: Feb 18 07:50:08 2015

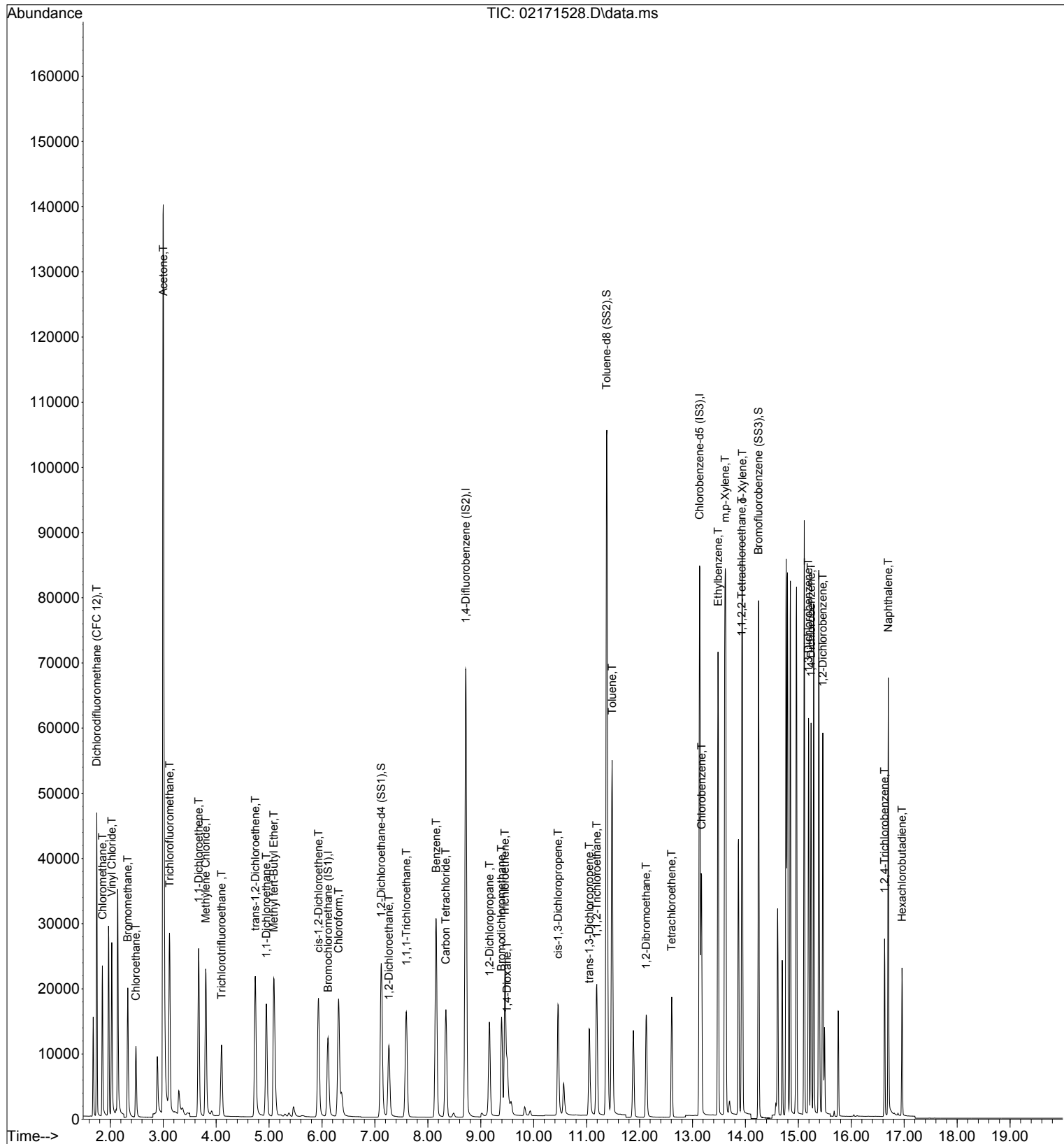
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:T015SIM.M

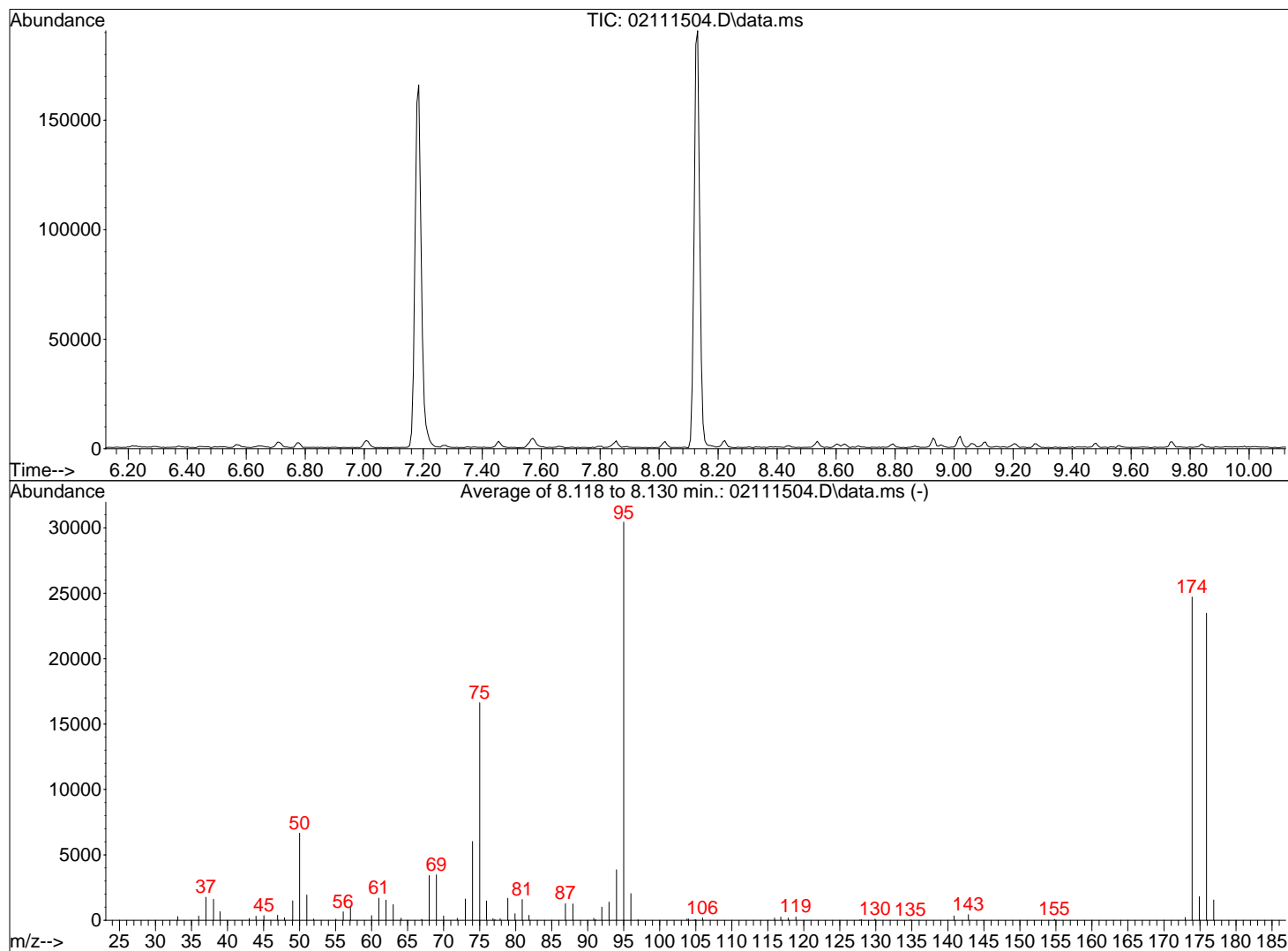


Data Path : I:\MS19\DATA\2015 02\11\
 Data File : 02111504.D
 Acq On : 11 Feb 2015 11:55
 Operator : EA
 Sample : BFB X19021115
 Misc : S29-02041502
 ALS Vial : 14 Sample Multiplier: 1

EA 2/12/15

Integration File: rteint.p

Method : I:\MS19\METHODS\X19021115.M
 Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 Last Update : Thu Feb 12 14:42:03 2015



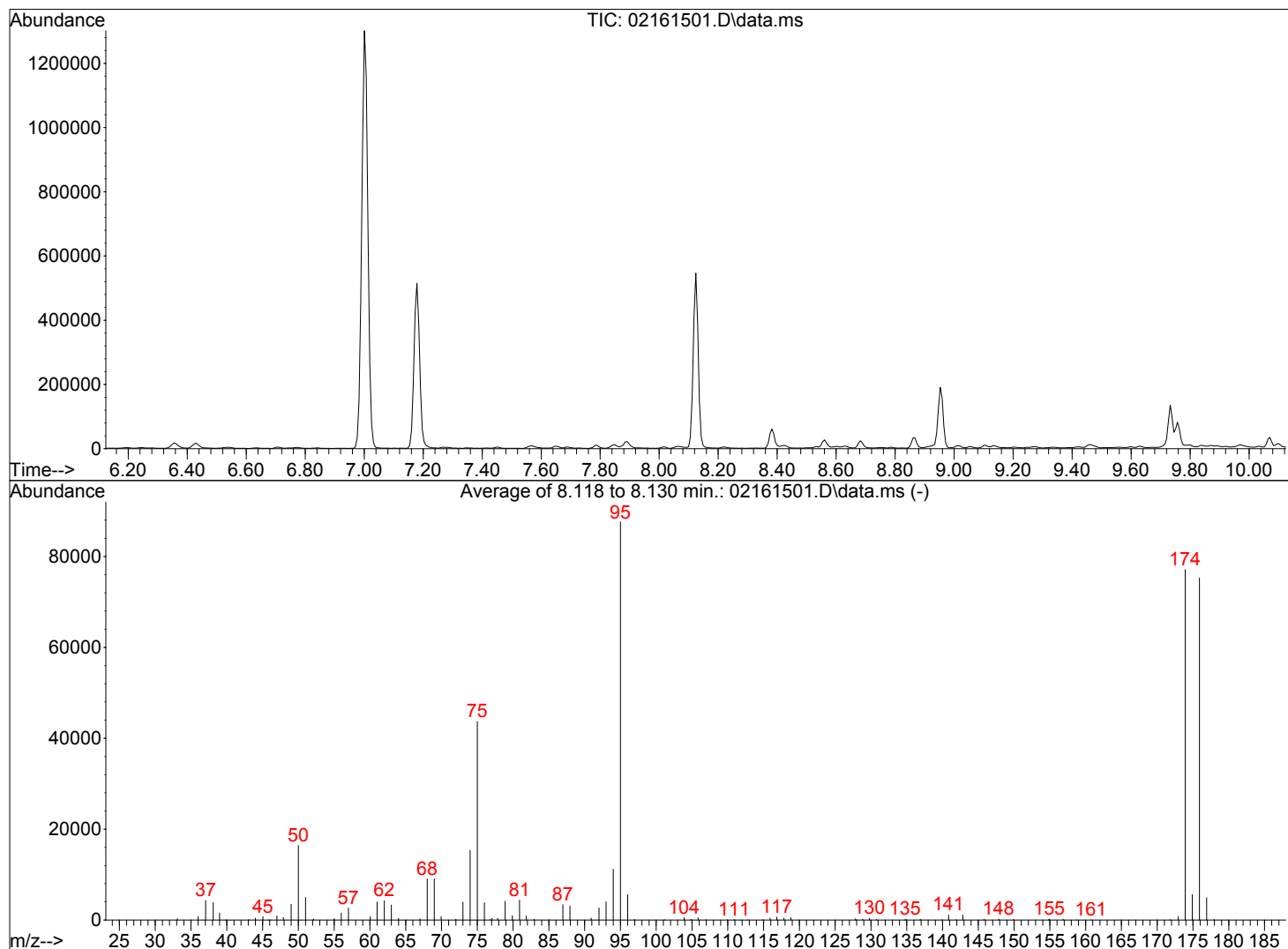
AutoFind: Scans 901, 902, 903; Background Corrected with Scan 896

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	21.9	6653	PASS
75	95	30	66	54.6	16628	PASS
95	95	100	100	100.0	30440	PASS
96	95	5	9	6.7	2037	PASS
173	174	0.00	2	0.9	219	PASS
174	95	50	120	81.2	24714	PASS
175	174	4	9	7.3	1805	PASS
176	174	93	101	95.0	23475	PASS
177	176	5	9	6.6	1552	PASS

Data Path : I:\MS19\DATA\2015 02\16\
Data File : 02161501.D
Acq On : 16 Feb 2015 8:37
Operator : WA
Sample : BFB X19021615
Misc : S29-02041502
ALS Vial : 3 Sample Multiplier: 1

Integration File: RTEINT.P

Method : I:\MS08\Methods\R8010815.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
Last Update : Fri Jan 09 07:01:04 2015



AutoFind: Scans 901, 902, 903; Background Corrected with Scan 895

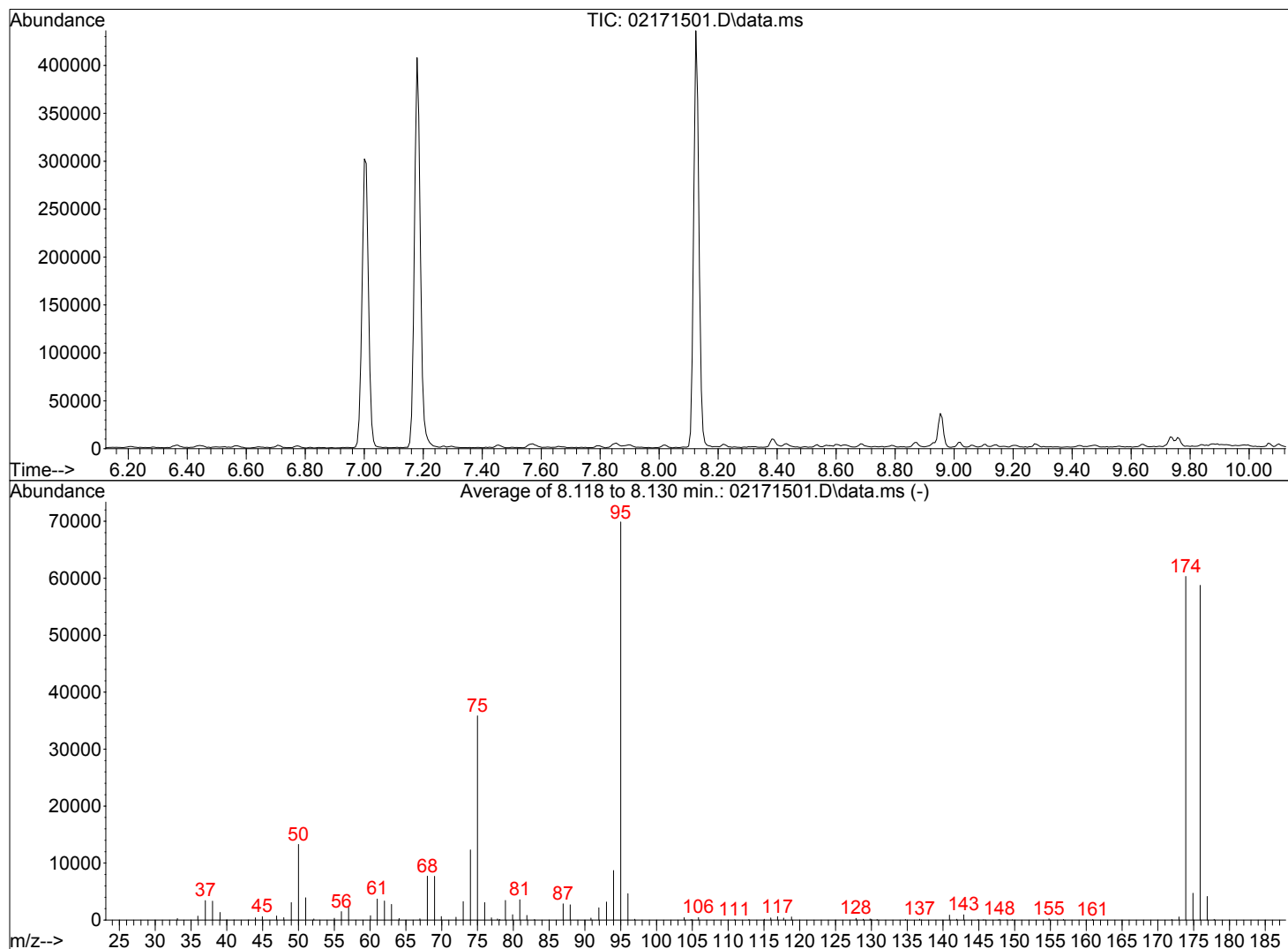
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	18.7	16401	PASS
75	95	30	66	49.9	43696	PASS
95	95	100	100	100.0	87608	PASS
96	95	5	9	6.3	5548	PASS
173	174	0.00	2	1.0	803	PASS
174	95	50	120	88.0	77112	PASS
175	174	4	9	7.3	5596	PASS
176	174	93	101	97.6	75288	PASS
177	176	5	9	6.6	4933	PASS

~~107~~ 2/17/15

Data Path : I:\MS19\DATA\2015 02\17\
 Data File : 02171501.D
 Acq On : 17 Feb 2015 2:21
 Operator : WA
 Sample : BFB X19021715
 Misc : S29-02041502
 ALS Vial : 3 Sample Multiplier: 1

Integration File: rteint.p

Method : I:\MS19\METHODS\X19021115.M
 Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 Last Update : Thu Feb 12 14:42:03 2015



AutoFind: Scans 901, 902, 903; Background Corrected with Scan 895

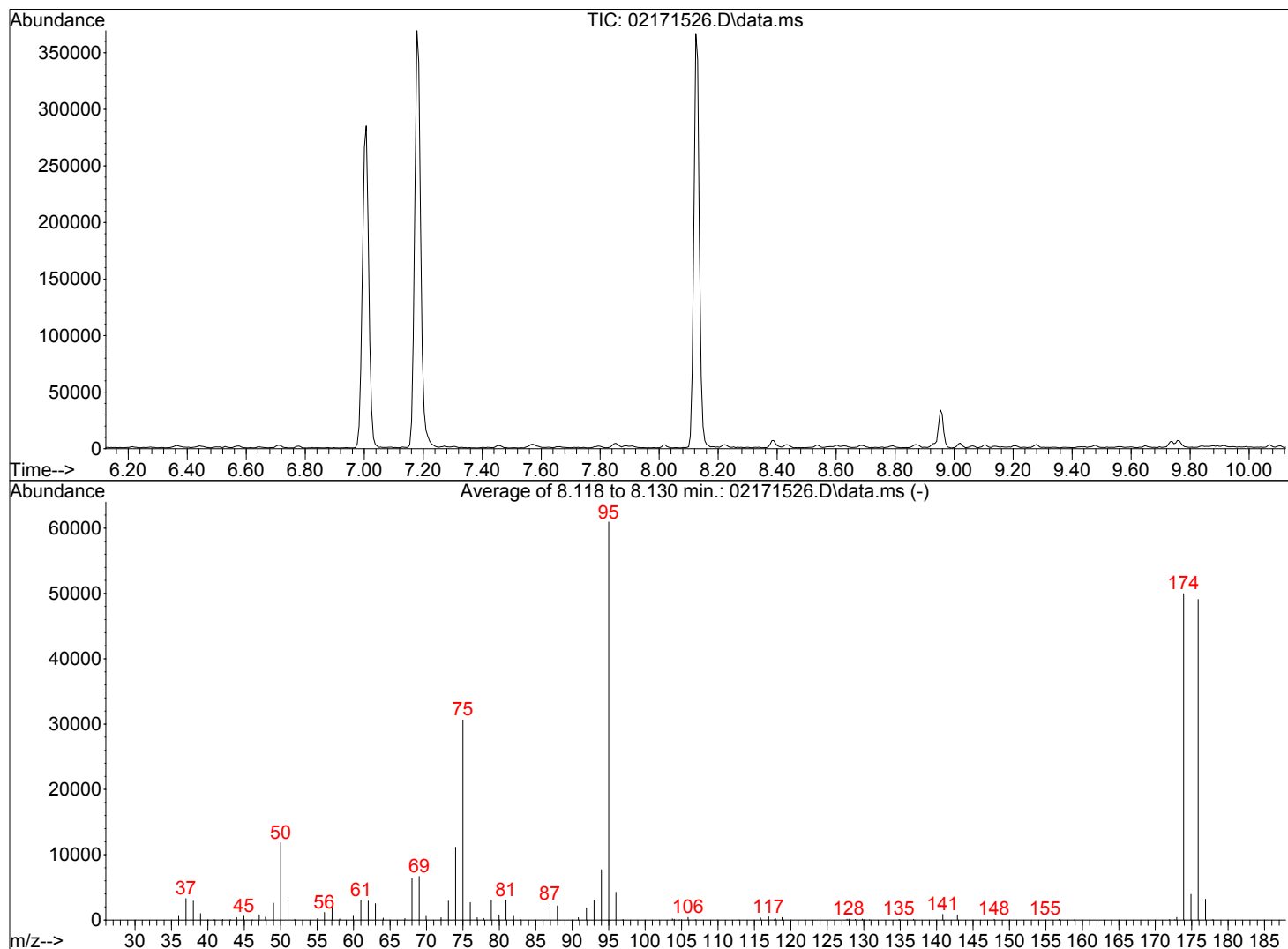
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	19.0	13276	PASS
75	95	30	66	51.3	35840	PASS
95	95	100	100	100.0	69883	PASS
96	95	5	9	6.6	4644	PASS
173	174	0.00	2	0.9	541	PASS
174	95	50	120	86.3	60323	PASS
175	174	4	9	7.8	4702	PASS
176	174	93	101	97.4	58763	PASS
177	176	5	9	7.1	4150	PASS

2/17/15

Data Path : I:\MS19\DATA\2015 02\17\
 Data File : 02171526.D
 Acq On : 17 Feb 2015 17:52
 Operator : WA
 Sample : BFB2 X19021715
 Misc : S29-02041502
 ALS Vial : 3 Sample Multiplier: 1

Integration File: rteint.p

Method : I:\MS19\METHODS\X19021115.M
 Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 Last Update : Thu Feb 12 14:42:03 2015



AutoFind: Scans 901, 902, 903; Background Corrected with Scan 895

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	19.4	11848	PASS
75	95	30	66	50.3	30643	PASS
95	95	100	100	100.0	60949	PASS
96	95	5	9	7.0	4260	PASS
173	174	0.00	2	0.8	416	PASS
174	95	50	120	82.0	49973	PASS
175	174	4	9	7.9	3932	PASS
176	174	93	101	98.3	49099	PASS
177	176	5	9	6.5	3190	PASS

~~WA~~ 2/18/15

	Date/Time	File Name	Sample ID	Misc Info	Operator	Vial	Comment
1	2/11/15 9:58	02111501.D	blank	S29-02041502	EA	1	
1	2/11/15 10:25	02111502.D	500pg TO-15-SIM ICV Std	S29-02041502	EA	16	
2	2/11/15 10:52	02111503.D	500pg can chk	S29-02041502	EA	8	
3	2/11/15 11:55	02111504.D	BFB X19021115	S29-02041502	EA	14	
4	2/11/15 12:19	02111505.D	10pg TO-15-SIM Std	S29-02041502/S29-01221514 (2/20)	EA	5	
5	2/11/15 12:48	02111506.D	20pg TO-15-SIM Std	S29-02041502/S29-01221514 (2/20)	EA	5	
6	2/11/15 13:19	02111507.D	50pg TO-15-SIM Std	S29-02041502/S29-01221514 (2/20)	EA	5	
7	2/11/15 13:46	02111508.D	100pg TO-15-SIM Std	S29-02041502/S29-01221514 (2/20)	EA	5	
8	2/11/15 14:14	02111509.D	500pg TO-15-SIM Std	S29-02041502/S29-01221510 (2/20)	EA	15	
9	2/11/15 14:41	02111510.D	1000pg TO-15-SIM Std	S29-02041502/S29-01221510 (2/20)	EA	15	
10	2/11/15 15:09	02111511.D	2500pg TO-15-SIM Std	S29-02041502/S29-01221506 (2/20)	EA	6	can closed, not used
11	2/11/15 15:39	02111512.D	20000pg TO-15-SIM Std	S29-02041502/S29-02031501 (3/4)	EA	7	
12	2/11/15 16:06	02111513.D	50000pg TO-15-SIM Std	S29-02041502/S29-02031501 (3/4)	EA	7	
13	2/11/15 16:36	02111514.D	2500pg TO-15-SIM Std	S29-02041502/S29-01221506 (2/20)	EA	6	
14	2/11/15 17:05	02111515.D	500pg TO-15-SIM ICV Std	S29-02041502/S29-01291510 (2/27)	EA	16	Passed
15	2/11/15 17:44	02111516.D	blank	S29-02041502	EA	1	
16	2/11/15 18:11	02111517.D	500pg TO-15-SIM ICV Std	S29-02041502/S29-01291509 (2/27)	EA	16	not used
17	2/11/15 18:40	02111518.D	500pg TO-15-SIM ICV Std	S29-02041502/S29-02111502	EA	12	not used
18	2/11/15 19:08	02111519.D	500pg TO-15-SIM ICV Std	S29-02041502/S29-02111502	EA	12	not used
	Saved as X19021115.M: good from 10pg--->50,000pg except:						
	20-50,000pg: Chloromethane, Bromomethane, Acetone, benzene, cis-1,3-dichloropropene, TCE, 1,3-dichlorobenzene						
	50-50,000pg: MeCl2, chloroform; 10-20,000pg: m,p-xylene, naphthalene; 50-20,000pg: trans-1,3-dichloropropene;						
	20-20,000pg: 1,2,4-trichlorobenzene, Hexachloro-1,3-butadiene						
					EA	2/12/15	

	Date/Time	File Name	Sample ID	Misc Info	Operator	Vial	Comment
1	2/16/15 8:37	02161501.D	BFB X19021615	S29-02041502	WA	3	Passed
1	2/16/15 8:59	02161502.D	CCV X19021615_500pg	S29-02041502/S29-01221510 (2/20)	WA	16	Passed
2	2/16/15 9:46	02161503.D	MB X19021615_1000ml	S29-02041502	WA	1	CF
3	2/16/15 10:14	02161504.D	LCS X19021615_500pg	S29-02041502/S29-01291510 (2/27)	WA	3	CF
4	2/16/15 12:03	02161505.D	MB X19021615_1000ml	S29-02041502	WA	1	CF
5	2/16/15 12:30	02161506.D	LCS X19021615_500pg	S29-02041502/S29-01291510 (2/27)	WA	3	CF
6	2/16/15 12:57	02161507.D	LCSD X19021615_500pg	S29-02041502/S29-01291510 (2/27)	WA	3	CF
7	2/16/15 14:54	02161508.D	25 pg TO-15SIM MDL	S29-02041502	WA	11	
8	2/16/15 15:22	02161509.D	25 pg TO-15SIM MDL	S29-02041502	WA	11	
9	2/16/15 15:49	02161510.D	25 pg TO-15SIM MDL	S29-02041502	WA	11	
10	2/16/15 16:17	02161511.D	MB X19021615_1000mL	S29-02041502	WA	1	Passed
11	2/16/15 16:44	02161512.D	25 pg TO-15SIM MDL	S29-02041502	WA	11	
12	2/16/15 17:32	02161513.D	25 pg TO-15SIM MDL	S29-02041502/S29-01221514	WA	12	
13	2/16/15 17:59	02161514.D	LCS X19021615_500pg	S29-02041502/S29-01291510 (2/27)	WA	3	Passed
14	2/16/15 18:26	02161515.D	LCSD X19021615_500pg	S29-02041502/S29-01291510 (2/27)	WA	3	Passed
15	2/16/15 18:54	02161516.D	25 pg TO-15SIM MDL	S29-02041502/S29-01221514	WA	12	
16	2/16/15 19:22	02161517.D	25 pg TO-15SIM MDL	S29-02041502/S29-01221514	WA	12	
17	2/16/15 19:50	02161518.D	P1500566-001 (1000mL)	S29-02041502	WA	1	
18	2/16/15 20:17	02161519.D	P1500566-002 (1000mL)	S29-02041502	WA	3	
19	2/16/15 20:45	02161520.D	P1500566-002 dup (1000mL)	S29-02041502	WA	3	pass as dup
20	2/16/15 21:12	02161521.D	P1500566-003 (1000mL)	S29-02041502	WA	4	
21	2/16/15 21:40	02161522.D	P1500566-004 (1000mL)	S29-02041502	WA	5	
22	2/16/15 22:09	02161523.D	P1500566-005 (1000mL)	S29-02041502	WA	6	
23	2/16/15 22:37	02161524.D	P1500566-006 (1000mL)	S29-02041502	WA	7	
24	2/16/15 23:05	02161525.D	P1500566-007 (1000mL)	S29-02041502	WA	8	
25	2/16/15 23:32	02161526.D	P1500566-008 (1000mL)	S29-02041502	WA	9	
26	2/17/15 0:00	02161527.D	P1500566-009 (1000mL)	S29-02041502	WA	10	
27	2/17/15 0:28	02161528.D	P1500566-010 (1000mL)	S29-02041502	WA	11	
28	2/17/15 0:55	02161529.D	P1500566-027 (1000mL)	S29-02041502	WA	13	
29	2/17/15 1:23	02161530.D	P1500566-028 (1000mL)	S29-02041502	WA	14	
30	2/17/15 1:53	02161531.D	P1500566-029 (1000mL)	S29-02041502	WA	15	

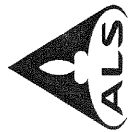
~~DA~~ 2/17/15

	Date/Time	File Name	Sample ID	Misc Info	Operator	Vial	Comment
1	2/17/15 2:21	02171501.D	BFB X19021715	S29-02041502	WA	3	Passed
1	2/17/15 2:43	02171502.D	CCV X19021715_500pg	S29-02041502/S29-01221510 (2/20)	WA	16	Passed
2	2/17/15 3:11	02171503.D	MB X19021715_1000ml	S29-02041502	WA	1	Passed
3	2/17/15 3:38	02171504.D	LCS X19021715_500pg	S29-02041502/S29-01291510 (2/27)	WA	3	Passed
4	2/17/15 4:06	02171505.D	LCSD X19021715_500pg	S29-02041502/S29-01291510 (2/27)	WA	3	Passed
5	2/17/15 4:33	02171506.D	25 pg TO-15SIM MDL	S29-02041502/S29-01221514	WA	12	
6	2/17/15 5:01	02171507.D	25 pg TO-15SIM LOD	S29-02041502/S29-01221514	WA	12	
7	2/17/15 7:53	02171508.D	20 pg TO-15SIM LOD	S29-02041502/S29-01221514	WA	12	
8	2/17/15 8:20	02171509.D	P1500566-026 (1000mL)	S29-02041502	WA	1	
9	2/17/15 8:49	02171510.D	P1500566-025 (1000mL)	S29-02041502	WA	3	
10	2/17/15 9:17	02171511.D	P1500566-024 (1000mL)	S29-02041502	WA	4	
11	2/17/15 9:45	02171512.D	P1500566-023 (1000mL)	S29-02041502	WA	5	
12	2/17/15 10:15	02171513.D	P1500566-022 (1000mL)	S29-02041502	WA	6	
13	2/17/15 10:43	02171514.D	P1500566-021 (1000mL)	S29-02041502	WA	7	
14	2/17/15 11:11	02171515.D	P1500566-020 (1000mL)	S29-02041502	WA	8	
15	2/17/15 12:43	02171516.D	P1500566-011 (1000mL)	S29-02041502	WA	9	
16	2/17/15 13:10	02171517.D	P1500566-012 (1000mL)	S29-02041502	WA	10	
17	2/17/15 13:38	02171518.D	P1500566-013 (1000mL)	S29-02041502	WA	11	
18	2/17/15 14:06	02171519.D	P1500566-014 (1000mL)	S29-02041502	WA	13	
19	2/17/15 14:34	02171520.D	P1500566-015 (1000mL)	S29-02041502	WA	14	
20	2/17/15 15:02	02171521.D	P1500566-016 (1000mL)	S29-02041502	WA	15	
21	2/17/15 15:30	02171522.D	P1500566-017 (1000mL)	S29-02041502	WA	1	
22	2/17/15 16:28	02171523.D	P1500566-018 (1000mL)	S29-02041502	WA	3	
23	2/17/15 16:55	02171524.D	P1500566-019 (1000mL)	S29-02041502	WA	4	
24	2/17/15 17:25	02171525.D	P1500566-019 dup (1000mL)	S29-02041502	WA	4	Pass as dup

WA 2/18/15

	Date/Time	File Name	Sample ID	Misc Info	Operator	Vial	Comment
25	2/17/15 17:52	02171526.D	BFB2 X19021715	S29-02041502	WA	3	Passed
26	2/17/15 18:15	02171527.D	CCV2 X19021715_500pg	S29-02041502/S29-01221511 (2/20)	WA	15	Passed-cf
27	2/17/15 18:42	02171528.D	CCV2 X19021715_500pg	S29-02041502/S29-01221510 (2/20)	WA	16	Passed
28	2/17/15 19:09	02171529.D	100pg_MDL Study	S29-02041502/S29-01221510 (2/20)	WA	16	
29	2/17/15 19:39	02171530.D	MB2 X19021715_1000ml	S29-02041502	WA	1	Passed
30	2/17/15 20:06	02171531.D	LCS2 X19021715_500pg	S29-02041502/S29-01291510 (2/27)	WA	3	Passed
31	2/17/15 20:34	02171532.D	LCSD2 X19021715_500pg	S29-02041502/S29-01291510 (2/27)	WA	3	Passed
32	2/17/15 21:01	02171533.D	100pg_MDL Study	S29-02041502/S29-01221510 (2/20)	WA	16	
33	2/17/15 21:29	02171534.D	100pg_MDL Study	S29-02041502/S29-01221510 (2/20)	WA	16	
34	2/17/15 21:56	02171535.D	P1500619-005 (1000mL)	S29-02041502	WA	5	
35	2/17/15 22:24	02171536.D	P1500619-006 (1000mL)	S29-02041502	WA	6	
36	2/17/15 22:51	02171537.D	P1500619-007 (1000mL)	S29-02041502	WA	7	
37	2/17/15 23:19	02171538.D	P1500619-008 (1000mL)	S29-02041502	WA	8	
38	2/17/15 23:47	02171539.D	P1500619-009 (1000mL)	S29-02041502	WA	9	
39	2/18/15 0:15	02171540.D	P1500619-010 (1000mL)	S29-02041502	WA	10	
40	2/18/15 0:42	02171541.D	P1500619-011 (1000mL)	S29-02041502	WA	11	
41	2/18/15 1:10	02171542.D	P1500619-012 (1000mL)	S29-02041502	WA	12	
42	2/18/15 1:37	02171543.D	P1500619-013 (1000mL)	S29-02041502	WA	13	
43	2/18/15 2:05	02171544.D	P1500619-014 (1000mL)	S29-02041502	WA	14	
44	2/18/15 2:32	02171545.D	P1500619-015 (1000mL)	S29-02041502	WA	1	
45	2/18/15 3:00	02171546.D	100pg_MDL Study	S29-02041502/S29-01221511 (2/20)	WA	15	
46	2/18/15 3:28	02171547.D	100pg_MDL Study	S29-02041502/S29-01221511 (2/20)	WA	15	
47	2/18/15 9:35	02171548.D	100pg_MDL Study	S29-02041502/S29-01221511 (2/20)	WA	15	
48	2/18/15 10:02	02171549.D	100pg_MDL Study	S29-02041502/S29-01221511 (2/20)	WA	15	
49	2/18/15 10:30	02171550.D	P1500619-016 (1000mL)	S29-02041502	WA	3	
50	2/18/15 10:59	02171551.D	P1500619-015 dup (1000mL)	S29-02041502	WA	1	Pass as dup
51	2/18/15 11:45	02171552.D	P1500566-030 (1000mL)	S29-02041502	WA	4	
52	2/18/15 12:39	02171553.D	P1500619-001 (1000mL)	S29-02041502	WA	5	
53	2/18/15 13:06	02171554.D	P1500619-002 (1000mL)	S29-02041502	WA	6	

~~WA~~ 2/18/15



ALS Environmental

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2655 Park Center Drive, Suite A
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QC Certification

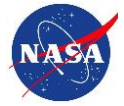
<u>Container IDs</u>	<u>Cleaned Date</u>	<u>Date Analyzed</u>	<u>QC Results</u>	<u>Comments</u>
AC00681*	1/30/15	2/5/15	Pass w/ Conditions	EPA TO-15 (Client Specified)
AC00714*	1/30/15	2/5/15	Pass w/ Conditions	EPA TO-15 (Client Specified)
AC00726*	2/3/15	2/4/15	Pass w/ Conditions	EPA TO-15 (Client Specified)
AC01036*	2/5/15	2/5/15	Pass w/ Conditions	EPA TO-15 (Client Specified)
AC01482*	2/5/15	2/5/15	Pass w/ Conditions	EPA TO-15 (Client Specified)
AC01494*	2/3/15	2/5/15	Pass w/ Conditions	EPA TO-15 (Client Specified)
AC01610*	2/5/15	2/5/15	Pass w/ Conditions	EPA TO-15 (Client Specified)
AC01784*	1/30/15	2/5/15	Pass w/ Conditions	EPA TO-15 (Client Specified)
AC01804*	2/5/15	2/5/15	Pass w/ Conditions	EPA TO-15 (Client Specified)
AC01887*	1/30/15	2/5/15	Pass w/ Conditions	EPA TO-15 (Client Specified)
AC01939*	2/3/15	2/4/15	Pass w/ Conditions	EPA TO-15 (Client Specified)
AC01946*	2/5/15	2/5/15	Pass w/ Conditions	EPA TO-15 (Client Specified)
AC02028*	2/3/15	2/5/15	Pass w/ Conditions	EPA TO-15 (Client Specified)
AC02056*	1/30/15	2/4/15	Pass w/ Conditions	EPA TO-15 (Client Specified)
AS00098*	2/5/15	2/6/15	Pass w/ Conditions	EPA TO-15 (Client Specified)
AS00293*	2/3/15	2/5/15	Pass w/ Conditions	EPA TO-15 (Client Specified)
AS00310*	2/5/15	2/6/15	Pass w/ Conditions	EPA TO-15 (Client Specified)
AS00388*	2/3/15	2/4/15	Pass w/ Conditions	EPA TO-15 (Client Specified)
AS00542*	2/3/15	2/4/15	Pass w/ Conditions	EPA TO-15 (Client Specified)
AS00602*	2/3/15	2/5/15	Pass w/ Conditions	EPA TO-15 (Client Specified)
AS00658*	2/3/15	2/4/15	Pass w/ Conditions	EPA TO-15 (Client Specified)
AS00695*	2/3/15	2/4/15	Pass w/ Conditions	EPA TO-15 (Client Specified)
AS00766*	2/5/15	2/5/15	Pass w/ Conditions	EPA TO-15 (Client Specified)
AS00780*	2/5/15	2/6/15	Pass w/ Conditions	EPA TO-15 (Client Specified)
AS00785*	2/5/15	2/5/15	Pass w/ Conditions	EPA TO-15 (Client Specified)
AS00804*	2/3/15	2/5/15	Pass w/ Conditions	EPA TO-15 (Client Specified)
AS00820*	2/3/15	2/5/15	Pass w/ Conditions	EPA TO-15 (Client Specified)
AS00833*	1/30/15	2/5/15	Pass w/ Conditions	EPA TO-15 (Client Specified)

* QC Canister

<u>Container IDs</u>	<u>Cleaned Date</u>	<u>Date Analyzed</u>	<u>QC Results</u>	<u>Comments</u>
AS00858*	2/3/15	2/5/15	Pass w/ Conditions	EPA TO-15 (Client Specified)
AS00859*	2/3/15	2/4/15	Pass w/ Conditions	EPA TO-15 (Client Specified)
FCA00065	2/4/15	2/5/15		
FCA00176	2/4/15	2/5/15		
FCA00343	1/29/15	1/30/15		
FCA00355	2/4/15	2/5/15		
FCA00375	1/8/15	1/9/15		
FCA00399	2/2/15	2/4/15		
FCA00409	2/2/15	2/4/15		
FCA00454	2/2/15	2/4/15		
FCA00532	2/4/15	2/5/15		
FCA00588	2/4/15	2/5/15		
FCA00611	2/2/15	2/4/15		
FCA00682	2/2/15	2/4/15		
FCA00699	1/29/15	1/30/15		
FCA00715	2/2/15	2/4/15		
FCA00716	2/4/15	2/5/15		
FCA00720	2/2/15	2/4/15		
FCA00747	1/22/15	1/22/15		
FCA00748	2/5/15	2/5/15		
FCA00754	2/4/15	2/5/15		
FCA00784	2/2/15	2/4/15		
FCA00829	2/4/15	2/5/15		
FCA00834	2/2/15	2/4/15		
FCA00879	2/2/15	2/4/15		
FCA00886	2/4/15	2/5/15		
FCA00921	2/2/15	2/4/15		
FCA00954	2/4/15	2/5/15		
FCA00956	2/2/15	2/4/15		
FCA00961	2/2/15	2/4/15		
FCA00964	2/4/15	2/5/15		
FCA00971	2/4/15	2/5/15		

All sets were QCed for the lab's full SIM list

* QC Canister



Group 2

8-hour Sampling
February 22, 2015



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LABORATORY REPORT

March 4, 2015

Joseph Lukas
NASA Ames Research Center
Mail Stop T206-4 Room
Moffett Field, CA 94035-1000

RE: Vapor Intrusion Study, Phase II / 3602-750

Dear Joseph:

Enclosed are the results of the samples submitted to our laboratory on February 24, 2015. For your reference, these analyses have been assigned our service request number P1500729.

All analyses were performed according to our laboratory's NELAP and DoD-ELAP-approved quality assurance program. The test results meet requirements of the current NELAP and DoD-ELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP and DoD-ELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

ALS | Environmental

By Sue Anderson at 4:51 pm, Mar 04, 2015

Sue Anderson
Project Manager



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Client: NASA Ames Research Center
Project: Vapor Intrusion Study, Phase II / 3602-750

Service Request No: P1500729

CASE NARRATIVE

The samples were received intact under chain of custody on February 24, 2015 and were stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the samples at the time of sample receipt.

Volatile Organic Compound Analysis

The samples were analyzed in SIM mode for volatile organic compounds in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph / mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator. This method is not included on the laboratory's AIHA-LAP scope of accreditation.

The Relative Percent Difference (RPD) criterion was exceeded for the replicate analysis of Acetone in sample N213-B-03-OFF (P1500729-013). However, analyte concentrations close to the Method Reporting Limit (MRL) may not be subject to the same precision criteria as results derived from measurements higher in the calibration range for the method. The magnitude of error may increase as the concentrations get closer to the reporting limit, therefore the reported precision may be unrealistically large.

The spike recoveries of Trichlorofluoromethane for the Laboratory Control Samples (LCS/LCSD) analyzed on February 28 and March 2, 2015 were outside the laboratory generated control criterion. The recovery error equates to a potential high bias. However, the spike recovery of the analyte in question was within the method criteria; therefore, the data quality is not significantly affected. No corrective action was taken.

The Summa canisters were cleaned, prior to sampling, down to the method reporting limit (MRL) reported for this project. Please note, projects which require reporting below the MRL could have results between the MRL and method detection limit (MDL) that are biased high.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.



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ALS Environmental – Simi Valley

CERTIFICATIONS, ACCREDITATIONS, AND REGISTRATIONS

Agency	Web Site	Number
AIHA	http://www.aihaaccreditedlabs.org	101661
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0694
DoD ELAP	http://www.pjlabs.com/search-accredited-labs	L14-2
Florida DOH (NELAP)	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E871020
Maine DHHS	http://www.maine.gov/dhhs/mecdc/environmental-health/water/dwp-services/labcert/labcert.htm	2014025
Minnesota DOH (NELAP)	http://www.health.state.mn.us/accreditation	838341
New Jersey DEP (NELAP)	http://www.nj.gov/dep/oqa/	CA009
New York DOH (NELAP)	http://www.wadsworth.org/labcert/elap/elap.html	11221
Oregon PHD (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	4068-001
Pennsylvania DEP	http://www.depweb.state.pa.us/labs	68-03307 (Registration)
Texas CEQ (NELAP)	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704413-14-5
Utah DOH (NELAP)	http://www.health.utah.gov/lab/labimp/certification/index.html	CA01627201 4-4
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C946

Analyses were performed according to our laboratory's NELAP and DoD-ELAP approved quality assurance program. A complete listing of specific NELAP and DoD-ELAP certified analytes can be found in the certifications section at www.alsglobal.com, or at the accreditation body's website.

Each of the certifications listed above have an explicit Scope of Accreditation that applies to specific matrices/methods/analytes; therefore, please contact the laboratory for information corresponding to a particular certification.

ALS ENVIRONMENTAL

DETAIL SUMMARY REPORT

Client: NASA Ames Research Center

Service Request: P1500729

Date Received: 2/24/2015

Time Received: 10:00

TO-15 - VOC SIM

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	Container ID	Pi1 (psig)	Pf1 (psig)	
N144-C103-01-OFF	P1500729-001	Air	2/22/2015	16:37	AC01920	-1.28	3.50	X
N144-107-01-OFF	P1500729-002	Air	2/22/2015	16:48	AS00671	-2.25	3.50	X
N211-103-01-OFF	P1500729-003	Air	2/22/2015	15:18	AS00091	-2.02	3.80	X
N211-119-02-OFF	P1500729-004	Air	2/22/2015	15:23	AS00743	-2.17	3.73	X
N211-1-04-P-OFF	P1500729-005	Air	2/22/2015	07:47	AS00826	-1.00	3.83	X
N211-136-1-03-OFF	P1500729-006	Air	2/22/2015	15:10	AS00678	-2.62	3.70	X
N211-179-05-OFF	P1500729-007	Air	2/22/2015	16:17	AS00764	-2.06	3.64	X
N212-101A-01-OFF	P1500729-008	Air	2/22/2015	16:24	AS00749	-3.02	3.61	X
N212-105-01-OFF	P1500729-009	Air	2/22/2015	16:05	AS00163	-2.51	3.92	X
N212-105-01-OFFD	P1500729-010	Air	2/22/2015	16:00	AS00812	-1.20	3.69	X
N213-B-01-OFF	P1500729-011	Air	2/22/2015	17:07	AC02045	-2.28	3.84	X
N213-B-02-OFF	P1500729-012	Air	2/22/2015	17:33	AS00228	-2.30	3.69	X
N213-B-03-OFF	P1500729-013	Air	2/22/2015	17:25	AC01005	-2.15	3.84	X
N213-B-04-P-OFF	P1500729-014	Air	2/22/2015	09:13	AS00514	-0.28	3.67	X
N213-B-05-P-OFF	P1500729-015	Air	2/22/2015	09:18	AC02024	-0.72	3.71	X
N213-B-06-P-OFF	P1500729-016	Air	2/22/2015	09:30	AC00717	-1.05	3.95	X
N213-B-07-P-OFF	P1500729-017	Air	2/22/2015	09:28	AS00720	-0.50	3.57	X
N213-1-01-OFF	P1500729-018	Air	2/22/2015	17:51	AC01656	-3.13	3.72	X
N213-1-02-OFF	P1500729-019	Air	2/22/2015	17:39	AS00750	-1.29	3.55	X
N213-1-03-OFF	P1500729-020	Air	2/22/2015	17:42	AS00570	-1.69	3.70	X
N213-1-04-OFF	P1500729-021	Air	2/22/2015	17:45	AC01462	-2.05	3.86	X
N213-1-04-OFFD	P1500729-022	Air	2/22/2015	17:45	AS00442	-1.80	3.61	X
N213-1-05-OFF	P1500729-023	Air	2/22/2015	17:47	AS00799	-2.19	3.57	X
N240-1-01-OFF	P1500729-024	Air	2/22/2015	17:57	AS00836	-1.91	3.65	X
N240-1-02-OFF	P1500729-025	Air	2/22/2015	18:12	AC01893	-1.66	3.60	X
N240-1-03-OFF	P1500729-026	Air	2/22/2015	18:15	AC01802	-2.04	3.54	X
N240-1-04-P-OFF	P1500729-027	Air	2/22/2015	10:19	AS00182	-2.15	3.60	X
N245-1-01-OFF	P1500729-028	Air	2/22/2015	16:30	AC01384	-0.98	3.92	X
T20G-1-02-OFF	P1500729-029	Air	2/22/2015	18:58	AC00819	-2.74	3.92	X
N258-1-01-OFF	P1500729-030	Air	2/22/2015	18:40	AS00479	-2.02	3.67	X



Air - Chain of Custody Record & Analytical Service Request

Page 1 of 3

2655 Park Center Drive, Suite A
 Simi Valley, California 93065
 Phone (805) 526-7161
 Fax (805) 526-7270

Requested Turnaround Time in Business Days (Surcharges) please circle
 1 Day (100%) 2 Day (75%) 3 Day (50%) 4 Day (35%) 5 Day (25%) 0-Day-Standard

ALS Project No. P1500 729

Company Name & Address (Reporting Information) Earth Resources Technology, Inc. (ERT) NASA Ames, Moffett Field, CA				Project Name Vapor Intrusion Study, Phase II				ALS Contact:		Comments e.g. Actual Preservative or specific instructions
Project Manager Joseph Lukas				Project Number 3602-750				Analysis Method		
Phone 650/604-2057		Fax 650/604-2645		P.O. # / Billing Information ERT 3601-0463 / 14401 Sweitzer Ln, Suite 300 Laurel, MD 20707						
Email Address for Result Reporting Joseph.R.Lukas@nasa.gov				Sampler (Print & Sign) Ingrid J. Dittmer / [Signature]						
Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Canister ID (Bar code # - AC, SC, etc.)	Flow Controller ID (Bar code # - FC #)	Canister Start Pressure "Hg	Canister End Pressure "Hg/psig	Sample Volume	T015-SIM	
N144-C103-01-OFF	①	2/22/15	4:37 PM	AC01920	FCAD0454	-30	-5	6L		
N144-107-01-OFF	②		4:48 PM	AS00671	FCAD0754	-30	-8.5			
N211-103-01-OFF	③		3:18 PM	AS00091	PCA00716	-24	-3			
N211-119-02-OFF	④		3:23 PM	AS00743	PCA00615	-30	-5			
N211-1-04-P-OFF	⑤		7:47 AM	AS00826	N/A	-28	-2.5			
N211-136-03-OFF	⑥		3:10 PM	AS00678	PCA00747	-30	-6			
N211-179-05-OFF	⑦		4:17 PM	AS00764	PCA00801	-30	-6.5			
N212-101A-01-OFF	⑧		4:24 PM	AS00749	PCA00065	-30	-7			
N212-105-01-OFF	⑨		4:05 PM	AS00163	FCS00047	-30	-5			
N212-105-01-OFFD	⑩		4:00 PM	AS00812	PCA00343	-30	-3			
N213-B-01-OFF	⑪		5:07 PM	AC02045	FCS00101	-29	-5			
N213-B-02-OFF	⑫		5:33 PM	AS00228	PCA00964	-30	-5.33			
N213-B-03-OFF	⑬	↓	5:25 PM	AC01005	FCS00254	-30	-6	↓		
N213-B-04-P-OFF	⑭	2/22/15	9:13 AM	AS00614	N/A	-30	-3	6L		
Report Tier Levels - please select										
Tier I - Results (Default in not specified)		Tier III (Results + QC & Calibration Summaries)		EDD required <u>YES</u> No		Chain of Custody Seal: (Circle) INTACT BROKEN <u>ABSENT</u>		Project Requirements (MRLs, QAPP)		
Tier II (Results + QC Summaries)		Tier IV (Date Validation Package) <u>100% Surcharge</u>		Type: <u>Included in quote</u>		Units:				
Relinquished by: (Signature) <u>[Signature]</u>		Date: <u>2/23/15</u>	Time: <u>2:00 PM</u>	Received by: (Signature) <u>[Signature]</u>		Date:	Time:			
Relinquished by: (Signature) <u>[Signature]</u>		Date:	Time:	Received by: (Signature) <u>[Signature]</u>		Date: <u>2/24/15</u>	Time: <u>1000</u>	Cooler / Blank Temperature ____ °C		



Air - Chain of Custody Record & Analytical Service Request

Page 2 of 3

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Requested Turnaround Time in Business Days (Surcharges) please circle
 1 Day (100%) 2 Day (75%) 3 Day (50%) 4 Day (35%) 5 Day (25%) 10-Day-Standard

ALS Project No.
F1500729

Company Name & Address (Reporting Information) Earth Resources Technology, Inc. (ERT) NASA Ames, Moffett Field, CA				Project Name Vapor Intrusion Study, Phase II				ALS Contact:		Comments e.g. Actual Preservative or specific instructions
Project Manager Joseph Lukas				Project Number 3602-750				Analysis Method		
Phone 650/604-2057				P.O. # / Billing Information P.O. 3601-0463 / ERT 14401 Sweitzer Ln, Suite 300 Laurel, MD 20707				TD15-SIM		
Fax 650/604-2645				Sampler (Print & Sign) Ingrid J. Dittmer / <i>[Signature]</i>						
Email Address for Result Reporting Joseph.R.Lukas@nasa.gov										
Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Canister ID (Bar code # - AC, SC, etc.)	Flow Controller ID (Bar code # - FC #)	Canister Start Pressure "Hg	Canister End Pressure "Hg/psig	Sample Volume		
N213-B-05-P-OFF	15	2/22/15	9:18 AM	AC02024	N/A	-30	-4	6L	X	
N213-B-06-P-OFF	16		9:30 AM	AC00717	N/A	-30	-4		X	
N213-B-07-P-OFF	17		9:28 AM	AS00720	N/A	-30	-4		X	
N213-1-01-OFF	18		5:51 PM	AC01666	PCA00829	-30	-8.5		X	
N213-1-02-OFF	19		5:39 PM	AS00750	PCA00678	-30	-4.5		X	
N213-1-03-OFF	20		5:42 PM	AS00570	FCS00119	-27	-5		X	
N213-1-04-OFF	21		5:45 PM	AC01462	PCA00699	-30	-5		X	
N213-1-04-OFFD	22		5:45 PM	AS00442	PCA00961	-30	-4		X	
N213-1-05-OFF	23		5:47 PM	AS00799	FCS00261	-30	-5		X	
N240-1-01-OFF	24		5:57 PM	AS00836	FCS00122	-30	-4.5		X	
N240-1-02-OFF	25		6:12 PM	AC01893	PCA00731	-30	-5.5		X	
N240-1-03-OFF	26		6:15 PM	AC01802	PCA00297	-30	-5.5		X	
N240-1-04-P-OFF	27	↓	10:14 AM	AS00182	N/A	-28	-5.5	↓	X	
N245-1-01-OFF	28	2/22/15	4:30 PM	AC01384	PCA00588	-29.5	-2.5	6L	X	
Report Tier Levels - please select										Project Requirements (MRLs, QAPP)
Tier I - Results (Default in not specified) _____ Tier II (Results + QC Summaries) _____ Tier III (Results + QC & Calibration Summaries) _____ Tier IV (Date Validation Package) 10% Surcharge <u>X</u> included in quote EDD required <u>YES</u> / No Type: _____ Units: _____ Chain of Custody Seal: (Circle) INTACT BROKEN <u>ABSENT</u>										
Relinquished by: (Signature) <i>[Signature]</i>			Date: 2/23/15	Time: 2:06 PM	Received by: (Signature) <i>[Signature]</i>			Date: 2/24/15	Time: 1000	Cooler / Blank Temperature _____ °C



Air - Chain of Custody Record & Analytical Service Request

Page 3 of 3

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Requested Turnaround Time in Business Days (Surcharges) please circle
1 Day (100%) 2 Day (75%) 3 Day (50%) 4 Day (35%) 5 Day (25%) 10-Day-Standard

ALS Project No. H1500729

Company Name & Address (Reporting Information) Earth Resources Technology, Inc. (ERT) NASA Ames, Moffett Field, CA				Project Name Vapor Intrusion Study, Phase II				ALS Contact:		Comments e.g. Actual Preservative or specific instructions	
Project Manager Joseph Lukas				Project Number 3602-750				Analysis Method			
Phone 650/604-2057 Fax 650/604-2645				P.O. # / Billing Information P.O. 3601-0463 / ERT 14401 Sweitzer Ln., Suite 300 Laurel, MD 20707							
Email Address for Result Reporting Joseph.R.Lukas@nasa.gov				Sampler (Print & Sign) Ingrid J. Dittmar / [Signature]							
Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Canister ID (Bar code # - AC, SC, etc.)	Flow Controller ID (Bar code # - FC #)	Canister Start Pressure "Hg	Canister End Pressure "Hg/psig	Sample Volume	TO15-SIM		
T206-1-02-OFF	29	2/24/15	6:58 AM	AC00819	FCA00247	-30	-8	6L			
N258-1-01-OFF	30	2/24/15	6:40 PM	AS00479	FCA00445	-30	-6	6L			
Report Tier Levels - please select											
Tier I - Results (Default in not specified) _____		Tier III (Results + QC & Calibration Summaries) _____		Tier II (Results + QC Summaries) _____		Tier IV (Date Validation Package) 10% Surcharge _____		EDD required YES / No Type: _____ Units: _____		Chain of Custody Seal: (Circle) INTACT <u>BROKEN</u> <u>ABSENT</u>	Project Requirements (MRLs, QAPP)
Relinquished by: (Signature) [Signature]		Date: 2/23/15	Time: 2:00 PM	Received by: (Signature) [Signature]		Date: 2/24/15	Time: 1000			Cooler / Blank Temperature _____ °C	

ALS Environmental **Sample Acceptance Check Form**

Client: Earth Resources Technology

Work order: P1500729

Project: Vapor Intrusion Study, Phase II / 3602-750

Sample(s) received on: 2/24/15

Date opened: 2/24/15

by: ADAVID

Note: This form is used for all samples received by ALS. The use of this form for custody seals is strictly meant to indicate presence/absence and not as an indication of compliance or nonconformity. Thermal preservation and pH will only be evaluated either at the request of the client and/or as required by the method/SOP.

	Yes	No	N/A
1 Were sample containers properly marked with client sample ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Container(s) supplied by ALS ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Did sample containers arrive in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Were chain-of-custody papers used and filled out?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Did sample container labels and/or tags agree with custody papers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6 Was sample volume received adequate for analysis?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Are samples within specified holding times?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8 Was proper temperature (thermal preservation) of cooler at receipt adhered to?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
9 Was a trip blank received?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
10 Were custody seals on outside of cooler/Box?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Location of seal(s)? _____ Sealing Lid?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Were signature and date included?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Were seals intact?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Were custody seals on outside of sample container?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Location of seal(s)? _____ Sealing Lid?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Were signature and date included?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Were seals intact?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
11 Do containers have appropriate preservation , according to method/SOP or Client specified information?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Is there a client indication that the submitted samples are pH preserved?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Were VOA vials checked for presence/absence of air bubbles?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Does the client/method/SOP require that the analyst check the sample pH and <u>if necessary</u> alter it?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
12 Tubes: Are the tubes capped and intact?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Do they contain moisture?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
13 Badges: Are the badges properly capped and intact?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Are dual bed badges separated and individually capped and intact?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P1500729-001	6L Summa					
P1500729-002	6L Summa					
P1500729-003	6L Summa					
P1500729-004	6L Summa					
P1500729-005	6L Summa					
P1500729-006	6L Summa					
P1500729-007	6L Summa					
P1500729-008	6L Summa					

Explain any discrepancies: (include lab sample ID numbers): _____

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: N144-C103-01-OFF
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P1500729-001

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC01920

Date Collected: 2/22/15
Date Received: 2/24/15
Date Analyzed: 2/27/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -1.28 **Final Pressure (psig):** 3.50

Canister Dilution Factor: 1.36

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.2	0.034	0.45	0.0069	
74-87-3	Chloromethane	0.66	0.034	0.32	0.016	
75-01-4	Vinyl Chloride	ND	0.034	ND	0.013	
74-83-9	Bromomethane	0.047	0.034	0.012	0.0088	
75-00-3	Chloroethane	0.088	0.034	0.033	0.013	
67-64-1	Acetone	19	3.4	7.9	1.4	
75-69-4	Trichlorofluoromethane	4.5	0.034	0.80	0.0061	
75-35-4	1,1-Dichloroethene	0.039	0.034	0.0099	0.0086	
75-09-2	Methylene Chloride	0.94	0.14	0.27	0.039	
76-13-1	Trichlorotrifluoroethane	0.51	0.034	0.067	0.0044	
156-60-5	trans-1,2-Dichloroethene	ND	0.034	ND	0.0086	
75-34-3	1,1-Dichloroethane	ND	0.034	ND	0.0084	
1634-04-4	Methyl tert-Butyl Ether	ND	0.034	ND	0.0094	
156-59-2	cis-1,2-Dichloroethene	ND	0.034	ND	0.0086	
67-66-3	Chloroform	0.36	0.14	0.074	0.028	
107-06-2	1,2-Dichloroethane	0.071	0.034	0.018	0.0084	
71-55-6	1,1,1-Trichloroethane	0.14	0.034	0.025	0.0062	
71-43-2	Benzene	0.49	0.10	0.15	0.032	
56-23-5	Carbon Tetrachloride	0.53	0.034	0.084	0.0054	
78-87-5	1,2-Dichloropropane	0.055	0.034	0.012	0.0074	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: N144-C103-01-OFF
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P1500729-001

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 6.0 L Summa Canister
 Test Notes:
 Container ID: AC01920

Date Collected: 2/22/15
 Date Received: 2/24/15
 Date Analyzed: 2/27/15
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -1.28 Final Pressure (psig): 3.50

Canister Dilution Factor: 1.36

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	0.034	ND	0.0051	
79-01-6	Trichloroethene	0.23	0.034	0.042	0.0063	
123-91-1	1,4-Dioxane	ND	0.14	ND	0.038	
10061-01-5	cis-1,3-Dichloropropene	ND	0.034	ND	0.0075	
10061-02-6	trans-1,3-Dichloropropene	ND	0.034	ND	0.0075	
79-00-5	1,1,2-Trichloroethane	ND	0.14	ND	0.025	
108-88-3	Toluene	2.4	0.14	0.65	0.036	
106-93-4	1,2-Dibromoethane	ND	0.034	ND	0.0044	
127-18-4	Tetrachloroethene	0.066	0.034	0.0098	0.0050	
108-90-7	Chlorobenzene	ND	0.14	ND	0.030	
100-41-4	Ethylbenzene	0.40	0.14	0.092	0.031	
179601-23-1	m,p-Xylenes	0.71	0.14	0.16	0.031	
95-47-6	o-Xylene	0.28	0.14	0.065	0.031	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.034	ND	0.0050	
541-73-1	1,3-Dichlorobenzene	ND	0.034	ND	0.0057	
106-46-7	1,4-Dichlorobenzene	0.047	0.034	0.0078	0.0057	
95-50-1	1,2-Dichlorobenzene	ND	0.034	ND	0.0057	
120-82-1	1,2,4-Trichlorobenzene	ND	0.034	ND	0.0046	
91-20-3	Naphthalene	ND	0.14	ND	0.026	
87-68-3	Hexachlorobutadiene	ND	0.034	ND	0.0032	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: N144-107-01-OFF
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P1500729-002

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS00671

Date Collected: 2/22/15
Date Received: 2/24/15
Date Analyzed: 2/27/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.25 Final Pressure (psig): 3.50

Canister Dilution Factor: 1.46

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.1	0.037	0.43	0.0074	
74-87-3	Chloromethane	0.66	0.037	0.32	0.018	
75-01-4	Vinyl Chloride	ND	0.037	ND	0.014	
74-83-9	Bromomethane	0.067	0.037	0.017	0.0094	
75-00-3	Chloroethane	0.091	0.037	0.034	0.014	
67-64-1	Acetone	20	3.7	8.3	1.5	
75-69-4	Trichlorofluoromethane	4.5	0.037	0.79	0.0065	
75-35-4	1,1-Dichloroethene	ND	0.037	ND	0.0092	
75-09-2	Methylene Chloride	1.1	0.15	0.32	0.042	
76-13-1	Trichlorotrifluoroethane	0.50	0.037	0.065	0.0048	
156-60-5	trans-1,2-Dichloroethene	ND	0.037	ND	0.0092	
75-34-3	1,1-Dichloroethane	ND	0.037	ND	0.0090	
1634-04-4	Methyl tert-Butyl Ether	ND	0.037	ND	0.010	
156-59-2	cis-1,2-Dichloroethene	ND	0.037	ND	0.0092	
67-66-3	Chloroform	0.32	0.15	0.065	0.030	
107-06-2	1,2-Dichloroethane	0.070	0.037	0.017	0.0090	
71-55-6	1,1,1-Trichloroethane	0.14	0.037	0.026	0.0067	
71-43-2	Benzene	0.49	0.11	0.15	0.034	
56-23-5	Carbon Tetrachloride	0.51	0.037	0.082	0.0058	
78-87-5	1,2-Dichloropropane	0.090	0.037	0.020	0.0079	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: N144-107-01-OFF
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P1500729-002

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 6.0 L Silonite Canister
 Test Notes:
 Container ID: AS00671

Date Collected: 2/22/15
 Date Received: 2/24/15
 Date Analyzed: 2/27/15
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.25 Final Pressure (psig): 3.50

Canister Dilution Factor: 1.46

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	0.037	ND	0.0055	
79-01-6	Trichloroethene	0.24	0.037	0.044	0.0068	
123-91-1	1,4-Dioxane	ND	0.15	ND	0.041	
10061-01-5	cis-1,3-Dichloropropene	ND	0.037	ND	0.0080	
10061-02-6	trans-1,3-Dichloropropene	ND	0.037	ND	0.0080	
79-00-5	1,1,2-Trichloroethane	ND	0.15	ND	0.027	
108-88-3	Toluene	2.3	0.15	0.60	0.039	
106-93-4	1,2-Dibromoethane	ND	0.037	ND	0.0048	
127-18-4	Tetrachloroethene	0.060	0.037	0.0089	0.0054	
108-90-7	Chlorobenzene	ND	0.15	ND	0.032	
100-41-4	Ethylbenzene	0.30	0.15	0.069	0.034	
179601-23-1	m,p-Xylenes	0.63	0.15	0.14	0.034	
95-47-6	o-Xylene	0.26	0.15	0.059	0.034	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.037	ND	0.0053	
541-73-1	1,3-Dichlorobenzene	ND	0.037	ND	0.0061	
106-46-7	1,4-Dichlorobenzene	ND	0.037	ND	0.0061	
95-50-1	1,2-Dichlorobenzene	ND	0.037	ND	0.0061	
120-82-1	1,2,4-Trichlorobenzene	ND	0.037	ND	0.0049	
91-20-3	Naphthalene	ND	0.15	ND	0.028	
87-68-3	Hexachlorobutadiene	ND	0.037	ND	0.0034	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: N211-103-01-OFF
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P1500729-003

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS00091

Date Collected: 2/22/15
Date Received: 2/24/15
Date Analyzed: 2/27/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.02 Final Pressure (psig): 3.80

Canister Dilution Factor: 1.46

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.3	0.037	0.47	0.0074	
74-87-3	Chloromethane	0.67	0.037	0.32	0.018	
75-01-4	Vinyl Chloride	ND	0.037	ND	0.014	
74-83-9	Bromomethane	0.049	0.037	0.013	0.0094	
75-00-3	Chloroethane	ND	0.037	ND	0.014	
67-64-1	Acetone	11	3.7	4.7	1.5	
75-69-4	Trichlorofluoromethane	2.1	0.037	0.37	0.0065	
75-35-4	1,1-Dichloroethene	ND	0.037	ND	0.0092	
75-09-2	Methylene Chloride	0.56	0.15	0.16	0.042	
76-13-1	Trichlorotrifluoroethane	0.54	0.037	0.070	0.0048	
156-60-5	trans-1,2-Dichloroethene	0.054	0.037	0.014	0.0092	
75-34-3	1,1-Dichloroethane	ND	0.037	ND	0.0090	
1634-04-4	Methyl tert-Butyl Ether	ND	0.037	ND	0.010	
156-59-2	cis-1,2-Dichloroethene	ND	0.037	ND	0.0092	
67-66-3	Chloroform	0.15	0.15	0.030	0.030	
107-06-2	1,2-Dichloroethane	0.091	0.037	0.023	0.0090	
71-55-6	1,1,1-Trichloroethane	ND	0.037	ND	0.0067	
71-43-2	Benzene	0.77	0.11	0.24	0.034	
56-23-5	Carbon Tetrachloride	0.54	0.037	0.086	0.0058	
78-87-5	1,2-Dichloropropane	ND	0.037	ND	0.0079	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: N211-103-01-OFF
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P1500729-003

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 6.0 L Silonite Canister
 Test Notes:
 Container ID: AS00091

Date Collected: 2/22/15
 Date Received: 2/24/15
 Date Analyzed: 2/27/15
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.02 Final Pressure (psig): 3.80

Canister Dilution Factor: 1.46

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	0.037	ND	0.0055	
79-01-6	Trichloroethene	0.069	0.037	0.013	0.0068	
123-91-1	1,4-Dioxane	ND	0.15	ND	0.041	
10061-01-5	cis-1,3-Dichloropropene	ND	0.037	ND	0.0080	
10061-02-6	trans-1,3-Dichloropropene	ND	0.037	ND	0.0080	
79-00-5	1,1,2-Trichloroethane	ND	0.15	ND	0.027	
108-88-3	Toluene	6.4	0.15	1.7	0.039	
106-93-4	1,2-Dibromoethane	ND	0.037	ND	0.0048	
127-18-4	Tetrachloroethene	0.085	0.037	0.013	0.0054	
108-90-7	Chlorobenzene	ND	0.15	ND	0.032	
100-41-4	Ethylbenzene	1.2	0.15	0.27	0.034	
179601-23-1	m,p-Xylenes	3.5	0.15	0.80	0.034	
95-47-6	o-Xylene	1.2	0.15	0.29	0.034	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.037	ND	0.0053	
541-73-1	1,3-Dichlorobenzene	ND	0.037	ND	0.0061	
106-46-7	1,4-Dichlorobenzene	0.046	0.037	0.0076	0.0061	
95-50-1	1,2-Dichlorobenzene	ND	0.037	ND	0.0061	
120-82-1	1,2,4-Trichlorobenzene	ND	0.037	ND	0.0049	
91-20-3	Naphthalene	0.28	0.15	0.053	0.028	
87-68-3	Hexachlorobutadiene	ND	0.037	ND	0.0034	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: N211-119-02-OFF
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P1500729-004

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS00743

Date Collected: 2/22/15
Date Received: 2/24/15
Date Analyzed: 2/27/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.17 Final Pressure (psig): 3.73

Canister Dilution Factor: 1.47

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.4	0.037	0.48	0.0074	
74-87-3	Chloromethane	0.65	0.037	0.32	0.018	
75-01-4	Vinyl Chloride	ND	0.037	ND	0.014	
74-83-9	Bromomethane	0.045	0.037	0.012	0.0095	
75-00-3	Chloroethane	ND	0.037	ND	0.014	
67-64-1	Acetone	8.5	3.7	3.6	1.5	
75-69-4	Trichlorofluoromethane	1.6	0.037	0.29	0.0065	
75-35-4	1,1-Dichloroethene	ND	0.037	ND	0.0093	
75-09-2	Methylene Chloride	0.37	0.15	0.11	0.042	
76-13-1	Trichlorotrifluoroethane	0.53	0.037	0.070	0.0048	
156-60-5	trans-1,2-Dichloroethene	0.048	0.037	0.012	0.0093	
75-34-3	1,1-Dichloroethane	ND	0.037	ND	0.0091	
1634-04-4	Methyl tert-Butyl Ether	ND	0.037	ND	0.010	
156-59-2	cis-1,2-Dichloroethene	ND	0.037	ND	0.0093	
67-66-3	Chloroform	0.17	0.15	0.034	0.030	
107-06-2	1,2-Dichloroethane	0.082	0.037	0.020	0.0091	
71-55-6	1,1,1-Trichloroethane	ND	0.037	ND	0.0067	
71-43-2	Benzene	0.56	0.11	0.17	0.035	
56-23-5	Carbon Tetrachloride	0.53	0.037	0.084	0.0058	
78-87-5	1,2-Dichloropropane	ND	0.037	ND	0.0080	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: N211-119-02-OFF
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P1500729-004

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 6.0 L Silonite Canister
 Test Notes:
 Container ID: AS00743

Date Collected: 2/22/15
 Date Received: 2/24/15
 Date Analyzed: 2/27/15
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.17 Final Pressure (psig): 3.73

Canister Dilution Factor: 1.47

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	0.037	ND	0.0055	
79-01-6	Trichloroethene	0.062	0.037	0.012	0.0068	
123-91-1	1,4-Dioxane	ND	0.15	ND	0.041	
10061-01-5	cis-1,3-Dichloropropene	ND	0.037	ND	0.0081	
10061-02-6	trans-1,3-Dichloropropene	ND	0.037	ND	0.0081	
79-00-5	1,1,2-Trichloroethane	ND	0.15	ND	0.027	
108-88-3	Toluene	2.1	0.15	0.56	0.039	
106-93-4	1,2-Dibromoethane	ND	0.037	ND	0.0048	
127-18-4	Tetrachloroethene	0.065	0.037	0.0097	0.0054	
108-90-7	Chlorobenzene	ND	0.15	ND	0.032	
100-41-4	Ethylbenzene	0.36	0.15	0.084	0.034	
179601-23-1	m,p-Xylenes	1.2	0.15	0.27	0.034	
95-47-6	o-Xylene	0.44	0.15	0.10	0.034	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.037	ND	0.0054	
541-73-1	1,3-Dichlorobenzene	ND	0.037	ND	0.0061	
106-46-7	1,4-Dichlorobenzene	0.051	0.037	0.0085	0.0061	
95-50-1	1,2-Dichlorobenzene	ND	0.037	ND	0.0061	
120-82-1	1,2,4-Trichlorobenzene	ND	0.037	ND	0.0050	
91-20-3	Naphthalene	0.24	0.15	0.046	0.028	
87-68-3	Hexachlorobutadiene	ND	0.037	ND	0.0034	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: N211-1-04-P-OFF
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P1500729-005

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS00826

Date Collected: 2/22/15
Date Received: 2/24/15
Date Analyzed: 2/28/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -1.00 **Final Pressure (psig):** 3.83

Canister Dilution Factor: 1.35

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.2	0.034	0.44	0.0068	
74-87-3	Chloromethane	0.59	0.034	0.29	0.016	
75-01-4	Vinyl Chloride	ND	0.034	ND	0.013	
74-83-9	Bromomethane	0.040	0.034	0.010	0.0087	
75-00-3	Chloroethane	ND	0.034	ND	0.013	
67-64-1	Acetone	11	3.4	4.6	1.4	
75-69-4	Trichlorofluoromethane	1.5	0.034	0.28	0.0060	
75-35-4	1,1-Dichloroethene	ND	0.034	ND	0.0085	
75-09-2	Methylene Chloride	0.39	0.14	0.11	0.039	
76-13-1	Trichlorotrifluoroethane	0.52	0.034	0.068	0.0044	
156-60-5	trans-1,2-Dichloroethene	0.080	0.034	0.020	0.0085	
75-34-3	1,1-Dichloroethane	ND	0.034	ND	0.0083	
1634-04-4	Methyl tert-Butyl Ether	ND	0.034	ND	0.0094	
156-59-2	cis-1,2-Dichloroethene	ND	0.034	ND	0.0085	
67-66-3	Chloroform	0.18	0.14	0.038	0.028	
107-06-2	1,2-Dichloroethane	0.096	0.034	0.024	0.0083	
71-55-6	1,1,1-Trichloroethane	ND	0.034	ND	0.0062	
71-43-2	Benzene	0.93	0.10	0.29	0.032	
56-23-5	Carbon Tetrachloride	0.54	0.034	0.085	0.0054	
78-87-5	1,2-Dichloropropane	0.045	0.034	0.0097	0.0073	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: N211-1-04-P-OFF
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P1500729-005

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 6.0 L Silonite Canister
 Test Notes:
 Container ID: AS00826

Date Collected: 2/22/15
 Date Received: 2/24/15
 Date Analyzed: 2/28/15
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -1.00 Final Pressure (psig): 3.83

Canister Dilution Factor: 1.35

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	0.034	ND	0.0050	
79-01-6	Trichloroethene	0.15	0.034	0.027	0.0063	
123-91-1	1,4-Dioxane	ND	0.14	ND	0.037	
10061-01-5	cis-1,3-Dichloropropene	ND	0.034	ND	0.0074	
10061-02-6	trans-1,3-Dichloropropene	ND	0.034	ND	0.0074	
79-00-5	1,1,2-Trichloroethane	ND	0.14	ND	0.025	
108-88-3	Toluene	6.5	0.14	1.7	0.036	
106-93-4	1,2-Dibromoethane	ND	0.034	ND	0.0044	
127-18-4	Tetrachloroethene	0.070	0.034	0.010	0.0050	
108-90-7	Chlorobenzene	ND	0.14	ND	0.029	
100-41-4	Ethylbenzene	1.3	0.14	0.29	0.031	
179601-23-1	m,p-Xylenes	4.3	0.14	1.0	0.031	
95-47-6	o-Xylene	1.6	0.14	0.37	0.031	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.034	ND	0.0049	
541-73-1	1,3-Dichlorobenzene	ND	0.034	ND	0.0056	
106-46-7	1,4-Dichlorobenzene	0.045	0.034	0.0074	0.0056	
95-50-1	1,2-Dichlorobenzene	ND	0.034	ND	0.0056	
120-82-1	1,2,4-Trichlorobenzene	ND	0.034	ND	0.0045	
91-20-3	Naphthalene	ND	0.14	ND	0.026	
87-68-3	Hexachlorobutadiene	ND	0.034	ND	0.0032	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: N211-136-1-03-OFF
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P1500729-006

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS00678

Date Collected: 2/22/15
Date Received: 2/24/15
Date Analyzed: 2/28/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.62 Final Pressure (psig): 3.70

Canister Dilution Factor: 1.52

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.4	0.038	0.48	0.0077	
74-87-3	Chloromethane	0.69	0.038	0.33	0.018	
75-01-4	Vinyl Chloride	ND	0.038	ND	0.015	
74-83-9	Bromomethane	0.044	0.038	0.011	0.0098	
75-00-3	Chloroethane	ND	0.038	ND	0.014	
67-64-1	Acetone	7.6	3.8	3.2	1.6	
75-69-4	Trichlorofluoromethane	1.5	0.038	0.27	0.0068	
75-35-4	1,1-Dichloroethene	ND	0.038	ND	0.0096	
75-09-2	Methylene Chloride	0.37	0.15	0.11	0.044	
76-13-1	Trichlorotrifluoroethane	0.53	0.038	0.069	0.0050	
156-60-5	trans-1,2-Dichloroethene	0.046	0.038	0.012	0.0096	
75-34-3	1,1-Dichloroethane	ND	0.038	ND	0.0094	
1634-04-4	Methyl tert-Butyl Ether	ND	0.038	ND	0.011	
156-59-2	cis-1,2-Dichloroethene	ND	0.038	ND	0.0096	
67-66-3	Chloroform	0.38	0.15	0.078	0.031	
107-06-2	1,2-Dichloroethane	0.088	0.038	0.022	0.0094	
71-55-6	1,1,1-Trichloroethane	ND	0.038	ND	0.0070	
71-43-2	Benzene	0.58	0.11	0.18	0.036	
56-23-5	Carbon Tetrachloride	0.54	0.038	0.086	0.0060	
78-87-5	1,2-Dichloropropane	ND	0.038	ND	0.0082	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: N211-136-1-03-OFF
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P1500729-006

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 6.0 L Silonite Canister
 Test Notes:
 Container ID: AS00678

Date Collected: 2/22/15
 Date Received: 2/24/15
 Date Analyzed: 2/28/15
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.62 Final Pressure (psig): 3.70

Canister Dilution Factor: 1.52

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	0.038	ND	0.0057	
79-01-6	Trichloroethene	0.044	0.038	0.0082	0.0071	
123-91-1	1,4-Dioxane	ND	0.15	ND	0.042	
10061-01-5	cis-1,3-Dichloropropene	ND	0.038	ND	0.0084	
10061-02-6	trans-1,3-Dichloropropene	ND	0.038	ND	0.0084	
79-00-5	1,1,2-Trichloroethane	ND	0.15	ND	0.028	
108-88-3	Toluene	3.2	0.15	0.86	0.040	
106-93-4	1,2-Dibromoethane	ND	0.038	ND	0.0049	
127-18-4	Tetrachloroethene	0.048	0.038	0.0071	0.0056	
108-90-7	Chlorobenzene	ND	0.15	ND	0.033	
100-41-4	Ethylbenzene	0.59	0.15	0.14	0.035	
179601-23-1	m,p-Xylenes	2.0	0.15	0.46	0.035	
95-47-6	o-Xylene	0.77	0.15	0.18	0.035	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.038	ND	0.0055	
541-73-1	1,3-Dichlorobenzene	ND	0.038	ND	0.0063	
106-46-7	1,4-Dichlorobenzene	ND	0.038	ND	0.0063	
95-50-1	1,2-Dichlorobenzene	ND	0.038	ND	0.0063	
120-82-1	1,2,4-Trichlorobenzene	ND	0.038	ND	0.0051	
91-20-3	Naphthalene	ND	0.15	ND	0.029	
87-68-3	Hexachlorobutadiene	ND	0.038	ND	0.0036	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: N211-179-05-OFF
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P1500729-007

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS00764

Date Collected: 2/22/15
Date Received: 2/24/15
Date Analyzed: 2/28/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.06 **Final Pressure (psig):** 3.64

Canister Dilution Factor: 1.45

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.3	0.036	0.46	0.0073	
74-87-3	Chloromethane	0.68	0.036	0.33	0.018	
75-01-4	Vinyl Chloride	ND	0.036	ND	0.014	
74-83-9	Bromomethane	0.040	0.036	0.010	0.0093	
75-00-3	Chloroethane	ND	0.036	ND	0.014	
67-64-1	Acetone	6.2	3.6	2.6	1.5	
75-69-4	Trichlorofluoromethane	1.8	0.036	0.31	0.0065	
75-35-4	1,1-Dichloroethene	ND	0.036	ND	0.0091	
75-09-2	Methylene Chloride	0.61	0.15	0.17	0.042	
76-13-1	Trichlorotrifluoroethane	0.51	0.036	0.067	0.0047	
156-60-5	trans-1,2-Dichloroethene	ND	0.036	ND	0.0091	
75-34-3	1,1-Dichloroethane	ND	0.036	ND	0.0090	
1634-04-4	Methyl tert-Butyl Ether	ND	0.036	ND	0.010	
156-59-2	cis-1,2-Dichloroethene	ND	0.036	ND	0.0091	
67-66-3	Chloroform	ND	0.15	ND	0.030	
107-06-2	1,2-Dichloroethane	0.072	0.036	0.018	0.0090	
71-55-6	1,1,1-Trichloroethane	ND	0.036	ND	0.0066	
71-43-2	Benzene	0.38	0.11	0.12	0.034	
56-23-5	Carbon Tetrachloride	0.54	0.036	0.085	0.0058	
78-87-5	1,2-Dichloropropane	ND	0.036	ND	0.0078	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: N211-179-05-OFF
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P1500729-007

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 6.0 L Silonite Canister
 Test Notes:
 Container ID: AS00764

Date Collected: 2/22/15
 Date Received: 2/24/15
 Date Analyzed: 2/28/15
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.06 Final Pressure (psig): 3.64

Canister Dilution Factor: 1.45

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	0.036	ND	0.0054	
79-01-6	Trichloroethene	0.044	0.036	0.0082	0.0067	
123-91-1	1,4-Dioxane	ND	0.15	ND	0.040	
10061-01-5	cis-1,3-Dichloropropene	ND	0.036	ND	0.0080	
10061-02-6	trans-1,3-Dichloropropene	ND	0.036	ND	0.0080	
79-00-5	1,1,2-Trichloroethane	ND	0.15	ND	0.027	
108-88-3	Toluene	1.8	0.15	0.47	0.038	
106-93-4	1,2-Dibromoethane	ND	0.036	ND	0.0047	
127-18-4	Tetrachloroethene	0.038	0.036	0.0056	0.0053	
108-90-7	Chlorobenzene	ND	0.15	ND	0.031	
100-41-4	Ethylbenzene	0.34	0.15	0.079	0.033	
179601-23-1	m,p-Xylenes	1.1	0.15	0.25	0.033	
95-47-6	o-Xylene	0.37	0.15	0.086	0.033	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.036	ND	0.0053	
541-73-1	1,3-Dichlorobenzene	ND	0.036	ND	0.0060	
106-46-7	1,4-Dichlorobenzene	ND	0.036	ND	0.0060	
95-50-1	1,2-Dichlorobenzene	ND	0.036	ND	0.0060	
120-82-1	1,2,4-Trichlorobenzene	ND	0.036	ND	0.0049	
91-20-3	Naphthalene	0.23	0.15	0.043	0.028	
87-68-3	Hexachlorobutadiene	ND	0.036	ND	0.0034	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: N212-101A-01-OFF
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P1500729-008

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS00749

Date Collected: 2/22/15
Date Received: 2/24/15
Date Analyzed: 2/28/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -3.02 Final Pressure (psig): 3.61

Canister Dilution Factor: 1.57

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.2	0.039	0.44	0.0079	
74-87-3	Chloromethane	0.65	0.039	0.32	0.019	
75-01-4	Vinyl Chloride	ND	0.039	ND	0.015	
74-83-9	Bromomethane	ND	0.039	ND	0.010	
75-00-3	Chloroethane	ND	0.039	ND	0.015	
67-64-1	Acetone	42	3.9	18	1.7	
75-69-4	Trichlorofluoromethane	1.5	0.039	0.27	0.0070	
75-35-4	1,1-Dichloroethene	ND	0.039	ND	0.0099	
75-09-2	Methylene Chloride	42	0.16	12	0.045	
76-13-1	Trichlorotrifluoroethane	0.71	0.039	0.092	0.0051	
156-60-5	trans-1,2-Dichloroethene	ND	0.039	ND	0.0099	
75-34-3	1,1-Dichloroethane	ND	0.039	ND	0.0097	
1634-04-4	Methyl tert-Butyl Ether	ND	0.039	ND	0.011	
156-59-2	cis-1,2-Dichloroethene	ND	0.039	ND	0.0099	
67-66-3	Chloroform	0.24	0.16	0.050	0.032	
107-06-2	1,2-Dichloroethane	0.073	0.039	0.018	0.0097	
71-55-6	1,1,1-Trichloroethane	0.11	0.039	0.020	0.0072	
71-43-2	Benzene	0.66	0.12	0.21	0.037	
56-23-5	Carbon Tetrachloride	0.51	0.039	0.081	0.0062	
78-87-5	1,2-Dichloropropane	ND	0.039	ND	0.0085	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: N212-101A-01-OFF
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P1500729-008

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 6.0 L Silonite Canister
 Test Notes:
 Container ID: AS00749

Date Collected: 2/22/15
 Date Received: 2/24/15
 Date Analyzed: 2/28/15
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -3.02 Final Pressure (psig): 3.61

Canister Dilution Factor: 1.57

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	0.039	ND	0.0059	
79-01-6	Trichloroethene	ND	0.039	ND	0.0073	
123-91-1	1,4-Dioxane	ND	0.16	ND	0.044	
10061-01-5	cis-1,3-Dichloropropene	ND	0.039	ND	0.0086	
10061-02-6	trans-1,3-Dichloropropene	ND	0.039	ND	0.0086	
79-00-5	1,1,2-Trichloroethane	ND	0.16	ND	0.029	
108-88-3	Toluene	14	0.16	3.7	0.042	
106-93-4	1,2-Dibromoethane	ND	0.039	ND	0.0051	
127-18-4	Tetrachloroethene	0.045	0.039	0.0066	0.0058	
108-90-7	Chlorobenzene	ND	0.16	ND	0.034	
100-41-4	Ethylbenzene	0.87	0.16	0.20	0.036	
179601-23-1	m,p-Xylenes	3.0	0.16	0.70	0.036	
95-47-6	o-Xylene	1.3	0.16	0.30	0.036	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.039	ND	0.0057	
541-73-1	1,3-Dichlorobenzene	ND	0.039	ND	0.0065	
106-46-7	1,4-Dichlorobenzene	ND	0.039	ND	0.0065	
95-50-1	1,2-Dichlorobenzene	ND	0.039	ND	0.0065	
120-82-1	1,2,4-Trichlorobenzene	ND	0.039	ND	0.0053	
91-20-3	Naphthalene	0.23	0.16	0.044	0.030	
87-68-3	Hexachlorobutadiene	ND	0.039	ND	0.0037	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: N212-105-01-OFF
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P1500729-009

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS00163

Date Collected: 2/22/15
Date Received: 2/24/15
Date Analyzed: 2/28/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.51 Final Pressure (psig): 3.92

Canister Dilution Factor: 1.53

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.2	0.038	0.44	0.0077	
74-87-3	Chloromethane	0.67	0.038	0.33	0.019	
75-01-4	Vinyl Chloride	ND	0.038	ND	0.015	
74-83-9	Bromomethane	0.048	0.038	0.012	0.0099	
75-00-3	Chloroethane	ND	0.038	ND	0.015	
67-64-1	Acetone	37	3.8	16	1.6	
75-69-4	Trichlorofluoromethane	1.9	0.038	0.33	0.0068	
75-35-4	1,1-Dichloroethene	ND	0.038	ND	0.0097	
75-09-2	Methylene Chloride	43	0.15	12	0.044	
76-13-1	Trichlorotrifluoroethane	0.70	0.038	0.091	0.0050	
156-60-5	trans-1,2-Dichloroethene	0.041	0.038	0.010	0.0097	
75-34-3	1,1-Dichloroethane	ND	0.038	ND	0.0095	
1634-04-4	Methyl tert-Butyl Ether	ND	0.038	ND	0.011	
156-59-2	cis-1,2-Dichloroethene	ND	0.038	ND	0.0097	
67-66-3	Chloroform	0.24	0.15	0.049	0.031	
107-06-2	1,2-Dichloroethane	0.090	0.038	0.022	0.0095	
71-55-6	1,1,1-Trichloroethane	0.097	0.038	0.018	0.0070	
71-43-2	Benzene	0.62	0.11	0.19	0.036	
56-23-5	Carbon Tetrachloride	0.52	0.038	0.082	0.0061	
78-87-5	1,2-Dichloropropane	0.041	0.038	0.0089	0.0083	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: N212-105-01-OFF
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P1500729-009

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 6.0 L Silonite Canister
 Test Notes:
 Container ID: AS00163

Date Collected: 2/22/15
 Date Received: 2/24/15
 Date Analyzed: 2/28/15
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.51 Final Pressure (psig): 3.92

Canister Dilution Factor: 1.53

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	0.038	ND	0.0057	
79-01-6	Trichloroethene	ND	0.038	ND	0.0071	
123-91-1	1,4-Dioxane	ND	0.15	ND	0.042	
10061-01-5	cis-1,3-Dichloropropene	ND	0.038	ND	0.0084	
10061-02-6	trans-1,3-Dichloropropene	ND	0.038	ND	0.0084	
79-00-5	1,1,2-Trichloroethane	ND	0.15	ND	0.028	
108-88-3	Toluene	15	0.15	3.9	0.041	
106-93-4	1,2-Dibromoethane	ND	0.038	ND	0.0050	
127-18-4	Tetrachloroethene	0.053	0.038	0.0078	0.0056	
108-90-7	Chlorobenzene	ND	0.15	ND	0.033	
100-41-4	Ethylbenzene	0.94	0.15	0.22	0.035	
179601-23-1	m,p-Xylenes	3.1	0.15	0.72	0.035	
95-47-6	o-Xylene	1.3	0.15	0.29	0.035	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.038	ND	0.0056	
541-73-1	1,3-Dichlorobenzene	ND	0.038	ND	0.0064	
106-46-7	1,4-Dichlorobenzene	ND	0.038	ND	0.0064	
95-50-1	1,2-Dichlorobenzene	ND	0.038	ND	0.0064	
120-82-1	1,2,4-Trichlorobenzene	ND	0.038	ND	0.0052	
91-20-3	Naphthalene	0.64	0.15	0.12	0.029	
87-68-3	Hexachlorobutadiene	ND	0.038	ND	0.0036	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: N212-105-01-OFFD
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P1500729-010

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS00812

Date Collected: 2/22/15
Date Received: 2/24/15
Date Analyzed: 2/28/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -1.20 **Final Pressure (psig):** 3.69

Canister Dilution Factor: 1.36

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.2	0.034	0.45	0.0069	
74-87-3	Chloromethane	0.66	0.034	0.32	0.016	
75-01-4	Vinyl Chloride	ND	0.034	ND	0.013	
74-83-9	Bromomethane	0.036	0.034	0.0094	0.0088	
75-00-3	Chloroethane	ND	0.034	ND	0.013	
67-64-1	Acetone	36	3.4	15	1.4	
75-69-4	Trichlorofluoromethane	1.7	0.034	0.30	0.0061	
75-35-4	1,1-Dichloroethene	ND	0.034	ND	0.0086	
75-09-2	Methylene Chloride	45	0.14	13	0.039	
76-13-1	Trichlorotrifluoroethane	0.71	0.034	0.093	0.0044	
156-60-5	trans-1,2-Dichloroethene	ND	0.034	ND	0.0086	
75-34-3	1,1-Dichloroethane	ND	0.034	ND	0.0084	
1634-04-4	Methyl tert-Butyl Ether	ND	0.034	ND	0.0094	
156-59-2	cis-1,2-Dichloroethene	ND	0.034	ND	0.0086	
67-66-3	Chloroform	0.23	0.14	0.048	0.028	
107-06-2	1,2-Dichloroethane	0.088	0.034	0.022	0.0084	
71-55-6	1,1,1-Trichloroethane	0.098	0.034	0.018	0.0062	
71-43-2	Benzene	0.73	0.10	0.23	0.032	
56-23-5	Carbon Tetrachloride	0.52	0.034	0.083	0.0054	
78-87-5	1,2-Dichloropropane	ND	0.034	ND	0.0074	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: N212-105-01-OFFD
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P1500729-010

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 6.0 L Silonite Canister
 Test Notes:
 Container ID: AS00812

Date Collected: 2/22/15
 Date Received: 2/24/15
 Date Analyzed: 2/28/15
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -1.20 Final Pressure (psig): 3.69

Canister Dilution Factor: 1.36

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	0.034	ND	0.0051	
79-01-6	Trichloroethene	ND	0.034	ND	0.0063	
123-91-1	1,4-Dioxane	ND	0.14	ND	0.038	
10061-01-5	cis-1,3-Dichloropropene	ND	0.034	ND	0.0075	
10061-02-6	trans-1,3-Dichloropropene	ND	0.034	ND	0.0075	
79-00-5	1,1,2-Trichloroethane	ND	0.14	ND	0.025	
108-88-3	Toluene	13	0.14	3.4	0.036	
106-93-4	1,2-Dibromoethane	ND	0.034	ND	0.0044	
127-18-4	Tetrachloroethene	0.043	0.034	0.0063	0.0050	
108-90-7	Chlorobenzene	ND	0.14	ND	0.030	
100-41-4	Ethylbenzene	0.92	0.14	0.21	0.031	
179601-23-1	m,p-Xylenes	3.1	0.14	0.72	0.031	
95-47-6	o-Xylene	1.3	0.14	0.29	0.031	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.034	ND	0.0050	
541-73-1	1,3-Dichlorobenzene	ND	0.034	ND	0.0057	
106-46-7	1,4-Dichlorobenzene	ND	0.034	ND	0.0057	
95-50-1	1,2-Dichlorobenzene	ND	0.034	ND	0.0057	
120-82-1	1,2,4-Trichlorobenzene	ND	0.034	ND	0.0046	
91-20-3	Naphthalene	0.18	0.14	0.035	0.026	
87-68-3	Hexachlorobutadiene	ND	0.034	ND	0.0032	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: N213-B-01-OFF
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P1500729-011

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC02045

Date Collected: 2/22/15
Date Received: 2/24/15
Date Analyzed: 2/28/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.28 **Final Pressure (psig):** 3.84

Canister Dilution Factor: 1.49

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.2	0.037	0.45	0.0075	
74-87-3	Chloromethane	0.69	0.037	0.34	0.018	
75-01-4	Vinyl Chloride	ND	0.037	ND	0.015	
74-83-9	Bromomethane	0.12	0.037	0.030	0.0096	
75-00-3	Chloroethane	ND	0.037	ND	0.014	
67-64-1	Acetone	8.8	3.7	3.7	1.6	
75-69-4	Trichlorofluoromethane	1.4	0.037	0.24	0.0066	
75-35-4	1,1-Dichloroethene	ND	0.037	ND	0.0094	
75-09-2	Methylene Chloride	1.1	0.15	0.32	0.043	
76-13-1	Trichlorotrifluoroethane	0.53	0.037	0.069	0.0049	
156-60-5	trans-1,2-Dichloroethene	ND	0.037	ND	0.0094	
75-34-3	1,1-Dichloroethane	ND	0.037	ND	0.0092	
1634-04-4	Methyl tert-Butyl Ether	ND	0.037	ND	0.010	
156-59-2	cis-1,2-Dichloroethene	ND	0.037	ND	0.0094	
67-66-3	Chloroform	ND	0.15	ND	0.031	
107-06-2	1,2-Dichloroethane	0.093	0.037	0.023	0.0092	
71-55-6	1,1,1-Trichloroethane	ND	0.037	ND	0.0068	
71-43-2	Benzene	0.61	0.11	0.19	0.035	
56-23-5	Carbon Tetrachloride	0.49	0.037	0.078	0.0059	
78-87-5	1,2-Dichloropropane	ND	0.037	ND	0.0081	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: N213-B-01-OFF
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P1500729-011

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 6.0 L Summa Canister
 Test Notes:
 Container ID: AC02045

Date Collected: 2/22/15
 Date Received: 2/24/15
 Date Analyzed: 2/28/15
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.28 Final Pressure (psig): 3.84

Canister Dilution Factor: 1.49

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	0.037	ND	0.0056	
79-01-6	Trichloroethene	ND	0.037	ND	0.0069	
123-91-1	1,4-Dioxane	ND	0.15	ND	0.041	
10061-01-5	cis-1,3-Dichloropropene	ND	0.037	ND	0.0082	
10061-02-6	trans-1,3-Dichloropropene	ND	0.037	ND	0.0082	
79-00-5	1,1,2-Trichloroethane	ND	0.15	ND	0.027	
108-88-3	Toluene	3.7	0.15	0.98	0.040	
106-93-4	1,2-Dibromoethane	ND	0.037	ND	0.0048	
127-18-4	Tetrachloroethene	0.046	0.037	0.0068	0.0055	
108-90-7	Chlorobenzene	ND	0.15	ND	0.032	
100-41-4	Ethylbenzene	0.28	0.15	0.065	0.034	
179601-23-1	m,p-Xylenes	1.0	0.15	0.23	0.034	
95-47-6	o-Xylene	0.34	0.15	0.079	0.034	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.037	ND	0.0054	
541-73-1	1,3-Dichlorobenzene	ND	0.037	ND	0.0062	
106-46-7	1,4-Dichlorobenzene	ND	0.037	ND	0.0062	
95-50-1	1,2-Dichlorobenzene	ND	0.037	ND	0.0062	
120-82-1	1,2,4-Trichlorobenzene	0.18	0.037	0.024	0.0050	
91-20-3	Naphthalene	ND	0.15	ND	0.028	
87-68-3	Hexachlorobutadiene	ND	0.037	ND	0.0035	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: N213-B-02-OFF
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P1500729-012

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS00228

Date Collected: 2/22/15
Date Received: 2/24/15
Date Analyzed: 2/28/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.30 Final Pressure (psig): 3.69

Canister Dilution Factor: 1.48

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.1	0.037	0.43	0.0075	
74-87-3	Chloromethane	0.62	0.037	0.30	0.018	
75-01-4	Vinyl Chloride	ND	0.037	ND	0.014	
74-83-9	Bromomethane	ND	0.037	ND	0.0095	
75-00-3	Chloroethane	ND	0.037	ND	0.014	
67-64-1	Acetone	7.0	3.7	2.9	1.6	
75-69-4	Trichlorofluoromethane	13	0.037	2.4	0.0066	
75-35-4	1,1-Dichloroethene	ND	0.037	ND	0.0093	
75-09-2	Methylene Chloride	0.38	0.15	0.11	0.043	
76-13-1	Trichlorotrifluoroethane	0.53	0.037	0.069	0.0048	
156-60-5	trans-1,2-Dichloroethene	ND	0.037	ND	0.0093	
75-34-3	1,1-Dichloroethane	0.046	0.037	0.011	0.0091	
1634-04-4	Methyl tert-Butyl Ether	ND	0.037	ND	0.010	
156-59-2	cis-1,2-Dichloroethene	0.24	0.037	0.061	0.0093	
67-66-3	Chloroform	0.33	0.15	0.068	0.030	
107-06-2	1,2-Dichloroethane	0.072	0.037	0.018	0.0091	
71-55-6	1,1,1-Trichloroethane	ND	0.037	ND	0.0068	
71-43-2	Benzene	0.38	0.11	0.12	0.035	
56-23-5	Carbon Tetrachloride	0.59	0.037	0.094	0.0059	
78-87-5	1,2-Dichloropropane	ND	0.037	ND	0.0080	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: N213-B-02-OFF
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P1500729-012

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 6.0 L Silonite Canister
 Test Notes:
 Container ID: AS00228

Date Collected: 2/22/15
 Date Received: 2/24/15
 Date Analyzed: 2/28/15
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.30 Final Pressure (psig): 3.69

Canister Dilution Factor: 1.48

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	0.037	ND	0.0055	
79-01-6	Trichloroethene	0.16	0.037	0.029	0.0069	
123-91-1	1,4-Dioxane	ND	0.15	ND	0.041	
10061-01-5	cis-1,3-Dichloropropene	ND	0.037	ND	0.0082	
10061-02-6	trans-1,3-Dichloropropene	ND	0.037	ND	0.0082	
79-00-5	1,1,2-Trichloroethane	ND	0.15	ND	0.027	
108-88-3	Toluene	2.2	0.15	0.57	0.039	
106-93-4	1,2-Dibromoethane	ND	0.037	ND	0.0048	
127-18-4	Tetrachloroethene	0.059	0.037	0.0087	0.0055	
108-90-7	Chlorobenzene	ND	0.15	ND	0.032	
100-41-4	Ethylbenzene	0.21	0.15	0.049	0.034	
179601-23-1	m,p-Xylenes	0.52	0.15	0.12	0.034	
95-47-6	o-Xylene	0.24	0.15	0.054	0.034	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.037	ND	0.0054	
541-73-1	1,3-Dichlorobenzene	ND	0.037	ND	0.0062	
106-46-7	1,4-Dichlorobenzene	0.041	0.037	0.0068	0.0062	
95-50-1	1,2-Dichlorobenzene	ND	0.037	ND	0.0062	
120-82-1	1,2,4-Trichlorobenzene	ND	0.037	ND	0.0050	
91-20-3	Naphthalene	ND	0.15	ND	0.028	
87-68-3	Hexachlorobutadiene	ND	0.037	ND	0.0035	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: N213-B-03-OFF
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P1500729-013

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC01005

Date Collected: 2/22/15
Date Received: 2/24/15
Date Analyzed: 2/28/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.15 Final Pressure (psig): 3.84

Canister Dilution Factor: 1.48

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.3	0.037	0.46	0.0075	
74-87-3	Chloromethane	0.69	0.037	0.34	0.018	
75-01-4	Vinyl Chloride	ND	0.037	ND	0.014	
74-83-9	Bromomethane	0.051	0.037	0.013	0.0095	
75-00-3	Chloroethane	0.051	0.037	0.019	0.014	
67-64-1	Acetone	12	3.7	5.0	1.6	
75-69-4	Trichlorofluoromethane	12	0.037	2.1	0.0066	
75-35-4	1,1-Dichloroethene	ND	0.037	ND	0.0093	
75-09-2	Methylene Chloride	0.37	0.15	0.11	0.043	
76-13-1	Trichlorotrifluoroethane	0.50	0.037	0.065	0.0048	
156-60-5	trans-1,2-Dichloroethene	ND	0.037	ND	0.0093	
75-34-3	1,1-Dichloroethane	ND	0.037	ND	0.0091	
1634-04-4	Methyl tert-Butyl Ether	ND	0.037	ND	0.010	
156-59-2	cis-1,2-Dichloroethene	0.15	0.037	0.038	0.0093	
67-66-3	Chloroform	ND	0.15	ND	0.030	
107-06-2	1,2-Dichloroethane	0.068	0.037	0.017	0.0091	
71-55-6	1,1,1-Trichloroethane	ND	0.037	ND	0.0068	
71-43-2	Benzene	0.33	0.11	0.10	0.035	
56-23-5	Carbon Tetrachloride	0.44	0.037	0.070	0.0059	
78-87-5	1,2-Dichloropropane	0.048	0.037	0.010	0.0080	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: N213-B-03-OFF
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P1500729-013

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 6.0 L Summa Canister
 Test Notes:
 Container ID: AC01005

Date Collected: 2/22/15
 Date Received: 2/24/15
 Date Analyzed: 2/28/15
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.15 Final Pressure (psig): 3.84

Canister Dilution Factor: 1.48

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	0.037	ND	0.0055	
79-01-6	Trichloroethene	0.068	0.037	0.013	0.0069	
123-91-1	1,4-Dioxane	ND	0.15	ND	0.041	
10061-01-5	cis-1,3-Dichloropropene	ND	0.037	ND	0.0082	
10061-02-6	trans-1,3-Dichloropropene	ND	0.037	ND	0.0082	
79-00-5	1,1,2-Trichloroethane	ND	0.15	ND	0.027	
108-88-3	Toluene	1.1	0.15	0.28	0.039	
106-93-4	1,2-Dibromoethane	ND	0.037	ND	0.0048	
127-18-4	Tetrachloroethene	0.042	0.037	0.0062	0.0055	
108-90-7	Chlorobenzene	ND	0.15	ND	0.032	
100-41-4	Ethylbenzene	0.18	0.15	0.042	0.034	
179601-23-1	m,p-Xylenes	0.48	0.15	0.11	0.034	
95-47-6	o-Xylene	0.20	0.15	0.047	0.034	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.037	ND	0.0054	
541-73-1	1,3-Dichlorobenzene	ND	0.037	ND	0.0062	
106-46-7	1,4-Dichlorobenzene	0.038	0.037	0.0063	0.0062	
95-50-1	1,2-Dichlorobenzene	ND	0.037	ND	0.0062	
120-82-1	1,2,4-Trichlorobenzene	ND	0.037	ND	0.0050	
91-20-3	Naphthalene	ND	0.15	ND	0.028	
87-68-3	Hexachlorobutadiene	ND	0.037	ND	0.0035	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: N213-B-04-P-OFF
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P1500729-014

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS00514

Date Collected: 2/22/15
Date Received: 2/24/15
Date Analyzed: 2/28/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -0.28 **Final Pressure (psig):** 3.67

Canister Dilution Factor: 1.27

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.1	0.032	0.42	0.0064	
74-87-3	Chloromethane	0.51	0.032	0.25	0.015	
75-01-4	Vinyl Chloride	0.25	0.032	0.098	0.012	
74-83-9	Bromomethane	0.033	0.032	0.0086	0.0082	
75-00-3	Chloroethane	ND	0.032	ND	0.012	
67-64-1	Acetone	4.1	3.2	1.7	1.3	
75-69-4	Trichlorofluoromethane	1.4	0.032	0.25	0.0057	
75-35-4	1,1-Dichloroethene	0.33	0.032	0.083	0.0080	
75-09-2	Methylene Chloride	0.29	0.13	0.082	0.037	
76-13-1	Trichlorotrifluoroethane	0.52	0.032	0.068	0.0041	
156-60-5	trans-1,2-Dichloroethene	0.16	0.032	0.040	0.0080	
75-34-3	1,1-Dichloroethane	0.33	0.032	0.082	0.0078	
1634-04-4	Methyl tert-Butyl Ether	ND	0.032	ND	0.0088	
156-59-2	cis-1,2-Dichloroethene	20	0.032	5.0	0.0080	
67-66-3	Chloroform	ND	0.13	ND	0.026	
107-06-2	1,2-Dichloroethane	0.069	0.032	0.017	0.0078	
71-55-6	1,1,1-Trichloroethane	0.049	0.032	0.0090	0.0058	
71-43-2	Benzene	0.34	0.095	0.11	0.030	
56-23-5	Carbon Tetrachloride	0.51	0.032	0.081	0.0050	
78-87-5	1,2-Dichloropropane	ND	0.032	ND	0.0069	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: N213-B-04-P-OFF
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P1500729-014

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 6.0 L Silonite Canister
 Test Notes:
 Container ID: AS00514

Date Collected: 2/22/15
 Date Received: 2/24/15
 Date Analyzed: 2/28/15
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -0.28 Final Pressure (psig): 3.67

Canister Dilution Factor: 1.27

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	0.032	ND	0.0047	
79-01-6	Trichloroethene	4.4	0.032	0.82	0.0059	
123-91-1	1,4-Dioxane	ND	0.13	ND	0.035	
10061-01-5	cis-1,3-Dichloropropene	ND	0.032	ND	0.0070	
10061-02-6	trans-1,3-Dichloropropene	ND	0.032	ND	0.0070	
79-00-5	1,1,2-Trichloroethane	ND	0.13	ND	0.023	
108-88-3	Toluene	0.73	0.13	0.19	0.034	
106-93-4	1,2-Dibromoethane	ND	0.032	ND	0.0041	
127-18-4	Tetrachloroethene	0.13	0.032	0.019	0.0047	
108-90-7	Chlorobenzene	ND	0.13	ND	0.028	
100-41-4	Ethylbenzene	0.16	0.13	0.038	0.029	
179601-23-1	m,p-Xylenes	0.53	0.13	0.12	0.029	
95-47-6	o-Xylene	0.24	0.13	0.055	0.029	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.032	ND	0.0046	
541-73-1	1,3-Dichlorobenzene	ND	0.032	ND	0.0053	
106-46-7	1,4-Dichlorobenzene	0.16	0.032	0.026	0.0053	
95-50-1	1,2-Dichlorobenzene	ND	0.032	ND	0.0053	
120-82-1	1,2,4-Trichlorobenzene	ND	0.032	ND	0.0043	
91-20-3	Naphthalene	ND	0.13	ND	0.024	
87-68-3	Hexachlorobutadiene	ND	0.032	ND	0.0030	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: N213-B-05-P-OFF
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P1500729-015

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC02024

Date Collected: 2/22/15
Date Received: 2/24/15
Date Analyzed: 2/28/15 & 3/2/15
Volume(s) Analyzed: 1.00 Liter(s)
 0.10 Liter(s)

Initial Pressure (psig): -0.72 Final Pressure (psig): 3.71

Canister Dilution Factor: 1.32

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.2	0.033	0.44	0.0067	
74-87-3	Chloromethane	0.45	0.033	0.22	0.016	
75-01-4	Vinyl Chloride	2.6	0.033	1.0	0.013	
74-83-9	Bromomethane	0.034	0.033	0.0088	0.0085	
75-00-3	Chloroethane	ND	0.033	ND	0.013	
67-64-1	Acetone	4.5	3.3	1.9	1.4	
75-69-4	Trichlorofluoromethane	1.5	0.033	0.26	0.0059	
75-35-4	1,1-Dichloroethene	3.7	0.033	0.93	0.0083	
75-09-2	Methylene Chloride	0.27	0.13	0.079	0.038	
76-13-1	Trichlorotrifluoroethane	0.97	0.033	0.13	0.0043	
156-60-5	trans-1,2-Dichloroethene	2.3	0.033	0.59	0.0083	
75-34-3	1,1-Dichloroethane	4.8	0.033	1.2	0.0082	
1634-04-4	Methyl tert-Butyl Ether	ND	0.033	ND	0.0092	
156-59-2	cis-1,2-Dichloroethene	290	0.33	74	0.083	D
67-66-3	Chloroform	0.16	0.13	0.032	0.027	
107-06-2	1,2-Dichloroethane	0.10	0.033	0.025	0.0082	
71-55-6	1,1,1-Trichloroethane	0.13	0.033	0.024	0.0061	
71-43-2	Benzene	0.37	0.099	0.12	0.031	
56-23-5	Carbon Tetrachloride	0.50	0.033	0.080	0.0052	
78-87-5	1,2-Dichloropropane	ND	0.033	ND	0.0071	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

D = The reported result is from a dilution.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: N213-B-05-P-OFF
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P1500729-015

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 6.0 L Summa Canister
 Test Notes:
 Container ID: AC02024

Date Collected: 2/22/15
 Date Received: 2/24/15
 Date Analyzed: 2/28/15 & 3/2/15
 Volume(s) Analyzed: 1.00 Liter(s)
 0.10 Liter(s)

Initial Pressure (psig): -0.72 Final Pressure (psig): 3.71

Canister Dilution Factor: 1.32

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	0.033	ND	0.0049	D
79-01-6	Trichloroethene	75	0.33	14	0.061	
123-91-1	1,4-Dioxane	ND	0.13	ND	0.037	
10061-01-5	cis-1,3-Dichloropropene	ND	0.033	ND	0.0073	
10061-02-6	trans-1,3-Dichloropropene	ND	0.033	ND	0.0073	
79-00-5	1,1,2-Trichloroethane	ND	0.13	ND	0.024	D
108-88-3	Toluene	0.54	0.13	0.14	0.035	
106-93-4	1,2-Dibromoethane	ND	0.033	ND	0.0043	
127-18-4	Tetrachloroethene	1.6	0.033	0.24	0.0049	
108-90-7	Chlorobenzene	ND	0.13	ND	0.029	
100-41-4	Ethylbenzene	ND	0.13	ND	0.030	D
179601-23-1	m,p-Xylenes	0.23	0.13	0.054	0.030	
95-47-6	o-Xylene	ND	0.13	ND	0.030	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.033	ND	0.0048	
541-73-1	1,3-Dichlorobenzene	ND	0.033	ND	0.0055	
106-46-7	1,4-Dichlorobenzene	0.034	0.033	0.0057	0.0055	D
95-50-1	1,2-Dichlorobenzene	ND	0.033	ND	0.0055	
120-82-1	1,2,4-Trichlorobenzene	ND	0.033	ND	0.0044	
91-20-3	Naphthalene	ND	0.13	ND	0.025	
87-68-3	Hexachlorobutadiene	ND	0.033	ND	0.0031	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

D = The reported result is from a dilution.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: N213-B-06-P-OFF
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P1500729-016

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC00717

Date Collected: 2/22/15
Date Received: 2/24/15
Date Analyzed: 2/28/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -1.05 **Final Pressure (psig):** 3.95

Canister Dilution Factor: 1.37

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.4	0.034	0.48	0.0069	
74-87-3	Chloromethane	0.34	0.034	0.16	0.017	
75-01-4	Vinyl Chloride	0.050	0.034	0.020	0.013	
74-83-9	Bromomethane	0.043	0.034	0.011	0.0088	
75-00-3	Chloroethane	ND	0.034	ND	0.013	
67-64-1	Acetone	8.4	3.4	3.5	1.4	
75-69-4	Trichlorofluoromethane	1.9	0.034	0.34	0.0061	
75-35-4	1,1-Dichloroethene	0.058	0.034	0.015	0.0086	
75-09-2	Methylene Chloride	1.4	0.14	0.40	0.039	
76-13-1	Trichlorotrifluoroethane	0.83	0.034	0.11	0.0045	
156-60-5	trans-1,2-Dichloroethene	ND	0.034	ND	0.0086	
75-34-3	1,1-Dichloroethane	0.10	0.034	0.025	0.0085	
1634-04-4	Methyl tert-Butyl Ether	ND	0.034	ND	0.0095	
156-59-2	cis-1,2-Dichloroethene	3.0	0.034	0.76	0.0086	
67-66-3	Chloroform	5.7	0.14	1.2	0.028	
107-06-2	1,2-Dichloroethane	0.067	0.034	0.017	0.0085	
71-55-6	1,1,1-Trichloroethane	0.086	0.034	0.016	0.0063	
71-43-2	Benzene	0.31	0.10	0.096	0.032	
56-23-5	Carbon Tetrachloride	0.52	0.034	0.082	0.0054	
78-87-5	1,2-Dichloropropane	ND	0.034	ND	0.0074	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: N213-B-06-P-OFF
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P1500729-016

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 6.0 L Summa Canister
 Test Notes:
 Container ID: AC00717

Date Collected: 2/22/15
 Date Received: 2/24/15
 Date Analyzed: 2/28/15
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -1.05 Final Pressure (psig): 3.95

Canister Dilution Factor: 1.37

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	0.33	0.034	0.049	0.0051	
79-01-6	Trichloroethene	1.4	0.034	0.25	0.0064	
123-91-1	1,4-Dioxane	ND	0.14	ND	0.038	
10061-01-5	cis-1,3-Dichloropropene	ND	0.034	ND	0.0075	
10061-02-6	trans-1,3-Dichloropropene	ND	0.034	ND	0.0075	
79-00-5	1,1,2-Trichloroethane	ND	0.14	ND	0.025	
108-88-3	Toluene	2.5	0.14	0.68	0.036	
106-93-4	1,2-Dibromoethane	ND	0.034	ND	0.0045	
127-18-4	Tetrachloroethene	2.0	0.034	0.29	0.0051	
108-90-7	Chlorobenzene	ND	0.14	ND	0.030	
100-41-4	Ethylbenzene	ND	0.14	ND	0.032	
179601-23-1	m,p-Xylenes	0.23	0.14	0.052	0.032	
95-47-6	o-Xylene	ND	0.14	ND	0.032	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.034	ND	0.0050	
541-73-1	1,3-Dichlorobenzene	ND	0.034	ND	0.0057	
106-46-7	1,4-Dichlorobenzene	0.037	0.034	0.0062	0.0057	
95-50-1	1,2-Dichlorobenzene	ND	0.034	ND	0.0057	
120-82-1	1,2,4-Trichlorobenzene	ND	0.034	ND	0.0046	
91-20-3	Naphthalene	ND	0.14	ND	0.026	
87-68-3	Hexachlorobutadiene	ND	0.034	ND	0.0032	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: N213-B-07-P-OFF
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P1500729-017

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS00720

Date Collected: 2/22/15
Date Received: 2/24/15
Date Analyzed: 2/28/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -0.50 **Final Pressure (psig):** 3.57

Canister Dilution Factor: 1.29

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.2	0.032	0.45	0.0065	
74-87-3	Chloromethane	0.63	0.032	0.30	0.016	
75-01-4	Vinyl Chloride	ND	0.032	ND	0.013	
74-83-9	Bromomethane	0.038	0.032	0.0097	0.0083	
75-00-3	Chloroethane	ND	0.032	ND	0.012	
67-64-1	Acetone	5.9	3.2	2.5	1.4	
75-69-4	Trichlorofluoromethane	5.9	0.032	1.1	0.0057	
75-35-4	1,1-Dichloroethene	ND	0.032	ND	0.0081	
75-09-2	Methylene Chloride	0.50	0.13	0.14	0.037	
76-13-1	Trichlorotrifluoroethane	0.53	0.032	0.069	0.0042	
156-60-5	trans-1,2-Dichloroethene	ND	0.032	ND	0.0081	
75-34-3	1,1-Dichloroethane	ND	0.032	ND	0.0080	
1634-04-4	Methyl tert-Butyl Ether	ND	0.032	ND	0.0089	
156-59-2	cis-1,2-Dichloroethene	0.095	0.032	0.024	0.0081	
67-66-3	Chloroform	0.14	0.13	0.028	0.026	
107-06-2	1,2-Dichloroethane	0.068	0.032	0.017	0.0080	
71-55-6	1,1,1-Trichloroethane	ND	0.032	ND	0.0059	
71-43-2	Benzene	0.35	0.097	0.11	0.030	
56-23-5	Carbon Tetrachloride	0.55	0.032	0.087	0.0051	
78-87-5	1,2-Dichloropropane	ND	0.032	ND	0.0070	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: N213-B-07-P-OFF
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P1500729-017

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 6.0 L Silonite Canister
 Test Notes:
 Container ID: AS00720

Date Collected: 2/22/15
 Date Received: 2/24/15
 Date Analyzed: 2/28/15
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -0.50 Final Pressure (psig): 3.57

Canister Dilution Factor: 1.29

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	0.032	ND	0.0048	
79-01-6	Trichloroethene	0.089	0.032	0.017	0.0060	
123-91-1	1,4-Dioxane	ND	0.13	ND	0.036	
10061-01-5	cis-1,3-Dichloropropene	ND	0.032	ND	0.0071	
10061-02-6	trans-1,3-Dichloropropene	ND	0.032	ND	0.0071	
79-00-5	1,1,2-Trichloroethane	ND	0.13	ND	0.024	
108-88-3	Toluene	0.47	0.13	0.12	0.034	
106-93-4	1,2-Dibromoethane	ND	0.032	ND	0.0042	
127-18-4	Tetrachloroethene	0.054	0.032	0.0080	0.0048	
108-90-7	Chlorobenzene	ND	0.13	ND	0.028	
100-41-4	Ethylbenzene	ND	0.13	ND	0.030	
179601-23-1	m,p-Xylenes	0.20	0.13	0.045	0.030	
95-47-6	o-Xylene	ND	0.13	ND	0.030	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.032	ND	0.0047	
541-73-1	1,3-Dichlorobenzene	ND	0.032	ND	0.0054	
106-46-7	1,4-Dichlorobenzene	ND	0.032	ND	0.0054	
95-50-1	1,2-Dichlorobenzene	ND	0.032	ND	0.0054	
120-82-1	1,2,4-Trichlorobenzene	ND	0.032	ND	0.0043	
91-20-3	Naphthalene	ND	0.13	ND	0.025	
87-68-3	Hexachlorobutadiene	ND	0.032	ND	0.0030	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: N213-1-01-OFF
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P1500729-018

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC01656

Date Collected: 2/22/15
Date Received: 2/24/15
Date Analyzed: 2/28/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -3.13 **Final Pressure (psig):** 3.72

Canister Dilution Factor: 1.59

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.3	0.040	0.46	0.0080	
74-87-3	Chloromethane	0.71	0.040	0.34	0.019	
75-01-4	Vinyl Chloride	ND	0.040	ND	0.016	
74-83-9	Bromomethane	0.083	0.040	0.021	0.010	
75-00-3	Chloroethane	ND	0.040	ND	0.015	
67-64-1	Acetone	6.7	4.0	2.8	1.7	
75-69-4	Trichlorofluoromethane	1.6	0.040	0.28	0.0071	
75-35-4	1,1-Dichloroethene	ND	0.040	ND	0.010	
75-09-2	Methylene Chloride	0.34	0.16	0.098	0.046	
76-13-1	Trichlorotrifluoroethane	0.53	0.040	0.069	0.0052	
156-60-5	trans-1,2-Dichloroethene	ND	0.040	ND	0.010	
75-34-3	1,1-Dichloroethane	ND	0.040	ND	0.0098	
1634-04-4	Methyl tert-Butyl Ether	ND	0.040	ND	0.011	
156-59-2	cis-1,2-Dichloroethene	ND	0.040	ND	0.010	
67-66-3	Chloroform	ND	0.16	ND	0.033	
107-06-2	1,2-Dichloroethane	0.072	0.040	0.018	0.0098	
71-55-6	1,1,1-Trichloroethane	ND	0.040	ND	0.0073	
71-43-2	Benzene	0.38	0.12	0.12	0.037	
56-23-5	Carbon Tetrachloride	0.52	0.040	0.083	0.0063	
78-87-5	1,2-Dichloropropane	ND	0.040	ND	0.0086	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: N213-1-01-OFF
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P1500729-018

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 6.0 L Summa Canister
 Test Notes:
 Container ID: AC01656

Date Collected: 2/22/15
 Date Received: 2/24/15
 Date Analyzed: 2/28/15
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -3.13 Final Pressure (psig): 3.72

Canister Dilution Factor: 1.59

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	0.040	ND	0.0059	
79-01-6	Trichloroethene	ND	0.040	ND	0.0074	
123-91-1	1,4-Dioxane	ND	0.16	ND	0.044	
10061-01-5	cis-1,3-Dichloropropene	ND	0.040	ND	0.0088	
10061-02-6	trans-1,3-Dichloropropene	ND	0.040	ND	0.0088	
79-00-5	1,1,2-Trichloroethane	ND	0.16	ND	0.029	
108-88-3	Toluene	0.79	0.16	0.21	0.042	
106-93-4	1,2-Dibromoethane	ND	0.040	ND	0.0052	
127-18-4	Tetrachloroethene	ND	0.040	ND	0.0059	
108-90-7	Chlorobenzene	ND	0.16	ND	0.035	
100-41-4	Ethylbenzene	ND	0.16	ND	0.037	
179601-23-1	m,p-Xylenes	0.27	0.16	0.062	0.037	
95-47-6	o-Xylene	ND	0.16	ND	0.037	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.040	ND	0.0058	
541-73-1	1,3-Dichlorobenzene	ND	0.040	ND	0.0066	
106-46-7	1,4-Dichlorobenzene	ND	0.040	ND	0.0066	
95-50-1	1,2-Dichlorobenzene	ND	0.040	ND	0.0066	
120-82-1	1,2,4-Trichlorobenzene	ND	0.040	ND	0.0054	
91-20-3	Naphthalene	0.26	0.16	0.049	0.030	
87-68-3	Hexachlorobutadiene	ND	0.040	ND	0.0037	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: N213-1-02-OFF
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P1500729-019

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS00750

Date Collected: 2/22/15
Date Received: 2/24/15
Date Analyzed: 2/28/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -1.29 **Final Pressure (psig):** 3.55

Canister Dilution Factor: 1.36

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.0	0.034	0.40	0.0069	
74-87-3	Chloromethane	0.60	0.034	0.29	0.016	
75-01-4	Vinyl Chloride	ND	0.034	ND	0.013	
74-83-9	Bromomethane	ND	0.034	ND	0.0088	
75-00-3	Chloroethane	0.040	0.034	0.015	0.013	
67-64-1	Acetone	40	3.4	17	1.4	
75-69-4	Trichlorofluoromethane	1.4	0.034	0.24	0.0061	
75-35-4	1,1-Dichloroethene	ND	0.034	ND	0.0086	
75-09-2	Methylene Chloride	0.28	0.14	0.080	0.039	
76-13-1	Trichlorotrifluoroethane	0.46	0.034	0.061	0.0044	
156-60-5	trans-1,2-Dichloroethene	ND	0.034	ND	0.0086	
75-34-3	1,1-Dichloroethane	ND	0.034	ND	0.0084	
1634-04-4	Methyl tert-Butyl Ether	ND	0.034	ND	0.0094	
156-59-2	cis-1,2-Dichloroethene	ND	0.034	ND	0.0086	
67-66-3	Chloroform	ND	0.14	ND	0.028	
107-06-2	1,2-Dichloroethane	0.065	0.034	0.016	0.0084	
71-55-6	1,1,1-Trichloroethane	ND	0.034	ND	0.0062	
71-43-2	Benzene	0.39	0.10	0.12	0.032	
56-23-5	Carbon Tetrachloride	0.50	0.034	0.080	0.0054	
78-87-5	1,2-Dichloropropane	0.065	0.034	0.014	0.0074	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: N213-1-02-OFF
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P1500729-019

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 6.0 L Silonite Canister
 Test Notes:
 Container ID: AS00750

Date Collected: 2/22/15
 Date Received: 2/24/15
 Date Analyzed: 2/28/15
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -1.29 Final Pressure (psig): 3.55

Canister Dilution Factor: 1.36

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	0.034	ND	0.0051	
79-01-6	Trichloroethene	ND	0.034	ND	0.0063	
123-91-1	1,4-Dioxane	ND	0.14	ND	0.038	
10061-01-5	cis-1,3-Dichloropropene	ND	0.034	ND	0.0075	
10061-02-6	trans-1,3-Dichloropropene	ND	0.034	ND	0.0075	
79-00-5	1,1,2-Trichloroethane	ND	0.14	ND	0.025	
108-88-3	Toluene	0.88	0.14	0.23	0.036	
106-93-4	1,2-Dibromoethane	ND	0.034	ND	0.0044	
127-18-4	Tetrachloroethene	0.042	0.034	0.0062	0.0050	
108-90-7	Chlorobenzene	ND	0.14	ND	0.030	
100-41-4	Ethylbenzene	0.15	0.14	0.034	0.031	
179601-23-1	m,p-Xylenes	0.42	0.14	0.098	0.031	
95-47-6	o-Xylene	0.18	0.14	0.041	0.031	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.034	ND	0.0050	
541-73-1	1,3-Dichlorobenzene	ND	0.034	ND	0.0057	
106-46-7	1,4-Dichlorobenzene	ND	0.034	ND	0.0057	
95-50-1	1,2-Dichlorobenzene	ND	0.034	ND	0.0057	
120-82-1	1,2,4-Trichlorobenzene	ND	0.034	ND	0.0046	
91-20-3	Naphthalene	ND	0.14	ND	0.026	
87-68-3	Hexachlorobutadiene	ND	0.034	ND	0.0032	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: N213-1-03-OFF
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P1500729-020

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS00570

Date Collected: 2/22/15
Date Received: 2/24/15
Date Analyzed: 2/28/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -1.69 Final Pressure (psig): 3.70

Canister Dilution Factor: 1.41

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.3	0.035	0.46	0.0071	
74-87-3	Chloromethane	0.69	0.035	0.34	0.017	
75-01-4	Vinyl Chloride	ND	0.035	ND	0.014	
74-83-9	Bromomethane	0.040	0.035	0.010	0.0091	
75-00-3	Chloroethane	ND	0.035	ND	0.013	
67-64-1	Acetone	6.2	3.5	2.6	1.5	
75-69-4	Trichlorofluoromethane	1.9	0.035	0.35	0.0063	
75-35-4	1,1-Dichloroethene	ND	0.035	ND	0.0089	
75-09-2	Methylene Chloride	0.36	0.14	0.10	0.041	
76-13-1	Trichlorotrifluoroethane	0.53	0.035	0.070	0.0046	
156-60-5	trans-1,2-Dichloroethene	ND	0.035	ND	0.0089	
75-34-3	1,1-Dichloroethane	ND	0.035	ND	0.0087	
1634-04-4	Methyl tert-Butyl Ether	ND	0.035	ND	0.0098	
156-59-2	cis-1,2-Dichloroethene	0.073	0.035	0.019	0.0089	
67-66-3	Chloroform	ND	0.14	ND	0.029	
107-06-2	1,2-Dichloroethane	0.073	0.035	0.018	0.0087	
71-55-6	1,1,1-Trichloroethane	ND	0.035	ND	0.0065	
71-43-2	Benzene	0.37	0.11	0.12	0.033	
56-23-5	Carbon Tetrachloride	0.53	0.035	0.084	0.0056	
78-87-5	1,2-Dichloropropane	ND	0.035	ND	0.0076	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: N213-1-03-OFF
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P1500729-020

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 6.0 L Silonite Canister
 Test Notes:
 Container ID: AS00570

Date Collected: 2/22/15
 Date Received: 2/24/15
 Date Analyzed: 2/28/15
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -1.69 Final Pressure (psig): 3.70

Canister Dilution Factor: 1.41

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	0.035	ND	0.0053	
79-01-6	Trichloroethene	0.037	0.035	0.0070	0.0066	
123-91-1	1,4-Dioxane	ND	0.14	ND	0.039	
10061-01-5	cis-1,3-Dichloropropene	ND	0.035	ND	0.0078	
10061-02-6	trans-1,3-Dichloropropene	ND	0.035	ND	0.0078	
79-00-5	1,1,2-Trichloroethane	ND	0.14	ND	0.026	
108-88-3	Toluene	1.5	0.14	0.39	0.037	
106-93-4	1,2-Dibromoethane	ND	0.035	ND	0.0046	
127-18-4	Tetrachloroethene	0.068	0.035	0.010	0.0052	
108-90-7	Chlorobenzene	ND	0.14	ND	0.031	
100-41-4	Ethylbenzene	ND	0.14	ND	0.032	
179601-23-1	m,p-Xylenes	0.26	0.14	0.059	0.032	
95-47-6	o-Xylene	ND	0.14	ND	0.032	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.035	ND	0.0051	
541-73-1	1,3-Dichlorobenzene	ND	0.035	ND	0.0059	
106-46-7	1,4-Dichlorobenzene	ND	0.035	ND	0.0059	
95-50-1	1,2-Dichlorobenzene	ND	0.035	ND	0.0059	
120-82-1	1,2,4-Trichlorobenzene	ND	0.035	ND	0.0048	
91-20-3	Naphthalene	ND	0.14	ND	0.027	
87-68-3	Hexachlorobutadiene	ND	0.035	ND	0.0033	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: N213-1-04-OFF
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P1500729-021

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC01462

Date Collected: 2/22/15
Date Received: 2/24/15
Date Analyzed: 2/28/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.05 **Final Pressure (psig):** 3.86

Canister Dilution Factor: 1.47

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.2	0.037	0.44	0.0074	
74-87-3	Chloromethane	0.67	0.037	0.33	0.018	
75-01-4	Vinyl Chloride	ND	0.037	ND	0.014	
74-83-9	Bromomethane	0.074	0.037	0.019	0.0095	
75-00-3	Chloroethane	0.050	0.037	0.019	0.014	
67-64-1	Acetone	28	3.7	12	1.5	
75-69-4	Trichlorofluoromethane	4.3	0.037	0.76	0.0065	
75-35-4	1,1-Dichloroethene	ND	0.037	ND	0.0093	
75-09-2	Methylene Chloride	0.35	0.15	0.10	0.042	
76-13-1	Trichlorotrifluoroethane	0.49	0.037	0.064	0.0048	
156-60-5	trans-1,2-Dichloroethene	ND	0.037	ND	0.0093	
75-34-3	1,1-Dichloroethane	ND	0.037	ND	0.0091	
1634-04-4	Methyl tert-Butyl Ether	ND	0.037	ND	0.010	
156-59-2	cis-1,2-Dichloroethene	0.13	0.037	0.032	0.0093	
67-66-3	Chloroform	ND	0.15	ND	0.030	
107-06-2	1,2-Dichloroethane	0.070	0.037	0.017	0.0091	
71-55-6	1,1,1-Trichloroethane	ND	0.037	ND	0.0067	
71-43-2	Benzene	0.33	0.11	0.10	0.035	
56-23-5	Carbon Tetrachloride	0.49	0.037	0.078	0.0058	
78-87-5	1,2-Dichloropropane	0.057	0.037	0.012	0.0080	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: N213-1-04-OFF
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P1500729-021

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 6.0 L Summa Canister
 Test Notes:
 Container ID: AC01462

Date Collected: 2/22/15
 Date Received: 2/24/15
 Date Analyzed: 2/28/15
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.05 Final Pressure (psig): 3.86

Canister Dilution Factor: 1.47

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	0.037	ND	0.0055	
79-01-6	Trichloroethene	0.060	0.037	0.011	0.0068	
123-91-1	1,4-Dioxane	ND	0.15	ND	0.041	
10061-01-5	cis-1,3-Dichloropropene	ND	0.037	ND	0.0081	
10061-02-6	trans-1,3-Dichloropropene	ND	0.037	ND	0.0081	
79-00-5	1,1,2-Trichloroethane	ND	0.15	ND	0.027	
108-88-3	Toluene	1.2	0.15	0.33	0.039	
106-93-4	1,2-Dibromoethane	ND	0.037	ND	0.0048	
127-18-4	Tetrachloroethene	0.050	0.037	0.0074	0.0054	
108-90-7	Chlorobenzene	ND	0.15	ND	0.032	
100-41-4	Ethylbenzene	0.19	0.15	0.043	0.034	
179601-23-1	m,p-Xylenes	0.52	0.15	0.12	0.034	
95-47-6	o-Xylene	0.22	0.15	0.050	0.034	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.037	ND	0.0054	
541-73-1	1,3-Dichlorobenzene	ND	0.037	ND	0.0061	
106-46-7	1,4-Dichlorobenzene	ND	0.037	ND	0.0061	
95-50-1	1,2-Dichlorobenzene	ND	0.037	ND	0.0061	
120-82-1	1,2,4-Trichlorobenzene	ND	0.037	ND	0.0050	
91-20-3	Naphthalene	ND	0.15	ND	0.028	
87-68-3	Hexachlorobutadiene	ND	0.037	ND	0.0034	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: N213-1-04-OFFD
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P1500729-022

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS00442

Date Collected: 2/22/15
Date Received: 2/24/15
Date Analyzed: 2/28/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -1.80 **Final Pressure (psig):** 3.61

Canister Dilution Factor: 1.42

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.2	0.036	0.44	0.0072	
74-87-3	Chloromethane	0.69	0.036	0.34	0.017	
75-01-4	Vinyl Chloride	ND	0.036	ND	0.014	
74-83-9	Bromomethane	0.052	0.036	0.013	0.0091	
75-00-3	Chloroethane	ND	0.036	ND	0.013	
67-64-1	Acetone	26	3.6	11	1.5	
75-69-4	Trichlorofluoromethane	4.2	0.036	0.75	0.0063	
75-35-4	1,1-Dichloroethene	ND	0.036	ND	0.0090	
75-09-2	Methylene Chloride	0.34	0.14	0.098	0.041	
76-13-1	Trichlorotrifluoroethane	0.50	0.036	0.065	0.0046	
156-60-5	trans-1,2-Dichloroethene	ND	0.036	ND	0.0090	
75-34-3	1,1-Dichloroethane	ND	0.036	ND	0.0088	
1634-04-4	Methyl tert-Butyl Ether	ND	0.036	ND	0.0099	
156-59-2	cis-1,2-Dichloroethene	0.13	0.036	0.032	0.0090	
67-66-3	Chloroform	ND	0.14	ND	0.029	
107-06-2	1,2-Dichloroethane	0.068	0.036	0.017	0.0088	
71-55-6	1,1,1-Trichloroethane	ND	0.036	ND	0.0065	
71-43-2	Benzene	0.31	0.11	0.097	0.033	
56-23-5	Carbon Tetrachloride	0.55	0.036	0.088	0.0056	
78-87-5	1,2-Dichloropropane	0.055	0.036	0.012	0.0077	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: N213-1-04-OFFD
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P1500729-022

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 6.0 L Silonite Canister
 Test Notes:
 Container ID: AS00442

Date Collected: 2/22/15
 Date Received: 2/24/15
 Date Analyzed: 2/28/15
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -1.80 Final Pressure (psig): 3.61

Canister Dilution Factor: 1.42

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	0.036	ND	0.0053	
79-01-6	Trichloroethene	0.057	0.036	0.011	0.0066	
123-91-1	1,4-Dioxane	ND	0.14	ND	0.039	
10061-01-5	cis-1,3-Dichloropropene	ND	0.036	ND	0.0078	
10061-02-6	trans-1,3-Dichloropropene	ND	0.036	ND	0.0078	
79-00-5	1,1,2-Trichloroethane	ND	0.14	ND	0.026	
108-88-3	Toluene	0.86	0.14	0.23	0.038	
106-93-4	1,2-Dibromoethane	ND	0.036	ND	0.0046	
127-18-4	Tetrachloroethene	0.049	0.036	0.0073	0.0052	
108-90-7	Chlorobenzene	ND	0.14	ND	0.031	
100-41-4	Ethylbenzene	0.18	0.14	0.043	0.033	
179601-23-1	m,p-Xylenes	0.46	0.14	0.11	0.033	
95-47-6	o-Xylene	0.20	0.14	0.045	0.033	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.036	ND	0.0052	
541-73-1	1,3-Dichlorobenzene	ND	0.036	ND	0.0059	
106-46-7	1,4-Dichlorobenzene	ND	0.036	ND	0.0059	
95-50-1	1,2-Dichlorobenzene	ND	0.036	ND	0.0059	
120-82-1	1,2,4-Trichlorobenzene	ND	0.036	ND	0.0048	
91-20-3	Naphthalene	ND	0.14	ND	0.027	
87-68-3	Hexachlorobutadiene	ND	0.036	ND	0.0033	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: N213-1-05-OFF
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P1500729-023

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS00799

Date Collected: 2/22/15
Date Received: 2/24/15
Date Analyzed: 2/28/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.19 Final Pressure (psig): 3.57

Canister Dilution Factor: 1.46

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.1	0.037	0.43	0.0074	
74-87-3	Chloromethane	0.66	0.037	0.32	0.018	
75-01-4	Vinyl Chloride	ND	0.037	ND	0.014	
74-83-9	Bromomethane	ND	0.037	ND	0.0094	
75-00-3	Chloroethane	0.041	0.037	0.016	0.014	
67-64-1	Acetone	34	3.7	14	1.5	
75-69-4	Trichlorofluoromethane	5.6	0.037	0.99	0.0065	
75-35-4	1,1-Dichloroethene	ND	0.037	ND	0.0092	
75-09-2	Methylene Chloride	0.33	0.15	0.094	0.042	
76-13-1	Trichlorotrifluoroethane	0.48	0.037	0.063	0.0048	
156-60-5	trans-1,2-Dichloroethene	ND	0.037	ND	0.0092	
75-34-3	1,1-Dichloroethane	ND	0.037	ND	0.0090	
1634-04-4	Methyl tert-Butyl Ether	ND	0.037	ND	0.010	
156-59-2	cis-1,2-Dichloroethene	0.17	0.037	0.043	0.0092	
67-66-3	Chloroform	ND	0.15	ND	0.030	
107-06-2	1,2-Dichloroethane	0.066	0.037	0.016	0.0090	
71-55-6	1,1,1-Trichloroethane	ND	0.037	ND	0.0067	
71-43-2	Benzene	0.32	0.11	0.099	0.034	
56-23-5	Carbon Tetrachloride	0.51	0.037	0.081	0.0058	
78-87-5	1,2-Dichloropropane	0.060	0.037	0.013	0.0079	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: N213-1-05-OFF
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P1500729-023

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 6.0 L Silonite Canister
 Test Notes:
 Container ID: AS00799

Date Collected: 2/22/15
 Date Received: 2/24/15
 Date Analyzed: 2/28/15
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.19 Final Pressure (psig): 3.57

Canister Dilution Factor: 1.46

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	0.037	ND	0.0055	
79-01-6	Trichloroethene	0.067	0.037	0.013	0.0068	
123-91-1	1,4-Dioxane	ND	0.15	ND	0.041	
10061-01-5	cis-1,3-Dichloropropene	ND	0.037	ND	0.0080	
10061-02-6	trans-1,3-Dichloropropene	ND	0.037	ND	0.0080	
79-00-5	1,1,2-Trichloroethane	ND	0.15	ND	0.027	
108-88-3	Toluene	0.81	0.15	0.22	0.039	
106-93-4	1,2-Dibromoethane	ND	0.037	ND	0.0048	
127-18-4	Tetrachloroethene	0.038	0.037	0.0057	0.0054	
108-90-7	Chlorobenzene	ND	0.15	ND	0.032	
100-41-4	Ethylbenzene	0.21	0.15	0.047	0.034	
179601-23-1	m,p-Xylenes	0.66	0.15	0.15	0.034	
95-47-6	o-Xylene	0.28	0.15	0.065	0.034	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.037	ND	0.0053	
541-73-1	1,3-Dichlorobenzene	ND	0.037	ND	0.0061	
106-46-7	1,4-Dichlorobenzene	ND	0.037	ND	0.0061	
95-50-1	1,2-Dichlorobenzene	ND	0.037	ND	0.0061	
120-82-1	1,2,4-Trichlorobenzene	ND	0.037	ND	0.0049	
91-20-3	Naphthalene	ND	0.15	ND	0.028	
87-68-3	Hexachlorobutadiene	ND	0.037	ND	0.0034	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: N240-1-01-OFF
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P1500729-024

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS00836

Date Collected: 2/22/15
Date Received: 2/24/15
Date Analyzed: 2/28/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -1.91 Final Pressure (psig): 3.65

Canister Dilution Factor: 1.43

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.1	0.036	0.43	0.0072	
74-87-3	Chloromethane	0.65	0.036	0.31	0.017	
75-01-4	Vinyl Chloride	ND	0.036	ND	0.014	
74-83-9	Bromomethane	0.040	0.036	0.010	0.0092	
75-00-3	Chloroethane	0.038	0.036	0.014	0.014	
67-64-1	Acetone	44	3.6	19	1.5	
75-69-4	Trichlorofluoromethane	1.5	0.036	0.27	0.0064	
75-35-4	1,1-Dichloroethene	ND	0.036	ND	0.0090	
75-09-2	Methylene Chloride	1.8	0.14	0.51	0.041	
76-13-1	Trichlorotrifluoroethane	0.50	0.036	0.066	0.0047	
156-60-5	trans-1,2-Dichloroethene	ND	0.036	ND	0.0090	
75-34-3	1,1-Dichloroethane	ND	0.036	ND	0.0088	
1634-04-4	Methyl tert-Butyl Ether	ND	0.036	ND	0.0099	
156-59-2	cis-1,2-Dichloroethene	ND	0.036	ND	0.0090	
67-66-3	Chloroform	ND	0.14	ND	0.029	
107-06-2	1,2-Dichloroethane	0.066	0.036	0.016	0.0088	
71-55-6	1,1,1-Trichloroethane	ND	0.036	ND	0.0066	
71-43-2	Benzene	0.36	0.11	0.11	0.034	
56-23-5	Carbon Tetrachloride	0.51	0.036	0.081	0.0057	
78-87-5	1,2-Dichloropropane	0.054	0.036	0.012	0.0077	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: N240-1-01-OFF
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P1500729-024

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS00836

Date Collected: 2/22/15
Date Received: 2/24/15
Date Analyzed: 2/28/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -1.91 Final Pressure (psig): 3.65

Canister Dilution Factor: 1.43

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	0.036	ND	0.0053	
79-01-6	Trichloroethene	1.2	0.036	0.22	0.0067	
123-91-1	1,4-Dioxane	ND	0.14	ND	0.040	
10061-01-5	cis-1,3-Dichloropropene	ND	0.036	ND	0.0079	
10061-02-6	trans-1,3-Dichloropropene	ND	0.036	ND	0.0079	
79-00-5	1,1,2-Trichloroethane	ND	0.14	ND	0.026	
108-88-3	Toluene	1.0	0.14	0.28	0.038	
106-93-4	1,2-Dibromoethane	ND	0.036	ND	0.0047	
127-18-4	Tetrachloroethene	0.037	0.036	0.0054	0.0053	
108-90-7	Chlorobenzene	ND	0.14	ND	0.031	
100-41-4	Ethylbenzene	0.35	0.14	0.079	0.033	
179601-23-1	m,p-Xylenes	0.55	0.14	0.13	0.033	
95-47-6	o-Xylene	0.22	0.14	0.052	0.033	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.036	ND	0.0052	
541-73-1	1,3-Dichlorobenzene	ND	0.036	ND	0.0059	
106-46-7	1,4-Dichlorobenzene	0.037	0.036	0.0061	0.0059	
95-50-1	1,2-Dichlorobenzene	ND	0.036	ND	0.0059	
120-82-1	1,2,4-Trichlorobenzene	ND	0.036	ND	0.0048	
91-20-3	Naphthalene	ND	0.14	ND	0.027	
87-68-3	Hexachlorobutadiene	ND	0.036	ND	0.0034	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: N240-1-02-OFF
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P1500729-025

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC01893

Date Collected: 2/22/15
Date Received: 2/24/15
Date Analyzed: 2/28/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -1.66 **Final Pressure (psig):** 3.60

Canister Dilution Factor: 1.40

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.1	0.035	0.42	0.0071	
74-87-3	Chloromethane	0.63	0.035	0.31	0.017	
75-01-4	Vinyl Chloride	ND	0.035	ND	0.014	
74-83-9	Bromomethane	0.038	0.035	0.0099	0.0090	
75-00-3	Chloroethane	0.053	0.035	0.020	0.013	
67-64-1	Acetone	71	3.5	30	1.5	
75-69-4	Trichlorofluoromethane	1.4	0.035	0.25	0.0062	
75-35-4	1,1-Dichloroethene	ND	0.035	ND	0.0088	
75-09-2	Methylene Chloride	0.47	0.14	0.14	0.040	
76-13-1	Trichlorotrifluoroethane	0.49	0.035	0.064	0.0046	
156-60-5	trans-1,2-Dichloroethene	ND	0.035	ND	0.0088	
75-34-3	1,1-Dichloroethane	ND	0.035	ND	0.0087	
1634-04-4	Methyl tert-Butyl Ether	ND	0.035	ND	0.0097	
156-59-2	cis-1,2-Dichloroethene	ND	0.035	ND	0.0088	
67-66-3	Chloroform	ND	0.14	ND	0.029	
107-06-2	1,2-Dichloroethane	0.072	0.035	0.018	0.0087	
71-55-6	1,1,1-Trichloroethane	ND	0.035	ND	0.0064	
71-43-2	Benzene	0.35	0.11	0.11	0.033	
56-23-5	Carbon Tetrachloride	0.50	0.035	0.079	0.0056	
78-87-5	1,2-Dichloropropane	0.045	0.035	0.0098	0.0076	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: N240-1-02-OFF
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P1500729-025

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 6.0 L Summa Canister
 Test Notes:
 Container ID: AC01893

Date Collected: 2/22/15
 Date Received: 2/24/15
 Date Analyzed: 2/28/15
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -1.66 Final Pressure (psig): 3.60

Canister Dilution Factor: 1.40

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	0.035	ND	0.0052	
79-01-6	Trichloroethene	0.15	0.035	0.028	0.0065	
123-91-1	1,4-Dioxane	ND	0.14	ND	0.039	
10061-01-5	cis-1,3-Dichloropropene	ND	0.035	ND	0.0077	
10061-02-6	trans-1,3-Dichloropropene	ND	0.035	ND	0.0077	
79-00-5	1,1,2-Trichloroethane	ND	0.14	ND	0.026	
108-88-3	Toluene	1.5	0.14	0.40	0.037	
106-93-4	1,2-Dibromoethane	ND	0.035	ND	0.0046	
127-18-4	Tetrachloroethene	ND	0.035	ND	0.0052	
108-90-7	Chlorobenzene	ND	0.14	ND	0.030	
100-41-4	Ethylbenzene	0.34	0.14	0.078	0.032	
179601-23-1	m,p-Xylenes	1.3	0.14	0.30	0.032	
95-47-6	o-Xylene	0.54	0.14	0.13	0.032	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.035	ND	0.0051	
541-73-1	1,3-Dichlorobenzene	ND	0.035	ND	0.0058	
106-46-7	1,4-Dichlorobenzene	0.038	0.035	0.0063	0.0058	
95-50-1	1,2-Dichlorobenzene	ND	0.035	ND	0.0058	
120-82-1	1,2,4-Trichlorobenzene	ND	0.035	ND	0.0047	
91-20-3	Naphthalene	0.23	0.14	0.044	0.027	
87-68-3	Hexachlorobutadiene	ND	0.035	ND	0.0033	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: Method Blank
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P150227-MB

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 2/27/15
Volume(s) Analyzed: 1.00 Liter(s)

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	0.025	ND	0.0051	
74-87-3	Chloromethane	ND	0.025	ND	0.012	
75-01-4	Vinyl Chloride	ND	0.025	ND	0.0098	
74-83-9	Bromomethane	ND	0.025	ND	0.0064	
75-00-3	Chloroethane	ND	0.025	ND	0.0095	
67-64-1	Acetone	ND	2.5	ND	1.1	
75-69-4	Trichlorofluoromethane	ND	0.025	ND	0.0045	
75-35-4	1,1-Dichloroethene	ND	0.025	ND	0.0063	
75-09-2	Methylene Chloride	ND	0.10	ND	0.029	
76-13-1	Trichlorotrifluoroethane	ND	0.025	ND	0.0033	
156-60-5	trans-1,2-Dichloroethene	ND	0.025	ND	0.0063	
75-34-3	1,1-Dichloroethane	ND	0.025	ND	0.0062	
1634-04-4	Methyl tert-Butyl Ether	ND	0.025	ND	0.0069	
156-59-2	cis-1,2-Dichloroethene	ND	0.025	ND	0.0063	
67-66-3	Chloroform	ND	0.10	ND	0.020	
107-06-2	1,2-Dichloroethane	ND	0.025	ND	0.0062	
71-55-6	1,1,1-Trichloroethane	ND	0.025	ND	0.0046	
71-43-2	Benzene	ND	0.075	ND	0.023	
56-23-5	Carbon Tetrachloride	ND	0.025	ND	0.0040	
78-87-5	1,2-Dichloropropane	ND	0.025	ND	0.0054	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: Method Blank
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P150227-MB

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 6.0 L Summa Canister
 Test Notes:

Date Collected: NA
 Date Received: NA
 Date Analyzed: 2/27/15
 Volume(s) Analyzed: 1.00 Liter(s)

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	0.025	ND	0.0037	
79-01-6	Trichloroethene	ND	0.025	ND	0.0047	
123-91-1	1,4-Dioxane	ND	0.10	ND	0.028	
10061-01-5	cis-1,3-Dichloropropene	ND	0.025	ND	0.0055	
10061-02-6	trans-1,3-Dichloropropene	ND	0.025	ND	0.0055	
79-00-5	1,1,2-Trichloroethane	ND	0.10	ND	0.018	
108-88-3	Toluene	ND	0.10	ND	0.027	
106-93-4	1,2-Dibromoethane	ND	0.025	ND	0.0033	
127-18-4	Tetrachloroethene	ND	0.025	ND	0.0037	
108-90-7	Chlorobenzene	ND	0.10	ND	0.022	
100-41-4	Ethylbenzene	ND	0.10	ND	0.023	
179601-23-1	m,p-Xylenes	ND	0.10	ND	0.023	
95-47-6	o-Xylene	ND	0.10	ND	0.023	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.025	ND	0.0036	
541-73-1	1,3-Dichlorobenzene	ND	0.025	ND	0.0042	
106-46-7	1,4-Dichlorobenzene	ND	0.025	ND	0.0042	
95-50-1	1,2-Dichlorobenzene	ND	0.025	ND	0.0042	
120-82-1	1,2,4-Trichlorobenzene	ND	0.025	ND	0.0034	
91-20-3	Naphthalene	ND	0.10	ND	0.019	
87-68-3	Hexachlorobutadiene	ND	0.025	ND	0.0023	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: Method Blank
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P150228-MB

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 2/28/15
Volume(s) Analyzed: 1.00 Liter(s)

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	0.025	ND	0.0051	
74-87-3	Chloromethane	ND	0.025	ND	0.012	
75-01-4	Vinyl Chloride	ND	0.025	ND	0.0098	
74-83-9	Bromomethane	ND	0.025	ND	0.0064	
75-00-3	Chloroethane	ND	0.025	ND	0.0095	
67-64-1	Acetone	ND	2.5	ND	1.1	
75-69-4	Trichlorofluoromethane	ND	0.025	ND	0.0045	
75-35-4	1,1-Dichloroethene	ND	0.025	ND	0.0063	
75-09-2	Methylene Chloride	ND	0.10	ND	0.029	
76-13-1	Trichlorotrifluoroethane	ND	0.025	ND	0.0033	
156-60-5	trans-1,2-Dichloroethene	ND	0.025	ND	0.0063	
75-34-3	1,1-Dichloroethane	ND	0.025	ND	0.0062	
1634-04-4	Methyl tert-Butyl Ether	ND	0.025	ND	0.0069	
156-59-2	cis-1,2-Dichloroethene	ND	0.025	ND	0.0063	
67-66-3	Chloroform	ND	0.10	ND	0.020	
107-06-2	1,2-Dichloroethane	ND	0.025	ND	0.0062	
71-55-6	1,1,1-Trichloroethane	ND	0.025	ND	0.0046	
71-43-2	Benzene	ND	0.075	ND	0.023	
56-23-5	Carbon Tetrachloride	ND	0.025	ND	0.0040	
78-87-5	1,2-Dichloropropane	ND	0.025	ND	0.0054	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: Method Blank
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P150228-MB

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 6.0 L Summa Canister
 Test Notes:

Date Collected: NA
 Date Received: NA
 Date Analyzed: 2/28/15
 Volume(s) Analyzed: 1.00 Liter(s)

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	0.025	ND	0.0037	
79-01-6	Trichloroethene	ND	0.025	ND	0.0047	
123-91-1	1,4-Dioxane	ND	0.10	ND	0.028	
10061-01-5	cis-1,3-Dichloropropene	ND	0.025	ND	0.0055	
10061-02-6	trans-1,3-Dichloropropene	ND	0.025	ND	0.0055	
79-00-5	1,1,2-Trichloroethane	ND	0.10	ND	0.018	
108-88-3	Toluene	ND	0.10	ND	0.027	
106-93-4	1,2-Dibromoethane	ND	0.025	ND	0.0033	
127-18-4	Tetrachloroethene	ND	0.025	ND	0.0037	
108-90-7	Chlorobenzene	ND	0.10	ND	0.022	
100-41-4	Ethylbenzene	ND	0.10	ND	0.023	
179601-23-1	m,p-Xylenes	ND	0.10	ND	0.023	
95-47-6	o-Xylene	ND	0.10	ND	0.023	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.025	ND	0.0036	
541-73-1	1,3-Dichlorobenzene	ND	0.025	ND	0.0042	
106-46-7	1,4-Dichlorobenzene	ND	0.025	ND	0.0042	
95-50-1	1,2-Dichlorobenzene	ND	0.025	ND	0.0042	
120-82-1	1,2,4-Trichlorobenzene	ND	0.025	ND	0.0034	
91-20-3	Naphthalene	ND	0.10	ND	0.019	
87-68-3	Hexachlorobutadiene	ND	0.025	ND	0.0023	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: Lab Control Sample
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P150227-LCS

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 2/27/15
Volume(s) Analyzed: 0.125 Liter(s)

CAS #	Compound	Spike Amount µg/m ³	Result µg/m ³	% Recovery	ALS Acceptance Limits	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	4.08	3.62	89	63-120	
74-87-3	Chloromethane	3.96	3.52	89	60-118	
75-01-4	Vinyl Chloride	4.04	3.37	83	63-120	
74-83-9	Bromomethane	4.04	3.56	88	65-118	
75-00-3	Chloroethane	4.04	3.43	85	63-118	
67-64-1	Acetone	21.6	17.2	80	70-130	
75-69-4	Trichlorofluoromethane	3.96	3.57	90	59-116	
75-35-4	1,1-Dichloroethene	4.28	4.01	94	67-114	
75-09-2	Methylene Chloride	4.32	3.90	90	66-111	
76-13-1	Trichlorotrifluoroethane	4.32	3.83	89	68-114	
156-60-5	trans-1,2-Dichloroethene	4.24	3.97	94	66-115	
75-34-3	1,1-Dichloroethane	4.16	3.77	91	65-117	
1634-04-4	Methyl tert-Butyl Ether	4.24	3.55	84	64-114	
156-59-2	cis-1,2-Dichloroethene	4.28	3.83	89	66-116	
67-66-3	Chloroform	4.32	3.84	89	63-114	
107-06-2	1,2-Dichloroethane	4.20	3.59	85	61-118	
71-55-6	1,1,1-Trichloroethane	4.16	3.57	86	65-114	
71-43-2	Benzene	4.40	4.13	94	67-118	
56-23-5	Carbon Tetrachloride	4.28	3.99	93	65-117	
78-87-5	1,2-Dichloropropane	4.24	3.81	90	63-116	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
 Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: Lab Control Sample
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P150227-LCS

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 2/27/15
Volume(s) Analyzed: 0.125 Liter(s)

CAS #	Compound	Spike Amount µg/m ³	Result µg/m ³	% Recovery	ALS Acceptance Limits	Data Qualifier
75-27-4	Bromodichloromethane	4.32	3.80	88	62-118	
79-01-6	Trichloroethene	4.16	3.76	90	66-116	
123-91-1	1,4-Dioxane	4.36	3.61	83	62-117	
10061-01-5	cis-1,3-Dichloropropene	4.52	4.07	90	63-117	
10061-02-6	trans-1,3-Dichloropropene	4.32	3.82	88	61-119	
79-00-5	1,1,2-Trichloroethane	4.24	3.86	91	64-117	
108-88-3	Toluene	4.24	3.55	84	66-113	
106-93-4	1,2-Dibromoethane	4.32	3.96	92	64-116	
127-18-4	Tetrachloroethene	3.96	3.38	85	65-118	
108-90-7	Chlorobenzene	4.32	4.03	93	67-126	
100-41-4	Ethylbenzene	4.24	3.87	91	67-124	
179601-23-1	m,p-Xylenes	8.40	7.64	91	66-128	
95-47-6	o-Xylene	4.12	3.79	92	65-127	
79-34-5	1,1,2,2-Tetrachloroethane	4.04	3.73	92	62-129	
541-73-1	1,3-Dichlorobenzene	4.36	3.99	92	62-131	
106-46-7	1,4-Dichlorobenzene	4.24	3.76	89	59-126	
95-50-1	1,2-Dichlorobenzene	4.28	4.01	94	59-131	
120-82-1	1,2,4-Trichlorobenzene	4.20	4.22	100	43-137	
91-20-3	Naphthalene	3.92	4.08	104	40-142	
87-68-3	Hexachlorobutadiene	4.28	4.25	99	49-133	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
 Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: Lab Control Sample
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P150228-LCS

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 2/28/15
Volume(s) Analyzed: 0.125 Liter(s)

CAS #	Compound	Spike Amount µg/m ³	Result µg/m ³	% Recovery	ALS Acceptance Limits	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	4.08	4.05	99	63-120	
74-87-3	Chloromethane	3.96	3.93	99	60-118	
75-01-4	Vinyl Chloride	4.04	3.72	92	63-120	
74-83-9	Bromomethane	4.04	3.63	90	65-118	
75-00-3	Chloroethane	4.04	3.74	93	63-118	
67-64-1	Acetone	21.6	21.0	97	70-130	
75-69-4	Trichlorofluoromethane	3.96	5.03	127	59-116	L
75-35-4	1,1-Dichloroethene	4.28	4.43	104	67-114	
75-09-2	Methylene Chloride	4.32	4.27	99	66-111	
76-13-1	Trichlorotrifluoroethane	4.32	4.27	99	68-114	
156-60-5	trans-1,2-Dichloroethene	4.24	4.41	104	66-115	
75-34-3	1,1-Dichloroethane	4.16	4.13	99	65-117	
1634-04-4	Methyl tert-Butyl Ether	4.24	4.04	95	64-114	
156-59-2	cis-1,2-Dichloroethene	4.28	4.24	99	66-116	
67-66-3	Chloroform	4.32	4.21	97	63-114	
107-06-2	1,2-Dichloroethane	4.20	3.91	93	61-118	
71-55-6	1,1,1-Trichloroethane	4.16	3.94	95	65-114	
71-43-2	Benzene	4.40	4.47	102	67-118	
56-23-5	Carbon Tetrachloride	4.28	4.52	106	65-117	
78-87-5	1,2-Dichloropropane	4.24	4.08	96	63-116	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
 Reported results are shown in concentration units and as a result of the calculation, may vary slightly.
 L = Laboratory control sample recovery outside the specified limits; results may be biased high.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: Lab Control Sample
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P150228-LCS

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 6.0 L Summa Canister
 Test Notes:

Date Collected: NA
 Date Received: NA
 Date Analyzed: 2/28/15
 Volume(s) Analyzed: 0.125 Liter(s)

CAS #	Compound	Spike Amount µg/m ³	Result µg/m ³	% Recovery	ALS Acceptance Limits	Data Qualifier
75-27-4	Bromodichloromethane	4.32	4.15	96	62-118	
79-01-6	Trichloroethene	4.16	4.06	98	66-116	
123-91-1	1,4-Dioxane	4.36	4.03	92	62-117	
10061-01-5	cis-1,3-Dichloropropene	4.52	4.49	99	63-117	
10061-02-6	trans-1,3-Dichloropropene	4.32	4.28	99	61-119	
79-00-5	1,1,2-Trichloroethane	4.24	4.16	98	64-117	
108-88-3	Toluene	4.24	3.85	91	66-113	
106-93-4	1,2-Dibromoethane	4.32	4.32	100	64-116	
127-18-4	Tetrachloroethene	3.96	3.61	91	65-118	
108-90-7	Chlorobenzene	4.32	4.36	101	67-126	
100-41-4	Ethylbenzene	4.24	4.21	99	67-124	
179601-23-1	m,p-Xylenes	8.40	8.32	99	66-128	
95-47-6	o-Xylene	4.12	4.11	100	65-127	
79-34-5	1,1,2,2-Tetrachloroethane	4.04	4.08	101	62-129	
541-73-1	1,3-Dichlorobenzene	4.36	4.37	100	62-131	
106-46-7	1,4-Dichlorobenzene	4.24	4.12	97	59-126	
95-50-1	1,2-Dichlorobenzene	4.28	4.42	103	59-131	
120-82-1	1,2,4-Trichlorobenzene	4.20	5.03	120	43-137	
91-20-3	Naphthalene	3.92	5.22	133	40-142	
87-68-3	Hexachlorobutadiene	4.28	4.89	114	49-133	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
 Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

ALS ENVIRONMENTAL

LABORATORY DUPLICATE SUMMARY RESULTS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: N213-B-04-P-OFF
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P1500729-014DUP

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS00514

Date Collected: 2/22/15
Date Received: 2/24/15
Date Analyzed: 2/28/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -0.28 **Final Pressure (psig):** 3.67

Canister Dilution Factor: 1.27

CAS #	Compound	Sample Result		Duplicate Sample Result		Average µg/m³	% RPD	RPD Limit	Data Qualifier
		µg/m³	ppbV	µg/m³	ppbV				
75-71-8	Dichlorodifluoromethane (CFC 12)	2.08	0.421	2.11	0.426	2.095	1	25	
74-87-3	Chloromethane	0.512	0.248	0.466	0.226	0.489	9	25	
75-01-4	Vinyl Chloride	0.251	0.0981	0.254	0.0992	0.2525	1	25	
74-83-9	Bromomethane	0.0332	0.00855	ND	ND	-	-	25	
75-00-3	Chloroethane	ND	ND	ND	ND	-	-	25	
67-64-1	Acetone	4.08	1.72	5.56	2.34	4.82	31	25	R
75-69-4	Trichlorofluoromethane	1.42	0.254	1.43	0.255	1.425	0.7	25	
75-35-4	1,1-Dichloroethene	0.327	0.0825	0.331	0.0836	0.329	1	25	
75-09-2	Methylene Chloride	0.285	0.0821	0.286	0.0825	0.2855	0.4	25	
76-13-1	Trichlorotrifluoroethane	0.525	0.0685	0.521	0.0680	0.523	0.8	25	
156-60-5	trans-1,2-Dichloroethene	0.159	0.0400	0.159	0.0401	0.159	0	25	
75-34-3	1,1-Dichloroethane	0.331	0.0819	0.337	0.0833	0.334	2	25	
1634-04-4	Methyl tert-Butyl Ether	ND	ND	ND	ND	-	-	25	
156-59-2	cis-1,2-Dichloroethene	19.7	4.97	19.7	4.98	19.7	0	25	
67-66-3	Chloroform	ND	ND	ND	ND	-	-	25	
107-06-2	1,2-Dichloroethane	0.0691	0.0171	0.0695	0.0172	0.0693	0.6	25	
71-55-6	1,1,1-Trichloroethane	0.0488	0.00895	0.0496	0.00909	0.0492	2	25	
71-43-2	Benzene	0.340	0.107	0.339	0.106	0.3395	0.3	25	
56-23-5	Carbon Tetrachloride	0.509	0.0810	0.516	0.0821	0.5125	1	25	
78-87-5	1,2-Dichloropropane	ND	ND	ND	ND	-	-	25	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

R = Duplicate precision not met.

ALS ENVIRONMENTAL

LABORATORY DUPLICATE SUMMARY RESULTS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: N213-B-04-P-OFF
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P1500729-014DUP

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS00514

Date Collected: 2/22/15
Date Received: 2/24/15
Date Analyzed: 2/28/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -0.28 **Final Pressure (psig):** 3.67

Canister Dilution Factor: 1.27

CAS #	Compound	Sample Result		Duplicate Sample Result		Average µg/m³	% RPD	RPD Limit	Data Qualifier
		µg/m³	ppbV	µg/m³	ppbV				
75-27-4	Bromodichloromethane	ND	ND	ND	ND	-	-	25	
79-01-6	Trichloroethene	4.39	0.818	4.43	0.825	4.41	0.9	25	
123-91-1	1,4-Dioxane	ND	ND	ND	ND	-	-	25	
10061-01-5	cis-1,3-Dichloropropene	ND	ND	ND	ND	-	-	25	
10061-02-6	trans-1,3-Dichloropropene	ND	ND	ND	ND	-	-	25	
79-00-5	1,1,2-Trichloroethane	ND	ND	ND	ND	-	-	25	
108-88-3	Toluene	0.733	0.195	0.739	0.196	0.736	0.8	25	
106-93-4	1,2-Dibromoethane	ND	ND	ND	ND	-	-	25	
127-18-4	Tetrachloroethene	0.129	0.0191	0.131	0.0194	0.13	2	25	
108-90-7	Chlorobenzene	ND	ND	ND	ND	-	-	25	
100-41-4	Ethylbenzene	0.163	0.0376	0.164	0.0378	0.1635	0.6	25	
179601-23-1	m,p-Xylenes	0.532	0.123	0.537	0.124	0.5345	0.9	25	
95-47-6	o-Xylene	0.238	0.0549	0.240	0.0552	0.239	0.8	25	
79-34-5	1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	-	-	25	
541-73-1	1,3-Dichlorobenzene	ND	ND	ND	ND	-	-	25	
106-46-7	1,4-Dichlorobenzene	0.157	0.0261	0.157	0.0260	0.157	0	25	
95-50-1	1,2-Dichlorobenzene	ND	ND	ND	ND	-	-	25	
120-82-1	1,2,4-Trichlorobenzene	ND	ND	ND	ND	-	-	25	
91-20-3	Naphthalene	ND	ND	ND	ND	-	-	25	
87-68-3	Hexachlorobutadiene	ND	ND	ND	ND	-	-	25	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 1

Client: NASA Ames Research Center
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750 ALS Project ID: P1500729

Method Blank Summary

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Lab File ID: 02271503.D
Analyst: Wida Ang Date Analyzed: 2/27/15
Sample Type: 6.0 L Summa Canister(s) Time Analyzed: 11:54
Test Notes:

Client Sample ID	ALS Sample ID	Lab File ID	Time Analyzed
Lab Control Sample	P150227-LCS	02271504.D	12:22
N144-C103-01-OFF	P1500729-001	02271522.D	21:09
N144-107-01-OFF	P1500729-002	02271523.D	21:36
N211-103-01-OFF	P1500729-003	02271524.D	22:04
N211-119-02-OFF	P1500729-004	02271525.D	22:32

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 1

Client: NASA Ames Research Center
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729

Method Blank Summary

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister(s)
Test Notes:

Lab File ID: 02281504.D
Date Analyzed: 2/28/15
Time Analyzed: 03:52

Client Sample ID	ALS Sample ID	Lab File ID	Time Analyzed
N211-1-04-P-OFF	P1500729-005	02281508.D	05:43
N211-136-1-03-OFF	P1500729-006	02281509.D	06:11
N211-179-05-OFF	P1500729-007	02281512.D	08:06
N212-101A-01-OFF	P1500729-008	02281513.D	08:50
N212-105-01-OFF	P1500729-009	02281514.D	09:18
N212-105-01-OFFD	P1500729-010	02281515.D	09:45
N213-B-01-OFF	P1500729-011	02281516.D	10:13
N213-B-02-OFF	P1500729-012	02281517.D	11:03
N213-B-03-OFF	P1500729-013	02281518.D	11:30
N213-B-04-P-OFF	P1500729-014	02281519.D	11:58
N213-B-04-P-OFF (Lab Duplicate)	P1500729-014DUP	02281520.D	12:25
N213-B-05-P-OFF	P1500729-015	02281521.D	12:53
N213-B-06-P-OFF	P1500729-016	02281522.D	13:20
N213-B-07-P-OFF	P1500729-017	02281523.D	13:48
N213-1-01-OFF	P1500729-018	02281524.D	14:15
N213-1-02-OFF	P1500729-019	02281525.D	14:43
N213-1-03-OFF	P1500729-020	02281526.D	14:43
N213-1-04-OFF	P1500729-021	02281527.D	15:38
N213-1-04-OFFD	P1500729-022	02281528.D	16:06
N213-1-05-OFF	P1500729-023	02281529.D	16:34
N240-1-01-OFF	P1500729-024	02281530.D	17:02
N240-1-02-OFF	P1500729-025	02281531.D	17:29
Lab Control Sample	P150228-LCS	02281532.D	17:57

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 1

Client: NASA Ames Research Center

Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729

Internal Standard Area and RT Summary

Test Code: EPA TO-15 SIM

Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19

Lab File ID: 02271502.D

Analyst: Wida Ang

Date Analyzed: 2/27/15

Sample Type: 6.0 L Summa Canister(s)

Time Analyzed: 11:27

Test Notes:

	IS1 (BCM)				IS2 (DFB)				IS3 (CBZ)			
	AREA	#	RT	#	AREA	#	RT	#	AREA	#	RT	#
24 Hour Standard	27915		6.12		205350		8.72		32788		13.13	
Upper Limit	39081		6.45		287490		9.05		45903		13.46	
Lower Limit	16749		5.79		123210		8.39		19673		12.80	

Client Sample ID		IS1 (BCM)				IS2 (DFB)				IS3 (CBZ)			
		AREA	#	RT	#	AREA	#	RT	#	AREA	#	RT	#
01	Method Blank	25784		6.12		190987		8.72		31113		13.13	
02	Lab Control Sample	26611		6.11		192953		8.72		31615		13.13	
03	N144-107-01-OFF	28915		6.13		200031		8.72		34285		13.13	
04	N211-103-01-OFF	27092		6.11		196943		8.72		35479		13.13	
05	N211-119-02-OFF	27302		6.11		196095		8.72		34918		13.13	
06													
07													
08													
09													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													

IS1 (BCM) = Bromochloromethane

IS2 (DFB) = 1,4-Difluorobenzene

IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = 140% of internal standard area

AREA LOWER LIMIT = 60% of internal standard area

RT UPPER LIMIT = 0.33 minutes of internal standard RT

RT LOWER LIMIT = 0.33 minutes of internal standard RT

Column used to flag values outside QC limits with an I.

I = Internal standard not within the specified limits. See case narrative.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 2

Client: NASA Ames Research Center
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729

Internal Standard Area and RT Summary

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister(s)
Test Notes:

Lab File ID: 02281503.D
Date Analyzed: 2/28/15
Time Analyzed: 03:23

	IS1 (BCM)			IS2 (DFB)			IS3 (CBZ)		
	AREA	#	RT	AREA	#	RT	AREA	#	RT
24 Hour Standard	23749		6.11	173150		8.72	28656		13.13
Upper Limit	33249		6.44	242410		9.05	40118		13.46
Lower Limit	14249		5.78	103890		8.39	17194		12.80

Client Sample ID		IS1 (BCM)		IS2 (DFB)		IS3 (CBZ)	
		AREA	RT	AREA	RT	AREA	RT
01	Method Blank	22086	6.12	161659	8.72	27224	13.13
02	N211-1-04-P-OFF	24248	6.11	167484	8.71	30210	13.13
03	N211-136-1-03-OFF	24022	6.11	175043	8.72	29194	13.13
04	N211-179-05-OFF	23129	6.11	168781	8.72	29549	13.13
05	N212-101A-01-OFF	27886	6.12	193710	8.72	34520	13.13
06	N212-105-01-OFF	27601	6.12	195717	8.72	35351	13.13
07	N212-105-01-OFFD	29767	6.12	207997	8.72	33909	13.13
08	N213-B-01-OFF	27613	6.11	197715	8.72	32248	13.13
09	N213-B-02-OFF	27097	6.12	207272	8.72	32431	13.13
10	N213-B-03-OFF	28135	6.13	197010	8.72	32579	13.13
11	N213-B-04-P-OFF	27809	6.11	187451	8.72	31708	13.13
12	N213-B-04-P-OFF (Lab Duplicate)	27827	6.11	186908	8.72	31678	13.13
13	N213-B-05-P-OFF	27399	6.12	186613	8.72	31397	13.13
14	N213-B-06-P-OFF	26440	6.11	183935	8.72	31939	13.13
15	N213-B-07-P-OFF	25968	6.11	183612	8.72	30977	13.13
16	N213-1-01-OFF	25233	6.11	180356	8.71	30542	13.13
17	N213-1-02-OFF	28579	6.13	191301	8.73	34221	13.13
18	N213-1-03-OFF	25949	6.12	186393	8.72	31649	13.13
19	N213-1-04-OFF	28192	6.13	195379	8.73	32087	13.13
20	N213-1-04-OFFD	28485	6.13	204194	8.72	33415	13.13

IS1 (BCM) = Bromochloromethane

IS2 (DFB) = 1,4-Difluorobenzene

IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = 140% of internal standard area

AREA LOWER LIMIT = 60% of internal standard area

RT UPPER LIMIT = 0.33 minutes of internal standard RT

RT LOWER LIMIT = 0.33 minutes of internal standard RT

Column used to flag values outside QC limits with an I.

I = Internal standard not within the specified limits. See case narrative.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 2

Client: NASA Ames Research Center

Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729

Internal Standard Area and RT Summary

Test Code: EPA TO-15 SIM

Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19

Lab File ID: 02281503.D

Analyst: Wida Ang

Date Analyzed: 2/28/15

Sample Type: 6.0 L Summa Canister(s)

Time Analyzed: 03:23

Test Notes:

	IS1 (BCM)				IS2 (DFB)				IS3 (CBZ)			
	AREA	#	RT	#	AREA	#	RT	#	AREA	#	RT	#
24 Hour Standard	23749		6.11		173150		8.72		28656		13.13	
Upper Limit	33249		6.44		242410		9.05		40118		13.46	
Lower Limit	14249		5.78		103890		8.39		17194		12.80	

Client Sample ID		IS1 (BCM)				IS2 (DFB)				IS3 (CBZ)			
		AREA	#	RT	#	AREA	#	RT	#	AREA	#	RT	#
21	N213-1-05-OFF	29017		6.13		195613		8.72		33340		13.13	
22	N240-1-01-OFF	29577		6.13		200421		8.72		35825		13.13	
23	N240-1-02-OFF	30664		6.13		206779		8.72		35043		13.13	
24	Lab Control Sample	27174		6.11		198914		8.72		32424		13.13	
25													
26													
27													
28													
29													
30													
31													
32													
33													
34													
35													
36													
37													
38													
39													
40													

IS1 (BCM) = Bromochloromethane

IS2 (DFB) = 1,4-Difluorobenzene

IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = 140% of internal standard area

AREA LOWER LIMIT = 60% of internal standard area

RT UPPER LIMIT = 0.33 minutes of internal standard RT

RT LOWER LIMIT = 0.33 minutes of internal standard RT

Column used to flag values outside QC limits with an I.

I = Internal standard not within the specified limits. See case narrative.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: N240-1-03-OFF
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P1500729-026

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC01802

Date Collected: 2/22/15
Date Received: 2/24/15
Date Analyzed: 3/2/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.04 **Final Pressure (psig):** 3.54

Canister Dilution Factor: 1.44

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.7	0.036	0.55	0.0073	
74-87-3	Chloromethane	0.62	0.036	0.30	0.017	
75-01-4	Vinyl Chloride	ND	0.036	ND	0.014	
74-83-9	Bromomethane	0.041	0.036	0.011	0.0093	
75-00-3	Chloroethane	ND	0.036	ND	0.014	
67-64-1	Acetone	10	3.6	4.3	1.5	
75-69-4	Trichlorofluoromethane	2.3	0.036	0.41	0.0064	L
75-35-4	1,1-Dichloroethene	ND	0.036	ND	0.0091	
75-09-2	Methylene Chloride	0.79	0.14	0.23	0.041	
76-13-1	Trichlorotrifluoroethane	0.50	0.036	0.065	0.0047	
156-60-5	trans-1,2-Dichloroethene	ND	0.036	ND	0.0091	
75-34-3	1,1-Dichloroethane	ND	0.036	ND	0.0089	
1634-04-4	Methyl tert-Butyl Ether	ND	0.036	ND	0.010	
156-59-2	cis-1,2-Dichloroethene	ND	0.036	ND	0.0091	
67-66-3	Chloroform	0.25	0.14	0.050	0.029	
107-06-2	1,2-Dichloroethane	0.12	0.036	0.029	0.0089	
71-55-6	1,1,1-Trichloroethane	0.12	0.036	0.023	0.0066	
71-43-2	Benzene	0.44	0.11	0.14	0.034	
56-23-5	Carbon Tetrachloride	0.52	0.036	0.083	0.0057	
78-87-5	1,2-Dichloropropane	ND	0.036	ND	0.0078	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

L = Laboratory control sample recovery outside the specified limits; results may be biased high.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: N240-1-03-OFF
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P1500729-026

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 6.0 L Summa Canister
 Test Notes:
 Container ID: AC01802

Date Collected: 2/22/15
 Date Received: 2/24/15
 Date Analyzed: 3/2/15
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.04 Final Pressure (psig): 3.54

Canister Dilution Factor: 1.44

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	0.036	ND	0.0054	
79-01-6	Trichloroethene	0.35	0.036	0.065	0.0067	
123-91-1	1,4-Dioxane	ND	0.14	ND	0.040	
10061-01-5	cis-1,3-Dichloropropene	ND	0.036	ND	0.0079	
10061-02-6	trans-1,3-Dichloropropene	ND	0.036	ND	0.0079	
79-00-5	1,1,2-Trichloroethane	ND	0.14	ND	0.026	
108-88-3	Toluene	2.0	0.14	0.54	0.038	
106-93-4	1,2-Dibromoethane	ND	0.036	ND	0.0047	
127-18-4	Tetrachloroethene	0.044	0.036	0.0065	0.0053	
108-90-7	Chlorobenzene	ND	0.14	ND	0.031	
100-41-4	Ethylbenzene	0.48	0.14	0.11	0.033	
179601-23-1	m,p-Xylenes	0.90	0.14	0.21	0.033	
95-47-6	o-Xylene	0.32	0.14	0.073	0.033	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.036	ND	0.0052	
541-73-1	1,3-Dichlorobenzene	ND	0.036	ND	0.0060	
106-46-7	1,4-Dichlorobenzene	0.043	0.036	0.0071	0.0060	
95-50-1	1,2-Dichlorobenzene	ND	0.036	ND	0.0060	
120-82-1	1,2,4-Trichlorobenzene	ND	0.036	ND	0.0049	
91-20-3	Naphthalene	0.22	0.14	0.042	0.027	
87-68-3	Hexachlorobutadiene	ND	0.036	ND	0.0034	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: N240-1-04-P-OFF
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P1500729-027

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS00182

Date Collected: 2/22/15
Date Received: 2/24/15
Date Analyzed: 3/2/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.15 **Final Pressure (psig):** 3.60

Canister Dilution Factor: 1.46

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.3	0.037	0.47	0.0074	
74-87-3	Chloromethane	0.67	0.037	0.32	0.018	
75-01-4	Vinyl Chloride	ND	0.037	ND	0.014	
74-83-9	Bromomethane	0.10	0.037	0.026	0.0094	
75-00-3	Chloroethane	ND	0.037	ND	0.014	
67-64-1	Acetone	17	3.7	7.1	1.5	
75-69-4	Trichlorofluoromethane	1.6	0.037	0.28	0.0065	L
75-35-4	1,1-Dichloroethene	ND	0.037	ND	0.0092	
75-09-2	Methylene Chloride	1.7	0.15	0.48	0.042	
76-13-1	Trichlorotrifluoroethane	0.52	0.037	0.068	0.0048	
156-60-5	trans-1,2-Dichloroethene	ND	0.037	ND	0.0092	
75-34-3	1,1-Dichloroethane	ND	0.037	ND	0.0090	
1634-04-4	Methyl tert-Butyl Ether	ND	0.037	ND	0.010	
156-59-2	cis-1,2-Dichloroethene	ND	0.037	ND	0.0092	
67-66-3	Chloroform	ND	0.15	ND	0.030	
107-06-2	1,2-Dichloroethane	0.068	0.037	0.017	0.0090	
71-55-6	1,1,1-Trichloroethane	ND	0.037	ND	0.0067	
71-43-2	Benzene	0.34	0.11	0.11	0.034	
56-23-5	Carbon Tetrachloride	0.52	0.037	0.082	0.0058	
78-87-5	1,2-Dichloropropane	ND	0.037	ND	0.0079	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

L = Laboratory control sample recovery outside the specified limits; results may be biased high.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: N240-1-04-P-OFF
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P1500729-027

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 6.0 L Silonite Canister
 Test Notes:
 Container ID: AS00182

Date Collected: 2/22/15
 Date Received: 2/24/15
 Date Analyzed: 3/2/15
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.15 Final Pressure (psig): 3.60

Canister Dilution Factor: 1.46

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	0.037	ND	0.0055	
79-01-6	Trichloroethene	1.7	0.037	0.31	0.0068	
123-91-1	1,4-Dioxane	ND	0.15	ND	0.041	
10061-01-5	cis-1,3-Dichloropropene	ND	0.037	ND	0.0080	
10061-02-6	trans-1,3-Dichloropropene	ND	0.037	ND	0.0080	
79-00-5	1,1,2-Trichloroethane	ND	0.15	ND	0.027	
108-88-3	Toluene	0.76	0.15	0.20	0.039	
106-93-4	1,2-Dibromoethane	ND	0.037	ND	0.0048	
127-18-4	Tetrachloroethene	0.085	0.037	0.012	0.0054	
108-90-7	Chlorobenzene	ND	0.15	ND	0.032	
100-41-4	Ethylbenzene	ND	0.15	ND	0.034	
179601-23-1	m,p-Xylenes	0.33	0.15	0.076	0.034	
95-47-6	o-Xylene	ND	0.15	ND	0.034	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.037	ND	0.0053	
541-73-1	1,3-Dichlorobenzene	ND	0.037	ND	0.0061	
106-46-7	1,4-Dichlorobenzene	ND	0.037	ND	0.0061	
95-50-1	1,2-Dichlorobenzene	ND	0.037	ND	0.0061	
120-82-1	1,2,4-Trichlorobenzene	ND	0.037	ND	0.0049	
91-20-3	Naphthalene	ND	0.15	ND	0.028	
87-68-3	Hexachlorobutadiene	ND	0.037	ND	0.0034	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: N245-1-01-OFF
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P1500729-028

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC01384

Date Collected: 2/22/15
Date Received: 2/24/15
Date Analyzed: 3/2/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -0.98 Final Pressure (psig): 3.92

Canister Dilution Factor: 1.36

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.3	0.034	0.47	0.0069	
74-87-3	Chloromethane	0.68	0.034	0.33	0.016	
75-01-4	Vinyl Chloride	ND	0.034	ND	0.013	
74-83-9	Bromomethane	0.051	0.034	0.013	0.0088	
75-00-3	Chloroethane	ND	0.034	ND	0.013	
67-64-1	Acetone	6.8	3.4	2.8	1.4	
75-69-4	Trichlorofluoromethane	2.2	0.034	0.39	0.0061	L
75-35-4	1,1-Dichloroethene	ND	0.034	ND	0.0086	
75-09-2	Methylene Chloride	0.32	0.14	0.092	0.039	
76-13-1	Trichlorotrifluoroethane	0.61	0.034	0.079	0.0044	
156-60-5	trans-1,2-Dichloroethene	ND	0.034	ND	0.0086	
75-34-3	1,1-Dichloroethane	ND	0.034	ND	0.0084	
1634-04-4	Methyl tert-Butyl Ether	ND	0.034	ND	0.0094	
156-59-2	cis-1,2-Dichloroethene	0.036	0.034	0.0092	0.0086	
67-66-3	Chloroform	0.16	0.14	0.033	0.028	
107-06-2	1,2-Dichloroethane	0.092	0.034	0.023	0.0084	
71-55-6	1,1,1-Trichloroethane	ND	0.034	ND	0.0062	
71-43-2	Benzene	0.40	0.10	0.13	0.032	
56-23-5	Carbon Tetrachloride	0.58	0.034	0.093	0.0054	
78-87-5	1,2-Dichloropropane	0.034	0.034	0.0074	0.0074	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

L = Laboratory control sample recovery outside the specified limits; results may be biased high.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: N245-1-01-OFF
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P1500729-028

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 6.0 L Summa Canister
 Test Notes:
 Container ID: AC01384

Date Collected: 2/22/15
 Date Received: 2/24/15
 Date Analyzed: 3/2/15
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -0.98 Final Pressure (psig): 3.92

Canister Dilution Factor: 1.36

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	0.034	ND	0.0051	
79-01-6	Trichloroethene	0.20	0.034	0.036	0.0063	
123-91-1	1,4-Dioxane	ND	0.14	ND	0.038	
10061-01-5	cis-1,3-Dichloropropene	ND	0.034	ND	0.0075	
10061-02-6	trans-1,3-Dichloropropene	ND	0.034	ND	0.0075	
79-00-5	1,1,2-Trichloroethane	ND	0.14	ND	0.025	
108-88-3	Toluene	1.6	0.14	0.42	0.036	
106-93-4	1,2-Dibromoethane	ND	0.034	ND	0.0044	
127-18-4	Tetrachloroethene	0.036	0.034	0.0053	0.0050	
108-90-7	Chlorobenzene	ND	0.14	ND	0.030	
100-41-4	Ethylbenzene	0.18	0.14	0.041	0.031	
179601-23-1	m,p-Xylenes	0.46	0.14	0.11	0.031	
95-47-6	o-Xylene	0.18	0.14	0.041	0.031	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.034	ND	0.0050	
541-73-1	1,3-Dichlorobenzene	ND	0.034	ND	0.0057	
106-46-7	1,4-Dichlorobenzene	ND	0.034	ND	0.0057	
95-50-1	1,2-Dichlorobenzene	ND	0.034	ND	0.0057	
120-82-1	1,2,4-Trichlorobenzene	ND	0.034	ND	0.0046	
91-20-3	Naphthalene	ND	0.14	ND	0.026	
87-68-3	Hexachlorobutadiene	ND	0.034	ND	0.0032	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: T20G-1-02-OFF
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P1500729-029

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC00819

Date Collected: 2/22/15
Date Received: 2/24/15
Date Analyzed: 3/2/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.74 Final Pressure (psig): 3.92

Canister Dilution Factor: 1.56

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.1	0.039	0.42	0.0079	
74-87-3	Chloromethane	0.65	0.039	0.31	0.019	
75-01-4	Vinyl Chloride	ND	0.039	ND	0.015	
74-83-9	Bromomethane	0.039	0.039	0.010	0.010	
75-00-3	Chloroethane	ND	0.039	ND	0.015	
67-64-1	Acetone	18	3.9	7.4	1.6	
75-69-4	Trichlorofluoromethane	1.6	0.039	0.28	0.0069	L
75-35-4	1,1-Dichloroethene	ND	0.039	ND	0.0098	
75-09-2	Methylene Chloride	0.30	0.16	0.085	0.045	
76-13-1	Trichlorotrifluoroethane	0.49	0.039	0.063	0.0051	
156-60-5	trans-1,2-Dichloroethene	0.053	0.039	0.013	0.0098	
75-34-3	1,1-Dichloroethane	ND	0.039	ND	0.0096	
1634-04-4	Methyl tert-Butyl Ether	ND	0.039	ND	0.011	
156-59-2	cis-1,2-Dichloroethene	ND	0.039	ND	0.0098	
67-66-3	Chloroform	ND	0.16	ND	0.032	
107-06-2	1,2-Dichloroethane	0.095	0.039	0.023	0.0096	
71-55-6	1,1,1-Trichloroethane	ND	0.039	ND	0.0072	
71-43-2	Benzene	0.46	0.12	0.14	0.037	
56-23-5	Carbon Tetrachloride	0.48	0.039	0.076	0.0062	
78-87-5	1,2-Dichloropropane	ND	0.039	ND	0.0084	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

L = Laboratory control sample recovery outside the specified limits; results may be biased high.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: T20G-1-02-OFF
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P1500729-029

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC00819

Date Collected: 2/22/15
Date Received: 2/24/15
Date Analyzed: 3/2/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.74 **Final Pressure (psig):** 3.92

Canister Dilution Factor: 1.56

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	0.039	ND	0.0058	
79-01-6	Trichloroethene	0.045	0.039	0.0084	0.0073	
123-91-1	1,4-Dioxane	ND	0.16	ND	0.043	
10061-01-5	cis-1,3-Dichloropropene	ND	0.039	ND	0.0086	
10061-02-6	trans-1,3-Dichloropropene	ND	0.039	ND	0.0086	
79-00-5	1,1,2-Trichloroethane	ND	0.16	ND	0.029	
108-88-3	Toluene	1.5	0.16	0.39	0.041	
106-93-4	1,2-Dibromoethane	ND	0.039	ND	0.0051	
127-18-4	Tetrachloroethene	0.042	0.039	0.0062	0.0058	
108-90-7	Chlorobenzene	ND	0.16	ND	0.034	
100-41-4	Ethylbenzene	0.27	0.16	0.062	0.036	
179601-23-1	m,p-Xylenes	0.73	0.16	0.17	0.036	
95-47-6	o-Xylene	0.26	0.16	0.060	0.036	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.039	ND	0.0057	
541-73-1	1,3-Dichlorobenzene	ND	0.039	ND	0.0065	
106-46-7	1,4-Dichlorobenzene	0.041	0.039	0.0068	0.0065	
95-50-1	1,2-Dichlorobenzene	ND	0.039	ND	0.0065	
120-82-1	1,2,4-Trichlorobenzene	ND	0.039	ND	0.0053	
91-20-3	Naphthalene	ND	0.16	ND	0.030	
87-68-3	Hexachlorobutadiene	ND	0.039	ND	0.0037	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: N258-1-01-OFF
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P1500729-030

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS00479

Date Collected: 2/22/15
Date Received: 2/24/15
Date Analyzed: 3/2/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.02 **Final Pressure (psig):** 3.67

Canister Dilution Factor: 1.45

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.3	0.036	0.47	0.0073	
74-87-3	Chloromethane	0.71	0.036	0.35	0.018	
75-01-4	Vinyl Chloride	ND	0.036	ND	0.014	
74-83-9	Bromomethane	0.045	0.036	0.012	0.0093	
75-00-3	Chloroethane	ND	0.036	ND	0.014	
67-64-1	Acetone	ND	3.6	ND	1.5	
75-69-4	Trichlorofluoromethane	1.2	0.036	0.21	0.0065	L
75-35-4	1,1-Dichloroethene	ND	0.036	ND	0.0091	
75-09-2	Methylene Chloride	0.26	0.15	0.074	0.042	
76-13-1	Trichlorotrifluoroethane	0.53	0.036	0.070	0.0047	
156-60-5	trans-1,2-Dichloroethene	ND	0.036	ND	0.0091	
75-34-3	1,1-Dichloroethane	ND	0.036	ND	0.0090	
1634-04-4	Methyl tert-Butyl Ether	ND	0.036	ND	0.010	
156-59-2	cis-1,2-Dichloroethene	ND	0.036	ND	0.0091	
67-66-3	Chloroform	ND	0.15	ND	0.030	
107-06-2	1,2-Dichloroethane	0.065	0.036	0.016	0.0090	
71-55-6	1,1,1-Trichloroethane	ND	0.036	ND	0.0066	
71-43-2	Benzene	0.28	0.11	0.088	0.034	
56-23-5	Carbon Tetrachloride	0.52	0.036	0.082	0.0058	
78-87-5	1,2-Dichloropropane	ND	0.036	ND	0.0078	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

L = Laboratory control sample recovery outside the specified limits; results may be biased high.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: N258-1-01-OFF
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P1500729-030

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 6.0 L Silonite Canister
 Test Notes:
 Container ID: AS00479

Date Collected: 2/22/15
 Date Received: 2/24/15
 Date Analyzed: 3/2/15
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.02 Final Pressure (psig): 3.67

Canister Dilution Factor: 1.45

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	0.036	ND	0.0054	
79-01-6	Trichloroethene	ND	0.036	ND	0.0067	
123-91-1	1,4-Dioxane	ND	0.15	ND	0.040	
10061-01-5	cis-1,3-Dichloropropene	ND	0.036	ND	0.0080	
10061-02-6	trans-1,3-Dichloropropene	ND	0.036	ND	0.0080	
79-00-5	1,1,2-Trichloroethane	ND	0.15	ND	0.027	
108-88-3	Toluene	0.36	0.15	0.095	0.038	
106-93-4	1,2-Dibromoethane	ND	0.036	ND	0.0047	
127-18-4	Tetrachloroethene	ND	0.036	ND	0.0053	
108-90-7	Chlorobenzene	ND	0.15	ND	0.031	
100-41-4	Ethylbenzene	ND	0.15	ND	0.033	
179601-23-1	m,p-Xylenes	0.19	0.15	0.043	0.033	
95-47-6	o-Xylene	ND	0.15	ND	0.033	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.036	ND	0.0053	
541-73-1	1,3-Dichlorobenzene	ND	0.036	ND	0.0060	
106-46-7	1,4-Dichlorobenzene	ND	0.036	ND	0.0060	
95-50-1	1,2-Dichlorobenzene	ND	0.036	ND	0.0060	
120-82-1	1,2,4-Trichlorobenzene	ND	0.036	ND	0.0049	
91-20-3	Naphthalene	ND	0.15	ND	0.028	
87-68-3	Hexachlorobutadiene	ND	0.036	ND	0.0034	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: Method Blank
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P150302-MB

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 3/2/15
Volume(s) Analyzed: 1.00 Liter(s)

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	0.025	ND	0.0051	
74-87-3	Chloromethane	ND	0.025	ND	0.012	
75-01-4	Vinyl Chloride	ND	0.025	ND	0.0098	
74-83-9	Bromomethane	ND	0.025	ND	0.0064	
75-00-3	Chloroethane	ND	0.025	ND	0.0095	
67-64-1	Acetone	ND	2.5	ND	1.1	
75-69-4	Trichlorofluoromethane	ND	0.025	ND	0.0045	L
75-35-4	1,1-Dichloroethene	ND	0.025	ND	0.0063	
75-09-2	Methylene Chloride	ND	0.10	ND	0.029	
76-13-1	Trichlorotrifluoroethane	ND	0.025	ND	0.0033	
156-60-5	trans-1,2-Dichloroethene	ND	0.025	ND	0.0063	
75-34-3	1,1-Dichloroethane	ND	0.025	ND	0.0062	
1634-04-4	Methyl tert-Butyl Ether	ND	0.025	ND	0.0069	
156-59-2	cis-1,2-Dichloroethene	ND	0.025	ND	0.0063	
67-66-3	Chloroform	ND	0.10	ND	0.020	
107-06-2	1,2-Dichloroethane	ND	0.025	ND	0.0062	
71-55-6	1,1,1-Trichloroethane	ND	0.025	ND	0.0046	
71-43-2	Benzene	ND	0.075	ND	0.023	
56-23-5	Carbon Tetrachloride	ND	0.025	ND	0.0040	
78-87-5	1,2-Dichloropropane	ND	0.025	ND	0.0054	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

L = Laboratory control sample recovery outside the specified limits; results may be biased high.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: Method Blank
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P150302-MB

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 6.0 L Summa Canister
 Test Notes:

Date Collected: NA
 Date Received: NA
 Date Analyzed: 3/2/15
 Volume(s) Analyzed: 1.00 Liter(s)

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	0.025	ND	0.0037	
79-01-6	Trichloroethene	ND	0.025	ND	0.0047	
123-91-1	1,4-Dioxane	ND	0.10	ND	0.028	
10061-01-5	cis-1,3-Dichloropropene	ND	0.025	ND	0.0055	
10061-02-6	trans-1,3-Dichloropropene	ND	0.025	ND	0.0055	
79-00-5	1,1,2-Trichloroethane	ND	0.10	ND	0.018	
108-88-3	Toluene	ND	0.10	ND	0.027	
106-93-4	1,2-Dibromoethane	ND	0.025	ND	0.0033	
127-18-4	Tetrachloroethene	ND	0.025	ND	0.0037	
108-90-7	Chlorobenzene	ND	0.10	ND	0.022	
100-41-4	Ethylbenzene	ND	0.10	ND	0.023	
179601-23-1	m,p-Xylenes	ND	0.10	ND	0.023	
95-47-6	o-Xylene	ND	0.10	ND	0.023	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.025	ND	0.0036	
541-73-1	1,3-Dichlorobenzene	ND	0.025	ND	0.0042	
106-46-7	1,4-Dichlorobenzene	ND	0.025	ND	0.0042	
95-50-1	1,2-Dichlorobenzene	ND	0.025	ND	0.0042	
120-82-1	1,2,4-Trichlorobenzene	ND	0.025	ND	0.0034	
91-20-3	Naphthalene	ND	0.10	ND	0.019	
87-68-3	Hexachlorobutadiene	ND	0.025	ND	0.0023	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

SURROGATE SPIKE RECOVERY RESULTS

Page 1 of 2

Client: NASA Ames Research Center
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister(s)
Test Notes:

Date(s) Collected: 2/22/15
Date(s) Received: 2/24/15
Date(s) Analyzed: 3/2/15

Client Sample ID	ALS Sample ID	1,2-Dichloroethane-d4	Toluene-d8	Bromofluorobenzene	Acceptance Limits	Data Qualifier
		% Recovered	% Recovered	% Recovered		
Method Blank	P150227-MB	92	100	116	70-130	
Method Blank	P150228-MB	95	101	110	70-130	
Method Blank	P150302-MB	93	101	111	70-130	
Lab Control Sample	P150227-LCS	92	100	118	70-130	
Lab Control Sample	P150228-LCS	93	100	120	70-130	
Lab Control Sample	P150302-LCS	96	100	114	70-130	
N144-C103-01-OFF	P1500729-001	88	104	118	70-130	
N144-107-01-OFF	P1500729-002	87	103	119	70-130	
N211-103-01-OFF	P1500729-003	89	102	113	70-130	
N211-119-02-OFF	P1500729-004	89	101	115	70-130	
N211-1-04-P-OFF	P1500729-005	89	105	116	70-130	
N211-136-1-03-OFF	P1500729-006	91	101	114	70-130	
N211-179-05-OFF	P1500729-007	91	101	121	70-130	
N212-101A-01-OFF	P1500729-008	85	100	117	70-130	
N212-105-01-OFF	P1500729-009	87	109	121	70-130	
N212-105-01-OFFD	P1500729-010	85	100	121	70-130	
N213-B-01-OFF	P1500729-011	88	100	118	70-130	
N213-B-02-OFF	P1500729-012	90	96	119	70-130	
N213-B-03-OFF	P1500729-013	85	102	122	70-130	

Surrogate percent recovery is verified and accepted based on the on-column result.

Reported results are shown in concentration units and as a result of the calculation, may vary slightly from the on-column percent recovery.

ALS ENVIRONMENTAL

SURROGATE SPIKE RECOVERY RESULTS

Page 2 of 2

Client: NASA Ames Research Center
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister(s)
Test Notes:

Date(s) Collected: 2/22/15
Date(s) Received: 2/24/15
Date(s) Analyzed: 3/2/15

Client Sample ID	ALS Sample ID	1,2-Dichloroethane-d4	Toluene-d8	Bromofluorobenzene	Acceptance Limits	Data Qualifier
		% Recovered	% Recovered	% Recovered		
N213-B-04-P-OFF	P1500729-014	85	103	119	70-130	
N213-B-04-P-OFF	P1500729-014DUP	85	103	118	70-130	
N213-B-05-P-OFF	P1500729-015	86	102	116	70-130	
N213-B-06-P-OFF	P1500729-016	88	106	119	70-130	
N213-B-07-P-OFF	P1500729-017	90	102	116	70-130	
N213-1-01-OFF	P1500729-018	91	101	114	70-130	
N213-1-02-OFF	P1500729-019	84	109	122	70-130	
N213-1-03-OFF	P1500729-020	91	101	115	70-130	
N213-1-04-OFF	P1500729-021	85	102	122	70-130	
N213-1-04-OFFD	P1500729-022	84	102	125	70-130	
N213-1-05-OFF	P1500729-023	86	106	123	70-130	
N240-1-01-OFF	P1500729-024	84	108	123	70-130	
N240-1-02-OFF	P1500729-025	84	105	125	70-130	
N240-1-03-OFF	P1500729-026	91	102	116	70-130	
N240-1-04-P-OFF	P1500729-027	89	102	117	70-130	
N245-1-01-OFF	P1500729-028	89	100	114	70-130	
N245-1-01-OFF	P1500729-028DUP	89	100	114	70-130	
T20G-1-02-OFF	P1500729-029	86	101	117	70-130	
N258-1-01-OFF	P1500729-030	89	104	114	70-130	

Surrogate percent recovery is verified and accepted based on the on-column result.

Reported results are shown in concentration units and as a result of the calculation, may vary slightly from the on-column percent recovery.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: Lab Control Sample
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P150302-LCS

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 3/2/15
Volume(s) Analyzed: 0.125 Liter(s)

CAS #	Compound	Spike Amount µg/m ³	Result µg/m ³	% Recovery	ALS Acceptance Limits	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	4.08	4.01	98	63-120	
74-87-3	Chloromethane	3.96	3.92	99	60-118	
75-01-4	Vinyl Chloride	4.04	3.78	94	63-120	
74-83-9	Bromomethane	4.04	3.83	95	65-118	
75-00-3	Chloroethane	4.04	3.87	96	63-118	
67-64-1	Acetone	21.6	21.9	101	70-130	
75-69-4	Trichlorofluoromethane	3.96	5.27	133	59-116	L
75-35-4	1,1-Dichloroethene	4.28	4.44	104	67-114	
75-09-2	Methylene Chloride	4.32	4.35	101	66-111	
76-13-1	Trichlorotrifluoroethane	4.32	4.26	99	68-114	
156-60-5	trans-1,2-Dichloroethene	4.24	4.43	104	66-115	
75-34-3	1,1-Dichloroethane	4.16	4.24	102	65-117	
1634-04-4	Methyl tert-Butyl Ether	4.24	3.94	93	64-114	
156-59-2	cis-1,2-Dichloroethene	4.28	4.27	100	66-116	
67-66-3	Chloroform	4.32	4.42	102	63-114	
107-06-2	1,2-Dichloroethane	4.20	4.06	97	61-118	
71-55-6	1,1,1-Trichloroethane	4.16	4.02	97	65-114	
71-43-2	Benzene	4.40	4.82	110	67-118	
56-23-5	Carbon Tetrachloride	4.28	4.69	110	65-117	
78-87-5	1,2-Dichloropropane	4.24	4.20	99	63-116	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
 Reported results are shown in concentration units and as a result of the calculation, may vary slightly.
 L = Laboratory control sample recovery outside the specified limits; results may be biased high.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: Lab Control Sample
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P150302-LCS

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 3/2/15
Volume(s) Analyzed: 0.125 Liter(s)

CAS #	Compound	Spike Amount µg/m ³	Result µg/m ³	% Recovery	ALS Acceptance Limits	Data Qualifier
75-27-4	Bromodichloromethane	4.32	4.32	100	62-118	
79-01-6	Trichloroethene	4.16	4.12	99	66-116	
123-91-1	1,4-Dioxane	4.36	4.01	92	62-117	
10061-01-5	cis-1,3-Dichloropropene	4.52	4.53	100	63-117	
10061-02-6	trans-1,3-Dichloropropene	4.32	4.31	100	61-119	
79-00-5	1,1,2-Trichloroethane	4.24	4.32	102	64-117	
108-88-3	Toluene	4.24	3.90	92	66-113	
106-93-4	1,2-Dibromoethane	4.32	4.42	102	64-116	
127-18-4	Tetrachloroethene	3.96	3.68	93	65-118	
108-90-7	Chlorobenzene	4.32	4.36	101	67-126	
100-41-4	Ethylbenzene	4.24	4.15	98	67-124	
179601-23-1	m,p-Xylenes	8.40	8.25	98	66-128	
95-47-6	o-Xylene	4.12	4.04	98	65-127	
79-34-5	1,1,2,2-Tetrachloroethane	4.04	4.16	103	62-129	
541-73-1	1,3-Dichlorobenzene	4.36	4.36	100	62-131	
106-46-7	1,4-Dichlorobenzene	4.24	4.16	98	59-126	
95-50-1	1,2-Dichlorobenzene	4.28	4.42	103	59-131	
120-82-1	1,2,4-Trichlorobenzene	4.20	4.83	115	43-137	
91-20-3	Naphthalene	3.92	4.94	126	40-142	
87-68-3	Hexachlorobutadiene	4.28	4.64	108	49-133	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
 Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

ALS ENVIRONMENTAL

LABORATORY DUPLICATE SUMMARY RESULTS

Page 1 of 2

Client: NASA Ames Research Center
Client Sample ID: N245-1-01-OFF
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P1500729-028DUP

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC01384

Date Collected: 2/22/15
Date Received: 2/24/15
Date Analyzed: 3/2/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -0.98

Final Pressure (psig): 3.92

Canister Dilution Factor: 1.36

CAS #	Compound	Sample Result		Duplicate Sample Result		Average µg/m³	% RPD	RPD Limit	Data Qualifier
		µg/m³	ppbV	µg/m³	ppbV				
75-71-8	Dichlorodifluoromethane (CFC 12)	2.33	0.472	2.34	0.474	2.335	0.4	25	
74-87-3	Chloromethane	0.683	0.331	0.603	0.292	0.643	12	25	
75-01-4	Vinyl Chloride	ND	ND	ND	ND	-	-	25	
74-83-9	Bromomethane	0.0512	0.0132	0.0492	0.0127	0.0502	4	25	
75-00-3	Chloroethane	ND	ND	ND	ND	-	-	25	
67-64-1	Acetone	6.76	2.85	6.86	2.89	6.81	1	25	
75-69-4	Trichlorofluoromethane	2.16	0.385	1.80	0.321	1.98	18	25	L
75-35-4	1,1-Dichloroethene	ND	ND	ND	ND	-	-	25	
75-09-2	Methylene Chloride	0.320	0.0922	0.328	0.0946	0.324	2	25	
76-13-1	Trichlorotrifluoroethane	0.606	0.0791	0.609	0.0795	0.6075	0.5	25	
156-60-5	trans-1,2-Dichloroethene	ND	ND	ND	ND	-	-	25	
75-34-3	1,1-Dichloroethane	ND	ND	ND	ND	-	-	25	
1634-04-4	Methyl tert-Butyl Ether	ND	ND	ND	ND	-	-	25	
156-59-2	cis-1,2-Dichloroethene	0.0365	0.00920	0.0381	0.00961	0.0373	4	25	
67-66-3	Chloroform	0.160	0.0328	0.162	0.0332	0.161	1	25	
107-06-2	1,2-Dichloroethane	0.0924	0.0228	0.0924	0.0228	0.0924	0	25	
71-55-6	1,1,1-Trichloroethane	ND	ND	ND	ND	-	-	25	
71-43-2	Benzene	0.404	0.126	0.411	0.129	0.4075	2	25	
56-23-5	Carbon Tetrachloride	0.583	0.0928	0.593	0.0943	0.588	2	25	
78-87-5	1,2-Dichloropropane	0.0341	0.00739	ND	ND	-	-	25	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

L = Laboratory control sample recovery outside the specified limits; results may be biased high.

ALS ENVIRONMENTAL

LABORATORY DUPLICATE SUMMARY RESULTS

Page 2 of 2

Client: NASA Ames Research Center
Client Sample ID: N245-1-01-OFF
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729
 ALS Sample ID: P1500729-028DUP

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC01384

Date Collected: 2/22/15
Date Received: 2/24/15
Date Analyzed: 3/2/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -0.98 **Final Pressure (psig):** 3.92

Canister Dilution Factor: 1.36

CAS #	Compound	Sample Result		Duplicate Sample Result		Average µg/m ³	% RPD	RPD Limit	Data Qualifier
		µg/m ³	ppbV	µg/m ³	ppbV				
75-27-4	Bromodichloromethane	ND	ND	ND	ND	-	-	25	
79-01-6	Trichloroethene	0.196	0.0365	0.199	0.0371	0.1975	2	25	
123-91-1	1,4-Dioxane	ND	ND	ND	ND	-	-	25	
10061-01-5	cis-1,3-Dichloropropene	ND	ND	ND	ND	-	-	25	
10061-02-6	trans-1,3-Dichloropropene	ND	ND	ND	ND	-	-	25	
79-00-5	1,1,2-Trichloroethane	ND	ND	ND	ND	-	-	25	
108-88-3	Toluene	1.58	0.420	1.61	0.426	1.595	2	25	
106-93-4	1,2-Dibromoethane	ND	ND	ND	ND	-	-	25	
127-18-4	Tetrachloroethene	0.0357	0.00527	0.0371	0.00547	0.0364	4	25	
108-90-7	Chlorobenzene	ND	ND	ND	ND	-	-	25	
100-41-4	Ethylbenzene	0.178	0.0410	0.177	0.0408	0.1775	0.6	25	
179601-23-1	m,p-Xylenes	0.465	0.107	0.468	0.108	0.4665	0.6	25	
95-47-6	o-Xylene	0.177	0.0409	0.177	0.0407	0.177	0	25	
79-34-5	1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	-	-	25	
541-73-1	1,3-Dichlorobenzene	ND	ND	ND	ND	-	-	25	
106-46-7	1,4-Dichlorobenzene	ND	ND	ND	ND	-	-	25	
95-50-1	1,2-Dichlorobenzene	ND	ND	ND	ND	-	-	25	
120-82-1	1,2,4-Trichlorobenzene	ND	ND	ND	ND	-	-	25	
91-20-3	Naphthalene	ND	ND	ND	ND	-	-	25	
87-68-3	Hexachlorobutadiene	ND	ND	ND	ND	-	-	25	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 1

Client: NASA Ames Research Center
Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729

Method Blank Summary

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister(s)
Test Notes:

Lab File ID: 03021503.D
Date Analyzed: 3/2/15
Time Analyzed: 08:32

Client Sample ID	ALS Sample ID	Lab File ID	Time Analyzed
Lab Control Sample	P150302-LCS	03021504.D	08:59
N240-1-03-OFF	P1500729-026	03021506.D	10:39
N240-1-04-P-OFF	P1500729-027	03021507.D	11:06
N245-1-01-OFF	P1500729-028	03021508.D	11:34
T20G-1-02-OFF	P1500729-029	03021509.D	12:01
N258-1-01-OFF	P1500729-030	03021510.D	12:29
N245-1-01-OFF (Lab Duplicate)	P1500729-028DUP	03021511.D	12:58
N213-B-05-P-OFF (Dilution)	P1500729-015	03021512.D	13:41

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 1

Client: NASA Ames Research Center

Client Project ID: Vapor Intrusion Study, Phase II / 3602-750

ALS Project ID: P1500729

Internal Standard Area and RT Summary

Test Code: EPA TO-15 SIM

Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19

Lab File ID: 03021502.D

Analyst: Wida Ang

Date Analyzed: 3/2/15

Sample Type: 6.0 L Summa Canister(s)

Time Analyzed: 08:04

Test Notes:

	IS1 (BCM)			IS2 (DFB)			IS3 (CBZ)		
	AREA	#	RT	AREA	#	RT	AREA	#	RT
24 Hour Standard	26106		6.11	186126		8.72	30328		13.13
Upper Limit	36548		6.44	260576		9.05	42459		13.46
Lower Limit	15664		5.78	111676		8.39	18197		12.80

Client Sample ID		IS1 (BCM)		IS2 (DFB)		IS3 (CBZ)	
		AREA	RT	AREA	RT	AREA	RT
01	Method Blank	24205	6.12	174156	8.72	28911	13.13
02	Lab Control Sample	23607	6.11	173462	8.72	29306	13.13
03	N240-1-03-OFF	24974	6.11	178907	8.71	31299	13.13
04	N240-1-04-P-OFF	25818	6.11	180756	8.72	30270	13.13
05	N245-1-01-OFF	25464	6.11	181891	8.72	30020	13.13
06	T20G-1-02-OFF	27211	6.13	188133	8.72	31938	13.13
07	N258-1-01-OFF	25819	6.11	183481	8.72	30371	13.13
08	N245-1-01-OFF (Lab Duplicate)	25112	6.12	180763	8.72	30269	13.13
09	N213-B-05-P-OFF (Dilution)	25783	6.11	178702	8.72	30002	13.14
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

IS1 (BCM) = Bromochloromethane

IS2 (DFB) = 1,4-Difluorobenzene

IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = 140% of internal standard area

AREA LOWER LIMIT = 60% of internal standard area

RT UPPER LIMIT = 0.33 minutes of internal standard RT

RT LOWER LIMIT = 0.33 minutes of internal standard RT

Column used to flag values outside QC limits with an I.

I = Internal standard not within the specified limits. See case narrative.

Data File: I:\MS19\DATA\2015 02\27\02271522.D

Acq On : 27 Feb 2015 21:09

Operator: WA

Sample : P1500729-001 (1000ml)

Misc : S29-02041502

ALS Vial : 10 Sample Multiplier: 1

Quant Time: Feb 28 06:51:19 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

2/28/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.12	130	27671	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	194254	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	33963	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.13	65	59140	875.173	pg	0.00
Spiked Amount 1000.000			Recovery	=	87.52%	
30) Toluene-d8 (SS2)	11.38	98	185536	1035.716	pg	0.00
Spiked Amount 1000.000			Recovery	=	103.57%	
40) Bromofluorobenzene (SS3)	14.25	174	81015	1181.551	pg	0.00
Spiked Amount 1000.000			Recovery	=	118.15%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.73	85	183808	1634.498	pg	100
3) Chloromethane	1.83	52	10851	483.176	pg	98
4) Vinyl Chloride	2.01	62	348	N.D.		
5) Bromomethane	2.33	94	1731	34.232	pg	100
6) Chloroethane	2.47	64	2760	64.876	pg	99
7) Acetone	2.99	58	548074	13801.686	pg	94
8) Trichlorofluoromethane	3.10	101	319343	3306.016	pg	100
9) 1,1-Dichloroethene	3.66	96	1249	28.965	pg	89
10) Methylene Chloride	3.80	84	31717	691.988	pg	95
11) Trichlorotrifluoroethane	4.09	151	16775	377.940	pg	100
12) trans-1,2-Dichloroethene	4.74	96	527	N.D.		
13) 1,1-Dichloroethane	4.95	63	424	N.D.		
14) Methyl tert-Butyl Ether	5.11	73	711	N.D.		
15) cis-1,2-Dichloroethene	5.93	96	1067	21.790	pg	99
16) Chloroform	6.32	83	22680	267.332	pg	99
18) 1,2-Dichloroethane	7.27	62	3546	52.494	pg	99
19) 1,1,1-Trichloroethane	7.59	97	8192	99.296	pg	99
20) Benzene	8.16	78	62654	359.062	pg	100
21) Carbon Tetrachloride	8.34	117	23928	387.407	pg	99
23) 1,2-Dichloropropane	9.16	63	1728	40.787	pg	91
24) Bromodichloromethane	9.41	83	1013	N.D.		
25) Trichloroethene	9.46	130	8339	167.097	pg	99
26) 1,4-Dioxane	9.54	88	401	N.D.		
27) cis-1,3-Dichloropropene	10.46	75	319	N.D.		
28) trans-1,3-Dichloropropene	11.05	75	163	N.D.		
29) 1,1,2-Trichloroethane	11.20	83	306	N.D.		
31) Toluene	11.48	91	342658	1798.505	pg	99
32) 1,2-Dibromoethane	12.12	107	84	N.D.		
33) Tetrachloroethene	12.61	166	2873	48.701	pg	98
35) Chlorobenzene	13.17	112	1409	N.D.		
36) Ethylbenzene	13.48	91	62869	295.192	pg	98
37) m,p-Xylene	13.61	91	90950	519.588	pg	96
38) o-Xylene	13.94	106	17648	206.296	pg	98
39) 1,1,2,2-Tetrachloroethane	13.97	83	483	N.D.		
41) 1,3-Dichlorobenzene	15.17	146	567	N.D.		
42) 1,4-Dichlorobenzene	15.24	146	4054	34.541	pg	100
43) 1,2-Dichlorobenzene	15.46	146	108	N.D.		
44) 1,2,4-Trichlorobenzene	16.61	182	170	N.D.		
45) Naphthalene	16.70	128	17384	81.803	pg	96
46) Hexachlorobutadiene	16.95	225	39	N.D.		

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\27\02271522.D

Acq On : 27 Feb 2015 21:09

Operator: WA

Sample : P1500729-001 (1000ml)

Misc : S29-02041502

ALS Vial : 10 Sample Multiplier: 1

Quant Time: Feb 28 06:51:19 2015

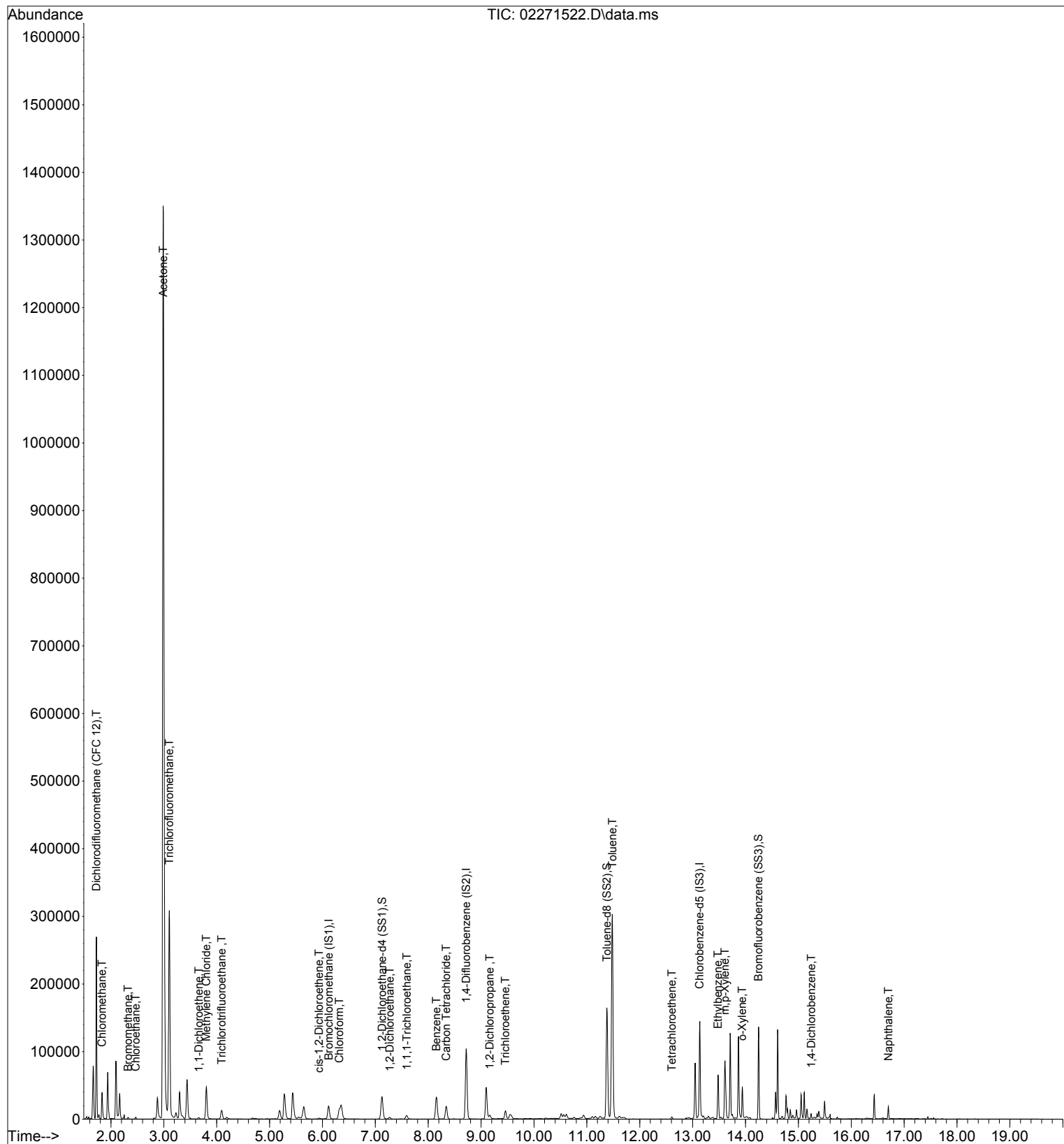
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 02\27\02271522.D

Acq On : 27 Feb 2015 21:09

Operator: WA

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Misc : S29-02041502

ALS Vial : 10 Sample Multiplier: 1

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WA 2/28/15

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Spiked Amount 1000.000			Recovery	=	103.57%	
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						Qvalue
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7) Acetone	2.99	58	548074	13801.686	pg	94
8) Trichlorofluoromethane	3.10	101	319343	3306.016	pg	100
9) 1,1-Dichloroethene	3.66	96	1249	28.965	pg	89
10) Methylene Chloride	3.80	84	31717	691.988	pg	95
11) Trichlorotrifluoroethane	4.09	151	16775	377.940	pg	100
15) cis-1,2-Dichloroethene	5.93	96	1067	21.790	pg	99
16) Chloroform	6.32	83	22680	267.332	pg	99
18) 1,2-Dichloroethane	7.27	62	3546	52.494	pg	99
19) 1,1,1-Trichloroethane	7.59	97	8192	99.296	pg	99
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23) 1,2-Dichloropropane	9.16	63	1728	40.787	pg	91
25) Trichloroethene	9.46	130	8339	167.097	pg	99
31) Toluene	11.48	91	342658	1798.505	pg	99
33) Tetrachloroethene	12.61	166	2873	48.701	pg	98
36) Ethylbenzene	13.48	91	62869	295.192	pg	98
37) m,p-Xylene	13.61	91	90950	519.588	pg	96
38) o-Xylene	13.94	106	17648	206.296	pg	98
42) 1,4-Dichlorobenzene	15.24	146	4054	34.541	pg	100
45) Naphthalene	16.70	128	17384	81.803	pg	96

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Data File: I:\MS19\DATA\2015 02\27\02271522.D

Acq On : 27 Feb 2015 21:09

Operator: WA

Sample : P1500729-001 (1000ml)

Misc : S29-02041502

ALS Vial : 10 Sample Multiplier: 1

Quant Time: Feb 28 06:51:19 2015

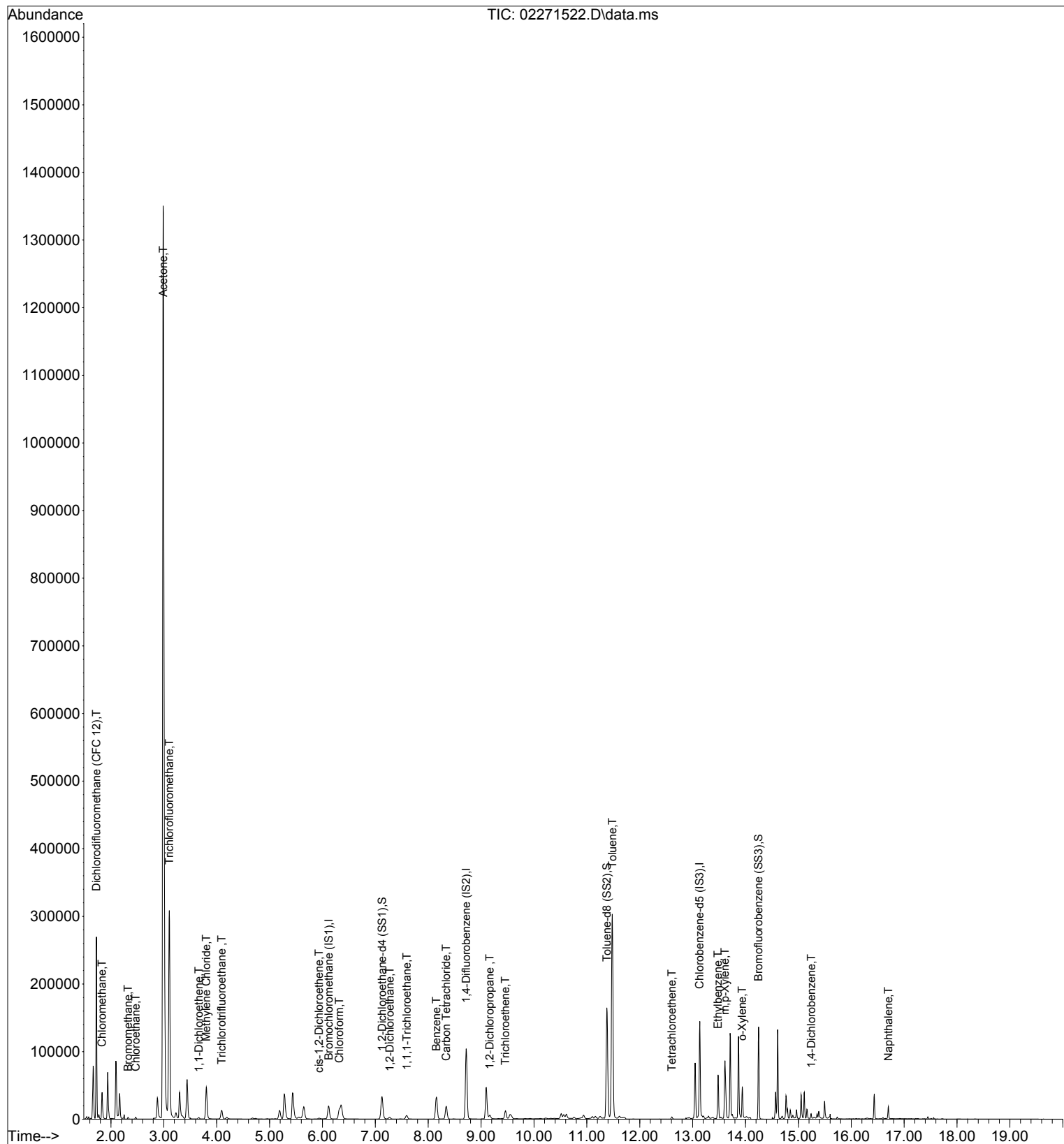
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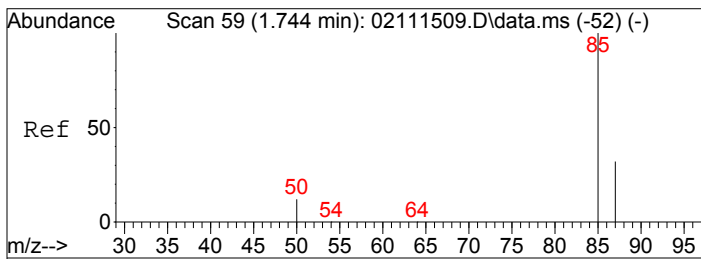
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

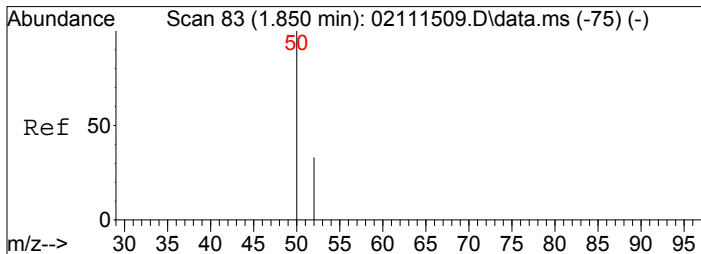
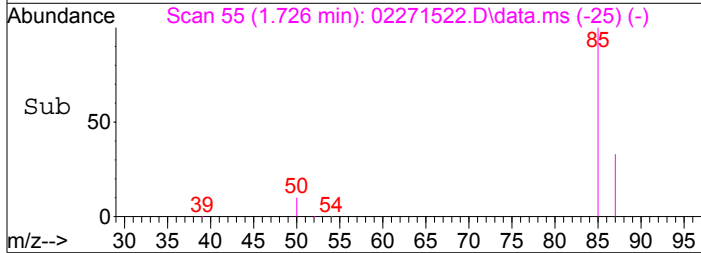
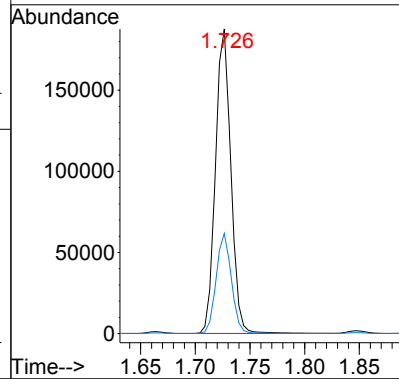
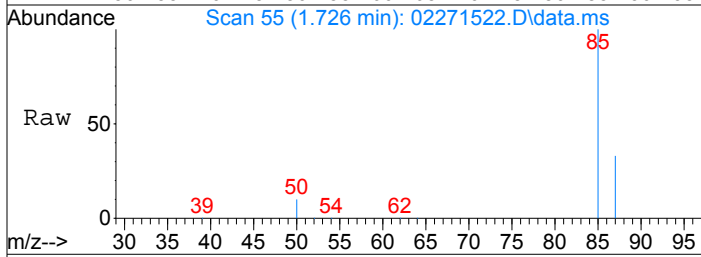
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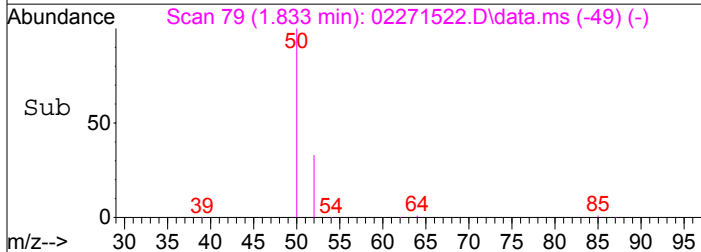
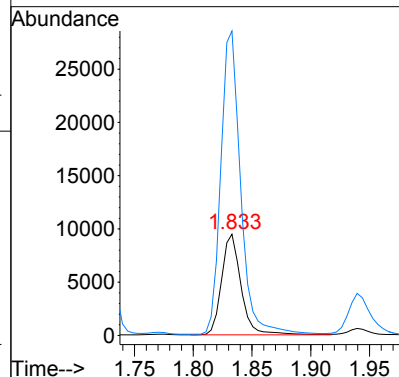
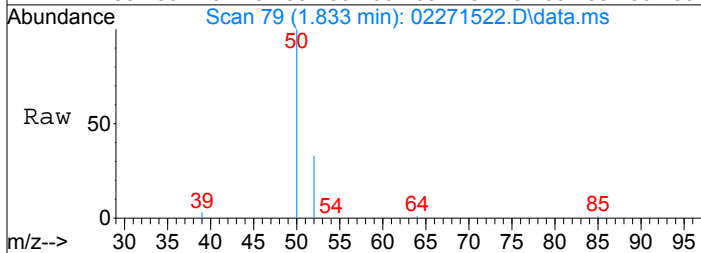
#2
 Dichlorodifluoromethane (CFC 12)
 Concen: 1634.50 pg
 RT: 1.73 min Scan# 55
 Delta R.T. -0.017 min
 Lab File: 02271522.D
 Acq: 27 Feb 2015 21:09

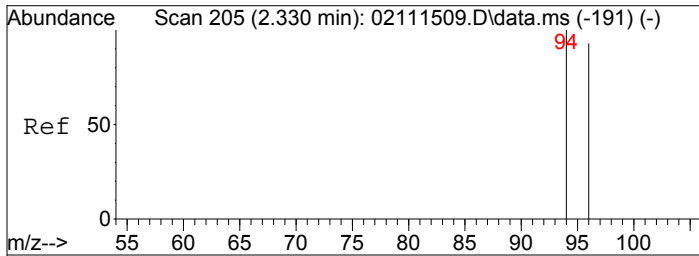
Tgt Ion: 85 Resp: 183808
 Ion Ratio Lower Upper
 85 100
 87 32.4 12.4 52.4



#3
 Chloromethane
 Concen: 483.18 pg
 RT: 1.83 min Scan# 79
 Delta R.T. -0.017 min
 Lab File: 02271522.D
 Acq: 27 Feb 2015 21:09

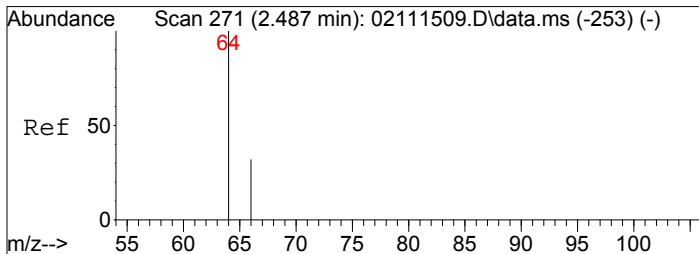
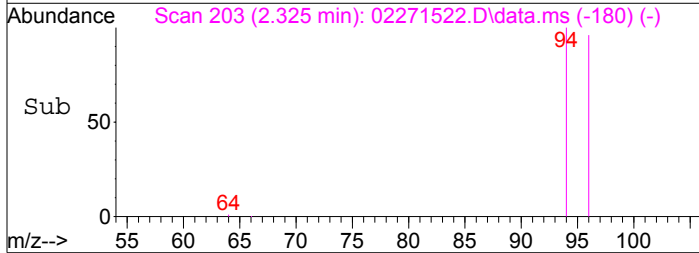
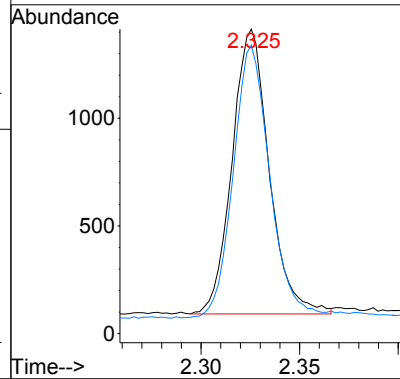
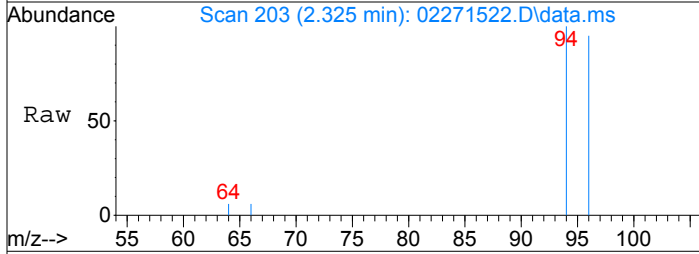
Tgt Ion: 52 Resp: 10851
 Ion Ratio Lower Upper
 52 100
 50 306.9 283.7 323.7





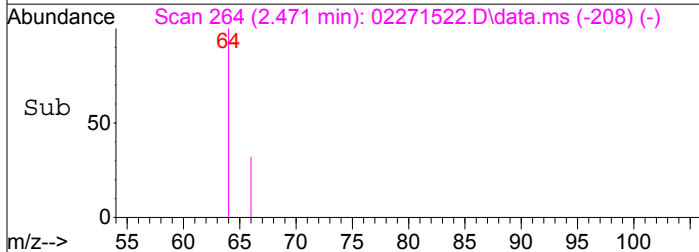
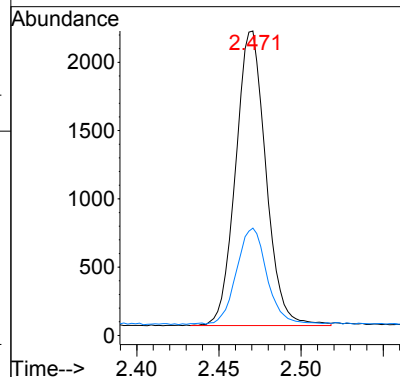
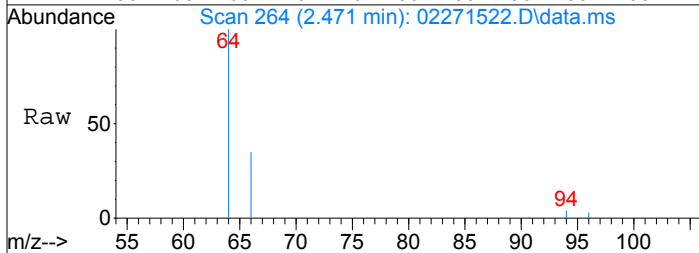
#5
Bromomethane
Concen: 34.23 pg
RT: 2.33 min Scan# 203
Delta R.T. -0.005 min
Lab File: 02271522.D
Acq: 27 Feb 2015 21:09

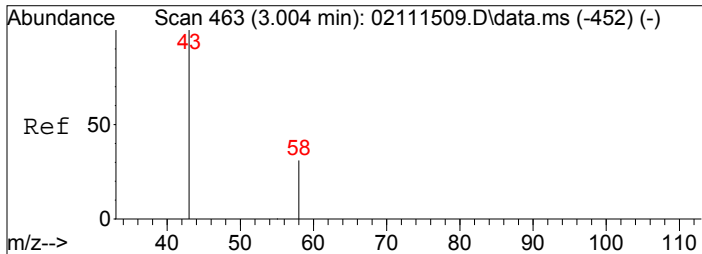
Tgt Ion: 94 Resp: 1731
Ion Ratio Lower Upper
94 100
96 94.3 75.5 113.3



#6
Chloroethane
Concen: 64.88 pg
RT: 2.47 min Scan# 264
Delta R.T. -0.016 min
Lab File: 02271522.D
Acq: 27 Feb 2015 21:09

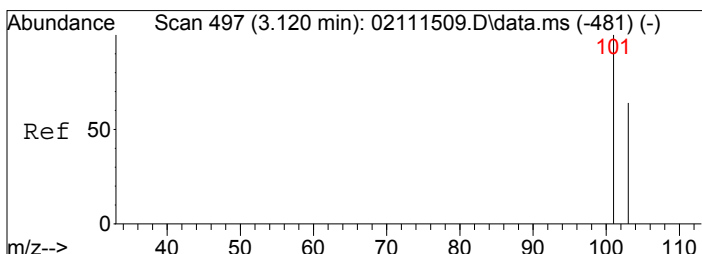
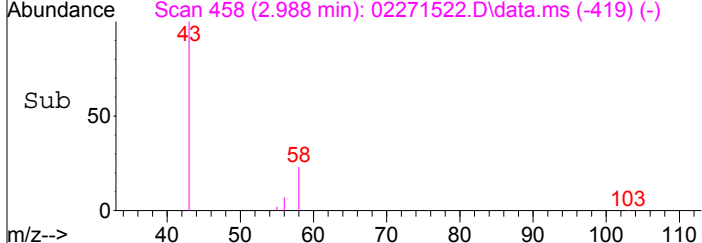
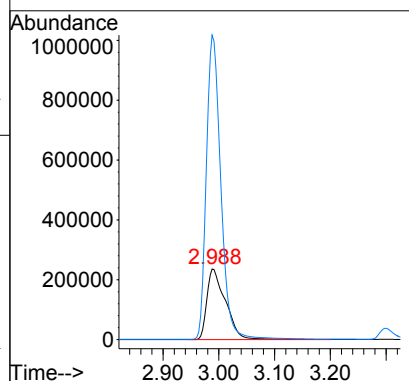
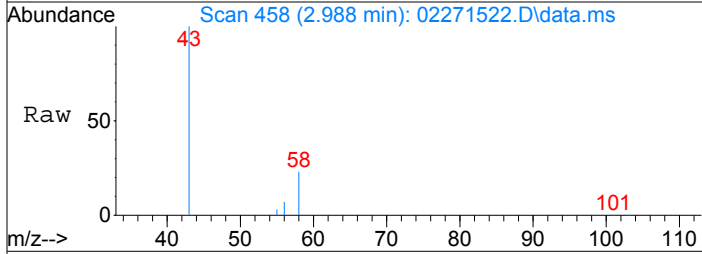
Tgt Ion: 64 Resp: 2760
Ion Ratio Lower Upper
64 100
66 32.6 12.2 52.2





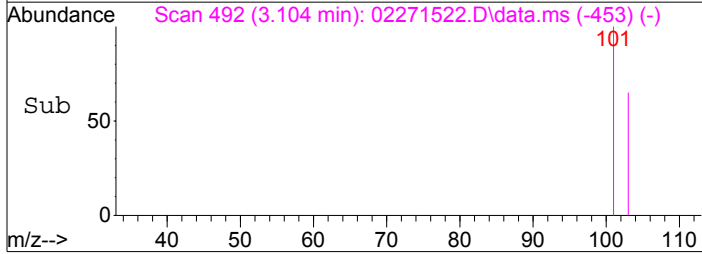
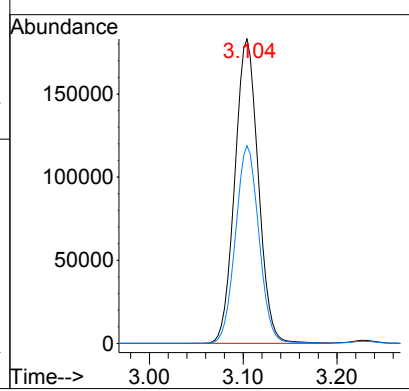
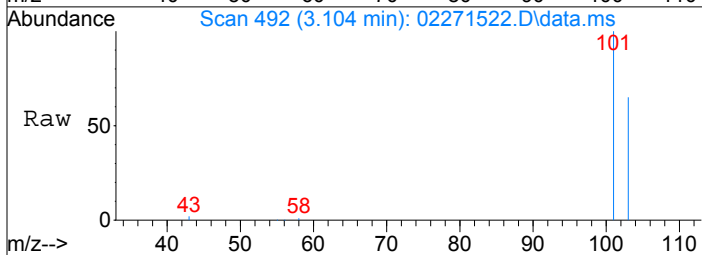
#7
 Acetone
 Concen: 13801.69 pg
 RT: 2.99 min Scan# 458
 Delta R.T. -0.016 min
 Lab File: 02271522.D
 Acq: 27 Feb 2015 21:09

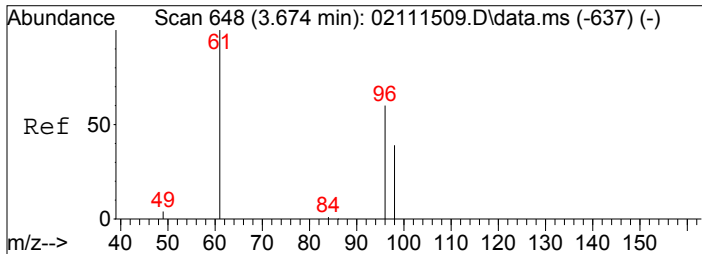
Tgt Ion:	58	Resp:	548074
Ion Ratio	Lower	Upper	
58	100		
43	334.8	301.8	341.8



#8
 Trichlorofluoromethane
 Concen: 3306.02 pg
 RT: 3.10 min Scan# 492
 Delta R.T. -0.016 min
 Lab File: 02271522.D
 Acq: 27 Feb 2015 21:09

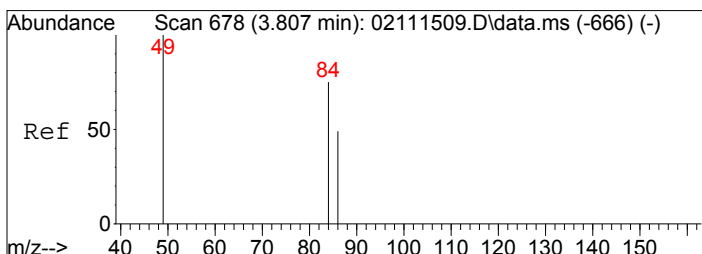
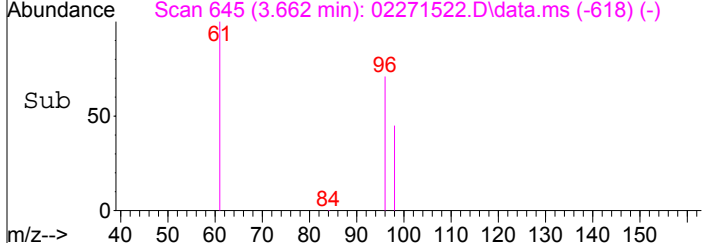
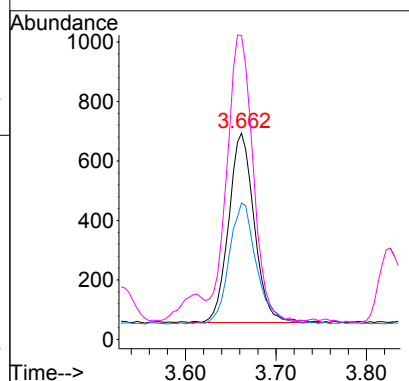
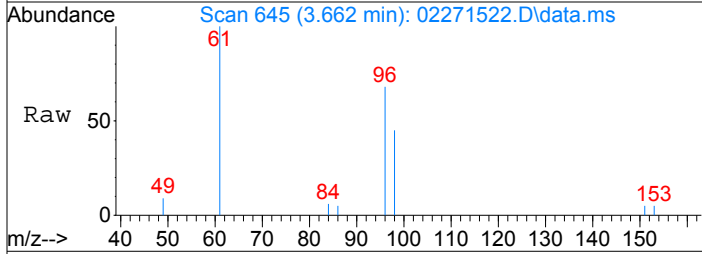
Tgt Ion:	101	Resp:	319343
Ion Ratio	Lower	Upper	
101	100		
103	64.9	51.8	77.6





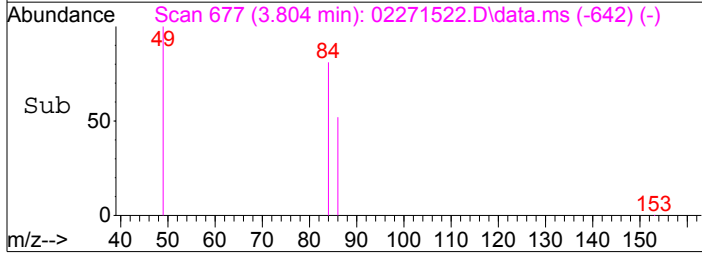
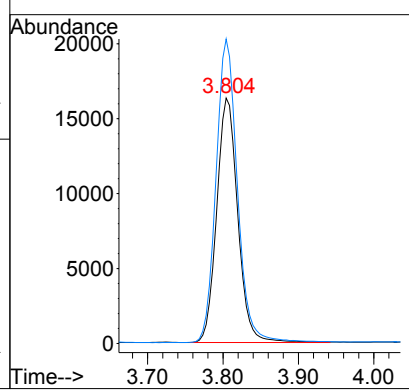
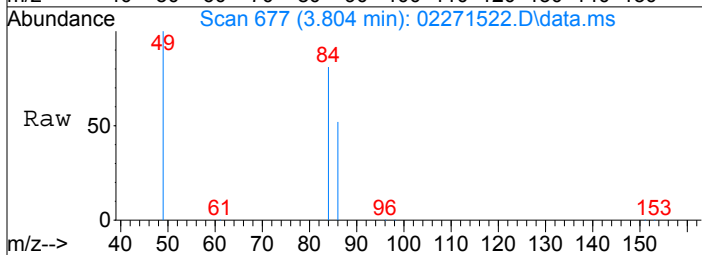
#9
 1,1-Dichloroethene
 Concen: 28.97 pg
 RT: 3.66 min Scan# 645
 Delta R.T. -0.012 min
 Lab File: 02271522.D
 Acq: 27 Feb 2015 21:09

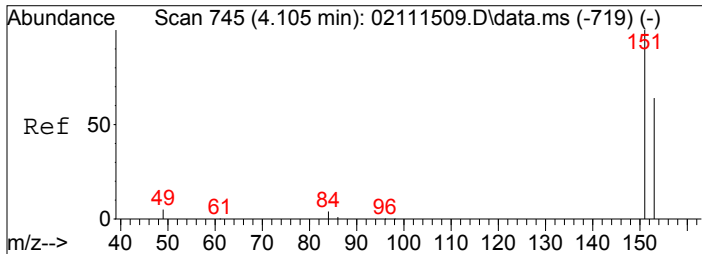
Tgt Ion: 96	Resp: 1249
Ion Ratio	Lower Upper
96	100
98	67.9 44.0 84.0
61	153.5 151.5 191.5



#10
 Methylene Chloride
 Concen: 691.99 pg
 RT: 3.80 min Scan# 677
 Delta R.T. -0.003 min
 Lab File: 02271522.D
 Acq: 27 Feb 2015 21:09

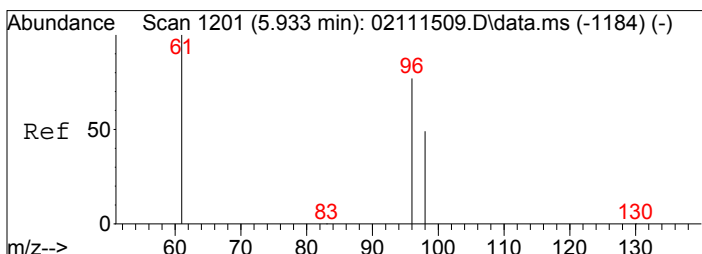
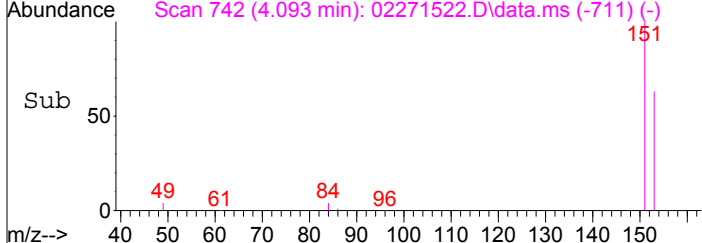
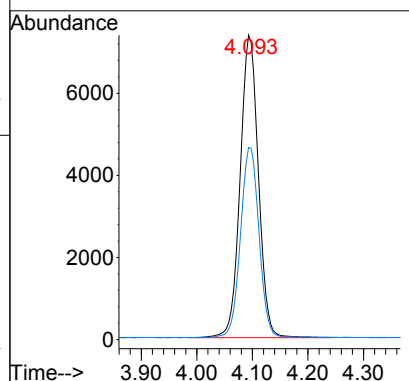
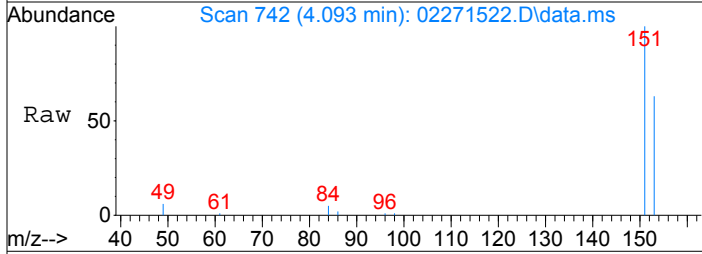
Tgt Ion: 84	Resp: 31717
Ion Ratio	Lower Upper
84	100
49	126.1 112.3 152.3





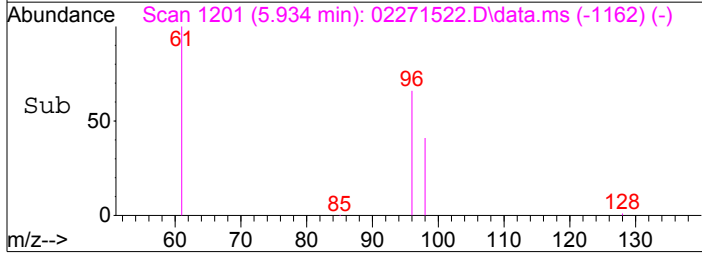
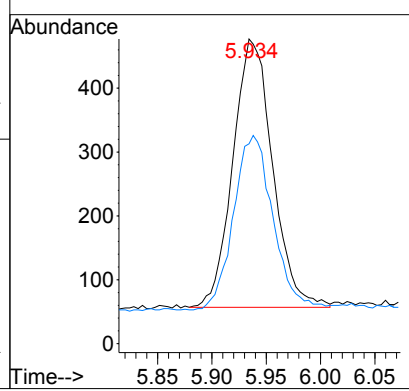
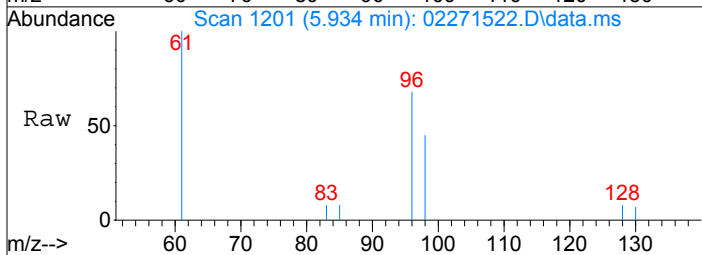
#11
 Trichlorotrifluoroethane
 Concen: 377.94 pg
 RT: 4.09 min Scan# 742
 Delta R.T. -0.012 min
 Lab File: 02271522.D
 Acq: 27 Feb 2015 21:09

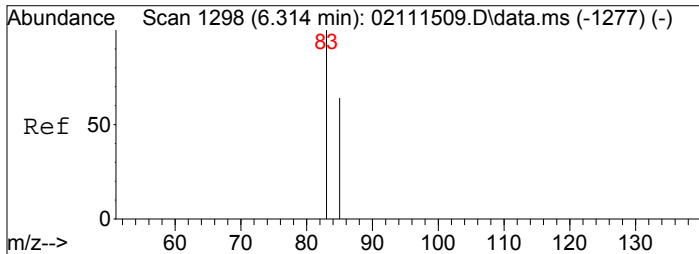
Tgt Ion: 151	Resp: 16775
Ion Ratio	Lower Upper
151	100
153	63.9 43.6 83.6



#15
 cis-1,2-Dichloroethene
 Concen: 21.79 pg
 RT: 5.93 min Scan# 1201
 Delta R.T. 0.001 min
 Lab File: 02271522.D
 Acq: 27 Feb 2015 21:09

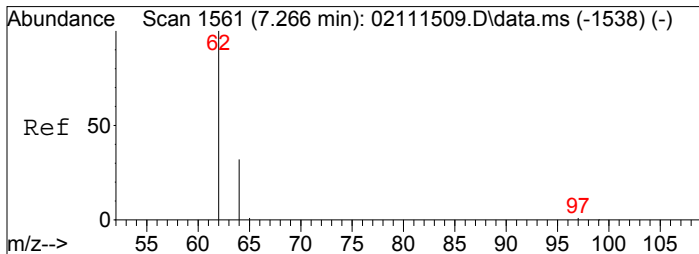
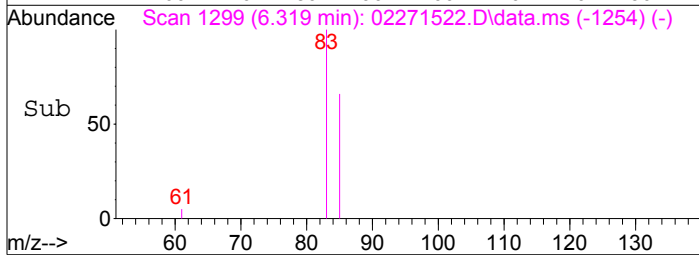
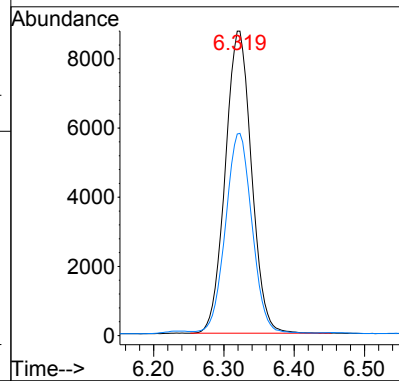
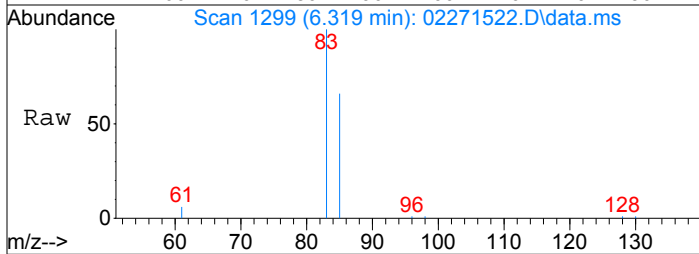
Tgt Ion: 96	Resp: 1067
Ion Ratio	Lower Upper
96	100
98	64.9 44.3 84.3





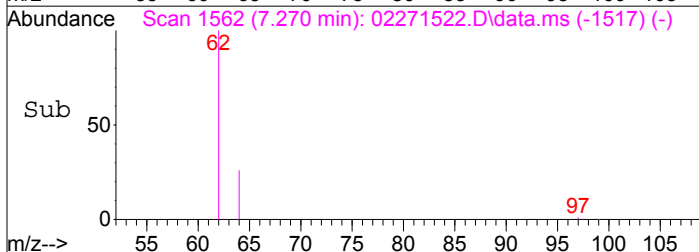
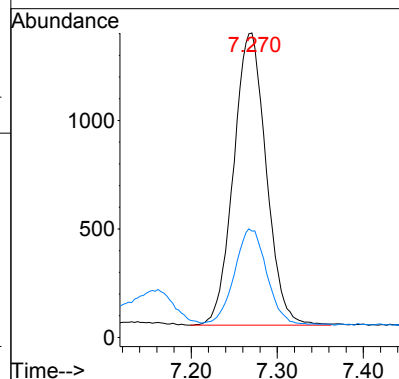
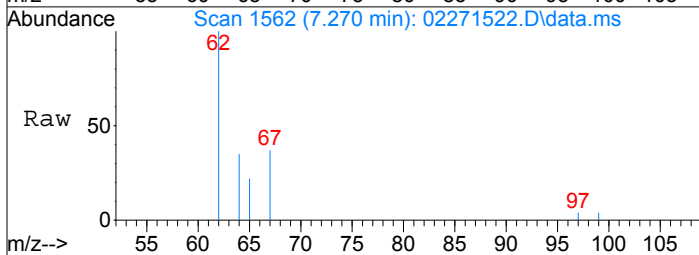
#16
Chloroform
Concen: 267.33 pg
RT: 6.32 min Scan# 1299
Delta R.T. 0.005 min
Lab File: 02271522.D
Acq: 27 Feb 2015 21:09

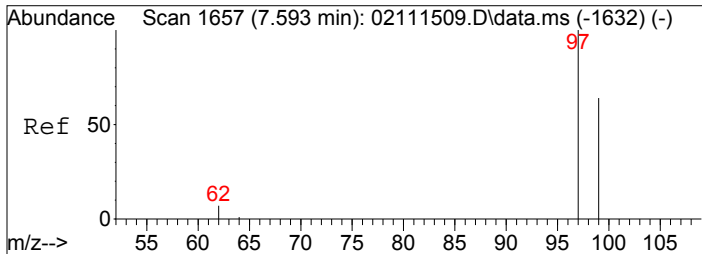
Tgt Ion: 83 Resp: 22680
Ion Ratio Lower Upper
83 100
85 66.4 45.4 85.4



#18
1,2-Dichloroethane
Concen: 52.49 pg
RT: 7.27 min Scan# 1562
Delta R.T. 0.005 min
Lab File: 02271522.D
Acq: 27 Feb 2015 21:09

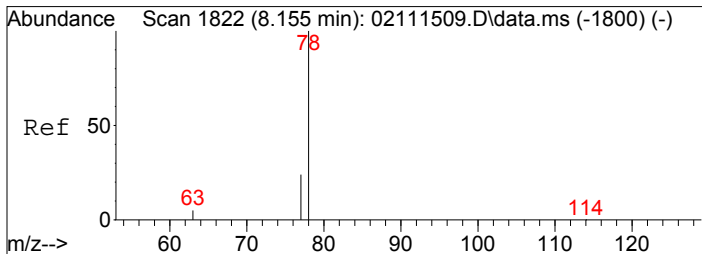
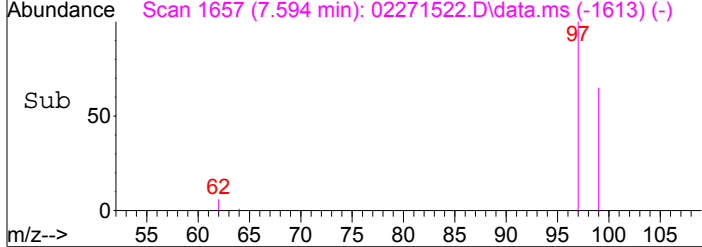
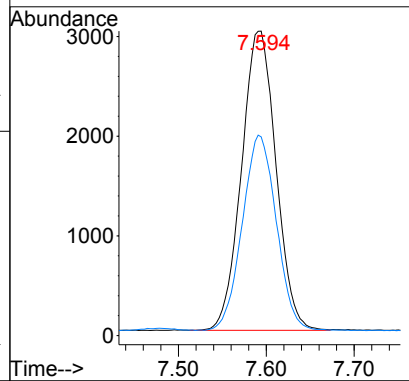
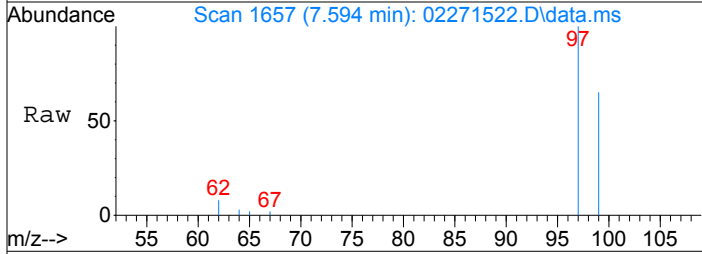
Tgt Ion: 62 Resp: 3546
Ion Ratio Lower Upper
62 100
64 32.1 11.6 51.6





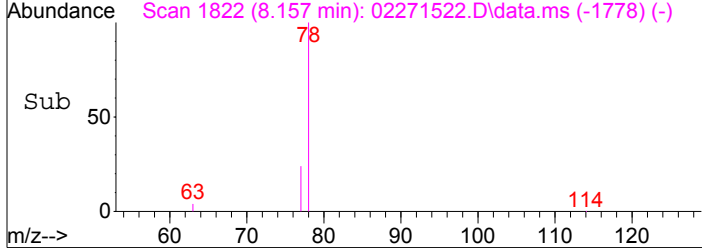
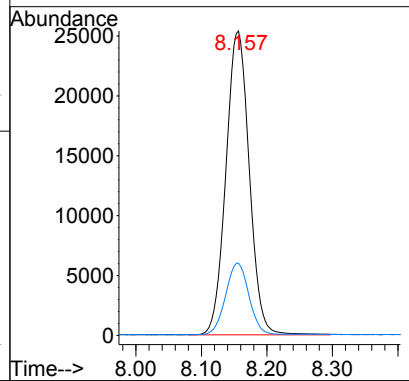
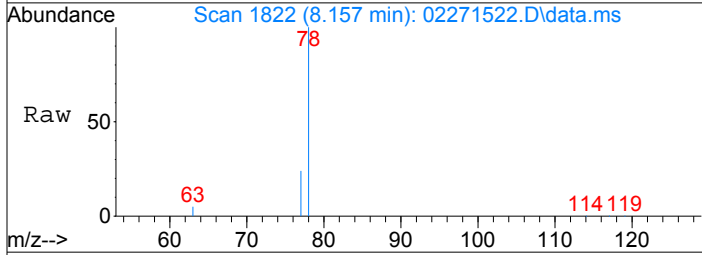
#19
 1,1,1-Trichloroethane
 Concen: 99.30 pg
 RT: 7.59 min Scan# 1657
 Delta R.T. 0.001 min
 Lab File: 02271522.D
 Acq: 27 Feb 2015 21:09

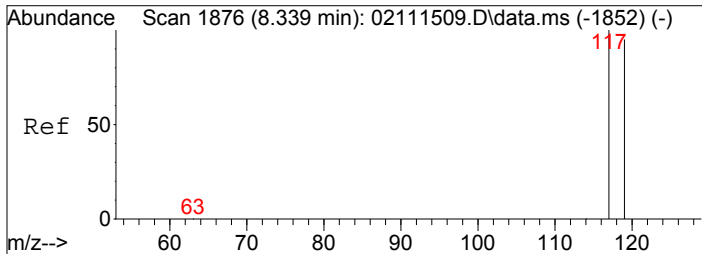
Tgt Ion: 97 Resp: 8192
 Ion Ratio Lower Upper
 97 100
 99 64.5 44.0 84.0



#20
 Benzene
 Concen: 359.06 pg
 RT: 8.16 min Scan# 1822
 Delta R.T. 0.002 min
 Lab File: 02271522.D
 Acq: 27 Feb 2015 21:09

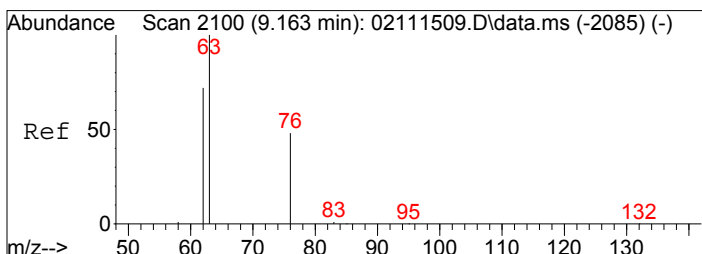
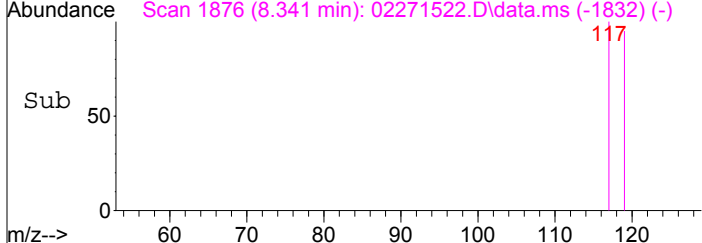
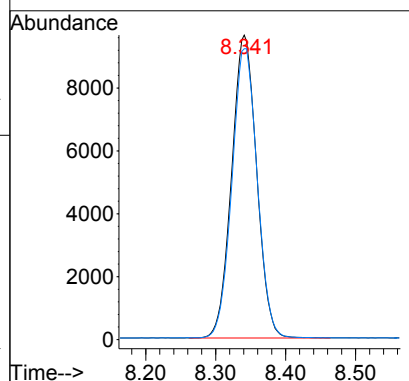
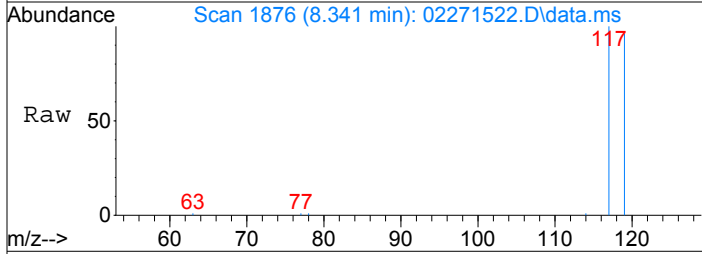
Tgt Ion: 78 Resp: 62654
 Ion Ratio Lower Upper
 78 100
 77 23.6 3.7 43.7





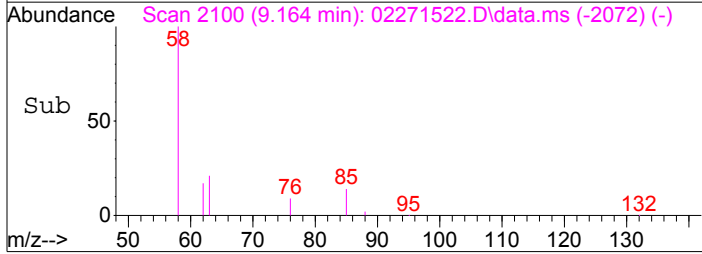
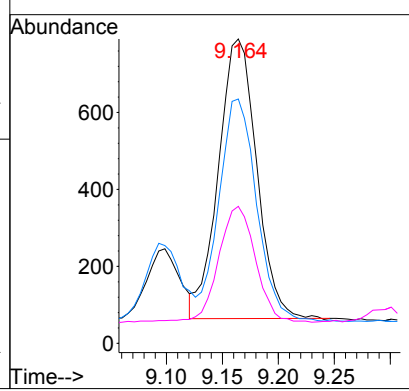
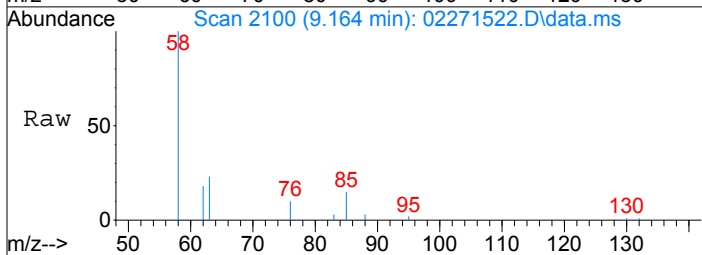
#21
Carbon Tetrachloride
Concen: 387.41 pg
RT: 8.34 min Scan# 1876
Delta R.T. 0.001 min
Lab File: 02271522.D
Acq: 27 Feb 2015 21:09

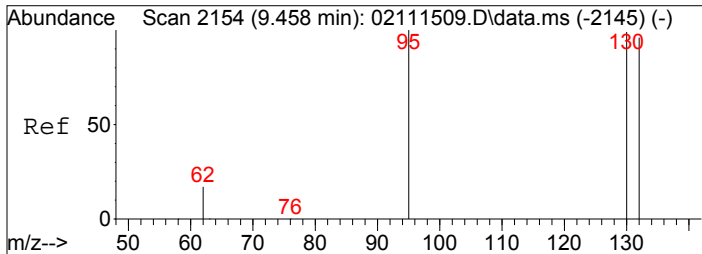
Tgt Ion: 117	Resp: 23928
Ion Ratio	Lower Upper
117	100
119	96.4 75.5 115.5



#23
1,2-Dichloropropane
Concen: 40.79 pg
RT: 9.16 min Scan# 2100
Delta R.T. 0.001 min
Lab File: 02271522.D
Acq: 27 Feb 2015 21:09

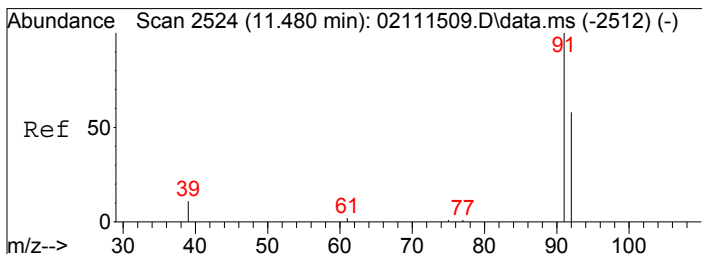
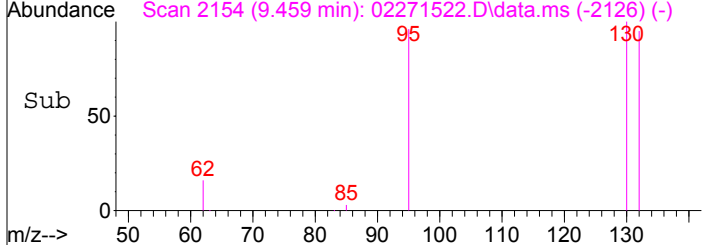
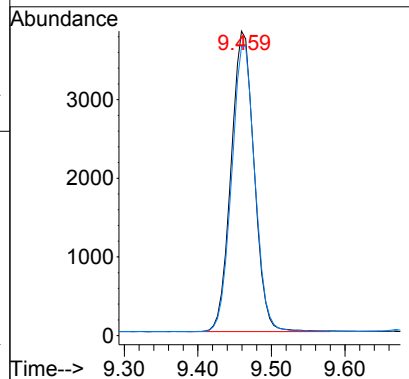
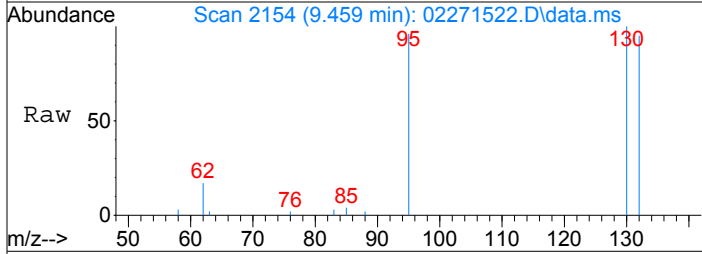
Tgt Ion: 63	Resp: 1728
Ion Ratio	Lower Upper
63	100
62	78.2 52.0 92.0
76	40.2 28.1 68.1





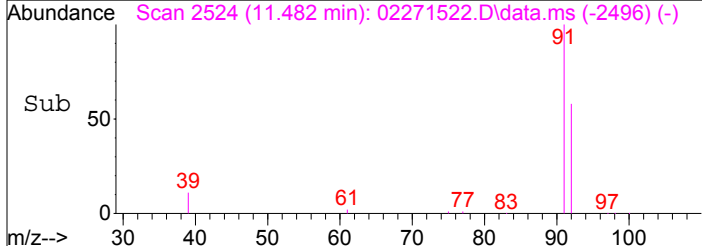
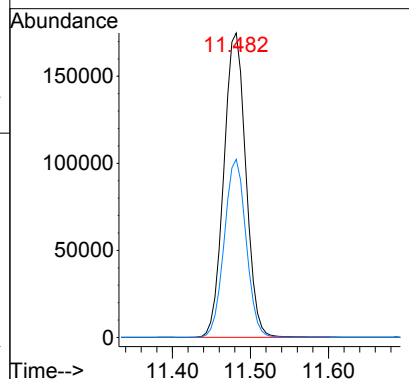
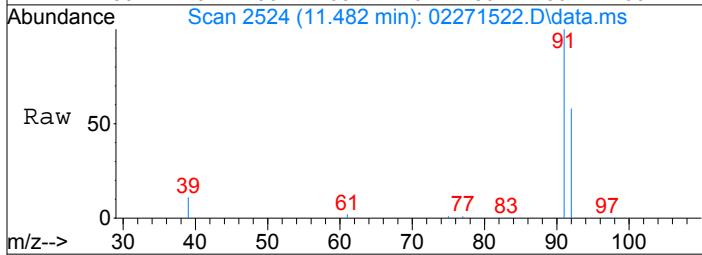
#25
 Trichloroethene
 Concen: 167.10 pg
 RT: 9.46 min Scan# 2154
 Delta R.T. 0.001 min
 Lab File: 02271522.D
 Acq: 27 Feb 2015 21:09

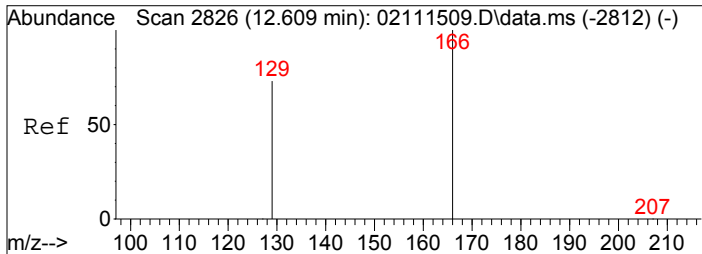
Tgt Ion: 130 Resp: 8339
 Ion Ratio Lower Upper
 130 100
 132 95.8 77.1 117.1



#31
 Toluene
 Concen: 1798.51 pg
 RT: 11.48 min Scan# 2524
 Delta R.T. 0.001 min
 Lab File: 02271522.D
 Acq: 27 Feb 2015 21:09

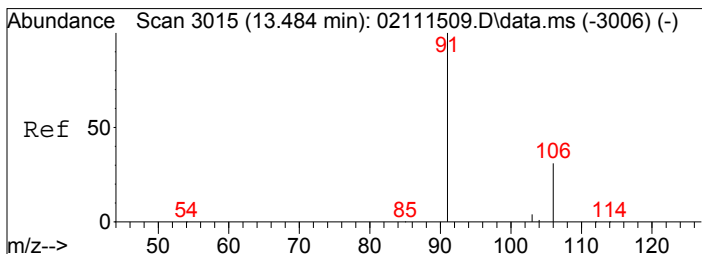
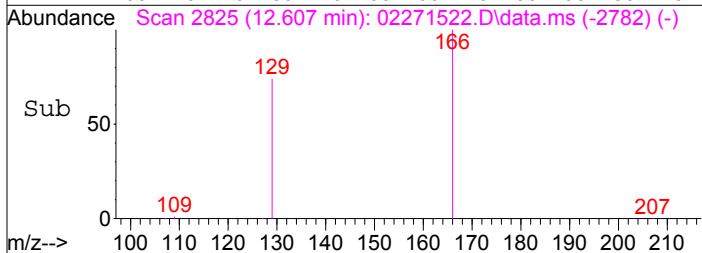
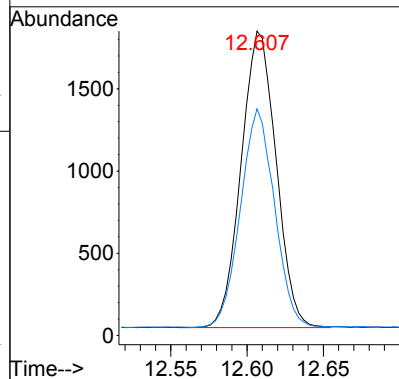
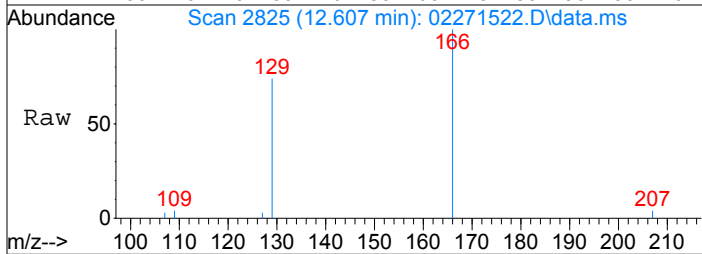
Tgt Ion: 91 Resp: 342658
 Ion Ratio Lower Upper
 91 100
 92 58.1 37.7 77.7





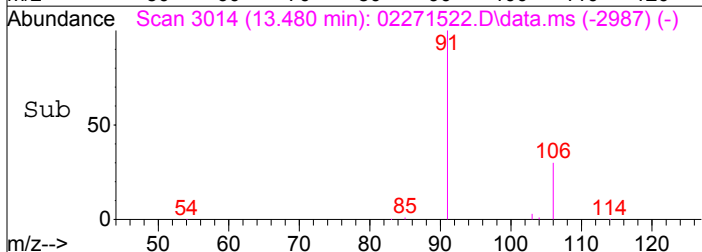
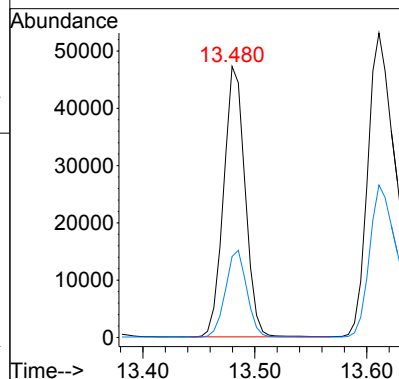
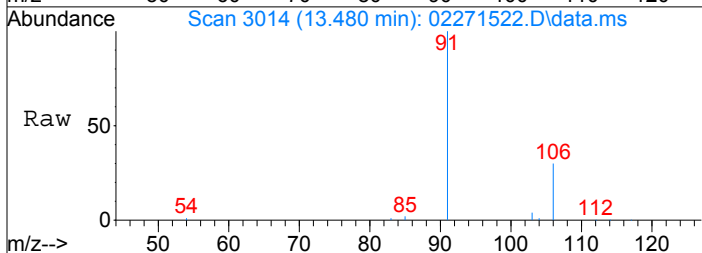
#33
Tetrachloroethene
Concen: 48.70 pg
RT: 12.61 min Scan# 2825
Delta R.T. -0.002 min
Lab File: 02271522.D
Acq: 27 Feb 2015 21:09

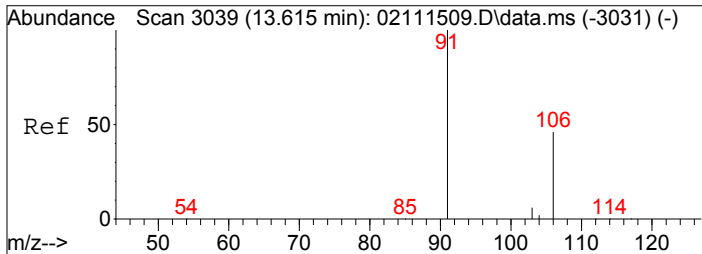
Tgt Ion: 166 Resp: 2873
Ion Ratio Lower Upper
166 100
129 71.9 53.3 93.3



#36
Ethylbenzene
Concen: 295.19 pg
RT: 13.48 min Scan# 3014
Delta R.T. -0.004 min
Lab File: 02271522.D
Acq: 27 Feb 2015 21:09

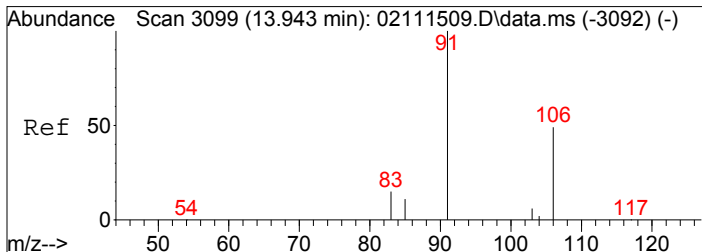
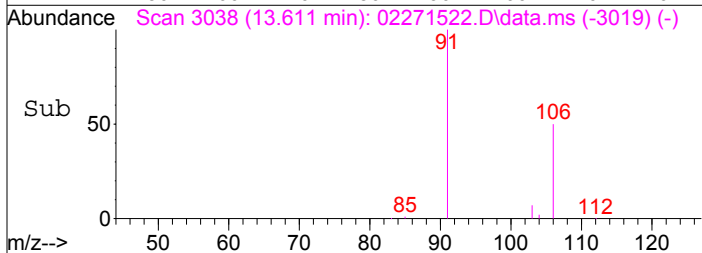
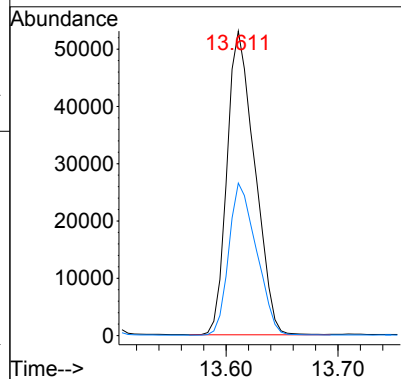
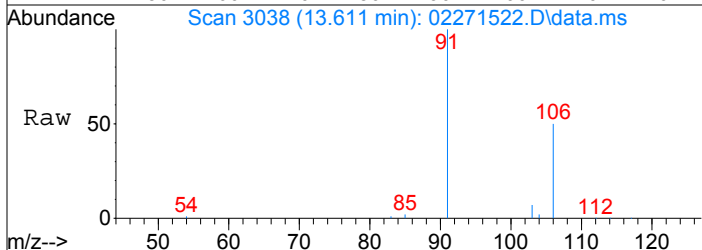
Tgt Ion: 91 Resp: 62869
Ion Ratio Lower Upper
91 100
106 31.8 10.9 50.9





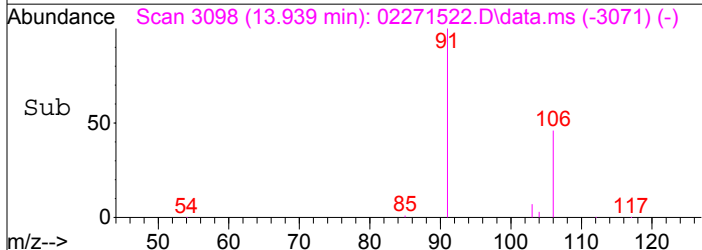
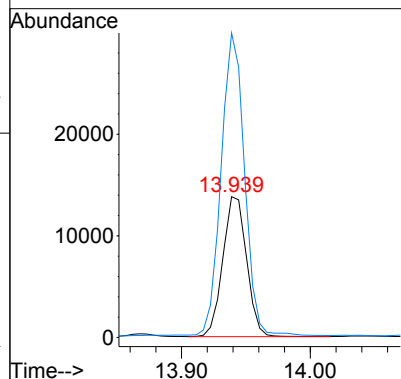
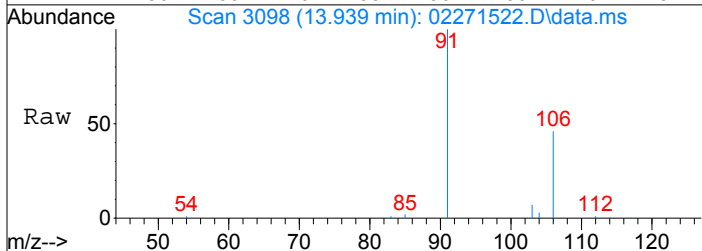
#37
 m,p-Xylene
 Concen: 519.59 pg
 RT: 13.61 min Scan# 3038
 Delta R.T. -0.004 min
 Lab File: 02271522.D
 Acq: 27 Feb 2015 21:09

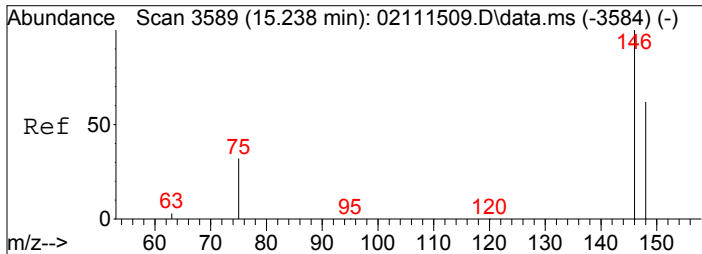
Tgt Ion: 91 Resp: 90950
 Ion Ratio Lower Upper
 91 100
 106 50.1 27.5 67.5



#38
 o-Xylene
 Concen: 206.30 pg
 RT: 13.94 min Scan# 3098
 Delta R.T. -0.004 min
 Lab File: 02271522.D
 Acq: 27 Feb 2015 21:09

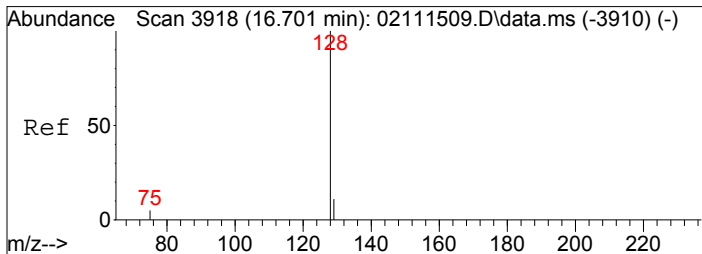
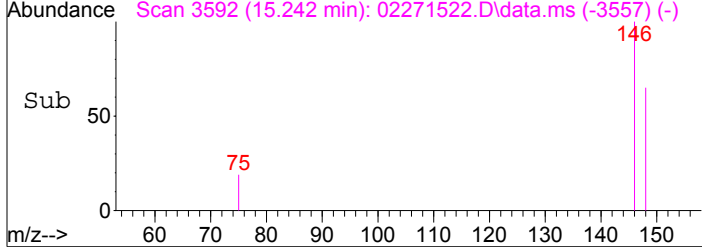
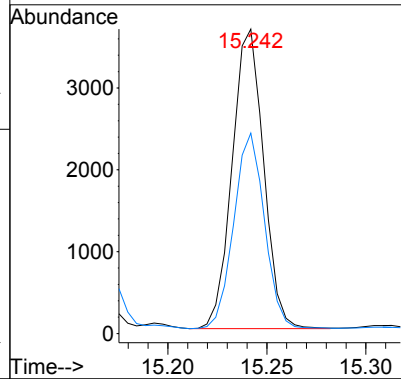
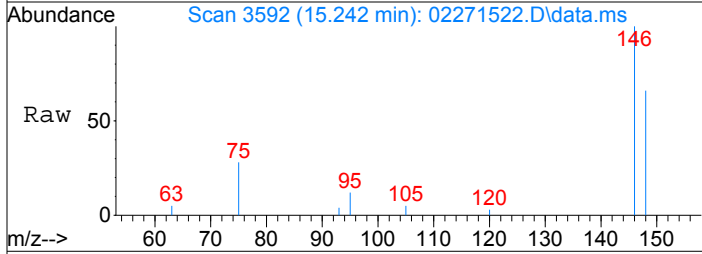
Tgt Ion: 106 Resp: 17648
 Ion Ratio Lower Upper
 106 100
 91 214.7 198.3 238.3





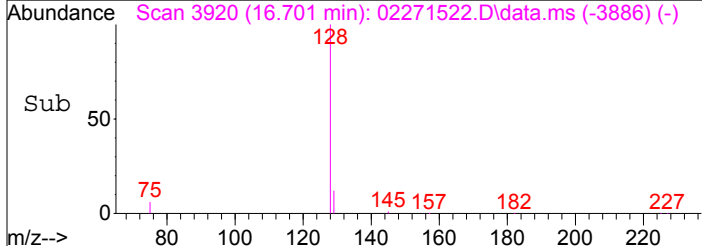
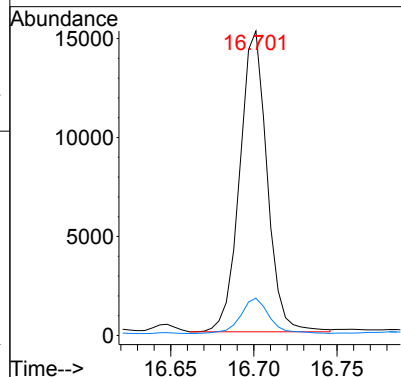
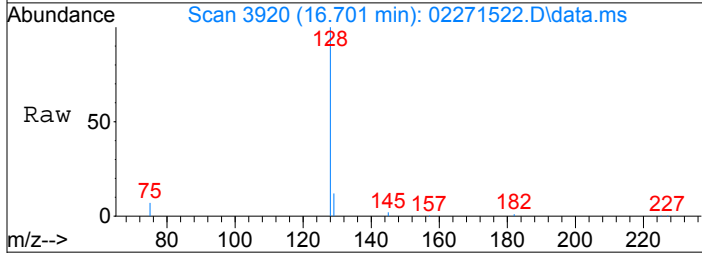
#42
 1,4-Dichlorobenzene
 Concen: 34.54 pg
 RT: 15.24 min Scan# 3592
 Delta R.T. 0.004 min
 Lab File: 02271522.D
 Acq: 27 Feb 2015 21:09

Tgt Ion: 146 Resp: 4054
 Ion Ratio Lower Upper
 146 100
 148 63.6 43.5 83.5



#45
 Naphthalene
 Concen: 81.80 pg
 RT: 16.70 min Scan# 3920
 Delta R.T. 0.000 min
 Lab File: 02271522.D
 Acq: 27 Feb 2015 21:09

Tgt Ion: 128 Resp: 17384
 Ion Ratio Lower Upper
 128 100
 129 12.4 0.0 30.9



Data File: I:\MS19\DATA\2015 02\27\02271523.D

Acq On : 27 Feb 2015 21:36

Operator: WA

Sample : P1500729-002 (1000ml)

Misc : S29-02041502

ALS Vial : 11 Sample Multiplier: 1

Quant Time: Feb 28 09:44:07 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

2/28/15

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.13	130	28915	1000.000	pg	0.01
22) 1,4-Difluorobenzene (IS2)	8.72	114	200031	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	34285	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.13	65	61309	868.237	pg	0.00
Spiked Amount 1000.000			Recovery	=	86.82%	
30) Toluene-d8 (SS2)	11.38	98	190234	1031.272	pg	0.00
Spiked Amount 1000.000			Recovery	=	103.13%	
40) Bromofluorobenzene (SS3)	14.25	174	82085	1185.913	pg	0.00
Spiked Amount 1000.000			Recovery	=	118.59%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.73	85	172992	1472.135	pg	100
3) Chloromethane	1.83	52	10686	455.358	pg	97
4) Vinyl Chloride	2.01	62	374	N.D.		
5) Bromomethane	2.33	94	2415	45.703	pg	99
6) Chloroethane	2.47	64	2769	62.287	pg	98
7) Acetone	2.99	58	560912m	13517.281	pg	
8) Trichlorofluoromethane	3.11	101	308366	3055.031	pg	100
9) 1,1-Dichloroethene	3.67	96	724	N.D.		
10) Methylene Chloride	3.81	84	36021	752.080	pg	97
11) Trichlorotrifluoroethane	4.10	151	15861	341.974	pg	100
12) trans-1,2-Dichloroethene	4.75	96	547	N.D.		
13) 1,1-Dichloroethane	4.96	63	380	N.D.		
14) Methyl tert-Butyl Ether	0.00	73	0	N.D.	d	
15) cis-1,2-Dichloroethene	5.94	96	921	N.D.		
16) Chloroform	6.33	83	19393	218.753	pg	97
18) 1,2-Dichloroethane	7.27	62	3362	47.629	pg	98
19) 1,1,1-Trichloroethane	7.59	97	8462	98.156	pg	99
20) Benzene	8.16	78	60770	333.282	pg	100
21) Carbon Tetrachloride	8.34	117	22762	352.674	pg	99
23) 1,2-Dichloropropane	9.16	63	2692	61.705	pg	86
24) Bromodichloromethane	9.42	83	983	N.D.		
25) Trichloroethene	9.46	130	8403	163.517	pg	99
26) 1,4-Dioxane	9.52	88	519	N.D.		
27) cis-1,3-Dichloropropene	10.46	75	247	N.D.		
28) trans-1,3-Dichloropropene	11.05	75	140	N.D.		
29) 1,1,2-Trichloroethane	11.17	83	222	N.D.		
31) Toluene	11.48	91	302984	1544.341	pg	99
32) 1,2-Dibromoethane	12.13	107	65	N.D.		
33) Tetrachloroethene	12.61	166	2510	41.319	pg	99
35) Chlorobenzene	13.17	112	1301	N.D.		
36) Ethylbenzene	13.48	91	43934	204.348	pg	99
37) m,p-Xylene	13.61	91	75682	428.302	pg	96
38) o-Xylene	13.94	106	15174	175.710	pg	98
39) 1,1,1,2,2-Tetrachloroethane	13.97	83	743	N.D.		
41) 1,3-Dichlorobenzene	15.17	146	513	N.D.		
42) 1,4-Dichlorobenzene	15.24	146	2174	N.D.		
43) 1,2-Dichlorobenzene	15.46	146	100	N.D.		
44) 1,2,4-Trichlorobenzene	16.65	182	274	N.D.		
45) Naphthalene	16.70	128	6314	29.433	pg	98
46) Hexachlorobutadiene	16.96	225	21	N.D.		

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\27\02271523.D

Acq On : 27 Feb 2015 21:36

Operator: WA

Sample : P1500729-002 (1000ml)

Misc : S29-02041502

ALS Vial : 11 Sample Multiplier: 1

Quant Time: Feb 28 09:44:07 2015

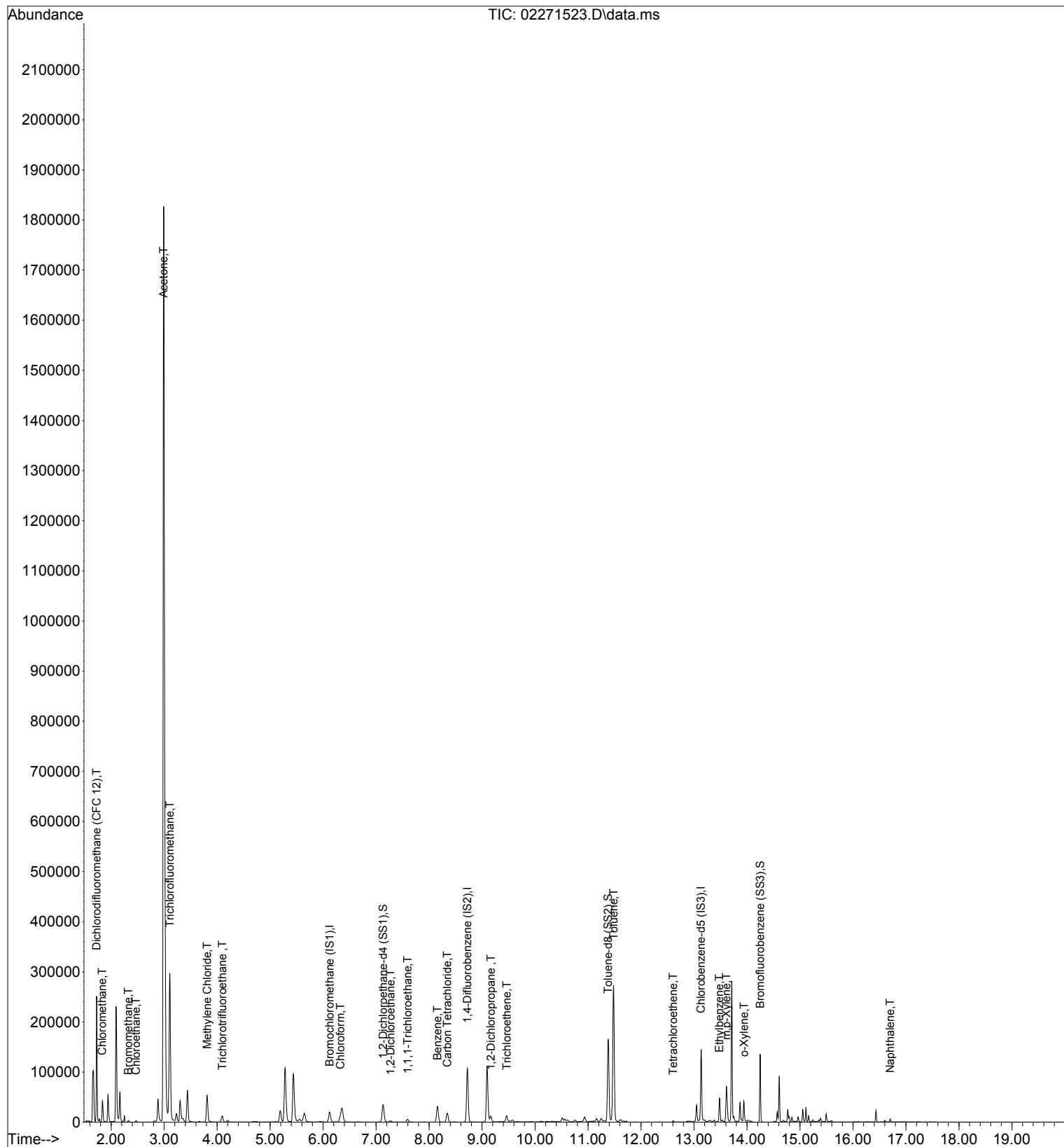
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 02\27\02271523.D

Acq On : 27 Feb 2015 21:36

Operator: WA

Sample : P1500729-002 (1000ml)

Misc : S29-02041502

ALS Vial : 11 Sample Multiplier: 1

Quant Time: Feb 28 09:44:07 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

2/28/15

DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.13	130	28915	1000.000	pg	0.01
22) 1,4-Difluorobenzene (IS2)	8.72	114	200031	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	34285	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.13	65	61309	868.237	pg	0.00
Spiked Amount 1000.000			Recovery	=	86.82%	
30) Toluene-d8 (SS2)	11.38	98	190234	1031.272	pg	0.00
Spiked Amount 1000.000			Recovery	=	103.13%	
40) Bromofluorobenzene (SS3)	14.25	174	82085	1185.913	pg	0.00
Spiked Amount 1000.000			Recovery	=	118.59%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.73	85	172992	1472.135	pg	100
3) Chloromethane	1.83	52	10686	455.358	pg	97
5) Bromomethane	2.33	94	2415	45.703	pg	99
6) Chloroethane	2.47	64	2769	62.287	pg	98
7) Acetone	2.99	58	560912m	13517.281	pg	
8) Trichlorofluoromethane	3.11	101	308366	3055.031	pg	100
10) Methylene Chloride	3.81	84	36021	752.080	pg	97
11) Trichlorotrifluoroethane	4.10	151	15861	341.974	pg	100
16) Chloroform	6.33	83	19393	218.753	pg	97
18) 1,2-Dichloroethane	7.27	62	3362	47.629	pg	98
19) 1,1,1-Trichloroethane	7.59	97	8462	98.156	pg	99
20) Benzene	8.16	78	60770	333.282	pg	100
21) Carbon Tetrachloride	8.34	117	22762	352.674	pg	99
23) 1,2-Dichloropropane	9.16	63	2692	61.705	pg	86
25) Trichloroethene	9.46	130	8403	163.517	pg	99
31) Toluene	11.48	91	302984	1544.341	pg	99
33) Tetrachloroethene	12.61	166	2510	41.319	pg	99
36) Ethylbenzene	13.48	91	43934	204.348	pg	99
37) m,p-Xylene	13.61	91	75682	428.302	pg	96
38) o-Xylene	13.94	106	15174	175.710	pg	98
45) Naphthalene	16.70	128	6314	29.433	pg	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File: I:\MS19\DATA\2015 02\27\02271523.D

Acq On : 27 Feb 2015 21:36

Operator: WA

Sample : P1500729-002 (1000ml)

Misc : S29-02041502

ALS Vial : 11 Sample Multiplier: 1

Quant Time: Feb 28 09:44:07 2015

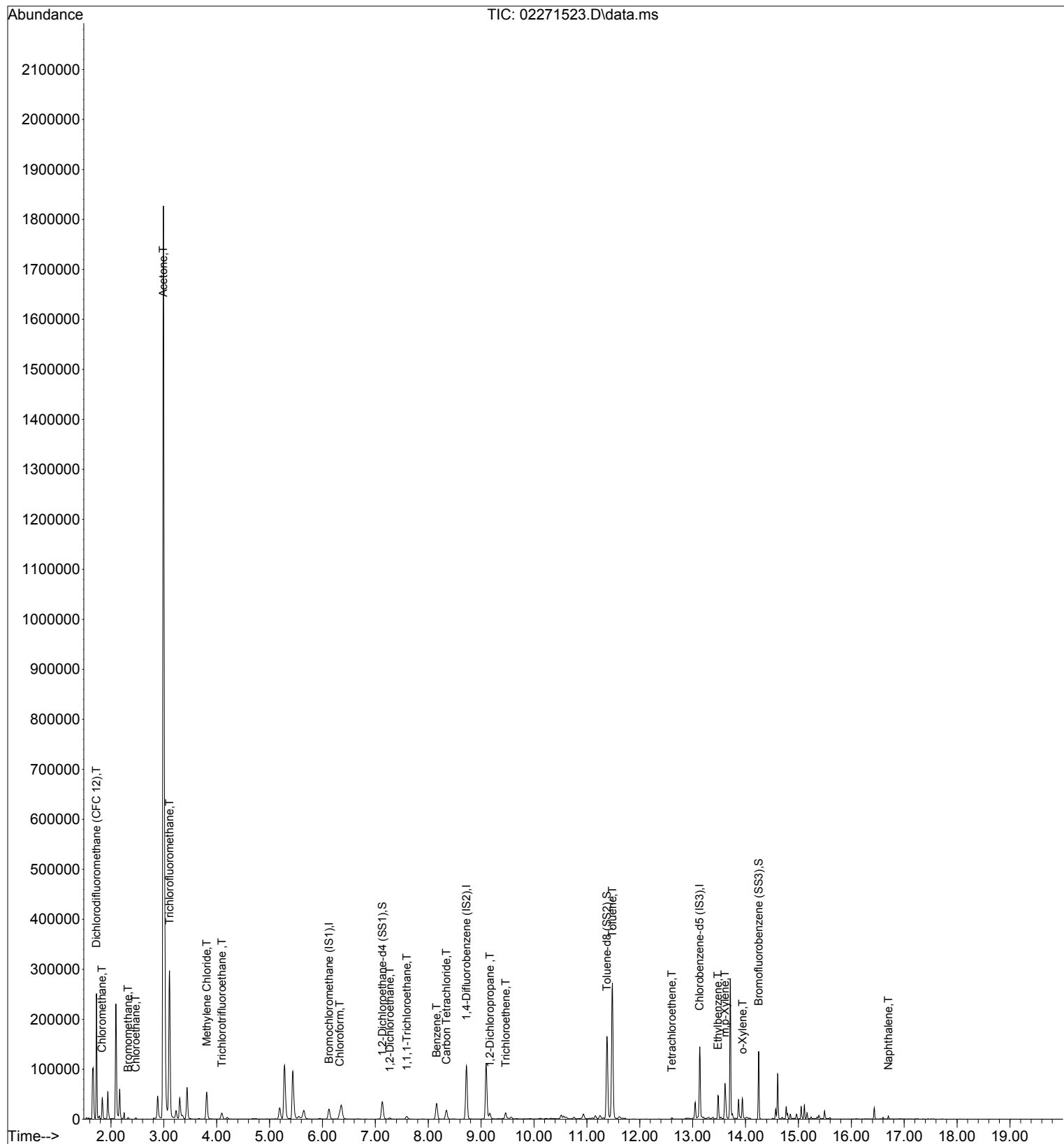
Quant Method : I:\MS19\METHODS\X19021115.M

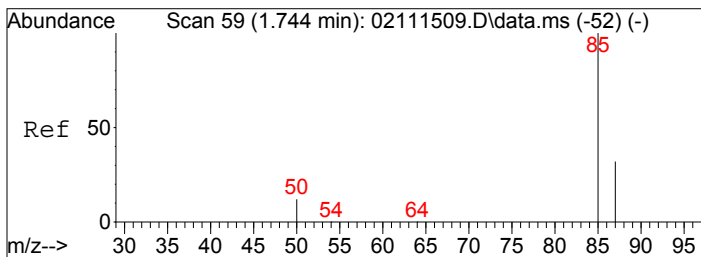
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

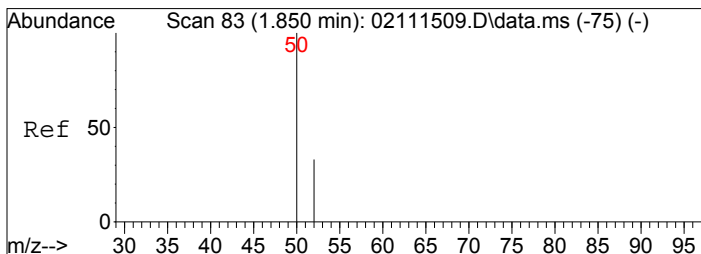
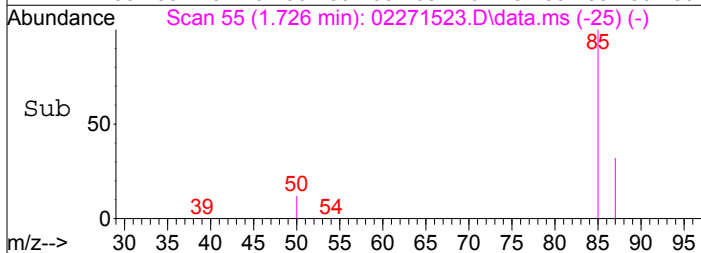
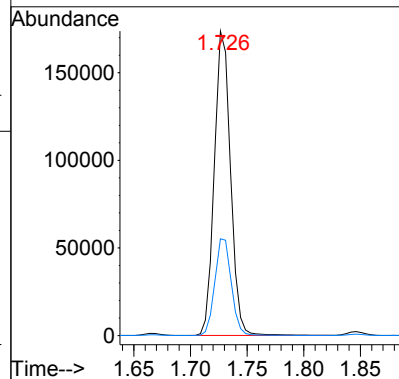
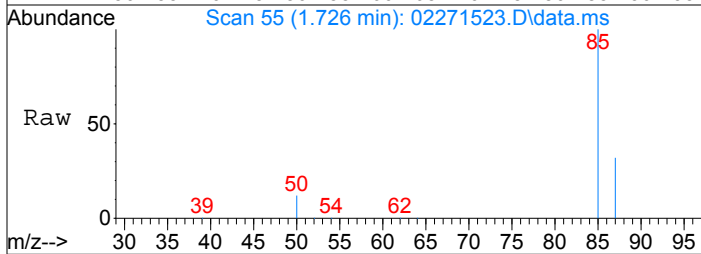
DataAcq Meth:TO15SIM.M





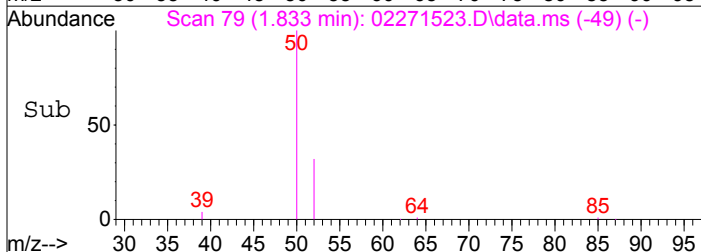
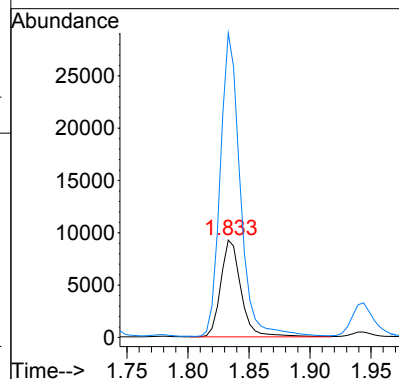
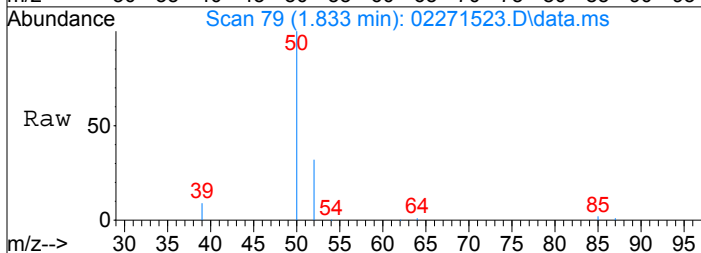
#2
 Dichlorodifluoromethane (CFC 12)
 Concen: 1472.13 pg
 RT: 1.73 min Scan# 55
 Delta R.T. -0.017 min
 Lab File: 02271523.D
 Acq: 27 Feb 2015 21:36

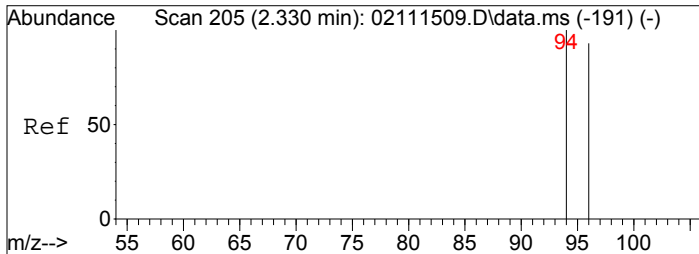
Tgt Ion: 85 Resp: 172992
 Ion Ratio Lower Upper
 85 100
 87 32.5 12.4 52.4



#3
 Chloromethane
 Concen: 455.36 pg
 RT: 1.83 min Scan# 79
 Delta R.T. -0.017 min
 Lab File: 02271523.D
 Acq: 27 Feb 2015 21:36

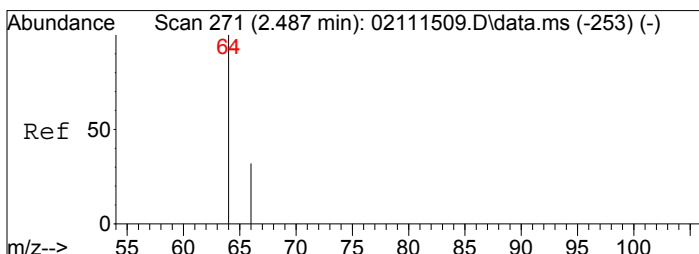
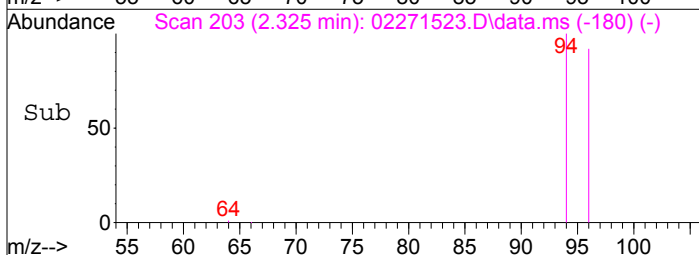
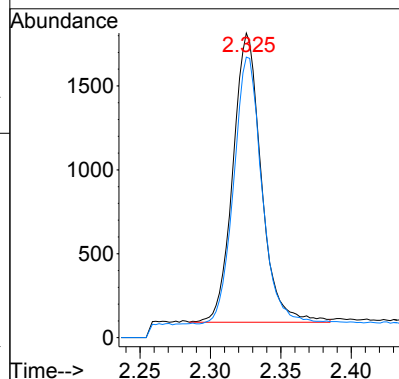
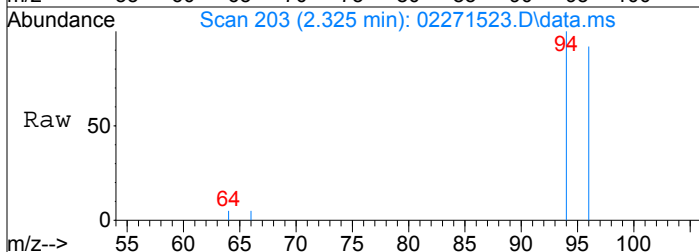
Tgt Ion: 52 Resp: 10686
 Ion Ratio Lower Upper
 52 100
 50 308.7 283.7 323.7





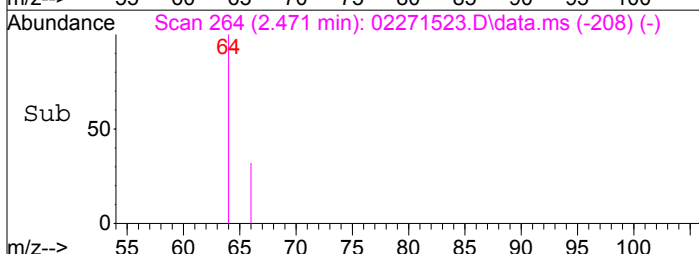
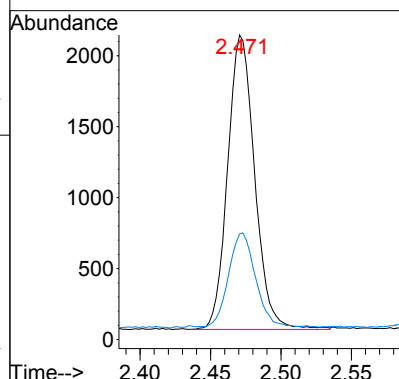
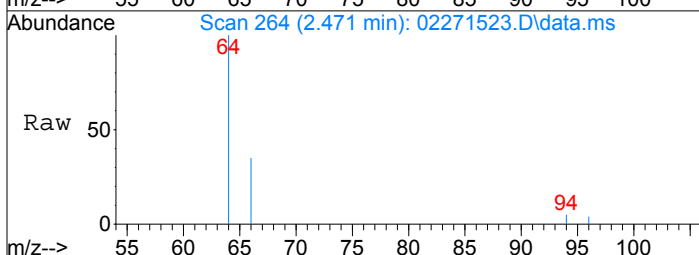
#5
Bromomethane
Concen: 45.70 pg
RT: 2.33 min Scan# 203
Delta R.T. -0.005 min
Lab File: 02271523.D
Acq: 27 Feb 2015 21:36

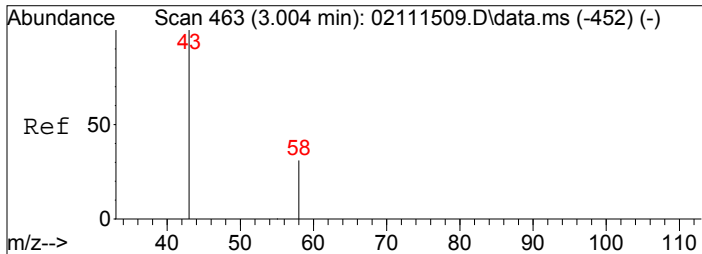
Tgt Ion: 94 Resp: 2415
Ion Ratio Lower Upper
94 100
96 93.1 75.5 113.3



#6
Chloroethane
Concen: 62.29 pg
RT: 2.47 min Scan# 264
Delta R.T. -0.016 min
Lab File: 02271523.D
Acq: 27 Feb 2015 21:36

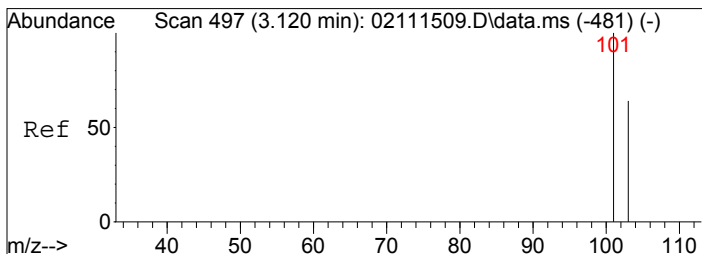
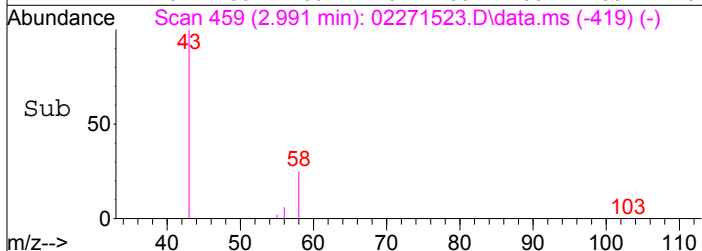
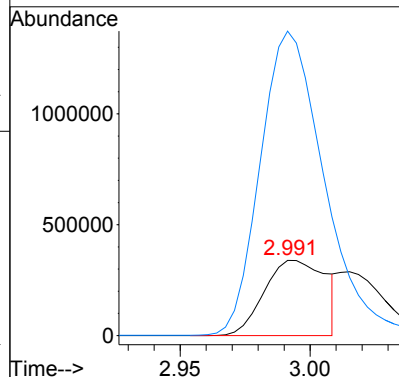
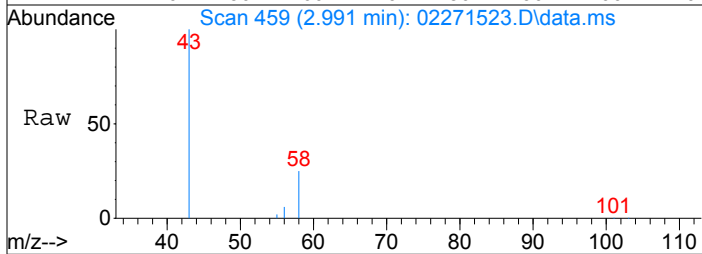
Tgt Ion: 64 Resp: 2769
Ion Ratio Lower Upper
64 100
66 31.1 12.2 52.2





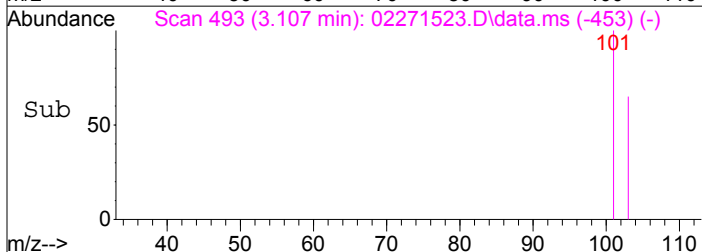
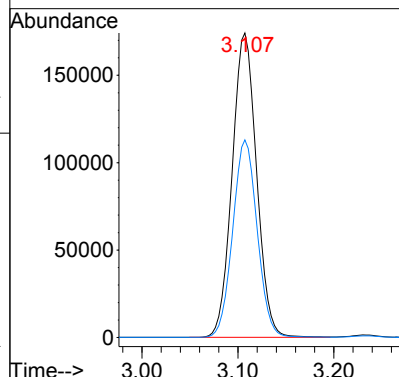
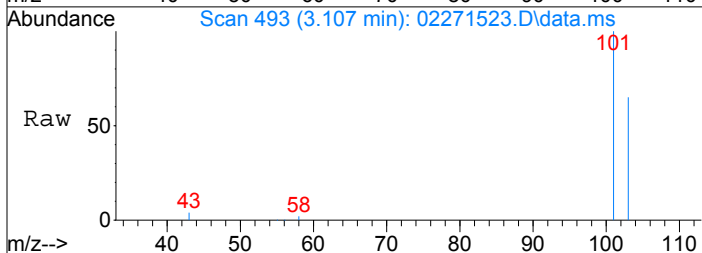
#7
Acetone
Concen: 13517.28 pg m
RT: 2.99 min Scan# 459
Delta R.T. -0.013 min
Lab File: 02271523.D
Acq: 27 Feb 2015 21:36

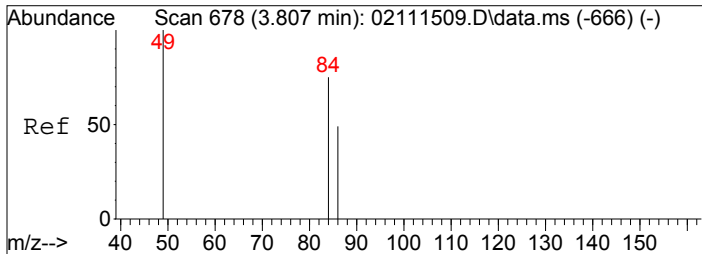
Tgt Ion: 58 Resp: 560912
Ion Ratio Lower Upper
58 100
43 426.7 301.8 341.8#



#8
Trichlorofluoromethane
Concen: 3055.03 pg
RT: 3.11 min Scan# 493
Delta R.T. -0.012 min
Lab File: 02271523.D
Acq: 27 Feb 2015 21:36

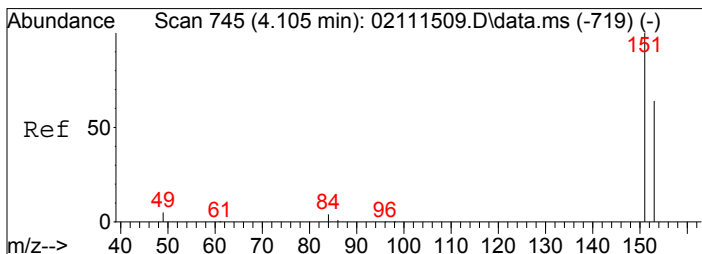
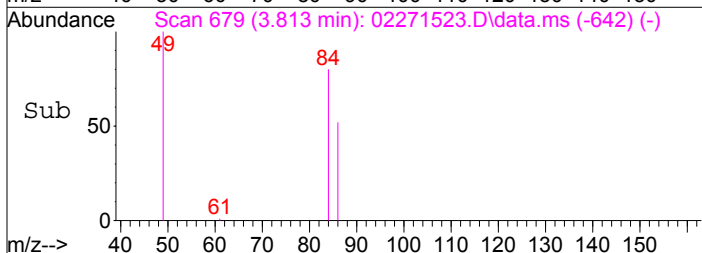
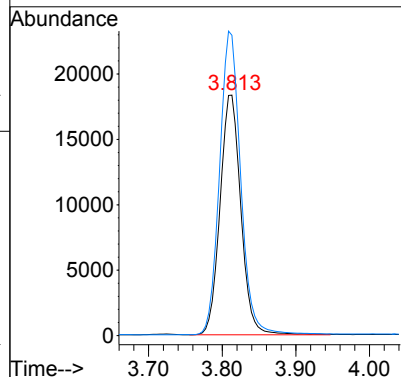
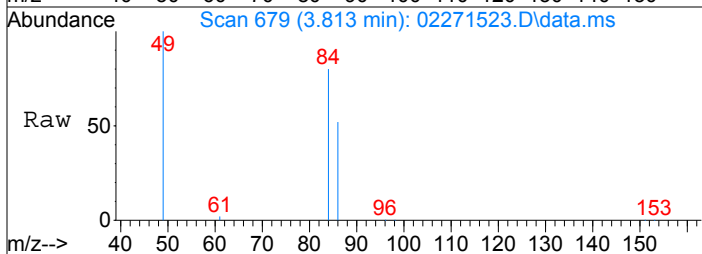
Tgt Ion: 101 Resp: 308366
Ion Ratio Lower Upper
101 100
103 64.9 51.8 77.6





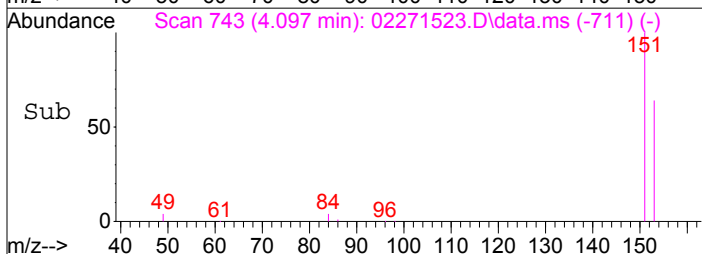
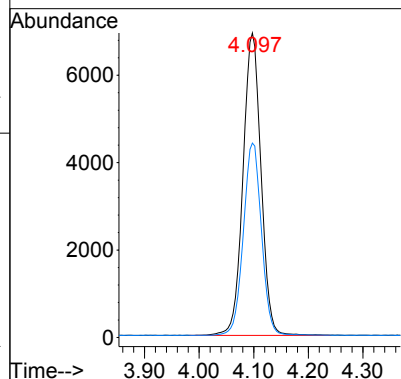
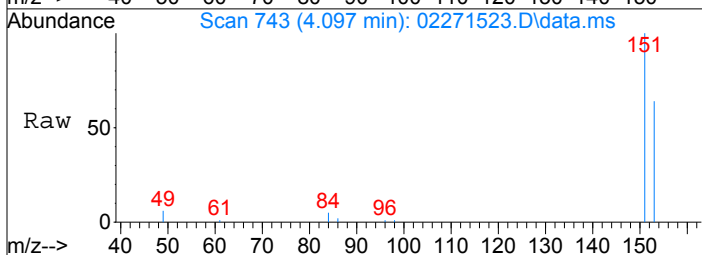
#10
Methylene Chloride
Concen: 752.08 pg
RT: 3.81 min Scan# 679
Delta R.T. 0.006 min
Lab File: 02271523.D
Acq: 27 Feb 2015 21:36

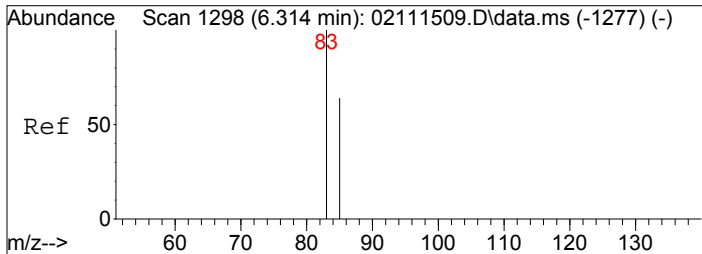
Tgt Ion: 84 Resp: 36021
Ion Ratio Lower Upper
84 100
49 128.7 112.3 152.3



#11
Trichlorotrifluoroethane
Concen: 341.97 pg
RT: 4.10 min Scan# 743
Delta R.T. -0.008 min
Lab File: 02271523.D
Acq: 27 Feb 2015 21:36

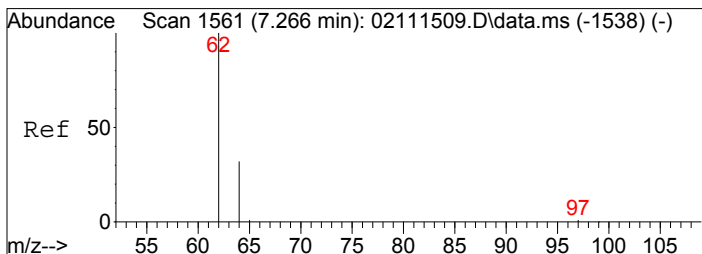
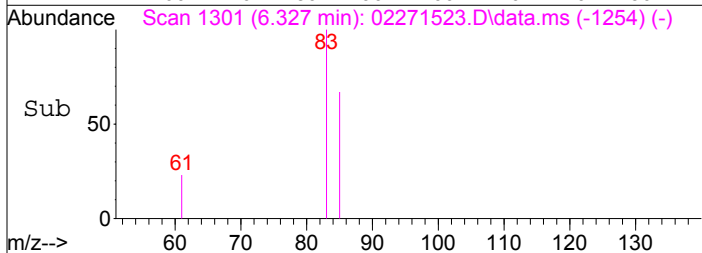
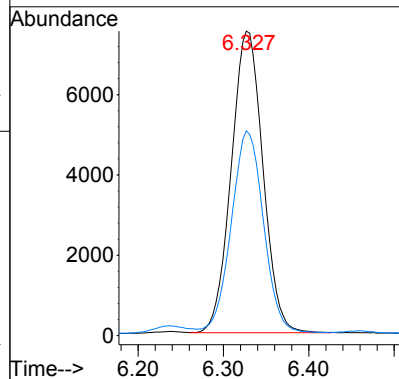
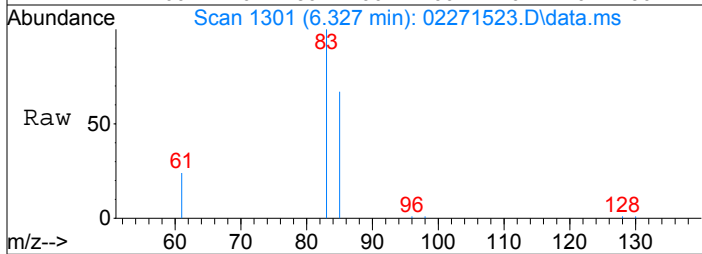
Tgt Ion: 151 Resp: 15861
Ion Ratio Lower Upper
151 100
153 63.9 43.6 83.6





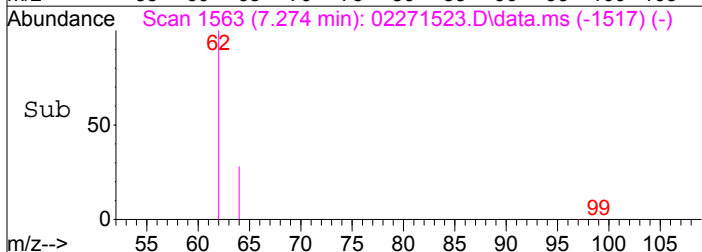
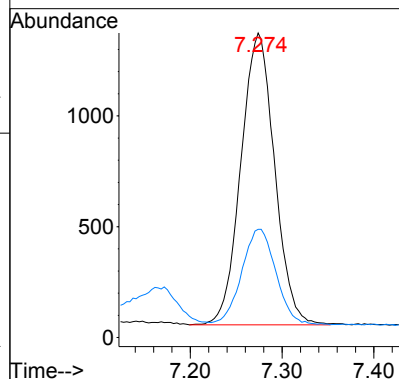
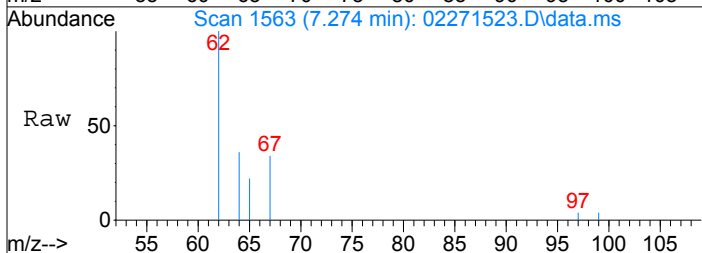
#16
Chloroform
Concen: 218.75 pg
RT: 6.33 min Scan# 1301
Delta R.T. 0.013 min
Lab File: 02271523.D
Acq: 27 Feb 2015 21:36

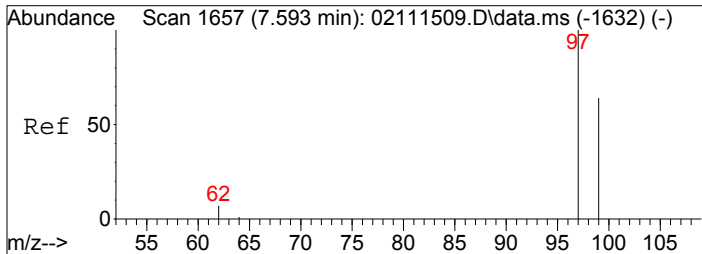
Tgt Ion: 83 Resp: 19393
Ion Ratio Lower Upper
83 100
85 68.0 45.4 85.4



#18
1,2-Dichloroethane
Concen: 47.63 pg
RT: 7.27 min Scan# 1563
Delta R.T. 0.008 min
Lab File: 02271523.D
Acq: 27 Feb 2015 21:36

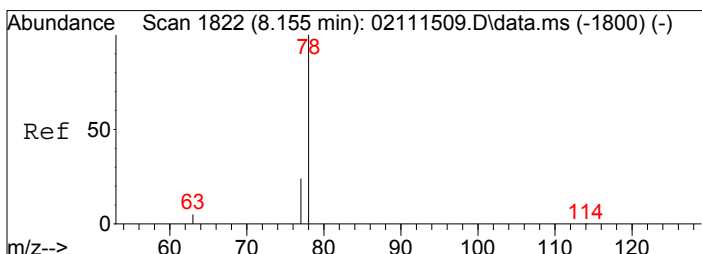
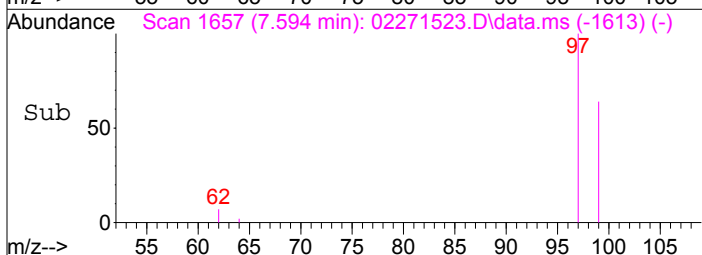
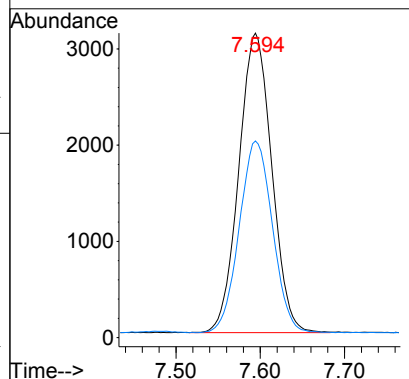
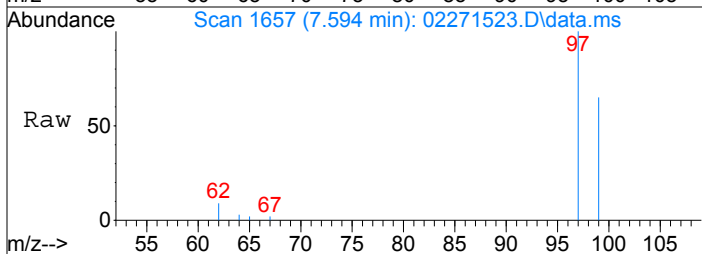
Tgt Ion: 62 Resp: 3362
Ion Ratio Lower Upper
62 100
64 32.7 11.6 51.6





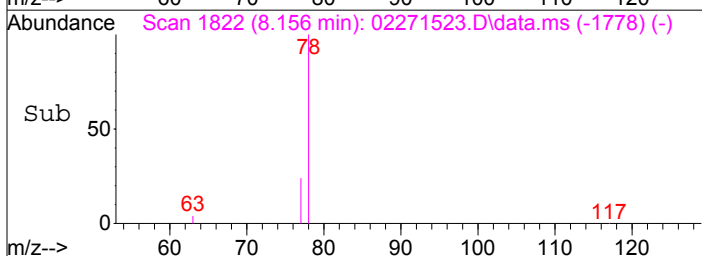
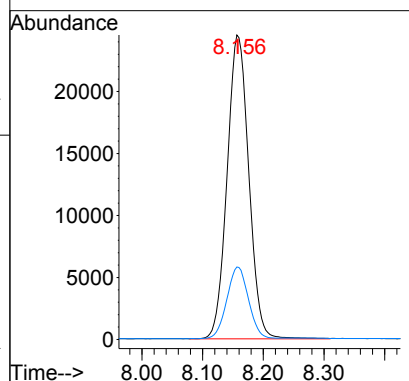
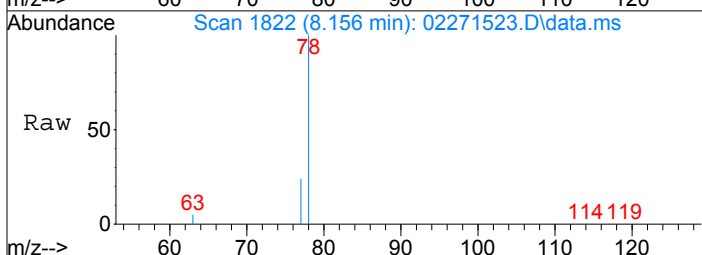
#19
 1,1,1-Trichloroethane
 Concen: 98.16 pg
 RT: 7.59 min Scan# 1657
 Delta R.T. 0.001 min
 Lab File: 02271523.D
 Acq: 27 Feb 2015 21:36

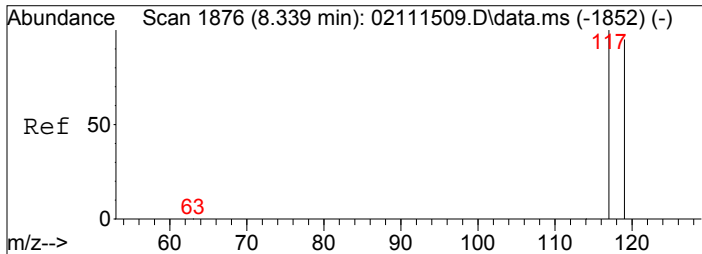
Tgt Ion: 97 Resp: 8462
 Ion Ratio Lower Upper
 97 100
 99 64.5 44.0 84.0



#20
 Benzene
 Concen: 333.28 pg
 RT: 8.16 min Scan# 1822
 Delta R.T. 0.002 min
 Lab File: 02271523.D
 Acq: 27 Feb 2015 21:36

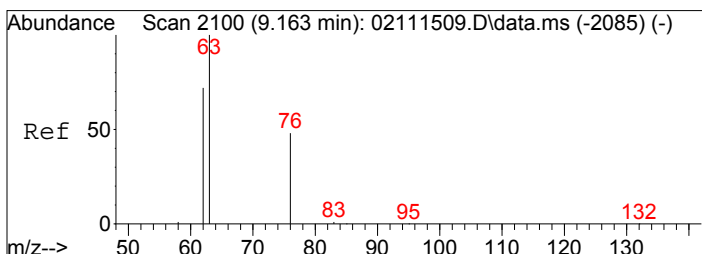
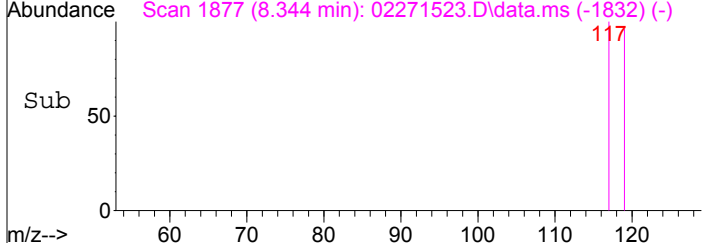
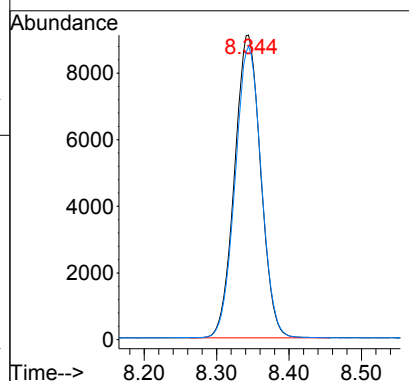
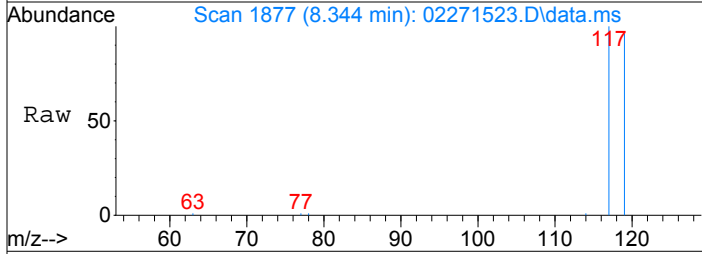
Tgt Ion: 78 Resp: 60770
 Ion Ratio Lower Upper
 78 100
 77 23.5 3.7 43.7





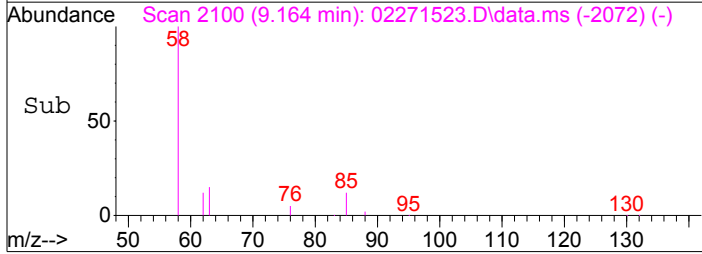
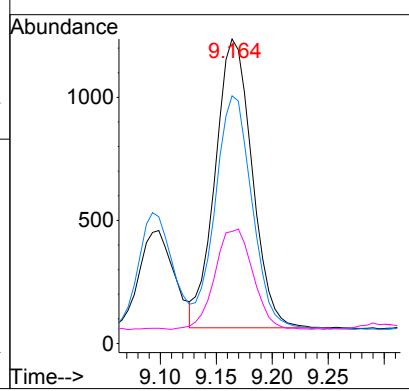
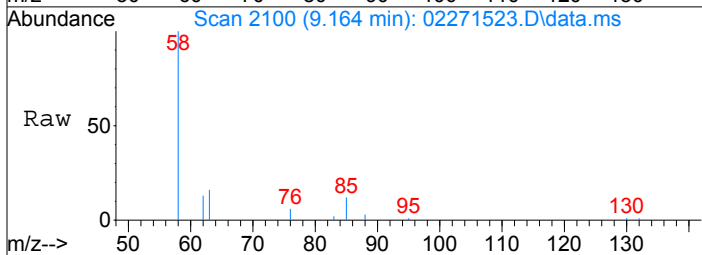
#21
Carbon Tetrachloride
Concen: 352.67 pg
RT: 8.34 min Scan# 1877
Delta R.T. 0.005 min
Lab File: 02271523.D
Acq: 27 Feb 2015 21:36

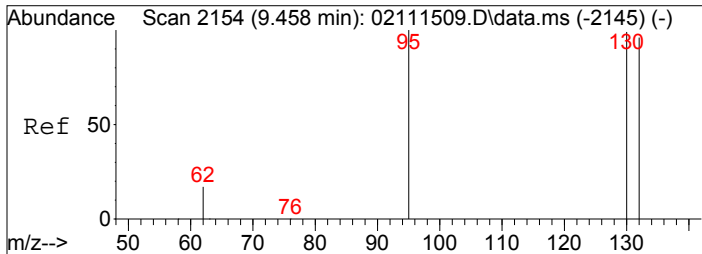
Tgt Ion:117	Resp:	22762
Ion Ratio	Lower	Upper
117	100	
119	96.2	75.5 115.5



#23
1,2-Dichloropropane
Concen: 61.71 pg
RT: 9.16 min Scan# 2100
Delta R.T. 0.001 min
Lab File: 02271523.D
Acq: 27 Feb 2015 21:36

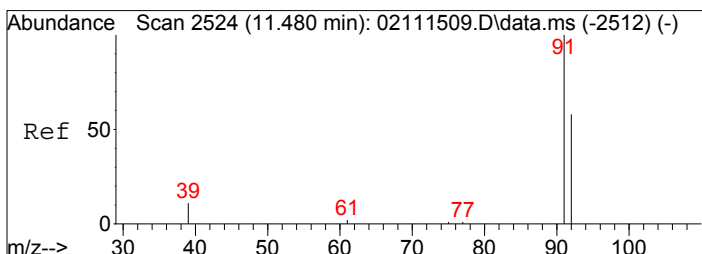
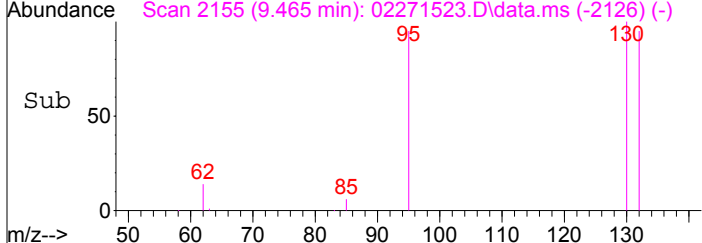
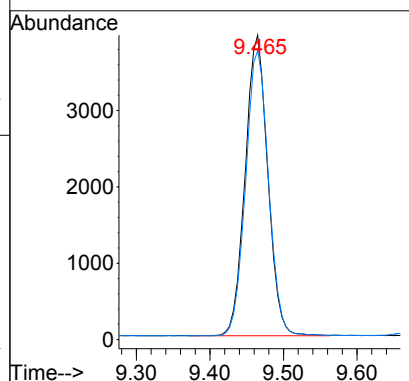
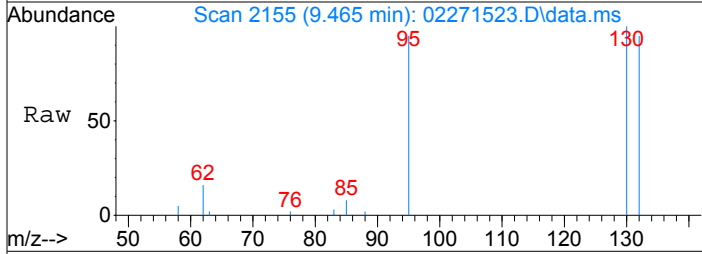
Tgt Ion: 63	Resp:	2692
Ion Ratio	Lower	Upper
63	100	
62	81.6	52.0 92.0
76	36.0	28.1 68.1





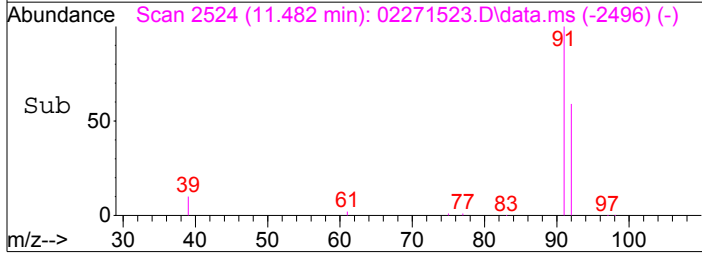
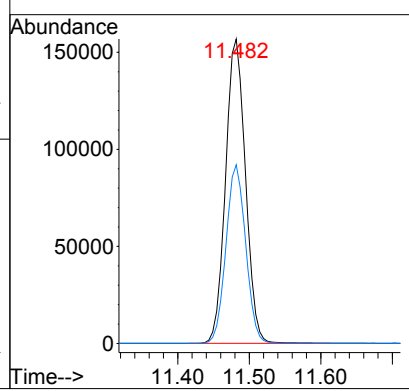
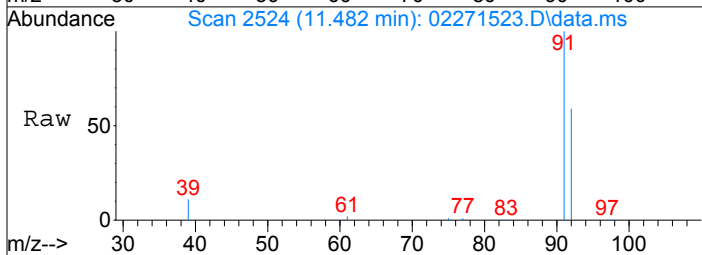
#25
 Trichloroethene
 Concen: 163.52 pg
 RT: 9.46 min Scan# 2155
 Delta R.T. 0.007 min
 Lab File: 02271523.D
 Acq: 27 Feb 2015 21:36

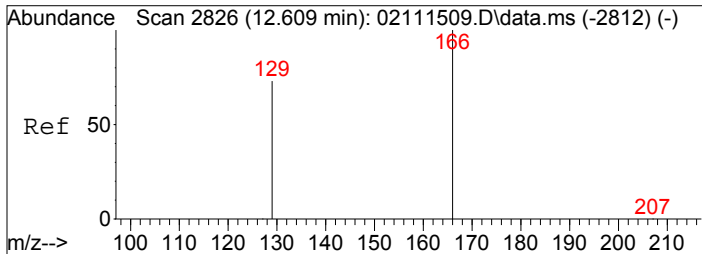
Tgt Ion:130	Resp:	8403
Ion Ratio	Lower	Upper
130	100	
132	96.5	77.1 117.1



#31
 Toluene
 Concen: 1544.34 pg
 RT: 11.48 min Scan# 2524
 Delta R.T. 0.001 min
 Lab File: 02271523.D
 Acq: 27 Feb 2015 21:36

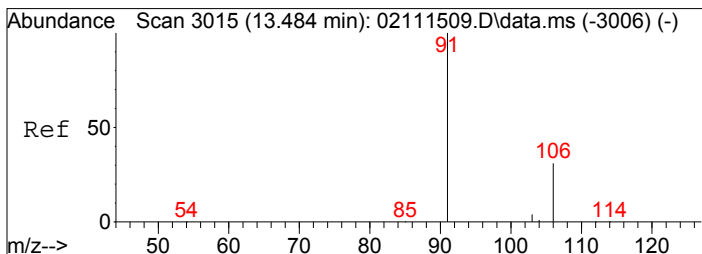
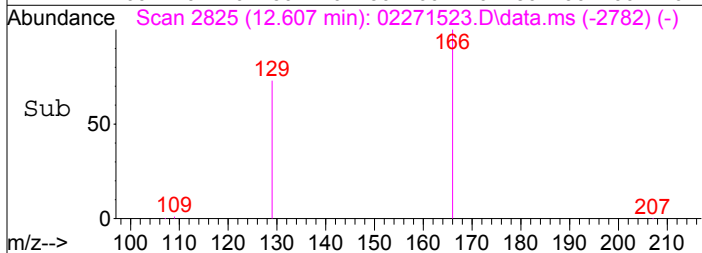
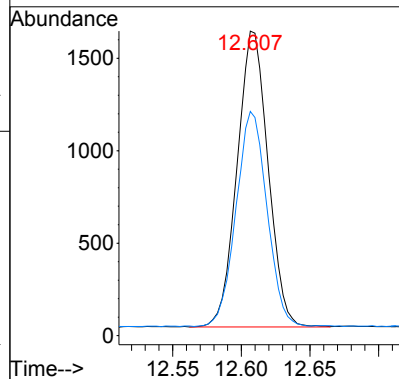
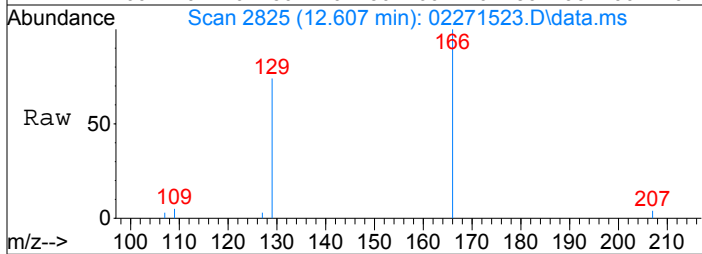
Tgt Ion: 91	Resp:	302984
Ion Ratio	Lower	Upper
91	100	
92	58.2	37.7 77.7





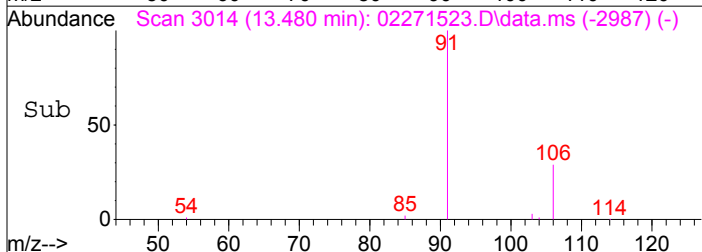
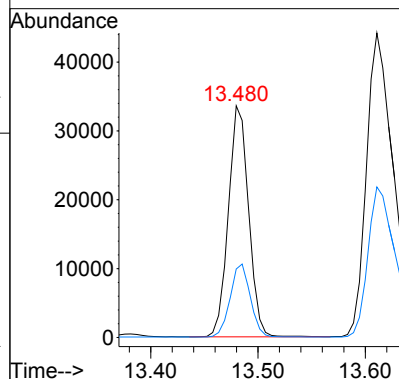
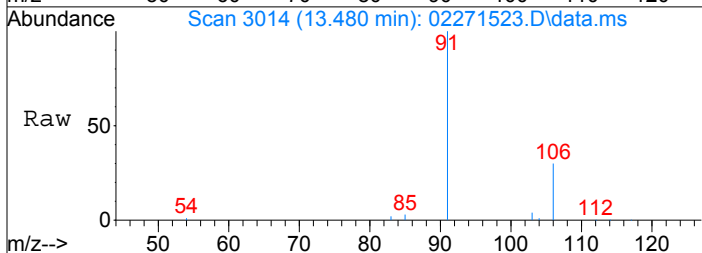
#33
Tetrachloroethene
Concen: 41.32 pg
RT: 12.61 min Scan# 2825
Delta R.T. -0.002 min
Lab File: 02271523.D
Acq: 27 Feb 2015 21:36

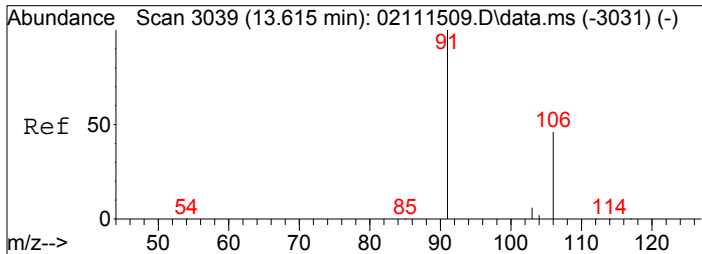
Tgt Ion: 166 Resp: 2510
Ion Ratio Lower Upper
166 100
129 72.6 53.3 93.3



#36
Ethylbenzene
Concen: 204.35 pg
RT: 13.48 min Scan# 3014
Delta R.T. -0.004 min
Lab File: 02271523.D
Acq: 27 Feb 2015 21:36

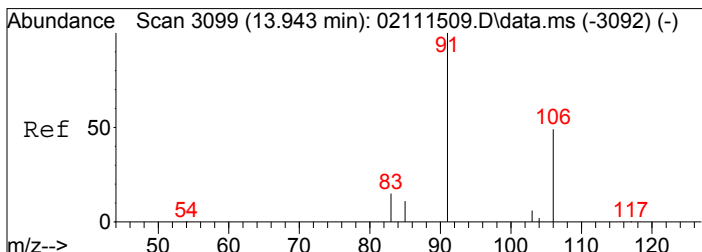
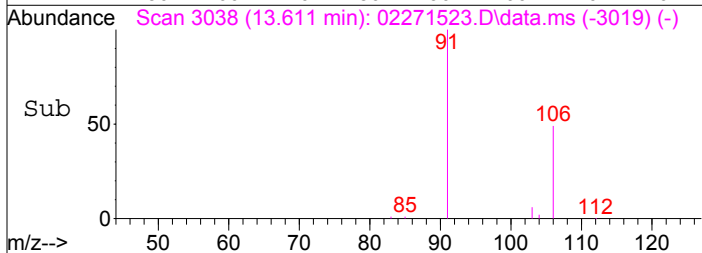
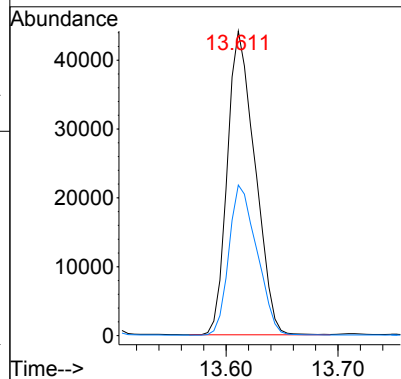
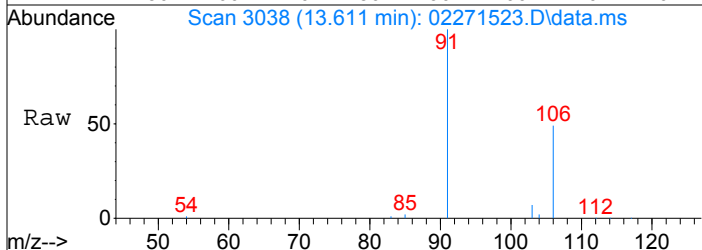
Tgt Ion: 91 Resp: 43934
Ion Ratio Lower Upper
91 100
106 31.4 10.9 50.9





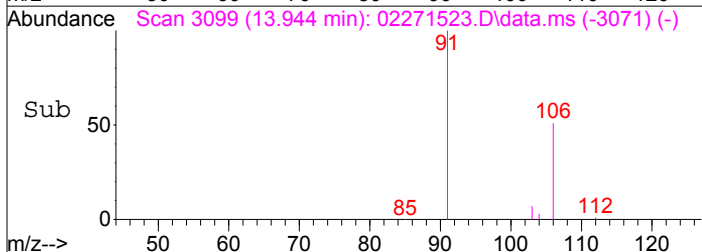
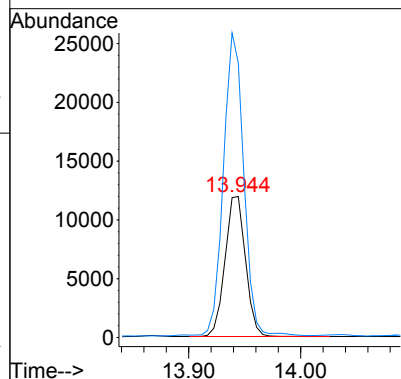
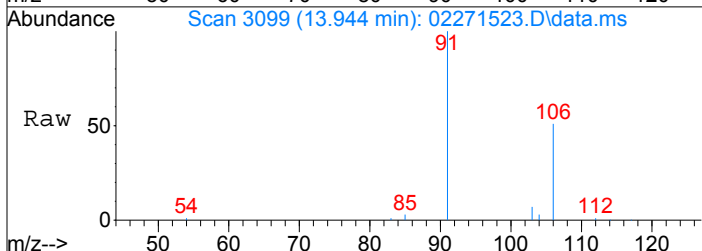
#37
 m,p-Xylene
 Concen: 428.30 pg
 RT: 13.61 min Scan# 3038
 Delta R.T. -0.004 min
 Lab File: 02271523.D
 Acq: 27 Feb 2015 21:36

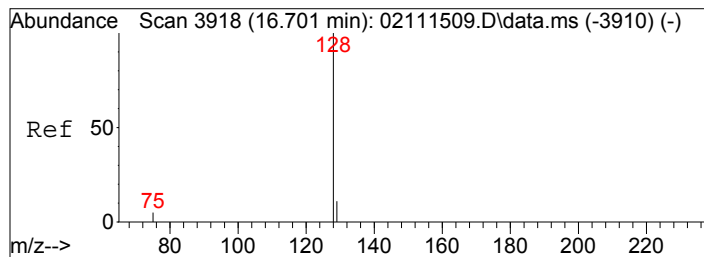
Tgt Ion: 91 Resp: 75682
 Ion Ratio Lower Upper
 91 100
 106 50.0 27.5 67.5



#38
 o-Xylene
 Concen: 175.71 pg
 RT: 13.94 min Scan# 3099
 Delta R.T. 0.001 min
 Lab File: 02271523.D
 Acq: 27 Feb 2015 21:36

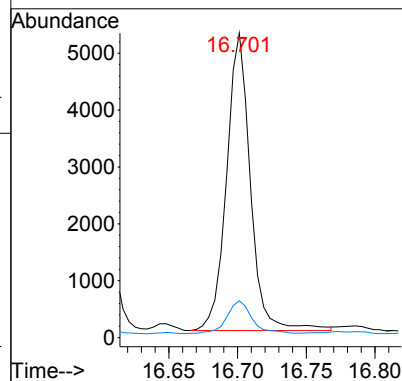
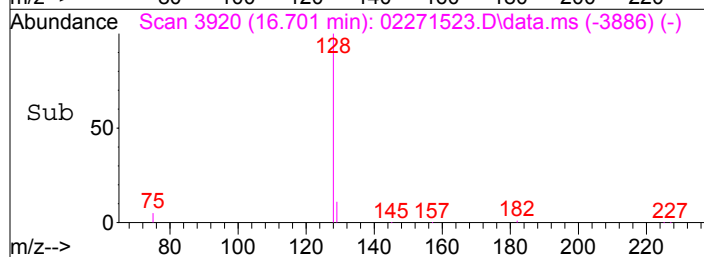
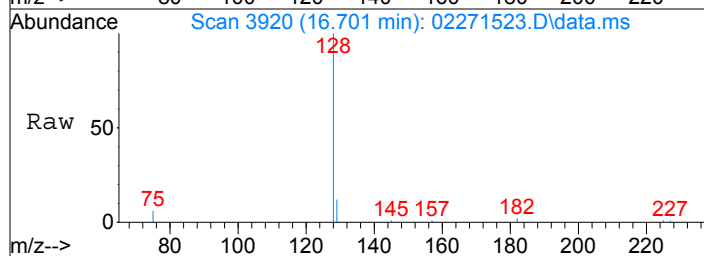
Tgt Ion: 106 Resp: 15174
 Ion Ratio Lower Upper
 106 100
 91 214.4 198.3 238.3





#45
Naphthalene
Concen: 29.43 pg
RT: 16.70 min Scan# 3920
Delta R.T. 0.000 min
Lab File: 02271523.D
Acq: 27 Feb 2015 21:36

Tgt Ion:128 Resp: 6314
Ion Ratio Lower Upper
128 100
129 11.6 0.0 30.9



Data File: I:\MS19\DATA\2015 02\27\02271523.D

Acq On : 27 Feb 2015 21:36

Operator: WA

Sample : P1500729-002 (1000ml)

Misc : S29-02041502

ALS Vial : 11 Sample Multiplier: 1

Quant Time: Feb 28 06:51:21 2015

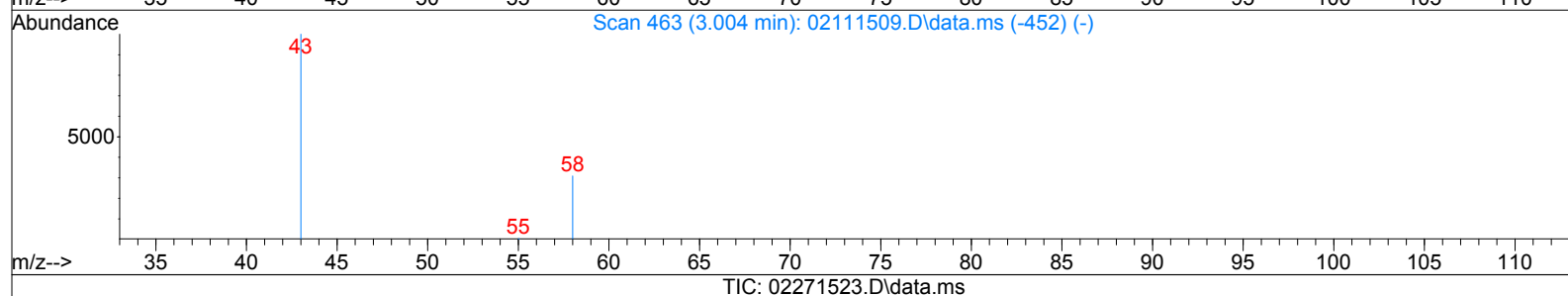
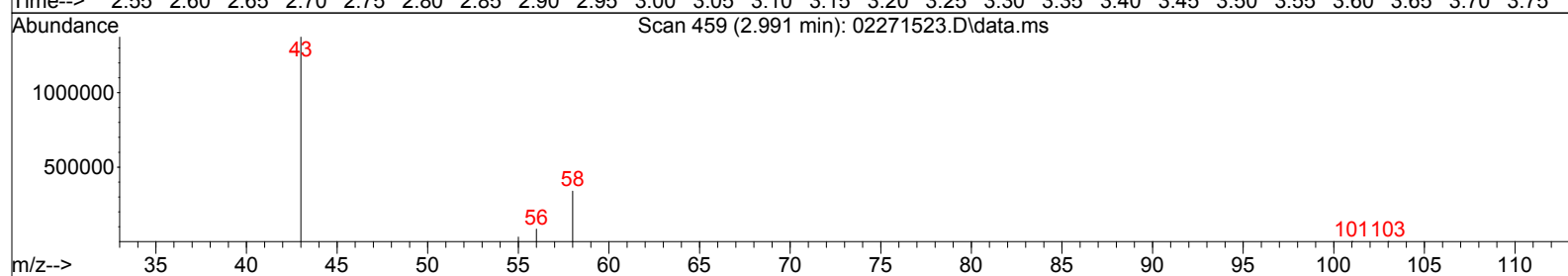
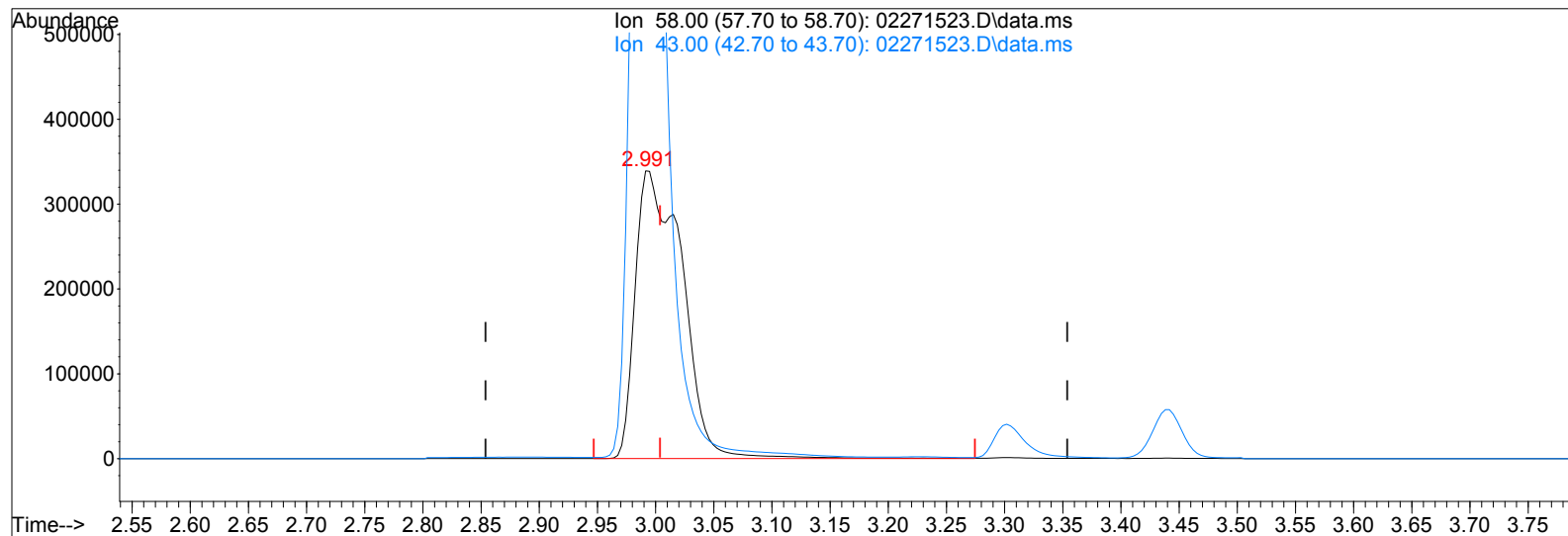
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



(7) Acetone (T)

2.991min (-0.013) 22923.60pg

response 951236

Ion	Exp%	Act%
58.00	100	100
43.00	321.80	251.59#
0.00	0.00	0.00
0.00	0.00	0.00

Data File: I:\MS19\DATA\2015 02\27\02271523.D

Acq On : 27 Feb 2015 21:36

Operator: WA

Sample : P1500729-002 (1000ml)

Misc : S29-02041502

ALS Vial : 11 Sample Multiplier: 1

Quant Time: Feb 28 06:51:21 2015

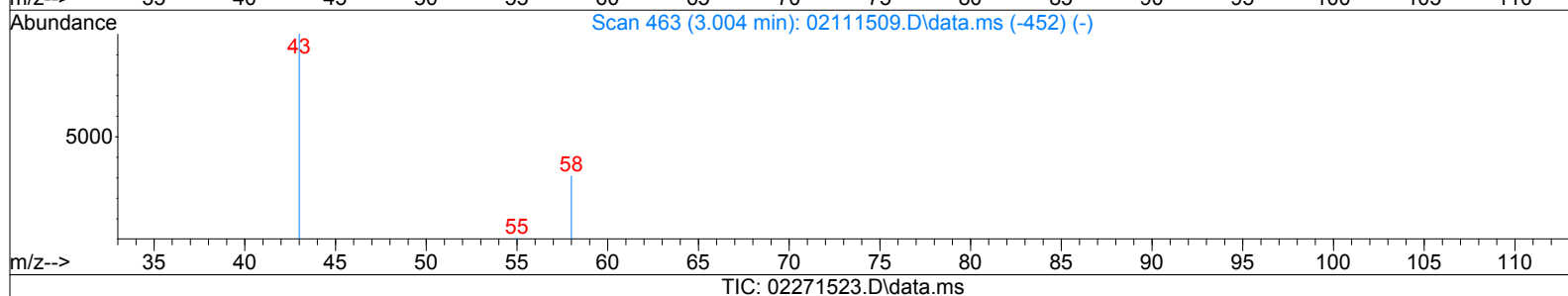
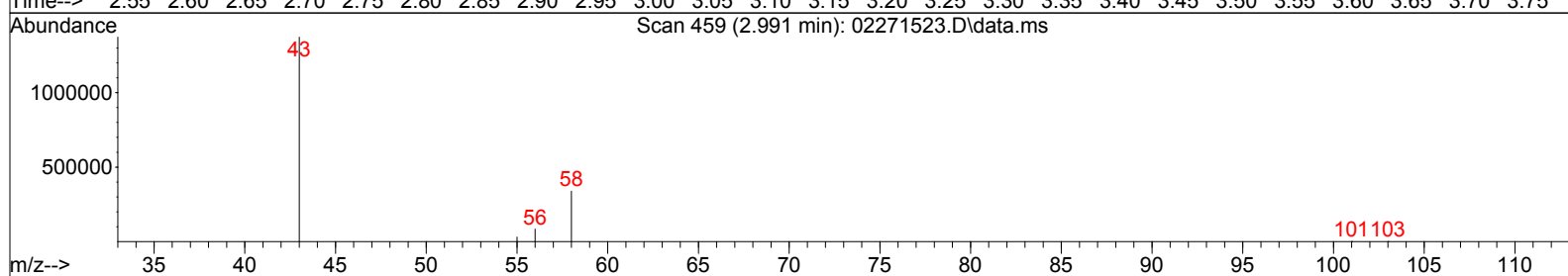
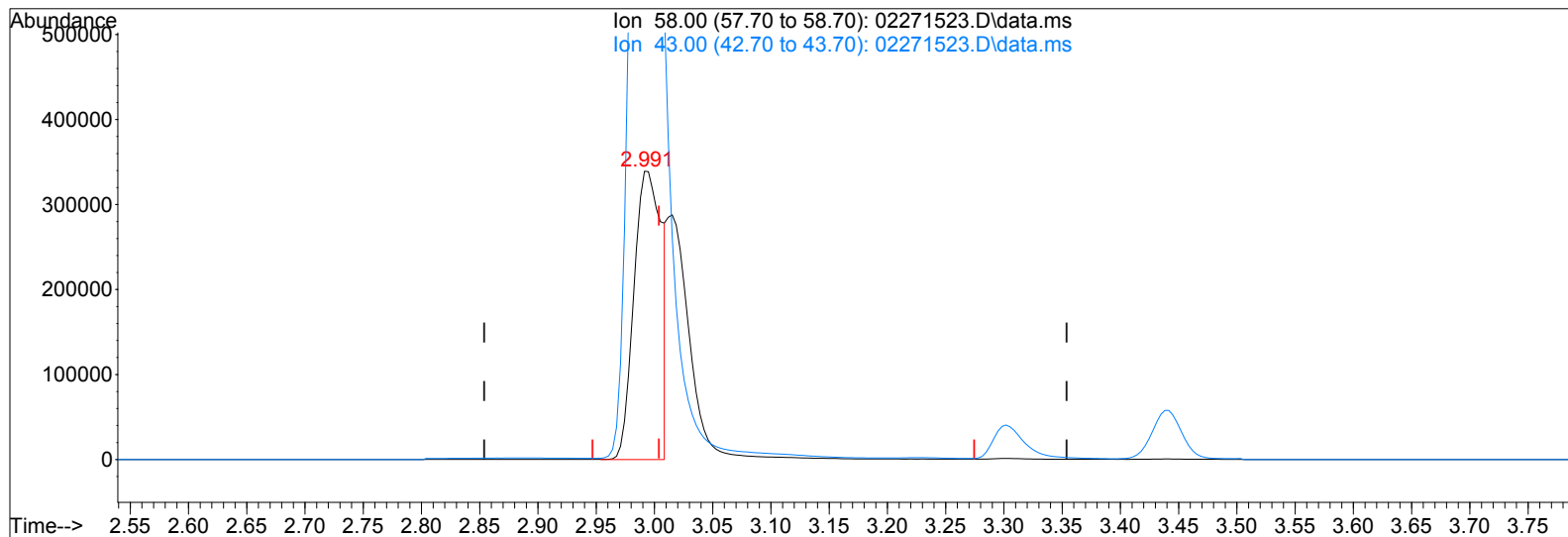
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



(7) Acetone (T)

2.991min (-0.013) 13517.28pg m

response 560912

IPC

Ion	Exp%	Act%
-----	------	------

58.00	100	100
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43.00	321.80	426.67#
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0.00	0.00	0.00
------	------	------

0.00	0.00	0.00
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2/28/15

3/3/15

Data File: I:\MS19\DATA\2015 02\27\02271524.D

Acq On : 27 Feb 2015 22:04

Operator: WA

Sample : P1500729-003 (1000ml)

Misc : S29-02041502

ALS Vial : 12 Sample Multiplier: 1

Quant Time: Feb 28 09:50:45 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

2/28/15

DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	27092	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	196943	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	35479	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	58745	887.906	pg	0.00
Spiked Amount 1000.000			Recovery	=	88.79%	
30) Toluene-d8 (SS2)	11.38	98	184760	1017.301	pg	0.00
Spiked Amount 1000.000			Recovery	=	101.73%	
40) Bromofluorobenzene (SS3)	14.25	174	80674	1126.304	pg	0.00
Spiked Amount 1000.000			Recovery	=	112.63%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.73	85	174871	1588.259	pg	100
3) Chloromethane	1.84	52	10046	456.891	pg	99
4) Vinyl Chloride	2.02	62	147	N.D.		
5) Bromomethane	2.33	94	1667	33.671	pg	100
6) Chloroethane	2.47	64	659	N.D.		
7) Acetone	2.99	58	296796	7633.694	pg	# 12
8) Trichlorofluoromethane	3.11	101	133447	1411.043	pg	100
9) 1,1-Dichloroethene	3.66	96	59	N.D.		
10) Methylene Chloride	3.80	84	17098	381.009	pg	94
11) Trichlorotrifluoroethane	4.10	151	16042	369.150	pg	100
12) trans-1,2-Dichloroethene	4.74	96	1608	37.297	pg	98
13) 1,1-Dichloroethane	4.95	63	435	N.D.		
14) Methyl tert-Butyl Ether	5.11	73	922	N.D.		
15) cis-1,2-Dichloroethene	5.93	96	586	N.D.		
16) Chloroform	6.32	83	8366	100.719	pg	93
18) 1,2-Dichloroethane	7.27	62	4138	62.567	pg	98
19) 1,1,1-Trichloroethane	7.59	97	1308	N.D.		
20) Benzene	8.16	78	89996	526.778	pg	100
21) Carbon Tetrachloride	8.34	117	22279	368.418	pg	99
23) 1,2-Dichloropropane	9.16	63	1046	24.352	pg	86
24) Bromodichloromethane	0.00	83	0	N.D.	d	
25) Trichloroethene	9.46	130	2404	47.514	pg	99
26) 1,4-Dioxane	9.53	88	272	N.D.		
27) cis-1,3-Dichloropropene	10.46	75	324	N.D.		
28) trans-1,3-Dichloropropene	11.06	75	158	N.D.		
29) 1,1,2-Trichloroethane	11.20	83	137	N.D.		
31) Toluene	11.48	91	844957	4374.364	pg	99
32) 1,2-Dibromoethane	12.12	107	32	N.D.		
33) Tetrachloroethene	12.61	166	3495	58.436	pg	99
35) Chlorobenzene	13.17	112	2041	N.D.		
36) Ethylbenzene	13.48	91	178289	801.359	pg	99
37) m,p-Xylene	13.61	91	434038	2373.660	pg	96
38) o-Xylene	13.94	106	76421	855.151	pg	98
39) 1,1,2,2-Tetrachloroethane	13.88	83	1533	N.D.		
41) 1,3-Dichlorobenzene	0.00	146	0	N.D.	d	
42) 1,4-Dichlorobenzene	15.24	146	3838	31.304	pg	100
43) 1,2-Dichlorobenzene	15.46	146	484	N.D.		
44) 1,2,4-Trichlorobenzene	16.63	182	755	N.D.		
45) Naphthalene	16.70	128	42394	190.968	pg	93
46) Hexachlorobutadiene	16.96	225	57	N.D.		

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\27\02271524.D

Acq On : 27 Feb 2015 22:04

Operator: WA

Sample : P1500729-003 (1000ml)

Misc : S29-02041502

ALS Vial : 12 Sample Multiplier: 1

Quant Time: Feb 28 09:50:45 2015

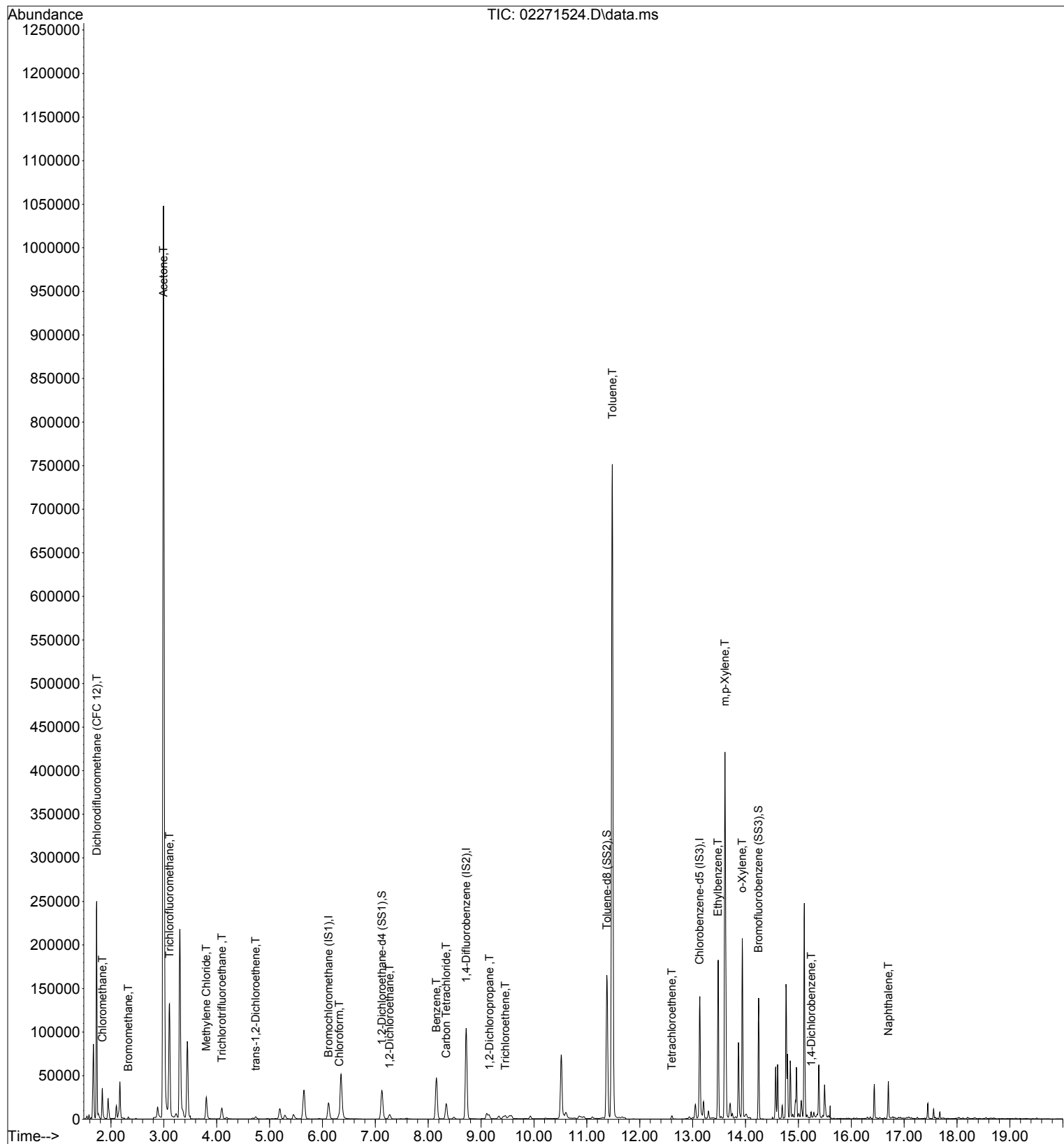
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 02\27\02271524.D

Acq On : 27 Feb 2015 22:04

Operator: WA

Sample : P1500729-003 (1000ml)

Misc : S29-02041502

ALS Vial : 12 Sample Multiplier: 1

Quant Time: Feb 28 09:50:45 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

2/28/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	27092	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	196943	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	35479	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	58745	887.906	pg	0.00
Spiked Amount 1000.000			Recovery	=	88.79%	
30) Toluene-d8 (SS2)	11.38	98	184760	1017.301	pg	0.00
Spiked Amount 1000.000			Recovery	=	101.73%	
40) Bromofluorobenzene (SS3)	14.25	174	80674	1126.304	pg	0.00
Spiked Amount 1000.000			Recovery	=	112.63%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.73	85	174871	1588.259	pg	100
3) Chloromethane	1.84	52	10046	456.891	pg	99
5) Bromomethane	2.33	94	1667	33.671	pg	100
7) Acetone	2.99	58	296796	7633.694	pg	# 12
8) Trichlorofluoromethane	3.11	101	133447	1411.043	pg	100
10) Methylene Chloride	3.80	84	17098	381.009	pg	94
11) Trichlorotrifluoroethane	4.10	151	16042	369.150	pg	100
12) trans-1,2-Dichloroethene	4.74	96	1608	37.297	pg	98
16) Chloroform	6.32	83	8366	100.719	pg	93
18) 1,2-Dichloroethane	7.27	62	4138	62.567	pg	98
20) Benzene	8.16	78	89996	526.778	pg	100
21) Carbon Tetrachloride	8.34	117	22279	368.418	pg	99
23) 1,2-Dichloropropane	9.16	63	1046	24.352	pg	86
25) Trichloroethene	9.46	130	2404	47.514	pg	99
31) Toluene	11.48	91	844957	4374.364	pg	99
33) Tetrachloroethene	12.61	166	3495	58.436	pg	99
36) Ethylbenzene	13.48	91	178289	801.359	pg	99
37) m,p-Xylene	13.61	91	434038	2373.660	pg	96
38) o-Xylene	13.94	106	76421	855.151	pg	98
42) 1,4-Dichlorobenzene	15.24	146	3838	31.304	pg	100
45) Naphthalene	16.70	128	42394	190.968	pg	93

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\27\02271524.D

Acq On : 27 Feb 2015 22:04

Operator: WA

Sample : P1500729-003 (1000ml)

Misc : S29-02041502

ALS Vial : 12 Sample Multiplier: 1

Quant Time: Feb 28 09:50:45 2015

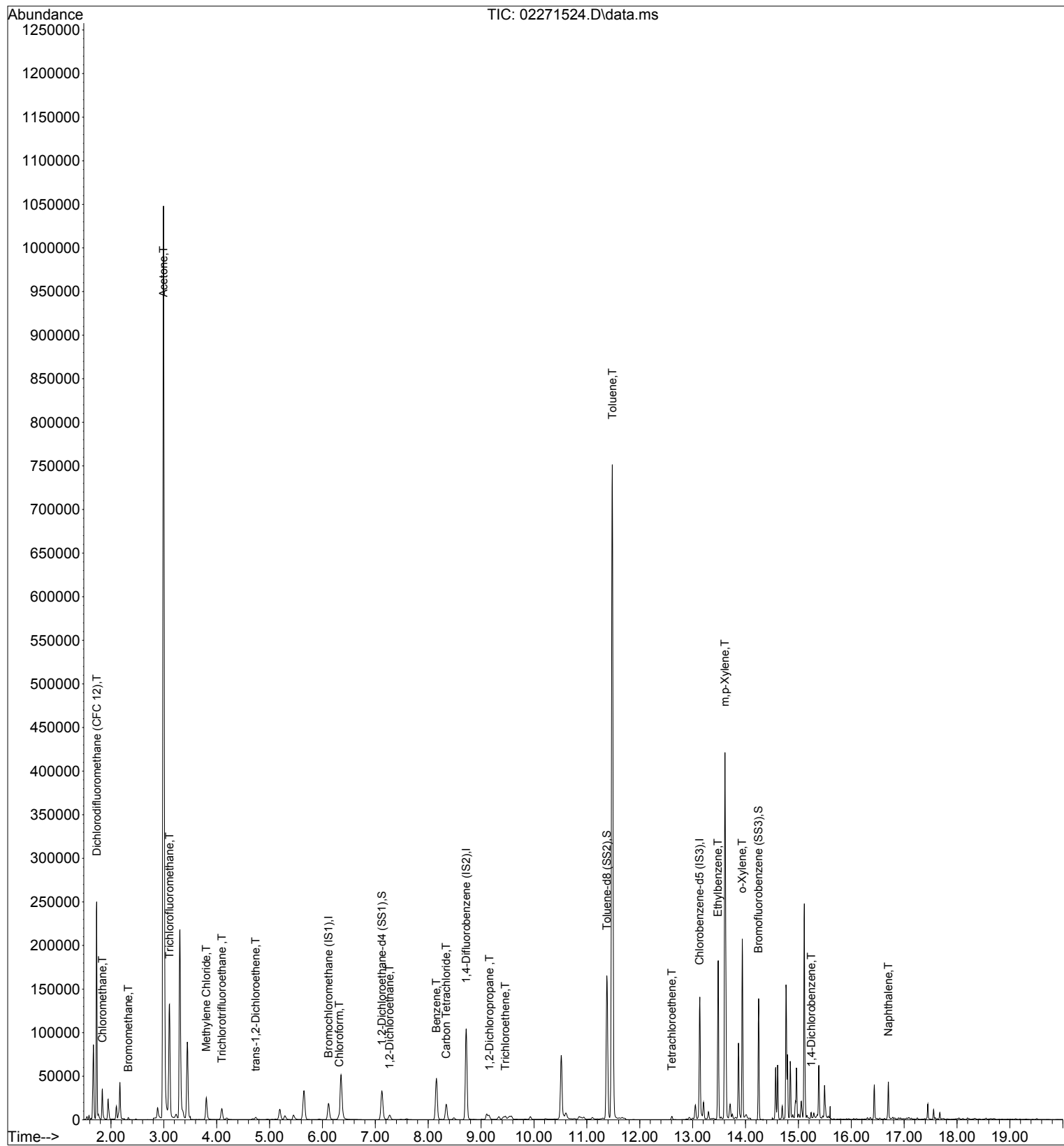
Quant Method : I:\MS19\METHODS\X19021115.M

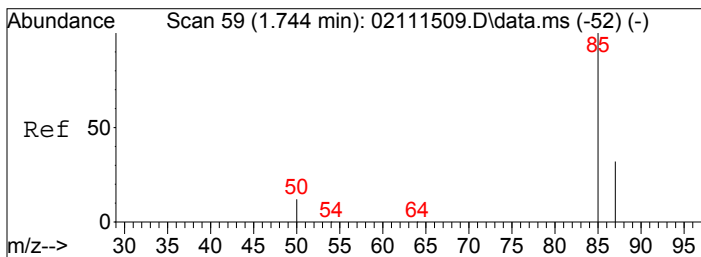
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

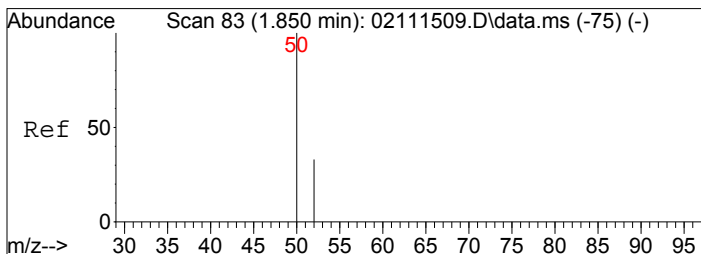
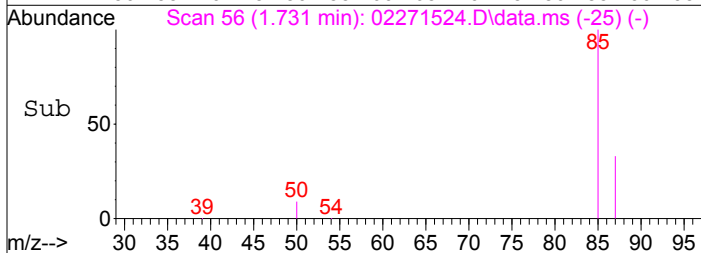
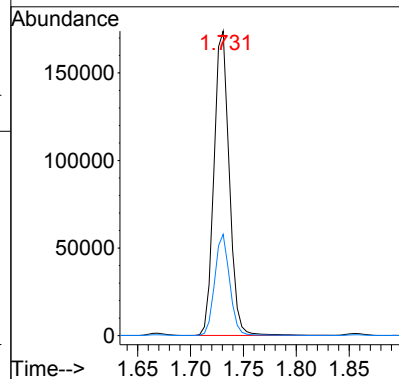
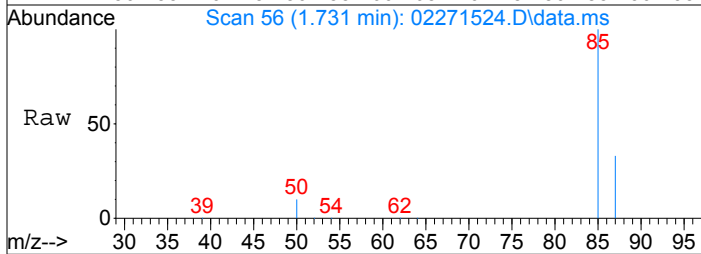
DataAcq Meth:TO15SIM.M





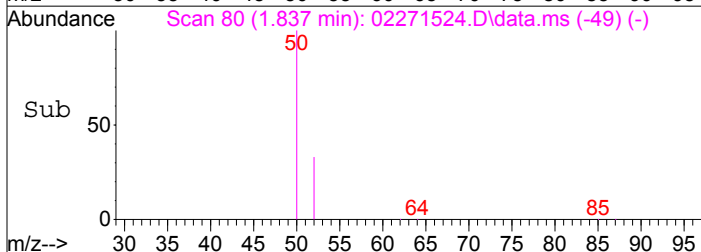
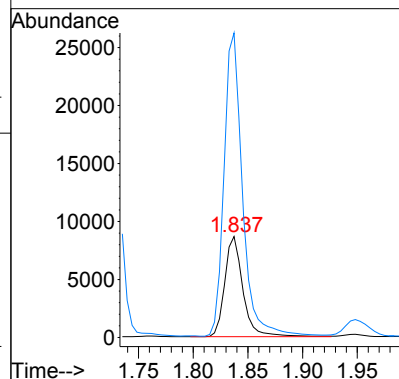
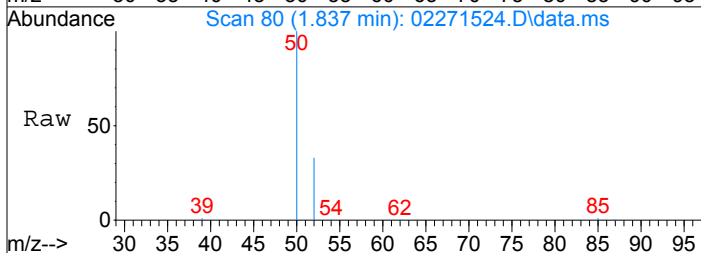
#2
 Dichlorodifluoromethane (CFC 12)
 Concen: 1588.26 pg
 RT: 1.73 min Scan# 56
 Delta R.T. -0.013 min
 Lab File: 02271524.D
 Acq: 27 Feb 2015 22:04

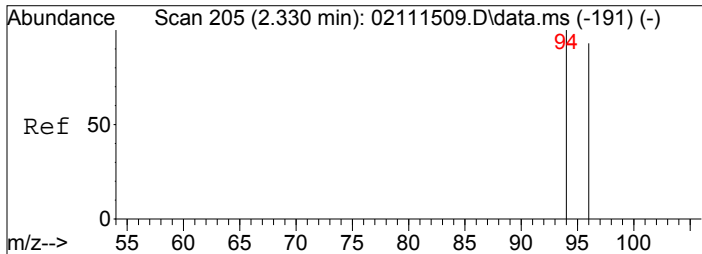
Tgt Ion: 85 Resp: 174871
 Ion Ratio Lower Upper
 85 100
 87 32.5 12.4 52.4



#3
 Chloromethane
 Concen: 456.89 pg
 RT: 1.84 min Scan# 80
 Delta R.T. -0.013 min
 Lab File: 02271524.D
 Acq: 27 Feb 2015 22:04

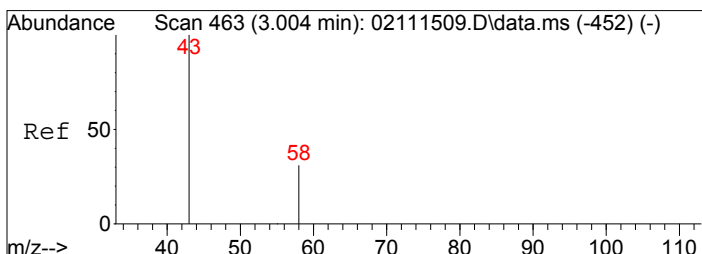
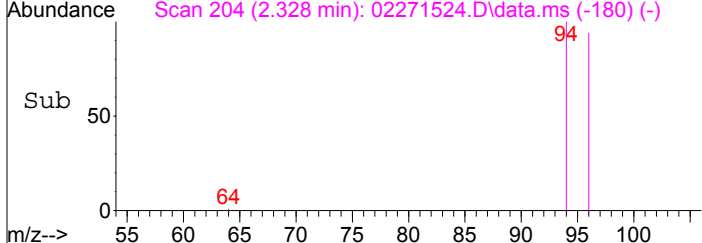
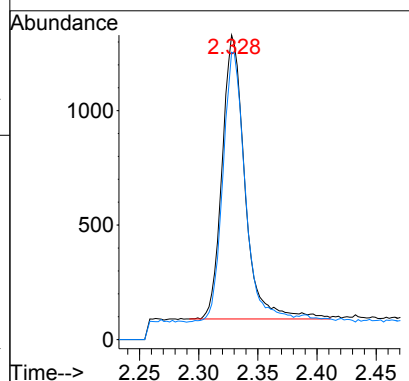
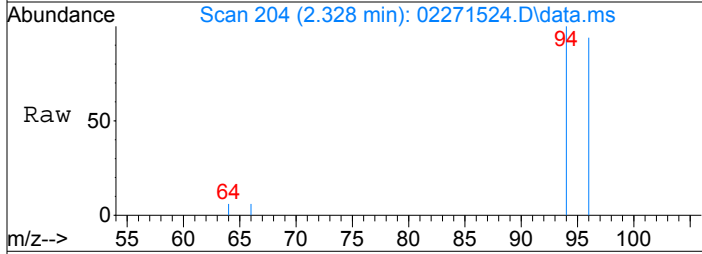
Tgt Ion: 52 Resp: 10046
 Ion Ratio Lower Upper
 52 100
 50 305.5 283.7 323.7





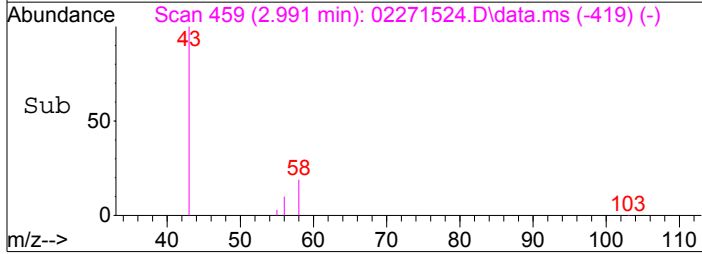
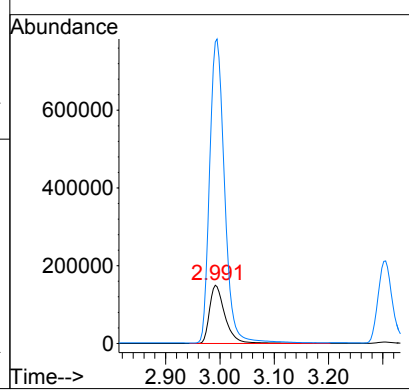
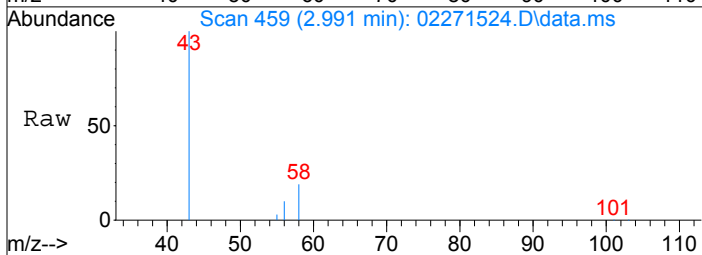
#5
 Bromomethane
 Concen: 33.67 pg
 RT: 2.33 min Scan# 204
 Delta R.T. -0.002 min
 Lab File: 02271524.D
 Acq: 27 Feb 2015 22:04

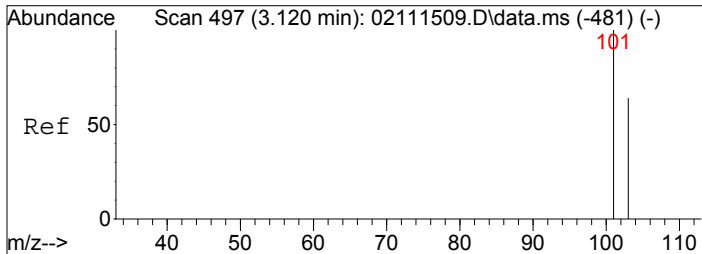
Tgt Ion:	94	Resp:	1667
Ion Ratio	Lower	Upper	
94	100		
96	94.1	75.5	113.3



#7
 Acetone
 Concen: 7633.69 pg
 RT: 2.99 min Scan# 459
 Delta R.T. -0.013 min
 Lab File: 02271524.D
 Acq: 27 Feb 2015 22:04

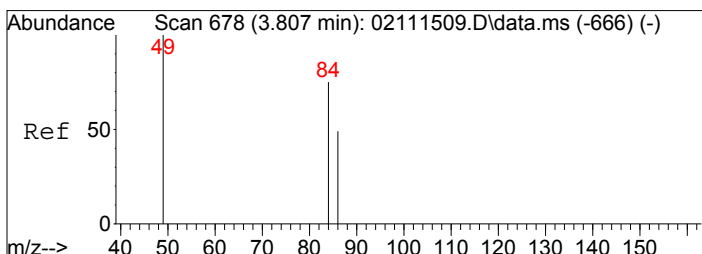
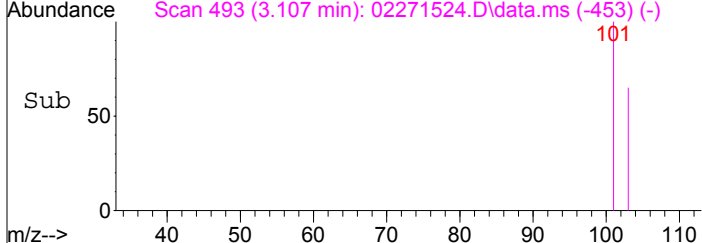
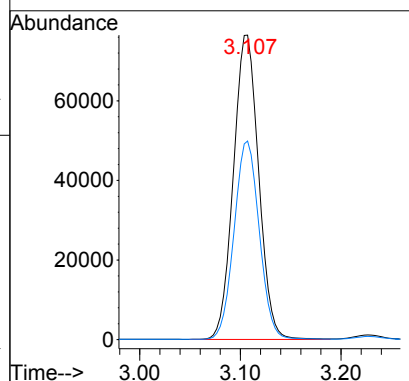
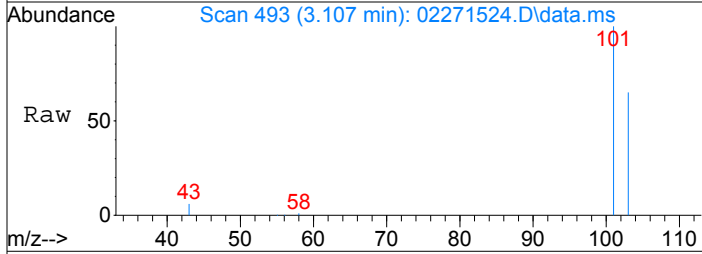
Tgt Ion:	58	Resp:	296796
Ion Ratio	Lower	Upper	
58	100		
43	503.0	301.8	341.8#





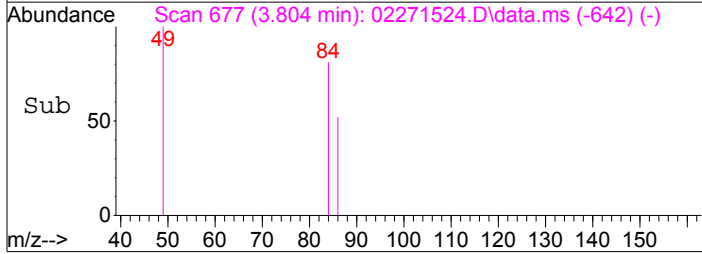
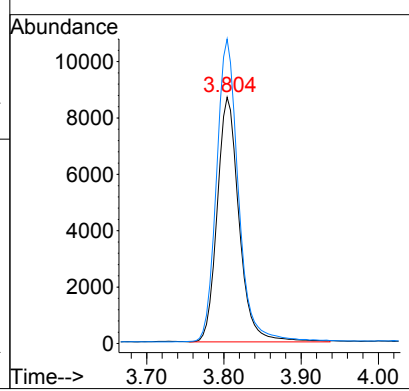
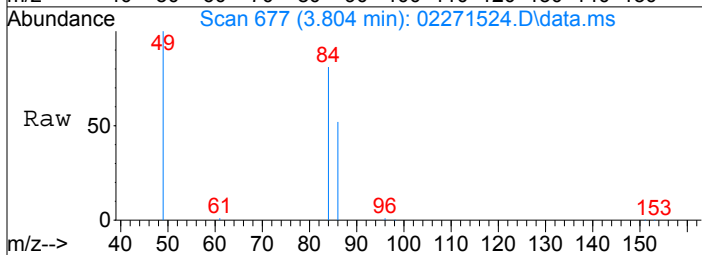
#8
 Trichlorofluoromethane
 Concen: 1411.04 pg
 RT: 3.11 min Scan# 493
 Delta R.T. -0.012 min
 Lab File: 02271524.D
 Acq: 27 Feb 2015 22:04

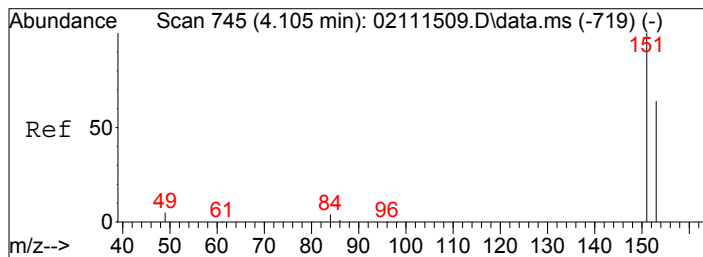
Tgt Ion:	101	Resp:	133447
Ion Ratio	Lower	Upper	
101	100		
103	64.9	51.8	77.6



#10
 Methylene Chloride
 Concen: 381.01 pg
 RT: 3.80 min Scan# 677
 Delta R.T. -0.003 min
 Lab File: 02271524.D
 Acq: 27 Feb 2015 22:04

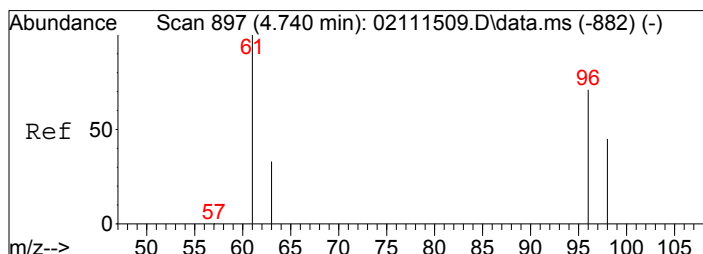
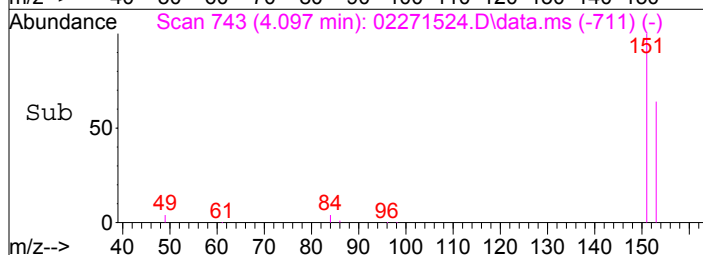
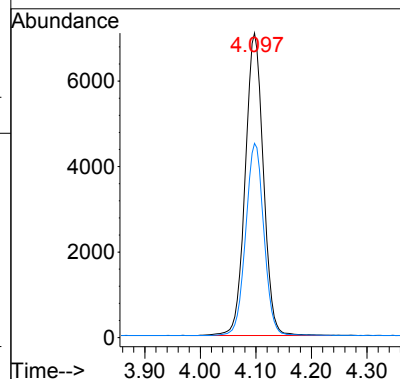
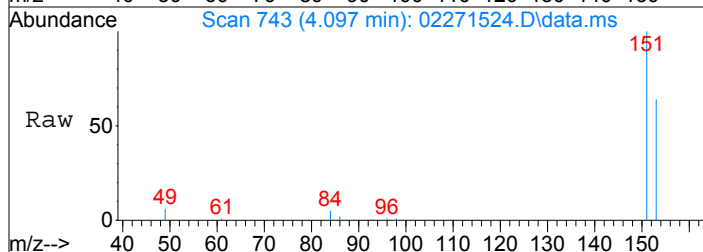
Tgt Ion:	84	Resp:	17098
Ion Ratio	Lower	Upper	
84	100		
49	124.9	112.3	152.3





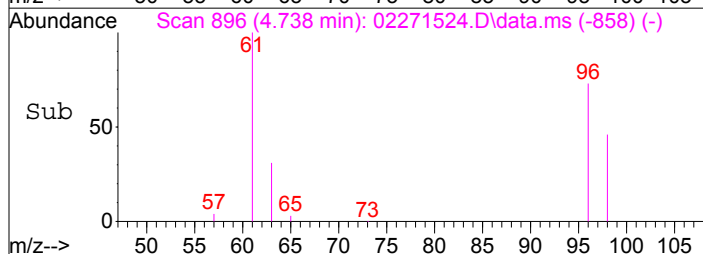
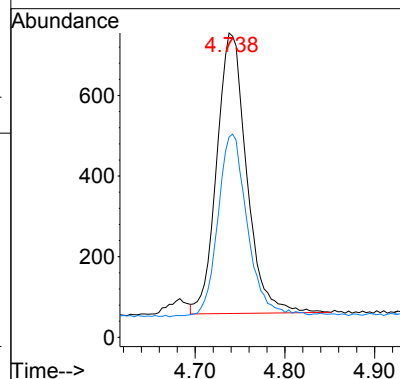
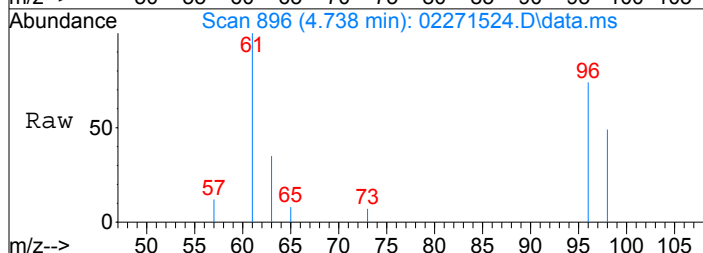
#11
Trichlorotrifluoroethane
Concen: 369.15 pg
RT: 4.10 min Scan# 743
Delta R.T. -0.008 min
Lab File: 02271524.D
Acq: 27 Feb 2015 22:04

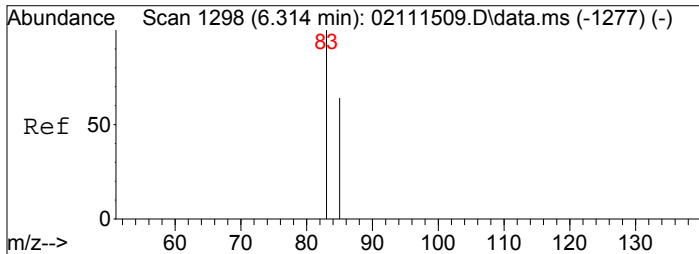
Tgt Ion: 151 Resp: 16042
Ion Ratio Lower Upper
151 100
153 63.7 43.6 83.6



#12
trans-1,2-Dichloroethene
Concen: 37.30 pg
RT: 4.74 min Scan# 896
Delta R.T. -0.003 min
Lab File: 02271524.D
Acq: 27 Feb 2015 22:04

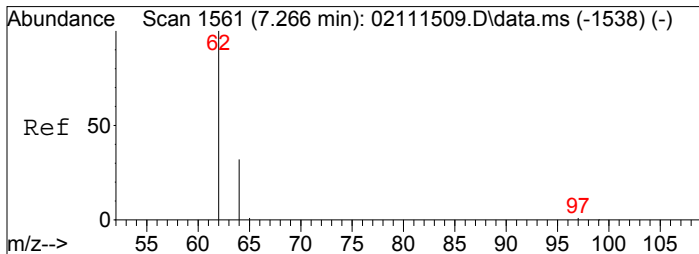
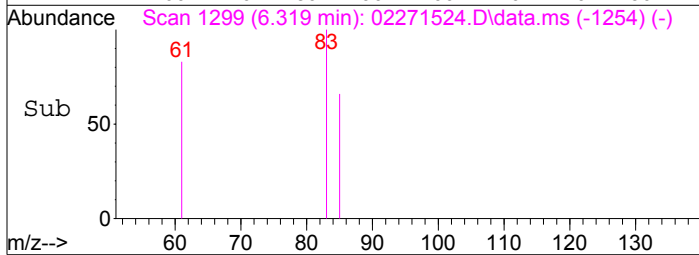
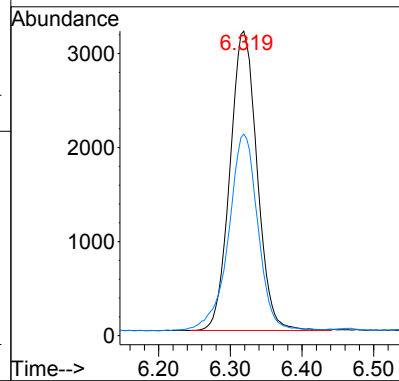
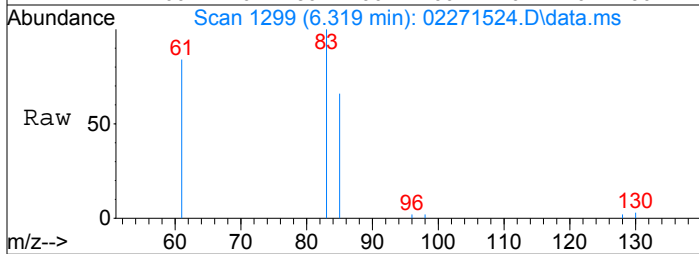
Tgt Ion: 96 Resp: 1608
Ion Ratio Lower Upper
96 100
98 65.2 43.7 83.7





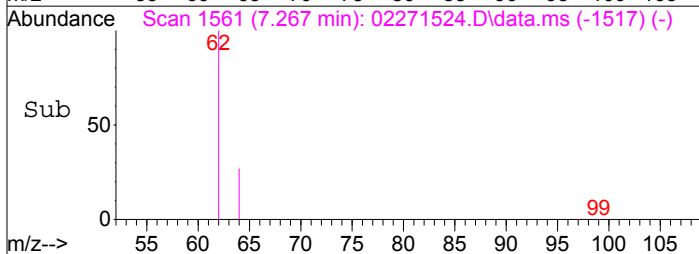
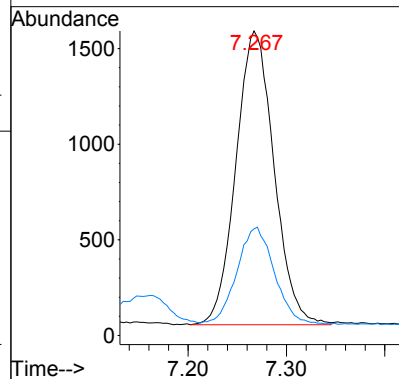
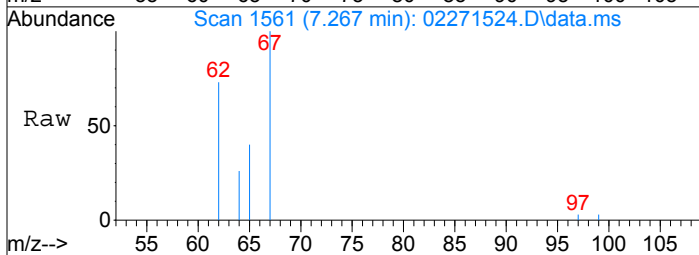
#16
Chloroform
Concen: 100.72 pg
RT: 6.32 min Scan# 1299
Delta R.T. 0.005 min
Lab File: 02271524.D
Acq: 27 Feb 2015 22:04

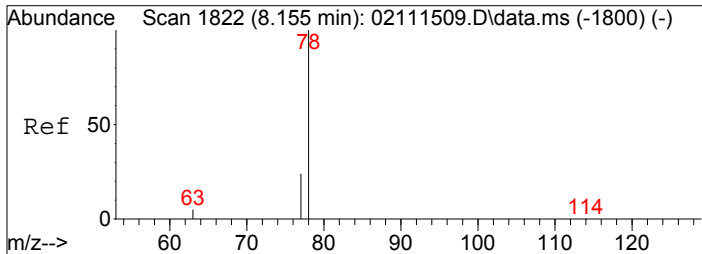
Tgt Ion:	83	Resp:	8366
Ion Ratio	Lower	Upper	
83	100		
85	70.9	45.4	85.4



#18
1,2-Dichloroethane
Concen: 62.57 pg
RT: 7.27 min Scan# 1561
Delta R.T. 0.001 min
Lab File: 02271524.D
Acq: 27 Feb 2015 22:04

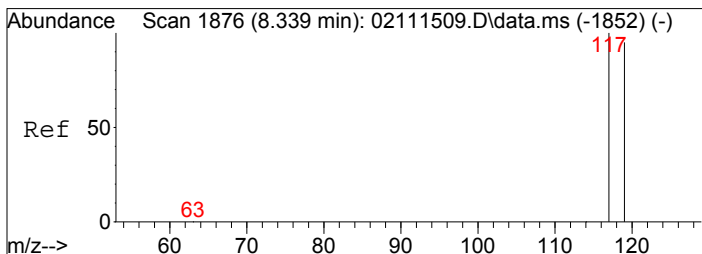
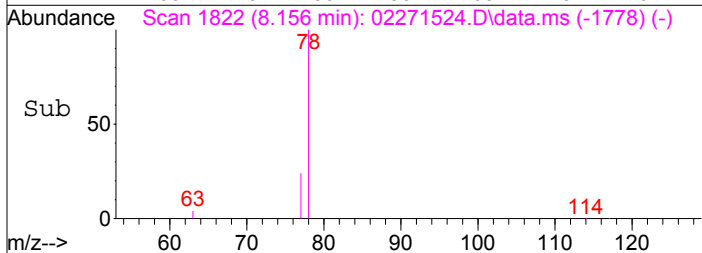
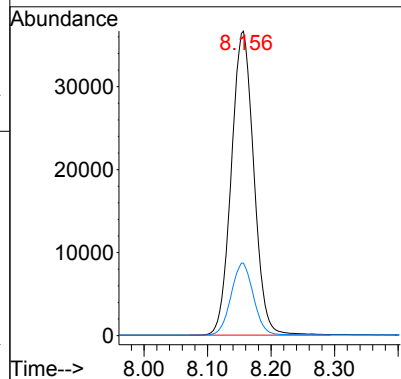
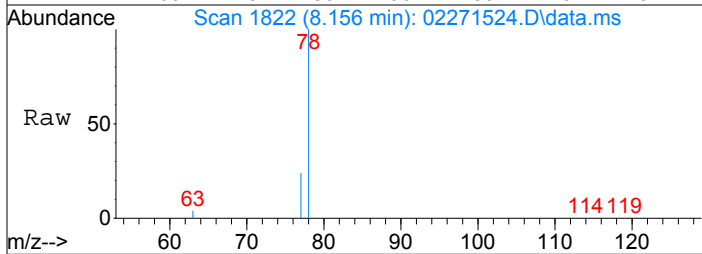
Tgt Ion:	62	Resp:	4138
Ion Ratio	Lower	Upper	
62	100		
64	32.6	11.6	51.6





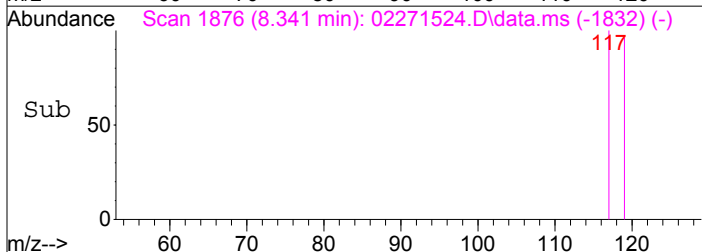
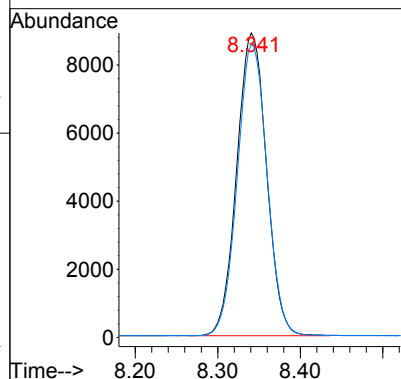
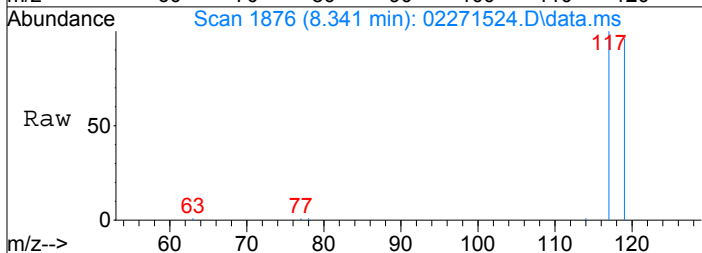
#20
Benzene
Concen: 526.78 pg
RT: 8.16 min Scan# 1822
Delta R.T. 0.001 min
Lab File: 02271524.D
Acq: 27 Feb 2015 22:04

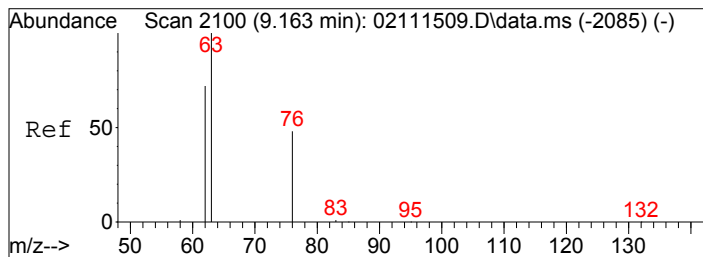
Tgt Ion	78	77	Resp	89996	Lower	Upper
Ion Ratio	100	23.6				
			3.7			43.7



#21
Carbon Tetrachloride
Concen: 368.42 pg
RT: 8.34 min Scan# 1876
Delta R.T. 0.001 min
Lab File: 02271524.D
Acq: 27 Feb 2015 22:04

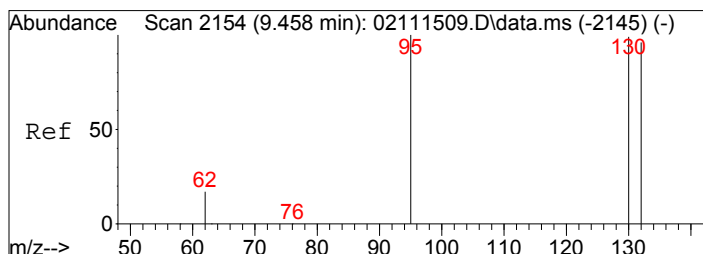
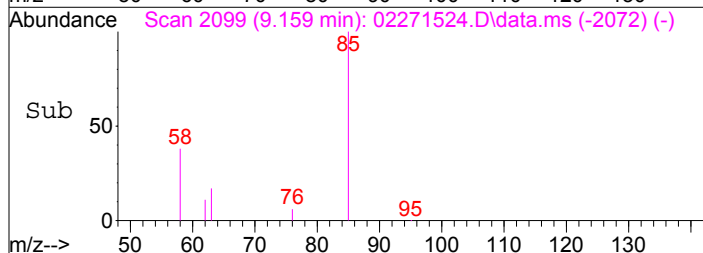
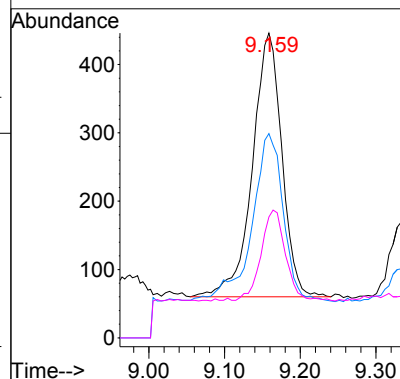
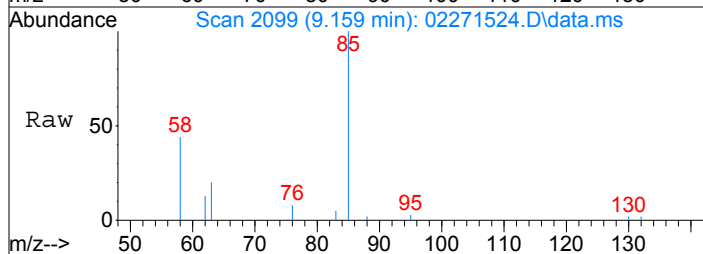
Tgt Ion	117	119	Resp	22279	Lower	Upper
Ion Ratio <td>100</td> <td>96.1</td> <td></td> <td></td> <td></td> <td></td>	100	96.1				
			75.5			115.5





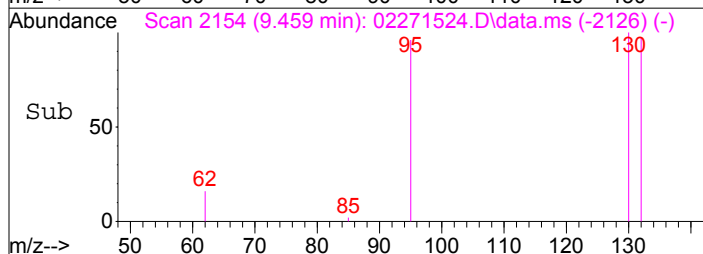
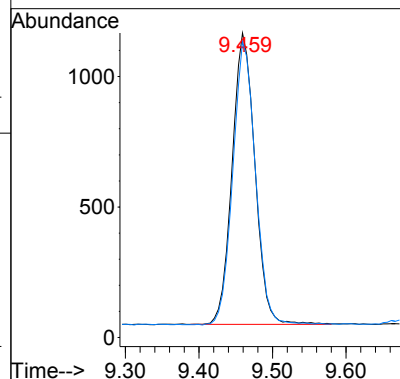
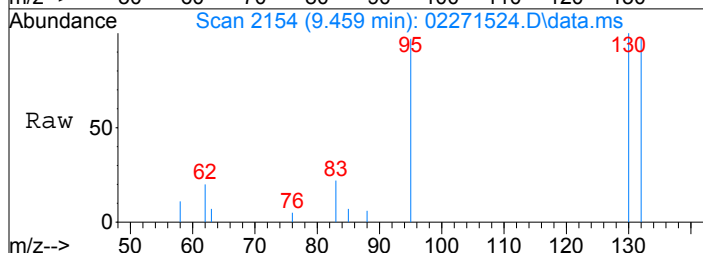
#23
1,2-Dichloropropane
Concen: 24.35 pg
RT: 9.16 min Scan# 2099
Delta R.T. -0.004 min
Lab File: 02271524.D
Acq: 27 Feb 2015 22:04

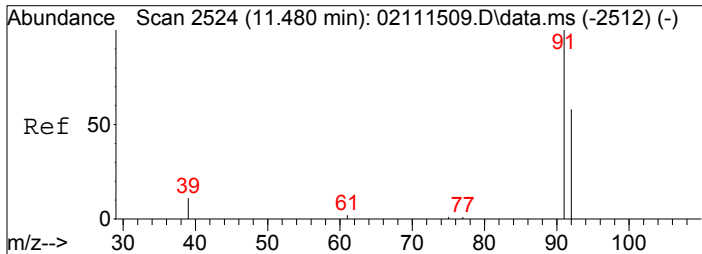
Tgt Ion: 63 Resp: 1046
Ion Ratio Lower Upper
63 100
62 68.1 52.0 92.0
76 28.7 28.1 68.1



#25
Trichloroethene
Concen: 47.51 pg
RT: 9.46 min Scan# 2154
Delta R.T. 0.001 min
Lab File: 02271524.D
Acq: 27 Feb 2015 22:04

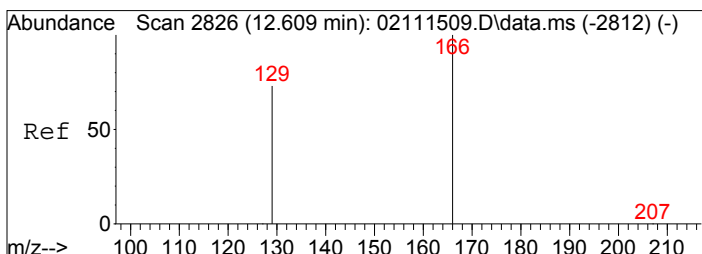
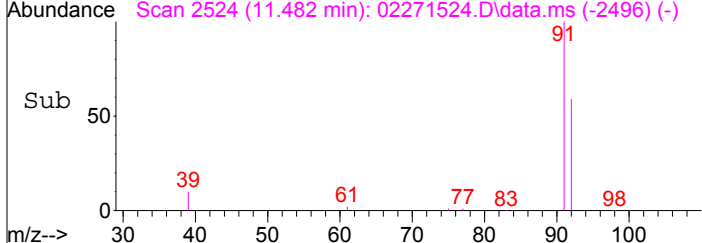
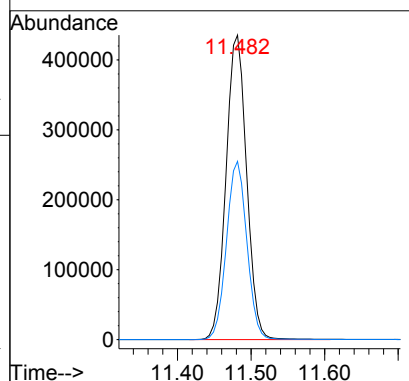
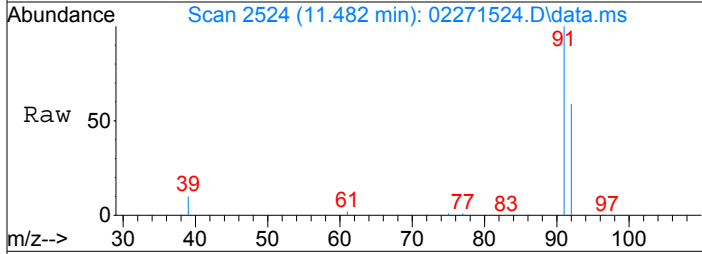
Tgt Ion: 130 Resp: 2404
Ion Ratio Lower Upper
130 100
132 96.3 77.1 117.1





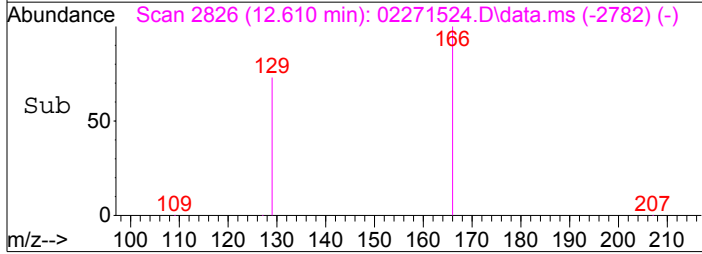
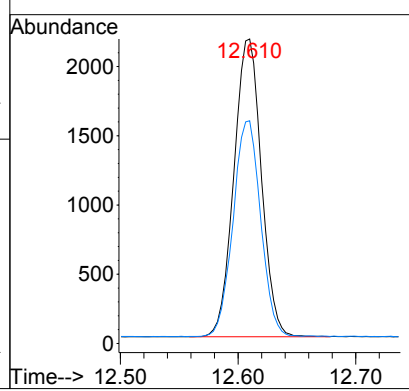
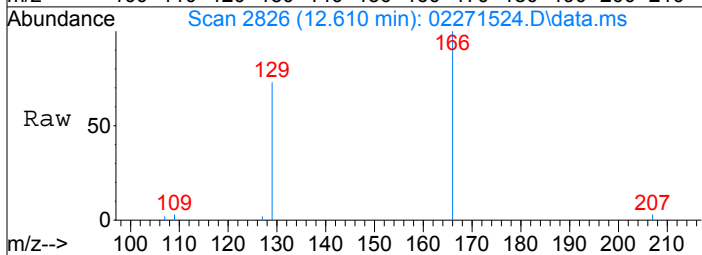
#31
 Toluene
 Concen: 4374.36 pg
 RT: 11.48 min Scan# 2524
 Delta R.T. 0.001 min
 Lab File: 02271524.D
 Acq: 27 Feb 2015 22:04

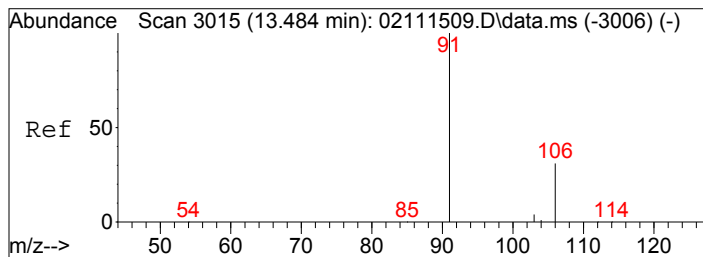
Tgt Ion:	91	Resp:	844957
Ion Ratio	Lower	Upper	
91	100		
92	58.1	37.7	77.7



#33
 Tetrachloroethene
 Concen: 58.44 pg
 RT: 12.61 min Scan# 2826
 Delta R.T. 0.001 min
 Lab File: 02271524.D
 Acq: 27 Feb 2015 22:04

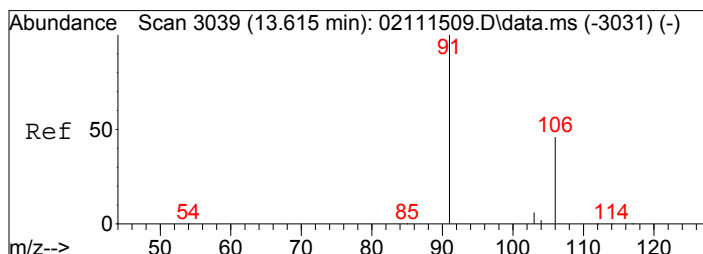
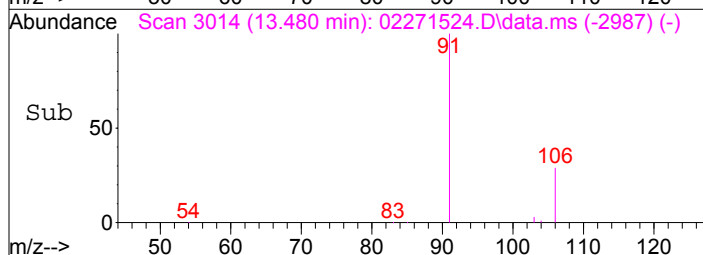
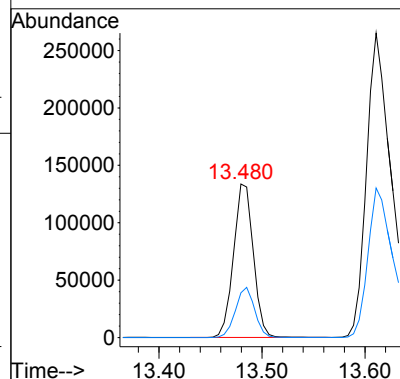
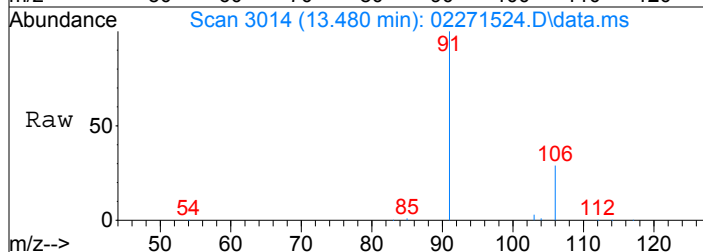
Tgt Ion:	166	Resp:	3495
Ion Ratio	Lower	Upper	
166	100		
129	72.3	53.3	93.3





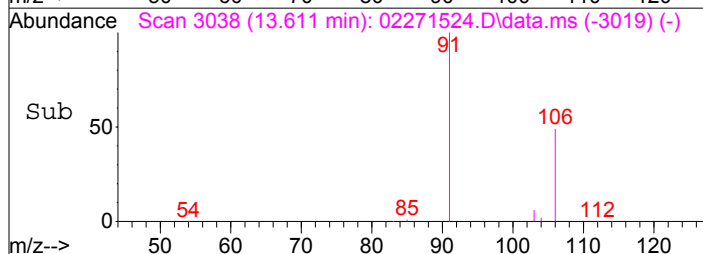
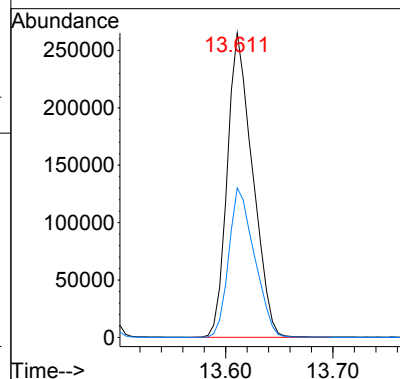
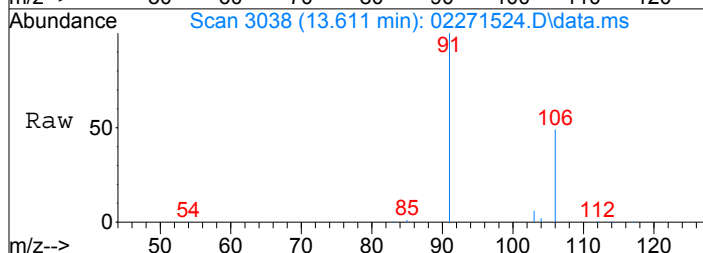
#36
Ethylbenzene
Concen: 801.36 pg
RT: 13.48 min Scan# 3014
Delta R.T. -0.004 min
Lab File: 02271524.D
Acq: 27 Feb 2015 22:04

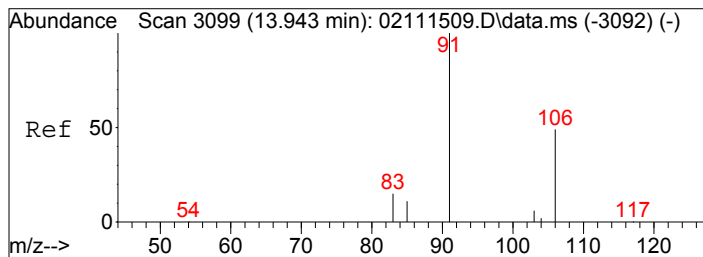
Tgt Ion: 91 Resp: 178289
Ion Ratio Lower Upper
91 100
106 31.6 10.9 50.9



#37
m,p-Xylene
Concen: 2373.66 pg
RT: 13.61 min Scan# 3038
Delta R.T. -0.004 min
Lab File: 02271524.D
Acq: 27 Feb 2015 22:04

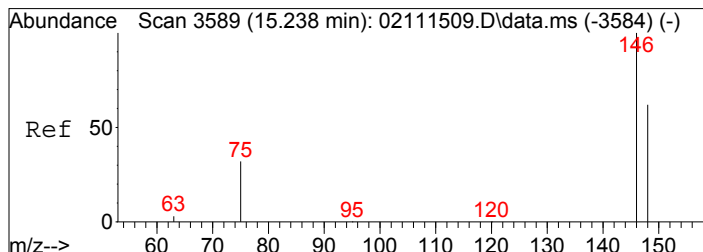
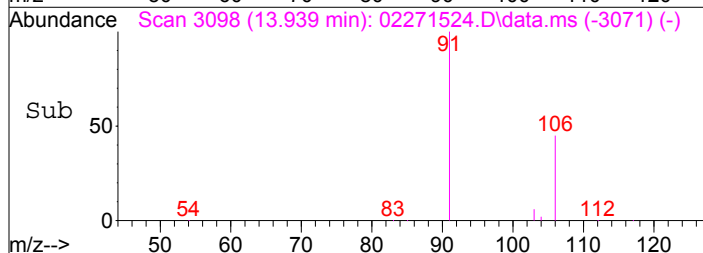
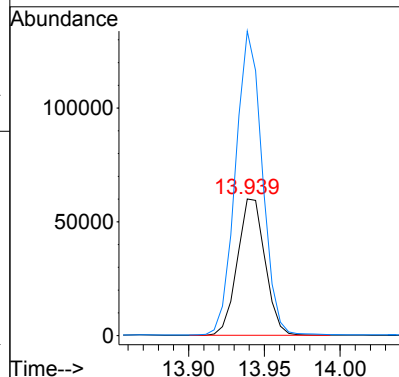
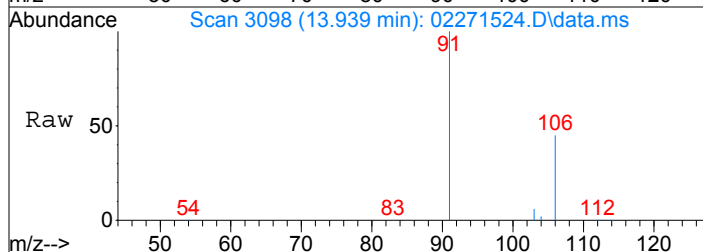
Tgt Ion: 91 Resp: 434038
Ion Ratio Lower Upper
91 100
106 49.9 27.5 67.5





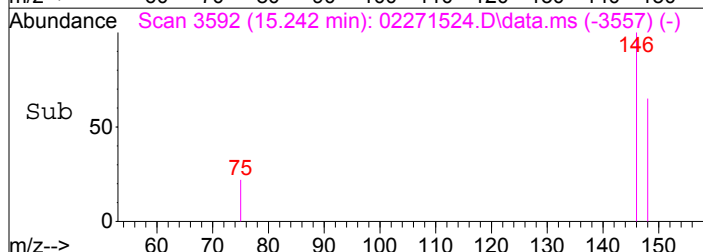
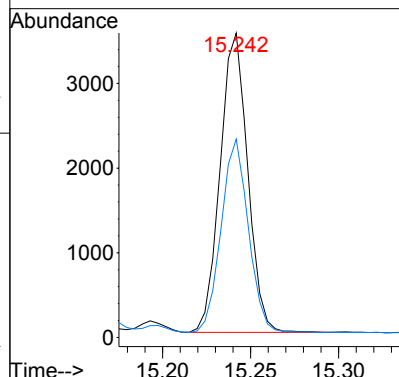
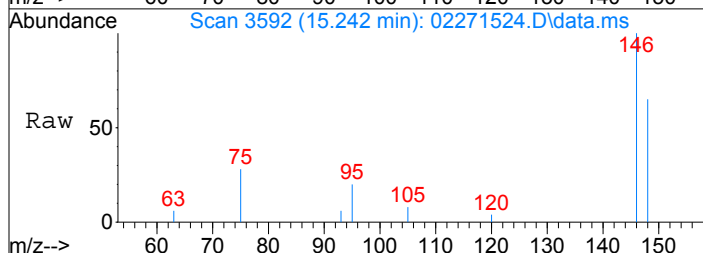
#38
o-Xylene
Concen: 855.15 pg
RT: 13.94 min Scan# 3098
Delta R.T. -0.004 min
Lab File: 02271524.D
Acq: 27 Feb 2015 22:04

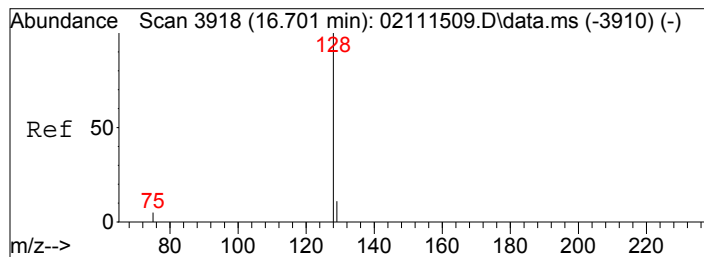
Tgt Ion:106 Resp: 76421
Ion Ratio Lower Upper
106 100
91 214.6 198.3 238.3



#42
1,4-Dichlorobenzene
Concen: 31.30 pg
RT: 15.24 min Scan# 3592
Delta R.T. 0.004 min
Lab File: 02271524.D
Acq: 27 Feb 2015 22:04

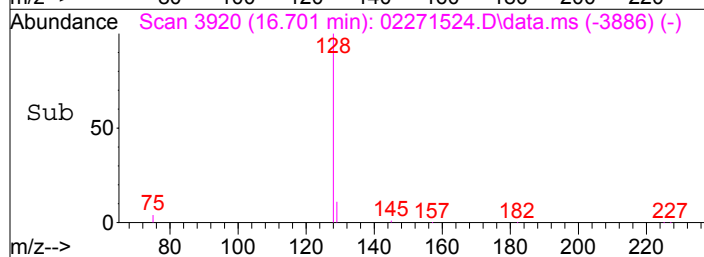
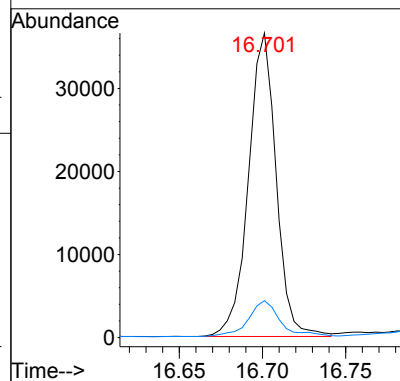
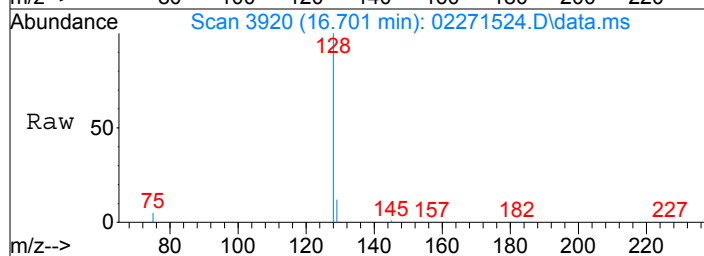
Tgt Ion:146 Resp: 3838
Ion Ratio Lower Upper
146 100
148 63.8 43.5 83.5





#45
Naphthalene
Concen: 190.97 pg
RT: 16.70 min Scan# 3920
Delta R.T. 0.000 min
Lab File: 02271524.D
Acq: 27 Feb 2015 22:04

Tgt Ion:128 Resp: 42394
Ion Ratio Lower Upper
128 100
129 13.6 0.0 30.9



Data File: I:\MS19\DATA\2015 02\27\02271525.D

Acq On : 27 Feb 2015 22:32

Operator: WA

Sample : P1500729-004 (1000ml)

Misc : S29-02041502

ALS Vial : 13 Sample Multiplier: 1

Quant Time: Feb 28 09:54:08 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

2/28/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	27302	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	196095	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	34918	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	59150	887.151	pg	0.00
Spiked Amount 1000.000			Recovery	=	88.72%	
30) Toluene-d8 (SS2)	11.38	98	181797	1005.316	pg	0.00
Spiked Amount 1000.000			Recovery	=	100.53%	
40) Bromofluorobenzene (SS3)	14.25	174	81321	1153.577	pg	0.00
Spiked Amount 1000.000			Recovery	=	115.36%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.73	85	179714	1619.691	pg	100
3) Chloromethane	1.84	52	9861	445.028	pg	99
4) Vinyl Chloride	2.02	62	136	N.D.		
5) Bromomethane	2.33	94	1522	30.505	pg	99
6) Chloroethane	2.48	64	367	N.D.		
7) Acetone	2.99	58	226508	5781.052	pg	# 75
8) Trichlorofluoromethane	3.11	101	106312	1115.476	pg	100
9) 1,1-Dichloroethene	3.67	96	140	N.D.		
10) Methylene Chloride	3.80	84	11278	249.384	pg	93
11) Trichlorotrifluoroethane	4.10	151	15892	362.885	pg	100
12) trans-1,2-Dichloroethene	4.74	96	1414	32.545	pg	98
13) 1,1-Dichloroethane	4.96	63	341	N.D.		
14) Methyl tert-Butyl Ether	5.12	73	643	N.D.		
15) cis-1,2-Dichloroethene	5.93	96	725	N.D.		
16) Chloroform	6.31	83	9583	114.483	pg	98
18) 1,2-Dichloroethane	7.26	62	3732	55.994	pg	100
19) 1,1,1-Trichloroethane	7.59	97	1336	N.D.		
20) Benzene	8.16	78	65382	379.760	pg	100
21) Carbon Tetrachloride	8.34	117	21931	359.874	pg	99
23) 1,2-Dichloropropane	9.16	63	810	N.D.		
24) Bromodichloromethane	0.00	83	0	N.D.	d	
25) Trichloroethene	9.46	130	2137	42.419	pg	100
26) 1,4-Dioxane	9.56	88	178	N.D.		
27) cis-1,3-Dichloropropene	10.47	75	312	N.D.		
28) trans-1,3-Dichloropropene	11.05	75	142	N.D.		
29) 1,1,2-Trichloroethane	11.20	83	164	N.D.		
31) Toluene	11.48	91	275015	1429.917	pg	100
32) 1,2-Dibromoethane	12.12	107	12	N.D.		
33) Tetrachloroethene	12.61	166	2652	44.533	pg	100
35) Chlorobenzene	0.00	112	0	N.D.	d	
36) Ethylbenzene	13.48	91	54359	248.254	pg	99
37) m,p-Xylene	13.61	91	143647	798.196	pg	97
38) o-Xylene	13.94	106	26616	302.618	pg	100
39) 1,1,2,2-Tetrachloroethane	0.00	83	0	N.D.	d	
41) 1,3-Dichlorobenzene	0.00	146	0	N.D.	d	
42) 1,4-Dichlorobenzene	15.24	146	4210	34.890	pg	100
43) 1,2-Dichlorobenzene	15.46	146	145	N.D.		
44) 1,2,4-Trichlorobenzene	16.63	182	265	N.D.		
45) Naphthalene	16.70	128	36053	165.014	pg	95
46) Hexachlorobutadiene	16.96	225	78	N.D.		

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\27\02271525.D

Acq On : 27 Feb 2015 22:32

Operator: WA

Sample : P1500729-004 (1000ml)

Misc : S29-02041502

ALS Vial : 13 Sample Multiplier: 1

Quant Time: Feb 28 09:54:08 2015

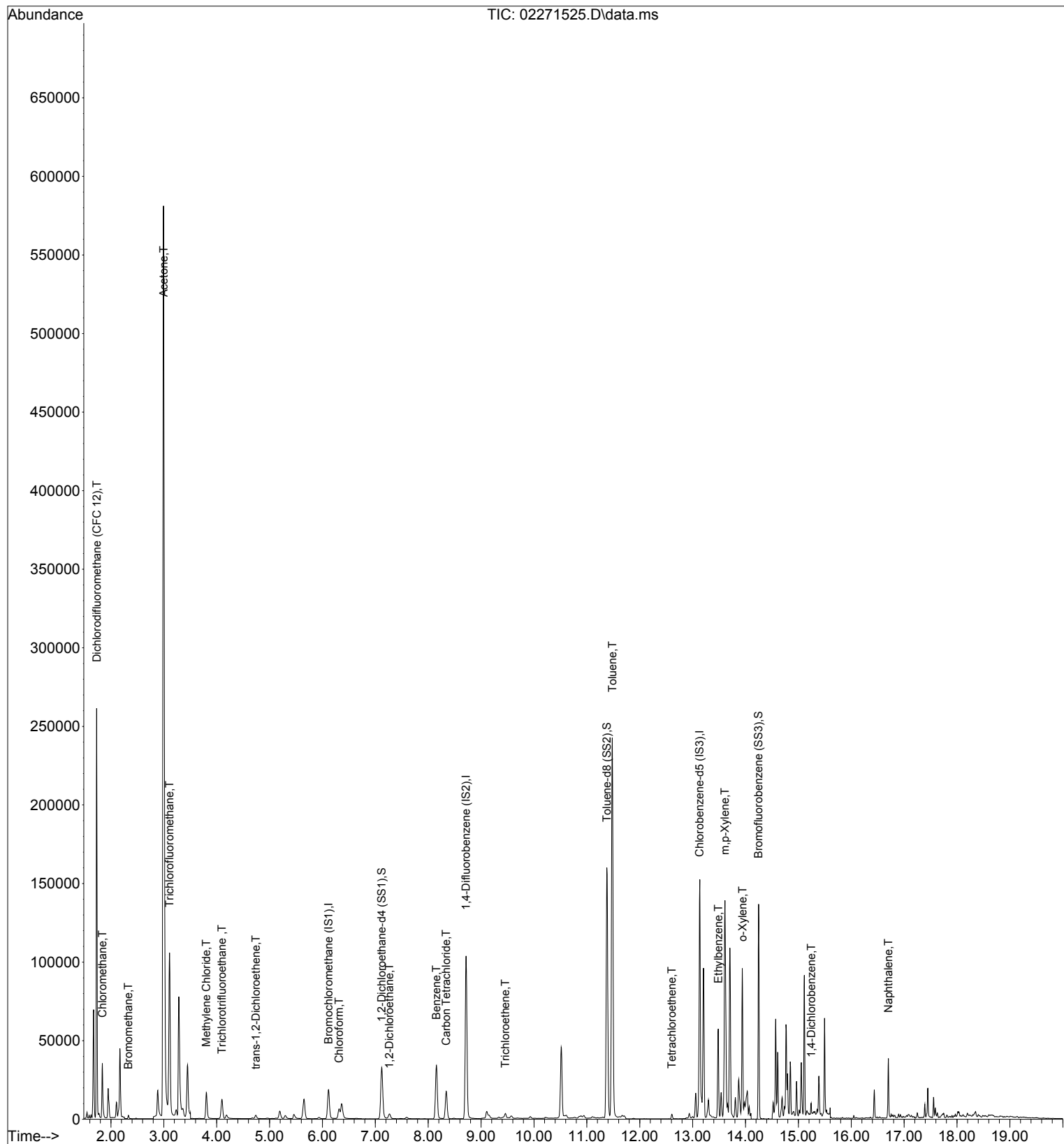
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 02\27\02271525.D

Acq On : 27 Feb 2015 22:32

Operator: WA

Sample : P1500729-004 (1000ml)

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ALS Vial : 13 Sample Multiplier: 1

Quant Time: Feb 28 09:54:08 2015

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Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

2/28/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	27302	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	196095	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	34918	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	59150	887.151	pg	0.00
Spiked Amount 1000.000			Recovery	=	88.72%	
30) Toluene-d8 (SS2)	11.38	98	181797	1005.316	pg	0.00
Spiked Amount 1000.000			Recovery	=	100.53%	
40) Bromofluorobenzene (SS3)	14.25	174	81321	1153.577	pg	0.00
Spiked Amount 1000.000			Recovery	=	115.36%	

Target Compounds

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2) Dichlorodifluoromethan...	1.73	85	179714	1619.691	pg	100
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5) Bromomethane	2.33	94	1522	30.505	pg	99
7) Acetone	2.99	58	226508	5781.052	pg	# 75
8) Trichlorofluoromethane	3.11	101	106312	1115.476	pg	100
10) Methylene Chloride	3.80	84	11278	249.384	pg	93
11) Trichlorotrifluoroethane	4.10	151	15892	362.885	pg	100
12) trans-1,2-Dichloroethene	4.74	96	1414	32.545	pg	98
16) Chloroform	6.31	83	9583	114.483	pg	98
18) 1,2-Dichloroethane	7.26	62	3732	55.994	pg	100
20) Benzene	8.16	78	65382	379.760	pg	100
21) Carbon Tetrachloride	8.34	117	21931	359.874	pg	99
25) Trichloroethene	9.46	130	2137	42.419	pg	100
31) Toluene	11.48	91	275015	1429.917	pg	100
33) Tetrachloroethene	12.61	166	2652	44.533	pg	100
36) Ethylbenzene	13.48	91	54359	248.254	pg	99
37) m,p-Xylene	13.61	91	143647	798.196	pg	97
38) o-Xylene	13.94	106	26616	302.618	pg	100
42) 1,4-Dichlorobenzene	15.24	146	4210	34.890	pg	100
45) Naphthalene	16.70	128	36053	165.014	pg	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File: I:\MS19\DATA\2015 02\27\02271525.D

Acq On : 27 Feb 2015 22:32

Operator: WA

Sample : P1500729-004 (1000ml)

Misc : S29-02041502

ALS Vial : 13 Sample Multiplier: 1

Quant Time: Feb 28 09:54:08 2015

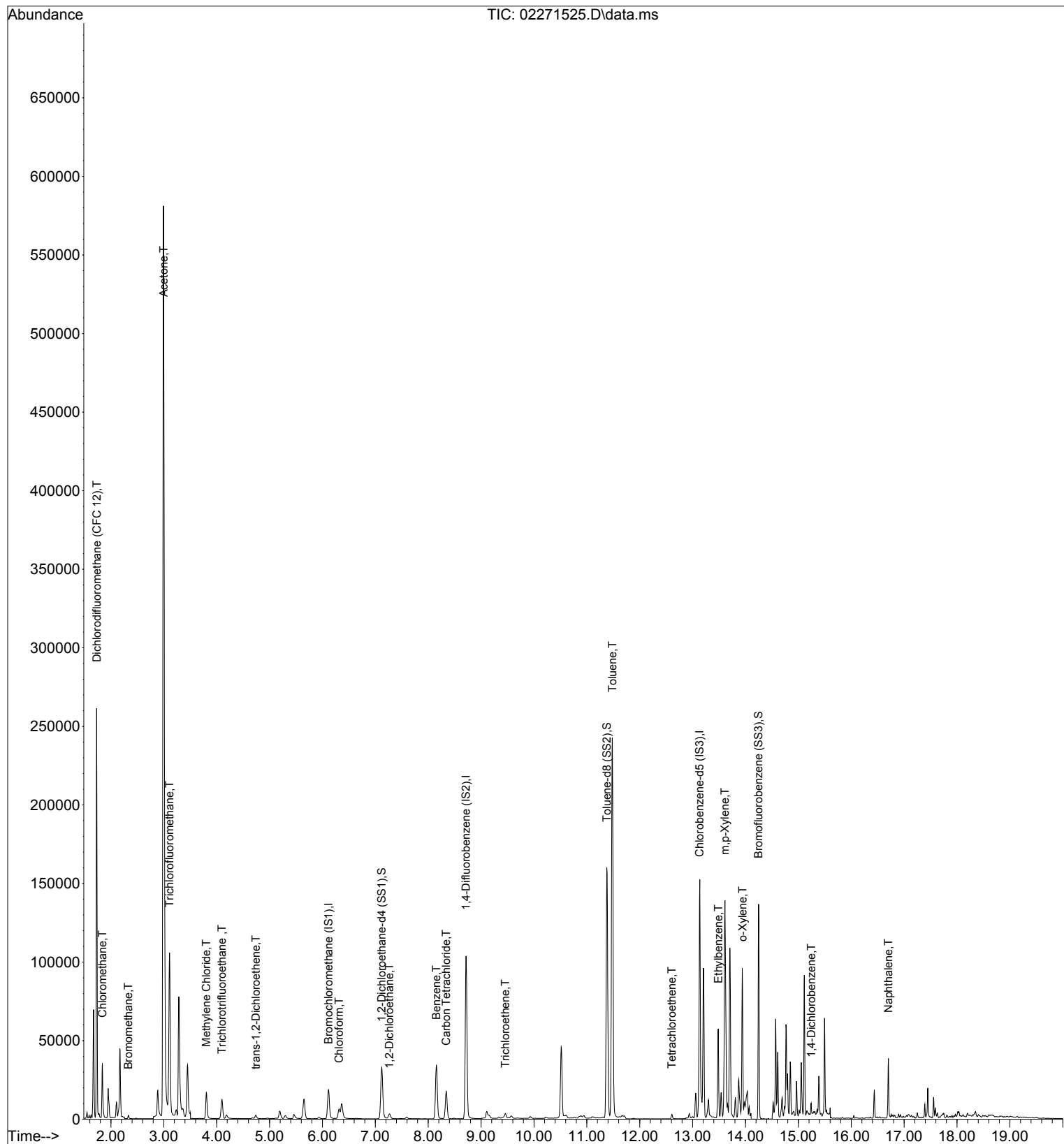
Quant Method : I:\MS19\METHODS\X19021115.M

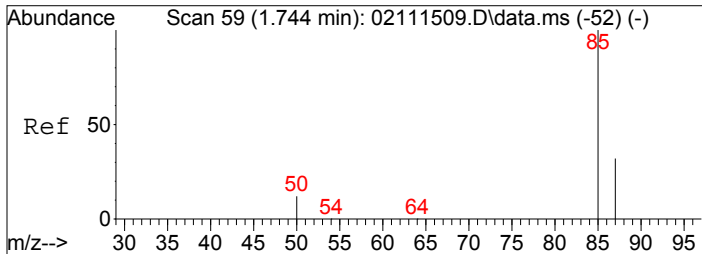
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

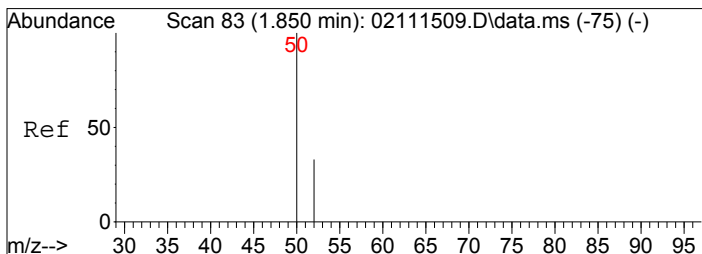
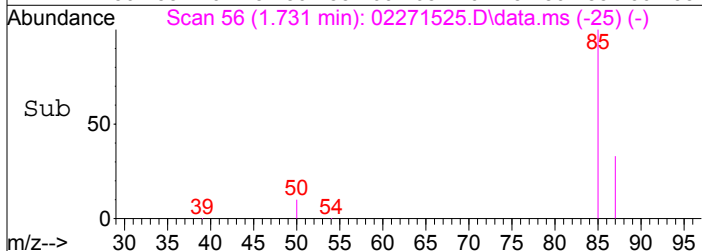
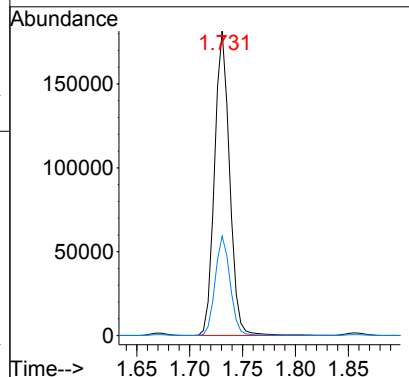
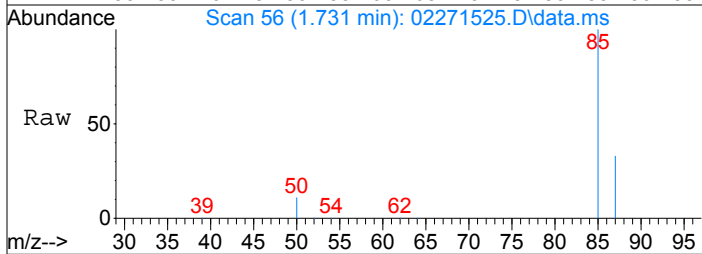
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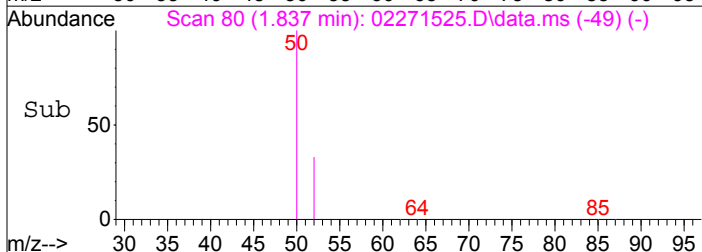
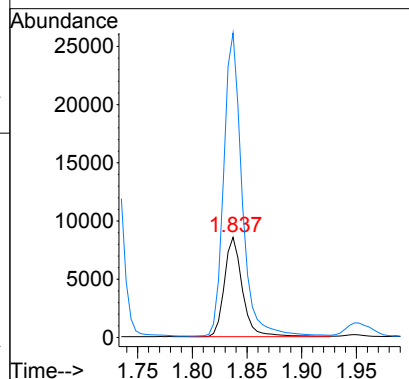
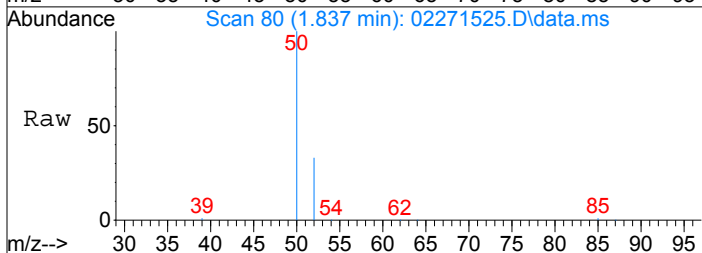
#2
 Dichlorodifluoromethane (CFC 12)
 Concen: 1619.69 pg
 RT: 1.73 min Scan# 56
 Delta R.T. -0.013 min
 Lab File: 02271525.D
 Acq: 27 Feb 2015 22:32

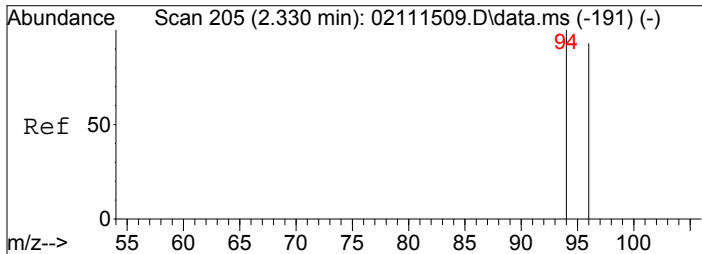
Tgt Ion	85	Resp	179714
Ion Ratio	100	Lower	Upper
85	100		
87	32.6	12.4	52.4



#3
 Chloromethane
 Concen: 445.03 pg
 RT: 1.84 min Scan# 80
 Delta R.T. -0.013 min
 Lab File: 02271525.D
 Acq: 27 Feb 2015 22:32

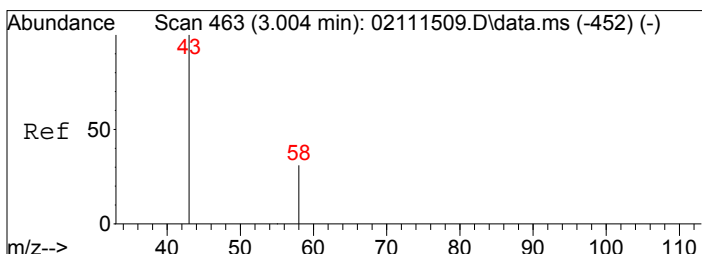
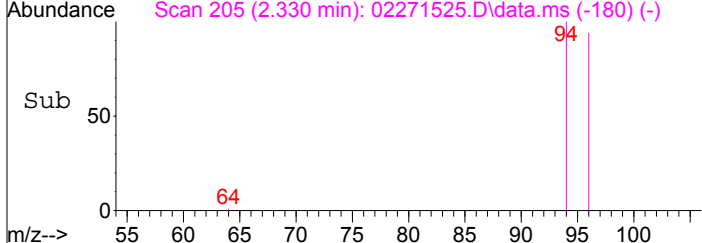
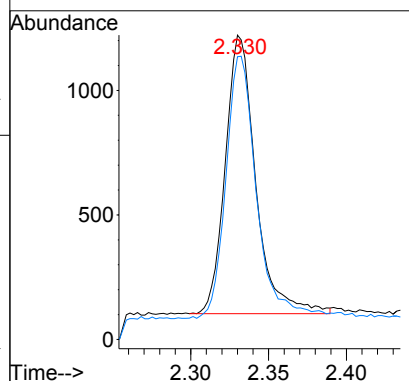
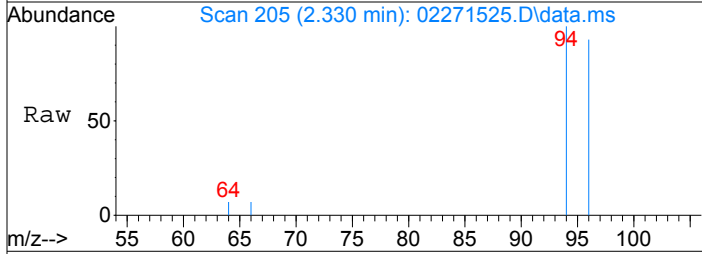
Tgt Ion	52	Resp	9861
Ion Ratio <td>100</td> <td>Lower</td> <td>Upper</td>	100	Lower	Upper
52	100		
50	306.6	283.7	323.7





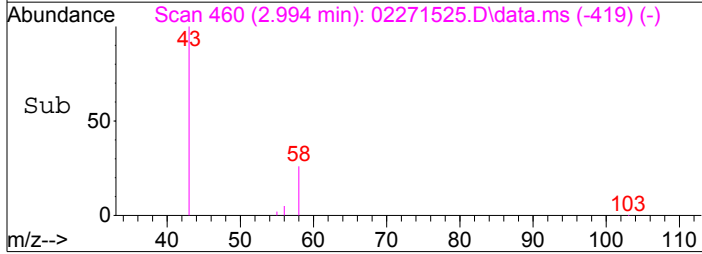
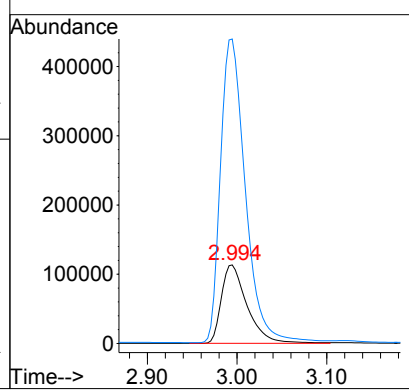
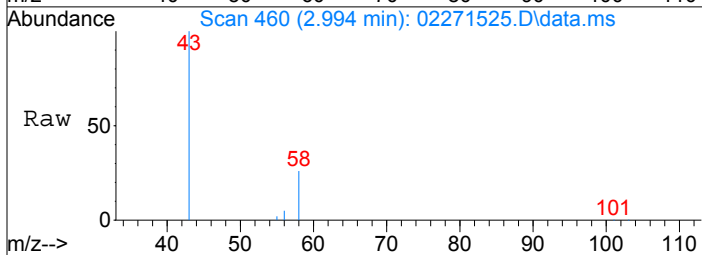
#5
 Bromomethane
 Concen: 30.51 pg
 RT: 2.33 min Scan# 205
 Delta R.T. -0.000 min
 Lab File: 02271525.D
 Acq: 27 Feb 2015 22:32

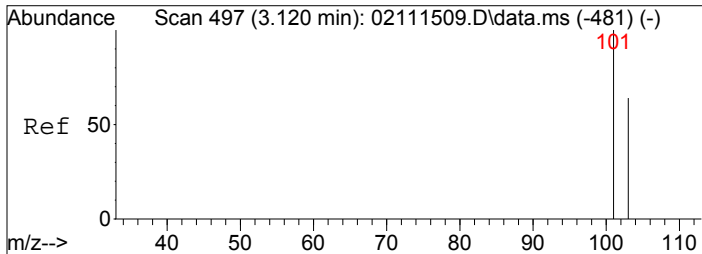
Tgt Ion:	94	Resp:	1522
Ion Ratio	Lower	Upper	
94	100		
96	95.5	75.5	113.3



#7
 Acetone
 Concen: 5781.05 pg
 RT: 2.99 min Scan# 460
 Delta R.T. -0.010 min
 Lab File: 02271525.D
 Acq: 27 Feb 2015 22:32

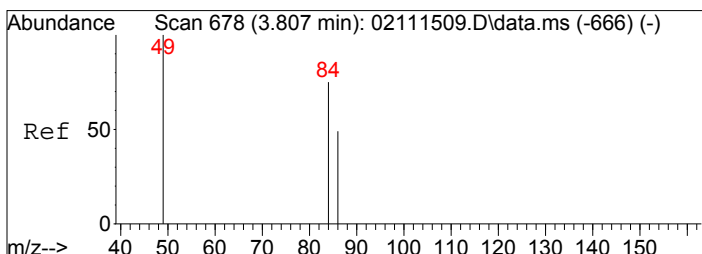
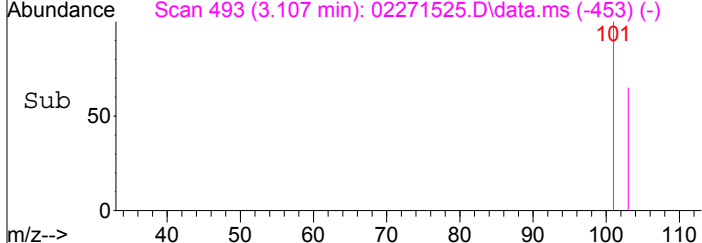
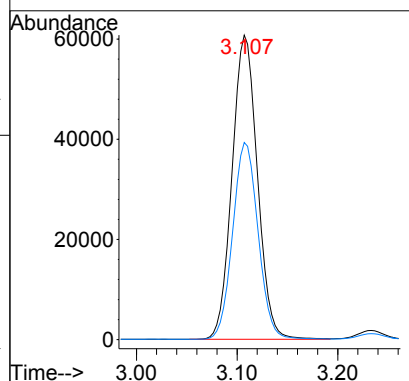
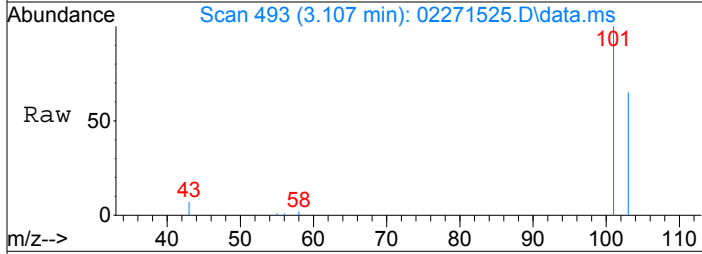
Tgt Ion:	58	Resp:	226508
Ion Ratio	Lower	Upper	
58	100		
43	373.9	301.8	341.8#





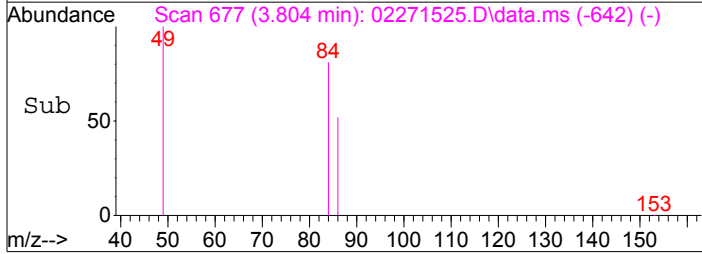
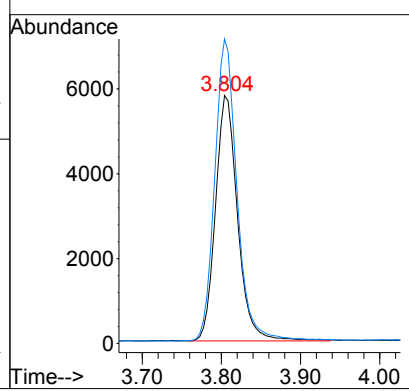
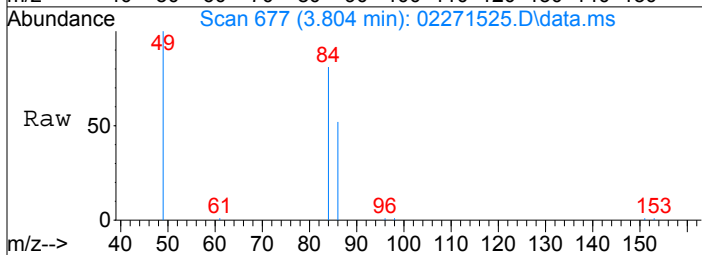
#8
 Trichlorofluoromethane
 Concen: 1115.48 pg
 RT: 3.11 min Scan# 493
 Delta R.T. -0.012 min
 Lab File: 02271525.D
 Acq: 27 Feb 2015 22:32

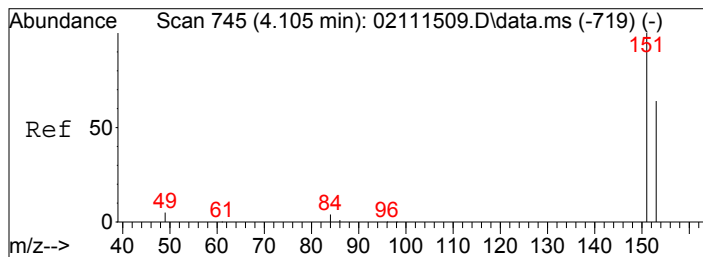
Tgt Ion: 101	Resp: 106312
Ion Ratio	Lower Upper
101	100
103	64.9 51.8 77.6



#10
 Methylene Chloride
 Concen: 249.38 pg
 RT: 3.80 min Scan# 677
 Delta R.T. -0.003 min
 Lab File: 02271525.D
 Acq: 27 Feb 2015 22:32

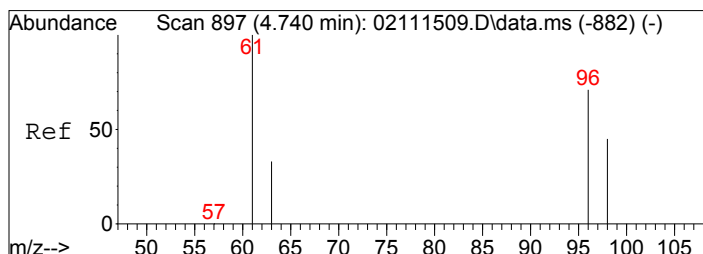
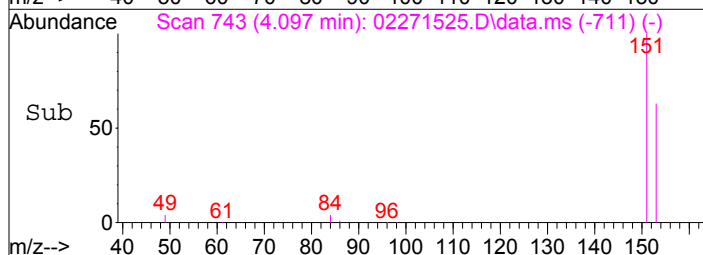
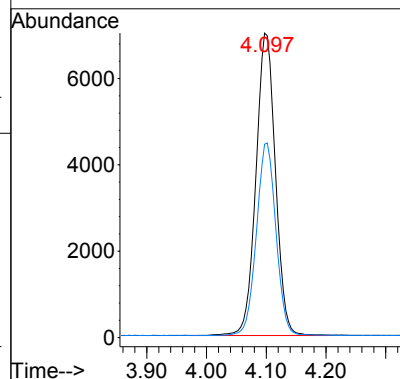
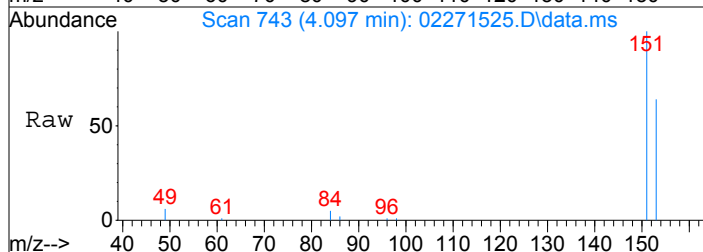
Tgt Ion: 84	Resp: 11278
Ion Ratio	Lower Upper
84	100
49	123.9 112.3 152.3





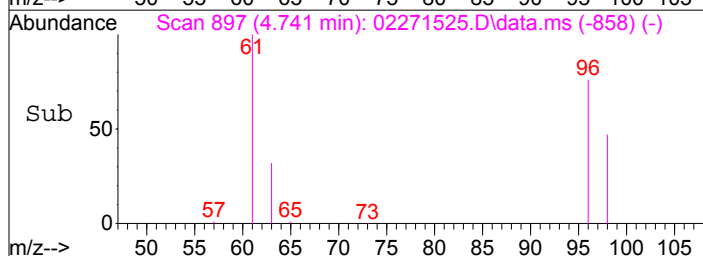
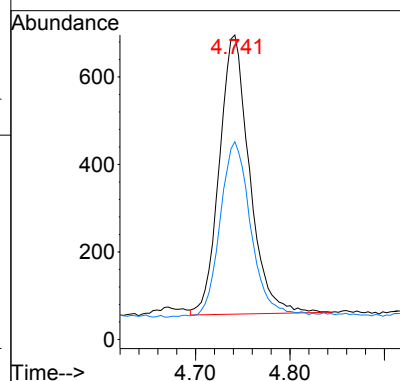
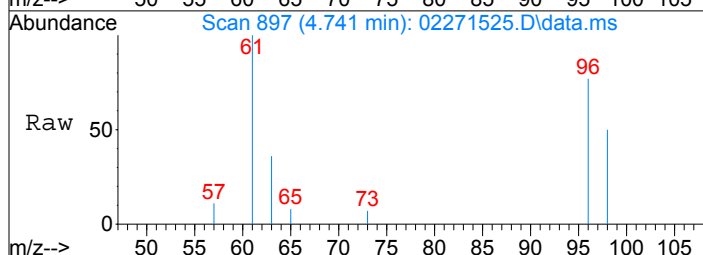
#11
 Trichlorotrifluoroethane
 Concen: 362.89 pg
 RT: 4.10 min Scan# 743
 Delta R.T. -0.008 min
 Lab File: 02271525.D
 Acq: 27 Feb 2015 22:32

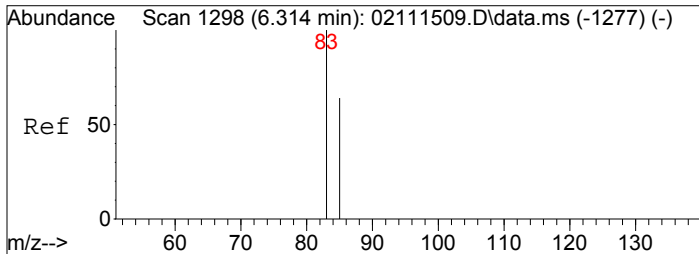
Tgt Ion: 151 Resp: 15892
 Ion Ratio Lower Upper
 151 100
 153 63.7 43.6 83.6



#12
 trans-1,2-Dichloroethene
 Concen: 32.54 pg
 RT: 4.74 min Scan# 897
 Delta R.T. 0.001 min
 Lab File: 02271525.D
 Acq: 27 Feb 2015 22:32

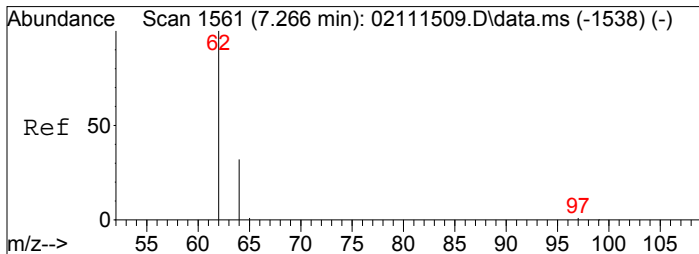
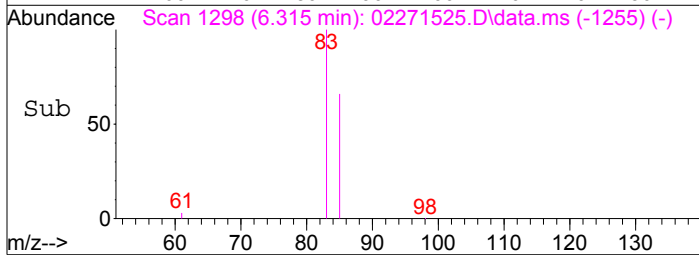
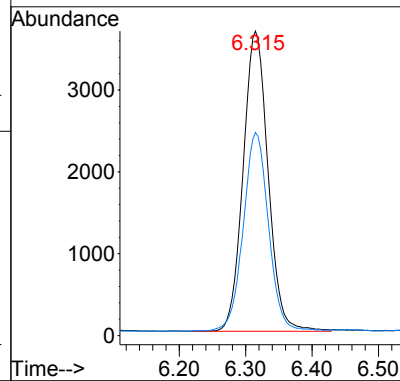
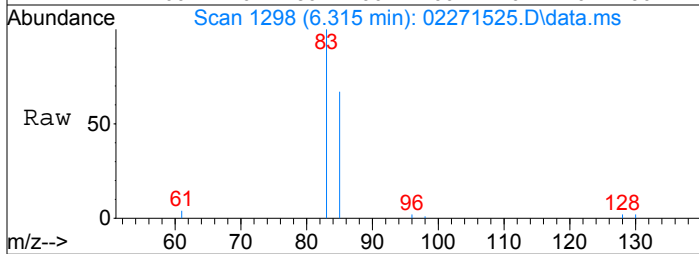
Tgt Ion: 96 Resp: 1414
 Ion Ratio Lower Upper
 96 100
 98 65.3 43.7 83.7





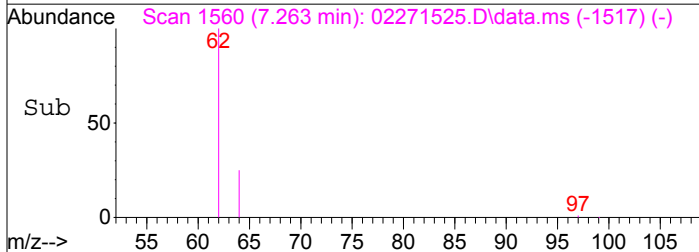
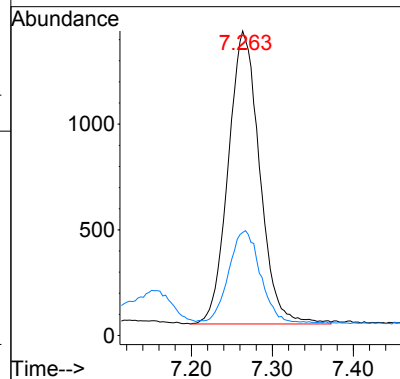
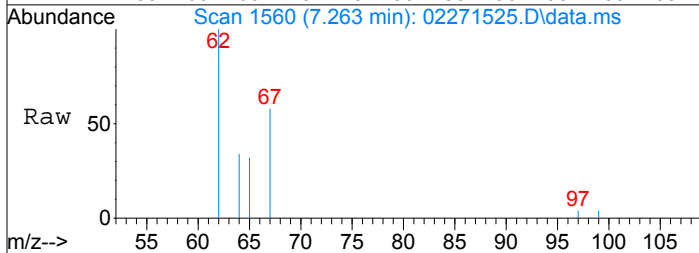
#16
Chloroform
Concen: 114.48 pg
RT: 6.31 min Scan# 1298
Delta R.T. 0.001 min
Lab File: 02271525.D
Acq: 27 Feb 2015 22:32

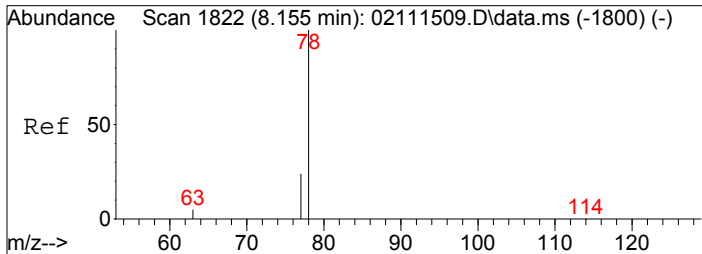
Tgt Ion: 83 Resp: 9583
Ion Ratio Lower Upper
83 100
85 67.1 45.4 85.4



#18
1,2-Dichloroethane
Concen: 55.99 pg
RT: 7.26 min Scan# 1560
Delta R.T. -0.002 min
Lab File: 02271525.D
Acq: 27 Feb 2015 22:32

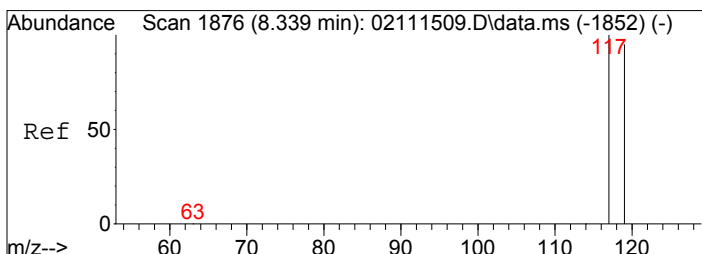
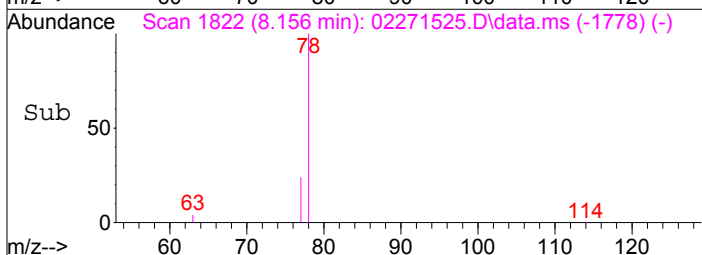
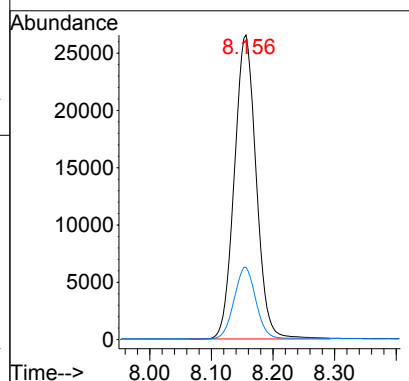
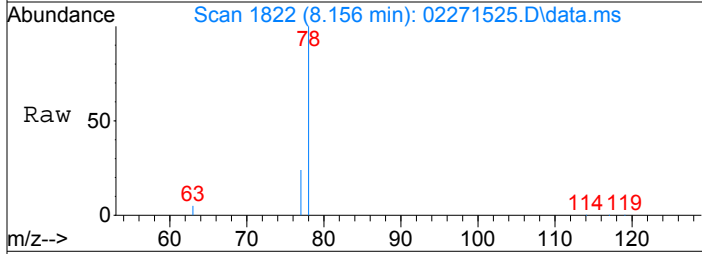
Tgt Ion: 62 Resp: 3732
Ion Ratio Lower Upper
62 100
64 31.4 11.6 51.6





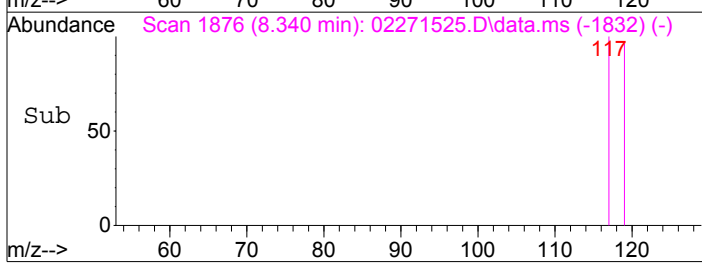
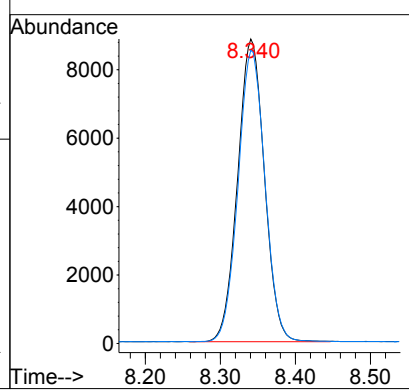
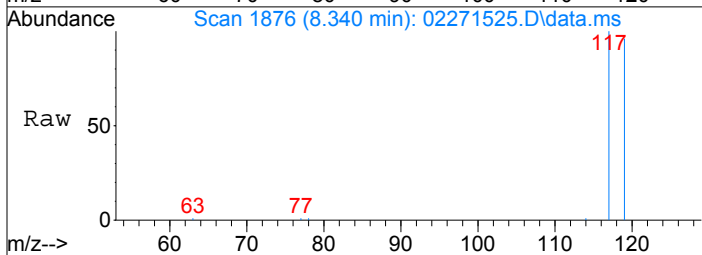
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Benzene
Concen: 379.76 pg
RT: 8.16 min Scan# 1822
Delta R.T. 0.001 min
Lab File: 02271525.D
Acq: 27 Feb 2015 22:32

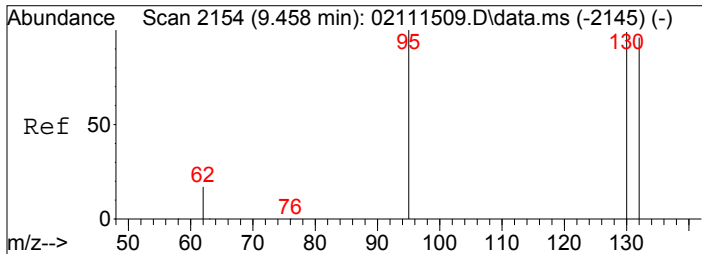
Tgt Ion:	78	Resp:	65382
Ion Ratio	Lower	Upper	
78	100		
77	23.5	3.7	43.7



#21
Carbon Tetrachloride
Concen: 359.87 pg
RT: 8.34 min Scan# 1876
Delta R.T. 0.001 min
Lab File: 02271525.D
Acq: 27 Feb 2015 22:32

Tgt Ion:	117	Resp:	21931
Ion Ratio	Lower	Upper	
117	100		
119	96.6	75.5	115.5

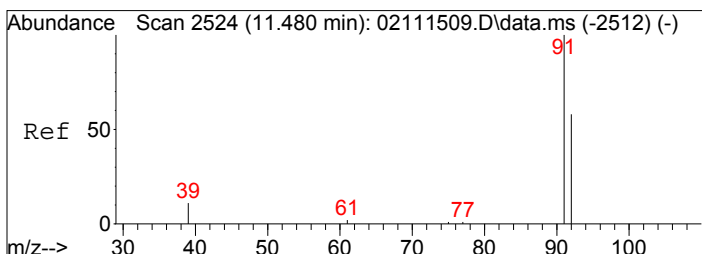
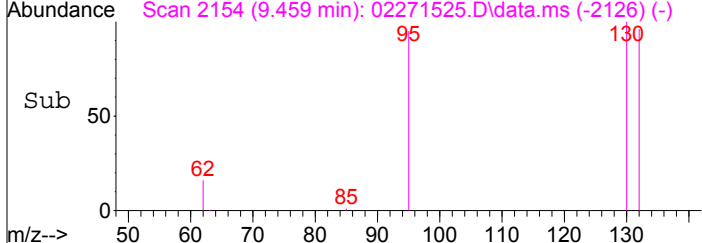
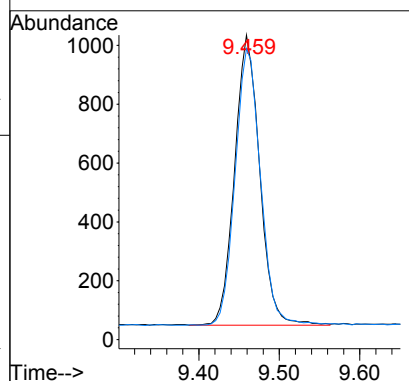
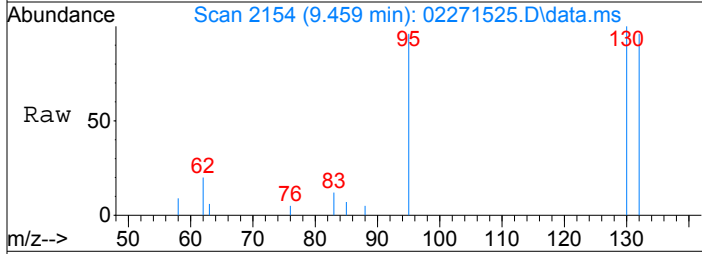




#25
 Trichloroethene
 Concen: 42.42 pg
 RT: 9.46 min Scan# 2154
 Delta R.T. 0.001 min
 Lab File: 02271525.D
 Acq: 27 Feb 2015 22:32

Tgt Ion: 130 Resp: 2137

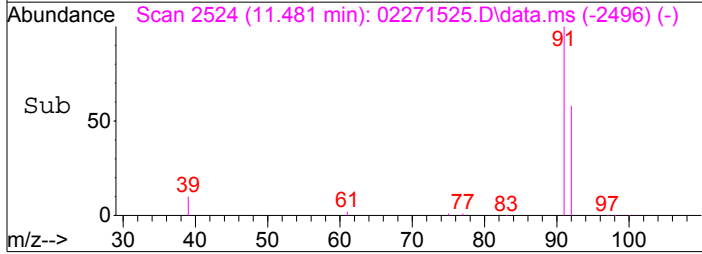
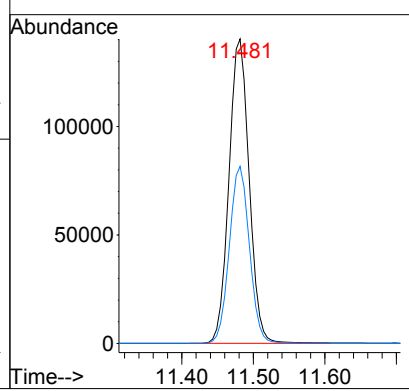
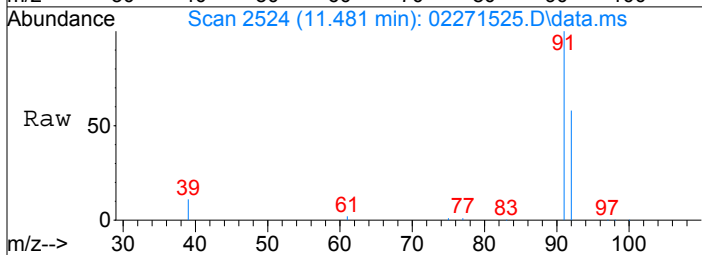
Ion	Ratio	Lower	Upper
130	100		
132	96.7	77.1	117.1

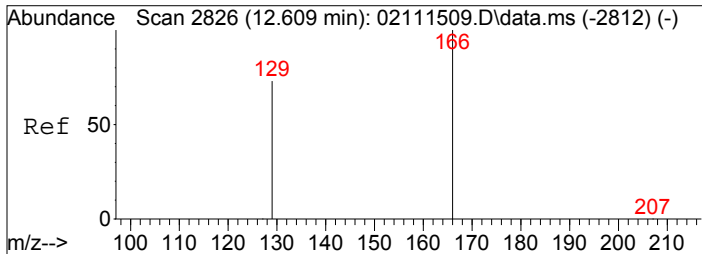


#31
 Toluene
 Concen: 1429.92 pg
 RT: 11.48 min Scan# 2524
 Delta R.T. 0.001 min
 Lab File: 02271525.D
 Acq: 27 Feb 2015 22:32

Tgt Ion: 91 Resp: 275015

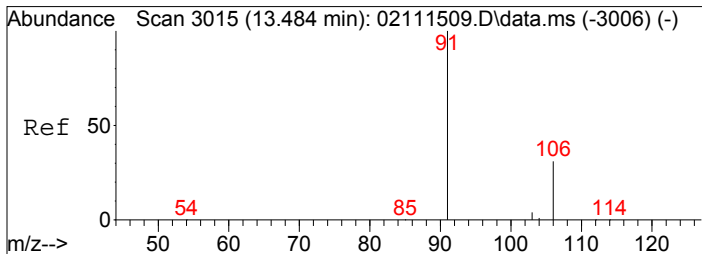
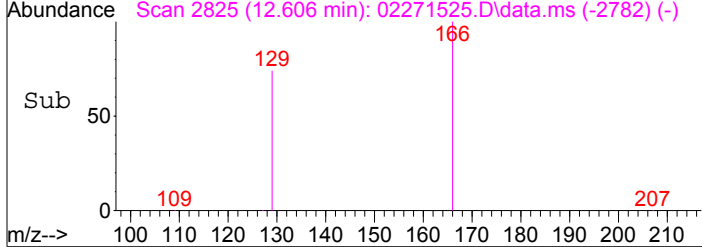
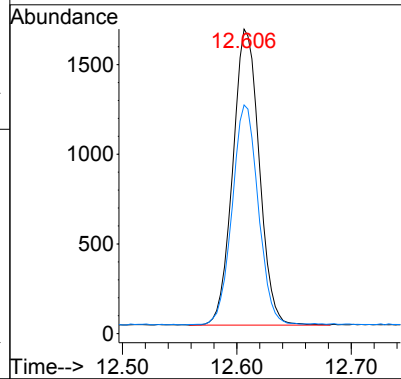
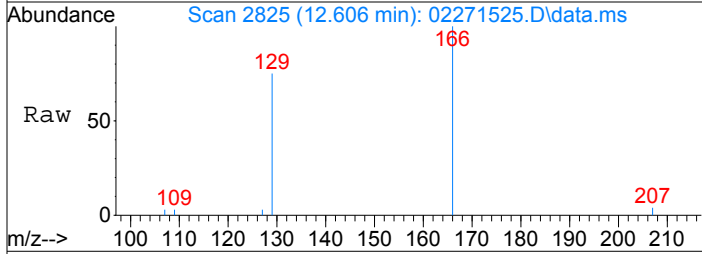
Ion	Ratio	Lower	Upper
91	100		
92	58.0	37.7	77.7





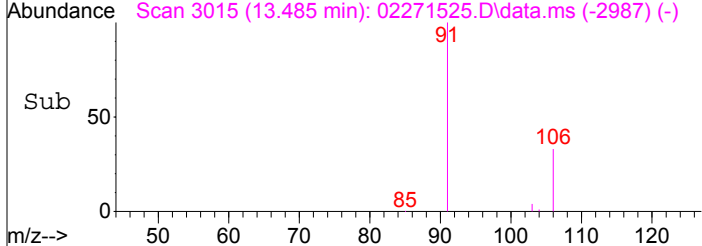
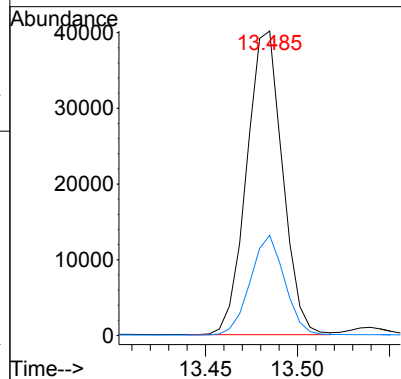
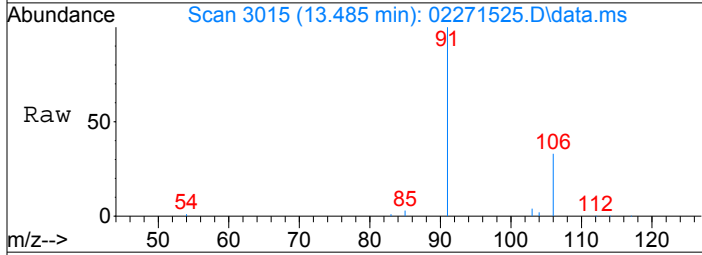
#33
Tetrachloroethene
Concen: 44.53 pg
RT: 12.61 min Scan# 2825
Delta R.T. -0.003 min
Lab File: 02271525.D
Acq: 27 Feb 2015 22:32

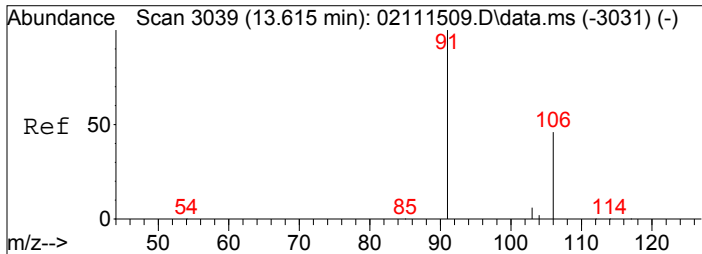
Tgt Ion:166	Resp:	2652
Ion Ratio	Lower	Upper
166	100	
129	73.2	53.3 93.3



#36
Ethylbenzene
Concen: 248.25 pg
RT: 13.48 min Scan# 3015
Delta R.T. 0.001 min
Lab File: 02271525.D
Acq: 27 Feb 2015 22:32

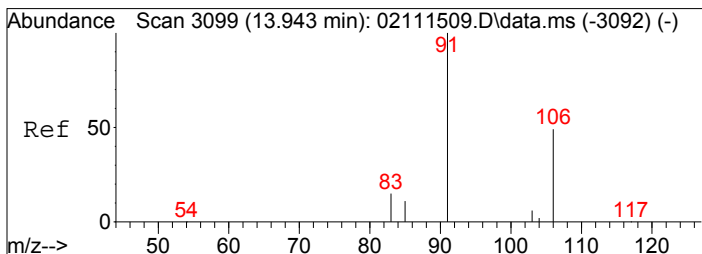
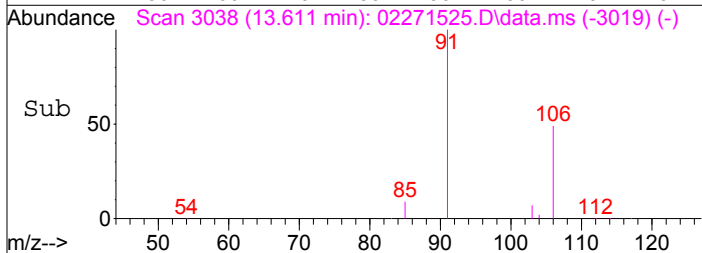
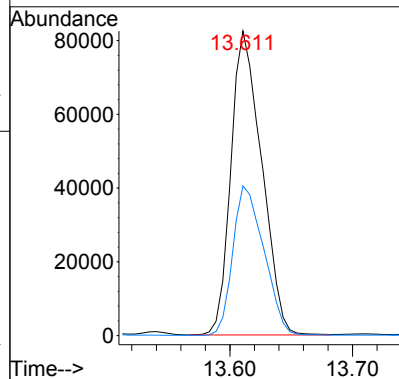
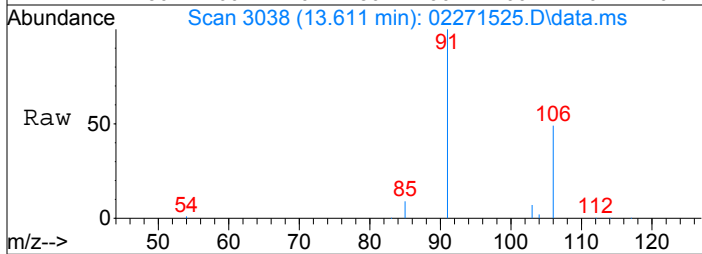
Tgt Ion: 91	Resp:	54359
Ion Ratio	Lower	Upper
91	100	
106	31.5	10.9 50.9





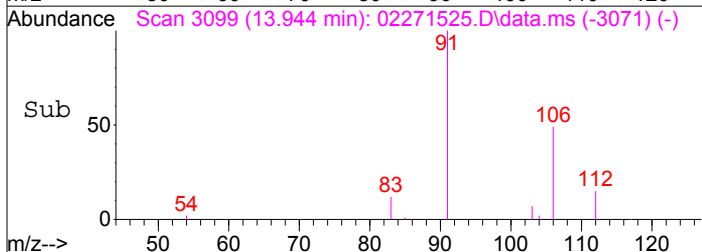
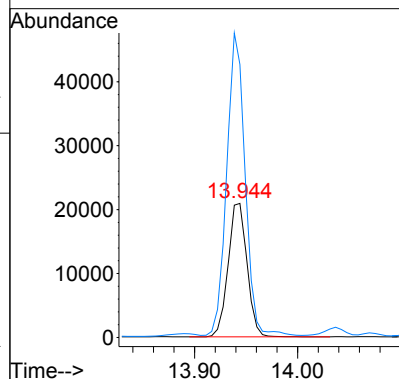
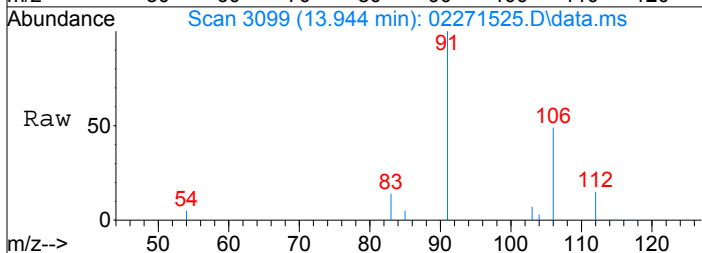
#37
m,p-Xylene
Concen: 798.20 pg
RT: 13.61 min Scan# 3038
Delta R.T. -0.004 min
Lab File: 02271525.D
Acq: 27 Feb 2015 22:32

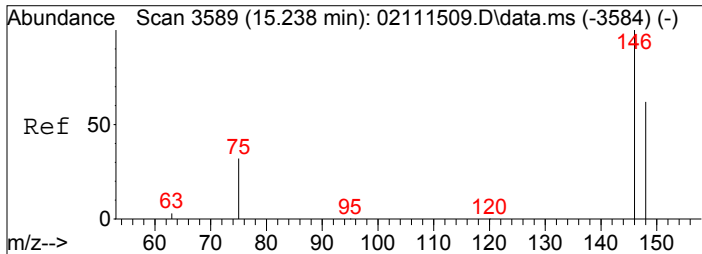
Tgt Ion: 91 Resp: 143647
Ion Ratio Lower Upper
91 100
106 49.8 27.5 67.5



#38
o-Xylene
Concen: 302.62 pg
RT: 13.94 min Scan# 3099
Delta R.T. 0.001 min
Lab File: 02271525.D
Acq: 27 Feb 2015 22:32

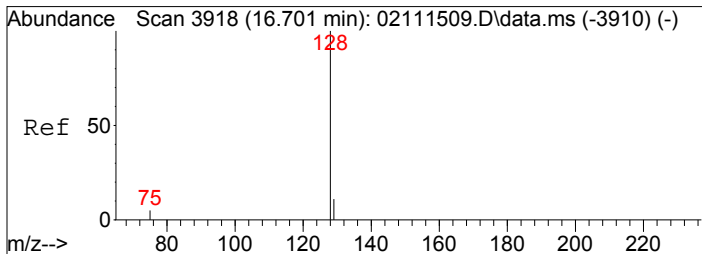
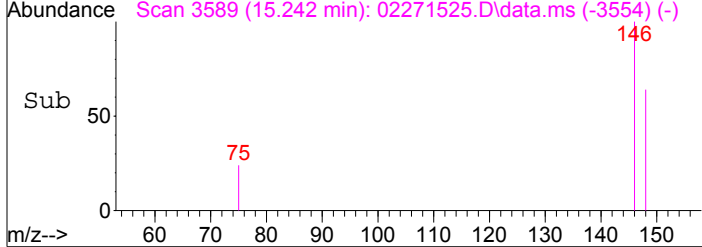
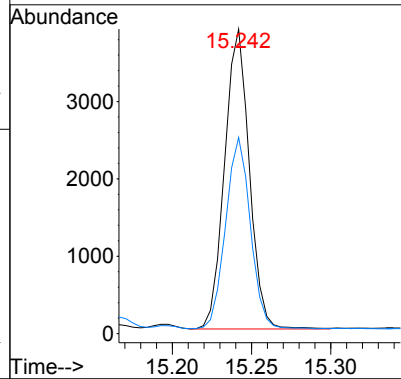
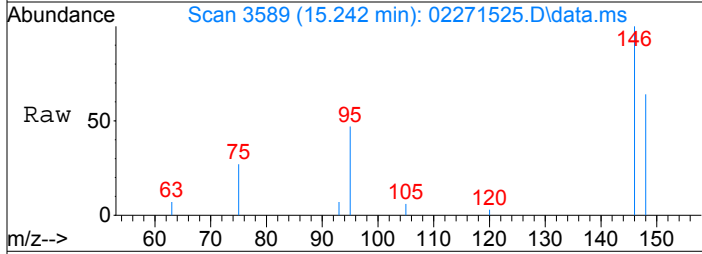
Tgt Ion: 106 Resp: 26616
Ion Ratio Lower Upper
106 100
91 219.1 198.3 238.3





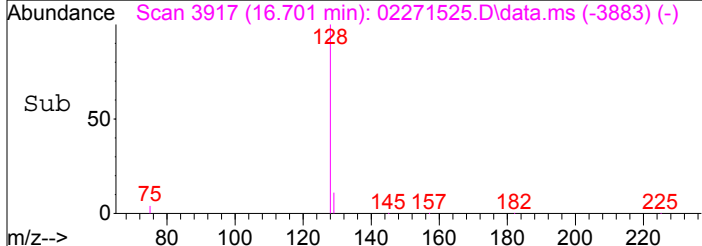
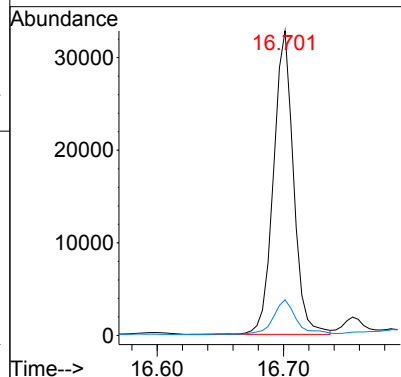
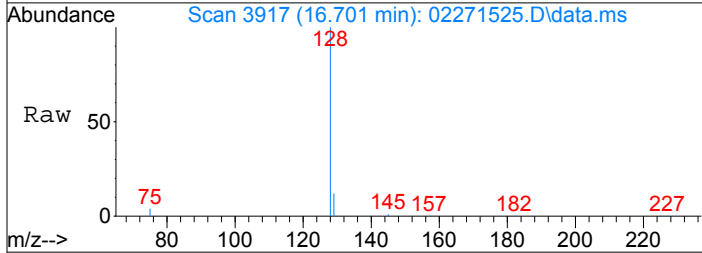
#42
 1,4-Dichlorobenzene
 Concen: 34.89 pg
 RT: 15.24 min Scan# 3589
 Delta R.T. 0.004 min
 Lab File: 02271525.D
 Acq: 27 Feb 2015 22:32

Tgt Ion:146 Resp: 4210
 Ion Ratio Lower Upper
 146 100
 148 63.5 43.5 83.5



#45
 Naphthalene
 Concen: 165.01 pg
 RT: 16.70 min Scan# 3917
 Delta R.T. 0.000 min
 Lab File: 02271525.D
 Acq: 27 Feb 2015 22:32

Tgt Ion:128 Resp: 36053
 Ion Ratio Lower Upper
 128 100
 129 12.9 0.0 30.9



Data File: I:\MS19\DATA\2015 02\28\02281508.D

Acq On : 28 Feb 2015 5:43

Operator: WA

Sample : P1500729-005 (1000mL)

Misc :

ALS Vial : 14 Sample Multiplier: 1

Quant Time: Feb 28 10:21:26 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

2/28/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	24248	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.71	114	167484	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	30210	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	52777	891.263	pg	0.00
Spiked Amount 1000.000			Recovery	=	89.13%	
30) Toluene-d8 (SS2)	11.38	98	161949	1048.545	pg	0.00
Spiked Amount 1000.000			Recovery	=	104.85%	
40) Bromofluorobenzene (SS3)	14.25	174	70583	1157.291	pg	0.00
Spiked Amount 1000.000			Recovery	=	115.73%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.72	85	160210	1625.767	pg	100
3) Chloromethane	1.83	52	8633	438.679	pg	97
4) Vinyl Chloride	2.01	62	158	N.D.		
5) Bromomethane	2.32	94	1300	29.337	pg	100
6) Chloroethane	2.47	64	688	N.D.		
7) Acetone	2.99	58	283421	8144.678	pg	# 64
8) Trichlorofluoromethane	3.10	101	97157	1147.811	pg	100
9) 1,1-Dichloroethene	3.66	96	80	N.D.		
10) Methylene Chloride	3.80	84	11627	289.483	pg	100
11) Trichlorotrifluoroethane	4.09	151	15020	386.171	pg	100
12) trans-1,2-Dichloroethene	4.74	96	2281	59.112	pg	96
13) 1,1-Dichloroethane	4.96	63	535	N.D.		
14) Methyl tert-Butyl Ether	5.11	73	1005	N.D.		
15) cis-1,2-Dichloroethene	5.93	96	922	21.487	pg	99
16) Chloroform	6.31	83	10179	136.918	pg	92
18) 1,2-Dichloroethane	7.27	62	4219	71.274	pg	100
19) 1,1,1-Trichloroethane	7.59	97	1474	20.389	pg	100
20) Benzene	8.15	78	105215	688.093	pg	100
21) Carbon Tetrachloride	8.34	117	21466	396.608	pg	100
23) 1,2-Dichloropropane	9.16	63	1214	33.234	pg	# 82
24) Bromodichloromethane	0.00	83	0	N.D.	d	
25) Trichloroethene	9.46	130	4645	107.954	pg	100
26) 1,4-Dioxane	9.55	88	169	N.D.		
27) cis-1,3-Dichloropropene	10.46	75	293	N.D.		
28) trans-1,3-Dichloropropene	11.05	75	166	N.D.		
29) 1,1,2-Trichloroethane	11.19	83	76	N.D.		
31) Toluene	11.48	91	790026	4809.378	pg	100
32) 1,2-Dibromoethane	12.12	107	53	N.D.		
33) Tetrachloroethene	12.61	166	2628	51.669	pg	99
35) Chlorobenzene	13.13	112	1542	N.D.		
36) Ethylbenzene	13.48	91	175719	927.560	pg	99
37) m,p-Xylene	13.61	91	500789	3216.372	pg	97
38) o-Xylene	13.94	106	89600	1177.494	pg	96
39) 1,1,1,2,2-Tetrachloroethane	0.00	83	0	N.D.	d	
41) 1,3-Dichlorobenzene	0.00	146	0	N.D.	d	
42) 1,4-Dichlorobenzene	15.24	146	3444	32.989	pg	99
43) 1,2-Dichlorobenzene	15.46	146	168	N.D.		
44) 1,2,4-Trichlorobenzene	16.63	182	347	N.D.		
45) Naphthalene	16.70	128	8393	44.401	pg	84
46) Hexachlorobutadiene	16.96	225	55	N.D.		

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\28\02281508.D

Acq On : 28 Feb 2015 5:43

Operator: WA

Sample : P1500729-005 (1000mL)

Misc :

ALS Vial : 14 Sample Multiplier: 1

Quant Time: Feb 28 10:21:26 2015

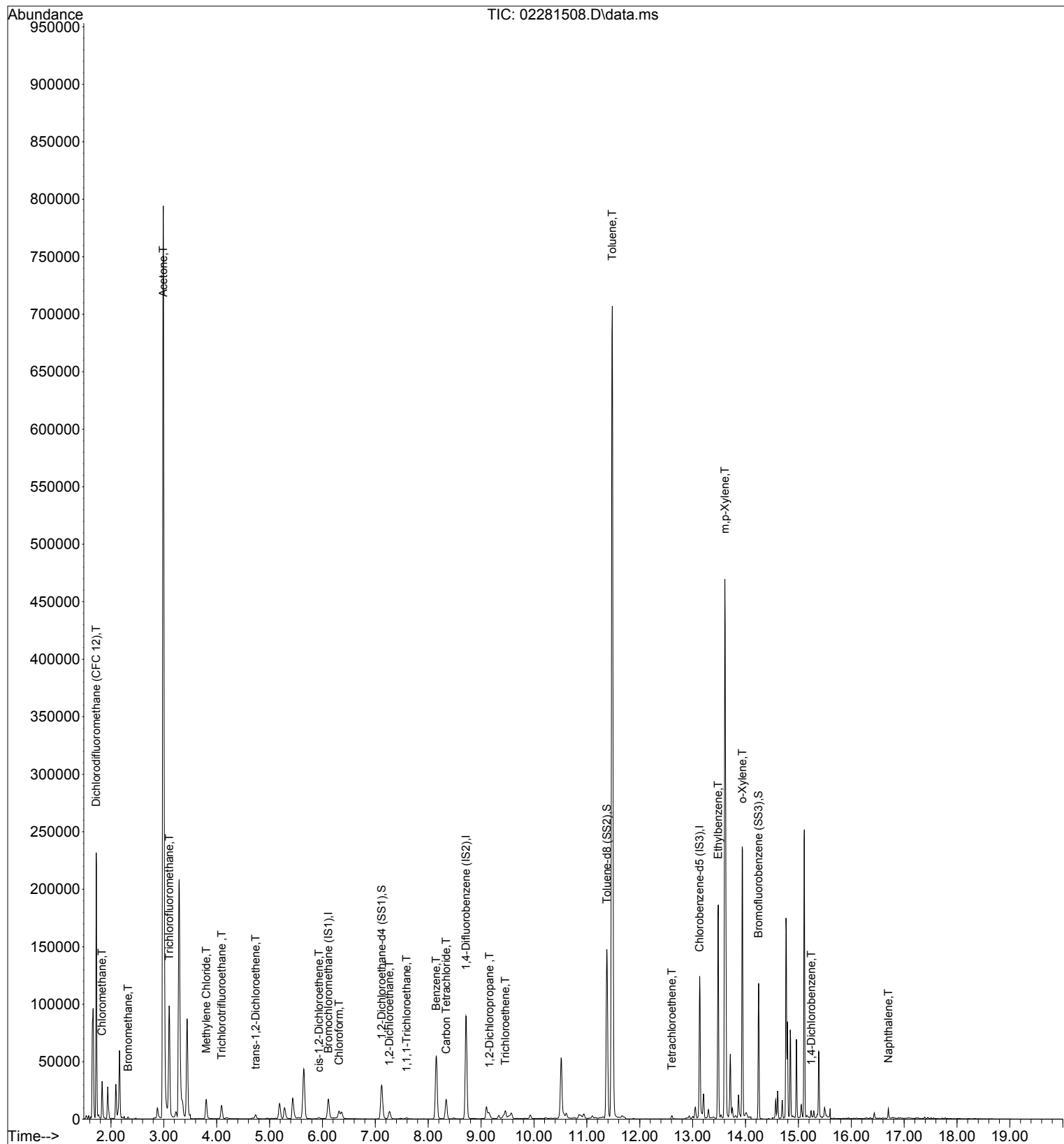
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 02\28\02281508.D

Acq On : 28 Feb 2015 5:43

Operator: WA

Sample : P1500729-005 (1000mL)

Misc :

ALS Vial : 14 Sample Multiplier: 1

Quant Time: Feb 28 10:21:26 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

2/28/15

DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	24248	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.71	114	167484	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	30210	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	52777	891.263	pg	0.00
Spiked Amount 1000.000			Recovery	=	89.13%	
30) Toluene-d8 (SS2)	11.38	98	161949	1048.545	pg	0.00
Spiked Amount 1000.000			Recovery	=	104.85%	
40) Bromofluorobenzene (SS3)	14.25	174	70583	1157.291	pg	0.00
Spiked Amount 1000.000			Recovery	=	115.73%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.72	85	160210	1625.767	pg	100
3) Chloromethane	1.83	52	8633	438.679	pg	97
5) Bromomethane	2.32	94	1300	29.337	pg	100
7) Acetone	2.99	58	283421	8144.678	pg	# 64
8) Trichlorofluoromethane	3.10	101	97157	1147.811	pg	100
10) Methylene Chloride	3.80	84	11627	289.483	pg	100
11) Trichlorotrifluoroethane	4.09	151	15020	386.171	pg	100
12) trans-1,2-Dichloroethene	4.74	96	2281	59.112	pg	96
15) cis-1,2-Dichloroethene	5.93	96	922	21.487	pg	99
16) Chloroform	6.31	83	10179	136.918	pg	92
18) 1,2-Dichloroethane	7.27	62	4219	71.274	pg	100
19) 1,1,1-Trichloroethane	7.59	97	1474	20.389	pg	100
20) Benzene	8.15	78	105215	688.093	pg	100
21) Carbon Tetrachloride	8.34	117	21466	396.608	pg	100
23) 1,2-Dichloropropane	9.16	63	1214	33.234	pg	# 82
25) Trichloroethene	9.46	130	4645	107.954	pg	100
31) Toluene	11.48	91	790026	4809.378	pg	100
33) Tetrachloroethene	12.61	166	2628	51.669	pg	99
36) Ethylbenzene	13.48	91	175719	927.560	pg	99
37) m,p-Xylene	13.61	91	500789	3216.372	pg	97
38) o-Xylene	13.94	106	89600	1177.494	pg	96
42) 1,4-Dichlorobenzene	15.24	146	3444	32.989	pg	99
45) Naphthalene	16.70	128	8393	44.401	pg	84

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\28\02281508.D

Acq On : 28 Feb 2015 5:43

Operator: WA

Sample : P1500729-005 (1000mL)

Misc :

ALS Vial : 14 Sample Multiplier: 1

Quant Time: Feb 28 10:21:26 2015

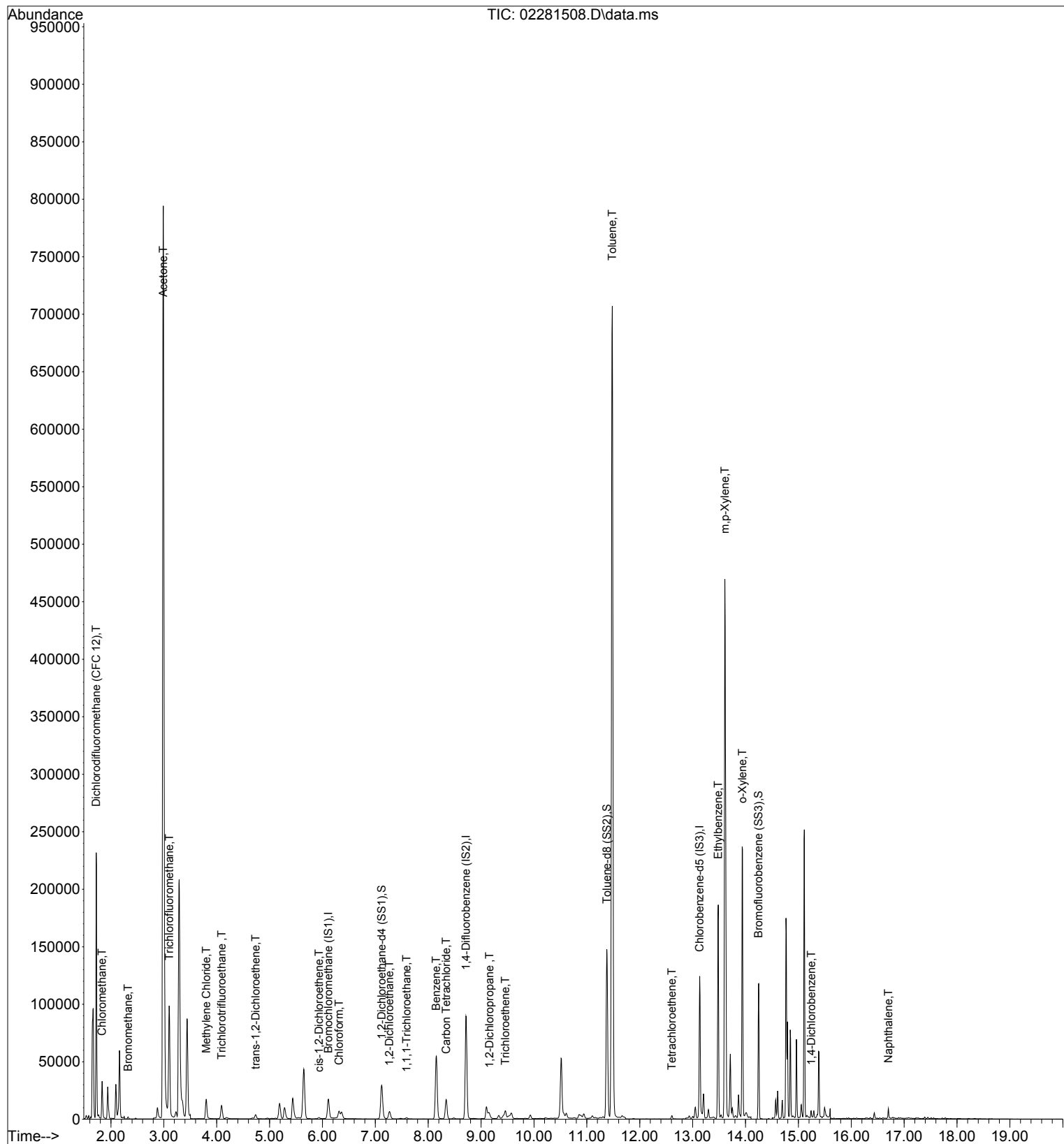
Quant Method : I:\MS19\METHODS\X19021115.M

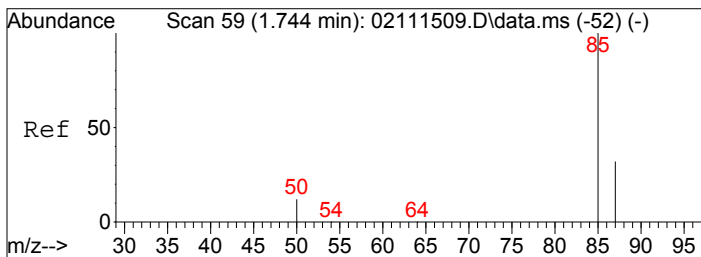
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

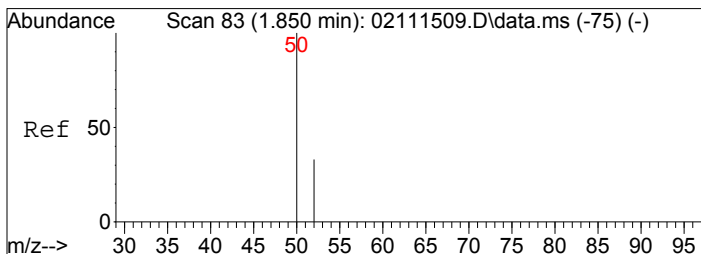
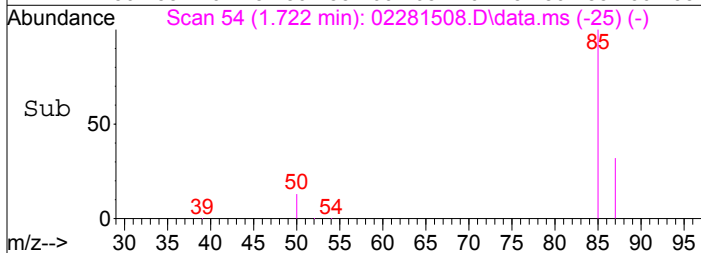
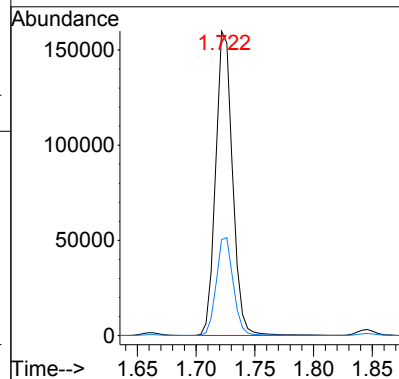
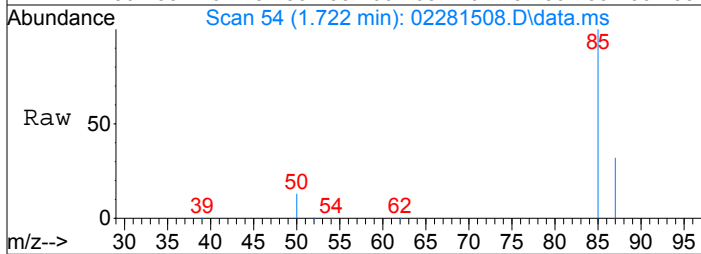
DataAcq Meth:TO15SIM.M





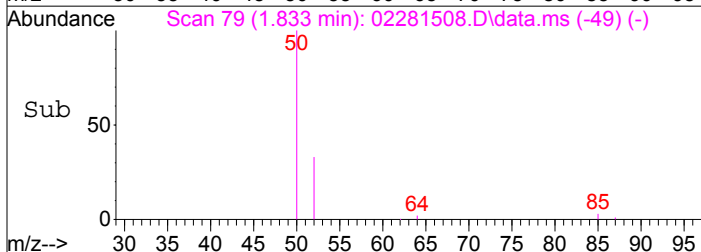
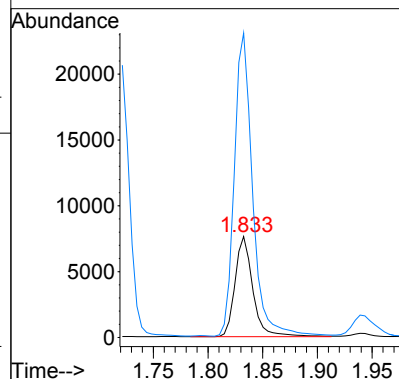
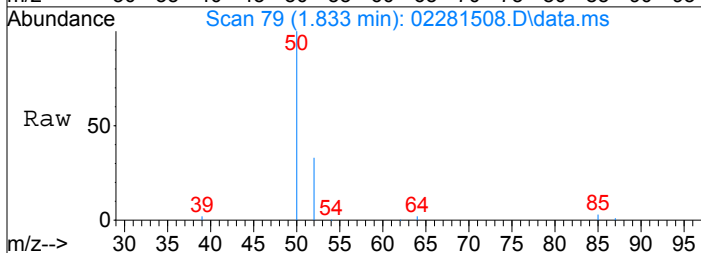
#2
 Dichlorodifluoromethane (CFC 12)
 Concen: 1625.77 pg
 RT: 1.72 min Scan# 54
 Delta R.T. -0.022 min
 Lab File: 02281508.D
 Acq: 28 Feb 2015 5:43

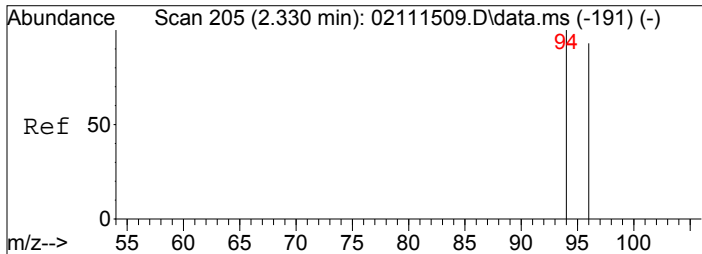
Tgt Ion: 85 Resp: 160210
 Ion Ratio Lower Upper
 85 100
 87 32.4 12.4 52.4



#3
 Chloromethane
 Concen: 438.68 pg
 RT: 1.83 min Scan# 79
 Delta R.T. -0.017 min
 Lab File: 02281508.D
 Acq: 28 Feb 2015 5:43

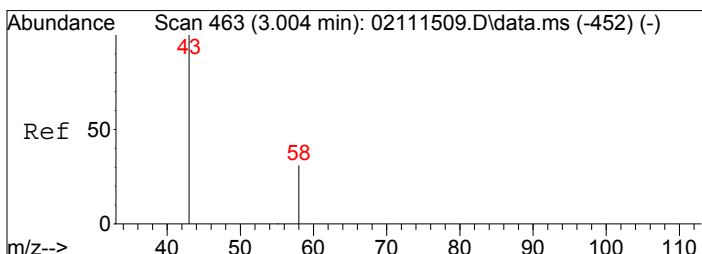
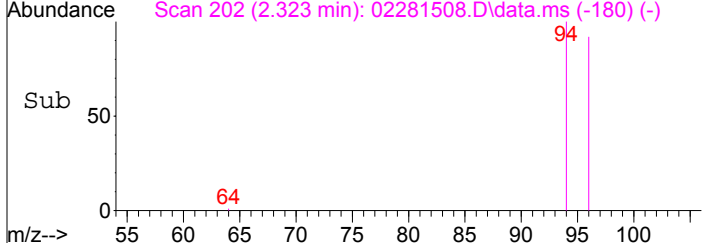
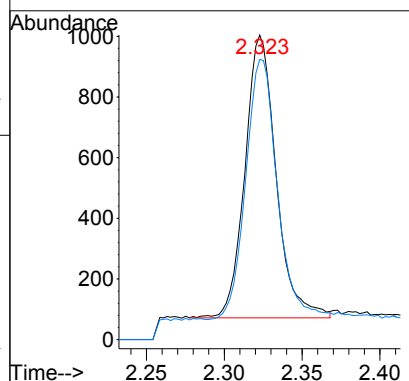
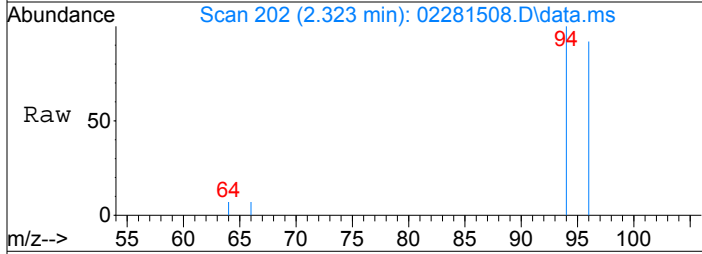
Tgt Ion: 52 Resp: 8633
 Ion Ratio Lower Upper
 52 100
 50 309.7 283.7 323.7





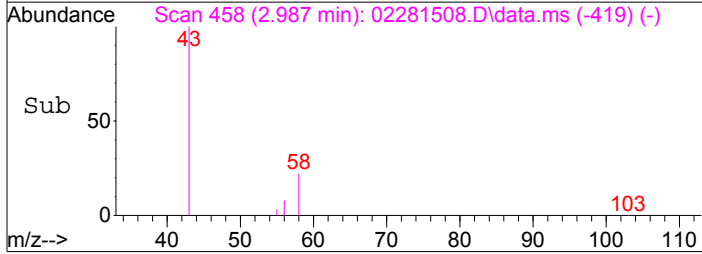
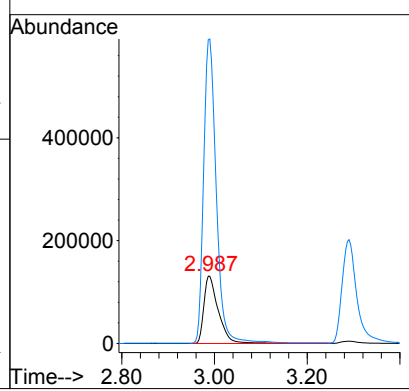
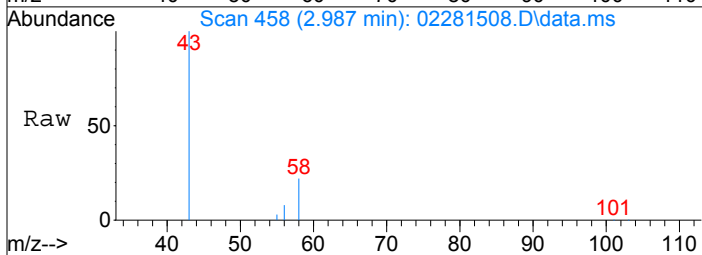
#5
 Bromomethane
 Concen: 29.34 pg
 RT: 2.32 min Scan# 202
 Delta R.T. -0.007 min
 Lab File: 02281508.D
 Acq: 28 Feb 2015 5:43

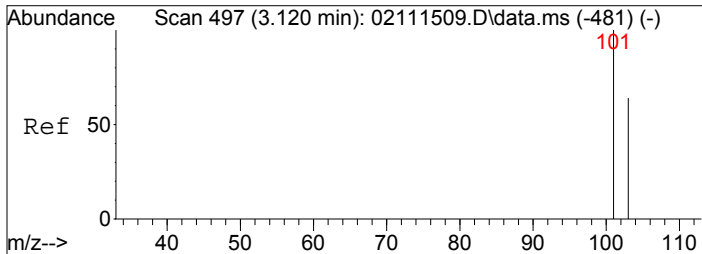
Tgt Ion:	94	Resp:	1300
Ion Ratio	Lower	Upper	
94	100		
96	93.9	75.5	113.3



#7
 Acetone
 Concen: 8144.68 pg
 RT: 2.99 min Scan# 458
 Delta R.T. -0.017 min
 Lab File: 02281508.D
 Acq: 28 Feb 2015 5:43

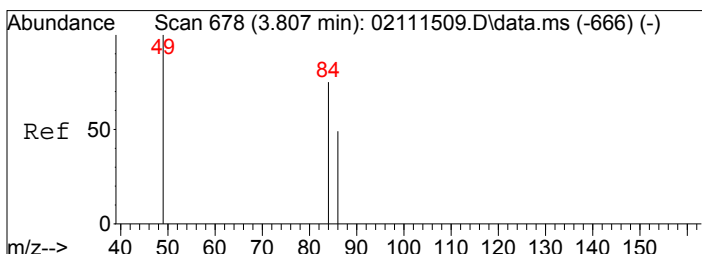
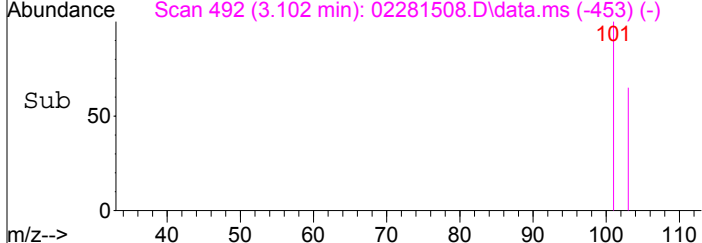
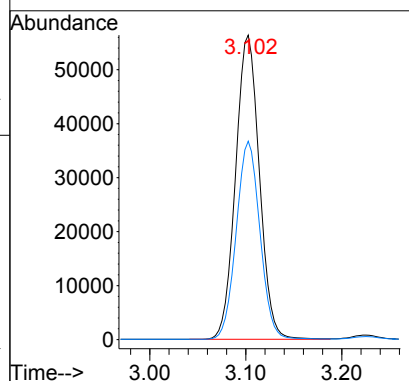
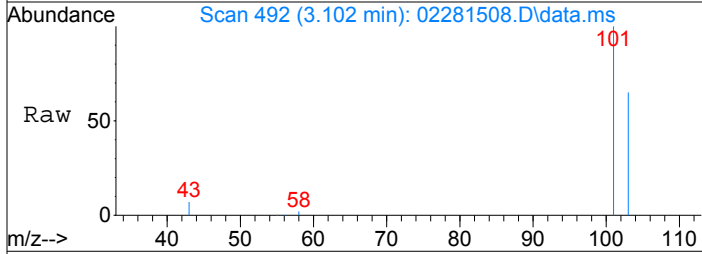
Tgt Ion:	58	Resp:	283421
Ion Ratio	Lower	Upper	
58	100		
43	394.7	301.8	341.8#





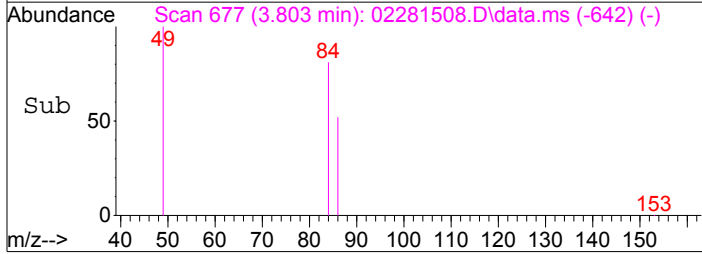
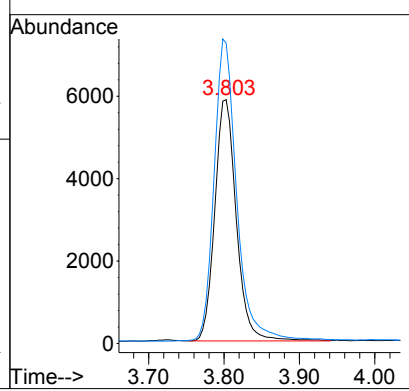
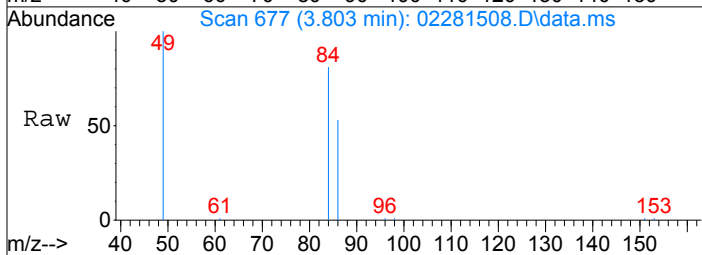
#8
 Trichlorofluoromethane
 Concen: 1147.81 pg
 RT: 3.10 min Scan# 492
 Delta R.T. -0.017 min
 Lab File: 02281508.D
 Acq: 28 Feb 2015 5:43

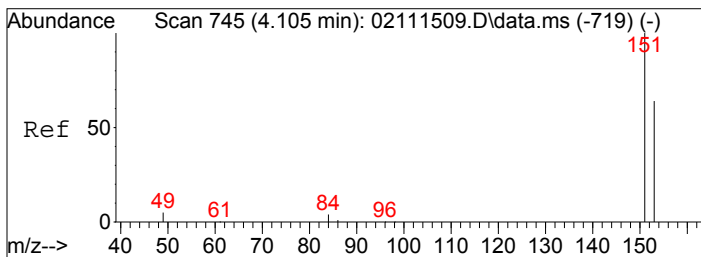
Tgt Ion: 101	Resp: 97157
Ion Ratio	Lower Upper
101	100
103	64.8 51.8 77.6



#10
 Methylene Chloride
 Concen: 289.48 pg
 RT: 3.80 min Scan# 677
 Delta R.T. -0.004 min
 Lab File: 02281508.D
 Acq: 28 Feb 2015 5:43

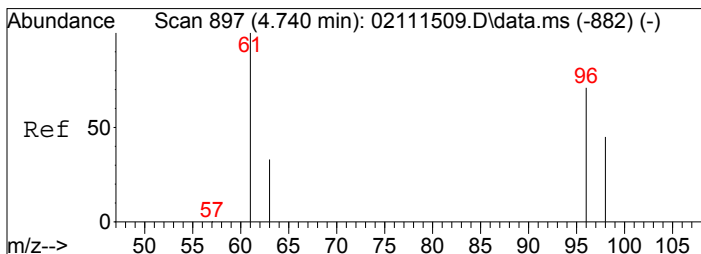
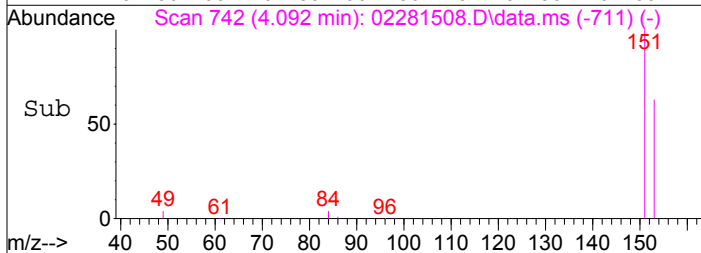
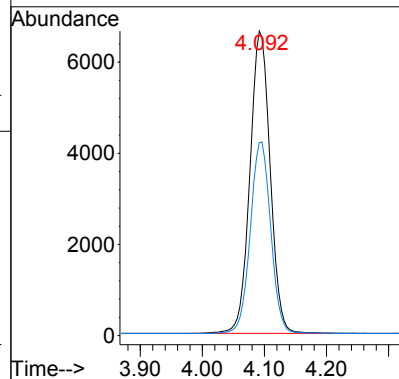
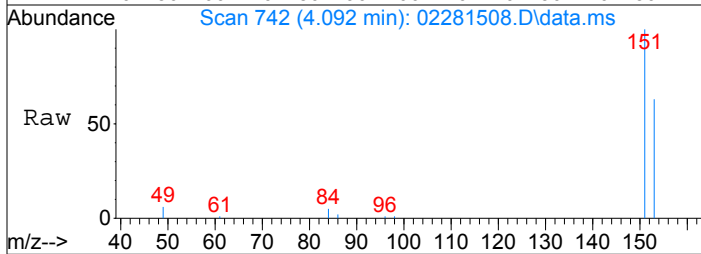
Tgt Ion: 84	Resp: 11627
Ion Ratio	Lower Upper
84	100
49	132.3 112.3 152.3





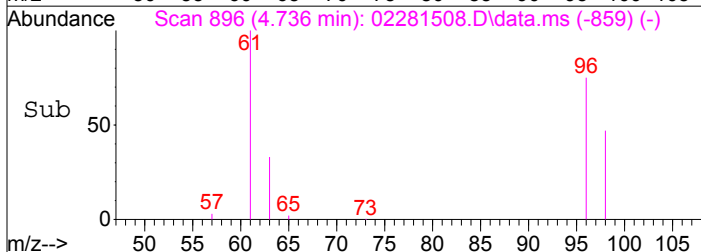
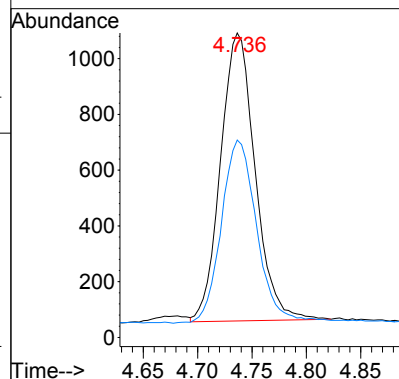
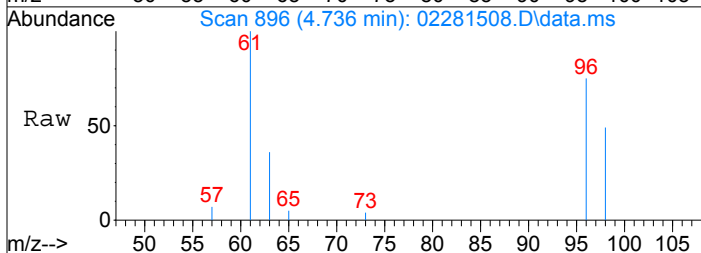
#11
Trichlorotrifluoroethane
Concen: 386.17 pg
RT: 4.09 min Scan# 742
Delta R.T. -0.013 min
Lab File: 02281508.D
Acq: 28 Feb 2015 5:43

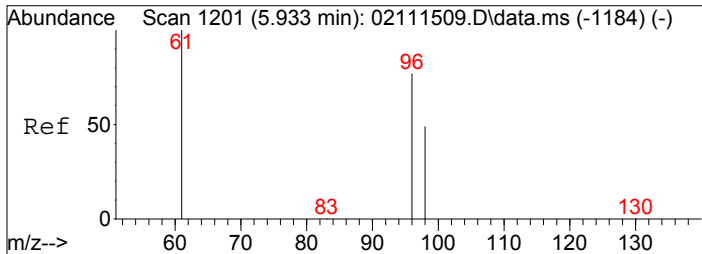
Tgt Ion: 151 Resp: 15020
Ion Ratio Lower Upper
151 100
153 64.0 43.6 83.6



#12
trans-1,2-Dichloroethene
Concen: 59.11 pg
RT: 4.74 min Scan# 896
Delta R.T. -0.004 min
Lab File: 02281508.D
Acq: 28 Feb 2015 5:43

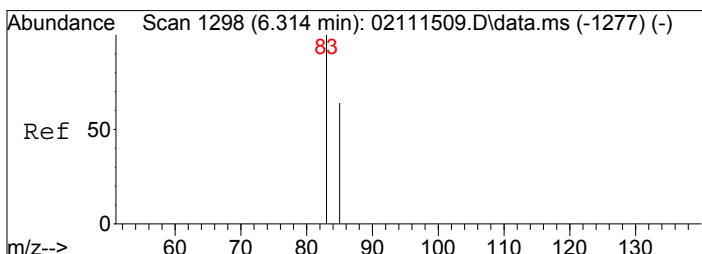
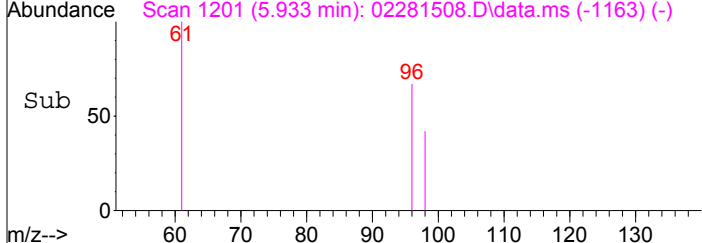
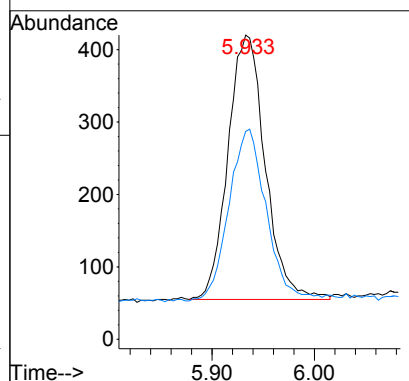
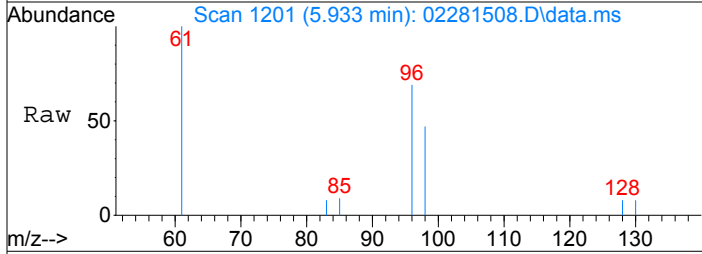
Tgt Ion: 96 Resp: 2281
Ion Ratio Lower Upper
96 100
98 66.9 43.7 83.7





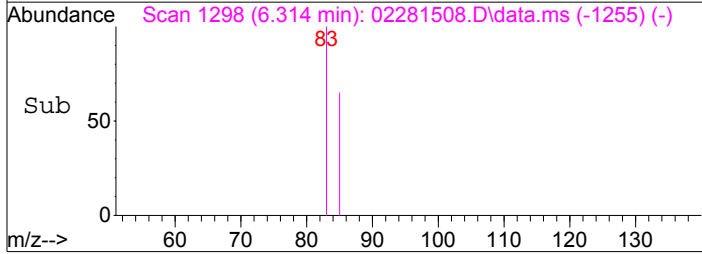
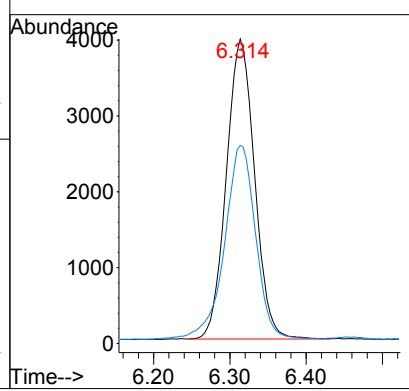
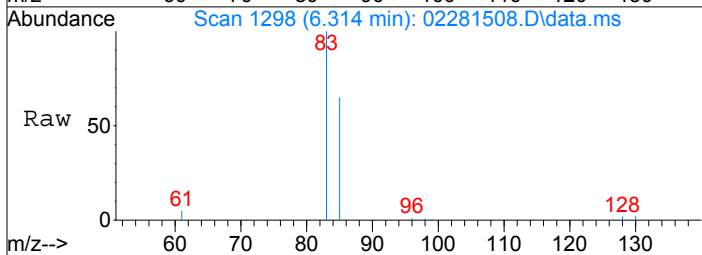
#15
 cis-1,2-Dichloroethene
 Concen: 21.49 pg
 RT: 5.93 min Scan# 1201
 Delta R.T. 0.000 min
 Lab File: 02281508.D
 Acq: 28 Feb 2015 5:43

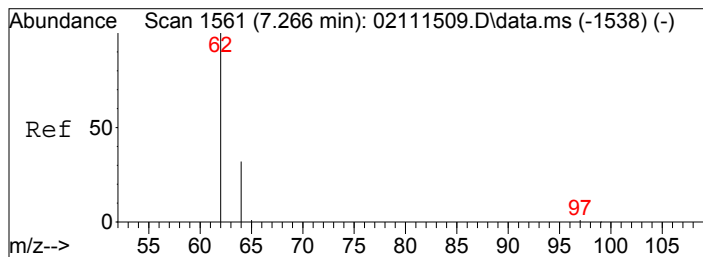
Tgt Ion:	96	Resp:	922
Ion Ratio	Lower	Upper	
96	100		
98	65.4	44.3	84.3



#16
 Chloroform
 Concen: 136.92 pg
 RT: 6.31 min Scan# 1298
 Delta R.T. -0.000 min
 Lab File: 02281508.D
 Acq: 28 Feb 2015 5:43

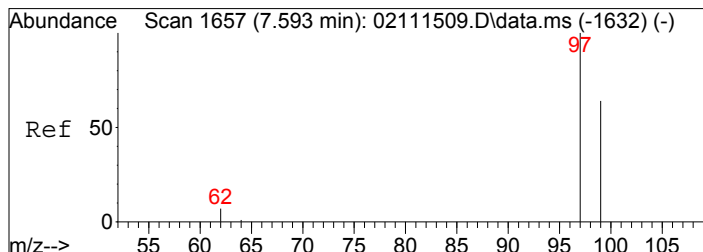
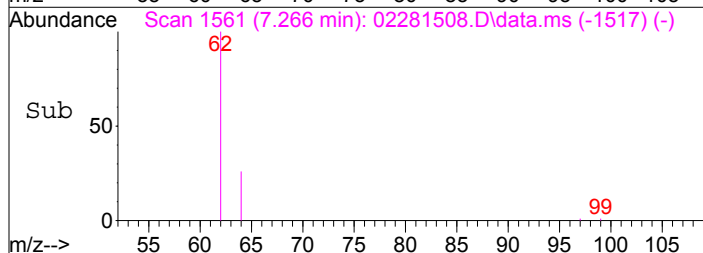
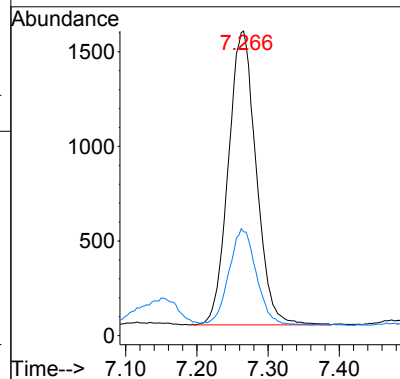
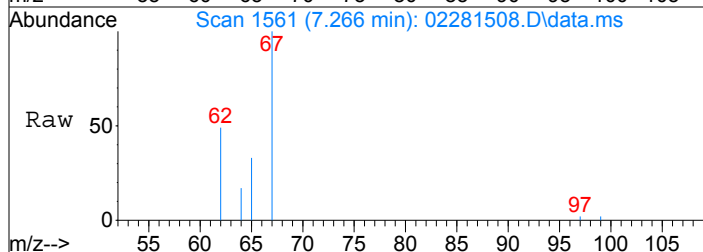
Tgt Ion:	83	Resp:	10179
Ion Ratio	Lower	Upper	
83	100		
85	71.5	45.4	85.4





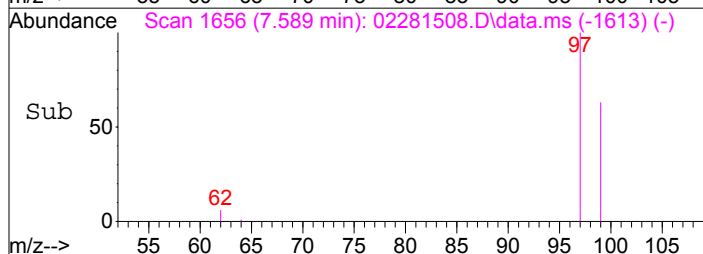
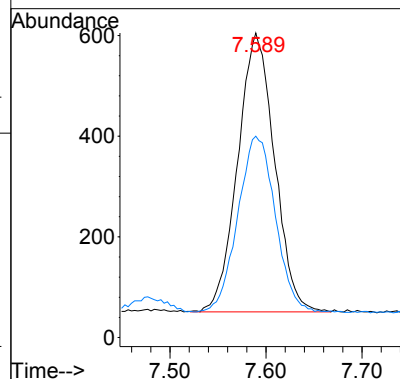
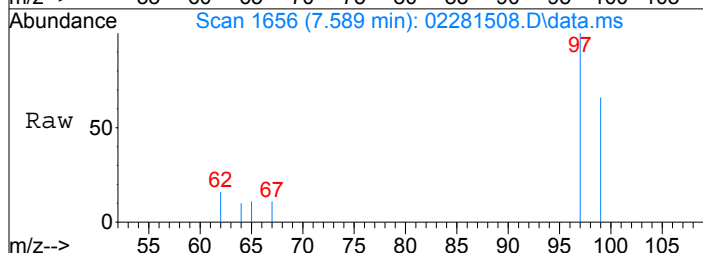
#18
1,2-Dichloroethane
Concen: 71.27 pg
RT: 7.27 min Scan# 1561
Delta R.T. -0.000 min
Lab File: 02281508.D
Acq: 28 Feb 2015 5:43

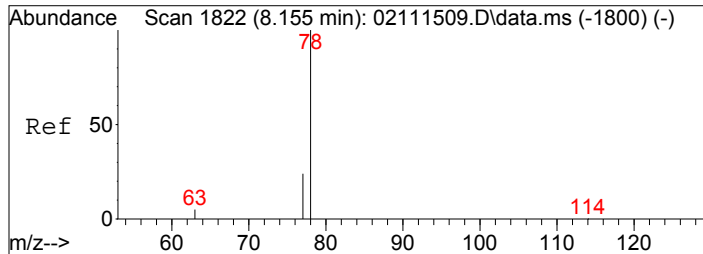
Tgt Ion: 62 Resp: 4219
Ion Ratio Lower Upper
62 100
64 31.6 11.6 51.6



#19
1,1,1-Trichloroethane
Concen: 20.39 pg
RT: 7.59 min Scan# 1656
Delta R.T. -0.003 min
Lab File: 02281508.D
Acq: 28 Feb 2015 5:43

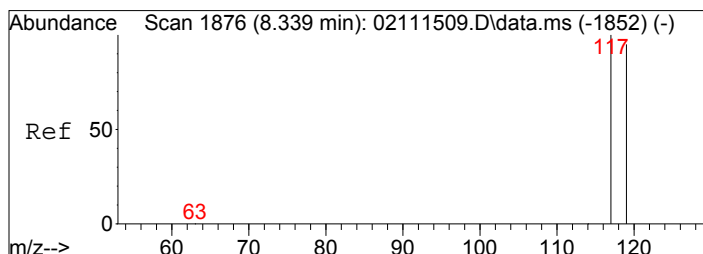
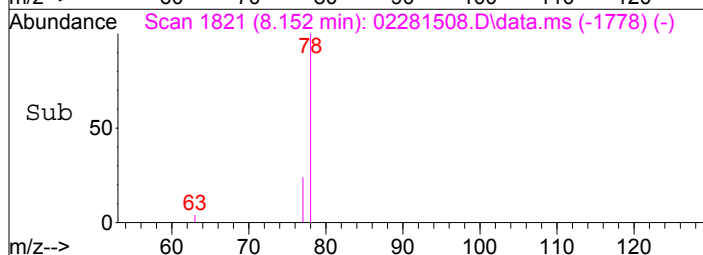
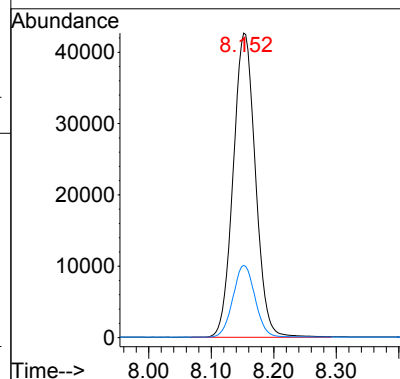
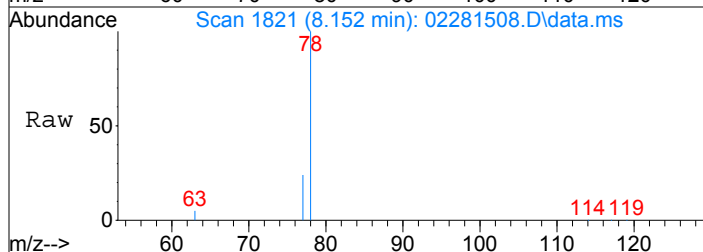
Tgt Ion: 97 Resp: 1474
Ion Ratio Lower Upper
97 100
99 64.0 44.0 84.0





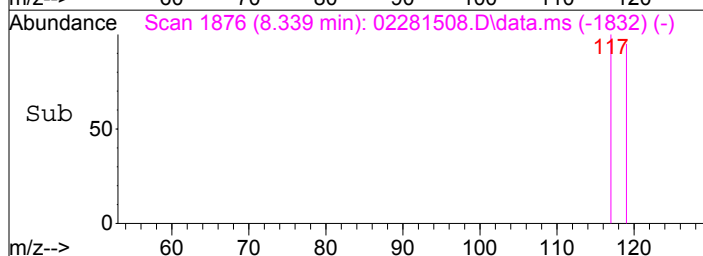
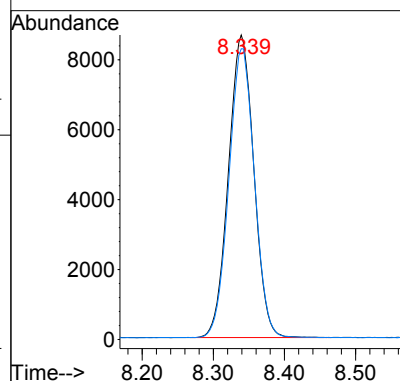
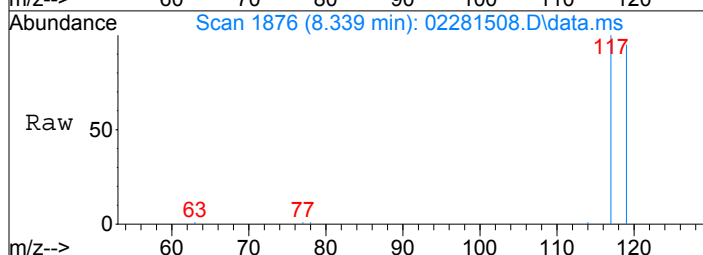
#20
Benzene
Concen: 688.09 pg
RT: 8.15 min Scan# 1821
Delta R.T. -0.003 min
Lab File: 02281508.D
Acq: 28 Feb 2015 5:43

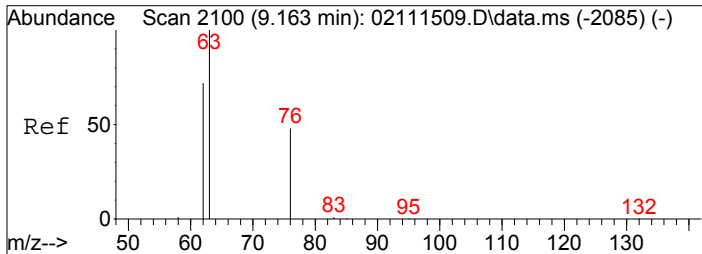
Tgt Ion: 78 Resp: 105215
Ion Ratio Lower Upper
78 100
77 23.6 3.7 43.7



#21
Carbon Tetrachloride
Concen: 396.61 pg
RT: 8.34 min Scan# 1876
Delta R.T. -0.000 min
Lab File: 02281508.D
Acq: 28 Feb 2015 5:43

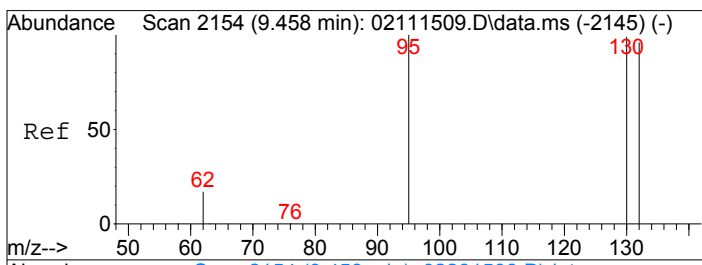
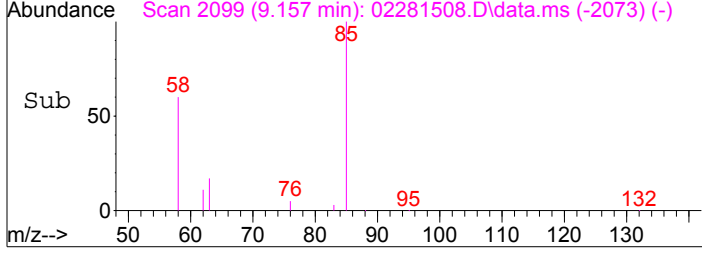
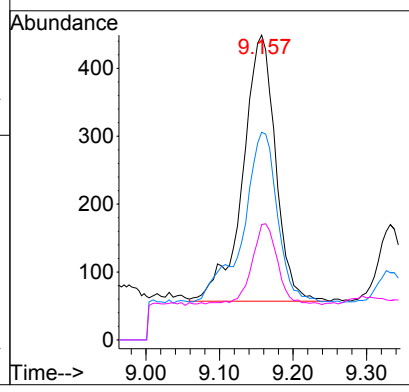
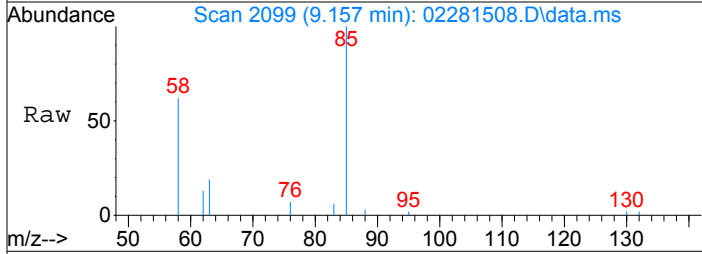
Tgt Ion: 117 Resp: 21466
Ion Ratio Lower Upper
117 100
119 96.0 75.5 115.5





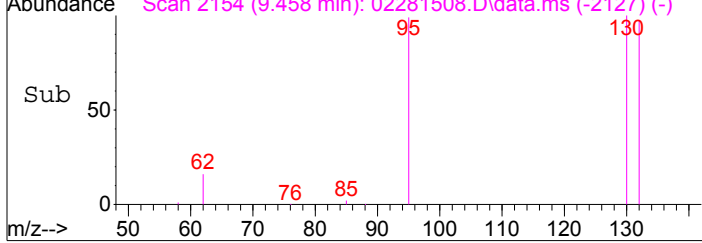
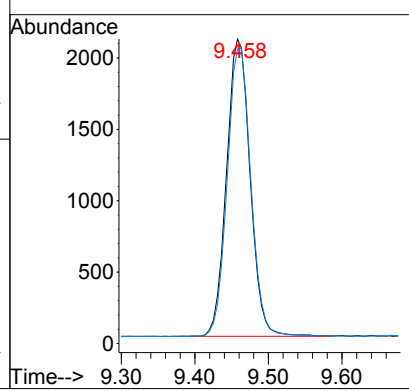
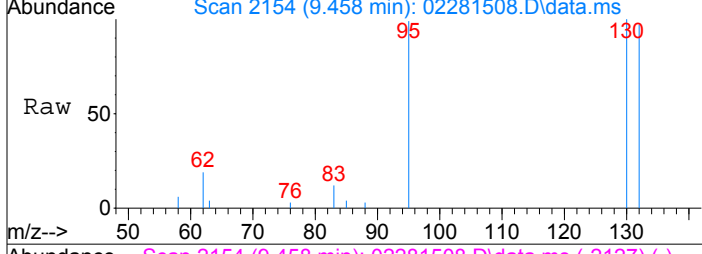
#23
 1,2-Dichloropropane
 Concen: 33.23 pg
 RT: 9.16 min Scan# 2099
 Delta R.T. -0.005 min
 Lab File: 02281508.D
 Acq: 28 Feb 2015 5:43

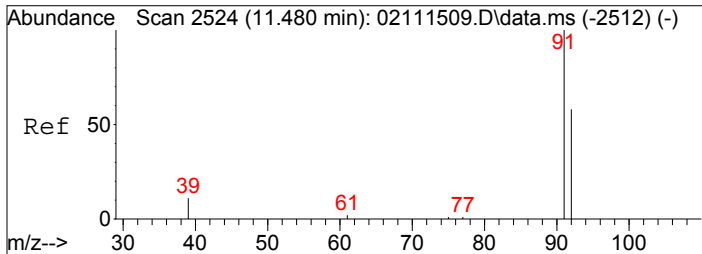
Tgt Ion: 63	Resp: 1214
Ion Ratio	Lower Upper
63	100
62	66.8 52.0 92.0
76	24.1 28.1 68.1#



#25
 Trichloroethene
 Concen: 107.95 pg
 RT: 9.46 min Scan# 2154
 Delta R.T. 0.000 min
 Lab File: 02281508.D
 Acq: 28 Feb 2015 5:43

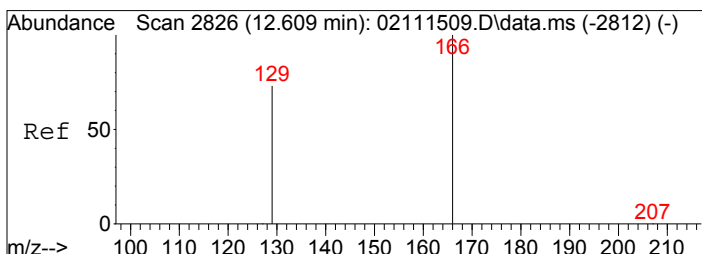
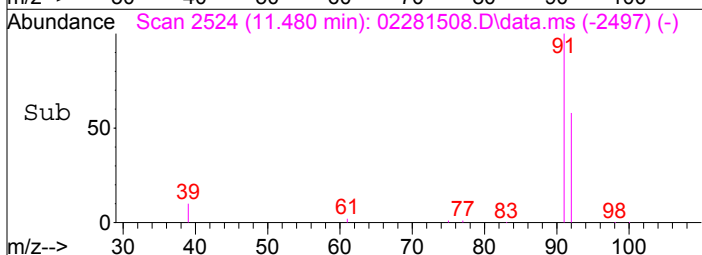
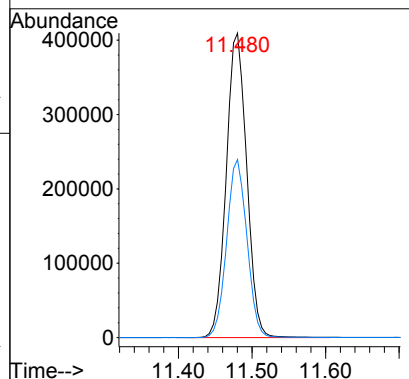
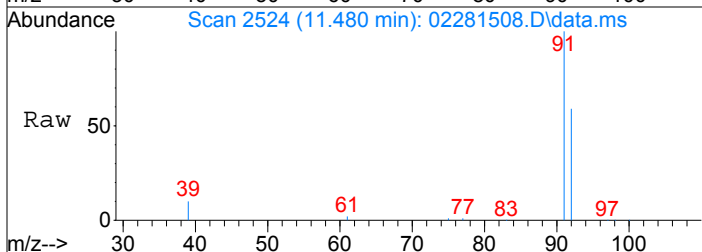
Tgt Ion: 130	Resp: 4645
Ion Ratio	Lower Upper
130	100
132	97.4 77.1 117.1





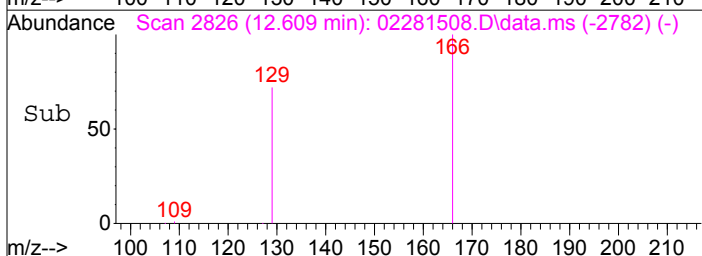
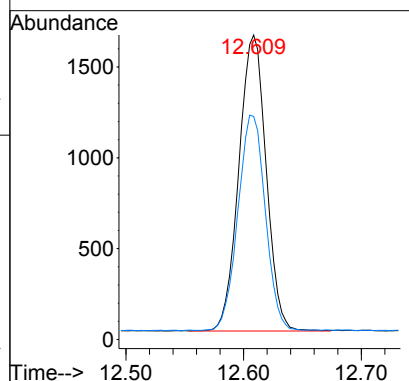
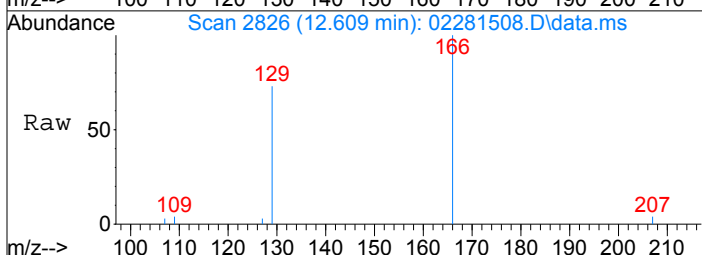
#31
Toluene
Concen: 4809.38 pg
RT: 11.48 min Scan# 2524
Delta R.T. 0.000 min
Lab File: 02281508.D
Acq: 28 Feb 2015 5:43

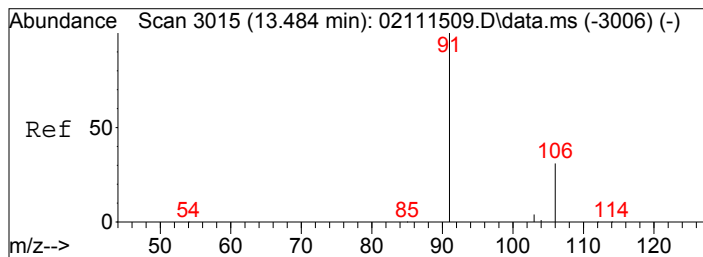
Tgt Ion	91	Resp	790026
Ion Ratio	100	Lower	Upper
91	100		
92	58.0	37.7	77.7



#33
Tetrachloroethene
Concen: 51.67 pg
RT: 12.61 min Scan# 2826
Delta R.T. -0.000 min
Lab File: 02281508.D
Acq: 28 Feb 2015 5:43

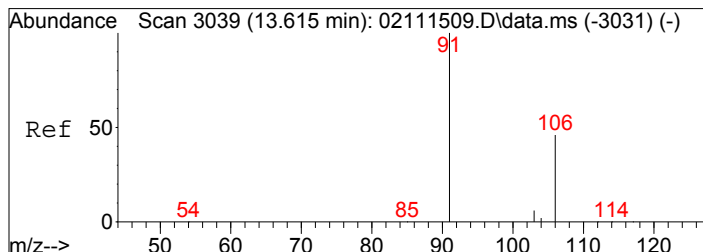
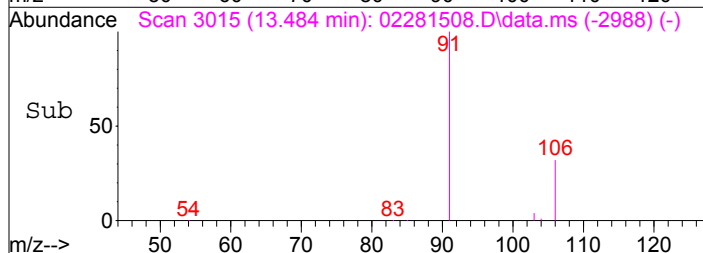
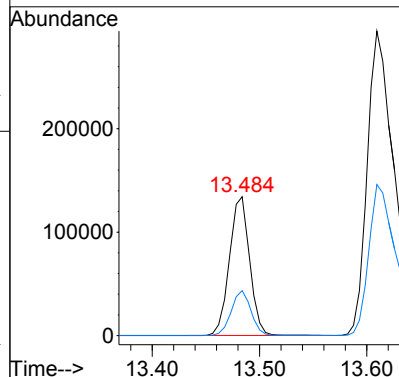
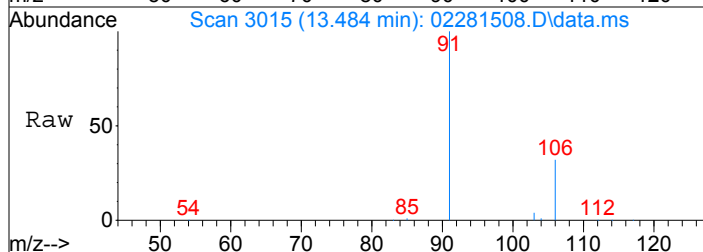
Tgt Ion	166	Resp	2628
Ion Ratio <th>100</th> <th>Lower</th> <th>Upper</th>	100	Lower	Upper
166	100		
129	72.8	53.3	93.3





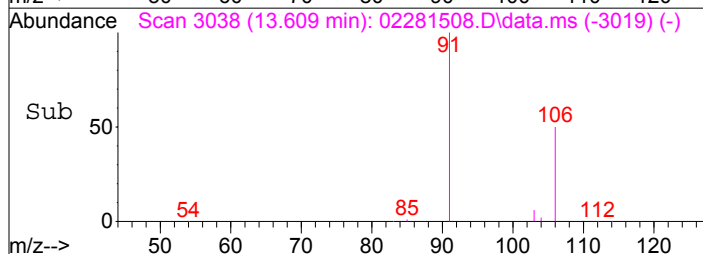
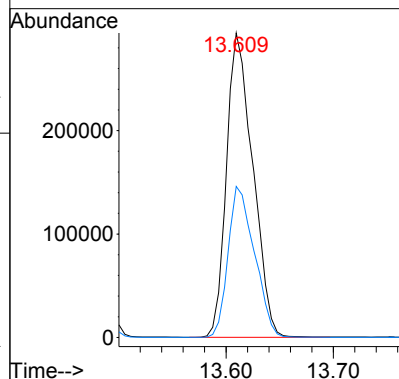
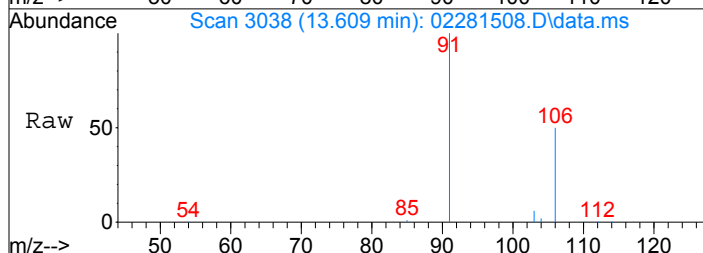
#36
Ethylbenzene
Concen: 927.56 pg
RT: 13.48 min Scan# 3015
Delta R.T. 0.000 min
Lab File: 02281508.D
Acq: 28 Feb 2015 5:43

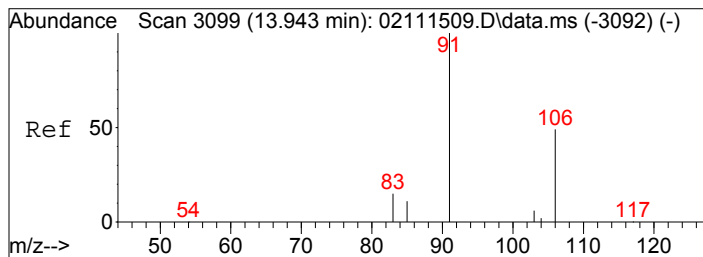
Tgt Ion: 91 Resp: 175719
Ion Ratio Lower Upper
91 100
106 31.6 10.9 50.9



#37
m,p-Xylene
Concen: 3216.37 pg
RT: 13.61 min Scan# 3038
Delta R.T. -0.005 min
Lab File: 02281508.D
Acq: 28 Feb 2015 5:43

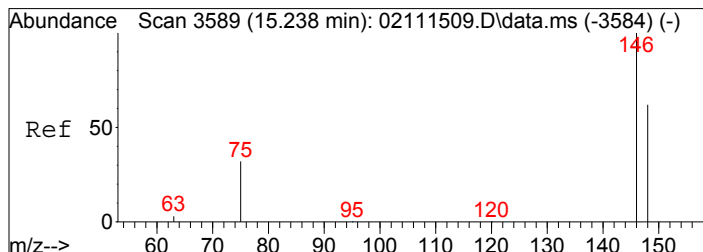
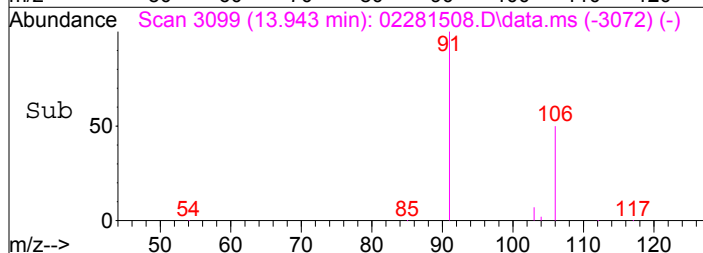
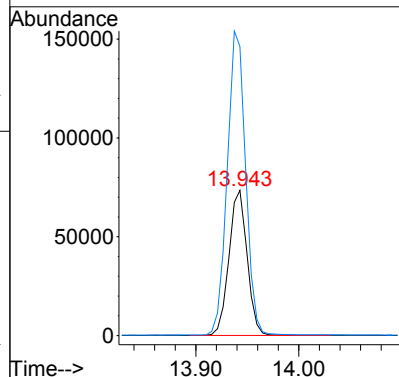
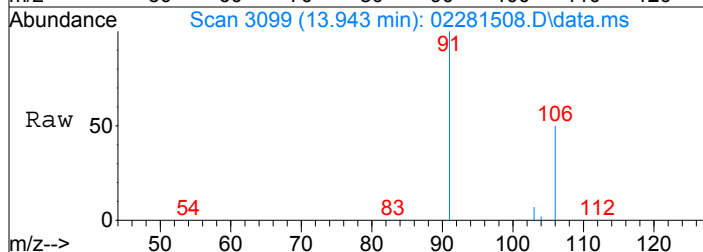
Tgt Ion: 91 Resp: 500789
Ion Ratio Lower Upper
91 100
106 49.8 27.5 67.5





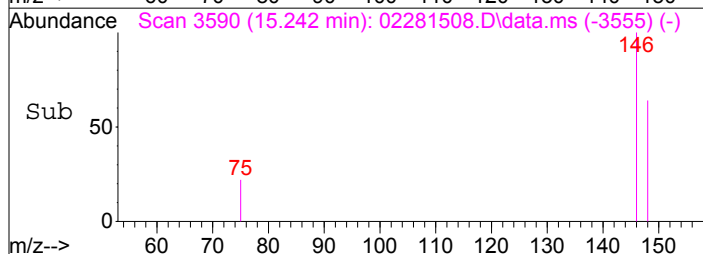
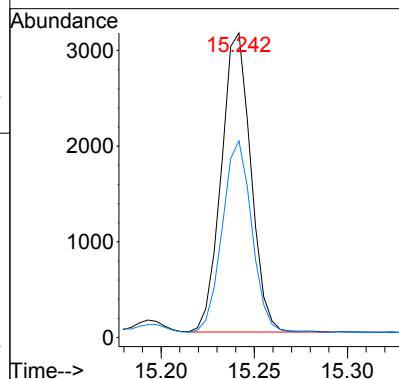
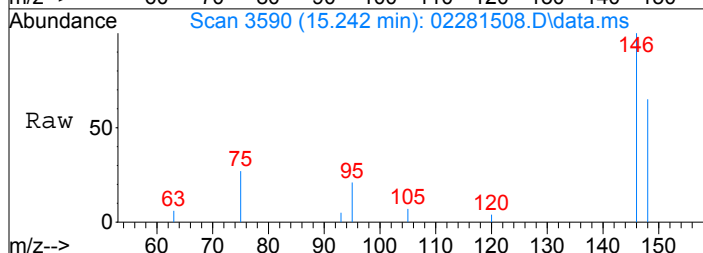
#38
o-Xylene
Concen: 1177.49 pg
RT: 13.94 min Scan# 3099
Delta R.T. 0.000 min
Lab File: 02281508.D
Acq: 28 Feb 2015 5:43

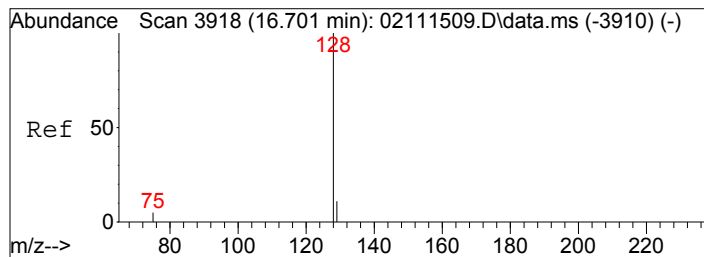
Tgt Ion:106 Resp: 89600
Ion Ratio Lower Upper
106 100
91 212.3 198.3 238.3



#42
1,4-Dichlorobenzene
Concen: 32.99 pg
RT: 15.24 min Scan# 3590
Delta R.T. 0.004 min
Lab File: 02281508.D
Acq: 28 Feb 2015 5:43

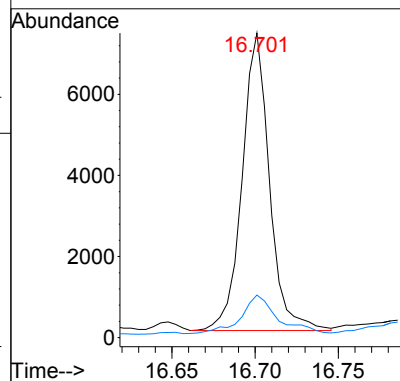
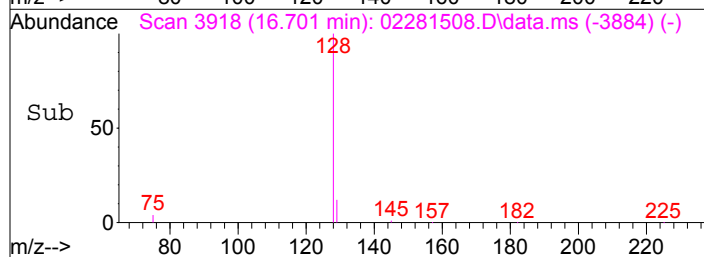
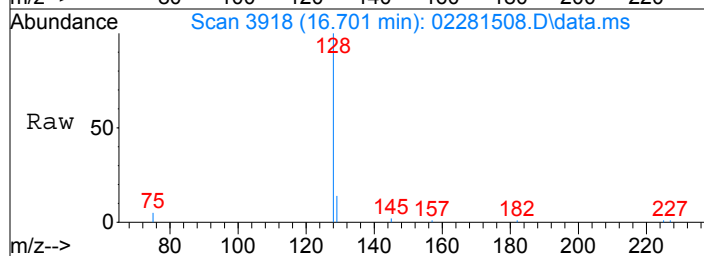
Tgt Ion:146 Resp: 3444
Ion Ratio Lower Upper
146 100
148 64.0 43.5 83.5





#45
Naphthalene
Concen: 44.40 pg
RT: 16.70 min Scan# 3918
Delta R.T. 0.000 min
Lab File: 02281508.D
Acq: 28 Feb 2015 5:43

Tgt Ion:128 Resp: 8393
Ion Ratio Lower Upper
128 100
129 17.1 0.0 30.9



Data File: I:\MS19\DATA\2015 02\28\02281509.D

Acq On : 28 Feb 2015 6:11

Operator: WA

Sample : P1500729-006 (1000mL)

Misc :

ALS Vial : 15 Sample Multiplier: 1

Quant Time: Feb 28 10:22:57 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

2/28/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	24022	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	175043	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	29194	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	53207	906.978	pg	0.00
Spiked Amount 1000.000			Recovery	=	90.70%	
30) Toluene-d8 (SS2)	11.38	98	162229	1005.000	pg	0.00
Spiked Amount 1000.000			Recovery	=	100.50%	
40) Bromofluorobenzene (SS3)	14.25	174	67370	1143.053	pg	0.00
Spiked Amount 1000.000			Recovery	=	114.30%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.73	85	151162	1548.382	pg	100
3) Chloromethane	1.84	52	8836	453.218	pg	99
4) Vinyl Chloride	2.02	62	176	N.D.		
5) Bromomethane	2.33	94	1278	29.112	pg	97
6) Chloroethane	2.48	64	345	N.D.		
7) Acetone	3.00	58	172557	5005.428	pg	# 70
8) Trichlorofluoromethane	3.11	101	83148	991.551	pg	100
9) 1,1-Dichloroethene	3.67	96	92	N.D.		
10) Methylene Chloride	3.81	84	9619	241.742	pg	94
11) Trichlorotrifluoroethane	4.10	151	13494	350.201	pg	100
12) trans-1,2-Dichloroethene	4.74	96	1156	30.239	pg	97
13) 1,1-Dichloroethane	4.95	63	387	N.D.		
14) Methyl tert-Butyl Ether	5.12	73	594	N.D.		
15) cis-1,2-Dichloroethene	5.93	96	471	N.D.		
16) Chloroform	6.31	83	18565	252.068	pg	99
18) 1,2-Dichloroethane	7.27	62	3390	57.808	pg	100
19) 1,1,1-Trichloroethane	7.59	97	1069	N.D.		
20) Benzene	8.15	78	57596	380.215	pg	100
21) Carbon Tetrachloride	8.34	117	18995	354.256	pg	99
23) 1,2-Dichloropropane	9.16	63	751	N.D.		
24) Bromodichloromethane	0.00	83	0	N.D.	d	
25) Trichloroethene	9.46	130	1309	29.109	pg	99
26) 1,4-Dioxane	9.57	88	124	N.D.		
27) cis-1,3-Dichloropropene	10.46	75	481	N.D.		
28) trans-1,3-Dichloropropene	11.06	75	265	N.D.		
29) 1,1,2-Trichloroethane	11.20	83	188	N.D.		
31) Toluene	11.48	91	364999	2126.022	pg	100
32) 1,2-Dibromoethane	12.13	107	174	N.D.		
33) Tetrachloroethene	12.61	166	1690	31.792	pg	100
35) Chlorobenzene	13.17	112	1045	N.D.		
36) Ethylbenzene	13.48	91	71035	388.019	pg	99
37) m,p-Xylene	13.61	91	197880	1315.135	pg	97
38) o-Xylene	13.94	106	37106	504.605	pg	97
39) 1,1,2,2-Tetrachloroethane	13.88	83	993	N.D.		
41) 1,3-Dichlorobenzene	15.19	146	302	N.D.		
42) 1,4-Dichlorobenzene	15.24	146	2453	24.315	pg	99
43) 1,2-Dichlorobenzene	15.46	146	362	N.D.		
44) 1,2,4-Trichlorobenzene	16.63	182	499	N.D.		
45) Naphthalene	16.70	128	16461	90.114	pg	83
46) Hexachlorobutadiene	16.96	225	84	N.D.		

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\28\02281509.D

Acq On : 28 Feb 2015 6:11

Operator: WA

Sample : P1500729-006 (1000mL)

Misc :

ALS Vial : 15 Sample Multiplier: 1

Quant Time: Feb 28 10:22:57 2015

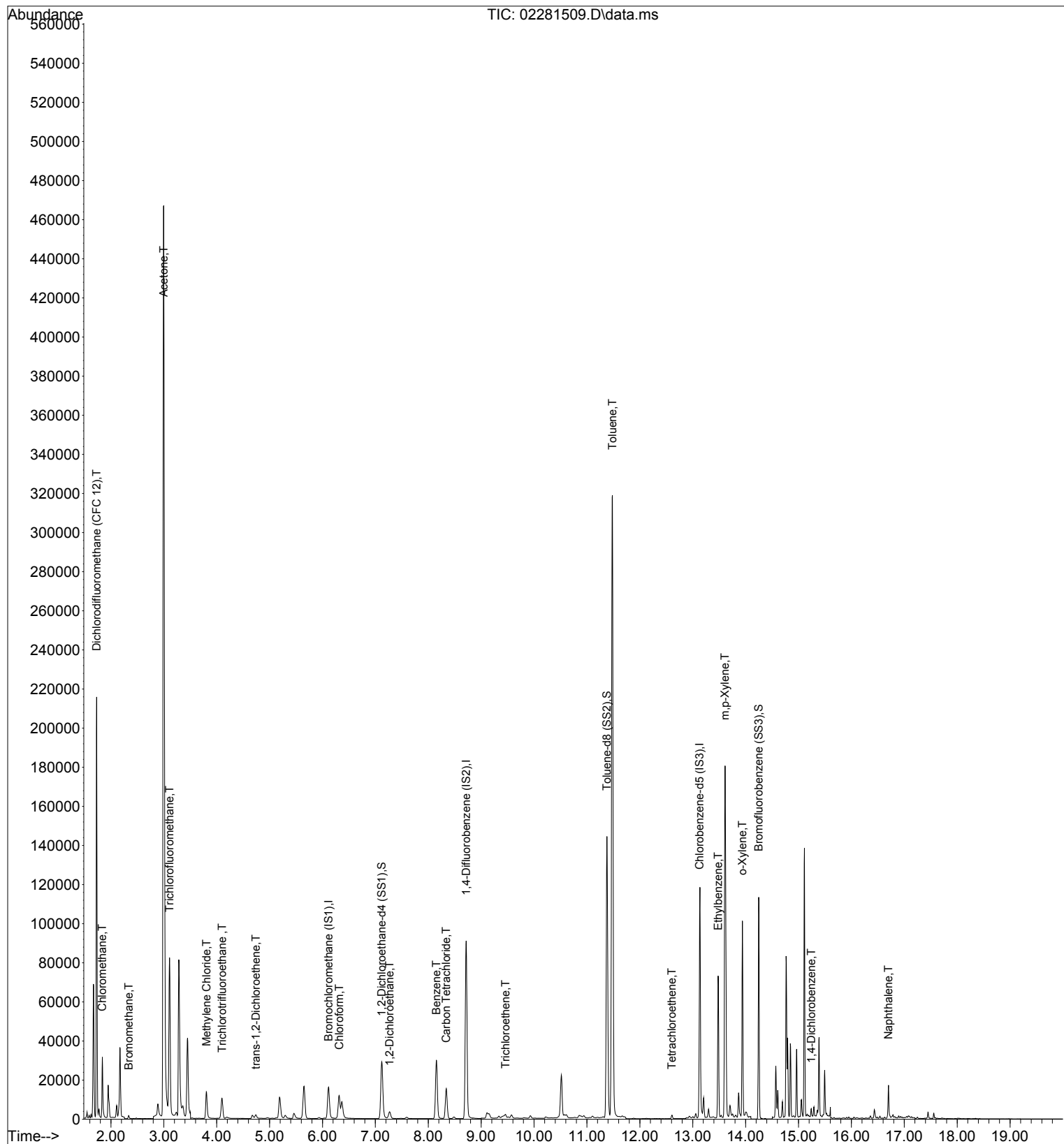
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 02\28\02281509.D

Acq On : 28 Feb 2015 6:11

Operator: WA

Sample : P1500729-006 (1000mL)

Misc :

ALS Vial : 15 Sample Multiplier: 1

Quant Time: Feb 28 10:22:57 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

2/28/15

DataAcq Meth:TO15SIM.M

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System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	53207	906.978	pg	0.00
Spiked Amount 1000.000			Recovery	=	90.70%	
30) Toluene-d8 (SS2)	11.38	98	162229	1005.000	pg	0.00
Spiked Amount 1000.000			Recovery	=	100.50%	
40) Bromofluorobenzene (SS3)	14.25	174	67370	1143.053	pg	0.00
Spiked Amount 1000.000			Recovery	=	114.30%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.73	85	151162	1548.382	pg	100
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7) Acetone	3.00	58	172557	5005.428	pg	# 70
8) Trichlorofluoromethane	3.11	101	83148	991.551	pg	100
10) Methylene Chloride	3.81	84	9619	241.742	pg	94
11) Trichlorotrifluoroethane	4.10	151	13494	350.201	pg	100
12) trans-1,2-Dichloroethene	4.74	96	1156	30.239	pg	97
16) Chloroform	6.31	83	18565	252.068	pg	99
18) 1,2-Dichloroethane	7.27	62	3390	57.808	pg	100
20) Benzene	8.15	78	57596	380.215	pg	100
21) Carbon Tetrachloride	8.34	117	18995	354.256	pg	99
25) Trichloroethene	9.46	130	1309	29.109	pg	99
31) Toluene	11.48	91	364999	2126.022	pg	100
33) Tetrachloroethene	12.61	166	1690	31.792	pg	100
36) Ethylbenzene	13.48	91	71035	388.019	pg	99
37) m,p-Xylene	13.61	91	197880	1315.135	pg	97
38) o-Xylene	13.94	106	37106	504.605	pg	97
42) 1,4-Dichlorobenzene	15.24	146	2453	24.315	pg	99
45) Naphthalene	16.70	128	16461	90.114	pg	83

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\28\02281509.D

Acq On : 28 Feb 2015 6:11

Operator: WA

Sample : P1500729-006 (1000mL)

Misc :

ALS Vial : 15 Sample Multiplier: 1

Quant Time: Feb 28 10:22:57 2015

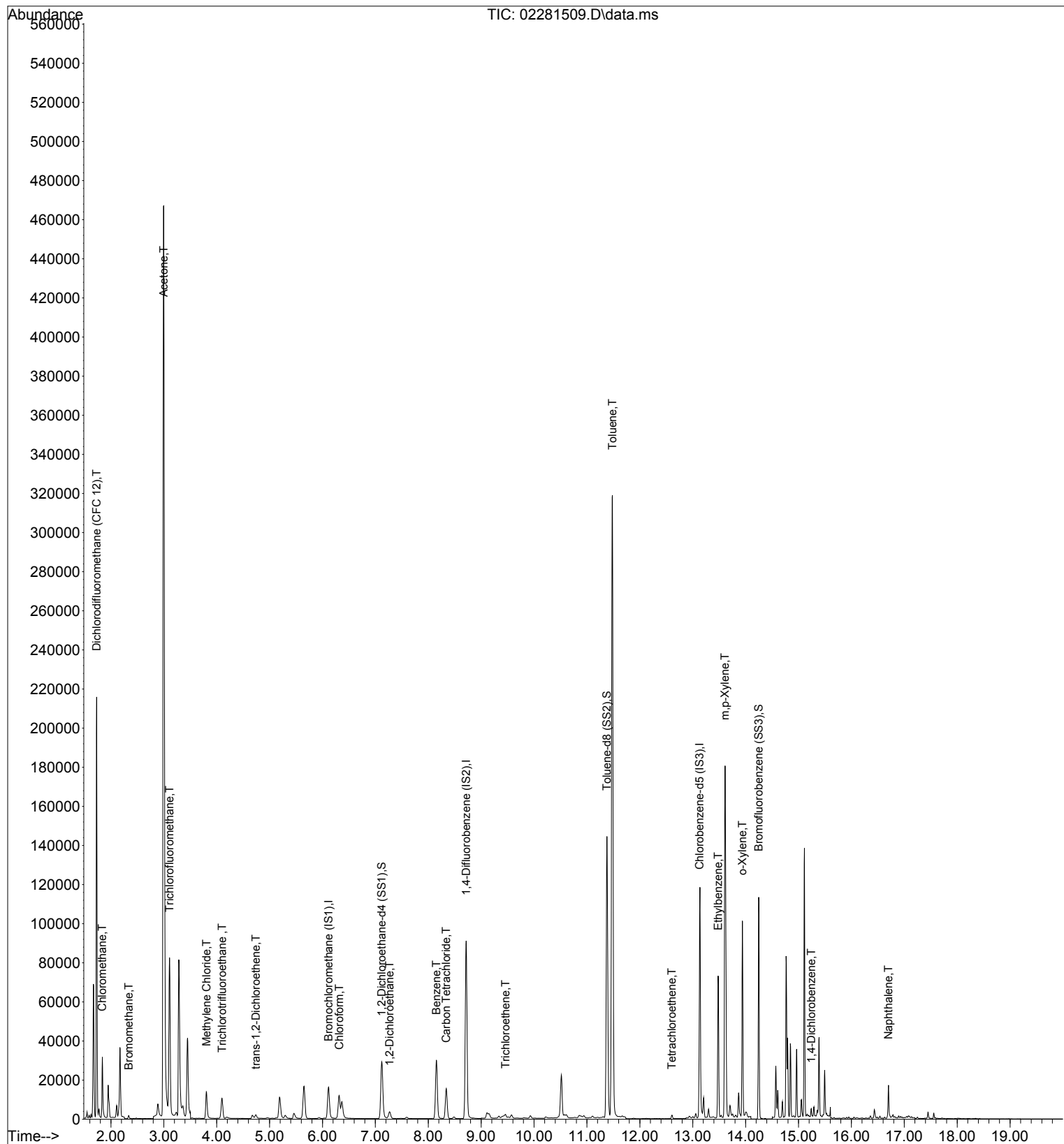
Quant Method : I:\MS19\METHODS\X19021115.M

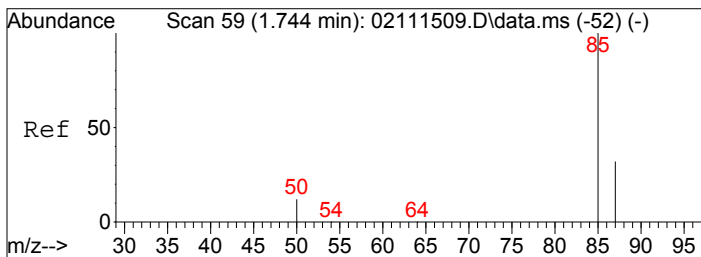
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

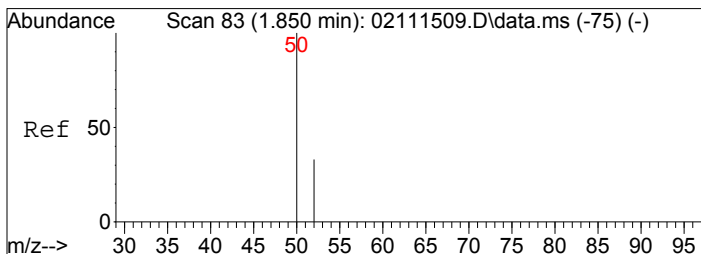
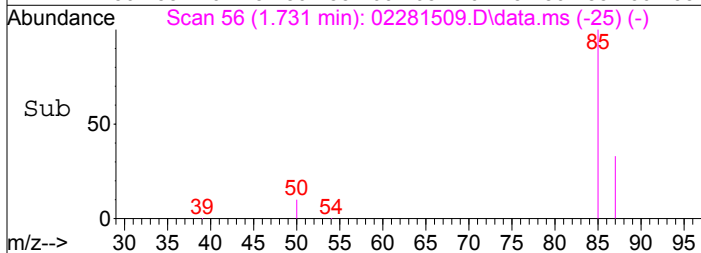
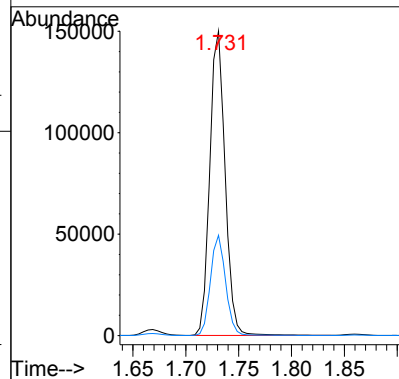
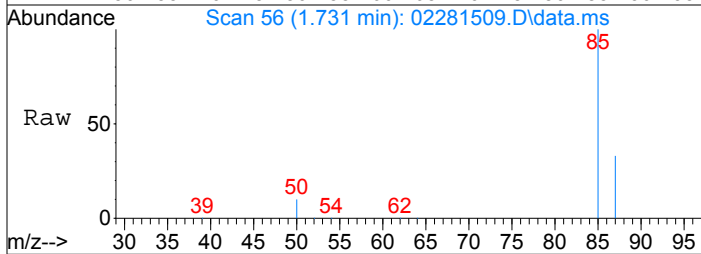
DataAcq Meth:TO15SIM.M





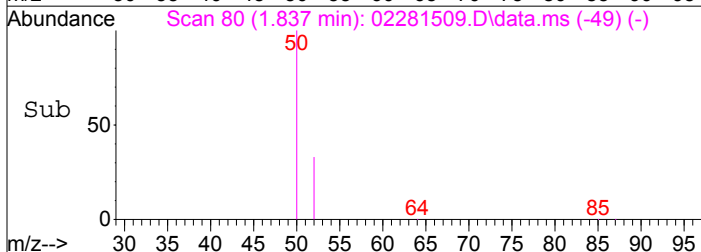
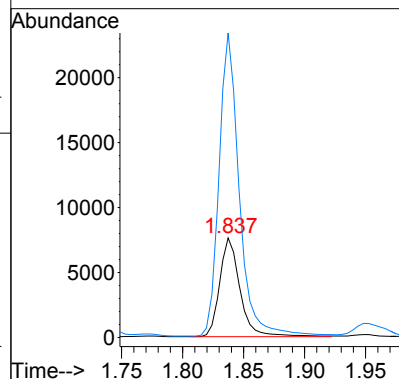
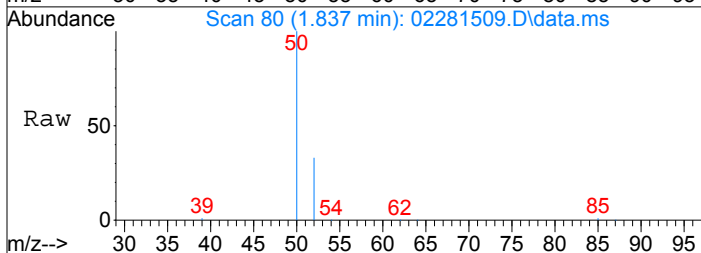
#2
 Dichlorodifluoromethane (CFC 12)
 Concen: 1548.38 pg
 RT: 1.73 min Scan# 56
 Delta R.T. -0.013 min
 Lab File: 02281509.D
 Acq: 28 Feb 2015 6:11

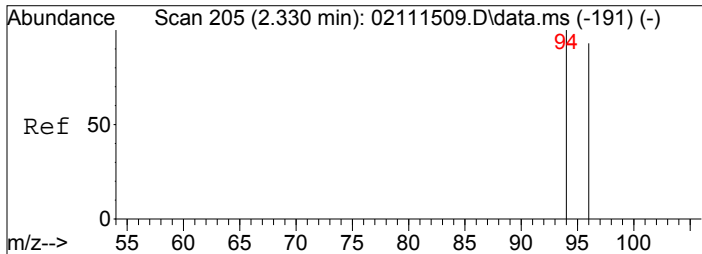
Tgt Ion: 85 Resp: 151162
 Ion Ratio Lower Upper
 85 100
 87 32.5 12.4 52.4



#3
 Chloromethane
 Concen: 453.22 pg
 RT: 1.84 min Scan# 80
 Delta R.T. -0.013 min
 Lab File: 02281509.D
 Acq: 28 Feb 2015 6:11

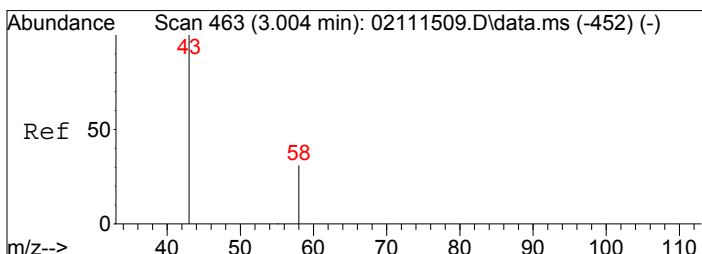
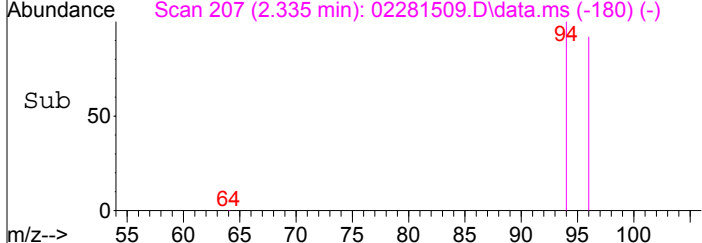
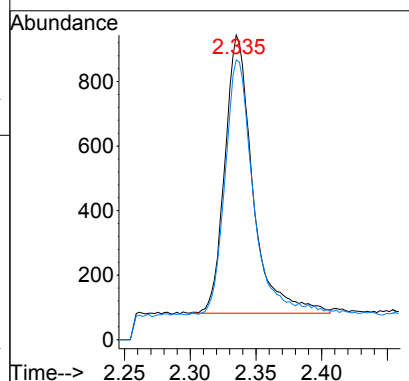
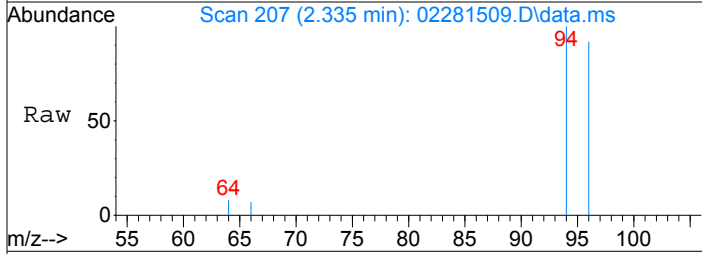
Tgt Ion: 52 Resp: 8836
 Ion Ratio Lower Upper
 52 100
 50 304.7 283.7 323.7





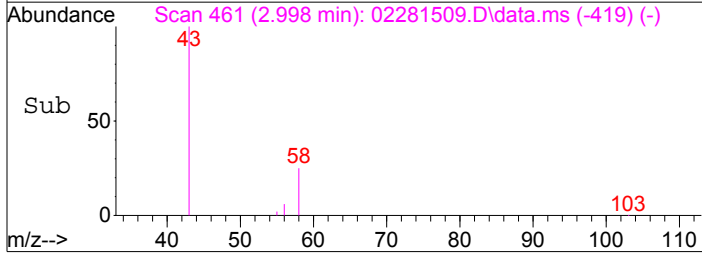
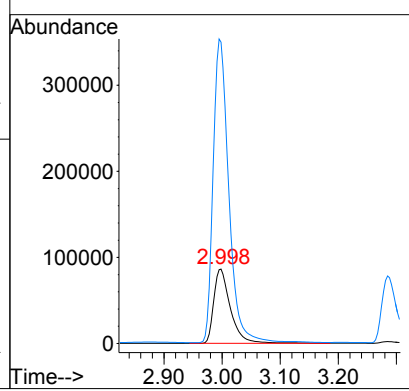
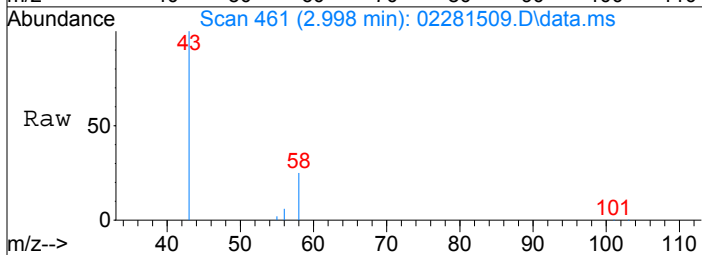
#5
 Bromomethane
 Concen: 29.11 pg
 RT: 2.33 min Scan# 207
 Delta R.T. 0.005 min
 Lab File: 02281509.D
 Acq: 28 Feb 2015 6:11

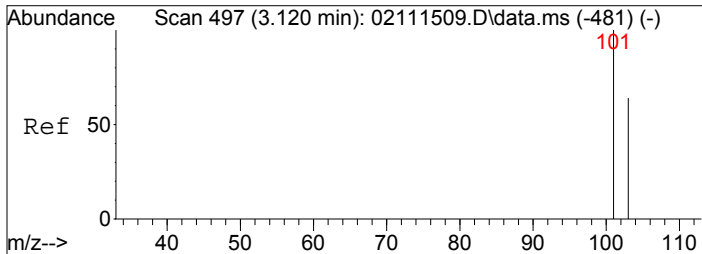
Tgt Ion:	94	Resp:	1278
Ion Ratio	Lower	Upper	
94	100		
96	91.2	75.5	113.3



#7
 Acetone
 Concen: 5005.43 pg
 RT: 3.00 min Scan# 461
 Delta R.T. -0.006 min
 Lab File: 02281509.D
 Acq: 28 Feb 2015 6:11

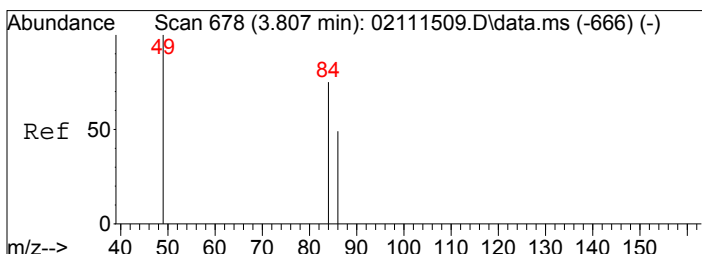
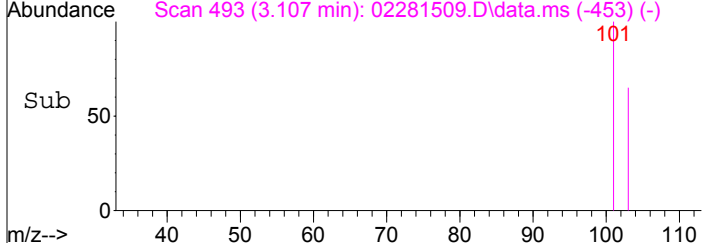
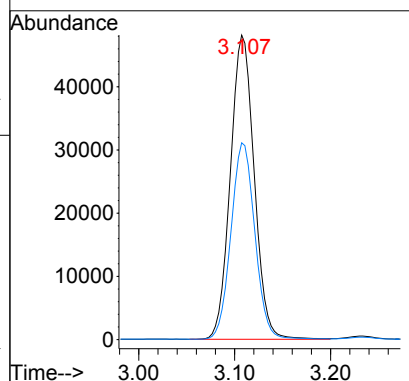
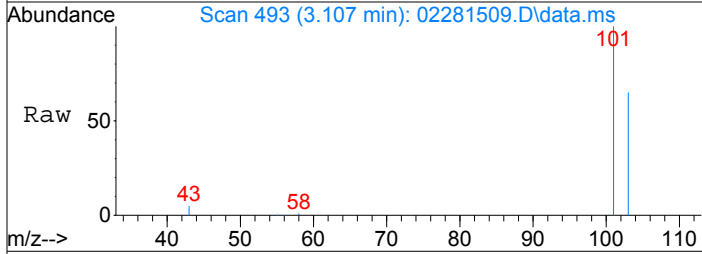
Tgt Ion:	58	Resp:	172557
Ion Ratio	Lower	Upper	
58	100		
43	383.8	301.8	341.8#





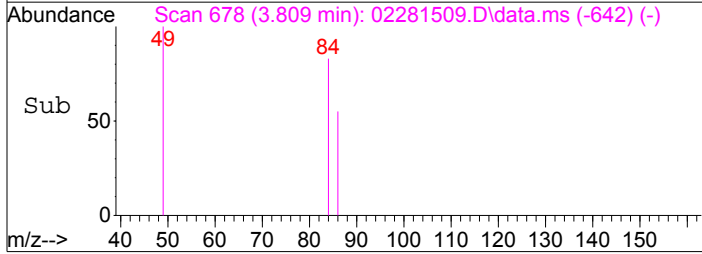
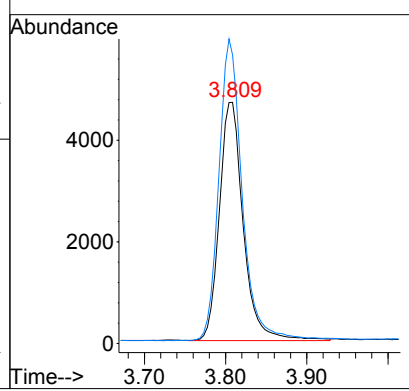
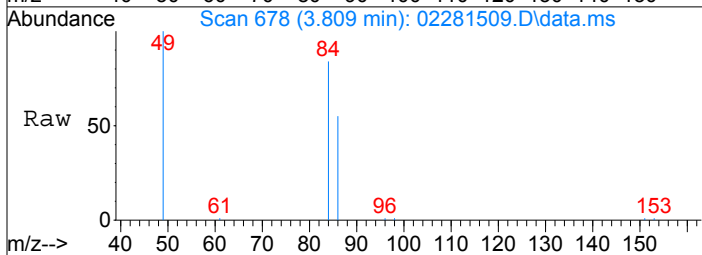
#8
 Trichlorofluoromethane
 Concen: 991.55 pg
 RT: 3.11 min Scan# 493
 Delta R.T. -0.012 min
 Lab File: 02281509.D
 Acq: 28 Feb 2015 6:11

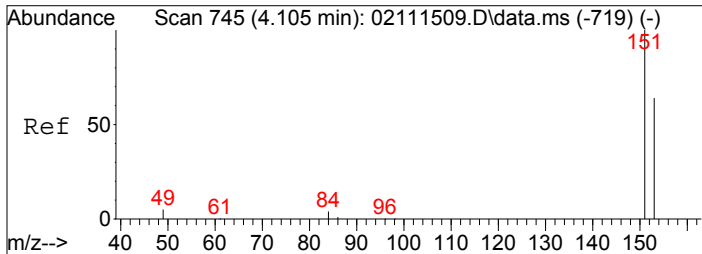
Tgt Ion: 101	Resp:	83148
Ion Ratio	Lower	Upper
101	100	
103	64.7	51.8 77.6



#10
 Methylene Chloride
 Concen: 241.74 pg
 RT: 3.81 min Scan# 678
 Delta R.T. 0.002 min
 Lab File: 02281509.D
 Acq: 28 Feb 2015 6:11

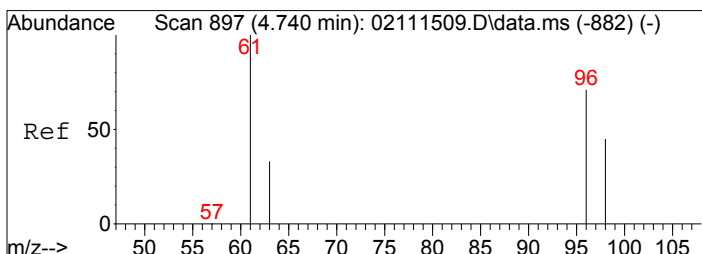
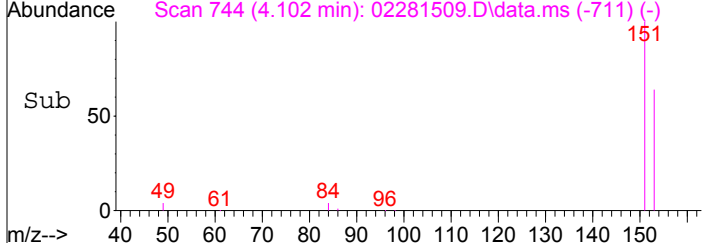
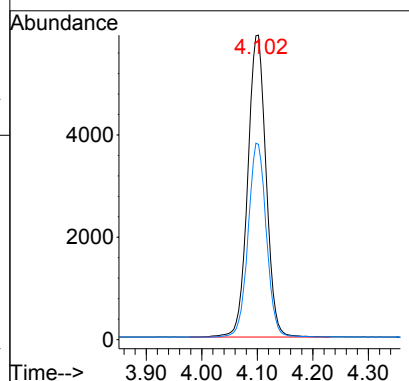
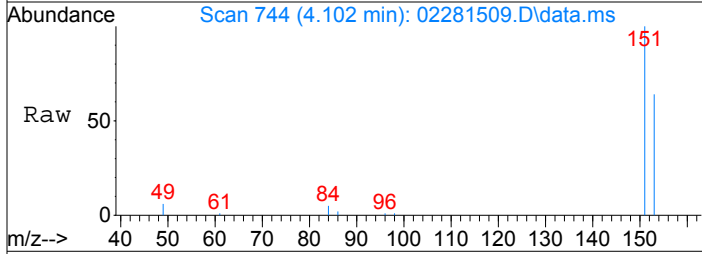
Tgt Ion: 84	Resp:	9619
Ion Ratio	Lower	Upper
84	100	
49	124.9	112.3 152.3





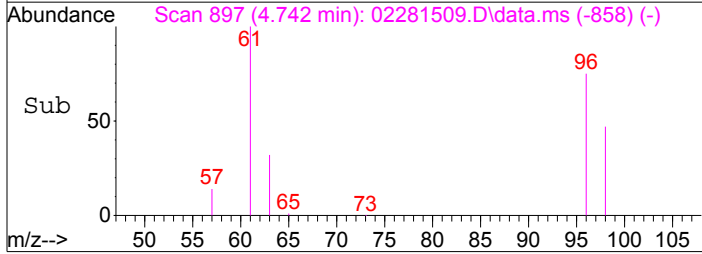
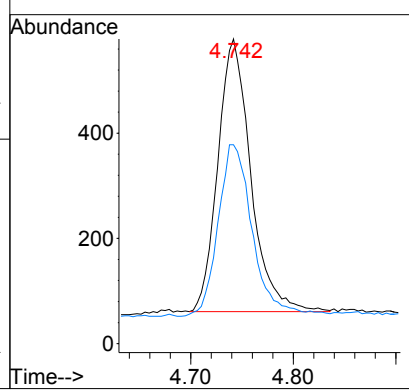
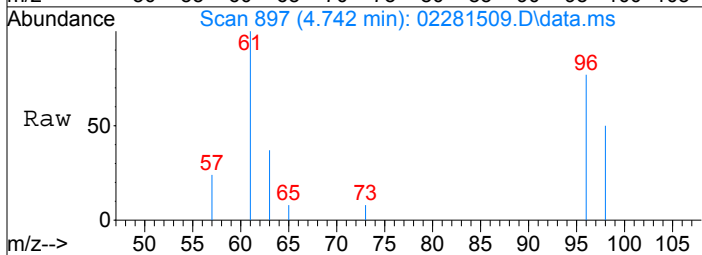
#11
 Trichlorotrifluoroethane
 Concen: 350.20 pg
 RT: 4.10 min Scan# 744
 Delta R.T. -0.003 min
 Lab File: 02281509.D
 Acq: 28 Feb 2015 6:11

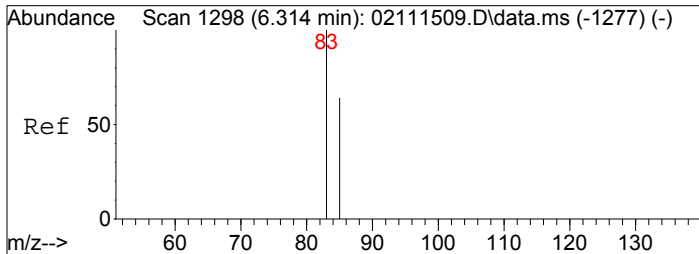
Tgt Ion: 151	Resp: 13494
Ion Ratio	Lower Upper
151	100
153	63.8 43.6 83.6



#12
 trans-1,2-Dichloroethene
 Concen: 30.24 pg
 RT: 4.74 min Scan# 897
 Delta R.T. 0.001 min
 Lab File: 02281509.D
 Acq: 28 Feb 2015 6:11

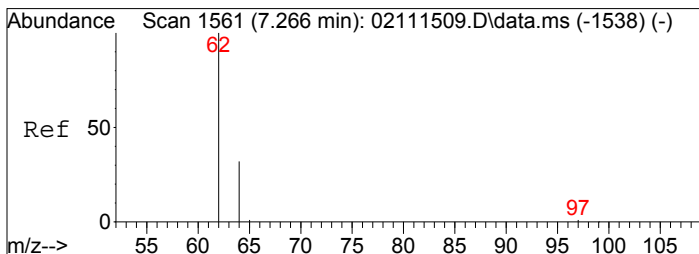
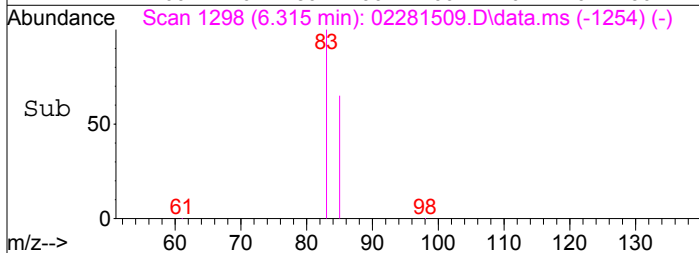
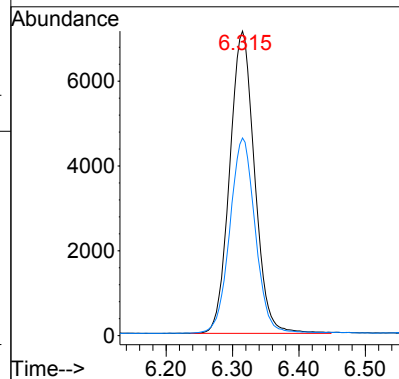
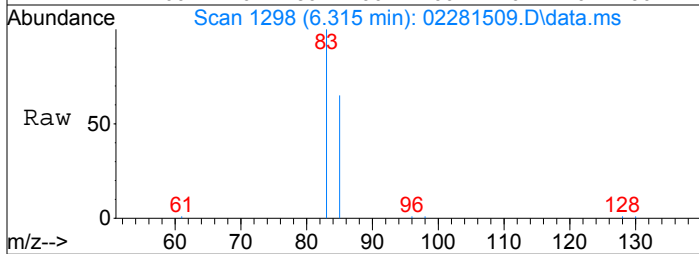
Tgt Ion: 96	Resp: 1156
Ion Ratio	Lower Upper
96	100
98	66.2 43.7 83.7





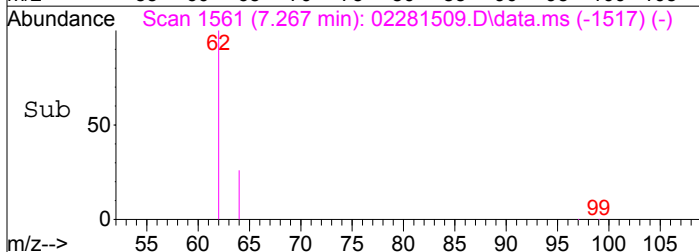
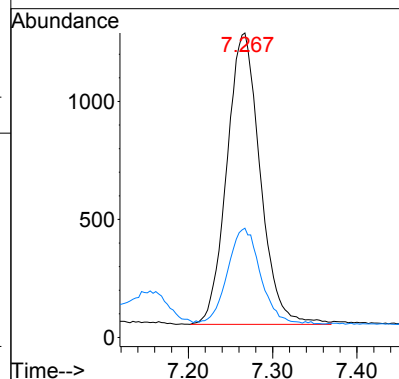
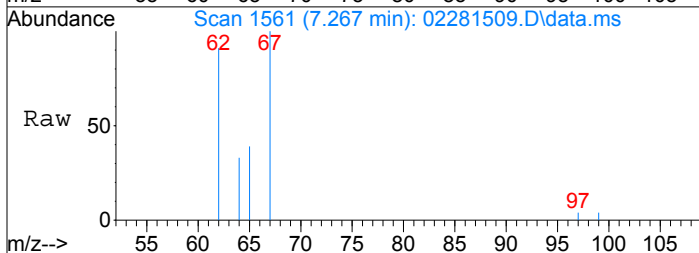
#16
Chloroform
Concen: 252.07 pg
RT: 6.31 min Scan# 1298
Delta R.T. 0.001 min
Lab File: 02281509.D
Acq: 28 Feb 2015 6:11

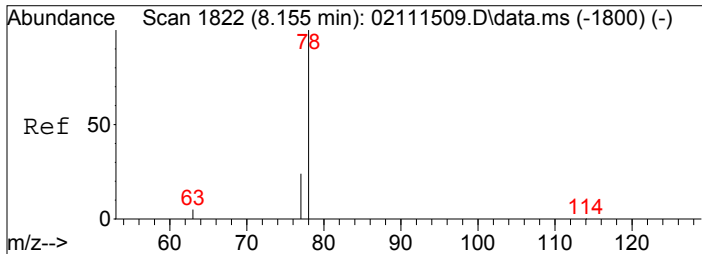
Tgt Ion: 83 Resp: 18565
Ion Ratio Lower Upper
83 100
85 66.1 45.4 85.4



#18
1,2-Dichloroethane
Concen: 57.81 pg
RT: 7.27 min Scan# 1561
Delta R.T. 0.001 min
Lab File: 02281509.D
Acq: 28 Feb 2015 6:11

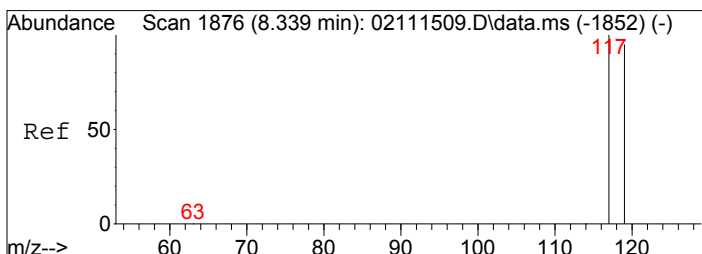
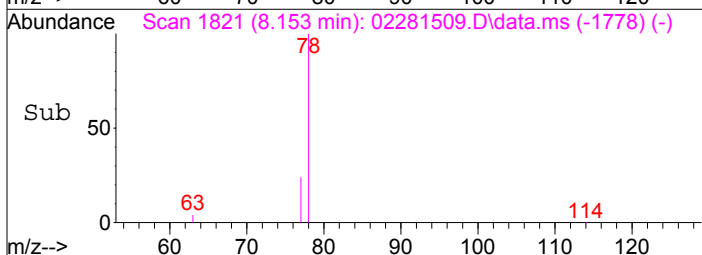
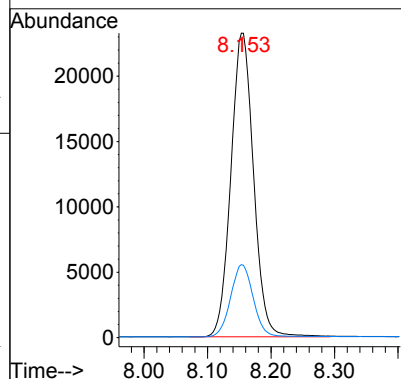
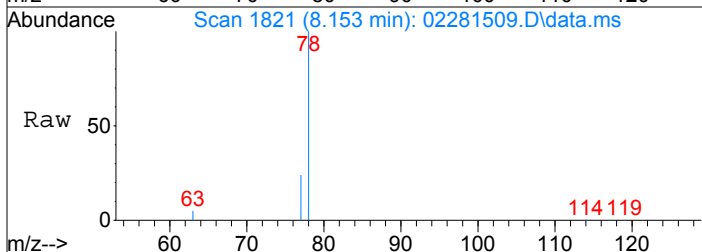
Tgt Ion: 62 Resp: 3390
Ion Ratio Lower Upper
62 100
64 31.4 11.6 51.6





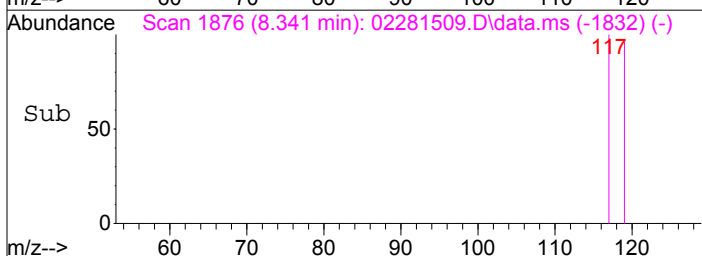
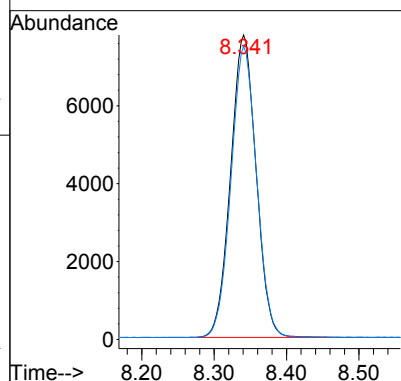
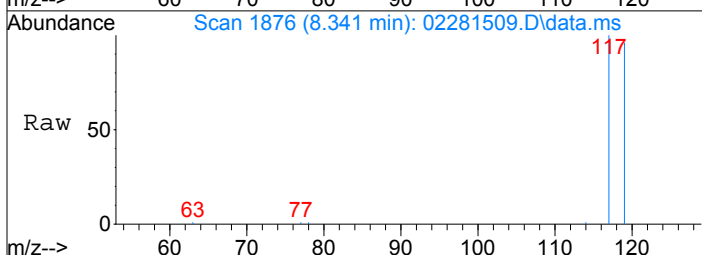
#20
Benzene
Concen: 380.21 pg
RT: 8.15 min Scan# 1821
Delta R.T. -0.002 min
Lab File: 02281509.D
Acq: 28 Feb 2015 6:11

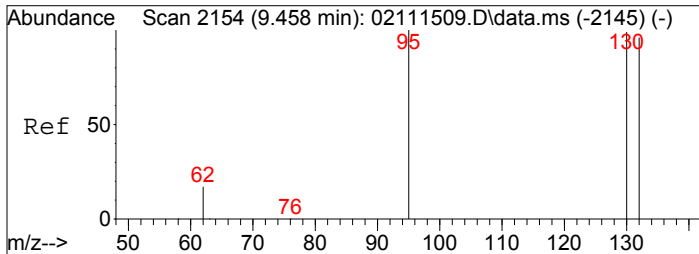
Tgt Ion: 78 Resp: 57596
Ion Ratio Lower Upper
78 100
77 23.7 3.7 43.7



#21
Carbon Tetrachloride
Concen: 354.26 pg
RT: 8.34 min Scan# 1876
Delta R.T. 0.001 min
Lab File: 02281509.D
Acq: 28 Feb 2015 6:11

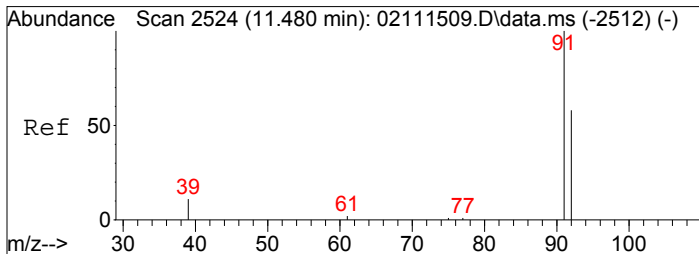
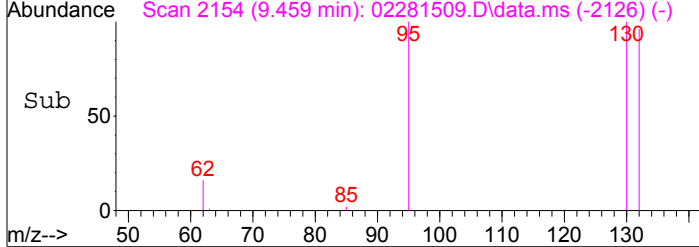
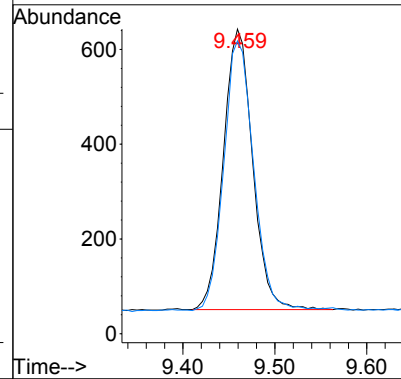
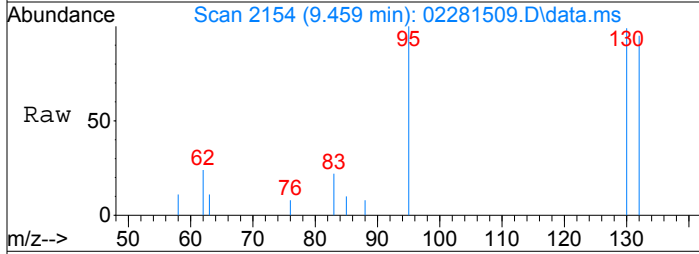
Tgt Ion: 117 Resp: 18995
Ion Ratio Lower Upper
117 100
119 96.7 75.5 115.5





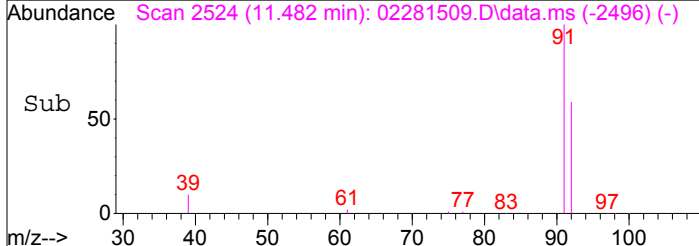
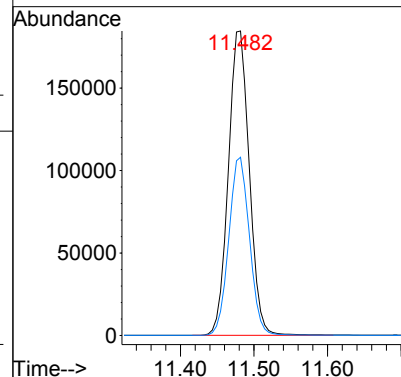
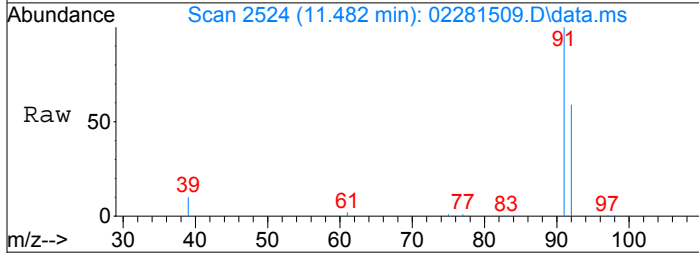
#25
Trichloroethene
Concen: 29.11 pg
RT: 9.46 min Scan# 2154
Delta R.T. 0.001 min
Lab File: 02281509.D
Acq: 28 Feb 2015 6:11

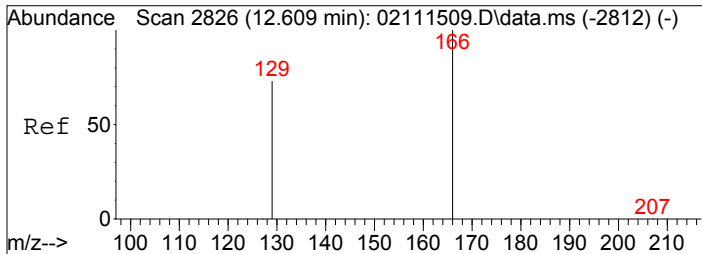
Tgt Ion: 130 Resp: 1309
Ion Ratio Lower Upper
130 100
132 98.1 77.1 117.1



#31
Toluene
Concen: 2126.02 pg
RT: 11.48 min Scan# 2524
Delta R.T. 0.001 min
Lab File: 02281509.D
Acq: 28 Feb 2015 6:11

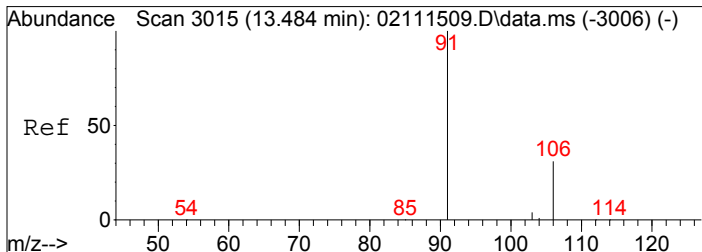
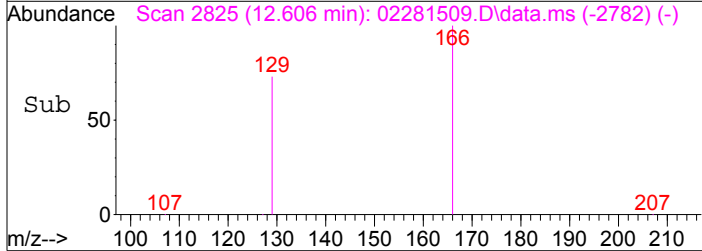
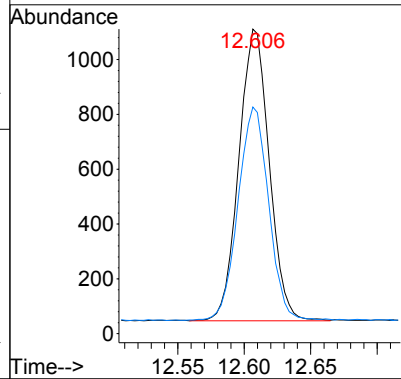
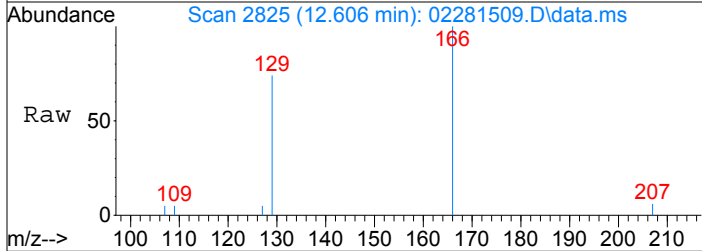
Tgt Ion: 91 Resp: 364999
Ion Ratio Lower Upper
91 100
92 58.0 37.7 77.7





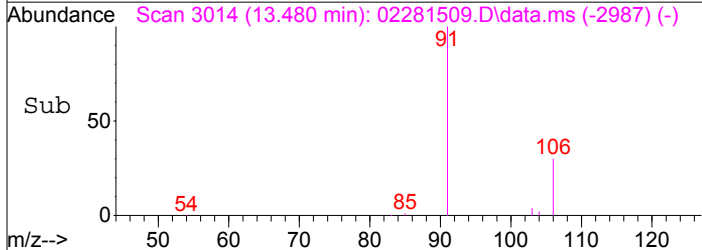
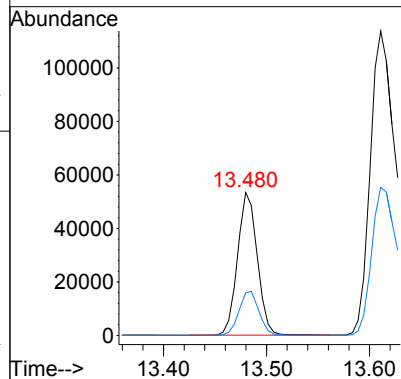
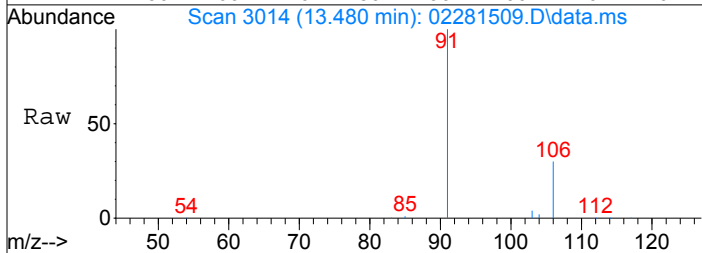
#33
Tetrachloroethene
Concen: 31.79 pg
RT: 12.61 min Scan# 2825
Delta R.T. -0.003 min
Lab File: 02281509.D
Acq: 28 Feb 2015 6:11

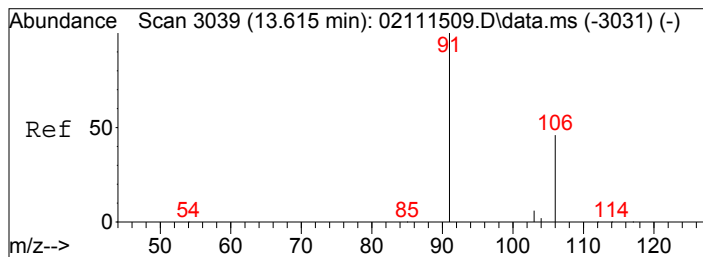
Tgt Ion: 166	Resp: 1690
Ion Ratio	Lower Upper
166	100
129	73.6 53.3 93.3



#36
Ethylbenzene
Concen: 388.02 pg
RT: 13.48 min Scan# 3014
Delta R.T. -0.004 min
Lab File: 02281509.D
Acq: 28 Feb 2015 6:11

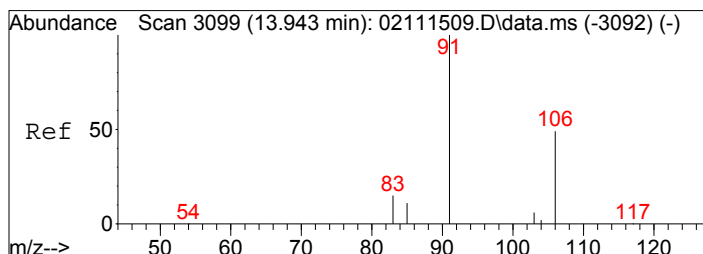
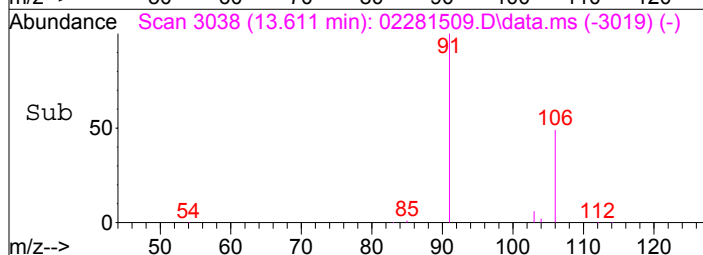
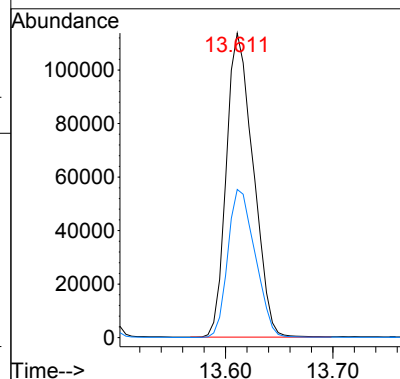
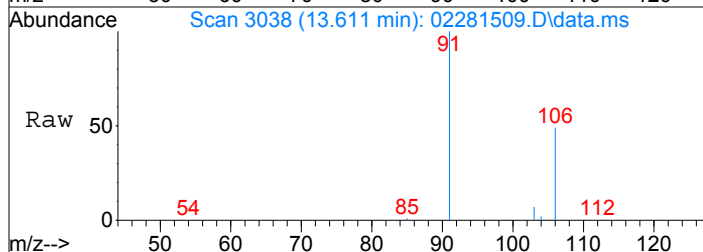
Tgt Ion: 91	Resp: 71035
Ion Ratio	Lower Upper
91	100
106	31.2 10.9 50.9





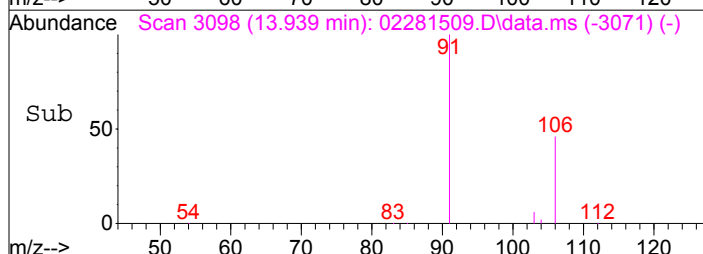
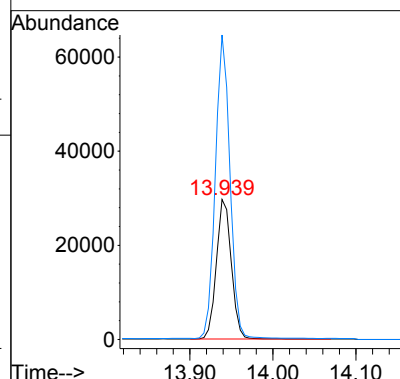
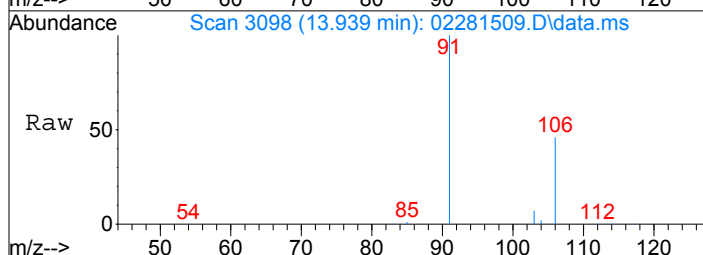
#37
m,p-Xylene
Concen: 1315.14 pg
RT: 13.61 min Scan# 3038
Delta R.T. -0.004 min
Lab File: 02281509.D
Acq: 28 Feb 2015 6:11

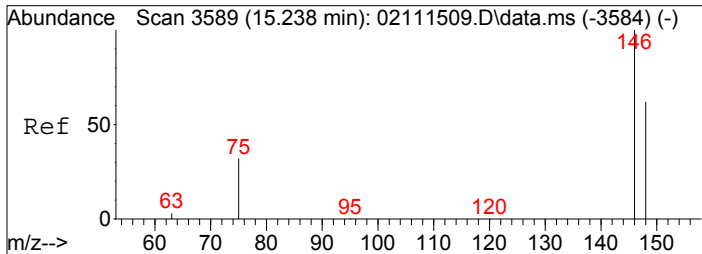
Tgt Ion: 91 Resp: 197880
Ion Ratio Lower Upper
91 100
106 49.6 27.5 67.5



#38
o-Xylene
Concen: 504.61 pg
RT: 13.94 min Scan# 3098
Delta R.T. -0.004 min
Lab File: 02281509.D
Acq: 28 Feb 2015 6:11

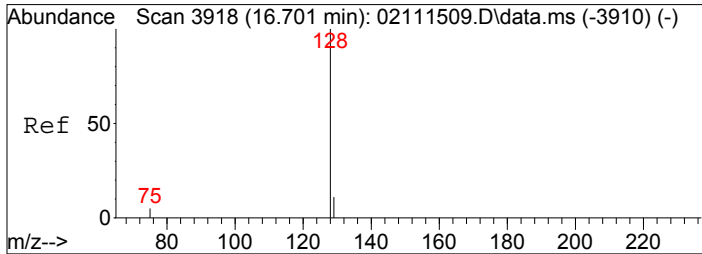
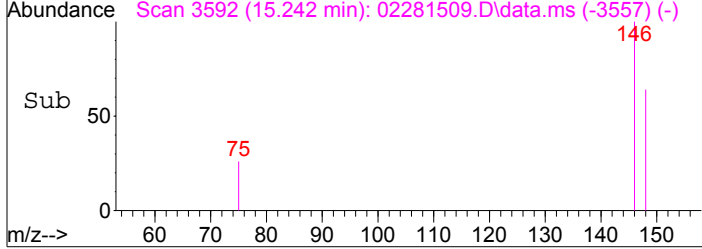
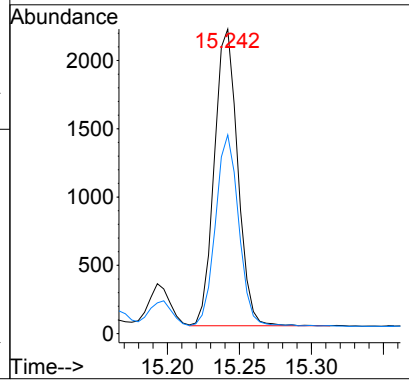
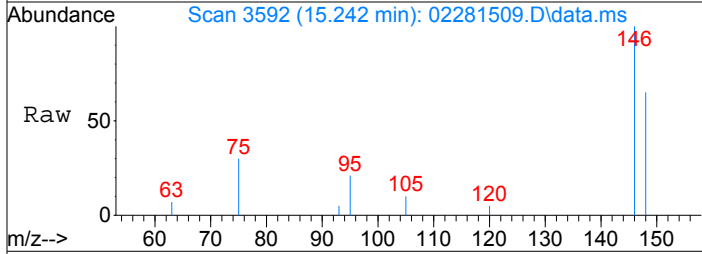
Tgt Ion: 106 Resp: 37106
Ion Ratio Lower Upper
106 100
91 213.1 198.3 238.3





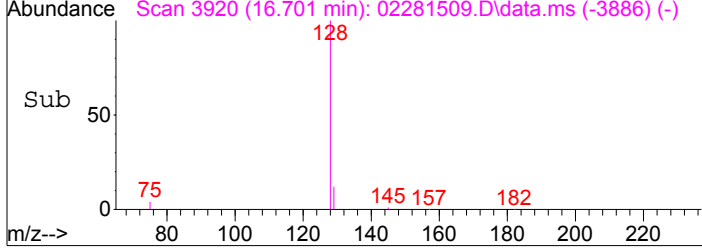
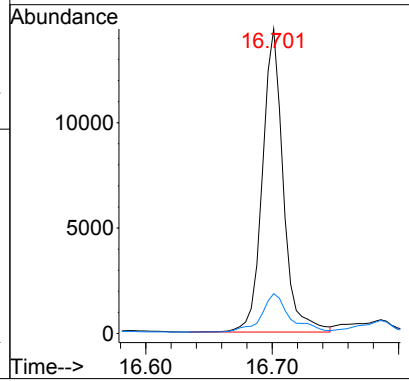
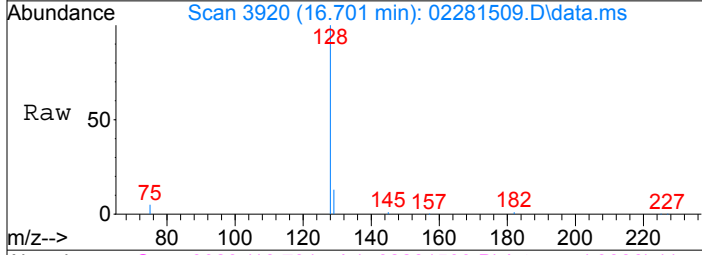
#42
 1,4-Dichlorobenzene
 Concen: 24.31 pg
 RT: 15.24 min Scan# 3592
 Delta R.T. 0.004 min
 Lab File: 02281509.D
 Acq: 28 Feb 2015 6:11

Tgt Ion	146	148	Resp	2453	Lower	Upper
Ion Ratio	100	64.0	43.5	83.5		



#45
 Naphthalene
 Concen: 90.11 pg
 RT: 16.70 min Scan# 3920
 Delta R.T. 0.000 min
 Lab File: 02281509.D
 Acq: 28 Feb 2015 6:11

Tgt Ion	128	129	Resp	16461	Lower	Upper
Ion Ratio	100	17.3	0.0	30.9		



Data File: I:\MS19\DATA\2015 02\28\02281512.D

Acq On : 28 Feb 2015 8:06

Operator: WA

Sample : P1500729-007 (1000mL)

Misc : S29-02041502

ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 28 10:26:24 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

2/28/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	23129	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	168781	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	29549	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	51578	913.156	pg	0.00
Spiked Amount 1000.000			Recovery	=	91.32%	
30) Toluene-d8 (SS2)	11.38	98	157600	1012.546	pg	0.00
Spiked Amount 1000.000			Recovery	=	101.26%	
40) Bromofluorobenzene (SS3)	14.25	174	72271	1211.475	pg	0.00
Spiked Amount 1000.000			Recovery	=	121.15%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.74	85	147064	1564.567	pg	100
3) Chloromethane	1.84	52	8828	470.290	pg	99
4) Vinyl Chloride	2.03	62	84	N.D.		
5) Bromomethane	2.34	94	1172	27.728	pg	96
6) Chloroethane	2.48	64	336	N.D.		
7) Acetone	3.00	58	141063	4249.854	pg	# 87
8) Trichlorofluoromethane	3.11	101	97501	1207.604	pg	100
9) 1,1-Dichloroethene	3.67	96	33	N.D.		
10) Methylene Chloride	3.81	84	16022	418.207	pg	94
11) Trichlorotrifluoroethane	4.10	151	13142	354.234	pg	100
12) trans-1,2-Dichloroethene	4.75	96	479	N.D.		
13) 1,1-Dichloroethane	4.95	63	301	N.D.		
14) Methyl tert-Butyl Ether	5.13	73	340	N.D.		
15) cis-1,2-Dichloroethene	5.94	96	353	N.D.		
16) Chloroform	6.31	83	5372	75.755	pg	98
18) 1,2-Dichloroethane	7.26	62	2822	49.980	pg	100
19) 1,1,1-Trichloroethane	7.59	97	1009	N.D.		
20) Benzene	8.15	78	38725	265.510	pg	100
21) Carbon Tetrachloride	8.34	117	19132	370.587	pg	99
23) 1,2-Dichloropropane	9.16	63	630	N.D.		
24) Bromodichloromethane	9.42	83	715	N.D.		
25) Trichloroethene	9.46	130	1318	30.396	pg	100
26) 1,4-Dioxane	9.56	88	140	N.D.		
27) cis-1,3-Dichloropropene	10.46	75	308	N.D.		
28) trans-1,3-Dichloropropene	11.06	75	166	N.D.		
29) 1,1,2-Trichloroethane	11.20	83	116	N.D.		
31) Toluene	11.48	91	202810	1225.143	pg	100
32) 1,2-Dibromoethane	12.12	107	49	N.D.		
33) Tetrachloroethene	12.61	166	1345	26.241	pg	100
35) Chlorobenzene	13.17	112	738	N.D.		
36) Ethylbenzene	13.48	91	43829	236.534	pg	99
37) m,p-Xylene	13.61	91	114285	750.427	pg	97
38) o-Xylene	13.94	106	19183	257.736	pg	99
39) 1,1,1,2,2-Tetrachloroethane	13.89	83	904	N.D.		
41) 1,3-Dichlorobenzene	0.00	146	0	N.D.	d	
42) 1,4-Dichlorobenzene	15.24	146	2162	21.173	pg	98
43) 1,2-Dichlorobenzene	15.46	146	171	N.D.		
44) 1,2,4-Trichlorobenzene	16.63	182	295	N.D.		
45) Naphthalene	16.70	128	29000	156.850	pg	76
46) Hexachlorobutadiene	16.96	225	48	N.D.		

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\28\02281512.D

Acq On : 28 Feb 2015 8:06

Operator: WA

Sample : P1500729-007 (1000mL)

Misc : S29-02041502

ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 28 10:26:24 2015

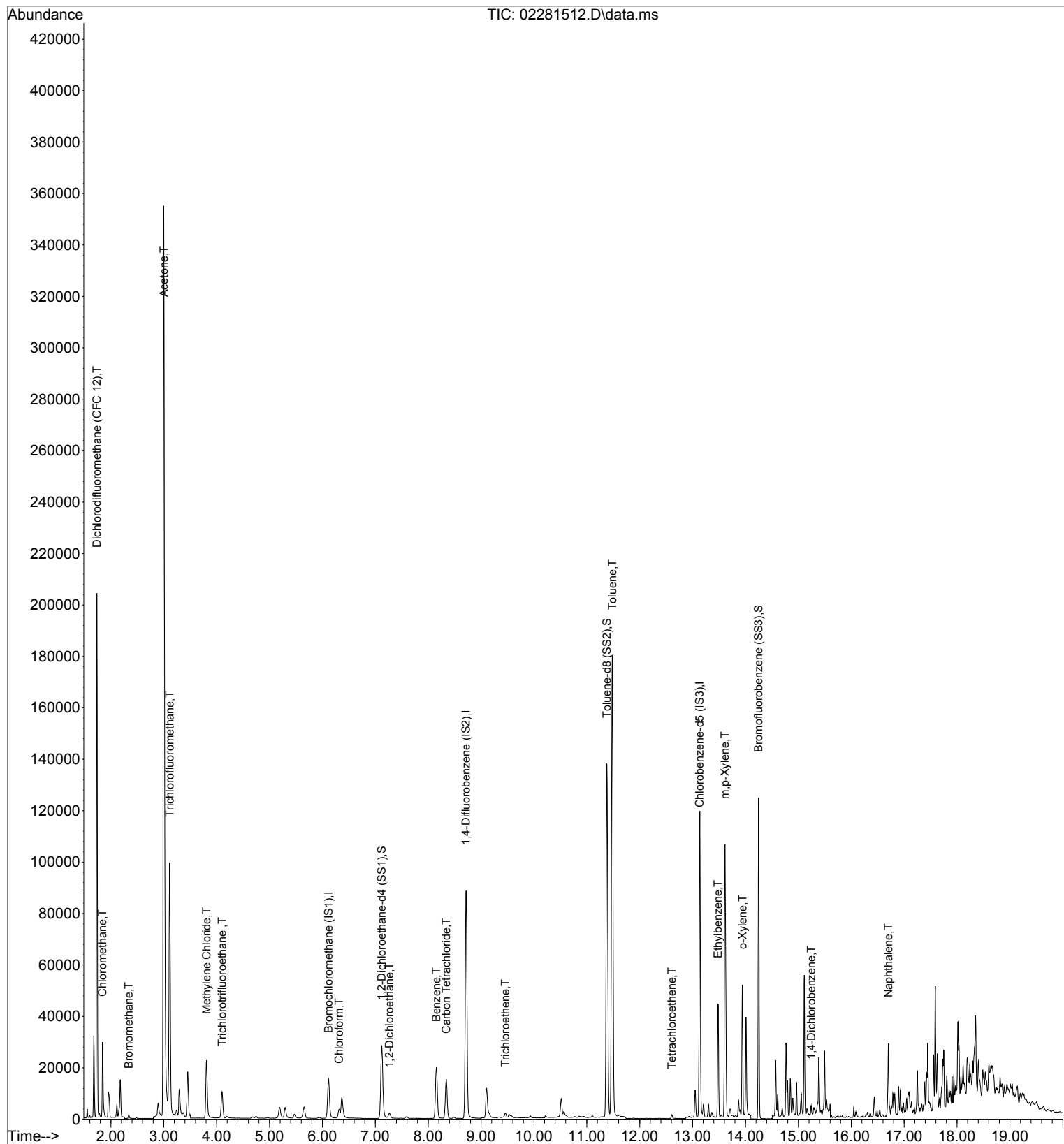
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 02\28\02281512.D

Acq On : 28 Feb 2015 8:06

Operator: WA

Sample : P1500729-007 (1000mL)

Misc : S29-02041502

ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 28 10:26:24 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

2/28/15

DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	23129	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	168781	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	29549	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	51578	913.156	pg	0.00
Spiked Amount 1000.000			Recovery	=	91.32%	
30) Toluene-d8 (SS2)	11.38	98	157600	1012.546	pg	0.00
Spiked Amount 1000.000			Recovery	=	101.26%	
40) Bromofluorobenzene (SS3)	14.25	174	72271	1211.475	pg	0.00
Spiked Amount 1000.000			Recovery	=	121.15%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.74	85	147064	1564.567	pg	100
3) Chloromethane	1.84	52	8828	470.290	pg	99
5) Bromomethane	2.34	94	1172	27.728	pg	96
7) Acetone	3.00	58	141063	4249.854	pg	# 87
8) Trichlorofluoromethane	3.11	101	97501	1207.604	pg	100
10) Methylene Chloride	3.81	84	16022	418.207	pg	94
11) Trichlorotrifluoroethane	4.10	151	13142	354.234	pg	100
16) Chloroform	6.31	83	5372	75.755	pg	98
18) 1,2-Dichloroethane	7.26	62	2822	49.980	pg	100
20) Benzene	8.15	78	38725	265.510	pg	100
21) Carbon Tetrachloride	8.34	117	19132	370.587	pg	99
25) Trichloroethene	9.46	130	1318	30.396	pg	100
31) Toluene	11.48	91	202810	1225.143	pg	100
33) Tetrachloroethene	12.61	166	1345	26.241	pg	100
36) Ethylbenzene	13.48	91	43829	236.534	pg	99
37) m,p-Xylene	13.61	91	114285	750.427	pg	97
38) o-Xylene	13.94	106	19183	257.736	pg	99
42) 1,4-Dichlorobenzene	15.24	146	2162	21.173	pg	98
45) Naphthalene	16.70	128	29000	156.850	pg	76

(#)= qualifier out of range (m)= manual integration (+)= signals summed

Data File: I:\MS19\DATA\2015 02\28\02281512.D

Acq On : 28 Feb 2015 8:06

Operator: WA

Sample : P1500729-007 (1000mL)

Misc : S29-02041502

ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 28 10:26:24 2015

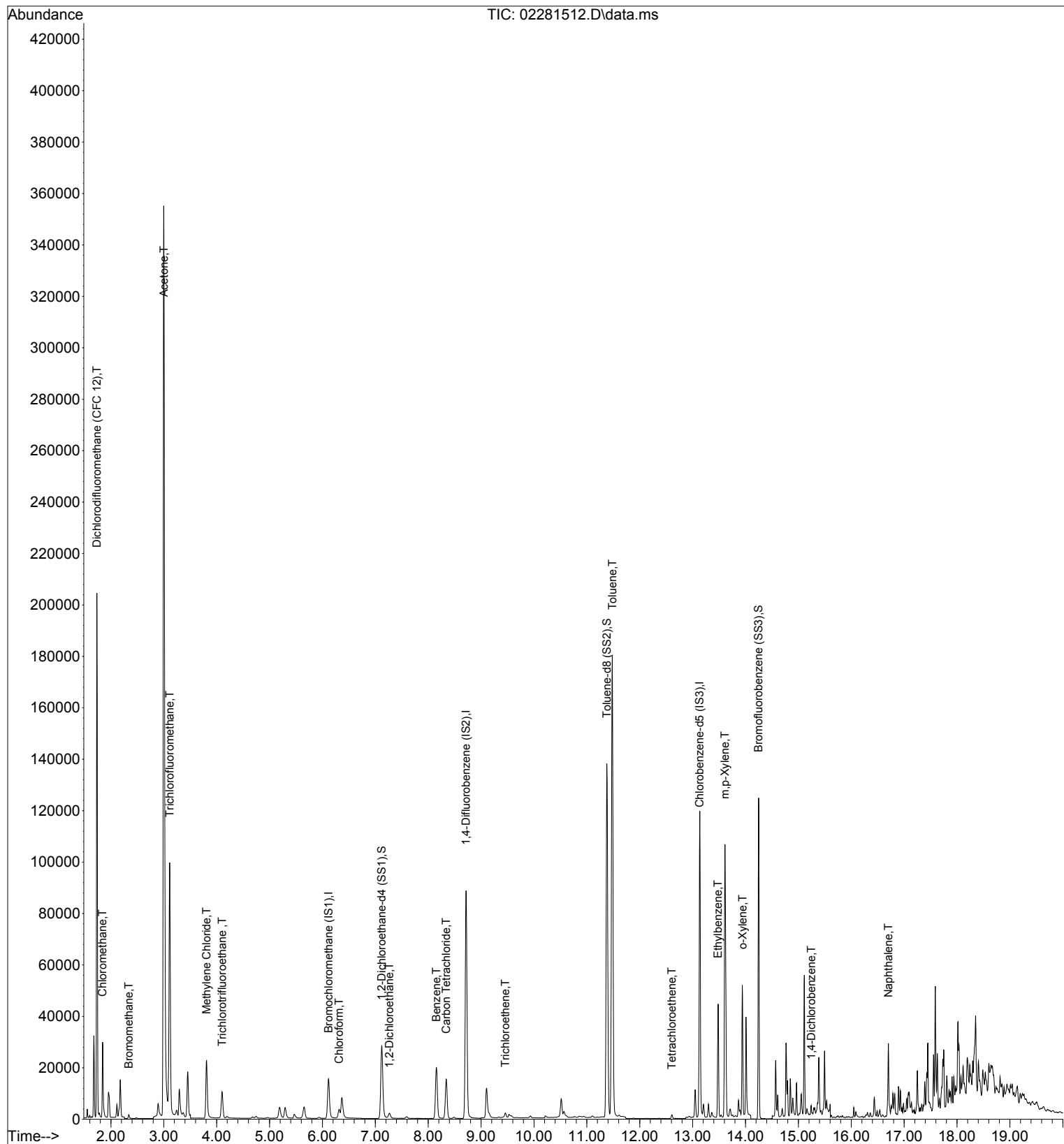
Quant Method : I:\MS19\METHODS\X19021115.M

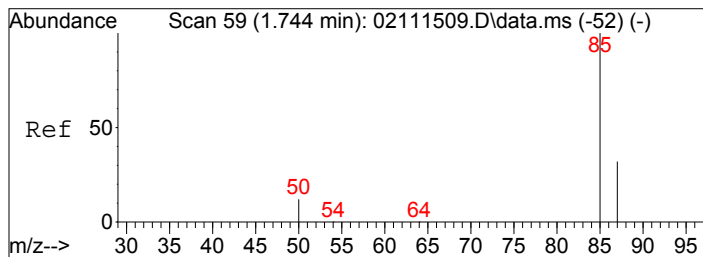
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

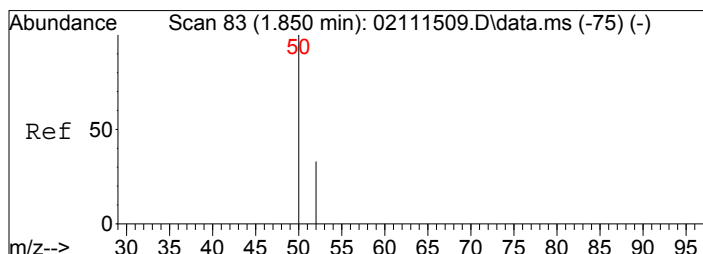
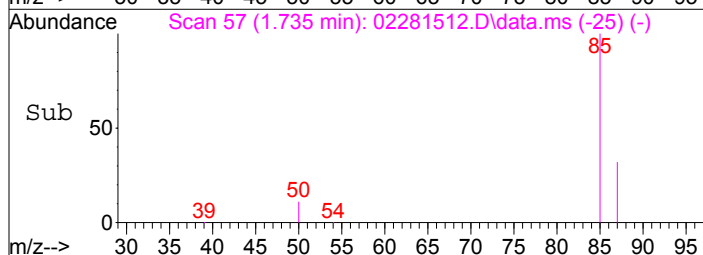
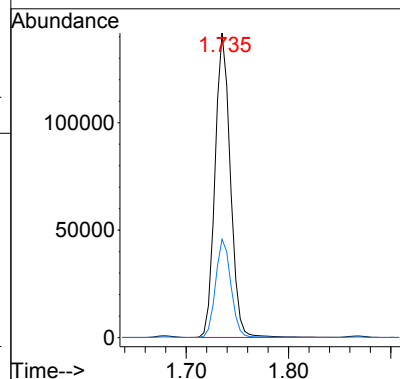
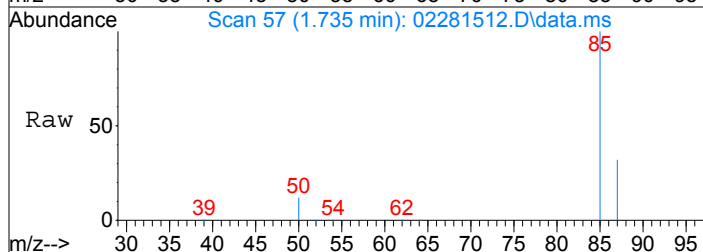
DataAcq Meth:TO15SIM.M





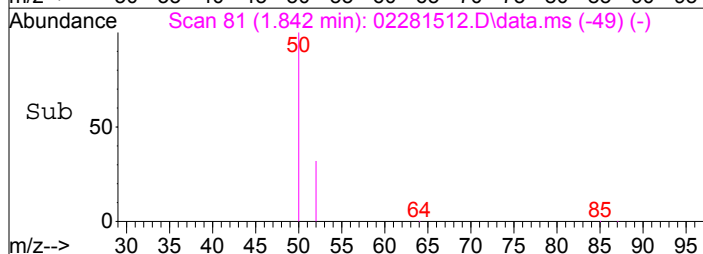
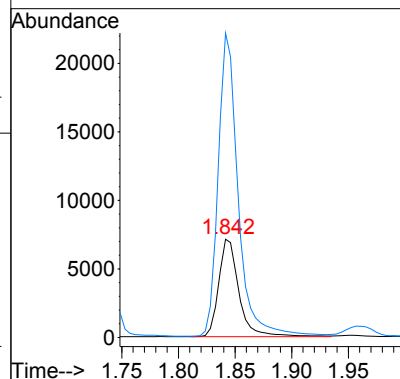
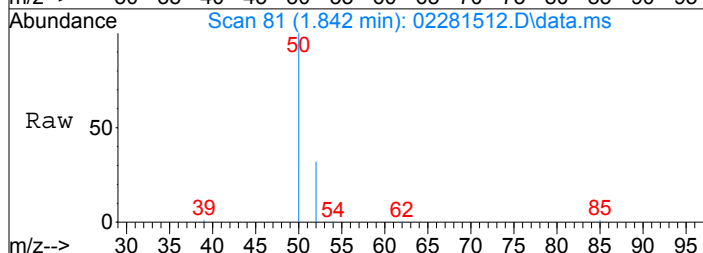
#2
 Dichlorodifluoromethane (CFC 12)
 Concen: 1564.57 pg
 RT: 1.74 min Scan# 57
 Delta R.T. -0.009 min
 Lab File: 02281512.D
 Acq: 28 Feb 2015 8:06

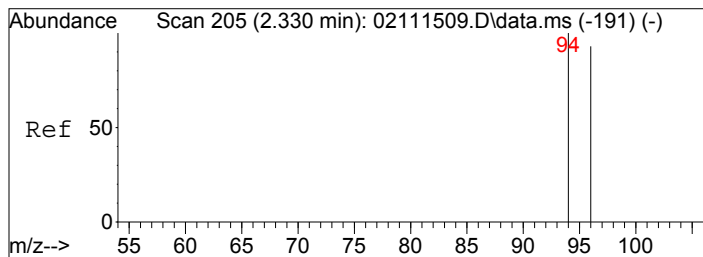
Tgt Ion: 85 Resp: 147064
 Ion Ratio Lower Upper
 85 100
 87 32.4 12.4 52.4



#3
 Chloromethane
 Concen: 470.29 pg
 RT: 1.84 min Scan# 81
 Delta R.T. -0.008 min
 Lab File: 02281512.D
 Acq: 28 Feb 2015 8:06

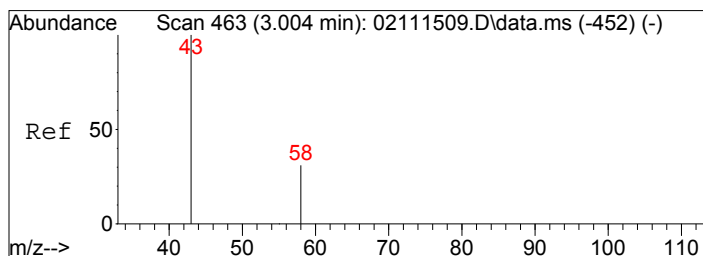
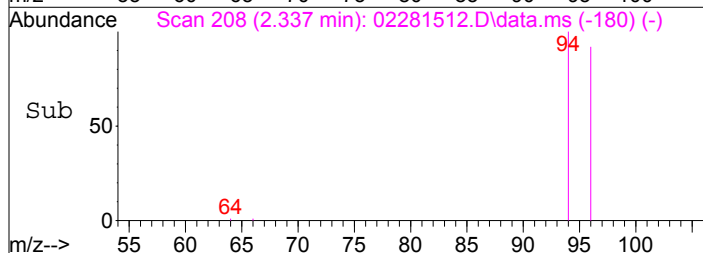
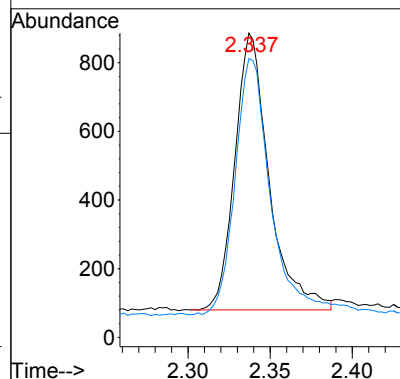
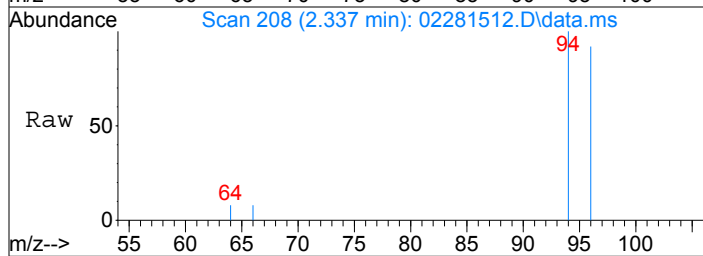
Tgt Ion: 52 Resp: 8828
 Ion Ratio Lower Upper
 52 100
 50 306.0 283.7 323.7





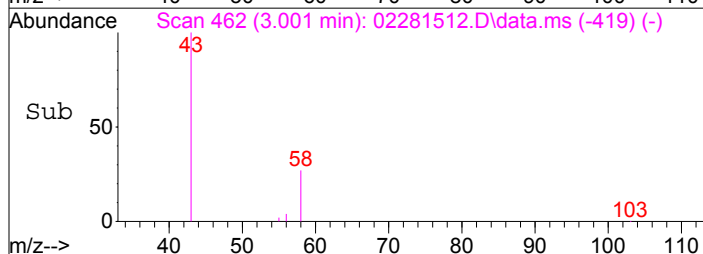
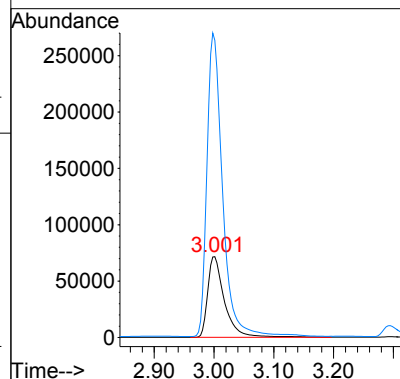
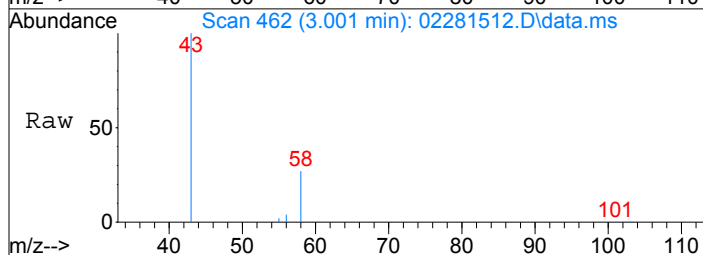
#5
Bromomethane
Concen: 27.73 pg
RT: 2.34 min Scan# 208
Delta R.T. 0.007 min
Lab File: 02281512.D
Acq: 28 Feb 2015 8:06

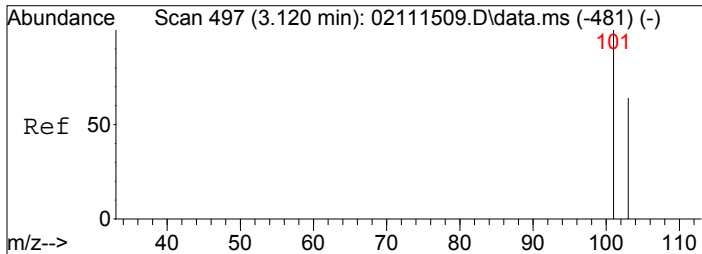
Tgt Ion: 94 Resp: 1172
Ion Ratio Lower Upper
94 100
96 98.3 75.5 113.3



#7
Acetone
Concen: 4249.85 pg
RT: 3.00 min Scan# 462
Delta R.T. -0.003 min
Lab File: 02281512.D
Acq: 28 Feb 2015 8:06

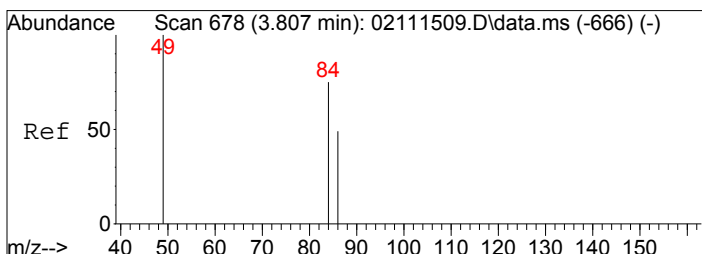
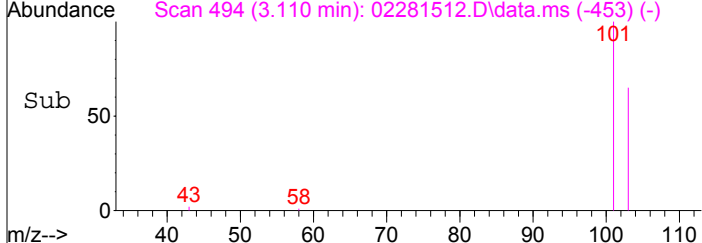
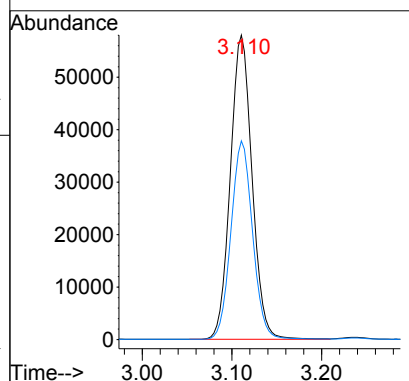
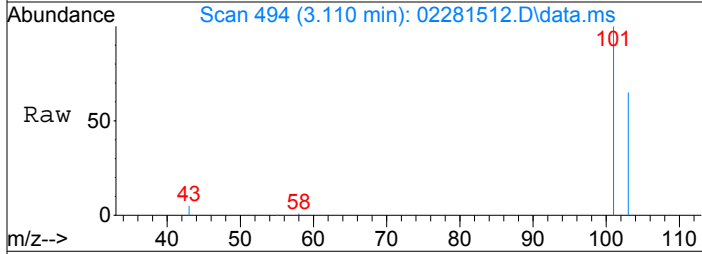
Tgt Ion: 58 Resp: 141063
Ion Ratio Lower Upper
58 100
43 348.6 301.8 341.8#





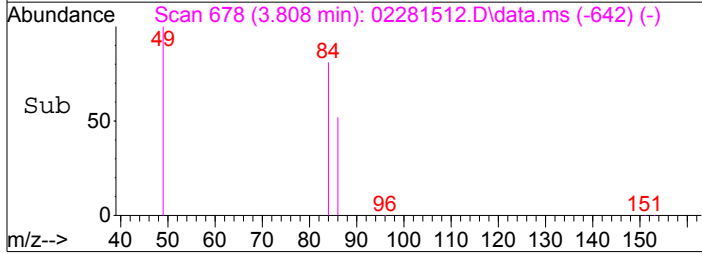
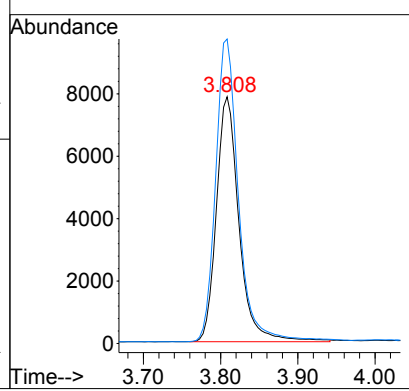
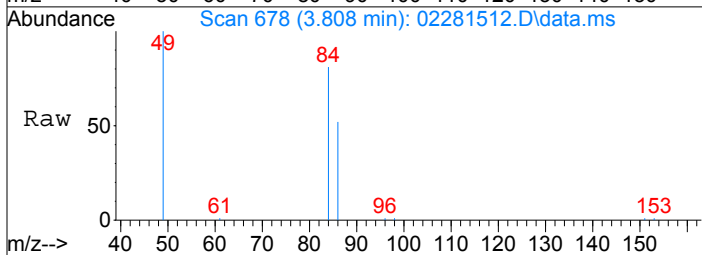
#8
 Trichlorofluoromethane
 Concen: 1207.60 pg
 RT: 3.11 min Scan# 494
 Delta R.T. -0.009 min
 Lab File: 02281512.D
 Acq: 28 Feb 2015 8:06

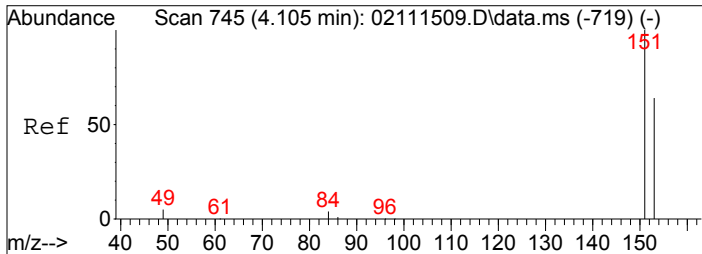
Tgt Ion: 101	Resp: 97501
Ion Ratio	Lower Upper
101	100
103	65.0 51.8 77.6



#10
 Methylene Chloride
 Concen: 418.21 pg
 RT: 3.81 min Scan# 678
 Delta R.T. 0.001 min
 Lab File: 02281512.D
 Acq: 28 Feb 2015 8:06

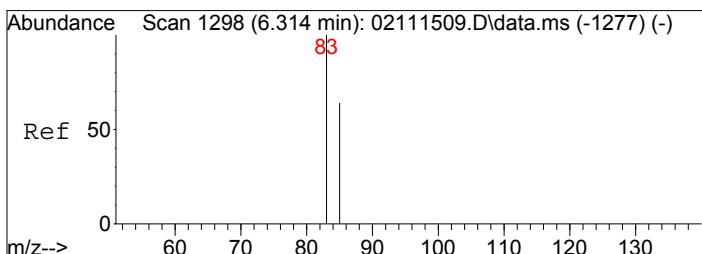
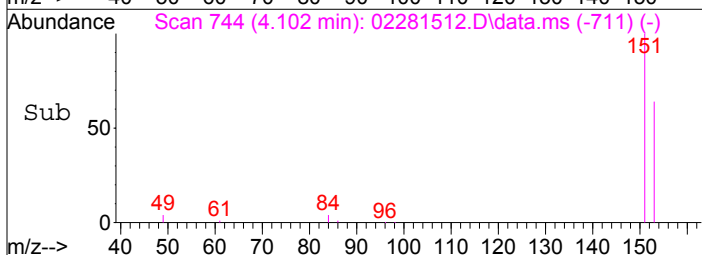
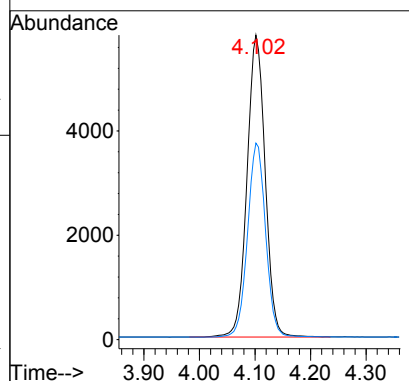
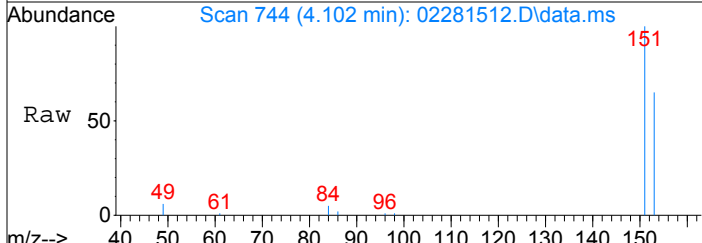
Tgt Ion: 84	Resp: 16022
Ion Ratio	Lower Upper
84	100
49	124.8 112.3 152.3





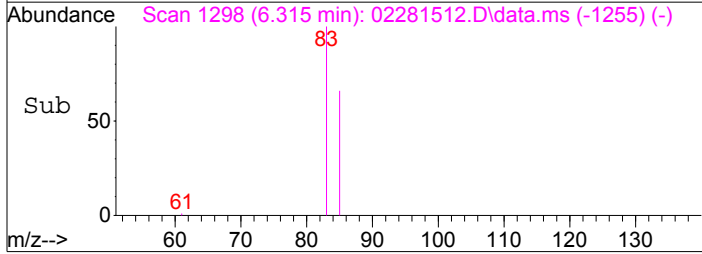
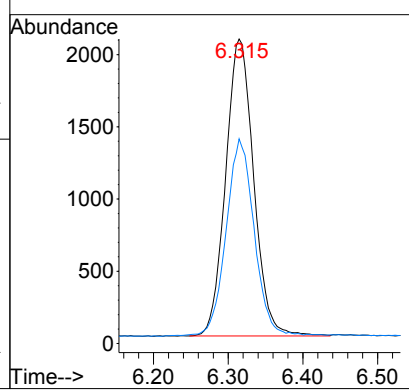
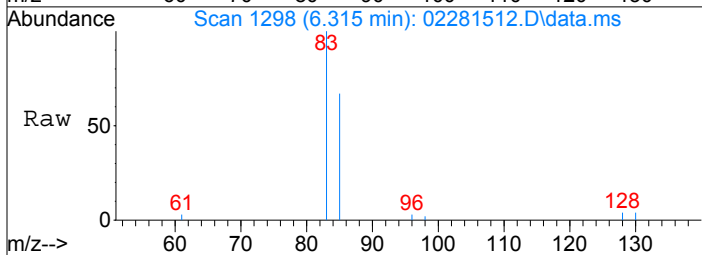
#11
 Trichlorotrifluoroethane
 Concen: 354.23 pg
 RT: 4.10 min Scan# 744
 Delta R.T. -0.003 min
 Lab File: 02281512.D
 Acq: 28 Feb 2015 8:06

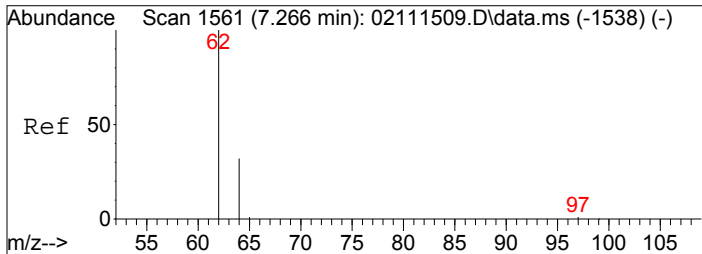
Tgt Ion: 151	Resp: 13142
Ion Ratio	Lower Upper
151	100
153	64.0 43.6 83.6



#16
 Chloroform
 Concen: 75.76 pg
 RT: 6.31 min Scan# 1298
 Delta R.T. 0.001 min
 Lab File: 02281512.D
 Acq: 28 Feb 2015 8:06

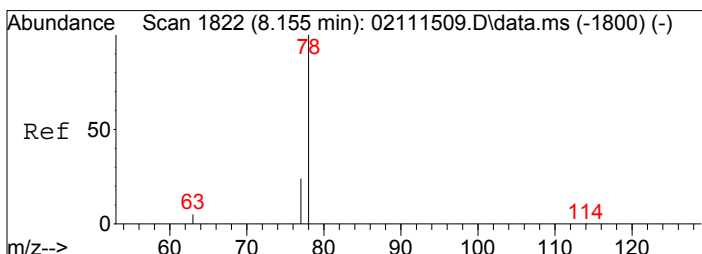
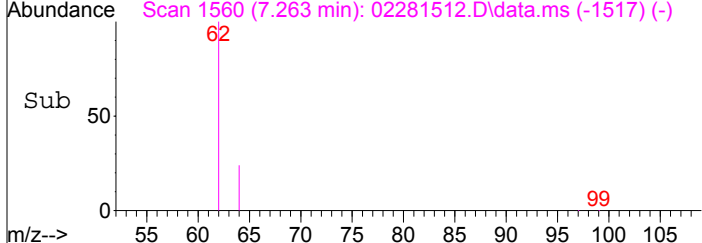
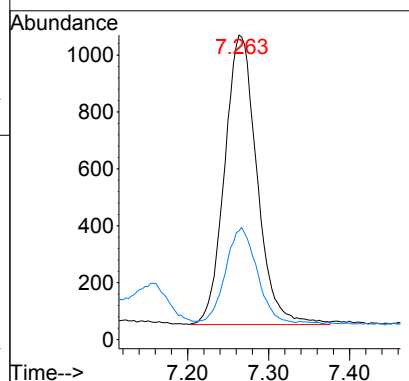
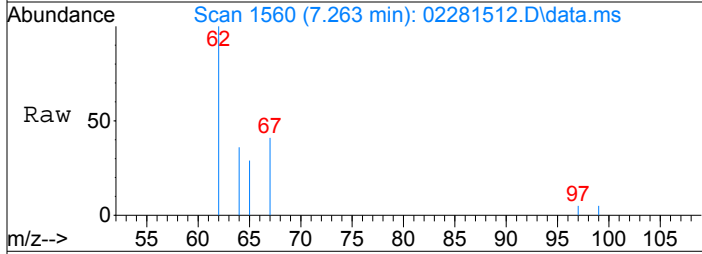
Tgt Ion: 83	Resp: 5372
Ion Ratio	Lower Upper
83	100
85	66.7 45.4 85.4





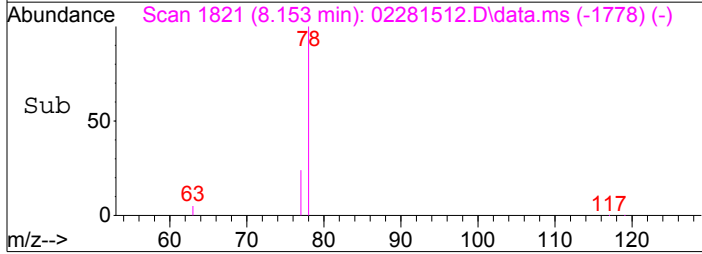
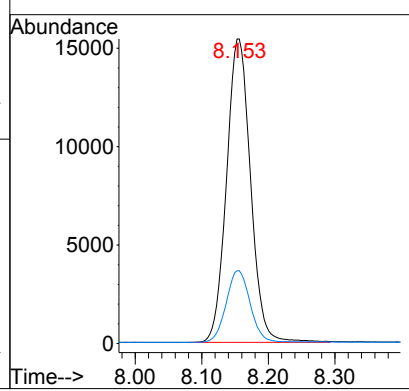
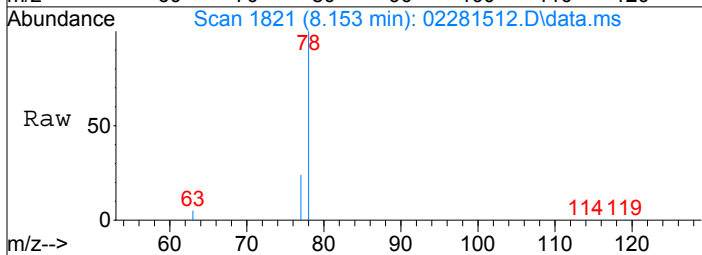
#18
 1,2-Dichloroethane
 Concen: 49.98 pg
 RT: 7.26 min Scan# 1560
 Delta R.T. -0.002 min
 Lab File: 02281512.D
 Acq: 28 Feb 2015 8:06

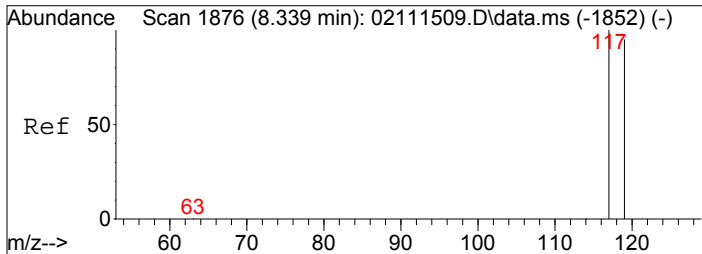
Tgt Ion:	62	Resp:	2822
Ion Ratio	Lower	Upper	
62	100		
64	31.3	11.6	51.6



#20
 Benzene
 Concen: 265.51 pg
 RT: 8.15 min Scan# 1821
 Delta R.T. -0.002 min
 Lab File: 02281512.D
 Acq: 28 Feb 2015 8:06

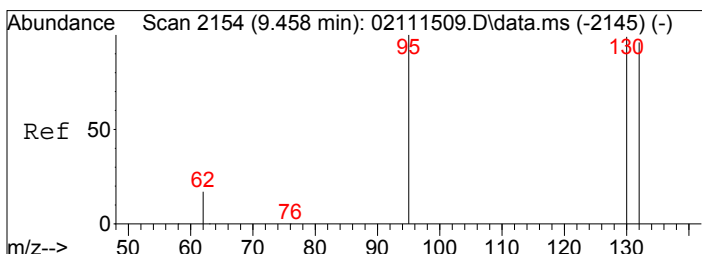
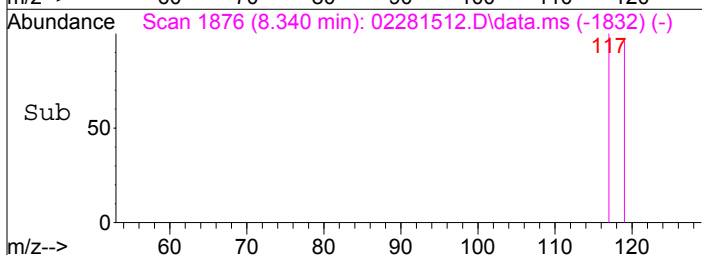
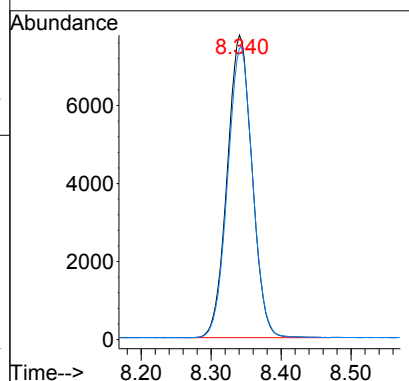
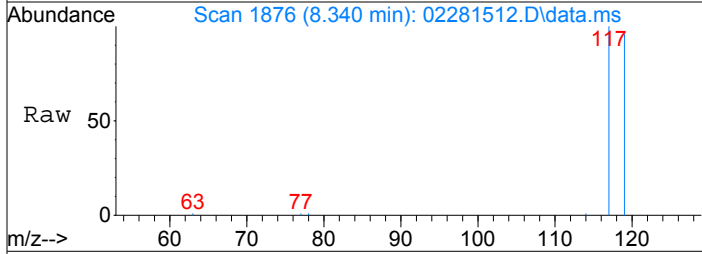
Tgt Ion:	78	Resp:	38725
Ion Ratio	Lower	Upper	
78	100		
77	23.7	3.7	43.7





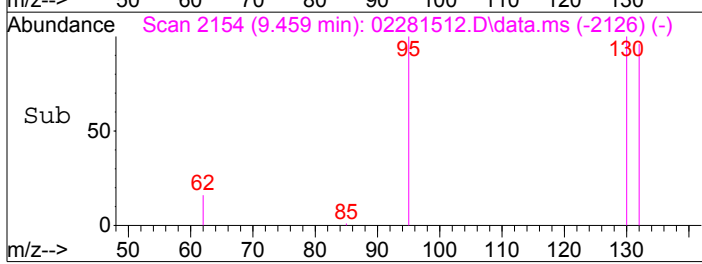
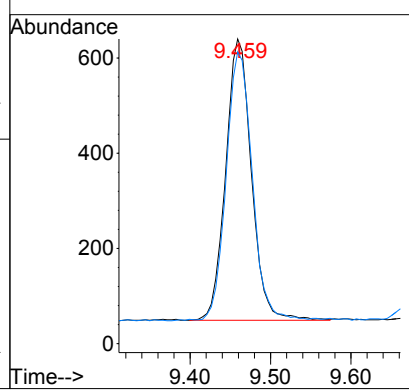
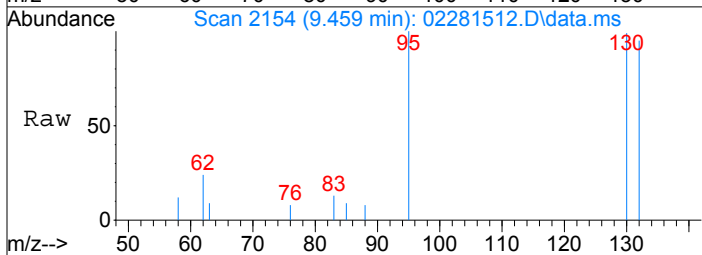
#21
Carbon Tetrachloride
Concen: 370.59 pg
RT: 8.34 min Scan# 1876
Delta R.T. 0.001 min
Lab File: 02281512.D
Acq: 28 Feb 2015 8:06

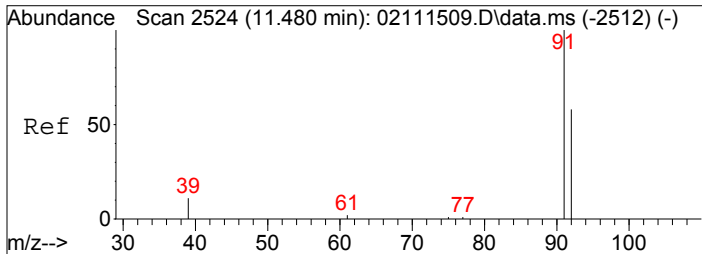
Tgt Ion:	117	Resp:	19132
Ion Ratio	Lower	Upper	
117	100		
119	96.5	75.5	115.5



#25
Trichloroethene
Concen: 30.40 pg
RT: 9.46 min Scan# 2154
Delta R.T. 0.001 min
Lab File: 02281512.D
Acq: 28 Feb 2015 8:06

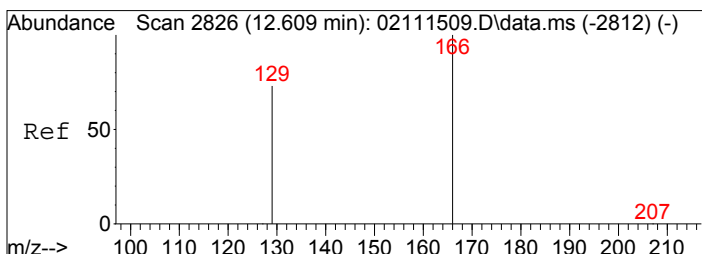
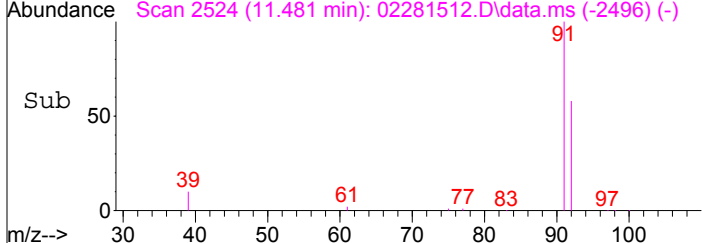
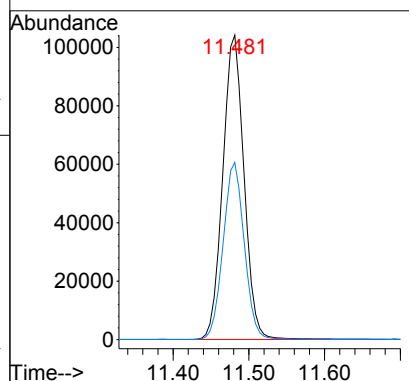
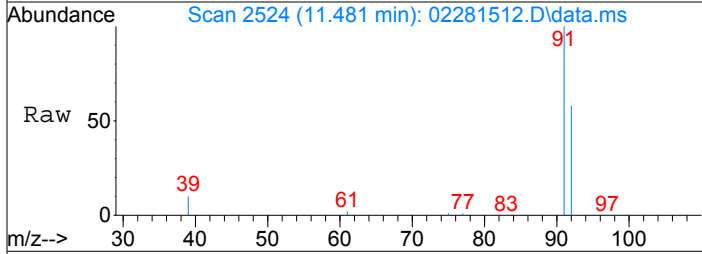
Tgt Ion:	130	Resp:	1318
Ion Ratio	Lower	Upper	
130	100		
132	96.9	77.1	117.1





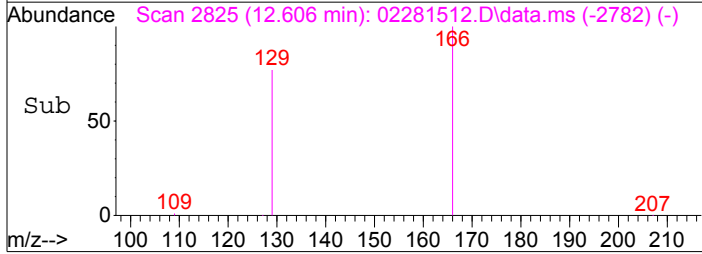
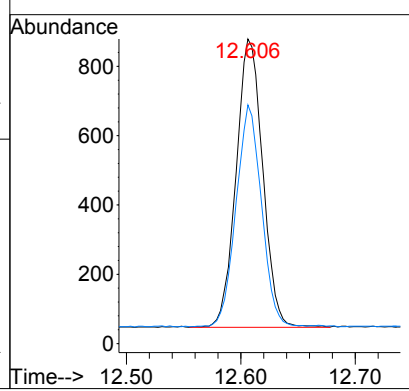
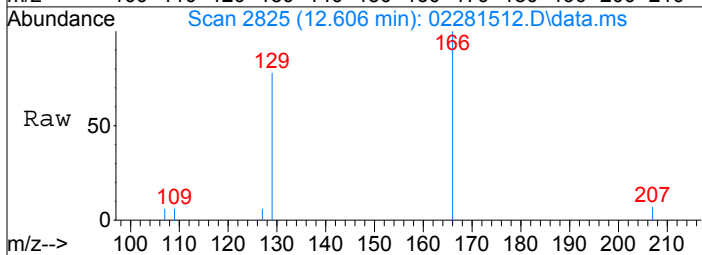
#31
Toluene
Concen: 1225.14 pg
RT: 11.48 min Scan# 2524
Delta R.T. 0.001 min
Lab File: 02281512.D
Acq: 28 Feb 2015 8:06

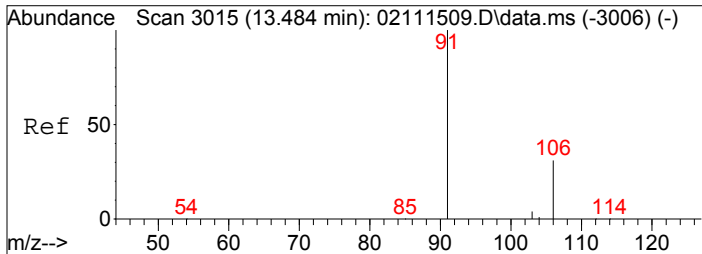
Tgt Ion:	91	Resp:	202810
Ion Ratio	Lower	Upper	
91	100		
92	57.9	37.7	77.7



#33
Tetrachloroethene
Concen: 26.24 pg
RT: 12.61 min Scan# 2825
Delta R.T. -0.003 min
Lab File: 02281512.D
Acq: 28 Feb 2015 8:06

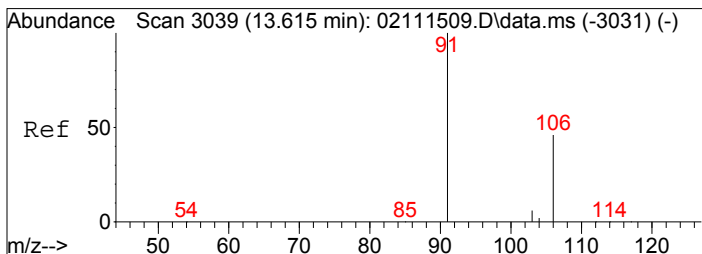
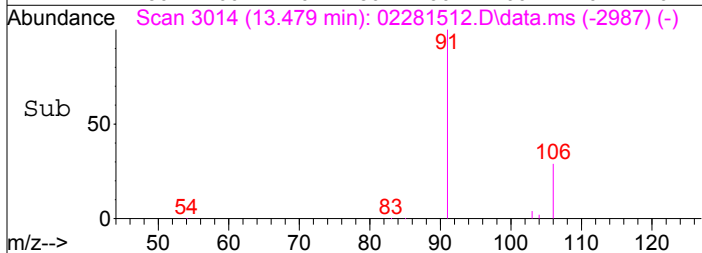
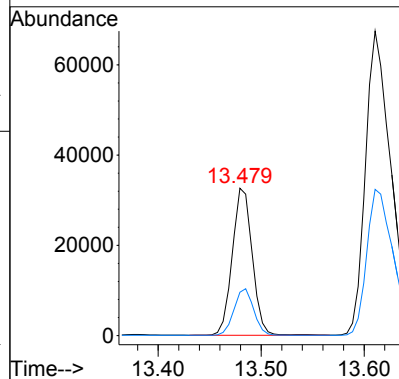
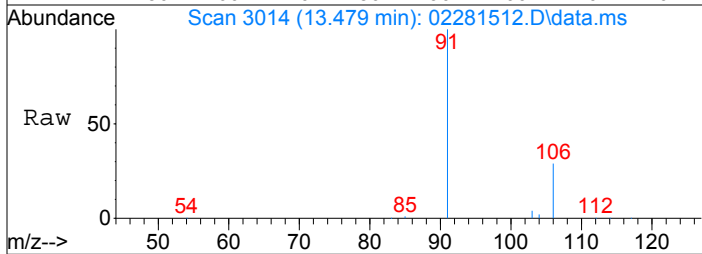
Tgt Ion:	166	Resp:	1345
Ion Ratio	Lower	Upper	
166	100		
129	73.5	53.3	93.3





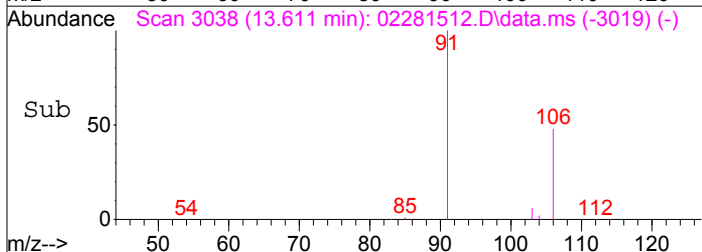
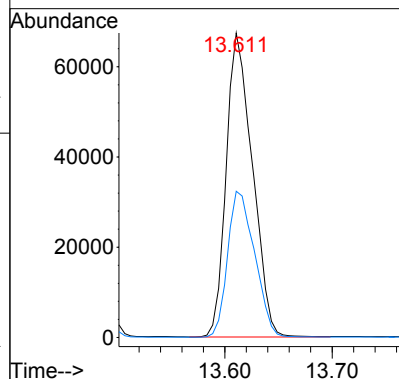
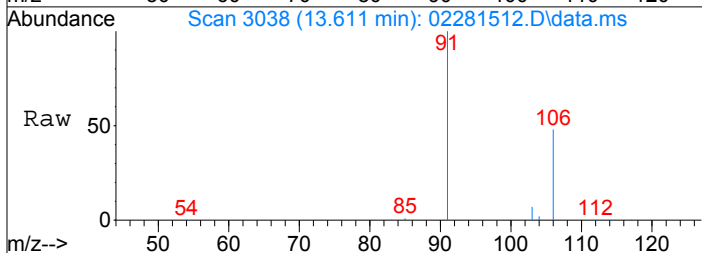
#36
Ethylbenzene
Concen: 236.53 pg
RT: 13.48 min Scan# 3014
Delta R.T. -0.004 min
Lab File: 02281512.D
Acq: 28 Feb 2015 8:06

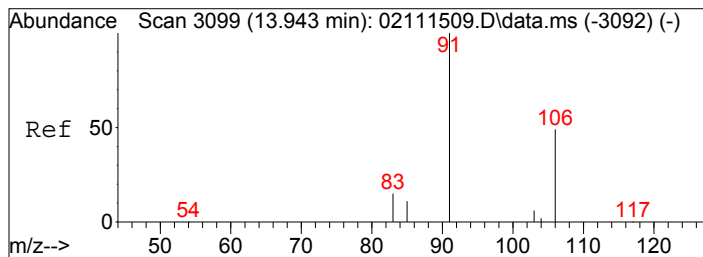
Tgt Ion: 91 Resp: 43829
Ion Ratio Lower Upper
91 100
106 31.3 10.9 50.9



#37
m,p-Xylene
Concen: 750.43 pg
RT: 13.61 min Scan# 3038
Delta R.T. -0.004 min
Lab File: 02281512.D
Acq: 28 Feb 2015 8:06

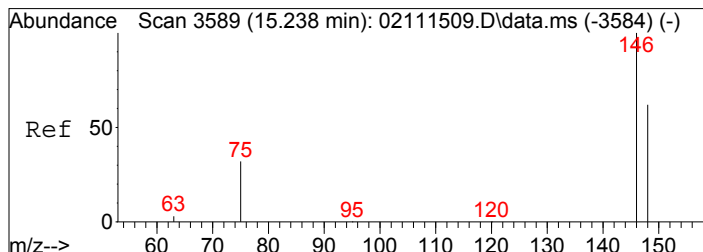
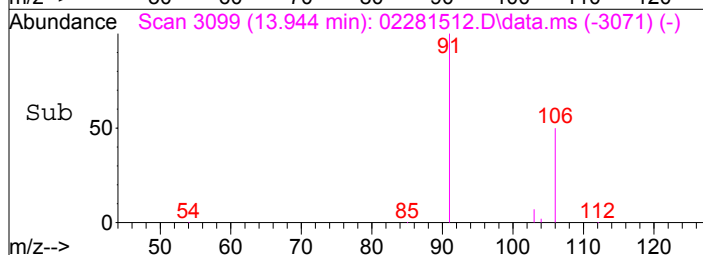
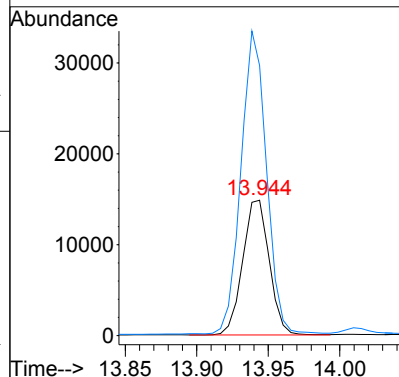
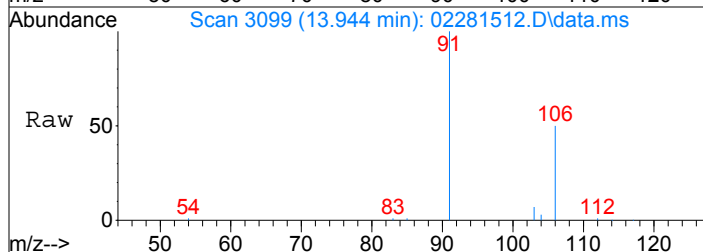
Tgt Ion: 91 Resp: 114285
Ion Ratio Lower Upper
91 100
106 49.7 27.5 67.5





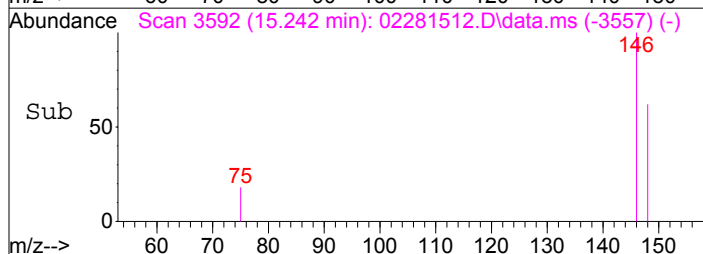
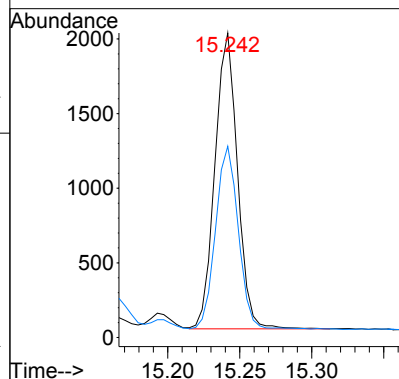
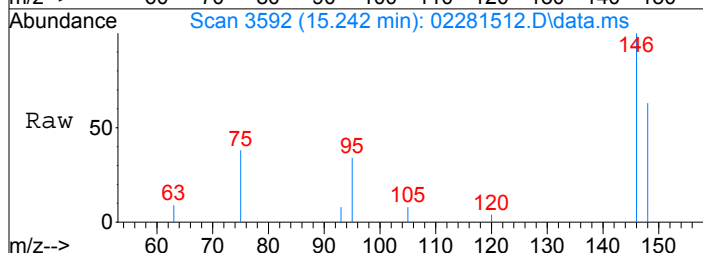
#38
o-Xylene
Concen: 257.74 pg
RT: 13.94 min Scan# 3099
Delta R.T. 0.001 min
Lab File: 02281512.D
Acq: 28 Feb 2015 8:06

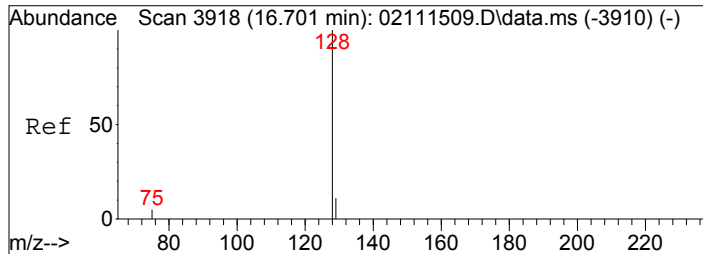
Tgt Ion:106 Resp: 19183
Ion Ratio Lower Upper
106 100
91 217.3 198.3 238.3



#42
1,4-Dichlorobenzene
Concen: 21.17 pg
RT: 15.24 min Scan# 3592
Delta R.T. 0.004 min
Lab File: 02281512.D
Acq: 28 Feb 2015 8:06

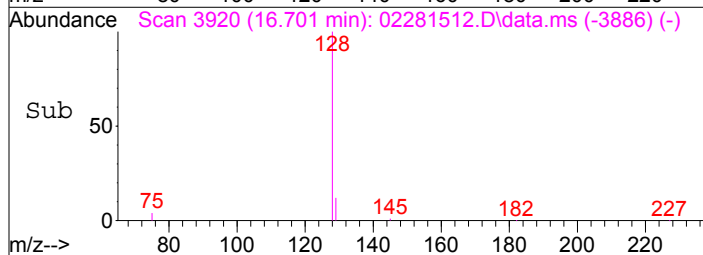
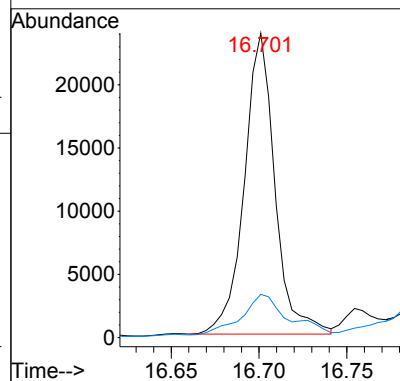
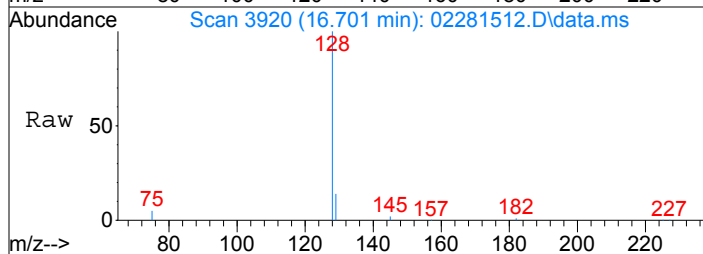
Tgt Ion:146 Resp: 2162
Ion Ratio Lower Upper
146 100
148 62.3 43.5 83.5





#45
Naphthalene
Concen: 156.85 pg
RT: 16.70 min Scan# 3920
Delta R.T. -0.000 min
Lab File: 02281512.D
Acq: 28 Feb 2015 8:06

Tgt Ion:128	Resp:	29000
Ion Ratio	Lower	Upper
128	100	
129	20.1	0.0 30.9



Data File: I:\MS19\DATA\2015 02\28\02281513.D

Acq On : 28 Feb 2015 8:50

Operator: WA

Sample : P1500729-008 (1000mL)

Misc : S29-02041502

ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 28 10:28:14 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

2/28/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.12	130	27886	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	193710	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	34520	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.13	65	58058	852.537	pg	0.00
Spiked Amount	1000.000		Recovery	=	85.25%	
30) Toluene-d8 (SS2)	11.38	98	177692	994.714	pg	0.00
Spiked Amount	1000.000		Recovery	=	99.47%	
40) Bromofluorobenzene (SS3)	14.25	174	81205	1165.213	pg	0.00
Spiked Amount	1000.000		Recovery	=	116.52%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.73	85	156526	1381.163	pg	100
3) Chloromethane	1.84	52	9420	416.222	pg	99
4) Vinyl Chloride	2.02	62	103	N.D.		
5) Bromomethane	2.33	94	1232	24.176	pg	98
6) Chloroethane	2.48	64	337	N.D.		
7) Acetone	2.99	58	1065346	26620.870	pg	95
8) Trichlorofluoromethane	3.11	101	94286	968.575	pg	100
9) 1,1-Dichloroethene	3.66	96	52	N.D.		
10) Methylene Chloride	3.80	84	1234529	26726.770	pg	90
11) Trichlorotrifluoroethane	4.10	151	20116	449.718	pg	100
12) trans-1,2-Dichloroethene	4.74	96	138	N.D.		
13) 1,1-Dichloroethane	4.96	63	449	N.D.		
14) Methyl tert-Butyl Ether	5.13	73	374	N.D.		
15) cis-1,2-Dichloroethene	5.94	96	212	N.D.		
16) Chloroform	6.32	83	13192	154.297	pg	99
18) 1,2-Dichloroethane	7.27	62	3168	46.537	pg	100
19) 1,1,1-Trichloroethane	7.59	97	5641	67.848	pg	100
20) Benzene	8.16	78	74051	421.105	pg	100
21) Carbon Tetrachloride	8.34	117	20186	324.303	pg	99
23) 1,2-Dichloropropane	9.16	63	703	N.D.		
24) Bromodichloromethane	0.00	83	0	N.D.	d	
25) Trichloroethene	9.46	130	677	N.D.		
26) 1,4-Dioxane	9.45	88	10	N.D.		
27) cis-1,3-Dichloropropene	10.46	75	276	N.D.		
28) trans-1,3-Dichloropropene	11.06	75	100	N.D.		
29) 1,1,2-Trichloroethane	11.19	83	63	N.D.		
31) Toluene	11.48	91	1675533	8819.049	pg	99
32) 1,2-Dibromoethane	12.13	107	14	N.D.		
33) Tetrachloroethene	12.61	166	1669	28.371	pg	99
35) Chlorobenzene	13.17	112	1518	N.D.		
36) Ethylbenzene	13.48	91	120527	556.785	pg	98
37) m,p-Xylene	13.61	91	344598	1936.886	pg	96
38) o-Xylene	13.94	106	70972	816.239	pg	95
39) 1,1,1,2,2-Tetrachloroethane	0.00	83	0	N.D.	d	
41) 1,3-Dichlorobenzene	0.00	146	0	N.D.	d	
42) 1,4-Dichlorobenzene	15.24	146	1326	N.D.		
43) 1,2-Dichlorobenzene	15.46	146	162	N.D.		
44) 1,2,4-Trichlorobenzene	16.63	182	192	N.D.		
45) Naphthalene	16.70	128	31672	146.633	pg	80
46) Hexachlorobutadiene	16.96	225	45	N.D.		

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\28\02281513.D

Acq On : 28 Feb 2015 8:50

Operator: WA

Sample : P1500729-008 (1000mL)

Misc : S29-02041502

ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 28 10:28:14 2015

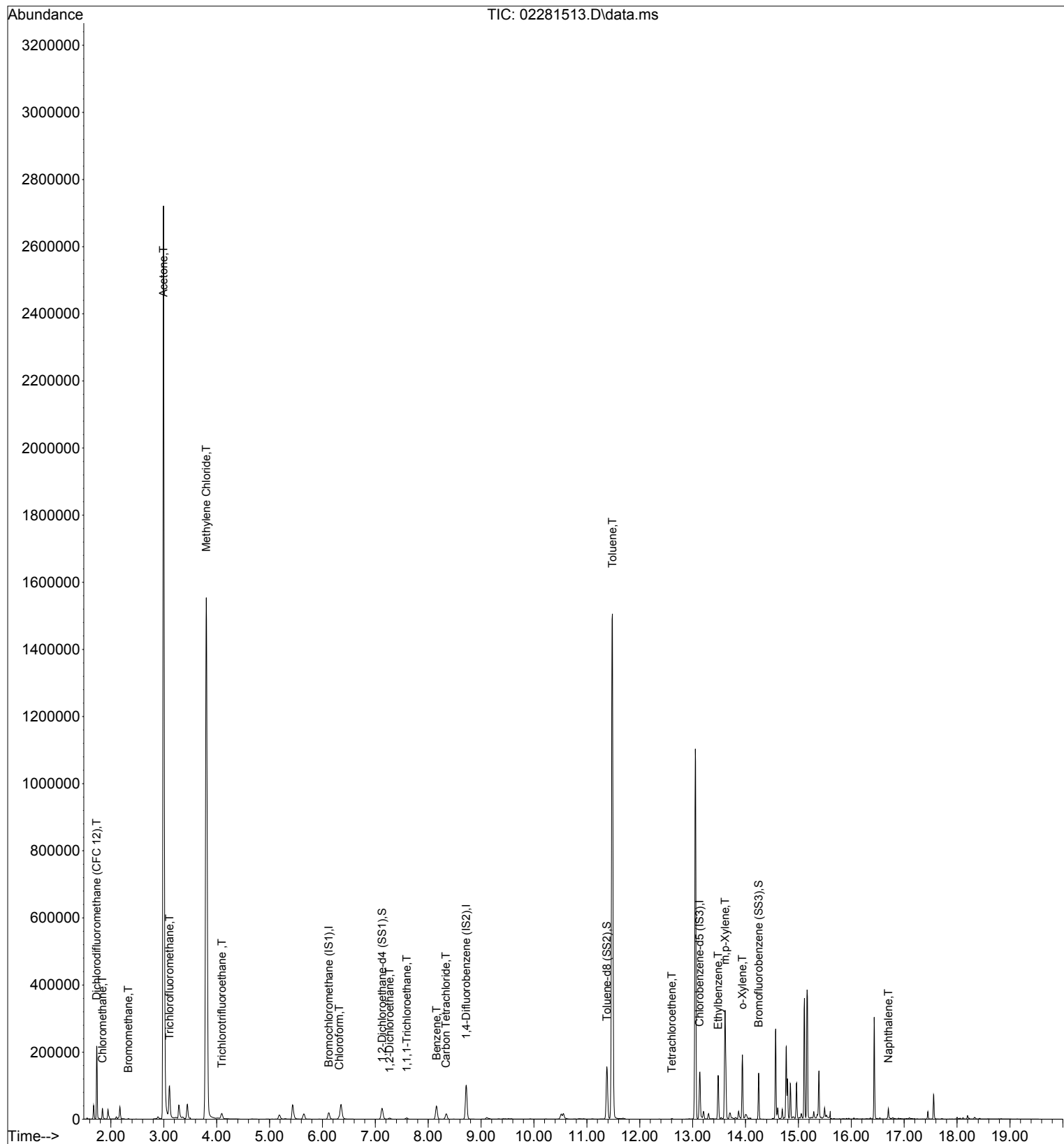
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 02\28\02281513.D

Acq On : 28 Feb 2015 8:50

Operator: WA

Sample : P1500729-008 (1000mL)

Misc : S29-02041502

ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 28 10:28:14 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

WA 2/28/15

DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.12	130	27886	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	193710	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	34520	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.13	65	58058	852.537	pg	0.00
Spiked Amount 1000.000			Recovery	=	85.25%	
30) Toluene-d8 (SS2)	11.38	98	177692	994.714	pg	0.00
Spiked Amount 1000.000			Recovery	=	99.47%	
40) Bromofluorobenzene (SS3)	14.25	174	81205	1165.213	pg	0.00
Spiked Amount 1000.000			Recovery	=	116.52%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.73	85	156526	1381.163	pg	100
3) Chloromethane	1.84	52	9420	416.222	pg	99
5) Bromomethane	2.33	94	1232	24.176	pg	98
7) Acetone	2.99	58	1065346	26620.870	pg	95
8) Trichlorofluoromethane	3.11	101	94286	968.575	pg	100
10) Methylene Chloride	3.80	84	1234529	26726.770	pg	90
11) Trichlorotrifluoroethane	4.10	151	20116	449.718	pg	100
16) Chloroform	6.32	83	13192	154.297	pg	99
18) 1,2-Dichloroethane	7.27	62	3168	46.537	pg	100
19) 1,1,1-Trichloroethane	7.59	97	5641	67.848	pg	100
20) Benzene	8.16	78	74051	421.105	pg	100
21) Carbon Tetrachloride	8.34	117	20186	324.303	pg	99
31) Toluene	11.48	91	1675533	8819.049	pg	99
33) Tetrachloroethene	12.61	166	1669	28.371	pg	99
36) Ethylbenzene	13.48	91	120527	556.785	pg	98
37) m,p-Xylene	13.61	91	344598	1936.886	pg	96
38) o-Xylene	13.94	106	70972	816.239	pg	95
45) Naphthalene	16.70	128	31672	146.633	pg	80

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File: I:\MS19\DATA\2015 02\28\02281513.D

Acq On : 28 Feb 2015 8:50

Operator: WA

Sample : P1500729-008 (1000mL)

Misc : S29-02041502

ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 28 10:28:14 2015

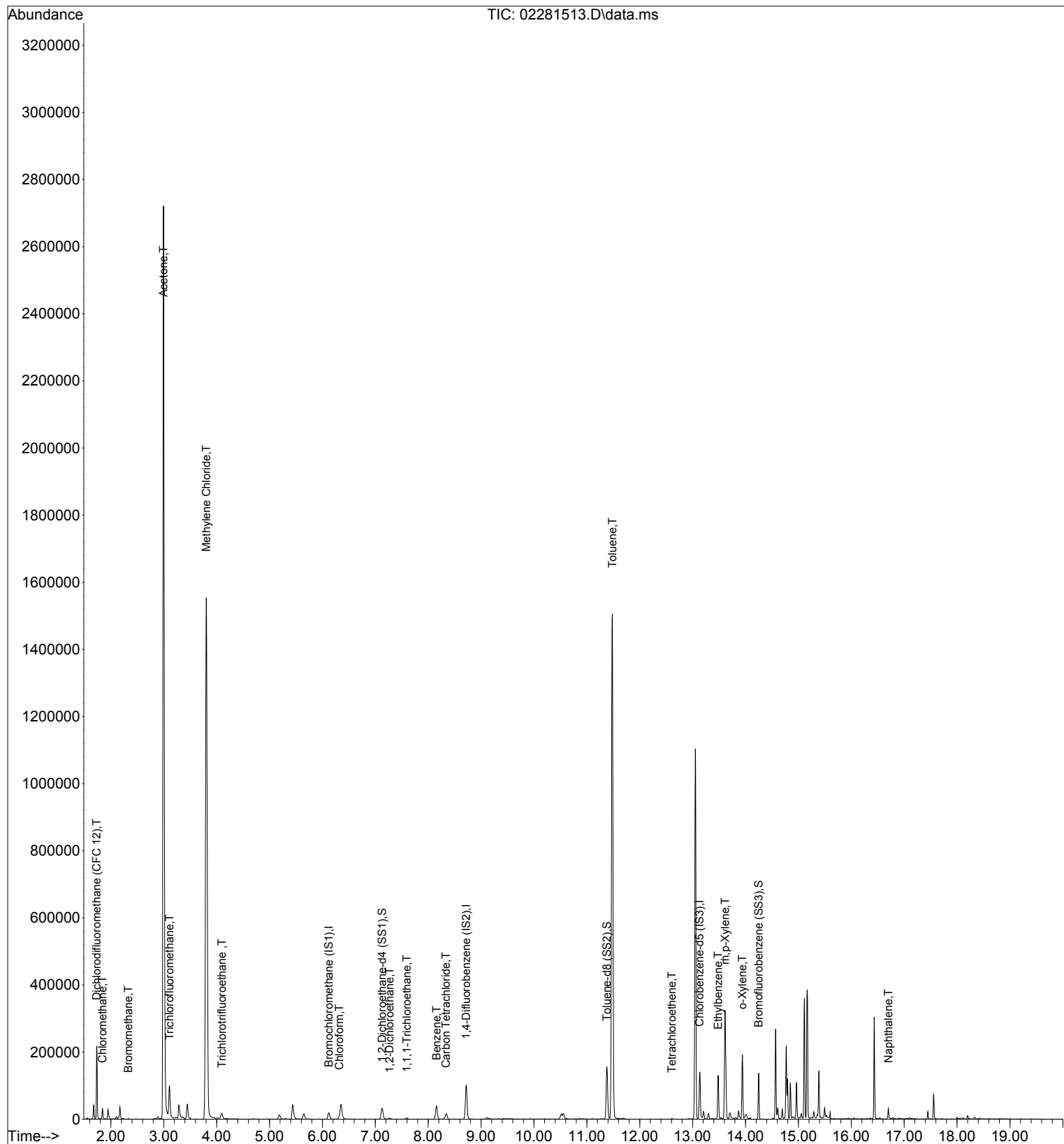
Quant Method : I:\MS19\METHODS\X19021115.M

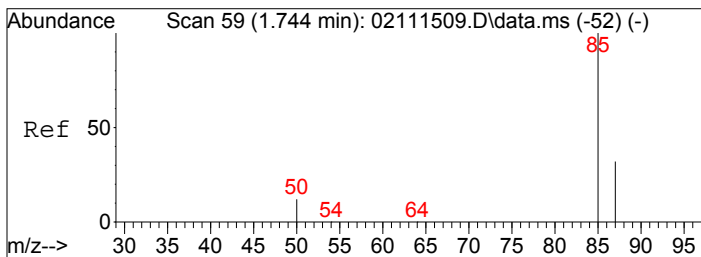
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

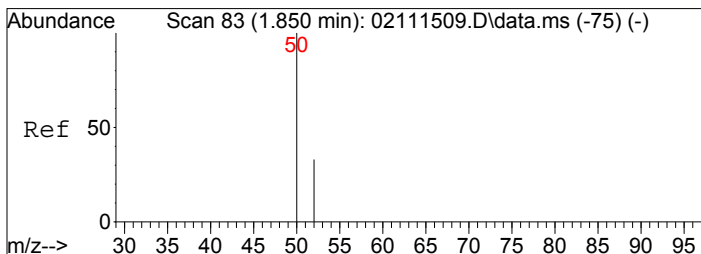
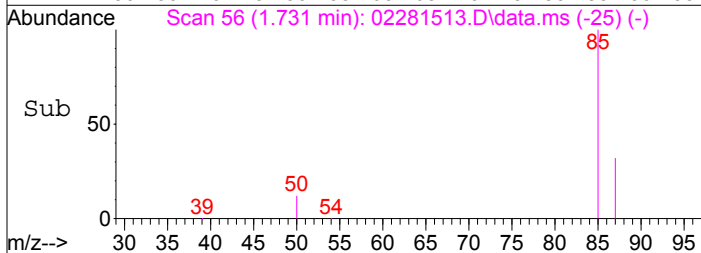
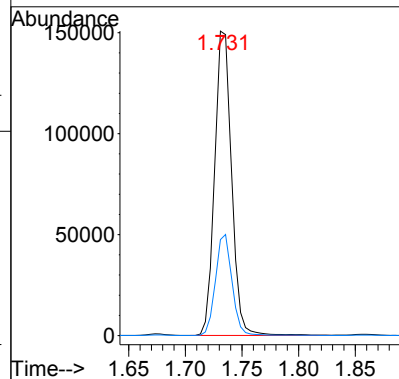
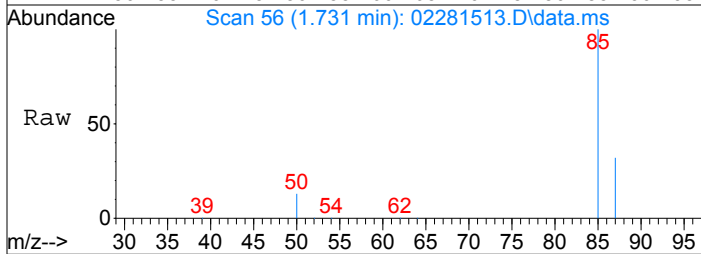
DataAcq Meth:TO15SIM.M





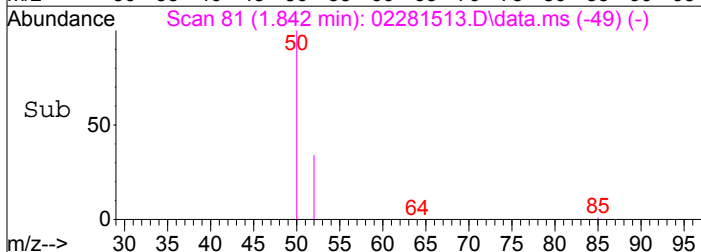
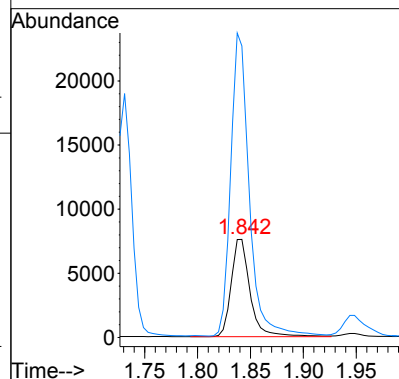
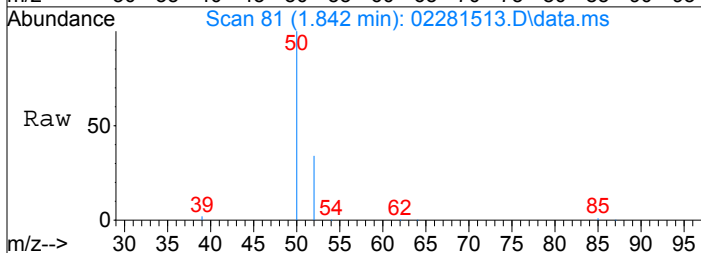
#2
 Dichlorodifluoromethane (CFC 12)
 Concen: 1381.16 pg
 RT: 1.73 min Scan# 56
 Delta R.T. -0.013 min
 Lab File: 02281513.D
 Acq: 28 Feb 2015 8:50

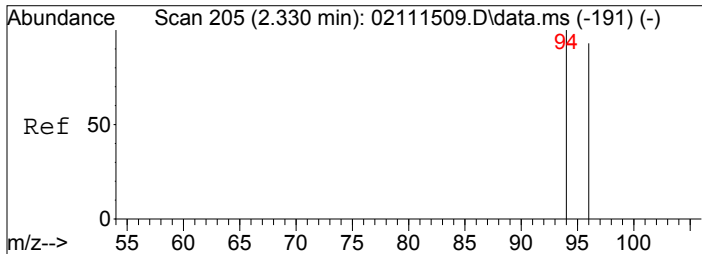
Tgt Ion: 85 Resp: 156526
 Ion Ratio Lower Upper
 85 100
 87 32.5 12.4 52.4



#3
 Chloromethane
 Concen: 416.22 pg
 RT: 1.84 min Scan# 81
 Delta R.T. -0.008 min
 Lab File: 02281513.D
 Acq: 28 Feb 2015 8:50

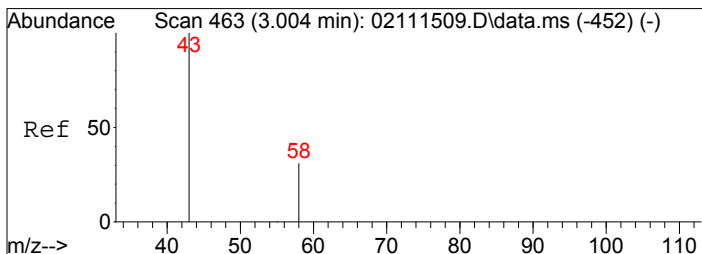
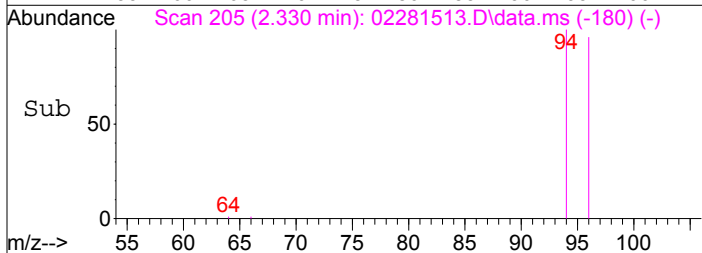
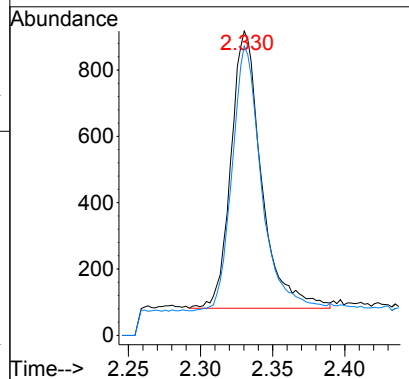
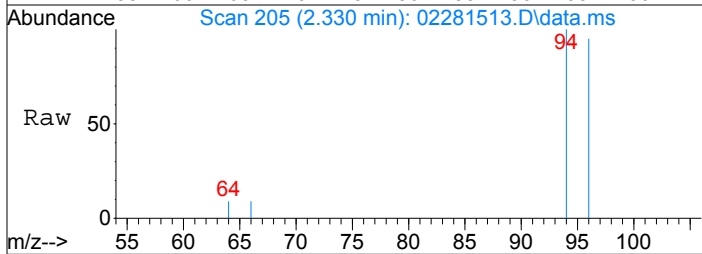
Tgt Ion: 52 Resp: 9420
 Ion Ratio Lower Upper
 52 100
 50 305.3 283.7 323.7





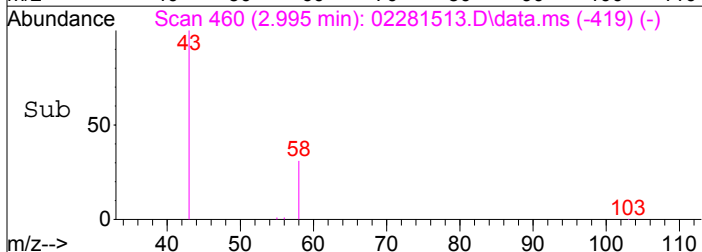
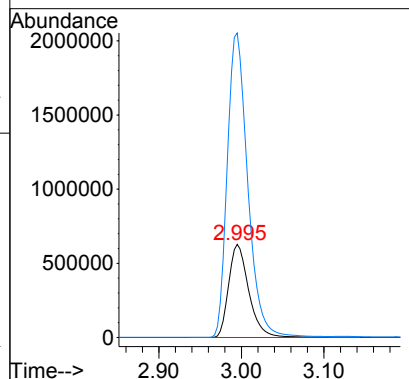
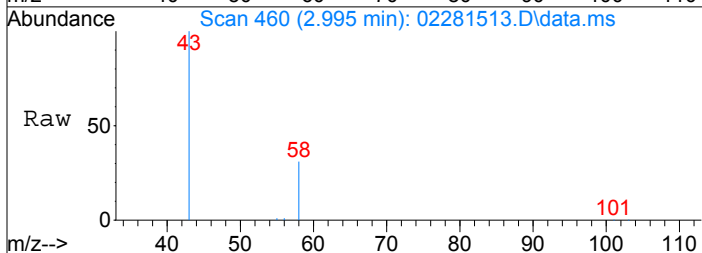
#5
Bromomethane
Concen: 24.18 pg
RT: 2.33 min Scan# 205
Delta R.T. 0.000 min
Lab File: 02281513.D
Acq: 28 Feb 2015 8:50

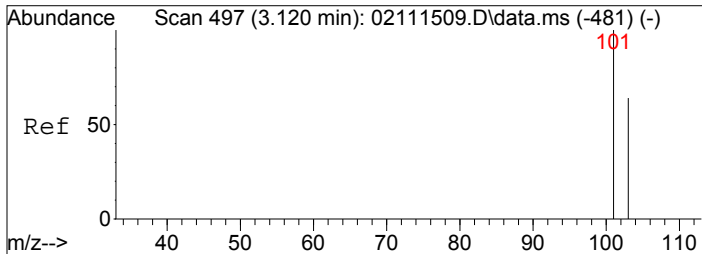
Tgt Ion: 94 Resp: 1232
Ion Ratio Lower Upper
94 100
96 92.7 75.5 113.3



#7
Acetone
Concen: 26620.87 pg
RT: 2.99 min Scan# 460
Delta R.T. -0.009 min
Lab File: 02281513.D
Acq: 28 Feb 2015 8:50

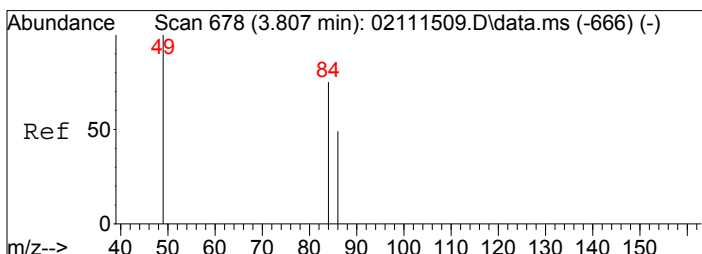
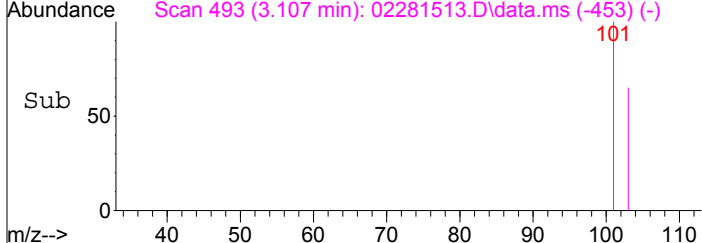
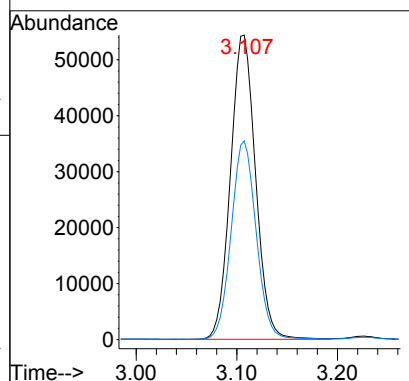
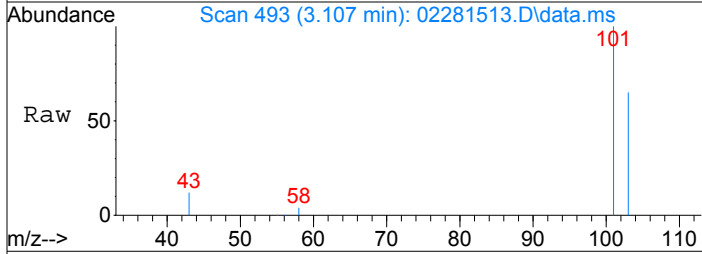
Tgt Ion: 58 Resp: 1065346
Ion Ratio Lower Upper
58 100
43 331.9 301.8 341.8





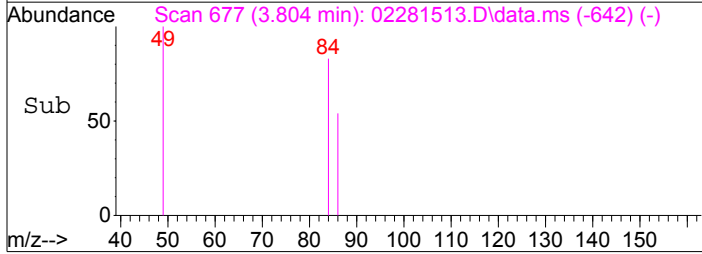
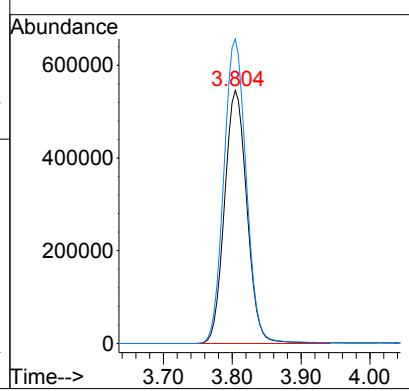
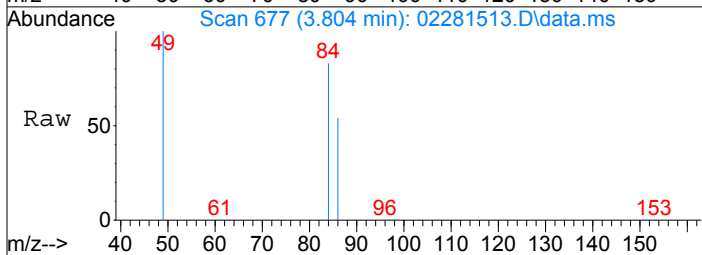
#8
 Trichlorofluoromethane
 Concen: 968.58 pg
 RT: 3.11 min Scan# 493
 Delta R.T. -0.012 min
 Lab File: 02281513.D
 Acq: 28 Feb 2015 8:50

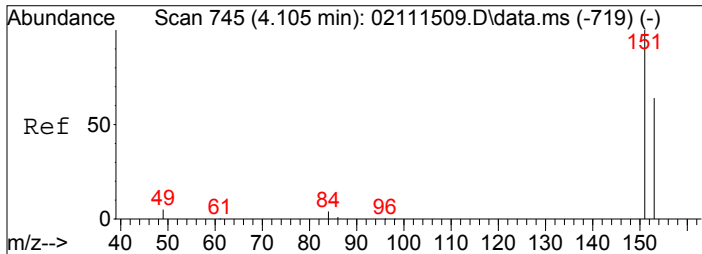
Tgt Ion: 101	Resp: 94286
Ion Ratio	Lower Upper
101	100
103	64.8 51.8 77.6



#10
 Methylene Chloride
 Concen: 26726.77 pg
 RT: 3.80 min Scan# 677
 Delta R.T. -0.003 min
 Lab File: 02281513.D
 Acq: 28 Feb 2015 8:50

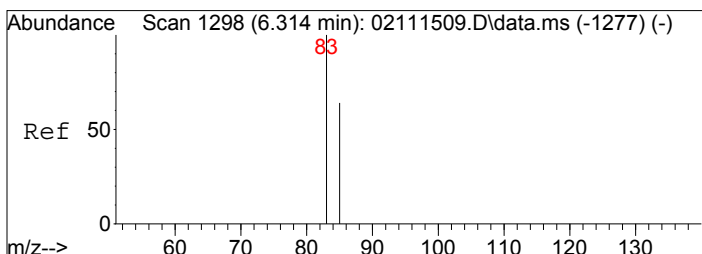
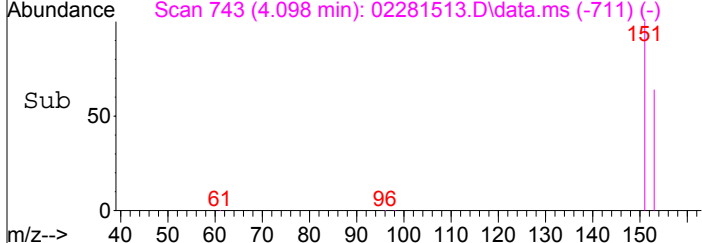
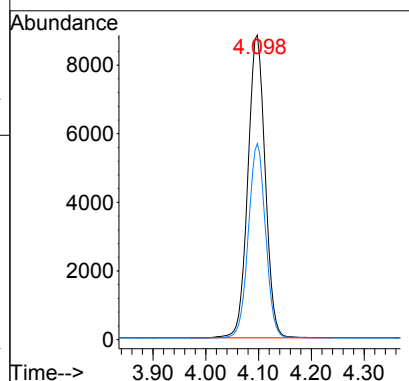
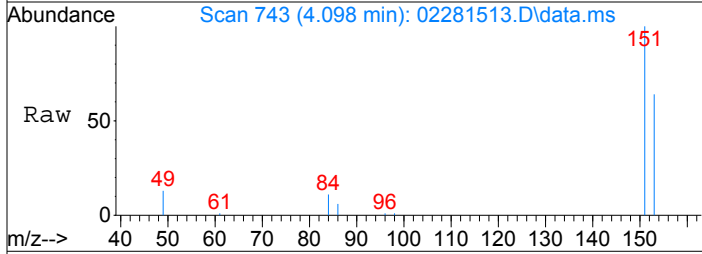
Tgt Ion: 84	Resp: 1234529
Ion Ratio	Lower Upper
84	100
49	120.8 112.3 152.3





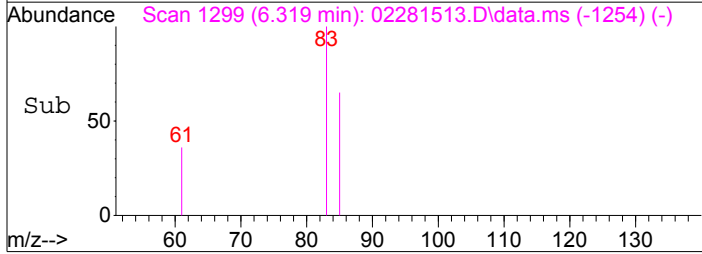
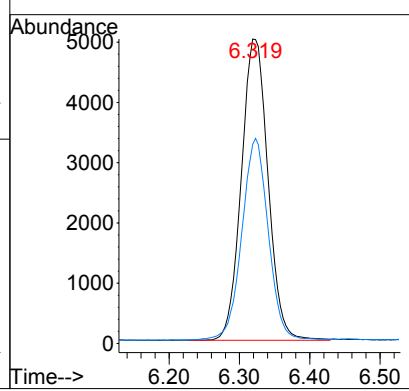
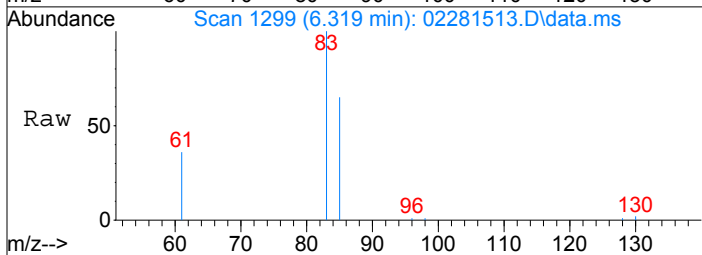
#11
 Trichlorotrifluoroethane
 Concen: 449.72 pg
 RT: 4.10 min Scan# 743
 Delta R.T. -0.007 min
 Lab File: 02281513.D
 Acq: 28 Feb 2015 8:50

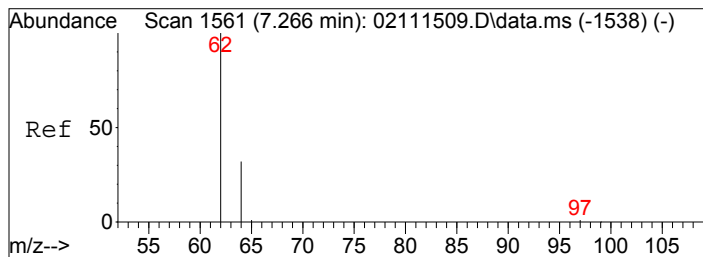
Tgt Ion: 151	Resp: 20116
Ion Ratio	Lower Upper
151	100
153	63.7 43.6 83.6



#16
 Chloroform
 Concen: 154.30 pg
 RT: 6.32 min Scan# 1299
 Delta R.T. 0.005 min
 Lab File: 02281513.D
 Acq: 28 Feb 2015 8:50

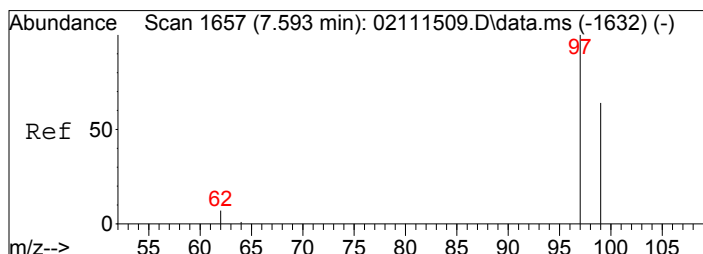
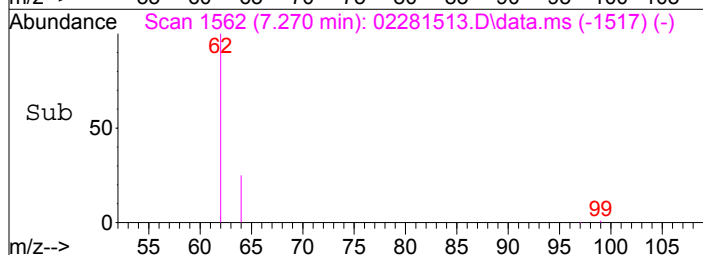
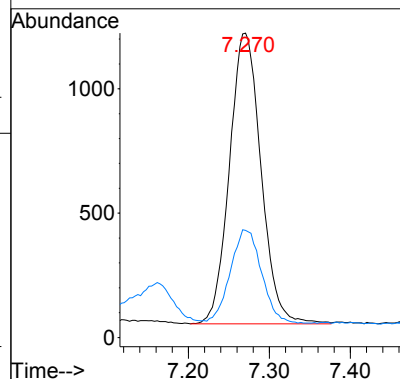
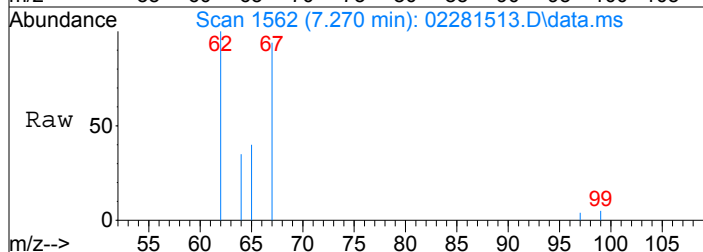
Tgt Ion: 83	Resp: 13192
Ion Ratio	Lower Upper
83	100
85	66.4 45.4 85.4





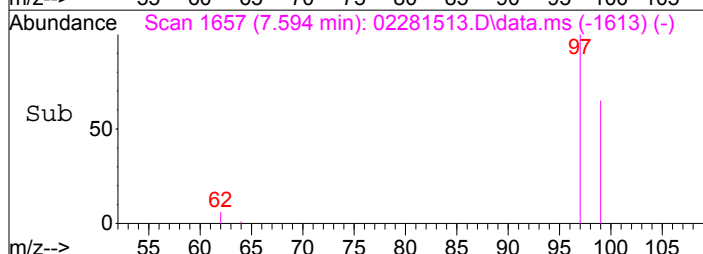
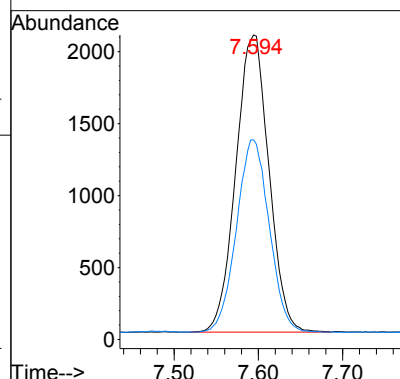
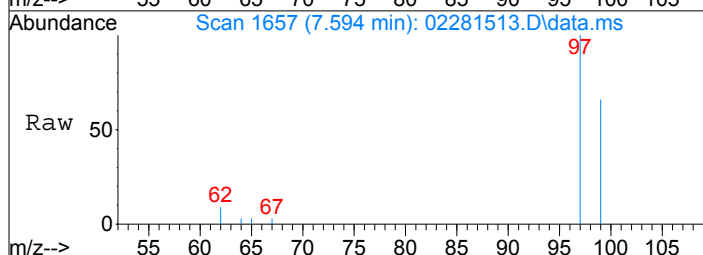
#18
1,2-Dichloroethane
Concen: 46.54 pg
RT: 7.27 min Scan# 1562
Delta R.T. 0.005 min
Lab File: 02281513.D
Acq: 28 Feb 2015 8:50

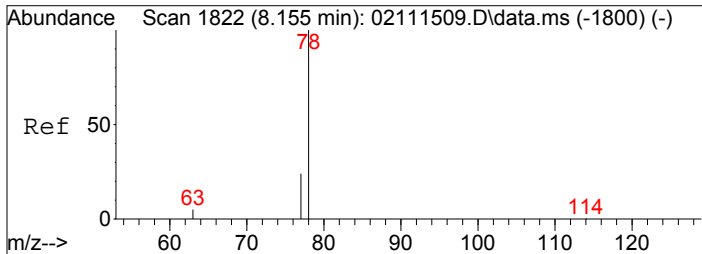
Tgt Ion: 62 Resp: 3168
Ion Ratio Lower Upper
62 100
64 31.6 11.6 51.6



#19
1,1,1-Trichloroethane
Concen: 67.85 pg
RT: 7.59 min Scan# 1657
Delta R.T. 0.001 min
Lab File: 02281513.D
Acq: 28 Feb 2015 8:50

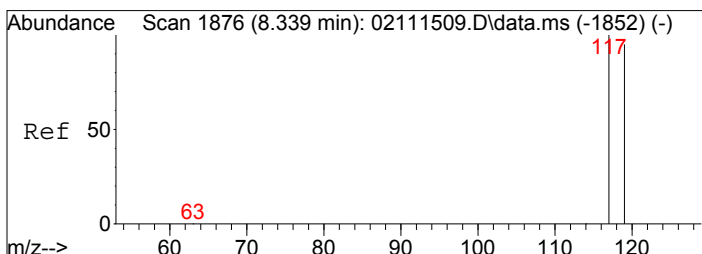
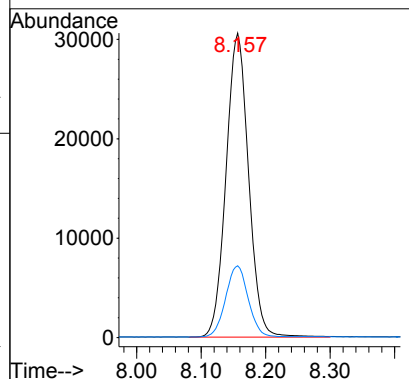
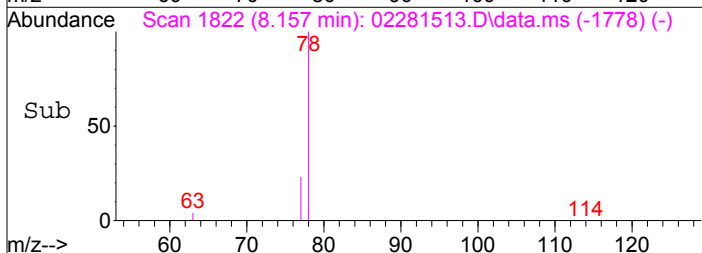
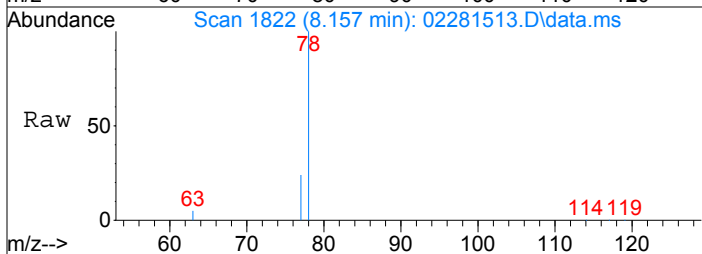
Tgt Ion: 97 Resp: 5641
Ion Ratio Lower Upper
97 100
99 64.1 44.0 84.0





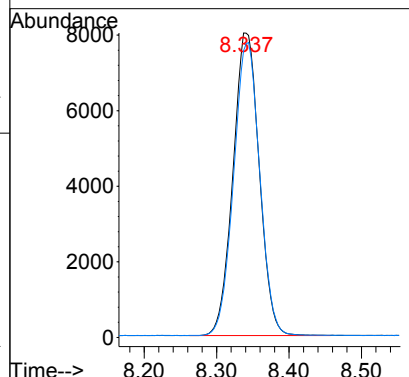
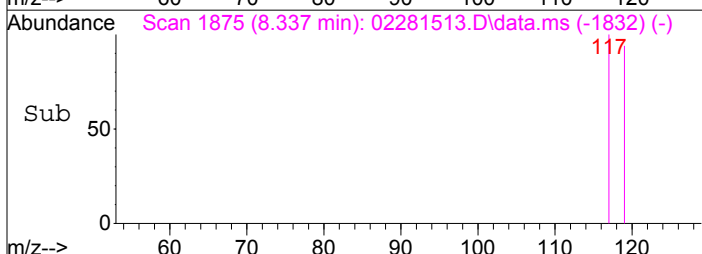
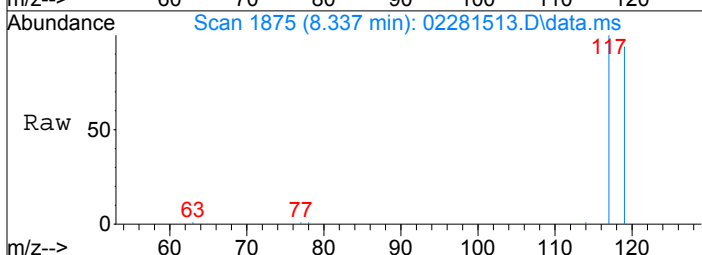
#20
Benzene
Concen: 421.11 pg
RT: 8.16 min Scan# 1822
Delta R.T. 0.002 min
Lab File: 02281513.D
Acq: 28 Feb 2015 8:50

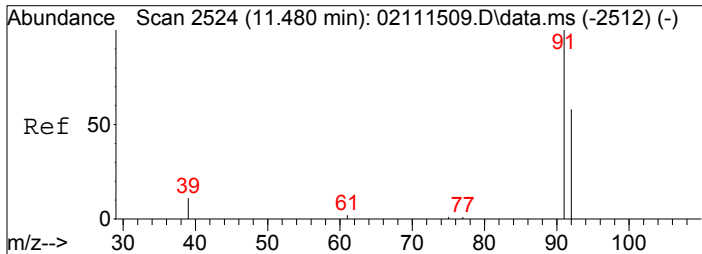
Tgt Ion	Ratio	Lower	Upper
78	100		
77	23.6	3.7	43.7



#21
Carbon Tetrachloride
Concen: 324.30 pg
RT: 8.34 min Scan# 1875
Delta R.T. -0.002 min
Lab File: 02281513.D
Acq: 28 Feb 2015 8:50

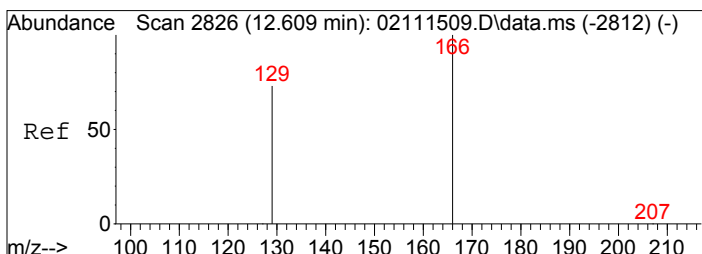
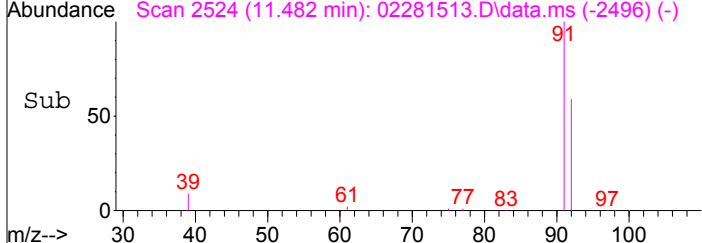
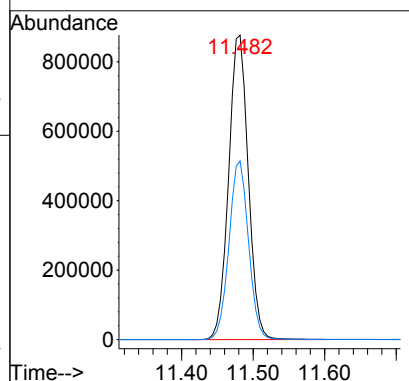
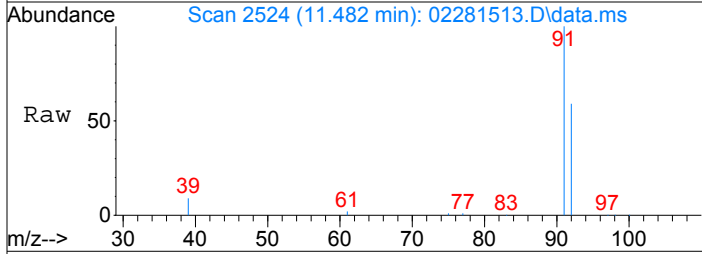
Tgt Ion	Ratio	Lower	Upper
117	100		
119	96.1	75.5	115.5





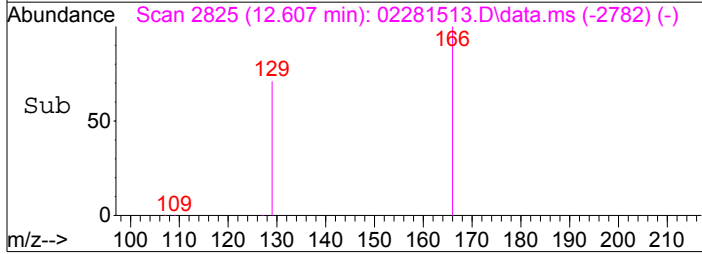
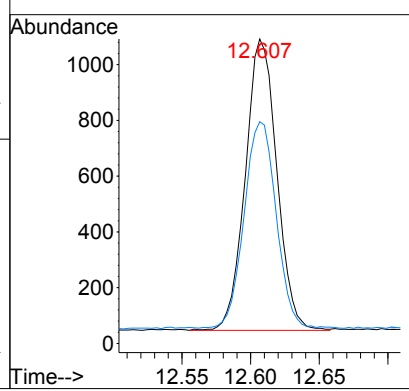
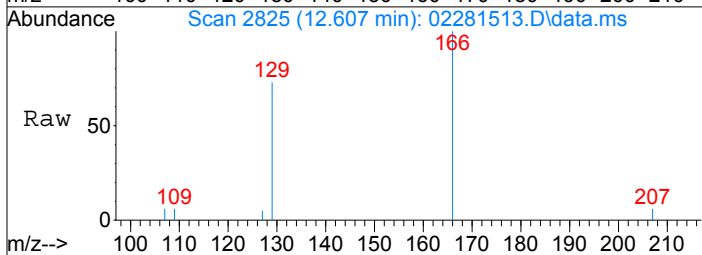
#31
Toluene
Concen: 8819.05 pg
RT: 11.48 min Scan# 2524
Delta R.T. 0.001 min
Lab File: 02281513.D
Acq: 28 Feb 2015 8:50

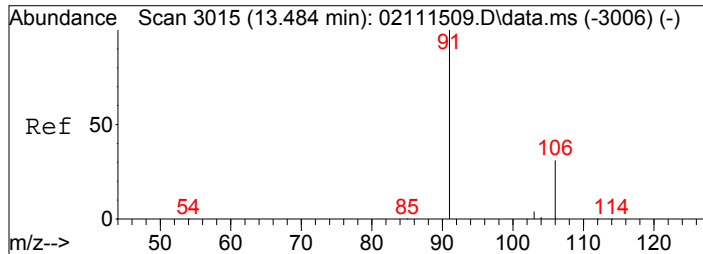
Tgt Ion:	91	Resp:	1675533
Ion Ratio	Lower	Upper	
91	100		
92	58.3	37.7	77.7



#33
Tetrachloroethene
Concen: 28.37 pg
RT: 12.61 min Scan# 2825
Delta R.T. -0.002 min
Lab File: 02281513.D
Acq: 28 Feb 2015 8:50

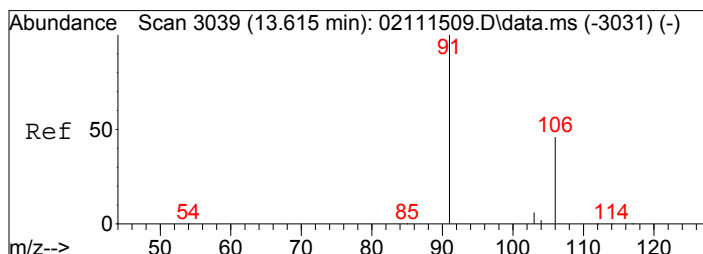
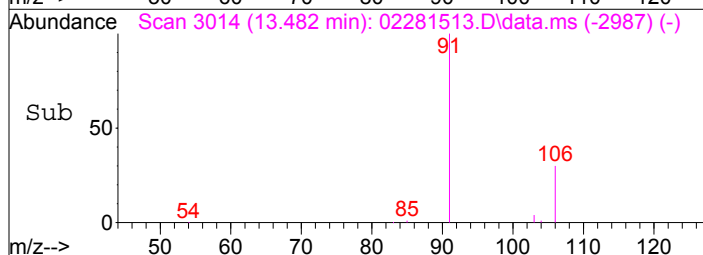
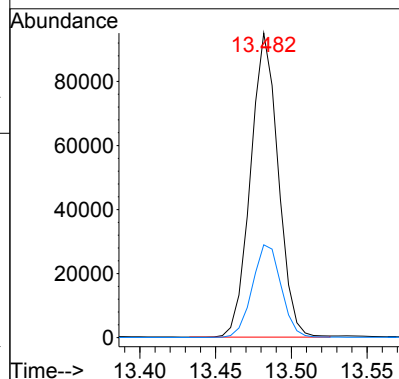
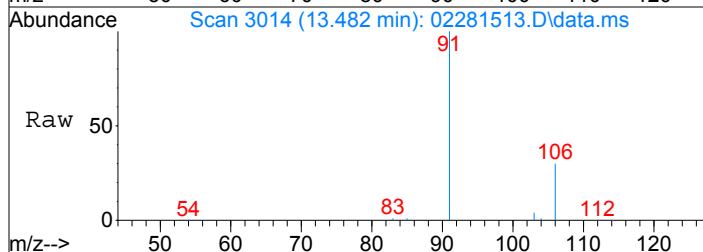
Tgt Ion:	166	Resp:	1669
Ion Ratio	Lower	Upper	
166	100		
129	72.3	53.3	93.3





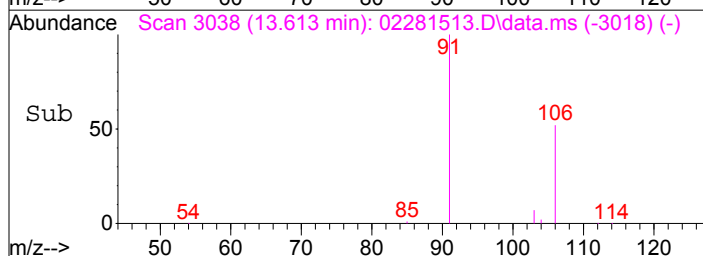
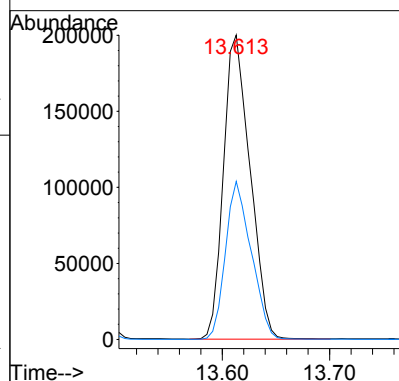
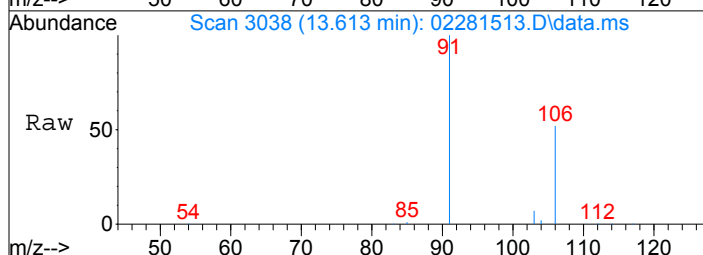
#36
Ethylbenzene
Concen: 556.79 pg
RT: 13.48 min Scan# 3014
Delta R.T. -0.002 min
Lab File: 02281513.D
Acq: 28 Feb 2015 8:50

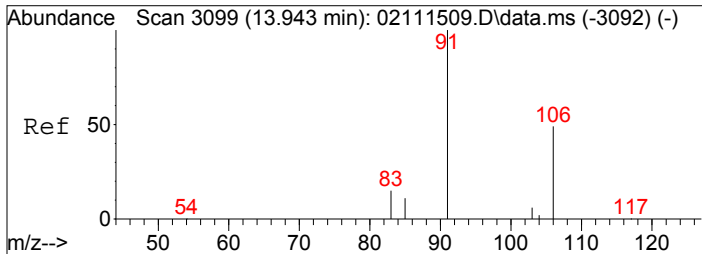
Tgt Ion: 91 Resp: 120527
Ion Ratio Lower Upper
91 100
106 31.9 10.9 50.9



#37
m,p-Xylene
Concen: 1936.89 pg
RT: 13.61 min Scan# 3038
Delta R.T. -0.002 min
Lab File: 02281513.D
Acq: 28 Feb 2015 8:50

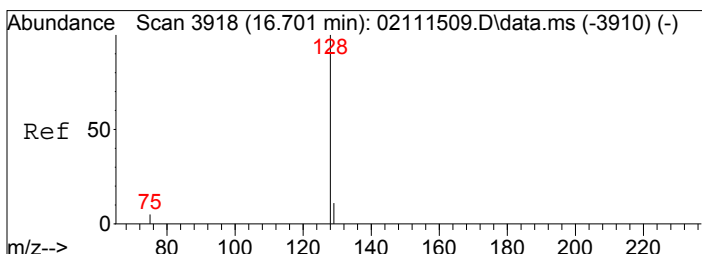
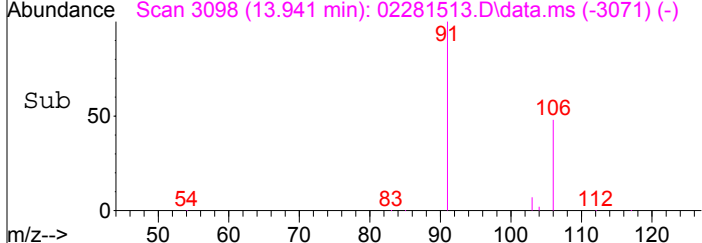
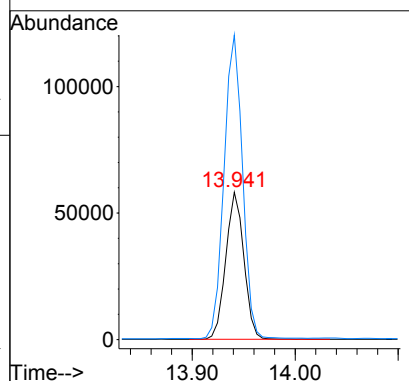
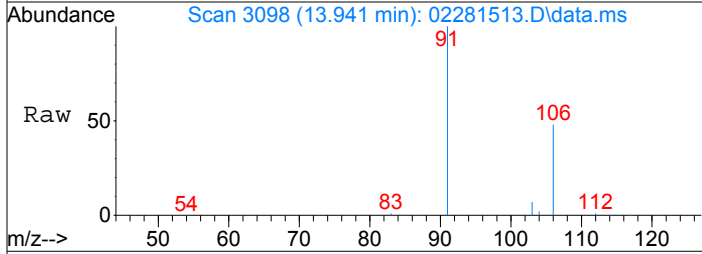
Tgt Ion: 91 Resp: 344598
Ion Ratio Lower Upper
91 100
106 50.3 27.5 67.5





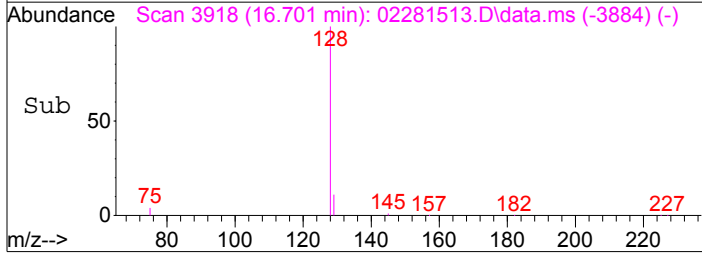
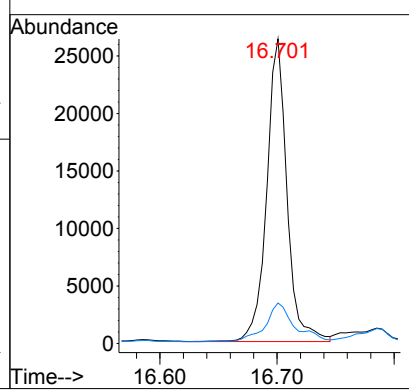
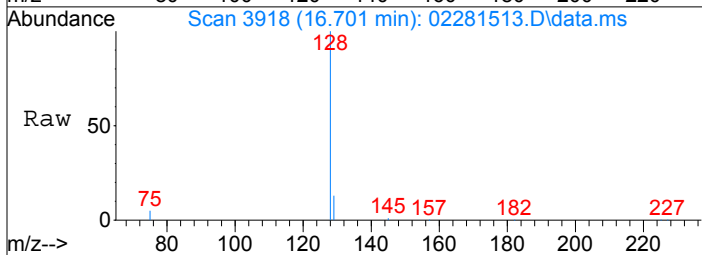
#38
 o-Xylene
 Concen: 816.24 pg
 RT: 13.94 min Scan# 3098
 Delta R.T. -0.002 min
 Lab File: 02281513.D
 Acq: 28 Feb 2015 8:50

Tgt Ion:106	Resp:	70972
Ion Ratio	Lower	Upper
106	100	
91	210.5	198.3 238.3



#45
 Naphthalene
 Concen: 146.63 pg
 RT: 16.70 min Scan# 3918
 Delta R.T. -0.000 min
 Lab File: 02281513.D
 Acq: 28 Feb 2015 8:50

Tgt Ion:128	Resp:	31672
Ion Ratio	Lower	Upper
128	100	
129	18.5	0.0 30.9



Data File: I:\MS19\DATA\2015 02\28\02281514.D

Acq On : 28 Feb 2015 9:18

Operator: WA

Sample : P1500729-009 (1000mL)

Misc : S29-02041502

ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 28 10:51:00 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

2/28/15

DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.12	130	27601	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	195717	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	35351	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.13	65	58298	864.900	pg	0.00
Spiked Amount 1000.000			Recovery	=	86.49%	
30) Toluene-d8 (SS2)	11.38	98	196781	1090.277	pg	0.00
Spiked Amount 1000.000			Recovery	=	109.03%	
40) Bromofluorobenzene (SS3)	14.25	174	86410	1210.753	pg	0.00
Spiked Amount 1000.000			Recovery	=	121.08%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.74	85	161159	1436.728	pg	100
3) Chloromethane	1.84	52	9831	438.868	pg	99
4) Vinyl Chloride	2.02	62	87	N.D.		
5) Bromomethane	2.34	94	1598	31.682	pg	99
6) Chloroethane	2.48	64	556	N.D.		
7) Acetone	2.99	58	958486	24197.960	pg	92
8) Trichlorofluoromethane	3.11	101	118365	1228.488	pg	100
9) 1,1-Dichloroethene	3.66	96	62	N.D.		
10) Methylene Chloride	3.80	84	1294041	28304.443	pg	91
11) Trichlorotrifluoroethane	4.10	151	20246	457.298	pg	100
12) trans-1,2-Dichloroethene	4.74	96	1169	26.614	pg	93
13) 1,1-Dichloroethane	4.96	63	453	N.D.		
14) Methyl tert-Butyl Ether	0.00	73	0	N.D.	d	
15) cis-1,2-Dichloroethene	5.94	96	239	N.D.		
16) Chloroform	6.33	83	13113	154.956	pg	97
18) 1,2-Dichloroethane	7.27	62	3960	58.772	pg	100
19) 1,1,1-Trichloroethane	7.60	97	5203	63.226	pg	100
20) Benzene	8.16	78	70053	402.483	pg	100
21) Carbon Tetrachloride	8.34	117	20880	338.916	pg	99
23) 1,2-Dichloropropane	9.16	63	1143	26.777	pg	94
24) Bromodichloromethane	0.00	83	0	N.D.	d	
25) Trichloroethene	9.46	130	931	N.D.		
26) 1,4-Dioxane	9.53	88	208	N.D.		
27) cis-1,3-Dichloropropene	10.46	75	404	N.D.		
28) trans-1,3-Dichloropropene	11.05	75	148	N.D.		
29) 1,1,2-Trichloroethane	11.19	83	186	N.D.		
31) Toluene	11.48	91	1824152	9502.837	pg	99
32) 1,2-Dibromoethane	12.12	107	22	N.D.		
33) Tetrachloroethene	12.61	166	2053	34.541	pg	99
35) Chlorobenzene	13.17	112	1569	N.D.		
36) Ethylbenzene	13.48	91	136536	615.913	pg	98
37) m,p-Xylene	13.61	91	373115	2047.874	pg	96
38) o-Xylene	13.94	106	73797	828.778	pg	96
39) 1,1,2,2-Tetrachloroethane	0.00	83	0	N.D.	d	
41) 1,3-Dichlorobenzene	0.00	146	0	N.D.	d	
42) 1,4-Dichlorobenzene	15.24	146	1943	N.D.		
43) 1,2-Dichlorobenzene	15.46	146	183	N.D.		
44) 1,2,4-Trichlorobenzene	16.63	182	130	N.D.		
45) Naphthalene	16.70	128	92913	420.052	pg	92
46) Hexachlorobutadiene	16.98	225	100	N.D.		

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\28\02281514.D

Acq On : 28 Feb 2015 9:18

Operator: WA

Sample : P1500729-009 (1000mL)

Misc : S29-02041502

ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 28 10:51:00 2015

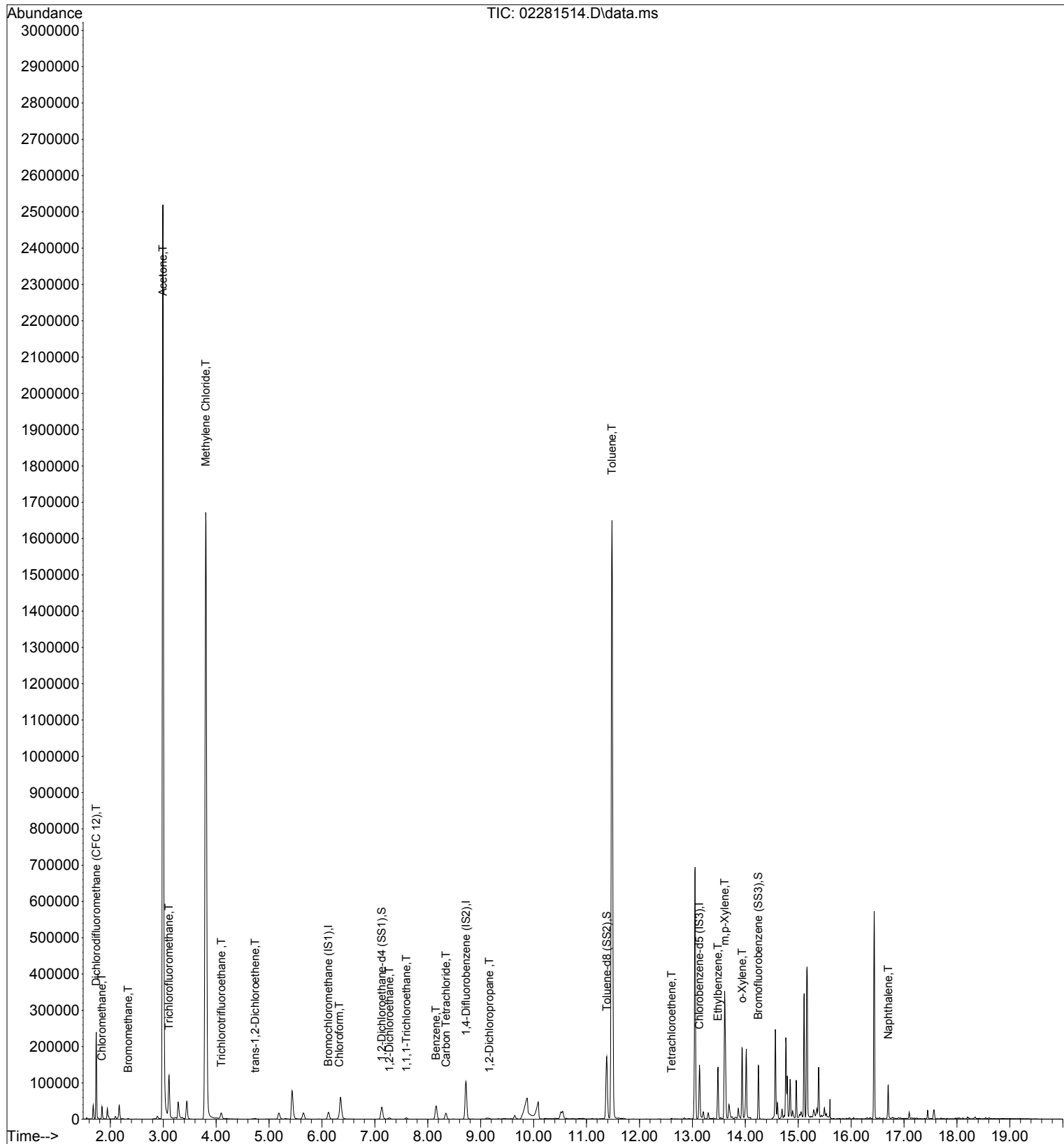
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 02\28\02281514.D

Acq On : 28 Feb 2015 9:18

Operator: WA

Sample : P1500729-009 (1000mL)

Misc : S29-02041502

ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 28 10:51:00 2015

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DataAcq Meth:TO15SIM.M

WA 2/28/15

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34) Chlorobenzene-d5 (IS3)	13.13	54	35351	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.13	65	58298	864.900	pg	0.00
Spiked Amount 1000.000			Recovery	=	86.49%	
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Spiked Amount 1000.000			Recovery	=	109.03%	
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Spiked Amount 1000.000			Recovery	=	121.08%	

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8) Trichlorofluoromethane	3.11	101	118365	1228.488	pg	100
10) Methylene Chloride	3.80	84	1294041	28304.443	pg	91
11) Trichlorotrifluoroethane	4.10	151	20246	457.298	pg	100
12) trans-1,2-Dichloroethene	4.74	96	1169	26.614	pg	93
16) Chloroform	6.33	83	13113	154.956	pg	97
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23) 1,2-Dichloropropane	9.16	63	1143	26.777	pg	94
31) Toluene	11.48	91	1824152	9502.837	pg	99
33) Tetrachloroethene	12.61	166	2053	34.541	pg	99
36) Ethylbenzene	13.48	91	136536	615.913	pg	98
37) m,p-Xylene	13.61	91	373115	2047.874	pg	96
38) o-Xylene	13.94	106	73797	828.778	pg	96
45) Naphthalene	16.70	128	92913	420.052	pg	92

(#)= qualifier out of range (m)= manual integration (+)= signals summed

Data File: I:\MS19\DATA\2015 02\28\02281514.D

Acq On : 28 Feb 2015 9:18

Operator: WA

Sample : P1500729-009 (1000mL)

Misc : S29-02041502

ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 28 10:51:00 2015

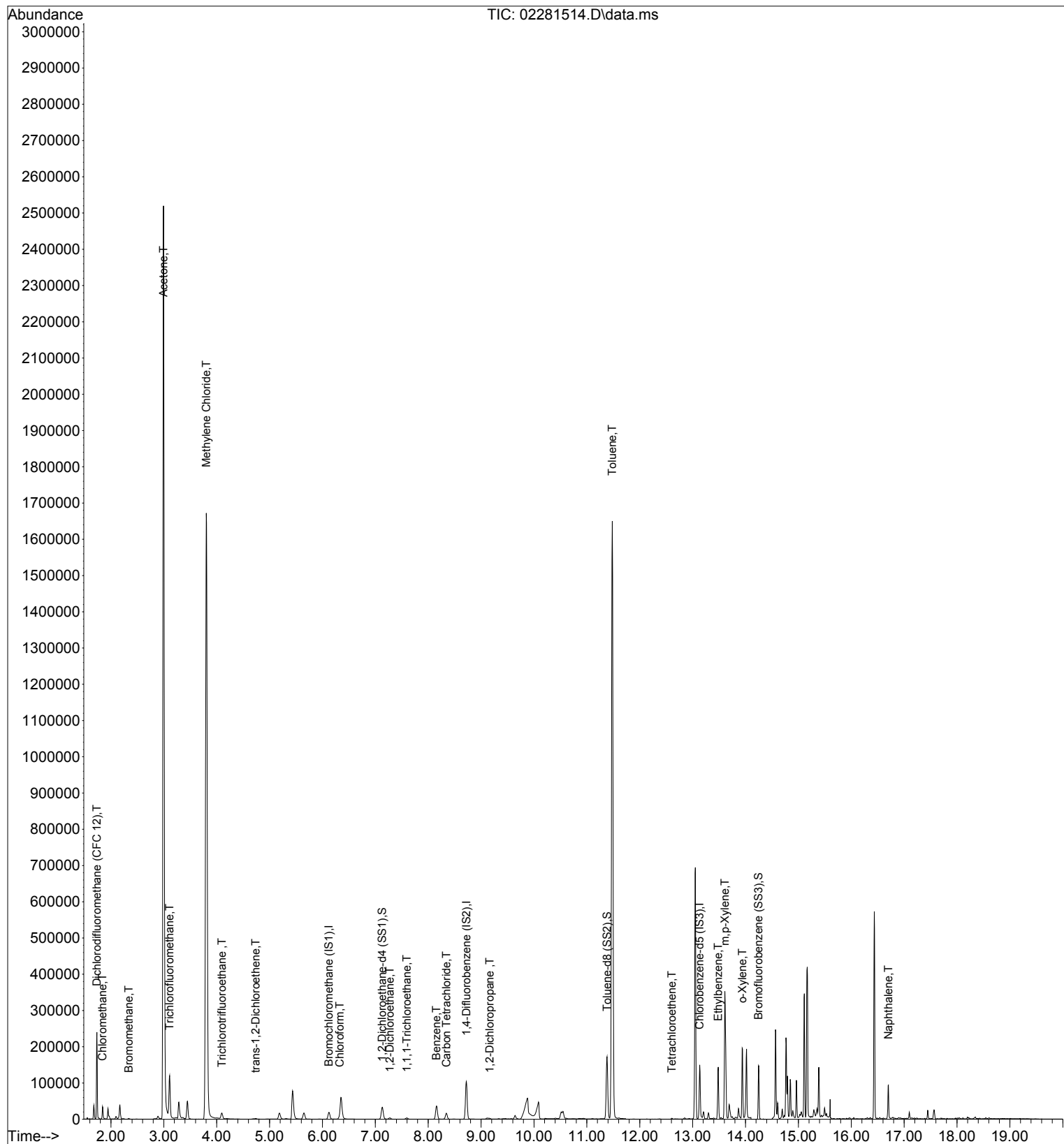
Quant Method : I:\MS19\METHODS\X19021115.M

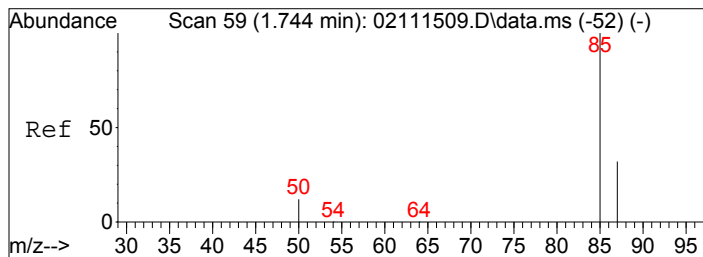
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

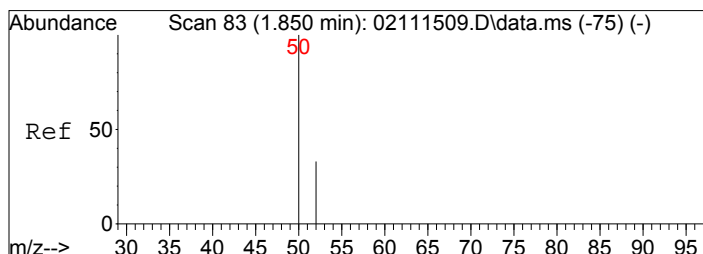
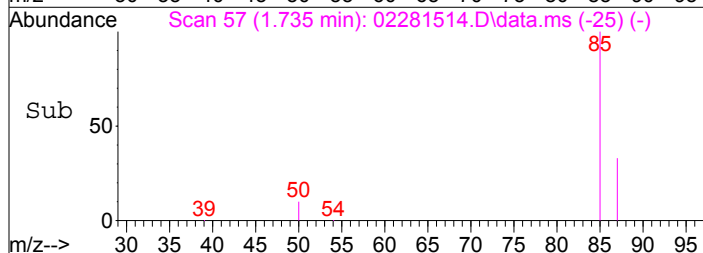
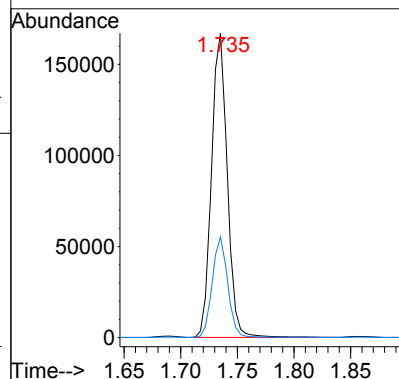
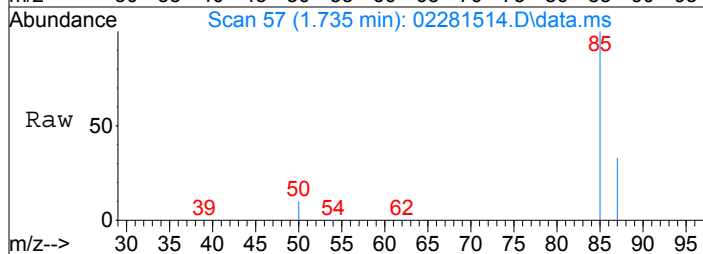
DataAcq Meth:TO15SIM.M





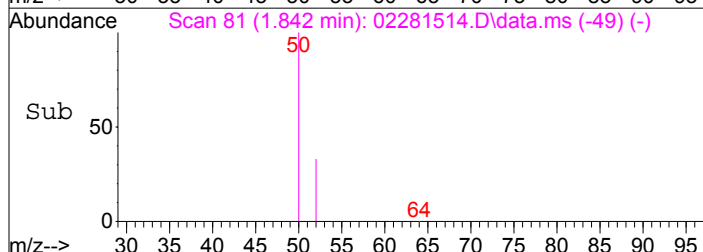
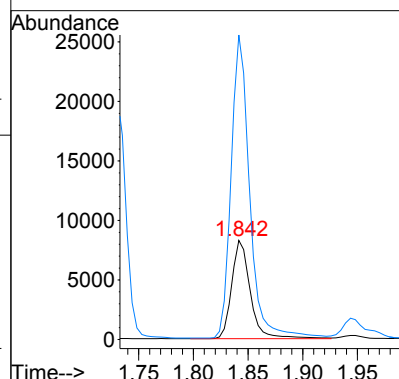
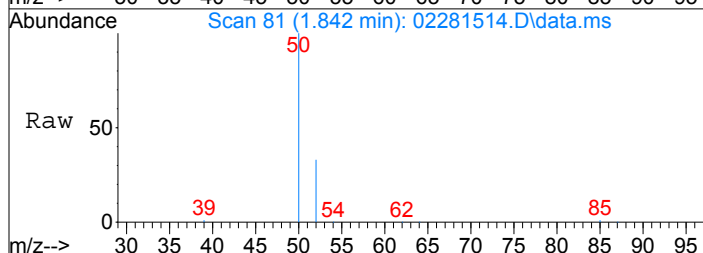
#2
 Dichlorodifluoromethane (CFC 12)
 Concen: 1436.73 pg
 RT: 1.74 min Scan# 57
 Delta R.T. -0.009 min
 Lab File: 02281514.D
 Acq: 28 Feb 2015 9:18

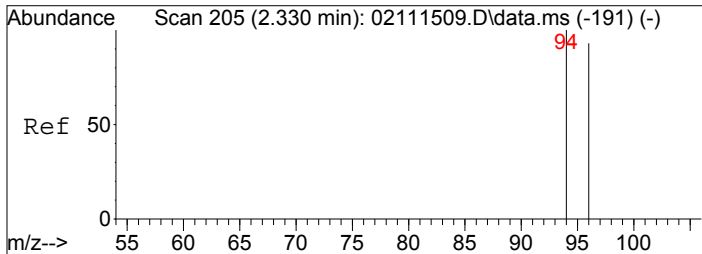
Tgt Ion: 85 Resp: 161159
 Ion Ratio Lower Upper
 85 100
 87 32.6 12.4 52.4



#3
 Chloromethane
 Concen: 438.87 pg
 RT: 1.84 min Scan# 81
 Delta R.T. -0.008 min
 Lab File: 02281514.D
 Acq: 28 Feb 2015 9:18

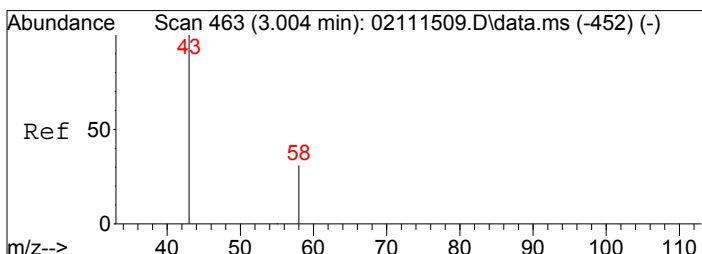
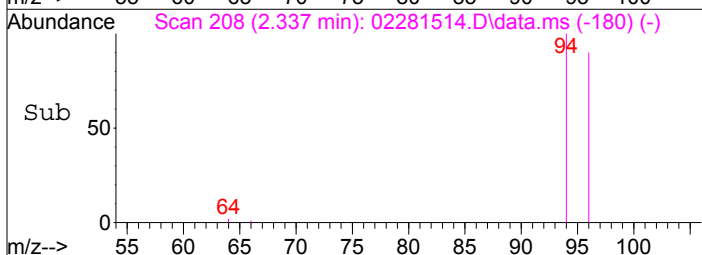
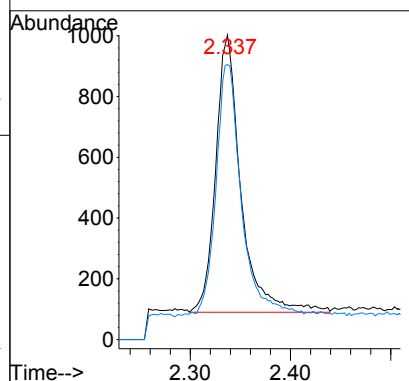
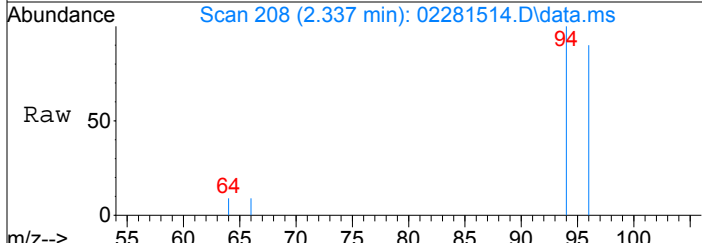
Tgt Ion: 52 Resp: 9831
 Ion Ratio Lower Upper
 52 100
 50 305.2 283.7 323.7





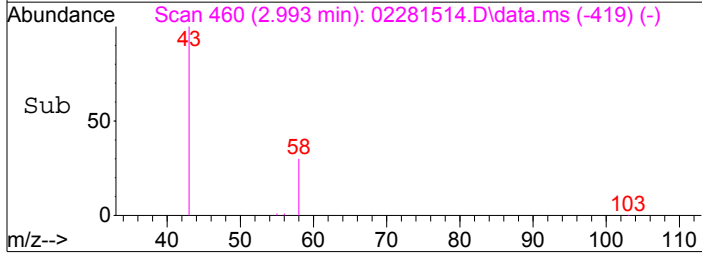
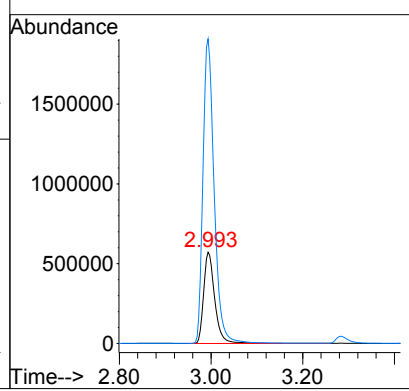
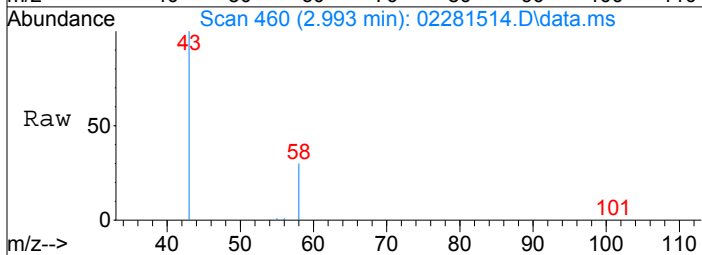
#5
 Bromomethane
 Concen: 31.68 pg
 RT: 2.34 min Scan# 208
 Delta R.T. 0.007 min
 Lab File: 02281514.D
 Acq: 28 Feb 2015 9:18

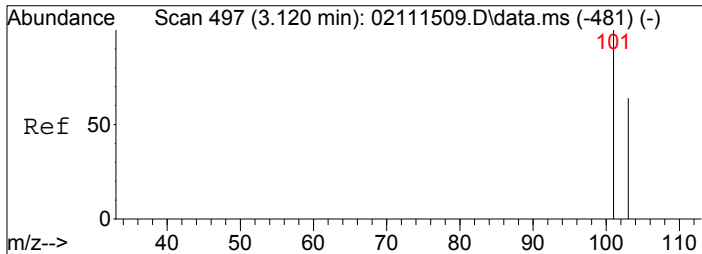
Tgt Ion:	94	Resp:	1598
Ion Ratio	Lower	Upper	
94	100		
96	93.3	75.5	113.3



#7
 Acetone
 Concen: 24197.96 pg
 RT: 2.99 min Scan# 460
 Delta R.T. -0.011 min
 Lab File: 02281514.D
 Acq: 28 Feb 2015 9:18

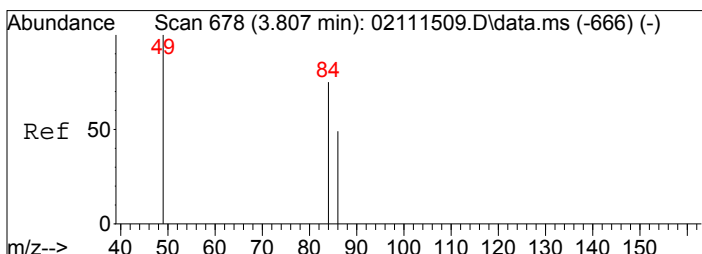
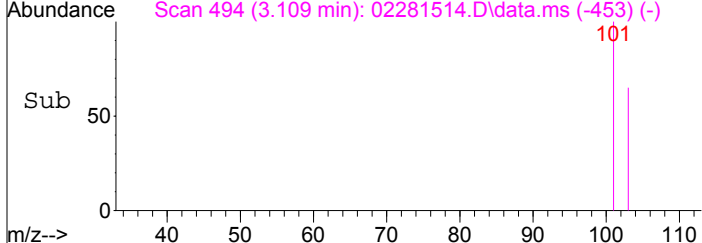
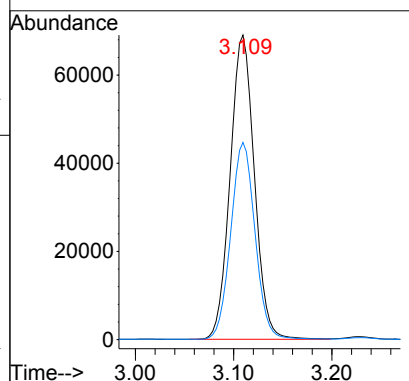
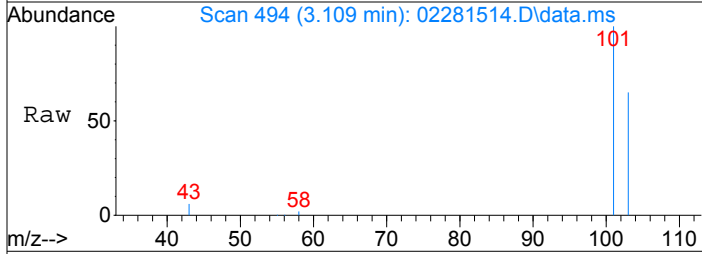
Tgt Ion:	58	Resp:	958486
Ion Ratio	Lower	Upper	
58	100		
43	338.2	301.8	341.8





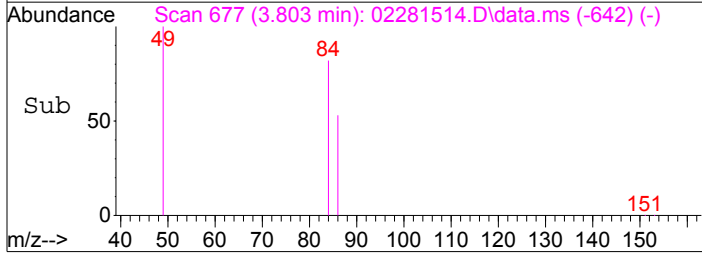
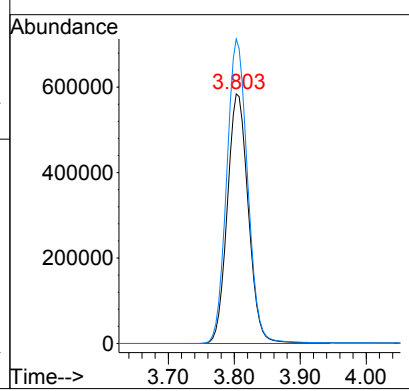
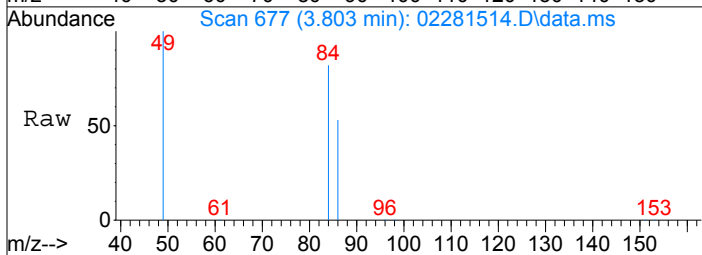
#8
 Trichlorofluoromethane
 Concen: 1228.49 pg
 RT: 3.11 min Scan# 494
 Delta R.T. -0.010 min
 Lab File: 02281514.D
 Acq: 28 Feb 2015 9:18

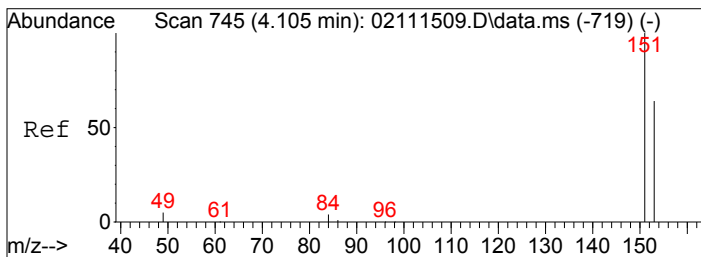
Tgt Ion:	101	Resp:	118365
Ion Ratio	Lower	Upper	
101	100		
103	64.8	51.8	77.6



#10
 Methylene Chloride
 Concen: 28304.44 pg
 RT: 3.80 min Scan# 677
 Delta R.T. -0.004 min
 Lab File: 02281514.D
 Acq: 28 Feb 2015 9:18

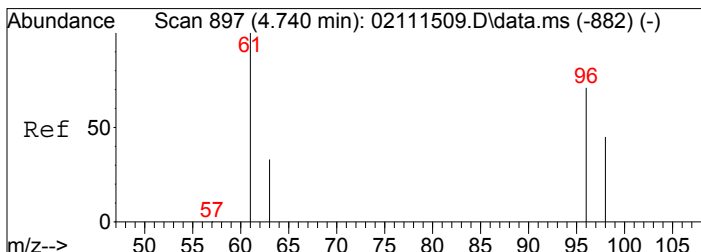
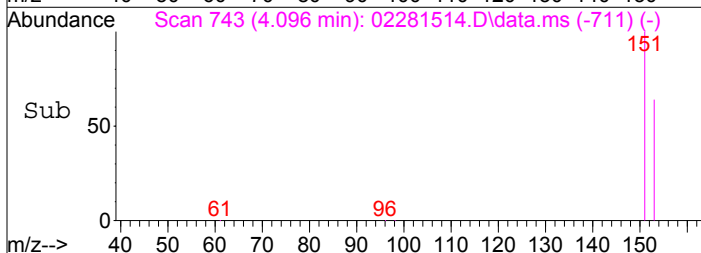
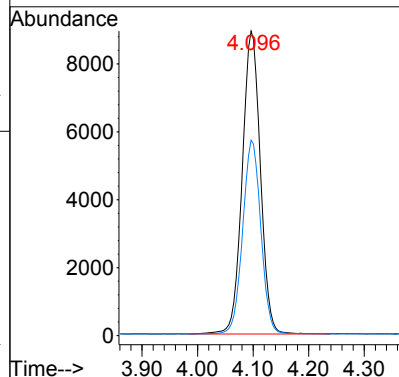
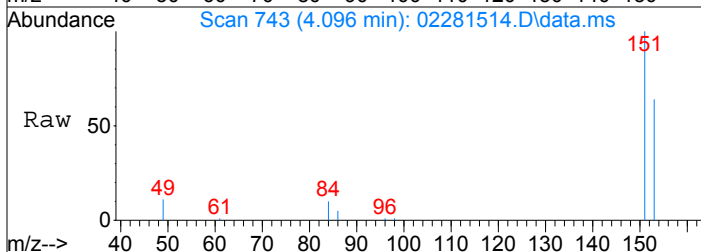
Tgt Ion:	84	Resp:	1294041
Ion Ratio	Lower	Upper	
84	100		
49	121.5	112.3	152.3





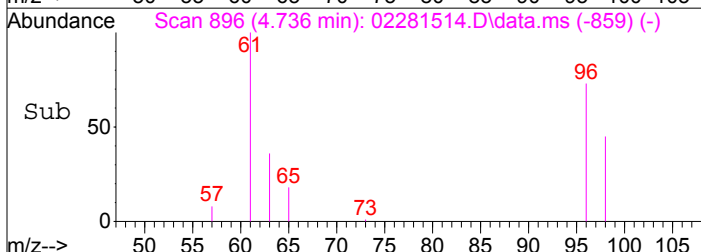
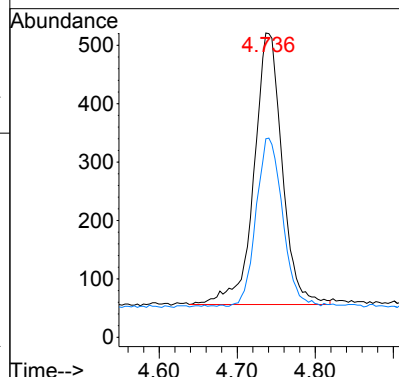
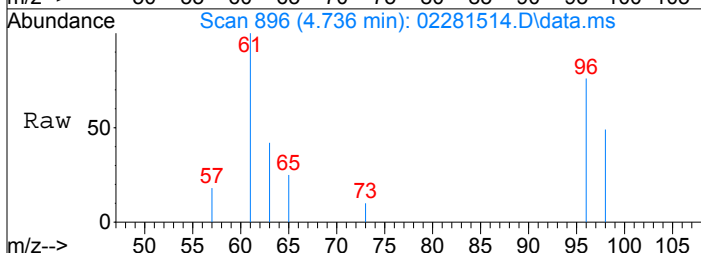
#11
 Trichlorotrifluoroethane
 Concen: 457.30 pg
 RT: 4.10 min Scan# 743
 Delta R.T. -0.009 min
 Lab File: 02281514.D
 Acq: 28 Feb 2015 9:18

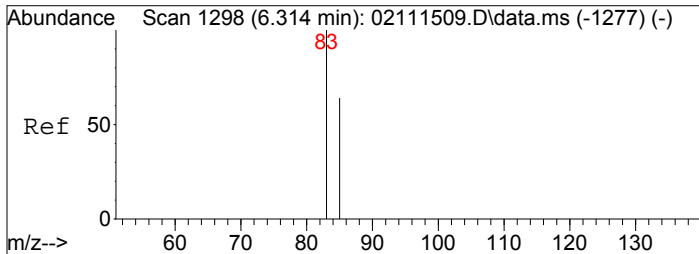
Tgt Ion: 151 Resp: 20246
 Ion Ratio Lower Upper
 151 100
 153 63.7 43.6 83.6



#12
 trans-1,2-Dichloroethene
 Concen: 26.61 pg
 RT: 4.74 min Scan# 896
 Delta R.T. -0.004 min
 Lab File: 02281514.D
 Acq: 28 Feb 2015 9:18

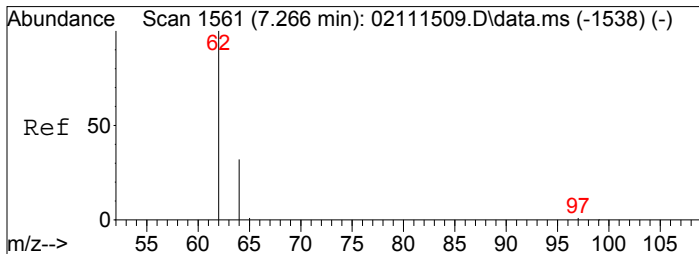
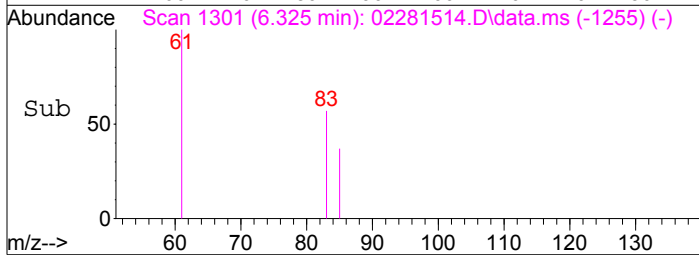
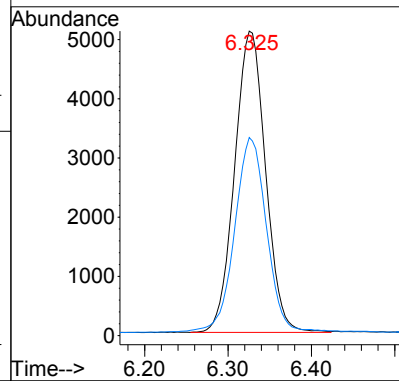
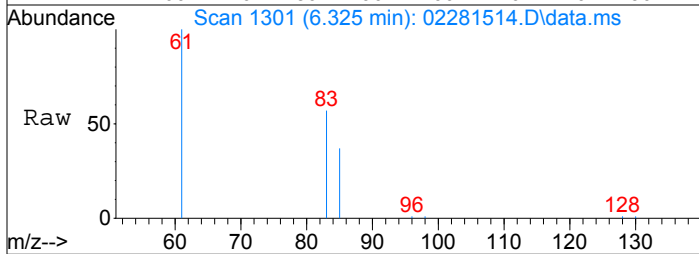
Tgt Ion: 96 Resp: 1169
 Ion Ratio Lower Upper
 96 100
 98 58.1 43.7 83.7





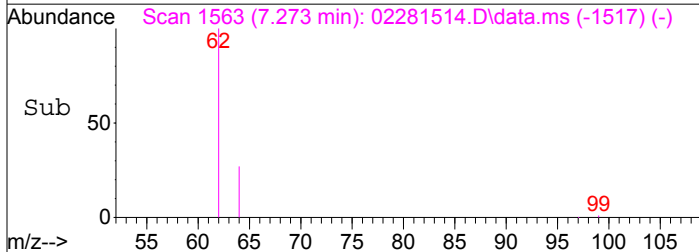
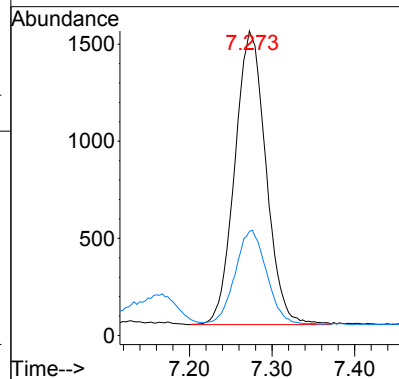
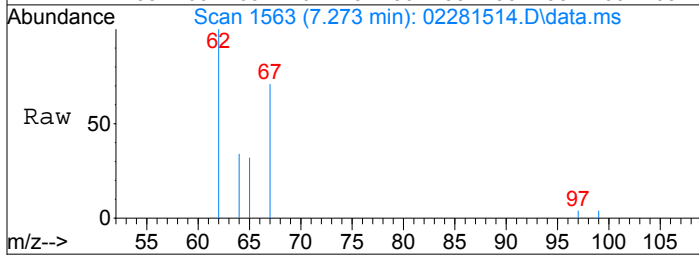
#16
Chloroform
Concen: 154.96 pg
RT: 6.33 min Scan# 1301
Delta R.T. 0.011 min
Lab File: 02281514.D
Acq: 28 Feb 2015 9:18

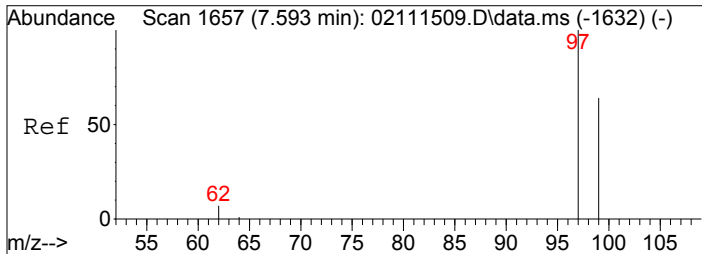
Tgt Ion: 83 Resp: 13113
Ion Ratio Lower Upper
83 100
85 67.6 45.4 85.4



#18
1,2-Dichloroethane
Concen: 58.77 pg
RT: 7.27 min Scan# 1563
Delta R.T. 0.007 min
Lab File: 02281514.D
Acq: 28 Feb 2015 9:18

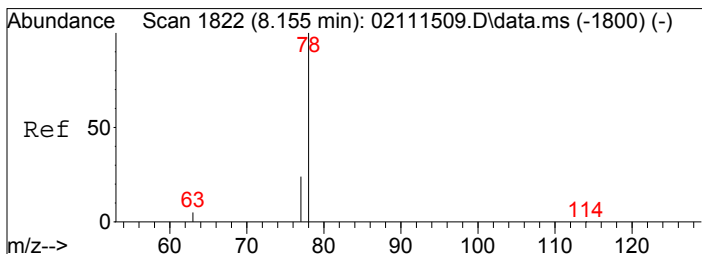
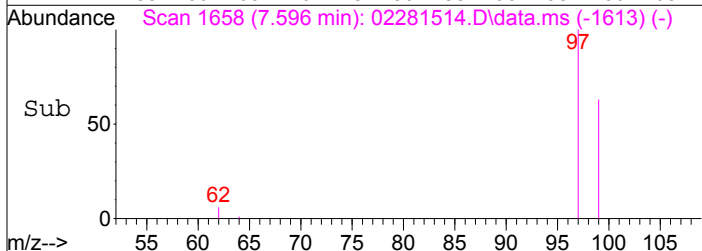
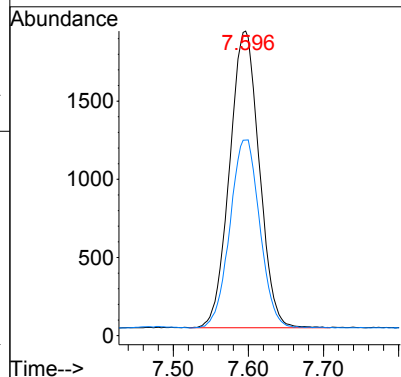
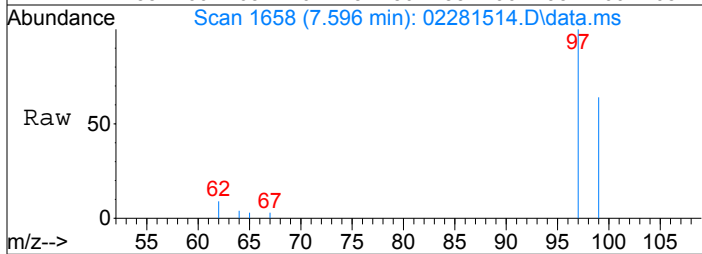
Tgt Ion: 62 Resp: 3960
Ion Ratio Lower Upper
62 100
64 31.7 11.6 51.6





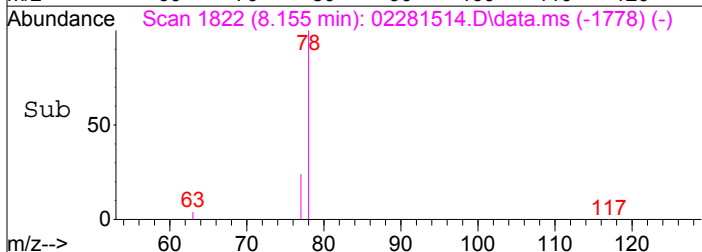
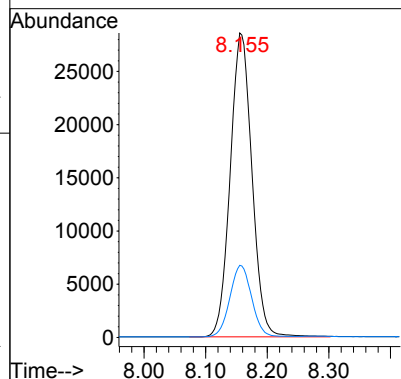
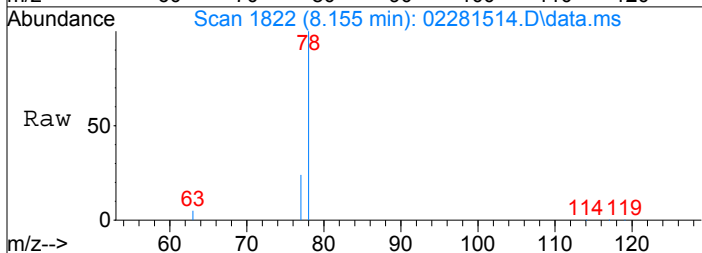
#19
1,1,1-Trichloroethane
Concen: 63.23 pg
RT: 7.60 min Scan# 1658
Delta R.T. 0.004 min
Lab File: 02281514.D
Acq: 28 Feb 2015 9:18

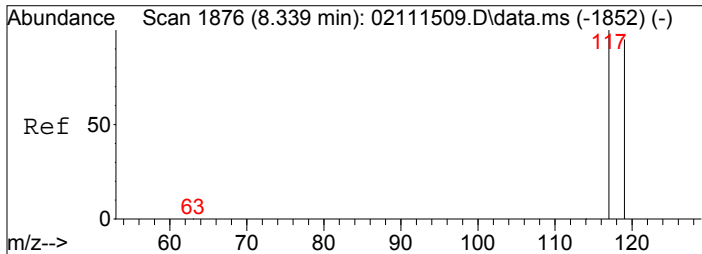
Tgt Ion: 97 Resp: 5203
Ion Ratio Lower Upper
97 100
99 63.8 44.0 84.0



#20
Benzene
Concen: 402.48 pg
RT: 8.16 min Scan# 1822
Delta R.T. 0.000 min
Lab File: 02281514.D
Acq: 28 Feb 2015 9:18

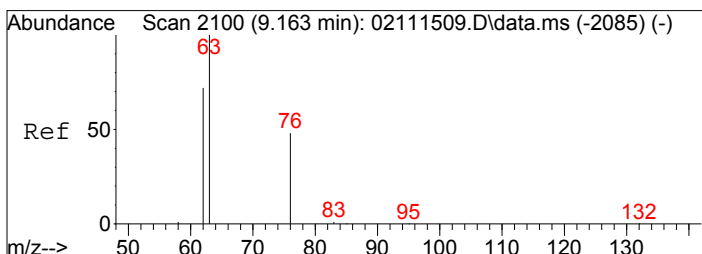
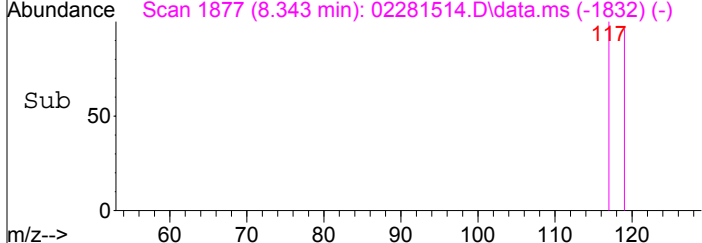
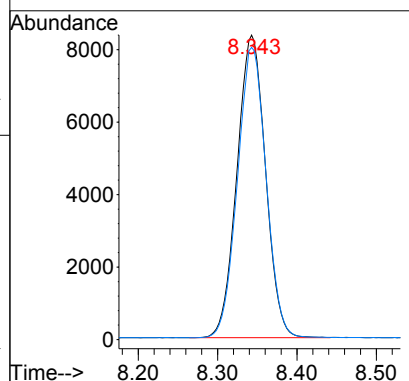
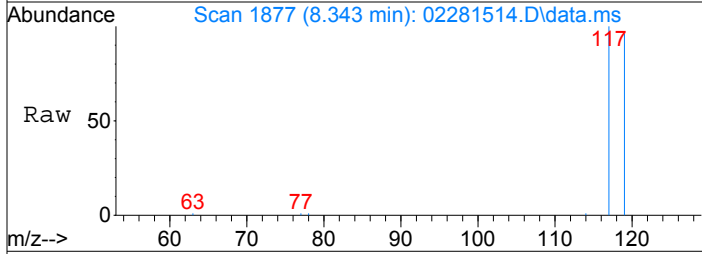
Tgt Ion: 78 Resp: 70053
Ion Ratio Lower Upper
78 100
77 23.6 3.7 43.7





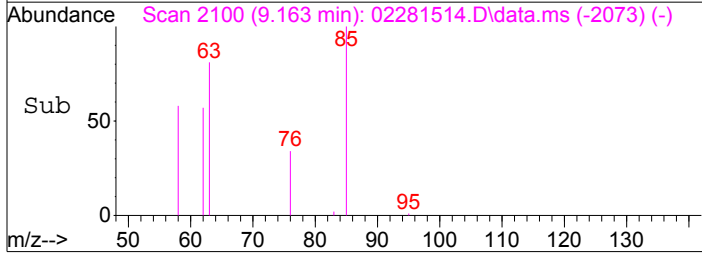
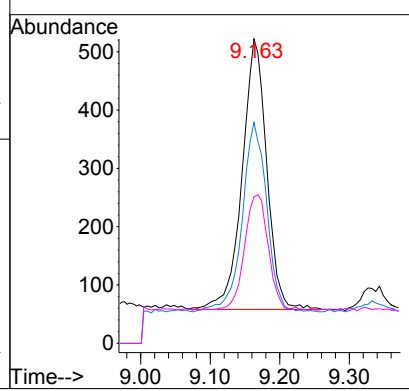
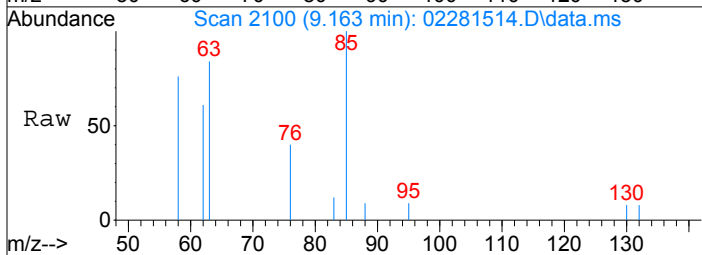
#21
Carbon Tetrachloride
Concen: 338.92 pg
RT: 8.34 min Scan# 1877
Delta R.T. 0.004 min
Lab File: 02281514.D
Acq: 28 Feb 2015 9:18

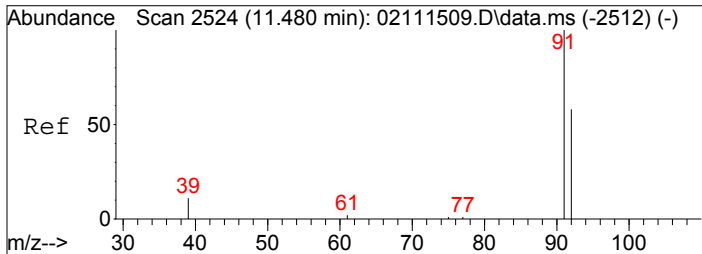
Tgt Ion:117	Resp:	20880
Ion Ratio	Lower	Upper
117	100	
119	96.2	75.5 115.5



#23
1,2-Dichloropropane
Concen: 26.78 pg
RT: 9.16 min Scan# 2100
Delta R.T. 0.000 min
Lab File: 02281514.D
Acq: 28 Feb 2015 9:18

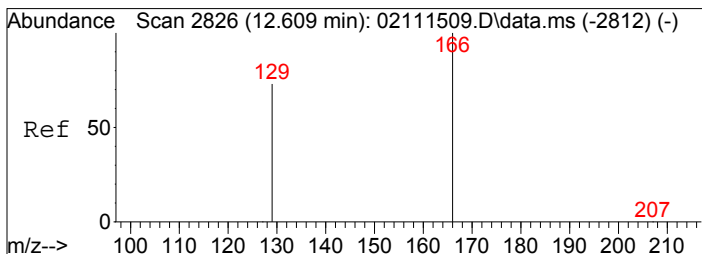
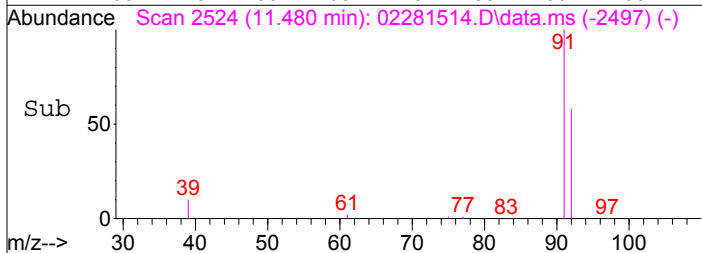
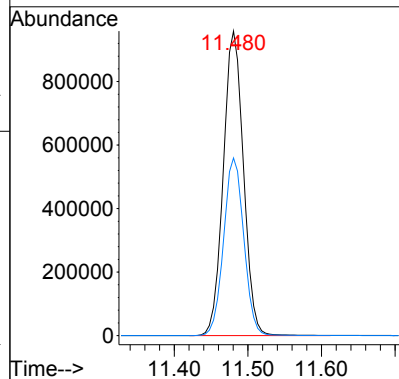
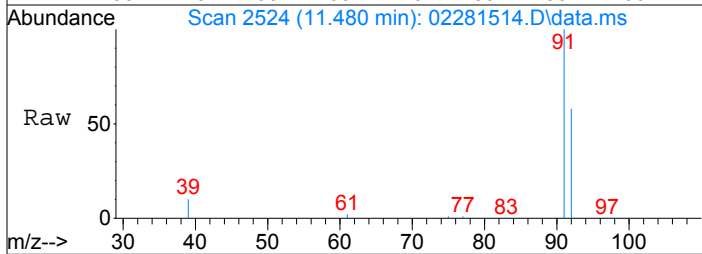
Tgt Ion: 63	Resp:	1143
Ion Ratio	Lower	Upper
63	100	
62	69.8	52.0 92.0
76	40.2	28.1 68.1





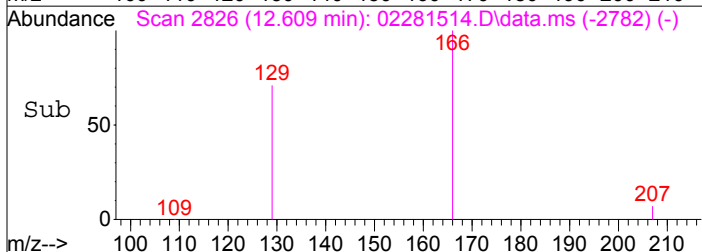
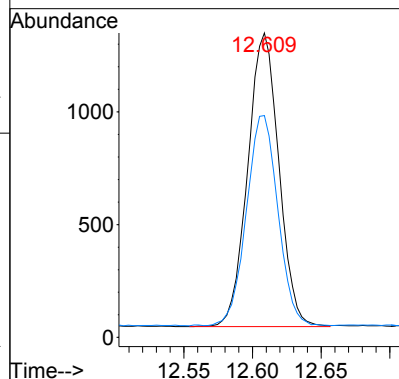
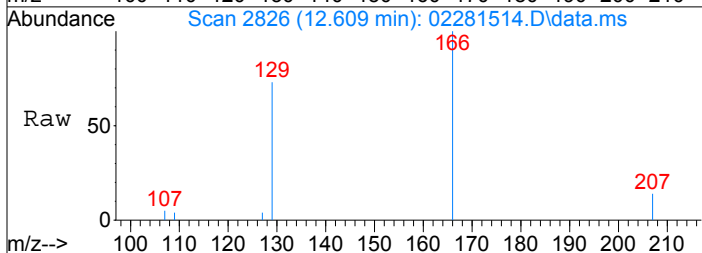
#31
Toluene
Concen: 9502.84 pg
RT: 11.48 min Scan# 2524
Delta R.T. 0.000 min
Lab File: 02281514.D
Acq: 28 Feb 2015 9:18

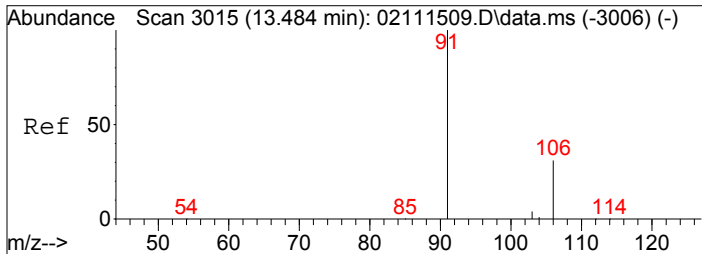
Tgt Ion: 91 Resp: 1824152
Ion Ratio Lower Upper
91 100
92 58.5 37.7 77.7



#33
Tetrachloroethene
Concen: 34.54 pg
RT: 12.61 min Scan# 2826
Delta R.T. -0.000 min
Lab File: 02281514.D
Acq: 28 Feb 2015 9:18

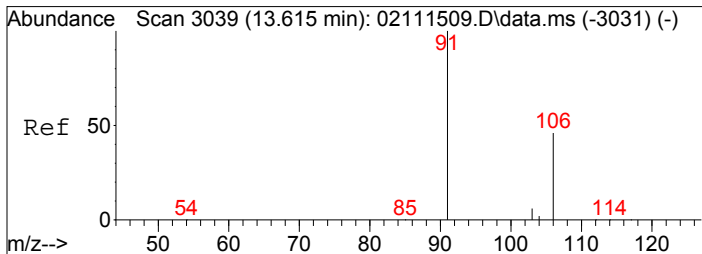
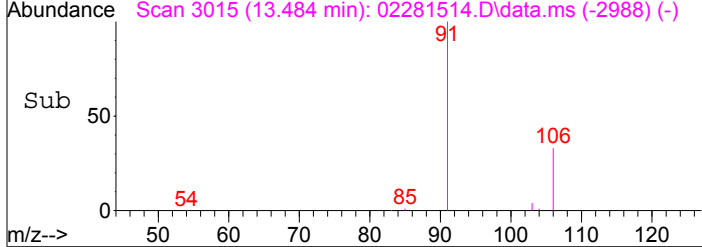
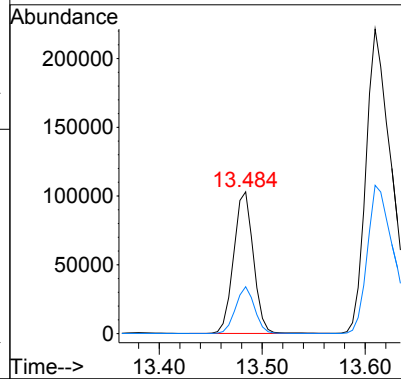
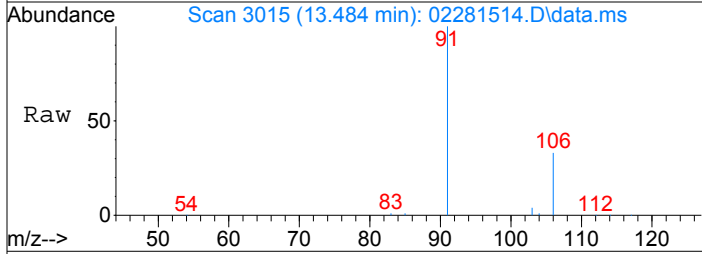
Tgt Ion: 166 Resp: 2053
Ion Ratio Lower Upper
166 100
129 72.3 53.3 93.3





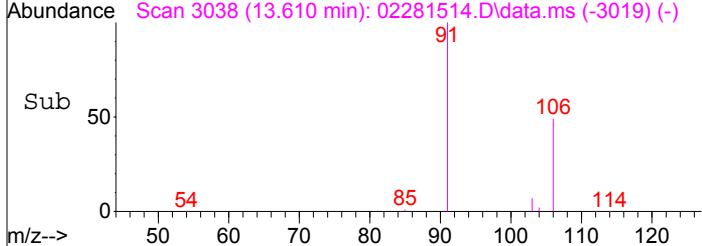
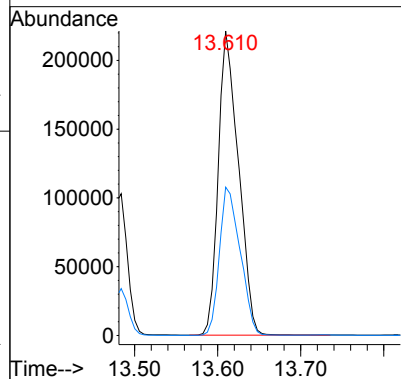
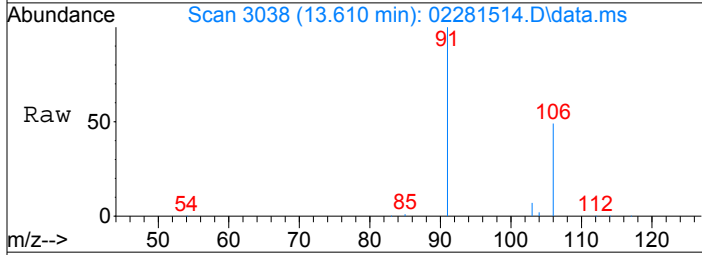
#36
Ethylbenzene
Concen: 615.91 pg
RT: 13.48 min Scan# 3015
Delta R.T. 0.000 min
Lab File: 02281514.D
Acq: 28 Feb 2015 9:18

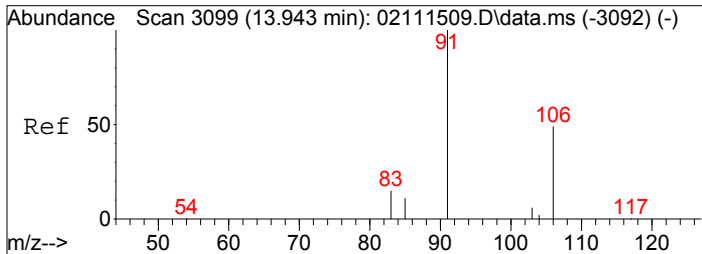
Tgt Ion: 91 Resp: 136536
Ion Ratio Lower Upper
91 100
106 31.9 10.9 50.9



#37
m,p-Xylene
Concen: 2047.87 pg
RT: 13.61 min Scan# 3038
Delta R.T. -0.005 min
Lab File: 02281514.D
Acq: 28 Feb 2015 9:18

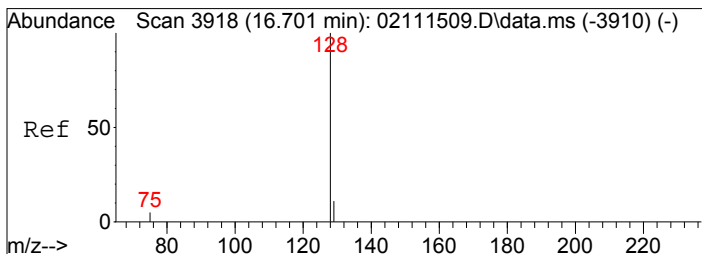
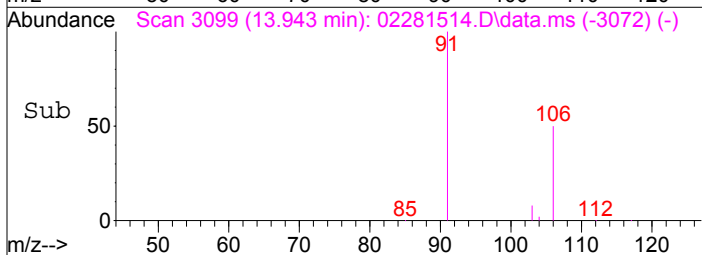
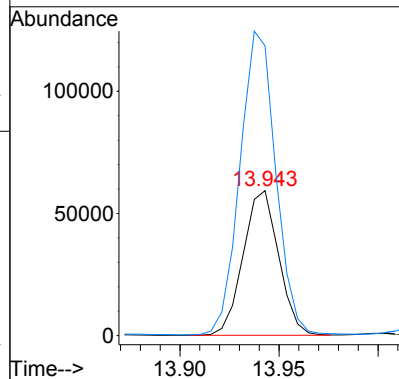
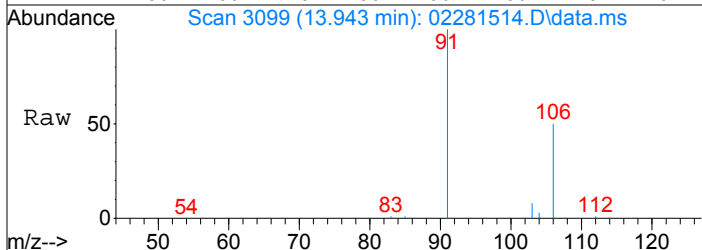
Tgt Ion: 91 Resp: 373115
Ion Ratio Lower Upper
91 100
106 50.1 27.5 67.5





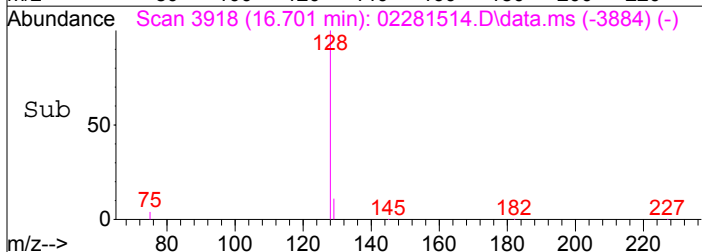
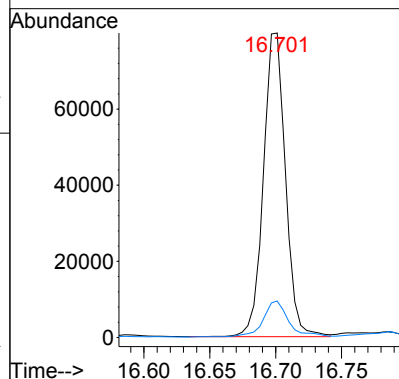
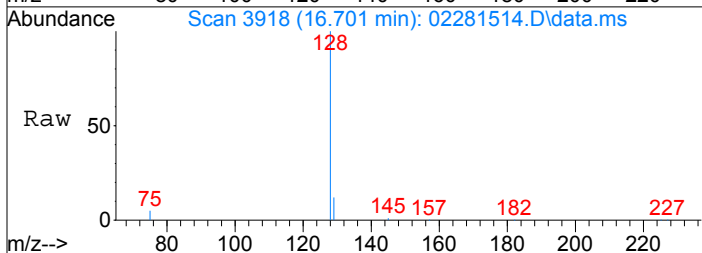
#38
o-Xylene
Concen: 828.78 pg
RT: 13.94 min Scan# 3099
Delta R.T. 0.000 min
Lab File: 02281514.D
Acq: 28 Feb 2015 9:18

Tgt Ion	106	Resp	73797
Ion Ratio	100	Lower	Upper
91	211.5	198.3	238.3



#45
Naphthalene
Concen: 420.05 pg
RT: 16.70 min Scan# 3918
Delta R.T. 0.000 min
Lab File: 02281514.D
Acq: 28 Feb 2015 9:18

Tgt Ion	128	Resp	92913
Ion Ratio <td>100</td> <td>Lower</td> <td>Upper</td>	100	Lower	Upper
129	13.8	0.0	30.9



Data File: I:\MS19\DATA\2015 02\28\02281515.D

Acq On : 28 Feb 2015 9:45
 Sample : P1500729-010 (1000mL)
 Misc : S29-02041502
 ALS Vial : 5 Sample Multiplier: 1

Operator: WA

Quant Time: Feb 28 10:52:46 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

2/28/15

DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.12	130	29767	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	207997	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	33909	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	61754	849.508	pg	0.00
Spiked Amount 1000.000			Recovery	=	84.95%	
30) Toluene-d8 (SS2)	11.38	98	191308	997.375	pg	0.00
Spiked Amount 1000.000			Recovery	=	99.74%	
40) Bromofluorobenzene (SS3)	14.25	174	83037	1212.970	pg	0.00
Spiked Amount 1000.000			Recovery	=	121.30%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.73	85	197902	1635.912	pg	100
3) Chloromethane	1.83	52	11705	484.504	pg	99
4) Vinyl Chloride	2.01	62	128	N.D.		
5) Bromomethane	2.33	94	1454	26.729	pg	99
6) Chloroethane	2.47	64	557	N.D.		
7) Acetone	2.99	58	1142560	26746.179	pg	92
8) Trichlorofluoromethane	3.10	101	130852	1259.267	pg	100
9) 1,1-Dichloroethene	3.66	96	70	N.D.		
10) Methylene Chloride	3.80	84	1618144	32818.105	pg	91
11) Trichlorotrifluoroethane	4.09	151	25065	524.950	pg	100
12) trans-1,2-Dichloroethene	4.73	96	176	N.D.		
13) 1,1-Dichloroethane	4.95	63	484	N.D.		
14) Methyl tert-Butyl Ether	5.11	73	562	N.D.		
15) cis-1,2-Dichloroethene	5.94	96	327	N.D.		
16) Chloroform	6.32	83	15645	171.425	pg	99
18) 1,2-Dichloroethane	7.27	62	4712	64.844	pg	99
19) 1,1,1-Trichloroethane	7.59	97	6375	71.831	pg	100
20) Benzene	8.16	78	101204	539.148	pg	100
21) Carbon Tetrachloride	8.34	117	25382	382.012	pg	99
23) 1,2-Dichloropropane	9.16	63	869	N.D.		
24) Bromodichloromethane	0.00	83	0	N.D.	d	
25) Trichloroethene	9.46	130	1115	20.866	pg	99
26) 1,4-Dioxane	9.55	88	187	N.D.		
27) cis-1,3-Dichloropropene	10.46	75	407	N.D.		
28) trans-1,3-Dichloropropene	11.05	75	159	N.D.		
29) 1,1,2-Trichloroethane	11.19	83	78	N.D.		
31) Toluene	11.48	91	1913270	9378.643	pg	99
32) 1,2-Dibromoethane	12.13	107	39	N.D.		
33) Tetrachloroethene	12.61	166	1993	31.552	pg	99
35) Chlorobenzene	13.17	112	1786	N.D.		
36) Ethylbenzene	13.48	91	143954	676.991	pg	98
37) m,p-Xylene	13.61	91	398936	2282.708	pg	96
38) o-Xylene	13.94	106	79026	925.244	pg	95
39) 1,1,1,2,2-Tetrachloroethane	0.00	83	0	N.D.	d	
41) 1,3-Dichlorobenzene	15.19	146	300	N.D.		
42) 1,4-Dichlorobenzene	15.24	146	2163	N.D.		
43) 1,2-Dichlorobenzene	15.46	146	290	N.D.		
44) 1,2,4-Trichlorobenzene	16.63	182	914	N.D.		
45) Naphthalene	16.70	128	28223	133.020	pg	81
46) Hexachlorobutadiene	16.96	225	78	N.D.		

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\28\02281515.D

Acq On : 28 Feb 2015 9:45

Operator: WA

Sample : P1500729-010 (1000mL)

Misc : S29-02041502

ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 28 10:52:46 2015

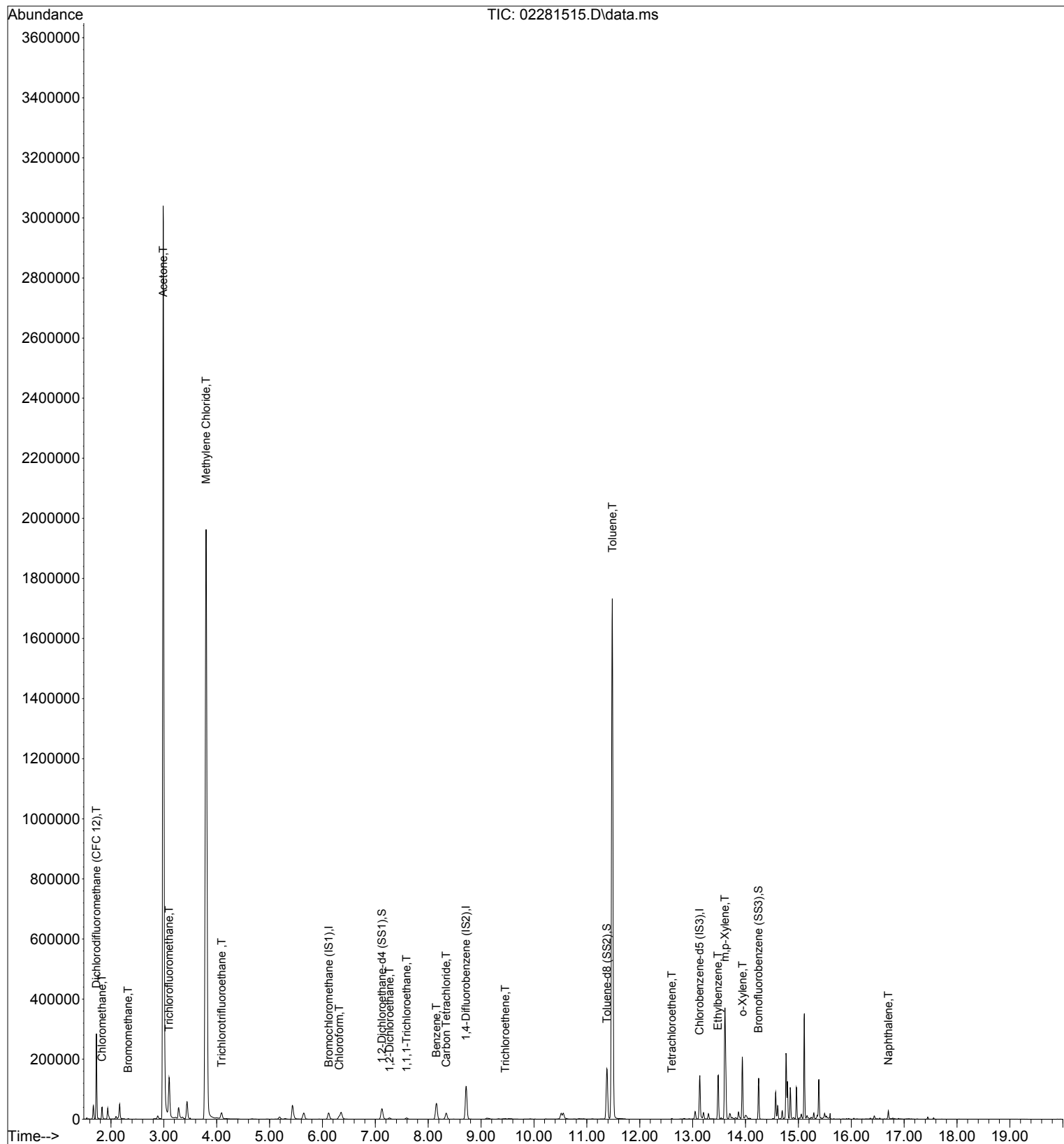
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 02\28\02281515.D

Acq On : 28 Feb 2015 9:45

Operator: WA

Sample : P1500729-010 (1000mL)

Misc : S29-02041502

ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 28 10:52:46 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

2/28/15

DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.12	130	29767	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	207997	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	33909	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	61754	849.508	pg	0.00
Spiked Amount 1000.000			Recovery	=	84.95%	
30) Toluene-d8 (SS2)	11.38	98	191308	997.375	pg	0.00
Spiked Amount 1000.000			Recovery	=	99.74%	
40) Bromofluorobenzene (SS3)	14.25	174	83037	1212.970	pg	0.00
Spiked Amount 1000.000			Recovery	=	121.30%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.73	85	197902	1635.912	pg	100
3) Chloromethane	1.83	52	11705	484.504	pg	99
5) Bromomethane	2.33	94	1454	26.729	pg	99
7) Acetone	2.99	58	1142560	26746.179	pg	92
8) Trichlorofluoromethane	3.10	101	130852	1259.267	pg	100
10) Methylene Chloride	3.80	84	1618144	32818.105	pg	91
11) Trichlorotrifluoroethane	4.09	151	25065	524.950	pg	100
16) Chloroform	6.32	83	15645	171.425	pg	99
18) 1,2-Dichloroethane	7.27	62	4712	64.844	pg	99
19) 1,1,1-Trichloroethane	7.59	97	6375	71.831	pg	100
20) Benzene	8.16	78	101204	539.148	pg	100
21) Carbon Tetrachloride	8.34	117	25382	382.012	pg	99
25) Trichloroethene	9.46	130	1115	20.866	pg	99
31) Toluene	11.48	91	1913270	9378.643	pg	99
33) Tetrachloroethene	12.61	166	1993	31.552	pg	99
36) Ethylbenzene	13.48	91	143954	676.991	pg	98
37) m,p-Xylene	13.61	91	398936	2282.708	pg	96
38) o-Xylene	13.94	106	79026	925.244	pg	95
45) Naphthalene	16.70	128	28223	133.020	pg	81

(#)= qualifier out of range (m)= manual integration (+)= signals summed

Data File: I:\MS19\DATA\2015 02\28\02281515.D

Acq On : 28 Feb 2015 9:45

Operator: WA

Sample : P1500729-010 (1000mL)

Misc : S29-02041502

ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 28 10:52:46 2015

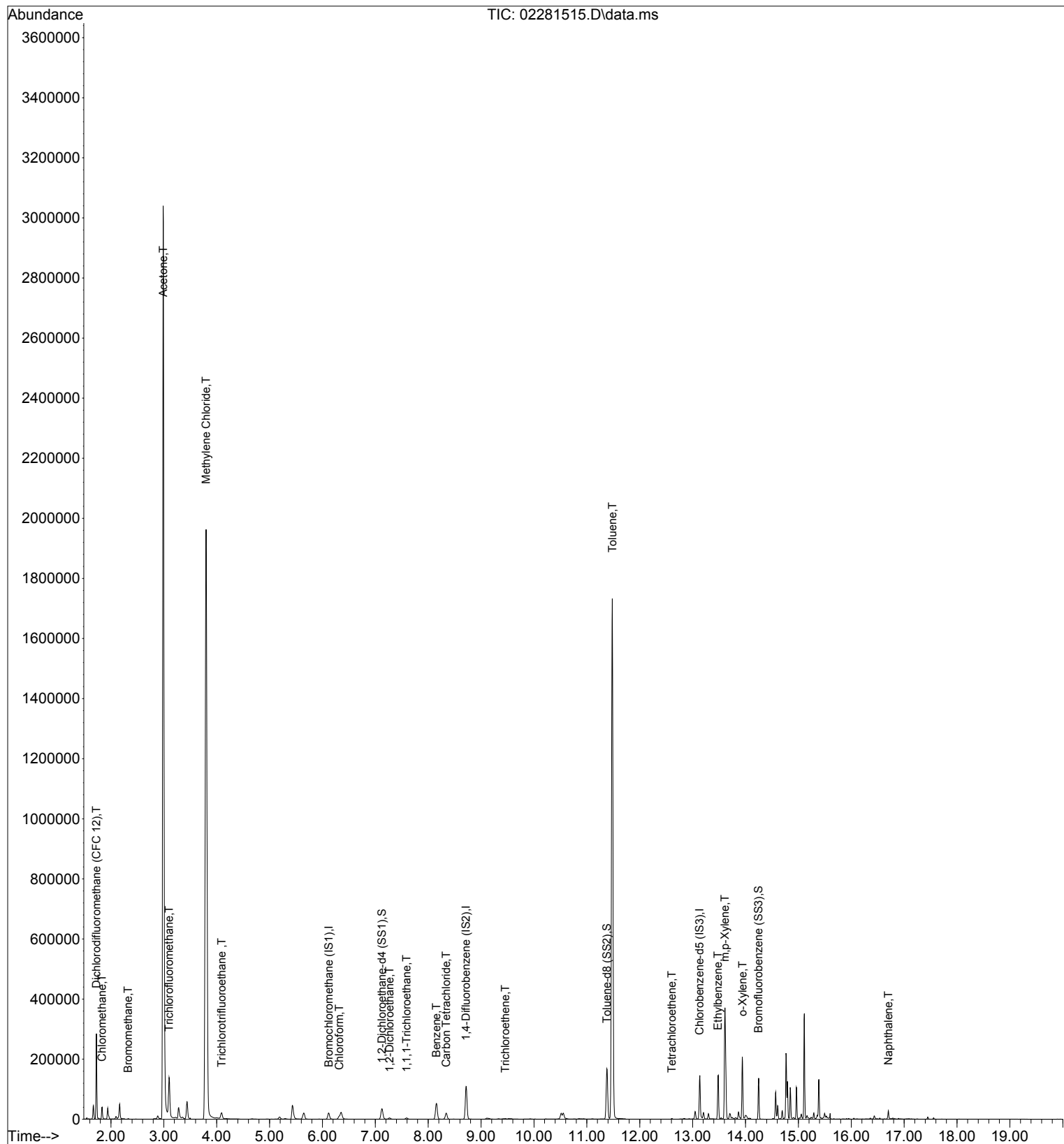
Quant Method : I:\MS19\METHODS\X19021115.M

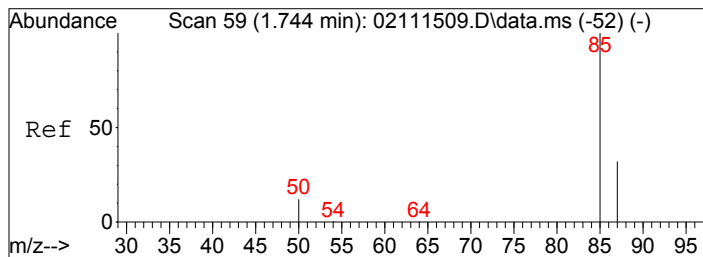
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

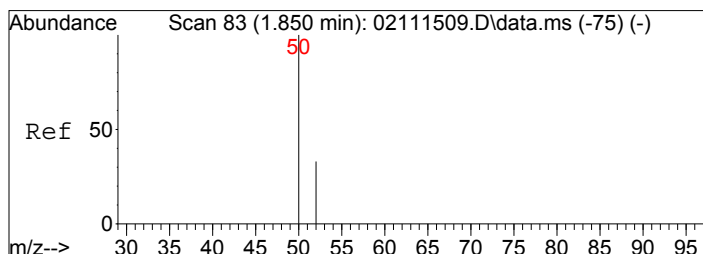
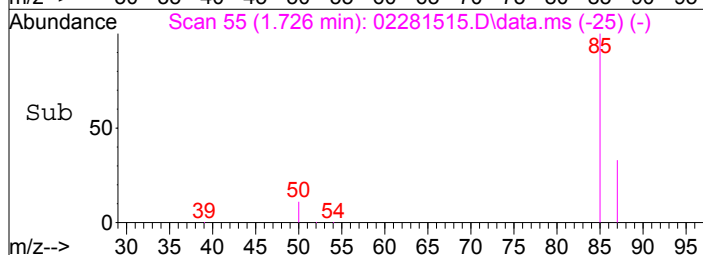
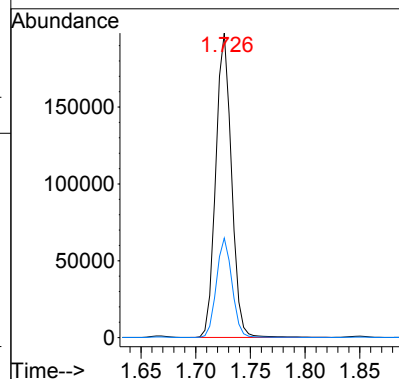
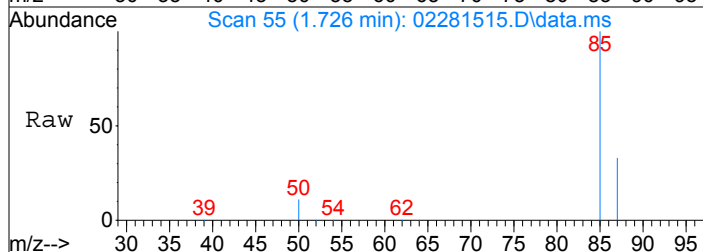
DataAcq Meth:TO15SIM.M





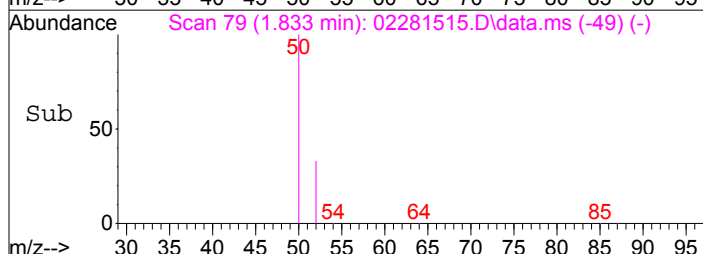
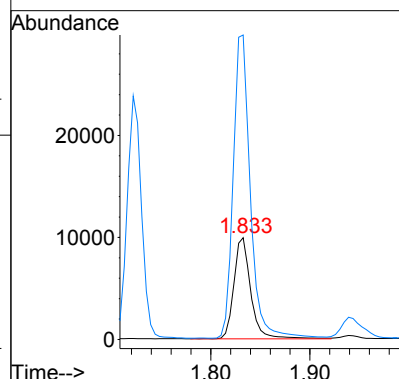
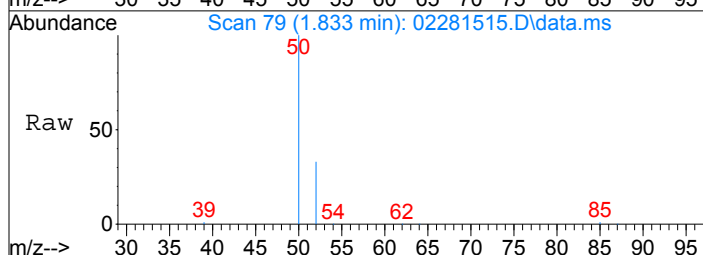
#2
 Dichlorodifluoromethane (CFC 12)
 Concen: 1635.91 pg
 RT: 1.73 min Scan# 55
 Delta R.T. -0.018 min
 Lab File: 02281515.D
 Acq: 28 Feb 2015 9:45

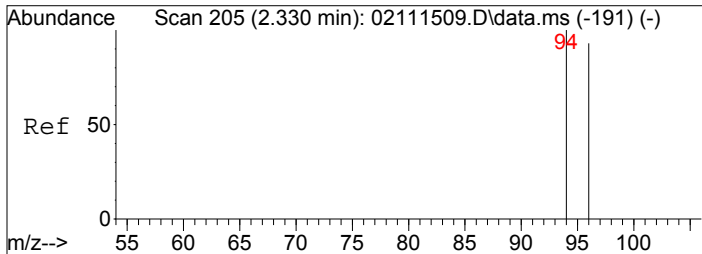
Tgt Ion: 85 Resp: 197902
 Ion Ratio Lower Upper
 85 100
 87 32.5 12.4 52.4



#3
 Chloromethane
 Concen: 484.50 pg
 RT: 1.83 min Scan# 79
 Delta R.T. -0.017 min
 Lab File: 02281515.D
 Acq: 28 Feb 2015 9:45

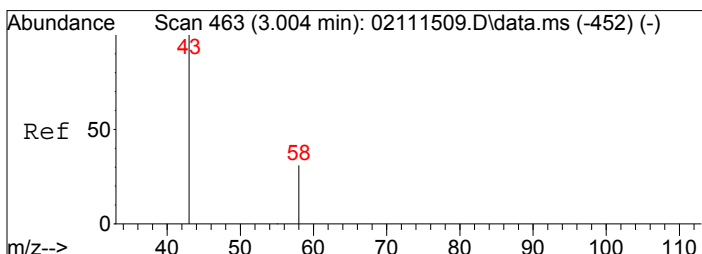
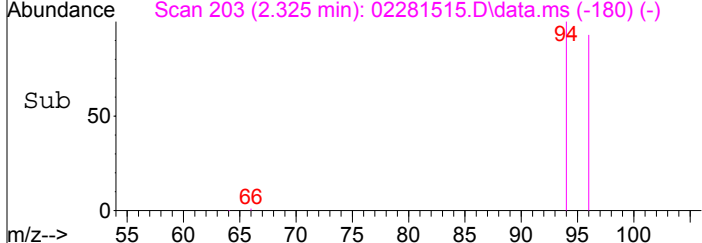
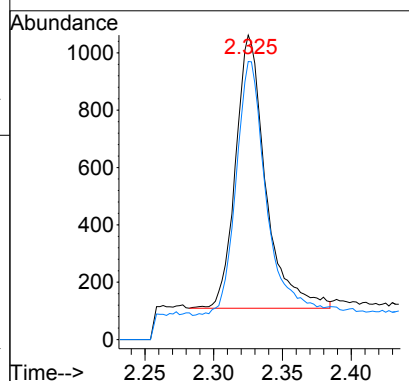
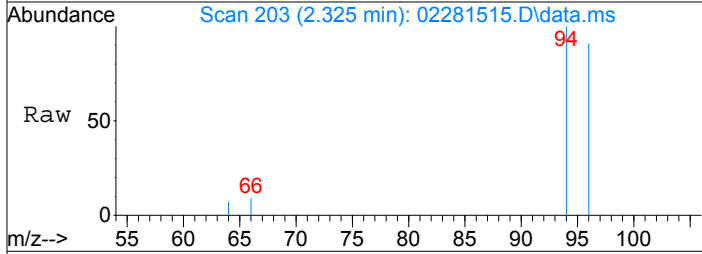
Tgt Ion: 52 Resp: 11705
 Ion Ratio Lower Upper
 52 100
 50 304.8 283.7 323.7





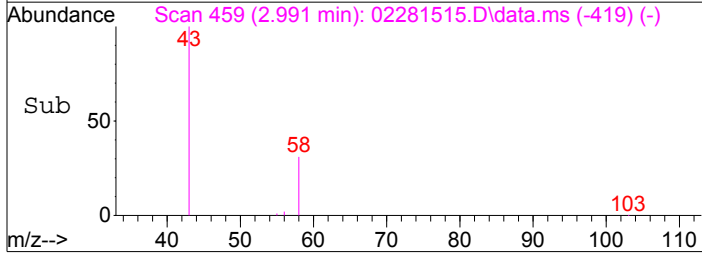
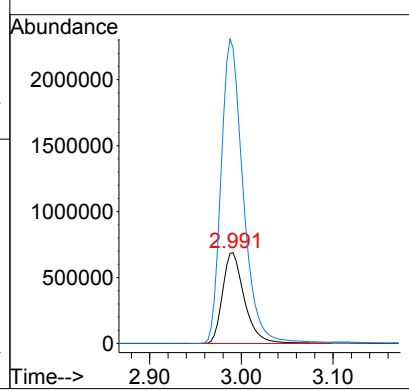
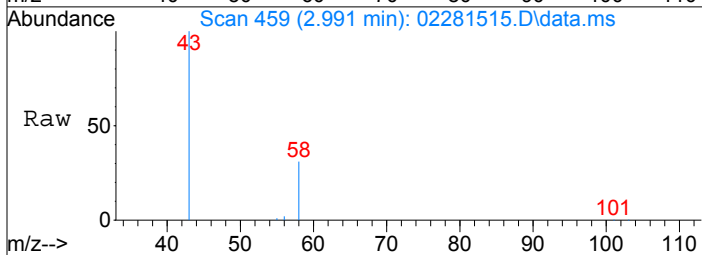
#5
 Bromomethane
 Concen: 26.73 pg
 RT: 2.33 min Scan# 203
 Delta R.T. -0.005 min
 Lab File: 02281515.D
 Acq: 28 Feb 2015 9:45

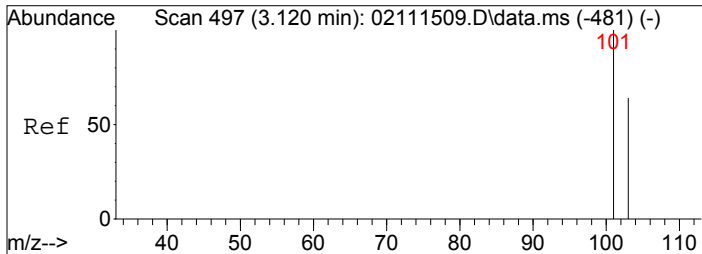
Tgt Ion:	94	Resp:	1454
Ion Ratio	Lower	Upper	
94	100		
96	93.5	75.5	113.3



#7
 Acetone
 Concen: 26746.18 pg
 RT: 2.99 min Scan# 459
 Delta R.T. -0.013 min
 Lab File: 02281515.D
 Acq: 28 Feb 2015 9:45

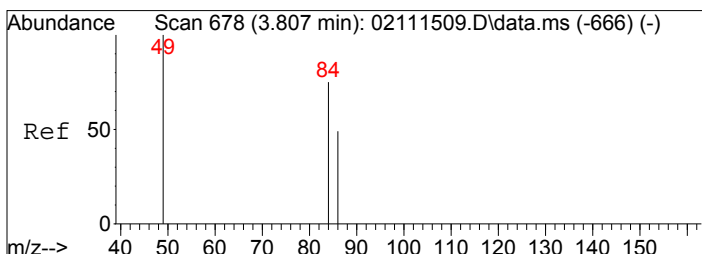
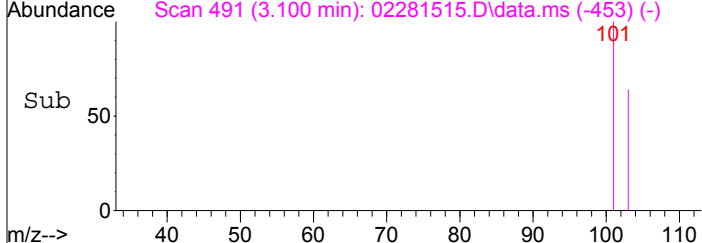
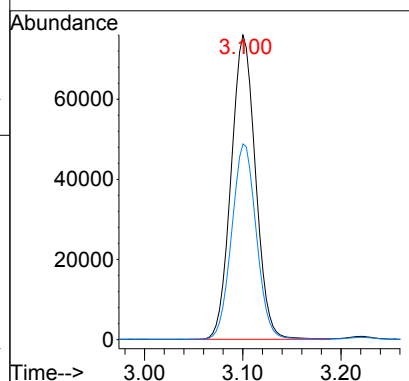
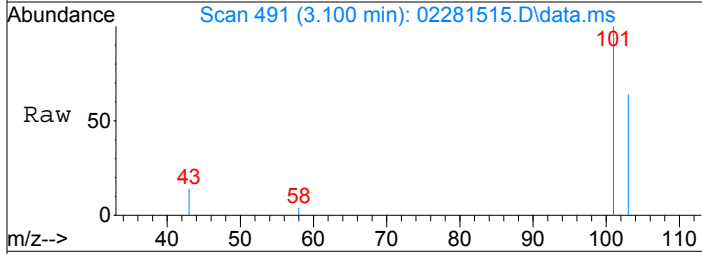
Tgt Ion:	58	Resp:	1142560
Ion Ratio	Lower	Upper	
58	100		
43	337.6	301.8	341.8





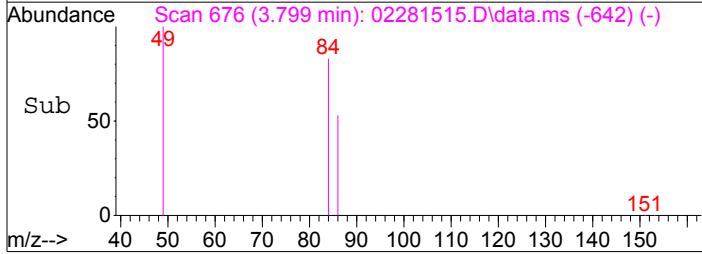
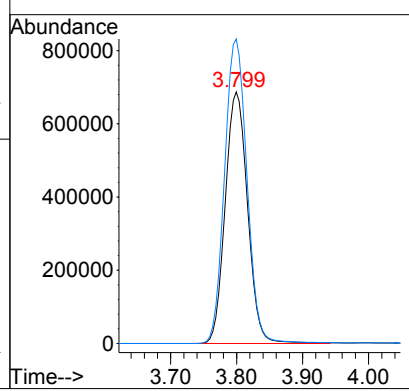
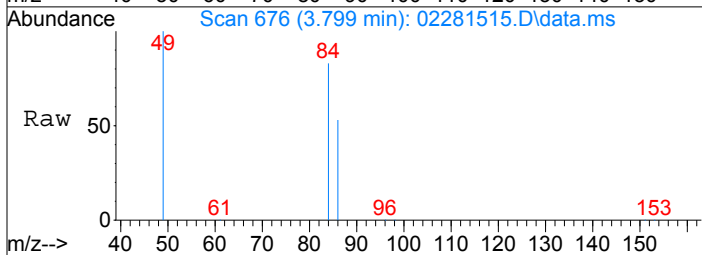
#8
 Trichlorofluoromethane
 Concen: 1259.27 pg
 RT: 3.10 min Scan# 491
 Delta R.T. -0.019 min
 Lab File: 02281515.D
 Acq: 28 Feb 2015 9:45

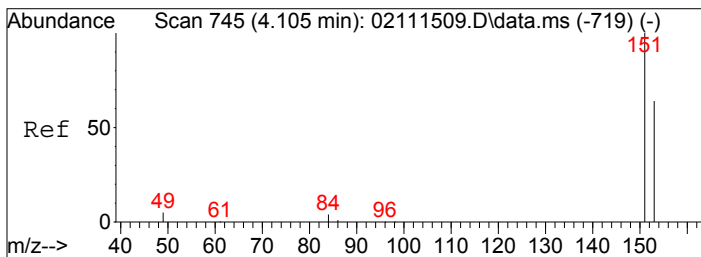
Tgt Ion:	101	Resp:	130852
Ion Ratio	Lower	Upper	
101	100		
103	64.8	51.8	77.6



#10
 Methylene Chloride
 Concen: 32818.10 pg
 RT: 3.80 min Scan# 676
 Delta R.T. -0.008 min
 Lab File: 02281515.D
 Acq: 28 Feb 2015 9:45

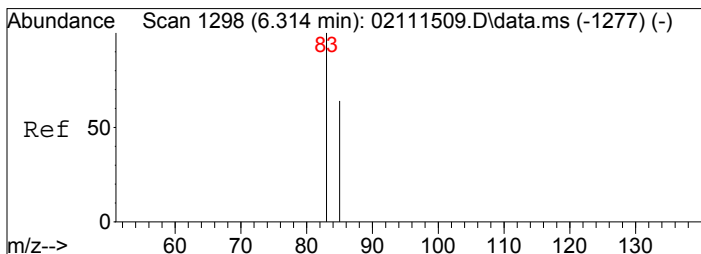
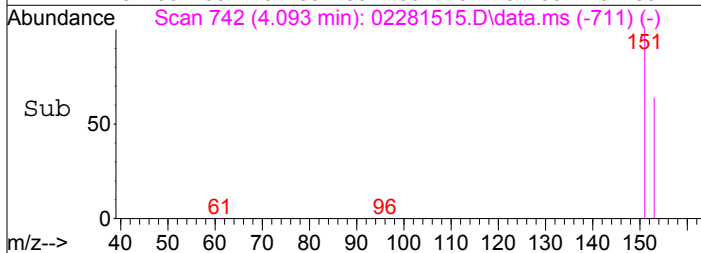
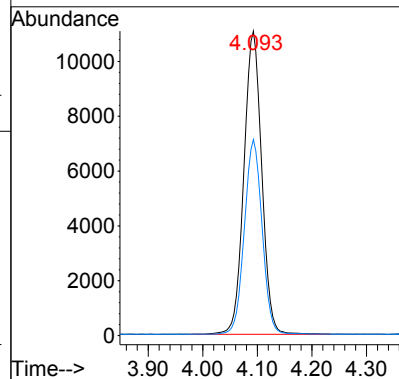
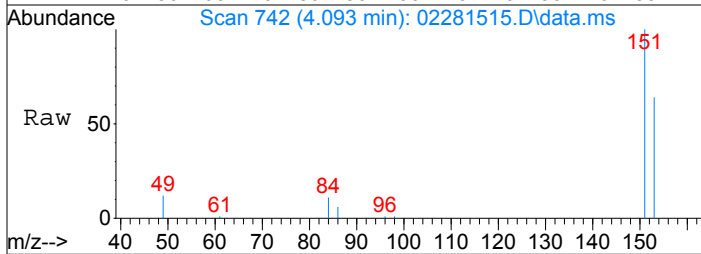
Tgt Ion:	84	Resp:	1618144
Ion Ratio	Lower	Upper	
84	100		
49	121.4	112.3	152.3





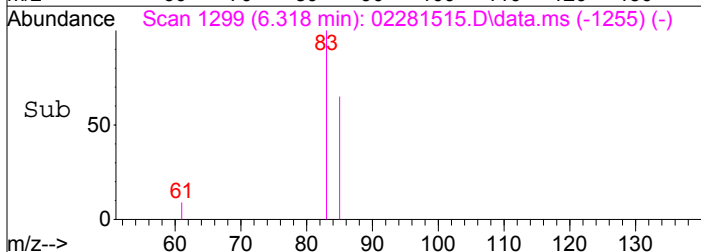
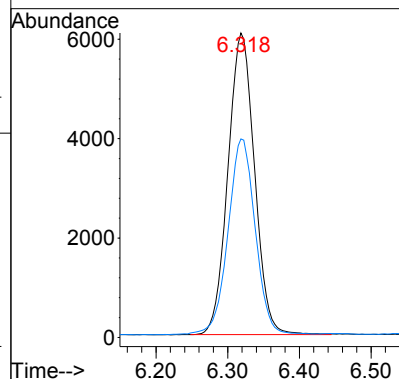
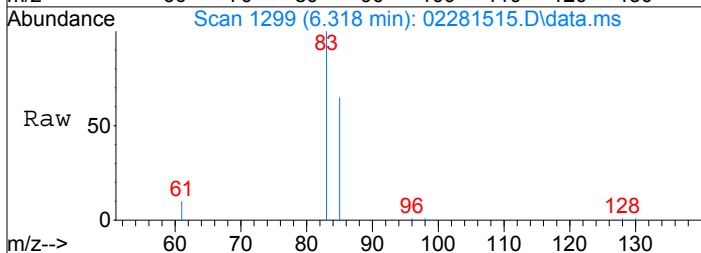
#11
Trichlorotrifluoroethane
Concen: 524.95 pg
RT: 4.09 min Scan# 742
Delta R.T. -0.012 min
Lab File: 02281515.D
Acq: 28 Feb 2015 9:45

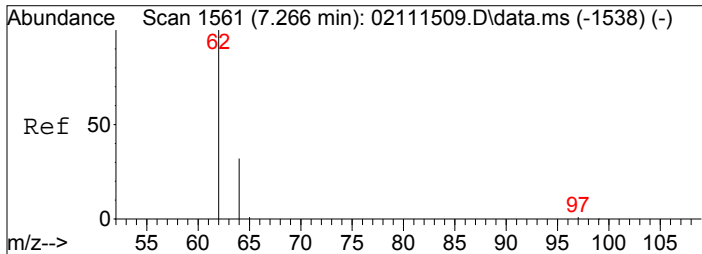
Tgt Ion: 151 Resp: 25065
Ion Ratio Lower Upper
151 100
153 63.9 43.6 83.6



#16
Chloroform
Concen: 171.42 pg
RT: 6.32 min Scan# 1299
Delta R.T. 0.004 min
Lab File: 02281515.D
Acq: 28 Feb 2015 9:45

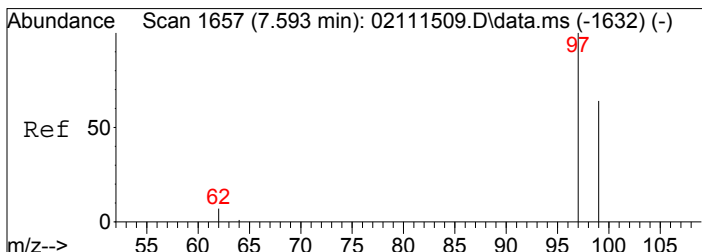
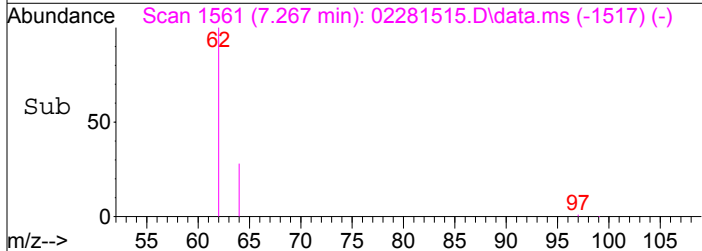
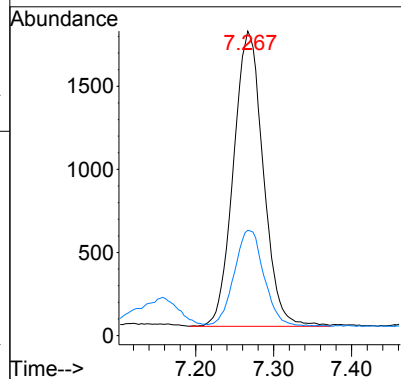
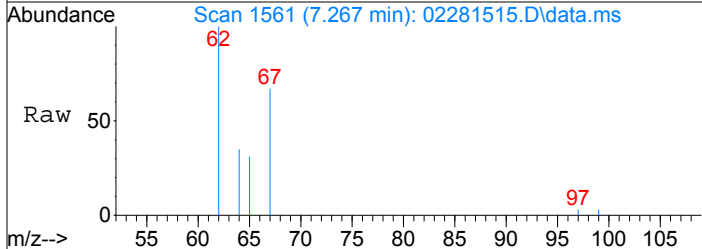
Tgt Ion: 83 Resp: 15645
Ion Ratio Lower Upper
83 100
85 66.5 45.4 85.4





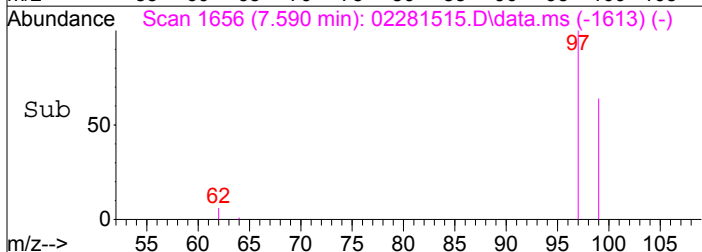
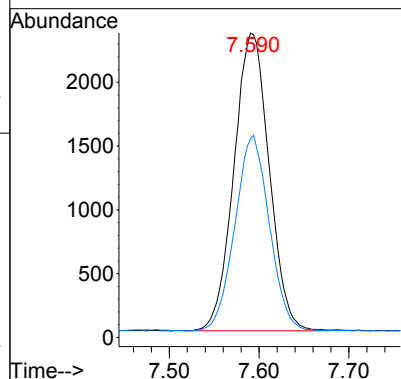
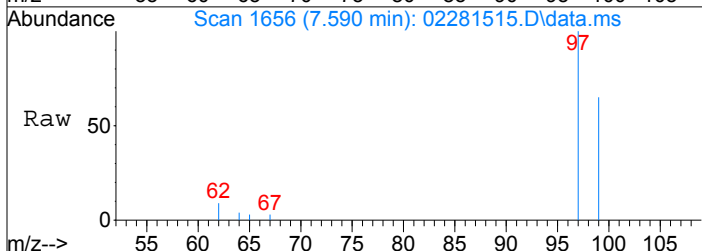
#18
 1,2-Dichloroethane
 Concen: 64.84 pg
 RT: 7.27 min Scan# 1561
 Delta R.T. 0.001 min
 Lab File: 02281515.D
 Acq: 28 Feb 2015 9:45

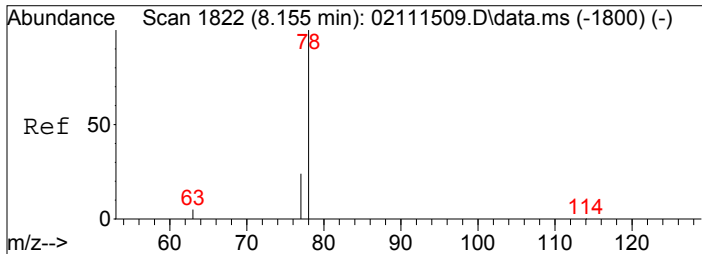
Tgt Ion	Ratio	Lower	Upper
62	100		
64	32.2	11.6	51.6



#19
 1,1,1-Trichloroethane
 Concen: 71.83 pg
 RT: 7.59 min Scan# 1656
 Delta R.T. -0.002 min
 Lab File: 02281515.D
 Acq: 28 Feb 2015 9:45

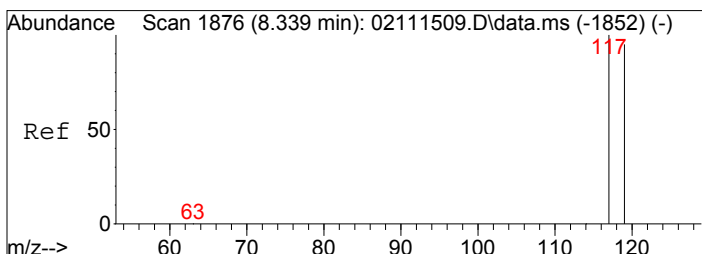
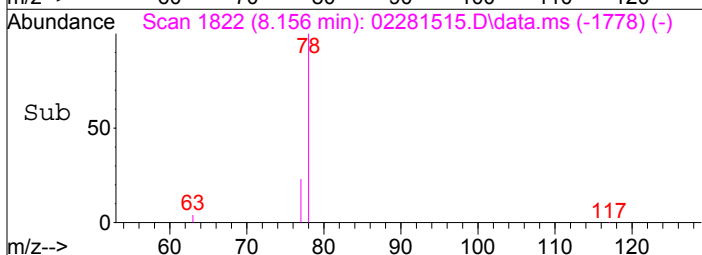
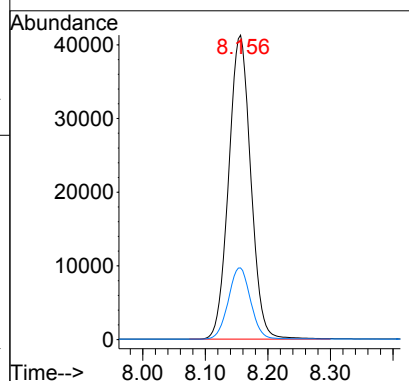
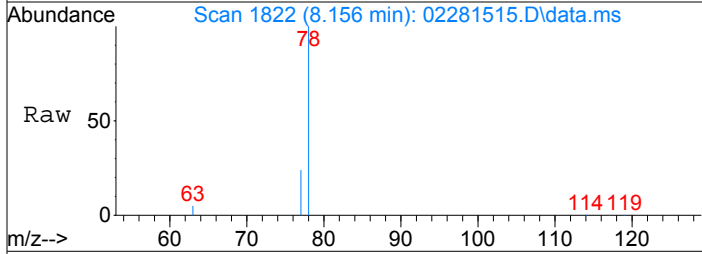
Tgt Ion	Ratio	Lower	Upper
97	100		
99	64.1	44.0	84.0





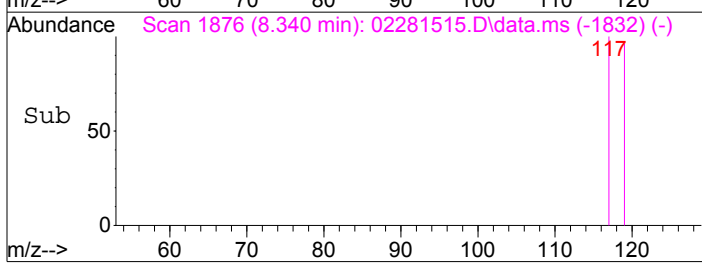
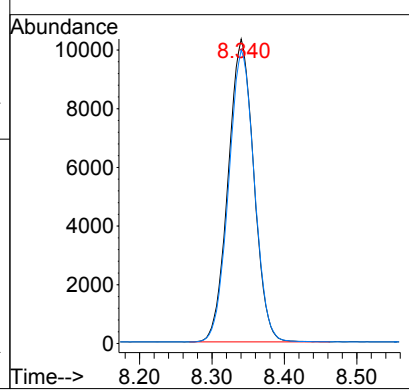
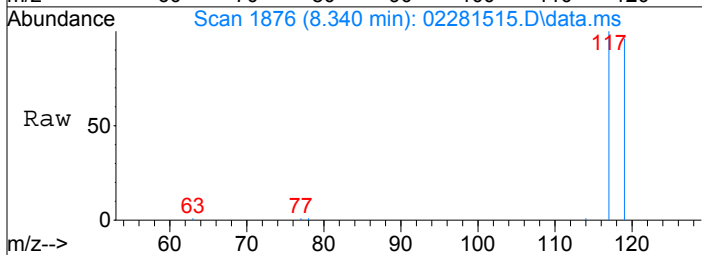
#20
Benzene
Concen: 539.15 pg
RT: 8.16 min Scan# 1822
Delta R.T. 0.001 min
Lab File: 02281515.D
Acq: 28 Feb 2015 9:45

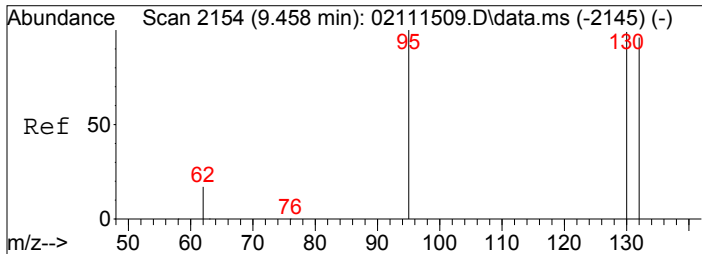
Tgt Ion:	78	Resp:	101204
Ion Ratio	Lower	Upper	
78	100		
77	23.7	3.7	43.7



#21
Carbon Tetrachloride
Concen: 382.01 pg
RT: 8.34 min Scan# 1876
Delta R.T. 0.001 min
Lab File: 02281515.D
Acq: 28 Feb 2015 9:45

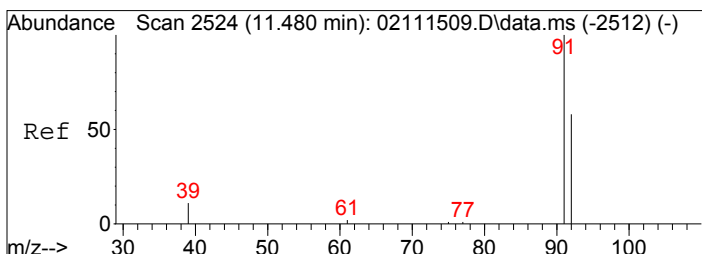
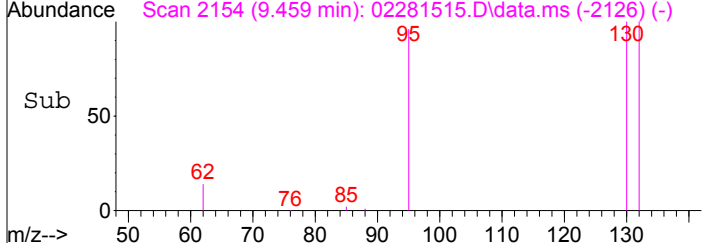
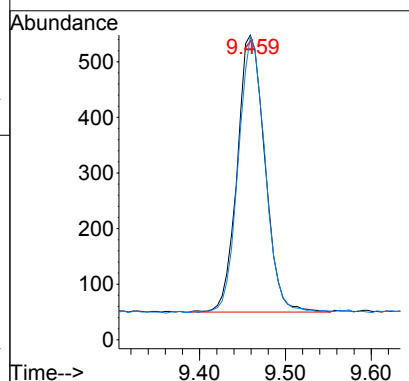
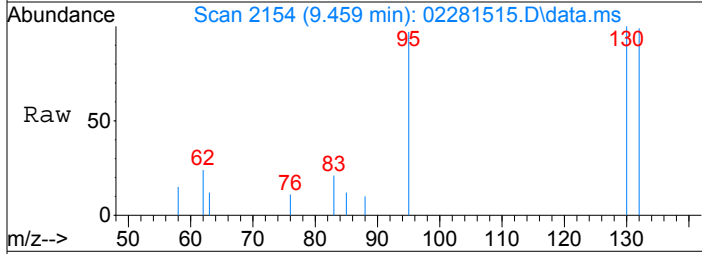
Tgt Ion:	117	Resp:	25382
Ion Ratio	Lower	Upper	
117	100		
119	96.4	75.5	115.5





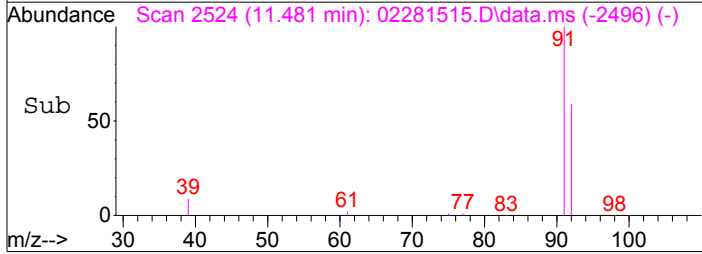
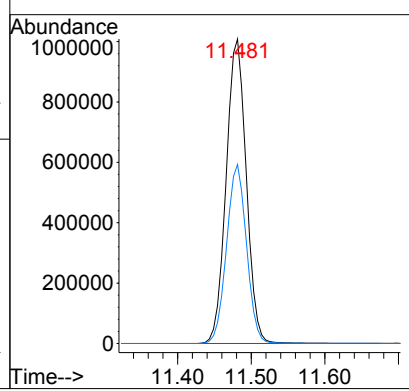
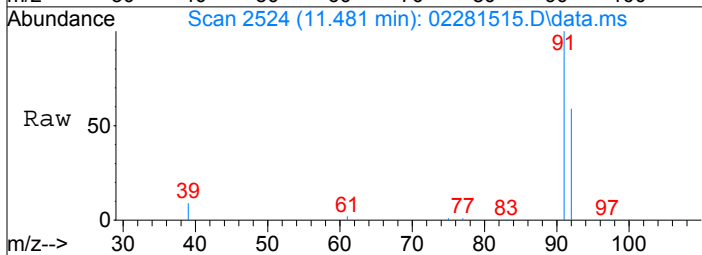
#25
 Trichloroethene
 Concen: 20.87 pg
 RT: 9.46 min Scan# 2154
 Delta R.T. 0.001 min
 Lab File: 02281515.D
 Acq: 28 Feb 2015 9:45

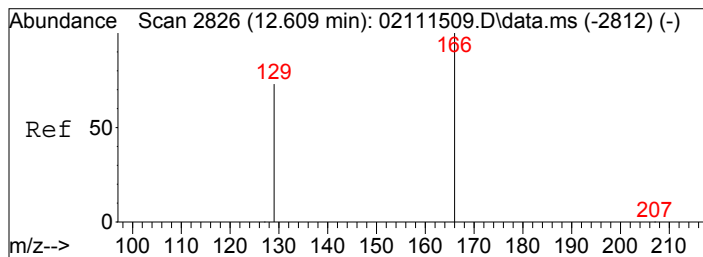
Tgt Ion: 130	Resp:	1115
Ion Ratio	Lower	Upper
130	100	
132	96.6	77.1 117.1



#31
 Toluene
 Concen: 9378.64 pg
 RT: 11.48 min Scan# 2524
 Delta R.T. 0.001 min
 Lab File: 02281515.D
 Acq: 28 Feb 2015 9:45

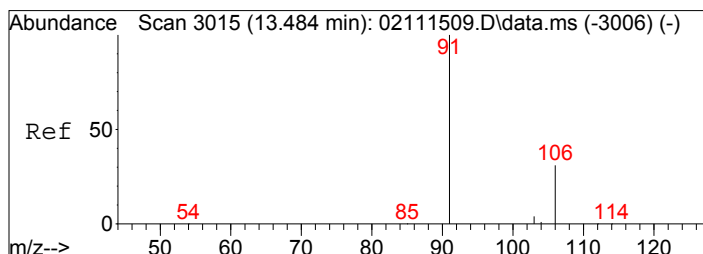
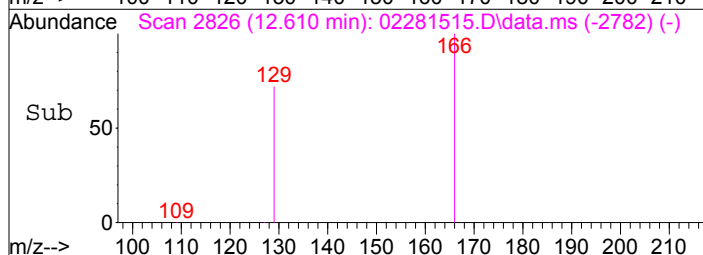
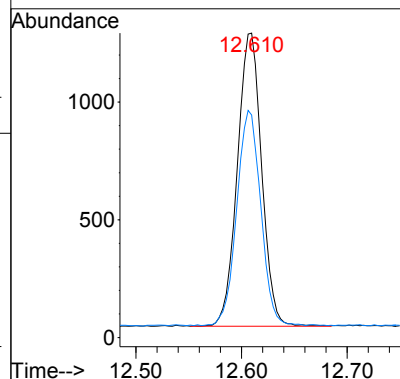
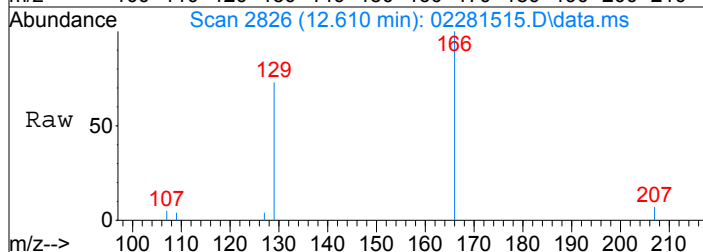
Tgt Ion: 91	Resp:	1913270
Ion Ratio	Lower	Upper
91	100	
92	58.3	37.7 77.7





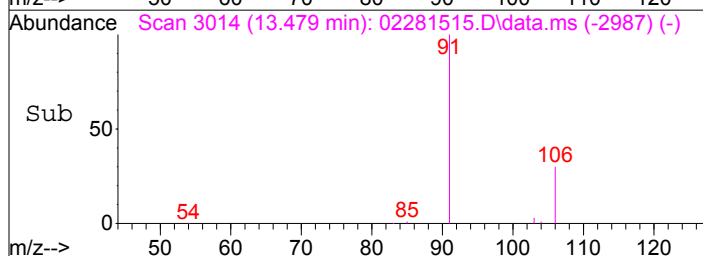
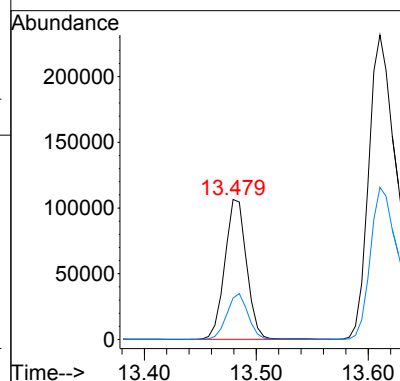
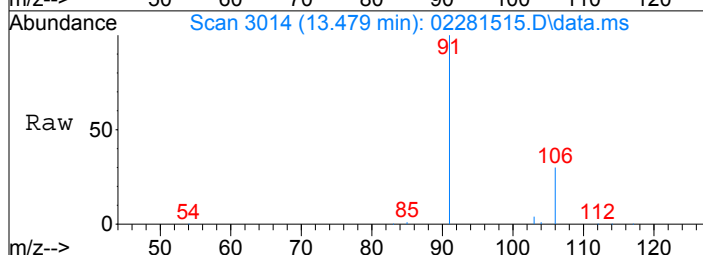
#33
Tetrachloroethene
Concen: 31.55 pg
RT: 12.61 min Scan# 2826
Delta R.T. 0.001 min
Lab File: 02281515.D
Acq: 28 Feb 2015 9:45

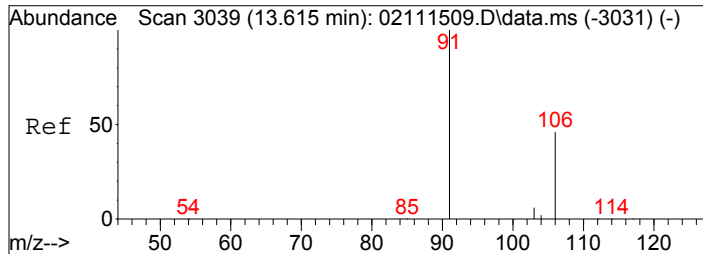
Tgt Ion: 166 Resp: 1993
Ion Ratio Lower Upper
166 100
129 72.3 53.3 93.3



#36
Ethylbenzene
Concen: 676.99 pg
RT: 13.48 min Scan# 3014
Delta R.T. -0.004 min
Lab File: 02281515.D
Acq: 28 Feb 2015 9:45

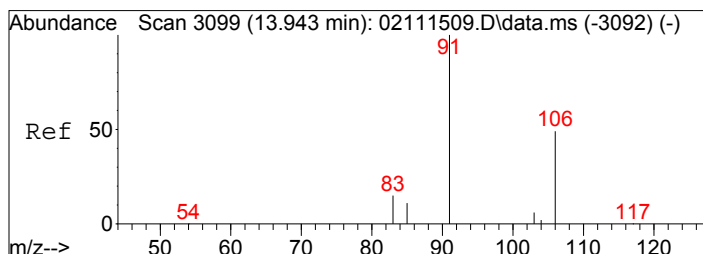
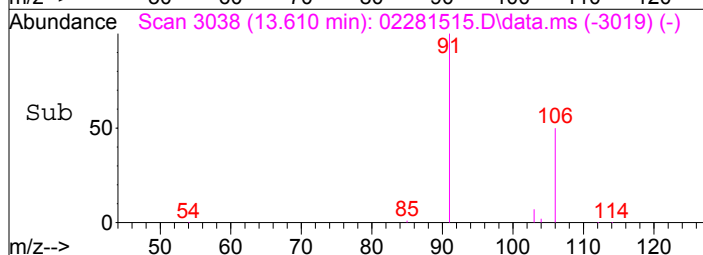
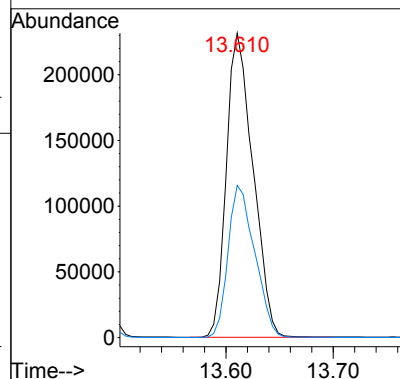
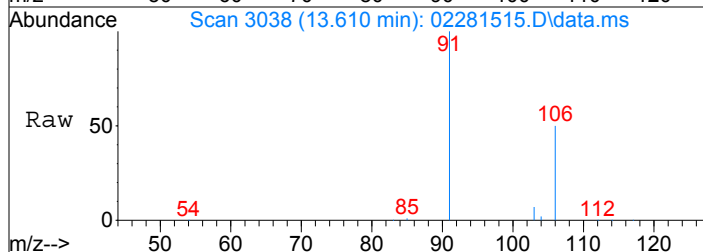
Tgt Ion: 91 Resp: 143954
Ion Ratio Lower Upper
91 100
106 31.7 10.9 50.9





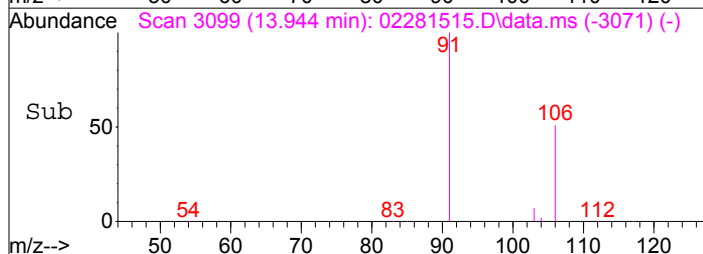
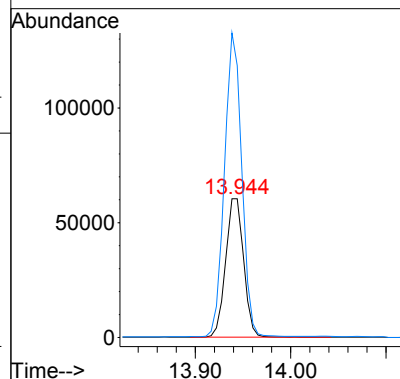
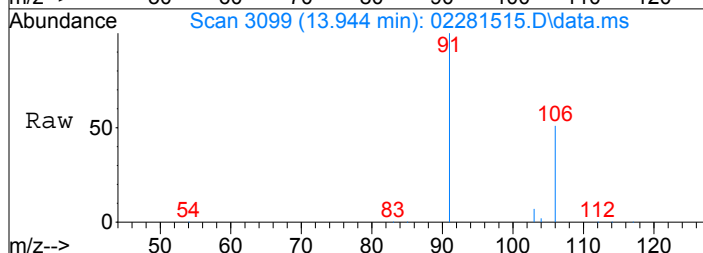
#37
m,p-Xylene
Concen: 2282.71 pg
RT: 13.61 min Scan# 3038
Delta R.T. -0.004 min
Lab File: 02281515.D
Acq: 28 Feb 2015 9:45

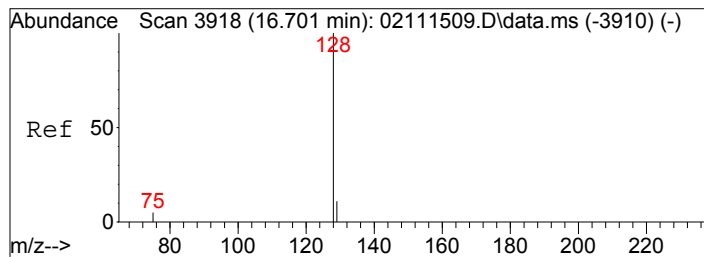
Tgt Ion: 91 Resp: 398936
Ion Ratio Lower Upper
91 100
106 50.2 27.5 67.5



#38
o-Xylene
Concen: 925.24 pg
RT: 13.94 min Scan# 3099
Delta R.T. 0.001 min
Lab File: 02281515.D
Acq: 28 Feb 2015 9:45

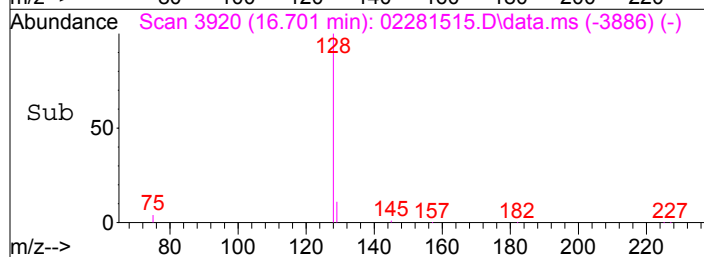
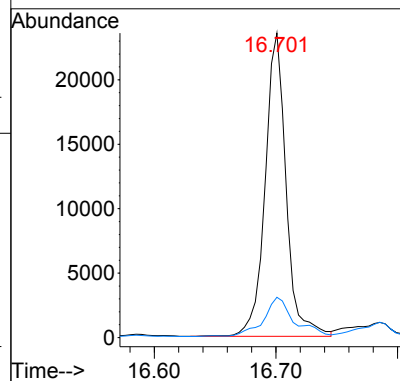
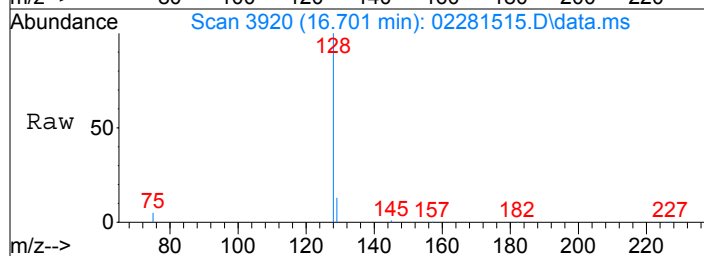
Tgt Ion: 106 Resp: 79026
Ion Ratio Lower Upper
106 100
91 210.8 198.3 238.3





#45
 Naphthalene
 Concen: 133.02 pg
 RT: 16.70 min Scan# 3920
 Delta R.T. -0.000 min
 Lab File: 02281515.D
 Acq: 28 Feb 2015 9:45

Tgt Ion:128 Resp: 28223
 Ion Ratio Lower Upper
 128 100
 129 18.0 0.0 30.9



Data File: I:\MS19\DATA\2015 02\28\02281516.D

Acq On : 28 Feb 2015 10:13
 Sample : P1500729-011 (1000mL)
 Misc : S29-02041502
 ALS Vial : 6 Sample Multiplier: 1

Operator: WA

Quant Time: Feb 28 10:42:27 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

WA 2/28/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	27613	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	197715	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	32248	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	59331	879.843	pg	0.00
Spiked Amount 1000.000			Recovery	=	87.98%	
30) Toluene-d8 (SS2)	11.38	98	182638	1001.691	pg	0.00
Spiked Amount 1000.000			Recovery	=	100.17%	
40) Bromofluorobenzene (SS3)	14.25	174	76646	1177.281	pg	0.00
Spiked Amount 1000.000			Recovery	=	117.73%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.72	85	166849	1486.807	pg	100
3) Chloromethane	1.83	52	10421	465.004	pg	97
4) Vinyl Chloride	2.02	62	106	N.D.		
5) Bromomethane	2.32	94	3984	78.952	pg	99
6) Chloroethane	2.47	64	505	N.D.		
7) Acetone	2.99	58	235220	5935.789	pg	92
8) Trichlorofluoromethane	3.10	101	87599	908.778	pg	100
9) 1,1-Dichloroethene	3.67	96	193	N.D.		
10) Methylene Chloride	3.80	84	34450	753.194	pg	91
11) Trichlorotrifluoroethane	4.09	151	15717	354.847	pg	100
12) trans-1,2-Dichloroethene	4.74	96	236	N.D.		
13) 1,1-Dichloroethane	4.95	63	348	N.D.		
14) Methyl tert-Butyl Ether	5.12	73	504	N.D.		
15) cis-1,2-Dichloroethene	5.93	96	188	N.D.		
16) Chloroform	6.31	83	6142	72.549	pg	100
18) 1,2-Dichloroethane	7.26	62	4214	62.514	pg	98
19) 1,1,1-Trichloroethane	7.59	97	1086	N.D.		
20) Benzene	8.15	78	71337	409.682	pg	100
21) Carbon Tetrachloride	8.34	117	20192	327.606	pg	99
23) 1,2-Dichloropropane	9.16	63	846	N.D.		
24) Bromodichloromethane	9.41	83	429	N.D.		
25) Trichloroethene	9.46	130	964	N.D.		
26) 1,4-Dioxane	9.54	88	1075	28.397	pg	# 15
27) cis-1,3-Dichloropropene	10.46	75	311	N.D.		
28) trans-1,3-Dichloropropene	11.05	75	109	N.D.		
29) 1,1,2-Trichloroethane	11.20	83	148	N.D.		
31) Toluene	11.48	91	480555	2478.131	pg	99
32) 1,2-Dibromoethane	12.13	107	29	N.D.		
33) Tetrachloroethene	12.61	166	1862	31.011	pg	99
35) Chlorobenzene	13.17	112	1128	N.D.		
36) Ethylbenzene	13.48	91	38009	187.957	pg	98
37) m,p-Xylene	13.61	91	113295	681.664	pg	96
38) o-Xylene	13.94	106	18777	231.166	pg	98
39) 1,1,1,2,2-Tetrachloroethane	13.89	83	442	N.D.		
41) 1,3-Dichlorobenzene	15.17	146	1405	N.D.		
42) 1,4-Dichlorobenzene	15.24	146	1667	N.D.		
43) 1,2-Dichlorobenzene	15.46	146	341	N.D.		
44) 1,2,4-Trichlorobenzene	16.63	182	7354	119.876	pg	98
45) Naphthalene	16.70	128	6833	33.864	pg	97
46) Hexachlorobutadiene	16.96	225	33	N.D.		

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\28\02281516.D

Acq On : 28 Feb 2015 10:13

Operator: WA

Sample : P1500729-011 (1000mL)

Misc : S29-02041502

ALS Vial : 6 Sample Multiplier: 1

Quant Time: Feb 28 10:42:27 2015

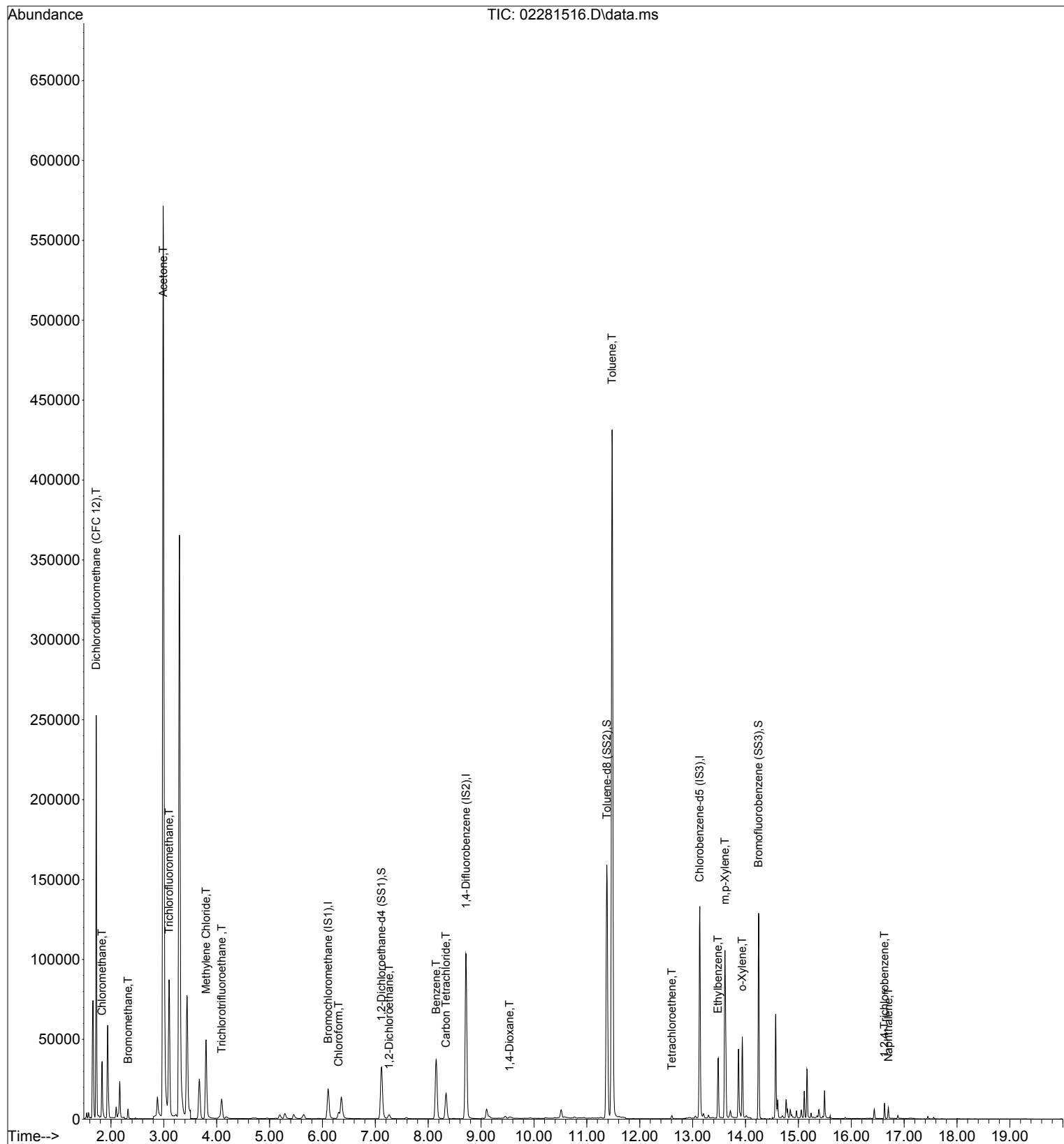
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 02\28\02281516.D

Acq On : 28 Feb 2015 10:13

Operator: WA

Sample : P1500729-011 (1000mL)

Misc : S29-02041502

ALS Vial : 6 Sample Multiplier: 1

Quant Time: Feb 28 10:42:27 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

2/28/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	27613	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	197715	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	32248	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	59331	879.843	pg	0.00
Spiked Amount 1000.000			Recovery	=	87.98%	
30) Toluene-d8 (SS2)	11.38	98	182638	1001.691	pg	0.00
Spiked Amount 1000.000			Recovery	=	100.17%	
40) Bromofluorobenzene (SS3)	14.25	174	76646	1177.281	pg	0.00
Spiked Amount 1000.000			Recovery	=	117.73%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.72	85	166849	1486.807	pg	100
3) Chloromethane	1.83	52	10421	465.004	pg	97
5) Bromomethane	2.32	94	3984	78.952	pg	99
7) Acetone	2.99	58	235220	5935.789	pg	92
8) Trichlorofluoromethane	3.10	101	87599	908.778	pg	100
10) Methylene Chloride	3.80	84	34450	753.194	pg	91
11) Trichlorotrifluoroethane	4.09	151	15717	354.847	pg	100
16) Chloroform	6.31	83	6142	72.549	pg	100
18) 1,2-Dichloroethane	7.26	62	4214	62.514	pg	98
20) Benzene	8.15	78	71337	409.682	pg	100
21) Carbon Tetrachloride	8.34	117	20192	327.606	pg	99
26) 1,4-Dioxane	9.54	88	1075	28.397	pg	# 15
31) Toluene	11.48	91	480555	2478.131	pg	99
33) Tetrachloroethene	12.61	166	1862	31.011	pg	99
36) Ethylbenzene	13.48	91	38009	187.957	pg	98
37) m,p-Xylene	13.61	91	113295	681.664	pg	96
38) o-Xylene	13.94	106	18777	231.166	pg	98
44) 1,2,4-Trichlorobenzene	16.63	182	7354	119.876	pg	98
45) Naphthalene	16.70	128	6833	33.864	pg	97

(#)= qualifier out of range (m) = manual integration (+) = signals summed

Data File: I:\MS19\DATA\2015 02\28\02281516.D

Acq On : 28 Feb 2015 10:13

Operator: WA

Sample : P1500729-011 (1000mL)

Misc : S29-02041502

ALS Vial : 6 Sample Multiplier: 1

Quant Time: Feb 28 10:42:27 2015

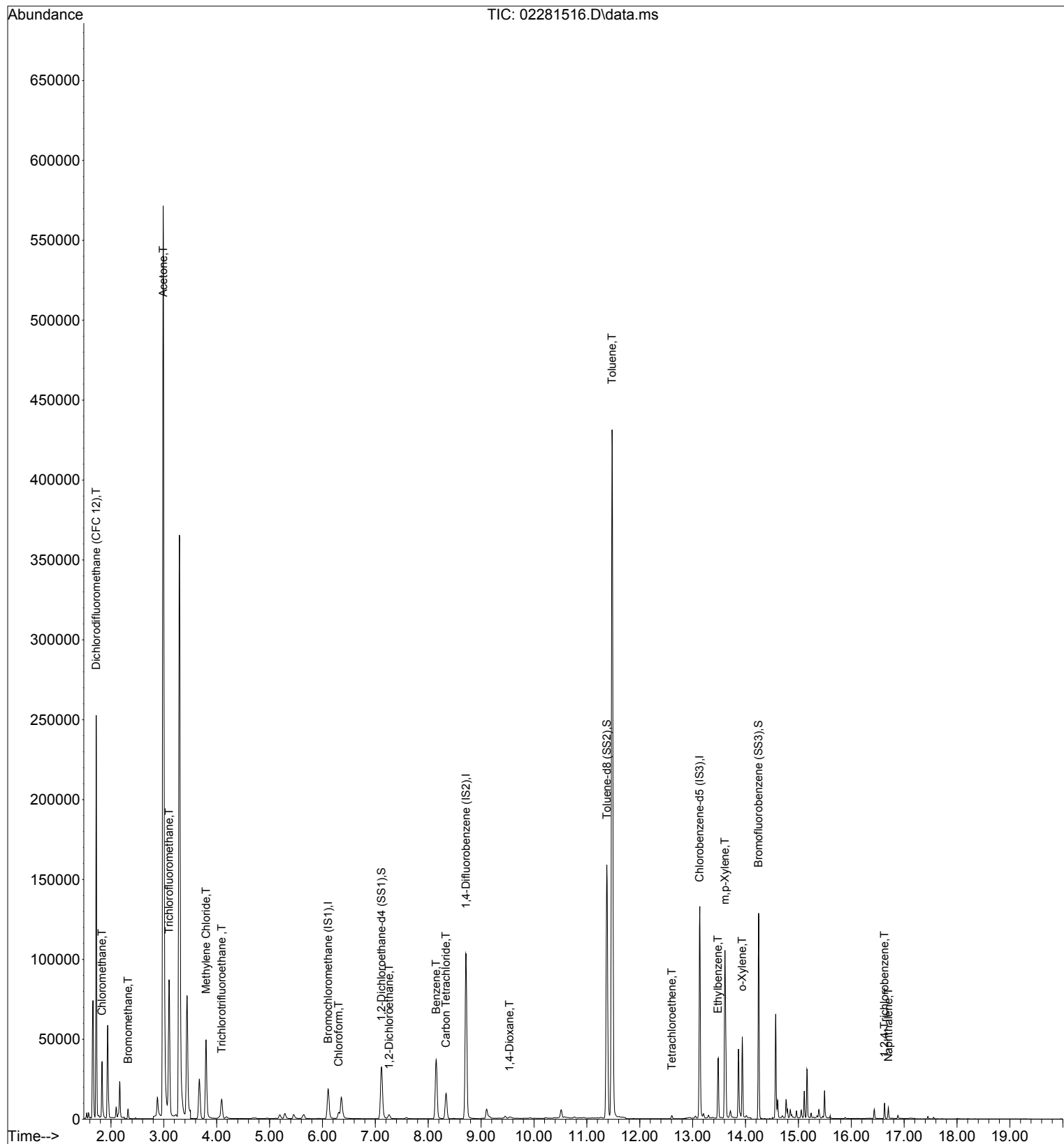
Quant Method : I:\MS19\METHODS\X19021115.M

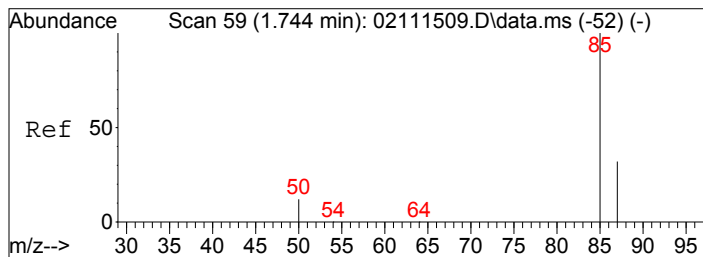
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

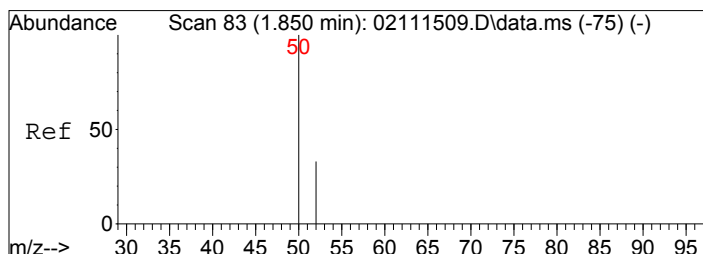
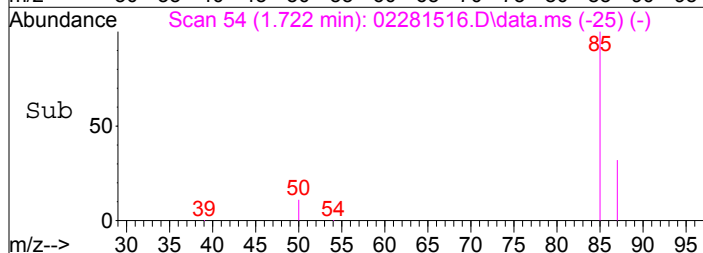
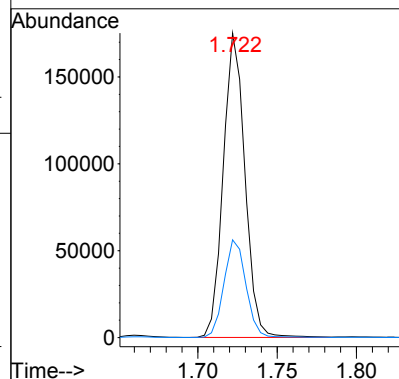
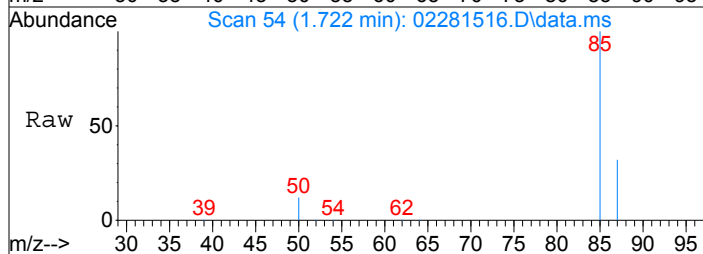
DataAcq Meth:TO15SIM.M





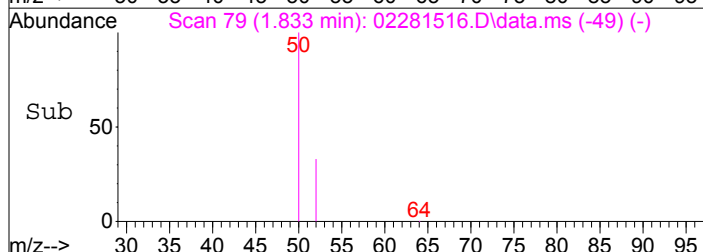
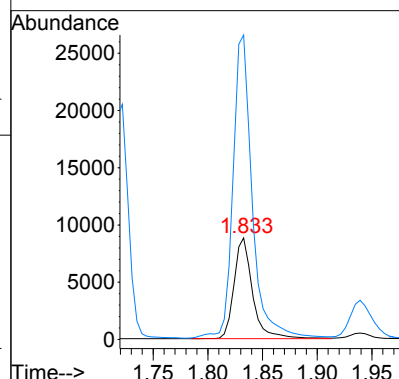
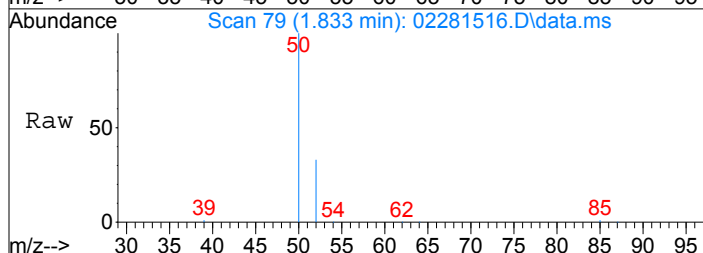
#2
 Dichlorodifluoromethane (CFC 12)
 Concen: 1486.81 pg
 RT: 1.72 min Scan# 54
 Delta R.T. -0.022 min
 Lab File: 02281516.D
 Acq: 28 Feb 2015 10:13

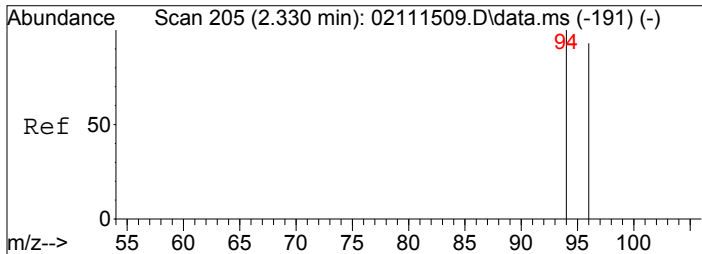
Tgt Ion: 85 Resp: 166849
 Ion Ratio Lower Upper
 85 100
 87 32.5 12.4 52.4



#3
 Chloromethane
 Concen: 465.00 pg
 RT: 1.83 min Scan# 79
 Delta R.T. -0.017 min
 Lab File: 02281516.D
 Acq: 28 Feb 2015 10:13

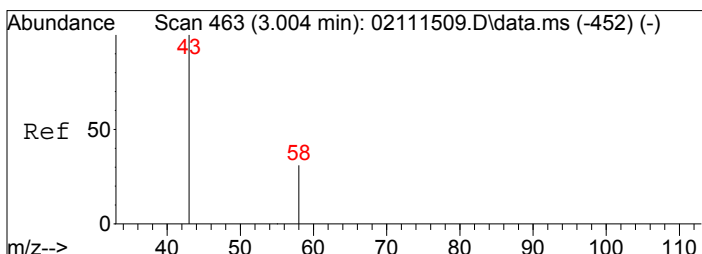
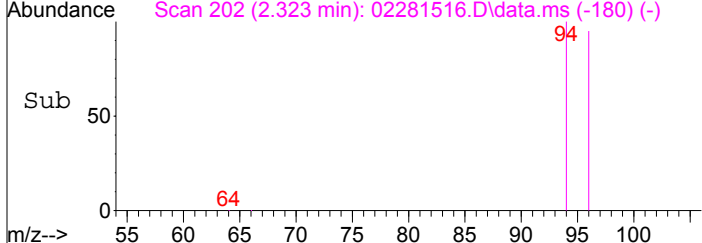
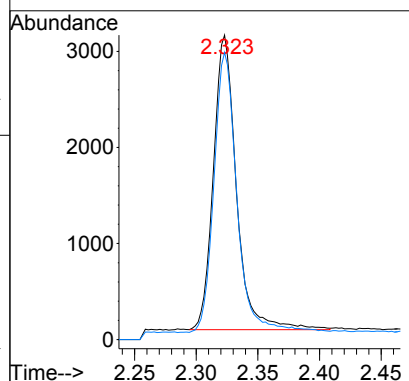
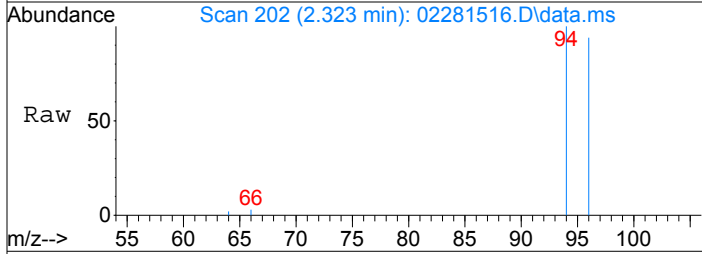
Tgt Ion: 52 Resp: 10421
 Ion Ratio Lower Upper
 52 100
 50 309.8 283.7 323.7





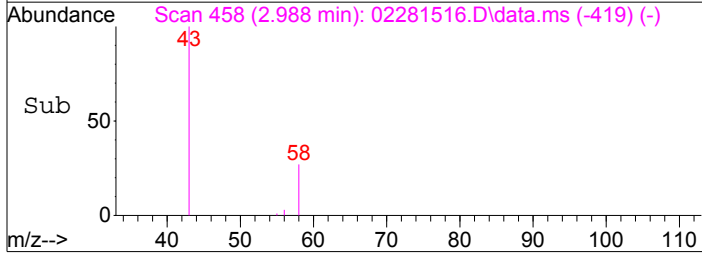
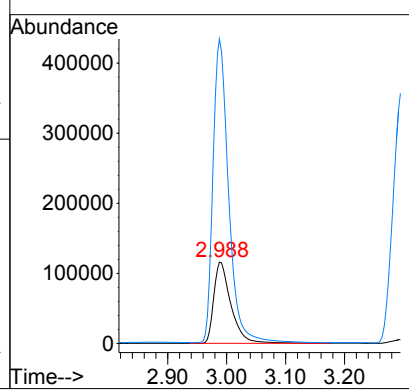
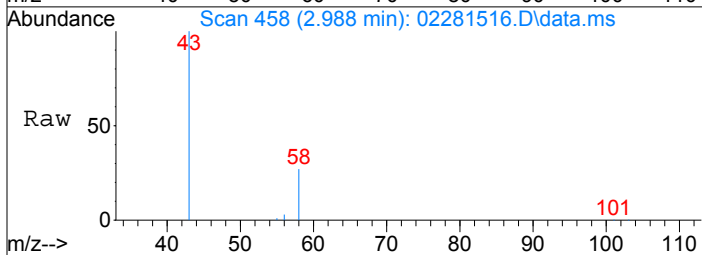
#5
 Bromomethane
 Concen: 78.95 pg
 RT: 2.32 min Scan# 202
 Delta R.T. -0.007 min
 Lab File: 02281516.D
 Acq: 28 Feb 2015 10:13

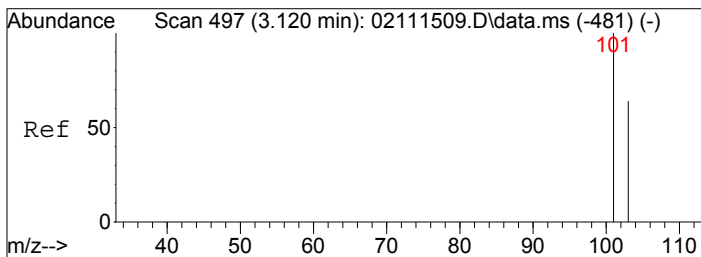
Tgt Ion: 94	Resp: 3984
Ion Ratio	Lower Upper
94	100
96	95.7 75.5 113.3



#7
 Acetone
 Concen: 5935.79 pg
 RT: 2.99 min Scan# 458
 Delta R.T. -0.016 min
 Lab File: 02281516.D
 Acq: 28 Feb 2015 10:13

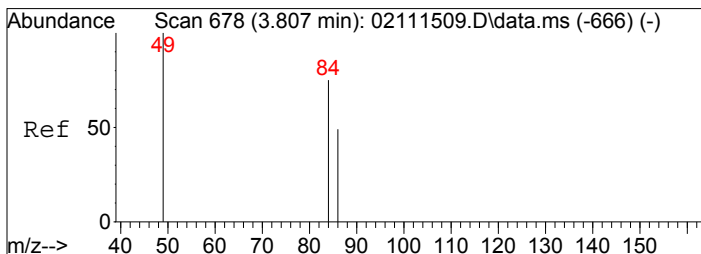
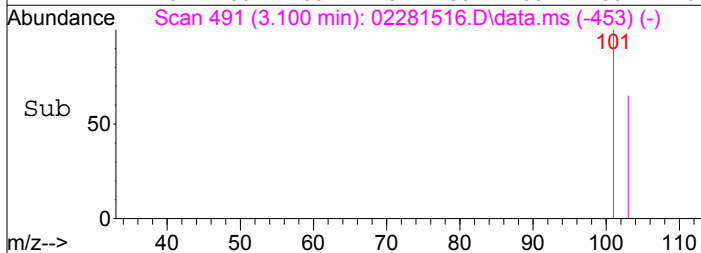
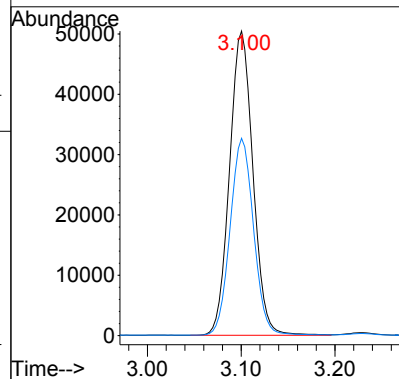
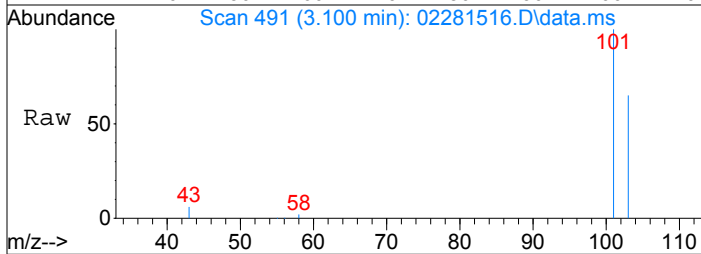
Tgt Ion: 58	Resp: 235220
Ion Ratio	Lower Upper
58	100
43	338.7 301.8 341.8





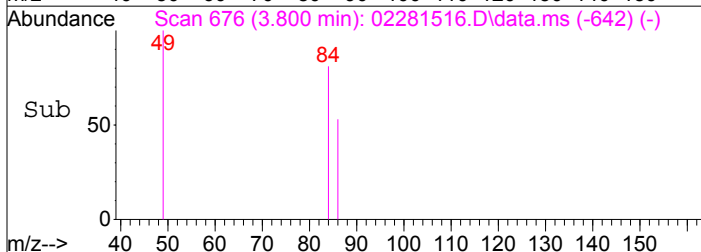
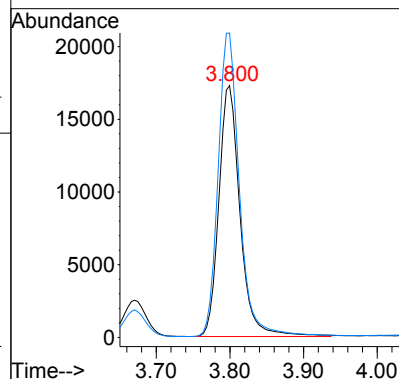
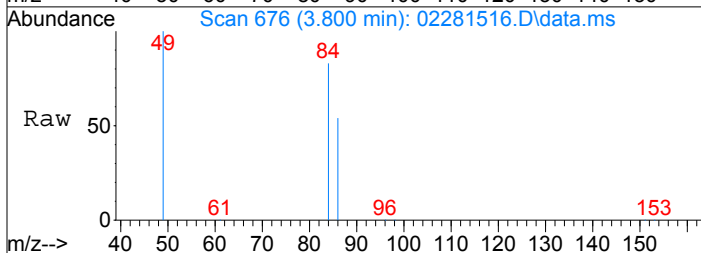
#8
 Trichlorofluoromethane
 Concen: 908.78 pg
 RT: 3.10 min Scan# 491
 Delta R.T. -0.019 min
 Lab File: 02281516.D
 Acq: 28 Feb 2015 10:13

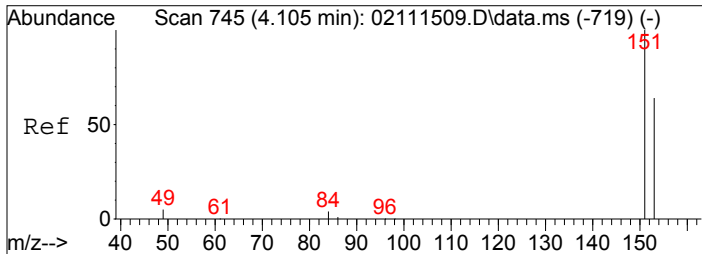
Tgt Ion: 101 Resp: 87599
 Ion Ratio Lower Upper
 101 100
 103 64.7 51.8 77.6



#10
 Methylene Chloride
 Concen: 753.19 pg
 RT: 3.80 min Scan# 676
 Delta R.T. -0.007 min
 Lab File: 02281516.D
 Acq: 28 Feb 2015 10:13

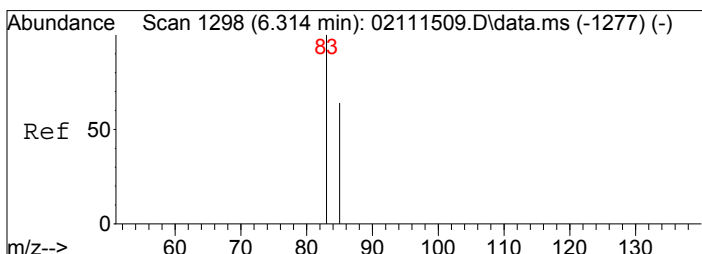
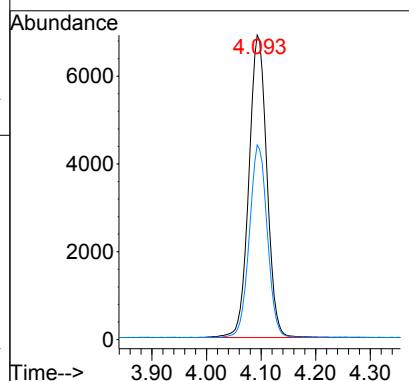
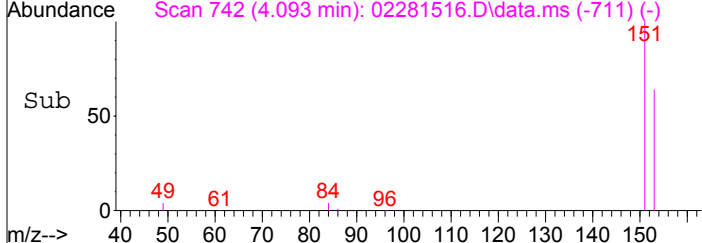
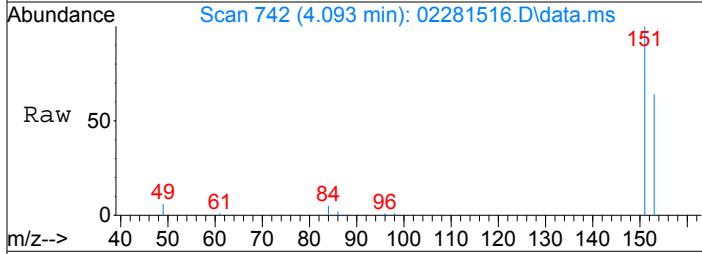
Tgt Ion: 84 Resp: 34450
 Ion Ratio Lower Upper
 84 100
 49 121.7 112.3 152.3





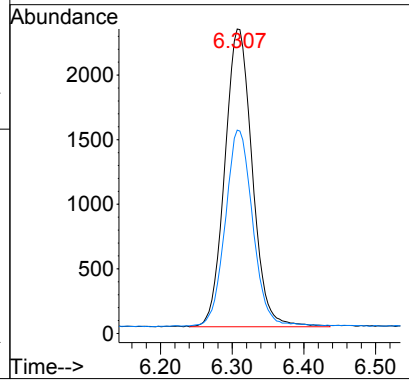
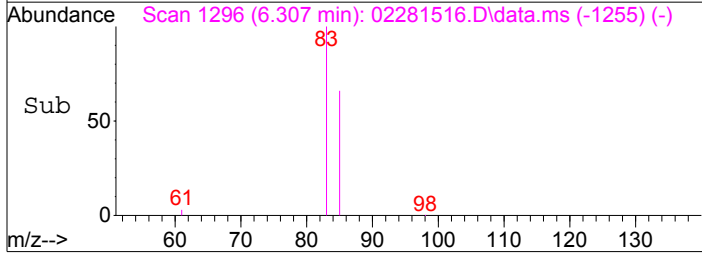
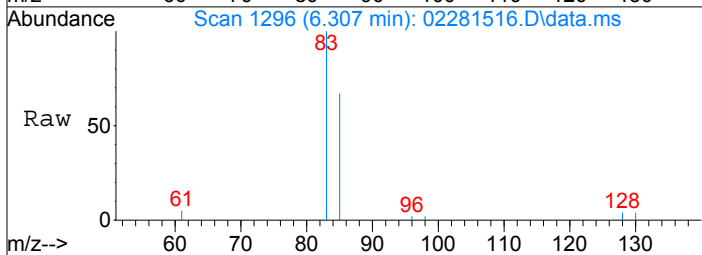
#11
 Trichlorotrifluoroethane
 Concen: 354.85 pg
 RT: 4.09 min Scan# 742
 Delta R.T. -0.012 min
 Lab File: 02281516.D
 Acq: 28 Feb 2015 10:13

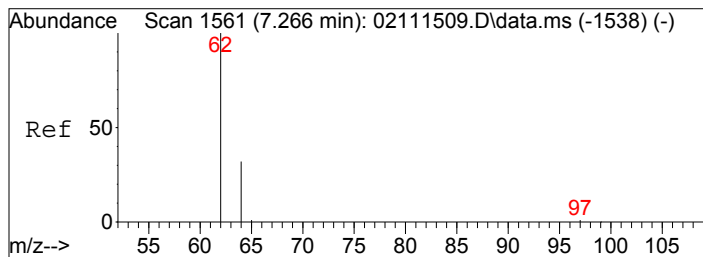
Tgt Ion: 151	Resp: 15717
Ion Ratio	Lower Upper
151	100
153	63.4 43.6 83.6



#16
 Chloroform
 Concen: 72.55 pg
 RT: 6.31 min Scan# 1296
 Delta R.T. -0.007 min
 Lab File: 02281516.D
 Acq: 28 Feb 2015 10:13

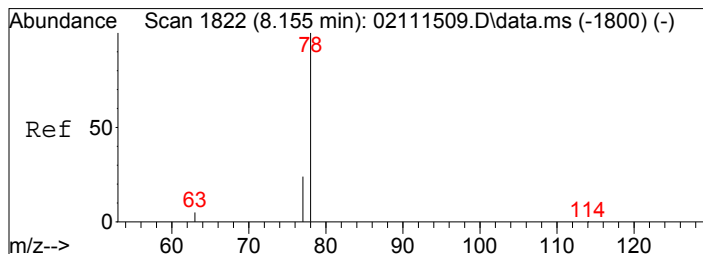
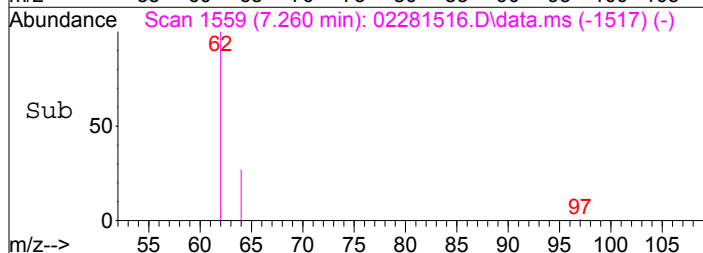
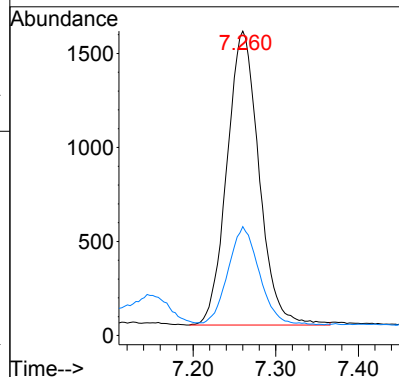
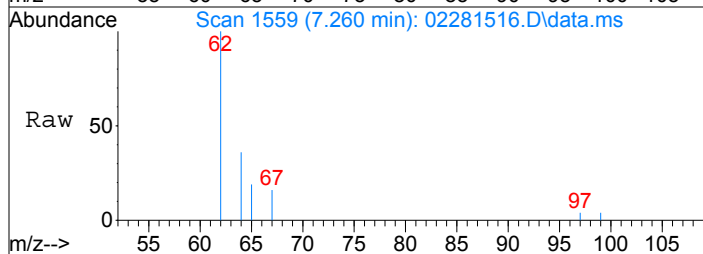
Tgt Ion: 83	Resp: 6142
Ion Ratio	Lower Upper
83	100
85	65.5 45.4 85.4





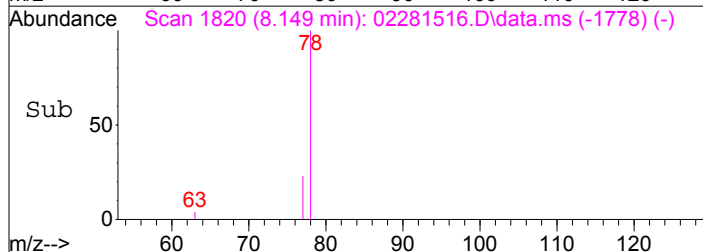
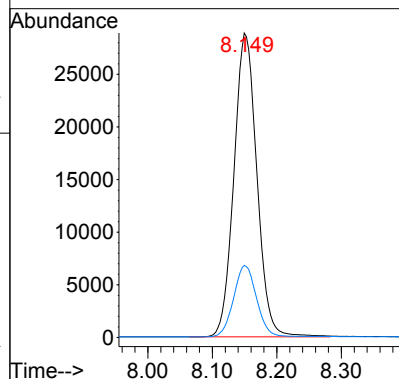
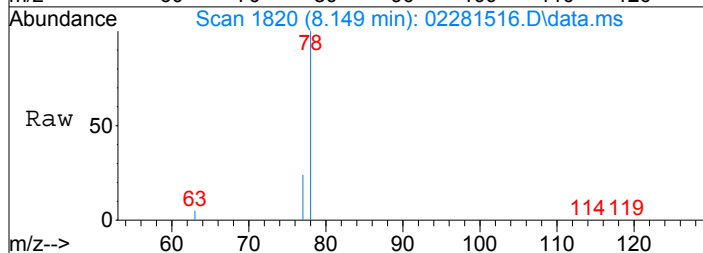
#18
1,2-Dichloroethane
Concen: 62.51 pg
RT: 7.26 min Scan# 1559
Delta R.T. -0.006 min
Lab File: 02281516.D
Acq: 28 Feb 2015 10:13

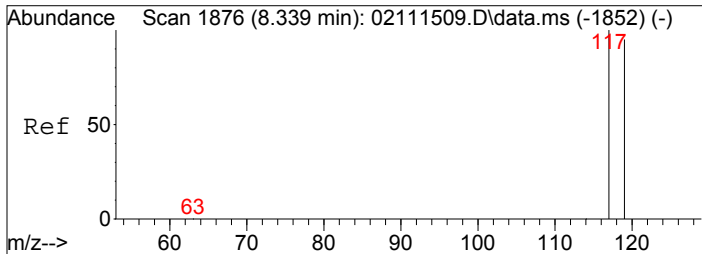
Tgt Ion: 62 Resp: 4214
Ion Ratio Lower Upper
62 100
64 32.6 11.6 51.6



#20
Benzene
Concen: 409.68 pg
RT: 8.15 min Scan# 1820
Delta R.T. -0.006 min
Lab File: 02281516.D
Acq: 28 Feb 2015 10:13

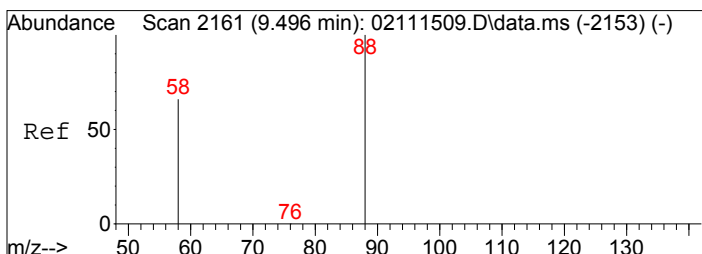
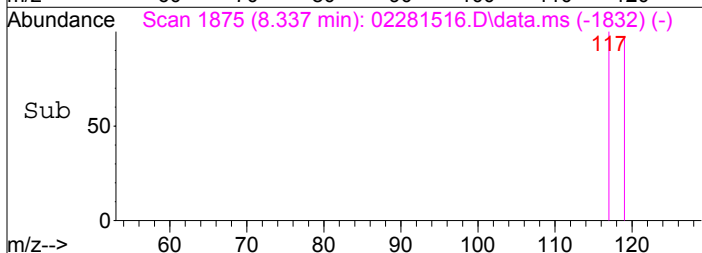
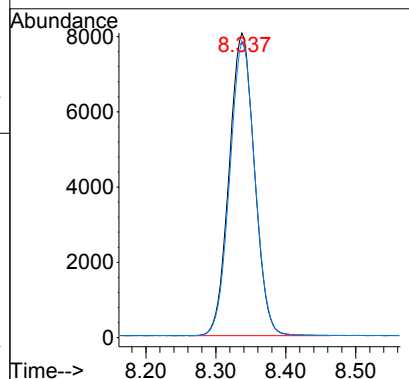
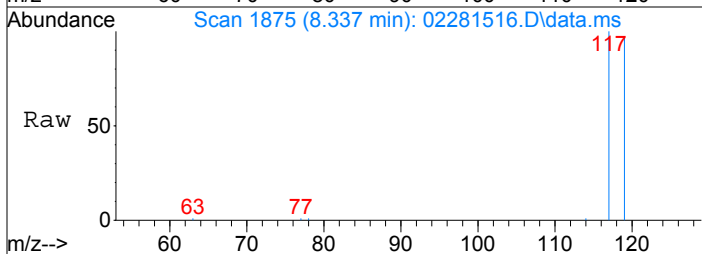
Tgt Ion: 78 Resp: 71337
Ion Ratio Lower Upper
78 100
77 23.6 3.7 43.7





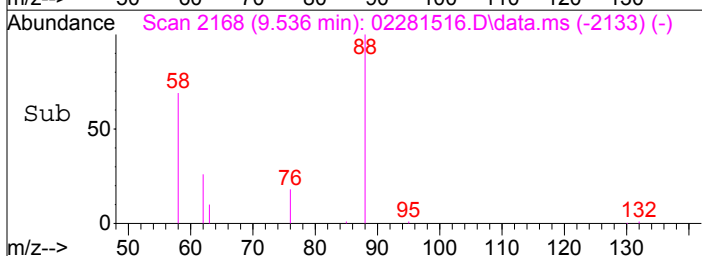
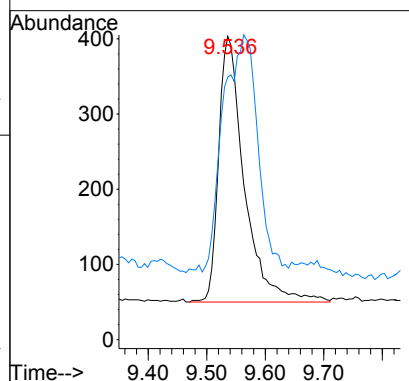
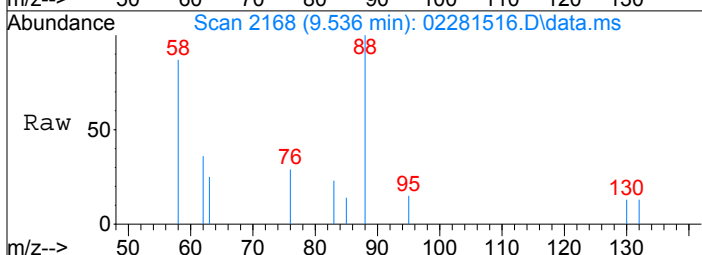
#21
Carbon Tetrachloride
Concen: 327.61 pg
RT: 8.34 min Scan# 1875
Delta R.T. -0.002 min
Lab File: 02281516.D
Acq: 28 Feb 2015 10:13

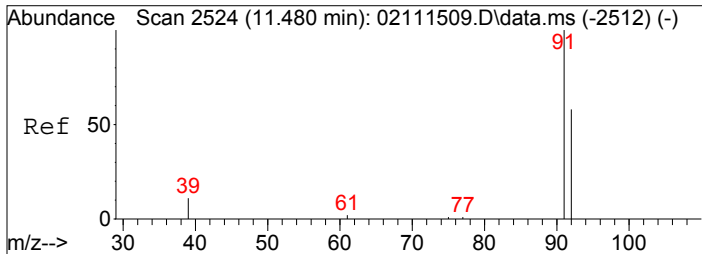
Tgt Ion: 117 Resp: 20192
Ion Ratio Lower Upper
117 100
119 96.4 75.5 115.5



#26
1,4-Dioxane
Concen: 28.40 pg
RT: 9.54 min Scan# 2168
Delta R.T. 0.039 min
Lab File: 02281516.D
Acq: 28 Feb 2015 10:13

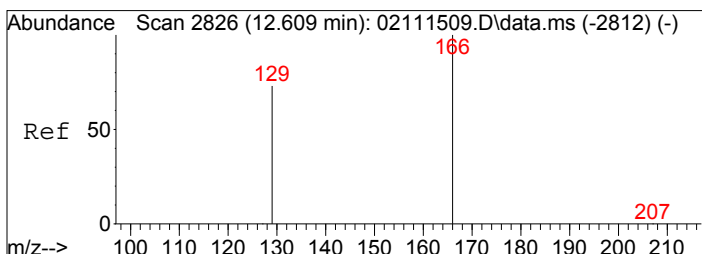
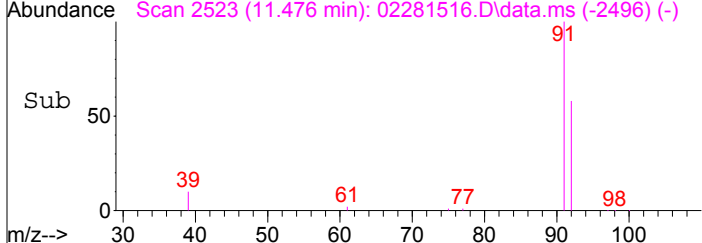
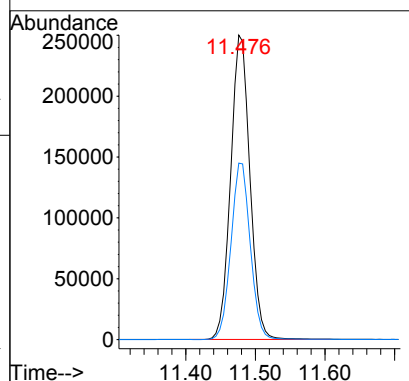
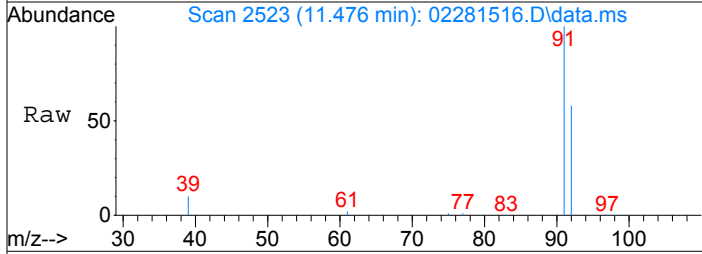
Tgt Ion: 88 Resp: 1075
Ion Ratio Lower Upper
88 100
58 121.5 38.3 78.3#





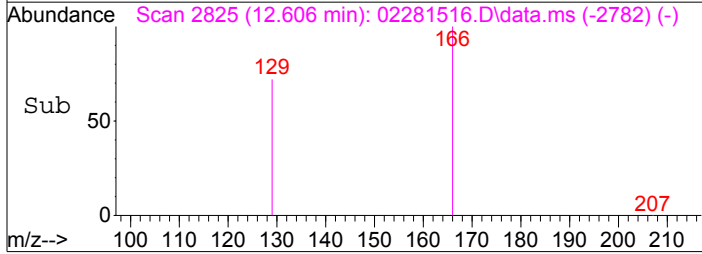
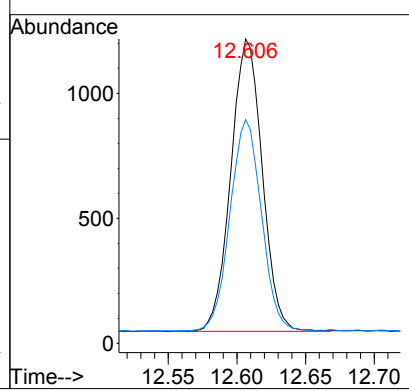
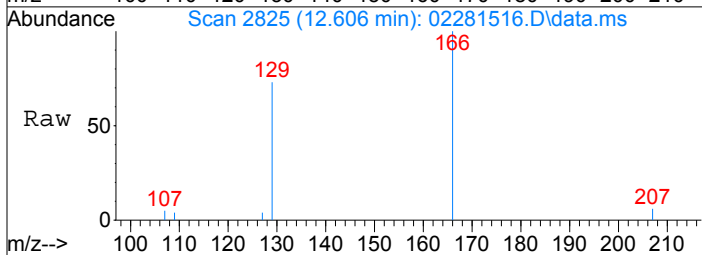
#31
Toluene
Concen: 2478.13 pg
RT: 11.48 min Scan# 2523
Delta R.T. -0.004 min
Lab File: 02281516.D
Acq: 28 Feb 2015 10:13

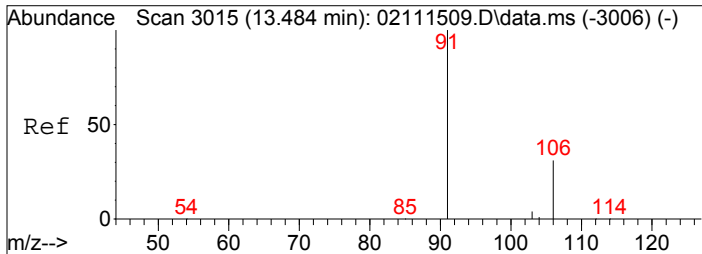
Tgt Ion:	91	Resp:	480555
Ion Ratio	Lower	Upper	
91	100		
92	58.2	37.7	77.7



#33
Tetrachloroethene
Concen: 31.01 pg
RT: 12.61 min Scan# 2825
Delta R.T. -0.003 min
Lab File: 02281516.D
Acq: 28 Feb 2015 10:13

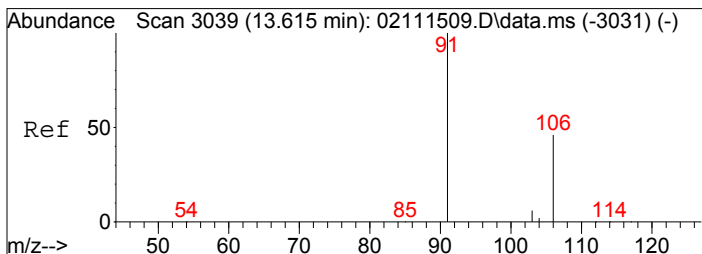
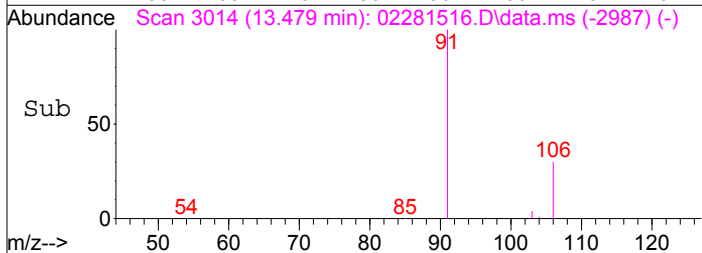
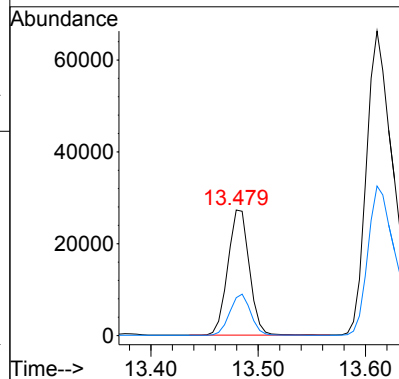
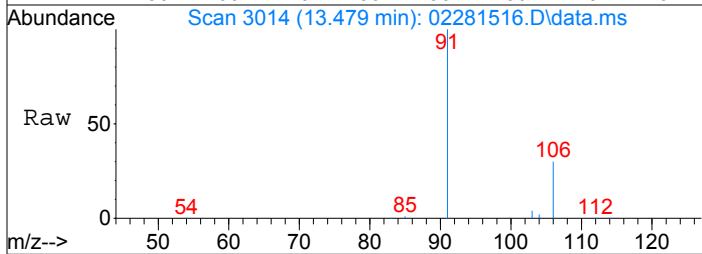
Tgt Ion:	166	Resp:	1862
Ion Ratio	Lower	Upper	
166	100		
129	72.3	53.3	93.3





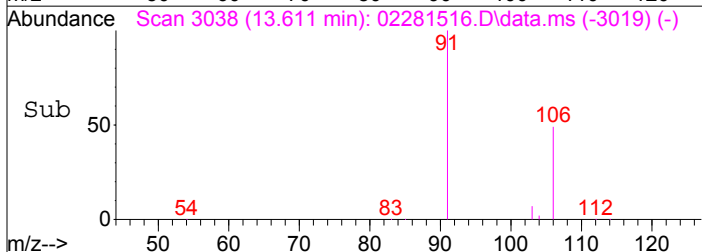
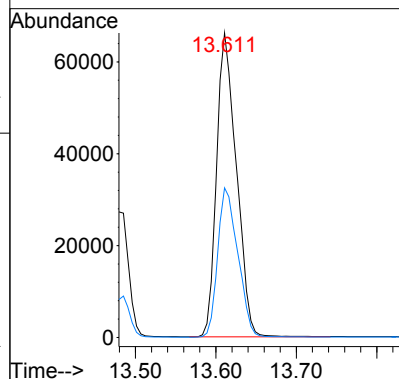
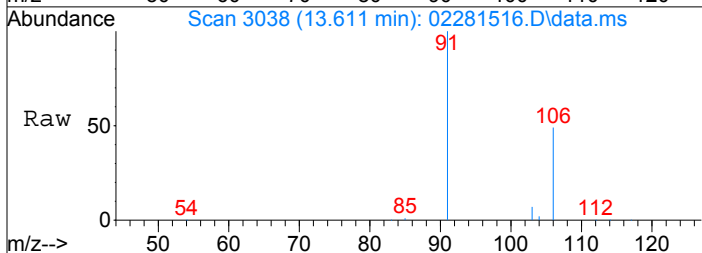
#36
Ethylbenzene
Concen: 187.96 pg
RT: 13.48 min Scan# 3014
Delta R.T. -0.004 min
Lab File: 02281516.D
Acq: 28 Feb 2015 10:13

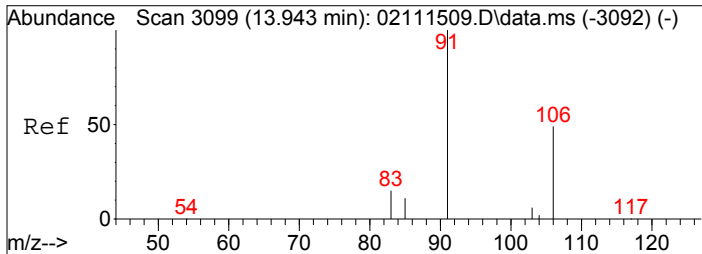
Tgt Ion: 91 Resp: 38009
Ion Ratio Lower Upper
91 100
106 31.9 10.9 50.9



#37
m,p-Xylene
Concen: 681.66 pg
RT: 13.61 min Scan# 3038
Delta R.T. -0.004 min
Lab File: 02281516.D
Acq: 28 Feb 2015 10:13

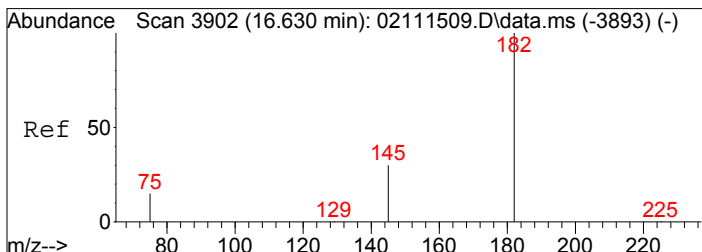
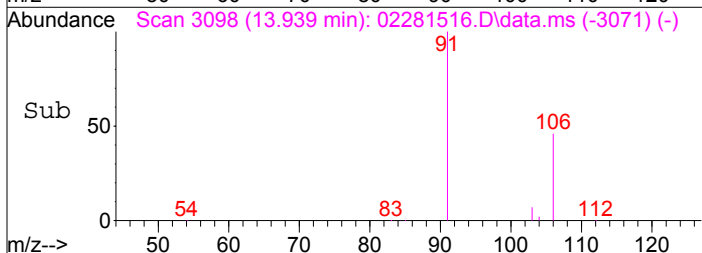
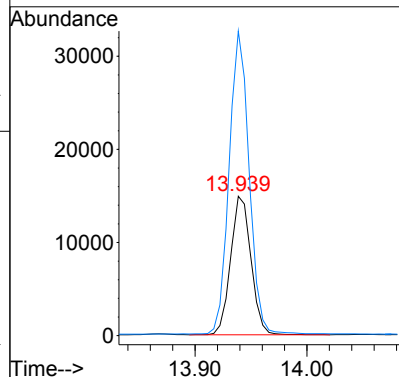
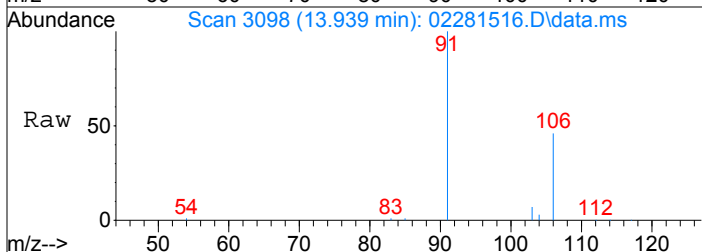
Tgt Ion: 91 Resp: 113295
Ion Ratio Lower Upper
91 100
106 49.9 27.5 67.5





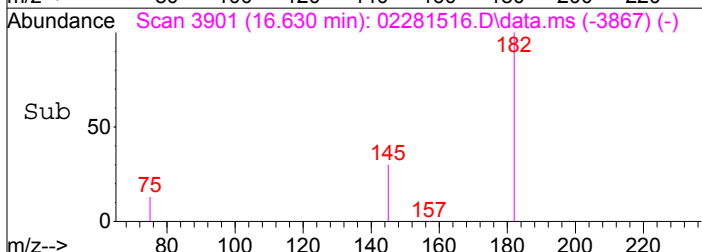
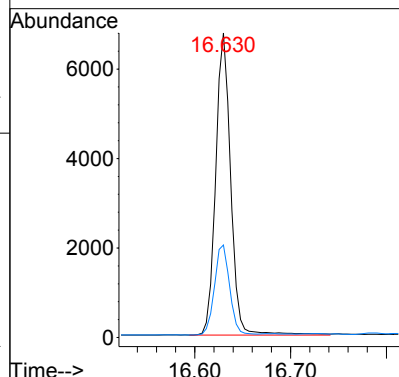
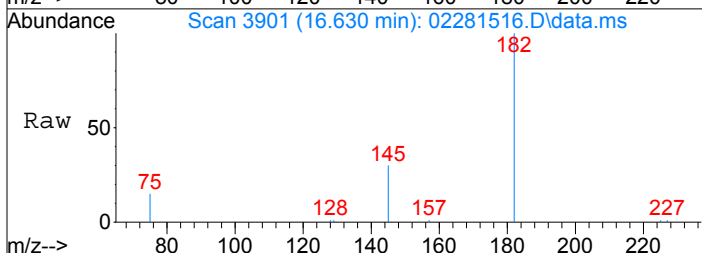
#38
o-Xylene
Concen: 231.17 pg
RT: 13.94 min Scan# 3098
Delta R.T. -0.004 min
Lab File: 02281516.D
Acq: 28 Feb 2015 10:13

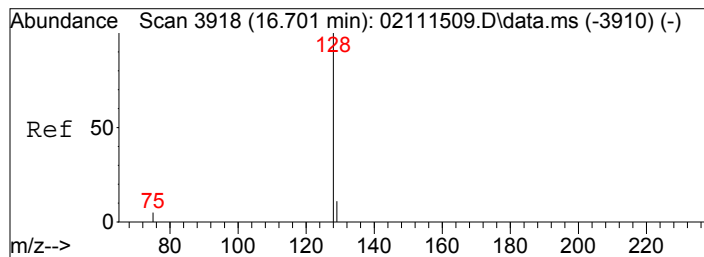
Tgt Ion	106	Resp	18777
Ion Ratio	100	Lower	Upper
91	215.6	198.3	238.3



#44
1,2,4-Trichlorobenzene
Concen: 119.88 pg
RT: 16.63 min Scan# 3901
Delta R.T. -0.000 min
Lab File: 02281516.D
Acq: 28 Feb 2015 10:13

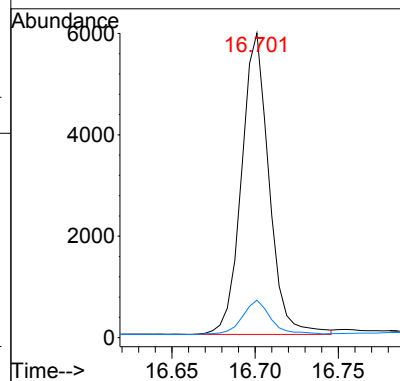
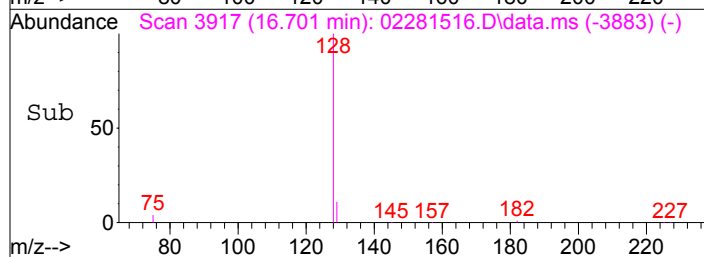
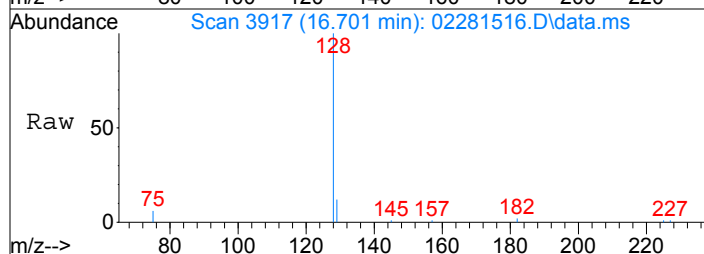
Tgt Ion	182	Resp	7354
Ion Ratio <td>100</td> <td>Lower</td> <td>Upper</td>	100	Lower	Upper
145	30.1	11.3	51.3





#45
Naphthalene
Concen: 33.86 pg
RT: 16.70 min Scan# 3917
Delta R.T. 0.000 min
Lab File: 02281516.D
Acq: 28 Feb 2015 10:13

Tgt Ion:128 Resp: 6833
Ion Ratio Lower Upper
128 100
129 11.9 0.0 30.9



Data File: I:\MS19\DATA\2015 02\28\02281517.D

Acq On : 28 Feb 2015 11:03

Operator: WA

Sample : P1500729-012 (1000mL)

Misc : S29-02041502

ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 28 11:32:51 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

2/28/15

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.12	130	27097	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	207272	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	32431	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.13	65	59433	898.139	pg	0.00
Spiked Amount 1000.000			Recovery	=	89.81%	
30) Toluene-d8 (SS2)	11.38	98	183296	958.947	pg	0.00
Spiked Amount 1000.000			Recovery	=	95.90%	
40) Bromofluorobenzene (SS3)	14.25	174	78085	1192.616	pg	0.00
Spiked Amount 1000.000			Recovery	=	119.26%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.72	85	158065	1435.355	pg	100
3) Chloromethane	1.84	52	9166	416.792	pg	94
4) Vinyl Chloride	2.02	62	149	N.D.		
5) Bromomethane	2.33	94	1191	24.052	pg	96
6) Chloroethane	2.47	64	341	N.D.		
7) Acetone	2.99	58	182849	4702.071	pg	90
8) Trichlorofluoromethane	3.10	101	851359	9000.443	pg	100
9) 1,1-Dichloroethene	3.66	96	589	N.D.		
10) Methylene Chloride	3.80	84	11404	254.078	pg	92
11) Trichlorotrifluoroethane	4.09	151	15446	355.369	pg	99
12) trans-1,2-Dichloroethene	4.73	96	575	N.D.		
13) 1,1-Dichloroethane	4.95	63	2419	31.249	pg	73
14) Methyl tert-Butyl Ether	5.11	73	480	N.D.		
15) cis-1,2-Dichloroethene	5.94	96	7858	163.876	pg	99
16) Chloroform	6.33	83	18586	223.716	pg	100
18) 1,2-Dichloroethane	7.27	62	3202	48.406	pg	99
19) 1,1,1-Trichloroethane	7.59	97	1565	N.D.		
20) Benzene	8.15	78	44048	257.781	pg	100
21) Carbon Tetrachloride	8.34	117	24112	398.656	pg	99
23) 1,2-Dichloropropane	9.16	63	745	N.D.		
24) Bromodichloromethane	9.42	83	504	N.D.		
25) Trichloroethene	9.46	130	5678	106.630	pg	99
26) 1,4-Dioxane	9.54	88	418	N.D.		
27) cis-1,3-Dichloropropene	10.46	75	388	N.D.		
28) trans-1,3-Dichloropropene	11.05	75	222	N.D.		
29) 1,1,2-Trichloroethane	11.19	83	179	N.D.		
31) Toluene	11.48	91	295706	1454.589	pg	99
32) 1,2-Dibromoethane	12.13	107	64	N.D.		
33) Tetrachloroethene	12.61	166	2494	39.622	pg	98
35) Chlorobenzene	13.17	112	2077	N.D.		
36) Ethylbenzene	13.48	91	29117	143.173	pg	99
37) m,p-Xylene	13.61	91	58732	351.380	pg	97
38) o-Xylene	13.94	106	13053	159.791	pg	98
39) 1,1,2,2-Tetrachloroethane	13.97	83	214	N.D.		
41) 1,3-Dichlorobenzene	0.00	146	0	N.D.	d	
42) 1,4-Dichlorobenzene	15.24	146	3112	27.768	pg	99
43) 1,2-Dichlorobenzene	15.46	146	228	N.D.		
44) 1,2,4-Trichlorobenzene	16.63	182	231	N.D.		
45) Naphthalene	16.70	128	15169	74.752	pg	95
46) Hexachlorobutadiene	16.96	225	45	N.D.		

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\28\02281517.D

Acq On : 28 Feb 2015 11:03

Operator: WA

Sample : P1500729-012 (1000mL)

Misc : S29-02041502

ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 28 11:32:51 2015

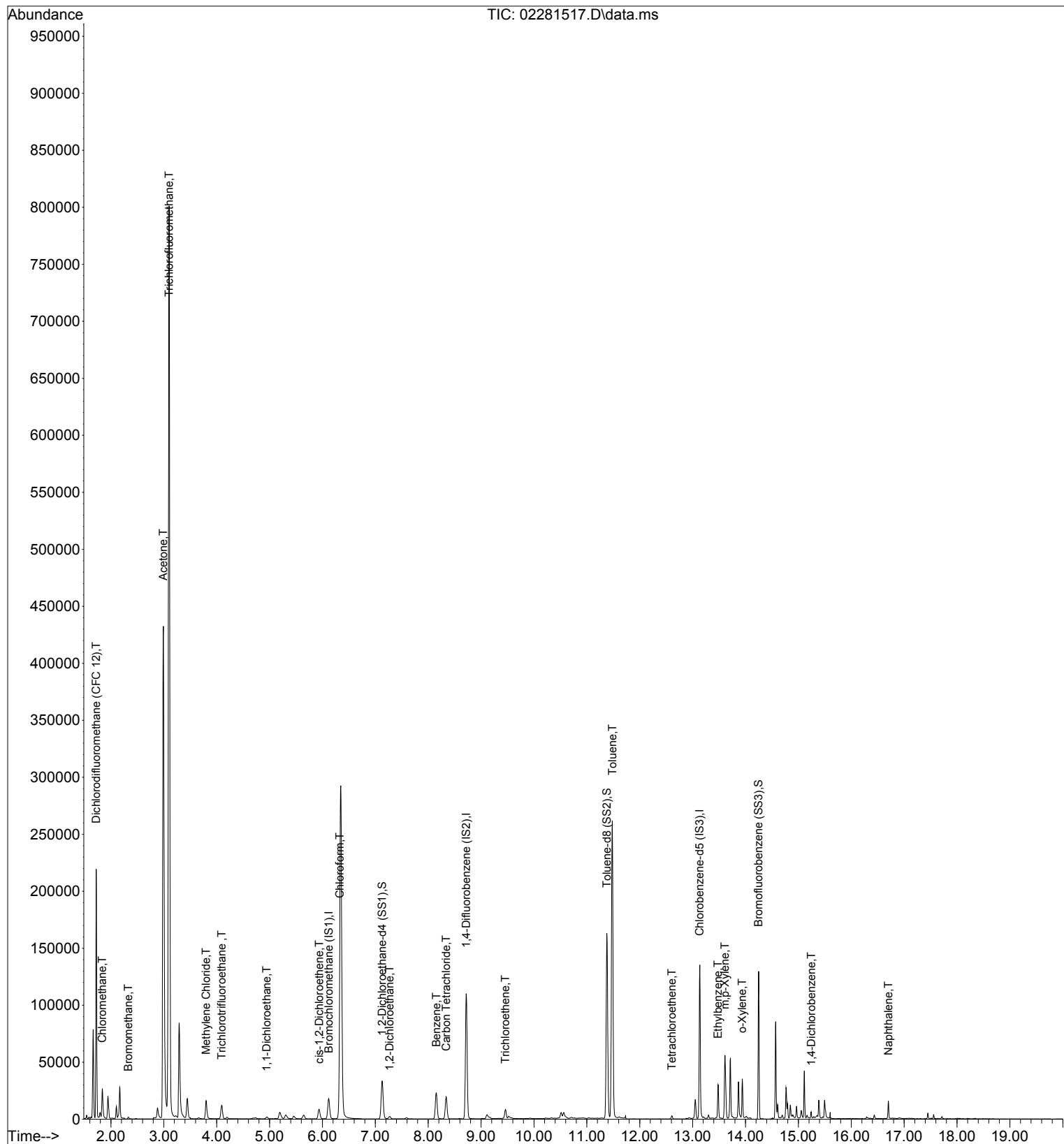
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 02\28\02281517.D

Acq On : 28 Feb 2015 11:03

Operator: WA

Sample : P1500729-012 (1000mL)

Misc : S29-02041502

ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 28 11:32:51 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

2/28/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.12	130	27097	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	207272	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	32431	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.13	65	59433	898.139	pg	0.00
Spiked Amount 1000.000			Recovery	=	89.81%	
30) Toluene-d8 (SS2)	11.38	98	183296	958.947	pg	0.00
Spiked Amount 1000.000			Recovery	=	95.90%	
40) Bromofluorobenzene (SS3)	14.25	174	78085	1192.616	pg	0.00
Spiked Amount 1000.000			Recovery	=	119.26%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.72	85	158065	1435.355	pg	100
3) Chloromethane	1.84	52	9166	416.792	pg	94
5) Bromomethane	2.33	94	1191	24.052	pg	96
7) Acetone	2.99	58	182849	4702.071	pg	90
8) Trichlorofluoromethane	3.10	101	851359	9000.443	pg	100
10) Methylene Chloride	3.80	84	11404	254.078	pg	92
11) Trichlorotrifluoroethane	4.09	151	15446	355.369	pg	99
13) 1,1-Dichloroethane	4.95	63	2419	31.249	pg	73
15) cis-1,2-Dichloroethene	5.94	96	7858	163.876	pg	99
16) Chloroform	6.33	83	18586	223.716	pg	100
18) 1,2-Dichloroethane	7.27	62	3202	48.406	pg	99
20) Benzene	8.15	78	44048	257.781	pg	100
21) Carbon Tetrachloride	8.34	117	24112	398.656	pg	99
25) Trichloroethene	9.46	130	5678	106.630	pg	99
31) Toluene	11.48	91	295706	1454.589	pg	99
33) Tetrachloroethene	12.61	166	2494	39.622	pg	98
36) Ethylbenzene	13.48	91	29117	143.173	pg	99
37) m,p-Xylene	13.61	91	58732	351.380	pg	97
38) o-Xylene	13.94	106	13053	159.791	pg	98
42) 1,4-Dichlorobenzene	15.24	146	3112	27.768	pg	99
45) Naphthalene	16.70	128	15169	74.752	pg	95

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\28\02281517.D

Acq On : 28 Feb 2015 11:03

Operator: WA

Sample : P1500729-012 (1000mL)

Misc : S29-02041502

ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 28 11:32:51 2015

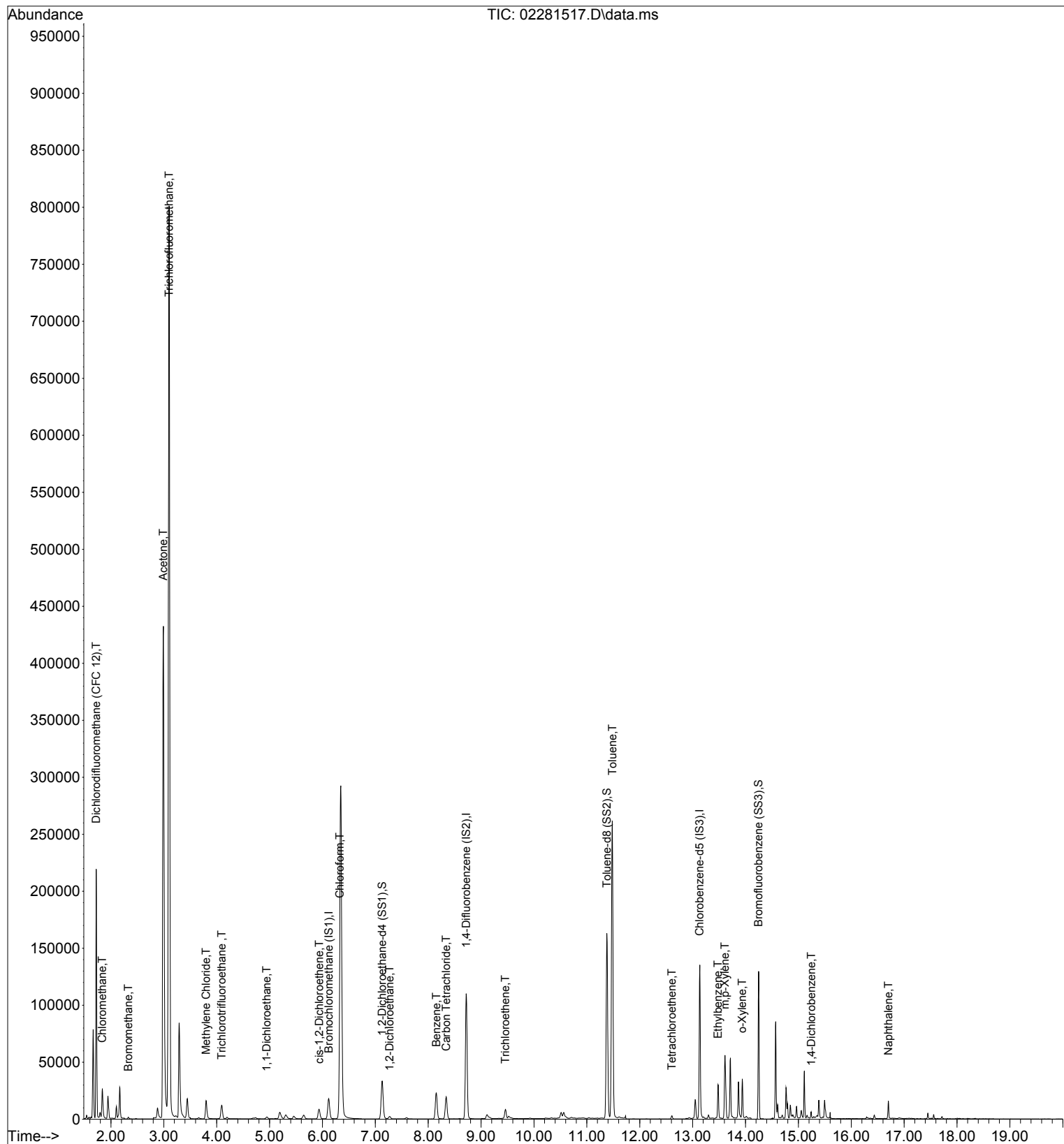
Quant Method : I:\MS19\METHODS\X19021115.M

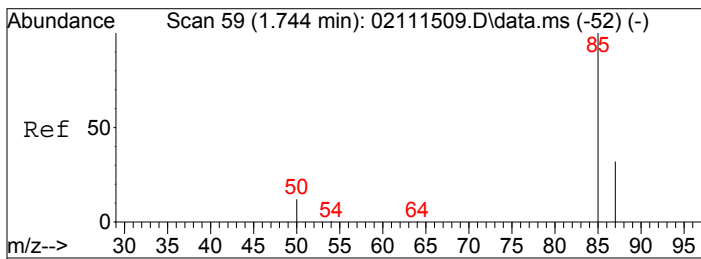
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

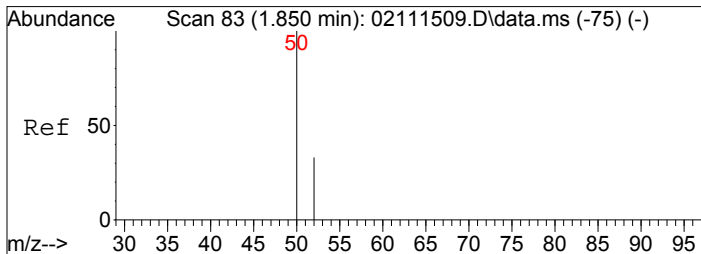
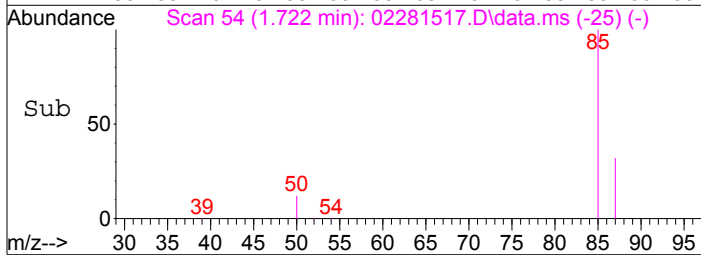
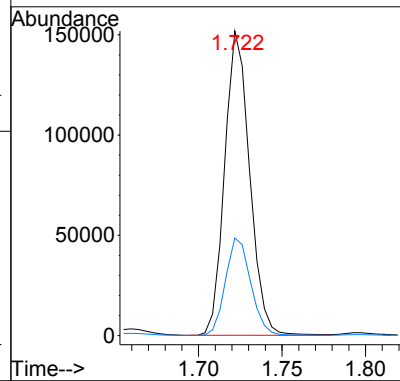
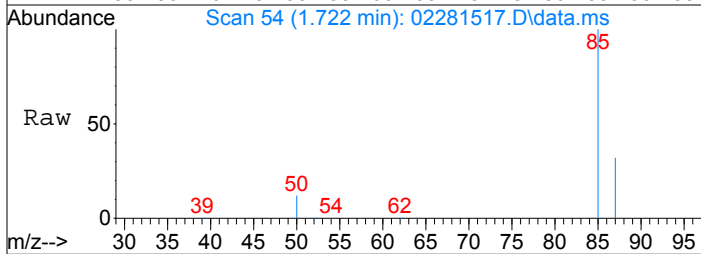
DataAcq Meth:TO15SIM.M





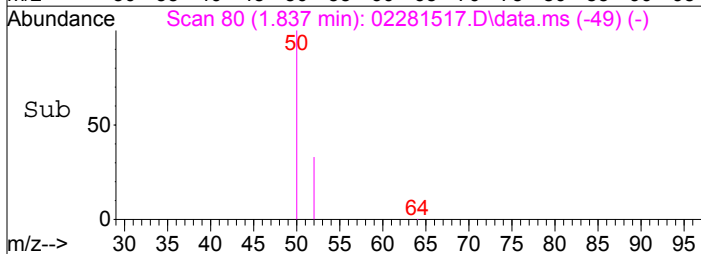
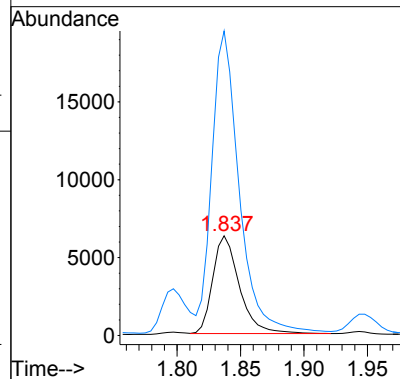
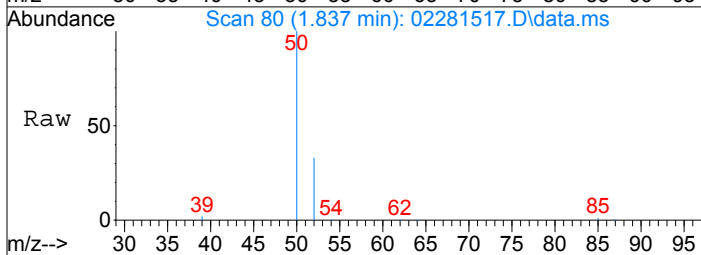
#2
 Dichlorodifluoromethane (CFC 12)
 Concen: 1435.35 pg
 RT: 1.72 min Scan# 54
 Delta R.T. -0.022 min
 Lab File: 02281517.D
 Acq: 28 Feb 2015 11:03

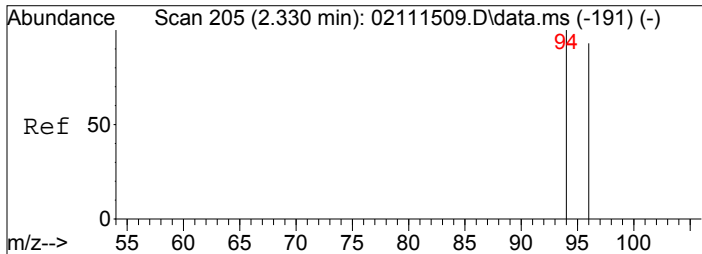
Tgt Ion: 85 Resp: 158065
 Ion Ratio Lower Upper
 85 100
 87 32.5 12.4 52.4



#3
 Chloromethane
 Concen: 416.79 pg
 RT: 1.84 min Scan# 80
 Delta R.T. -0.013 min
 Lab File: 02281517.D
 Acq: 28 Feb 2015 11:03

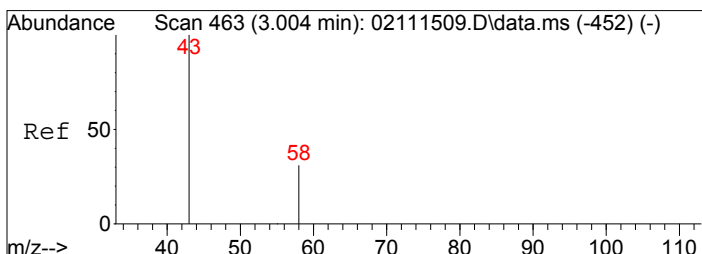
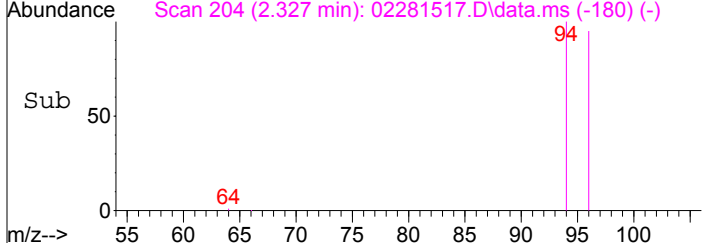
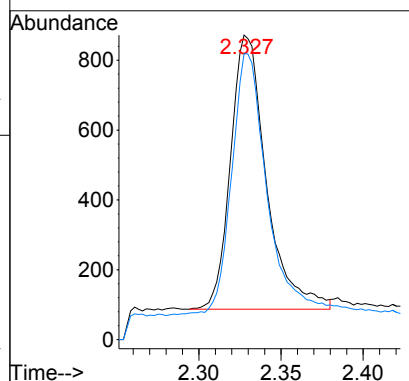
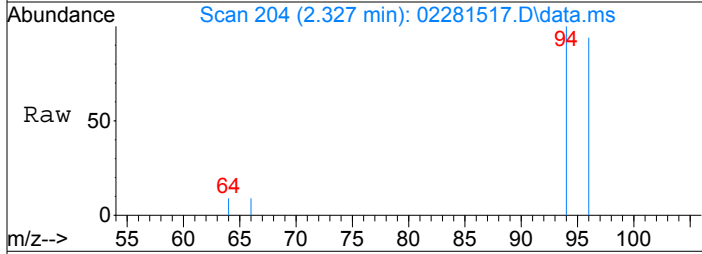
Tgt Ion: 52 Resp: 9166
 Ion Ratio Lower Upper
 52 100
 50 314.6 283.7 323.7





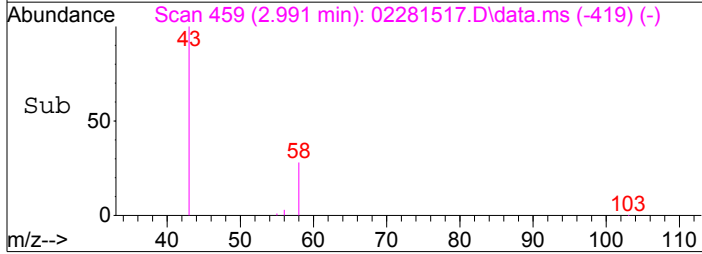
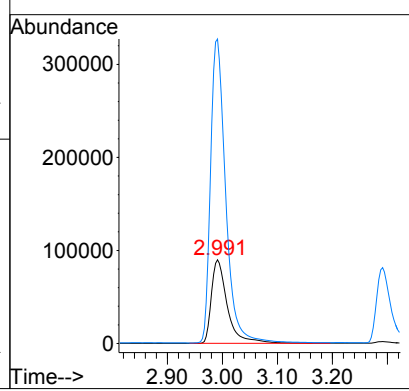
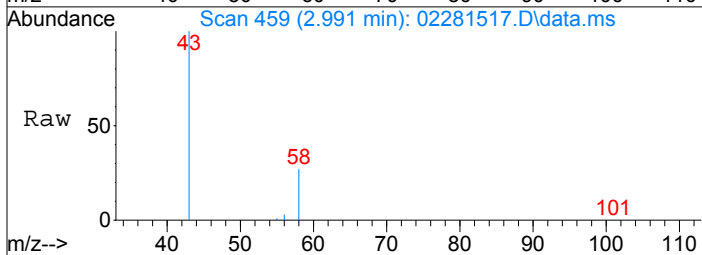
#5
 Bromomethane
 Concen: 24.05 pg
 RT: 2.33 min Scan# 204
 Delta R.T. -0.003 min
 Lab File: 02281517.D
 Acq: 28 Feb 2015 11:03

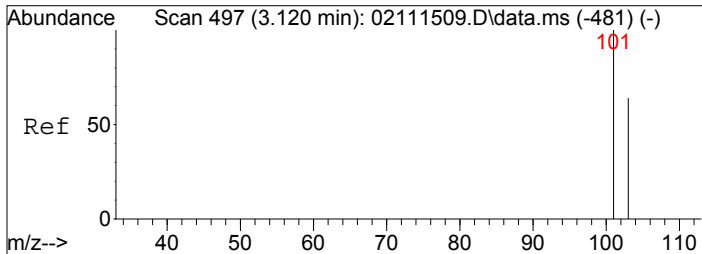
Tgt Ion:	94	Resp:	1191
Ion Ratio	Lower	Upper	
94	100		
96	98.7	75.5	113.3



#7
 Acetone
 Concen: 4702.07 pg
 RT: 2.99 min Scan# 459
 Delta R.T. -0.013 min
 Lab File: 02281517.D
 Acq: 28 Feb 2015 11:03

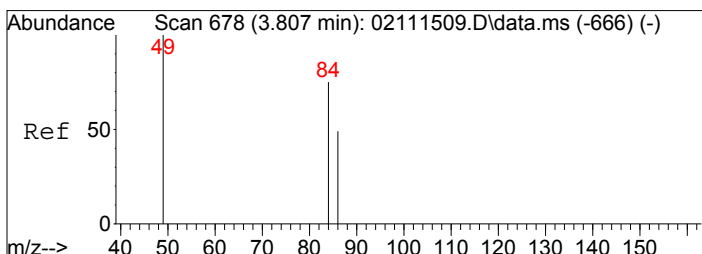
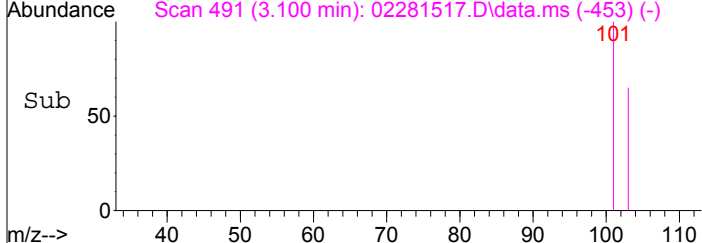
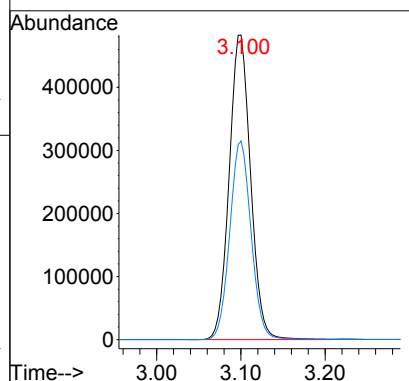
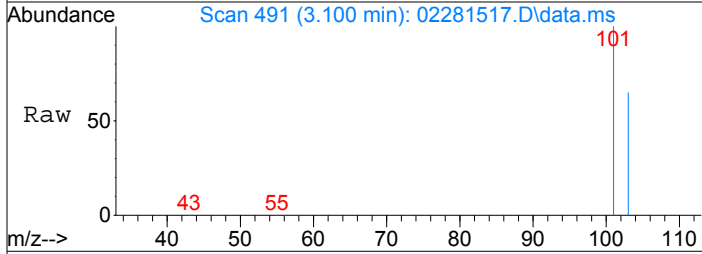
Tgt Ion:	58	Resp:	182849
Ion Ratio	Lower	Upper	
58	100		
43	341.6	301.8	341.8





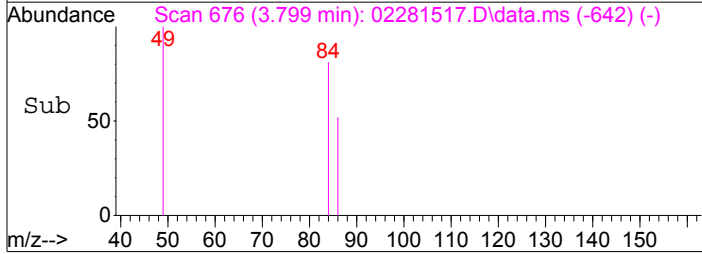
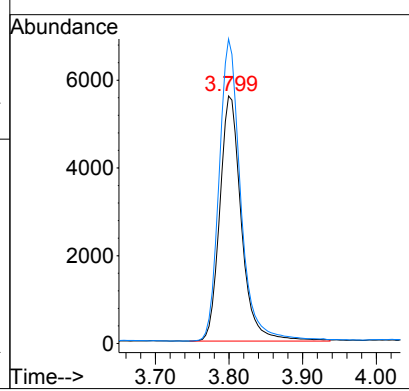
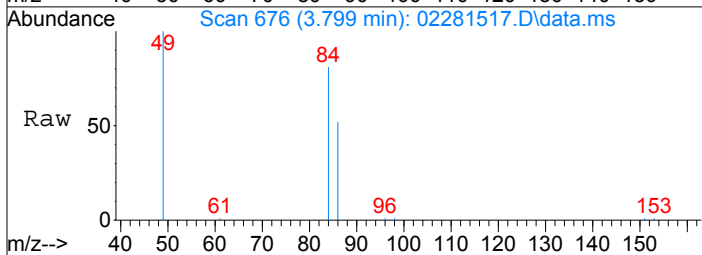
#8
 Trichlorofluoromethane
 Concen: 9000.44 pg
 RT: 3.10 min Scan# 491
 Delta R.T. -0.019 min
 Lab File: 02281517.D
 Acq: 28 Feb 2015 11:03

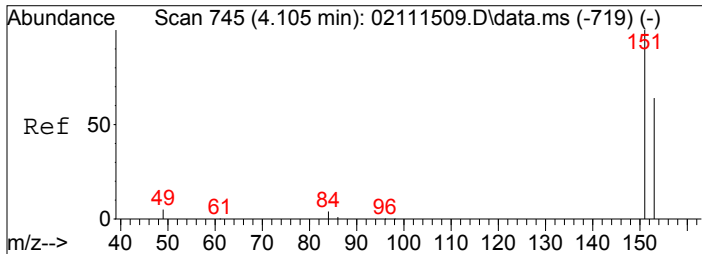
Tgt Ion:101	Resp:	851359
Ion Ratio	Lower	Upper
101	100	
103	64.8	51.8 77.6



#10
 Methylene Chloride
 Concen: 254.08 pg
 RT: 3.80 min Scan# 676
 Delta R.T. -0.008 min
 Lab File: 02281517.D
 Acq: 28 Feb 2015 11:03

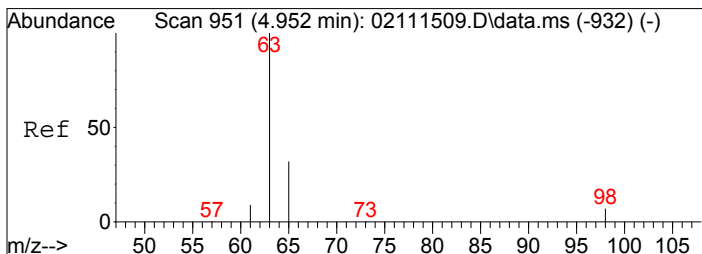
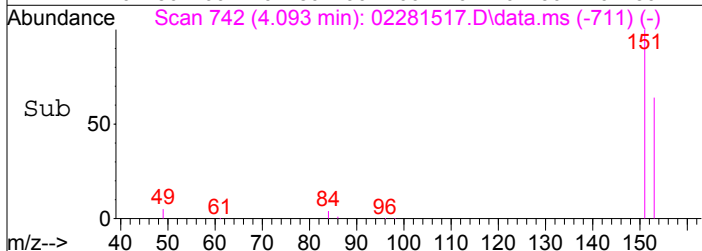
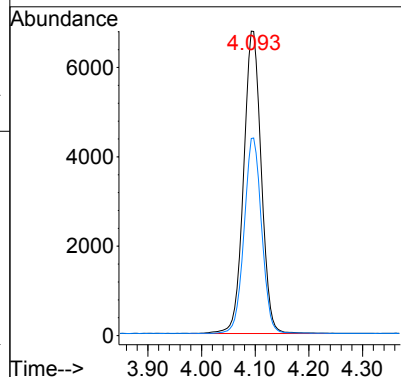
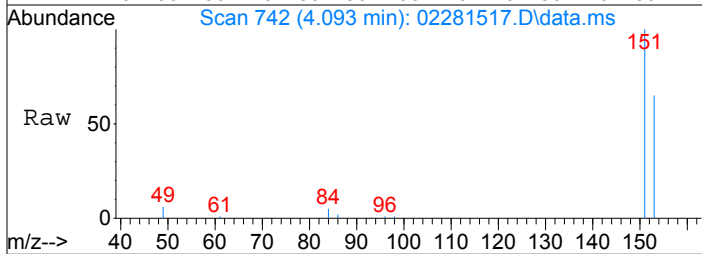
Tgt Ion: 84	Resp:	11404
Ion Ratio	Lower	Upper
84	100	
49	123.4	112.3 152.3





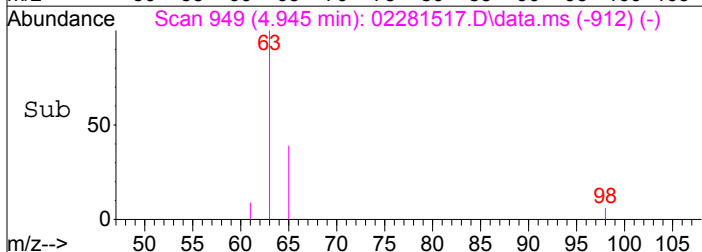
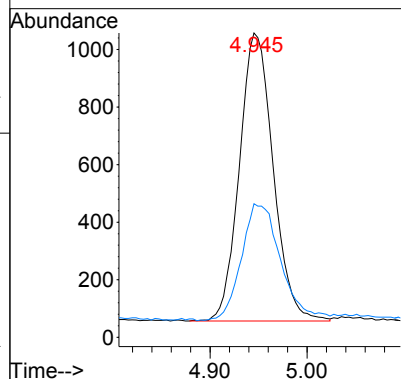
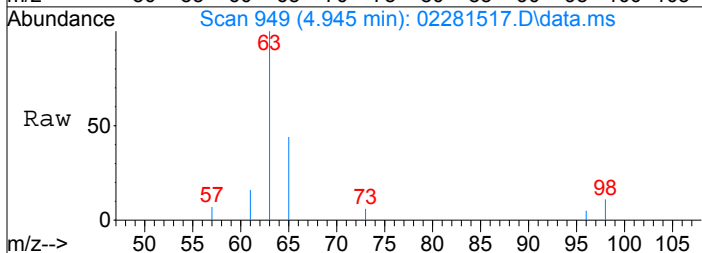
#11
 Trichlorotrifluoroethane
 Concen: 355.37 pg
 RT: 4.09 min Scan# 742
 Delta R.T. -0.012 min
 Lab File: 02281517.D
 Acq: 28 Feb 2015 11:03

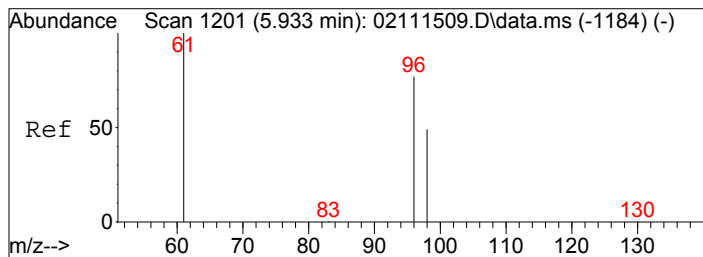
Tgt Ion: 151 Resp: 15446
 Ion Ratio Lower Upper
 151 100
 153 64.2 43.6 83.6



#13
 1,1-Dichloroethane
 Concen: 31.25 pg
 RT: 4.95 min Scan# 949
 Delta R.T. -0.007 min
 Lab File: 02281517.D
 Acq: 28 Feb 2015 11:03

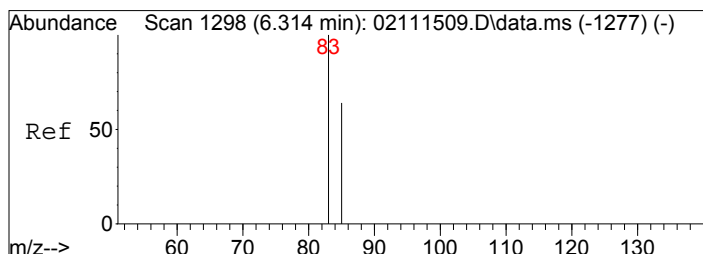
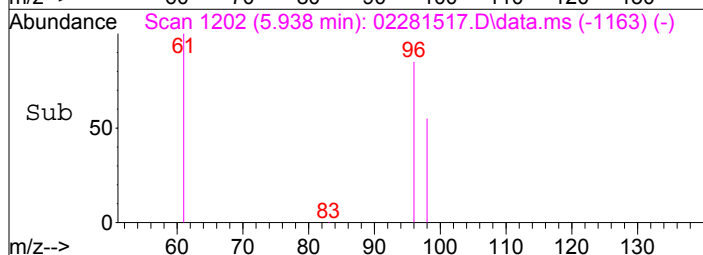
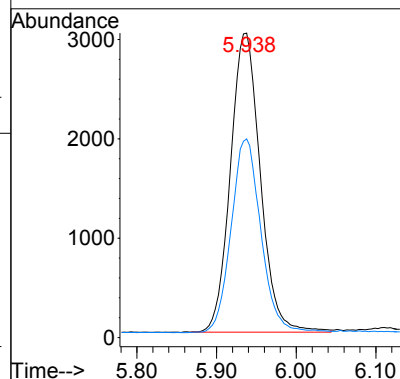
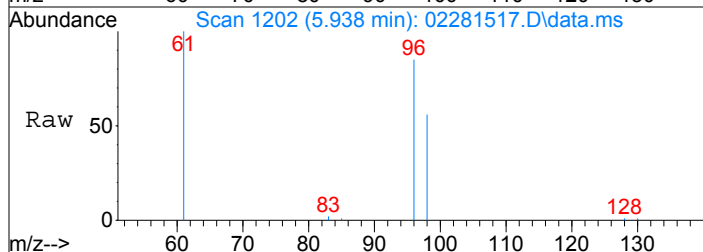
Tgt Ion: 63 Resp: 2419
 Ion Ratio Lower Upper
 63 100
 65 47.1 12.2 52.2





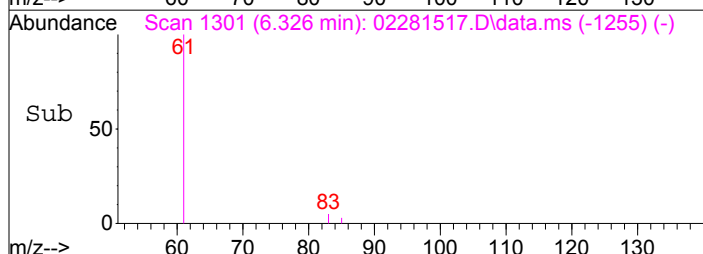
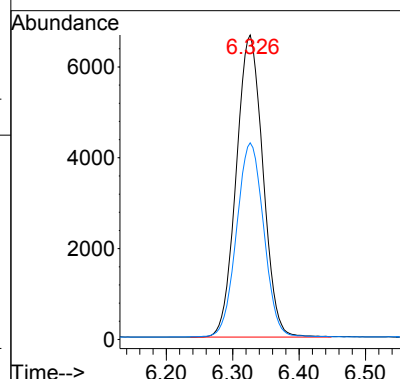
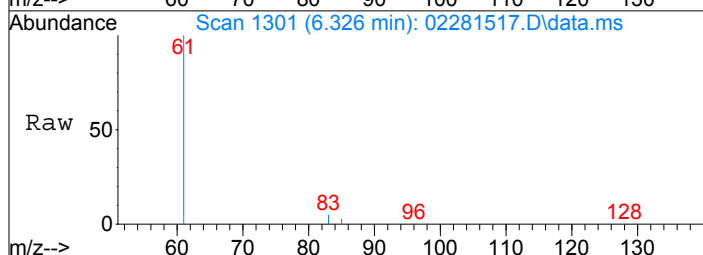
#15
 cis-1,2-Dichloroethene
 Concen: 163.88 pg
 RT: 5.94 min Scan# 1202
 Delta R.T. 0.005 min
 Lab File: 02281517.D
 Acq: 28 Feb 2015 11:03

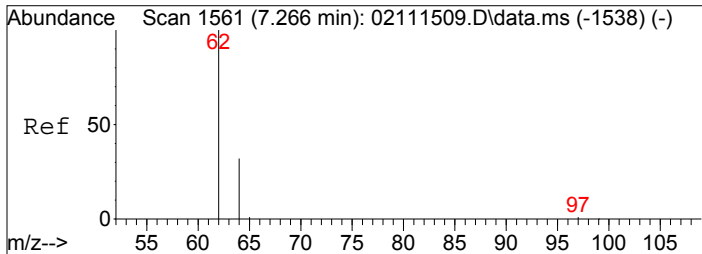
Tgt Ion: 96 Resp: 7858
 Ion Ratio Lower Upper
 96 100
 98 64.8 44.3 84.3



#16
 Chloroform
 Concen: 223.72 pg
 RT: 6.33 min Scan# 1301
 Delta R.T. 0.012 min
 Lab File: 02281517.D
 Acq: 28 Feb 2015 11:03

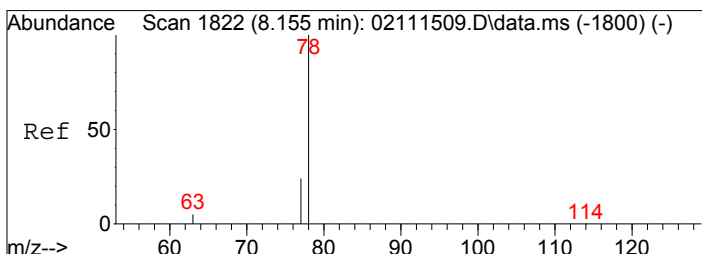
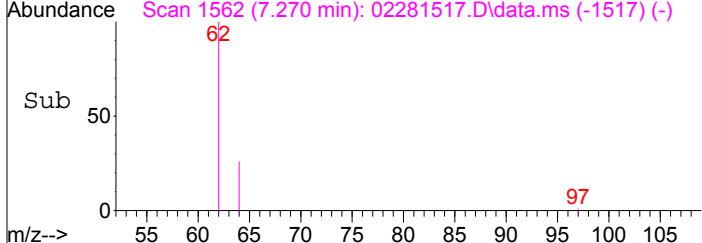
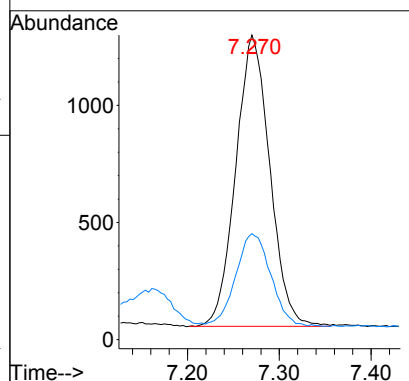
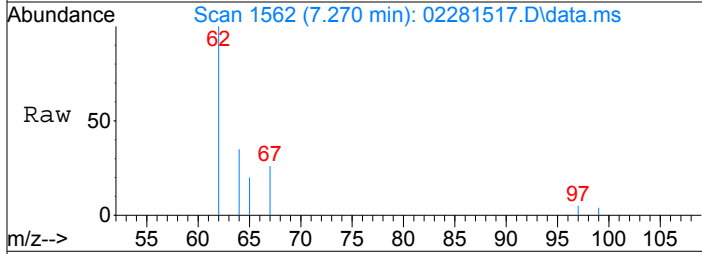
Tgt Ion: 83 Resp: 18586
 Ion Ratio Lower Upper
 83 100
 85 65.5 45.4 85.4





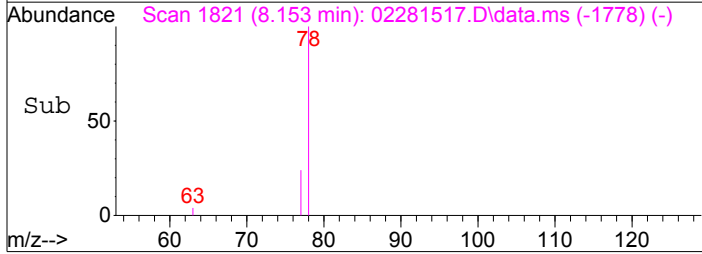
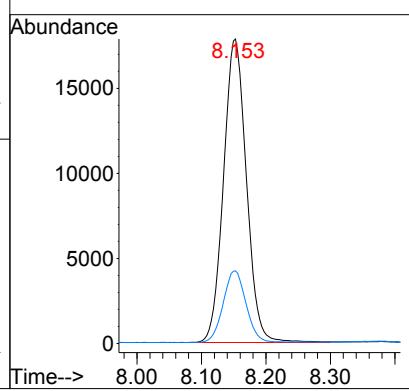
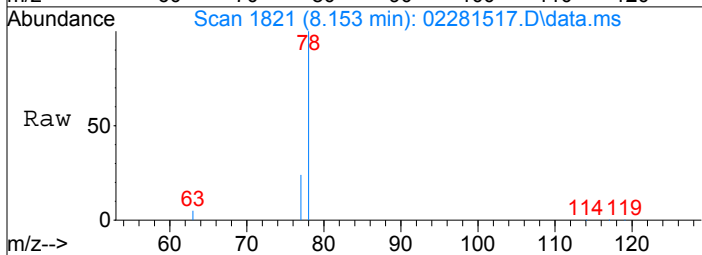
#18
 1,2-Dichloroethane
 Concen: 48.41 pg
 RT: 7.27 min Scan# 1562
 Delta R.T. 0.004 min
 Lab File: 02281517.D
 Acq: 28 Feb 2015 11:03

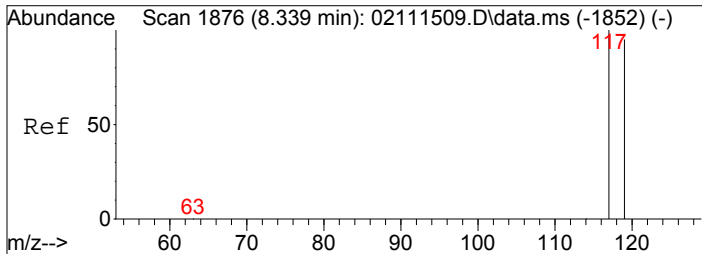
Tgt Ion:	62	Resp:	3202
Ion Ratio	Lower	Upper	
62	100		
64	32.3	11.6	51.6



#20
 Benzene
 Concen: 257.78 pg
 RT: 8.15 min Scan# 1821
 Delta R.T. -0.002 min
 Lab File: 02281517.D
 Acq: 28 Feb 2015 11:03

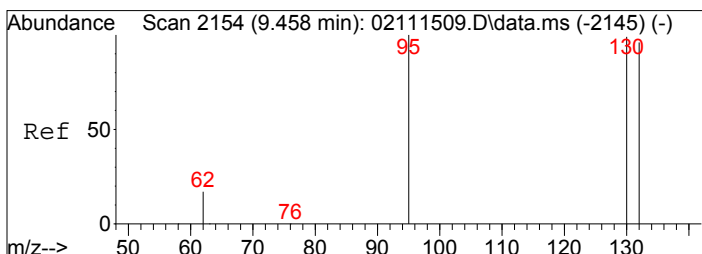
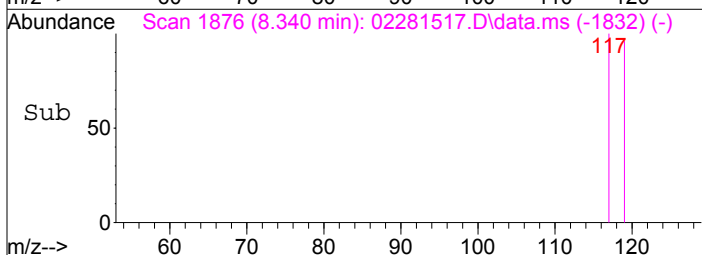
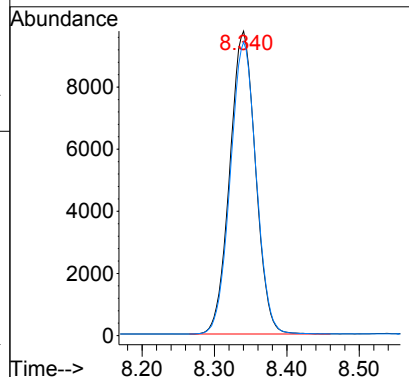
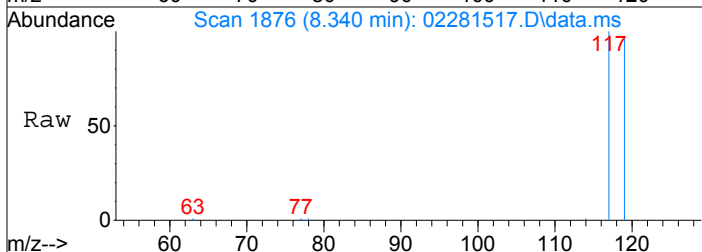
Tgt Ion:	78	Resp:	44048
Ion Ratio	Lower	Upper	
78	100		
77	23.6	3.7	43.7





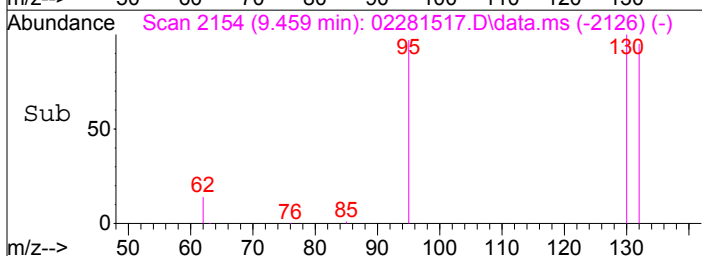
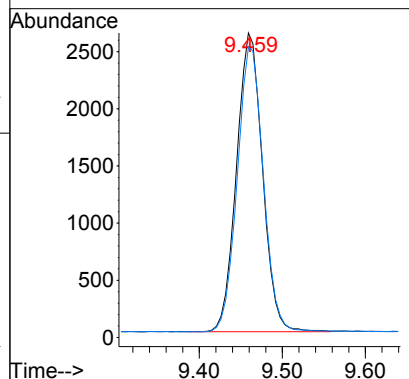
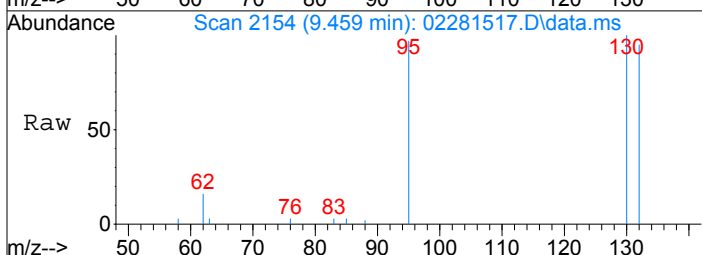
#21
Carbon Tetrachloride
Concen: 398.66 pg
RT: 8.34 min Scan# 1876
Delta R.T. 0.001 min
Lab File: 02281517.D
Acq: 28 Feb 2015 11:03

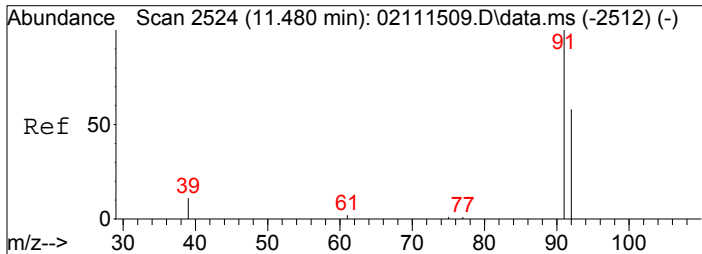
Tgt Ion:117 Resp: 24112
Ion Ratio Lower Upper
117 100
119 96.4 75.5 115.5



#25
Trichloroethene
Concen: 106.63 pg
RT: 9.46 min Scan# 2154
Delta R.T. 0.001 min
Lab File: 02281517.D
Acq: 28 Feb 2015 11:03

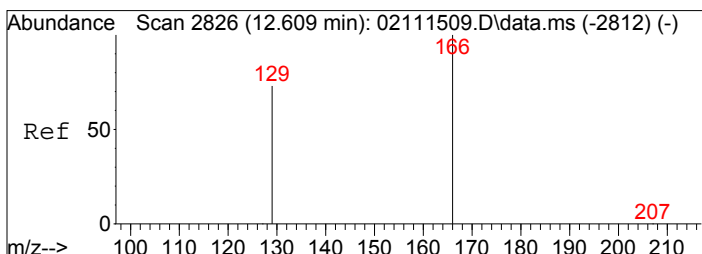
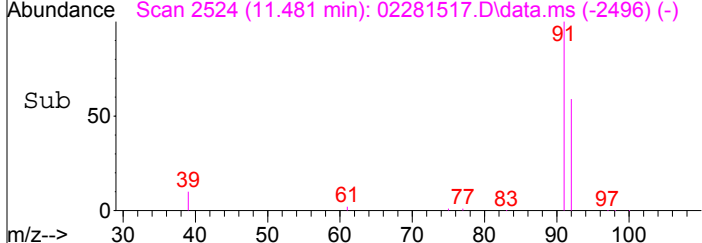
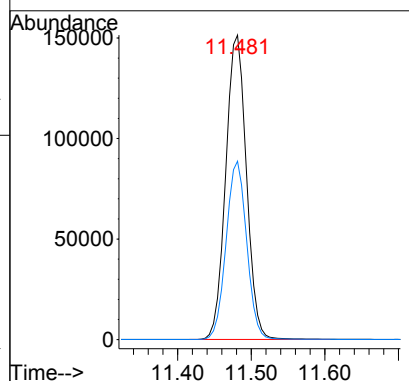
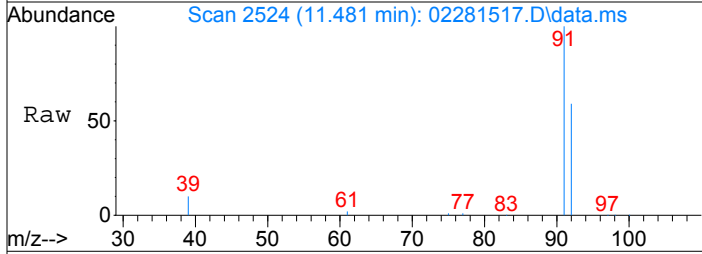
Tgt Ion:130 Resp: 5678
Ion Ratio Lower Upper
130 100
132 96.1 77.1 117.1





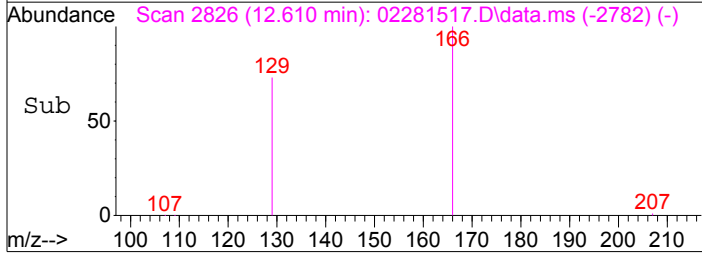
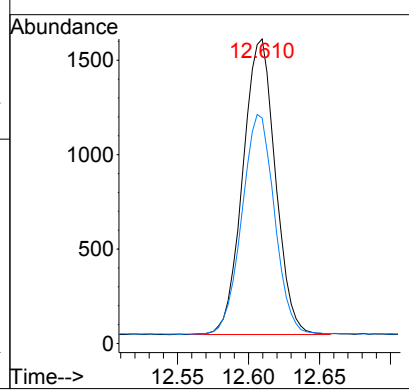
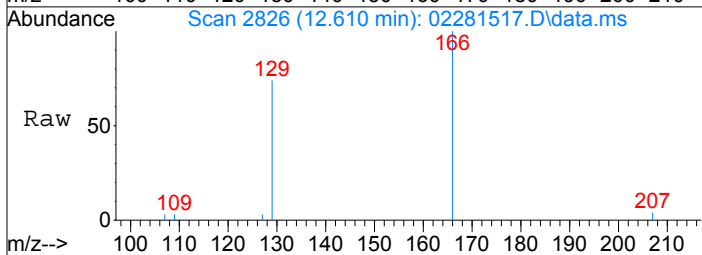
#31
Toluene
Concen: 1454.59 pg
RT: 11.48 min Scan# 2524
Delta R.T. 0.001 min
Lab File: 02281517.D
Acq: 28 Feb 2015 11:03

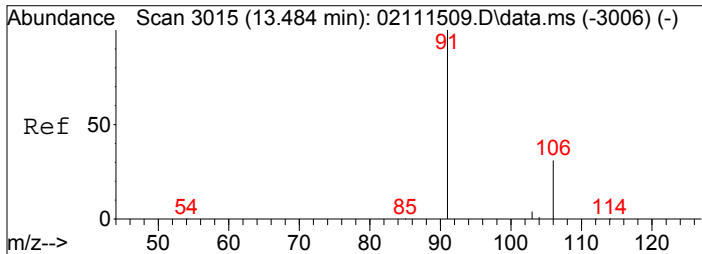
Tgt Ion:	91	Resp:	295706
Ion Ratio	Lower	Upper	
91	100		
92	58.2	37.7	77.7



#33
Tetrachloroethene
Concen: 39.62 pg
RT: 12.61 min Scan# 2826
Delta R.T. 0.001 min
Lab File: 02281517.D
Acq: 28 Feb 2015 11:03

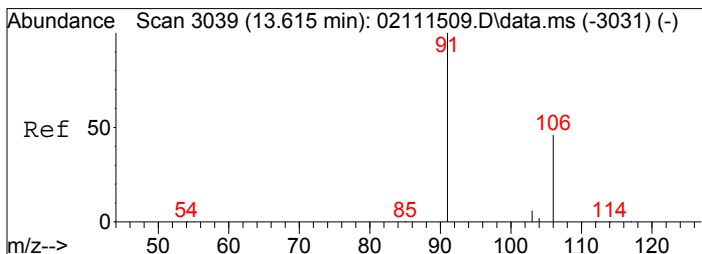
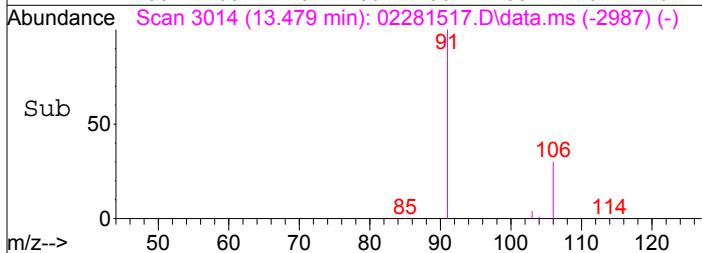
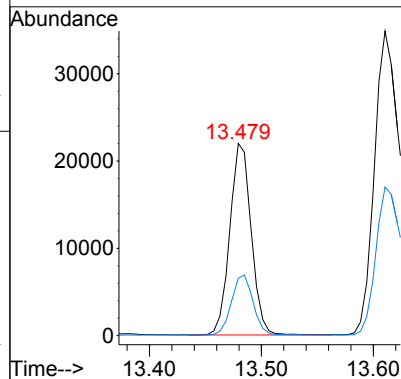
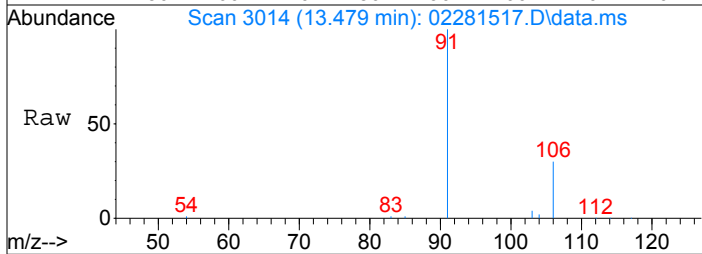
Tgt Ion:	166	Resp:	2494
Ion Ratio	Lower	Upper	
166	100		
129	74.7	53.3	93.3





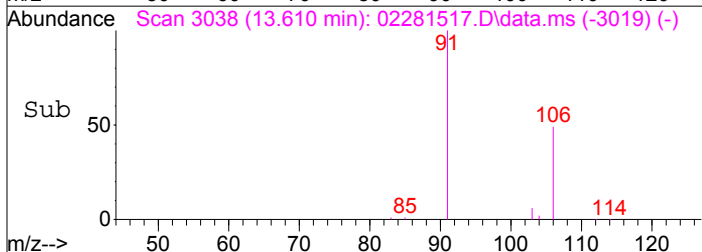
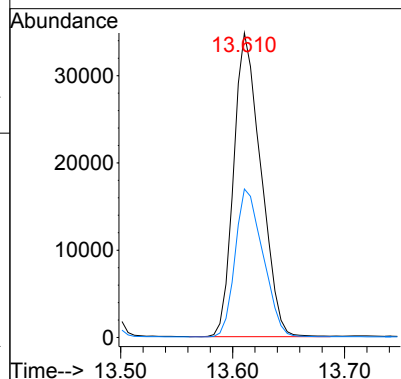
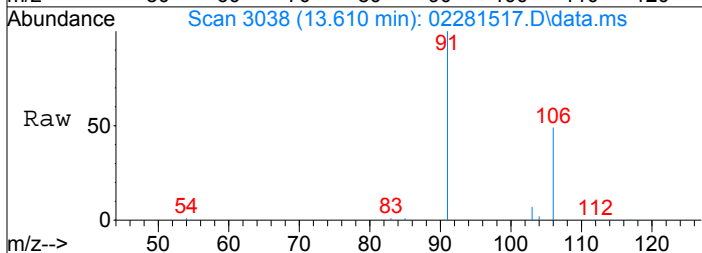
#36
Ethylbenzene
Concen: 143.17 pg
RT: 13.48 min Scan# 3014
Delta R.T. -0.004 min
Lab File: 02281517.D
Acq: 28 Feb 2015 11:03

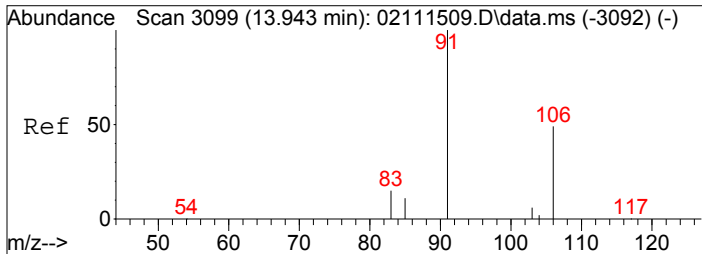
Tgt Ion: 91 Resp: 29117
Ion Ratio Lower Upper
91 100
106 31.7 10.9 50.9



#37
m,p-Xylene
Concen: 351.38 pg
RT: 13.61 min Scan# 3038
Delta R.T. -0.004 min
Lab File: 02281517.D
Acq: 28 Feb 2015 11:03

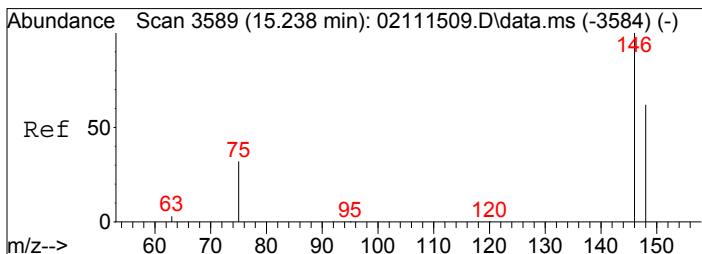
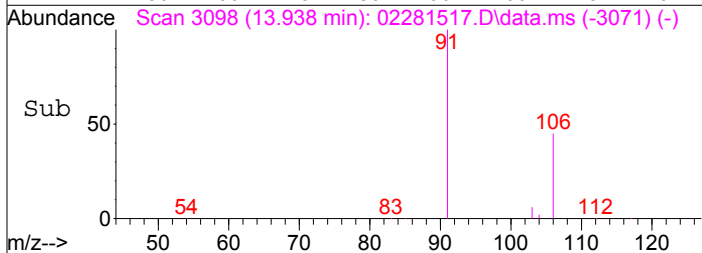
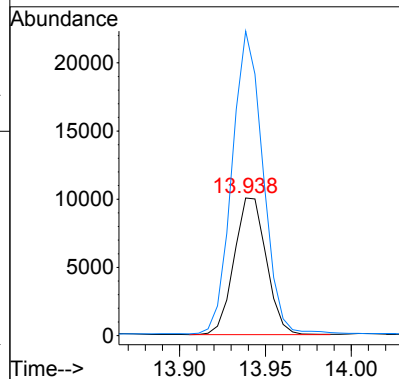
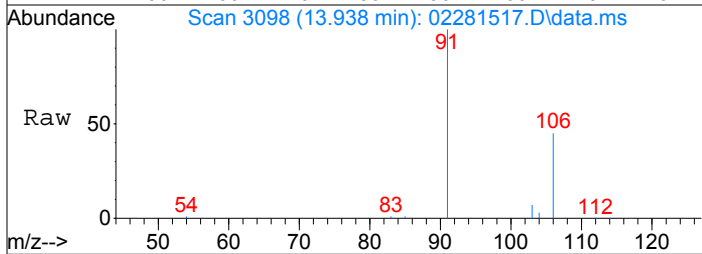
Tgt Ion: 91 Resp: 58732
Ion Ratio Lower Upper
91 100
106 49.8 27.5 67.5





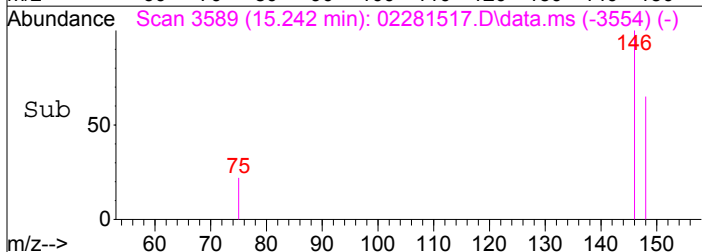
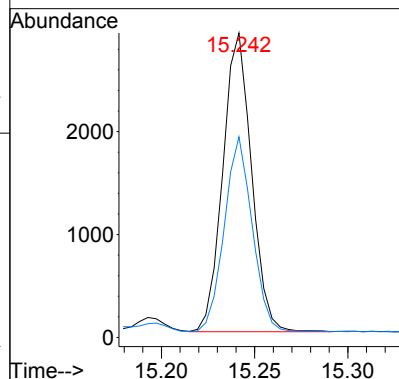
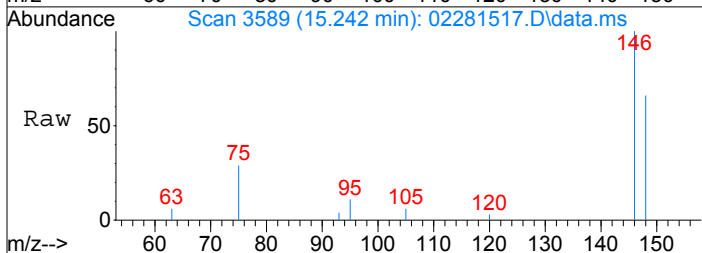
#38
o-Xylene
Concen: 159.79 pg
RT: 13.94 min Scan# 3098
Delta R.T. -0.004 min
Lab File: 02281517.D
Acq: 28 Feb 2015 11:03

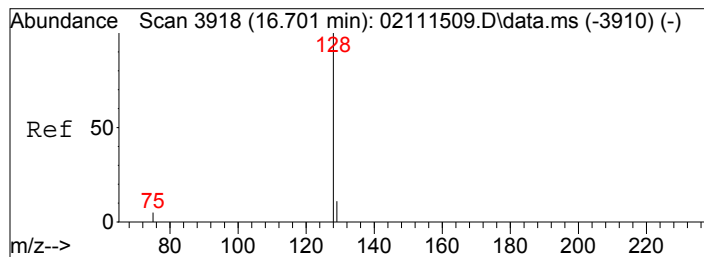
Tgt Ion:106 Resp: 13053
Ion Ratio Lower Upper
106 100
91 214.4 198.3 238.3



#42
1,4-Dichlorobenzene
Concen: 27.77 pg
RT: 15.24 min Scan# 3589
Delta R.T. 0.004 min
Lab File: 02281517.D
Acq: 28 Feb 2015 11:03

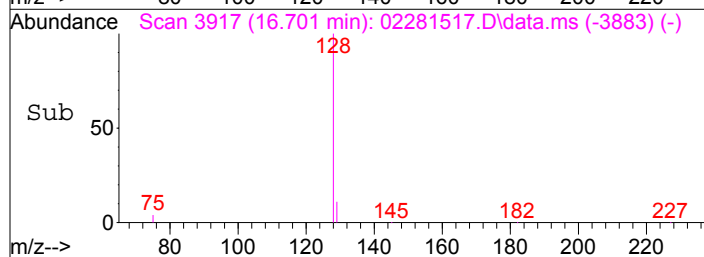
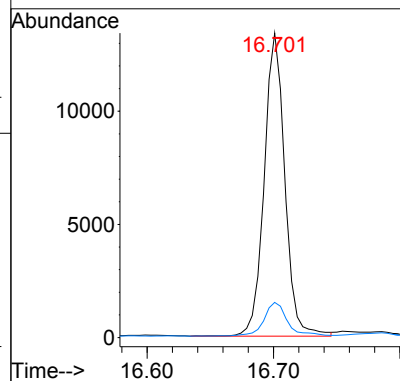
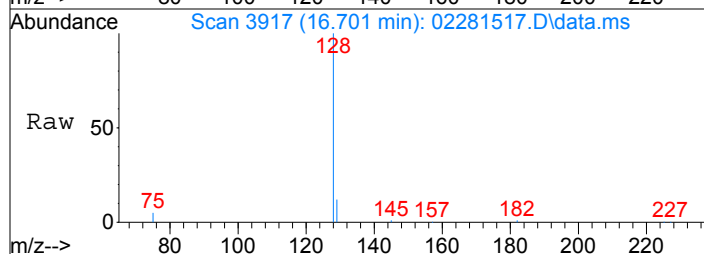
Tgt Ion:146 Resp: 3112
Ion Ratio Lower Upper
146 100
148 64.1 43.5 83.5





#45
Naphthalene
Concen: 74.75 pg
RT: 16.70 min Scan# 3917
Delta R.T. -0.000 min
Lab File: 02281517.D
Acq: 28 Feb 2015 11:03

Tgt Ion:128	Resp:	15169
Ion Ratio	Lower	Upper
128	100	
129	12.8	0.0 30.9



Data File: I:\MS19\DATA\2015 02\28\02281518.D

Acq On : 28 Feb 2015 11:30

Operator: WA

Sample : P1500729-013 (1000mL)

Misc : S29-02041502

ALS Vial : 8 Sample Multiplier: 1

Quant Time: Mar 02 10:55:00 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

3/2/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.13	130	28135	1000.000	pg	0.01
22) 1,4-Difluorobenzene (IS2)	8.72	114	197010	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	32579	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.13	65	58608	852.996	pg	0.01
Spiked Amount 1000.000			Recovery	=	85.30%	
30) Toluene-d8 (SS2)	11.38	98	185137	1019.031	pg	0.00
Spiked Amount 1000.000			Recovery	=	101.90%	
40) Bromofluorobenzene (SS3)	14.25	174	79846	1213.972	pg	0.00
Spiked Amount 1000.000			Recovery	=	121.40%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.73	85	174348	1524.807	pg	100
3) Chloromethane	1.84	52	10711	469.077	pg	95
4) Vinyl Chloride	2.01	62	234	N.D.		
5) Bromomethane	2.33	94	1760	34.231	pg	99
6) Chloroethane	2.47	64	1496	34.585	pg	99
7) Acetone	3.00	58	322154	7978.742	pg	# 53
8) Trichlorofluoromethane	3.11	101	776064	7901.745	pg	100
9) 1,1-Dichloroethene	3.67	96	136	N.D.		
10) Methylene Chloride	3.81	84	11633	249.618	pg	95
11) Trichlorotrifluoroethane	4.10	151	15129	335.234	pg	100
12) trans-1,2-Dichloroethene	4.75	96	261	N.D.		
13) 1,1-Dichloroethane	4.96	63	422	N.D.		
14) Methyl tert-Butyl Ether	0.00	73	0	N.D.	d	
15) cis-1,2-Dichloroethene	5.95	96	5126	102.957	pg	99
16) Chloroform	6.33	83	6099	70.704	pg	99
18) 1,2-Dichloroethane	7.27	62	3145	45.790	pg	98
19) 1,1,1-Trichloroethane	7.59	97	1484	N.D.		
20) Benzene	8.16	78	40155	226.328	pg	99
21) Carbon Tetrachloride	8.34	117	18778	299.012	pg	99
23) 1,2-Dichloropropane	9.16	63	1396	32.489	pg	# 71
24) Bromodichloromethane	9.42	83	563	N.D.		
25) Trichloroethene	9.46	130	2322	45.878	pg	99
26) 1,4-Dioxane	0.00	88	0	N.D.	d	
27) cis-1,3-Dichloropropene	10.47	75	349	N.D.		
28) trans-1,3-Dichloropropene	11.05	75	295	N.D.		
29) 1,1,2-Trichloroethane	11.20	83	277	N.D.		
31) Toluene	11.48	91	138871	718.694	pg	99
32) 1,2-Dibromoethane	12.13	107	122	N.D.		
33) Tetrachloroethene	12.61	166	1696	28.347	pg	100
35) Chlorobenzene	13.17	112	914	N.D.		
36) Ethylbenzene	13.48	91	24925	122.003	pg	99
37) m,p-Xylene	13.61	91	54343	323.644	pg	96
38) o-Xylene	13.94	106	11313	137.861	pg	98
39) 1,1,2,2-Tetrachloroethane	13.97	83	880	N.D.		
41) 1,3-Dichlorobenzene	15.19	146	153	N.D.		
42) 1,4-Dichlorobenzene	15.24	146	2892	25.688	pg	100
43) 1,2-Dichlorobenzene	15.46	146	143	N.D.		
44) 1,2,4-Trichlorobenzene	16.61	182	438	N.D.		
45) Naphthalene	16.70	128	9467	46.441	pg	98
46) Hexachlorobutadiene	16.95	225	22	N.D.		

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\28\02281518.D

Acq On : 28 Feb 2015 11:30

Operator: WA

Sample : P1500729-013 (1000mL)

Misc : S29-02041502

ALS Vial : 8 Sample Multiplier: 1

Quant Time: Mar 02 10:55:00 2015

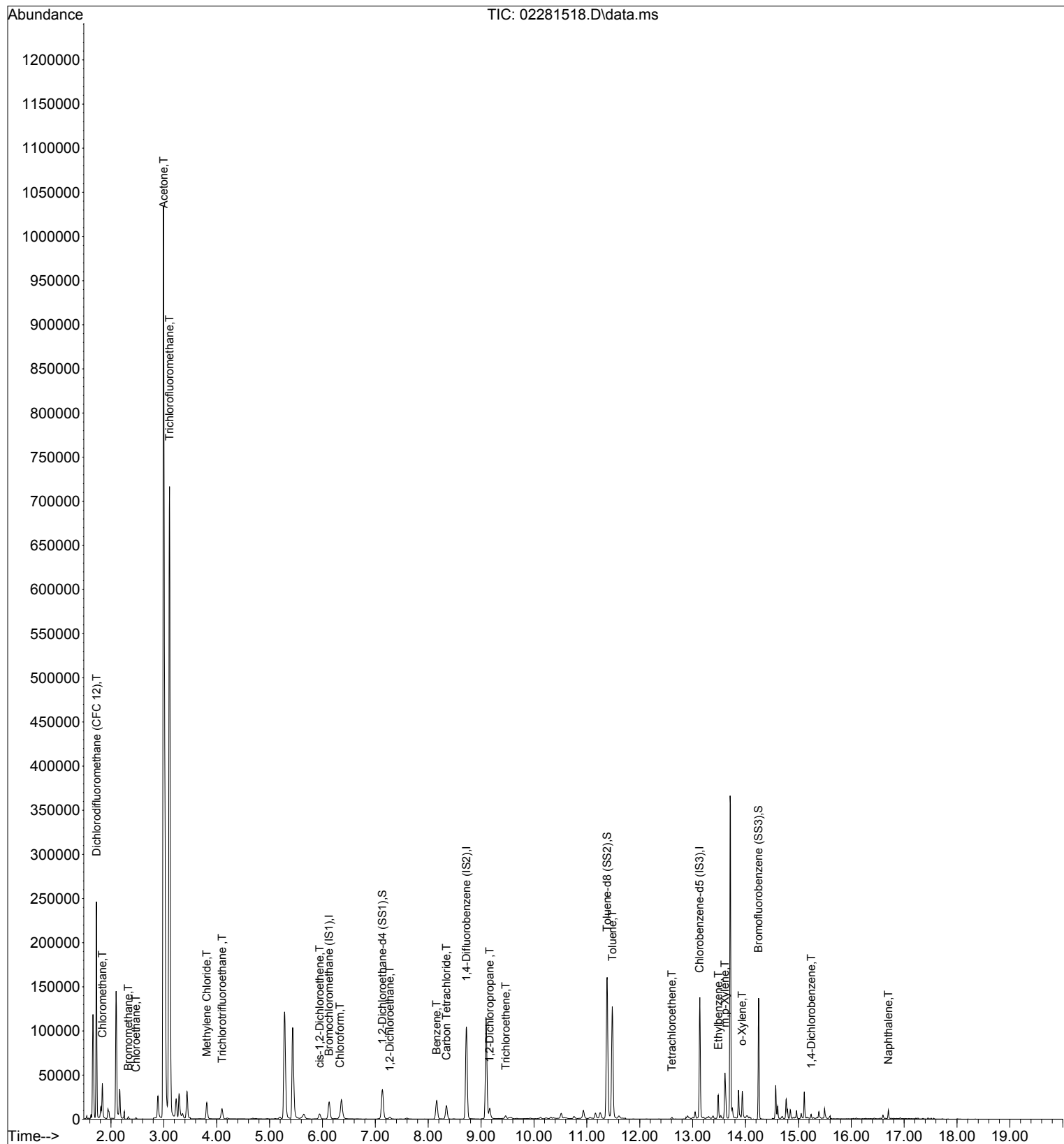
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 02\28\02281518.D

Acq On : 28 Feb 2015 11:30
 Sample : P1500729-013 (1000mL)
 Misc : S29-02041502
 ALS Vial : 8 Sample Multiplier: 1

Operator: WA

Quant Time: Mar 02 10:55:00 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

3/2/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.13	130	28135	1000.000	pg	0.01
22) 1,4-Difluorobenzene (IS2)	8.72	114	197010	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	32579	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.13	65	58608	852.996	pg	0.01
Spiked Amount 1000.000			Recovery	=	85.30%	
30) Toluene-d8 (SS2)	11.38	98	185137	1019.031	pg	0.00
Spiked Amount 1000.000			Recovery	=	101.90%	
40) Bromofluorobenzene (SS3)	14.25	174	79846	1213.972	pg	0.00
Spiked Amount 1000.000			Recovery	=	121.40%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.73	85	174348	1524.807	pg	100
3) Chloromethane	1.84	52	10711	469.077	pg	95
5) Bromomethane	2.33	94	1760	34.231	pg	99
6) Chloroethane	2.47	64	1496	34.585	pg	99
7) Acetone	3.00	58	322154	7978.742	pg	# 53
8) Trichlorofluoromethane	3.11	101	776064	7901.745	pg	100
10) Methylene Chloride	3.81	84	11633	249.618	pg	95
11) Trichlorotrifluoroethane	4.10	151	15129	335.234	pg	100
15) cis-1,2-Dichloroethene	5.95	96	5126	102.957	pg	99
16) Chloroform	6.33	83	6099	70.704	pg	99
18) 1,2-Dichloroethane	7.27	62	3145	45.790	pg	98
20) Benzene	8.16	78	40155	226.328	pg	99
21) Carbon Tetrachloride	8.34	117	18778	299.012	pg	99
23) 1,2-Dichloropropane	9.16	63	1396	32.489	pg	# 71
25) Trichloroethene	9.46	130	2322	45.878	pg	99
31) Toluene	11.48	91	138871	718.694	pg	99
33) Tetrachloroethene	12.61	166	1696	28.347	pg	100
36) Ethylbenzene	13.48	91	24925	122.003	pg	99
37) m,p-Xylene	13.61	91	54343	323.644	pg	96
38) o-Xylene	13.94	106	11313	137.861	pg	98
42) 1,4-Dichlorobenzene	15.24	146	2892	25.688	pg	100
45) Naphthalene	16.70	128	9467	46.441	pg	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File: I:\MS19\DATA\2015 02\28\02281518.D

Acq On : 28 Feb 2015 11:30

Operator: WA

Sample : P1500729-013 (1000mL)

Misc : S29-02041502

ALS Vial : 8 Sample Multiplier: 1

Quant Time: Mar 02 10:55:00 2015

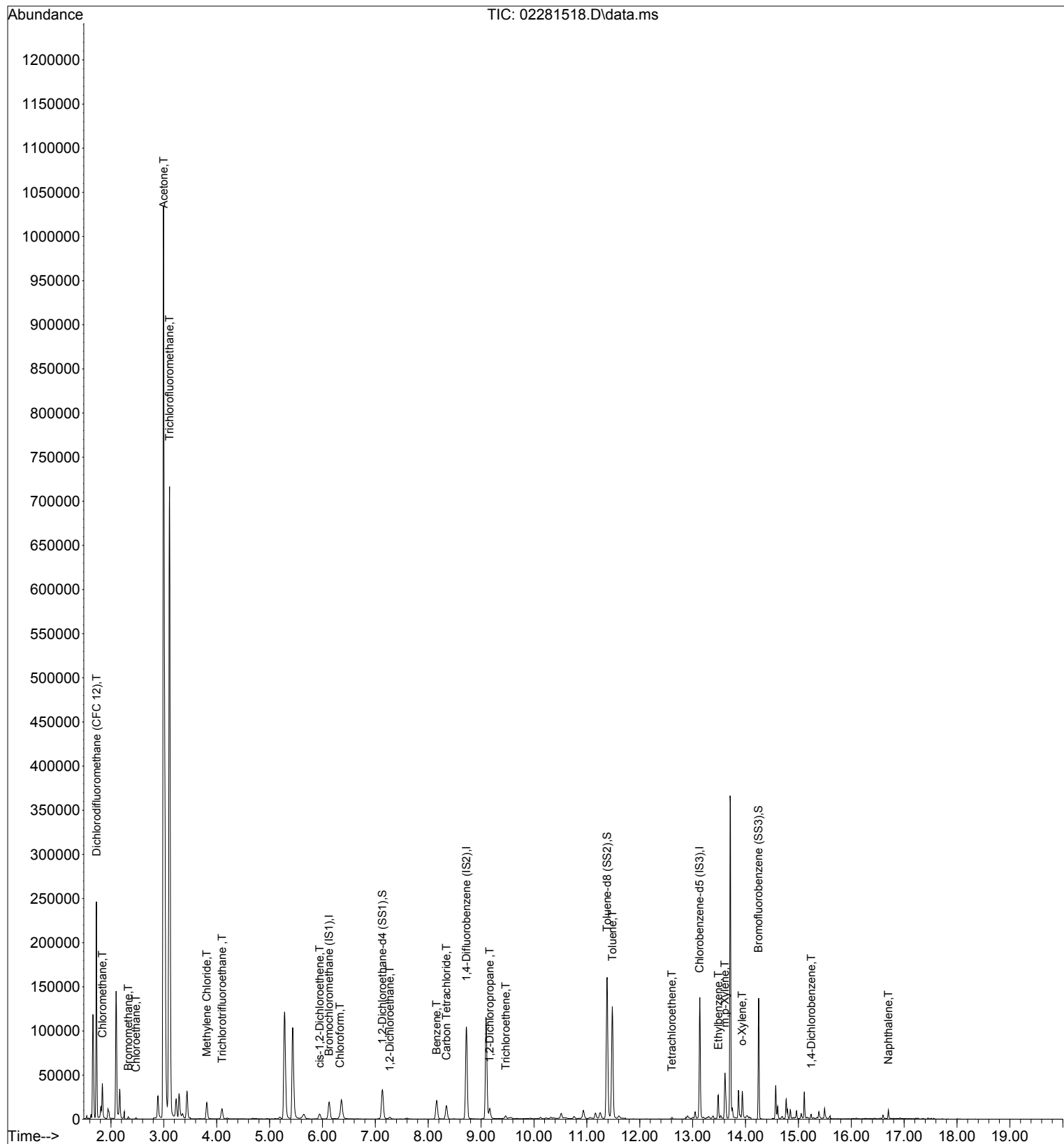
Quant Method : I:\MS19\METHODS\X19021115.M

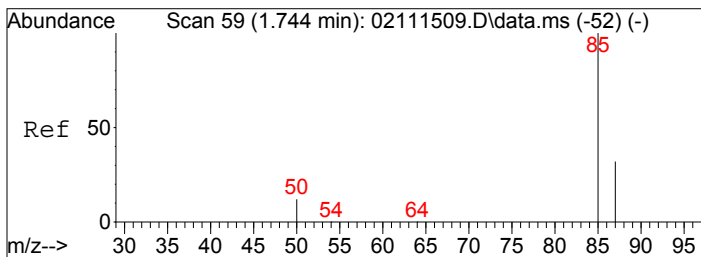
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

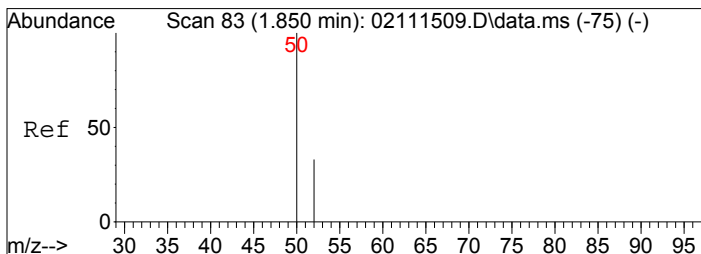
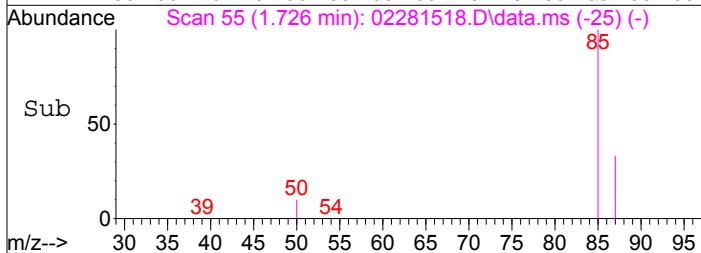
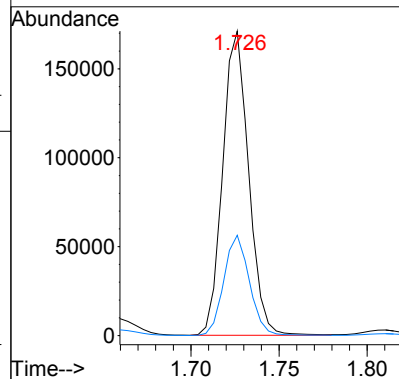
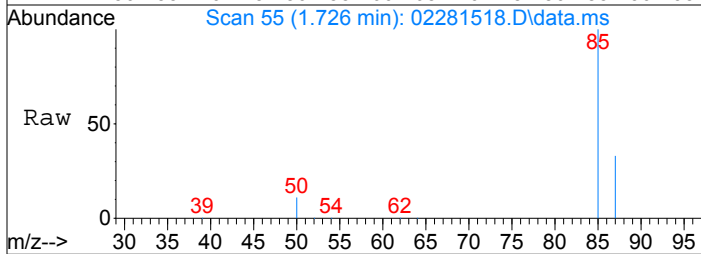
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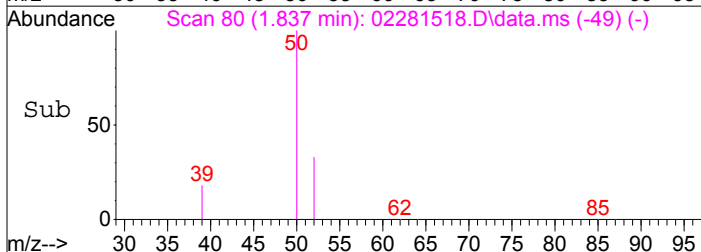
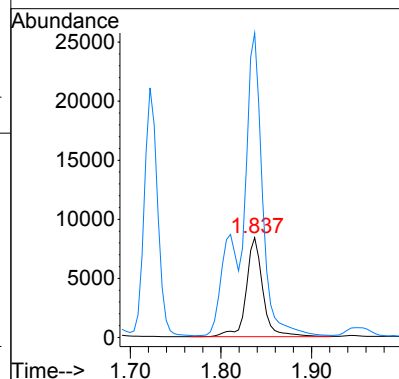
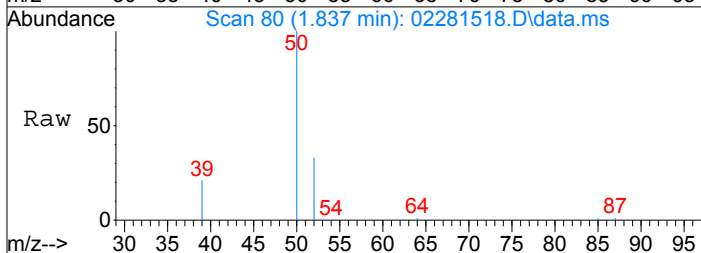
#2
 Dichlorodifluoromethane (CFC 12)
 Concen: 1524.81 pg
 RT: 1.73 min Scan# 55
 Delta R.T. -0.018 min
 Lab File: 02281518.D
 Acq: 28 Feb 2015 11:30

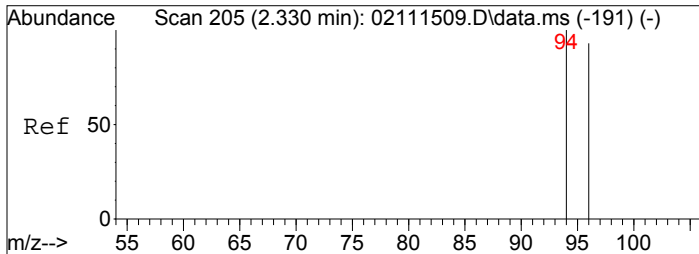
Tgt Ion: 85 Resp: 174348
 Ion Ratio Lower Upper
 85 100
 87 32.5 12.4 52.4



#3
 Chloromethane
 Concen: 469.08 pg
 RT: 1.84 min Scan# 80
 Delta R.T. -0.013 min
 Lab File: 02281518.D
 Acq: 28 Feb 2015 11:30

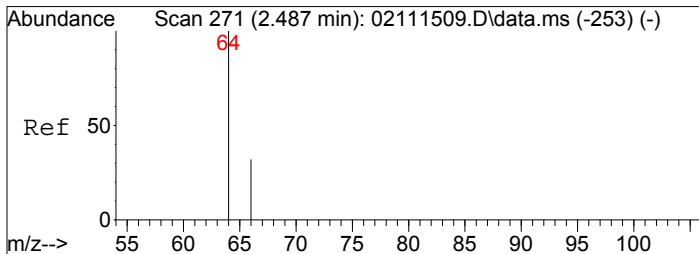
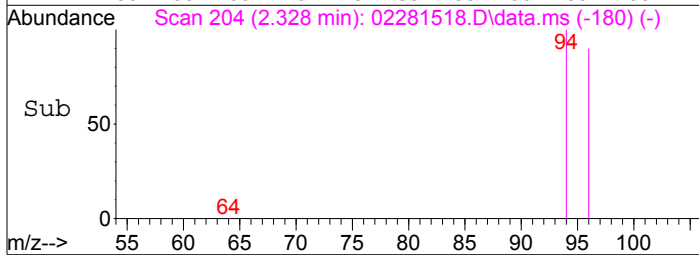
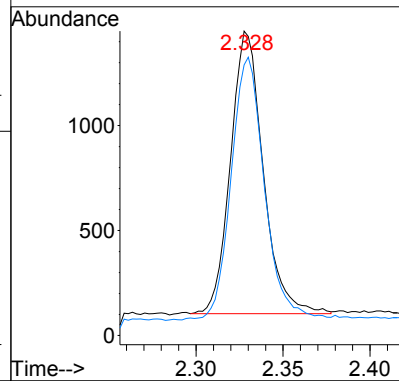
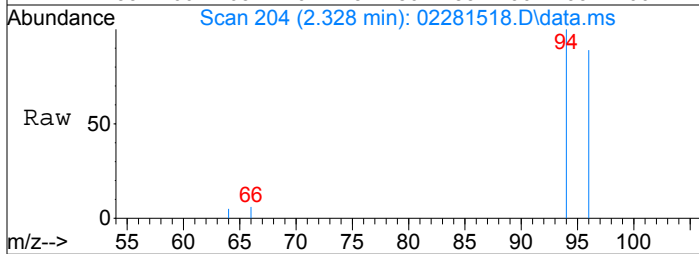
Tgt Ion: 52 Resp: 10711
 Ion Ratio Lower Upper
 52 100
 50 293.3 283.7 323.7





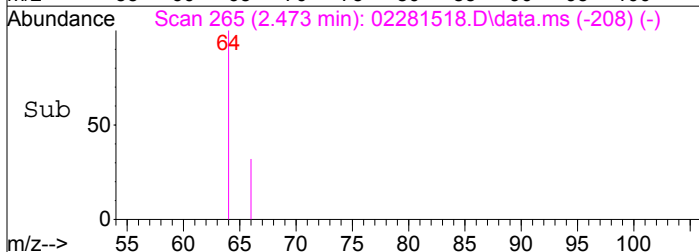
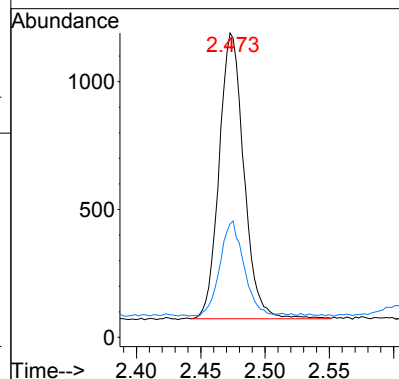
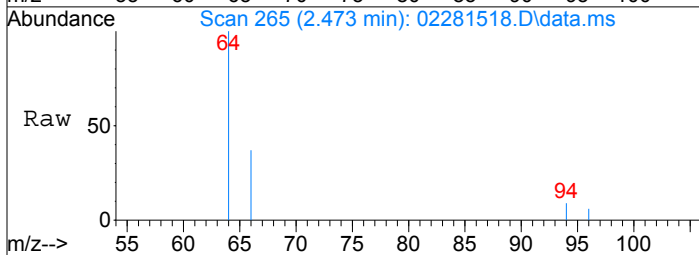
#5
 Bromomethane
 Concen: 34.23 pg
 RT: 2.33 min Scan# 204
 Delta R.T. -0.002 min
 Lab File: 02281518.D
 Acq: 28 Feb 2015 11:30

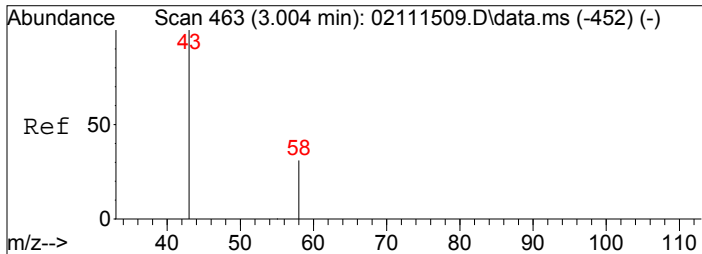
Tgt Ion: 94 Resp: 1760
 Ion Ratio Lower Upper
 94 100
 96 95.7 75.5 113.3



#6
 Chloroethane
 Concen: 34.58 pg
 RT: 2.47 min Scan# 265
 Delta R.T. -0.014 min
 Lab File: 02281518.D
 Acq: 28 Feb 2015 11:30

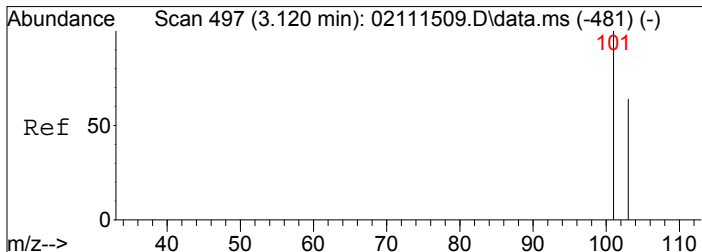
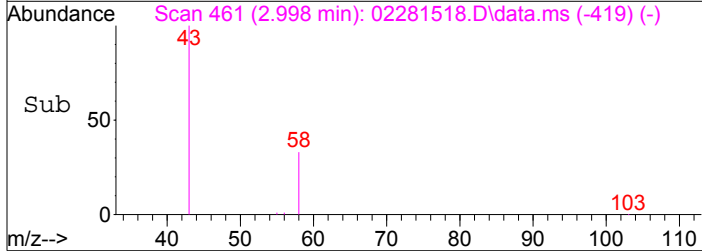
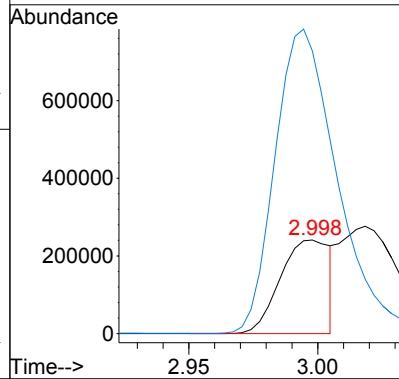
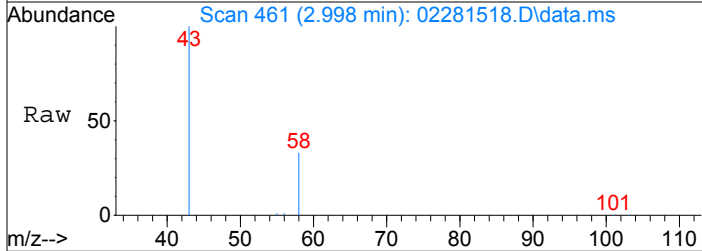
Tgt Ion: 64 Resp: 1496
 Ion Ratio Lower Upper
 64 100
 66 31.7 12.2 52.2





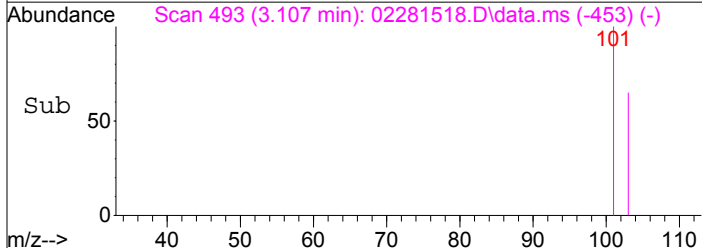
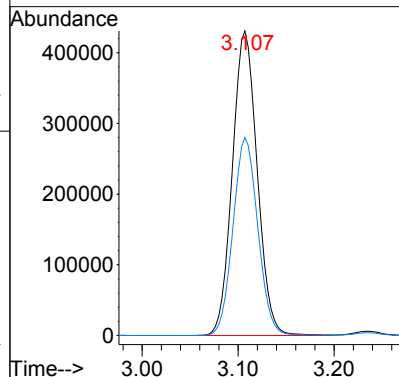
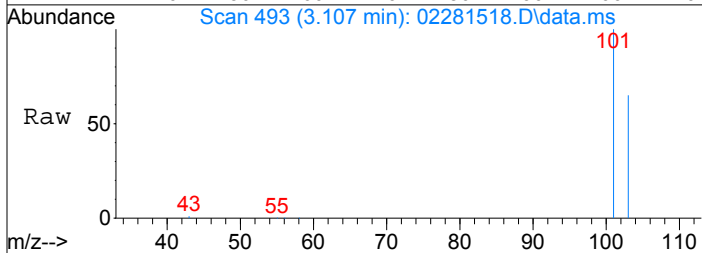
#7
Acetone
Concen: 7978.74 pg
RT: 3.00 min Scan# 461
Delta R.T. -0.006 min
Lab File: 02281518.D
Acq: 28 Feb 2015 11:30

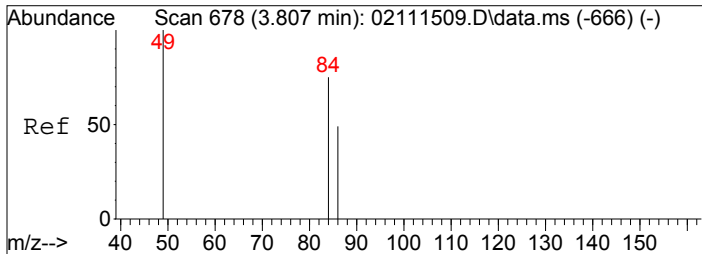
Tgt Ion: 58 Resp: 322154
Ion Ratio Lower Upper
58 100
43 417.8 301.8 341.8#



#8
Trichlorofluoromethane
Concen: 7901.74 pg
RT: 3.11 min Scan# 493
Delta R.T. -0.012 min
Lab File: 02281518.D
Acq: 28 Feb 2015 11:30

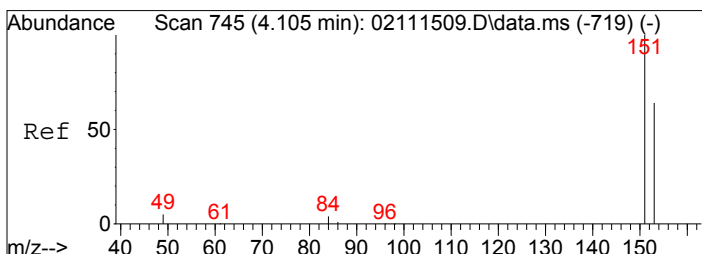
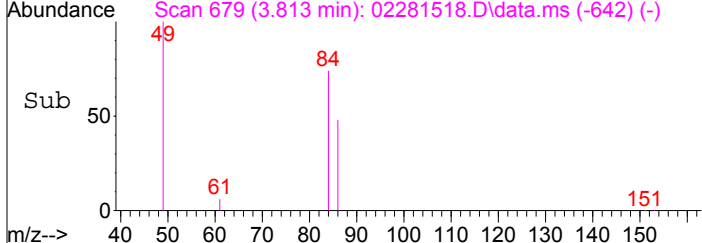
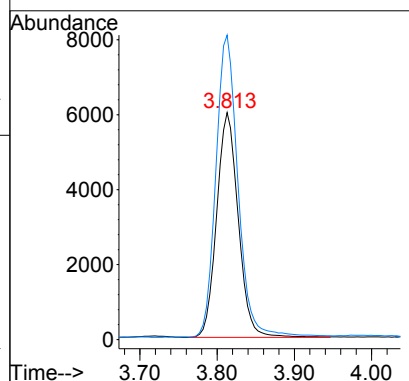
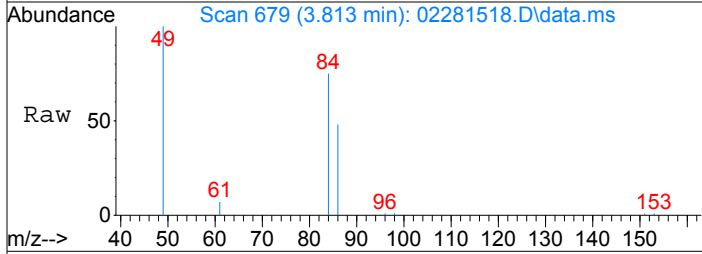
Tgt Ion: 101 Resp: 776064
Ion Ratio Lower Upper
101 100
103 64.9 51.8 77.6





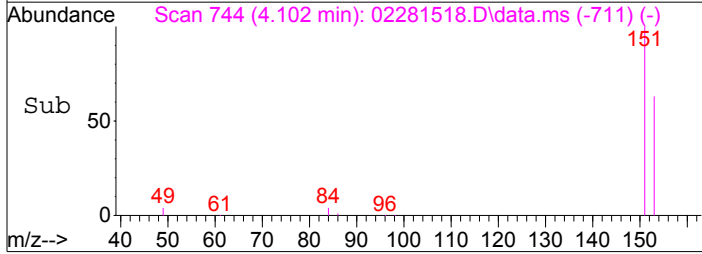
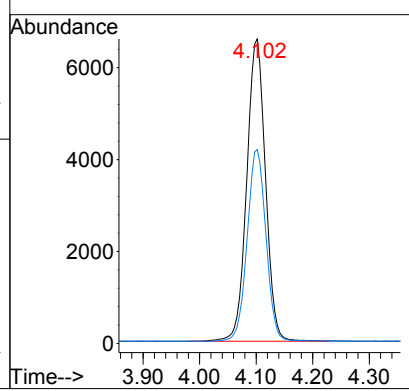
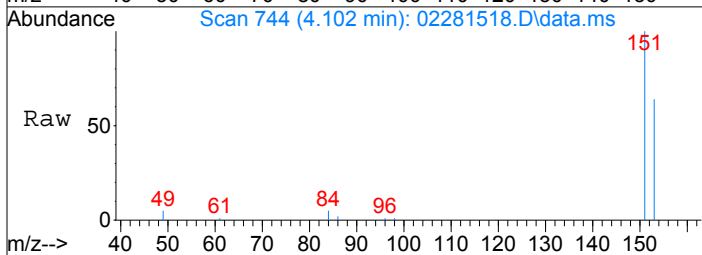
#10
Methylene Chloride
Concen: 249.62 pg
RT: 3.81 min Scan# 679
Delta R.T. 0.006 min
Lab File: 02281518.D
Acq: 28 Feb 2015 11:30

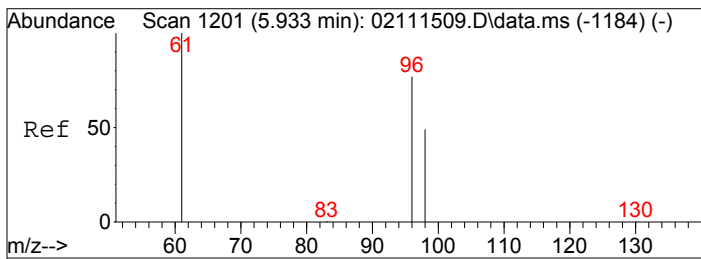
Tgt Ion: 84	Resp: 11633
Ion Ratio	Lower Upper
84	100
49	138.0 112.3 152.3



#11
Trichlorotrifluoroethane
Concen: 335.23 pg
RT: 4.10 min Scan# 744
Delta R.T. -0.003 min
Lab File: 02281518.D
Acq: 28 Feb 2015 11:30

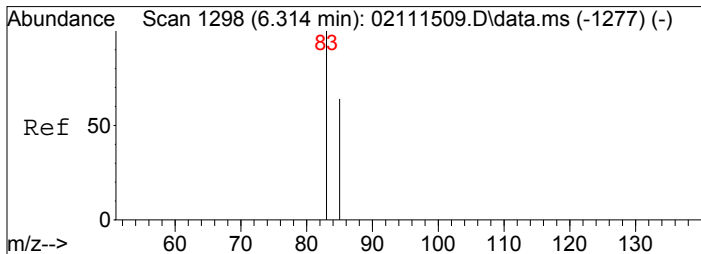
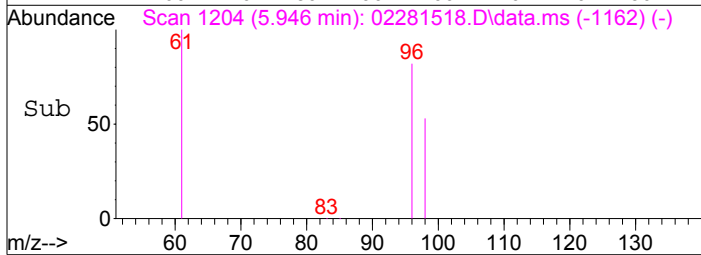
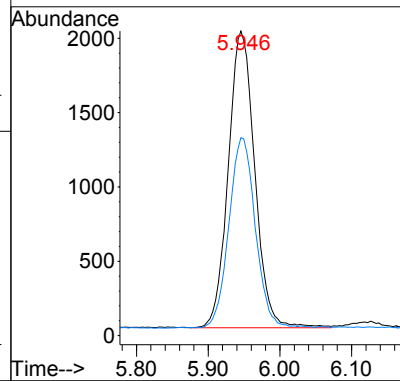
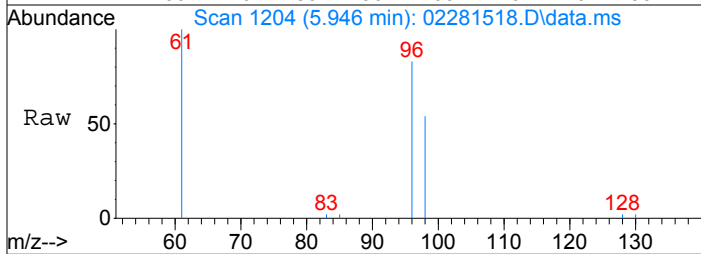
Tgt Ion: 151	Resp: 15129
Ion Ratio	Lower Upper
151	100
153	63.6 43.6 83.6





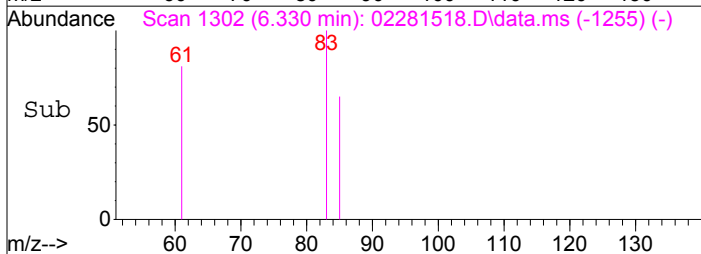
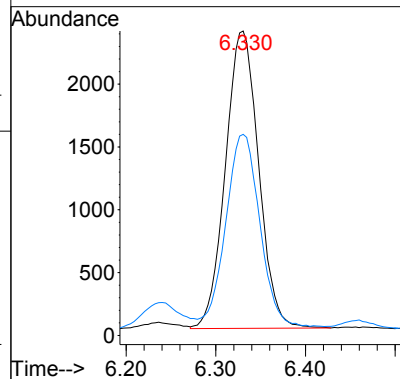
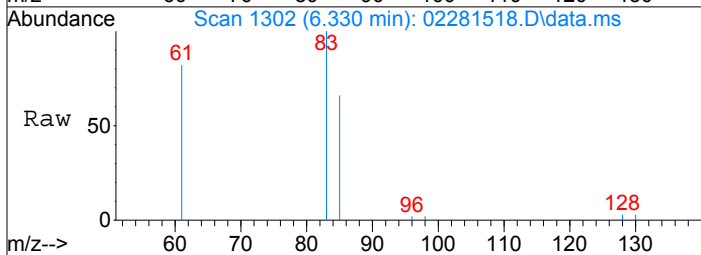
#15
 cis-1,2-Dichloroethene
 Concen: 102.96 pg
 RT: 5.95 min Scan# 1204
 Delta R.T. 0.013 min
 Lab File: 02281518.D
 Acq: 28 Feb 2015 11:30

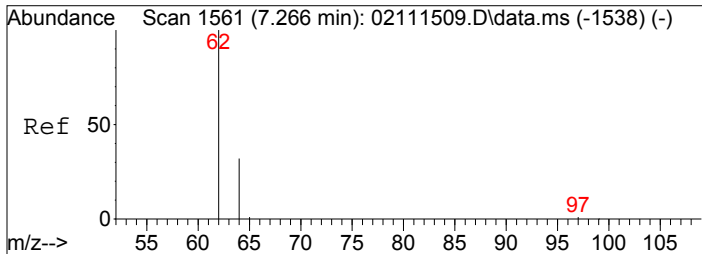
Tgt Ion: 96 Resp: 5126
 Ion Ratio Lower Upper
 96 100
 98 63.6 44.3 84.3



#16
 Chloroform
 Concen: 70.70 pg
 RT: 6.33 min Scan# 1302
 Delta R.T. 0.016 min
 Lab File: 02281518.D
 Acq: 28 Feb 2015 11:30

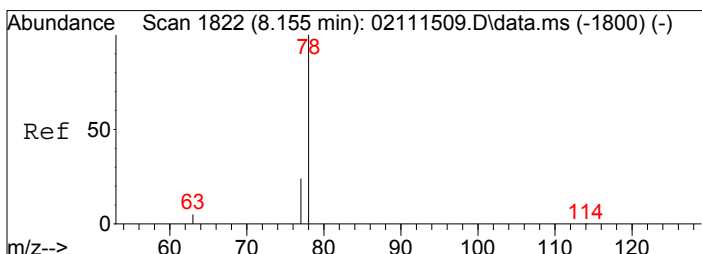
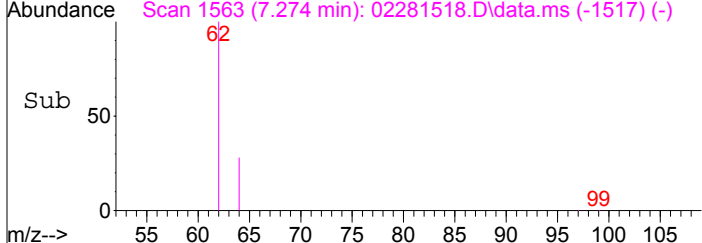
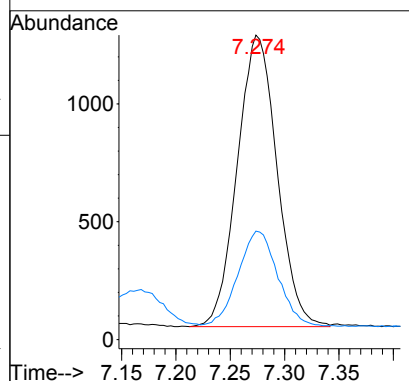
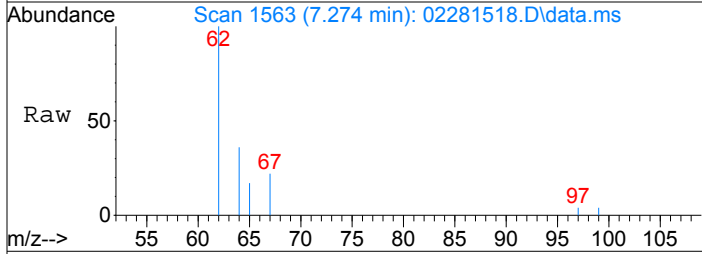
Tgt Ion: 83 Resp: 6099
 Ion Ratio Lower Upper
 83 100
 85 66.4 45.4 85.4





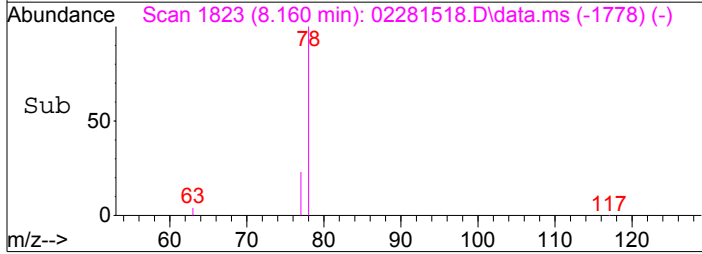
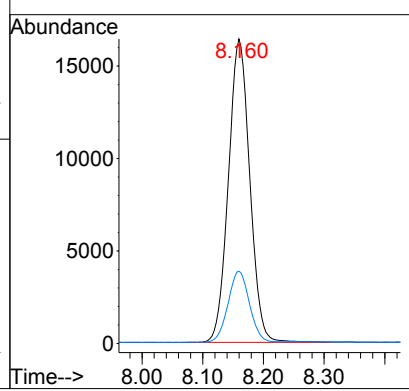
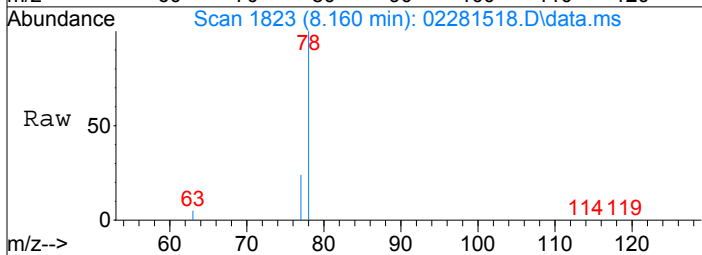
#18
 1,2-Dichloroethane
 Concen: 45.79 pg
 RT: 7.27 min Scan# 1563
 Delta R.T. 0.008 min
 Lab File: 02281518.D
 Acq: 28 Feb 2015 11:30

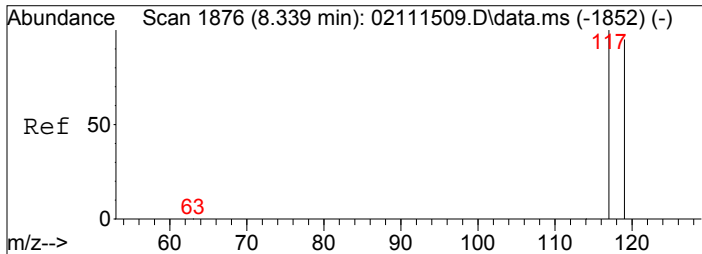
Tgt Ion:	62	Resp:	3145
Ion Ratio	Lower	Upper	
62	100		
64	32.4	11.6	51.6



#20
 Benzene
 Concen: 226.33 pg
 RT: 8.16 min Scan# 1823
 Delta R.T. 0.005 min
 Lab File: 02281518.D
 Acq: 28 Feb 2015 11:30

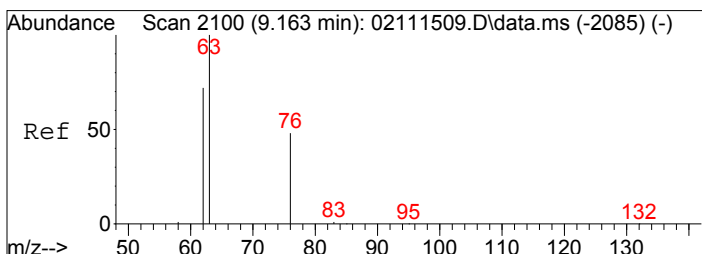
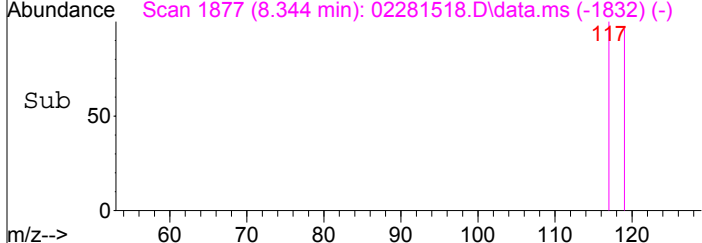
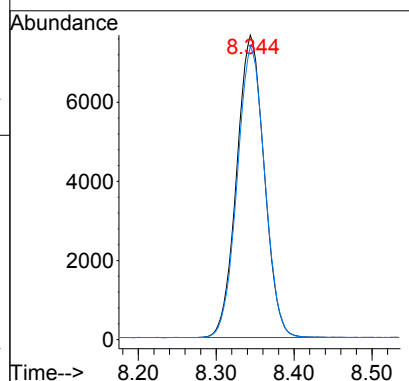
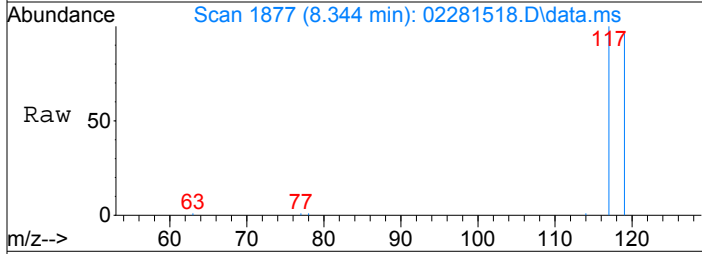
Tgt Ion:	78	Resp:	40155
Ion Ratio	Lower	Upper	
78	100		
77	23.4	3.7	43.7





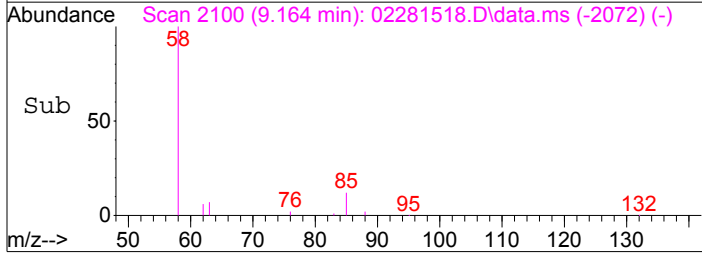
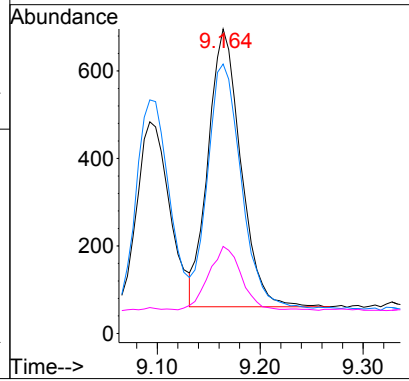
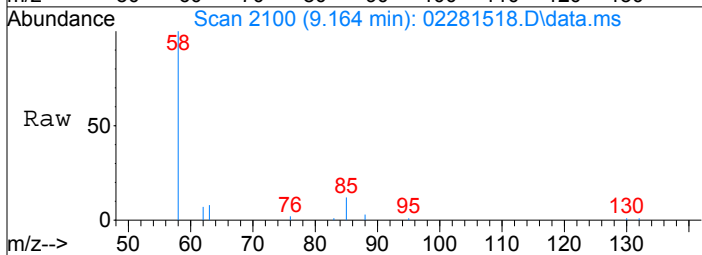
#21
Carbon Tetrachloride
Concen: 299.01 pg
RT: 8.34 min Scan# 1877
Delta R.T. 0.005 min
Lab File: 02281518.D
Acq: 28 Feb 2015 11:30

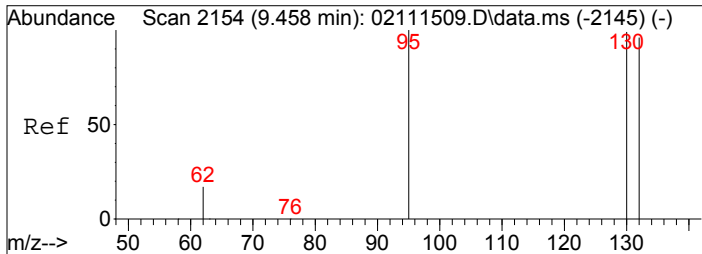
Tgt Ion: 117	Resp: 18778
Ion Ratio	Lower Upper
117	100
119	96.3 75.5 115.5



#23
1,2-Dichloropropane
Concen: 32.49 pg
RT: 9.16 min Scan# 2100
Delta R.T. 0.001 min
Lab File: 02281518.D
Acq: 28 Feb 2015 11:30

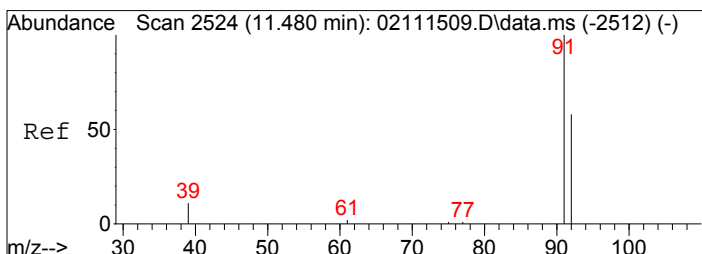
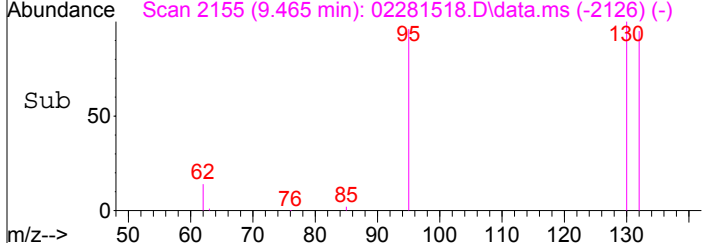
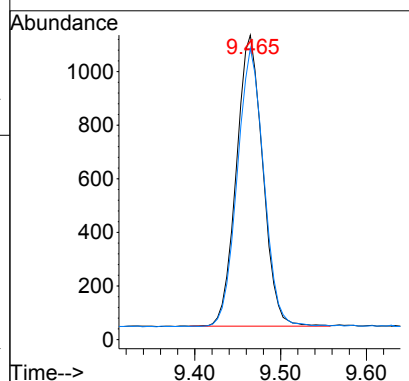
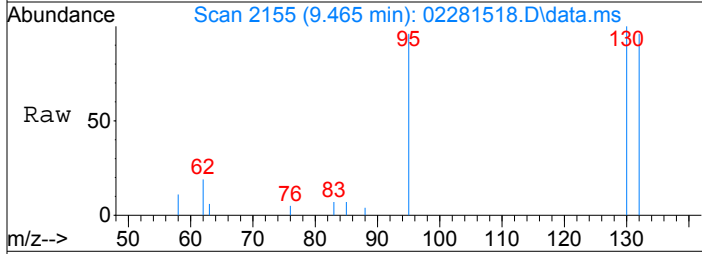
Tgt Ion: 63	Resp: 1396
Ion Ratio	Lower Upper
63	100
62	91.0 52.0 92.0
76	22.9 28.1 68.1#





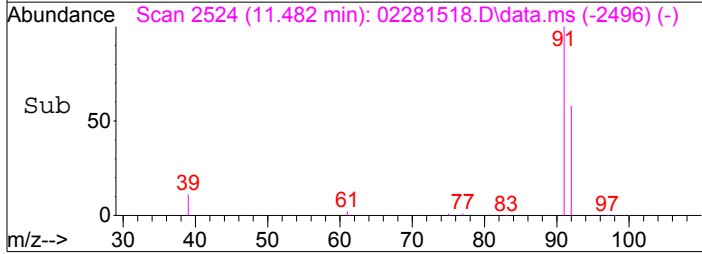
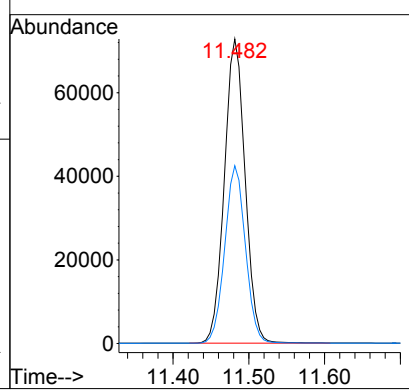
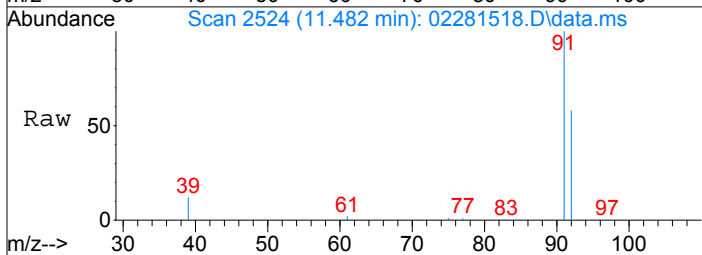
#25
 Trichloroethene
 Concen: 45.88 pg
 RT: 9.46 min Scan# 2155
 Delta R.T. 0.007 min
 Lab File: 02281518.D
 Acq: 28 Feb 2015 11:30

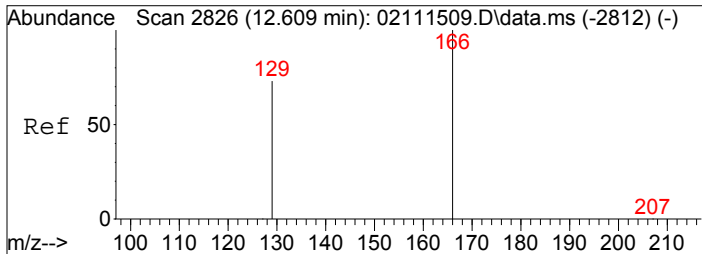
Tgt Ion:130	Resp:	2322
Ion Ratio	Lower	Upper
130	100	
132	95.7	77.1 117.1



#31
 Toluene
 Concen: 718.69 pg
 RT: 11.48 min Scan# 2524
 Delta R.T. 0.001 min
 Lab File: 02281518.D
 Acq: 28 Feb 2015 11:30

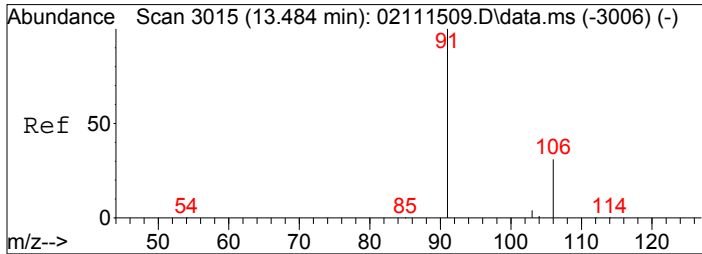
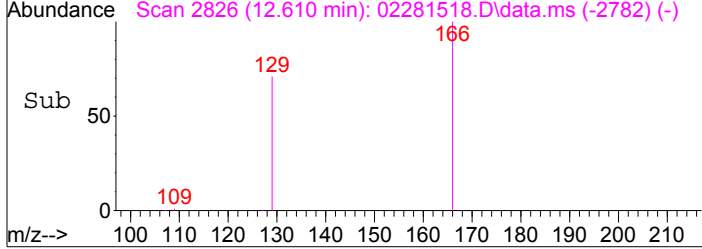
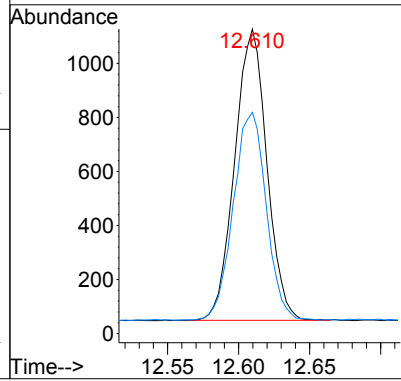
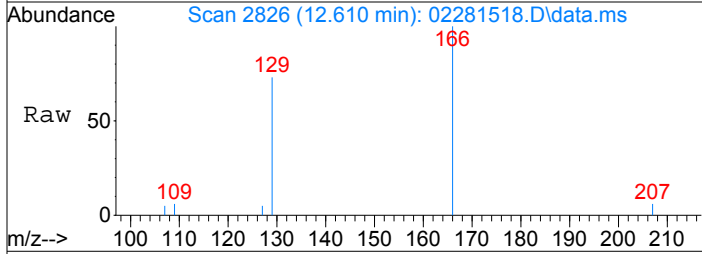
Tgt Ion: 91	Resp:	138871
Ion Ratio	Lower	Upper
91	100	
92	58.1	37.7 77.7





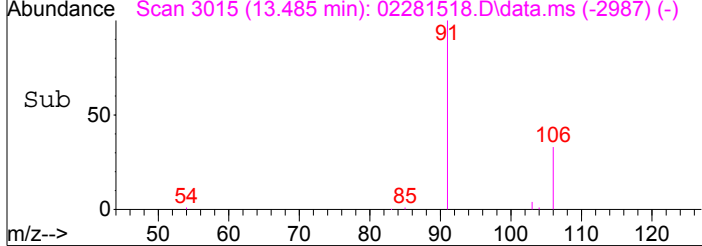
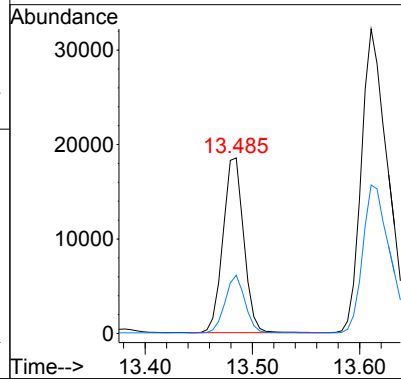
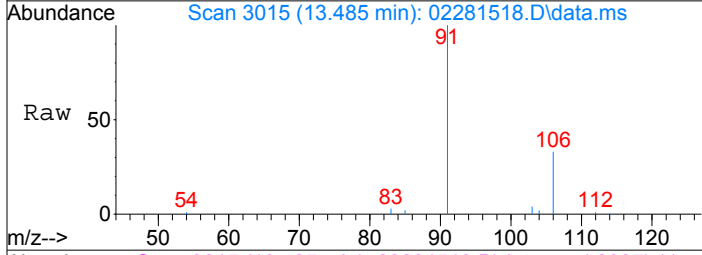
#33
Tetrachloroethene
Concen: 28.35 pg
RT: 12.61 min Scan# 2826
Delta R.T. 0.001 min
Lab File: 02281518.D
Acq: 28 Feb 2015 11:30

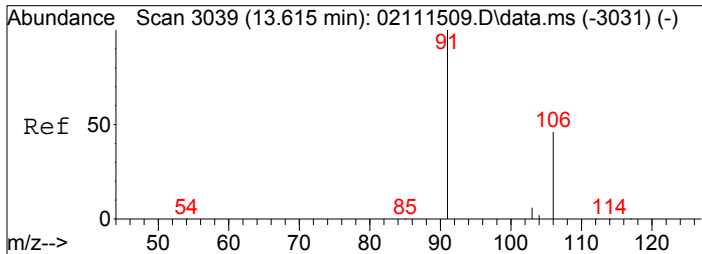
Tgt Ion:	166	Resp:	1696
Ion Ratio	Lower	Upper	
166	100		
129	73.3	53.3	93.3



#36
Ethylbenzene
Concen: 122.00 pg
RT: 13.48 min Scan# 3015
Delta R.T. 0.001 min
Lab File: 02281518.D
Acq: 28 Feb 2015 11:30

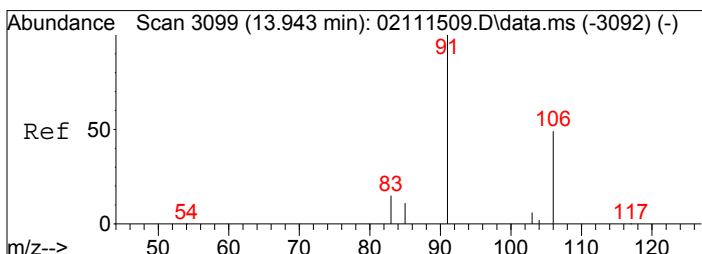
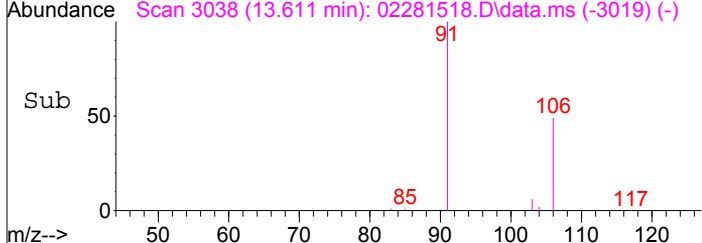
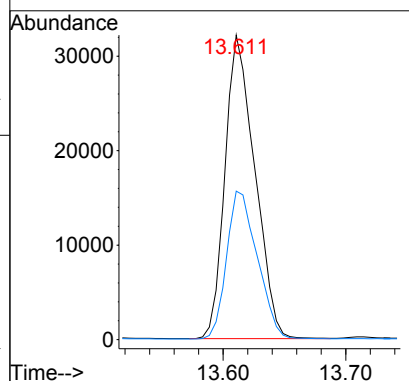
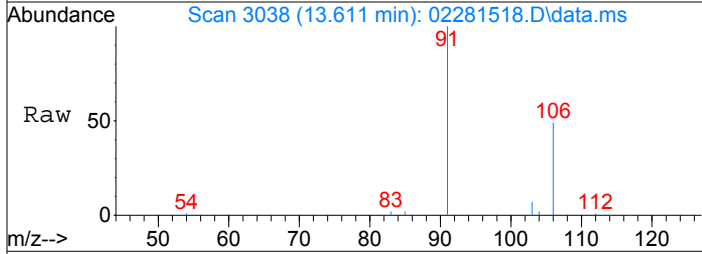
Tgt Ion:	91	Resp:	24925
Ion Ratio	Lower	Upper	
91	100		
106	31.4	10.9	50.9





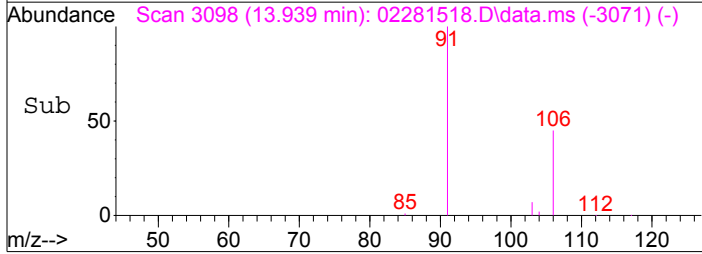
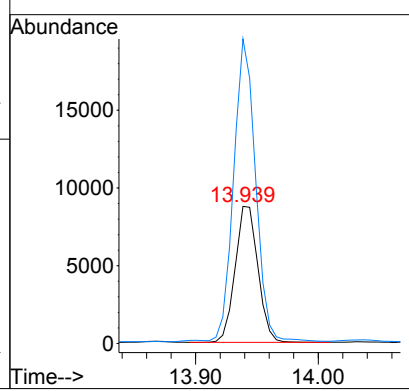
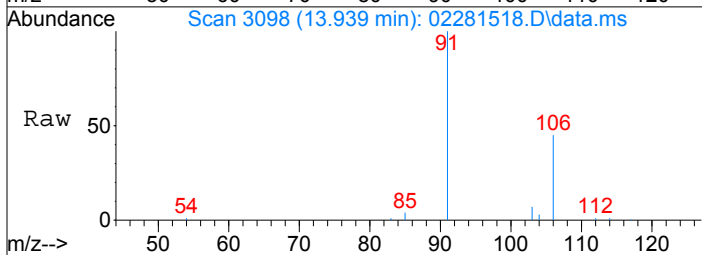
#37
 m,p-Xylene
 Concen: 323.64 pg
 RT: 13.61 min Scan# 3038
 Delta R.T. -0.004 min
 Lab File: 02281518.D
 Acq: 28 Feb 2015 11:30

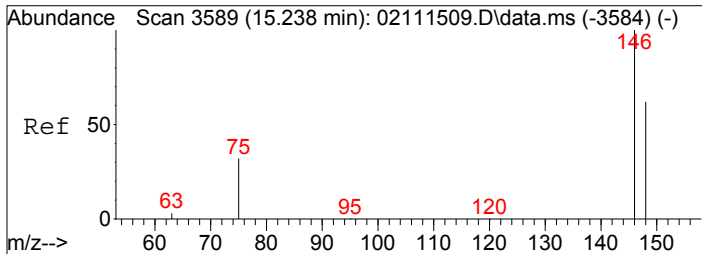
Tgt Ion:	91	Resp:	54343
Ion Ratio	Lower	Upper	
91	100		
106	50.0	27.5	67.5



#38
 o-Xylene
 Concen: 137.86 pg
 RT: 13.94 min Scan# 3098
 Delta R.T. -0.004 min
 Lab File: 02281518.D
 Acq: 28 Feb 2015 11:30

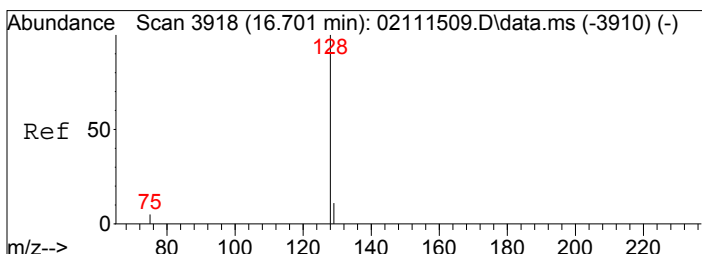
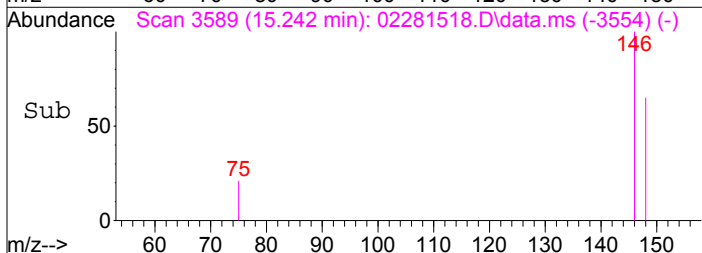
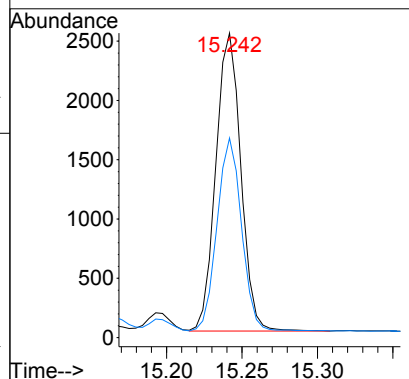
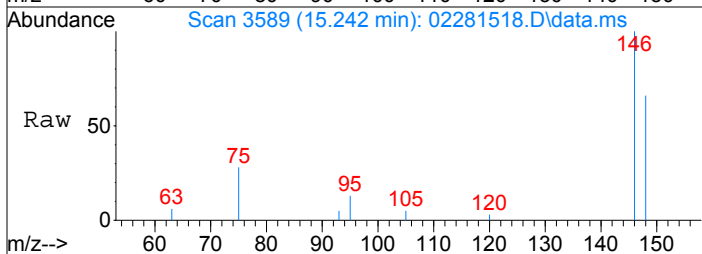
Tgt Ion:	106	Resp:	11313
Ion Ratio	Lower	Upper	
106	100		
91	214.6	198.3	238.3





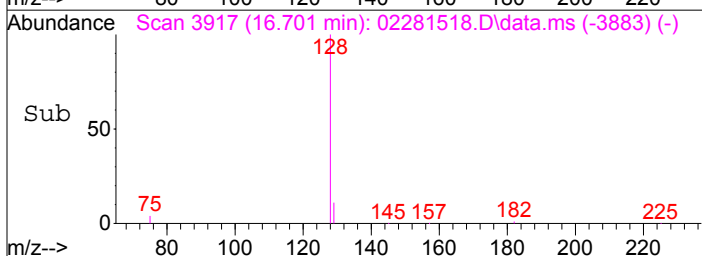
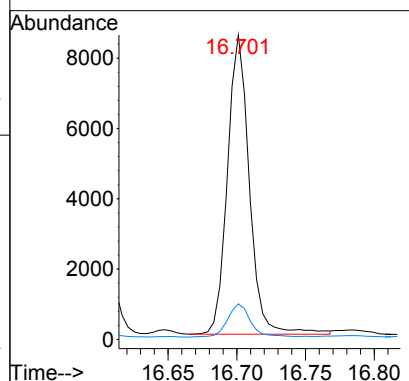
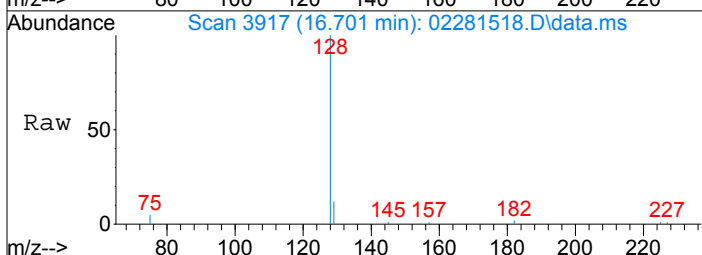
#42
 1,4-Dichlorobenzene
 Concen: 25.69 pg
 RT: 15.24 min Scan# 3589
 Delta R.T. 0.004 min
 Lab File: 02281518.D
 Acq: 28 Feb 2015 11:30

Tgt Ion	Ratio	Lower	Upper
146	100		
148	63.6	43.5	83.5



#45
 Naphthalene
 Concen: 46.44 pg
 RT: 16.70 min Scan# 3917
 Delta R.T. 0.000 min
 Lab File: 02281518.D
 Acq: 28 Feb 2015 11:30

Tgt Ion	Ratio	Lower	Upper
128	100		
129	11.6	0.0	30.9



Data File: I:\MS19\DATA\2015 02\28\02281519.D

Acq On : 28 Feb 2015 11:58
 Sample : P1500729-014 (1000mL)
 Misc : S29-02041502
 ALS Vial : 9 Sample Multiplier: 1

Operator: WA

Quant Time: Mar 02 11:17:46 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

3/2/15

DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	27809	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	187451	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	31708	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	57832	851.569	pg	0.00
Spiked Amount	1000.000		Recovery	=	85.16%	
30) Toluene-d8 (SS2)	11.38	98	177111	1024.566	pg	0.00
Spiked Amount	1000.000		Recovery	=	102.46%	
40) Bromofluorobenzene (SS3)	14.25	174	75807	1184.224	pg	0.00
Spiked Amount	1000.000		Recovery	=	118.42%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.71	85	185035	1637.243	pg	100
3) Chloromethane	1.83	52	9107	403.507	pg	98
4) Vinyl Chloride	2.01	62	17349	197.391	pg	99
5) Bromomethane	2.31	94	1328	26.132	pg	99
6) Chloroethane	2.46	64	687	N.D.		
7) Acetone	3.00	58	128220m	3212.833	pg	
8) Trichlorofluoromethane	3.10	101	108901	1121.809	pg	100
9) 1,1-Dichloroethene	3.65	96	11162	257.570	pg	90
10) Methylene Chloride	3.80	84	10346	224.605	pg	96
11) Trichlorotrifluoroethane	4.09	151	18423	413.010	pg	99
12) trans-1,2-Dichloroethene	4.73	96	5528	124.912	pg	97
13) 1,1-Dichloroethane	4.94	63	20718	260.790	pg	99
14) Methyl tert-Butyl Ether	5.12	73	719	N.D.		
15) cis-1,2-Dichloroethene	5.92	96	762540	15495.331	pg	100
16) Chloroform	6.31	83	7060	82.804	pg	98
18) 1,2-Dichloroethane	7.26	62	3694	54.414	pg	99
19) 1,1,1-Trichloroethane	7.59	97	3187	38.438	pg	99
20) Benzene	8.15	78	46963	267.803	pg	100
21) Carbon Tetrachloride	8.34	117	24902	401.176	pg	99
23) 1,2-Dichloropropane	9.16	63	864	21.133	pg	92
24) Bromodichloromethane	9.33	83	891	N.D.		
25) Trichloroethene	9.46	130	166643	3460.391	pg	99
26) 1,4-Dioxane	9.55	88	435	N.D.		
27) cis-1,3-Dichloropropene	10.46	75	505	N.D.		
28) trans-1,3-Dichloropropene	11.04	75	294	N.D.		
29) 1,1,2-Trichloroethane	11.19	83	144	N.D.		
31) Toluene	11.48	91	106152	577.379	pg	100
32) 1,2-Dibromoethane	12.12	107	81	N.D.		
33) Tetrachloroethene	12.61	166	5800	101.886	pg	100
35) Chlorobenzene	13.17	112	662	N.D.		
36) Ethylbenzene	13.48	91	25592	128.709	pg	99
37) m,p-Xylene	13.61	91	68447	418.840	pg	97
38) o-Xylene	13.94	106	14989	187.674	pg	99
39) 1,1,2,2-Tetrachloroethane	13.97	83	145	N.D.		
41) 1,3-Dichlorobenzene	0.00	146	0	N.D.	d	
42) 1,4-Dichlorobenzene	15.24	146	13533	123.506	pg	100
43) 1,2-Dichlorobenzene	15.46	146	176	N.D.		
44) 1,2,4-Trichlorobenzene	16.63	182	535	N.D.		
45) Naphthalene	16.70	128	8249	41.578	pg	98
46) Hexachlorobutadiene	16.96	225	52	N.D.		

(#)= qualifier out of range (m) = manual integration (+) = signals summed

Data File: I:\MS19\DATA\2015 02\28\02281519.D

Acq On : 28 Feb 2015 11:58

Operator: WA

Sample : P1500729-014 (1000mL)

Misc : S29-02041502

ALS Vial : 9 Sample Multiplier: 1

Quant Time: Mar 02 11:17:46 2015

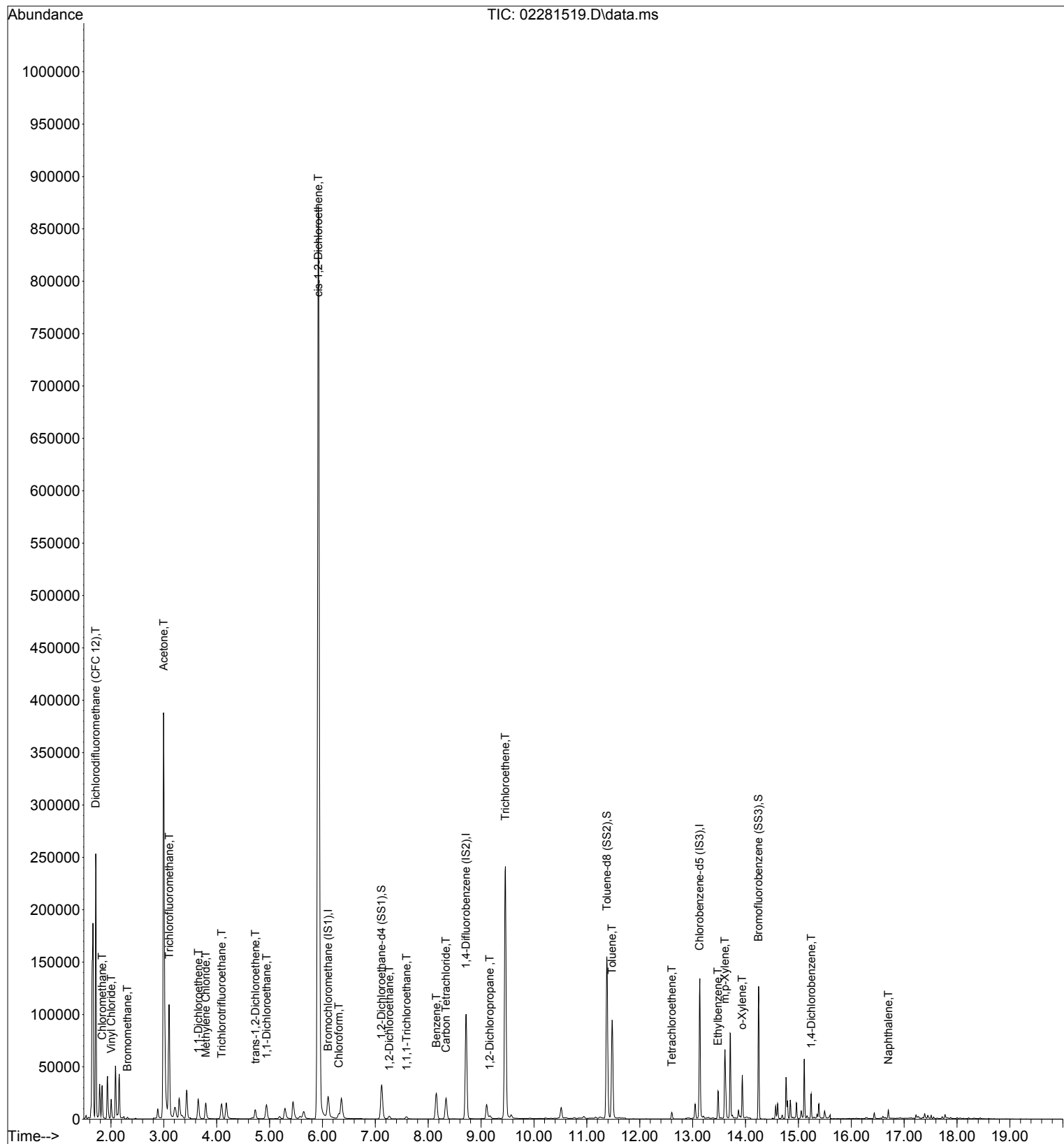
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 02\28\02281519.D

Acq On : 28 Feb 2015 11:58
 Sample : P1500729-014 (1000mL)
 Misc : S29-02041502
 ALS Vial : 9 Sample Multiplier: 1

Operator: WA

Quant Time: Mar 02 11:17:46 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

3/2/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	27809	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	187451	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	31708	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	57832	851.569	pg	0.00
Spiked Amount 1000.000			Recovery	=	85.16%	
30) Toluene-d8 (SS2)	11.38	98	177111	1024.566	pg	0.00
Spiked Amount 1000.000			Recovery	=	102.46%	
40) Bromofluorobenzene (SS3)	14.25	174	75807	1184.224	pg	0.00
Spiked Amount 1000.000			Recovery	=	118.42%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.71	85	185035	1637.243	pg	100
3) Chloromethane	1.83	52	9107	403.507	pg	98
4) Vinyl Chloride	2.01	62	17349	197.391	pg	99
5) Bromomethane	2.31	94	1328	26.132	pg	99
7) Acetone	3.00	58	128220m	3212.833	pg	
8) Trichlorofluoromethane	3.10	101	108901	1121.809	pg	100
9) 1,1-Dichloroethene	3.65	96	11162	257.570	pg	90
10) Methylene Chloride	3.80	84	10346	224.605	pg	96
11) Trichlorotrifluoroethane	4.09	151	18423	413.010	pg	99
12) trans-1,2-Dichloroethene	4.73	96	5528	124.912	pg	97
13) 1,1-Dichloroethane	4.94	63	20718	260.790	pg	99
15) cis-1,2-Dichloroethene	5.92	96	762540	15495.331	pg	100
16) Chloroform	6.31	83	7060	82.804	pg	98
18) 1,2-Dichloroethane	7.26	62	3694	54.414	pg	99
19) 1,1,1-Trichloroethane	7.59	97	3187	38.438	pg	99
20) Benzene	8.15	78	46963	267.803	pg	100
21) Carbon Tetrachloride	8.34	117	24902	401.176	pg	99
23) 1,2-Dichloropropane	9.16	63	864	21.133	pg	92
25) Trichloroethene	9.46	130	166643	3460.391	pg	99
31) Toluene	11.48	91	106152	577.379	pg	100
33) Tetrachloroethene	12.61	166	5800	101.886	pg	100
36) Ethylbenzene	13.48	91	25592	128.709	pg	99
37) m,p-Xylene	13.61	91	68447	418.840	pg	97
38) o-Xylene	13.94	106	14989	187.674	pg	99
42) 1,4-Dichlorobenzene	15.24	146	13533	123.506	pg	100
45) Naphthalene	16.70	128	8249	41.578	pg	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File: I:\MS19\DATA\2015 02\28\02281519.D

Acq On : 28 Feb 2015 11:58

Operator: WA

Sample : P1500729-014 (1000mL)

Misc : S29-02041502

ALS Vial : 9 Sample Multiplier: 1

Quant Time: Mar 02 11:17:46 2015

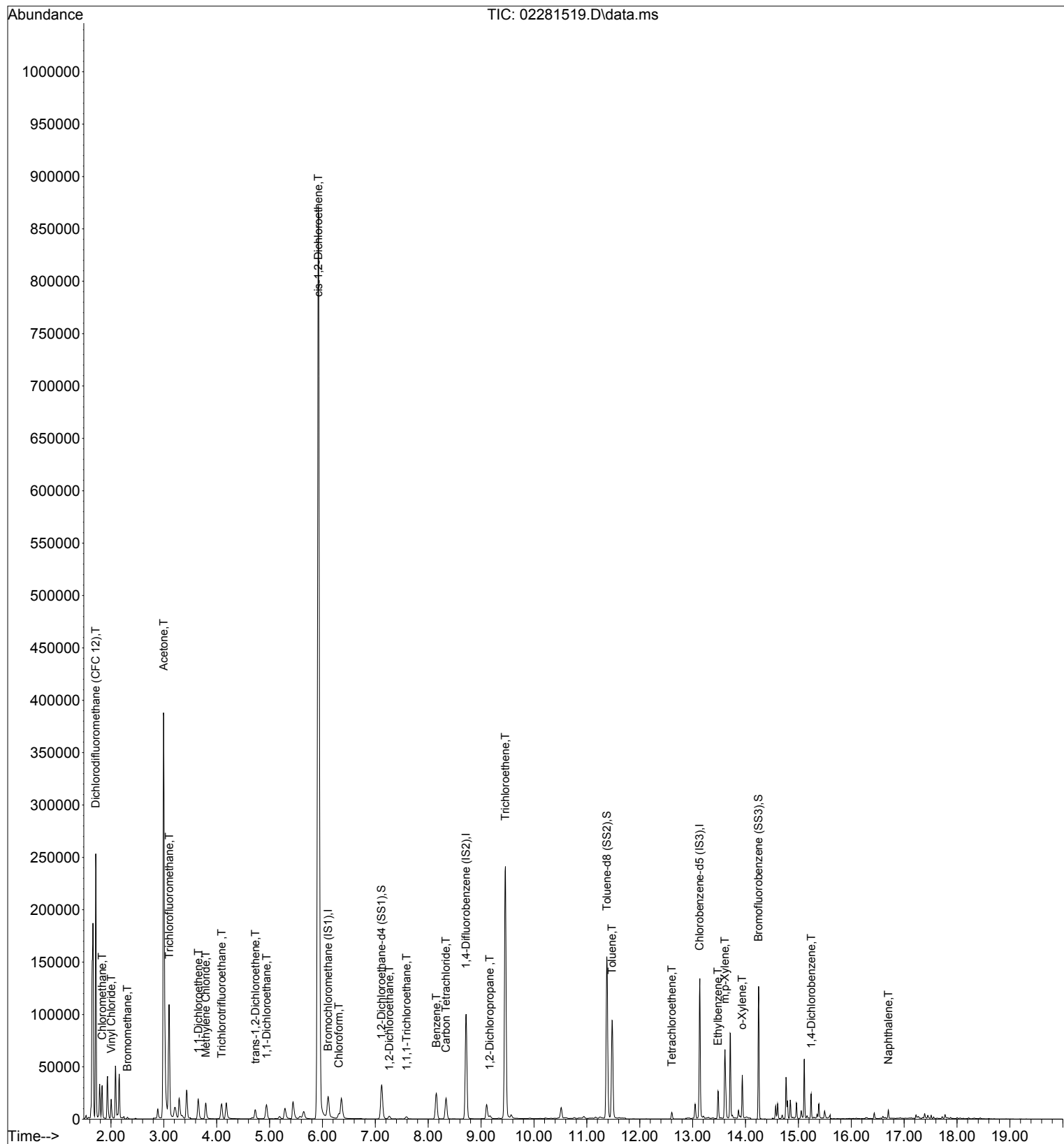
Quant Method : I:\MS19\METHODS\X19021115.M

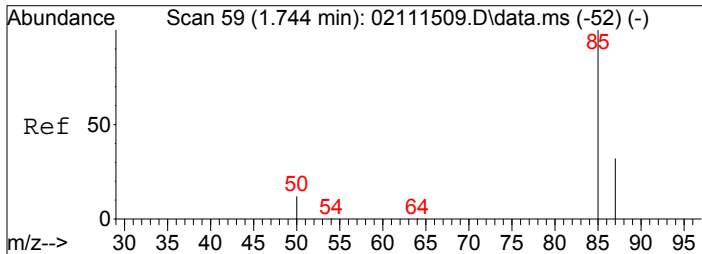
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

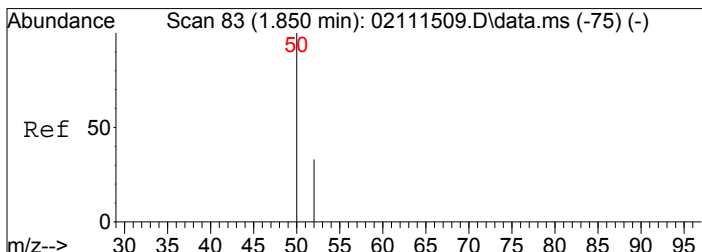
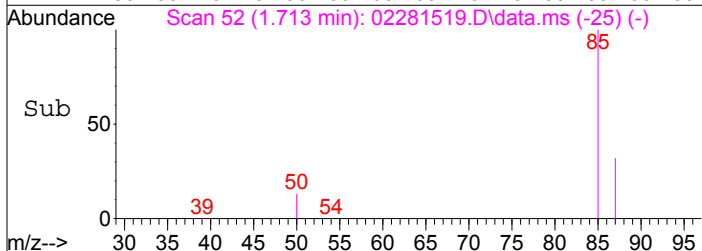
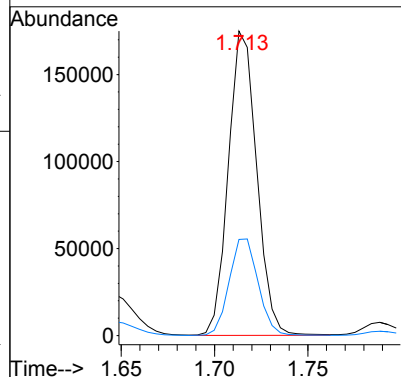
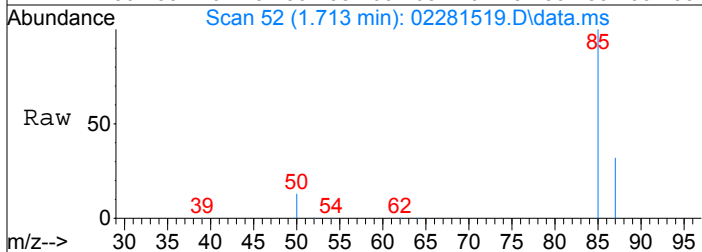
DataAcq Meth:TO15SIM.M





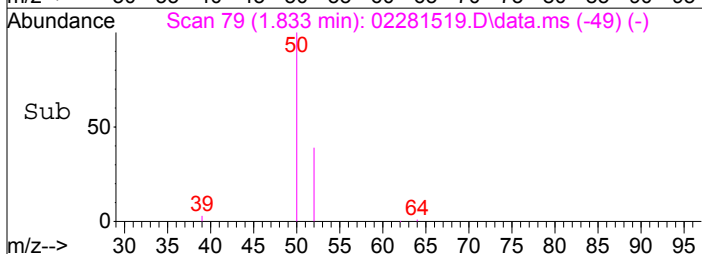
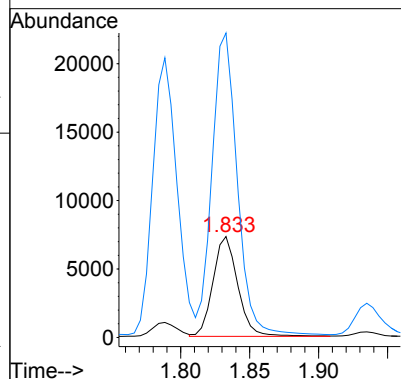
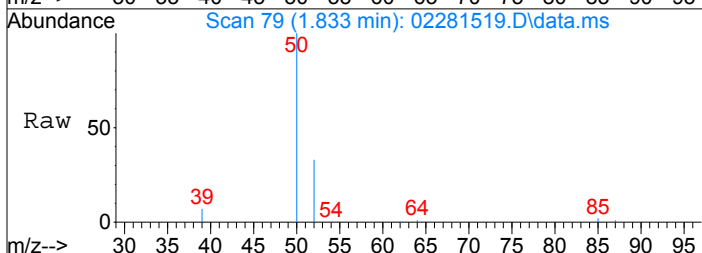
#2
 Dichlorodifluoromethane (CFC 12)
 Concen: 1637.24 pg
 RT: 1.71 min Scan# 52
 Delta R.T. -0.031 min
 Lab File: 02281519.D
 Acq: 28 Feb 2015 11:58

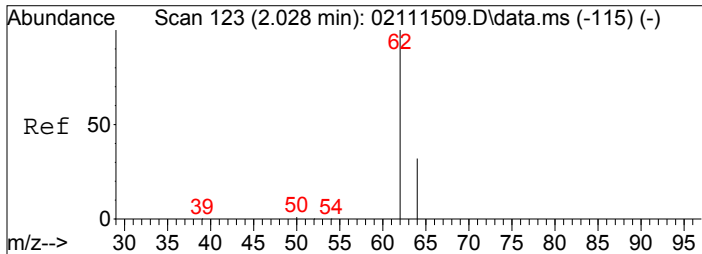
Tgt Ion	85	Resp	185035
Ion Ratio	100	Lower	Upper
87	32.5	12.4	52.4



#3
 Chloromethane
 Concen: 403.51 pg
 RT: 1.83 min Scan# 79
 Delta R.T. -0.017 min
 Lab File: 02281519.D
 Acq: 28 Feb 2015 11:58

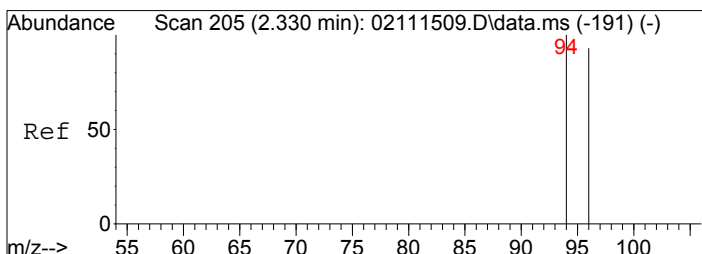
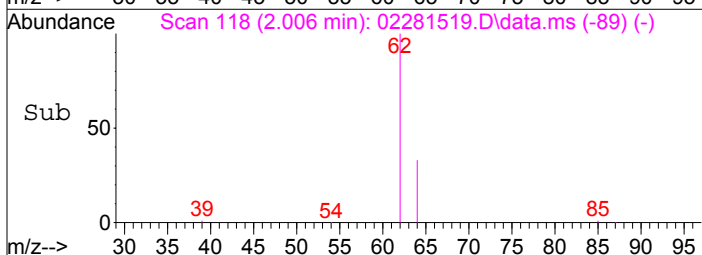
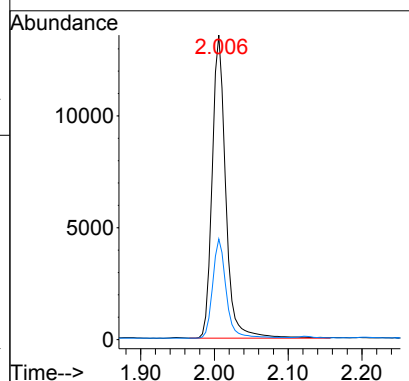
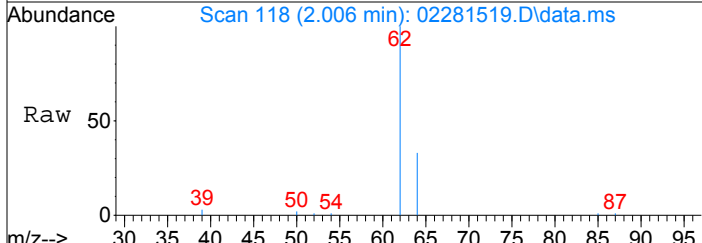
Tgt Ion	52	Resp	9107
Ion Ratio	100	Lower	Upper
50	306.7	283.7	323.7





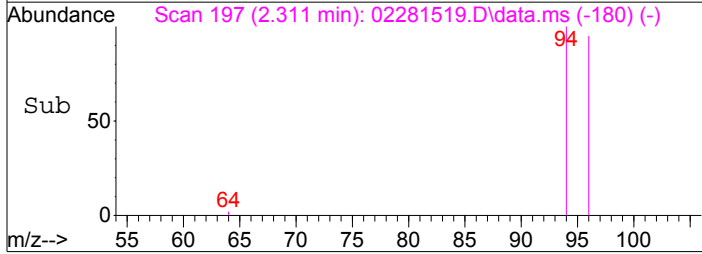
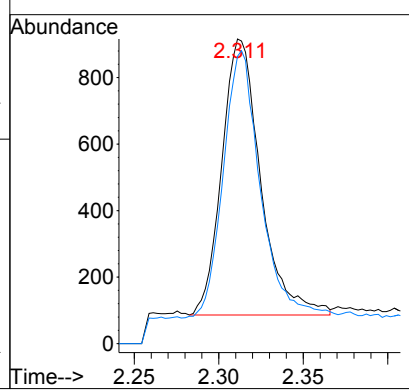
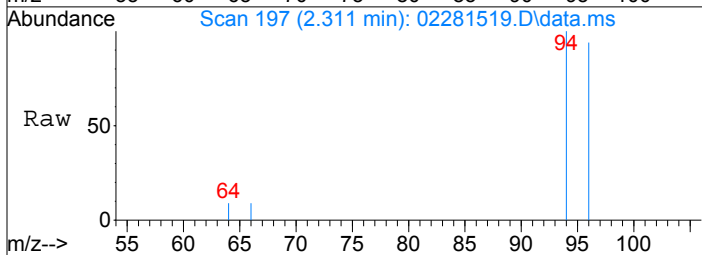
#4
 Vinyl Chloride
 Concen: 197.39 pg
 RT: 2.01 min Scan# 118
 Delta R.T. -0.022 min
 Lab File: 02281519.D
 Acq: 28 Feb 2015 11:58

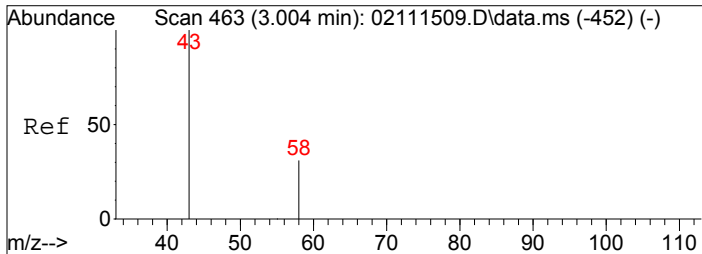
Tgt Ion:	62	Resp:	17349
Ion Ratio	Lower	Upper	
62	100		
64	32.7	12.4	52.4



#5
 Bromomethane
 Concen: 26.13 pg
 RT: 2.31 min Scan# 197
 Delta R.T. -0.019 min
 Lab File: 02281519.D
 Acq: 28 Feb 2015 11:58

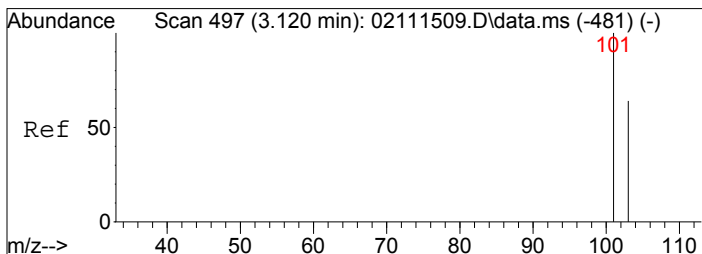
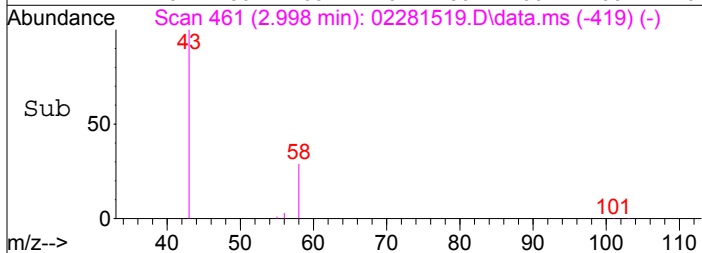
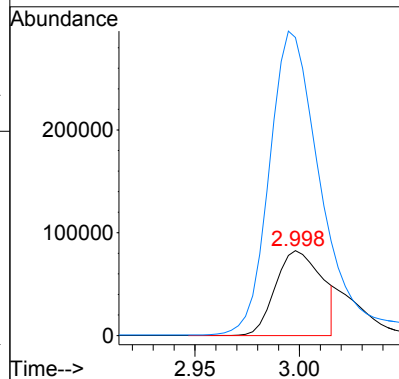
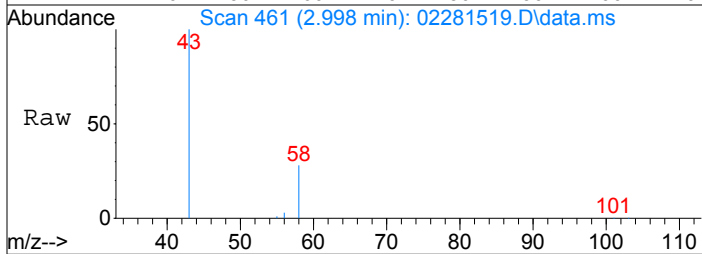
Tgt Ion:	94	Resp:	1328
Ion Ratio	Lower	Upper	
94	100		
96	93.3	75.5	113.3





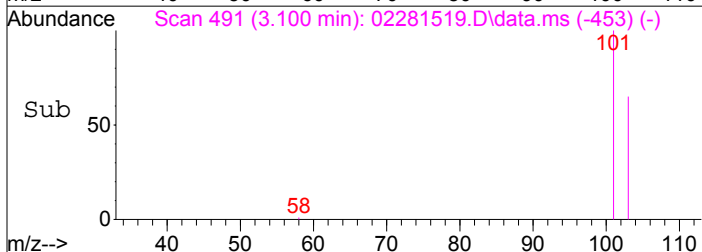
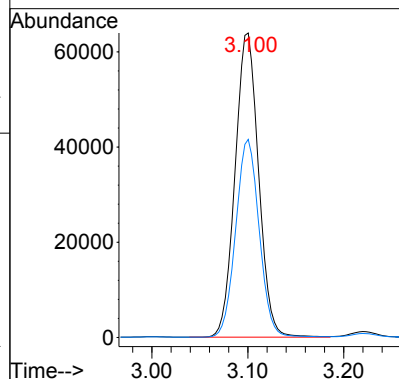
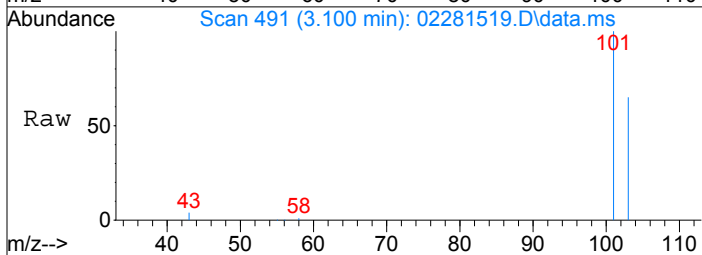
#7
Acetone
Concen: 3212.83 pg m
RT: 3.00 min Scan# 461
Delta R.T. -0.006 min
Lab File: 02281519.D
Acq: 28 Feb 2015 11:58

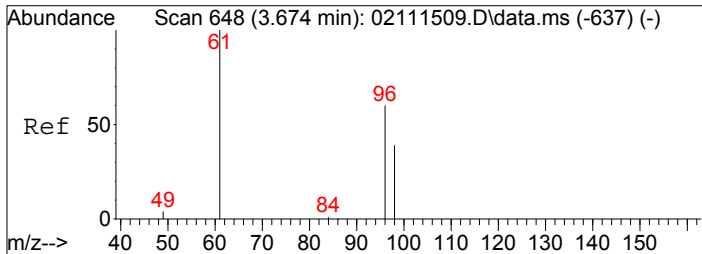
Tgt Ion: 58 Resp: 128220
Ion Ratio Lower Upper
58 100
43 411.5 301.8 341.8#



#8
Trichlorofluoromethane
Concen: 1121.81 pg
RT: 3.10 min Scan# 491
Delta R.T. -0.019 min
Lab File: 02281519.D
Acq: 28 Feb 2015 11:58

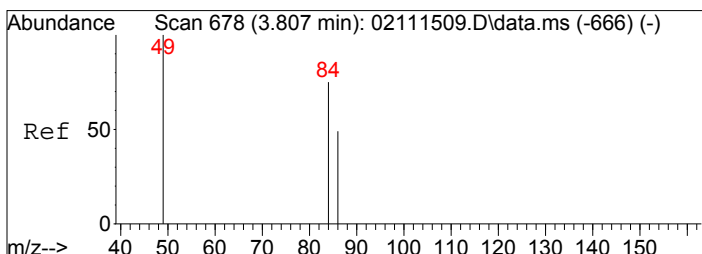
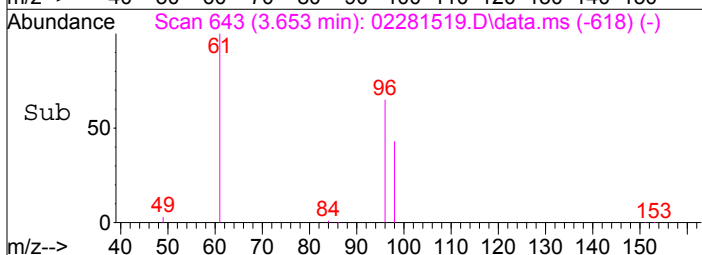
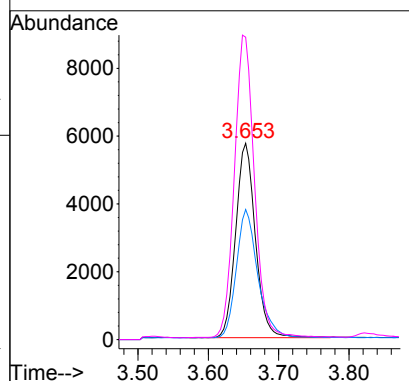
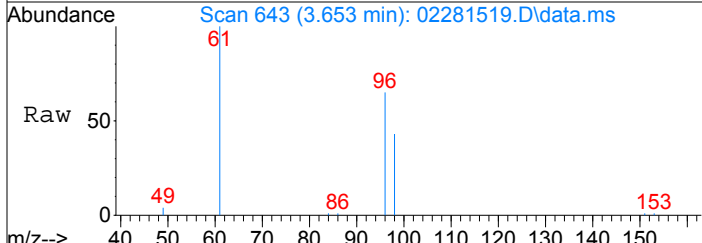
Tgt Ion: 101 Resp: 108901
Ion Ratio Lower Upper
101 100
103 64.9 51.8 77.6





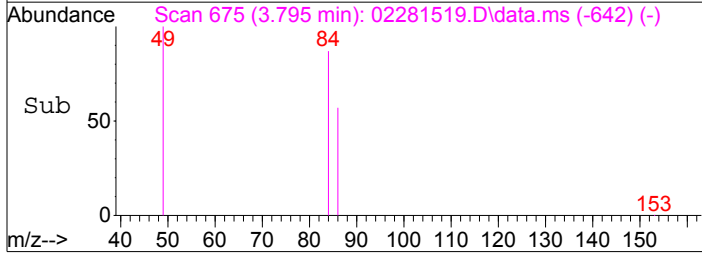
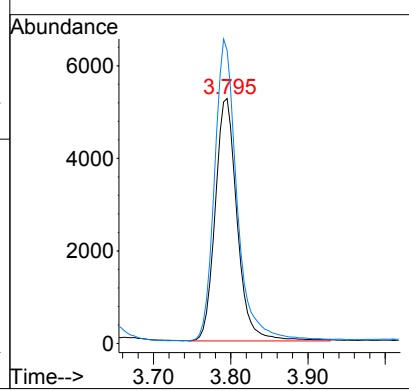
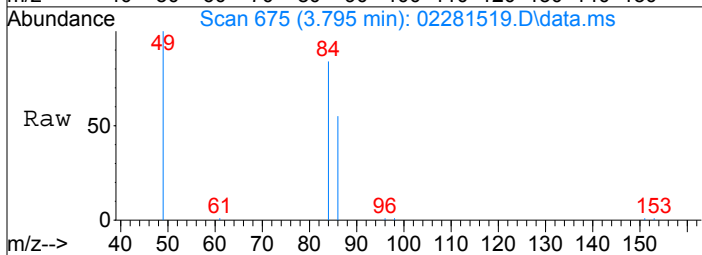
#9
 1,1-Dichloroethene
 Concen: 257.57 pg
 RT: 3.65 min Scan# 643
 Delta R.T. -0.021 min
 Lab File: 02281519.D
 Acq: 28 Feb 2015 11:58

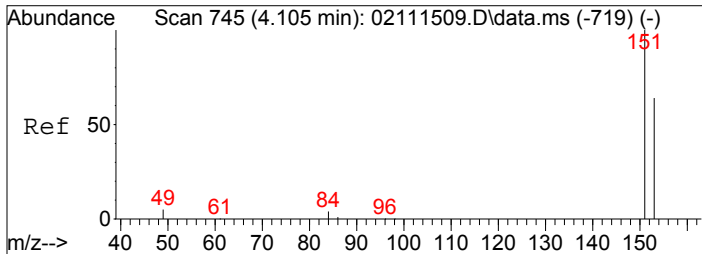
Tgt Ion:	96	Resp:	11162
Ion Ratio	Lower	Upper	
96	100		
98	72.0	44.0	84.0
61	158.7	151.5	191.5



#10
 Methylene Chloride
 Concen: 224.60 pg
 RT: 3.80 min Scan# 675
 Delta R.T. -0.012 min
 Lab File: 02281519.D
 Acq: 28 Feb 2015 11:58

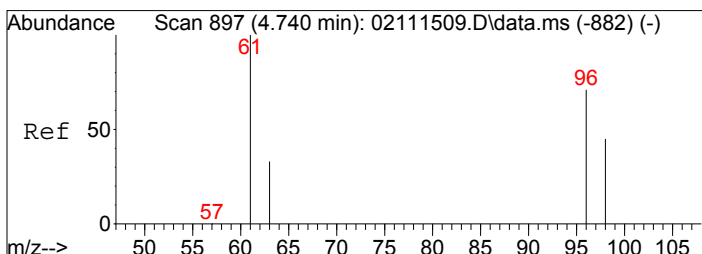
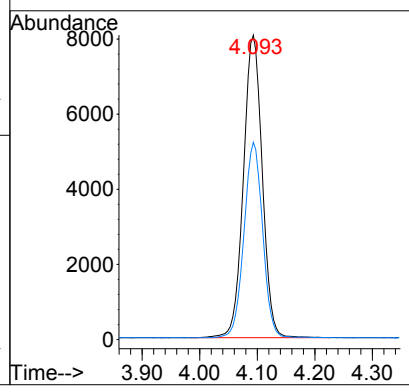
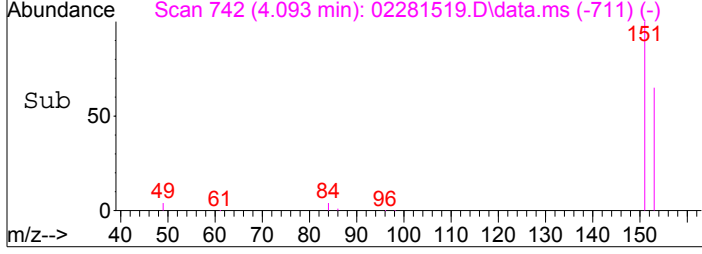
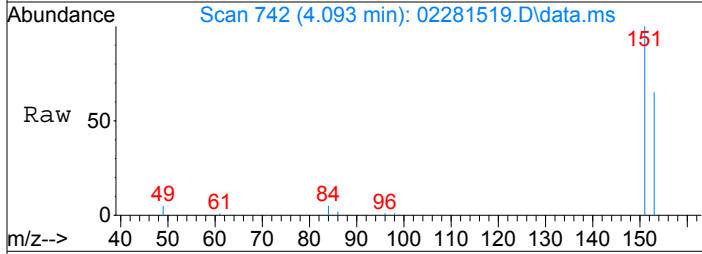
Tgt Ion:	84	Resp:	10346
Ion Ratio	Lower	Upper	
84	100		
49	127.9	112.3	152.3





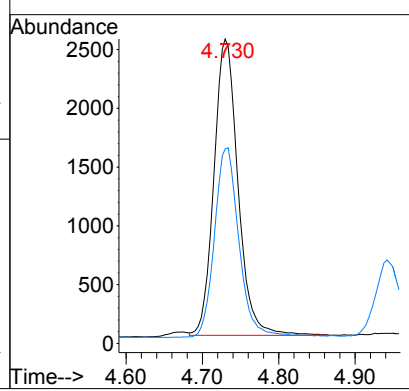
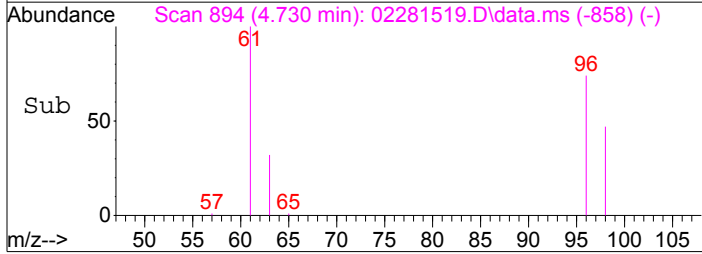
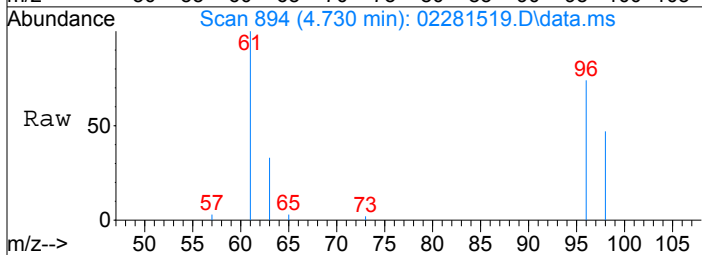
#11
 Trichlorotrifluoroethane
 Concen: 413.01 pg
 RT: 4.09 min Scan# 742
 Delta R.T. -0.012 min
 Lab File: 02281519.D
 Acq: 28 Feb 2015 11:58

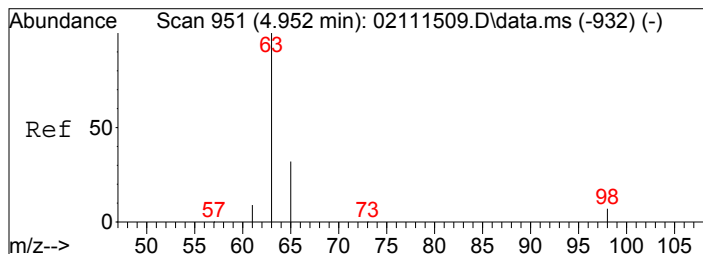
Tgt Ion: 151	Resp: 18423
Ion Ratio	Lower Upper
151	100
153	64.0 43.6 83.6



#12
 trans-1,2-Dichloroethene
 Concen: 124.91 pg
 RT: 4.73 min Scan# 894
 Delta R.T. -0.010 min
 Lab File: 02281519.D
 Acq: 28 Feb 2015 11:58

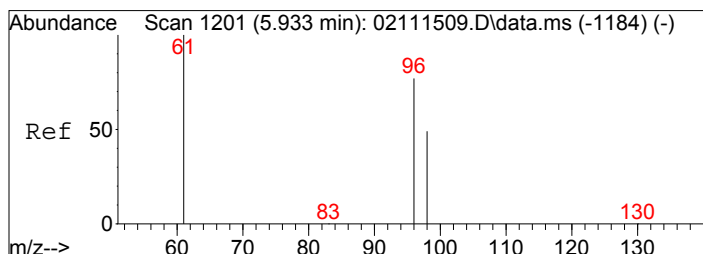
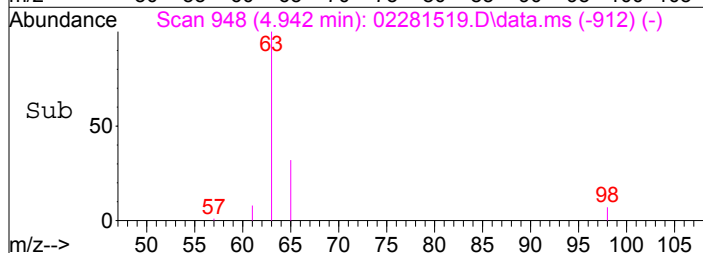
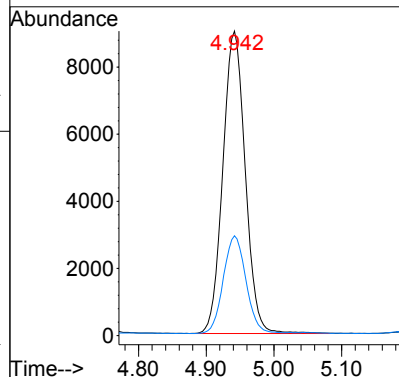
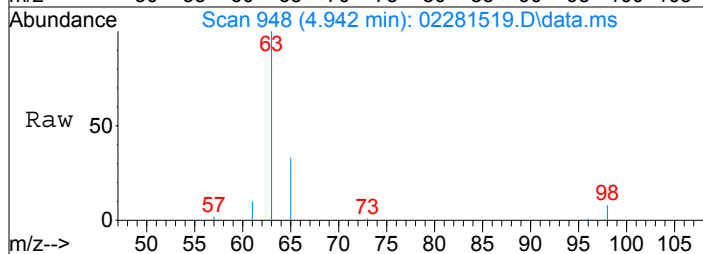
Tgt Ion: 96	Resp: 5528
Ion Ratio	Lower Upper
96	100
98	66.0 43.7 83.7





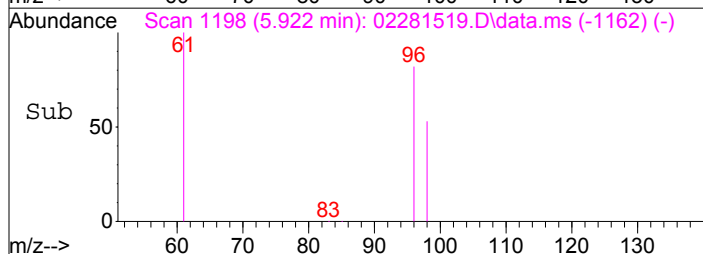
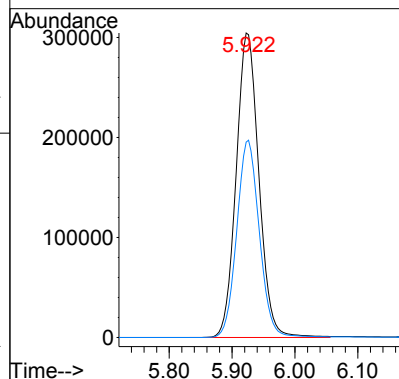
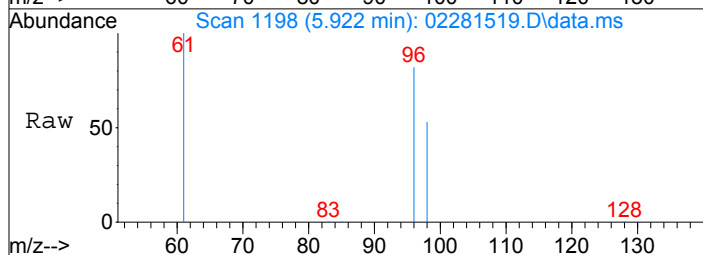
#13
1,1-Dichloroethane
Concen: 260.79 pg
RT: 4.94 min Scan# 948
Delta R.T. -0.010 min
Lab File: 02281519.D
Acq: 28 Feb 2015 11:58

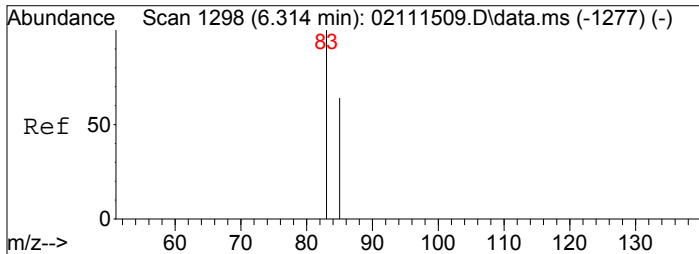
Tgt Ion: 63 Resp: 20718
Ion Ratio Lower Upper
63 100
65 32.7 12.2 52.2



#15
cis-1,2-Dichloroethene
Concen: 15495.33 pg
RT: 5.92 min Scan# 1198
Delta R.T. -0.010 min
Lab File: 02281519.D
Acq: 28 Feb 2015 11:58

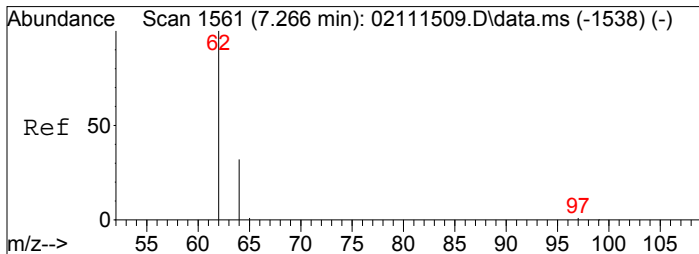
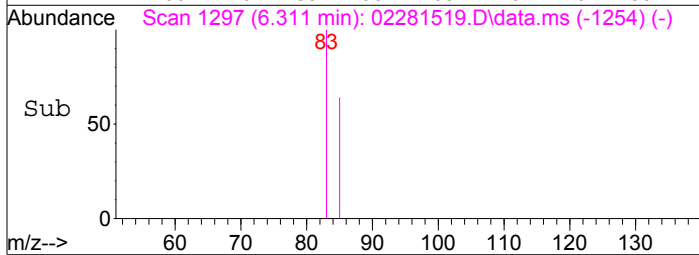
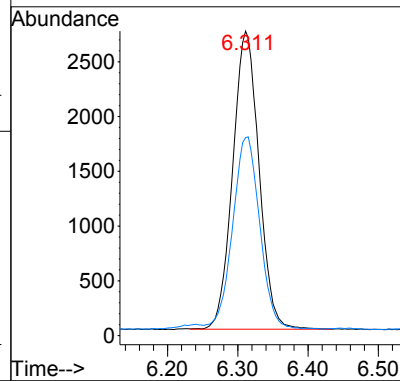
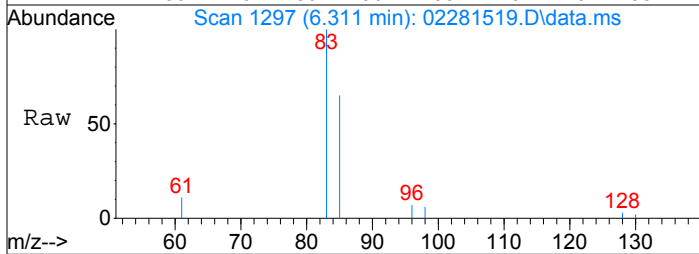
Tgt Ion: 96 Resp: 762540
Ion Ratio Lower Upper
96 100
98 64.5 44.3 84.3





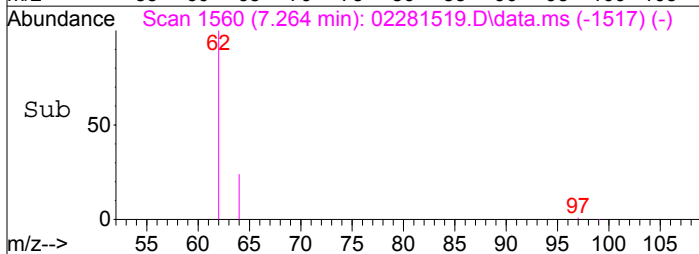
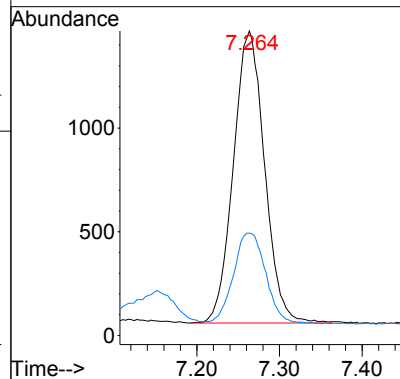
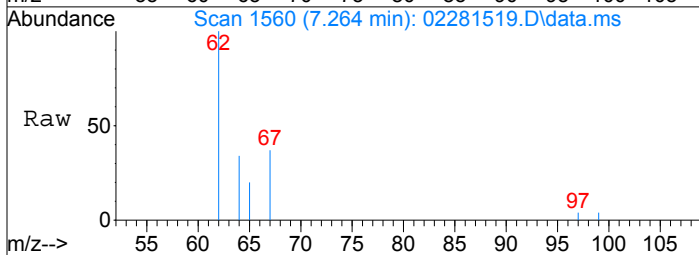
#16
Chloroform
Concen: 82.80 pg
RT: 6.31 min Scan# 1297
Delta R.T. -0.003 min
Lab File: 02281519.D
Acq: 28 Feb 2015 11:58

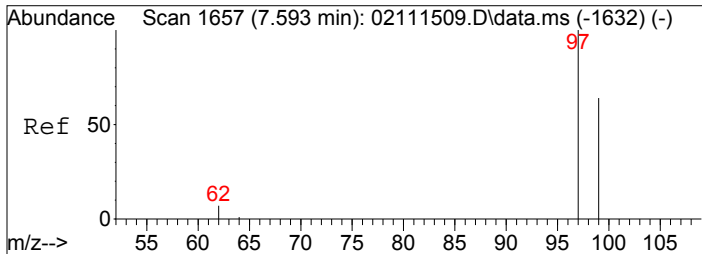
Tgt Ion: 83 Resp: 7060
Ion Ratio Lower Upper
83 100
85 66.7 45.4 85.4



#18
1,2-Dichloroethane
Concen: 54.41 pg
RT: 7.26 min Scan# 1560
Delta R.T. -0.002 min
Lab File: 02281519.D
Acq: 28 Feb 2015 11:58

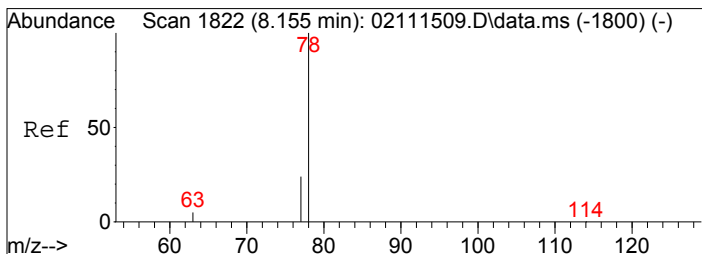
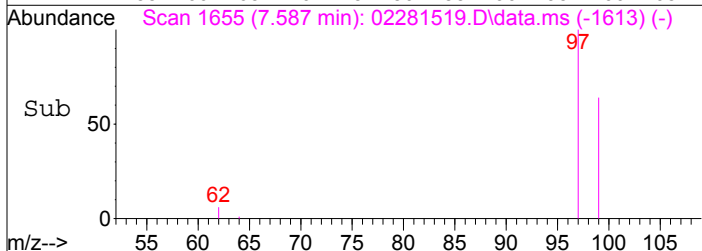
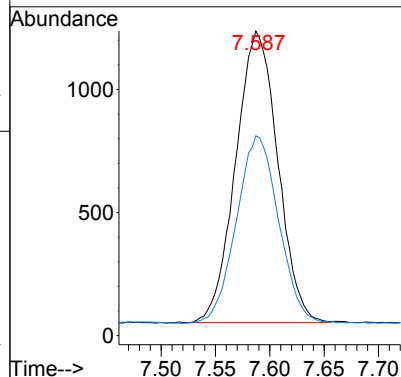
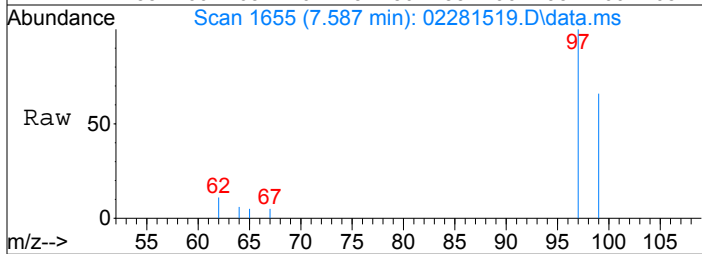
Tgt Ion: 62 Resp: 3694
Ion Ratio Lower Upper
62 100
64 32.2 11.6 51.6





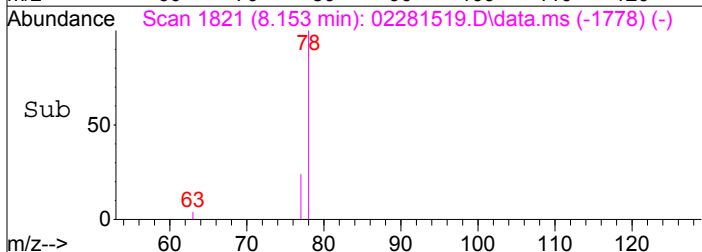
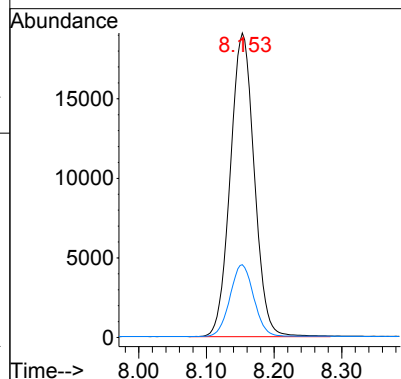
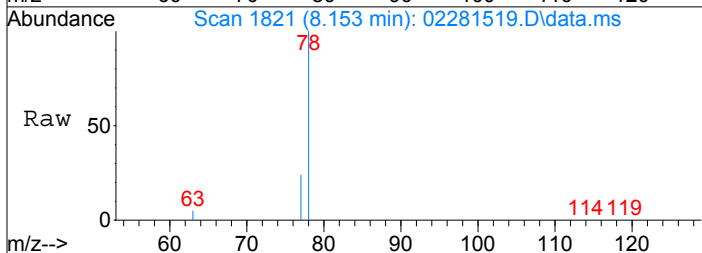
#19
1,1,1-Trichloroethane
Concen: 38.44 pg
RT: 7.59 min Scan# 1655
Delta R.T. -0.005 min
Lab File: 02281519.D
Acq: 28 Feb 2015 11:58

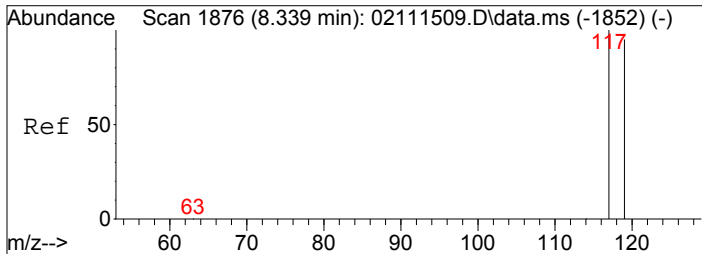
Tgt Ion: 97 Resp: 3187
Ion Ratio Lower Upper
97 100
99 65.0 44.0 84.0



#20
Benzene
Concen: 267.80 pg
RT: 8.15 min Scan# 1821
Delta R.T. -0.002 min
Lab File: 02281519.D
Acq: 28 Feb 2015 11:58

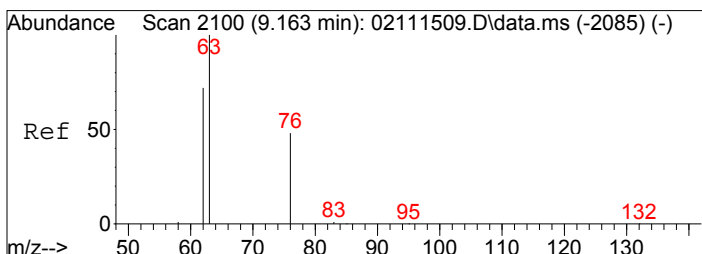
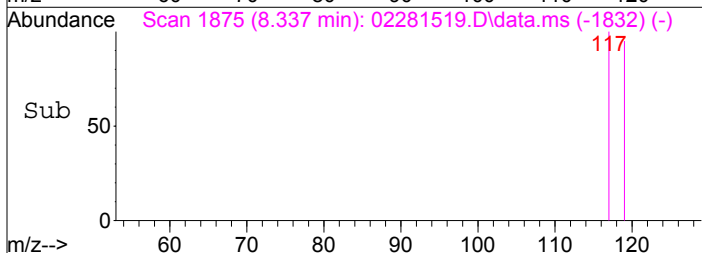
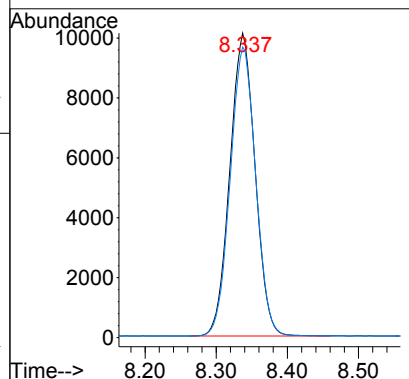
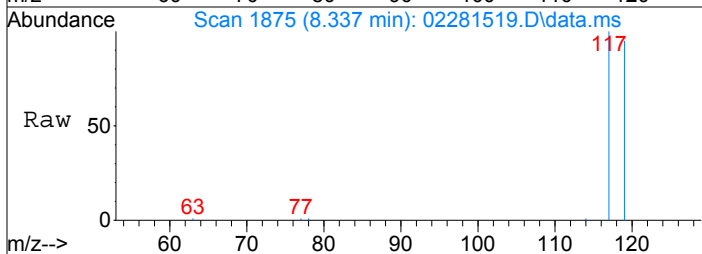
Tgt Ion: 78 Resp: 46963
Ion Ratio Lower Upper
78 100
77 23.5 3.7 43.7





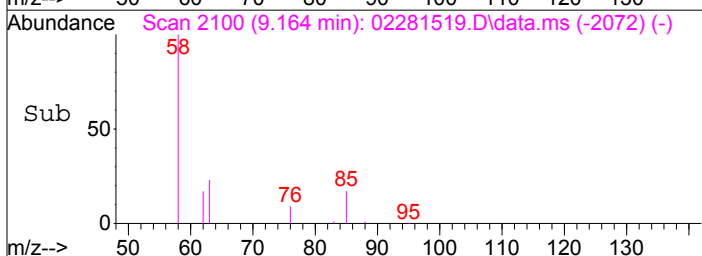
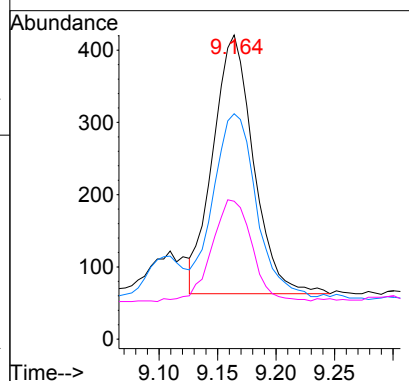
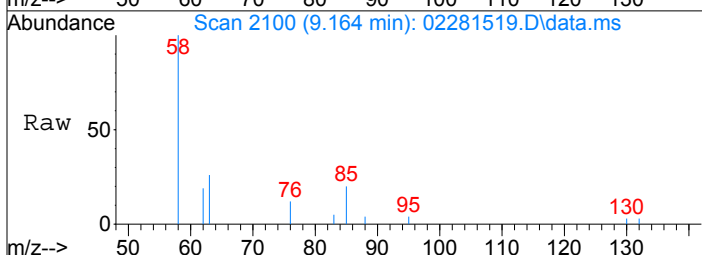
#21
Carbon Tetrachloride
Concen: 401.18 pg
RT: 8.34 min Scan# 1875
Delta R.T. -0.002 min
Lab File: 02281519.D
Acq: 28 Feb 2015 11:58

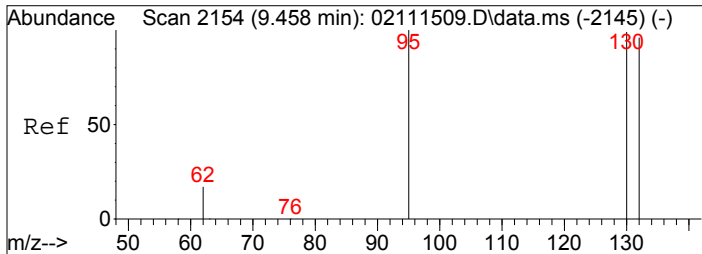
Tgt Ion: 117 Resp: 24902
Ion Ratio Lower Upper
117 100
119 96.2 75.5 115.5



#23
1,2-Dichloropropane
Concen: 21.13 pg
RT: 9.16 min Scan# 2100
Delta R.T. 0.001 min
Lab File: 02281519.D
Acq: 28 Feb 2015 11:58

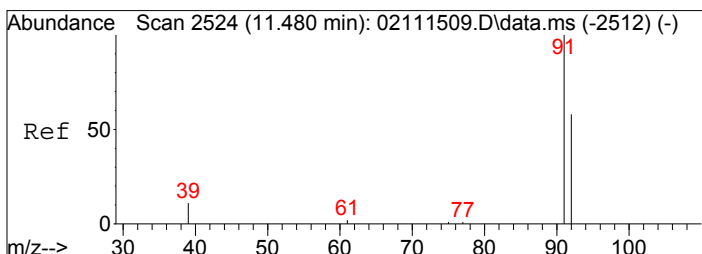
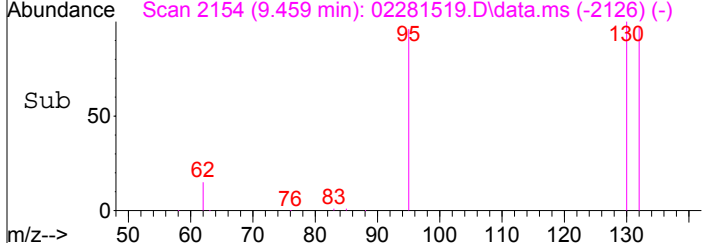
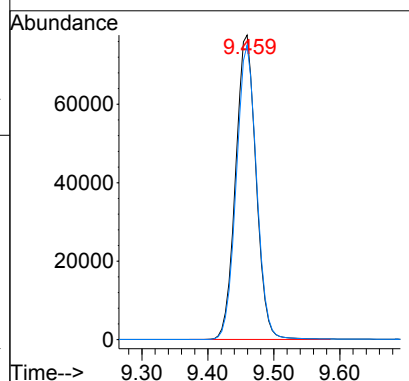
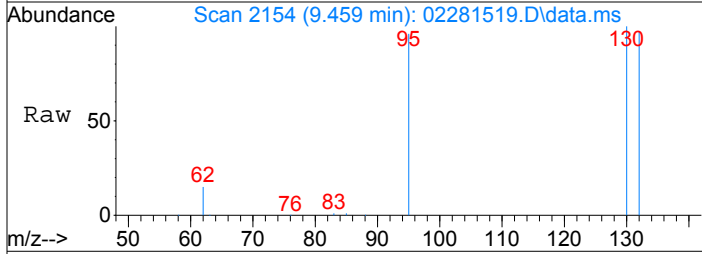
Tgt Ion: 63 Resp: 864
Ion Ratio Lower Upper
63 100
62 75.3 52.0 92.0
76 39.4 28.1 68.1





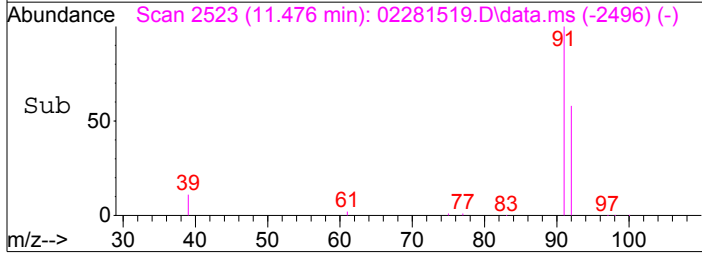
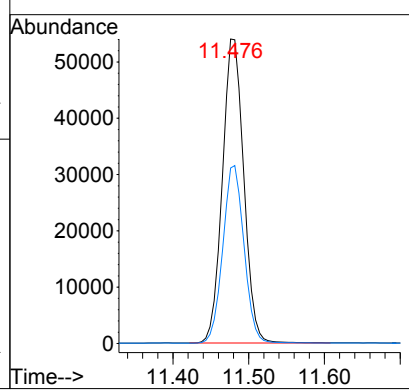
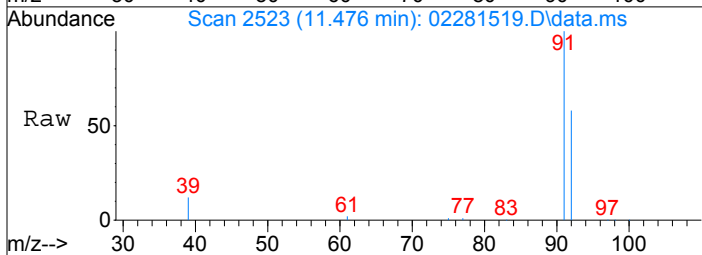
#25
 Trichloroethene
 Concen: 3460.39 pg
 RT: 9.46 min Scan# 2154
 Delta R.T. 0.001 min
 Lab File: 02281519.D
 Acq: 28 Feb 2015 11:58

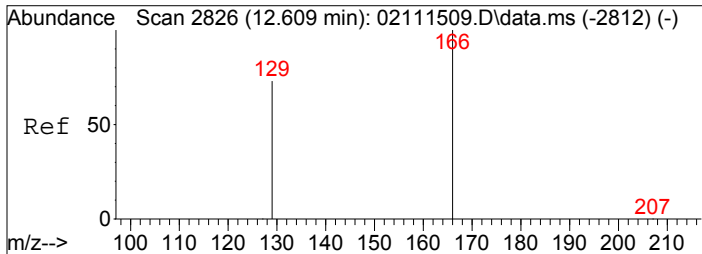
Tgt Ion:130	Resp:	166643
Ion Ratio	Lower	Upper
130	100	
132	96.1	77.1 117.1



#31
 Toluene
 Concen: 577.38 pg
 RT: 11.48 min Scan# 2523
 Delta R.T. -0.004 min
 Lab File: 02281519.D
 Acq: 28 Feb 2015 11:58

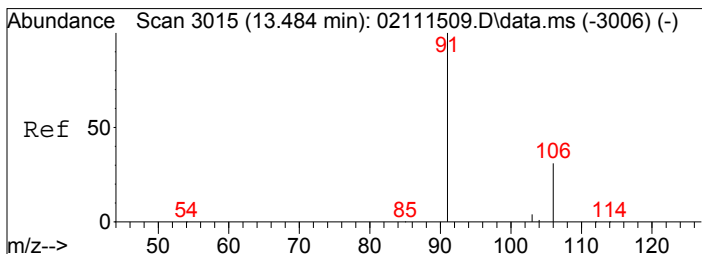
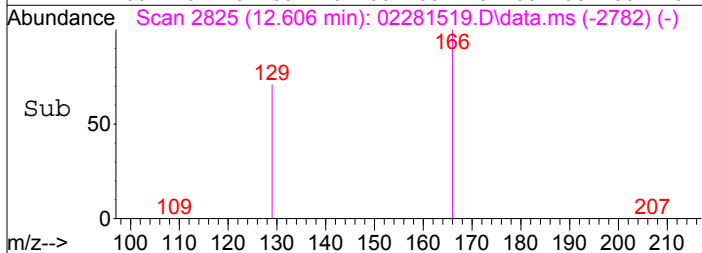
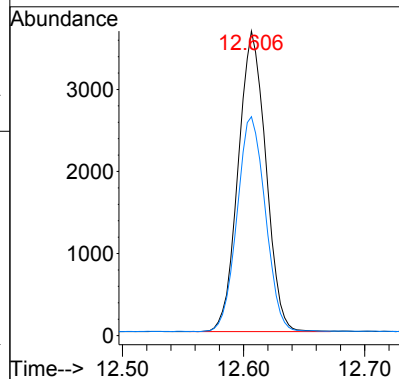
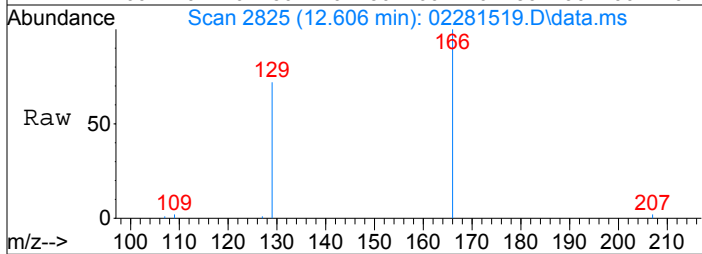
Tgt Ion: 91	Resp:	106152
Ion Ratio	Lower	Upper
91	100	
92	57.9	37.7 77.7





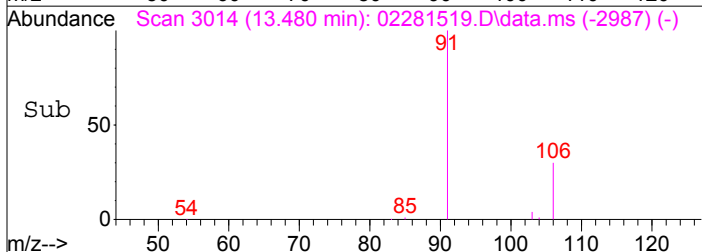
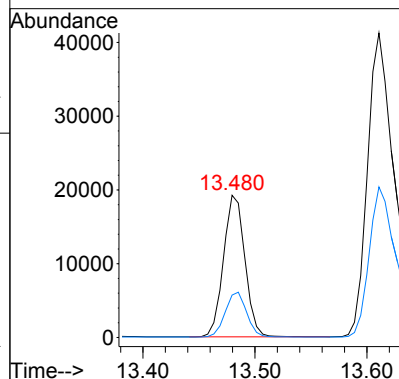
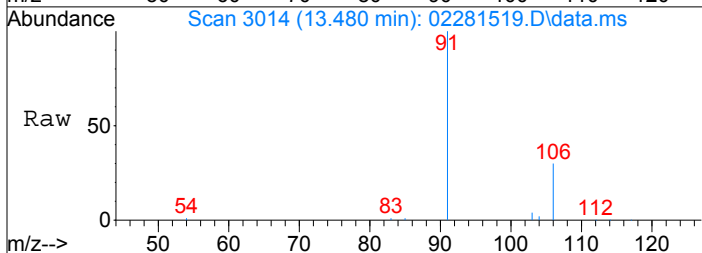
#33
Tetrachloroethene
Concen: 101.89 pg
RT: 12.61 min Scan# 2825
Delta R.T. -0.003 min
Lab File: 02281519.D
Acq: 28 Feb 2015 11:58

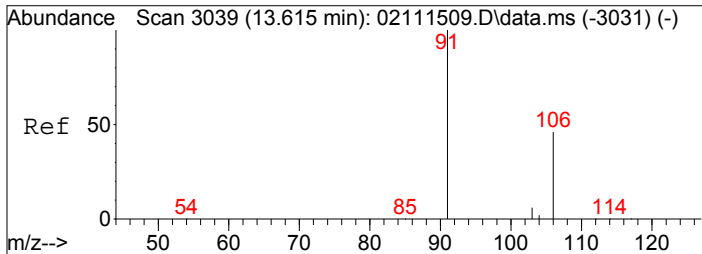
Tgt Ion: 166 Resp: 5800
Ion Ratio Lower Upper
166 100
129 73.3 53.3 93.3



#36
Ethylbenzene
Concen: 128.71 pg
RT: 13.48 min Scan# 3014
Delta R.T. -0.004 min
Lab File: 02281519.D
Acq: 28 Feb 2015 11:58

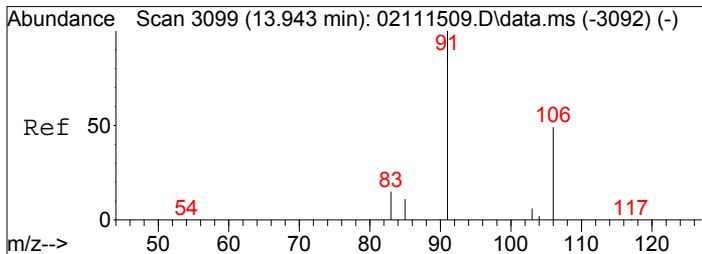
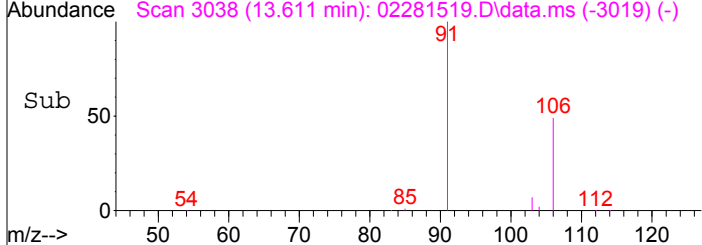
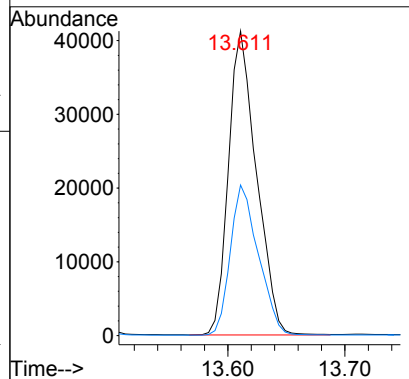
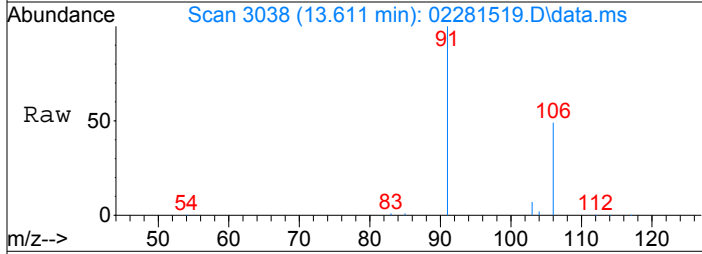
Tgt Ion: 91 Resp: 25592
Ion Ratio Lower Upper
91 100
106 31.5 10.9 50.9





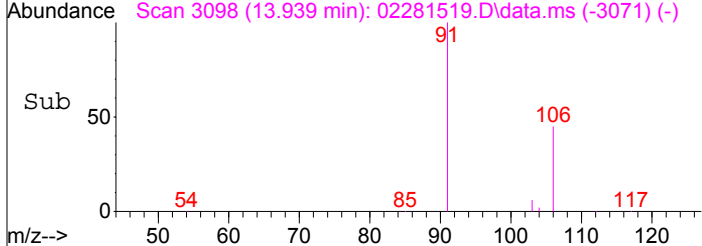
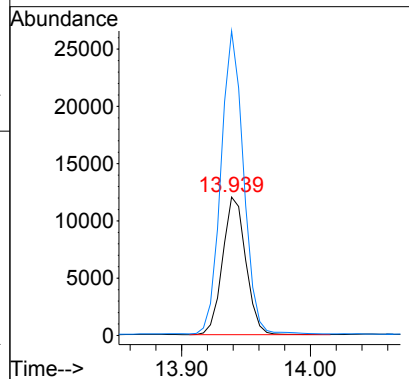
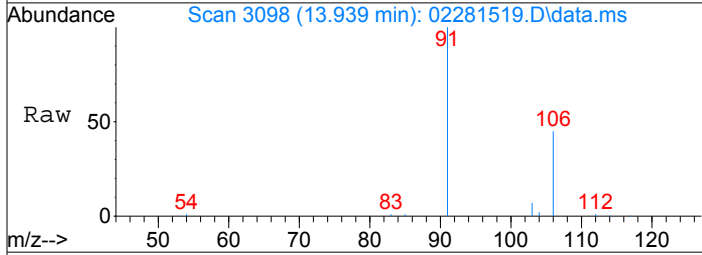
#37
m,p-Xylene
Concen: 418.84 pg
RT: 13.61 min Scan# 3038
Delta R.T. -0.004 min
Lab File: 02281519.D
Acq: 28 Feb 2015 11:58

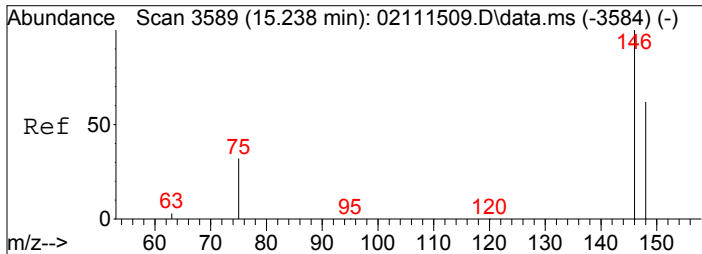
Tgt Ion: 91 Resp: 68447
Ion Ratio Lower Upper
91 100
106 49.7 27.5 67.5



#38
o-Xylene
Concen: 187.67 pg
RT: 13.94 min Scan# 3098
Delta R.T. -0.004 min
Lab File: 02281519.D
Acq: 28 Feb 2015 11:58

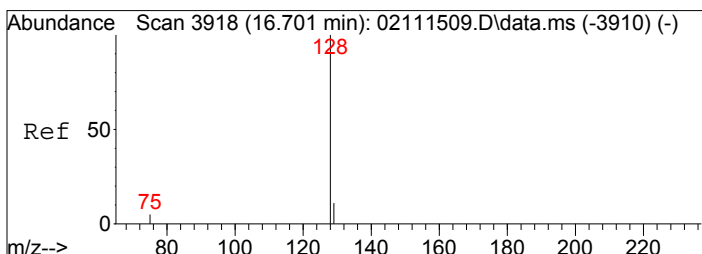
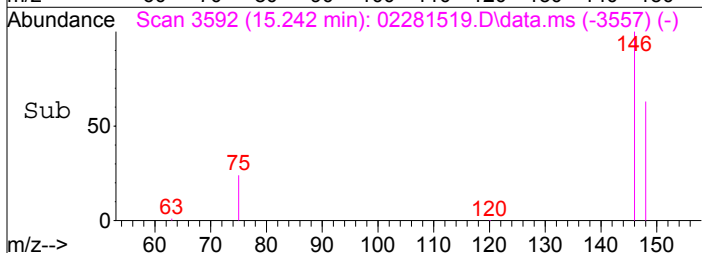
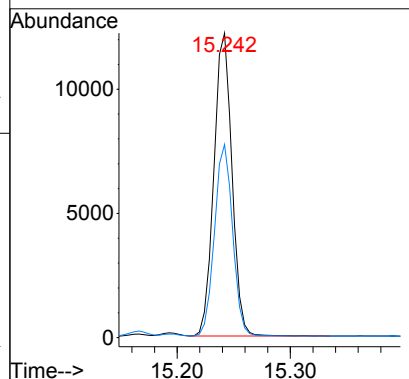
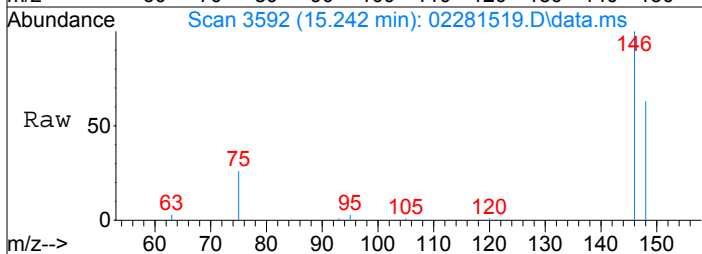
Tgt Ion: 106 Resp: 14989
Ion Ratio Lower Upper
106 100
91 216.3 198.3 238.3





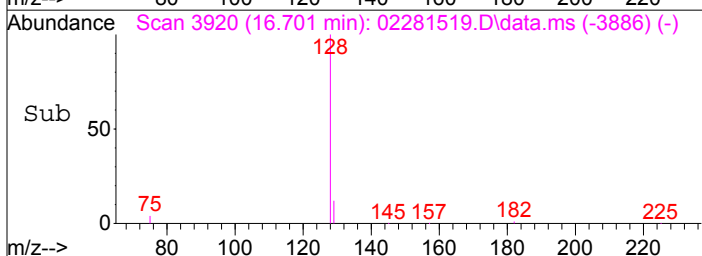
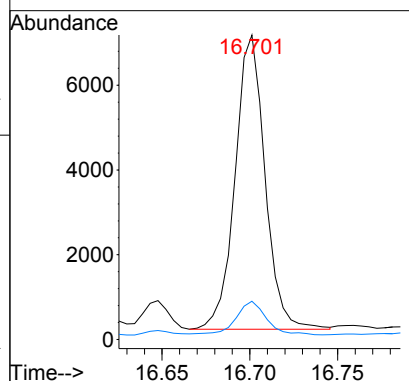
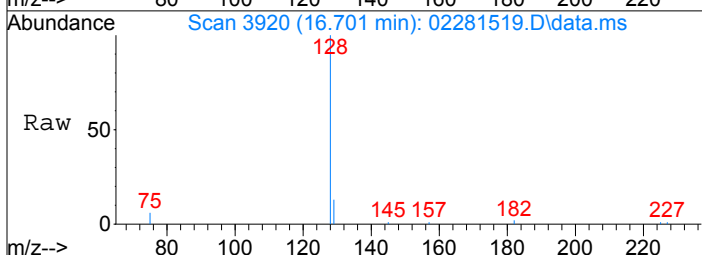
#42
 1,4-Dichlorobenzene
 Concen: 123.51 pg
 RT: 15.24 min Scan# 3592
 Delta R.T. 0.004 min
 Lab File: 02281519.D
 Acq: 28 Feb 2015 11:58

Tgt Ion:146 Resp: 13533
 Ion Ratio Lower Upper
 146 100
 148 63.4 43.5 83.5



#45
 Naphthalene
 Concen: 41.58 pg
 RT: 16.70 min Scan# 3920
 Delta R.T. 0.000 min
 Lab File: 02281519.D
 Acq: 28 Feb 2015 11:58

Tgt Ion:128 Resp: 8249
 Ion Ratio Lower Upper
 128 100
 129 11.8 0.0 30.9



Data File: I:\MS19\DATA\2015 02\28\02281519.D

Acq On : 28 Feb 2015 11:58

Operator: WA

Sample : P1500729-014 (1000mL)

Misc : S29-02041502

ALS Vial : 9 Sample Multiplier: 1

Quant Time: Mar 02 08:58:24 2015

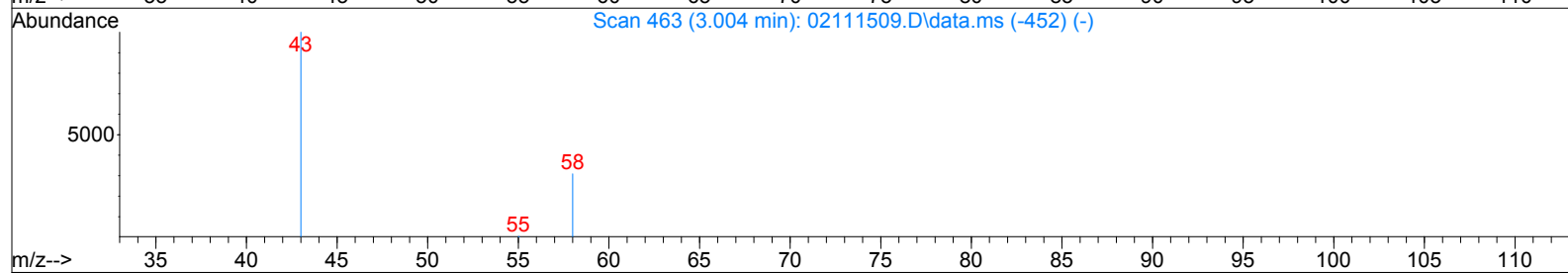
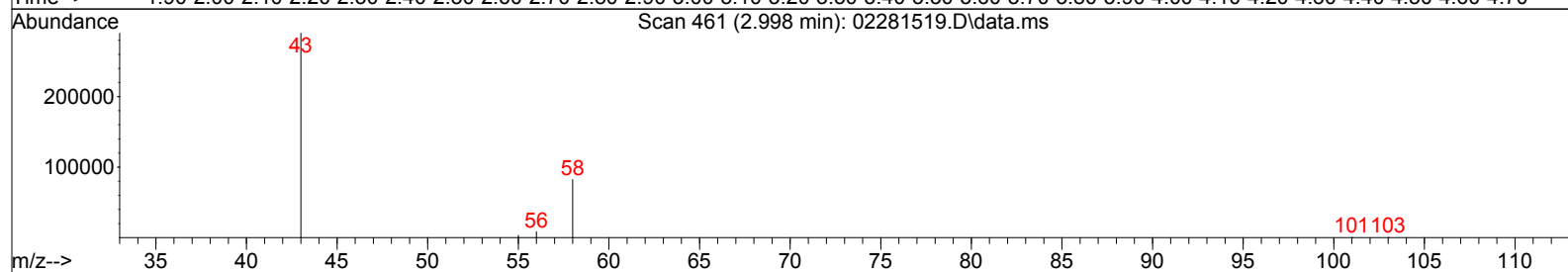
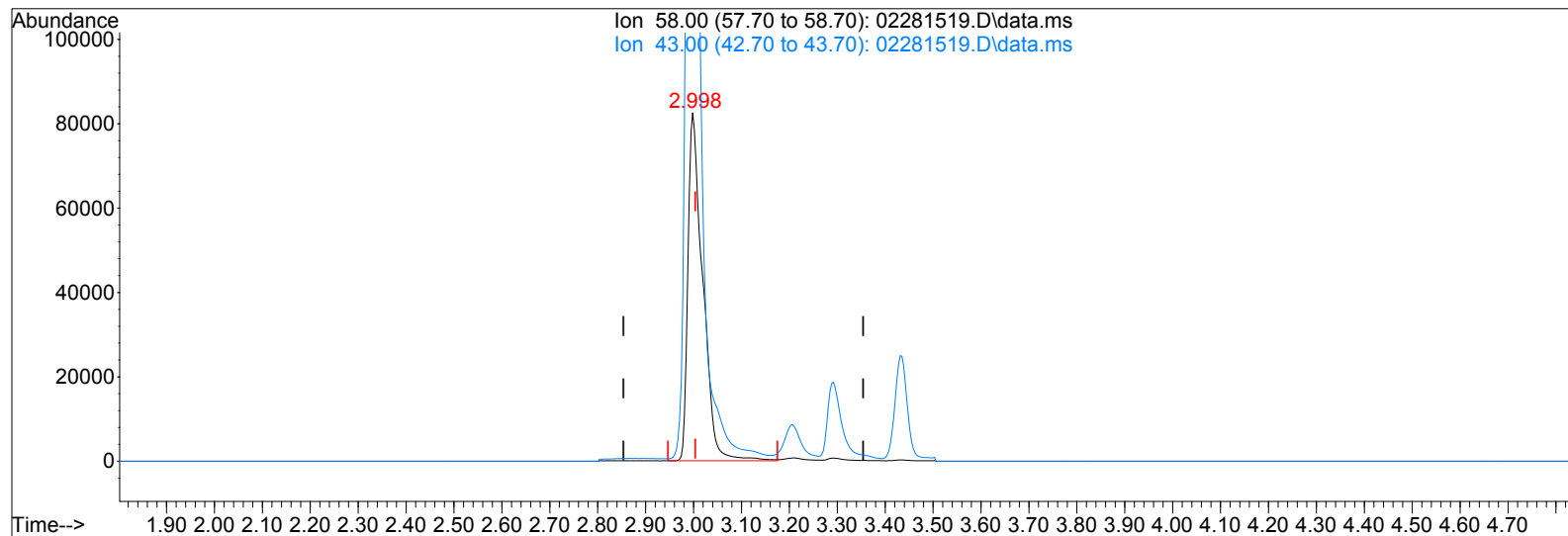
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



TIC: 02281519.D\data.ms

(7) Acetone (T)

2.998min (-0.006) 4445.60pg

response 177418

Ion	Exp%	Act%
58.00	100	100
43.00	321.80	297.41#
0.00	0.00	0.00
0.00	0.00	0.00

Data File: I:\MS19\DATA\2015 02\28\02281519.D

Acq On : 28 Feb 2015 11:58

Operator: WA

Sample : P1500729-014 (1000mL)

Misc : S29-02041502

ALS Vial : 9 Sample Multiplier: 1

Quant Time: Mar 02 08:58:24 2015

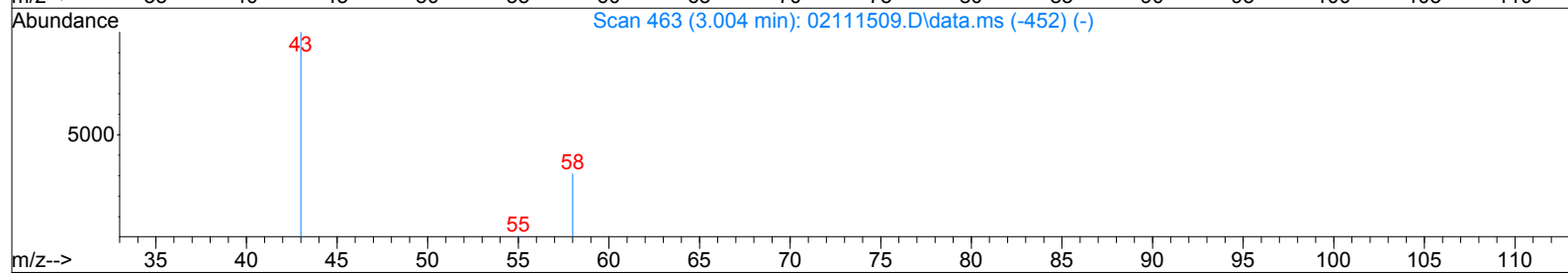
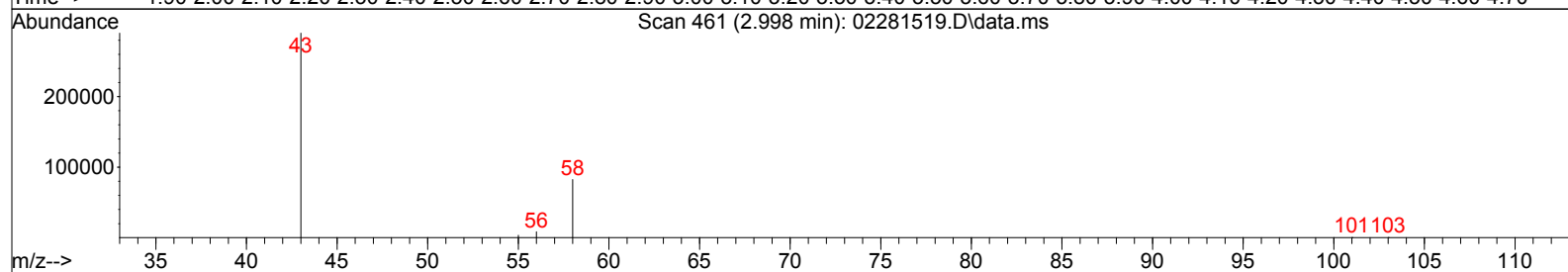
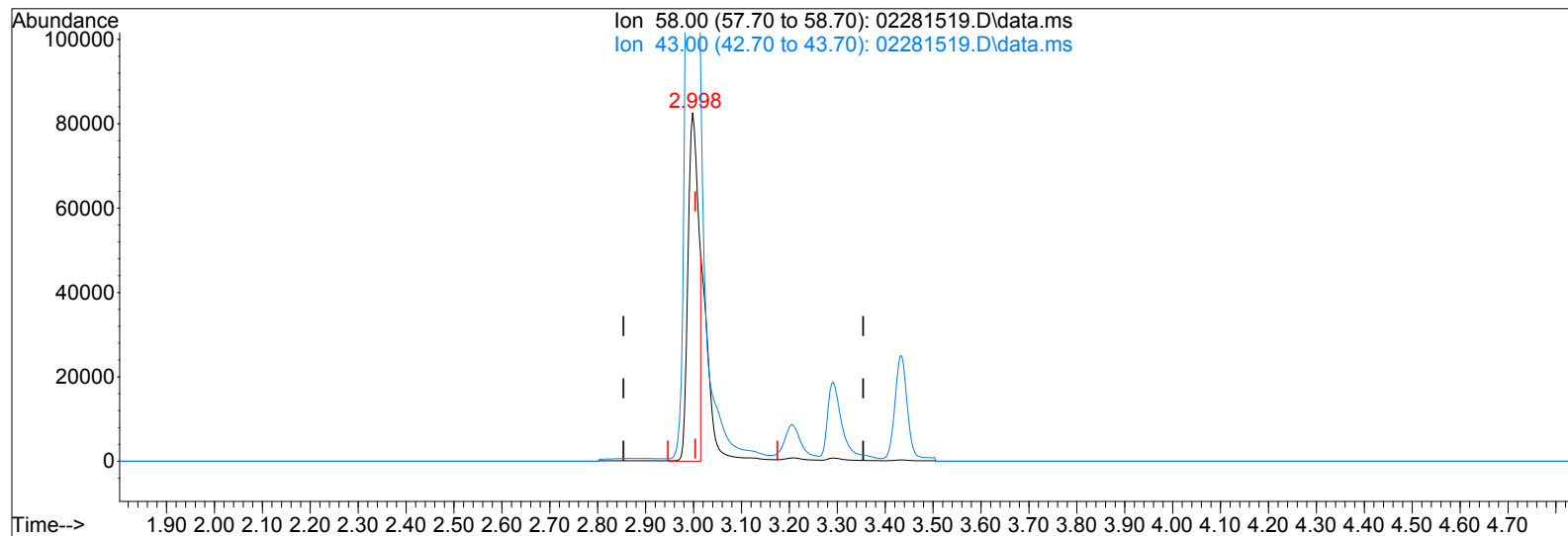
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



TIC: 02281519.D\data.ms

(7) Acetone (T)

2.998min (-0.006) 3212.83pg m

IPC

response 128220

3/2/15

Ion	Exp%	Act%
58.00	100	100
43.00	321.80	411.52#
0.00	0.00	0.00
0.00	0.00	0.00

3/3/15

Data File: I:\MS19\DATA\2015 02\28\02281521.D

Acq On : 28 Feb 2015 12:53

Operator: WA

Sample : P1500729-015 (1000mL)

Misc : S29-02041502

ALS Vial : 10 Sample Multiplier: 1

Quant Time: Mar 02 11:24:24 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

107 3/2/15

DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.12	130	27399	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	186613	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	31397	1000.000	pg	0.00
System Monitoring Compounds						
17) 1,2-Dichloroethane-d4 ...	7.13	65	57204	854.927	pg	0.00
Spiked Amount 1000.000			Recovery	=	85.49%	
30) Toluene-d8 (SS2)	11.38	98	175486	1019.724	pg	0.00
Spiked Amount 1000.000			Recovery	=	101.97%	
40) Bromofluorobenzene (SS3)	14.25	174	73466	1159.022	pg	0.00
Spiked Amount 1000.000			Recovery	=	115.90%	
Target Compounds						Qvalue
2) Dichlorodifluoromethan...	1.73	85	183453	1647.536	pg	100
3) Chloromethane	1.83	52	7518	338.087	pg	99
4) Vinyl Chloride	2.01	62	168349	1944.076	pg	99
5) Bromomethane	2.33	94	1301	25.984	pg	98
6) Chloroethane	2.47	64	581	N.D.		
7) Acetone	3.03	58	134674	3425.049	pg	91
8) Trichlorofluoromethane	3.10	101	105713	1105.264	pg	100
9) 1,1-Dichloroethene	3.65	96	118660	2779.128	pg	94
10) Methylene Chloride	3.80	84	9399	207.099	pg	94
11) Trichlorotrifluoroethane	4.09	151	32298	734.896	pg	99
12) trans-1,2-Dichloroethene	4.73	96	76744	1760.082	pg	99
13) 1,1-Dichloroethane	4.95	63	282157	3604.822	pg	100
14) Methyl tert-Butyl Ether	5.13	73	1873	N.D.		
15) cis-1,2-Dichloroethene	5.94	96	15487941	319435.057	pg	98
16) Chloroform	6.32	83	9868	117.470	pg	100
18) 1,2-Dichloroethane	7.27	62	5179	77.430	pg	99
19) 1,1,1-Trichloroethane	7.60	97	8226	100.698	pg	99
20) Benzene	8.16	78	49077	284.046	pg	100
21) Carbon Tetrachloride	8.35	117	23294	380.887	pg	99
23) 1,2-Dichloropropane	9.16	63	745	N.D.		
24) Bromodichloromethane	0.00	83	0	N.D. d		
25) Trichloroethene	9.46	130	3430073	71546.319	pg	99
26) 1,4-Dioxane	9.54	88	999	27.959	pg	76
27) cis-1,3-Dichloropropene	10.46	75	423	N.D.		
28) trans-1,3-Dichloropropene	11.05	75	179	N.D.		
29) 1,1,2-Trichloroethane	11.19	83	328	N.D.		
31) Toluene	11.48	91	74188	405.334	pg	100
32) 1,2-Dibromoethane	12.12	107	23	N.D.		
33) Tetrachloroethene	12.61	166	69025	1217.979	pg	99
35) Chlorobenzene	13.17	112	467	N.D.		
36) Ethylbenzene	13.48	91	11715	59.502	pg	99
37) m,p-Xylene	13.61	91	28539	176.365	pg	97
38) o-Xylene	13.94	106	6461	81.698	pg	96
39) 1,1,2,2-Tetrachloroethane	13.96	83	351	N.D.		
41) 1,3-Dichlorobenzene	15.17	146	150	N.D.		
42) 1,4-Dichlorobenzene	15.24	146	2791	25.724	pg	97
43) 1,2-Dichlorobenzene	15.46	146	170	N.D.		
44) 1,2,4-Trichlorobenzene	16.63	182	138	N.D.		
45) Naphthalene	16.70	128	4827	24.571	pg	93
46) Hexachlorobutadiene	16.96	225	53	N.D.		

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\28\02281521.D

Acq On : 28 Feb 2015 12:53

Operator: WA

Sample : P1500729-015 (1000mL)

Misc : S29-02041502

ALS Vial : 10 Sample Multiplier: 1

Quant Time: Mar 02 11:24:24 2015

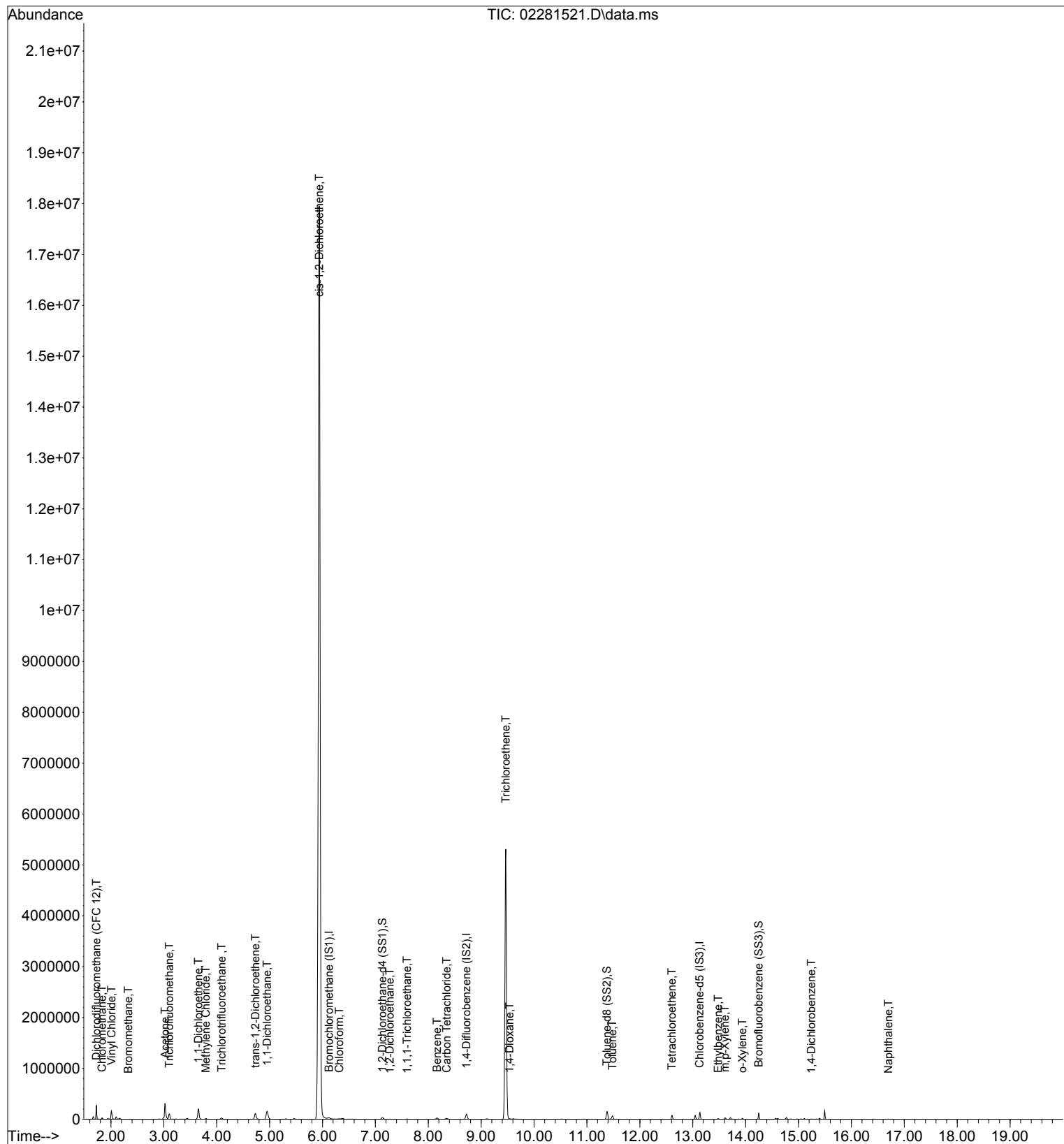
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 02\28\02281521.D

Acq On : 28 Feb 2015 12:53

Operator: WA

Sample : P1500729-015 (1000mL)

Misc : S29-02041502

ALS Vial : 10 Sample Multiplier: 1

Quant Time: Mar 02 11:24:24 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

3/2/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.12	130	27399	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	186613	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	31397	1000.000	pg	0.00
System Monitoring Compounds						
17) 1,2-Dichloroethane-d4 ...	7.13	65	57204	854.927	pg	0.00
Spiked Amount 1000.000			Recovery	=	85.49%	
30) Toluene-d8 (SS2)	11.38	98	175486	1019.724	pg	0.00
Spiked Amount 1000.000			Recovery	=	101.97%	
40) Bromofluorobenzene (SS3)	14.25	174	73466	1159.022	pg	0.00
Spiked Amount 1000.000			Recovery	=	115.90%	
Target Compounds						Qvalue
2) Dichlorodifluoromethan...	1.73	85	183453	1647.536	pg	100
3) Chloromethane	1.83	52	7518	338.087	pg	99
4) Vinyl Chloride	2.01	62	168349	1944.076	pg	99
5) Bromomethane	2.33	94	1301	25.984	pg	98
7) Acetone	3.03	58	134674	3425.049	pg	91
8) Trichlorofluoromethane	3.10	101	105713	1105.264	pg	100
9) 1,1-Dichloroethene	3.65	96	118660	2779.128	pg	94
10) Methylene Chloride	3.80	84	9399	207.099	pg	94
11) Trichlorotrifluoroethane	4.09	151	32298	734.896	pg	99
12) trans-1,2-Dichloroethene	4.73	96	76744	1760.082	pg	99
13) 1,1-Dichloroethane	4.95	63	282157	3604.822	pg	100
15) cis-1,2-Dichloroethene	5.94	96	15487941	319435.057	pg	98
16) Chloroform	6.32	83	9868	117.470	pg	100
18) 1,2-Dichloroethane	7.27	62	5179	77.430	pg	99
19) 1,1,1-Trichloroethane	7.60	97	8226	100.698	pg	99
20) Benzene	8.16	78	49077	284.046	pg	100
21) Carbon Tetrachloride	8.35	117	23294	380.887	pg	99
25) Trichloroethene	9.46	130	3430073	71546.319	pg	99
26) 1,4-Dioxane	9.54	88	999	27.959	pg	76
31) Toluene	11.48	91	74188	405.334	pg	100
33) Tetrachloroethene	12.61	166	69025	1217.979	pg	99
36) Ethylbenzene	13.48	91	11715	59.502	pg	99
37) m,p-Xylene	13.61	91	28539	176.365	pg	97
38) o-Xylene	13.94	106	6461	81.698	pg	96
42) 1,4-Dichlorobenzene	15.24	146	2791	25.724	pg	97
45) Naphthalene	16.70	128	4827	24.571	pg	93

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\28\02281521.D

Acq On : 28 Feb 2015 12:53

Operator: WA

Sample : P1500729-015 (1000mL)

Misc : S29-02041502

ALS Vial : 10 Sample Multiplier: 1

Quant Time: Mar 02 11:24:24 2015

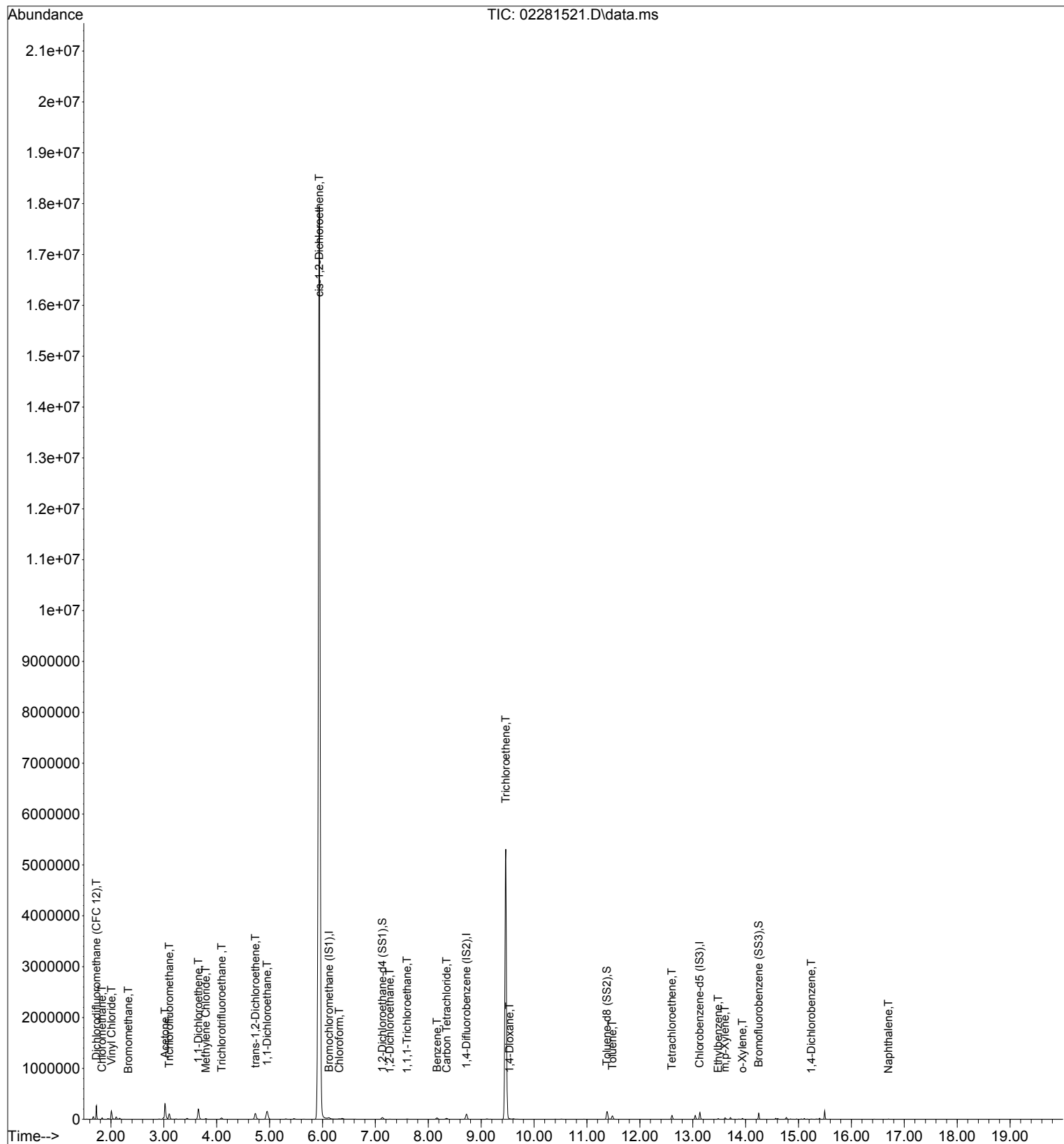
Quant Method : I:\MS19\METHODS\X19021115.M

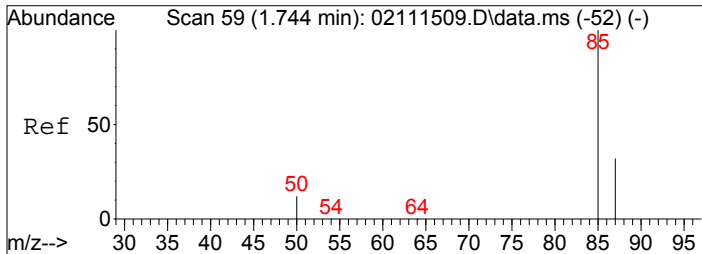
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

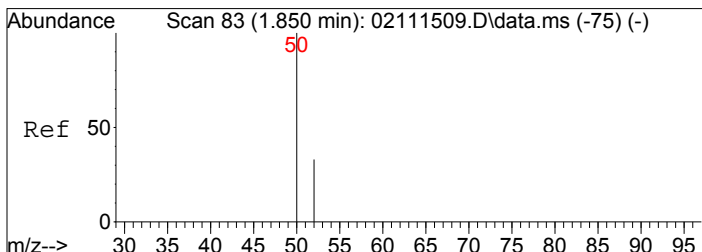
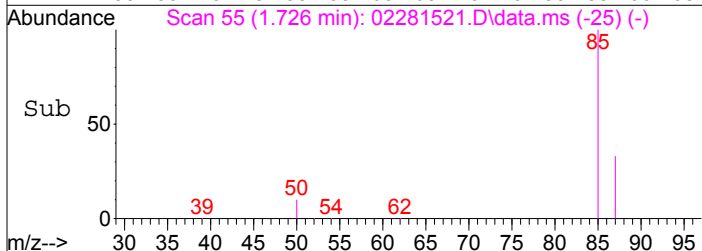
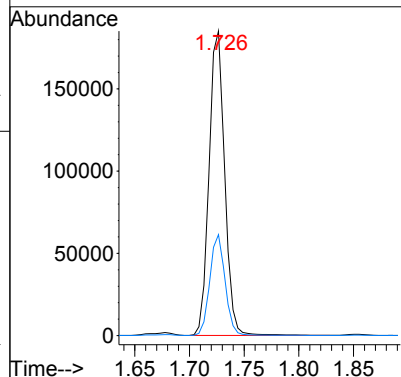
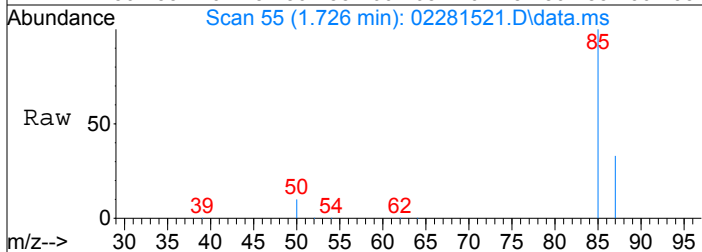
DataAcq Meth:TO15SIM.M





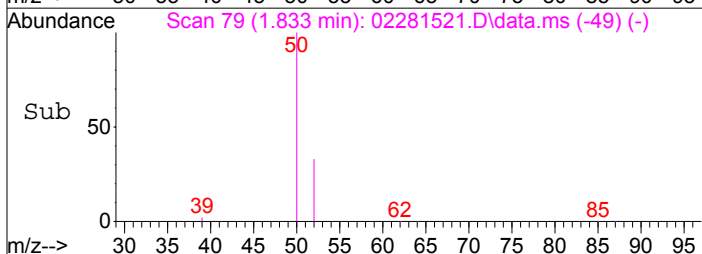
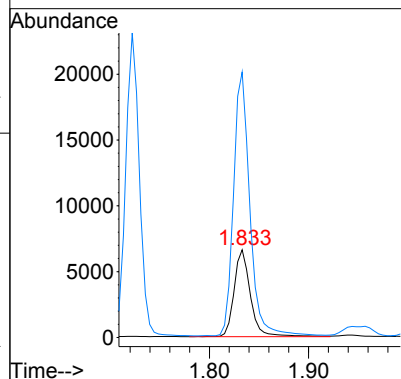
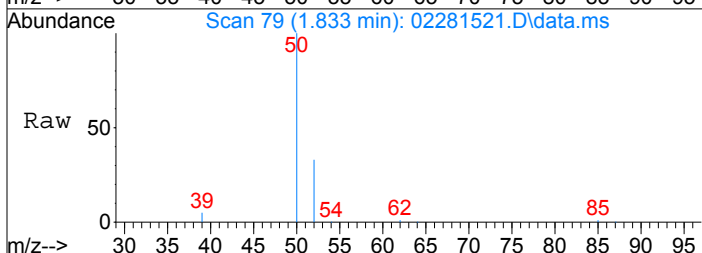
#2
 Dichlorodifluoromethane (CFC 12)
 Concen: 1647.54 pg
 RT: 1.73 min Scan# 55
 Delta R.T. -0.017 min
 Lab File: 02281521.D
 Acq: 28 Feb 2015 12:53

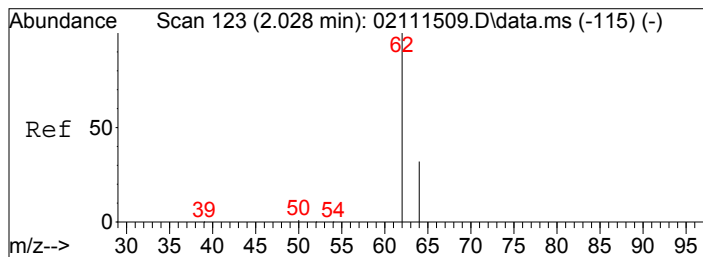
Tgt Ion	85	Resp	183453
Ion Ratio	100	Lower	Upper
87	32.6	12.4	52.4



#3
 Chloromethane
 Concen: 338.09 pg
 RT: 1.83 min Scan# 79
 Delta R.T. -0.017 min
 Lab File: 02281521.D
 Acq: 28 Feb 2015 12:53

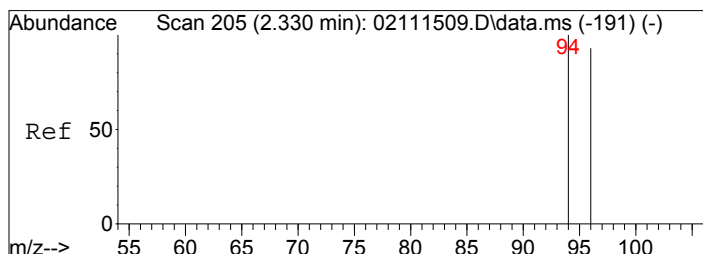
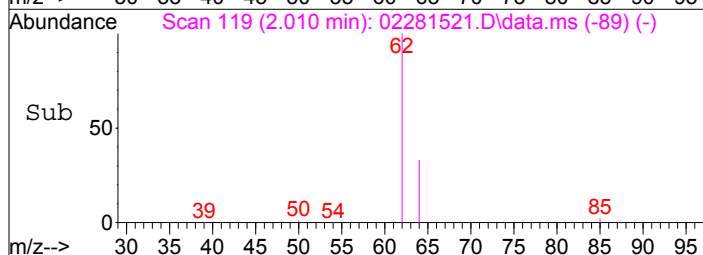
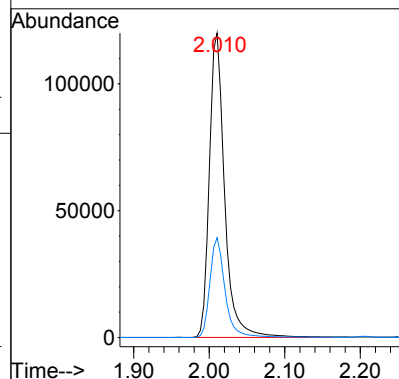
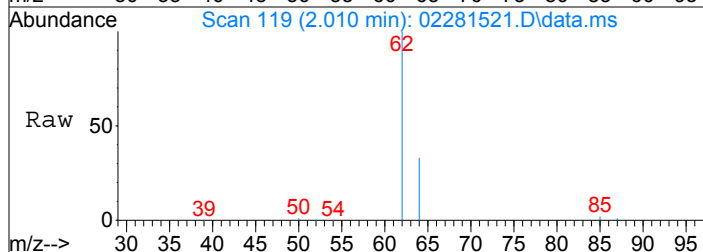
Tgt Ion	52	Resp	7518
Ion Ratio	100	Lower	Upper
50	305.3	283.7	323.7





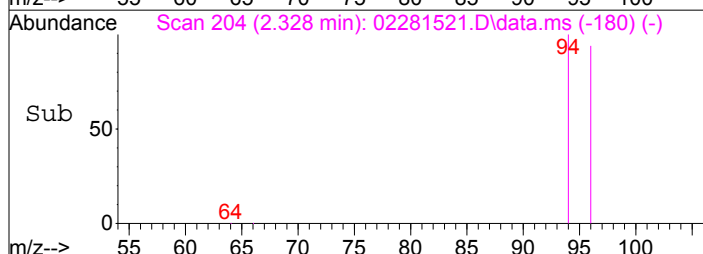
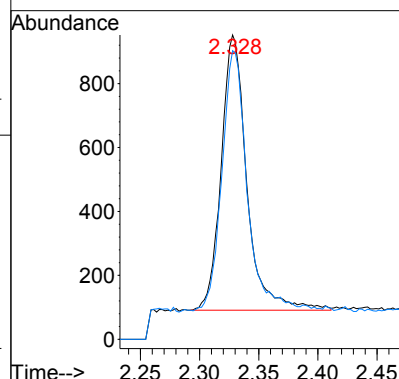
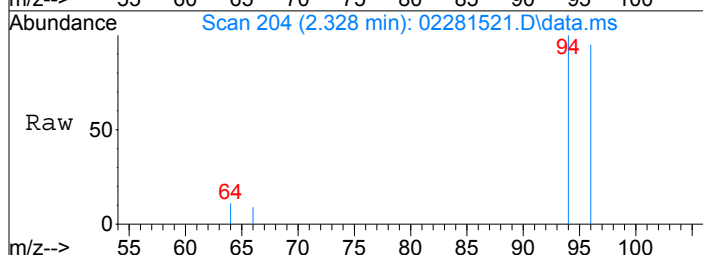
#4
 Vinyl Chloride
 Concen: 1944.08 pg
 RT: 2.01 min Scan# 119
 Delta R.T. -0.017 min
 Lab File: 02281521.D
 Acq: 28 Feb 2015 12:53

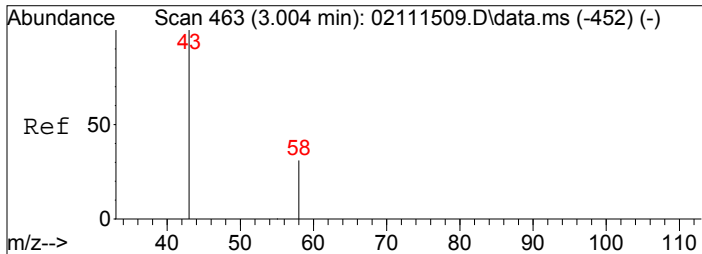
Tgt Ion: 62 Resp: 168349
 Ion Ratio Lower Upper
 62 100
 64 32.7 12.4 52.4



#5
 Bromomethane
 Concen: 25.98 pg
 RT: 2.33 min Scan# 204
 Delta R.T. -0.002 min
 Lab File: 02281521.D
 Acq: 28 Feb 2015 12:53

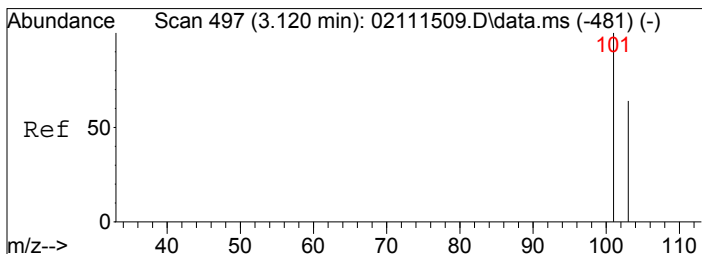
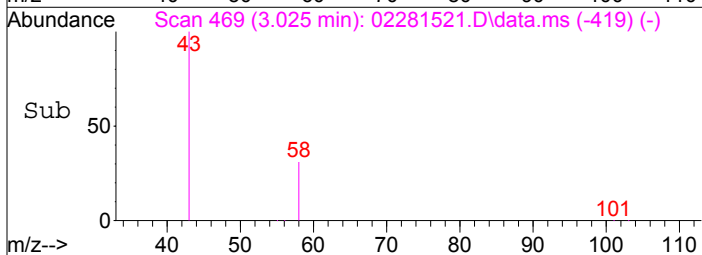
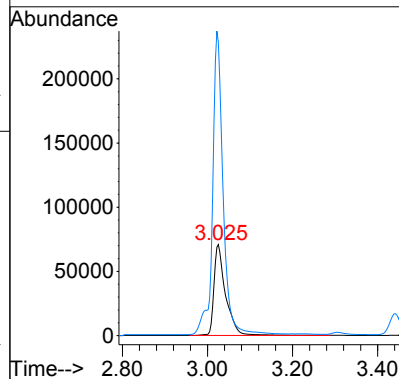
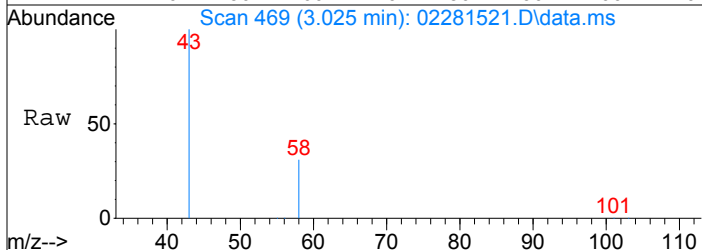
Tgt Ion: 94 Resp: 1301
 Ion Ratio Lower Upper
 94 100
 96 92.7 75.5 113.3





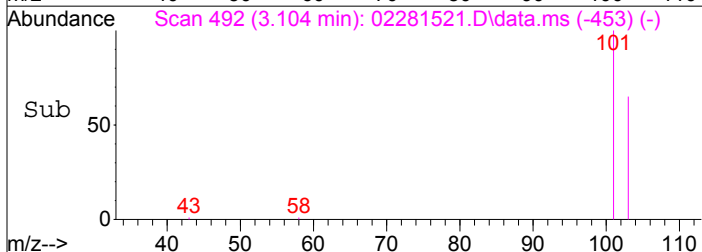
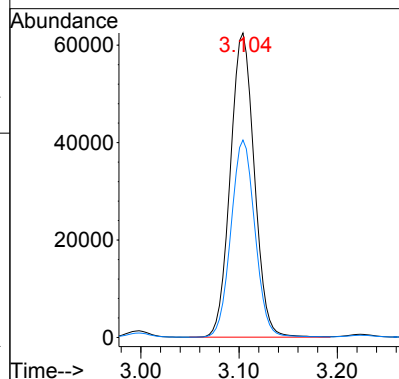
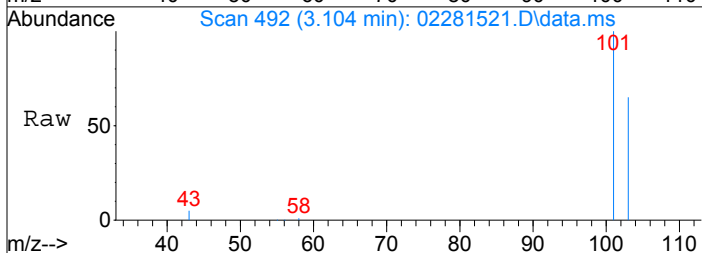
#7
Acetone
Concen: 3425.05 pg
RT: 3.03 min Scan# 469
Delta R.T. 0.021 min
Lab File: 02281521.D
Acq: 28 Feb 2015 12:53

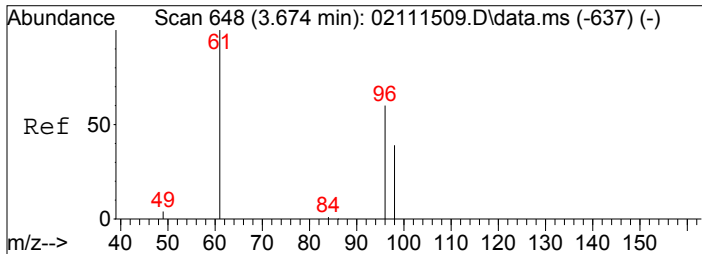
Tgt Ion: 58 Resp: 134674
Ion Ratio Lower Upper
58 100
43 303.3 301.8 341.8



#8
Trichlorofluoromethane
Concen: 1105.26 pg
RT: 3.10 min Scan# 492
Delta R.T. -0.016 min
Lab File: 02281521.D
Acq: 28 Feb 2015 12:53

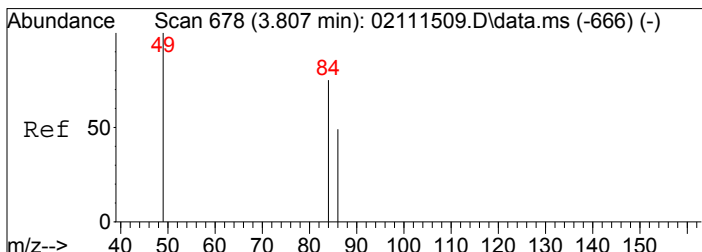
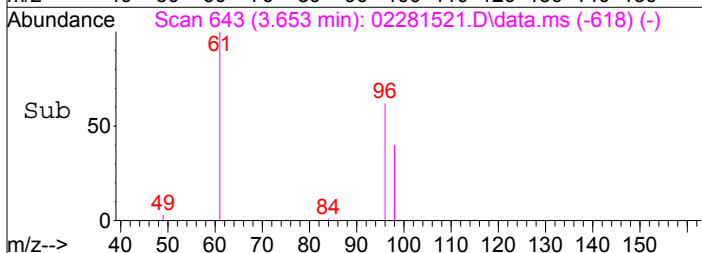
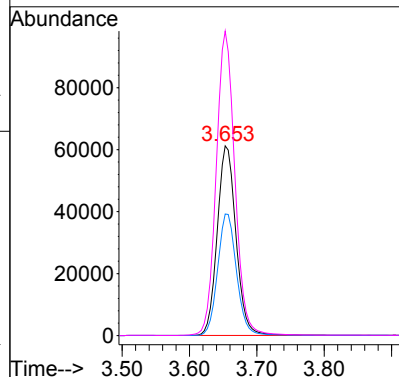
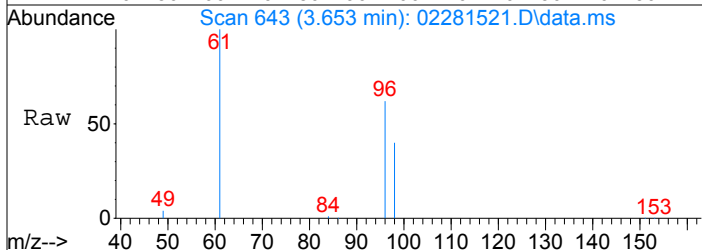
Tgt Ion: 101 Resp: 105713
Ion Ratio Lower Upper
101 100
103 64.8 51.8 77.6





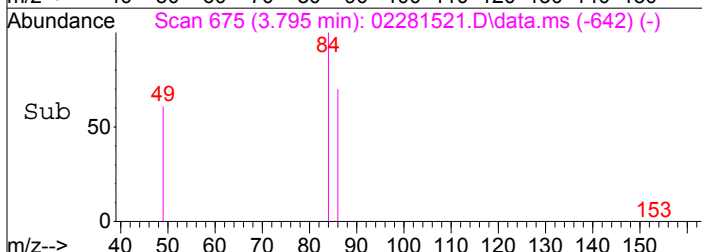
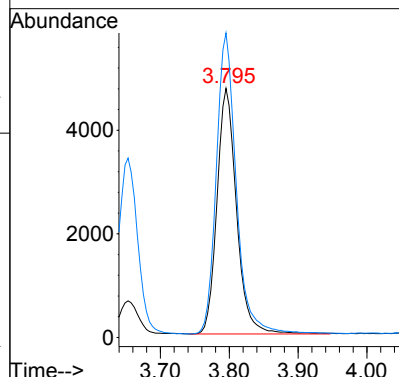
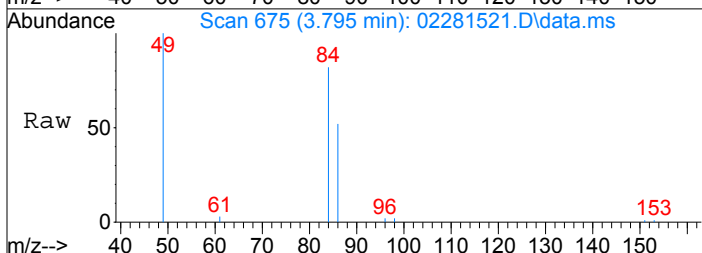
#9
1,1-Dichloroethene
Concen: 2779.13 pg
RT: 3.65 min Scan# 643
Delta R.T. -0.021 min
Lab File: 02281521.D
Acq: 28 Feb 2015 12:53

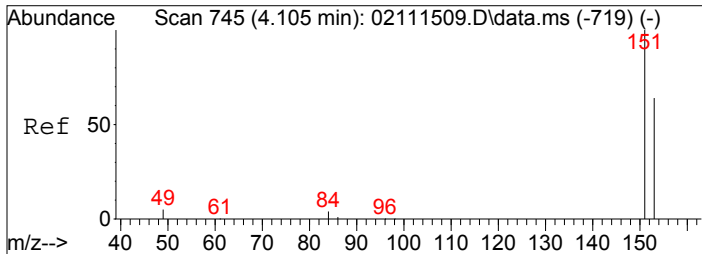
Tgt Ion: 96 Resp: 118660
Ion Ratio Lower Upper
96 100
98 64.5 44.0 84.0
61 160.0 151.5 191.5



#10
Methylene Chloride
Concen: 207.10 pg
RT: 3.80 min Scan# 675
Delta R.T. -0.012 min
Lab File: 02281521.D
Acq: 28 Feb 2015 12:53

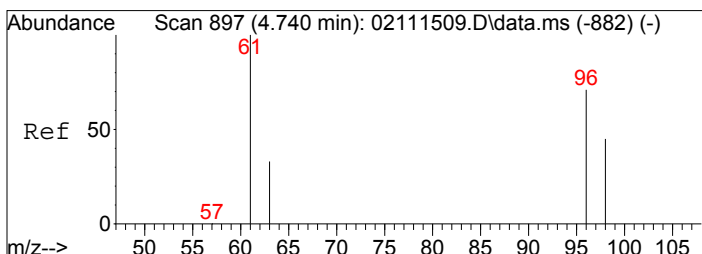
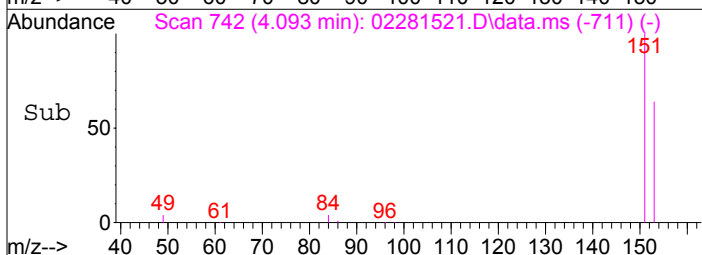
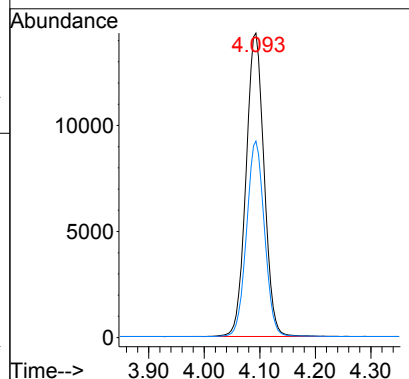
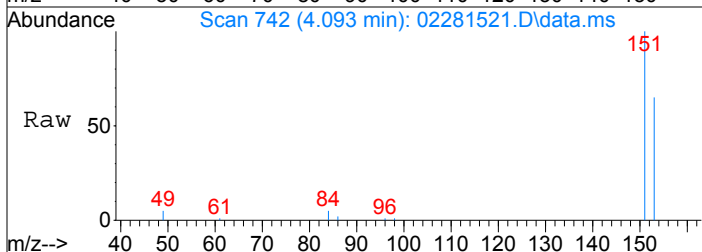
Tgt Ion: 84 Resp: 9399
Ion Ratio Lower Upper
84 100
49 124.7 112.3 152.3





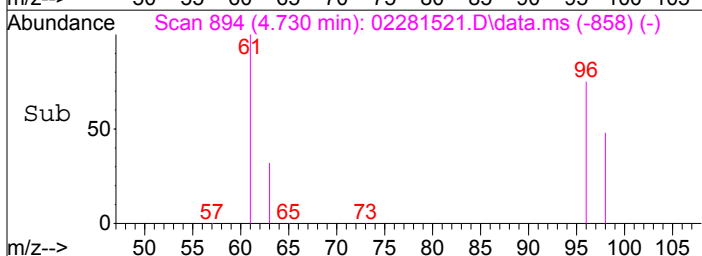
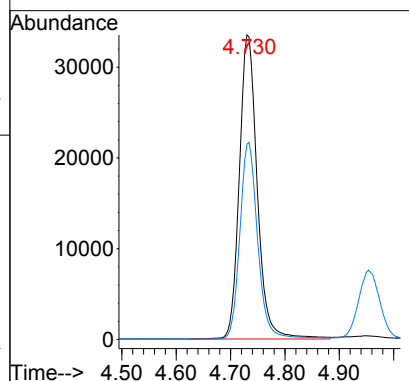
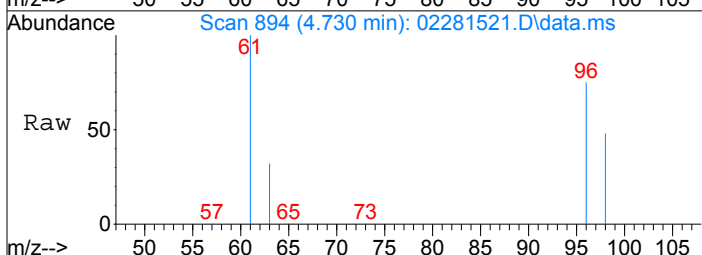
#11
 Trichlorotrifluoroethane
 Concen: 734.90 pg
 RT: 4.09 min Scan# 742
 Delta R.T. -0.012 min
 Lab File: 02281521.D
 Acq: 28 Feb 2015 12:53

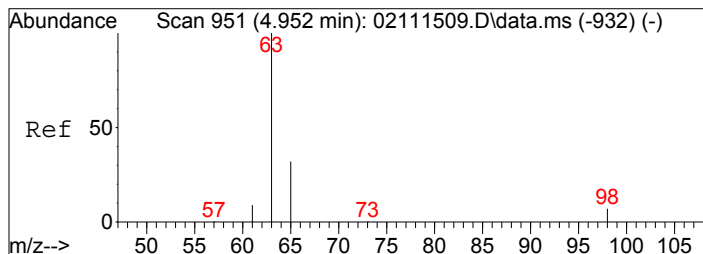
Tgt Ion: 151 Resp: 32298
 Ion Ratio Lower Upper
 151 100
 153 64.2 43.6 83.6



#12
 trans-1,2-Dichloroethene
 Concen: 1760.08 pg
 RT: 4.73 min Scan# 894
 Delta R.T. -0.010 min
 Lab File: 02281521.D
 Acq: 28 Feb 2015 12:53

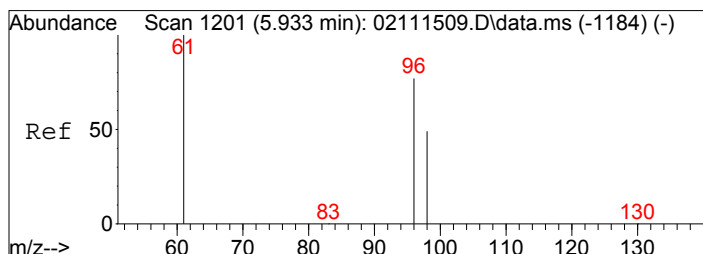
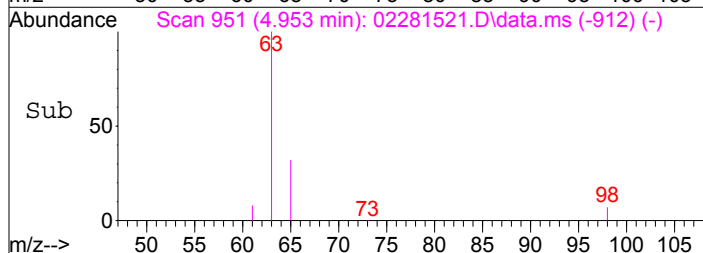
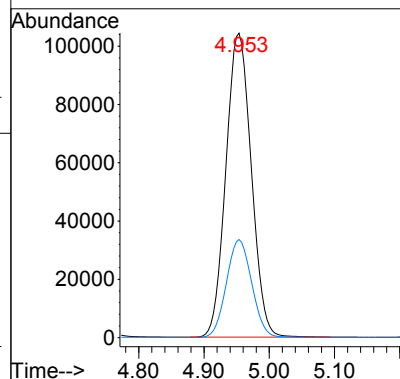
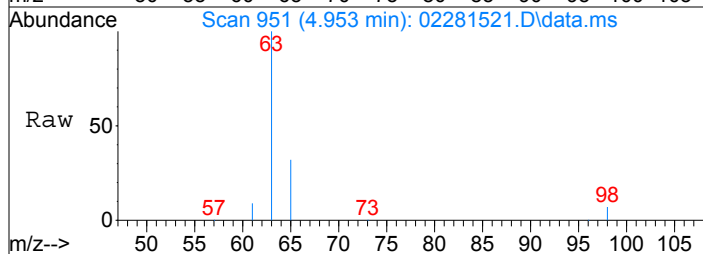
Tgt Ion: 96 Resp: 76744
 Ion Ratio Lower Upper
 96 100
 98 64.3 43.7 83.7





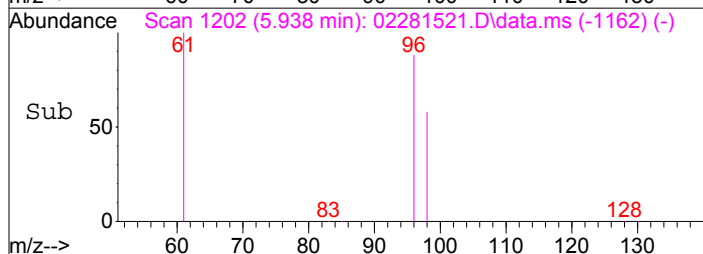
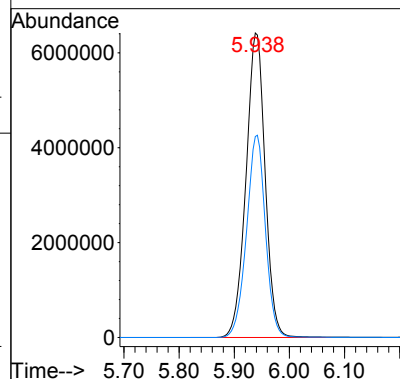
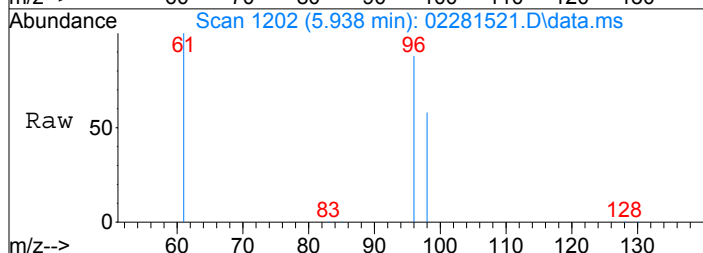
#13
1,1-Dichloroethane
Concen: 3604.82 pg
RT: 4.95 min Scan# 951
Delta R.T. 0.001 min
Lab File: 02281521.D
Acq: 28 Feb 2015 12:53

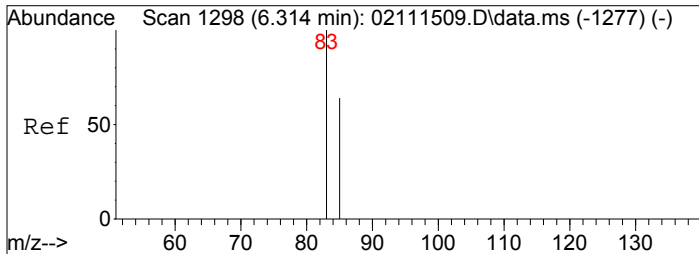
Tgt Ion: 63 Resp: 282157
Ion Ratio Lower Upper
63 100
65 32.1 12.2 52.2



#15
cis-1,2-Dichloroethene
Concen: 319435.06 pg
RT: 5.94 min Scan# 1202
Delta R.T. 0.005 min
Lab File: 02281521.D
Acq: 28 Feb 2015 12:53

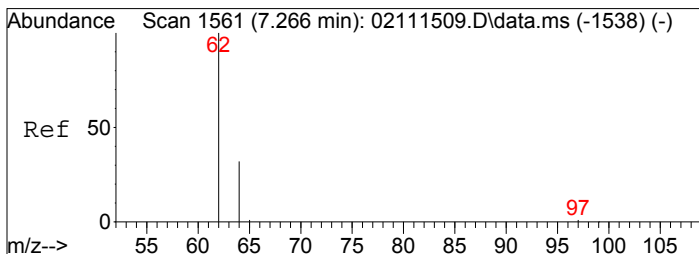
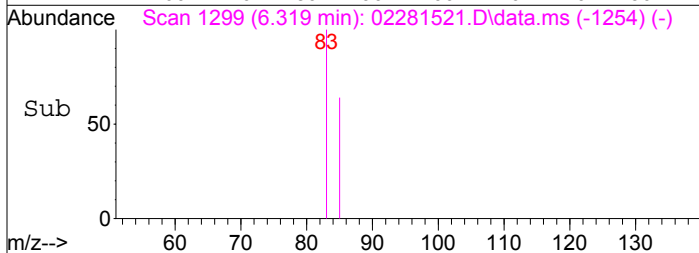
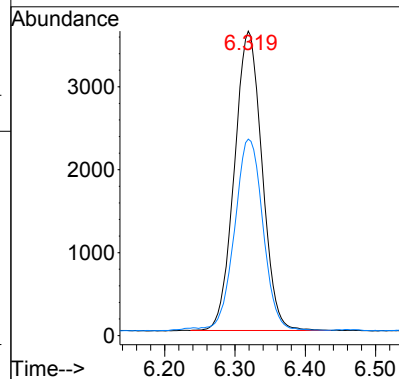
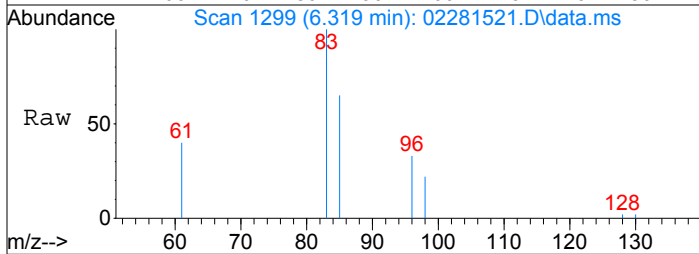
Tgt Ion: 96 Resp: 15487941
Ion Ratio Lower Upper
96 100
98 65.7 44.3 84.3





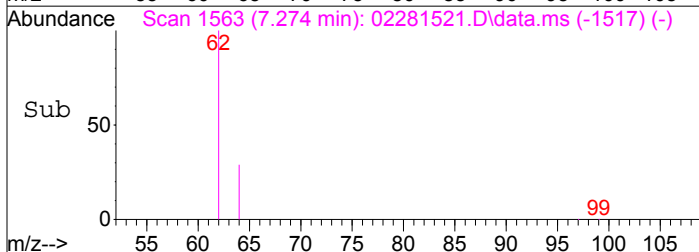
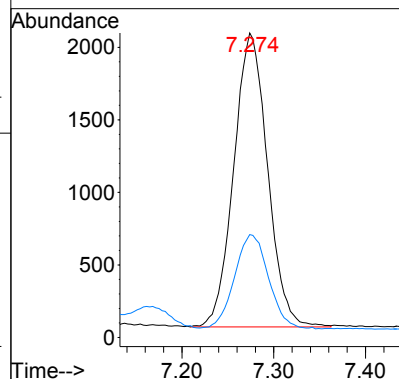
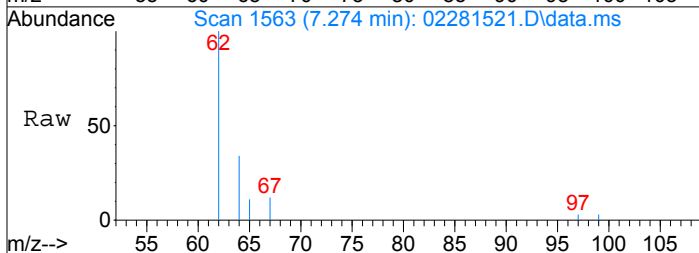
#16
Chloroform
Concen: 117.47 pg
RT: 6.32 min Scan# 1299
Delta R.T. 0.005 min
Lab File: 02281521.D
Acq: 28 Feb 2015 12:53

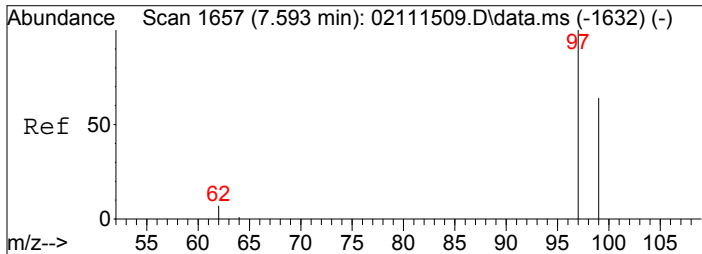
Tgt Ion: 83 Resp: 9868
Ion Ratio Lower Upper
83 100
85 65.5 45.4 85.4



#18
1,2-Dichloroethane
Concen: 77.43 pg
RT: 7.27 min Scan# 1563
Delta R.T. 0.008 min
Lab File: 02281521.D
Acq: 28 Feb 2015 12:53

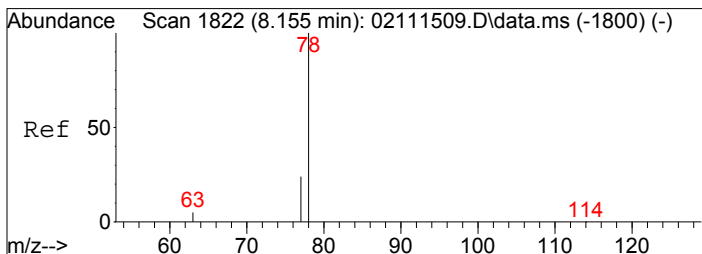
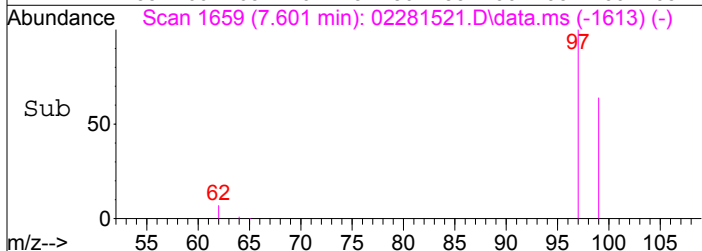
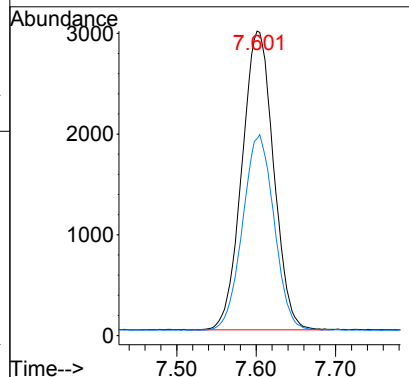
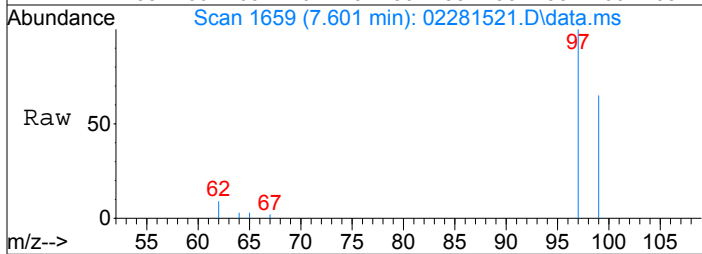
Tgt Ion: 62 Resp: 5179
Ion Ratio Lower Upper
62 100
64 32.3 11.6 51.6





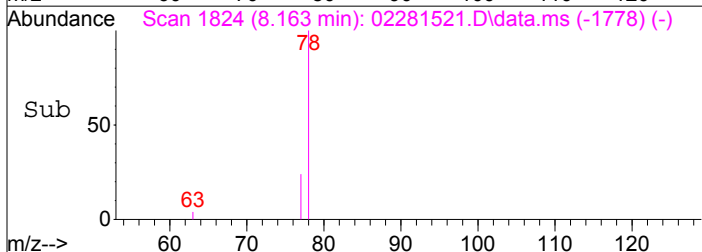
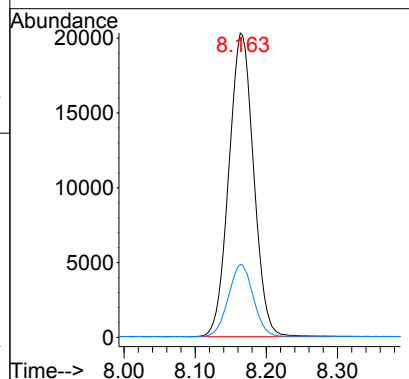
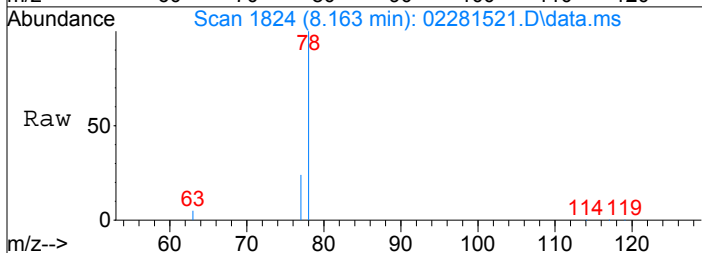
#19
 1,1,1-Trichloroethane
 Concen: 100.70 pg
 RT: 7.60 min Scan# 1659
 Delta R.T. 0.008 min
 Lab File: 02281521.D
 Acq: 28 Feb 2015 12:53

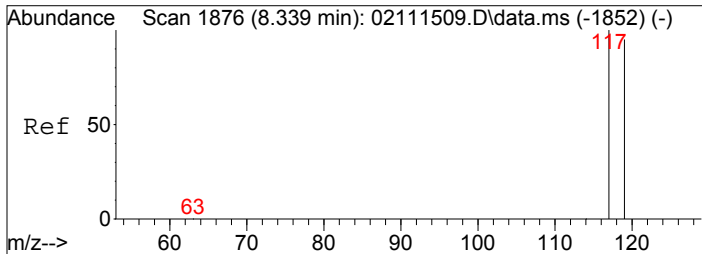
Tgt Ion: 97 Resp: 8226
 Ion Ratio Lower Upper
 97 100
 99 64.8 44.0 84.0



#20
 Benzene
 Concen: 284.05 pg
 RT: 8.16 min Scan# 1824
 Delta R.T. 0.008 min
 Lab File: 02281521.D
 Acq: 28 Feb 2015 12:53

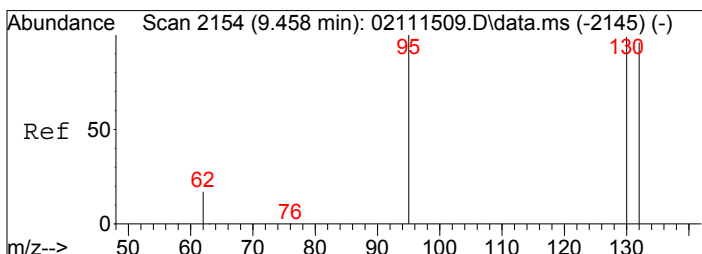
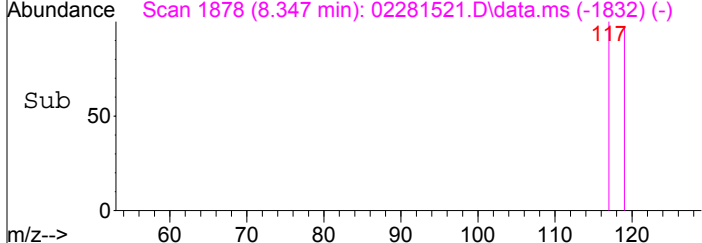
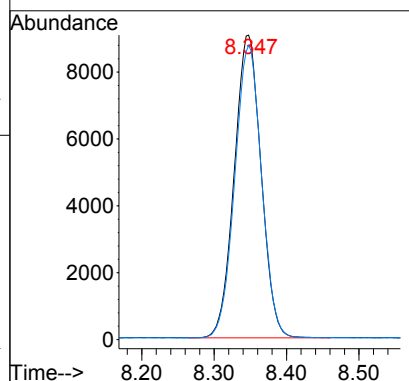
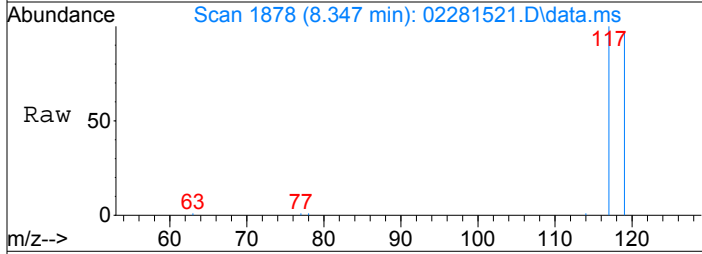
Tgt Ion: 78 Resp: 49077
 Ion Ratio Lower Upper
 78 100
 77 23.8 3.7 43.7





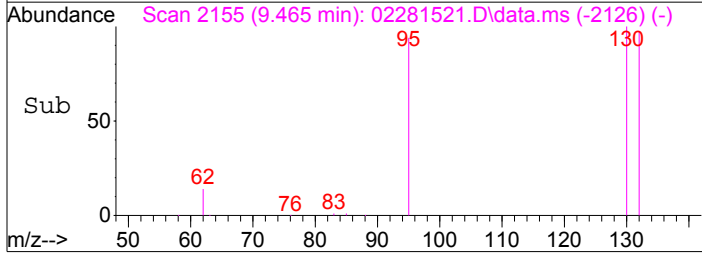
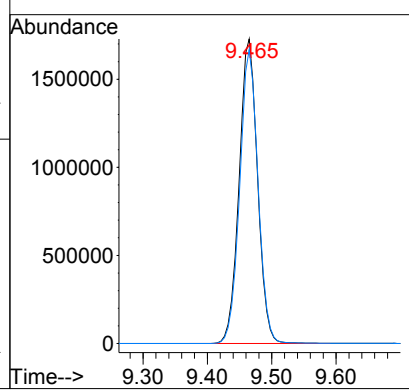
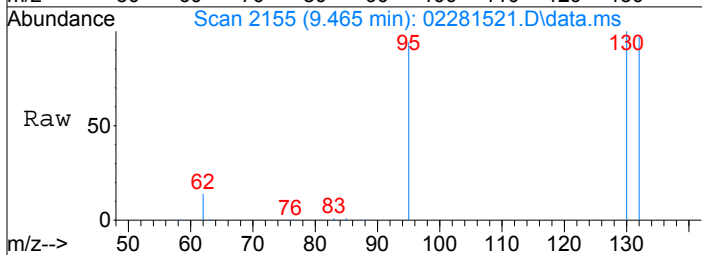
#21
Carbon Tetrachloride
Concen: 380.89 pg
RT: 8.35 min Scan# 1878
Delta R.T. 0.008 min
Lab File: 02281521.D
Acq: 28 Feb 2015 12:53

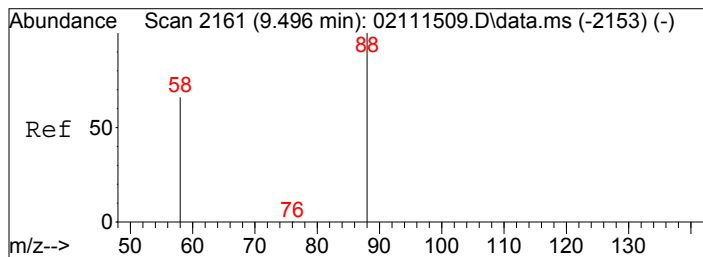
Tgt Ion:117	Resp:	23294
Ion Ratio	Lower	Upper
117	100	
119	96.3	75.5 115.5



#25
Trichloroethene
Concen: 71546.32 pg
RT: 9.46 min Scan# 2155
Delta R.T. 0.007 min
Lab File: 02281521.D
Acq: 28 Feb 2015 12:53

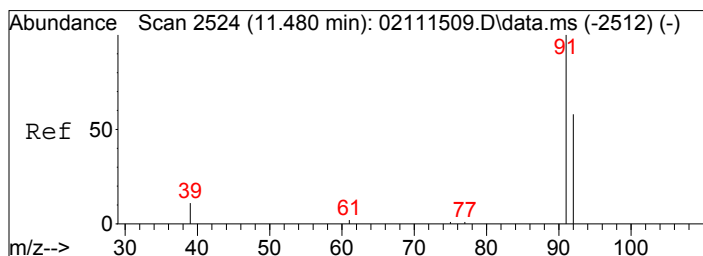
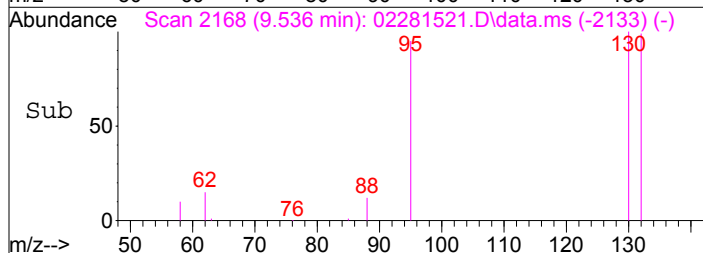
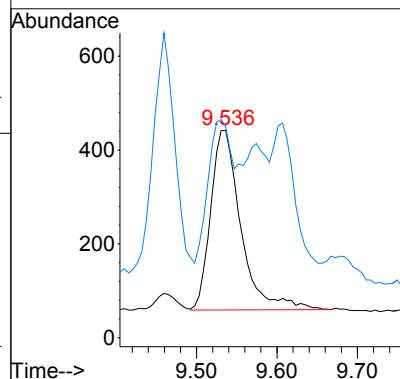
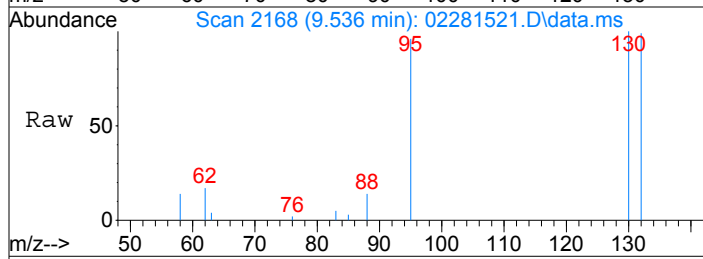
Tgt Ion:130	Resp:	3430073
Ion Ratio	Lower	Upper
130	100	
132	96.0	77.1 117.1





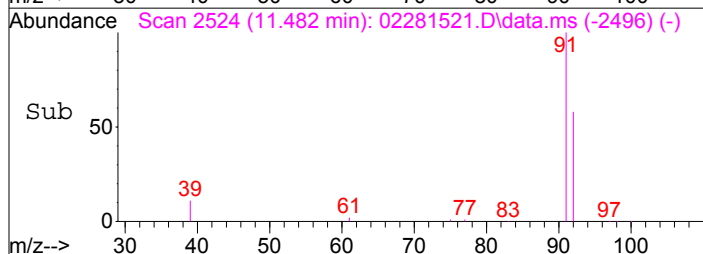
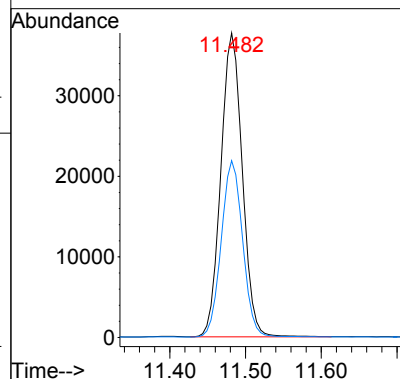
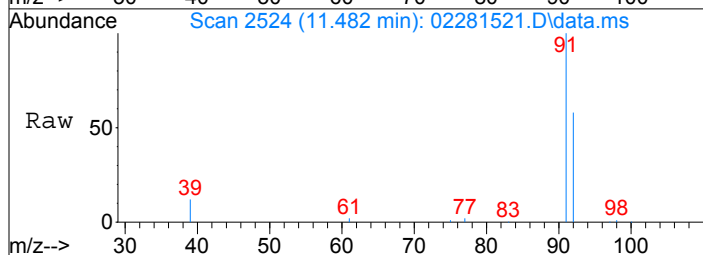
#26
1,4-Dioxane
Concen: 27.96 pg
RT: 9.54 min Scan# 2168
Delta R.T. 0.040 min
Lab File: 02281521.D
Acq: 28 Feb 2015 12:53

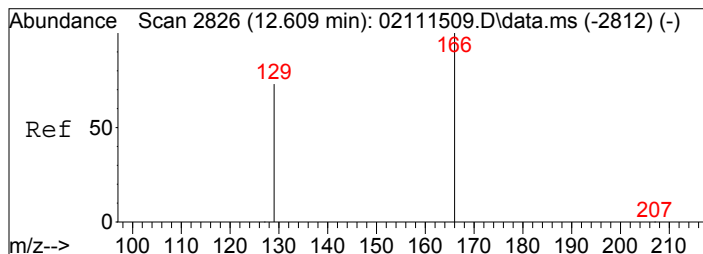
Tgt Ion: 88 Resp: 999
Ion Ratio Lower Upper
88 100
58 76.1 38.3 78.3



#31
Toluene
Concen: 405.33 pg
RT: 11.48 min Scan# 2524
Delta R.T. 0.001 min
Lab File: 02281521.D
Acq: 28 Feb 2015 12:53

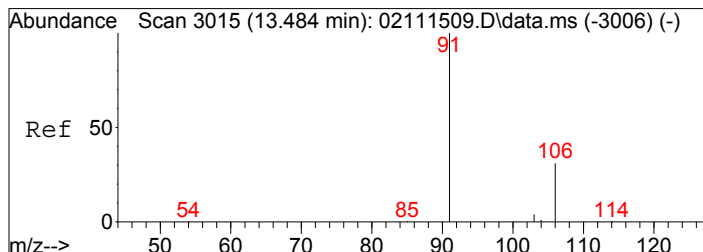
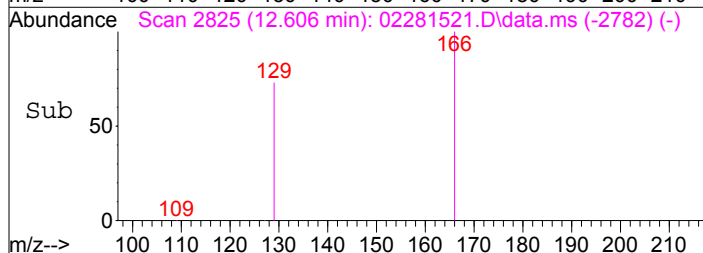
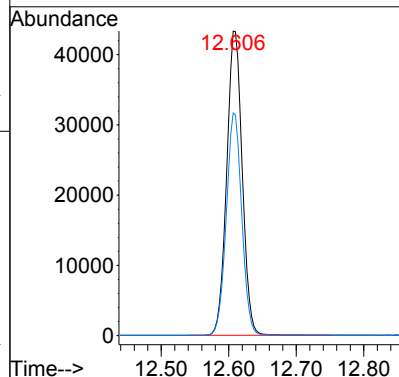
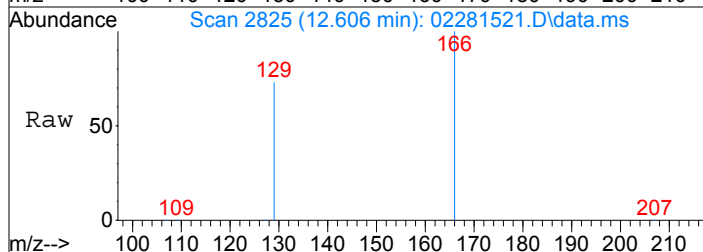
Tgt Ion: 91 Resp: 74188
Ion Ratio Lower Upper
91 100
92 58.0 37.7 77.7





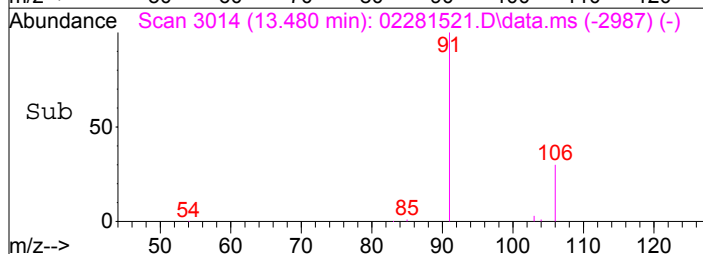
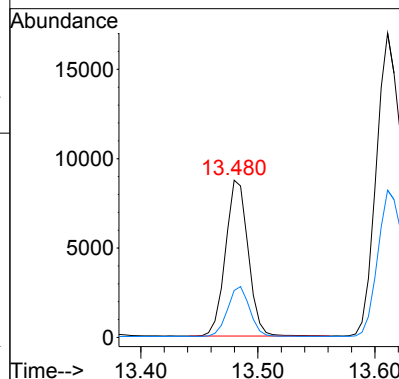
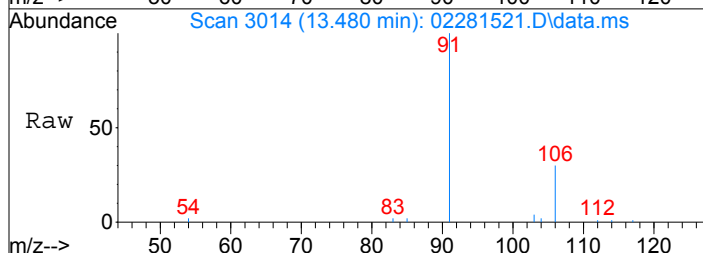
#33
Tetrachloroethene
Concen: 1217.98 pg
RT: 12.61 min Scan# 2825
Delta R.T. -0.003 min
Lab File: 02281521.D
Acq: 28 Feb 2015 12:53

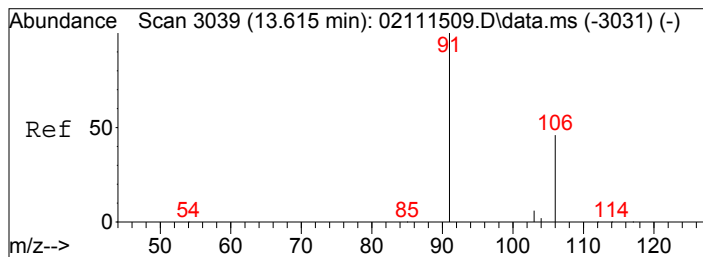
Tgt Ion: 166 Resp: 69025
Ion Ratio Lower Upper
166 100
129 72.7 53.3 93.3



#36
Ethylbenzene
Concen: 59.50 pg
RT: 13.48 min Scan# 3014
Delta R.T. -0.004 min
Lab File: 02281521.D
Acq: 28 Feb 2015 12:53

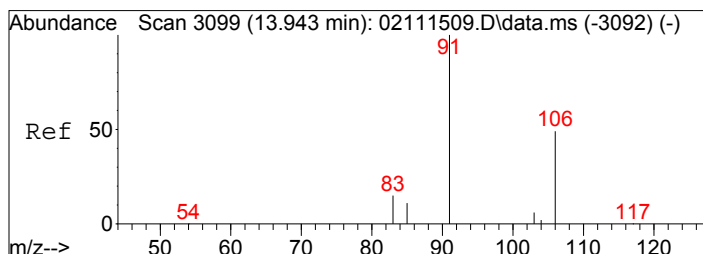
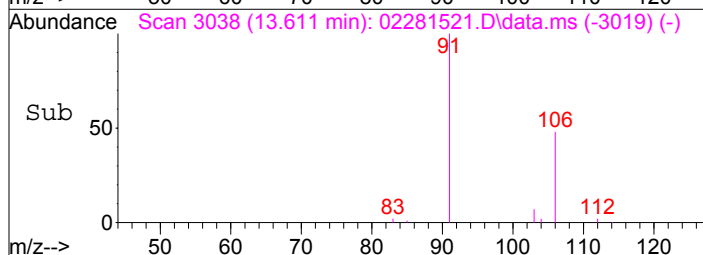
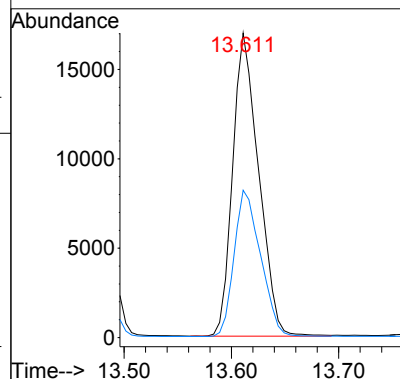
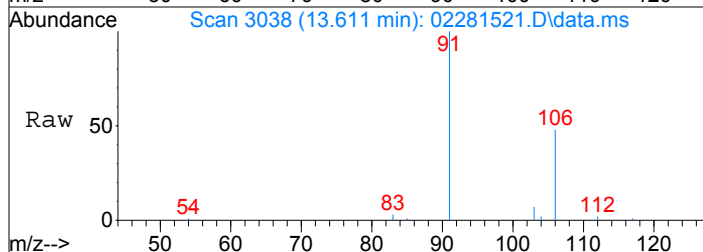
Tgt Ion: 91 Resp: 11715
Ion Ratio Lower Upper
91 100
106 31.3 10.9 50.9





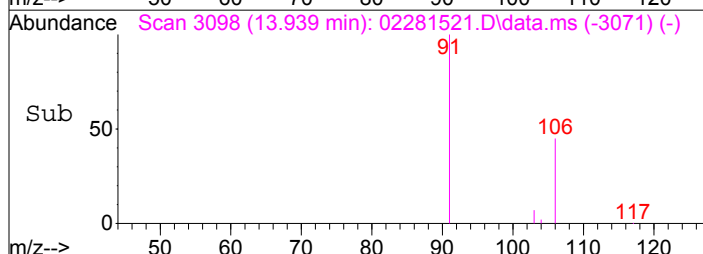
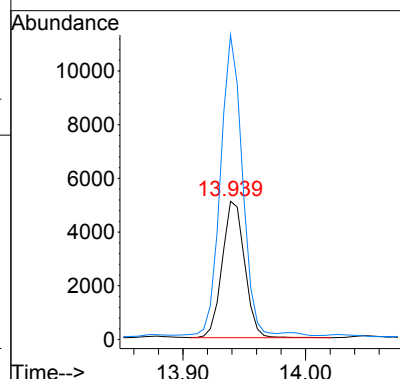
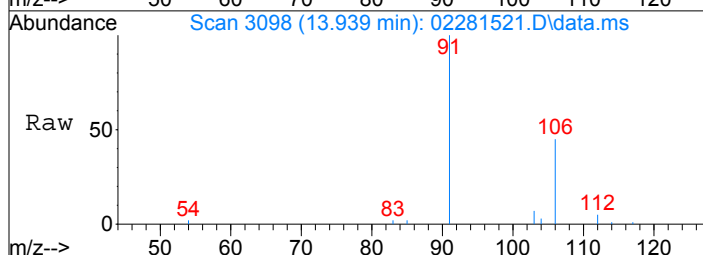
#37
m,p-Xylene
Concen: 176.37 pg
RT: 13.61 min Scan# 3038
Delta R.T. -0.004 min
Lab File: 02281521.D
Acq: 28 Feb 2015 12:53

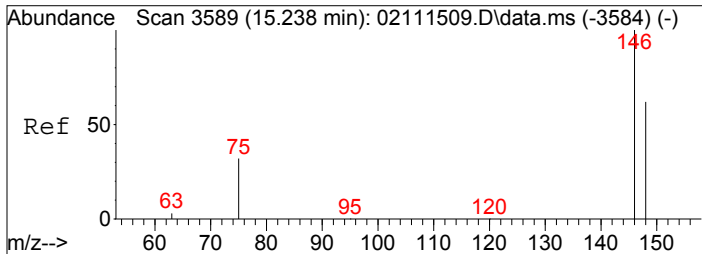
Tgt Ion: 91 Resp: 28539
Ion Ratio Lower Upper
91 100
106 49.3 27.5 67.5



#38
o-Xylene
Concen: 81.70 pg
RT: 13.94 min Scan# 3098
Delta R.T. -0.004 min
Lab File: 02281521.D
Acq: 28 Feb 2015 12:53

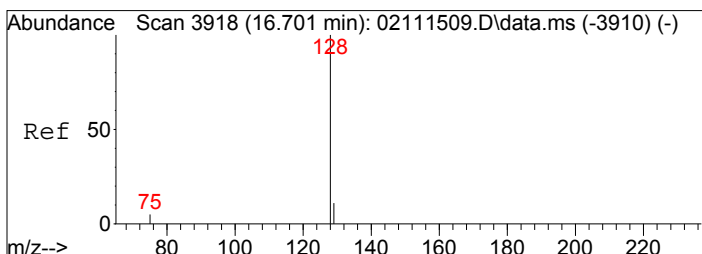
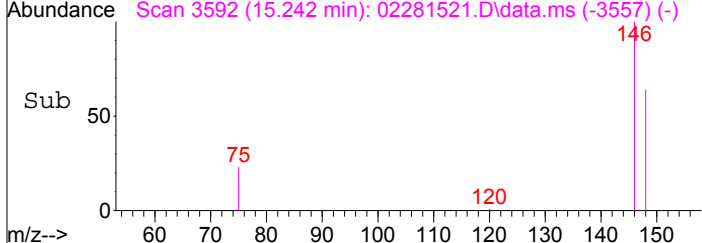
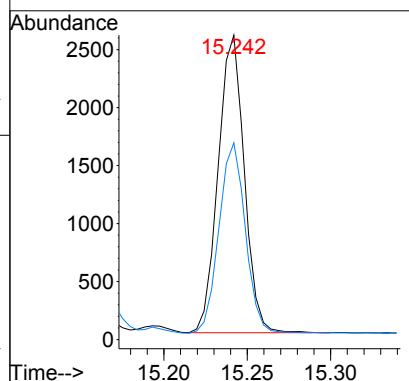
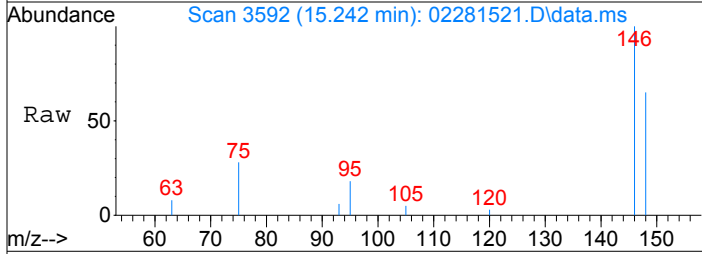
Tgt Ion: 106 Resp: 6461
Ion Ratio Lower Upper
106 100
91 211.3 198.3 238.3





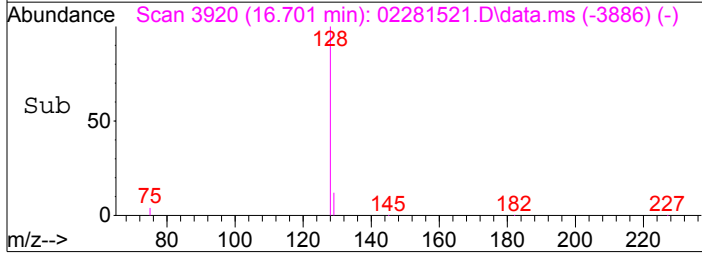
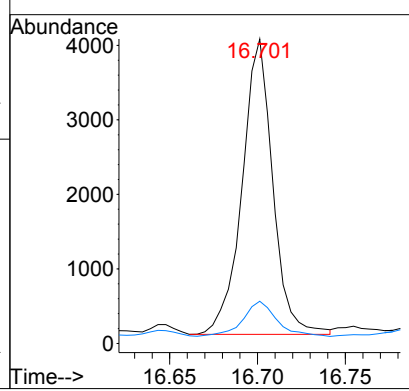
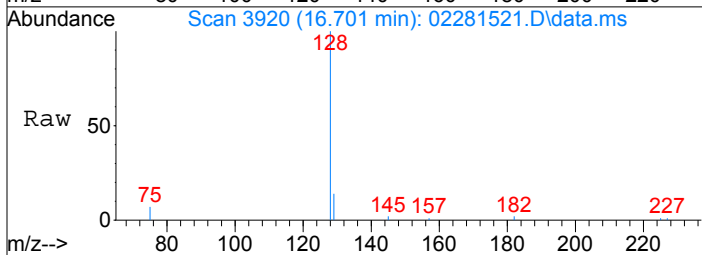
#42
 1,4-Dichlorobenzene
 Concen: 25.72 pg
 RT: 15.24 min Scan# 3592
 Delta R.T. 0.004 min
 Lab File: 02281521.D
 Acq: 28 Feb 2015 12:53

Tgt Ion:146	Resp:	2791
Ion Ratio	Lower	Upper
146	100	
148	65.5	43.5 83.5



#45
 Naphthalene
 Concen: 24.57 pg
 RT: 16.70 min Scan# 3920
 Delta R.T. 0.000 min
 Lab File: 02281521.D
 Acq: 28 Feb 2015 12:53

Tgt Ion:128	Resp:	4827
Ion Ratio	Lower	Upper
128	100	
129	13.4	0.0 30.9



Data File: I:\MS19\DATA\2015 03\02\03021512.D

Acq On : 2 Mar 2015 13:41

Operator: WA

Sample : P1500729-015 dil(100mL)

Misc : S29-02041502

ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 02 16:04:45 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DA 3/2/15

DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	25783	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	178702	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.14	54	30002	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	58718	932.556	pg	0.00
Spiked Amount 1000.000			Recovery	=	93.26%	
30) Toluene-d8 (SS2)	11.38	98	166097	1007.893	pg	0.00
Spiked Amount 1000.000			Recovery	=	100.79%	
40) Bromofluorobenzene (SS3)	14.25	174	67046	1106.919	pg	0.00
Spiked Amount 1000.000			Recovery	=	110.69%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.75	85	16955	161.811	pg	100
3) Chloromethane	1.86	52	1493	71.349	pg	99
4) Vinyl Chloride	2.04	62	15289	187.622	pg	98
5) Bromomethane	2.35	94	295	N.D.		
6) Chloroethane	2.50	64	77	N.D.		
7) Acetone	3.05	58	15862	428.689	pg	# 73
8) Trichlorofluoromethane	3.12	101	7797	86.630	pg	100
9) 1,1-Dichloroethene	3.68	96	10598	263.772	pg	95
10) Methylene Chloride	3.81	84	1469	34.397	pg	89
11) Trichlorotrifluoroethane	4.10	151	3080	74.474	pg	99
12) trans-1,2-Dichloroethene	4.74	96	6827	166.387	pg	100
13) 1,1-Dichloroethane	4.95	63	27699	376.061	pg	100
14) Methyl tert-Butyl Ether	5.18	73	265	N.D.		
15) cis-1,2-Dichloroethene	5.93	96	1018405	22320.847	pg	100
16) Chloroform	6.31	83	2109	26.679	pg	99
18) 1,2-Dichloroethane	7.27	62	497	N.D.		
19) 1,1,1-Trichloroethane	7.59	97	767	N.D.		
20) Benzene	8.16	78	5351	32.911	pg	100
21) Carbon Tetrachloride	8.34	117	1980	34.405	pg	99
23) 1,2-Dichloropropane	9.17	63	76	N.D.		
24) Bromodichloromethane	0.00	83	0	N.D.	d	
25) Trichloroethene	9.46	130	260657	5677.613	pg	99
26) 1,4-Dioxane	9.46	88	8	N.D.		
27) cis-1,3-Dichloropropene	10.47	75	53	N.D.		
28) trans-1,3-Dichloropropene	11.06	75	29	N.D.		
29) 1,1,2-Trichloroethane	11.19	83	42	N.D.		
31) Toluene	11.48	91	6782	38.694	pg	100
32) 1,2-Dibromoethane	12.12	107	19	N.D.		
33) Tetrachloroethene	12.61	166	6303	116.143	pg	99
35) Chlorobenzene	13.17	112	75	N.D.		
36) Ethylbenzene	13.49	91	1057	N.D.		
37) m,p-Xylene	13.61	91	2488	N.D.		
38) o-Xylene	13.94	106	553	N.D.		
39) 1,1,2,2-Tetrachloroethane	13.90	83	22	N.D.		
41) 1,3-Dichlorobenzene	15.20	146	32	N.D.		
42) 1,4-Dichlorobenzene	15.24	146	272	N.D.		
43) 1,2-Dichlorobenzene	15.46	146	39	N.D.		
44) 1,2,4-Trichlorobenzene	16.63	182	36	N.D.		
45) Naphthalene	16.70	128	578	N.D.		
46) Hexachlorobutadiene	16.95	225	9	N.D.		

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 03\02\03021512.D

Acq On : 2 Mar 2015 13:41

Operator: WA

Sample : P1500729-015 dil(100mL)

Misc : S29-02041502

ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 02 16:04:45 2015

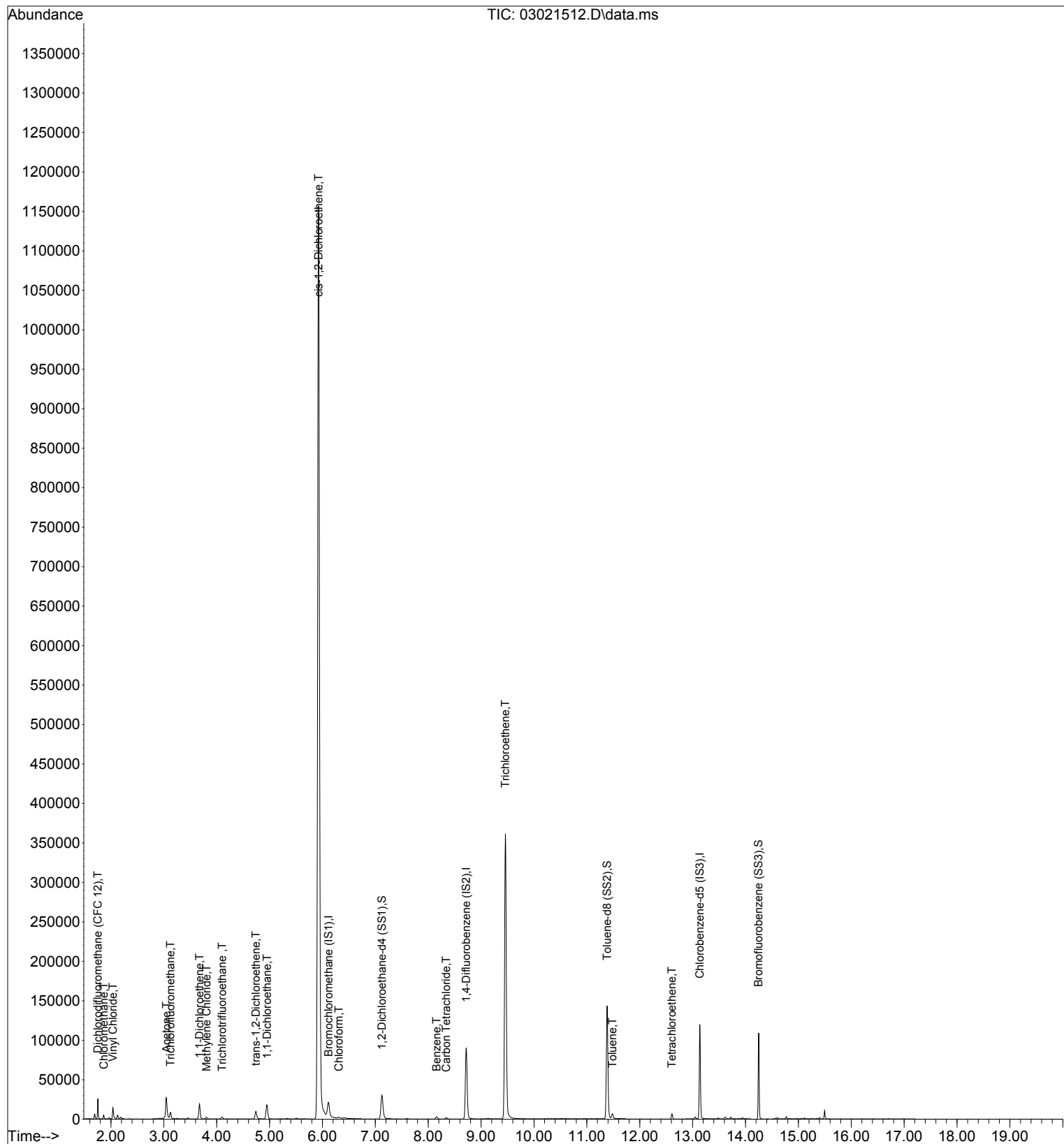
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 03\02\03021512.D

Acq On : 2 Mar 2015 13:41

Operator: WA

Sample : P1500729-015 dil(100mL)

Misc : S29-02041502

ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 02 14:34:25 2015

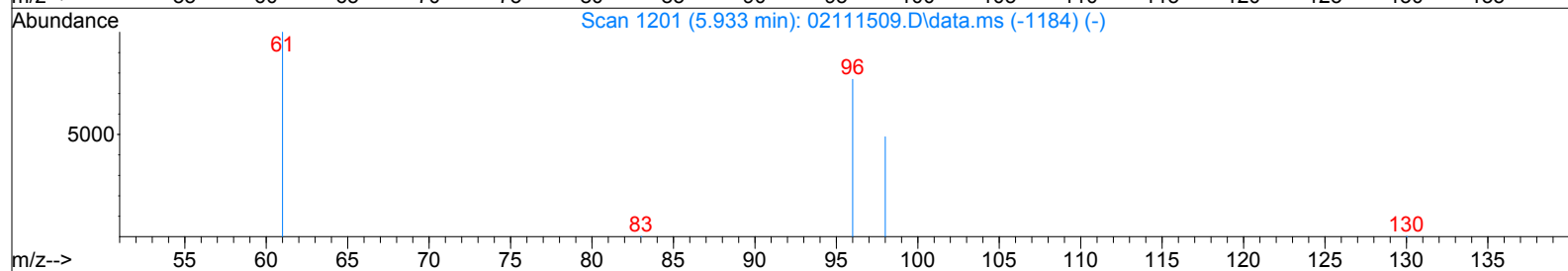
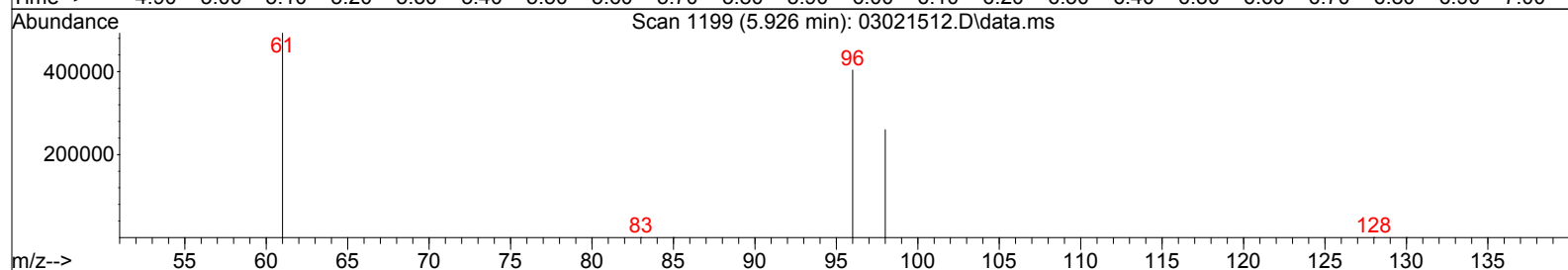
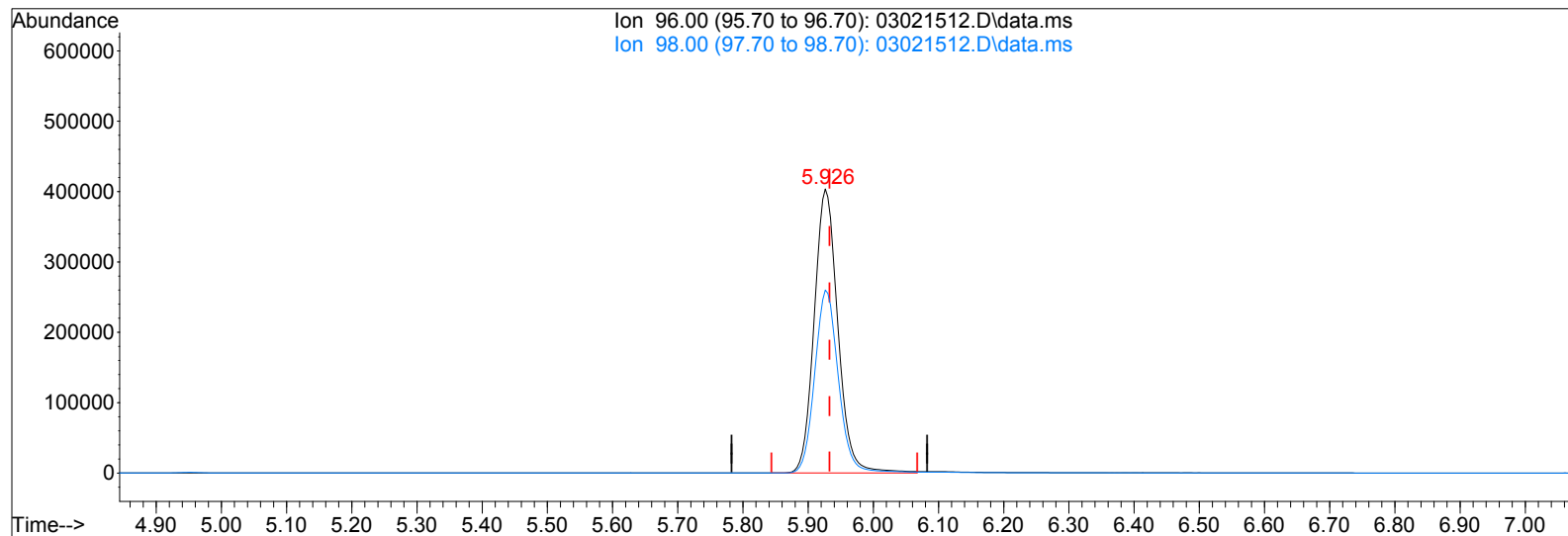
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



TIC: 03021512.D\data.ms

(15) cis-1,2-Dichloroethene (T)

5.926min (-0.006) 22320.85pg

response 1018405

Ion	Exp%	Act%
96.00	100	100
98.00	64.30	64.39
0.00	0.00	0.00
0.00	0.00	0.00

Data File: I:\MS19\DATA\2015 03\02\03021512.D

Acq On : 2 Mar 2015 13:41

Operator: WA

Sample : P1500729-015 dil(100mL)

Misc : S29-02041502

ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 02 14:34:25 2015

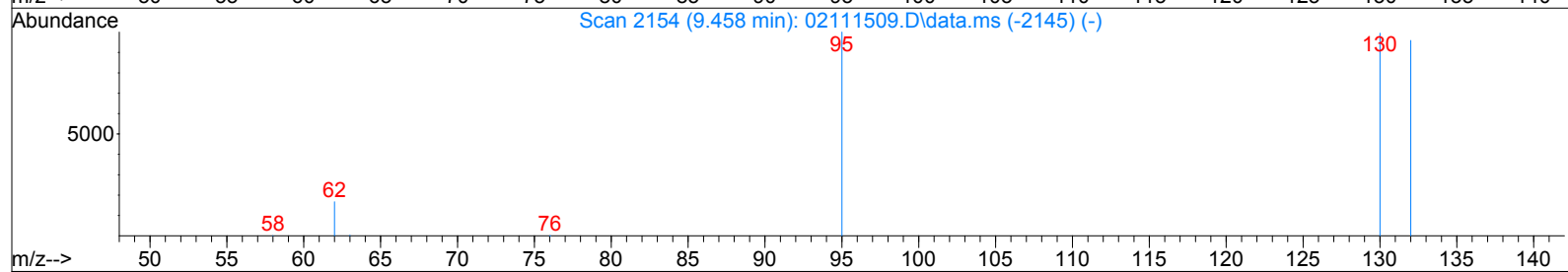
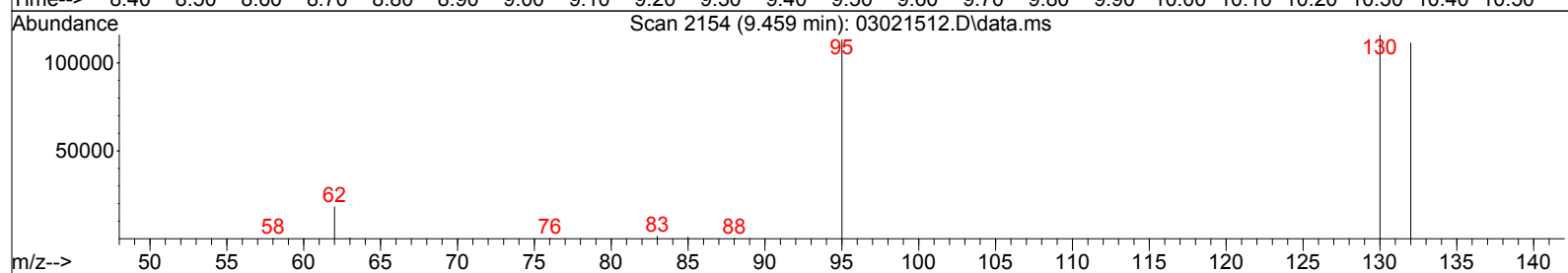
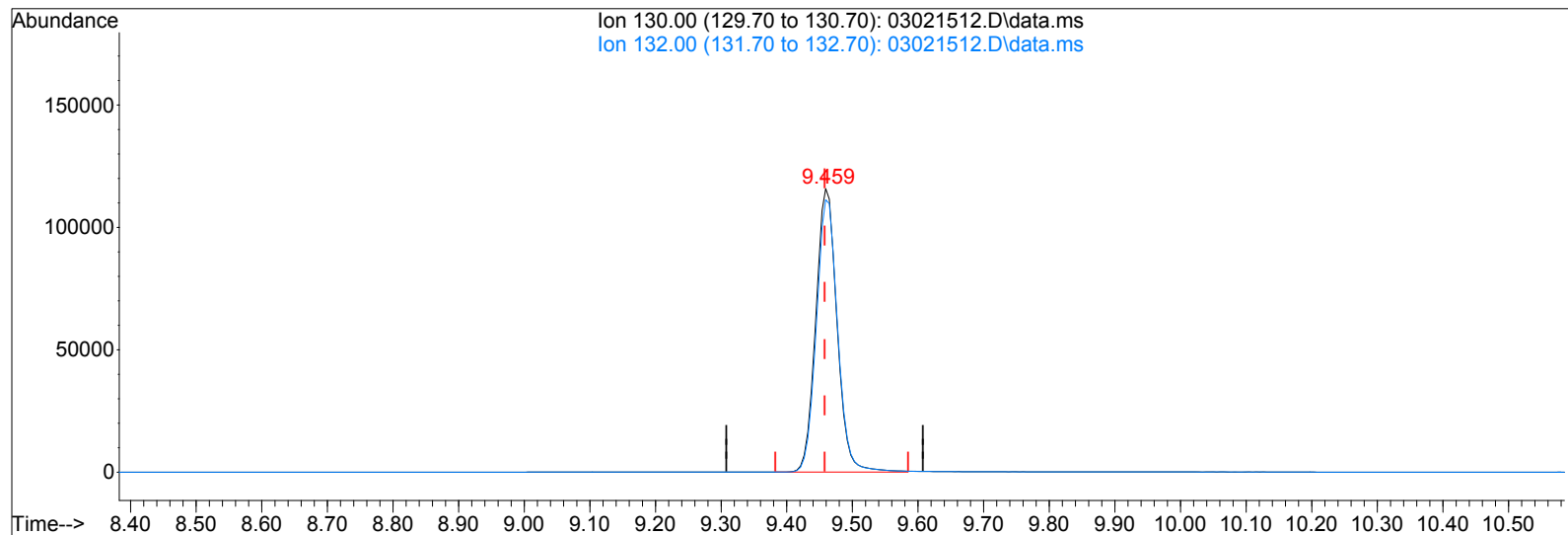
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



TIC: 03021512.D\data.ms

(25) Trichloroethene (T)

9.459min (+0.001) 5677.61pg

response 260657

Ion	Exp%	Act%
130.00	100	100
132.00	97.10	96.41
0.00	0.00	0.00
0.00	0.00	0.00

Data File: I:\MS19\DATA\2015 02\28\02281522.D

Acq On : 28 Feb 2015 13:20

Operator: WA

Sample : P1500729-016 (1000mL)

Misc : S29-02041502

ALS Vial : 11 Sample Multiplier: 1

Quant Time: Mar 02 11:28:18 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

WA 3/2/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	26440	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	183935	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	31939	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	57022	883.117	pg	0.00
Spiked Amount 1000.000			Recovery	=	88.31%	
30) Toluene-d8 (SS2)	11.38	98	179640	1059.061	pg	0.00
Spiked Amount 1000.000			Recovery	=	105.91%	
40) Bromofluorobenzene (SS3)	14.25	174	76748	1190.252	pg	0.00
Spiked Amount 1000.000			Recovery	=	119.03%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.72	85	187395	1743.979	pg	100
3) Chloromethane	1.83	52	5315	247.687	pg	95
4) Vinyl Chloride	2.01	62	3072	36.762	pg	86
5) Bromomethane	2.32	94	1509	31.231	pg	99
6) Chloroethane	2.47	64	369	N.D.		
7) Acetone	3.00	58	233346	6149.739	pg	# 74
8) Trichlorofluoromethane	3.10	101	128340	1390.506	pg	100
9) 1,1-Dichloroethene	3.65	96	1734	42.085	pg	# 1
10) Methylene Chloride	3.80	84	44901	1025.241	pg	92
11) Trichlorotrifluoroethane	4.10	151	25651	604.823	pg	99
12) trans-1,2-Dichloroethene	4.73	96	960	22.816	pg	95
13) 1,1-Dichloroethane	4.95	63	5523	73.121	pg	98
14) Methyl tert-Butyl Ether	5.10	73	607	N.D.		
15) cis-1,2-Dichloroethene	5.93	96	103367	2209.246	pg	100
16) Chloroform	6.31	83	334885	4131.110	pg	100
18) 1,2-Dichloroethane	7.26	62	3151	48.819	pg	98
19) 1,1,1-Trichloroethane	7.59	97	4949	62.780	pg	100
20) Benzene	8.15	78	37356	224.050	pg	100
21) Carbon Tetrachloride	8.34	117	22241	376.859	pg	99
23) 1,2-Dichloropropane	9.16	63	873	21.762	pg	88
24) Bromodichloromethane	9.40	83	13945	240.824	pg	98
25) Trichloroethene	9.46	130	47240	999.704	pg	99
26) 1,4-Dioxane	9.54	88	777	22.063	pg	# 1
27) cis-1,3-Dichloropropene	10.46	75	527	N.D.		
28) trans-1,3-Dichloropropene	11.06	75	164	N.D.		
29) 1,1,2-Trichloroethane	11.20	83	209	N.D.		
31) Toluene	11.48	91	335456	1859.482	pg	100
32) 1,2-Dibromoethane	12.12	107	18	N.D.		
33) Tetrachloroethene	12.61	166	79699	1426.802	pg	99
35) Chlorobenzene	13.17	112	517	N.D.		
36) Ethylbenzene	13.48	91	10787	53.858	pg	99
37) m,p-Xylene	13.61	91	27223	165.378	pg	98
38) o-Xylene	13.94	106	5519	68.603	pg	95
39) 1,1,2,2-Tetrachloroethane	13.96	83	189	N.D.		
41) 1,3-Dichlorobenzene	0.00	146	0	N.D.	d	
42) 1,4-Dichlorobenzene	15.24	146	2982	27.018	pg	100
43) 1,2-Dichlorobenzene	15.46	146	123	N.D.		
44) 1,2,4-Trichlorobenzene	16.63	182	48	N.D.		
45) Naphthalene	16.70	128	9101	45.540	pg	97
46) Hexachlorobutadiene	16.96	225	27	N.D.		

(#)= qualifier out of range (m) = manual integration (+) = signals summed

Data File: I:\MS19\DATA\2015 02\28\02281522.D

Acq On : 28 Feb 2015 13:20

Operator: WA

Sample : P1500729-016 (1000mL)

Misc : S29-02041502

ALS Vial : 11 Sample Multiplier: 1

Quant Time: Mar 02 11:28:18 2015

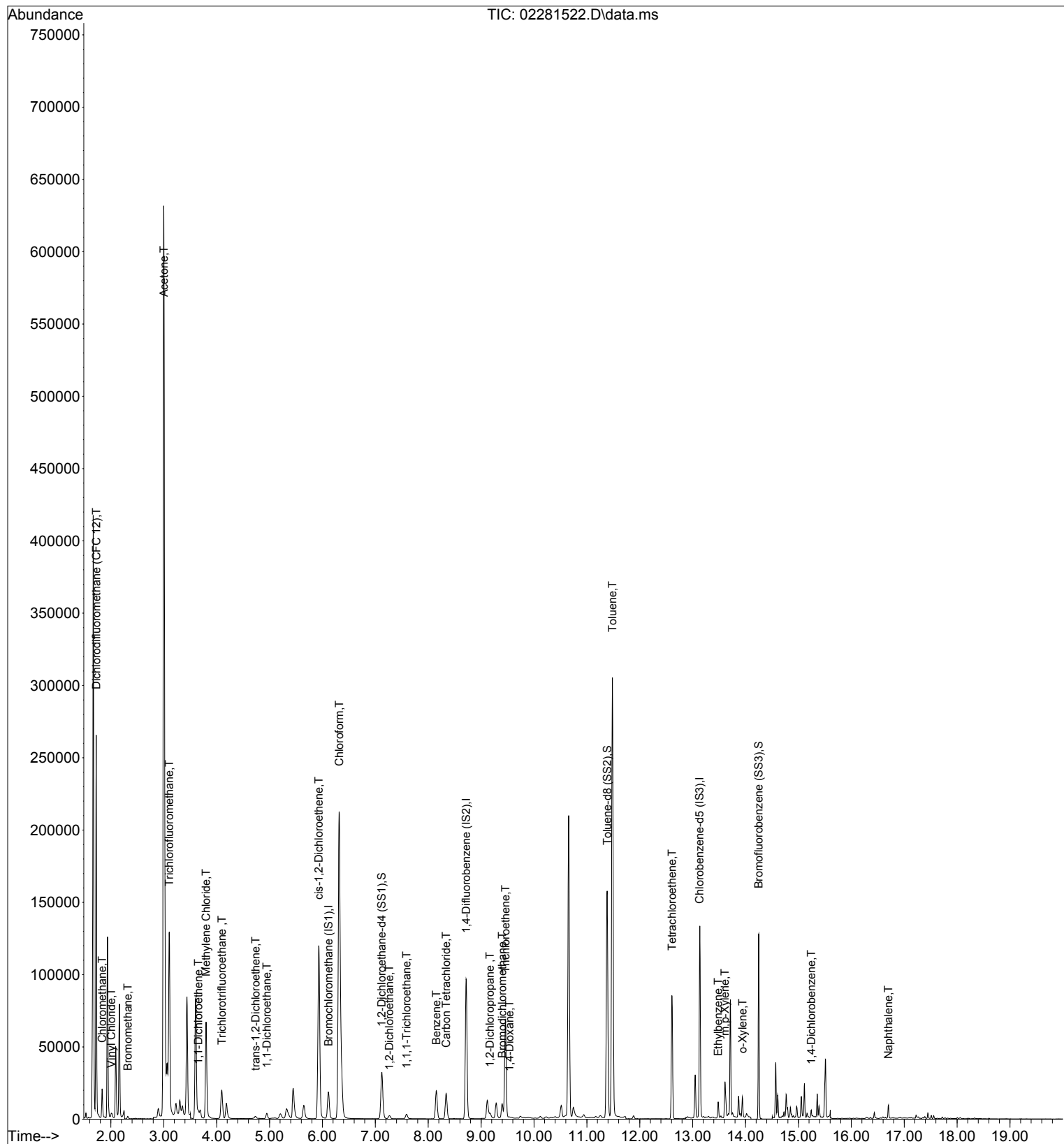
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 02\28\02281522.D

Acq On : 28 Feb 2015 13:20

Operator: WA

Sample : P1500729-016 (1000mL)

Misc : S29-02041502

ALS Vial : 11 Sample Multiplier: 1

Quant Time: Mar 02 11:28:18 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

IDA 3/2/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	26440	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	183935	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	31939	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	57022	883.117	pg	0.00
Spiked Amount 1000.000			Recovery	=	88.31%	
30) Toluene-d8 (SS2)	11.38	98	179640	1059.061	pg	0.00
Spiked Amount 1000.000			Recovery	=	105.91%	
40) Bromofluorobenzene (SS3)	14.25	174	76748	1190.252	pg	0.00
Spiked Amount 1000.000			Recovery	=	119.03%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.72	85	187395	1743.979	pg	100
3) Chloromethane	1.83	52	5315	247.687	pg	95
4) Vinyl Chloride	2.01	62	3072	36.762	pg	86
5) Bromomethane	2.32	94	1509	31.231	pg	99
7) Acetone	3.00	58	233346	6149.739	pg	# 74
8) Trichlorofluoromethane	3.10	101	128340	1390.506	pg	100
9) 1,1-Dichloroethene	3.65	96	1734	42.085	pg	# 1
10) Methylene Chloride	3.80	84	44901	1025.241	pg	92
11) Trichlorotrifluoroethane	4.10	151	25651	604.823	pg	99
12) trans-1,2-Dichloroethene	4.73	96	960	22.816	pg	95
13) 1,1-Dichloroethane	4.95	63	5523	73.121	pg	98
15) cis-1,2-Dichloroethene	5.93	96	103367	2209.246	pg	100
16) Chloroform	6.31	83	334885	4131.110	pg	100
18) 1,2-Dichloroethane	7.26	62	3151	48.819	pg	98
19) 1,1,1-Trichloroethane	7.59	97	4949	62.780	pg	100
20) Benzene	8.15	78	37356	224.050	pg	100
21) Carbon Tetrachloride	8.34	117	22241	376.859	pg	99
23) 1,2-Dichloropropane	9.16	63	873	21.762	pg	88
24) Bromodichloromethane	9.40	83	13945	240.824	pg	98
25) Trichloroethene	9.46	130	47240	999.704	pg	99
26) 1,4-Dioxane	9.54	88	777	22.063	pg	# 1
31) Toluene	11.48	91	335456	1859.482	pg	100
33) Tetrachloroethene	12.61	166	79699	1426.802	pg	99
36) Ethylbenzene	13.48	91	10787	53.858	pg	99
37) m,p-Xylene	13.61	91	27223	165.378	pg	98
38) o-Xylene	13.94	106	5519	68.603	pg	95
42) 1,4-Dichlorobenzene	15.24	146	2982	27.018	pg	100
45) Naphthalene	16.70	128	9101	45.540	pg	97

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\28\02281522.D

Acq On : 28 Feb 2015 13:20

Operator: WA

Sample : P1500729-016 (1000mL)

Misc : S29-02041502

ALS Vial : 11 Sample Multiplier: 1

Quant Time: Mar 02 11:28:18 2015

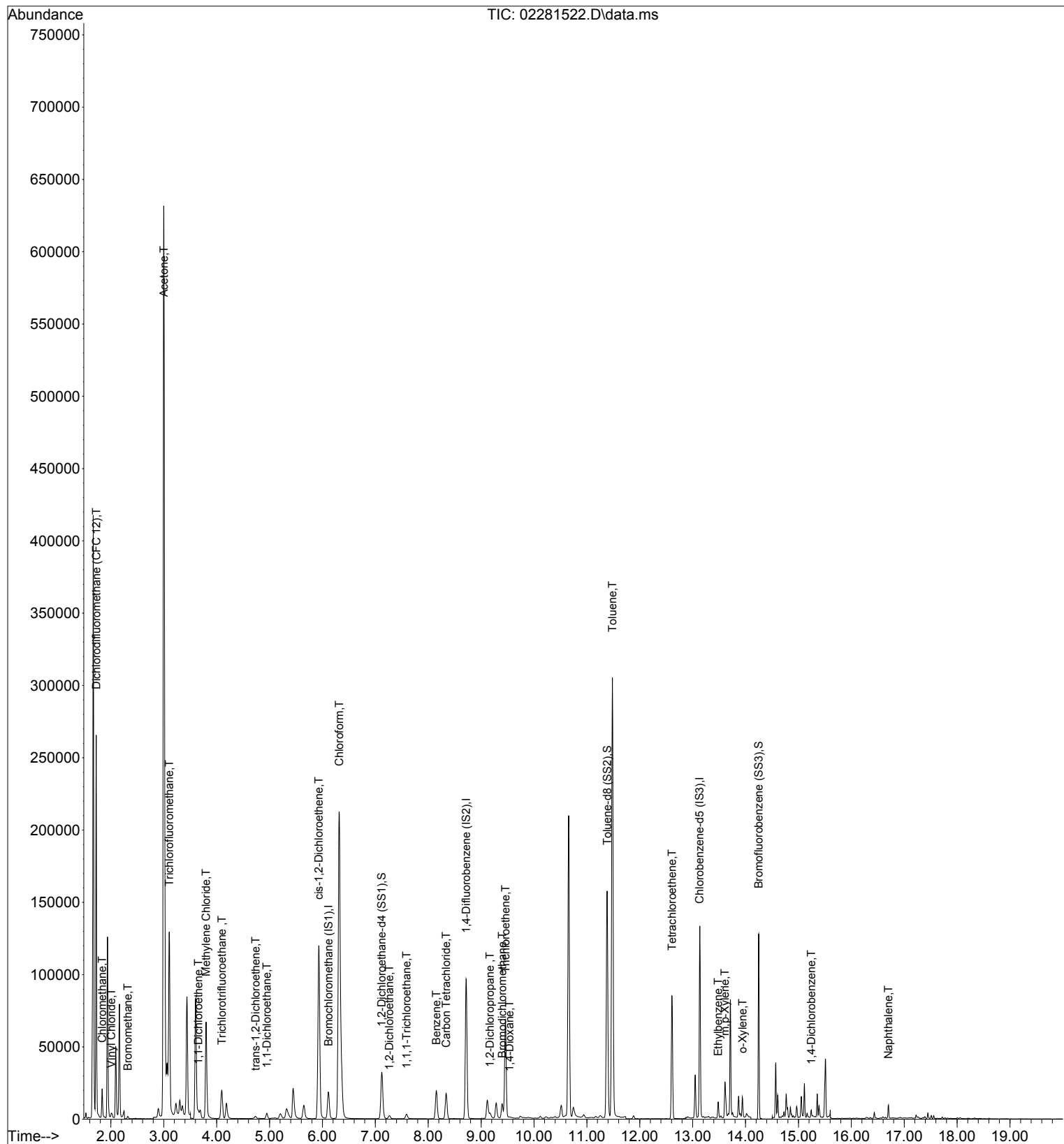
Quant Method : I:\MS19\METHODS\X19021115.M

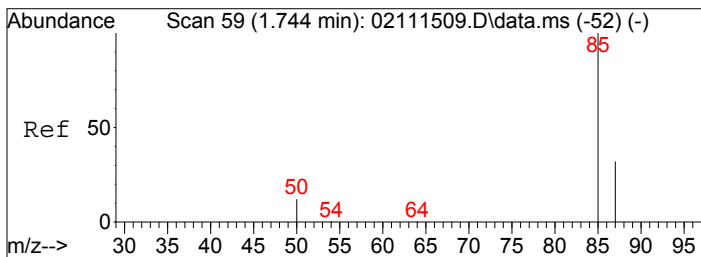
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

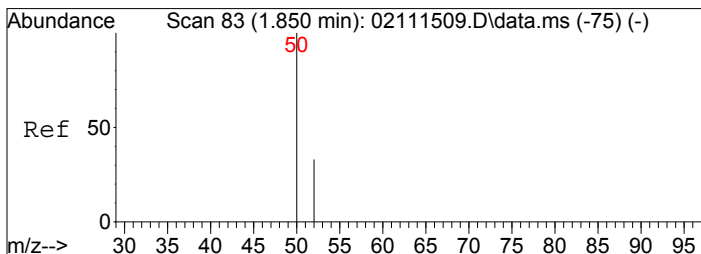
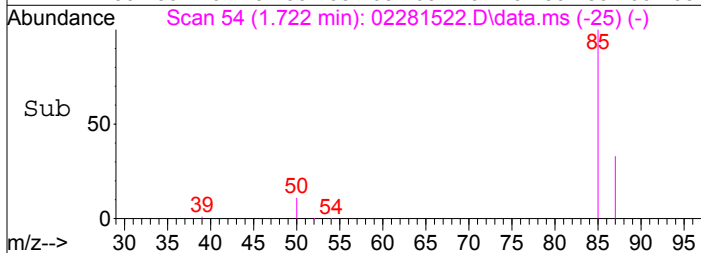
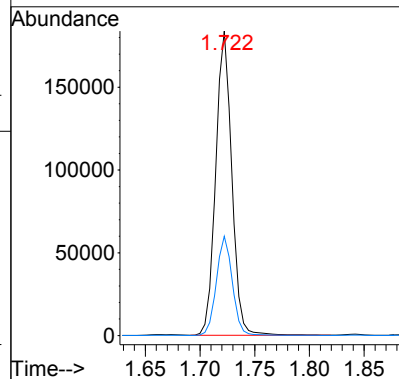
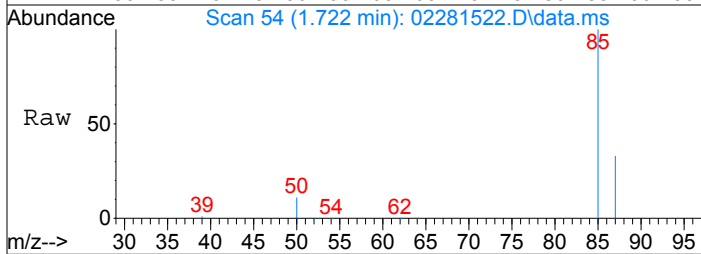
DataAcq Meth:TO15SIM.M





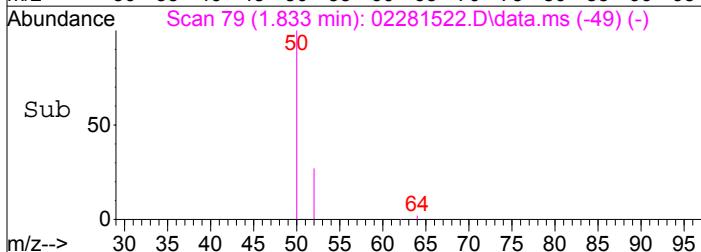
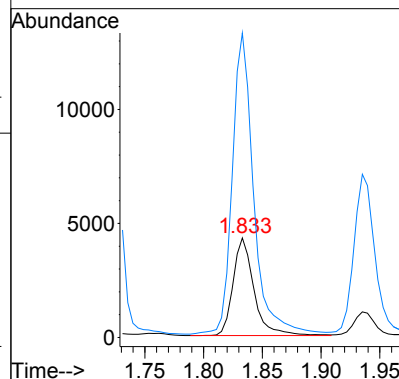
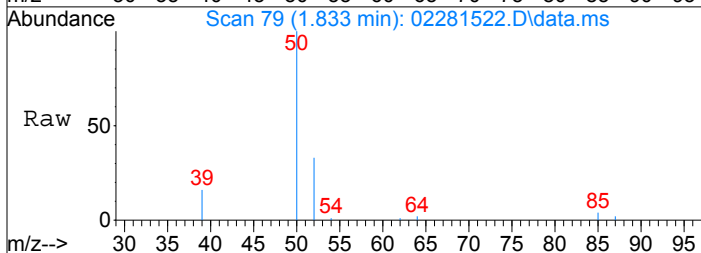
#2
 Dichlorodifluoromethane (CFC 12)
 Concen: 1743.98 pg
 RT: 1.72 min Scan# 54
 Delta R.T. -0.022 min
 Lab File: 02281522.D
 Acq: 28 Feb 2015 13:20

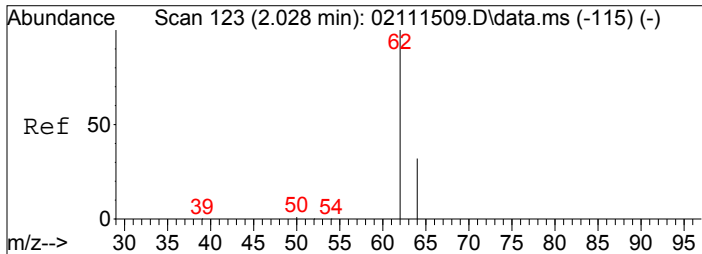
Tgt Ion: 85 Resp: 187395
 Ion Ratio Lower Upper
 85 100
 87 32.5 12.4 52.4



#3
 Chloromethane
 Concen: 247.69 pg
 RT: 1.83 min Scan# 79
 Delta R.T. -0.017 min
 Lab File: 02281522.D
 Acq: 28 Feb 2015 13:20

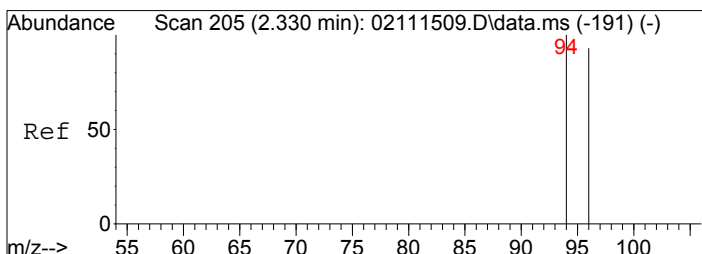
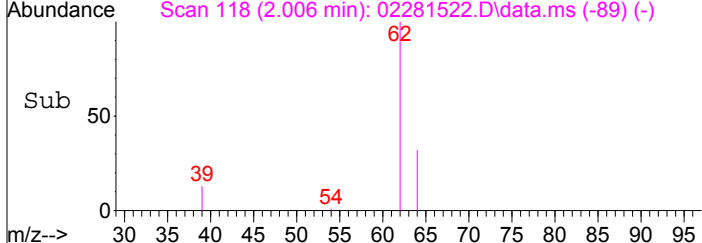
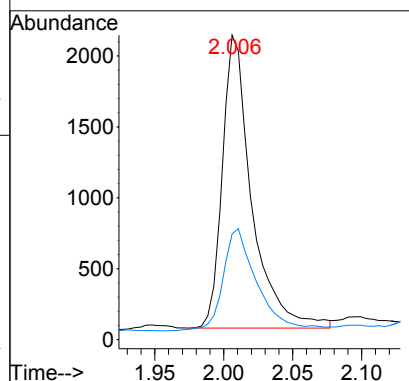
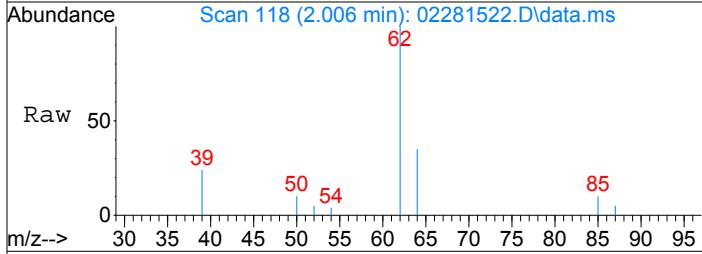
Tgt Ion: 52 Resp: 5315
 Ion Ratio Lower Upper
 52 100
 50 312.7 283.7 323.7





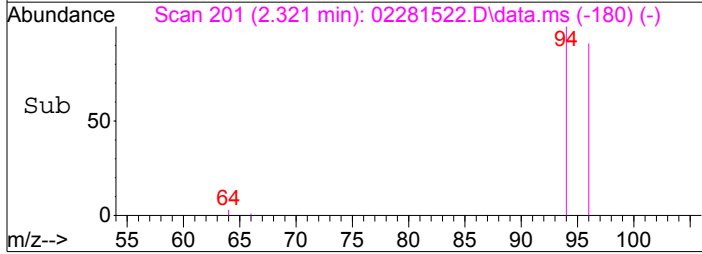
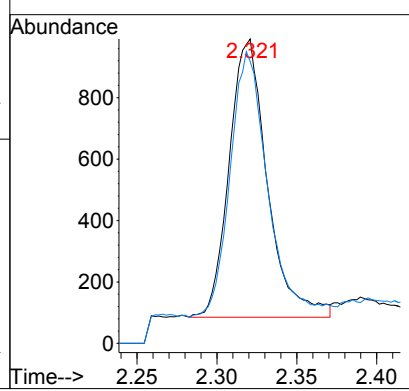
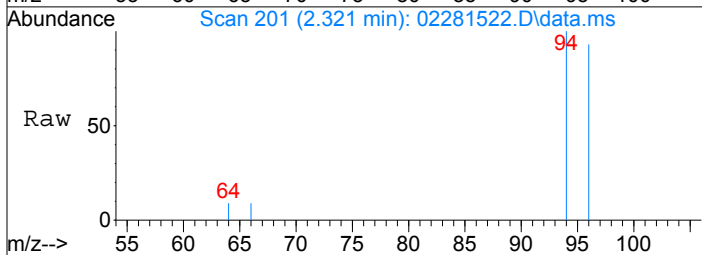
#4
 Vinyl Chloride
 Concen: 36.76 pg
 RT: 2.01 min Scan# 118
 Delta R.T. -0.022 min
 Lab File: 02281522.D
 Acq: 28 Feb 2015 13:20

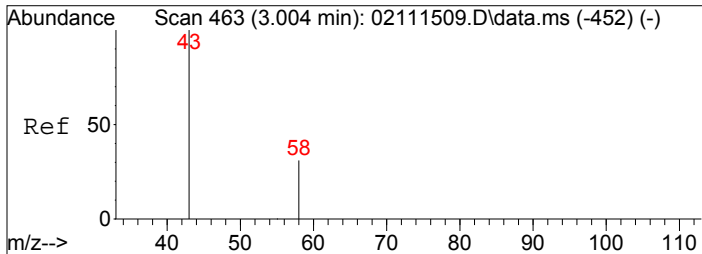
Tgt Ion:	62	Resp:	3072
Ion Ratio	Lower	Upper	
62	100		
64	40.5	12.4	52.4



#5
 Bromomethane
 Concen: 31.23 pg
 RT: 2.32 min Scan# 201
 Delta R.T. -0.009 min
 Lab File: 02281522.D
 Acq: 28 Feb 2015 13:20

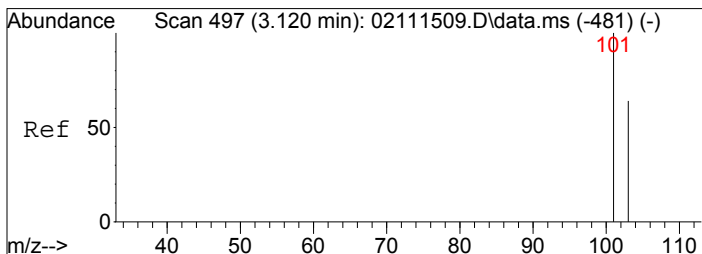
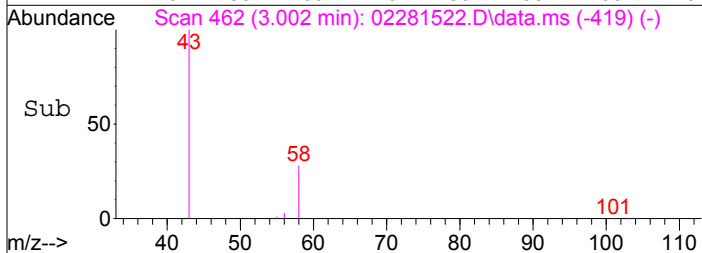
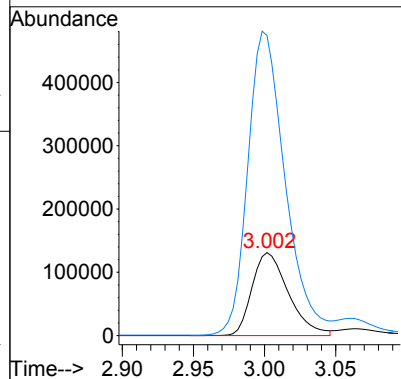
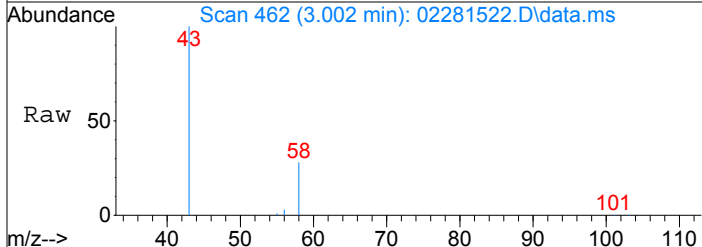
Tgt Ion:	94	Resp:	1509
Ion Ratio	Lower	Upper	
94	100		
96	95.0	75.5	113.3





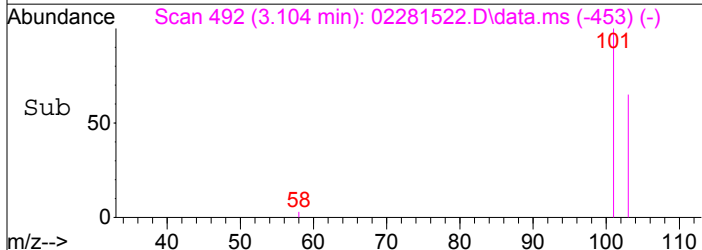
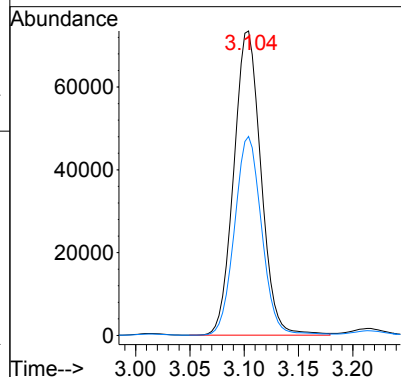
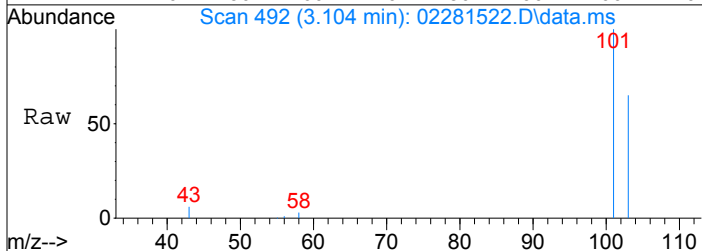
#7
Acetone
Concen: 6149.74 pg
RT: 3.00 min Scan# 462
Delta R.T. -0.002 min
Lab File: 02281522.D
Acq: 28 Feb 2015 13:20

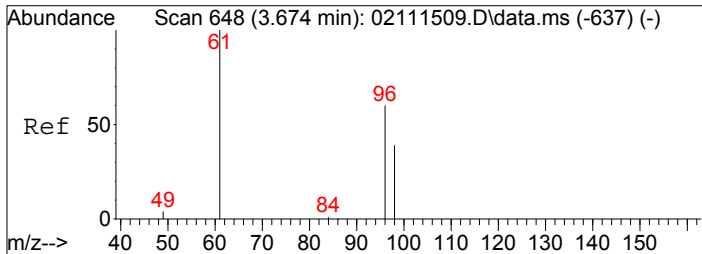
Tgt Ion: 58 Resp: 233346
Ion Ratio Lower Upper
58 100
43 375.4 301.8 341.8#



#8
Trichlorofluoromethane
Concen: 1390.51 pg
RT: 3.10 min Scan# 492
Delta R.T. -0.016 min
Lab File: 02281522.D
Acq: 28 Feb 2015 13:20

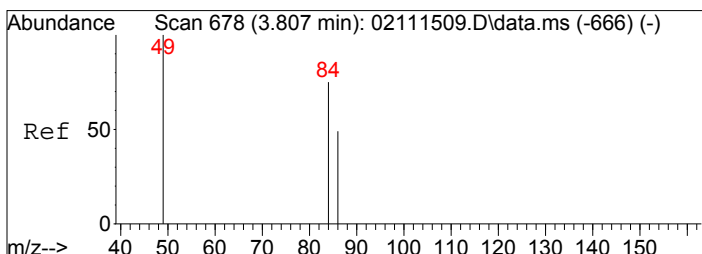
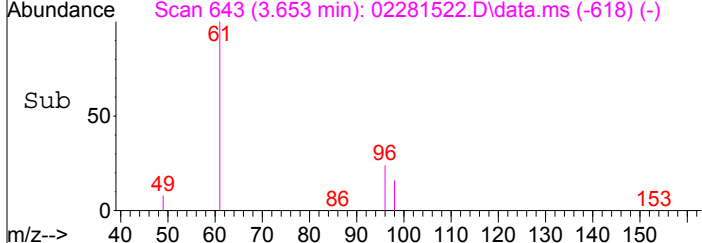
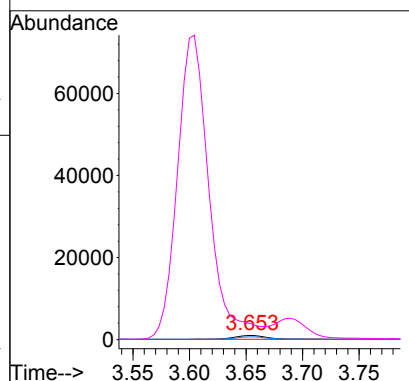
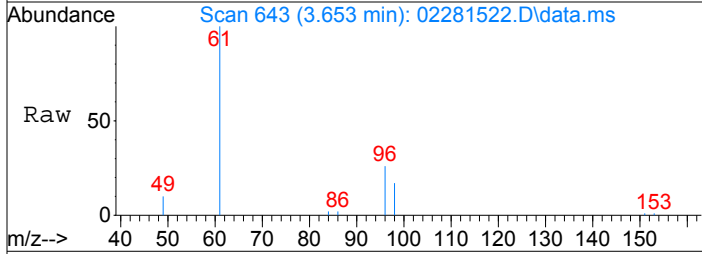
Tgt Ion: 101 Resp: 128340
Ion Ratio Lower Upper
101 100
103 65.0 51.8 77.6





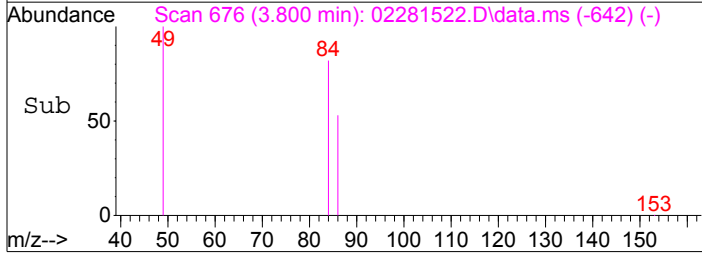
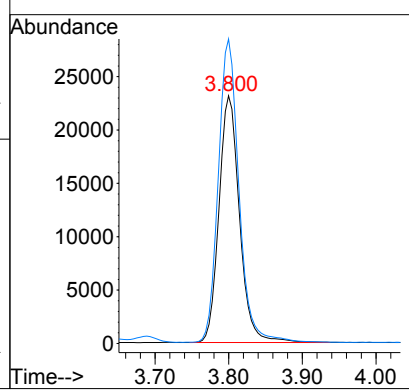
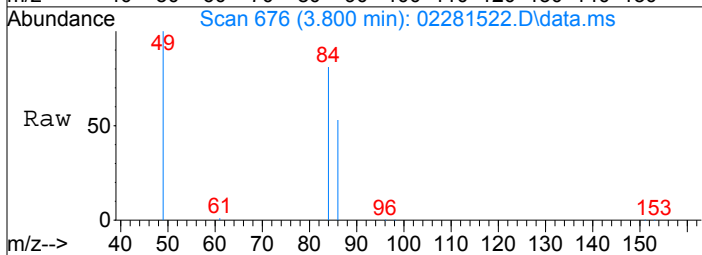
#9
 1,1-Dichloroethene
 Concen: 42.08 pg
 RT: 3.65 min Scan# 643
 Delta R.T. -0.021 min
 Lab File: 02281522.D
 Acq: 28 Feb 2015 13:20

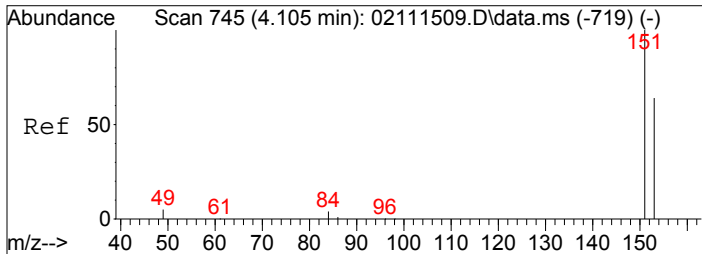
Tgt Ion: 96	Resp: 1734
Ion Ratio	Lower Upper
96	100
98	67.5 44.0 84.0
61	612.7 151.5 191.5#



#10
 Methylene Chloride
 Concen: 1025.24 pg
 RT: 3.80 min Scan# 676
 Delta R.T. -0.007 min
 Lab File: 02281522.D
 Acq: 28 Feb 2015 13:20

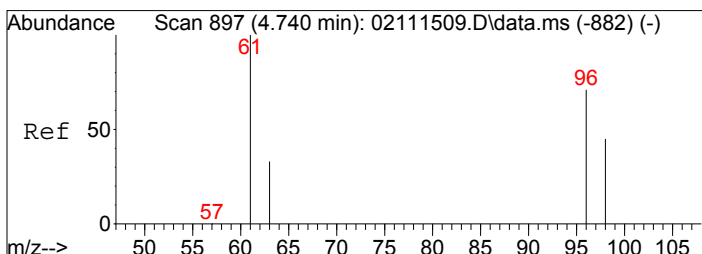
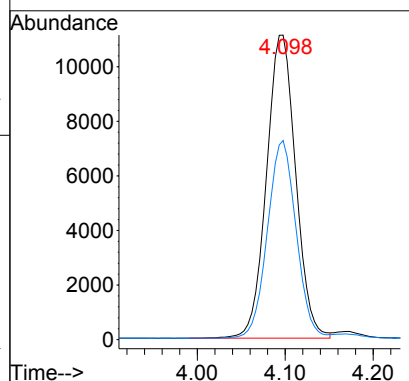
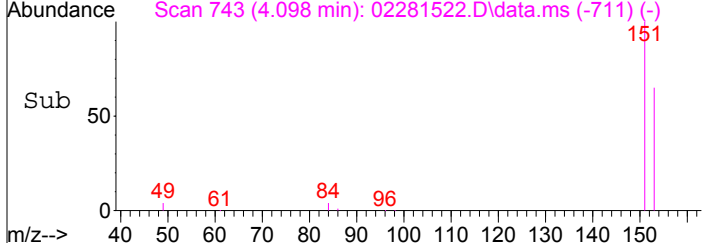
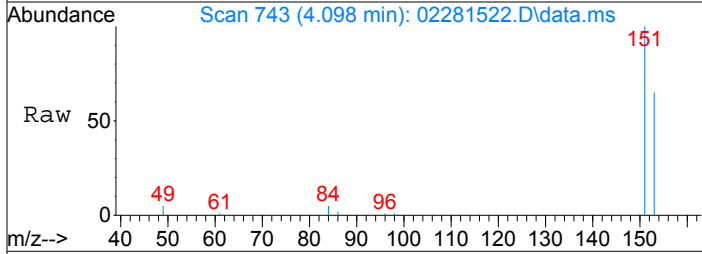
Tgt Ion: 84	Resp: 44901
Ion Ratio	Lower Upper
84	100
49	123.2 112.3 152.3





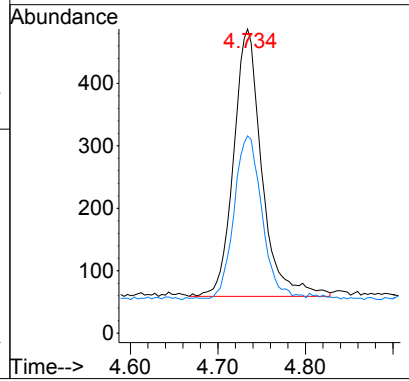
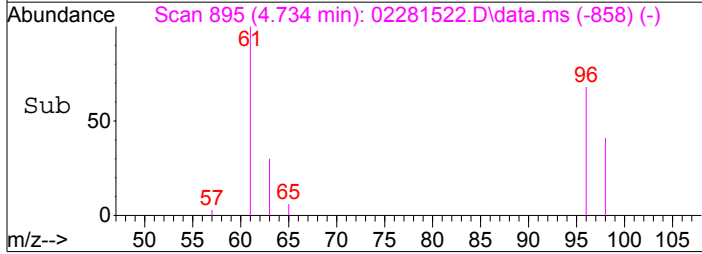
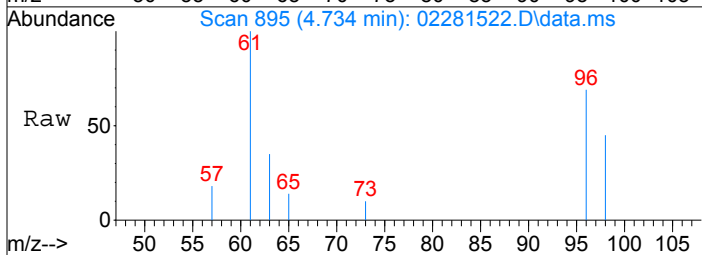
#11
 Trichlorotrifluoroethane
 Concen: 604.82 pg
 RT: 4.10 min Scan# 743
 Delta R.T. -0.007 min
 Lab File: 02281522.D
 Acq: 28 Feb 2015 13:20

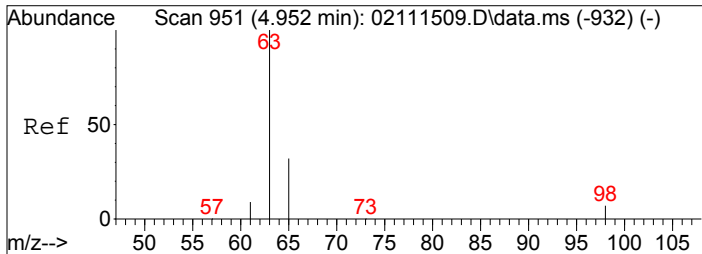
Tgt Ion: 151	Resp: 25651
Ion Ratio	Lower Upper
151	100
153	64.1 43.6 83.6



#12
 trans-1,2-Dichloroethene
 Concen: 22.82 pg
 RT: 4.73 min Scan# 895
 Delta R.T. -0.006 min
 Lab File: 02281522.D
 Acq: 28 Feb 2015 13:20

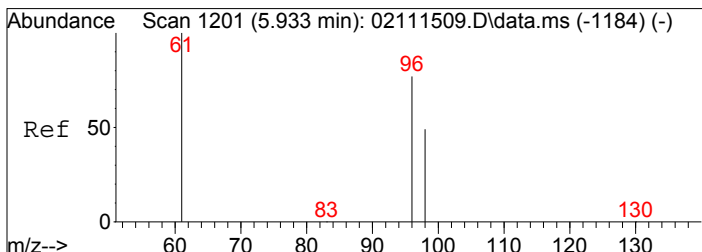
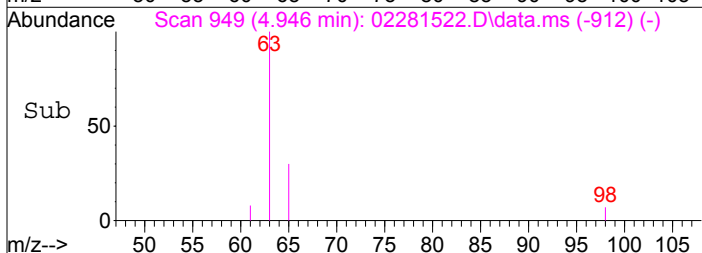
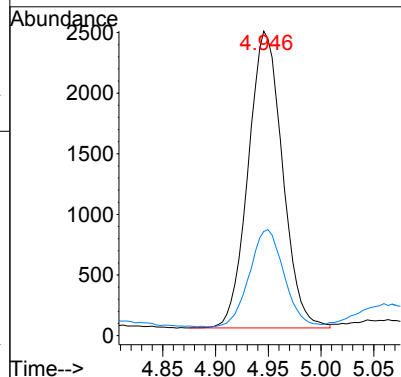
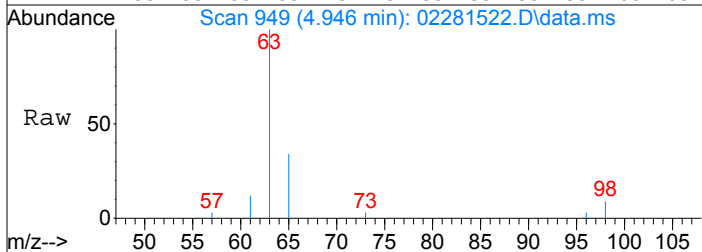
Tgt Ion: 96	Resp: 960
Ion Ratio	Lower Upper
96	100
98	59.5 43.7 83.7





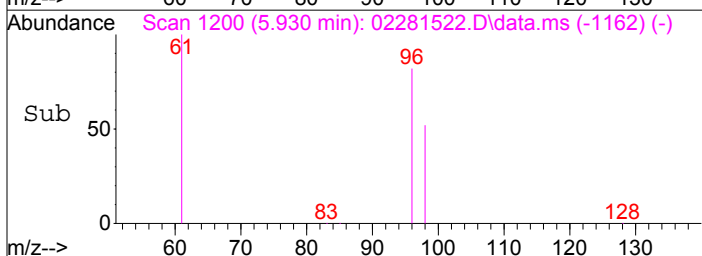
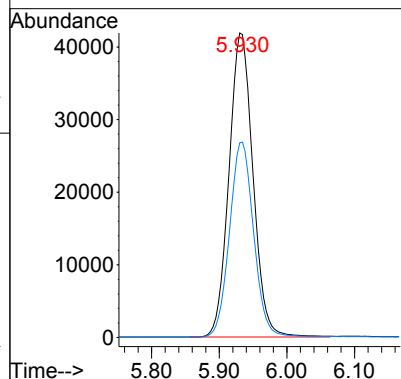
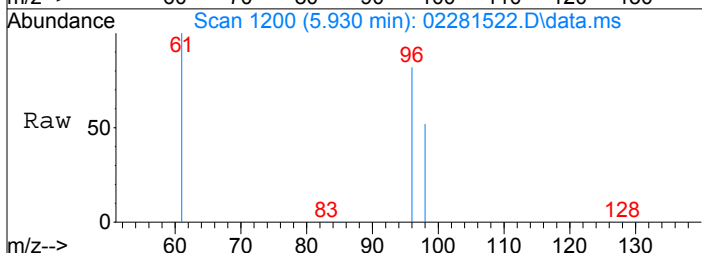
#13
1,1-Dichloroethane
Concen: 73.12 pg
RT: 4.95 min Scan# 949
Delta R.T. -0.006 min
Lab File: 02281522.D
Acq: 28 Feb 2015 13:20

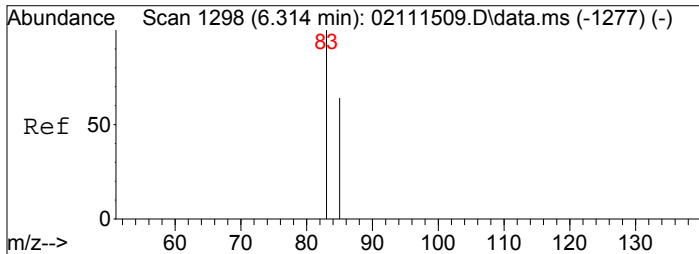
Tgt Ion	63	65	Resp	5523	Lower	Upper
Ion Ratio	100	33.0				
			12.2			52.2



#15
cis-1,2-Dichloroethene
Concen: 2209.25 pg
RT: 5.93 min Scan# 1200
Delta R.T. -0.002 min
Lab File: 02281522.D
Acq: 28 Feb 2015 13:20

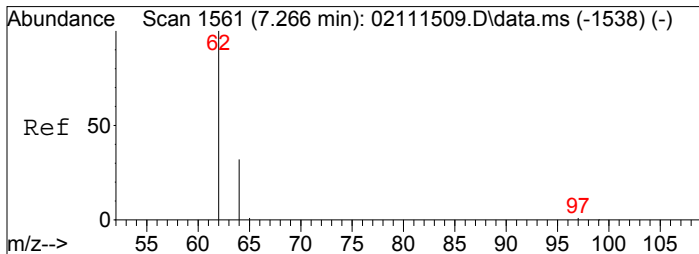
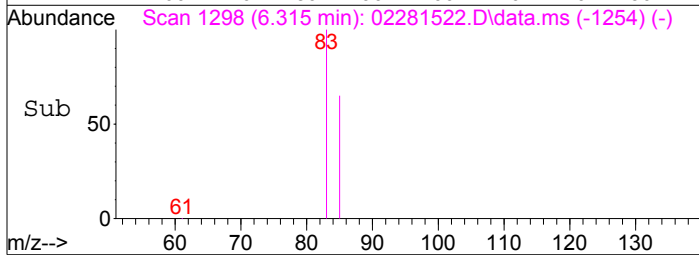
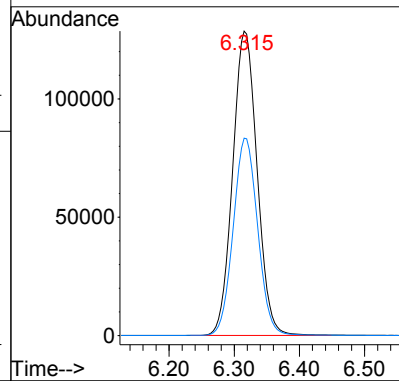
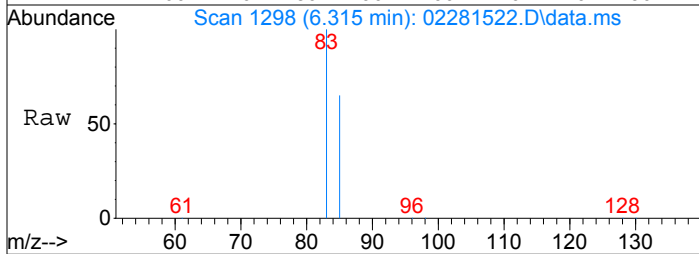
Tgt Ion	96	98	Resp	103367	Lower	Upper
Ion Ratio	100	64.4				
			44.3			84.3





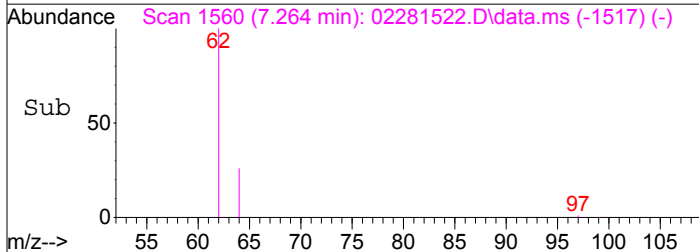
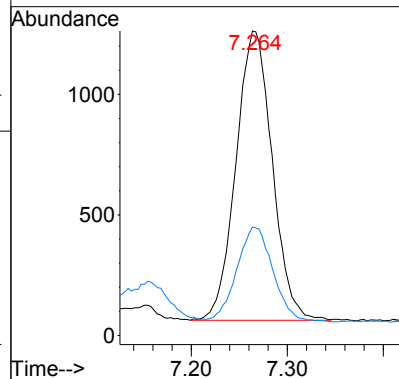
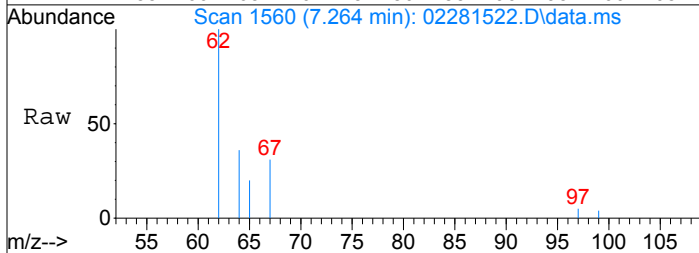
#16
Chloroform
Concen: 4131.11 pg
RT: 6.31 min Scan# 1298
Delta R.T. 0.001 min
Lab File: 02281522.D
Acq: 28 Feb 2015 13:20

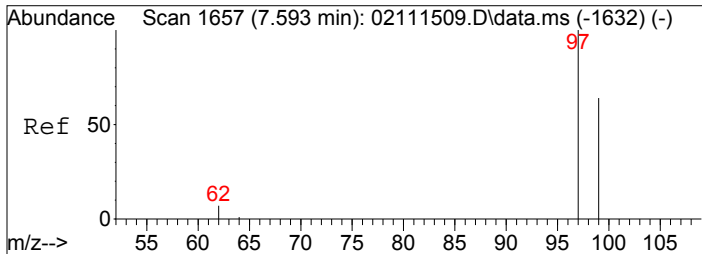
Tgt Ion: 83 Resp: 334885
Ion Ratio Lower Upper
83 100
85 65.1 45.4 85.4



#18
1,2-Dichloroethane
Concen: 48.82 pg
RT: 7.26 min Scan# 1560
Delta R.T. -0.002 min
Lab File: 02281522.D
Acq: 28 Feb 2015 13:20

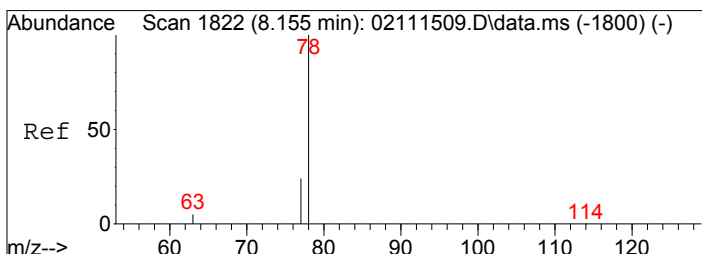
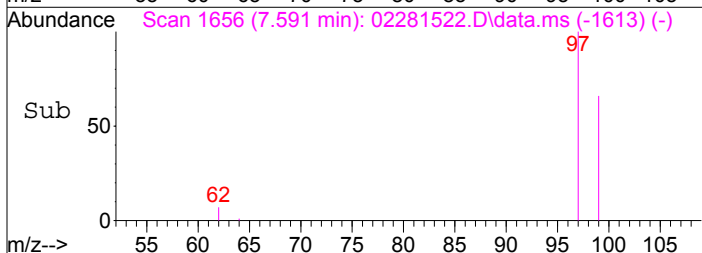
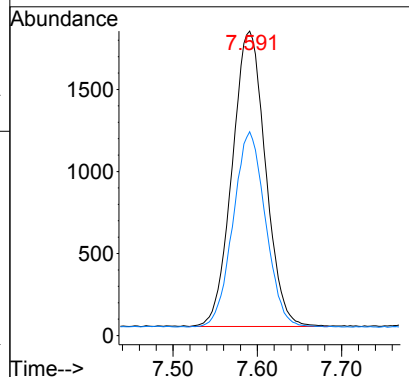
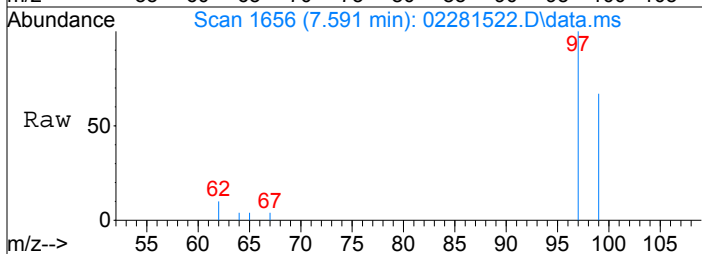
Tgt Ion: 62 Resp: 3151
Ion Ratio Lower Upper
62 100
64 32.9 11.6 51.6





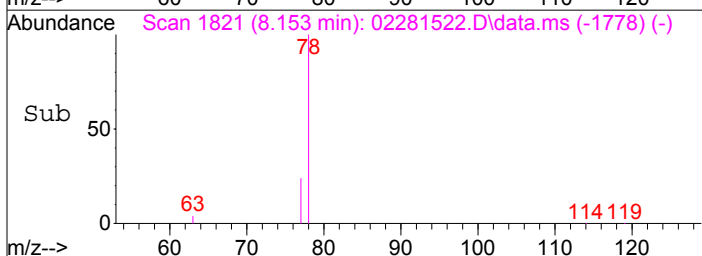
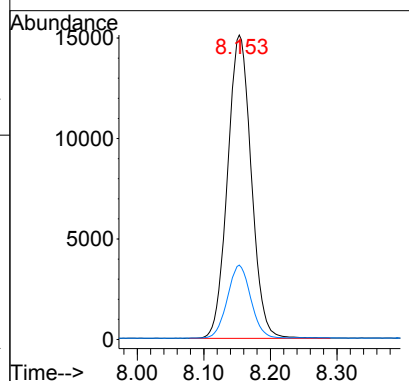
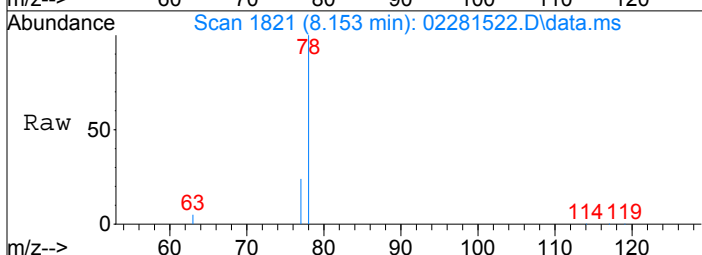
#19
 1,1,1-Trichloroethane
 Concen: 62.78 pg
 RT: 7.59 min Scan# 1656
 Delta R.T. -0.002 min
 Lab File: 02281522.D
 Acq: 28 Feb 2015 13:20

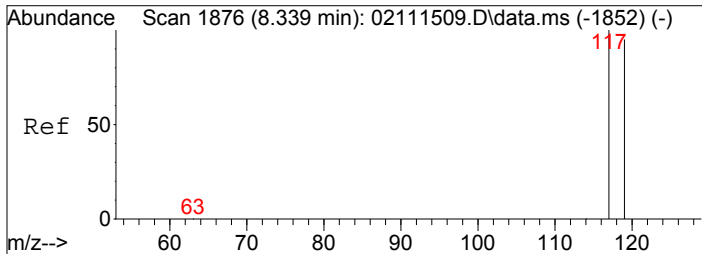
Tgt Ion: 97 Resp: 4949
 Ion Ratio Lower Upper
 97 100
 99 64.4 44.0 84.0



#20
 Benzene
 Concen: 224.05 pg
 RT: 8.15 min Scan# 1821
 Delta R.T. -0.002 min
 Lab File: 02281522.D
 Acq: 28 Feb 2015 13:20

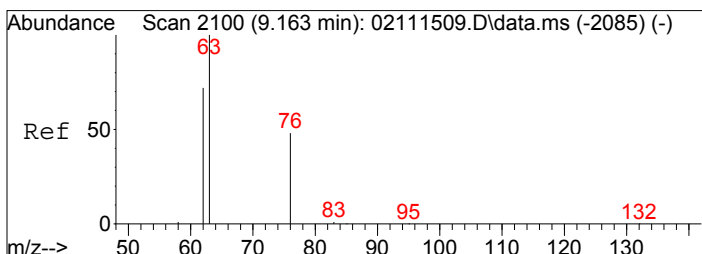
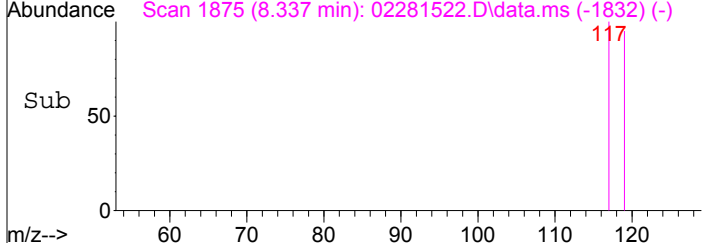
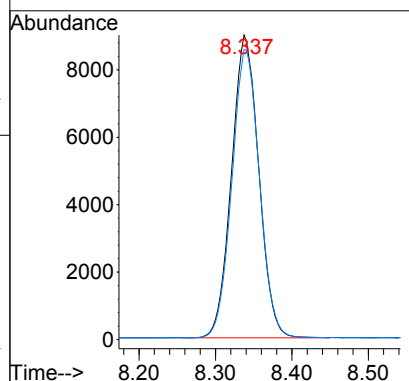
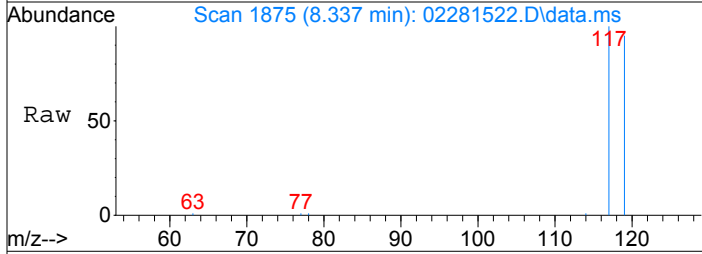
Tgt Ion: 78 Resp: 37356
 Ion Ratio Lower Upper
 78 100
 77 23.8 3.7 43.7





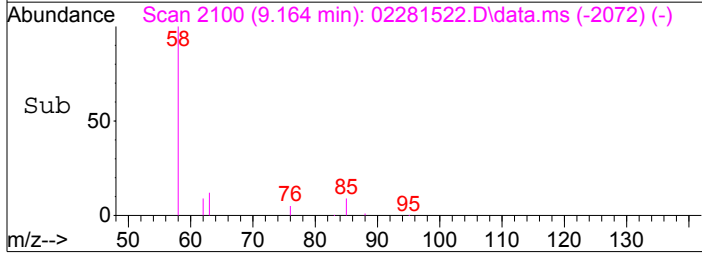
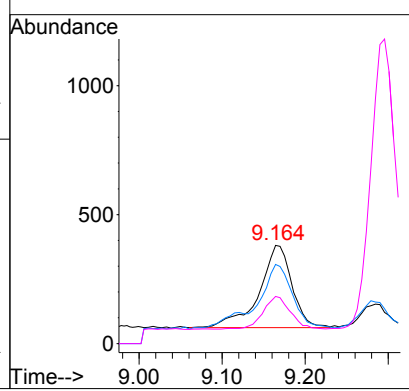
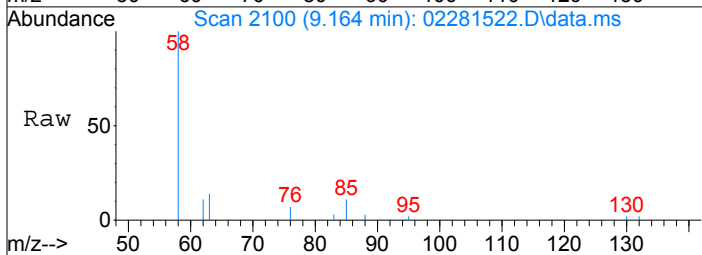
#21
Carbon Tetrachloride
Concen: 376.86 pg
RT: 8.34 min Scan# 1875
Delta R.T. -0.002 min
Lab File: 02281522.D
Acq: 28 Feb 2015 13:20

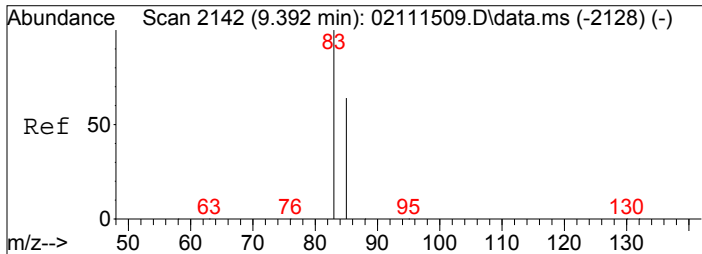
Tgt Ion: 117	Resp: 22241
Ion Ratio	Lower Upper
117	100
119	96.4 75.5 115.5



#23
1,2-Dichloropropane
Concen: 21.76 pg
RT: 9.16 min Scan# 2100
Delta R.T. 0.001 min
Lab File: 02281522.D
Acq: 28 Feb 2015 13:20

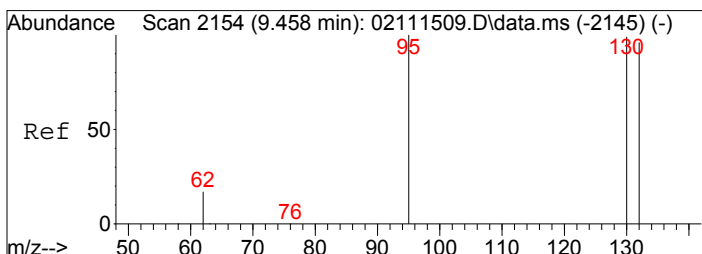
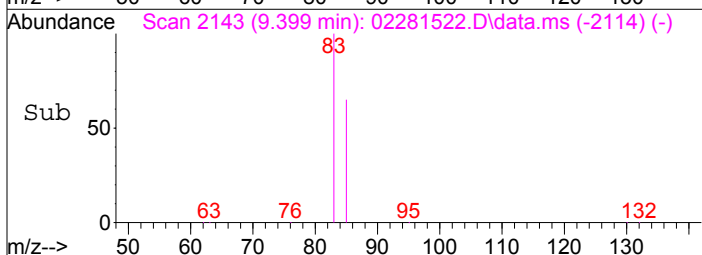
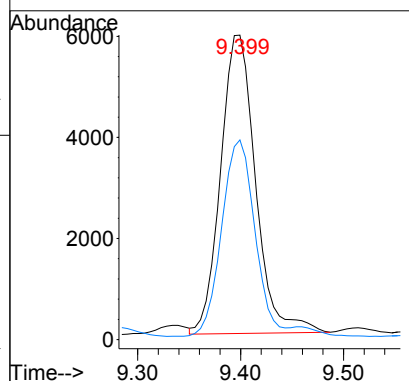
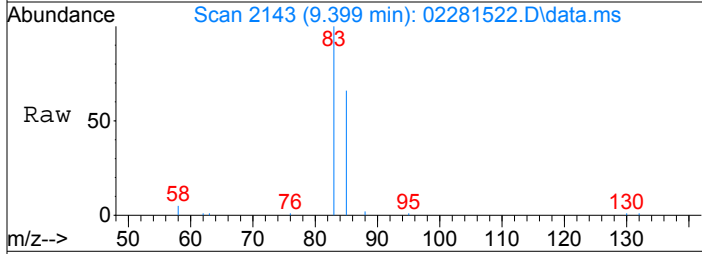
Tgt Ion: 63	Resp: 873
Ion Ratio	Lower Upper
63	100
62	67.8 52.0 92.0
76	33.2 28.1 68.1





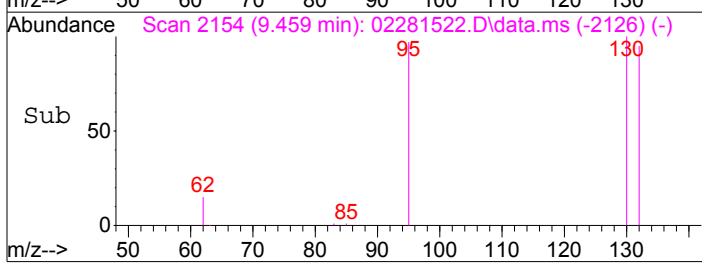
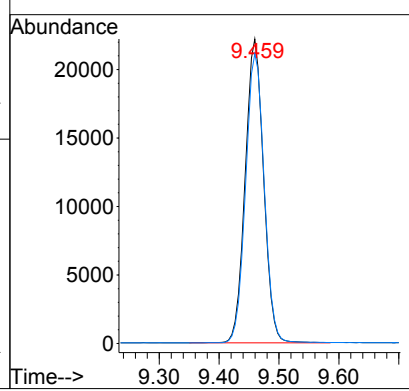
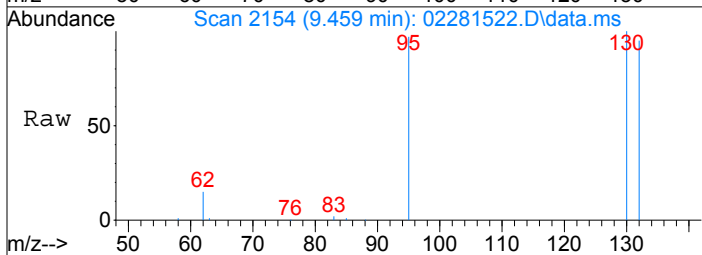
#24
 Bromodichloromethane
 Concen: 240.82 pg
 RT: 9.40 min Scan# 2143
 Delta R.T. 0.007 min
 Lab File: 02281522.D
 Acq: 28 Feb 2015 13:20

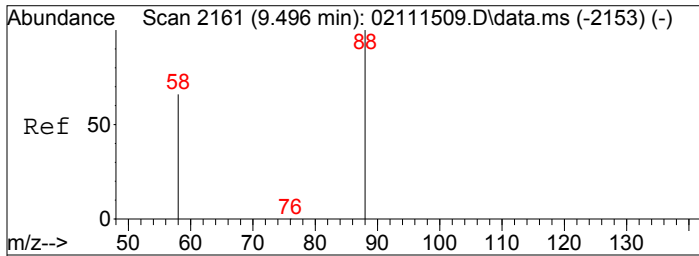
Tgt Ion: 83	Resp: 13945
Ion Ratio	Lower Upper
83	100
85	62.6 51.4 77.0



#25
 Trichloroethene
 Concen: 999.70 pg
 RT: 9.46 min Scan# 2154
 Delta R.T. 0.002 min
 Lab File: 02281522.D
 Acq: 28 Feb 2015 13:20

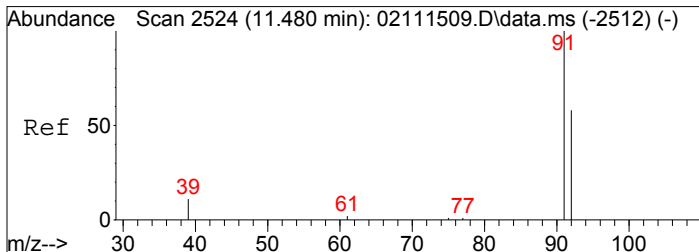
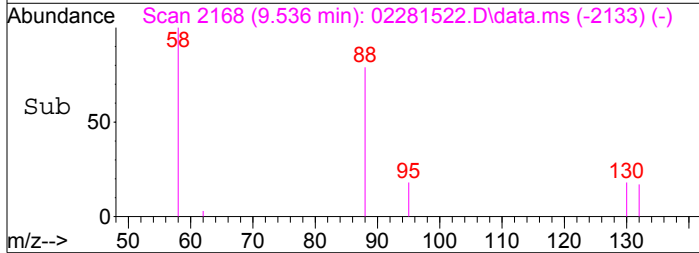
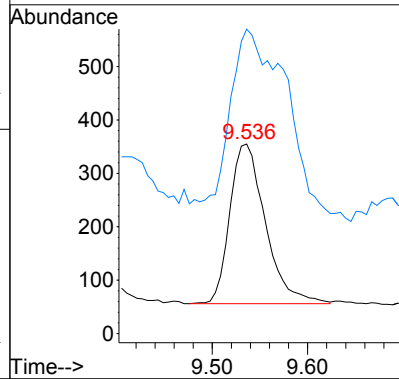
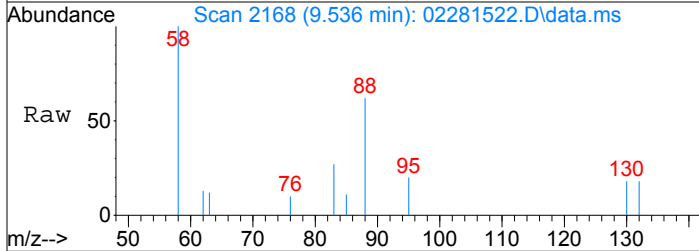
Tgt Ion: 130	Resp: 47240
Ion Ratio	Lower Upper
130	100
132	96.2 77.1 117.1





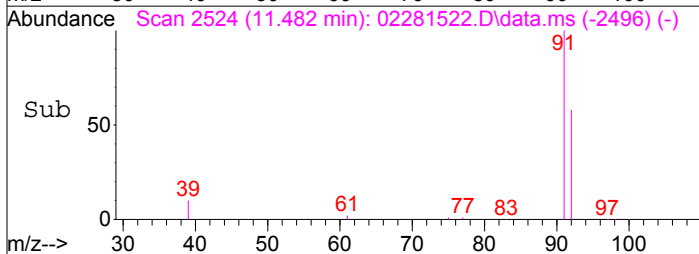
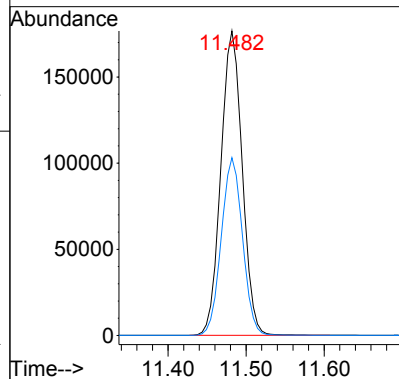
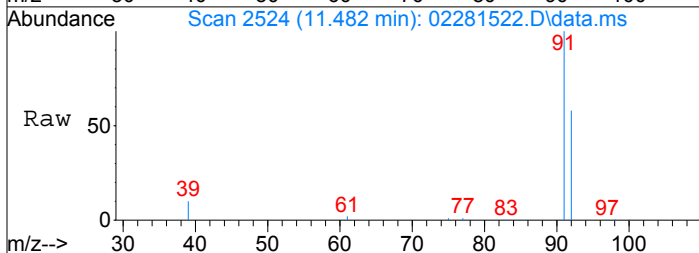
#26
1,4-Dioxane
Concen: 22.06 pg
RT: 9.54 min Scan# 2168
Delta R.T. 0.040 min
Lab File: 02281522.D
Acq: 28 Feb 2015 13:20

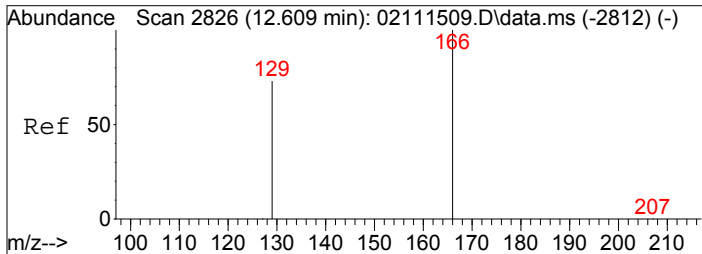
Tgt Ion: 88 Resp: 777
Ion Ratio Lower Upper
88 100
58 194.1 38.3 78.3#



#31
Toluene
Concen: 1859.48 pg
RT: 11.48 min Scan# 2524
Delta R.T. 0.001 min
Lab File: 02281522.D
Acq: 28 Feb 2015 13:20

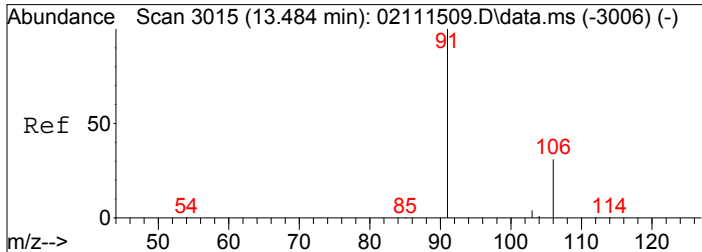
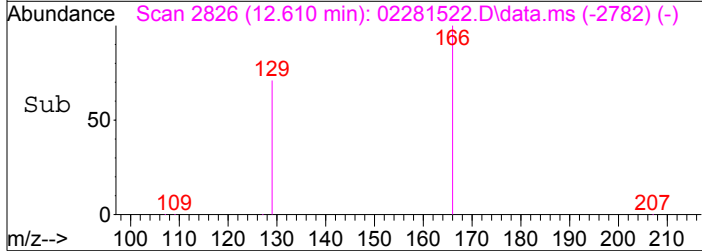
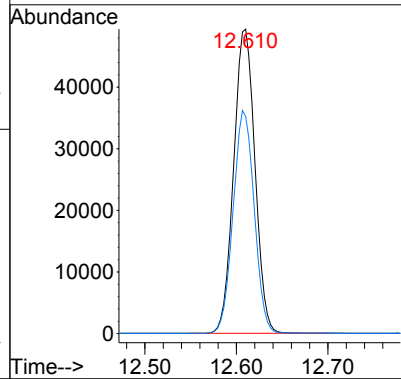
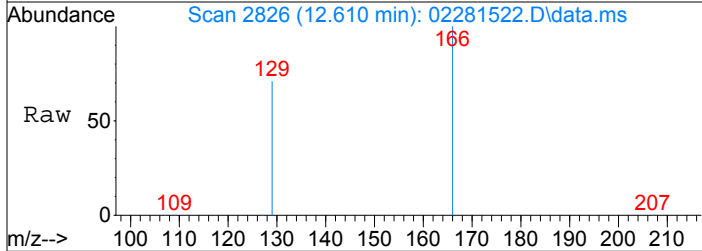
Tgt Ion: 91 Resp: 335456
Ion Ratio Lower Upper
91 100
92 58.1 37.7 77.7





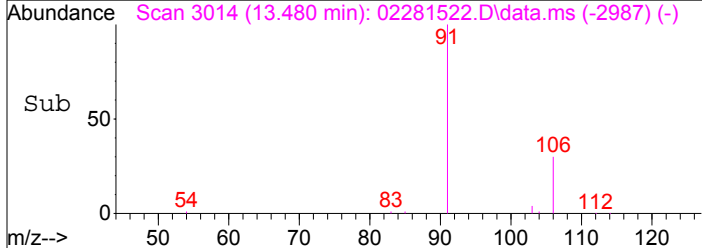
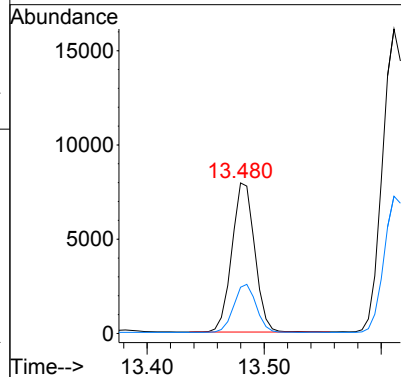
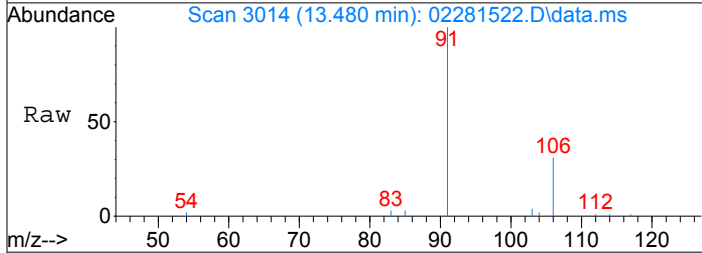
#33
Tetrachloroethene
Concen: 1426.80 pg
RT: 12.61 min Scan# 2826
Delta R.T. 0.001 min
Lab File: 02281522.D
Acq: 28 Feb 2015 13:20

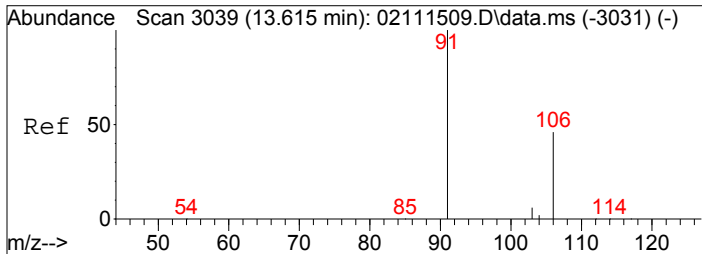
Tgt Ion	166	Resp	79699
Ion Ratio	100	Lower	Upper
129	72.6	53.3	93.3



#36
Ethylbenzene
Concen: 53.86 pg
RT: 13.48 min Scan# 3014
Delta R.T. -0.004 min
Lab File: 02281522.D
Acq: 28 Feb 2015 13:20

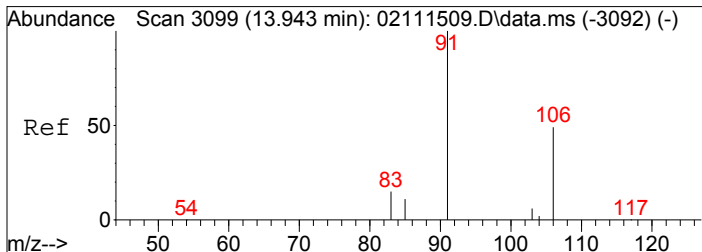
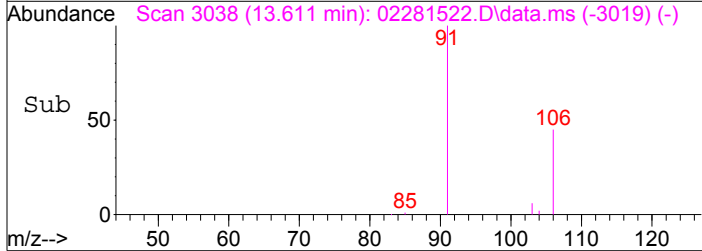
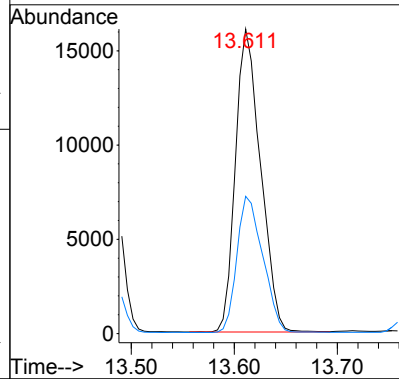
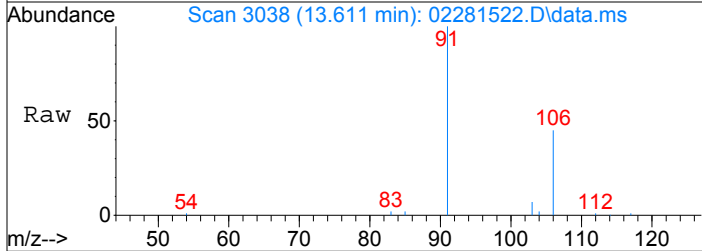
Tgt Ion	91	Resp	10787
Ion Ratio <td>100</td> <td>Lower</td> <td>Upper</td>	100	Lower	Upper
106	31.6	10.9	50.9





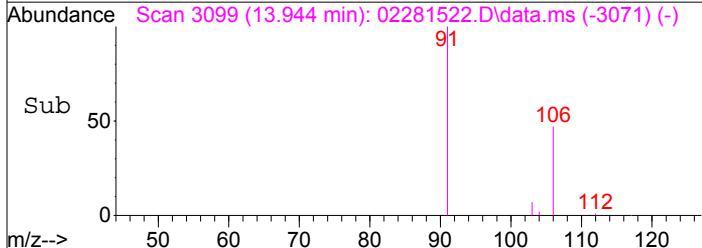
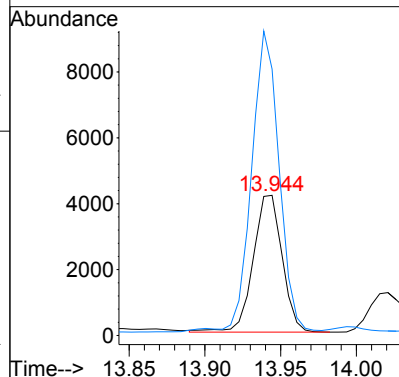
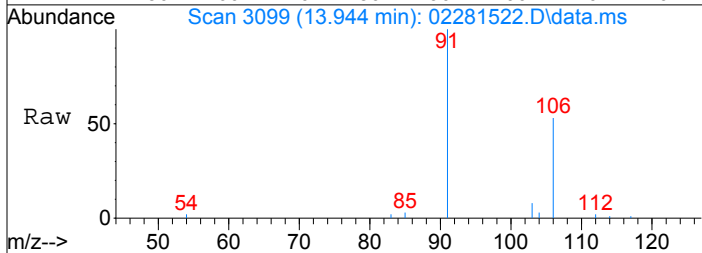
#37
m,p-Xylene
Concen: 165.38 pg
RT: 13.61 min Scan# 3038
Delta R.T. -0.004 min
Lab File: 02281522.D
Acq: 28 Feb 2015 13:20

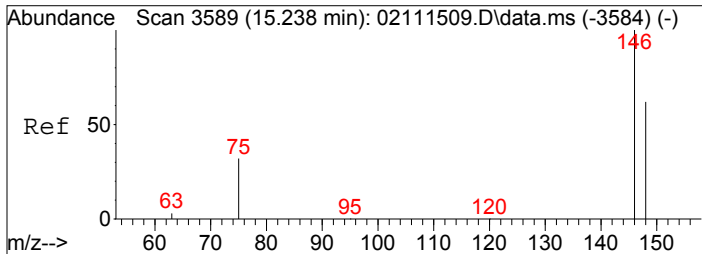
Tgt Ion: 91 Resp: 27223
Ion Ratio Lower Upper
91 100
106 46.4 27.5 67.5



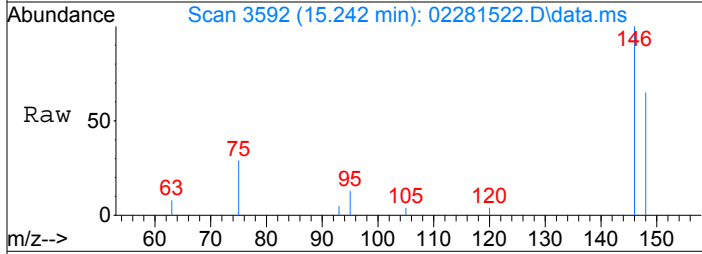
#38
o-Xylene
Concen: 68.60 pg
RT: 13.94 min Scan# 3099
Delta R.T. 0.001 min
Lab File: 02281522.D
Acq: 28 Feb 2015 13:20

Tgt Ion: 106 Resp: 5519
Ion Ratio Lower Upper
106 100
91 210.1 198.3 238.3

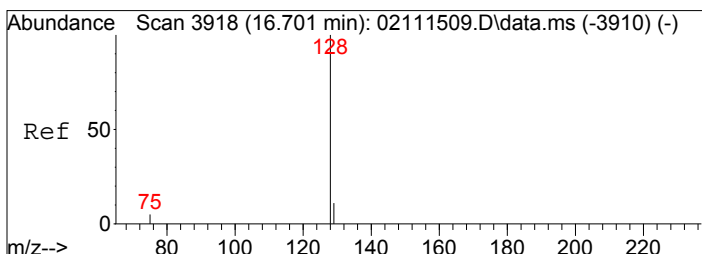
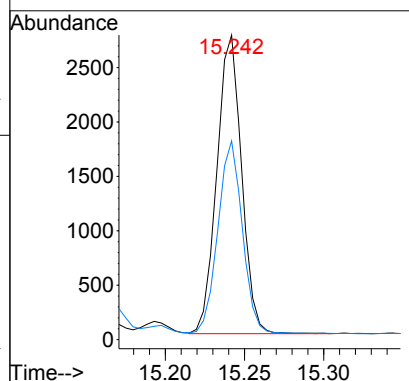
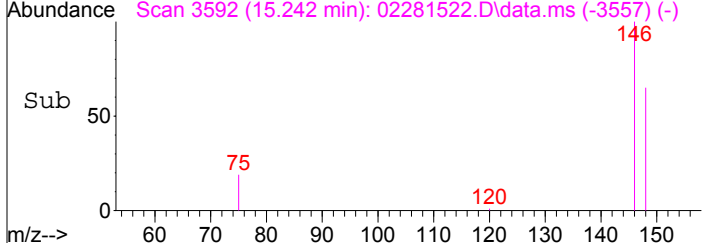




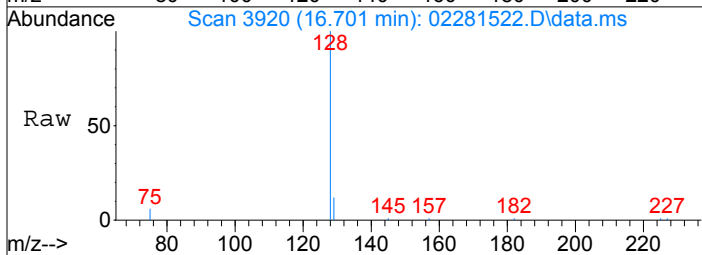
#42
 1,4-Dichlorobenzene
 Concen: 27.02 pg
 RT: 15.24 min Scan# 3592
 Delta R.T. 0.004 min
 Lab File: 02281522.D
 Acq: 28 Feb 2015 13:20



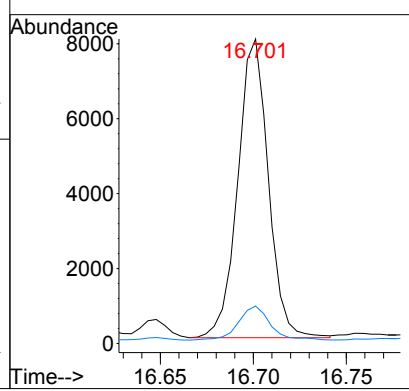
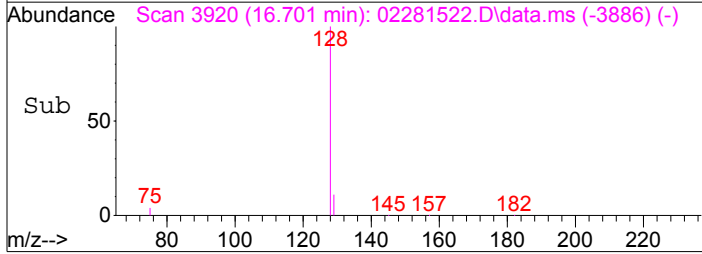
Tgt Ion:146 Resp: 2982
 Ion Ratio Lower Upper
 146 100
 148 63.8 43.5 83.5



#45
 Naphthalene
 Concen: 45.54 pg
 RT: 16.70 min Scan# 3920
 Delta R.T. 0.000 min
 Lab File: 02281522.D
 Acq: 28 Feb 2015 13:20



Tgt Ion:128 Resp: 9101
 Ion Ratio Lower Upper
 128 100
 129 11.9 0.0 30.9



Data File: I:\MS19\DATA\2015 02\28\02281523.D

Acq On : 28 Feb 2015 13:48

Operator: WA

Sample : P1500729-017 (1000mL)

Misc : S29-02041502

ALS Vial : 12 Sample Multiplier: 1

Quant Time: Mar 02 08:58:32 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

3/2/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	25968	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	183612	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	30977	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	56753	894.927	pg	0.00
Spiked Amount 1000.000			Recovery	=	89.49%	
30) Toluene-d8 (SS2)	11.38	98	172768	1020.339	pg	0.00
Spiked Amount 1000.000			Recovery	=	102.03%	
40) Bromofluorobenzene (SS3)	14.25	174	72777	1163.719	pg	0.00
Spiked Amount 1000.000			Recovery	=	116.37%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.73	85	183310	1736.970	pg	100
3) Chloromethane	1.84	52	10267	487.153	pg	98
4) Vinyl Chloride	2.02	62	193	N.D.		
5) Bromomethane	2.33	94	1383	29.143	pg	100
6) Chloroethane	2.48	64	462	N.D.		
7) Acetone	3.00	58	170143	4565.553	pg	# 82
8) Trichlorofluoromethane	3.11	101	417660	4607.409	pg	100
9) 1,1-Dichloroethene	3.67	96	88	N.D.		
10) Methylene Chloride	3.81	84	16666	387.458	pg	94
11) Trichlorotrifluoroethane	4.10	151	17121	411.032	pg	100
12) trans-1,2-Dichloroethene	4.75	96	195	N.D.		
13) 1,1-Dichloroethane	4.95	63	405	N.D.		
14) Methyl tert-Butyl Ether	5.12	73	559	N.D.		
15) cis-1,2-Dichloroethene	5.94	96	3379	73.531	pg	100
16) Chloroform	6.32	83	8501	106.774	pg	100
18) 1,2-Dichloroethane	7.27	62	3358	52.971	pg	99
19) 1,1,1-Trichloroethane	7.59	97	1232	N.D.		
20) Benzene	8.16	78	45014	274.887	pg	100
21) Carbon Tetrachloride	8.34	117	24639	425.080	pg	99
23) 1,2-Dichloropropane	9.16	63	830	20.726	pg	89
24) Bromodichloromethane	9.39	83	585	N.D.		
25) Trichloroethene	9.46	130	3268	69.280	pg	99
26) 1,4-Dioxane	9.55	88	319	N.D.		
27) cis-1,3-Dichloropropene	10.46	75	434	N.D.		
28) trans-1,3-Dichloropropene	11.05	75	193	N.D.		
29) 1,1,2-Trichloroethane	11.18	83	133	N.D.		
31) Toluene	11.48	91	65269	362.432	pg	100
32) 1,2-Dibromoethane	12.13	107	30	N.D.		
33) Tetrachloroethene	12.61	166	2354	42.216	pg	100
35) Chlorobenzene	13.17	112	529	N.D.		
36) Ethylbenzene	13.48	91	10860	55.907	pg	99
37) m,p-Xylene	13.61	91	24262	151.967	pg	97
38) o-Xylene	13.94	106	4859	62.274	pg	99
39) 1,1,2,2-Tetrachloroethane	13.97	83	77	N.D.		
41) 1,3-Dichlorobenzene	15.24	146	1831	N.D.		
42) 1,4-Dichlorobenzene	15.24	146	1831	N.D.		
43) 1,2-Dichlorobenzene	15.46	146	103	N.D.		
44) 1,2,4-Trichlorobenzene	16.63	182	283	N.D.		
45) Naphthalene	16.70	128	5497	28.361	pg	98
46) Hexachlorobutadiene	16.96	225	41	N.D.		

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\28\02281523.D

Acq On : 28 Feb 2015 13:48

Operator: WA

Sample : P1500729-017 (1000mL)

Misc : S29-02041502

ALS Vial : 12 Sample Multiplier: 1

Quant Time: Mar 02 08:58:32 2015

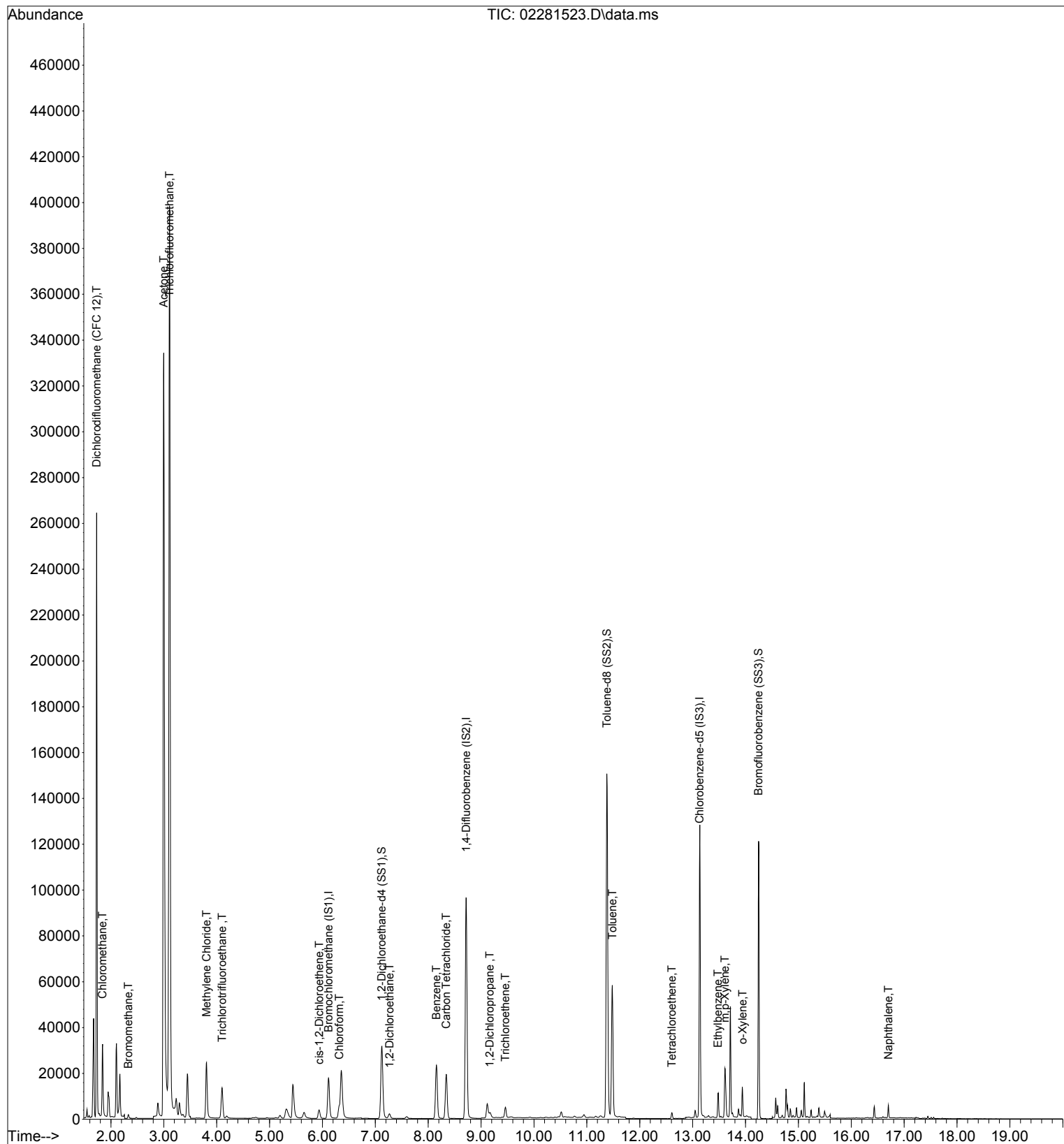
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 02\28\02281523.D

Acq On : 28 Feb 2015 13:48

Operator: WA

Sample : P1500729-017 (1000mL)

Misc : S29-02041502

ALS Vial : 12 Sample Multiplier: 1

Quant Time: Mar 02 08:58:32 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

3/2/15

DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	25968	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	183612	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	30977	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	56753	894.927	pg	0.00
Spiked Amount 1000.000			Recovery	=	89.49%	
30) Toluene-d8 (SS2)	11.38	98	172768	1020.339	pg	0.00
Spiked Amount 1000.000			Recovery	=	102.03%	
40) Bromofluorobenzene (SS3)	14.25	174	72777	1163.719	pg	0.00
Spiked Amount 1000.000			Recovery	=	116.37%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.73	85	183310	1736.970	pg	100
3) Chloromethane	1.84	52	10267	487.153	pg	98
5) Bromomethane	2.33	94	1383	29.143	pg	100
7) Acetone	3.00	58	170143	4565.553	pg	# 82
8) Trichlorofluoromethane	3.11	101	417660	4607.409	pg	100
10) Methylene Chloride	3.81	84	16666	387.458	pg	94
11) Trichlorotrifluoroethane	4.10	151	17121	411.032	pg	100
15) cis-1,2-Dichloroethene	5.94	96	3379	73.531	pg	100
16) Chloroform	6.32	83	8501	106.774	pg	100
18) 1,2-Dichloroethane	7.27	62	3358	52.971	pg	99
20) Benzene	8.16	78	45014	274.887	pg	100
21) Carbon Tetrachloride	8.34	117	24639	425.080	pg	99
23) 1,2-Dichloropropane	9.16	63	830	20.726	pg	89
25) Trichloroethene	9.46	130	3268	69.280	pg	99
31) Toluene	11.48	91	65269	362.432	pg	100
33) Tetrachloroethene	12.61	166	2354	42.216	pg	100
36) Ethylbenzene	13.48	91	10860	55.907	pg	99
37) m,p-Xylene	13.61	91	24262	151.967	pg	97
38) o-Xylene	13.94	106	4859	62.274	pg	99
45) Naphthalene	16.70	128	5497	28.361	pg	98

(#)= qualifier out of range (m)= manual integration (+)= signals summed

Data File: I:\MS19\DATA\2015 02\28\02281523.D

Acq On : 28 Feb 2015 13:48

Operator: WA

Sample : P1500729-017 (1000mL)

Misc : S29-02041502

ALS Vial : 12 Sample Multiplier: 1

Quant Time: Mar 02 08:58:32 2015

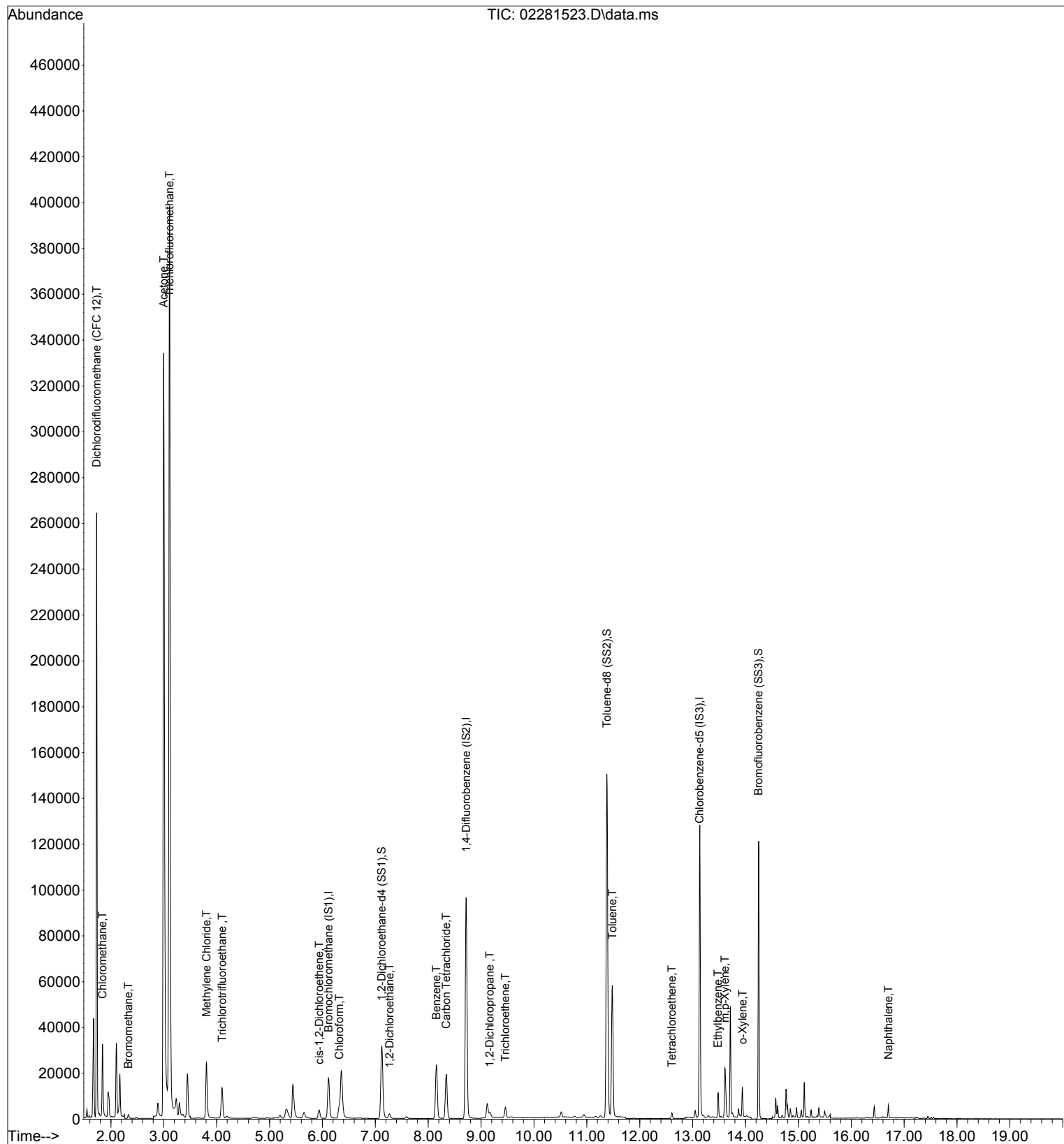
Quant Method : I:\MS19\METHODS\X19021115.M

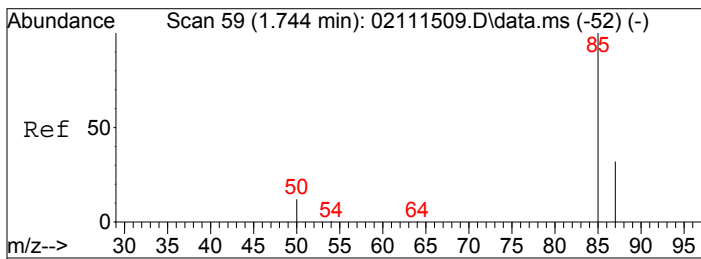
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

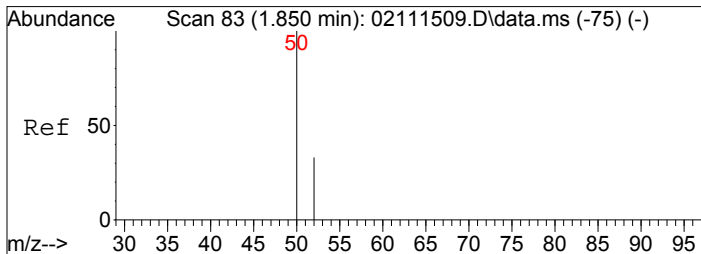
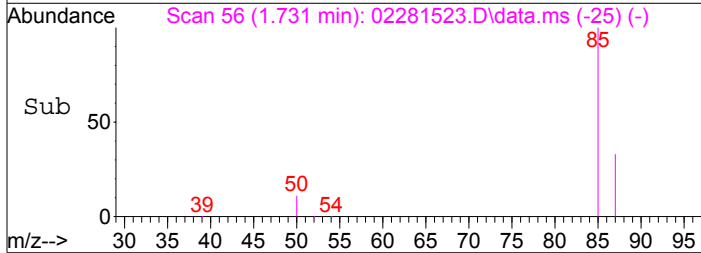
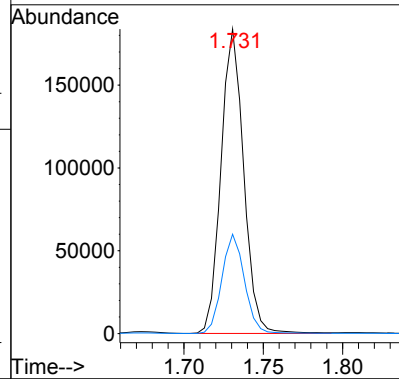
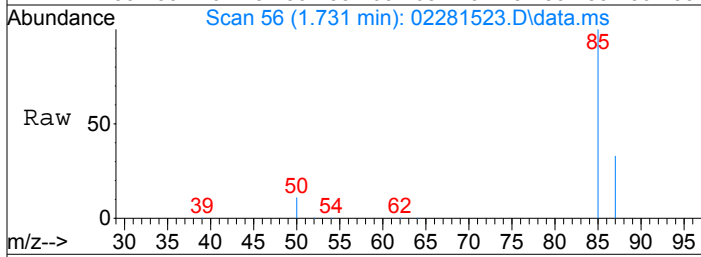
DataAcq Meth:TO15SIM.M





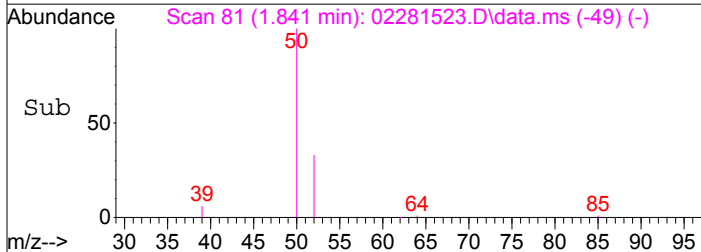
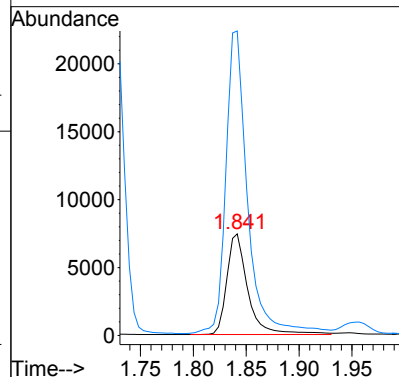
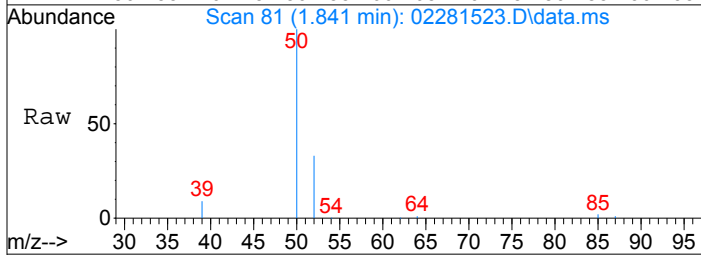
#2
 Dichlorodifluoromethane (CFC 12)
 Concen: 1736.97 pg
 RT: 1.73 min Scan# 56
 Delta R.T. -0.013 min
 Lab File: 02281523.D
 Acq: 28 Feb 2015 13:48

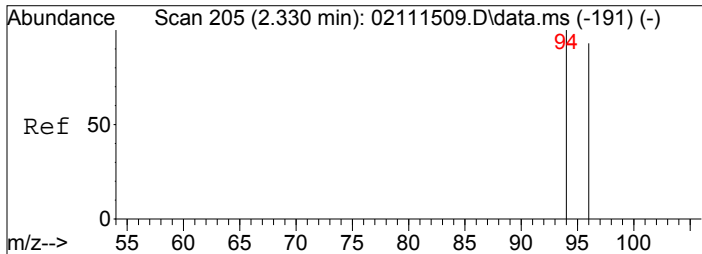
Tgt Ion: 85 Resp: 183310
 Ion Ratio Lower Upper
 85 100
 87 32.5 12.4 52.4



#3
 Chloromethane
 Concen: 487.15 pg
 RT: 1.84 min Scan# 81
 Delta R.T. -0.009 min
 Lab File: 02281523.D
 Acq: 28 Feb 2015 13:48

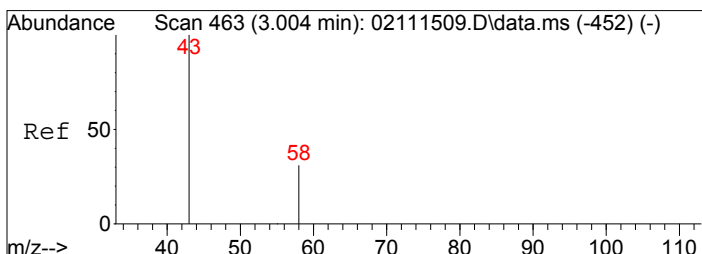
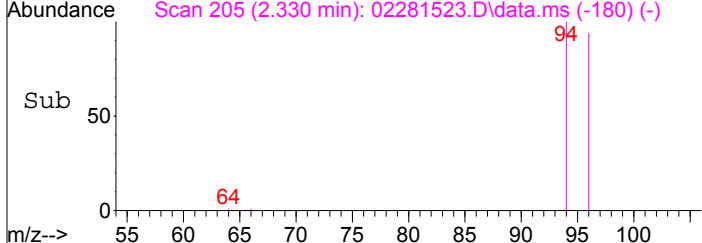
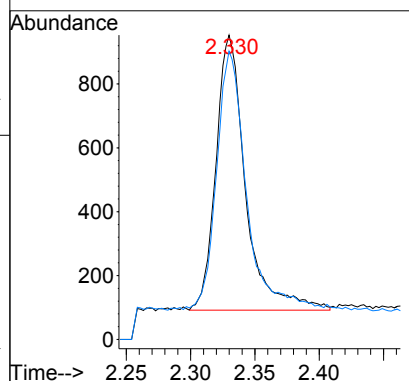
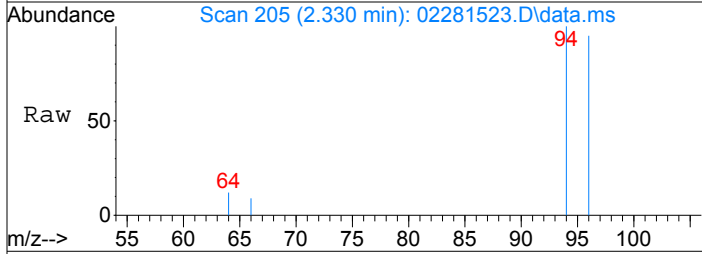
Tgt Ion: 52 Resp: 10267
 Ion Ratio Lower Upper
 52 100
 50 308.5 283.7 323.7





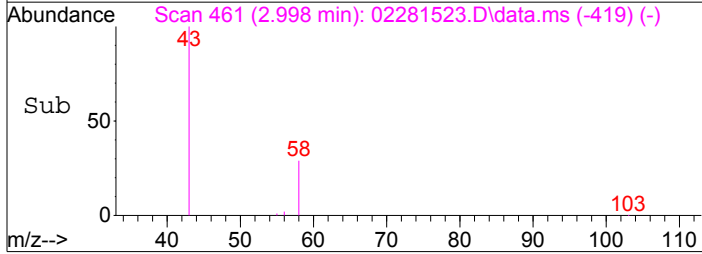
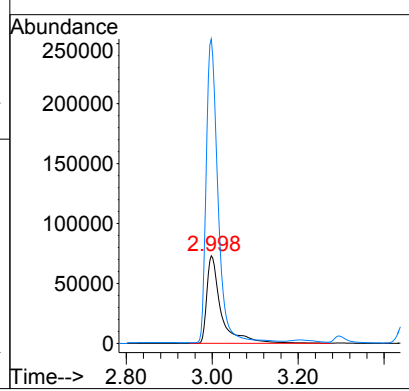
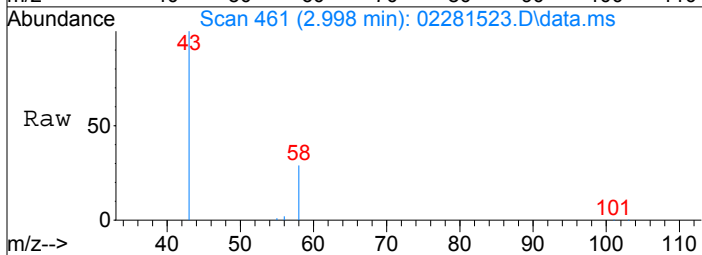
#5
 Bromomethane
 Concen: 29.14 pg
 RT: 2.33 min Scan# 205
 Delta R.T. -0.000 min
 Lab File: 02281523.D
 Acq: 28 Feb 2015 13:48

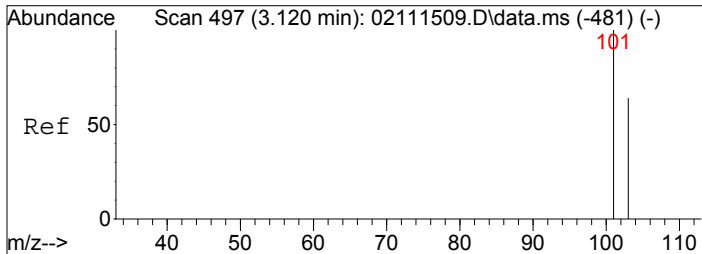
Tgt Ion:	94	Resp:	1383
Ion Ratio	Lower	Upper	
94	100		
96	93.9	75.5	113.3



#7
 Acetone
 Concen: 4565.55 pg
 RT: 3.00 min Scan# 461
 Delta R.T. -0.006 min
 Lab File: 02281523.D
 Acq: 28 Feb 2015 13:48

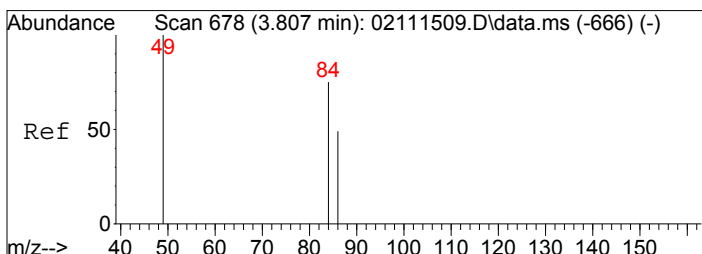
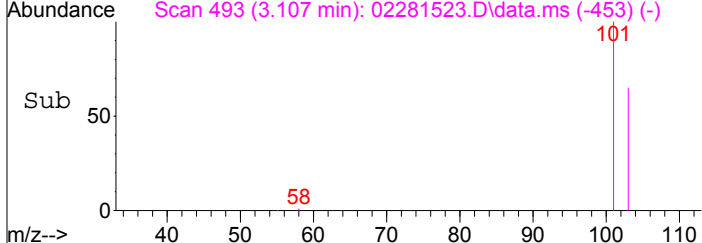
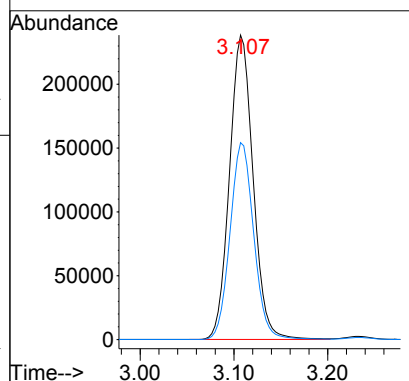
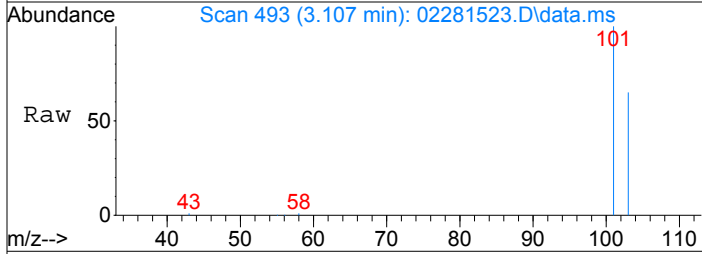
Tgt Ion:	58	Resp:	170143
Ion Ratio	Lower	Upper	
58	100		
43	285.1	301.8	341.8#





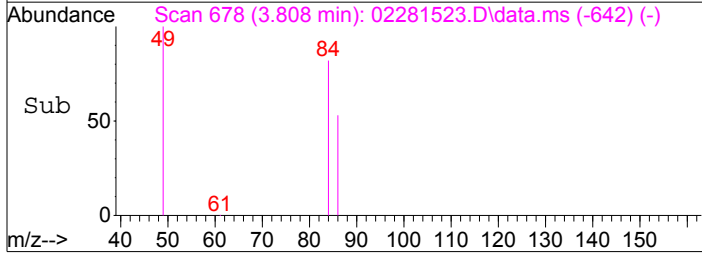
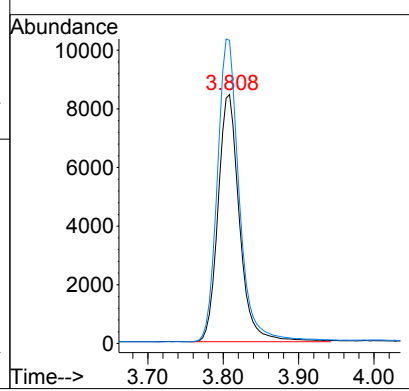
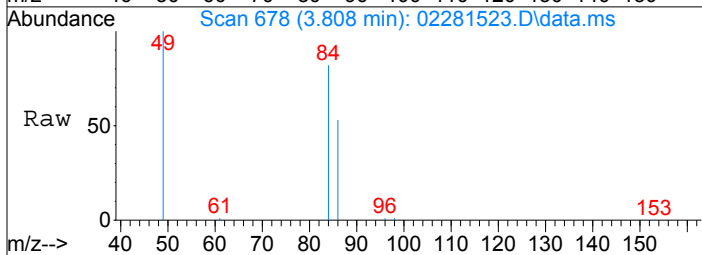
#8
 Trichlorofluoromethane
 Concen: 4607.41 pg
 RT: 3.11 min Scan# 493
 Delta R.T. -0.013 min
 Lab File: 02281523.D
 Acq: 28 Feb 2015 13:48

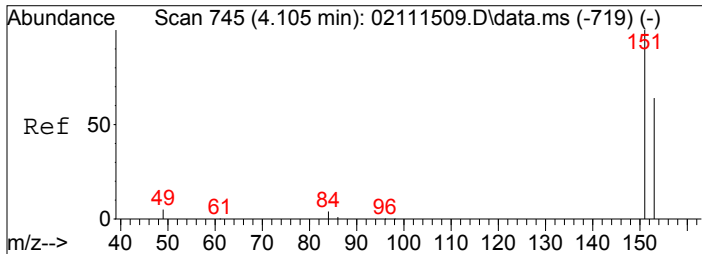
Tgt Ion: 101	Resp:	417660
Ion Ratio	Lower	Upper
101	100	
103	64.9	51.8 77.6



#10
 Methylene Chloride
 Concen: 387.46 pg
 RT: 3.81 min Scan# 678
 Delta R.T. 0.001 min
 Lab File: 02281523.D
 Acq: 28 Feb 2015 13:48

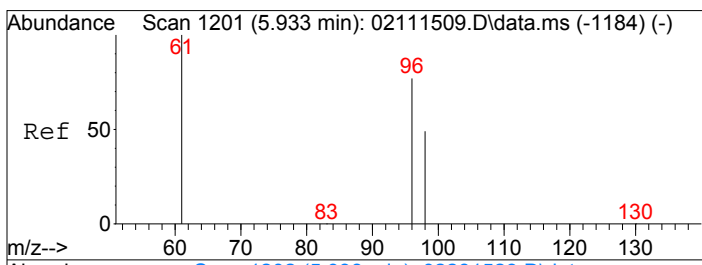
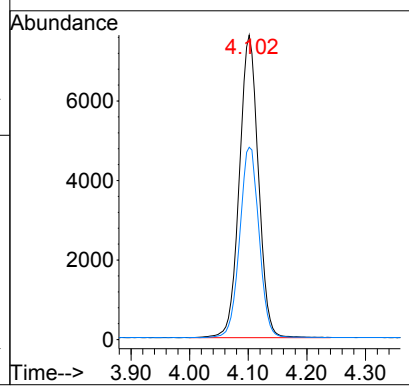
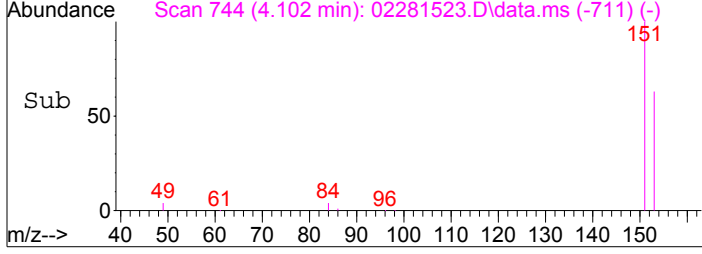
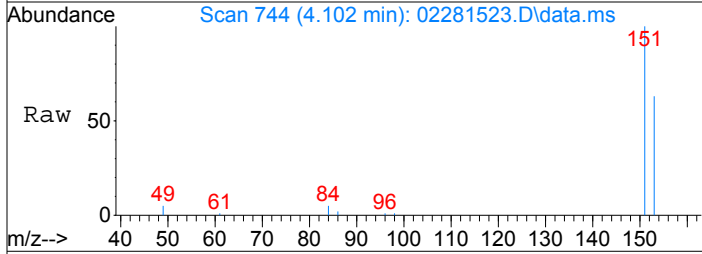
Tgt Ion: 84	Resp:	16666
Ion Ratio	Lower	Upper
84	100	
49	125.3	112.3 152.3





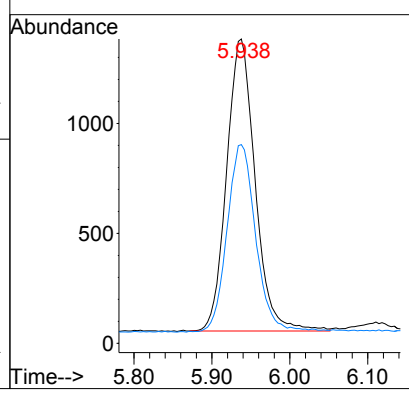
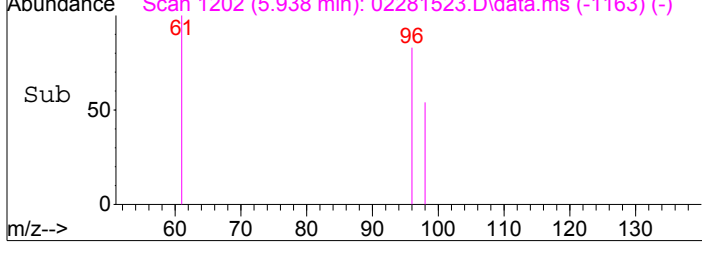
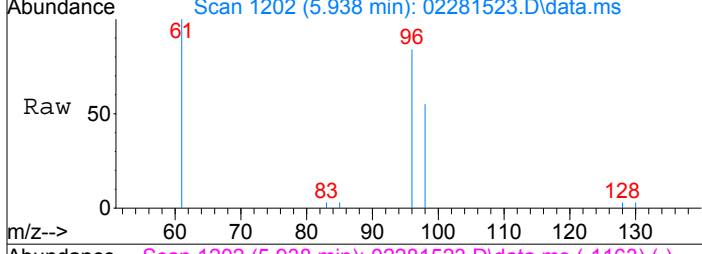
#11
 Trichlorotrifluoroethane
 Concen: 411.03 pg
 RT: 4.10 min Scan# 744
 Delta R.T. -0.003 min
 Lab File: 02281523.D
 Acq: 28 Feb 2015 13:48

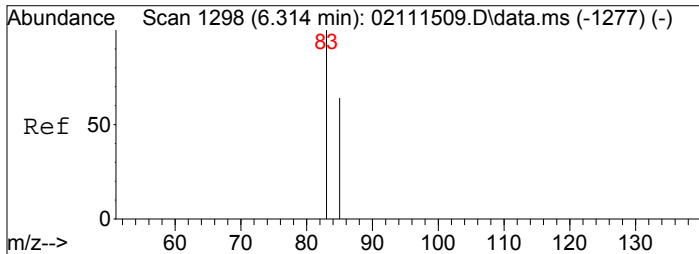
Tgt Ion: 151	Resp: 17121
Ion Ratio	Lower Upper
151	100
153	63.9 43.6 83.6



#15
 cis-1,2-Dichloroethene
 Concen: 73.53 pg
 RT: 5.94 min Scan# 1202
 Delta R.T. 0.005 min
 Lab File: 02281523.D
 Acq: 28 Feb 2015 13:48

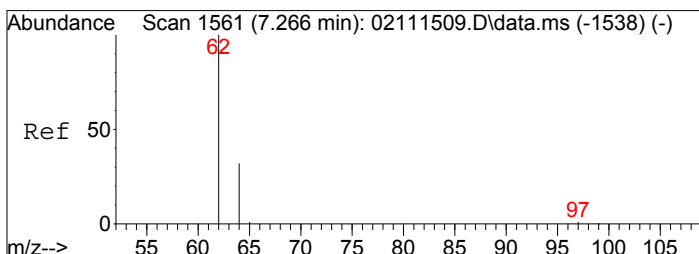
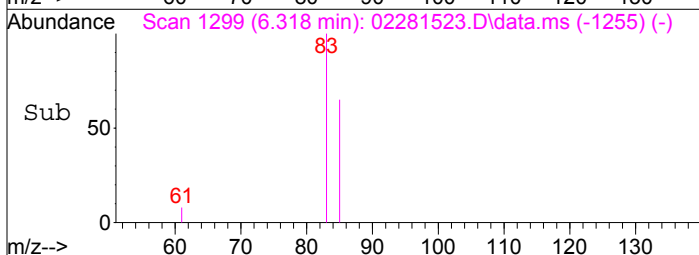
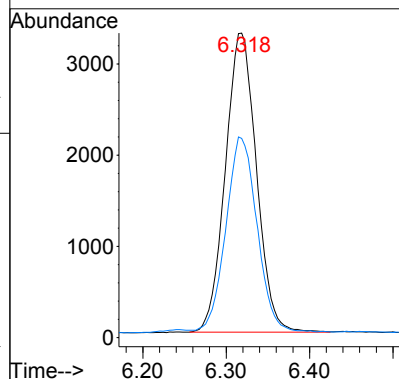
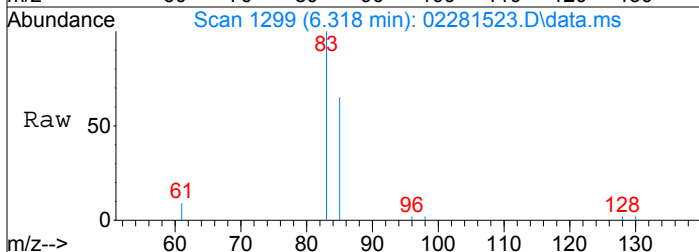
Tgt Ion: 96	Resp: 3379
Ion Ratio	Lower Upper
96	100
98	64.5 44.3 84.3





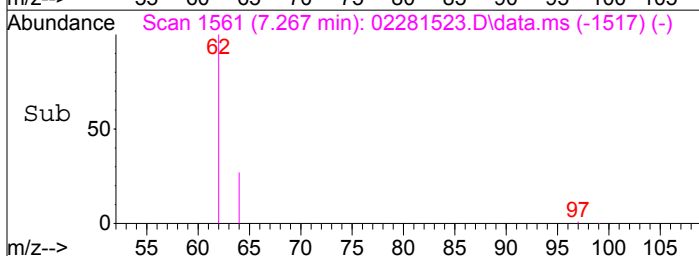
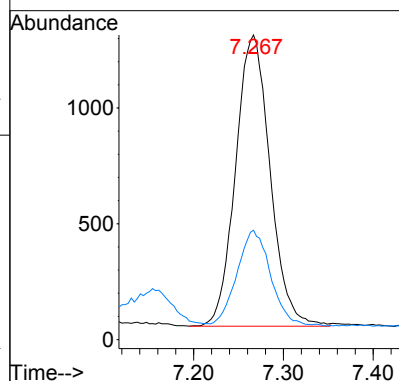
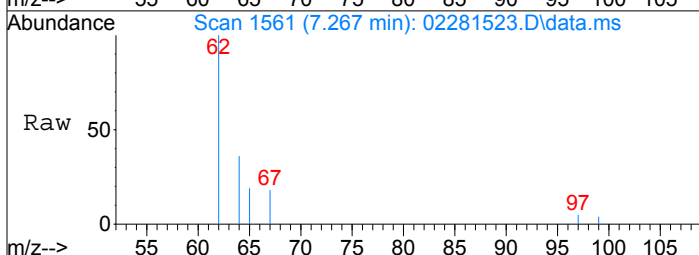
#16
Chloroform
Concen: 106.77 pg
RT: 6.32 min Scan# 1299
Delta R.T. 0.004 min
Lab File: 02281523.D
Acq: 28 Feb 2015 13:48

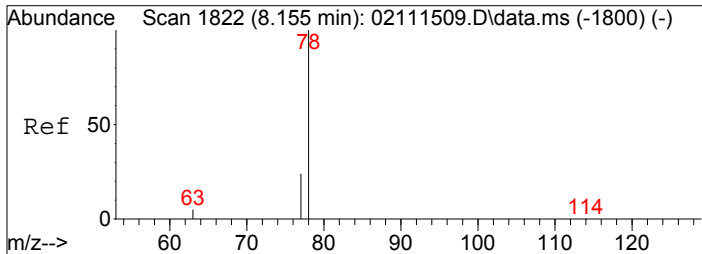
Tgt Ion: 83 Resp: 8501
Ion Ratio Lower Upper
83 100
85 65.0 45.4 85.4



#18
1,2-Dichloroethane
Concen: 52.97 pg
RT: 7.27 min Scan# 1561
Delta R.T. 0.001 min
Lab File: 02281523.D
Acq: 28 Feb 2015 13:48

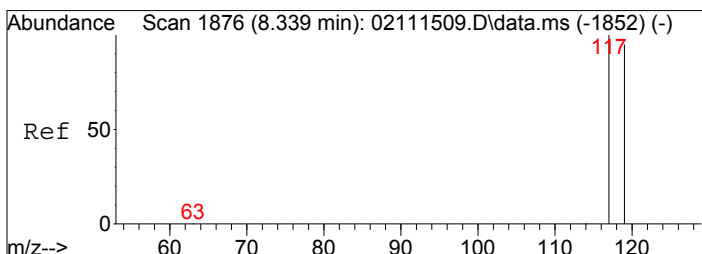
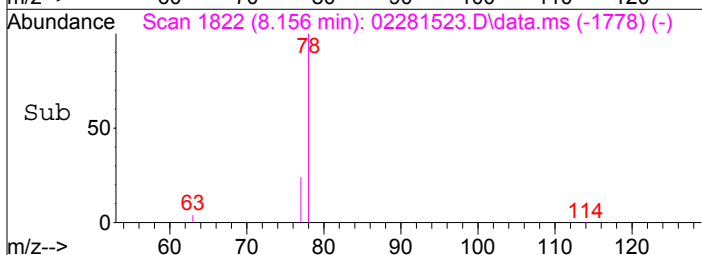
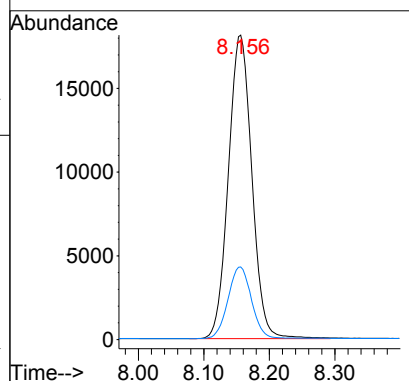
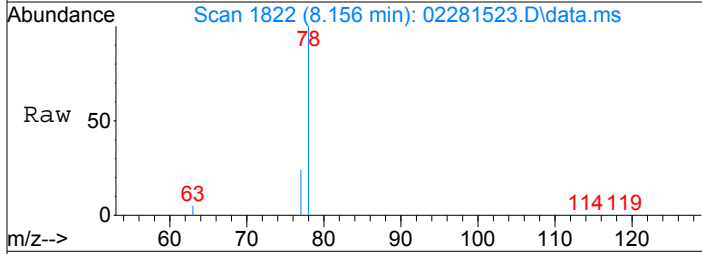
Tgt Ion: 62 Resp: 3358
Ion Ratio Lower Upper
62 100
64 31.0 11.6 51.6





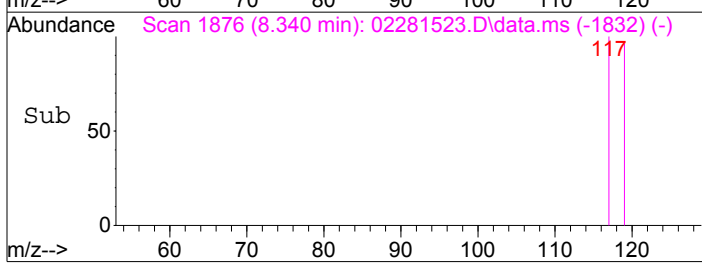
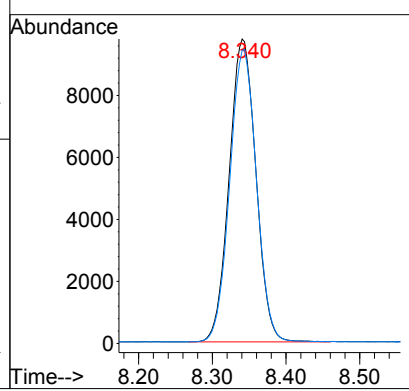
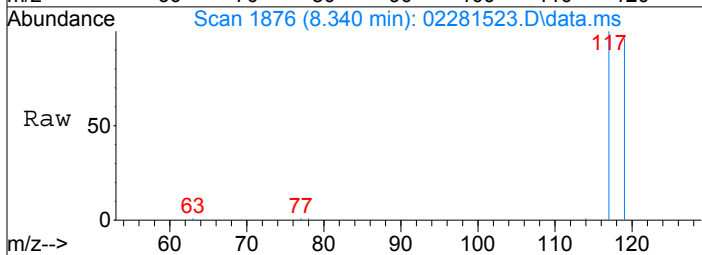
#20
Benzene
Concen: 274.89 pg
RT: 8.16 min Scan# 1822
Delta R.T. 0.001 min
Lab File: 02281523.D
Acq: 28 Feb 2015 13:48

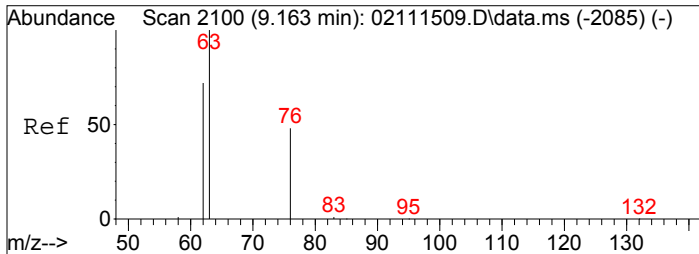
Tgt Ion: 78	Resp: 45014
Ion Ratio	Lower Upper
78	100
77	23.7 3.7 43.7



#21
Carbon Tetrachloride
Concen: 425.08 pg
RT: 8.34 min Scan# 1876
Delta R.T. 0.001 min
Lab File: 02281523.D
Acq: 28 Feb 2015 13:48

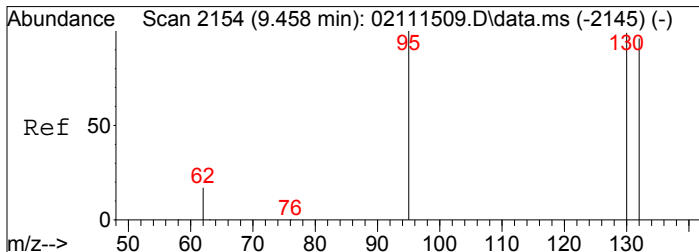
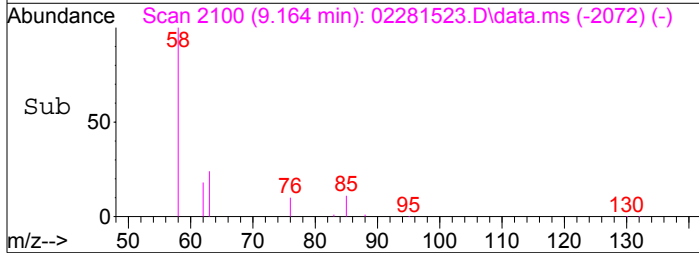
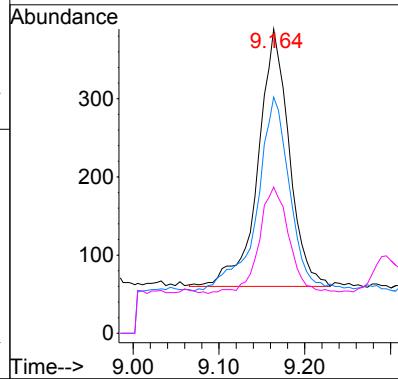
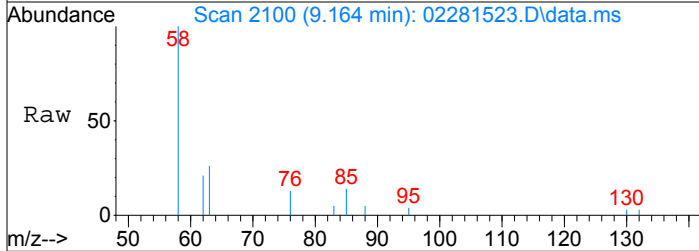
Tgt Ion: 117	Resp: 24639
Ion Ratio	Lower Upper
117	100
119	96.3 75.5 115.5





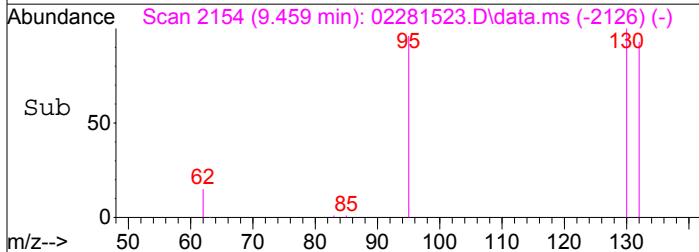
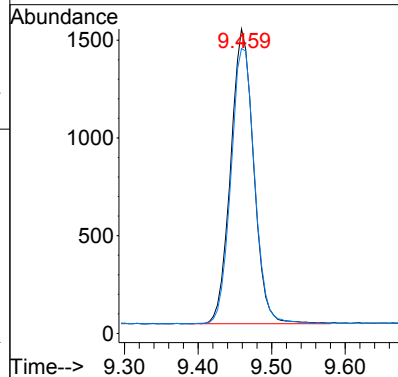
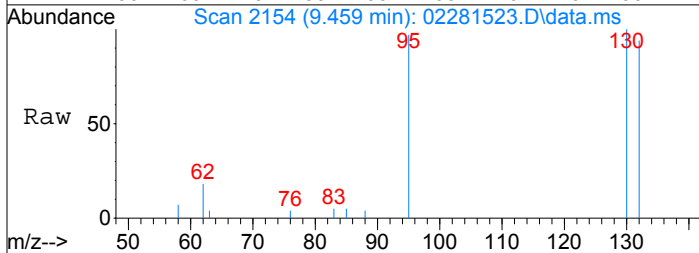
#23
1,2-Dichloropropane
Concen: 20.73 pg
RT: 9.16 min Scan# 2100
Delta R.T. 0.001 min
Lab File: 02281523.D
Acq: 28 Feb 2015 13:48

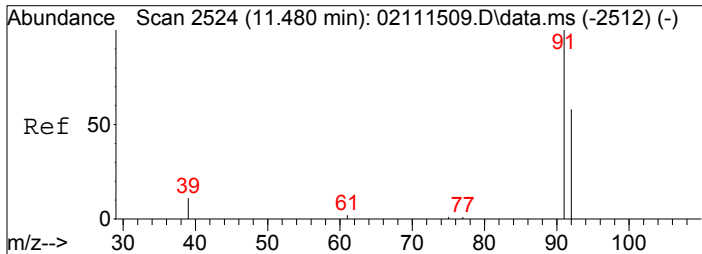
Tgt Ion: 63 Resp: 830
Ion Ratio Lower Upper
63 100
62 80.6 52.0 92.0
76 40.2 28.1 68.1



#25
Trichloroethene
Concen: 69.28 pg
RT: 9.46 min Scan# 2154
Delta R.T. 0.001 min
Lab File: 02281523.D
Acq: 28 Feb 2015 13:48

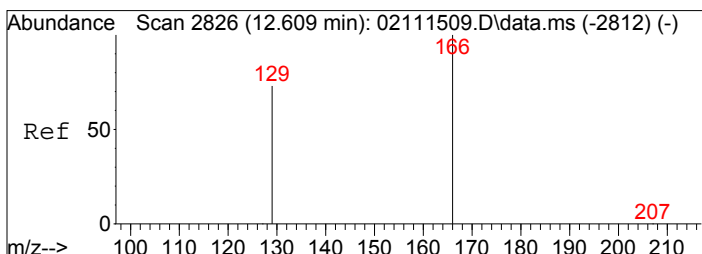
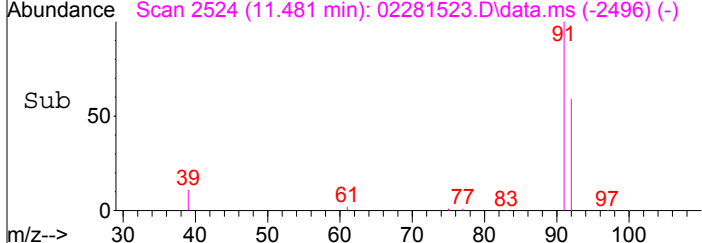
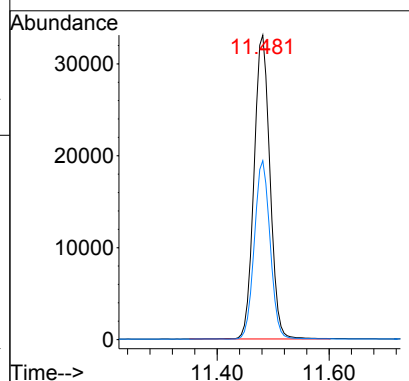
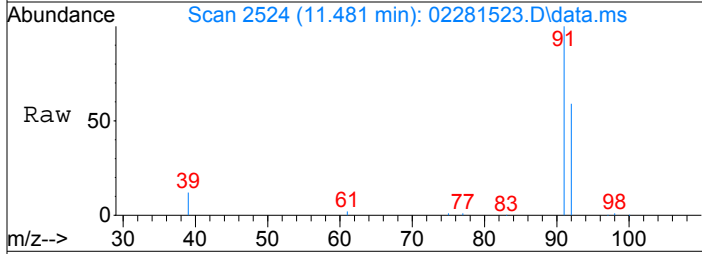
Tgt Ion: 130 Resp: 3268
Ion Ratio Lower Upper
130 100
132 96.2 77.1 117.1





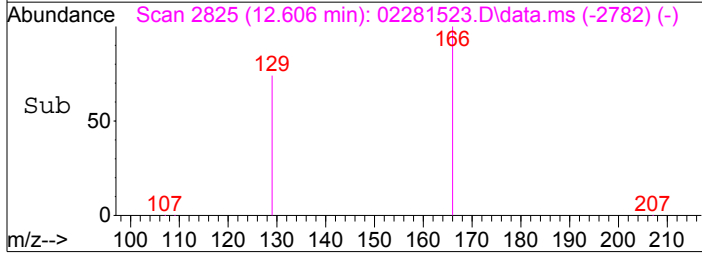
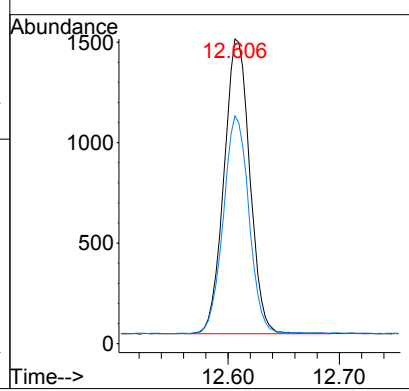
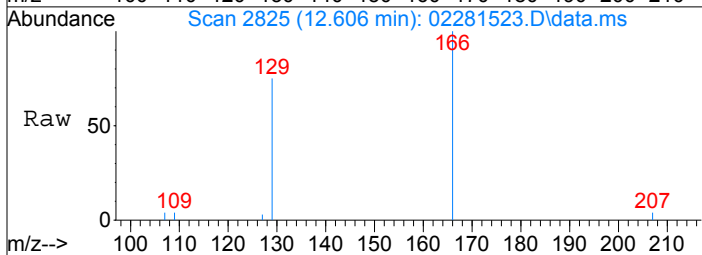
#31
Toluene
Concen: 362.43 pg
RT: 11.48 min Scan# 2524
Delta R.T. 0.001 min
Lab File: 02281523.D
Acq: 28 Feb 2015 13:48

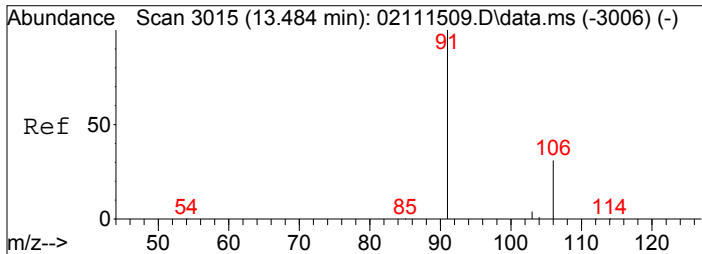
Tgt Ion:	91	Resp:	65269
Ion Ratio	Lower	Upper	
91	100		
92	58.0	37.7	77.7



#33
Tetrachloroethene
Concen: 42.22 pg
RT: 12.61 min Scan# 2825
Delta R.T. -0.003 min
Lab File: 02281523.D
Acq: 28 Feb 2015 13:48

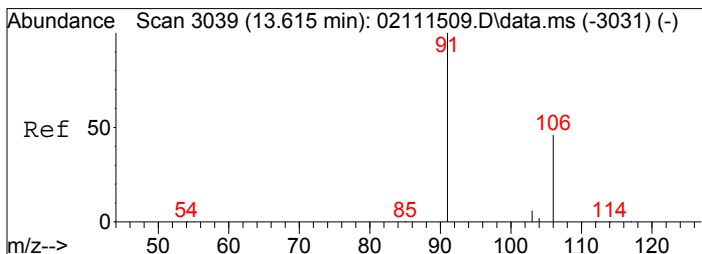
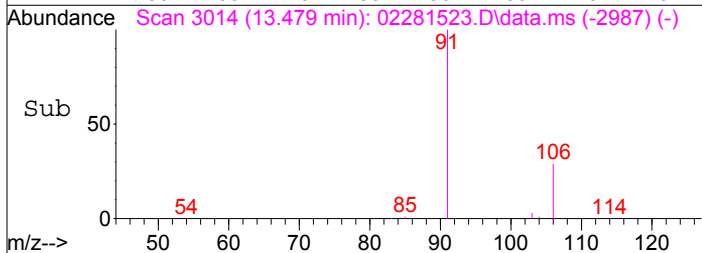
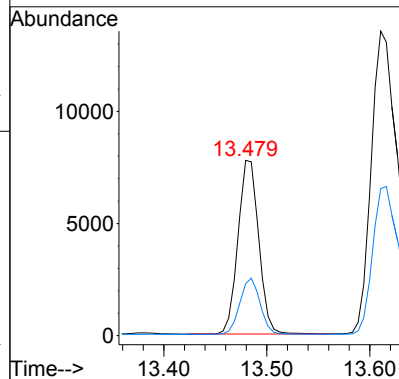
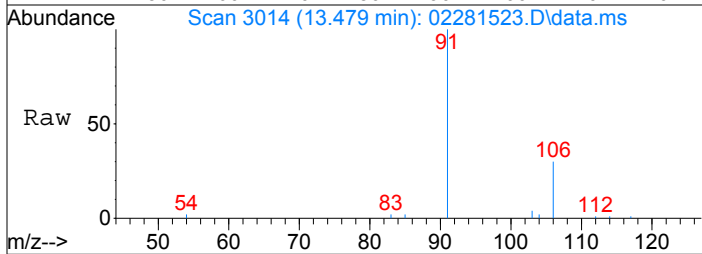
Tgt Ion:	166	Resp:	2354
Ion Ratio	Lower	Upper	
166	100		
129	73.5	53.3	93.3





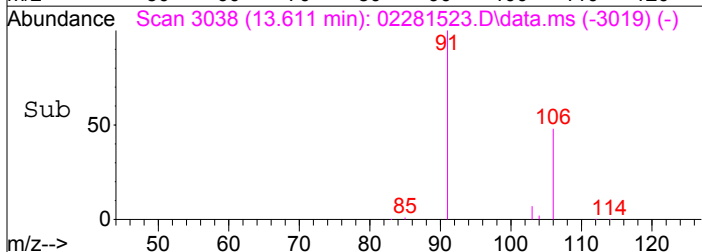
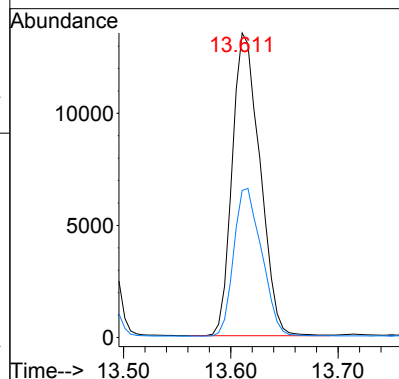
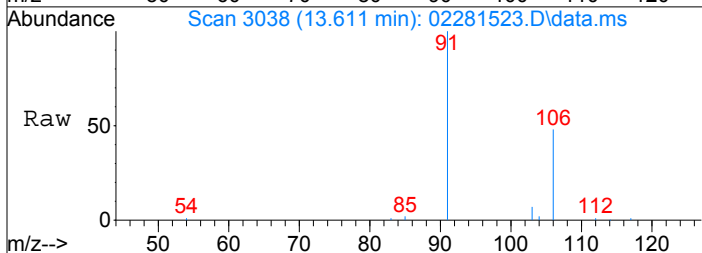
#36
Ethylbenzene
Concen: 55.91 pg
RT: 13.48 min Scan# 3014
Delta R.T. -0.004 min
Lab File: 02281523.D
Acq: 28 Feb 2015 13:48

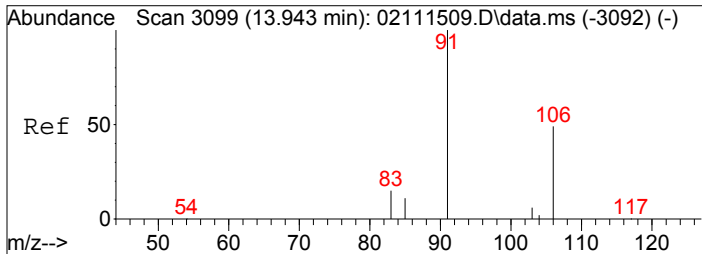
Tgt Ion: 91 Resp: 10860
Ion Ratio Lower Upper
91 100
106 31.6 10.9 50.9



#37
m,p-Xylene
Concen: 151.97 pg
RT: 13.61 min Scan# 3038
Delta R.T. -0.004 min
Lab File: 02281523.D
Acq: 28 Feb 2015 13:48

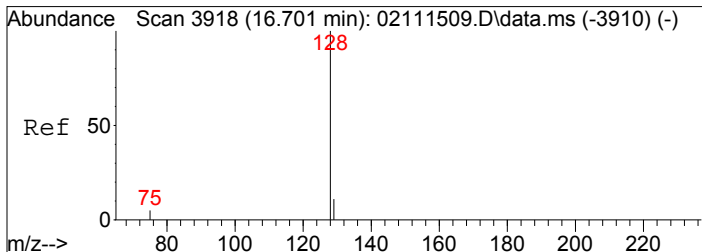
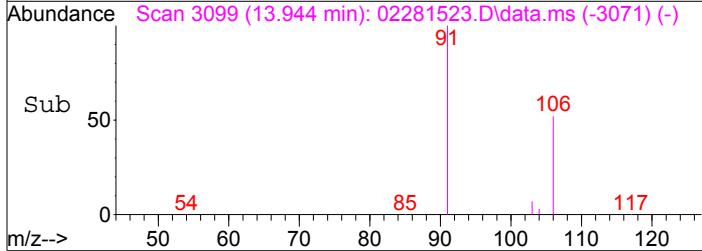
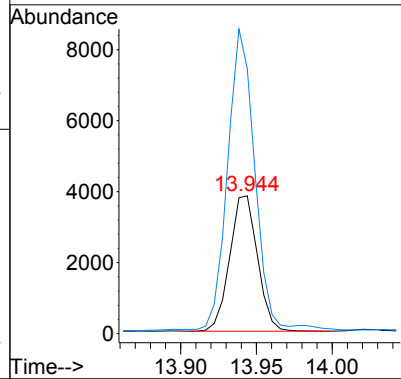
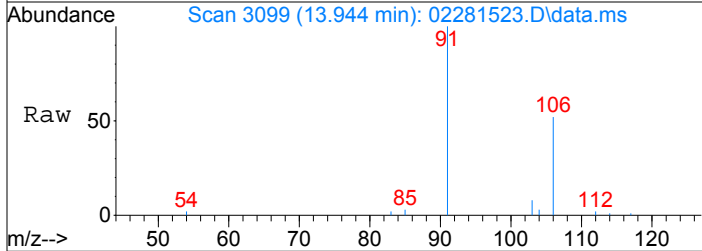
Tgt Ion: 91 Resp: 24262
Ion Ratio Lower Upper
91 100
106 49.4 27.5 67.5





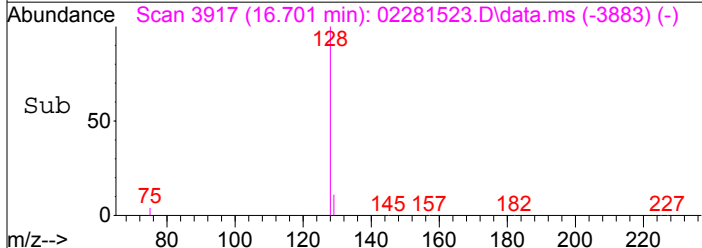
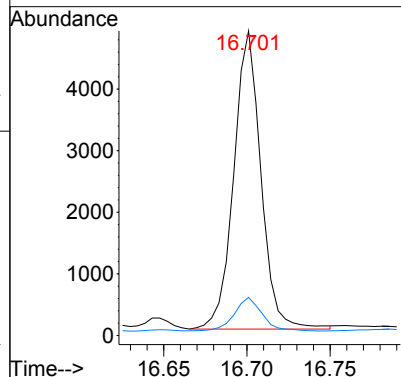
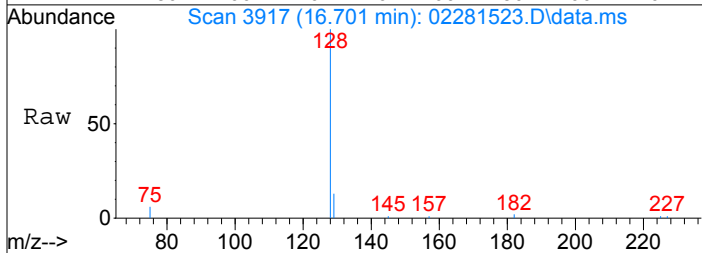
#38
o-Xylene
Concen: 62.27 pg
RT: 13.94 min Scan# 3099
Delta R.T. 0.001 min
Lab File: 02281523.D
Acq: 28 Feb 2015 13:48

Tgt Ion	106	Resp	4859
Ion Ratio	Lower	Upper	
106	100		
91	220.6	198.3	238.3



#45
Naphthalene
Concen: 28.36 pg
RT: 16.70 min Scan# 3917
Delta R.T. -0.000 min
Lab File: 02281523.D
Acq: 28 Feb 2015 13:48

Tgt Ion	128	Resp	5497
Ion Ratio <td>Lower</td> <td>Upper</td> <td></td>	Lower	Upper	
128	100		
129	11.7	0.0	30.9



Data File: I:\MS19\DATA\2015 02\28\02281524.D

Acq On : 28 Feb 2015 14:15

Operator: WA

Sample : P1500729-018 (1000mL)

Misc : S29-02041502

ALS Vial : 13 Sample Multiplier: 1

Quant Time: Mar 02 08:58:35 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

WA 3/2/15

DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	25233	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.71	114	180356	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	30542	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	55957	908.077	pg	0.00
Spiked Amount 1000.000			Recovery	=	90.81%	
30) Toluene-d8 (SS2)	11.38	98	167897	1009.473	pg	0.00
Spiked Amount 1000.000			Recovery	=	100.95%	
40) Bromofluorobenzene (SS3)	14.25	174	70388	1141.549	pg	0.00
Spiked Amount 1000.000			Recovery	=	114.16%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.73	85	146391	1427.546	pg	100
3) Chloromethane	1.84	52	9107	444.700	pg	98
4) Vinyl Chloride	2.03	62	139	N.D.		
5) Bromomethane	2.33	94	2410	52.264	pg	100
6) Chloroethane	2.47	64	389	N.D.		
7) Acetone	3.00	58	152988	4224.801	pg	97
8) Trichlorofluoromethane	3.11	101	86415	981.053	pg	100
9) 1,1-Dichloroethene	3.67	96	25	N.D.		
10) Methylene Chloride	3.81	84	8903	213.009	pg	93
11) Trichlorotrifluoroethane	4.10	151	13373	330.404	pg	99
12) trans-1,2-Dichloroethene	4.74	96	84	N.D.		
13) 1,1-Dichloroethane	4.95	63	209	N.D.		
14) Methyl tert-Butyl Ether	5.12	73	324	N.D.		
15) cis-1,2-Dichloroethene	5.93	96	310	N.D.		
16) Chloroform	6.31	83	4570	59.072	pg	100
18) 1,2-Dichloroethane	7.26	62	2805	45.537	pg	99
19) 1,1,1-Trichloroethane	7.59	97	902	N.D.		
20) Benzene	8.16	78	38148	239.744	pg	100
21) Carbon Tetrachloride	8.34	117	18580	329.886	pg	99
23) 1,2-Dichloropropane	9.16	63	554	N.D.		
24) Bromodichloromethane	9.41	83	282	N.D.		
25) Trichloroethene	9.46	130	494	N.D.		
26) 1,4-Dioxane	9.56	88	131	N.D.		
27) cis-1,3-Dichloropropene	10.46	75	286	N.D.		
28) trans-1,3-Dichloropropene	11.05	75	94	N.D.		
29) 1,1,2-Trichloroethane	11.20	83	131	N.D.		
31) Toluene	11.48	91	87737	495.990	pg	100
32) 1,2-Dibromoethane	12.12	107	6	N.D.		
33) Tetrachloroethene	12.61	166	1094	N.D.		
35) Chlorobenzene	13.17	112	776	N.D.		
36) Ethylbenzene	13.48	91	14031	73.260	pg	99
37) m,p-Xylene	13.61	91	26598	168.972	pg	97
38) o-Xylene	13.94	106	5902	76.719	pg	98
39) 1,1,2,2-Tetrachloroethane	13.97	83	152	N.D.		
41) 1,3-Dichlorobenzene	15.24	146	1155	N.D.		
42) 1,4-Dichlorobenzene	15.24	146	1155	N.D.		
43) 1,2-Dichlorobenzene	15.46	146	96	N.D.		
44) 1,2,4-Trichlorobenzene	16.63	182	70	N.D.		
45) Naphthalene	16.70	128	31038	162.414	pg	99
46) Hexachlorobutadiene	16.96	225	36	N.D.		

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\28\02281524.D

Acq On : 28 Feb 2015 14:15

Operator: WA

Sample : P1500729-018 (1000mL)

Misc : S29-02041502

ALS Vial : 13 Sample Multiplier: 1

Quant Time: Mar 02 08:58:35 2015

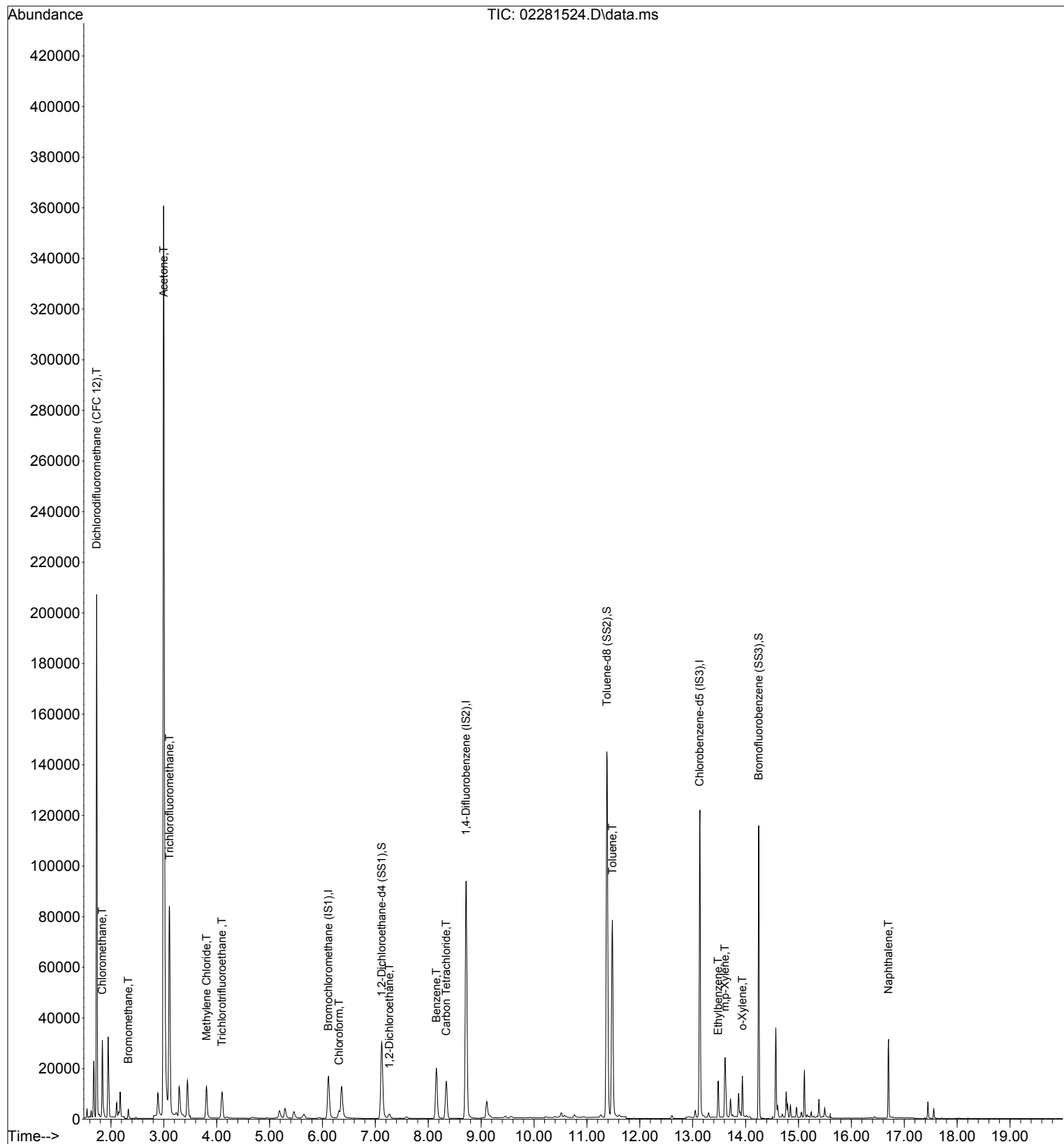
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 02\28\02281524.D

Acq On : 28 Feb 2015 14:15

Operator: WA

Sample : P1500729-018 (1000mL)

Misc : S29-02041502

ALS Vial : 13 Sample Multiplier: 1

Quant Time: Mar 02 08:58:35 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

WA 3/2/15

DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	25233	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.71	114	180356	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	30542	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	55957	908.077	pg	0.00
Spiked Amount 1000.000			Recovery	=	90.81%	
30) Toluene-d8 (SS2)	11.38	98	167897	1009.473	pg	0.00
Spiked Amount 1000.000			Recovery	=	100.95%	
40) Bromofluorobenzene (SS3)	14.25	174	70388	1141.549	pg	0.00
Spiked Amount 1000.000			Recovery	=	114.16%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.73	85	146391	1427.546	pg	100
3) Chloromethane	1.84	52	9107	444.700	pg	98
5) Bromomethane	2.33	94	2410	52.264	pg	100
7) Acetone	3.00	58	152988	4224.801	pg	97
8) Trichlorofluoromethane	3.11	101	86415	981.053	pg	100
10) Methylene Chloride	3.81	84	8903	213.009	pg	93
11) Trichlorotrifluoroethane	4.10	151	13373	330.404	pg	99
16) Chloroform	6.31	83	4570	59.072	pg	100
18) 1,2-Dichloroethane	7.26	62	2805	45.537	pg	99
20) Benzene	8.16	78	38148	239.744	pg	100
21) Carbon Tetrachloride	8.34	117	18580	329.886	pg	99
31) Toluene	11.48	91	87737	495.990	pg	100
36) Ethylbenzene	13.48	91	14031	73.260	pg	99
37) m,p-Xylene	13.61	91	26598	168.972	pg	97
38) o-Xylene	13.94	106	5902	76.719	pg	98
45) Naphthalene	16.70	128	31038	162.414	pg	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File: I:\MS19\DATA\2015 02\28\02281524.D

Acq On : 28 Feb 2015 14:15

Operator: WA

Sample : P1500729-018 (1000mL)

Misc : S29-02041502

ALS Vial : 13 Sample Multiplier: 1

Quant Time: Mar 02 08:58:35 2015

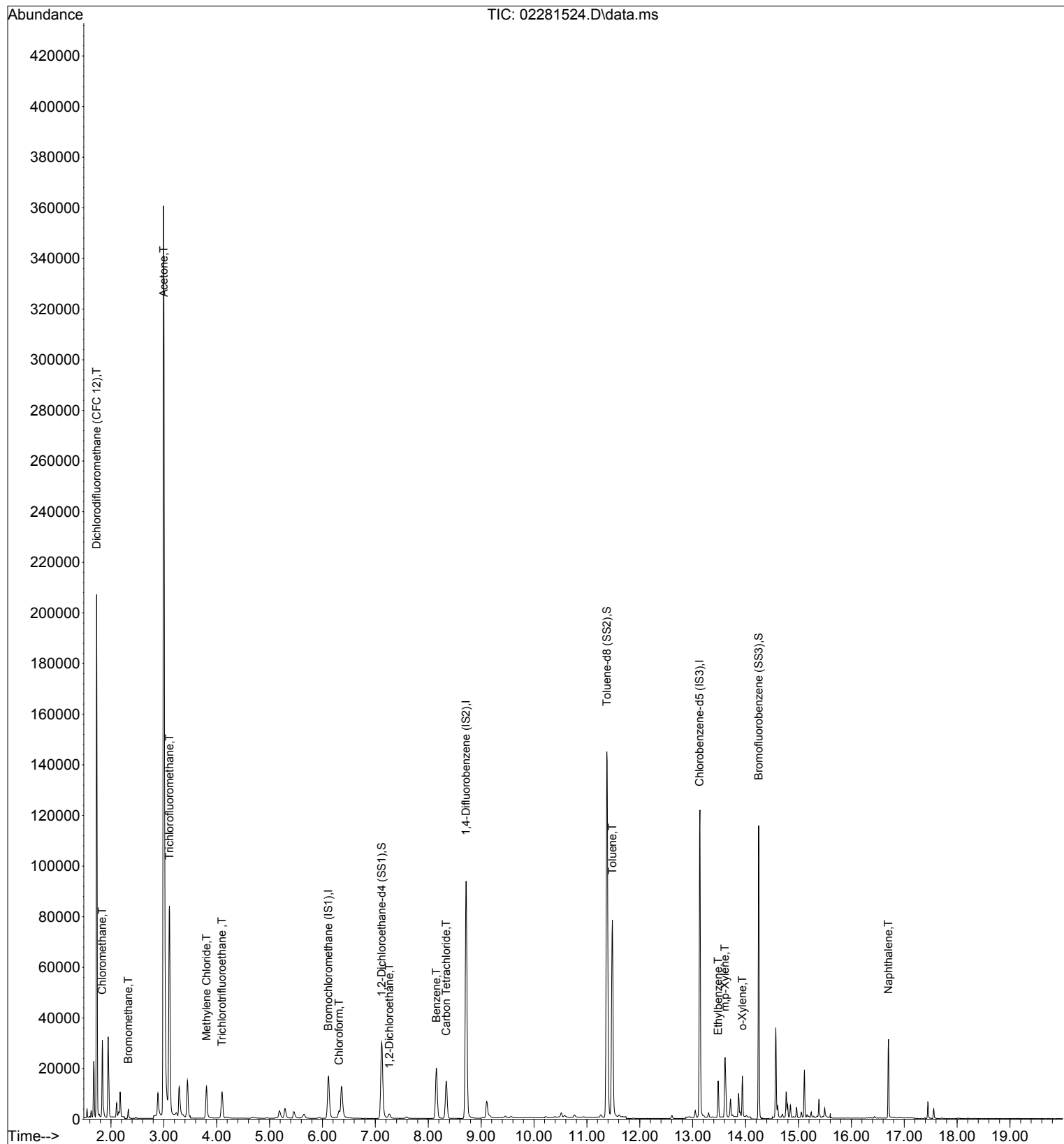
Quant Method : I:\MS19\METHODS\X19021115.M

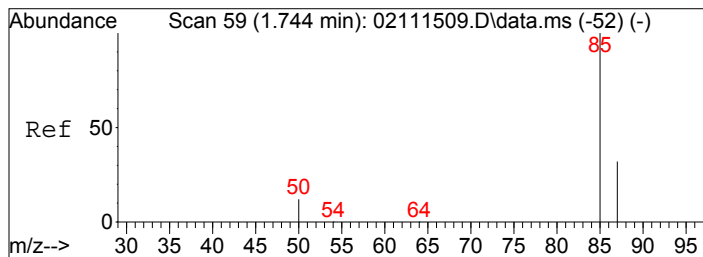
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

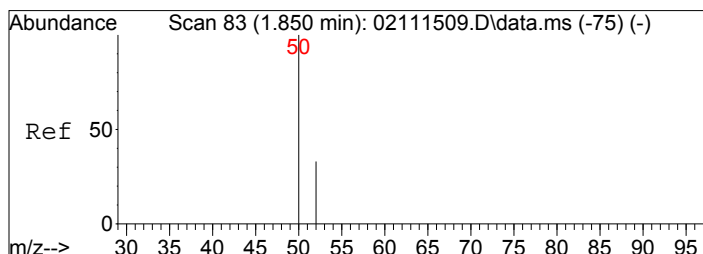
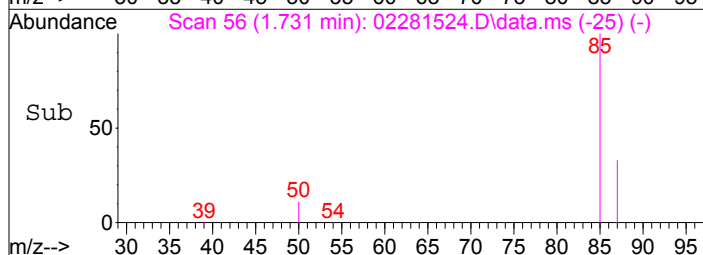
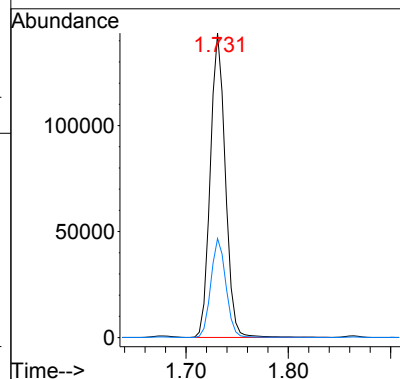
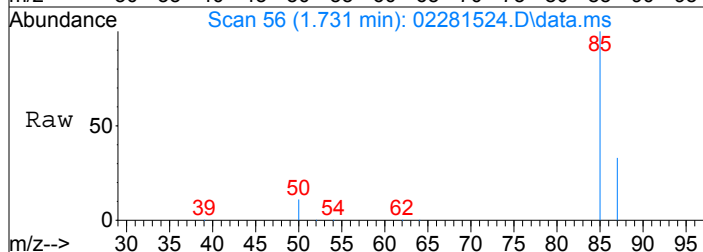
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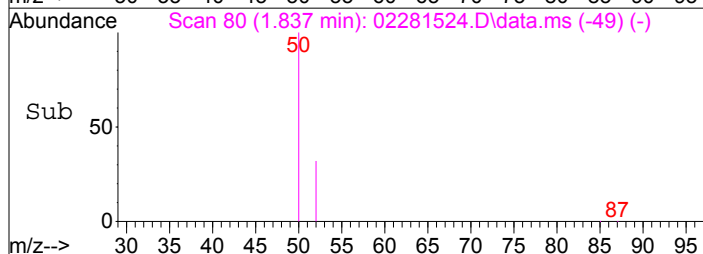
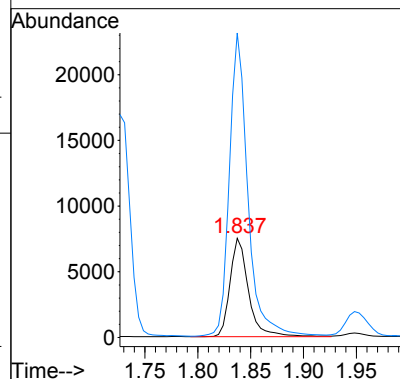
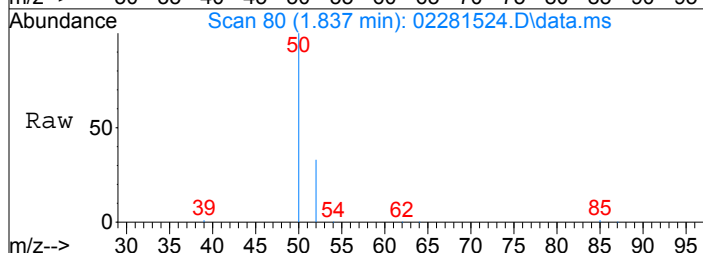
#2
 Dichlorodifluoromethane (CFC 12)
 Concen: 1427.55 pg
 RT: 1.73 min Scan# 56
 Delta R.T. -0.013 min
 Lab File: 02281524.D
 Acq: 28 Feb 2015 14:15

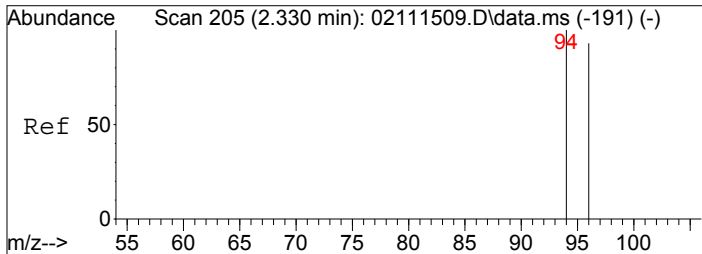
Tgt Ion: 85 Resp: 146391
 Ion Ratio Lower Upper
 85 100
 87 32.5 12.4 52.4



#3
 Chloromethane
 Concen: 444.70 pg
 RT: 1.84 min Scan# 80
 Delta R.T. -0.013 min
 Lab File: 02281524.D
 Acq: 28 Feb 2015 14:15

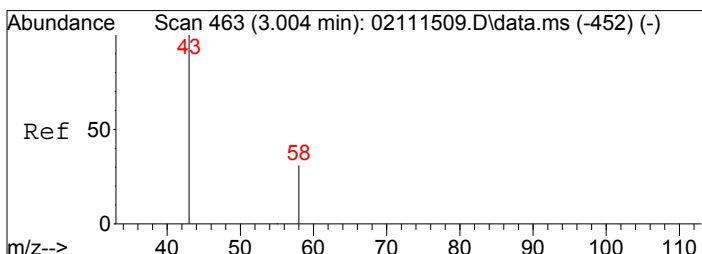
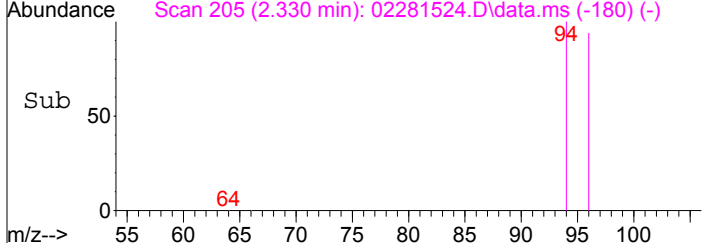
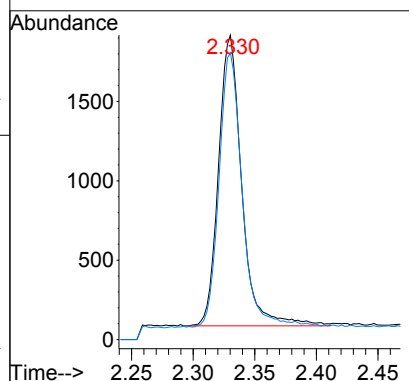
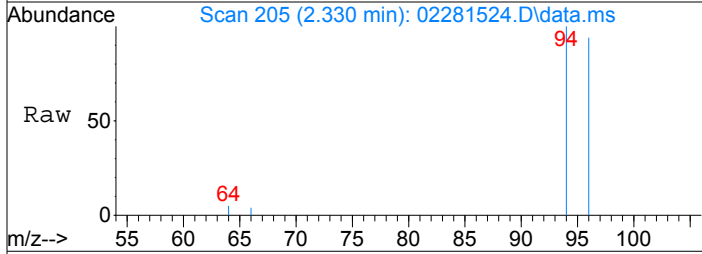
Tgt Ion: 52 Resp: 9107
 Ion Ratio Lower Upper
 52 100
 50 307.4 283.7 323.7





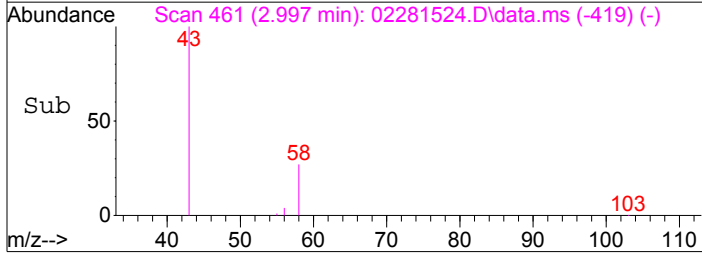
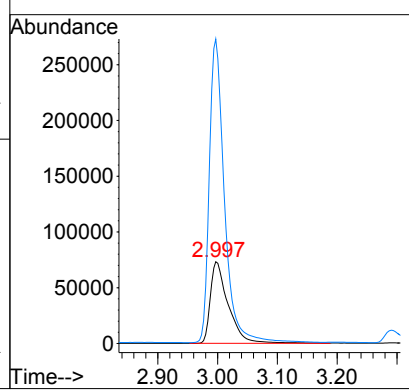
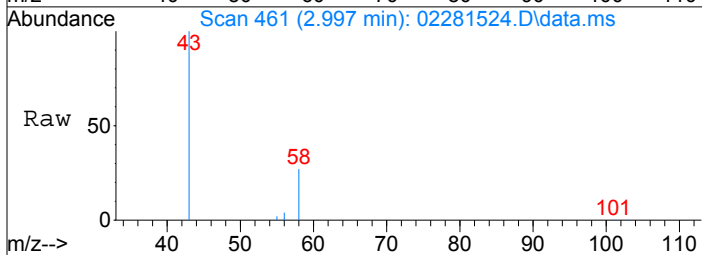
#5
 Bromomethane
 Concen: 52.26 pg
 RT: 2.33 min Scan# 205
 Delta R.T. 0.000 min
 Lab File: 02281524.D
 Acq: 28 Feb 2015 14:15

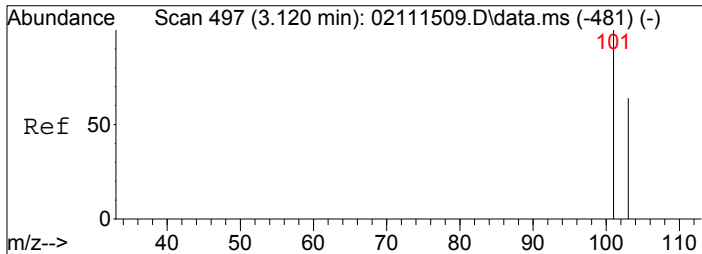
Tgt Ion:	94	Resp:	2410
Ion Ratio	Lower	Upper	
94	100		
96	94.0	75.5	113.3



#7
 Acetone
 Concen: 4224.80 pg
 RT: 3.00 min Scan# 461
 Delta R.T. -0.007 min
 Lab File: 02281524.D
 Acq: 28 Feb 2015 14:15

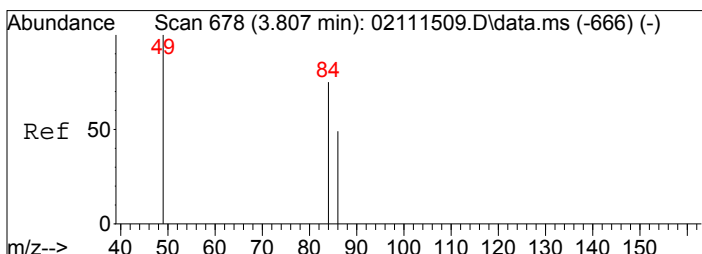
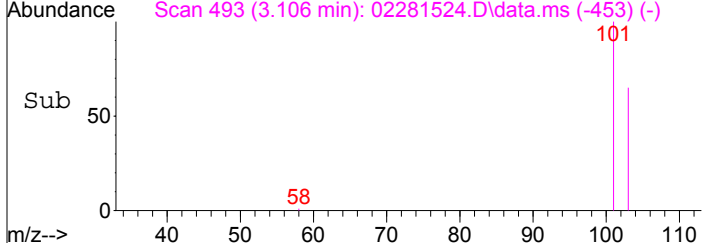
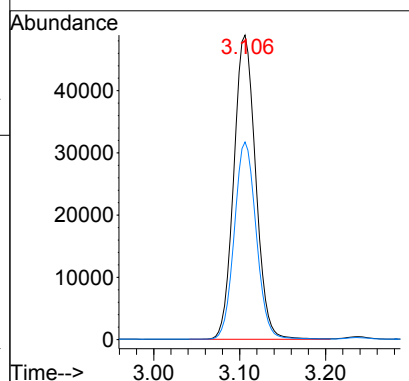
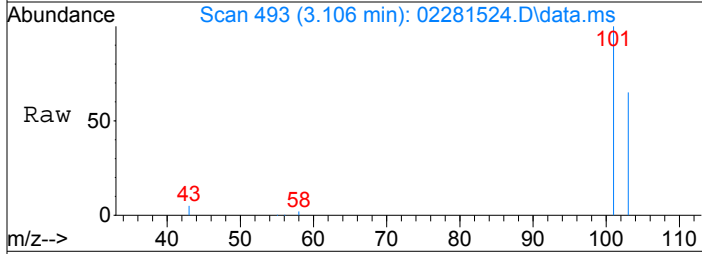
Tgt Ion:	58	Resp:	152988
Ion Ratio	Lower	Upper	
58	100		
43	315.0	301.8	341.8





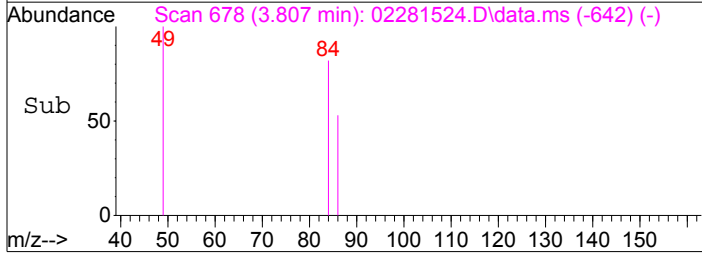
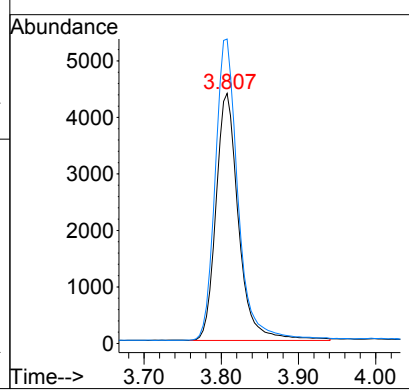
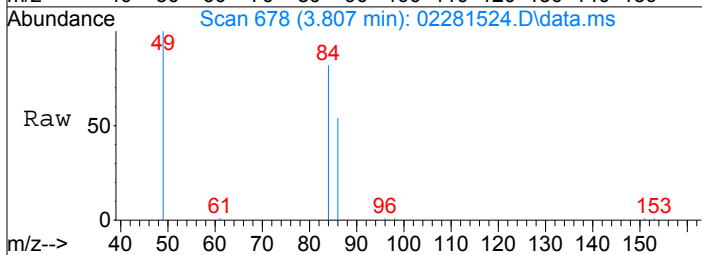
#8
 Trichlorofluoromethane
 Concen: 981.05 pg
 RT: 3.11 min Scan# 493
 Delta R.T. -0.013 min
 Lab File: 02281524.D
 Acq: 28 Feb 2015 14:15

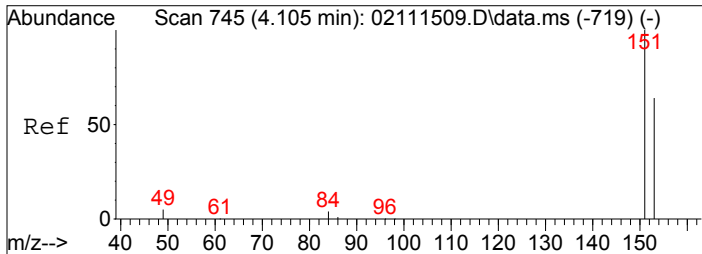
Tgt Ion: 101	Resp:	86415
Ion Ratio	Lower	Upper
101	100	
103	64.9	51.8 77.6



#10
 Methylene Chloride
 Concen: 213.01 pg
 RT: 3.81 min Scan# 678
 Delta R.T. 0.000 min
 Lab File: 02281524.D
 Acq: 28 Feb 2015 14:15

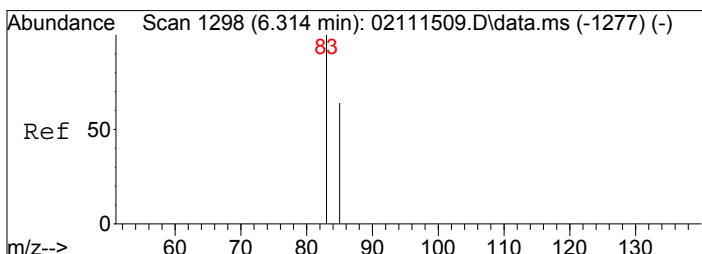
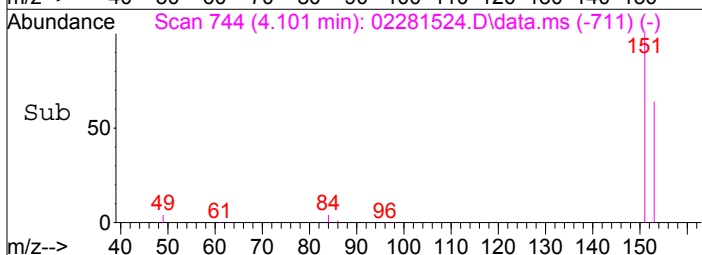
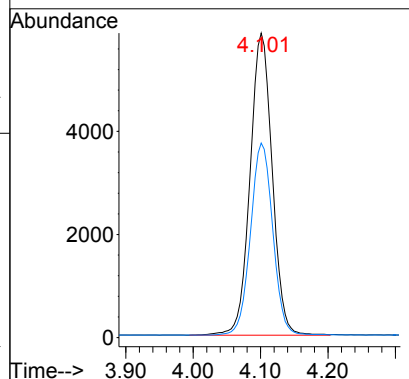
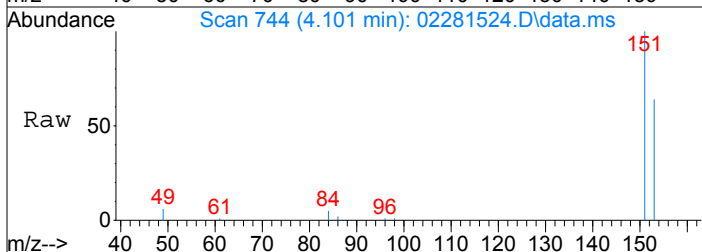
Tgt Ion: 84	Resp:	8903
Ion Ratio	Lower	Upper
84	100	
49	123.8	112.3 152.3





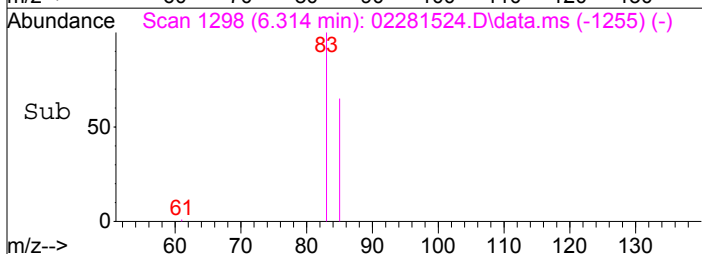
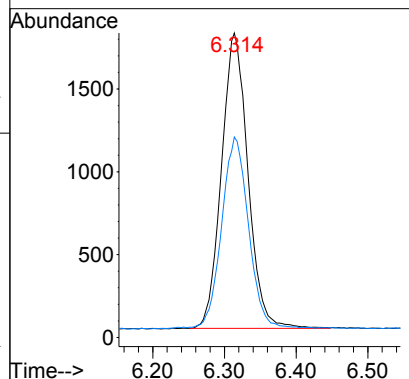
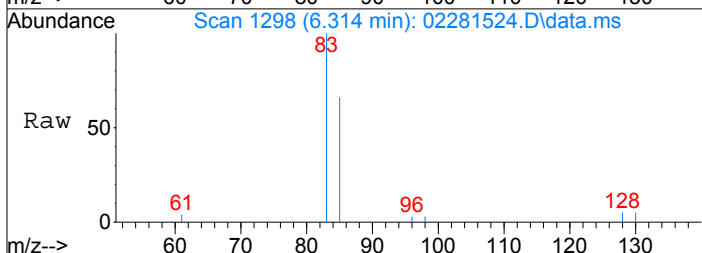
#11
Trichlorotrifluoroethane
Concen: 330.40 pg
RT: 4.10 min Scan# 744
Delta R.T. -0.004 min
Lab File: 02281524.D
Acq: 28 Feb 2015 14:15

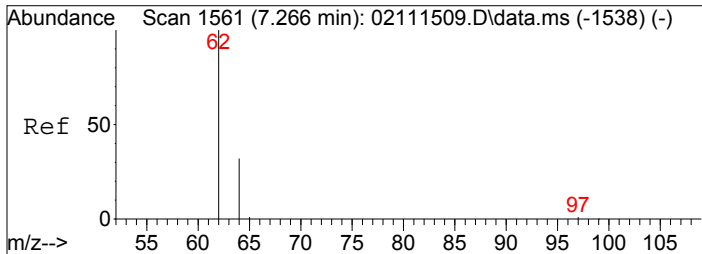
Tgt Ion: 151 Resp: 13373
Ion Ratio Lower Upper
151 100
153 64.0 43.6 83.6



#16
Chloroform
Concen: 59.07 pg
RT: 6.31 min Scan# 1298
Delta R.T. -0.000 min
Lab File: 02281524.D
Acq: 28 Feb 2015 14:15

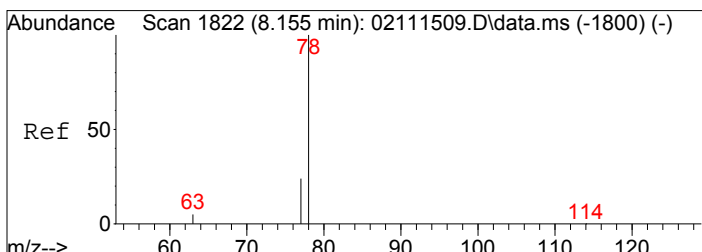
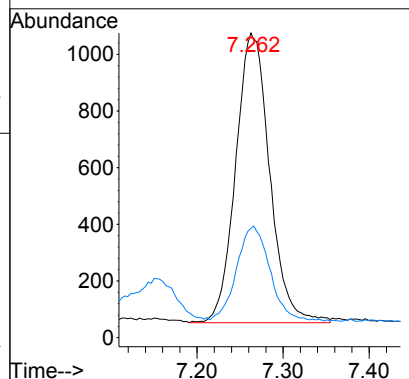
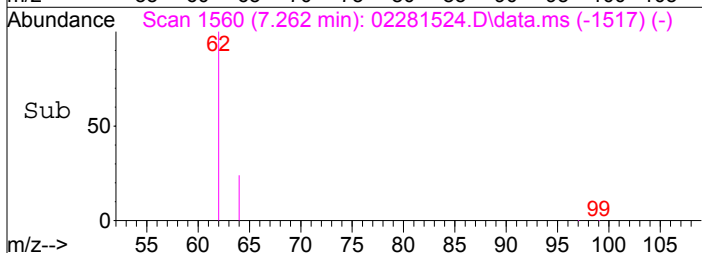
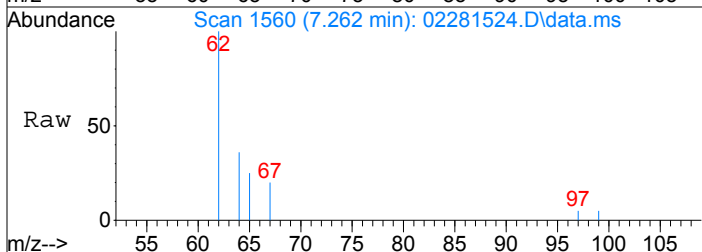
Tgt Ion: 83 Resp: 4570
Ion Ratio Lower Upper
83 100
85 65.2 45.4 85.4





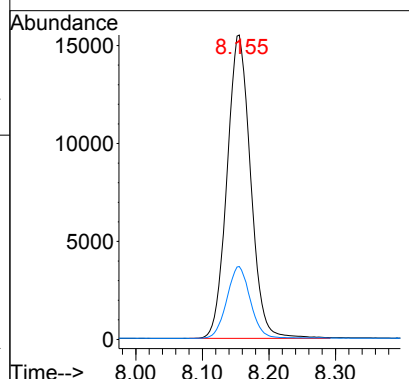
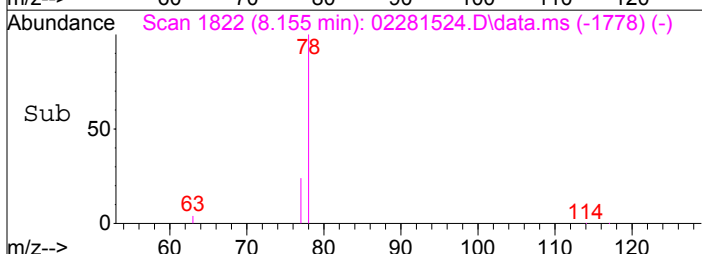
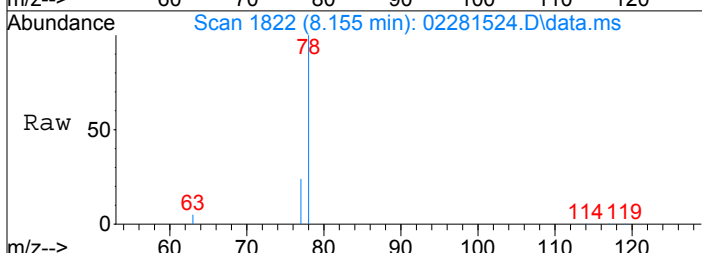
#18
1,2-Dichloroethane
Concen: 45.54 pg
RT: 7.26 min Scan# 1560
Delta R.T. -0.003 min
Lab File: 02281524.D
Acq: 28 Feb 2015 14:15

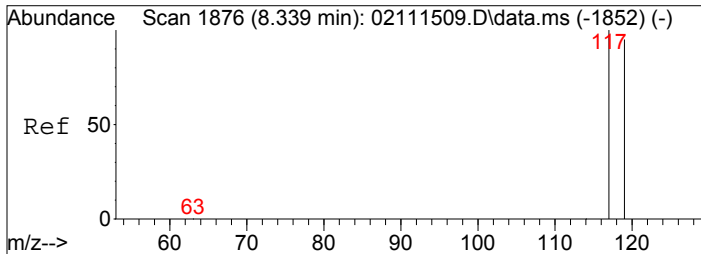
Tgt Ion	Ratio	Resp	Lower	Upper
62	100	2805		
64	32.0	11.6		51.6



#20
Benzene
Concen: 239.74 pg
RT: 8.16 min Scan# 1822
Delta R.T. 0.000 min
Lab File: 02281524.D
Acq: 28 Feb 2015 14:15

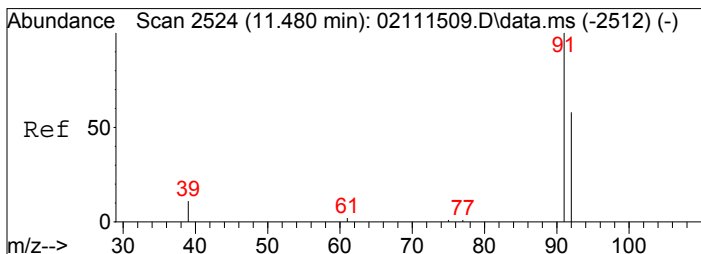
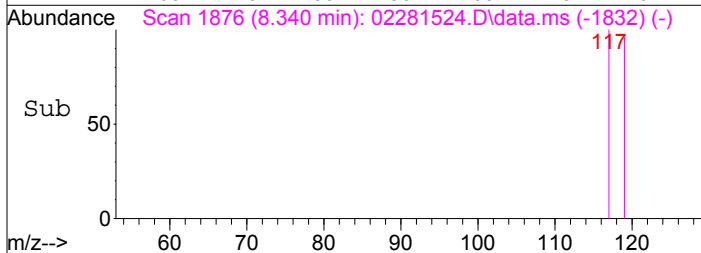
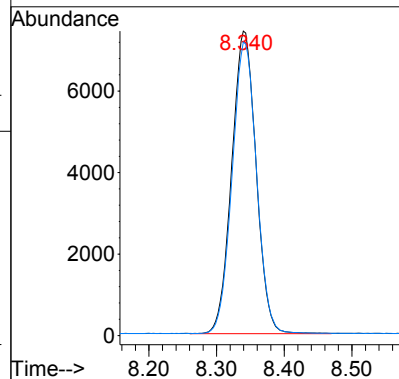
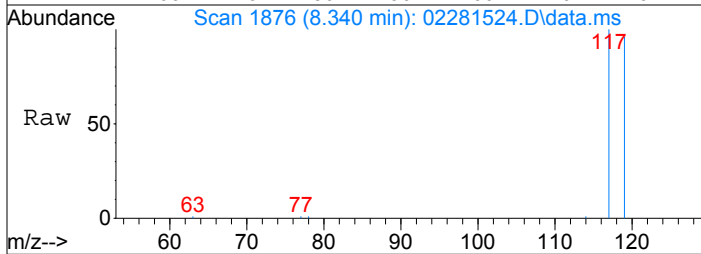
Tgt Ion	Ratio	Resp	Lower	Upper
78	100	38148		
77	23.6	3.7		43.7





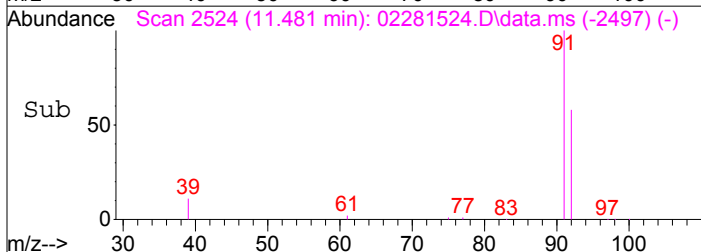
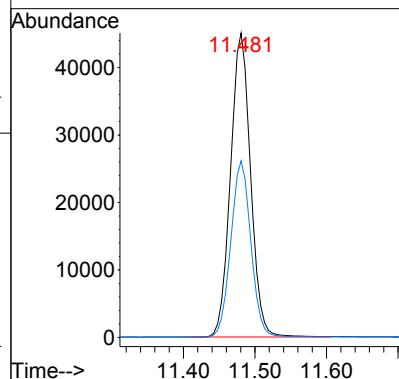
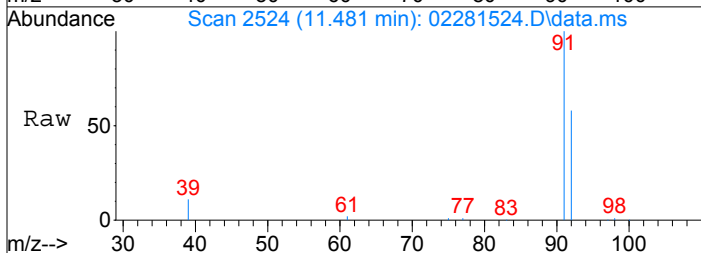
#21
Carbon Tetrachloride
Concen: 329.89 pg
RT: 8.34 min Scan# 1876
Delta R.T. 0.000 min
Lab File: 02281524.D
Acq: 28 Feb 2015 14:15

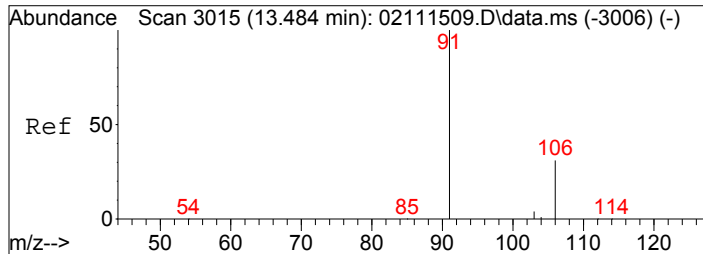
Tgt Ion: 117 Resp: 18580
Ion Ratio Lower Upper
117 100
119 96.3 75.5 115.5



#31
Toluene
Concen: 495.99 pg
RT: 11.48 min Scan# 2524
Delta R.T. 0.000 min
Lab File: 02281524.D
Acq: 28 Feb 2015 14:15

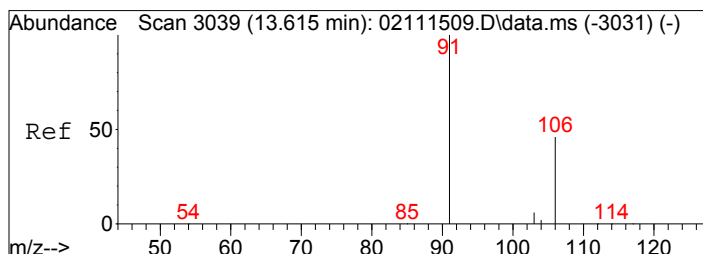
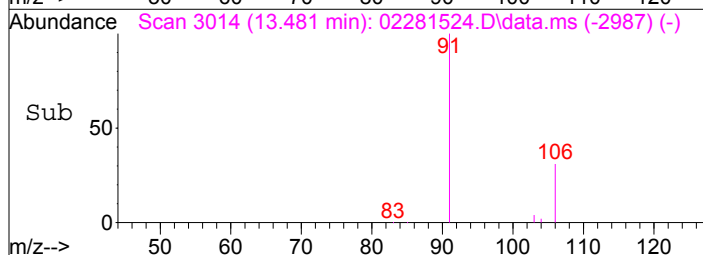
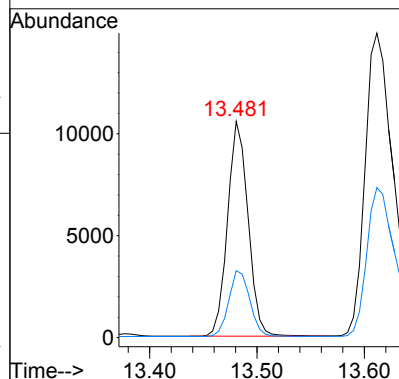
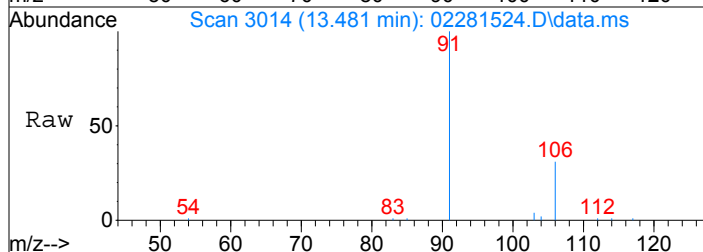
Tgt Ion: 91 Resp: 87737
Ion Ratio Lower Upper
91 100
92 58.0 37.7 77.7





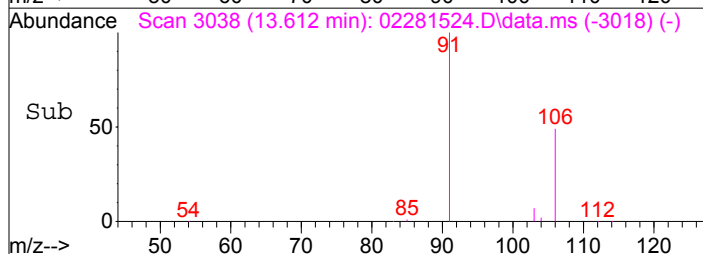
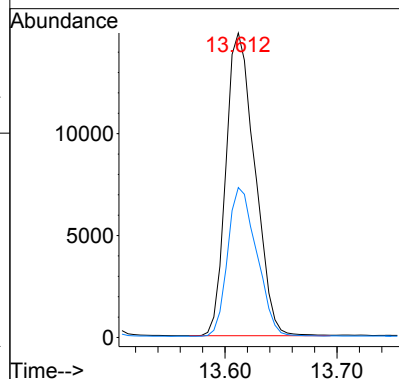
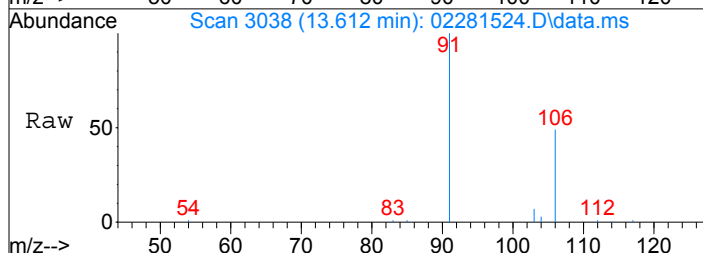
#36
Ethylbenzene
Concen: 73.26 pg
RT: 13.48 min Scan# 3014
Delta R.T. -0.003 min
Lab File: 02281524.D
Acq: 28 Feb 2015 14:15

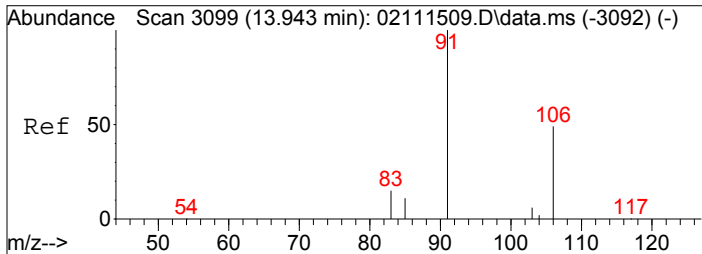
Tgt Ion: 91 Resp: 14031
Ion Ratio Lower Upper
91 100
106 31.4 10.9 50.9



#37
m,p-Xylene
Concen: 168.97 pg
RT: 13.61 min Scan# 3038
Delta R.T. -0.003 min
Lab File: 02281524.D
Acq: 28 Feb 2015 14:15

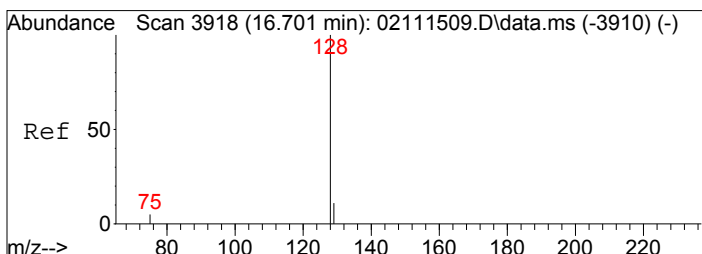
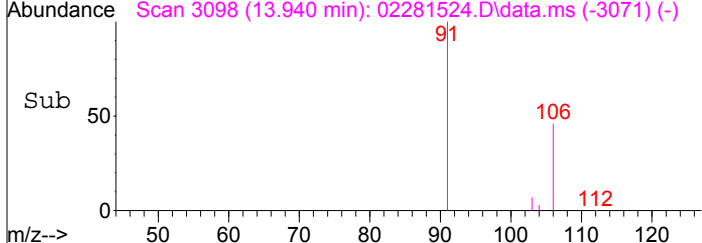
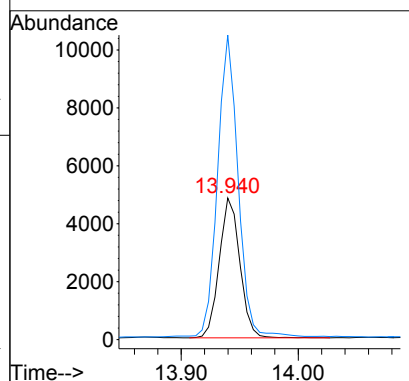
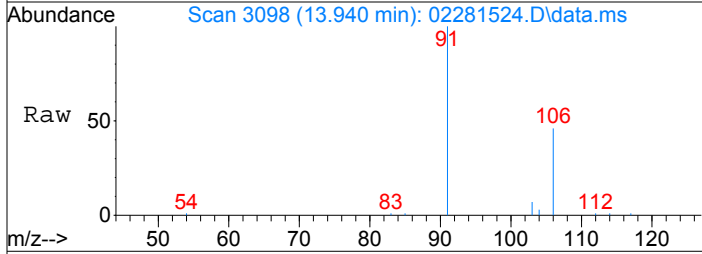
Tgt Ion: 91 Resp: 26598
Ion Ratio Lower Upper
91 100
106 49.5 27.5 67.5





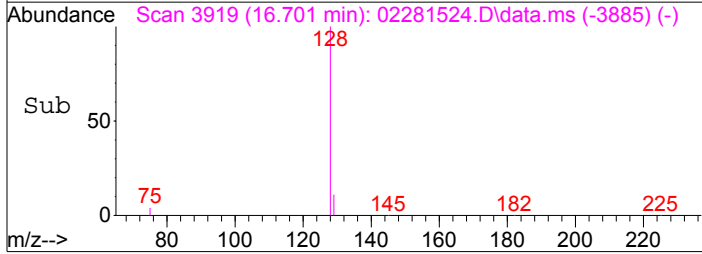
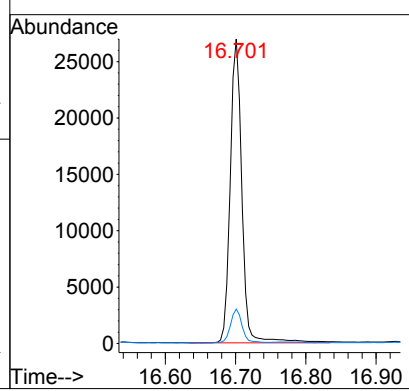
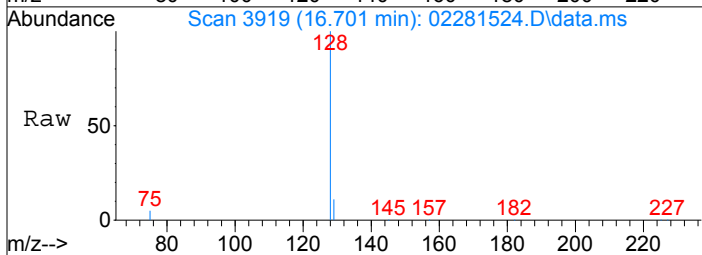
#38
 o-Xylene
 Concen: 76.72 pg
 RT: 13.94 min Scan# 3098
 Delta R.T. -0.003 min
 Lab File: 02281524.D
 Acq: 28 Feb 2015 14:15

Tgt Ion:106	Resp:	5902
Ion Ratio	Lower	Upper
106	100	
91	215.7	198.3 238.3



#45
 Naphthalene
 Concen: 162.41 pg
 RT: 16.70 min Scan# 3919
 Delta R.T. -0.000 min
 Lab File: 02281524.D
 Acq: 28 Feb 2015 14:15

Tgt Ion:128	Resp:	31038
Ion Ratio	Lower	Upper
128	100	
129	11.1	0.0 30.9



Data File: I:\MS19\DATA\2015 02\28\02281525.D

Acq On : 28 Feb 2015 14:43

Operator: WA

Sample : P1500729-019 (1000mL)

Misc : S29-02041502

ALS Vial : 14 Sample Multiplier: 1

Quant Time: Mar 02 14:48:50 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

3/2/15

DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.13	130	28579	1000.000	pg	0.02
22) 1,4-Difluorobenzene (IS2)	8.73	114	191301	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	34221	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.14	65	58225	834.257	pg	0.01
Spiked Amount	1000.000		Recovery	=	83.43%	
30) Toluene-d8 (SS2)	11.38	98	191934	1087.970	pg	0.00
Spiked Amount	1000.000		Recovery	=	108.80%	
40) Bromofluorobenzene (SS3)	14.25	174	84412	1221.813	pg	0.00
Spiked Amount	1000.000		Recovery	=	122.18%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.73	85	166980	1437.680	pg	100
3) Chloromethane	1.83	52	10275	442.992	pg	99
4) Vinyl Chloride	2.01	62	184	N.D.		
5) Bromomethane	2.32	94	1294	24.777	pg	99
6) Chloroethane	2.47	64	1287	29.291	pg	99
7) Acetone	2.99	58	1208879m	29474.985	pg	
8) Trichlorofluoromethane	3.10	101	99179	994.134	pg	100
9) 1,1-Dichloroethene	3.70	96	3	N.D.		
10) Methylene Chloride	3.81	84	9701	204.928	pg	93
11) Trichlorotrifluoroethane	4.10	151	15630	340.955	pg	100
12) trans-1,2-Dichloroethene	4.75	96	141	N.D.		
13) 1,1-Dichloroethane	4.96	63	251	N.D.		
14) Methyl tert-Butyl Ether	0.00	73	0	N.D.	d	
15) cis-1,2-Dichloroethene	5.95	96	947	N.D.		
16) Chloroform	6.33	83	5646	64.436	pg	94
18) 1,2-Dichloroethane	7.28	62	3353	48.060	pg	99
19) 1,1,1-Trichloroethane	7.59	97	1732	20.327	pg	100
20) Benzene	8.16	78	51970	288.371	pg	100
21) Carbon Tetrachloride	8.34	117	23612	370.145	pg	99
23) 1,2-Dichloropropane	9.16	63	1992	47.744	pg	# 63
24) Bromodichloromethane	9.42	83	372	N.D.		
25) Trichloroethene	9.46	130	1206	24.539	pg	99
26) 1,4-Dioxane	9.51	88	283	N.D.		
27) cis-1,3-Dichloropropene	10.46	75	341	N.D.		
28) trans-1,3-Dichloropropene	11.06	75	216	N.D.		
29) 1,1,2-Trichloroethane	0.00	83	0	N.D.	d	
31) Toluene	11.48	91	121943	649.921	pg	100
32) 1,2-Dibromoethane	12.12	107	29	N.D.		
33) Tetrachloroethene	12.61	166	1790	30.811	pg	98
35) Chlorobenzene	13.17	112	871	N.D.		
36) Ethylbenzene	13.48	91	23120	107.738	pg	99
37) m,p-Xylene	13.61	91	54925	311.415	pg	96
38) o-Xylene	13.94	106	11190	129.819	pg	96
39) 1,1,2,2-Tetrachloroethane	13.97	83	1512	N.D.		
41) 1,3-Dichlorobenzene	15.17	146	384	N.D.		
42) 1,4-Dichlorobenzene	15.24	146	2664	22.527	pg	100
43) 1,2-Dichlorobenzene	15.46	146	111	N.D.		
44) 1,2,4-Trichlorobenzene	16.65	182	310	N.D.		
45) Naphthalene	16.70	128	10125	47.286	pg	97
46) Hexachlorobutadiene	16.96	225	37	N.D.		

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\28\02281525.D

Acq On : 28 Feb 2015 14:43

Operator: WA

Sample : P1500729-019 (1000mL)

Misc : S29-02041502

ALS Vial : 14 Sample Multiplier: 1

Quant Time: Mar 02 14:48:50 2015

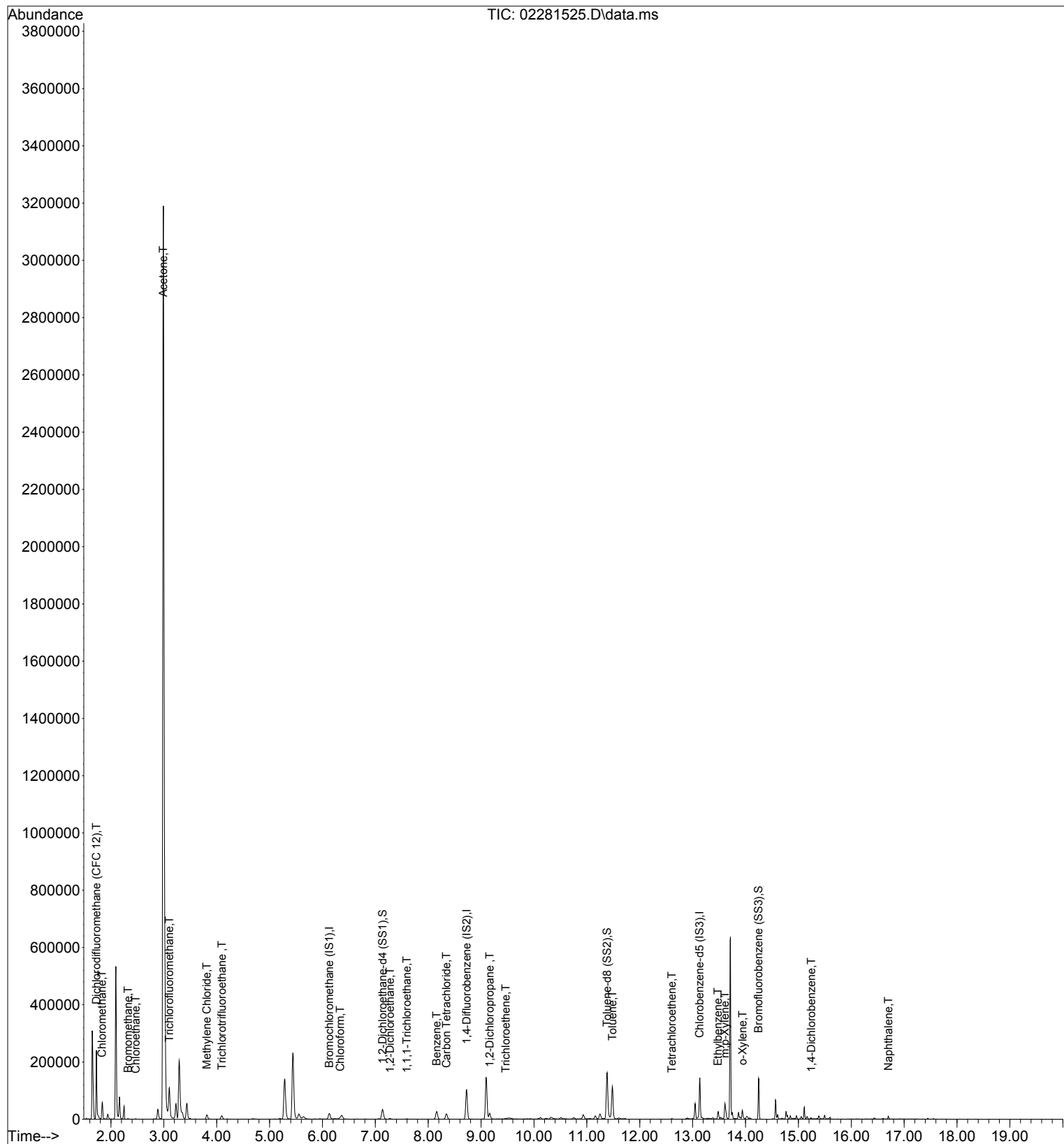
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 02\28\02281525.D

Acq On : 28 Feb 2015 14:43

Operator: WA

Sample : P1500729-019 (1000mL)

Misc : S29-02041502

ALS Vial : 14 Sample Multiplier: 1

Quant Time: Mar 02 14:48:50 2015

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DataAcq Meth:TO15SIM.M

3/2/15

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34) Chlorobenzene-d5 (IS3)	13.13	54	34221	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.14	65	58225	834.257	pg	0.01
Spiked Amount 1000.000			Recovery	=	83.43%	
30) Toluene-d8 (SS2)	11.38	98	191934	1087.970	pg	0.00
Spiked Amount 1000.000			Recovery	=	108.80%	
40) Bromofluorobenzene (SS3)	14.25	174	84412	1221.813	pg	0.00
Spiked Amount 1000.000			Recovery	=	122.18%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.73	85	166980	1437.680	pg	100
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7) Acetone	2.99	58	1208879m	29474.985	pg	
8) Trichlorofluoromethane	3.10	101	99179	994.134	pg	100
10) Methylene Chloride	3.81	84	9701	204.928	pg	93
11) Trichlorotrifluoroethane	4.10	151	15630	340.955	pg	100
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18) 1,2-Dichloroethane	7.28	62	3353	48.060	pg	99
19) 1,1,1-Trichloroethane	7.59	97	1732	20.327	pg	100
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23) 1,2-Dichloropropane	9.16	63	1992	47.744	pg	# 63
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31) Toluene	11.48	91	121943	649.921	pg	100
33) Tetrachloroethene	12.61	166	1790	30.811	pg	98
36) Ethylbenzene	13.48	91	23120	107.738	pg	99
37) m,p-Xylene	13.61	91	54925	311.415	pg	96
38) o-Xylene	13.94	106	11190	129.819	pg	96
42) 1,4-Dichlorobenzene	15.24	146	2664	22.527	pg	100
45) Naphthalene	16.70	128	10125	47.286	pg	97

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\28\02281525.D

Acq On : 28 Feb 2015 14:43

Operator: WA

Sample : P1500729-019 (1000mL)

Misc : S29-02041502

ALS Vial : 14 Sample Multiplier: 1

Quant Time: Mar 02 14:48:50 2015

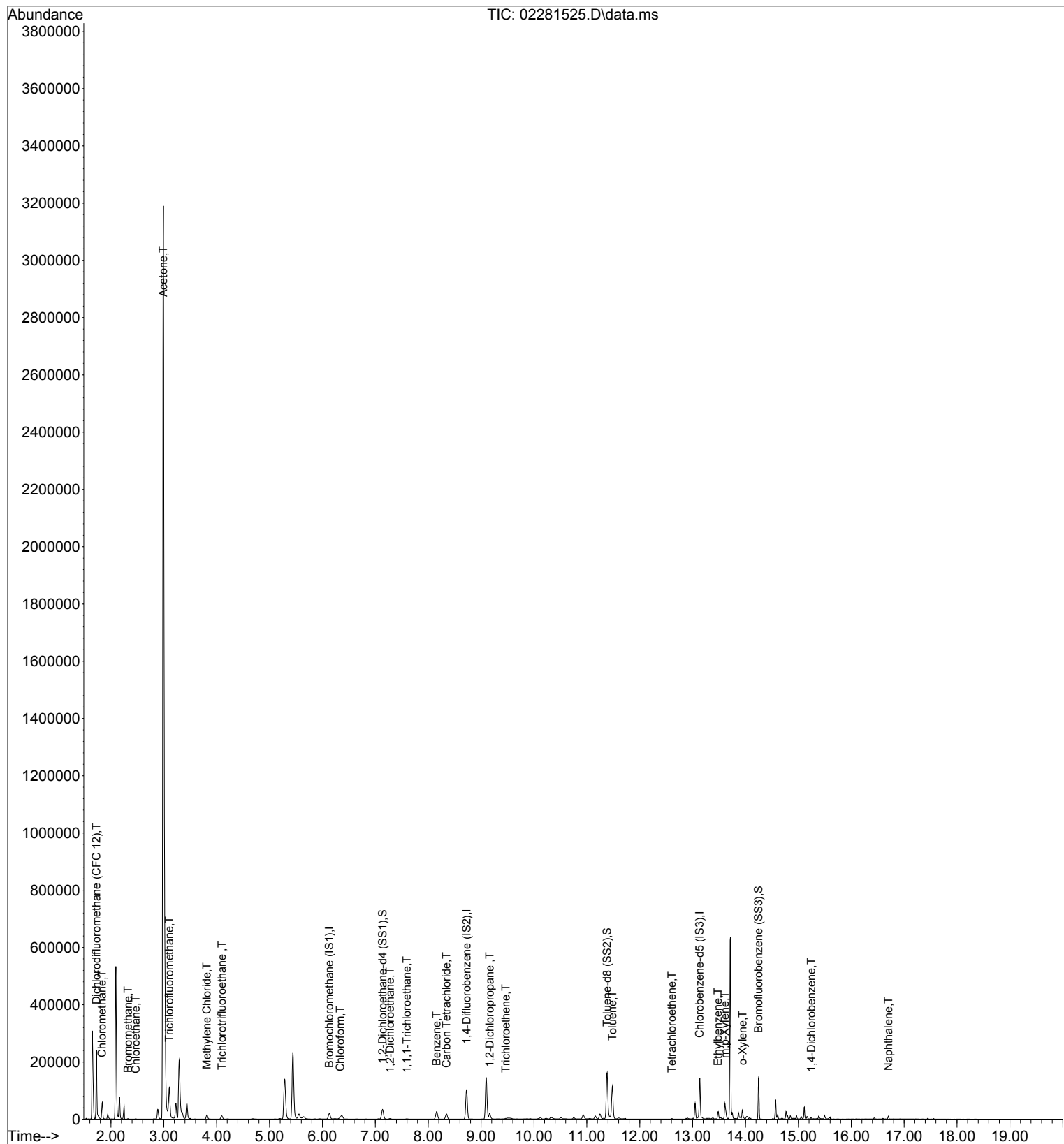
Quant Method : I:\MS19\METHODS\X19021115.M

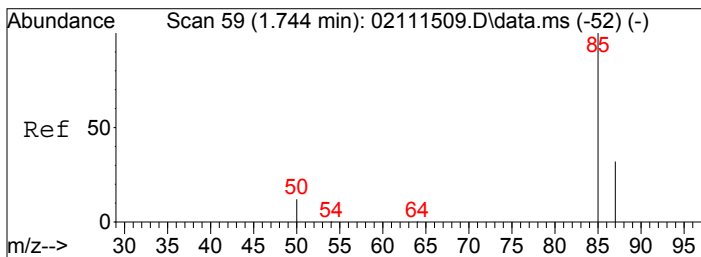
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

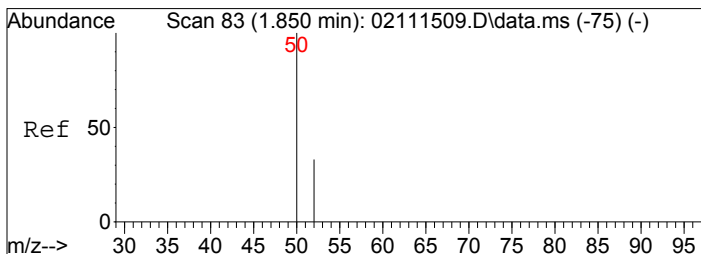
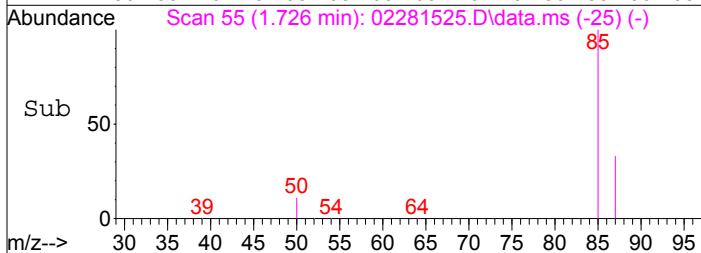
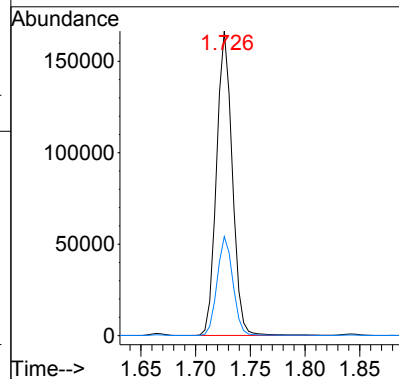
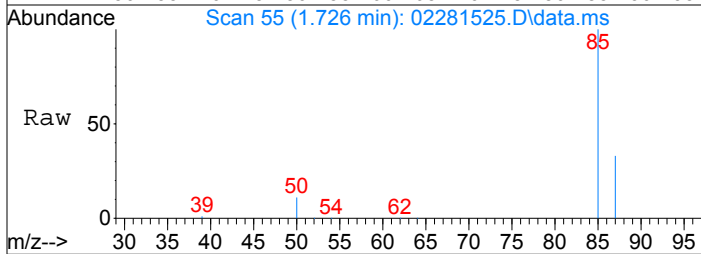
DataAcq Meth:TO15SIM.M





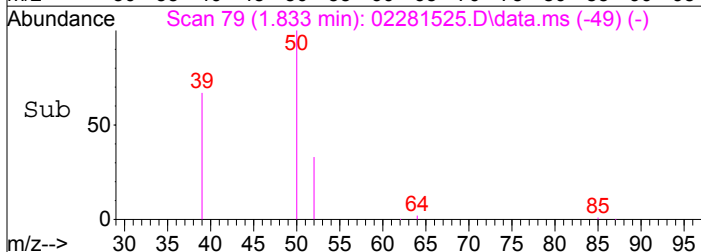
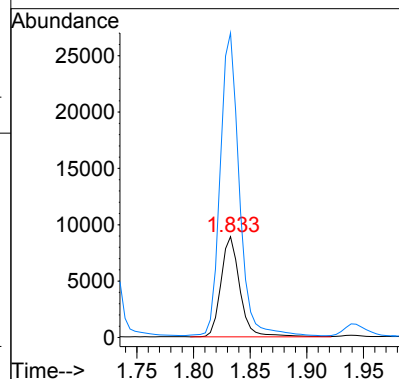
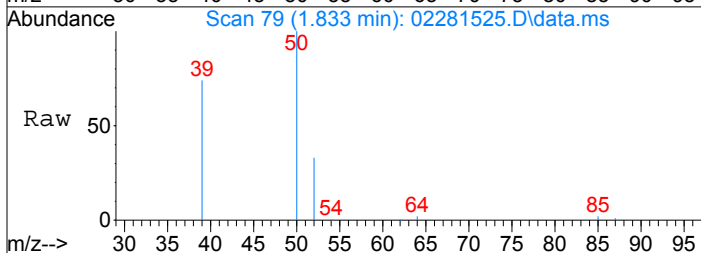
#2
 Dichlorodifluoromethane (CFC 12)
 Concen: 1437.68 pg
 RT: 1.73 min Scan# 55
 Delta R.T. -0.018 min
 Lab File: 02281525.D
 Acq: 28 Feb 2015 14:43

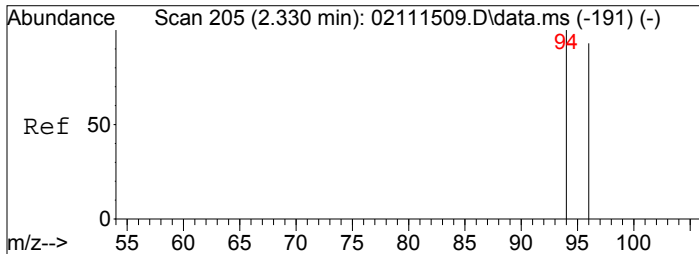
Tgt Ion: 85 Resp: 166980
 Ion Ratio Lower Upper
 85 100
 87 32.5 12.4 52.4



#3
 Chloromethane
 Concen: 442.99 pg
 RT: 1.83 min Scan# 79
 Delta R.T. -0.017 min
 Lab File: 02281525.D
 Acq: 28 Feb 2015 14:43

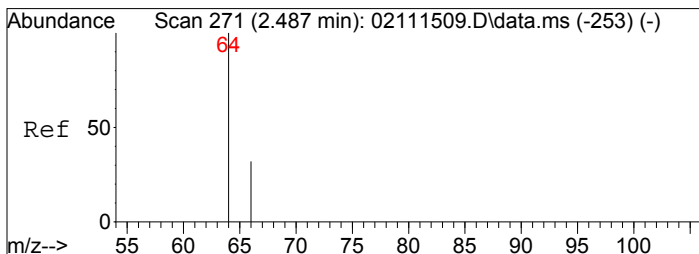
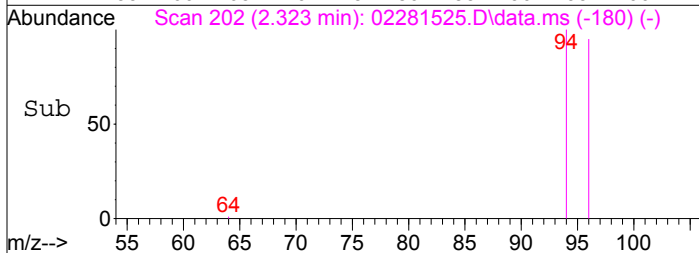
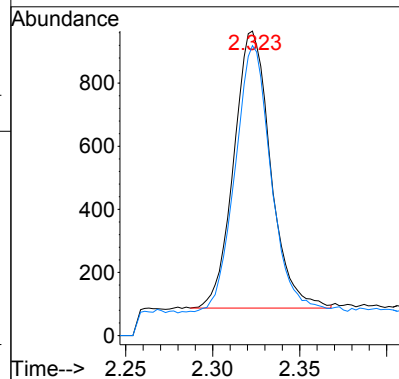
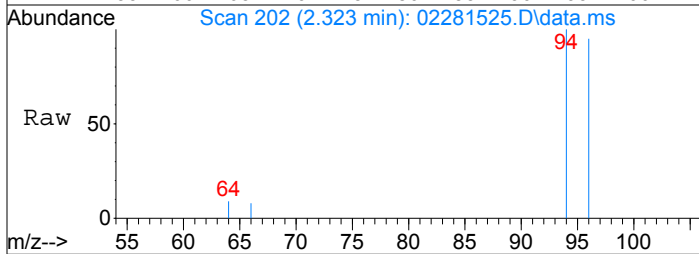
Tgt Ion: 52 Resp: 10275
 Ion Ratio Lower Upper
 52 100
 50 305.2 283.7 323.7





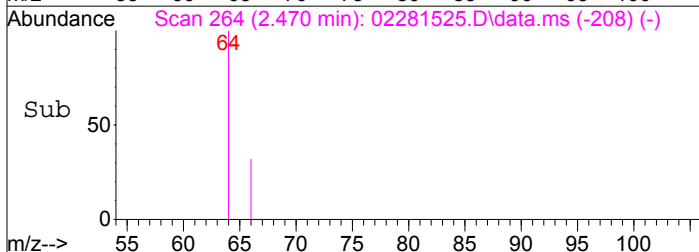
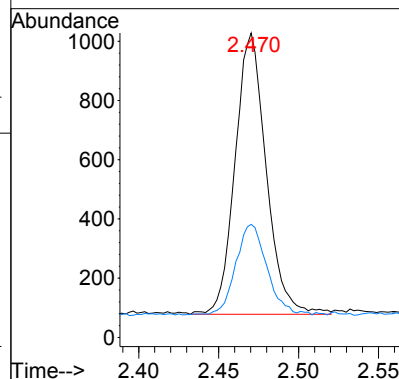
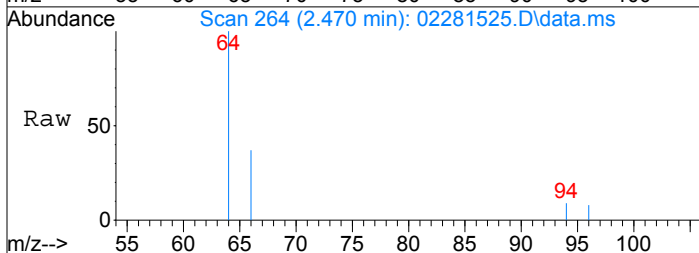
#5
 Bromomethane
 Concen: 24.78 pg
 RT: 2.32 min Scan# 202
 Delta R.T. -0.007 min
 Lab File: 02281525.D
 Acq: 28 Feb 2015 14:43

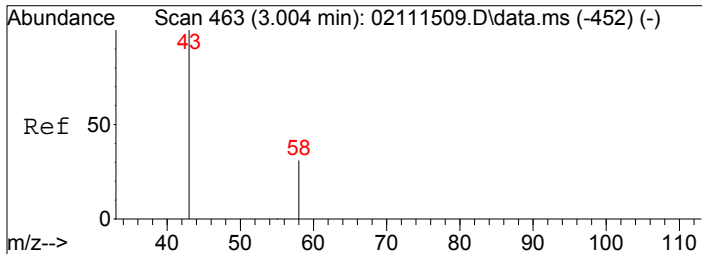
Tgt Ion: 94 Resp: 1294
 Ion Ratio Lower Upper
 94 100
 96 95.6 75.5 113.3



#6
 Chloroethane
 Concen: 29.29 pg
 RT: 2.47 min Scan# 264
 Delta R.T. -0.017 min
 Lab File: 02281525.D
 Acq: 28 Feb 2015 14:43

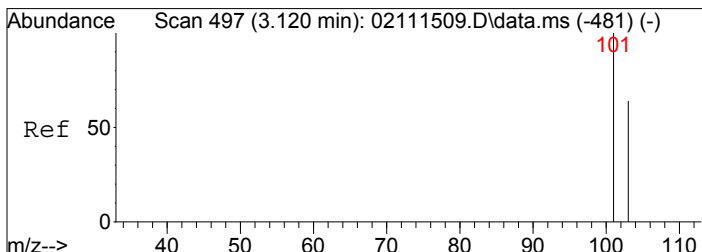
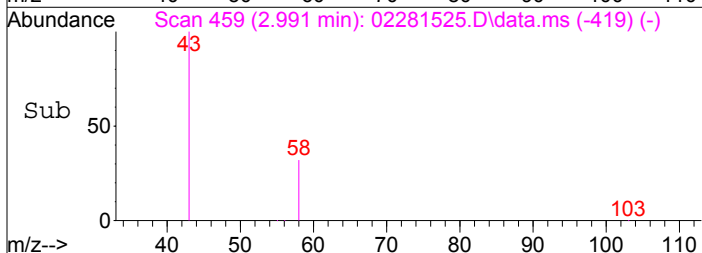
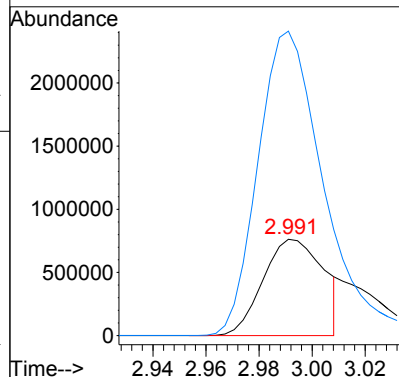
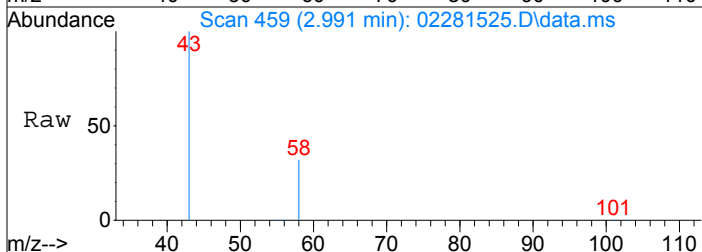
Tgt Ion: 64 Resp: 1287
 Ion Ratio Lower Upper
 64 100
 66 31.7 12.2 52.2





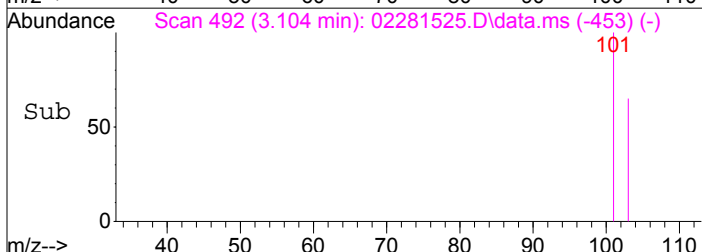
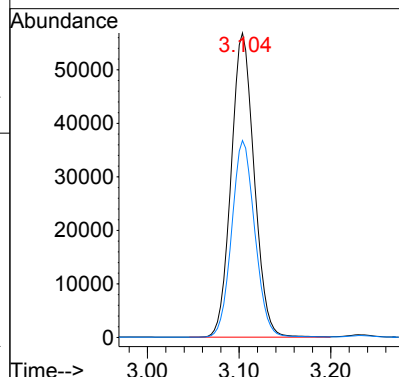
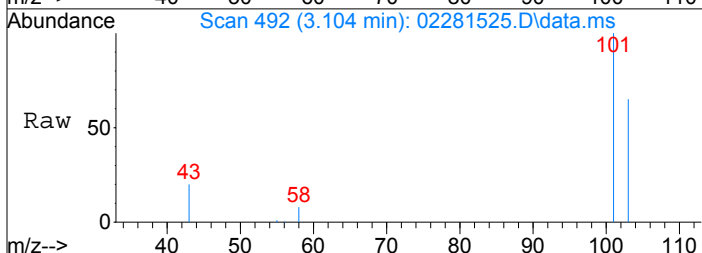
#7
Acetone
Concen: 29474.99 pg m
RT: 2.99 min Scan# 459
Delta R.T. -0.013 min
Lab File: 02281525.D
Acq: 28 Feb 2015 14:43

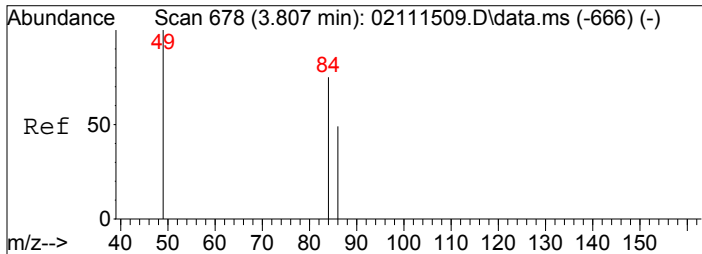
Tgt Ion: 58 Resp: 1208879
Ion Ratio Lower Upper
58 100
43 351.8 301.8 341.8#



#8
Trichlorofluoromethane
Concen: 994.13 pg
RT: 3.10 min Scan# 492
Delta R.T. -0.016 min
Lab File: 02281525.D
Acq: 28 Feb 2015 14:43

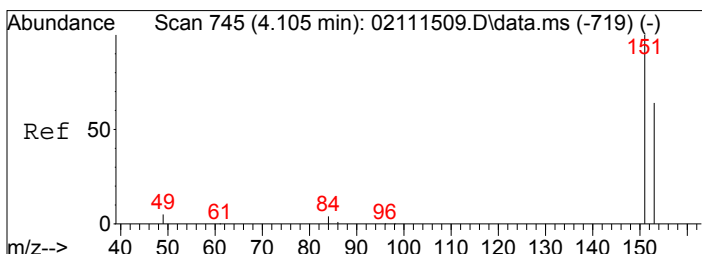
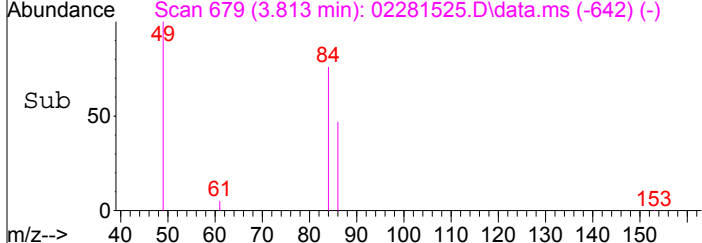
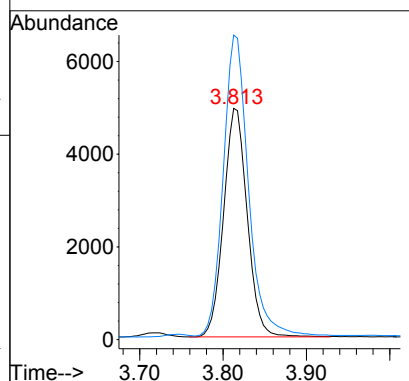
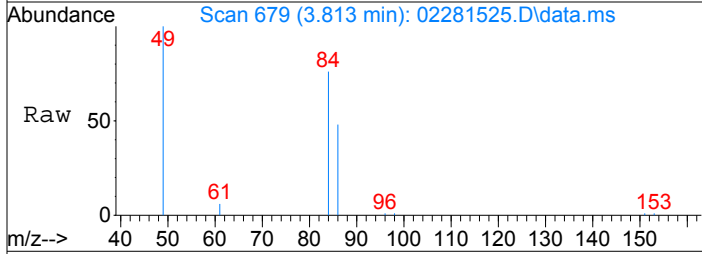
Tgt Ion: 101 Resp: 99179
Ion Ratio Lower Upper
101 100
103 64.8 51.8 77.6





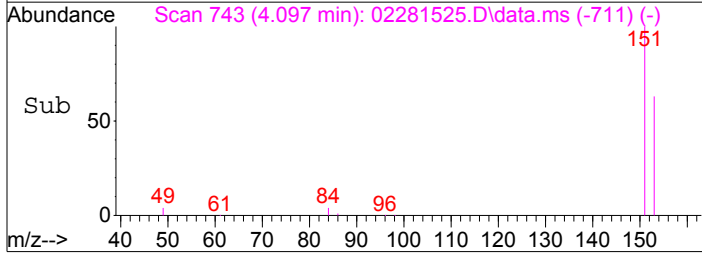
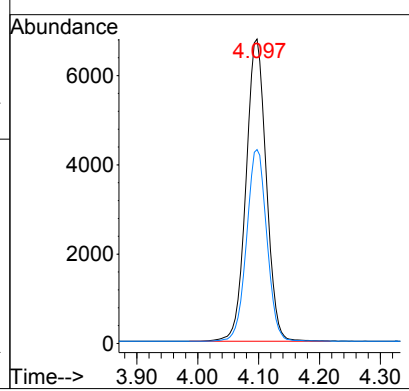
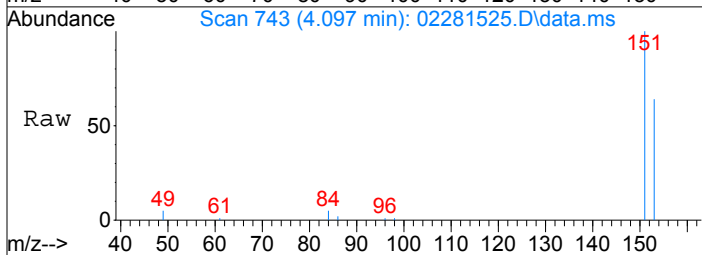
#10
 Methylene Chloride
 Concen: 204.93 pg
 RT: 3.81 min Scan# 679
 Delta R.T. 0.006 min
 Lab File: 02281525.D
 Acq: 28 Feb 2015 14:43

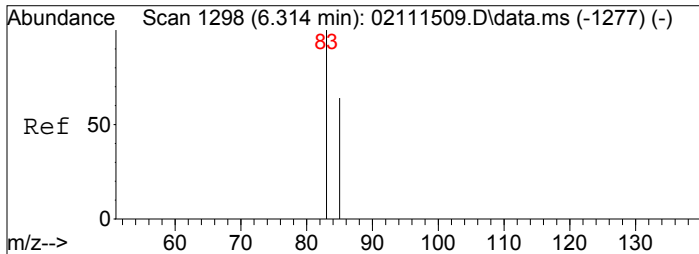
Tgt Ion: 84	Resp: 9701
Ion Ratio	Lower Upper
84	100
49	140.4 112.3 152.3



#11
 Trichlorotrifluoroethane
 Concen: 340.96 pg
 RT: 4.10 min Scan# 743
 Delta R.T. -0.008 min
 Lab File: 02281525.D
 Acq: 28 Feb 2015 14:43

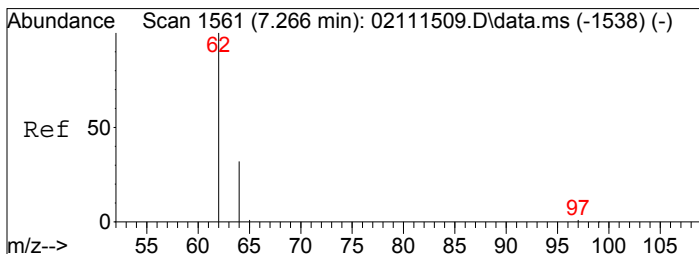
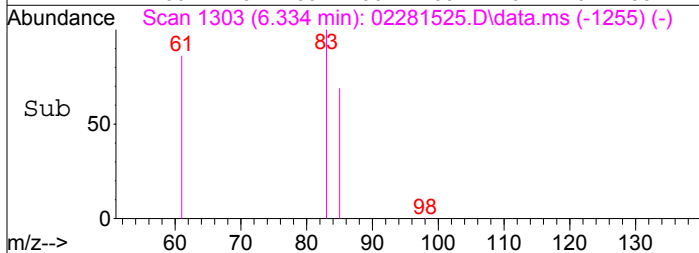
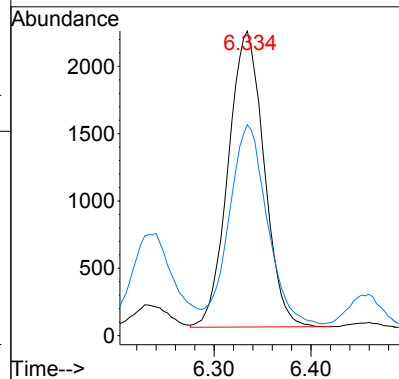
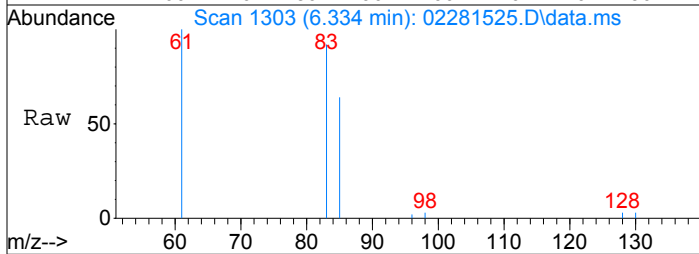
Tgt Ion: 151	Resp: 15630
Ion Ratio	Lower Upper
151	100
153	63.7 43.6 83.6





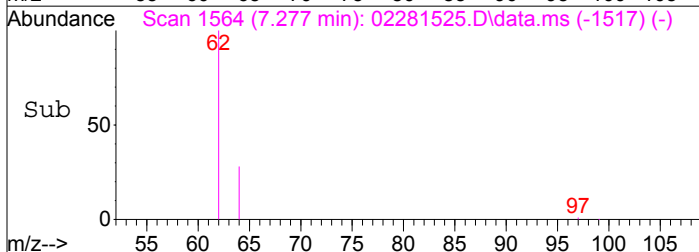
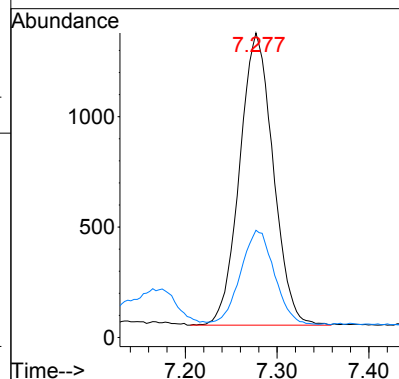
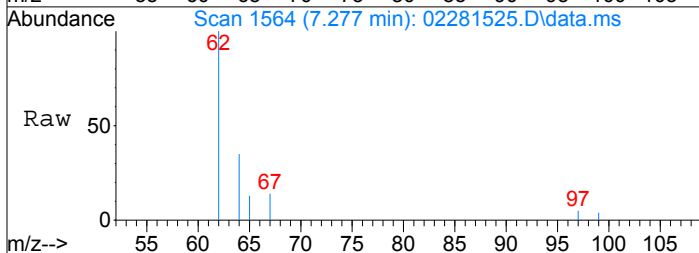
#16
Chloroform
Concen: 64.44 pg
RT: 6.33 min Scan# 1303
Delta R.T. 0.020 min
Lab File: 02281525.D
Acq: 28 Feb 2015 14:43

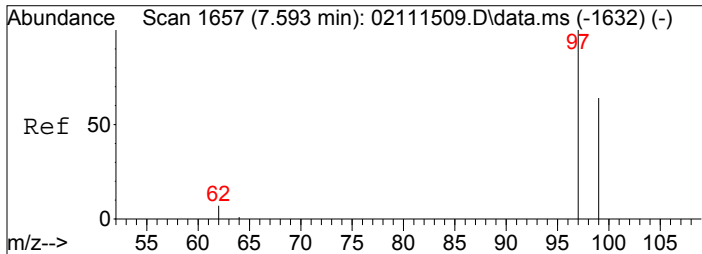
Tgt Ion: 83 Resp: 5646
Ion Ratio Lower Upper
83 100
85 70.5 45.4 85.4



#18
1,2-Dichloroethane
Concen: 48.06 pg
RT: 7.28 min Scan# 1564
Delta R.T. 0.011 min
Lab File: 02281525.D
Acq: 28 Feb 2015 14:43

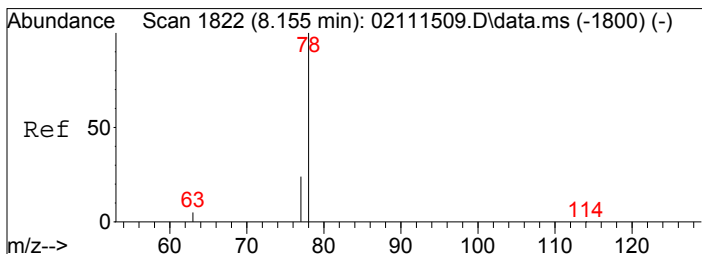
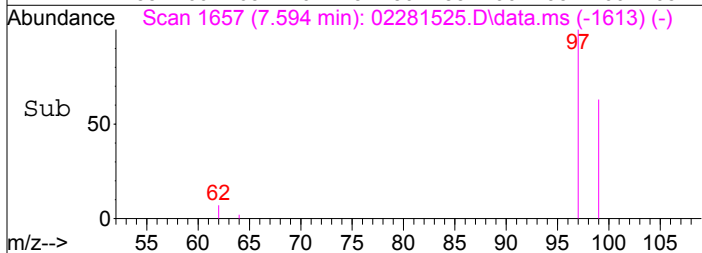
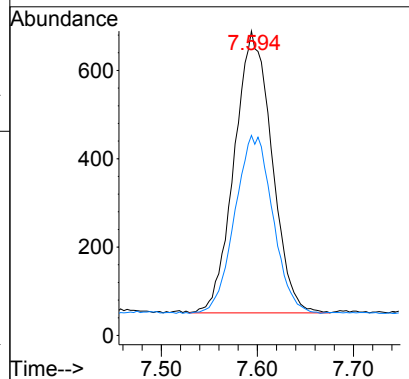
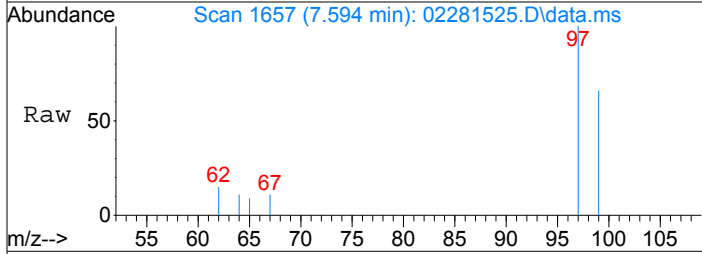
Tgt Ion: 62 Resp: 3353
Ion Ratio Lower Upper
62 100
64 32.3 11.6 51.6





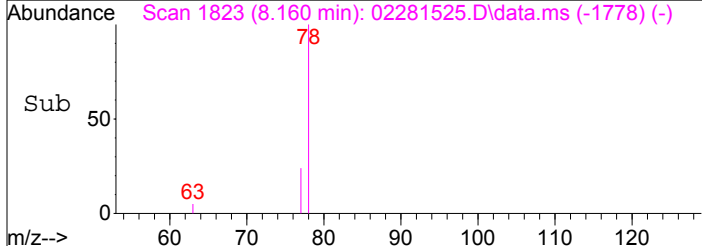
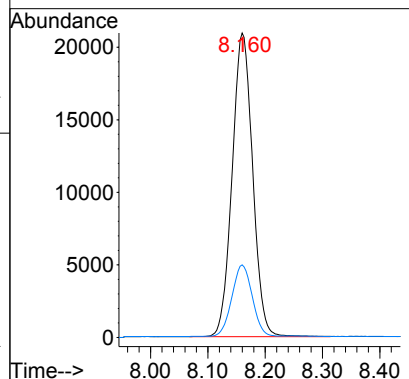
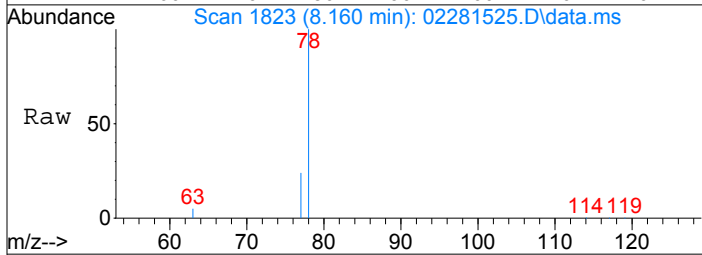
#19
 1,1,1-Trichloroethane
 Concen: 20.33 pg
 RT: 7.59 min Scan# 1657
 Delta R.T. 0.001 min
 Lab File: 02281525.D
 Acq: 28 Feb 2015 14:43

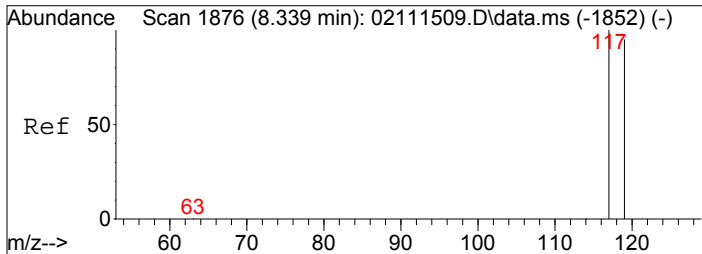
Tgt Ion	97	Resp	1732
Ion Ratio	100	Lower	Upper
99	64.0	44.0	84.0



#20
 Benzene
 Concen: 288.37 pg
 RT: 8.16 min Scan# 1823
 Delta R.T. 0.005 min
 Lab File: 02281525.D
 Acq: 28 Feb 2015 14:43

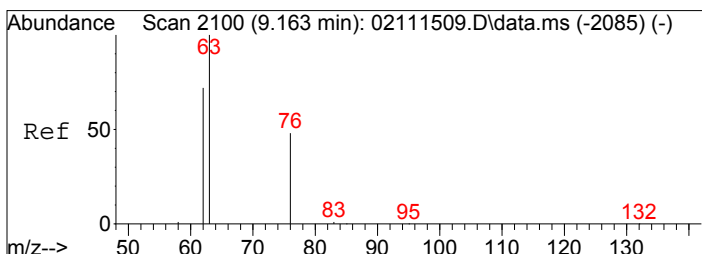
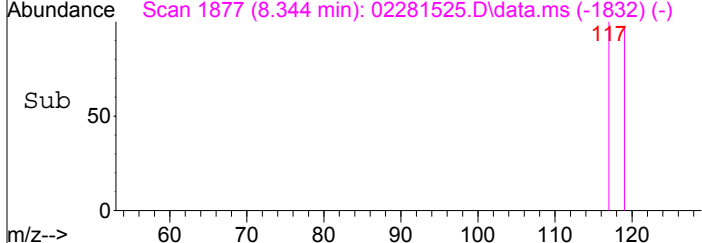
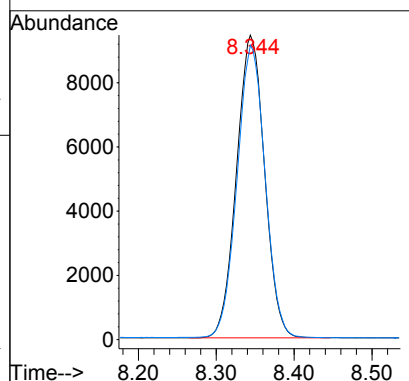
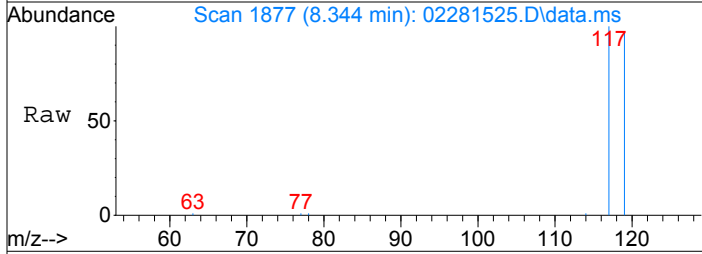
Tgt Ion	78	Resp	51970
Ion Ratio	100	Lower	Upper
77	23.8	3.7	43.7





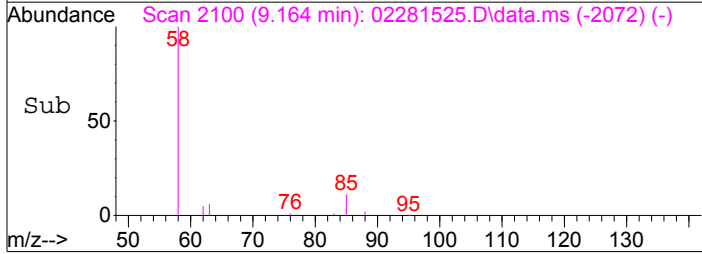
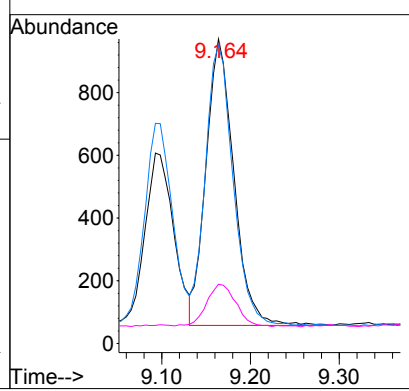
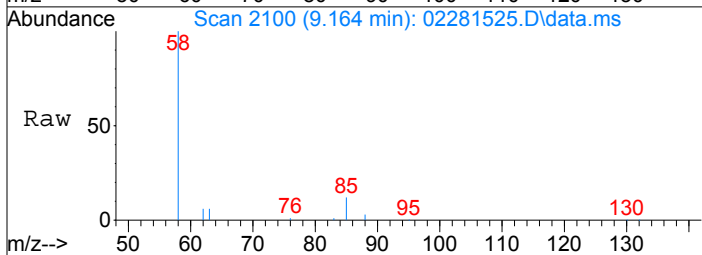
#21
Carbon Tetrachloride
Concen: 370.15 pg
RT: 8.34 min Scan# 1877
Delta R.T. 0.005 min
Lab File: 02281525.D
Acq: 28 Feb 2015 14:43

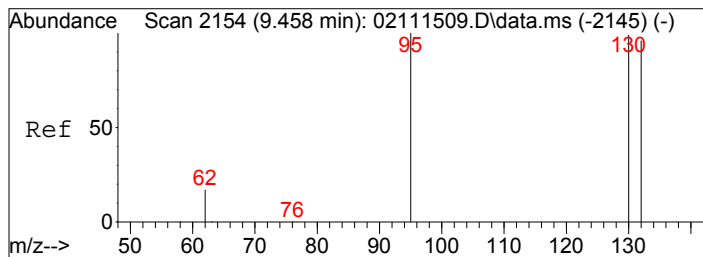
Tgt Ion: 117	Resp: 23612
Ion Ratio	Lower Upper
117	100
119	96.6 75.5 115.5



#23
1,2-Dichloropropane
Concen: 47.74 pg
RT: 9.16 min Scan# 2100
Delta R.T. 0.001 min
Lab File: 02281525.D
Acq: 28 Feb 2015 14:43

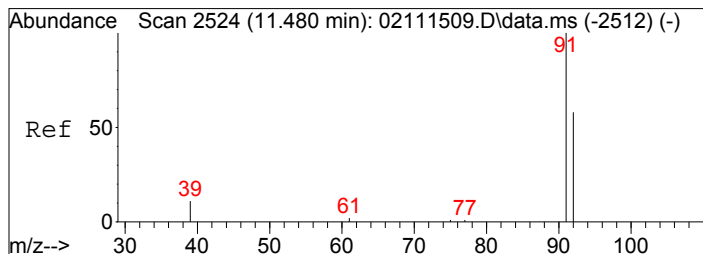
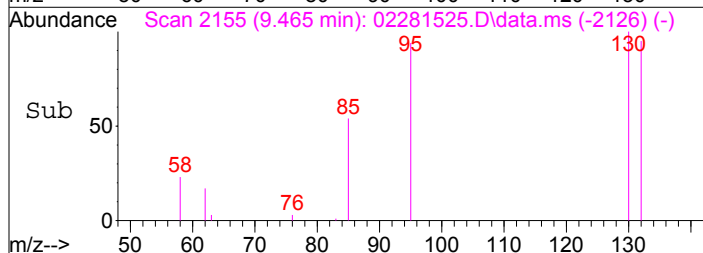
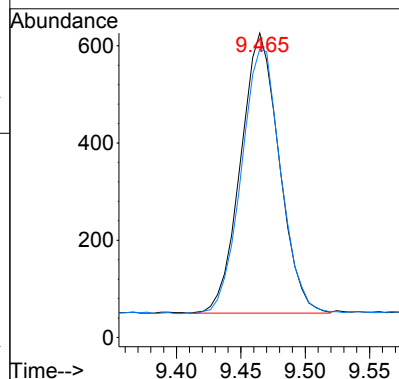
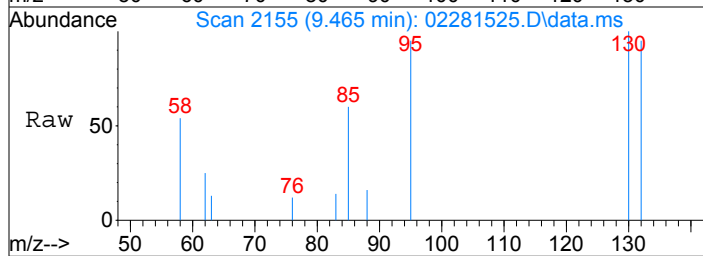
Tgt Ion: 63	Resp: 1992
Ion Ratio	Lower Upper
63	100
62	96.9 52.0 92.0#
76	15.7 28.1 68.1#





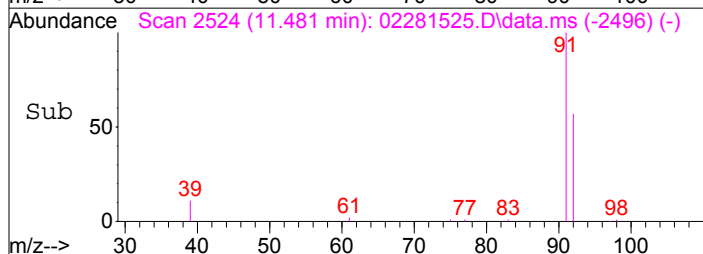
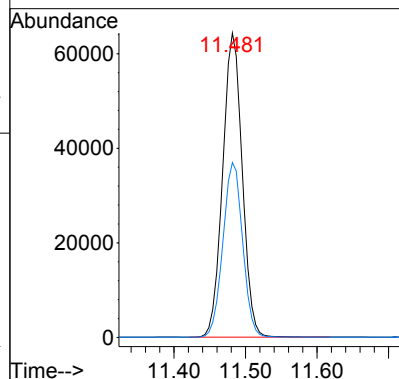
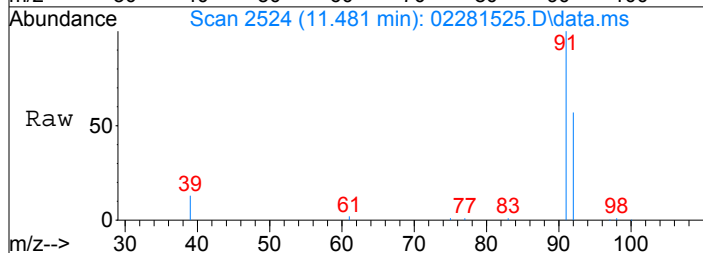
#25
Trichloroethene
Concen: 24.54 pg
RT: 9.46 min Scan# 2155
Delta R.T. 0.007 min
Lab File: 02281525.D
Acq: 28 Feb 2015 14:43

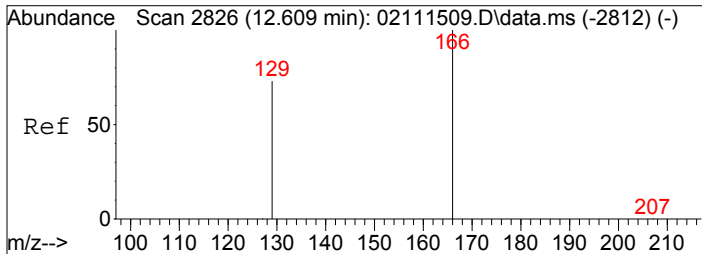
Tgt Ion: 130 Resp: 1206
Ion Ratio Lower Upper
130 100
132 96.6 77.1 117.1



#31
Toluene
Concen: 649.92 pg
RT: 11.48 min Scan# 2524
Delta R.T. 0.001 min
Lab File: 02281525.D
Acq: 28 Feb 2015 14:43

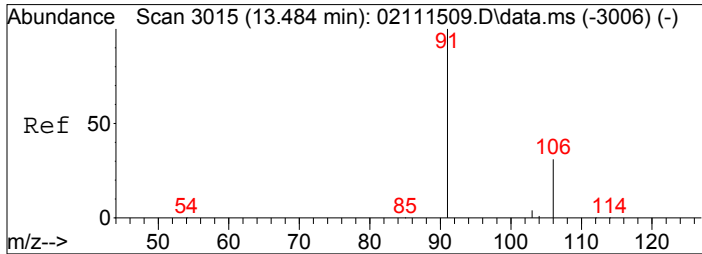
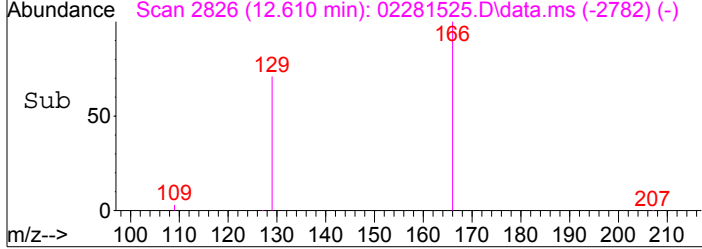
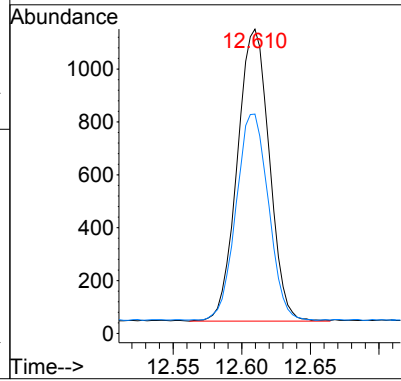
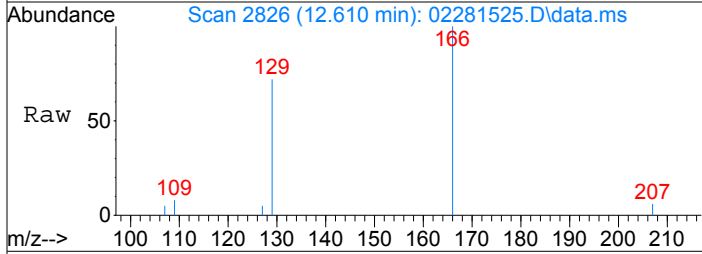
Tgt Ion: 91 Resp: 121943
Ion Ratio Lower Upper
91 100
92 58.0 37.7 77.7





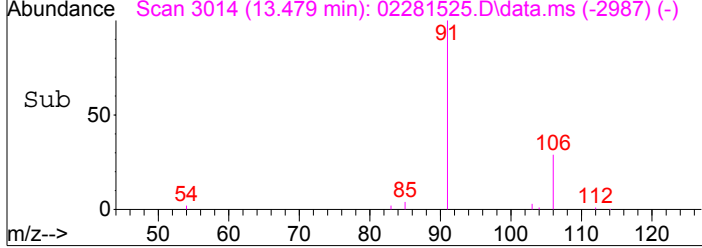
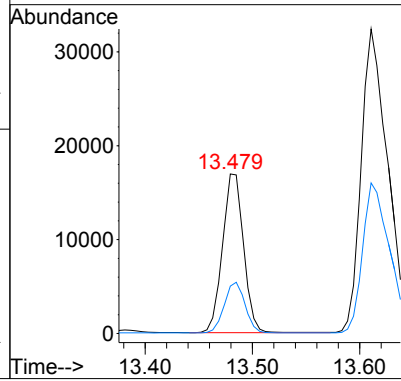
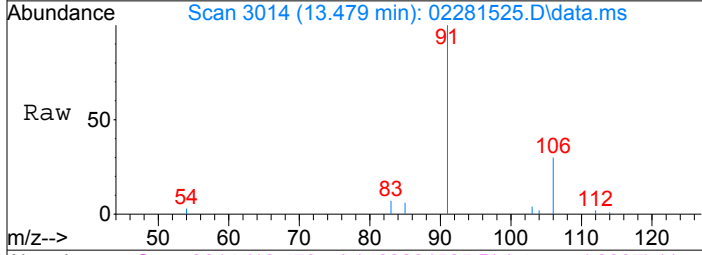
#33
 Tetrachloroethene
 Concen: 30.81 pg
 RT: 12.61 min Scan# 2826
 Delta R.T. 0.001 min
 Lab File: 02281525.D
 Acq: 28 Feb 2015 14:43

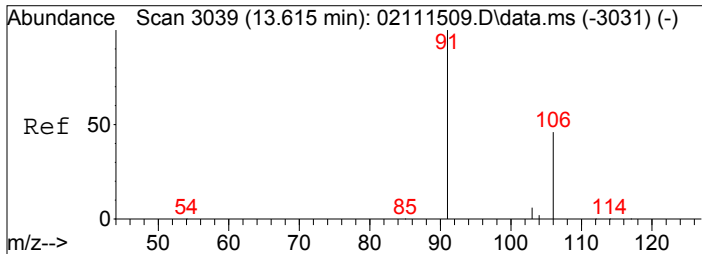
Tgt Ion:	166	Resp:	1790
Ion Ratio	Lower	Upper	
166	100		
129	71.3	53.3	93.3



#36
 Ethylbenzene
 Concen: 107.74 pg
 RT: 13.48 min Scan# 3014
 Delta R.T. -0.004 min
 Lab File: 02281525.D
 Acq: 28 Feb 2015 14:43

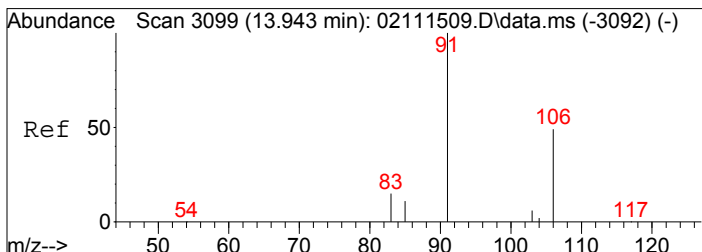
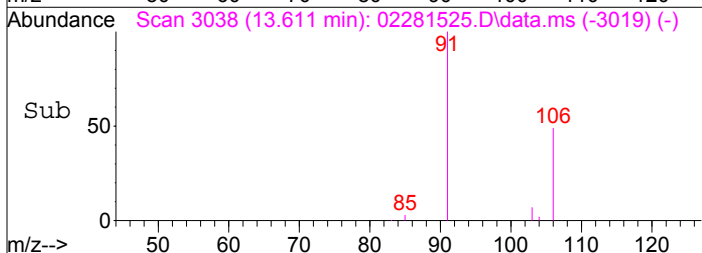
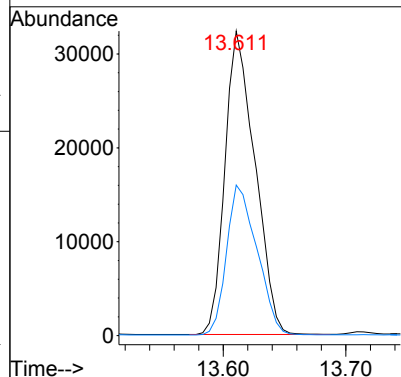
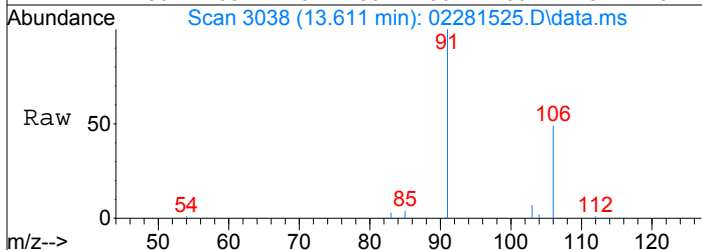
Tgt Ion:	91	Resp:	23120
Ion Ratio	Lower	Upper	
91	100		
106	31.4	10.9	50.9





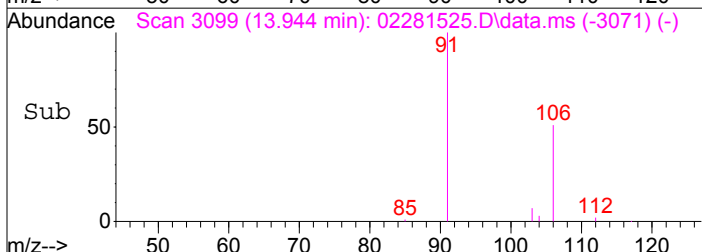
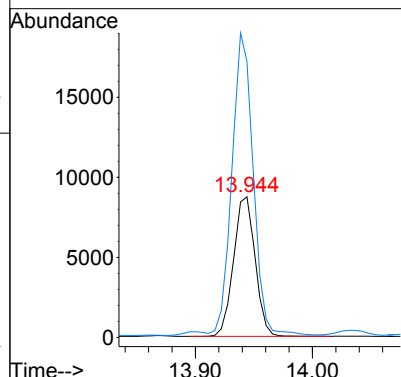
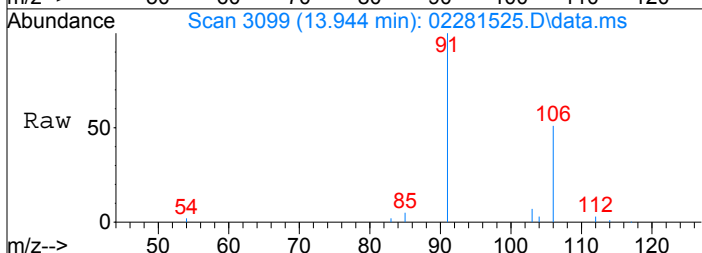
#37
m,p-Xylene
Concen: 311.41 pg
RT: 13.61 min Scan# 3038
Delta R.T. -0.004 min
Lab File: 02281525.D
Acq: 28 Feb 2015 14:43

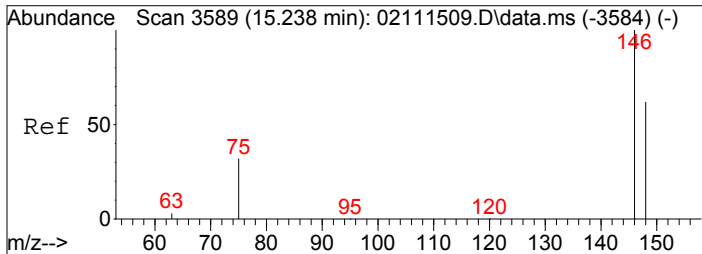
Tgt Ion: 91 Resp: 54925
Ion Ratio Lower Upper
91 100
106 50.2 27.5 67.5



#38
o-Xylene
Concen: 129.82 pg
RT: 13.94 min Scan# 3099
Delta R.T. 0.001 min
Lab File: 02281525.D
Acq: 28 Feb 2015 14:43

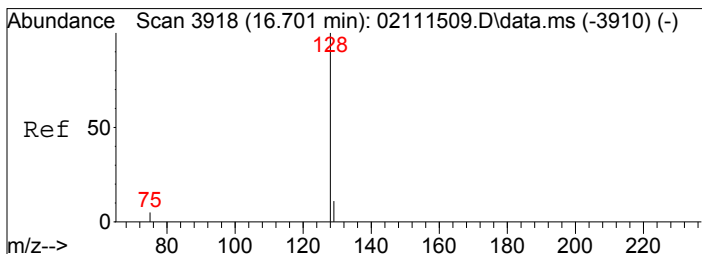
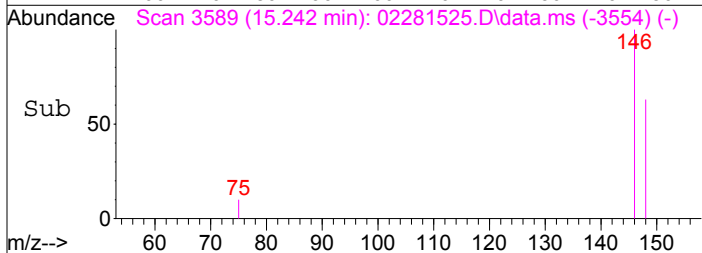
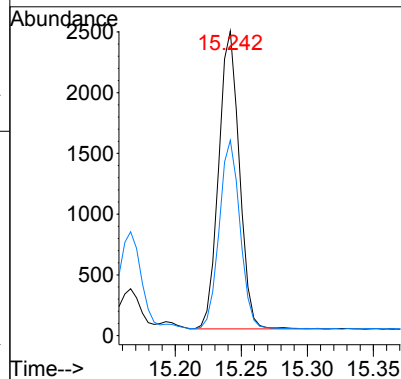
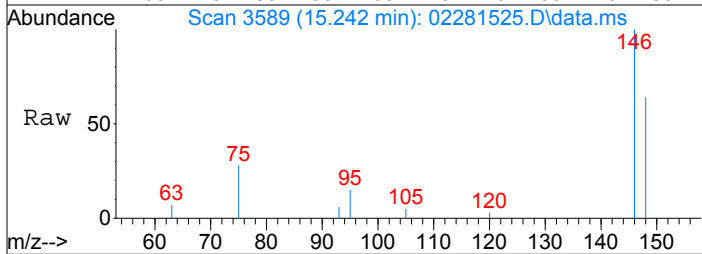
Tgt Ion: 106 Resp: 11190
Ion Ratio Lower Upper
106 100
91 211.3 198.3 238.3





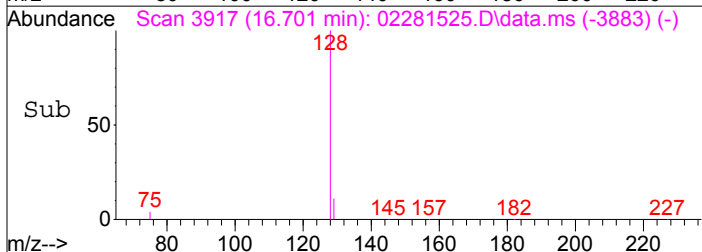
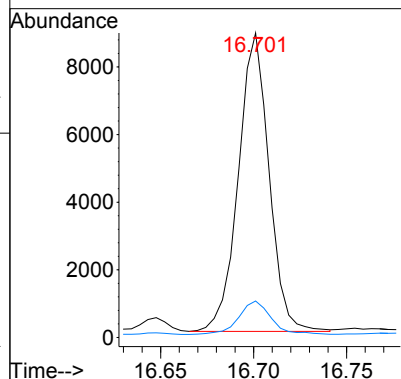
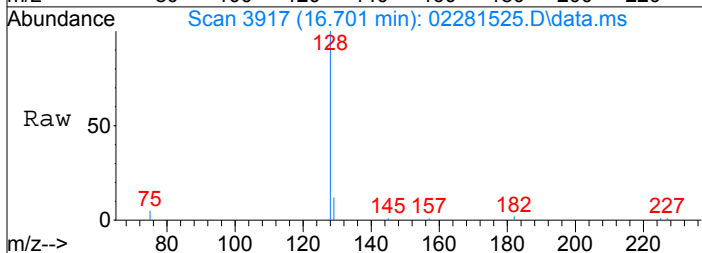
#42
 1,4-Dichlorobenzene
 Concen: 22.53 pg
 RT: 15.24 min Scan# 3589
 Delta R.T. 0.004 min
 Lab File: 02281525.D
 Acq: 28 Feb 2015 14:43

Tgt Ion:146	Resp:	2664
Ion Ratio	Lower	Upper
146	100	
148	63.4	43.5 83.5



#45
 Naphthalene
 Concen: 47.29 pg
 RT: 16.70 min Scan# 3917
 Delta R.T. 0.000 min
 Lab File: 02281525.D
 Acq: 28 Feb 2015 14:43

Tgt Ion:128	Resp:	10125
Ion Ratio	Lower	Upper
128	100	
129	11.9	0.0 30.9



Data File: I:\MS19\DATA\2015 02\28\02281525.D

Acq On : 28 Feb 2015 14:43

Operator: WA

Sample : P1500729-019 (1000mL)

Misc : S29-02041502

ALS Vial : 14 Sample Multiplier: 1

Quant Time: Mar 02 08:58:36 2015

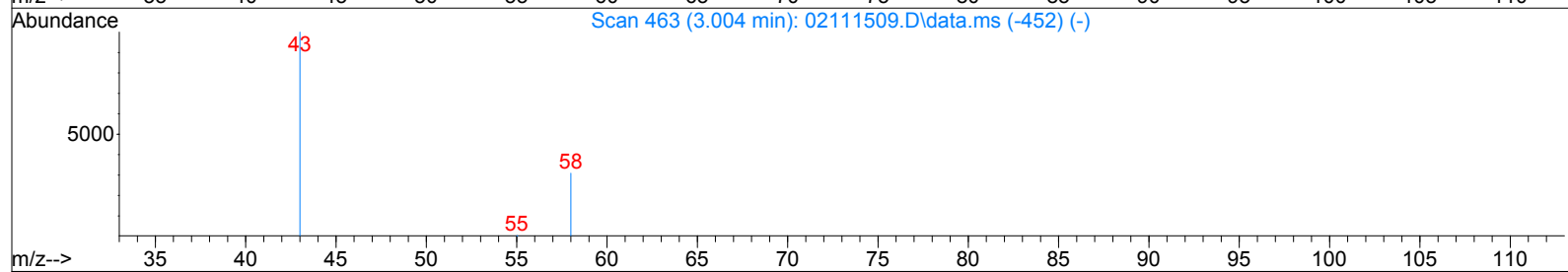
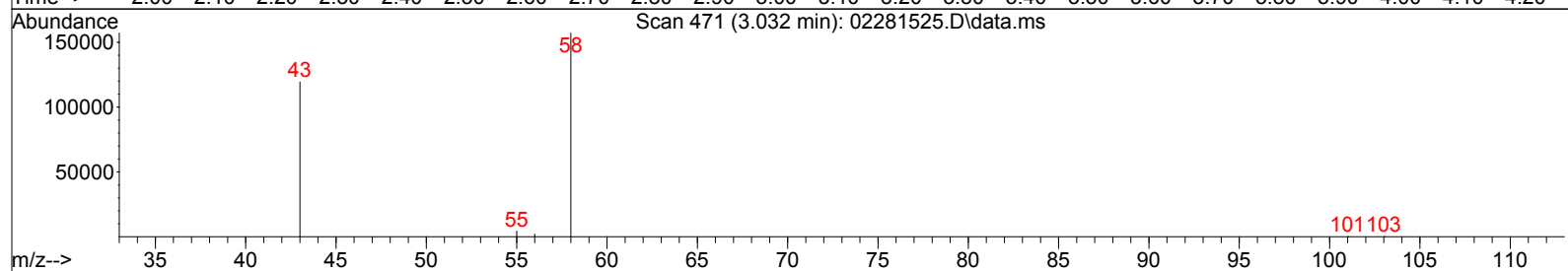
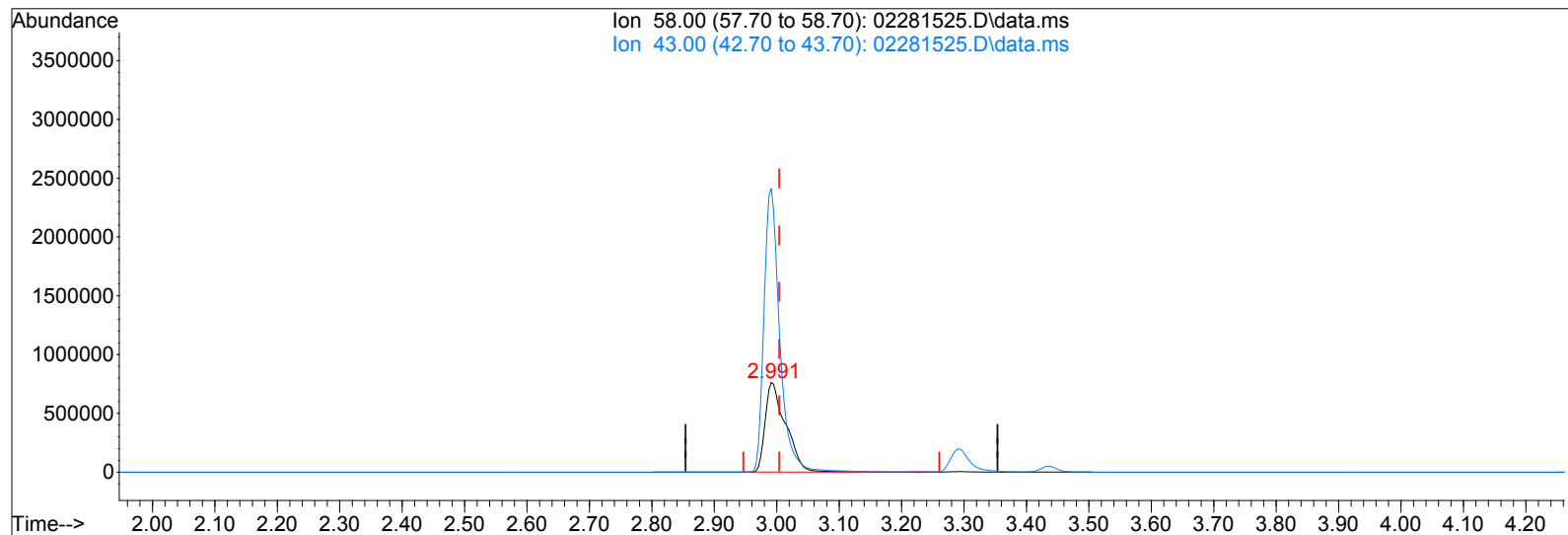
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



TIC: 02281525.D\data.ms

(7) Acetone (T)

2.991min (-0.013) 42706.87pg

response 1751568

Ion	Exp%	Act%
58.00	100	100
43.00	321.80	242.79#
0.00	0.00	0.00
0.00	0.00	0.00

Data File: I:\MS19\DATA\2015 02\28\02281525.D

Acq On : 28 Feb 2015 14:43

Operator: WA

Sample : P1500729-019 (1000mL)

Misc : S29-02041502

ALS Vial : 14 Sample Multiplier: 1

Quant Time: Mar 02 08:58:36 2015

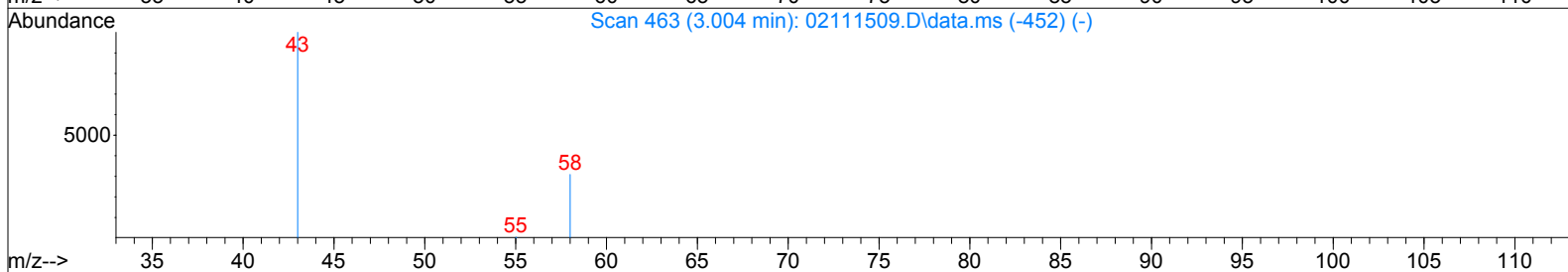
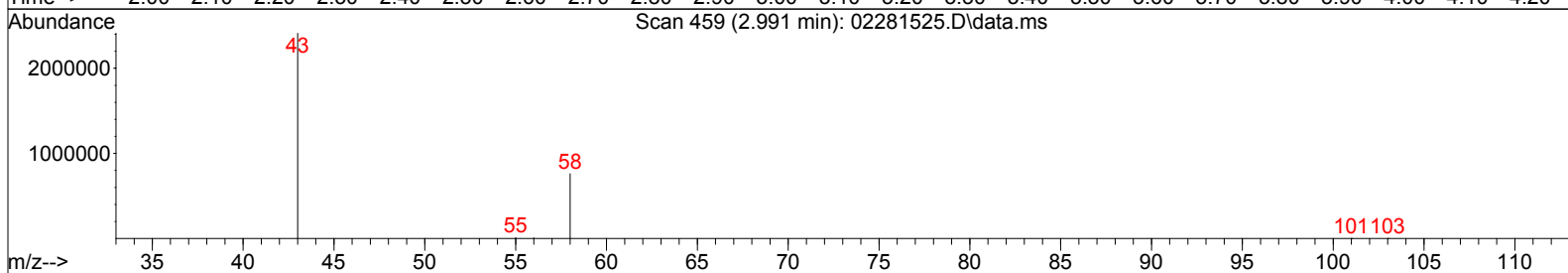
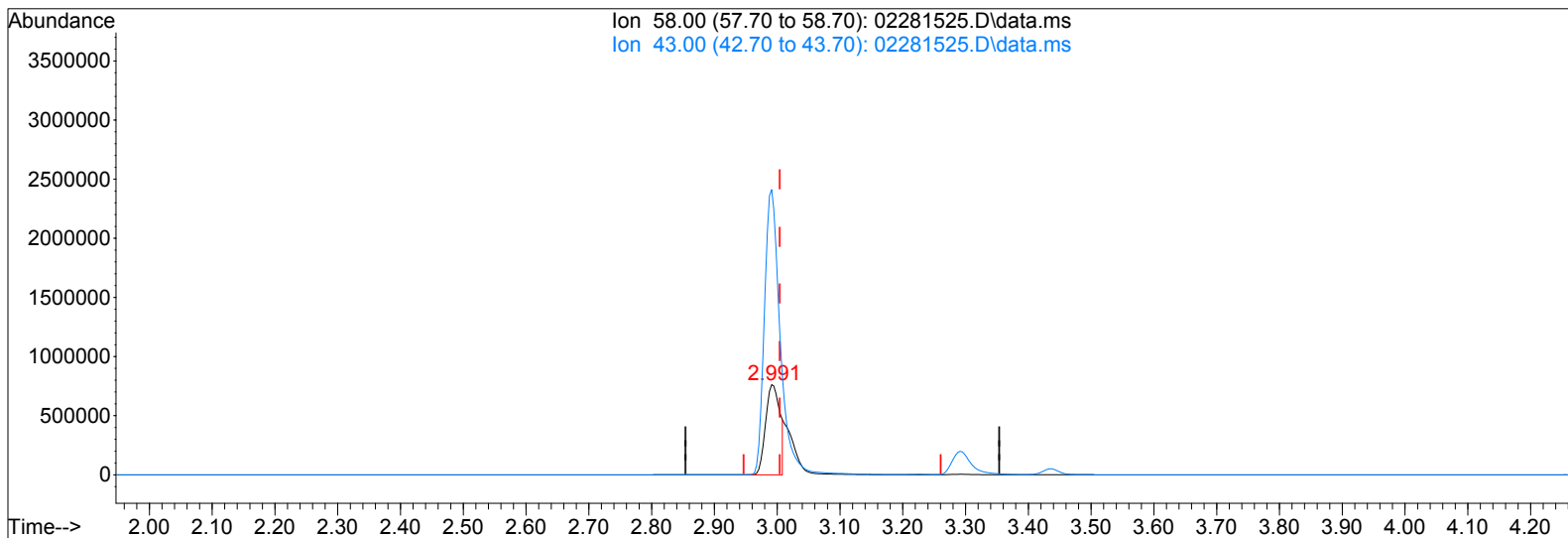
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



TIC: 02281525.D\data.ms

(7) Acetone (T)

2.991min (-0.013) 29474.99pg m

response 1208879

IPC

WA 3/2/15

Ion	Exp%	Act%
58.00	100	100
43.00	321.80	351.78#
0.00	0.00	0.00
0.00	0.00	0.00

3/3/15

Data File: I:\MS19\DATA\2015 02\28\02281526.D

Acq On : 28 Feb 2015 15:11

Operator: WA

Sample : P1500729-020 (1000mL)

Misc : S29-02041502

ALS Vial : 15 Sample Multiplier: 1

Quant Time: Mar 02 08:58:38 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

407 3/2/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.12	130	25949	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	186393	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	31649	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	57381	905.492	pg	0.00
Spiked Amount 1000.000			Recovery	=	90.55%	
30) Toluene-d8 (SS2)	11.38	98	173097	1007.030	pg	0.00
Spiked Amount 1000.000			Recovery	=	100.70%	
40) Bromofluorobenzene (SS3)	14.25	174	73671	1153.001	pg	0.00
Spiked Amount 1000.000			Recovery	=	115.30%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.74	85	170609	1617.804	pg	100
3) Chloromethane	1.85	52	10378	492.781	pg	93
4) Vinyl Chloride	2.02	62	188	N.D.		
5) Bromomethane	2.34	94	1354	28.553	pg	97
6) Chloroethane	2.48	64	447	N.D.		
7) Acetone	3.00	58	164454	4416.128	pg	92
8) Trichlorofluoromethane	3.11	101	124747	1377.152	pg	100
9) 1,1-Dichloroethene	3.67	96	82	N.D.		
10) Methylene Chloride	3.81	84	10961	255.012	pg	92
11) Trichlorotrifluoroethane	4.10	151	15721	377.698	pg	100
12) trans-1,2-Dichloroethene	4.74	96	234	N.D.		
13) 1,1-Dichloroethane	4.95	63	391	N.D.		
14) Methyl tert-Butyl Ether	5.12	73	375	N.D.		
15) cis-1,2-Dichloroethene	5.94	96	2388	52.004	pg	99
16) Chloroform	6.32	83	5443	68.415	pg	100
18) 1,2-Dichloroethane	7.27	62	3262	51.495	pg	100
19) 1,1,1-Trichloroethane	7.60	97	1109	N.D.		
20) Benzene	8.16	78	43291	264.559	pg	100
21) Carbon Tetrachloride	8.34	117	21777	375.979	pg	99
23) 1,2-Dichloropropane	9.16	63	722	N.D.		
24) Bromodichloromethane	9.40	83	355	N.D.		
25) Trichloroethene	9.46	130	1268	26.480	pg	97
26) 1,4-Dioxane	9.56	88	183	N.D.		
27) cis-1,3-Dichloropropene	10.46	75	402	N.D.		
28) trans-1,3-Dichloropropene	11.05	75	260	N.D.		
29) 1,1,2-Trichloroethane	11.20	83	134	N.D.		
31) Toluene	11.48	91	190366	1041.311	pg	100
32) 1,2-Dibromoethane	12.12	107	125	N.D.		
33) Tetrachloroethene	12.61	166	2710	47.876	pg	100
35) Chlorobenzene	13.17	112	1037	N.D.		
36) Ethylbenzene	13.48	91	13406	67.548	pg	100
37) m,p-Xylene	13.61	91	29659	181.827	pg	98
38) o-Xylene	13.94	106	6019	75.503	pg	99
39) 1,1,2,2-Tetrachloroethane	13.90	83	173	N.D.		
41) 1,3-Dichlorobenzene	15.20	146	195	N.D.		
42) 1,4-Dichlorobenzene	15.24	146	1793	N.D.		
43) 1,2-Dichlorobenzene	15.46	146	179	N.D.		
44) 1,2,4-Trichlorobenzene	16.63	182	170	N.D.		
45) Naphthalene	16.70	128	2577	N.D.		
46) Hexachlorobutadiene	16.94	225	103	N.D.		

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\28\02281526.D

Acq On : 28 Feb 2015 15:11

Operator: WA

Sample : P1500729-020 (1000mL)

Misc : S29-02041502

ALS Vial : 15 Sample Multiplier: 1

Quant Time: Mar 02 08:58:38 2015

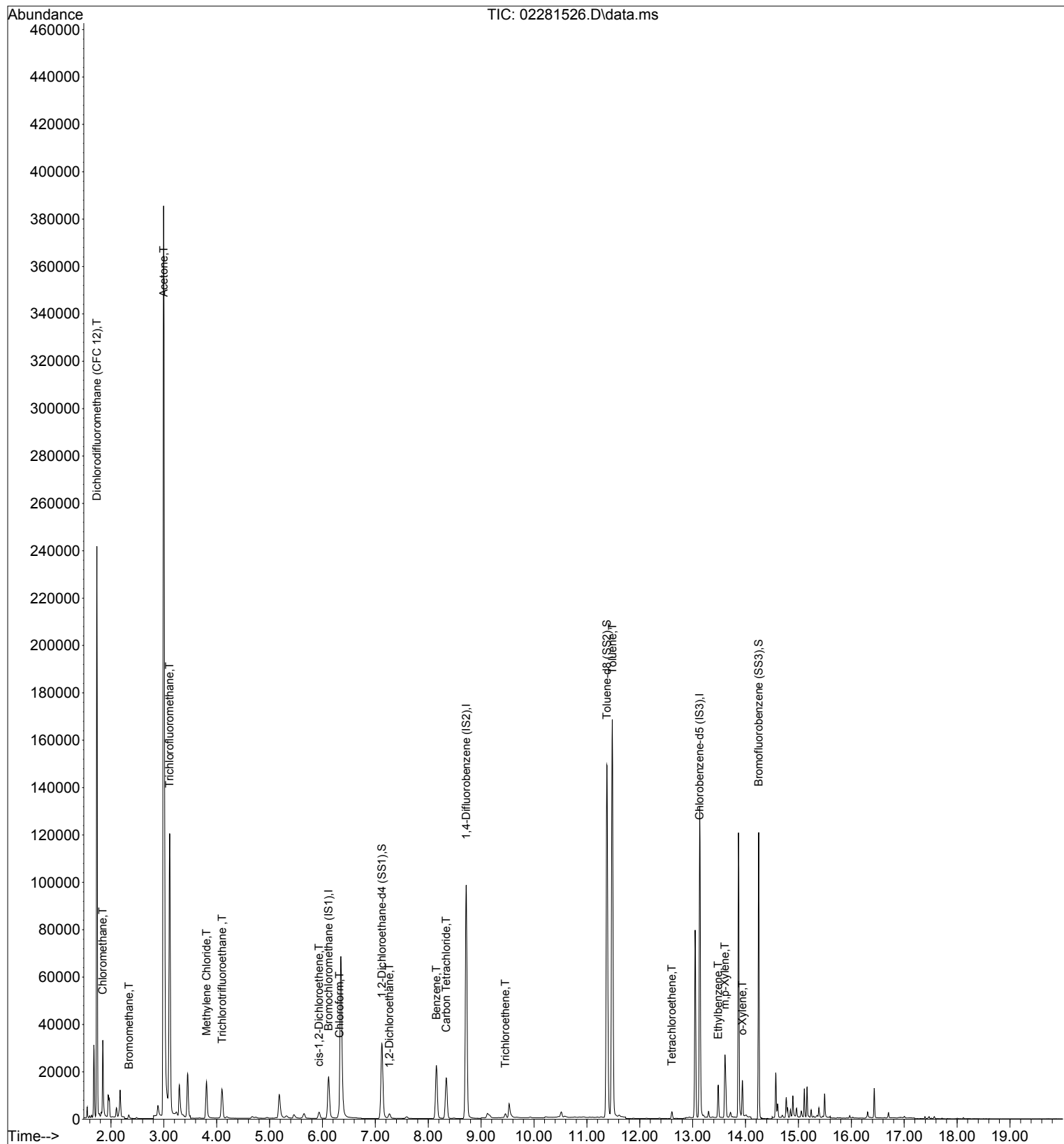
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 02\28\02281526.D

Acq On : 28 Feb 2015 15:11

Operator: WA

Sample : P1500729-020 (1000mL)

Misc : S29-02041502

ALS Vial : 15 Sample Multiplier: 1

Quant Time: Mar 02 08:58:38 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

~~WA~~ 3/2/15

DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.12	130	25949	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	186393	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	31649	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	57381	905.492	pg	0.00
Spiked Amount 1000.000			Recovery	=	90.55%	
30) Toluene-d8 (SS2)	11.38	98	173097	1007.030	pg	0.00
Spiked Amount 1000.000			Recovery	=	100.70%	
40) Bromofluorobenzene (SS3)	14.25	174	73671	1153.001	pg	0.00
Spiked Amount 1000.000			Recovery	=	115.30%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.74	85	170609	1617.804	pg	100
3) Chloromethane	1.85	52	10378	492.781	pg	93
5) Bromomethane	2.34	94	1354	28.553	pg	97
7) Acetone	3.00	58	164454	4416.128	pg	92
8) Trichlorofluoromethane	3.11	101	124747	1377.152	pg	100
10) Methylene Chloride	3.81	84	10961	255.012	pg	92
11) Trichlorotrifluoroethane	4.10	151	15721	377.698	pg	100
15) cis-1,2-Dichloroethene	5.94	96	2388	52.004	pg	99
16) Chloroform	6.32	83	5443	68.415	pg	100
18) 1,2-Dichloroethane	7.27	62	3262	51.495	pg	100
20) Benzene	8.16	78	43291	264.559	pg	100
21) Carbon Tetrachloride	8.34	117	21777	375.979	pg	99
25) Trichloroethene	9.46	130	1268	26.480	pg	97
31) Toluene	11.48	91	190366	1041.311	pg	100
33) Tetrachloroethene	12.61	166	2710	47.876	pg	100
36) Ethylbenzene	13.48	91	13406	67.548	pg	100
37) m,p-Xylene	13.61	91	29659	181.827	pg	98
38) o-Xylene	13.94	106	6019	75.503	pg	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File: I:\MS19\DATA\2015 02\28\02281526.D

Acq On : 28 Feb 2015 15:11

Operator: WA

Sample : P1500729-020 (1000mL)

Misc : S29-02041502

ALS Vial : 15 Sample Multiplier: 1

Quant Time: Mar 02 08:58:38 2015

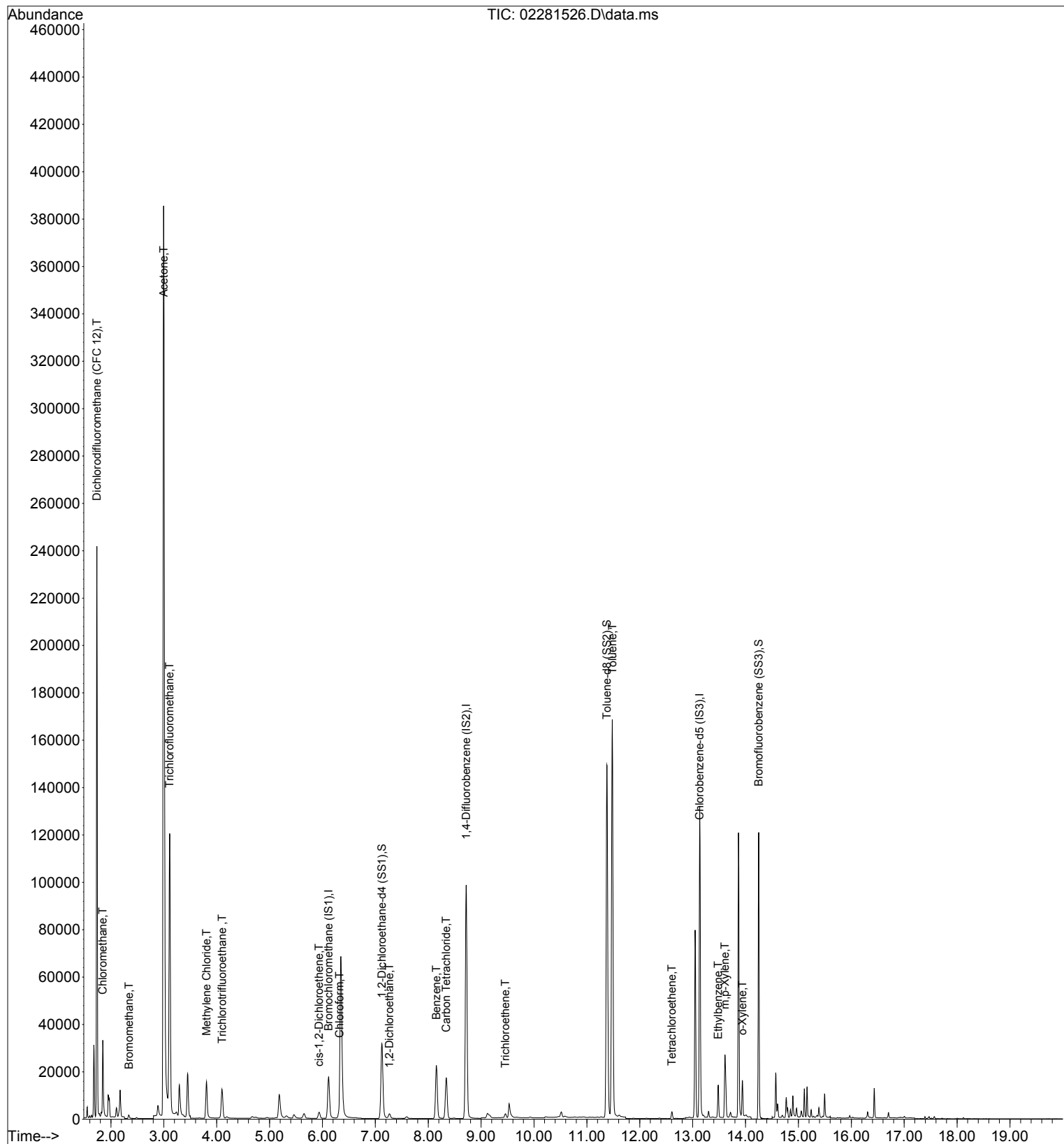
Quant Method : I:\MS19\METHODS\X19021115.M

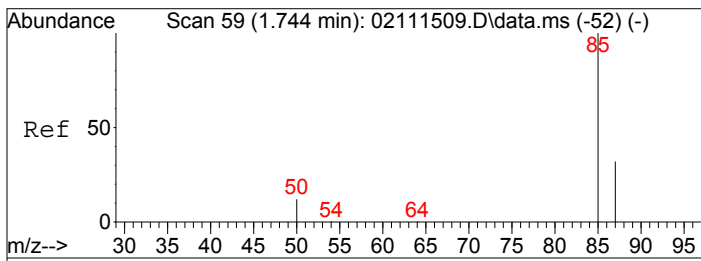
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

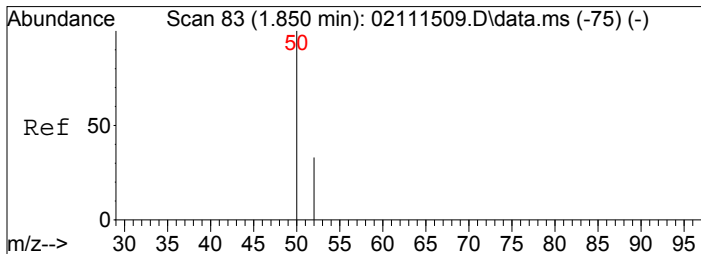
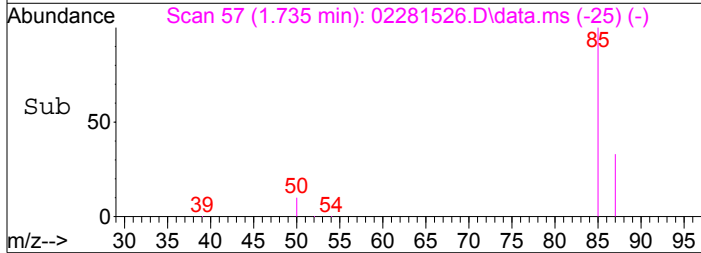
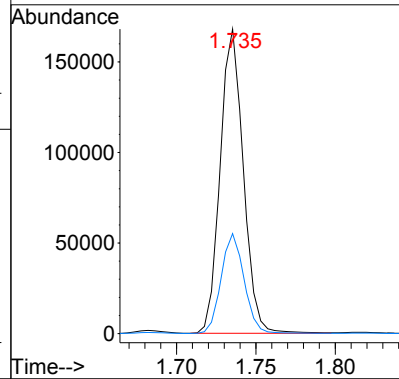
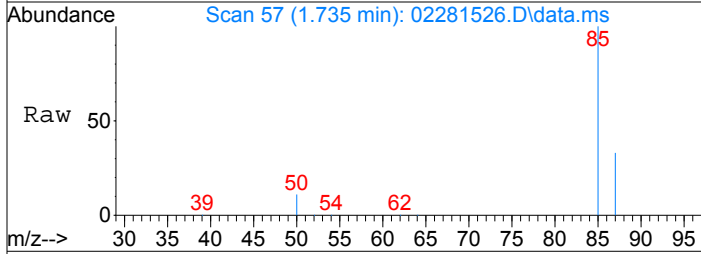
DataAcq Meth:TO15SIM.M





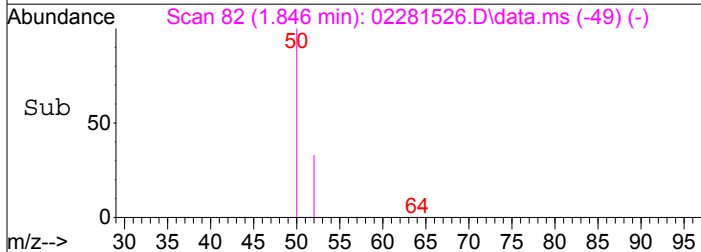
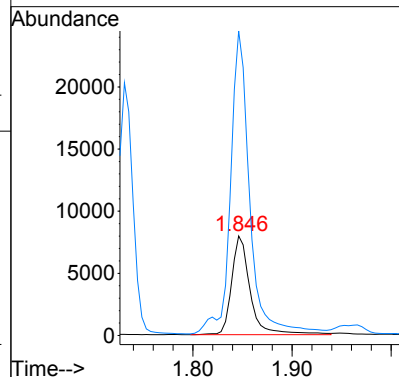
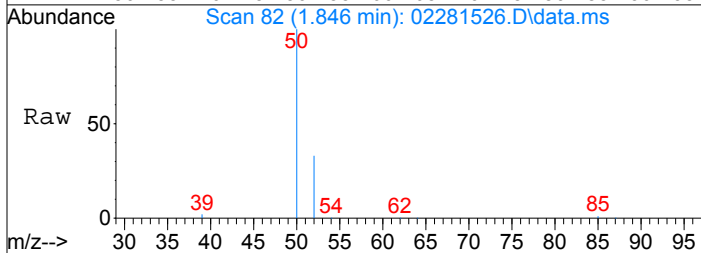
#2
 Dichlorodifluoromethane (CFC 12)
 Concen: 1617.80 pg
 RT: 1.74 min Scan# 57
 Delta R.T. -0.009 min
 Lab File: 02281526.D
 Acq: 28 Feb 2015 15:11

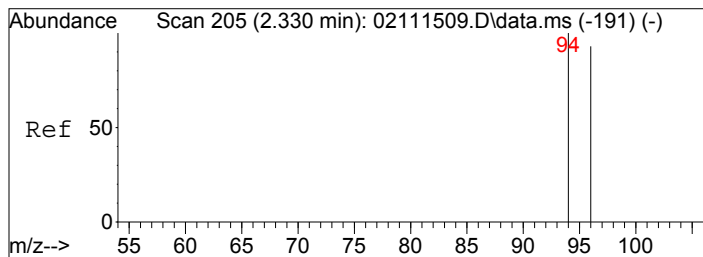
Tgt Ion: 85 Resp: 170609
 Ion Ratio Lower Upper
 85 100
 87 32.5 12.4 52.4



#3
 Chloromethane
 Concen: 492.78 pg
 RT: 1.85 min Scan# 82
 Delta R.T. -0.004 min
 Lab File: 02281526.D
 Acq: 28 Feb 2015 15:11

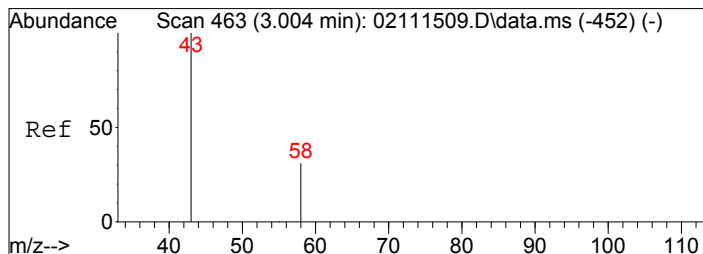
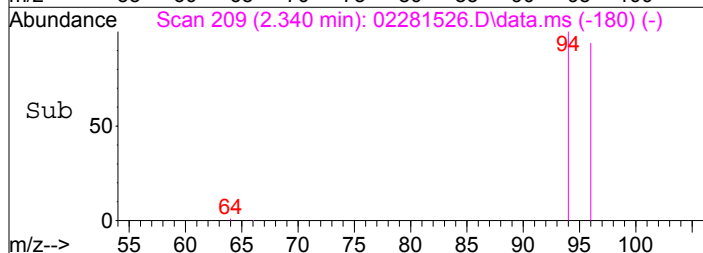
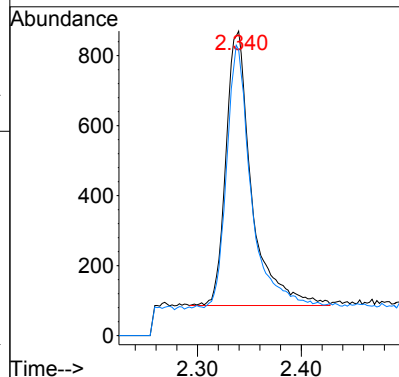
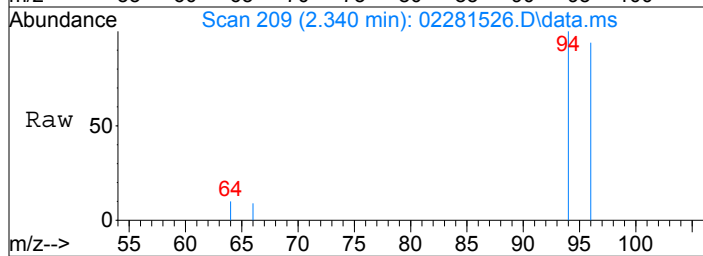
Tgt Ion: 52 Resp: 10378
 Ion Ratio Lower Upper
 52 100
 50 316.7 283.7 323.7





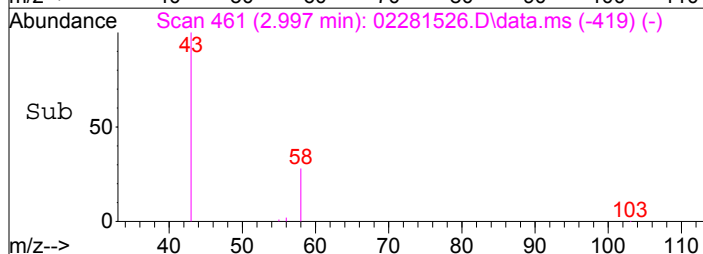
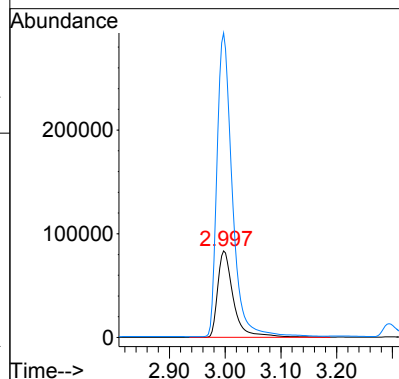
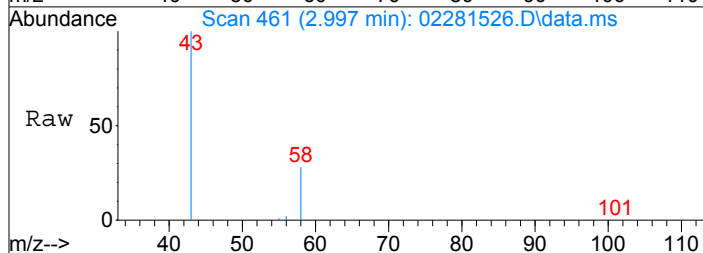
#5
Bromomethane
Concen: 28.55 pg
RT: 2.34 min Scan# 209
Delta R.T. 0.010 min
Lab File: 02281526.D
Acq: 28 Feb 2015 15:11

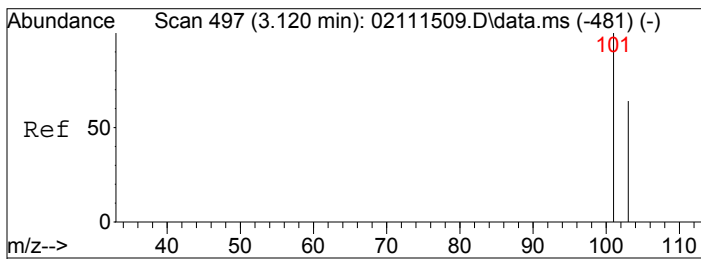
Tgt Ion: 94 Resp: 1354
Ion Ratio Lower Upper
94 100
96 91.9 75.5 113.3



#7
Acetone
Concen: 4416.13 pg
RT: 3.00 min Scan# 461
Delta R.T. -0.007 min
Lab File: 02281526.D
Acq: 28 Feb 2015 15:11

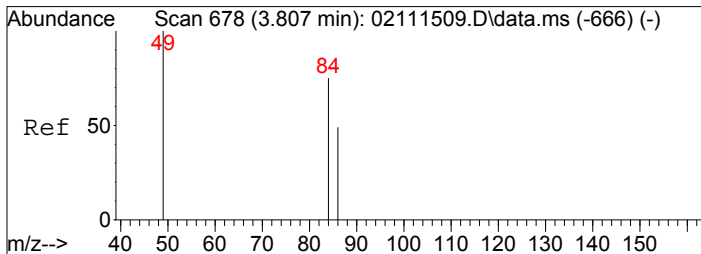
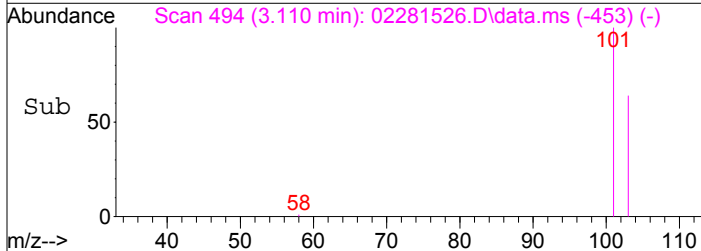
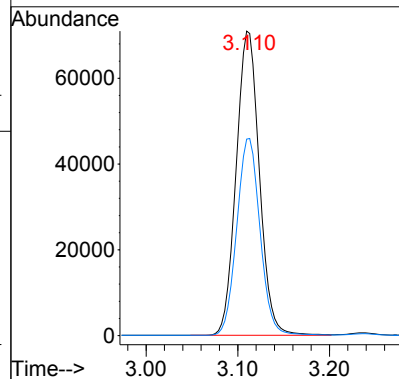
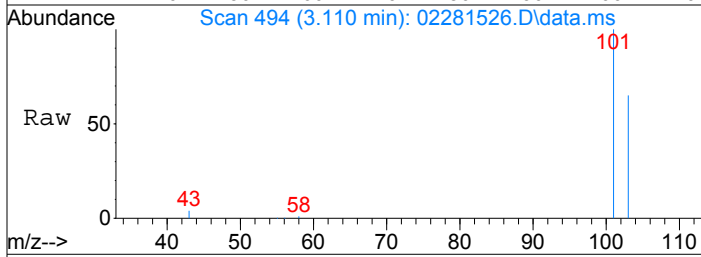
Tgt Ion: 58 Resp: 164454
Ion Ratio Lower Upper
58 100
43 338.4 301.8 341.8





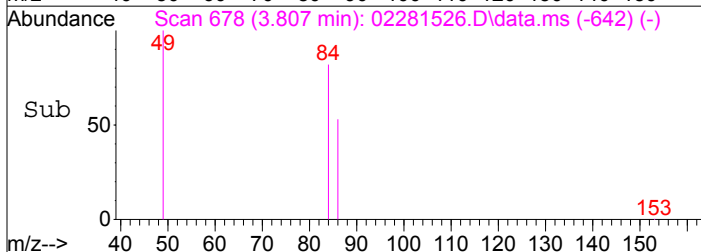
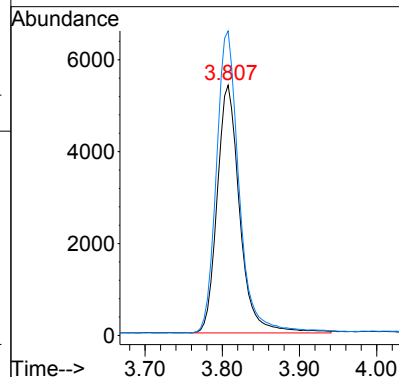
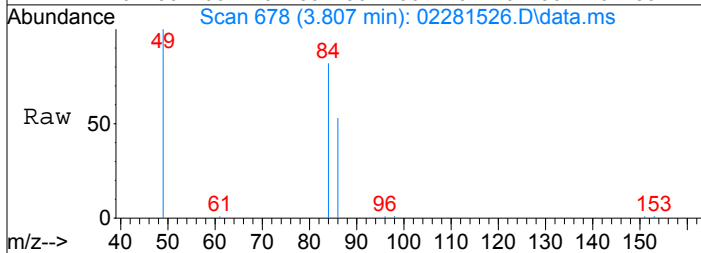
#8
 Trichlorofluoromethane
 Concen: 1377.15 pg
 RT: 3.11 min Scan# 494
 Delta R.T. -0.010 min
 Lab File: 02281526.D
 Acq: 28 Feb 2015 15:11

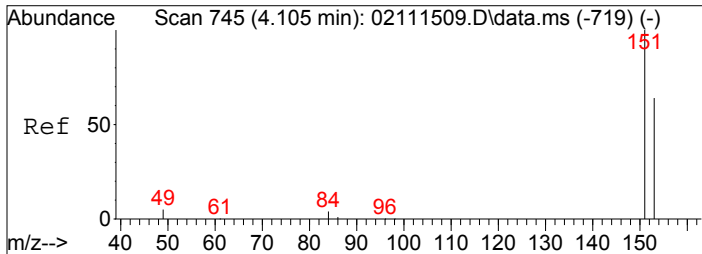
Tgt Ion: 101 Resp: 124747
 Ion Ratio Lower Upper
 101 100
 103 64.9 51.8 77.6



#10
 Methylene Chloride
 Concen: 255.01 pg
 RT: 3.81 min Scan# 678
 Delta R.T. 0.000 min
 Lab File: 02281526.D
 Acq: 28 Feb 2015 15:11

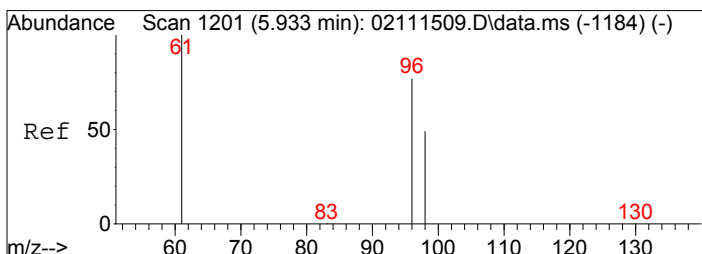
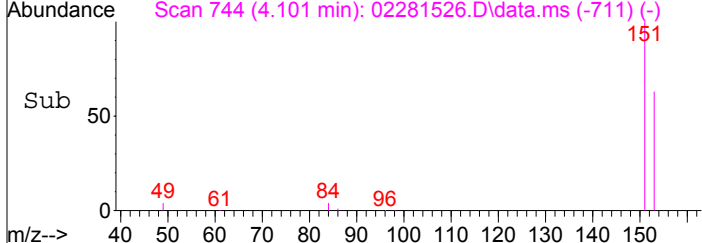
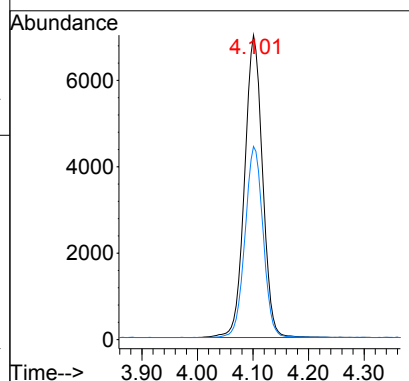
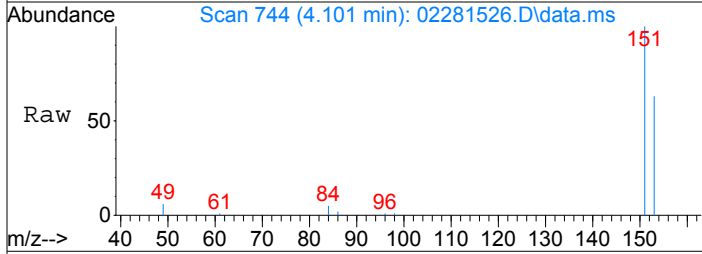
Tgt Ion: 84 Resp: 10961
 Ion Ratio Lower Upper
 84 100
 49 122.8 112.3 152.3





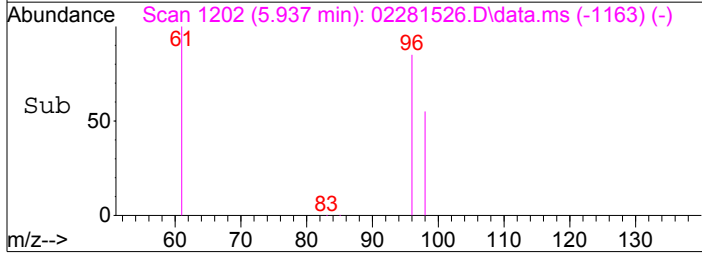
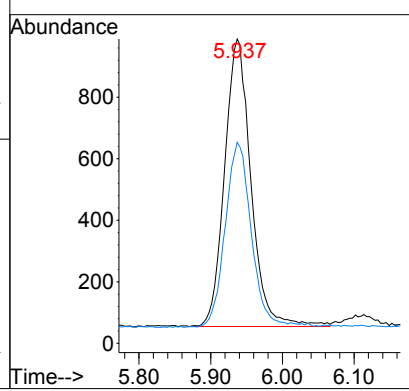
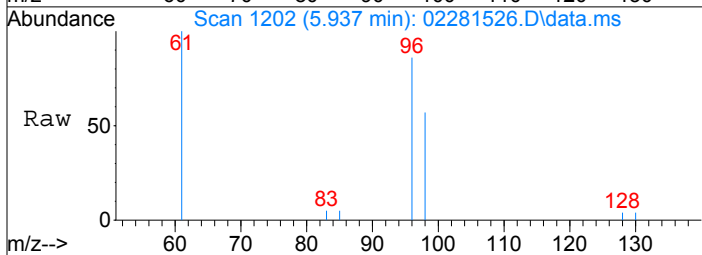
#11
 Trichlorotrifluoroethane
 Concen: 377.70 pg
 RT: 4.10 min Scan# 744
 Delta R.T. -0.004 min
 Lab File: 02281526.D
 Acq: 28 Feb 2015 15:11

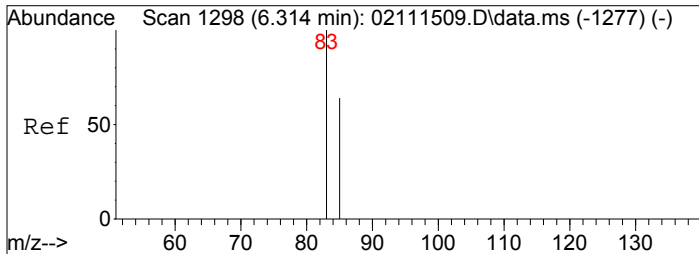
Tgt Ion: 151	Resp: 15721
Ion Ratio	Lower Upper
151	100
153	63.6 43.6 83.6



#15
 cis-1,2-Dichloroethene
 Concen: 52.00 pg
 RT: 5.94 min Scan# 1202
 Delta R.T. 0.004 min
 Lab File: 02281526.D
 Acq: 28 Feb 2015 15:11

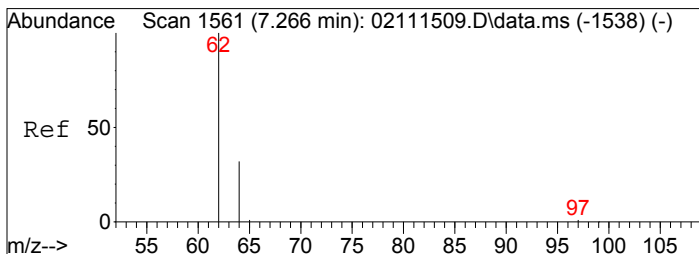
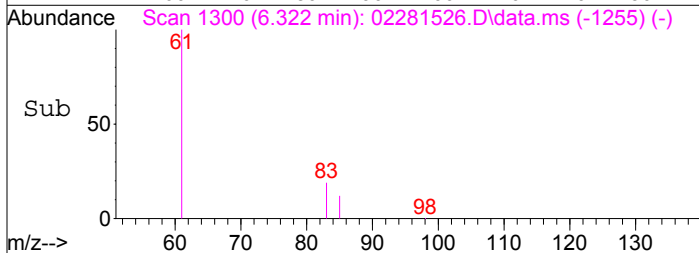
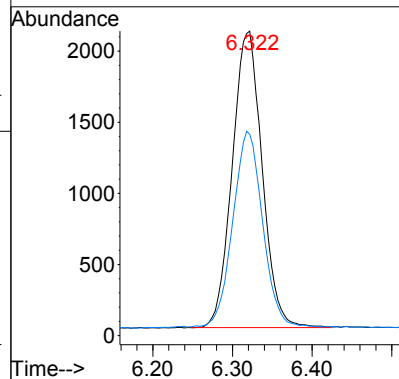
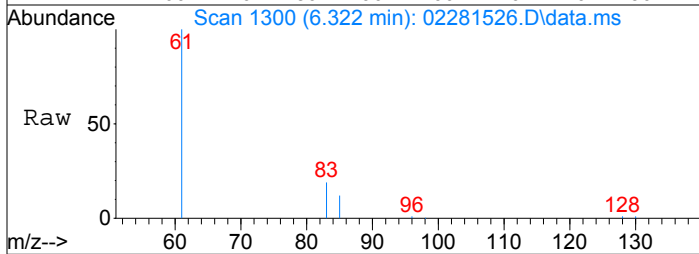
Tgt Ion: 96	Resp: 2388
Ion Ratio	Lower Upper
96	100
98	63.3 44.3 84.3





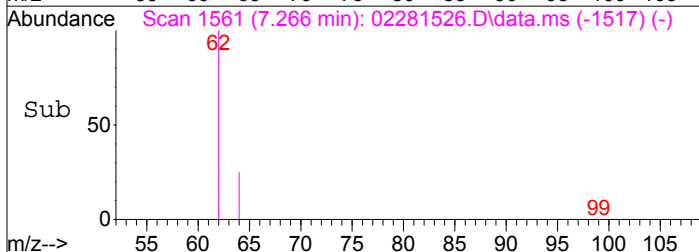
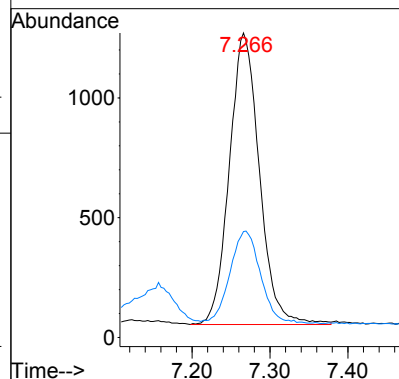
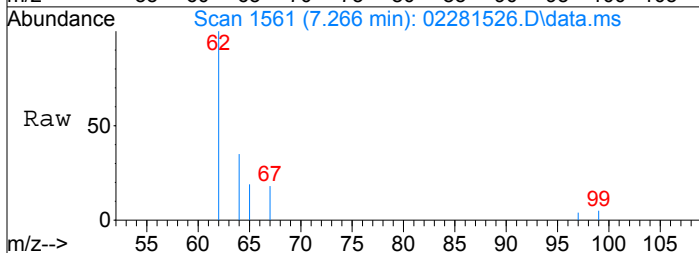
#16
Chloroform
Concen: 68.41 pg
RT: 6.32 min Scan# 1300
Delta R.T. 0.008 min
Lab File: 02281526.D
Acq: 28 Feb 2015 15:11

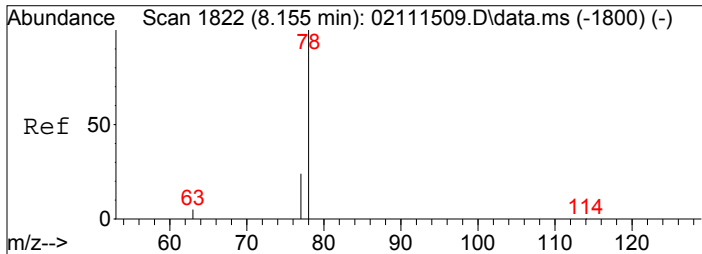
Tgt Ion:	83	Resp:	5443
Ion Ratio	Lower	Upper	
83	100		
85	65.6	45.4	85.4



#18
1,2-Dichloroethane
Concen: 51.49 pg
RT: 7.27 min Scan# 1561
Delta R.T. 0.000 min
Lab File: 02281526.D
Acq: 28 Feb 2015 15:11

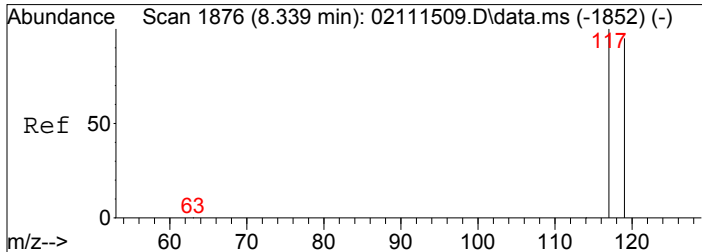
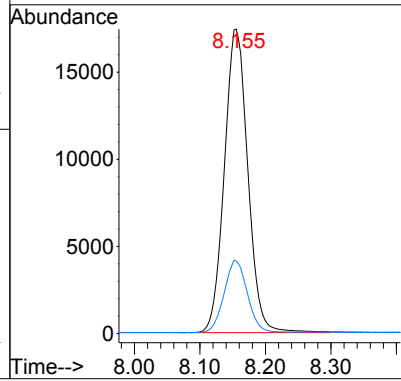
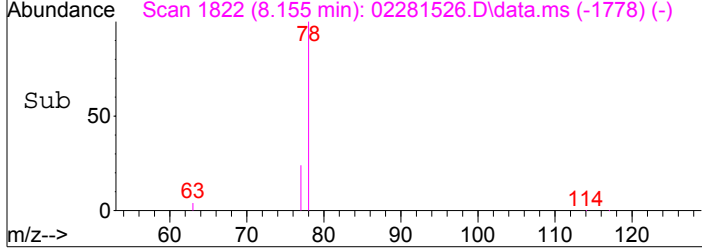
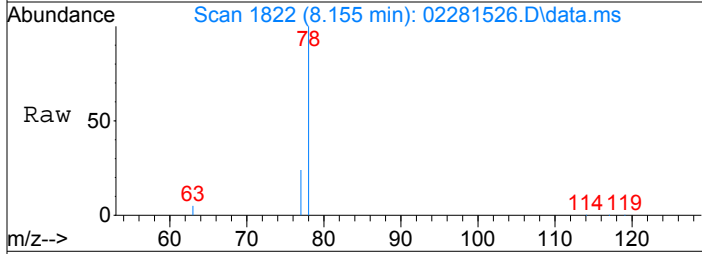
Tgt Ion:	62	Resp:	3262
Ion Ratio	Lower	Upper	
62	100		
64	31.8	11.6	51.6





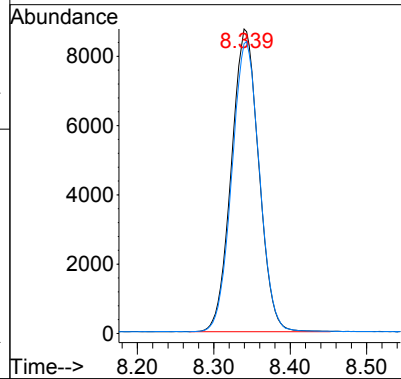
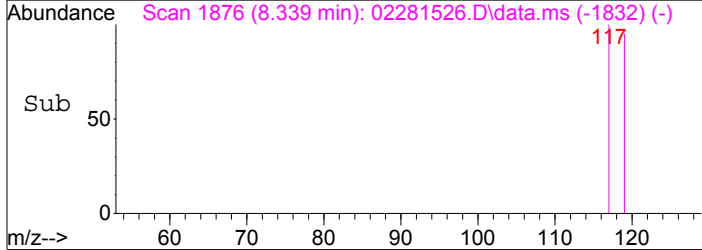
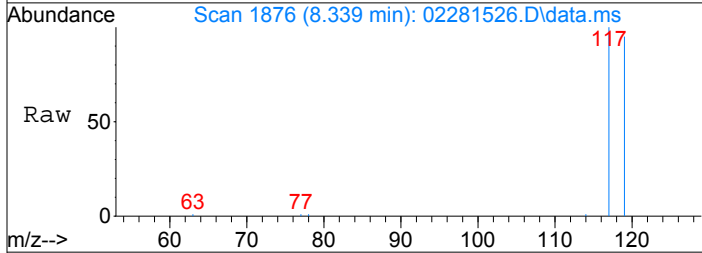
#20
Benzene
Concen: 264.56 pg
RT: 8.16 min Scan# 1822
Delta R.T. 0.000 min
Lab File: 02281526.D
Acq: 28 Feb 2015 15:11

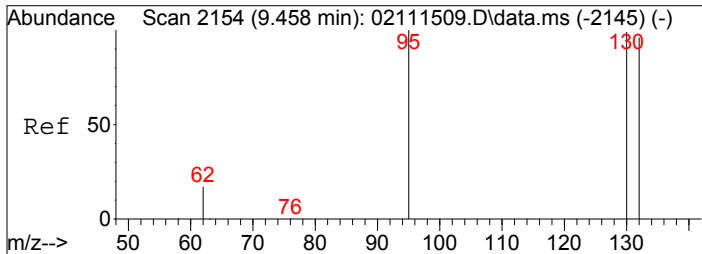
Tgt Ion: 78 Resp: 43291
Ion Ratio Lower Upper
78 100
77 23.6 3.7 43.7



#21
Carbon Tetrachloride
Concen: 375.98 pg
RT: 8.34 min Scan# 1876
Delta R.T. 0.000 min
Lab File: 02281526.D
Acq: 28 Feb 2015 15:11

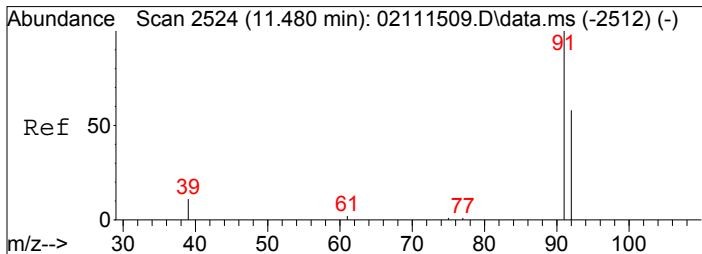
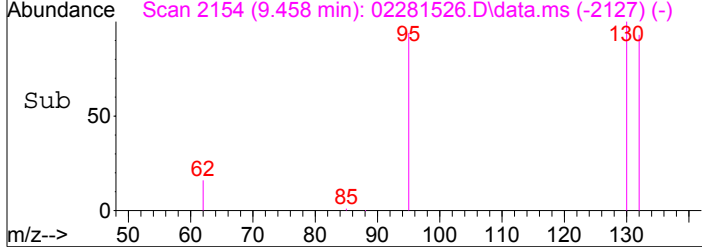
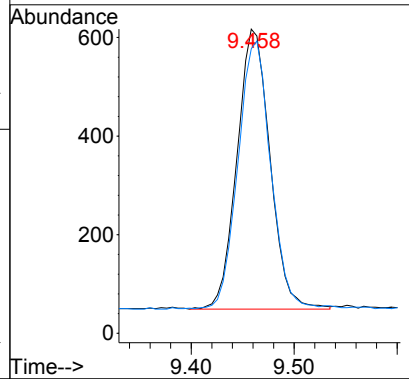
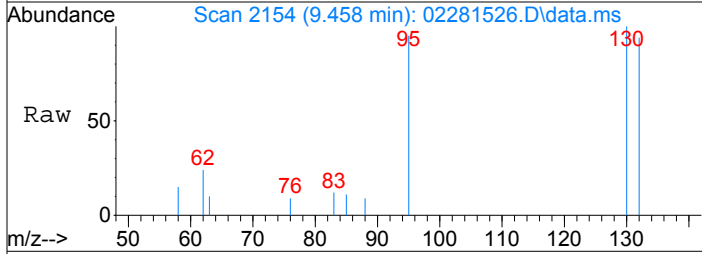
Tgt Ion: 117 Resp: 21777
Ion Ratio Lower Upper
117 100
119 96.3 75.5 115.5





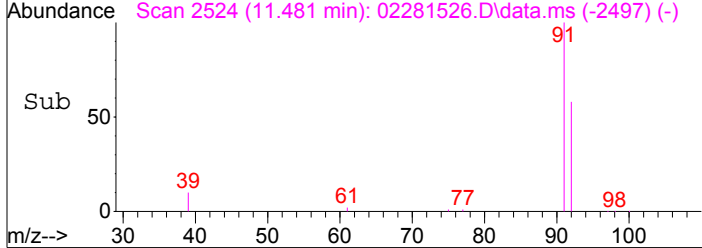
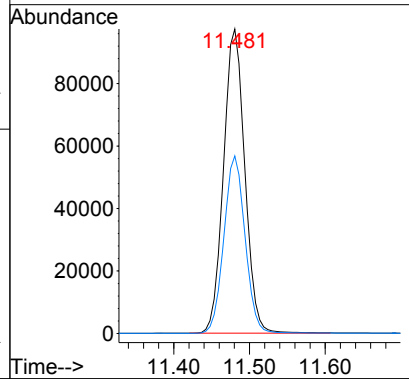
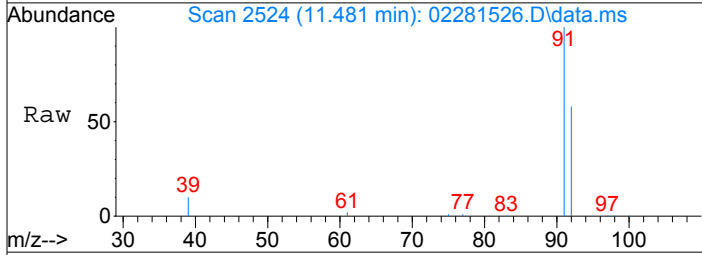
#25
 Trichloroethene
 Concen: 26.48 pg
 RT: 9.46 min Scan# 2154
 Delta R.T. 0.000 min
 Lab File: 02281526.D
 Acq: 28 Feb 2015 15:11

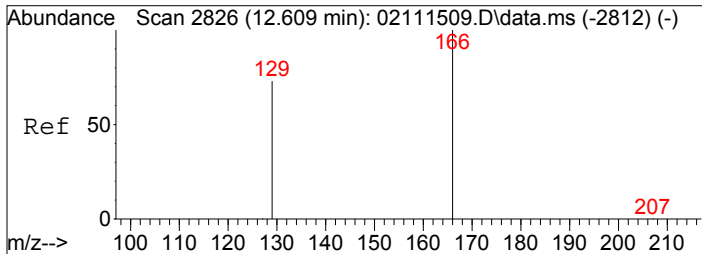
Tgt Ion: 130 Resp: 1268
 Ion Ratio Lower Upper
 130 100
 132 94.1 77.1 117.1



#31
 Toluene
 Concen: 1041.31 pg
 RT: 11.48 min Scan# 2524
 Delta R.T. 0.000 min
 Lab File: 02281526.D
 Acq: 28 Feb 2015 15:11

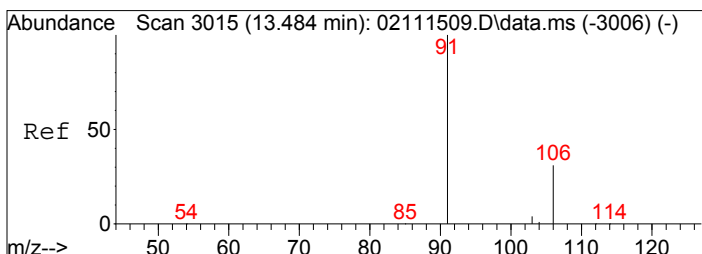
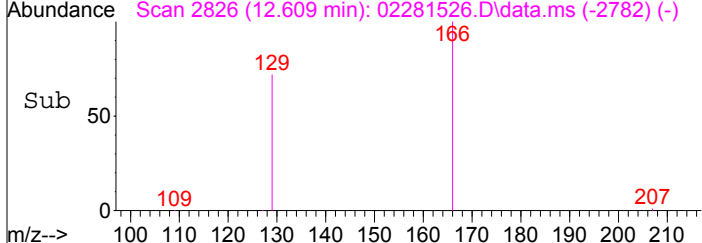
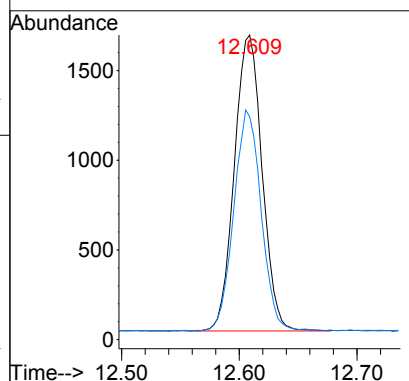
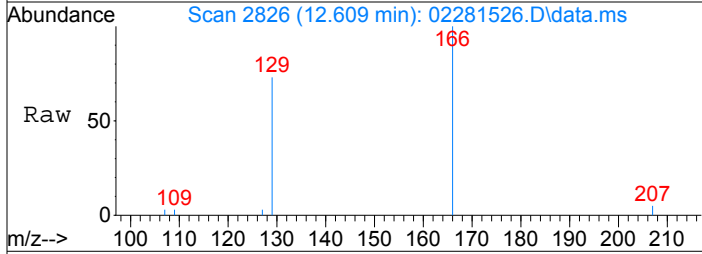
Tgt Ion: 91 Resp: 190366
 Ion Ratio Lower Upper
 91 100
 92 58.0 37.7 77.7





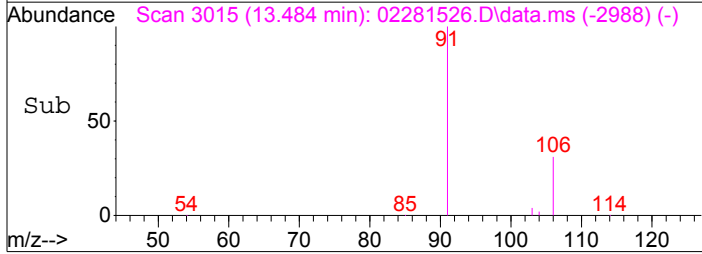
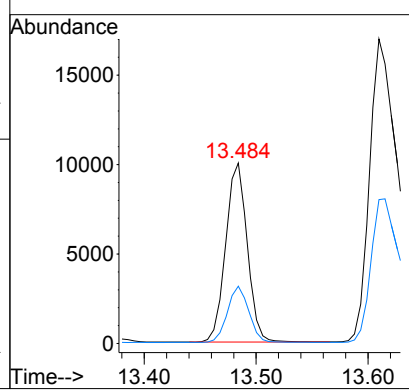
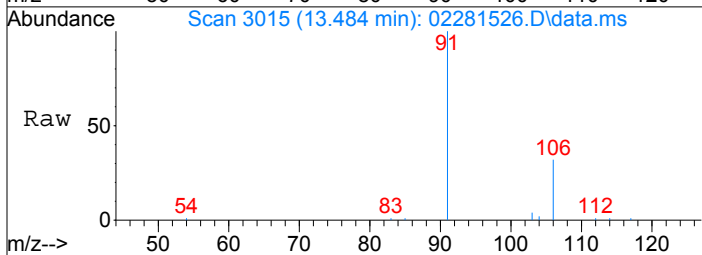
#33
 Tetrachloroethene
 Concen: 47.88 pg
 RT: 12.61 min Scan# 2826
 Delta R.T. -0.000 min
 Lab File: 02281526.D
 Acq: 28 Feb 2015 15:11

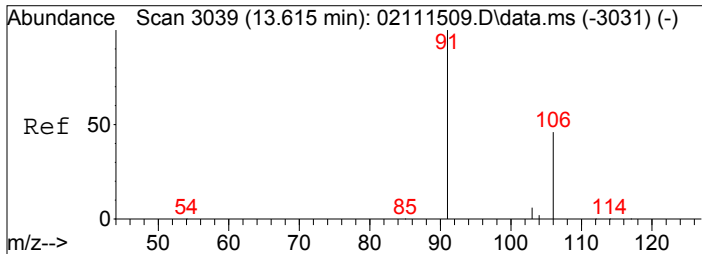
Tgt Ion:	166	Resp:	2710
Ion Ratio	Lower	Upper	
166	100		
129	73.1	53.3	93.3



#36
 Ethylbenzene
 Concen: 67.55 pg
 RT: 13.48 min Scan# 3015
 Delta R.T. 0.000 min
 Lab File: 02281526.D
 Acq: 28 Feb 2015 15:11

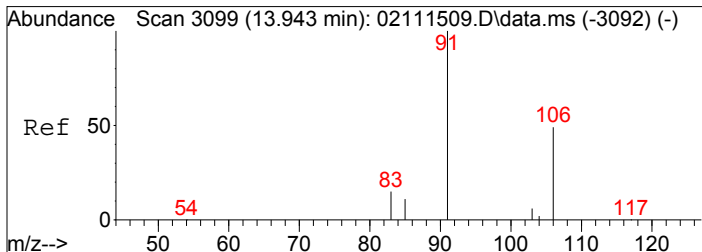
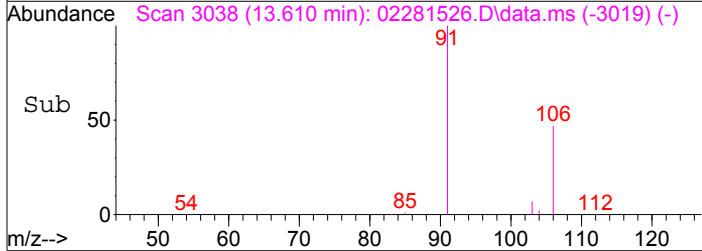
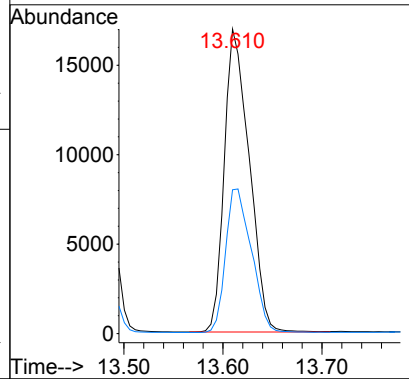
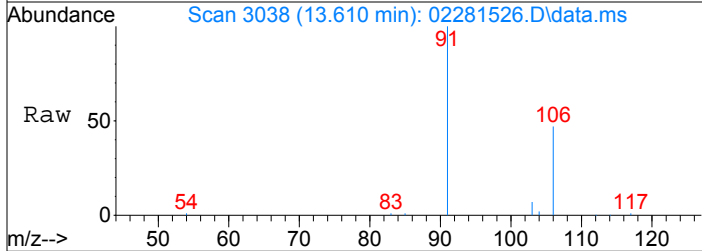
Tgt Ion:	91	Resp:	13406
Ion Ratio	Lower	Upper	
91	100		
106	31.1	10.9	50.9





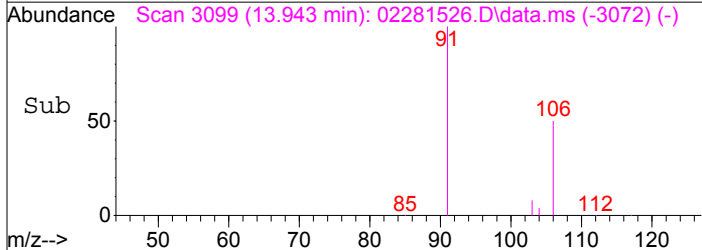
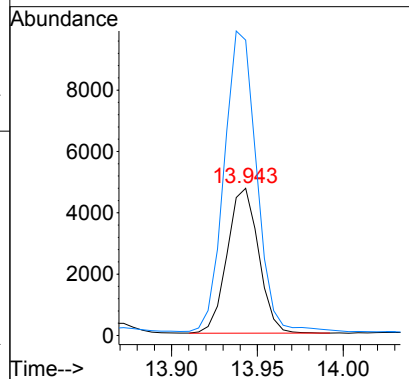
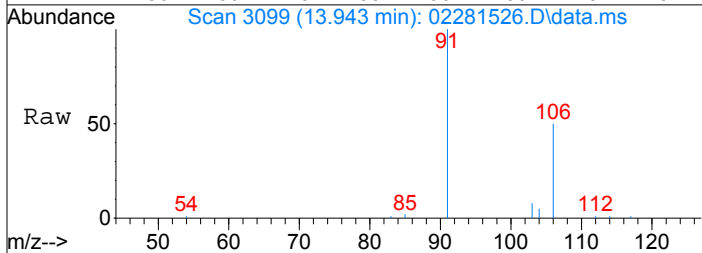
#37
 m,p-Xylene
 Concen: 181.83 pg
 RT: 13.61 min Scan# 3038
 Delta R.T. -0.005 min
 Lab File: 02281526.D
 Acq: 28 Feb 2015 15:11

Tgt Ion: 91 Resp: 29659
 Ion Ratio Lower Upper
 91 100
 106 49.1 27.5 67.5



#38
 o-Xylene
 Concen: 75.50 pg
 RT: 13.94 min Scan# 3099
 Delta R.T. 0.000 min
 Lab File: 02281526.D
 Acq: 28 Feb 2015 15:11

Tgt Ion: 106 Resp: 6019
 Ion Ratio Lower Upper
 106 100
 91 216.4 198.3 238.3



Data File: I:\MS19\DATA\2015 02\28\02281527.D

Acq On : 28 Feb 2015 15:38

Operator: WA

Sample : P1500729-021 (1000mL)

Misc : S29-02041502

ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 02 14:52:27 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

407 3/2/15

DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.13	130	28192	1000.000	pg	0.02
22) 1,4-Difluorobenzene (IS2)	8.73	114	195379	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	32087	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.14	65	58713	852.797	pg	0.01
Spiked Amount 1000.000			Recovery	=	85.28%	
30) Toluene-d8 (SS2)	11.38	98	183113	1016.304	pg	0.00
Spiked Amount 1000.000			Recovery	=	101.63%	
40) Bromofluorobenzene (SS3)	14.25	174	79010	1219.681	pg	0.00
Spiked Amount 1000.000			Recovery	=	121.97%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.72	85	169575	1480.065	pg	100
3) Chloromethane	1.84	52	10460	457.158	pg	96
4) Vinyl Chloride	2.01	62	292	N.D.		
5) Bromomethane	2.33	94	2604	50.544	pg	98
6) Chloroethane	2.48	64	1486	34.284	pg	100
7) Acetone	2.99	58	761169m	18813.647	pg	
8) Trichlorofluoromethane	3.11	101	286631	2912.525	pg	100
9) 1,1-Dichloroethene	3.67	96	152	N.D.		
10) Methylene Chloride	3.82	84	11148	238.728	pg	97
11) Trichlorotrifluoroethane	4.10	151	15149	334.999	pg	100
12) trans-1,2-Dichloroethene	4.75	96	232	N.D.		
13) 1,1-Dichloroethane	4.96	63	491	N.D.		
14) Methyl tert-Butyl Ether	0.00	73	0	N.D.	d	
15) cis-1,2-Dichloroethene	5.95	96	4327	86.733	pg	99
16) Chloroform	6.33	83	6109	70.677	pg	97
18) 1,2-Dichloroethane	7.28	62	3270	47.514	pg	98
19) 1,1,1-Trichloroethane	7.60	97	1790	21.296	pg	99
20) Benzene	8.16	78	40191	226.073	pg	99
21) Carbon Tetrachloride	8.34	117	20885	331.891	pg	99
23) 1,2-Dichloropropane	9.16	63	1665	39.073	pg	# 67
24) Bromodichloromethane	9.42	83	640	N.D.		
25) Trichloroethene	9.46	130	2047	40.782	pg	100
26) 1,4-Dioxane	9.53	88	508	N.D.		
27) cis-1,3-Dichloropropene	10.46	75	388	N.D.		
28) trans-1,3-Dichloropropene	11.06	75	234	N.D.		
29) 1,1,2-Trichloroethane	11.20	83	667	N.D.		
31) Toluene	11.48	91	162924	850.214	pg	100
32) 1,2-Dibromoethane	12.12	107	83	N.D.		
33) Tetrachloroethene	12.61	166	2019	34.028	pg	95
35) Chlorobenzene	13.17	112	762	N.D.		
36) Ethylbenzene	13.48	91	25643	127.442	pg	99
37) m,p-Xylene	13.61	91	58000	350.720	pg	96
38) o-Xylene	13.94	106	11900	147.238	pg	96
39) 1,1,2,2-Tetrachloroethane	13.97	83	881	N.D.		
41) 1,3-Dichlorobenzene	15.19	146	176	N.D.		
42) 1,4-Dichlorobenzene	15.24	146	2257	20.355	pg	99
43) 1,2-Dichlorobenzene	15.46	146	183	N.D.		
44) 1,2,4-Trichlorobenzene	16.63	182	236	N.D.		
45) Naphthalene	16.70	128	2928	N.D.		
46) Hexachlorobutadiene	16.96	225	111	N.D.		

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\28\02281527.D

Acq On : 28 Feb 2015 15:38

Operator: WA

Sample : P1500729-021 (1000mL)

Misc : S29-02041502

ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 02 14:52:27 2015

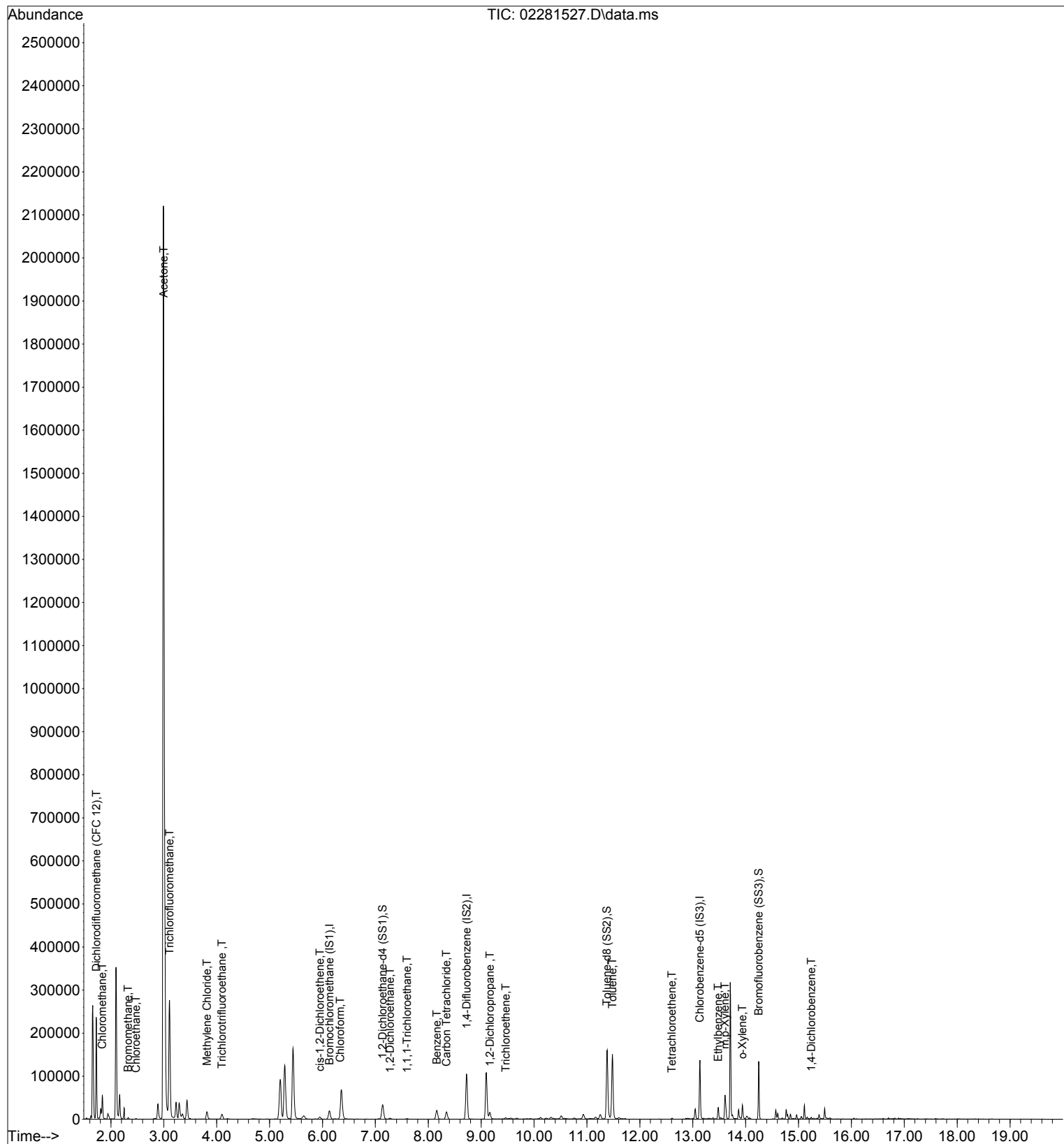
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 02\28\02281527.D

Acq On : 28 Feb 2015 15:38

Operator: WA

Sample : P1500729-021 (1000mL)

Misc : S29-02041502

ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 02 14:52:27 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

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DataAcq Meth:TO15SIM.M

WA 3/2/15

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System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.14	65	58713	852.797	pg	0.01
Spiked Amount 1000.000			Recovery	=	85.28%	
30) Toluene-d8 (SS2)	11.38	98	183113	1016.304	pg	0.00
Spiked Amount 1000.000			Recovery	=	101.63%	
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Spiked Amount 1000.000			Recovery	=	121.97%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.72	85	169575	1480.065	pg	100
3) Chloromethane	1.84	52	10460	457.158	pg	96
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6) Chloroethane	2.48	64	1486	34.284	pg	100
7) Acetone	2.99	58	761169m	18813.647	pg	
8) Trichlorofluoromethane	3.11	101	286631	2912.525	pg	100
10) Methylene Chloride	3.82	84	11148	238.728	pg	97
11) Trichlorotrifluoroethane	4.10	151	15149	334.999	pg	100
15) cis-1,2-Dichloroethene	5.95	96	4327	86.733	pg	99
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18) 1,2-Dichloroethane	7.28	62	3270	47.514	pg	98
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20) Benzene	8.16	78	40191	226.073	pg	99
21) Carbon Tetrachloride	8.34	117	20885	331.891	pg	99
23) 1,2-Dichloropropane	9.16	63	1665	39.073	pg	# 67
25) Trichloroethene	9.46	130	2047	40.782	pg	100
31) Toluene	11.48	91	162924	850.214	pg	100
33) Tetrachloroethene	12.61	166	2019	34.028	pg	95
36) Ethylbenzene	13.48	91	25643	127.442	pg	99
37) m,p-Xylene	13.61	91	58000	350.720	pg	96
38) o-Xylene	13.94	106	11900	147.238	pg	96
42) 1,4-Dichlorobenzene	15.24	146	2257	20.355	pg	99

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\28\02281527.D

Acq On : 28 Feb 2015 15:38

Operator: WA

Sample : P1500729-021 (1000mL)

Misc : S29-02041502

ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 02 14:52:27 2015

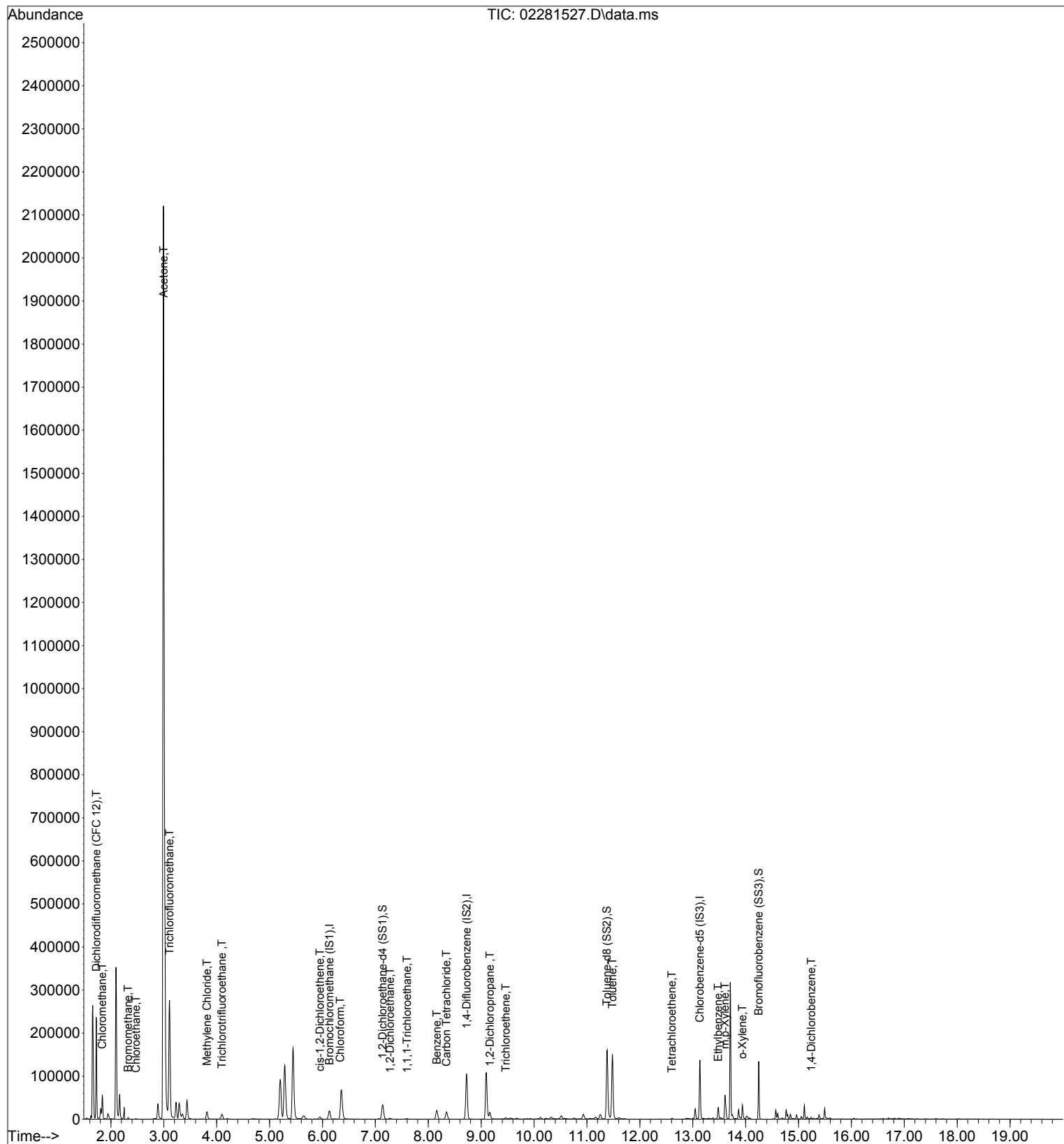
Quant Method : I:\MS19\METHODS\X19021115.M

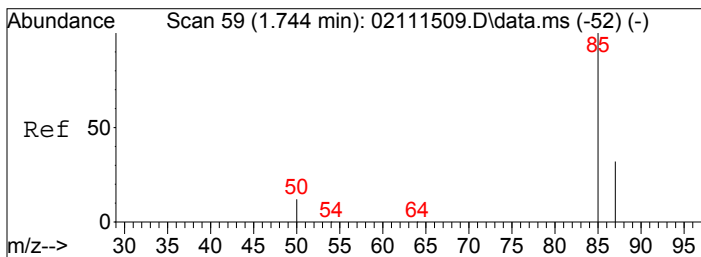
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

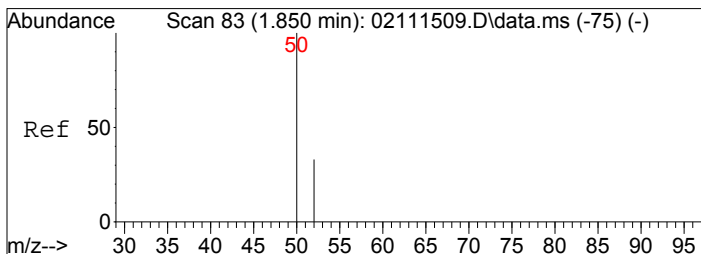
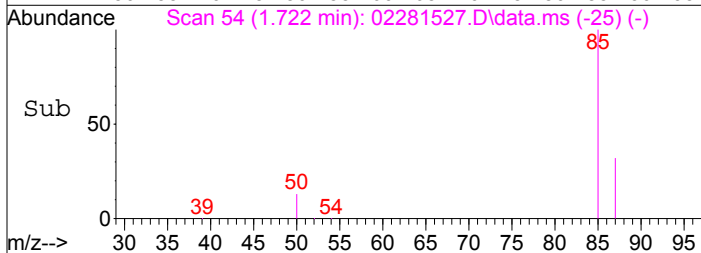
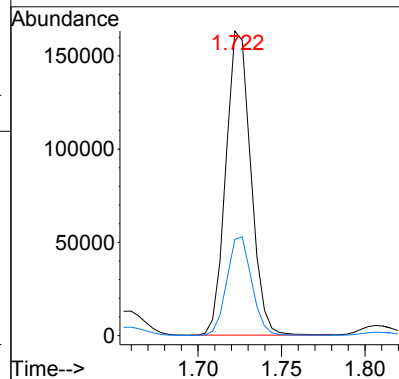
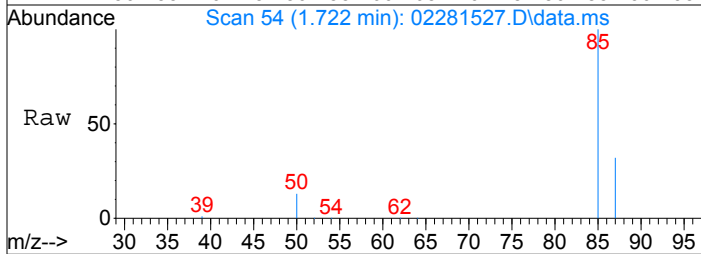
DataAcq Meth:TO15SIM.M





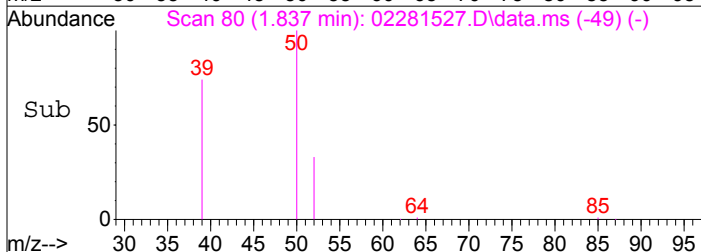
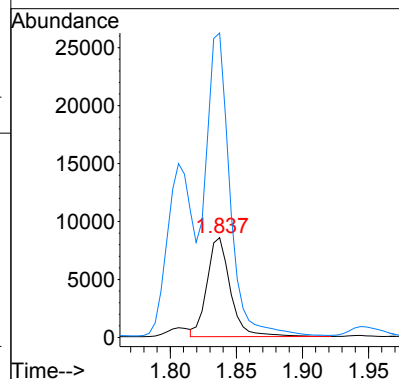
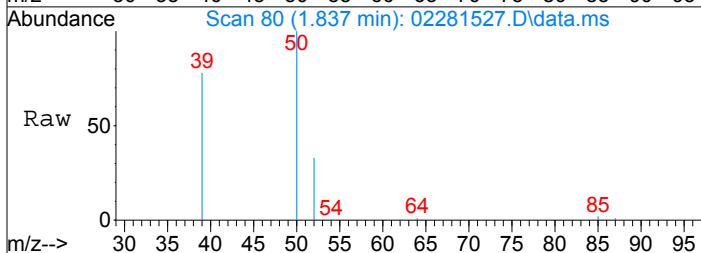
#2
 Dichlorodifluoromethane (CFC 12)
 Concen: 1480.06 pg
 RT: 1.72 min Scan# 54
 Delta R.T. -0.022 min
 Lab File: 02281527.D
 Acq: 28 Feb 2015 15:38

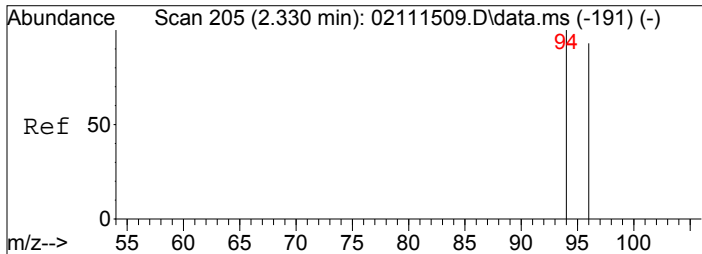
Tgt Ion: 85 Resp: 169575
 Ion Ratio Lower Upper
 85 100
 87 32.5 12.4 52.4



#3
 Chloromethane
 Concen: 457.16 pg
 RT: 1.84 min Scan# 80
 Delta R.T. -0.013 min
 Lab File: 02281527.D
 Acq: 28 Feb 2015 15:38

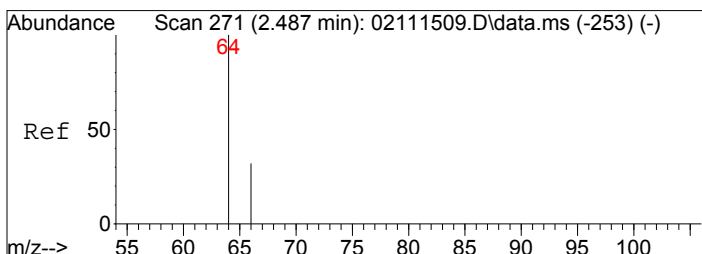
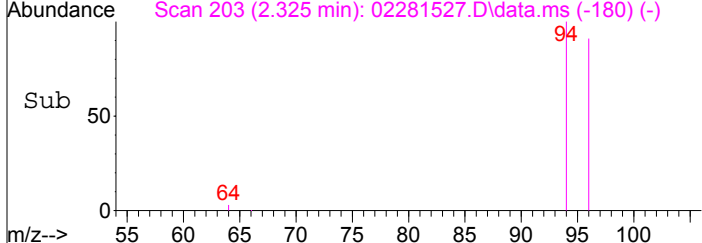
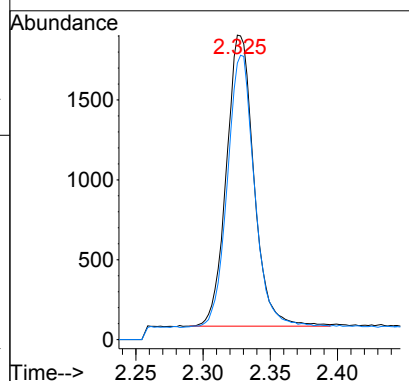
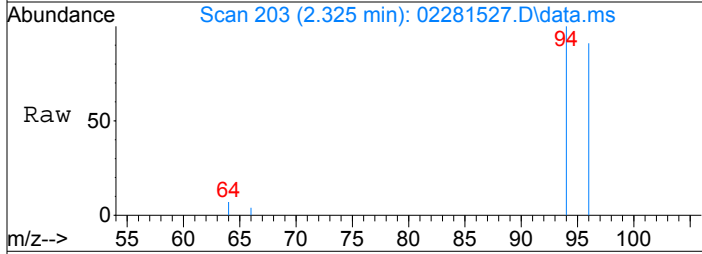
Tgt Ion: 52 Resp: 10460
 Ion Ratio Lower Upper
 52 100
 50 311.7 283.7 323.7





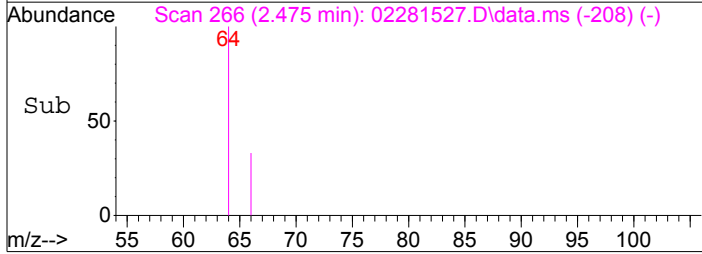
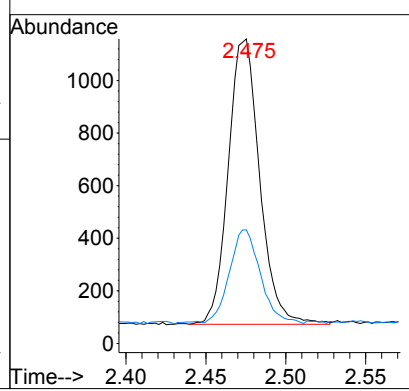
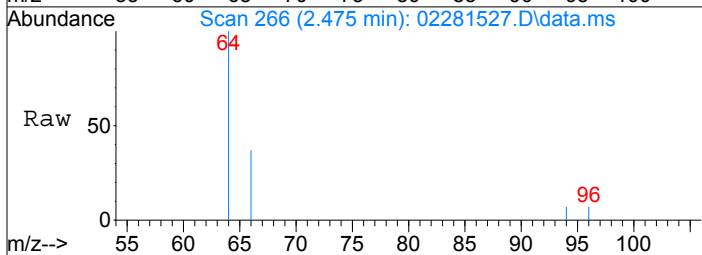
#5
 Bromomethane
 Concen: 50.54 pg
 RT: 2.33 min Scan# 203
 Delta R.T. -0.005 min
 Lab File: 02281527.D
 Acq: 28 Feb 2015 15:38

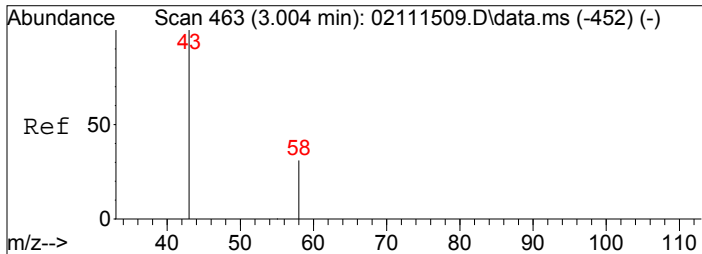
Tgt Ion: 94	Resp: 2604
Ion Ratio	Lower Upper
94	100
96	92.6 75.5 113.3



#6
 Chloroethane
 Concen: 34.28 pg
 RT: 2.48 min Scan# 266
 Delta R.T. -0.012 min
 Lab File: 02281527.D
 Acq: 28 Feb 2015 15:38

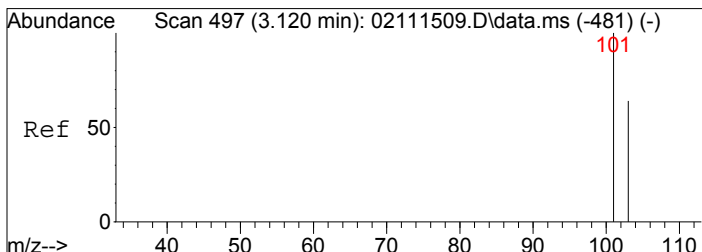
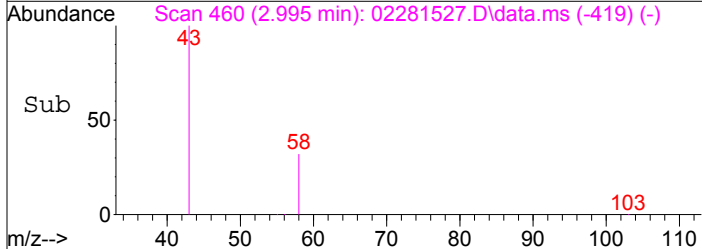
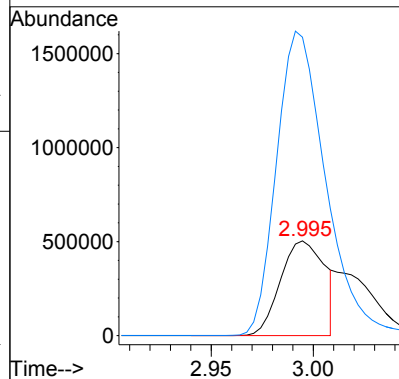
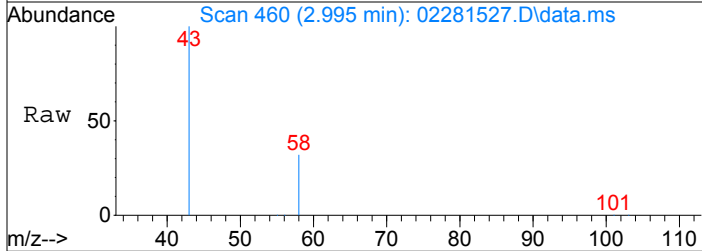
Tgt Ion: 64	Resp: 1486
Ion Ratio	Lower Upper
64	100
66	32.2 12.2 52.2





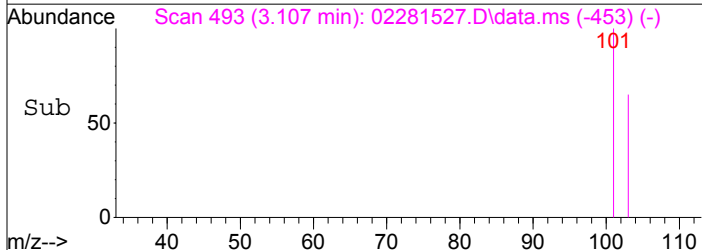
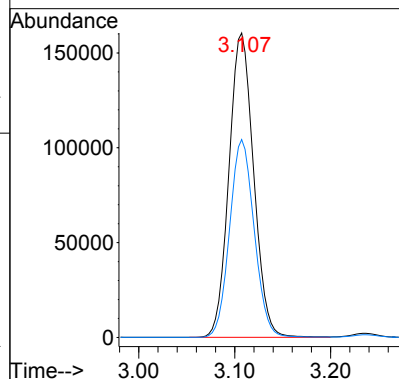
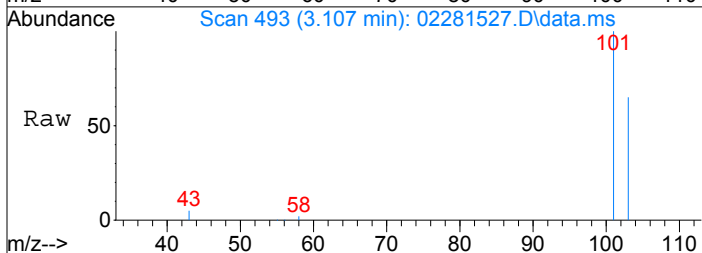
#7
Acetone
Concen: 18813.65 pg m
RT: 2.99 min Scan# 460
Delta R.T. -0.009 min
Lab File: 02281527.D
Acq: 28 Feb 2015 15:38

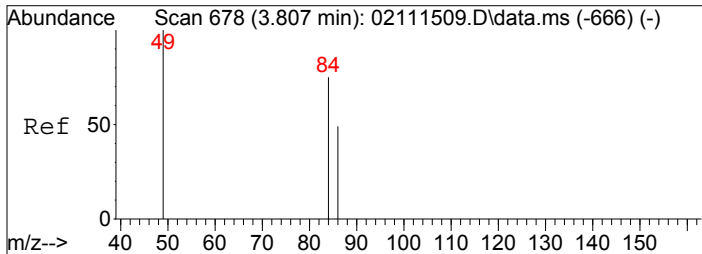
Tgt Ion: 58 Resp: 761169
Ion Ratio Lower Upper
58 100
43 364.2 301.8 341.8#



#8
Trichlorofluoromethane
Concen: 2912.52 pg
RT: 3.11 min Scan# 493
Delta R.T. -0.012 min
Lab File: 02281527.D
Acq: 28 Feb 2015 15:38

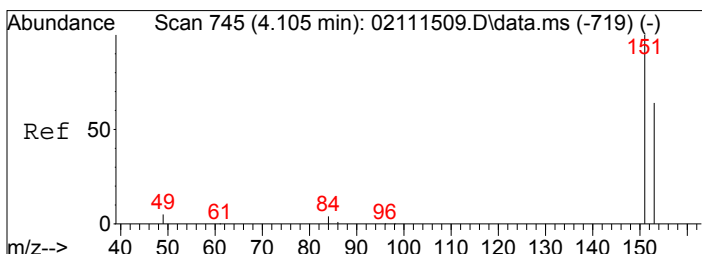
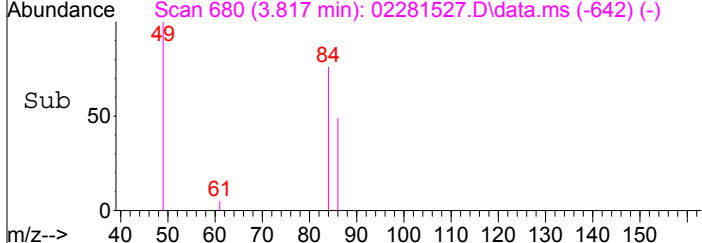
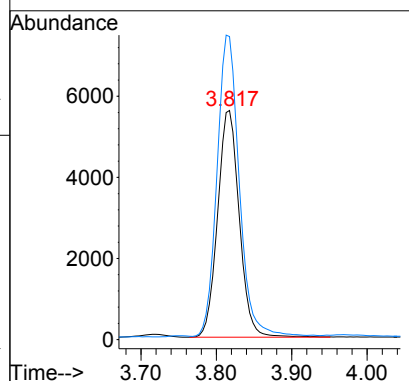
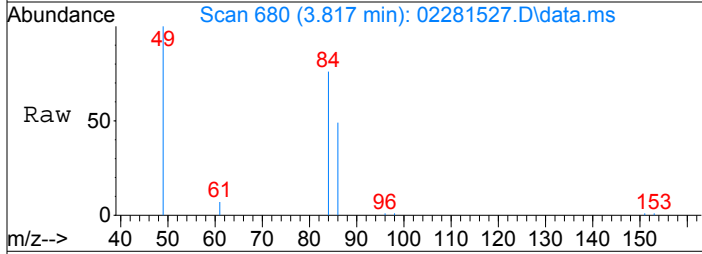
Tgt Ion: 101 Resp: 286631
Ion Ratio Lower Upper
101 100
103 64.8 51.8 77.6





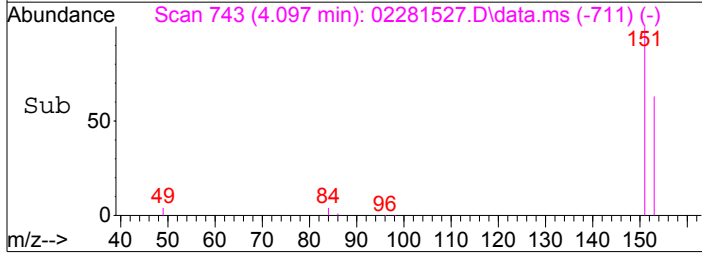
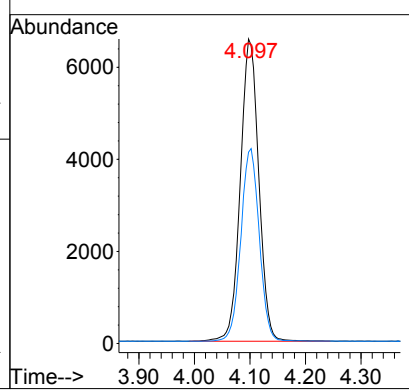
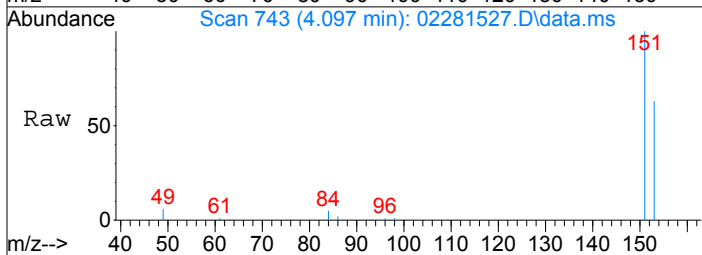
#10
 Methylene Chloride
 Concen: 238.73 pg
 RT: 3.82 min Scan# 680
 Delta R.T. 0.010 min
 Lab File: 02281527.D
 Acq: 28 Feb 2015 15:38

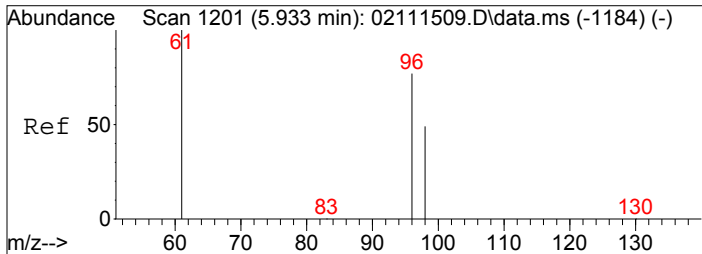
Tgt Ion: 84	Resp: 11148
Ion Ratio	Lower Upper
84	100
49	136.4 112.3 152.3



#11
 Trichlorotrifluoroethane
 Concen: 335.00 pg
 RT: 4.10 min Scan# 743
 Delta R.T. -0.008 min
 Lab File: 02281527.D
 Acq: 28 Feb 2015 15:38

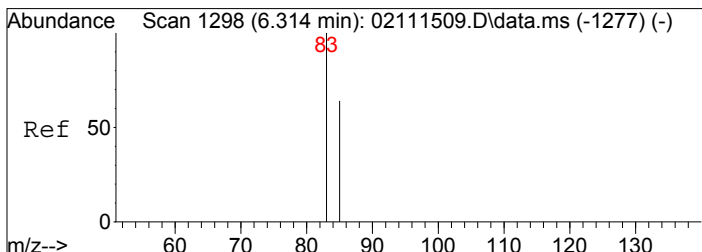
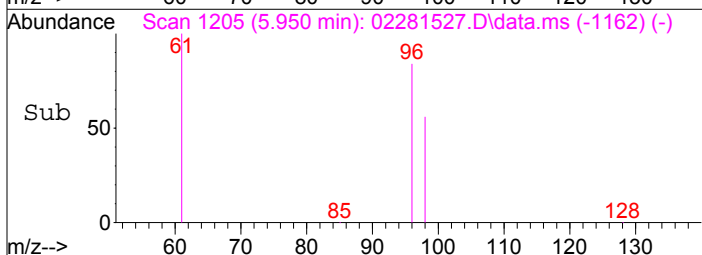
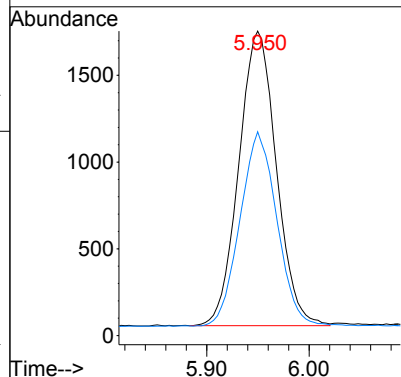
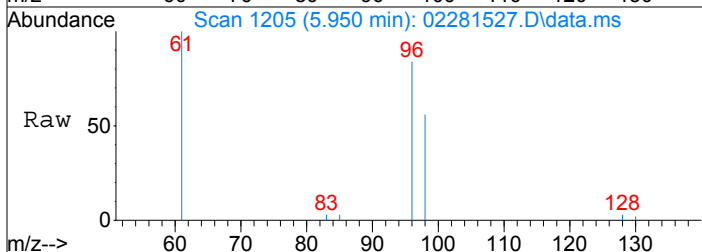
Tgt Ion: 151	Resp: 15149
Ion Ratio	Lower Upper
151	100
153	63.5 43.6 83.6





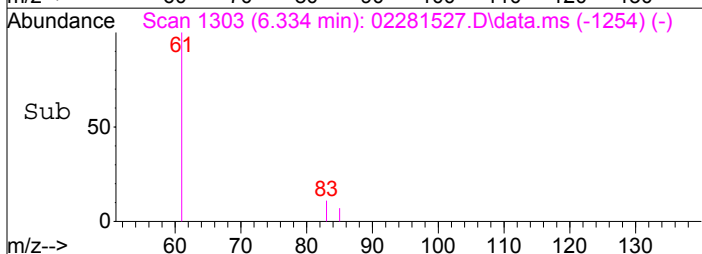
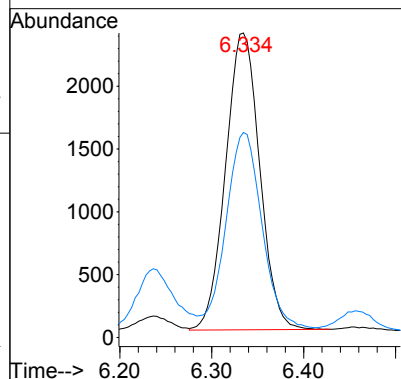
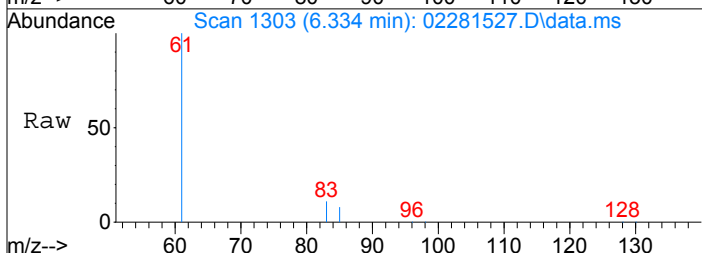
#15
 cis-1,2-Dichloroethene
 Concen: 86.73 pg
 RT: 5.95 min Scan# 1205
 Delta R.T. 0.017 min
 Lab File: 02281527.D
 Acq: 28 Feb 2015 15:38

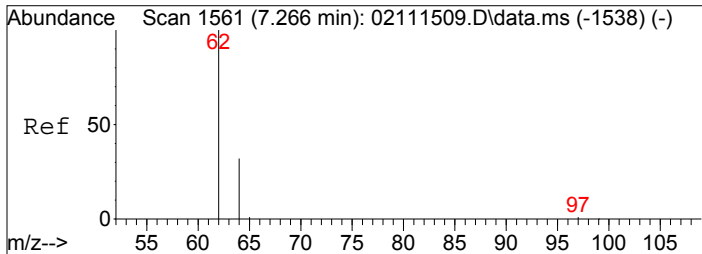
Tgt Ion: 96 Resp: 4327
 Ion Ratio Lower Upper
 96 100
 98 65.1 44.3 84.3



#16
 Chloroform
 Concen: 70.68 pg
 RT: 6.33 min Scan# 1303
 Delta R.T. 0.020 min
 Lab File: 02281527.D
 Acq: 28 Feb 2015 15:38

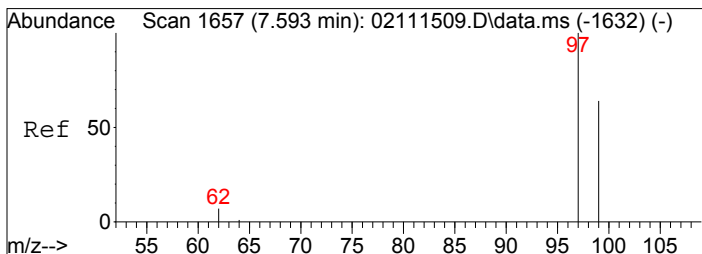
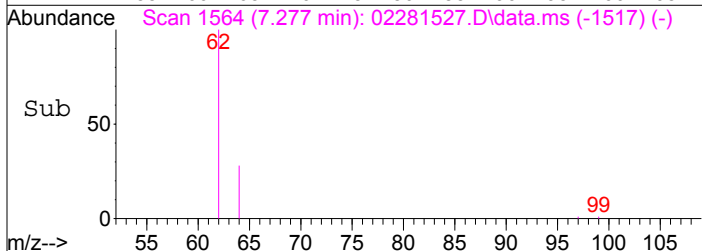
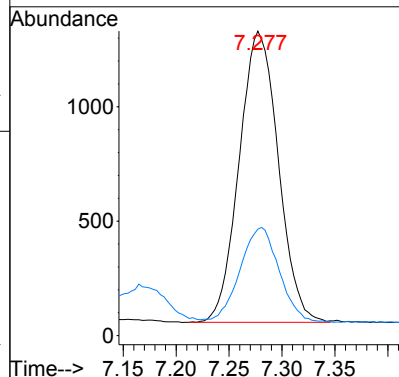
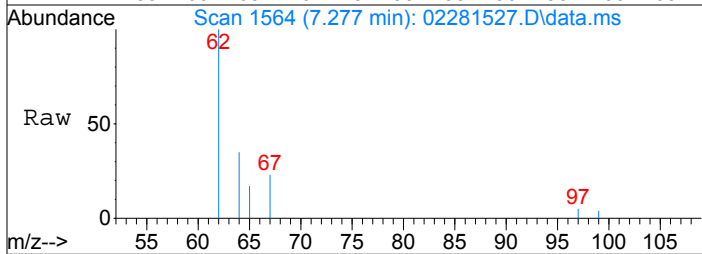
Tgt Ion: 83 Resp: 6109
 Ion Ratio Lower Upper
 83 100
 85 68.1 45.4 85.4





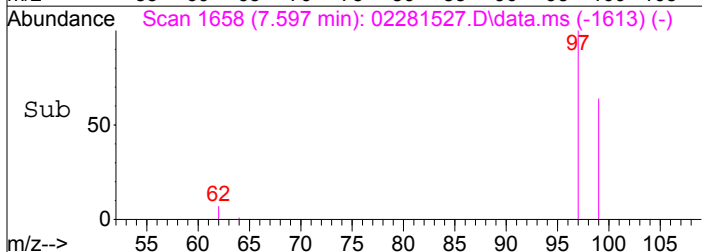
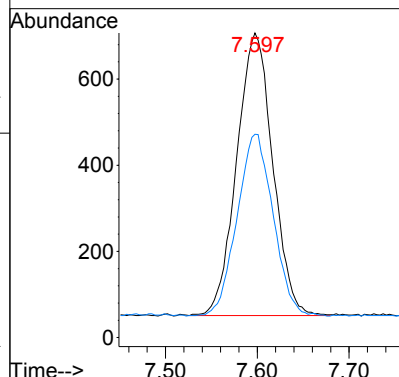
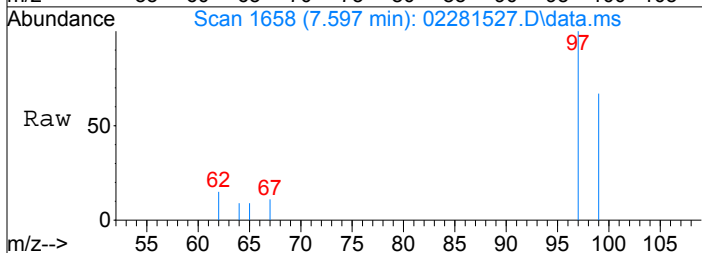
#18
1,2-Dichloroethane
Concen: 47.51 pg
RT: 7.28 min Scan# 1564
Delta R.T. 0.012 min
Lab File: 02281527.D
Acq: 28 Feb 2015 15:38

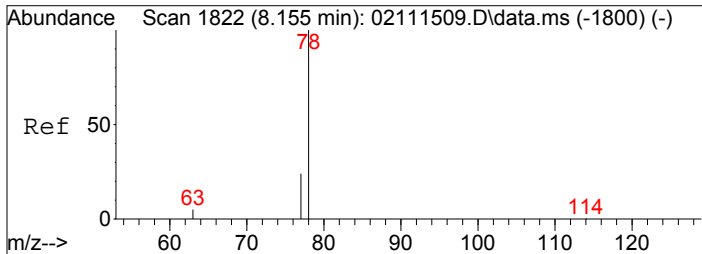
Tgt Ion: 62 Resp: 3270
Ion Ratio Lower Upper
62 100
64 32.8 11.6 51.6



#19
1,1,1-Trichloroethane
Concen: 21.30 pg
RT: 7.60 min Scan# 1658
Delta R.T. 0.005 min
Lab File: 02281527.D
Acq: 28 Feb 2015 15:38

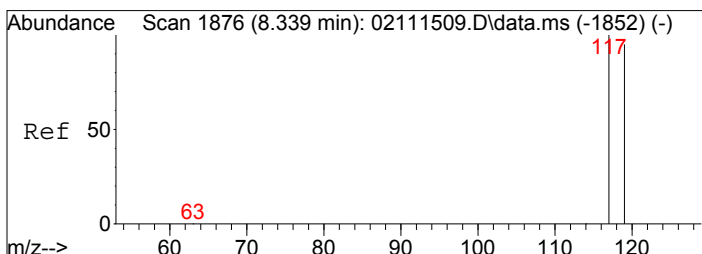
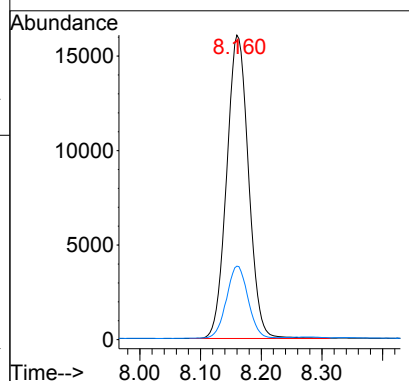
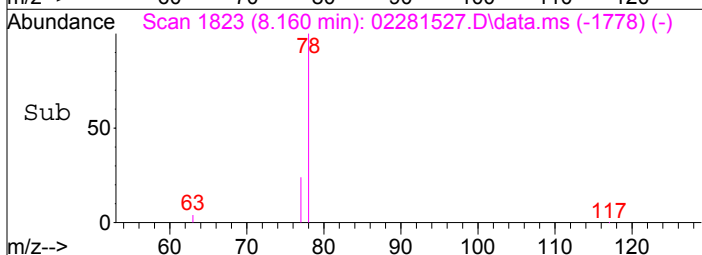
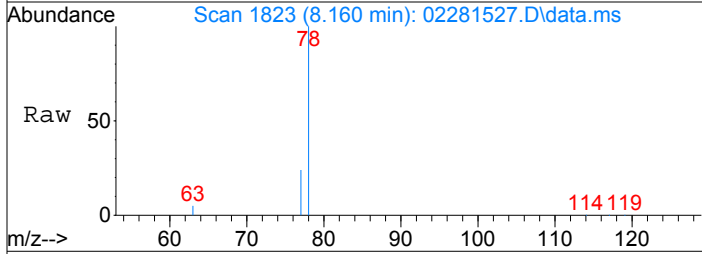
Tgt Ion: 97 Resp: 1790
Ion Ratio Lower Upper
97 100
99 64.5 44.0 84.0





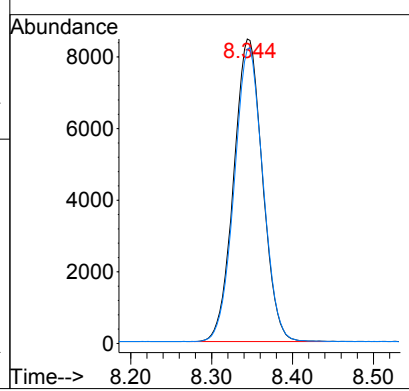
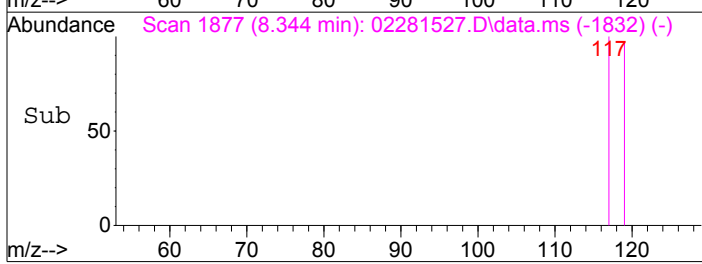
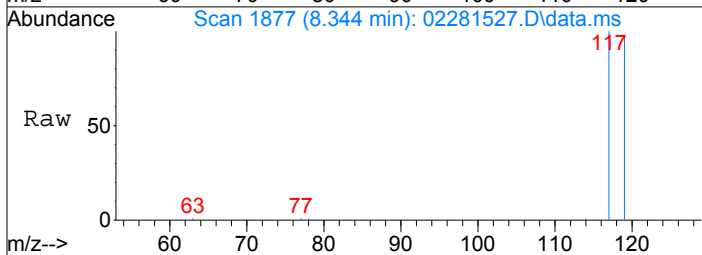
#20
Benzene
Concen: 226.07 pg
RT: 8.16 min Scan# 1823
Delta R.T. 0.005 min
Lab File: 02281527.D
Acq: 28 Feb 2015 15:38

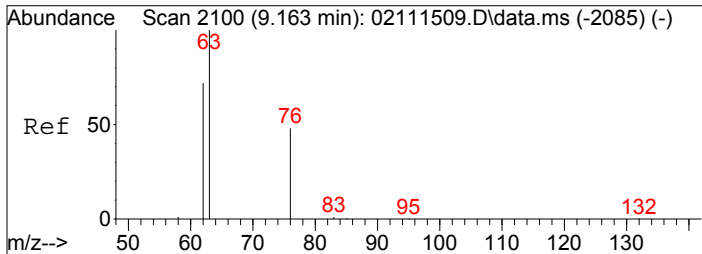
Tgt Ion:	78	Resp:	40191
Ion Ratio	Lower	Upper	
78	100		
77	23.4	3.7	43.7



#21
Carbon Tetrachloride
Concen: 331.89 pg
RT: 8.34 min Scan# 1877
Delta R.T. 0.005 min
Lab File: 02281527.D
Acq: 28 Feb 2015 15:38

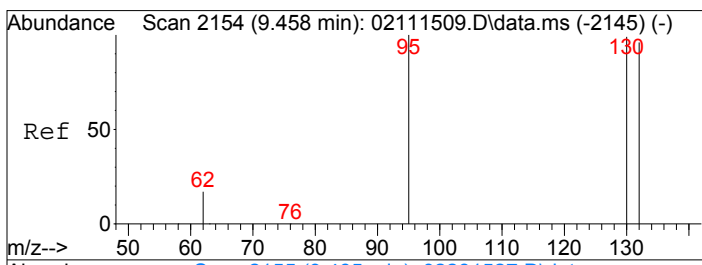
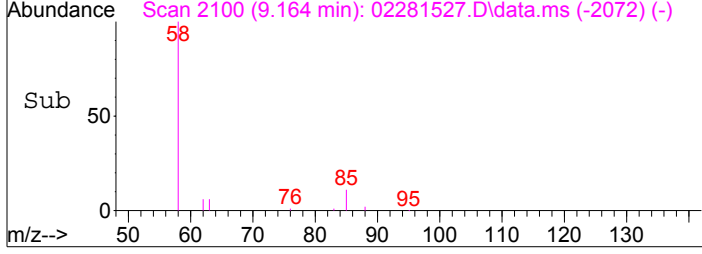
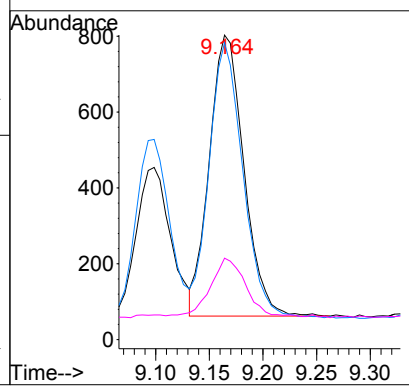
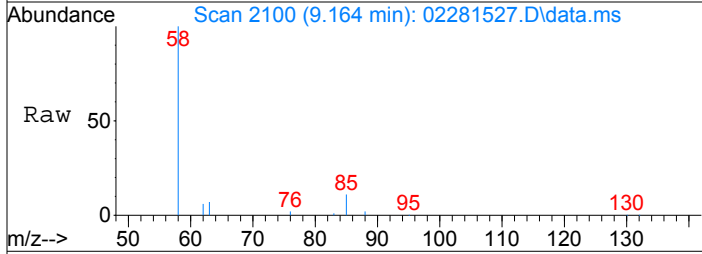
Tgt Ion:	117	Resp:	20885
Ion Ratio	Lower	Upper	
117	100		
119	96.7	75.5	115.5





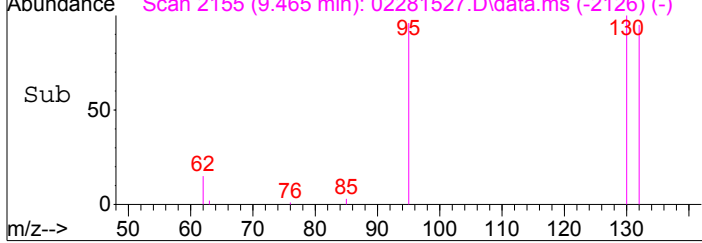
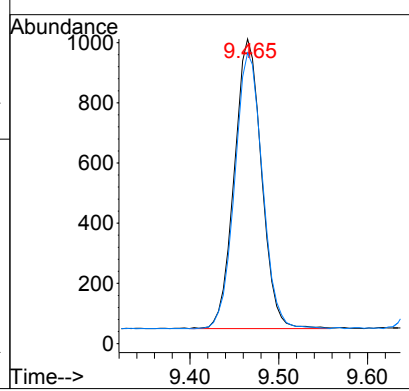
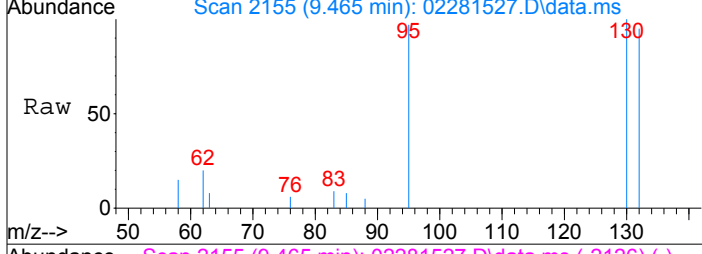
#23
 1,2-Dichloropropane
 Concen: 39.07 pg
 RT: 9.16 min Scan# 2100
 Delta R.T. 0.001 min
 Lab File: 02281527.D
 Acq: 28 Feb 2015 15:38

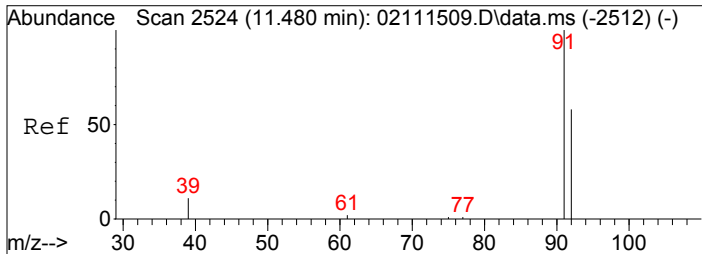
Tgt Ion:	63	Resp:	1665
Ion Ratio	Lower	Upper	
63	100		
62	95.2	52.0	92.0#
76	21.3	28.1	68.1#



#25
 Trichloroethene
 Concen: 40.78 pg
 RT: 9.46 min Scan# 2155
 Delta R.T. 0.007 min
 Lab File: 02281527.D
 Acq: 28 Feb 2015 15:38

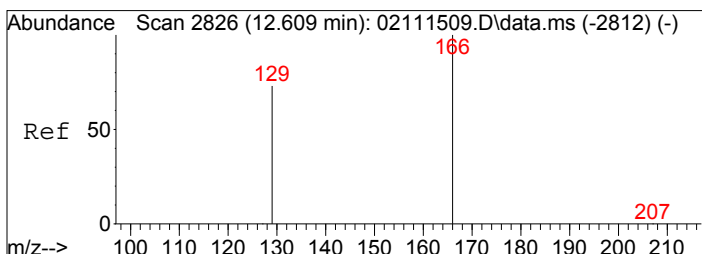
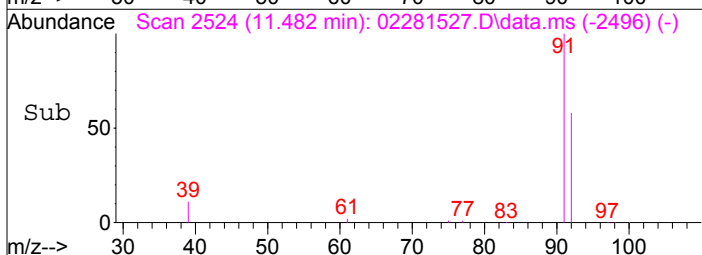
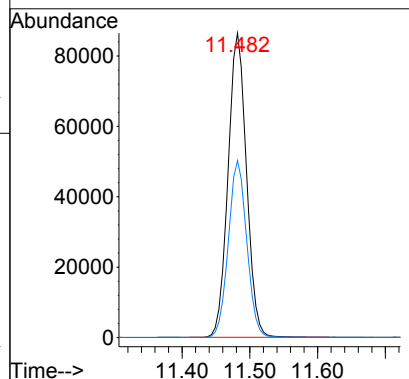
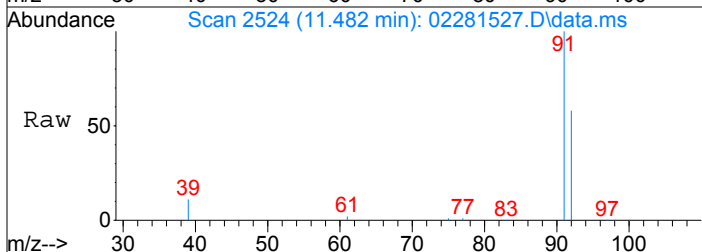
Tgt Ion:	130	Resp:	2047
Ion Ratio	Lower	Upper	
130	100		
132	97.1	77.1	117.1





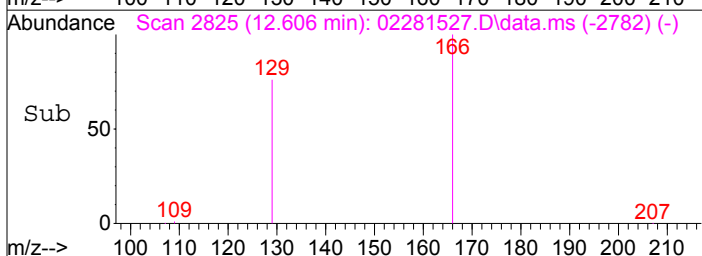
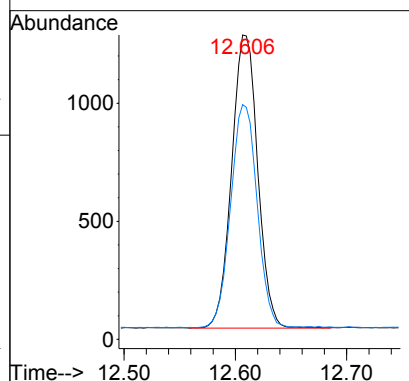
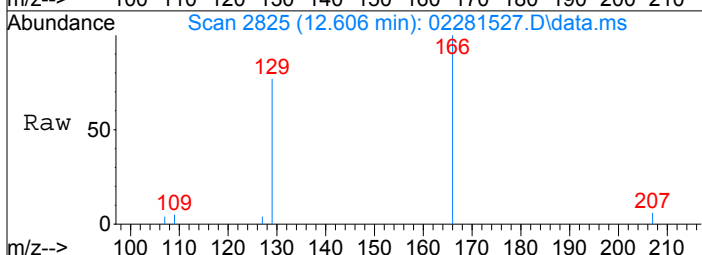
#31
Toluene
Concen: 850.21 pg
RT: 11.48 min Scan# 2524
Delta R.T. 0.001 min
Lab File: 02281527.D
Acq: 28 Feb 2015 15:38

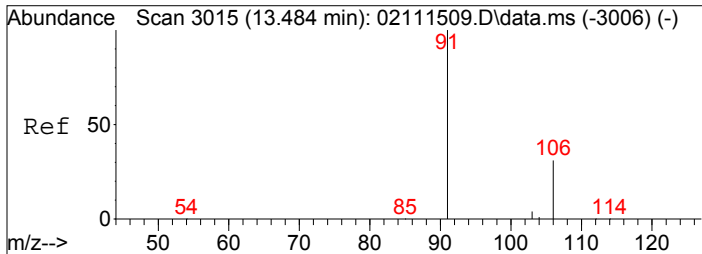
Tgt Ion: 91 Resp: 162924
Ion Ratio Lower Upper
91 100
92 58.1 37.7 77.7



#33
Tetrachloroethene
Concen: 34.03 pg
RT: 12.61 min Scan# 2825
Delta R.T. -0.003 min
Lab File: 02281527.D
Acq: 28 Feb 2015 15:38

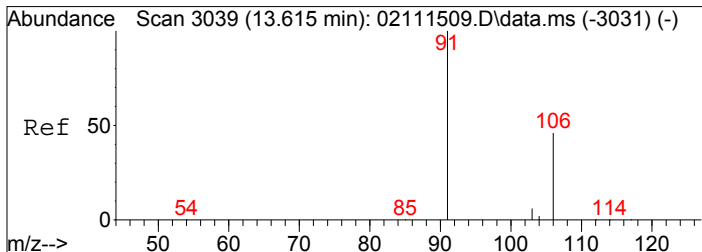
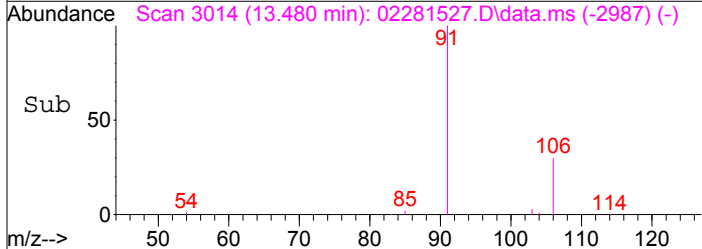
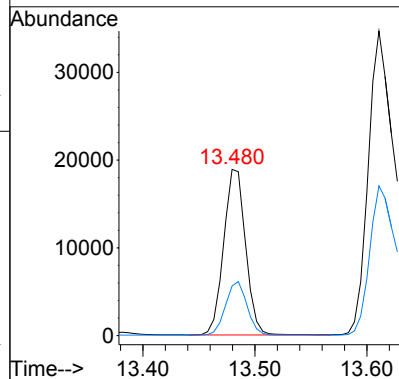
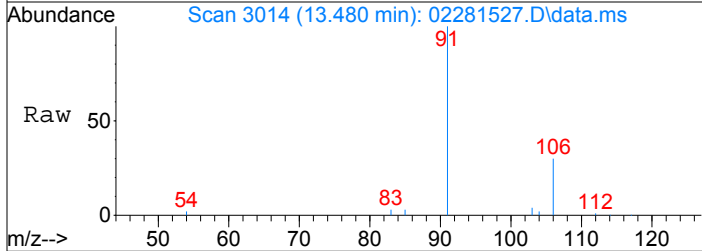
Tgt Ion: 166 Resp: 2019
Ion Ratio Lower Upper
166 100
129 77.6 53.3 93.3





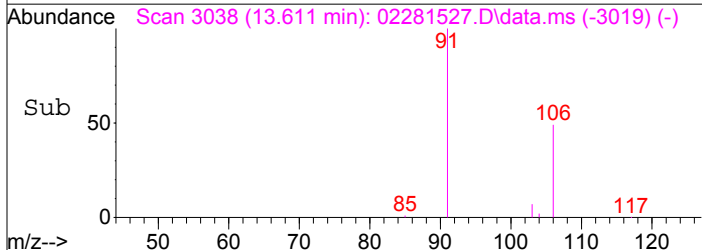
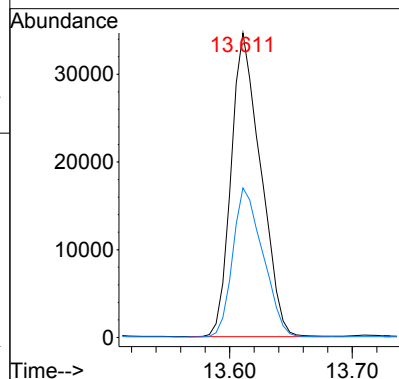
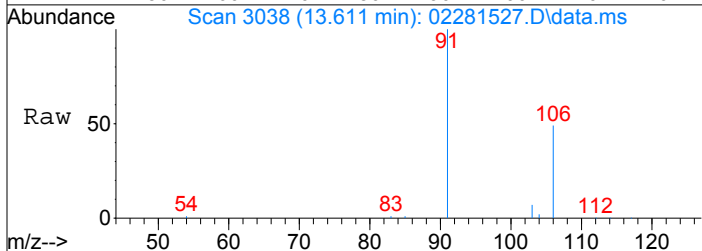
#36
Ethylbenzene
Concen: 127.44 pg
RT: 13.48 min Scan# 3014
Delta R.T. -0.004 min
Lab File: 02281527.D
Acq: 28 Feb 2015 15:38

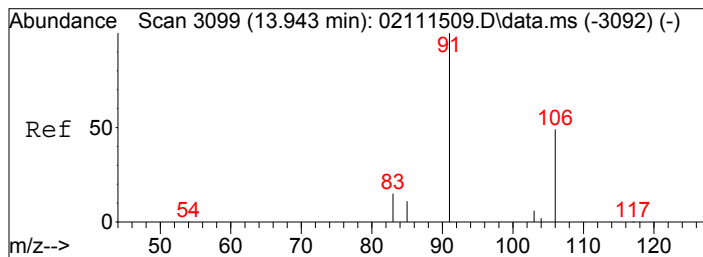
Tgt Ion: 91 Resp: 25643
Ion Ratio Lower Upper
91 100
106 31.6 10.9 50.9



#37
m,p-Xylene
Concen: 350.72 pg
RT: 13.61 min Scan# 3038
Delta R.T. -0.004 min
Lab File: 02281527.D
Acq: 28 Feb 2015 15:38

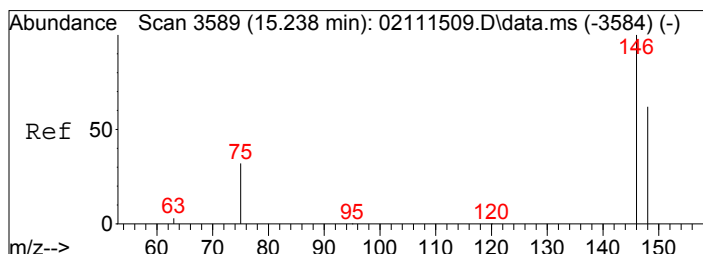
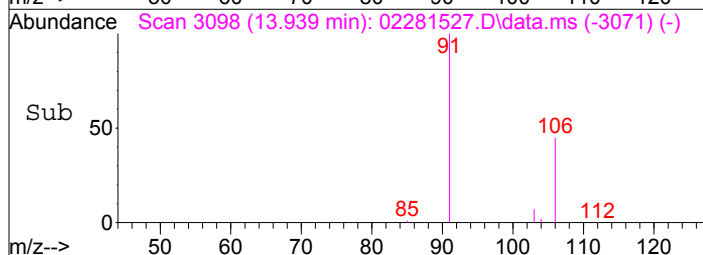
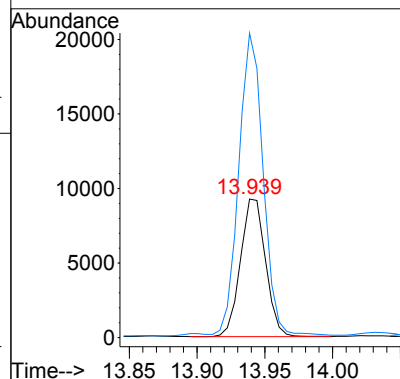
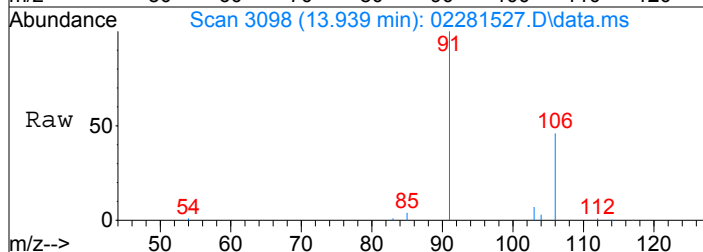
Tgt Ion: 91 Resp: 58000
Ion Ratio Lower Upper
91 100
106 50.0 27.5 67.5





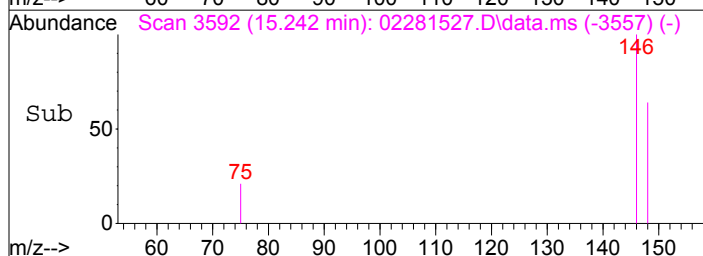
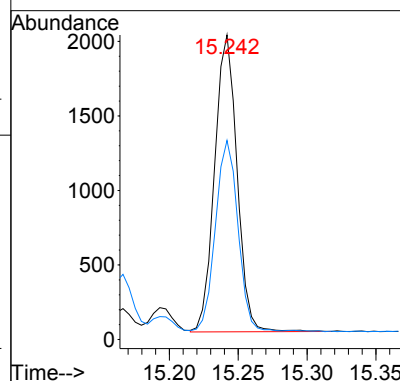
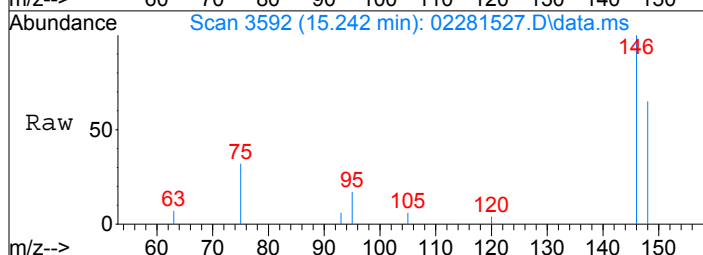
#38
o-Xylene
Concen: 147.24 pg
RT: 13.94 min Scan# 3098
Delta R.T. -0.004 min
Lab File: 02281527.D
Acq: 28 Feb 2015 15:38

Tgt Ion:106 Resp: 11900
Ion Ratio Lower Upper
106 100
91 211.3 198.3 238.3



#42
1,4-Dichlorobenzene
Concen: 20.35 pg
RT: 15.24 min Scan# 3592
Delta R.T. 0.004 min
Lab File: 02281527.D
Acq: 28 Feb 2015 15:38

Tgt Ion:146 Resp: 2257
Ion Ratio Lower Upper
146 100
148 63.9 43.5 83.5



Data File: I:\MS19\DATA\2015 02\28\02281527.D

Acq On : 28 Feb 2015 15:38

Operator: WA

Sample : P1500729-021 (1000mL)

Misc : S29-02041502

ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 02 08:58:41 2015

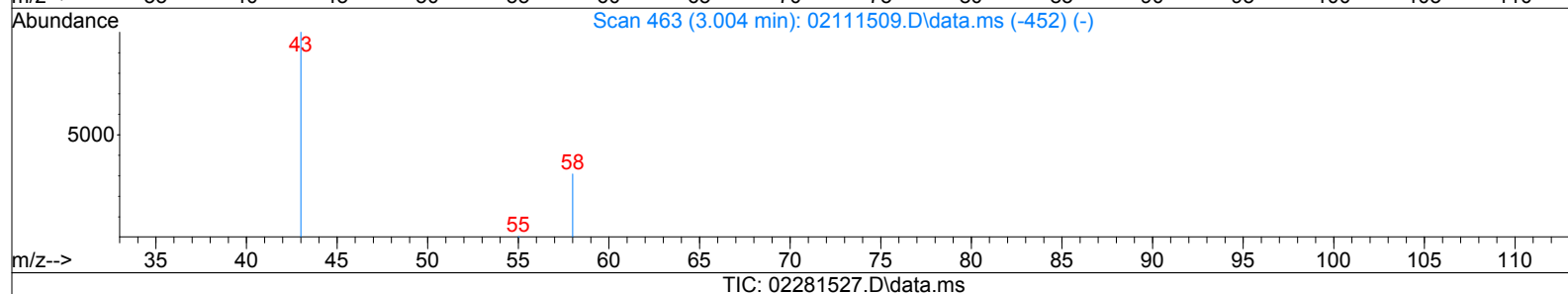
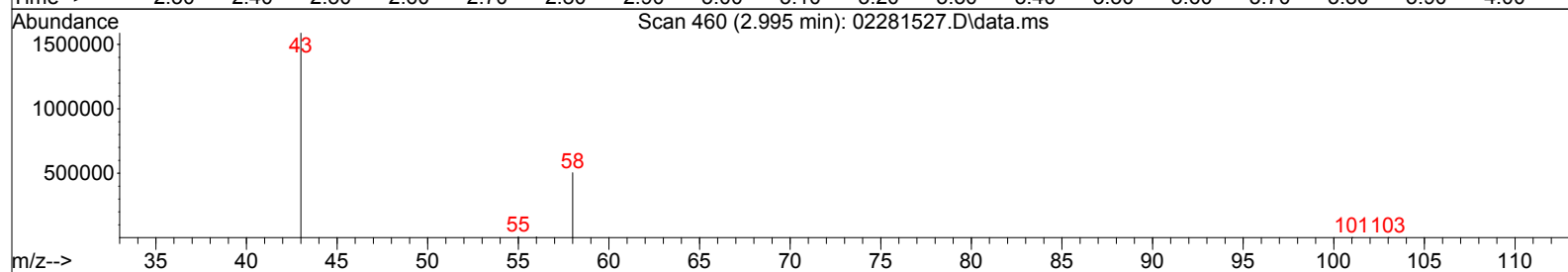
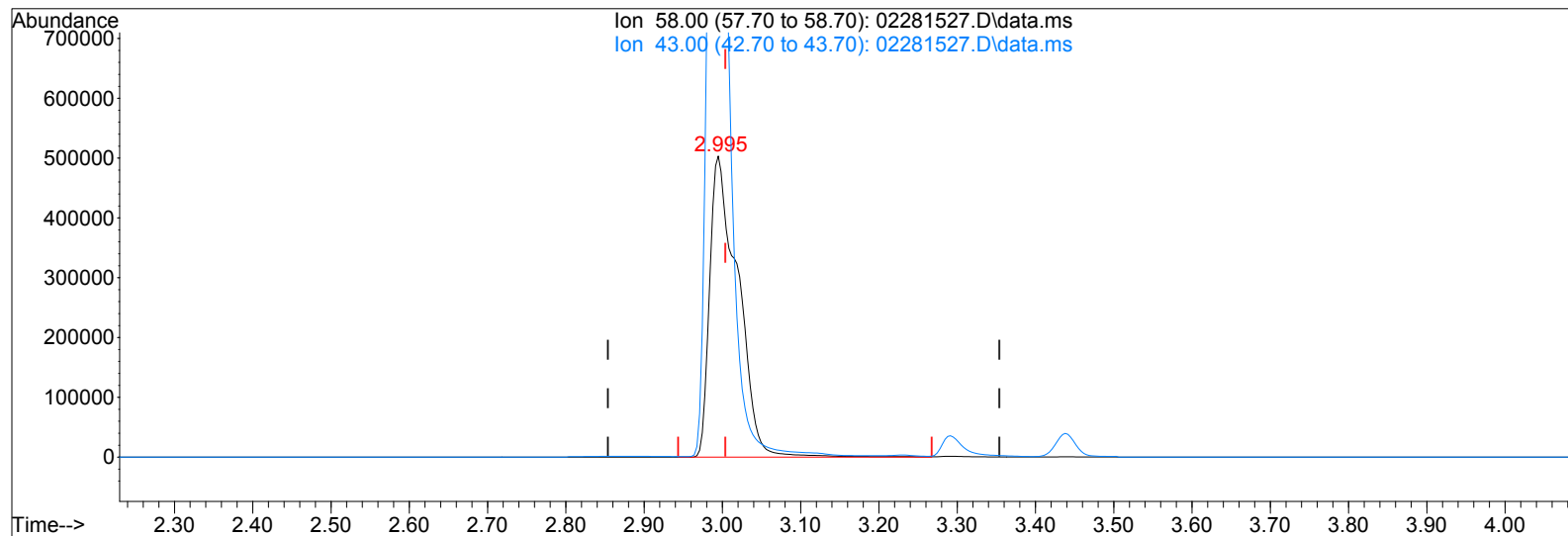
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



(7) Acetone (T)

2.995min (-0.009) 31027.96pg

response 1255340

Ion	Exp%	Act%
58.00	100	100
43.00	321.80	220.83#
0.00	0.00	0.00
0.00	0.00	0.00

Data File: I:\MS19\DATA\2015 02\28\02281527.D

Acq On : 28 Feb 2015 15:38

Operator: WA

Sample : P1500729-021 (1000mL)

Misc : S29-02041502

ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 02 08:58:41 2015

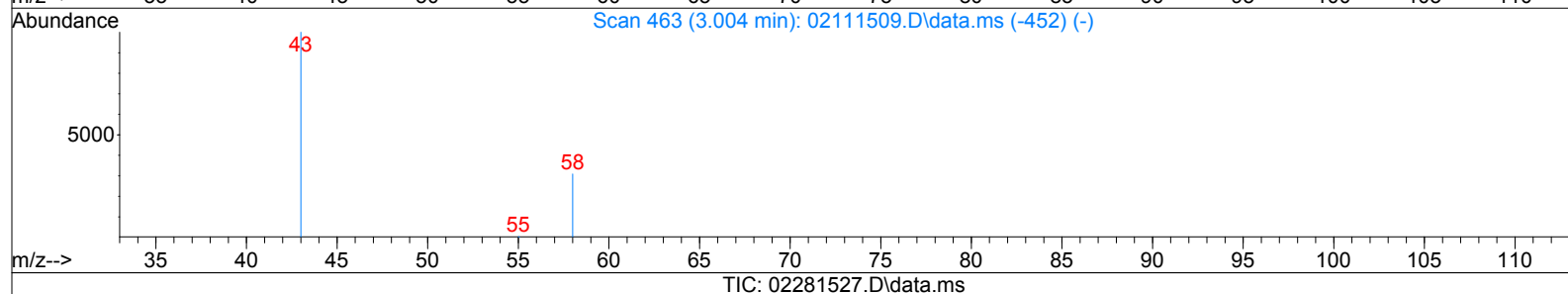
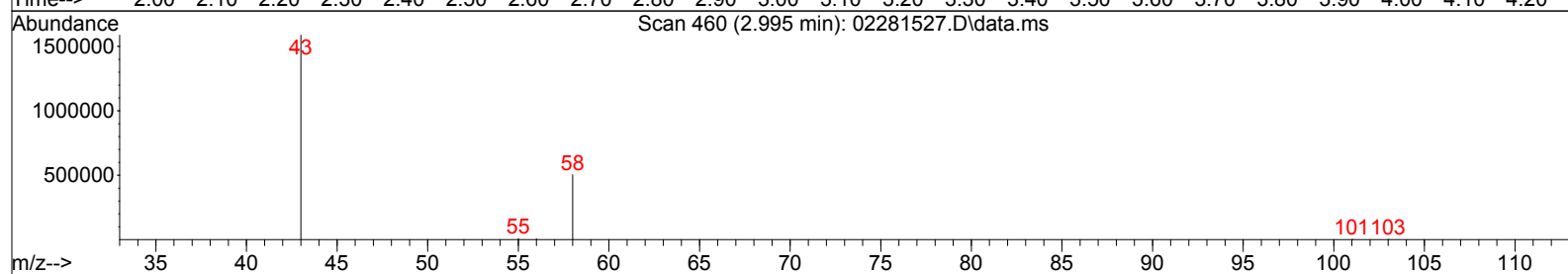
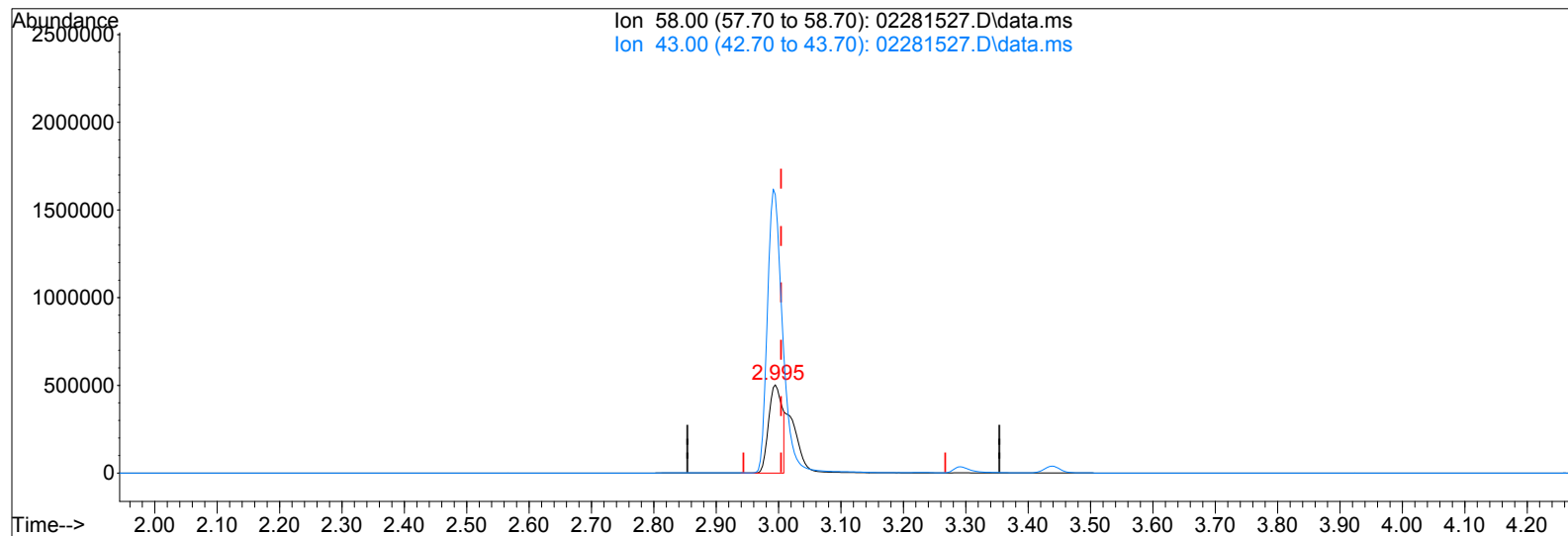
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



(7) Acetone (T)

2.995min (-0.009) 18813.65pg m

response 761169

IPC

DA 3/2/15

Ion	Exp%	Act%
58.00	100	100
43.00	321.80	364.20#
0.00	0.00	0.00
0.00	0.00	0.00

Data File: I:\MS19\DATA\2015 02\28\02281528.D

Acq On : 28 Feb 2015 16:06

Operator: WA

Sample : P1500729-022 (1000mL)

Misc : S29-02041502

ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 02 14:55:21 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

3/2/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.13	130	28485	1000.000	pg	0.02
22) 1,4-Difluorobenzene (IS2)	8.72	114	204194	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	33415	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.14	65	58659	843.249	pg	0.01
Spiked Amount 1000.000			Recovery	=	84.33%	
30) Toluene-d8 (SS2)	11.38	98	191454	1016.726	pg	0.00
Spiked Amount 1000.000			Recovery	=	101.67%	
40) Bromofluorobenzene (SS3)	14.25	174	84339	1250.202	pg	0.00
Spiked Amount 1000.000			Recovery	=	125.02%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.73	85	177071	1529.593	pg	100
3) Chloromethane	1.84	52	11312	489.310	pg	# 84
4) Vinyl Chloride	2.01	62	210	N.D.		
5) Bromomethane	2.33	94	1911	36.711	pg	99
6) Chloroethane	2.48	64	963	21.989	pg	96
7) Acetone	3.00	58	759196m	18571.863	pg	
8) Trichlorofluoromethane	3.11	101	293425	2950.892	pg	100
9) 1,1-Dichloroethene	3.67	96	117	N.D.		
10) Methylene Chloride	3.82	84	11309	239.684	pg	95
11) Trichlorotrifluoroethane	4.10	151	15932	348.690	pg	100
12) trans-1,2-Dichloroethene	4.75	96	148	N.D.		
13) 1,1-Dichloroethane	4.96	63	413	N.D.		
14) Methyl tert-Butyl Ether	0.00	73	0	N.D.	d	
15) cis-1,2-Dichloroethene	5.95	96	4471	88.698	pg	99
16) Chloroform	6.33	83	6102	69.870	pg	97
18) 1,2-Dichloroethane	7.28	62	3309	47.586	pg	99
19) 1,1,1-Trichloroethane	7.60	97	1750	20.606	pg	99
20) Benzene	8.16	78	39160	218.008	pg	100
21) Carbon Tetrachloride	8.35	117	24700	388.479	pg	99
23) 1,2-Dichloropropane	9.16	63	1712	38.442	pg	# 68
24) Bromodichloromethane	9.42	83	657	N.D.		
25) Trichloroethene	9.46	130	2102	40.070	pg	100
26) 1,4-Dioxane	9.53	88	470	N.D.		
27) cis-1,3-Dichloropropene	10.46	75	295	N.D.		
28) trans-1,3-Dichloropropene	11.06	75	143	N.D.		
29) 1,1,2-Trichloroethane	0.00	83	0	N.D.	d	
31) Toluene	11.48	91	121858	608.460	pg	100
32) 1,2-Dibromoethane	12.13	107	32	N.D.		
33) Tetrachloroethene	12.61	166	2158	34.800	pg	100
35) Chlorobenzene	13.17	112	724	N.D.		
36) Ethylbenzene	13.48	91	27232	129.961	pg	99
37) m,p-Xylene	13.61	91	55909	324.640	pg	96
38) o-Xylene	13.94	106	11702	139.034	pg	94
39) 1,1,2,2-Tetrachloroethane	13.96	83	1183	N.D.		
41) 1,3-Dichlorobenzene	15.17	146	169	N.D.		
42) 1,4-Dichlorobenzene	15.24	146	1780	N.D.		
43) 1,2-Dichlorobenzene	15.46	146	76	N.D.		
44) 1,2,4-Trichlorobenzene	16.63	182	49	N.D.		
45) Naphthalene	16.70	128	1864	N.D.		
46) Hexachlorobutadiene	16.96	225	22	N.D.		

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\28\02281528.D

Acq On : 28 Feb 2015 16:06

Operator: WA

Sample : P1500729-022 (1000mL)

Misc : S29-02041502

ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 02 14:55:21 2015

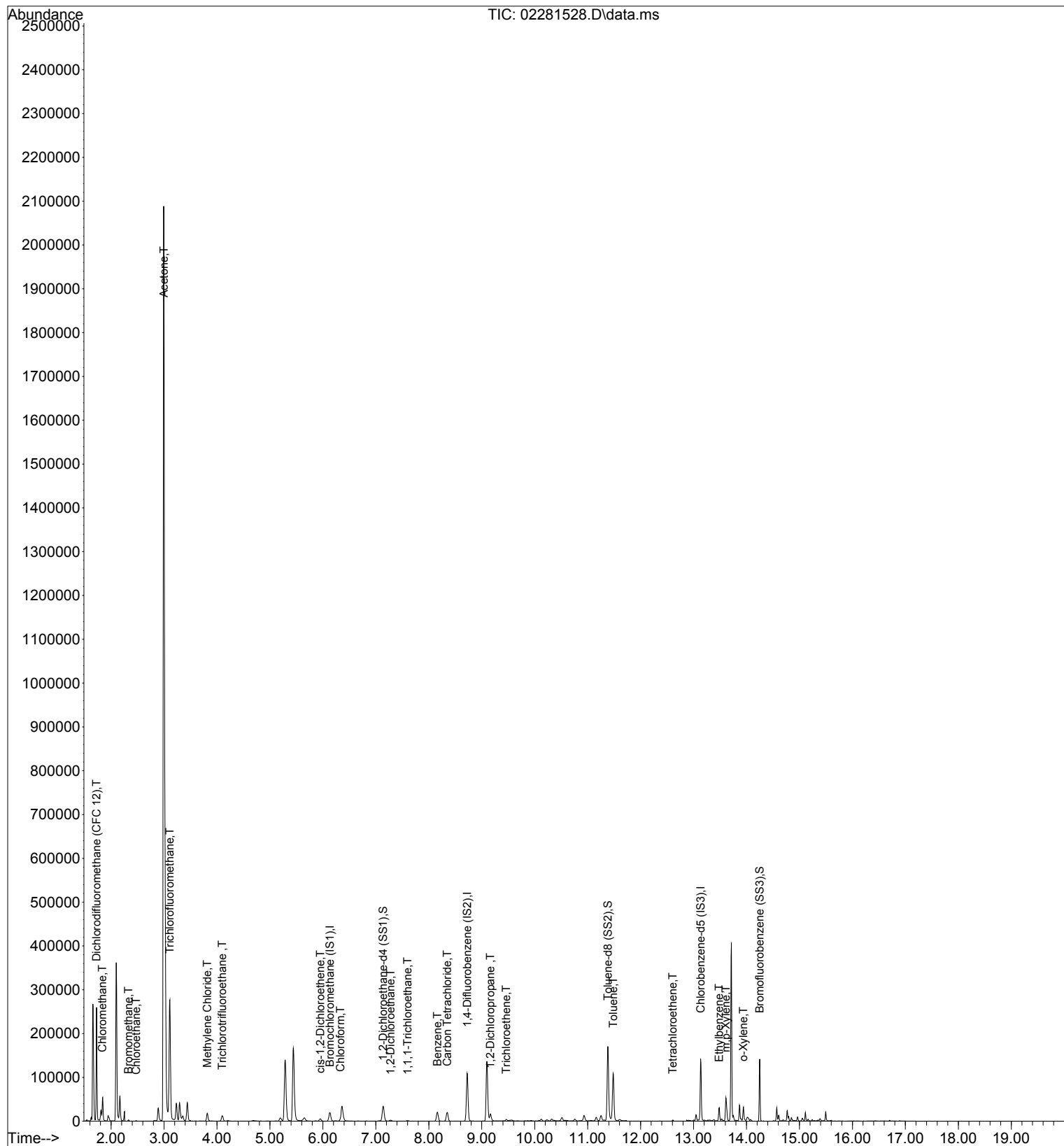
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 02\28\02281528.D

Acq On : 28 Feb 2015 16:06

Operator: WA

Sample : P1500729-022 (1000mL)

Misc : S29-02041502

ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 02 14:55:21 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

107 3/2/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.13	130	28485	1000.000	pg	0.02
22) 1,4-Difluorobenzene (IS2)	8.72	114	204194	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	33415	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.14	65	58659	843.249	pg	0.01
Spiked Amount 1000.000			Recovery	=	84.33%	
30) Toluene-d8 (SS2)	11.38	98	191454	1016.726	pg	0.00
Spiked Amount 1000.000			Recovery	=	101.67%	
40) Bromofluorobenzene (SS3)	14.25	174	84339	1250.202	pg	0.00
Spiked Amount 1000.000			Recovery	=	125.02%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.73	85	177071	1529.593	pg	100
3) Chloromethane	1.84	52	11312	489.310	pg	# 84
5) Bromomethane	2.33	94	1911	36.711	pg	99
6) Chloroethane	2.48	64	963	21.989	pg	96
7) Acetone	3.00	58	759196m	18571.863	pg	
8) Trichlorofluoromethane	3.11	101	293425	2950.892	pg	100
10) Methylene Chloride	3.82	84	11309	239.684	pg	95
11) Trichlorotrifluoroethane	4.10	151	15932	348.690	pg	100
15) cis-1,2-Dichloroethene	5.95	96	4471	88.698	pg	99
16) Chloroform	6.33	83	6102	69.870	pg	97
18) 1,2-Dichloroethane	7.28	62	3309	47.586	pg	99
19) 1,1,1-Trichloroethane	7.60	97	1750	20.606	pg	99
20) Benzene	8.16	78	39160	218.008	pg	100
21) Carbon Tetrachloride	8.35	117	24700	388.479	pg	99
23) 1,2-Dichloropropane	9.16	63	1712	38.442	pg	# 68
25) Trichloroethene	9.46	130	2102	40.070	pg	100
31) Toluene	11.48	91	121858	608.460	pg	100
33) Tetrachloroethene	12.61	166	2158	34.800	pg	100
36) Ethylbenzene	13.48	91	27232	129.961	pg	99
37) m,p-Xylene	13.61	91	55909	324.640	pg	96
38) o-Xylene	13.94	106	11702	139.034	pg	94

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\28\02281528.D

Acq On : 28 Feb 2015 16:06

Operator: WA

Sample : P1500729-022 (1000mL)

Misc : S29-02041502

ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 02 14:55:21 2015

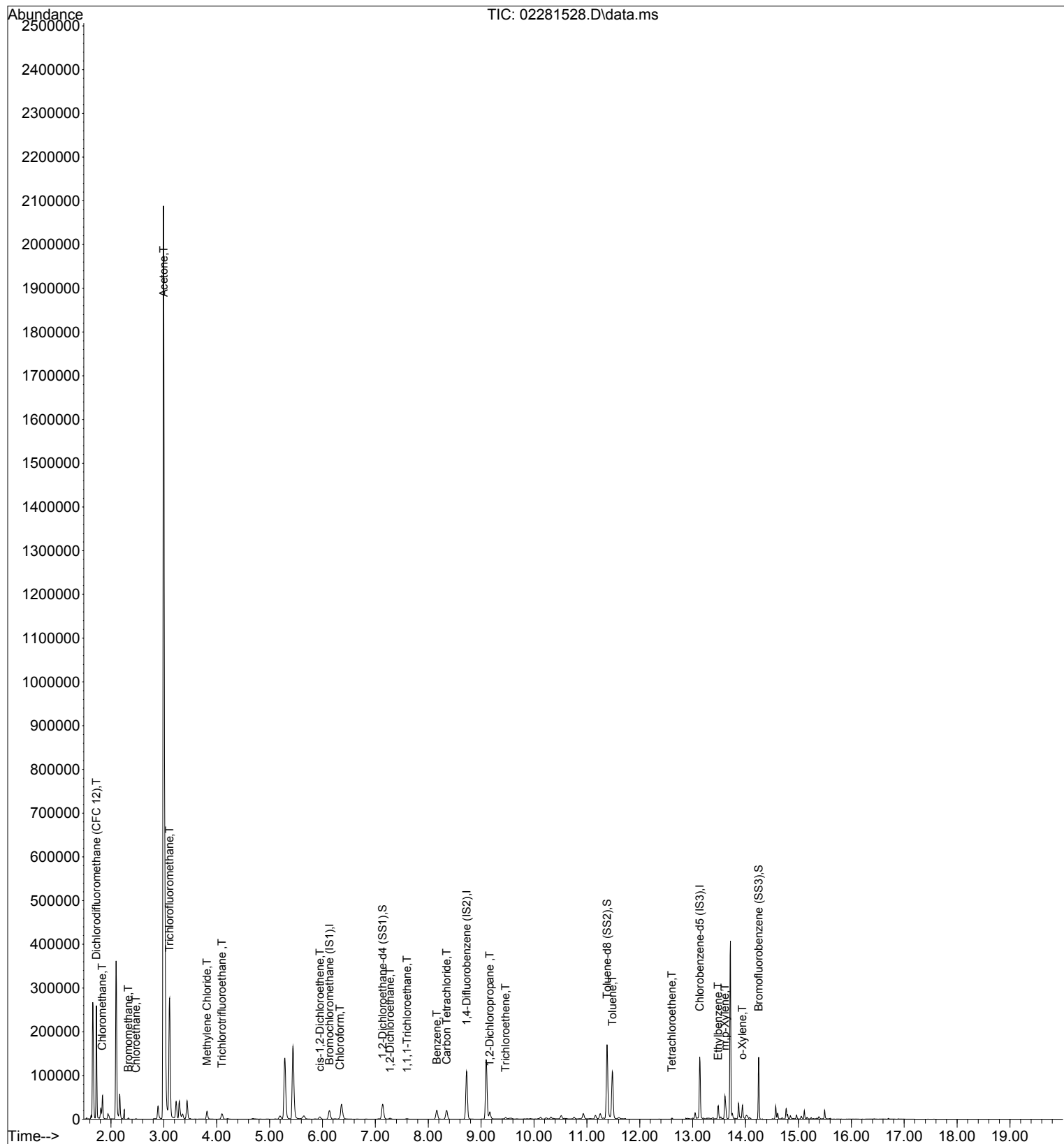
Quant Method : I:\MS19\METHODS\X19021115.M

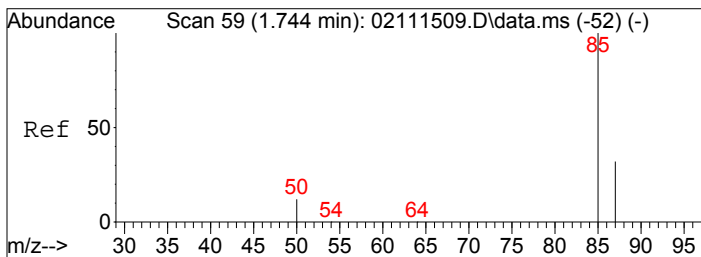
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

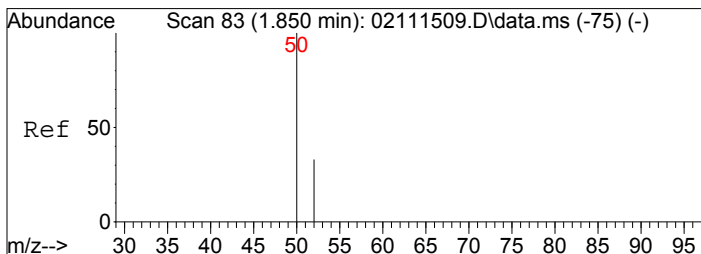
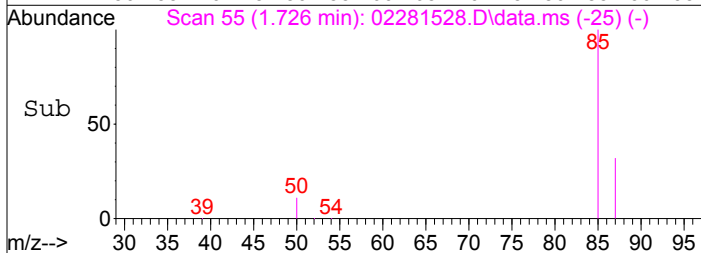
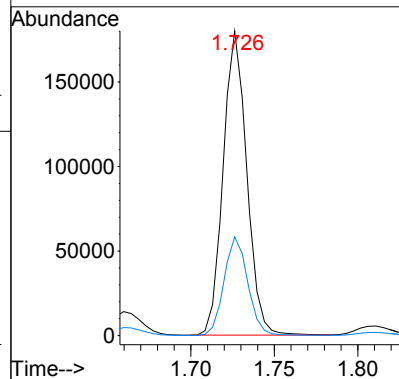
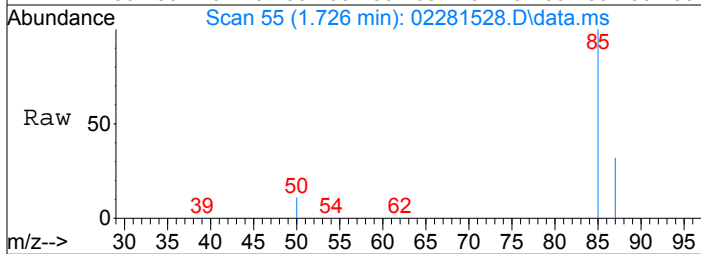
DataAcq Meth:TO15SIM.M





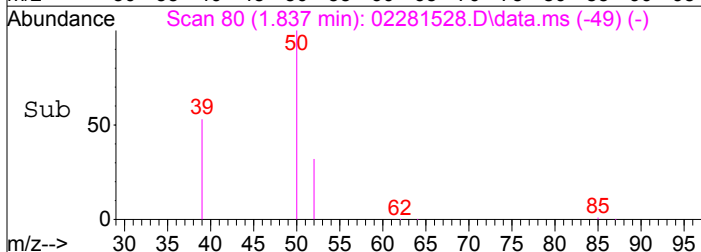
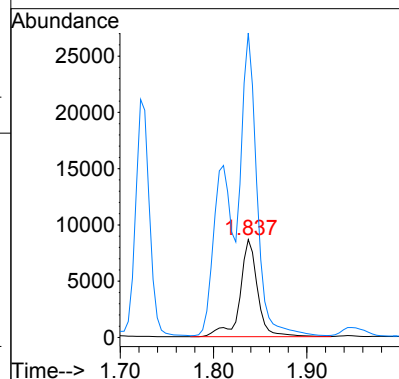
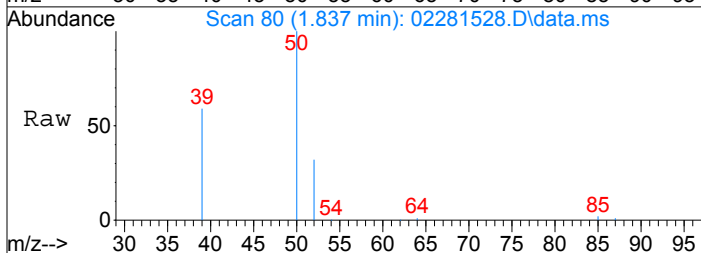
#2
 Dichlorodifluoromethane (CFC 12)
 Concen: 1529.59 pg
 RT: 1.73 min Scan# 55
 Delta R.T. -0.018 min
 Lab File: 02281528.D
 Acq: 28 Feb 2015 16:06

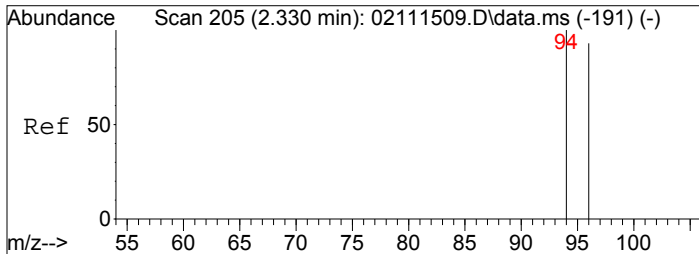
Tgt Ion: 85 Resp: 177071
 Ion Ratio Lower Upper
 85 100
 87 32.6 12.4 52.4



#3
 Chloromethane
 Concen: 489.31 pg
 RT: 1.84 min Scan# 80
 Delta R.T. -0.013 min
 Lab File: 02281528.D
 Acq: 28 Feb 2015 16:06

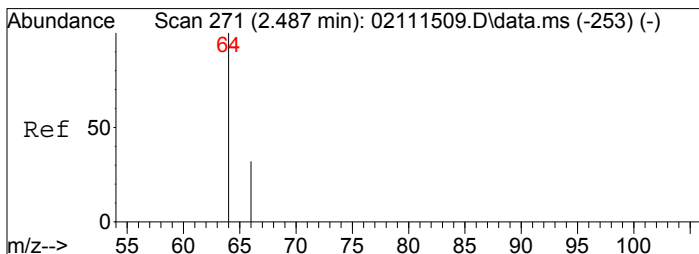
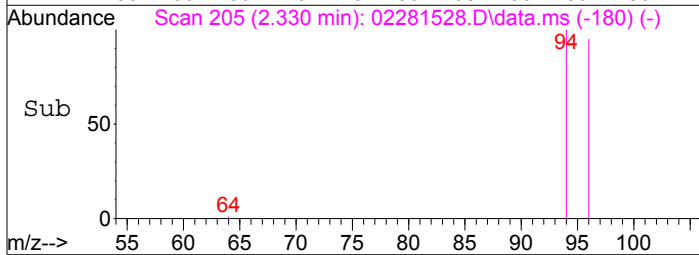
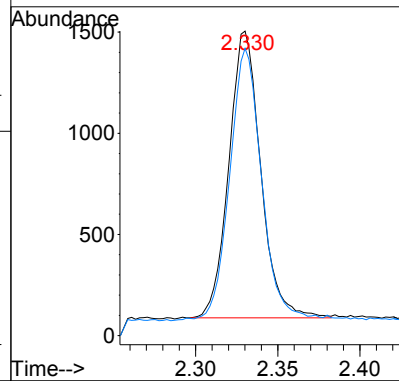
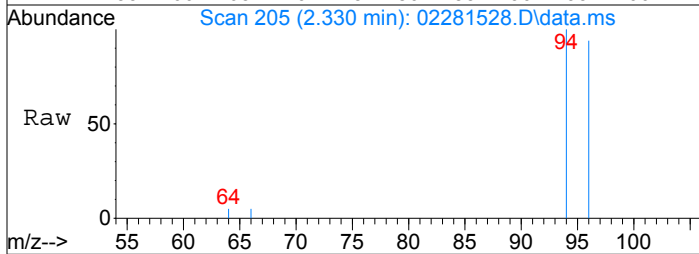
Tgt Ion: 52 Resp: 11312
 Ion Ratio Lower Upper
 52 100
 50 272.5 283.7 323.7#





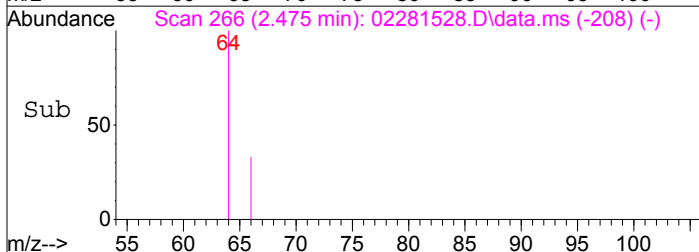
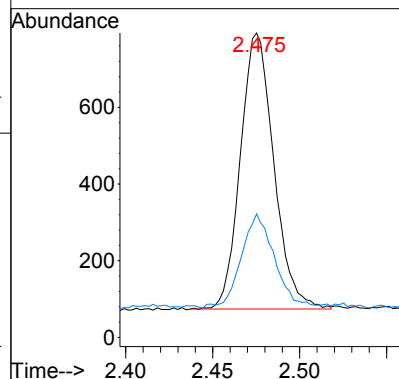
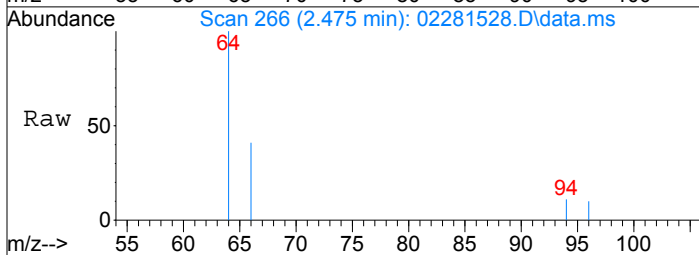
#5
Bromomethane
Concen: 36.71 pg
RT: 2.33 min Scan# 205
Delta R.T. 0.000 min
Lab File: 02281528.D
Acq: 28 Feb 2015 16:06

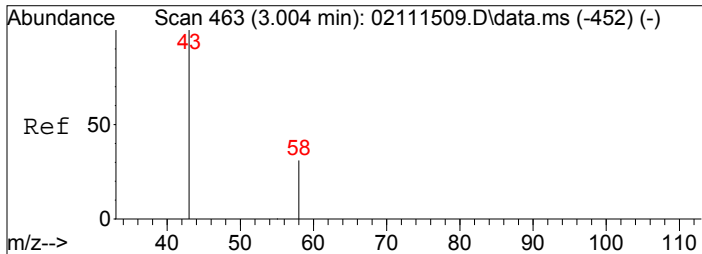
Tgt Ion: 94 Resp: 1911
Ion Ratio Lower Upper
94 100
96 95.6 75.5 113.3



#6
Chloroethane
Concen: 21.99 pg
RT: 2.48 min Scan# 266
Delta R.T. -0.012 min
Lab File: 02281528.D
Acq: 28 Feb 2015 16:06

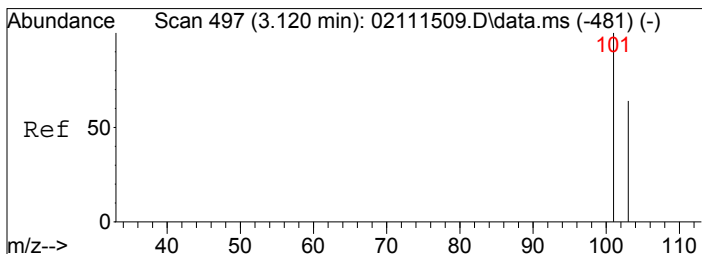
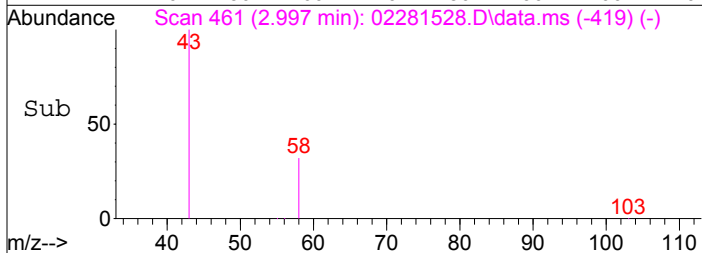
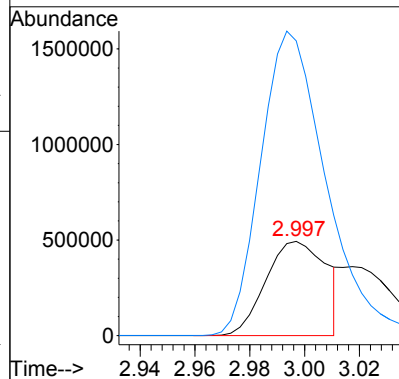
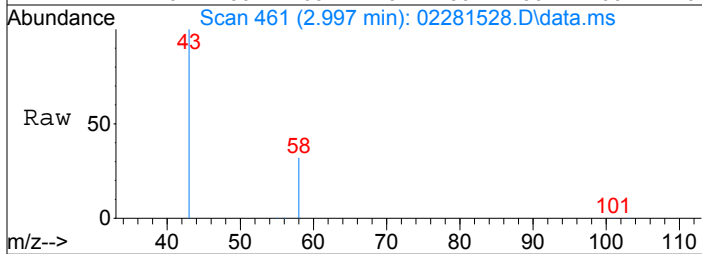
Tgt Ion: 64 Resp: 963
Ion Ratio Lower Upper
64 100
66 34.2 12.2 52.2





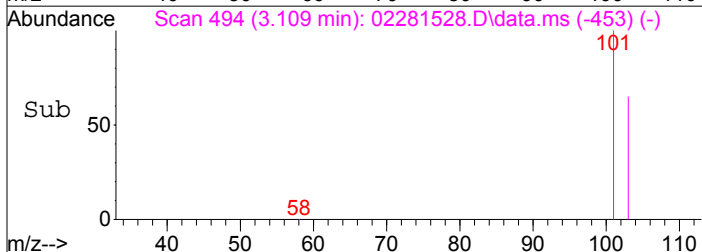
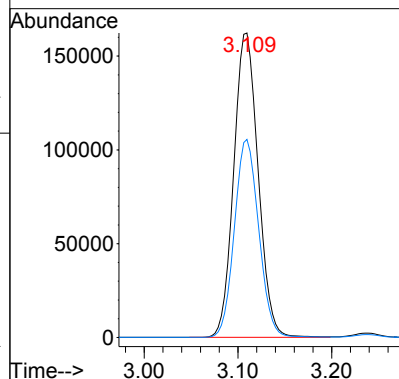
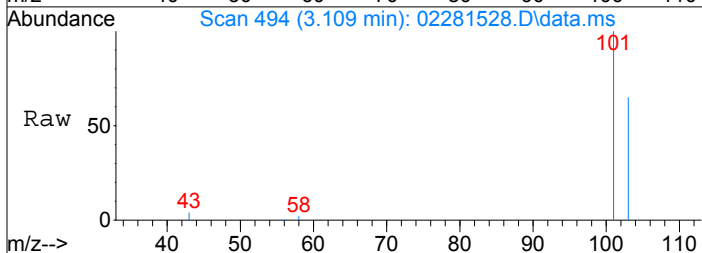
#7
Acetone
Concen: 18571.86 pg m
RT: 3.00 min Scan# 461
Delta R.T. -0.007 min
Lab File: 02281528.D
Acq: 28 Feb 2015 16:06

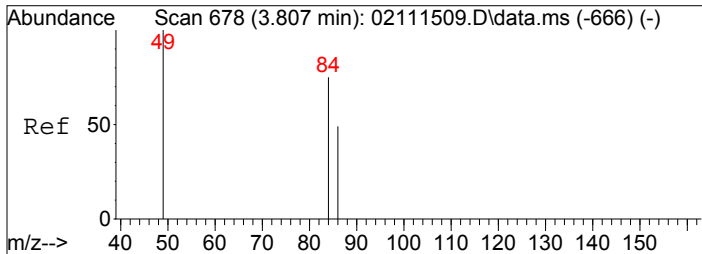
Tgt Ion: 58 Resp: 759196
Ion Ratio Lower Upper
58 100
43 356.1 301.8 341.8#



#8
Trichlorofluoromethane
Concen: 2950.89 pg
RT: 3.11 min Scan# 494
Delta R.T. -0.010 min
Lab File: 02281528.D
Acq: 28 Feb 2015 16:06

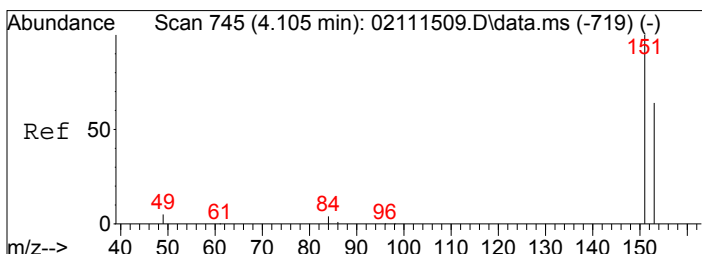
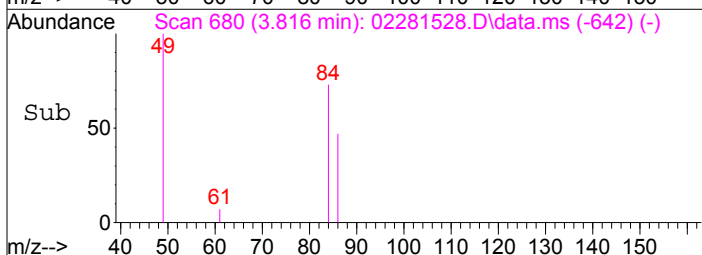
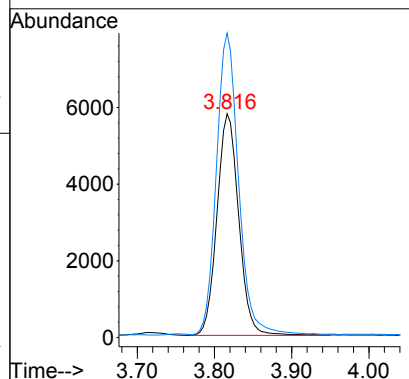
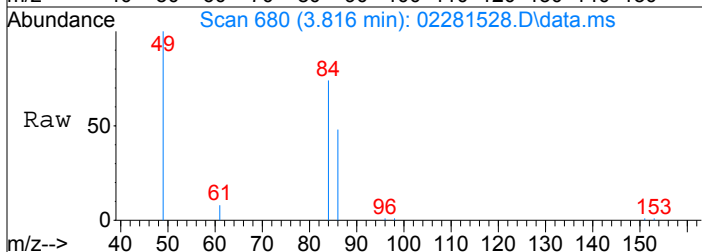
Tgt Ion: 101 Resp: 293425
Ion Ratio Lower Upper
101 100
103 64.9 51.8 77.6





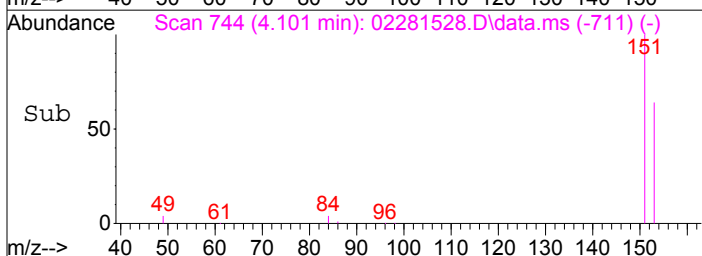
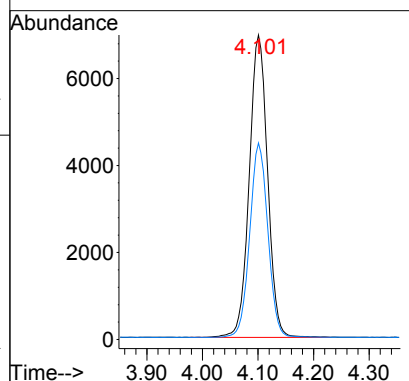
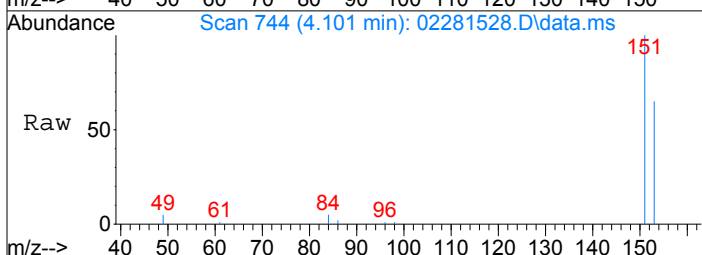
#10
Methylene Chloride
Concen: 239.68 pg
RT: 3.82 min Scan# 680
Delta R.T. 0.009 min
Lab File: 02281528.D
Acq: 28 Feb 2015 16:06

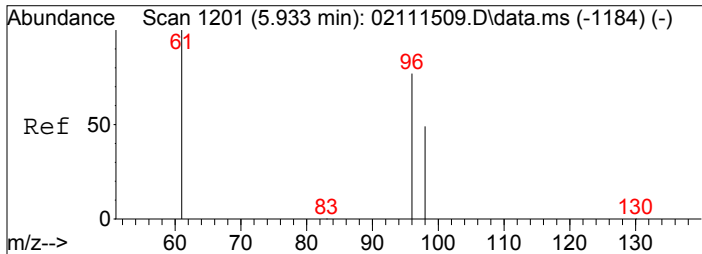
Tgt Ion: 84 Resp: 11309
Ion Ratio Lower Upper
84 100
49 138.2 112.3 152.3



#11
Trichlorotrifluoroethane
Concen: 348.69 pg
RT: 4.10 min Scan# 744
Delta R.T. -0.004 min
Lab File: 02281528.D
Acq: 28 Feb 2015 16:06

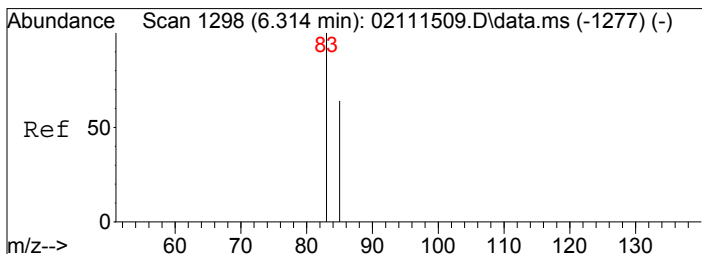
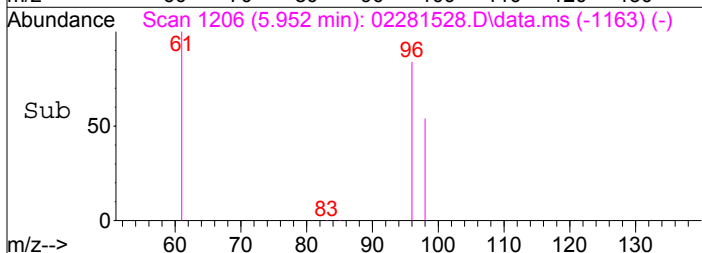
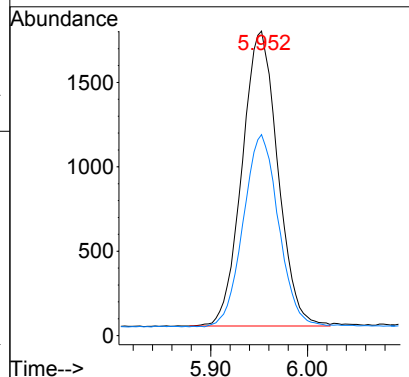
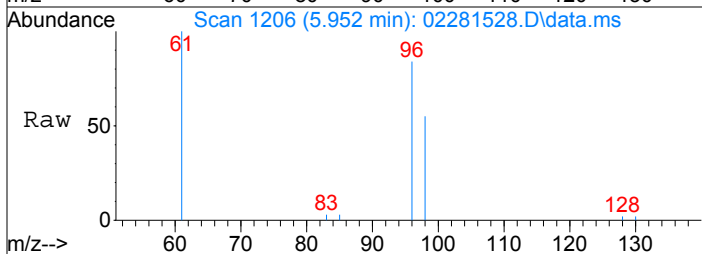
Tgt Ion: 151 Resp: 15932
Ion Ratio Lower Upper
151 100
153 63.6 43.6 83.6





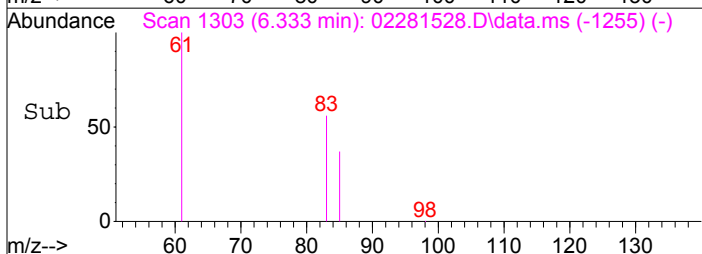
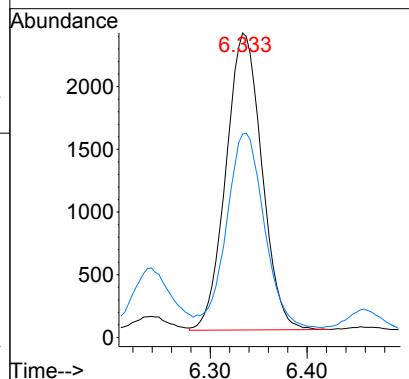
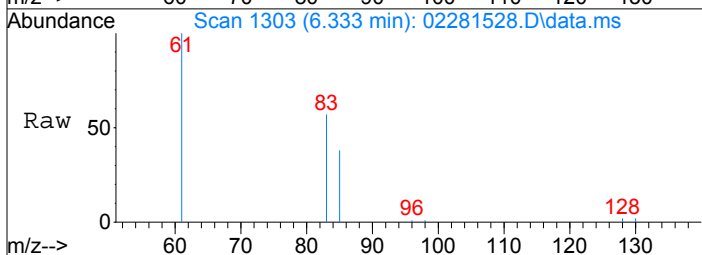
#15
 cis-1,2-Dichloroethene
 Concen: 88.70 pg
 RT: 5.95 min Scan# 1206
 Delta R.T. 0.020 min
 Lab File: 02281528.D
 Acq: 28 Feb 2015 16:06

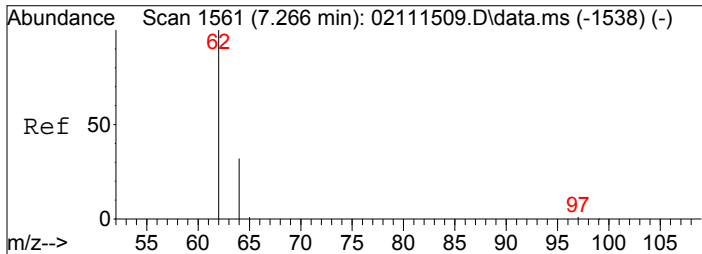
Tgt Ion: 96 Resp: 4471
 Ion Ratio Lower Upper
 96 100
 98 64.7 44.3 84.3



#16
 Chloroform
 Concen: 69.87 pg
 RT: 6.33 min Scan# 1303
 Delta R.T. 0.019 min
 Lab File: 02281528.D
 Acq: 28 Feb 2015 16:06

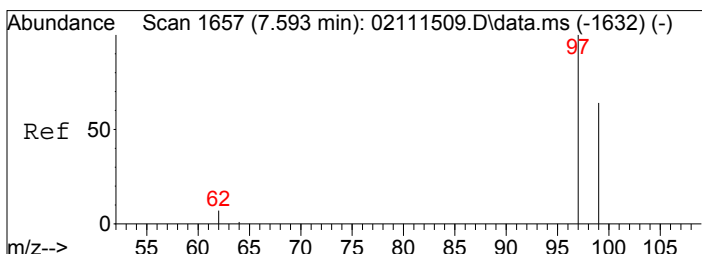
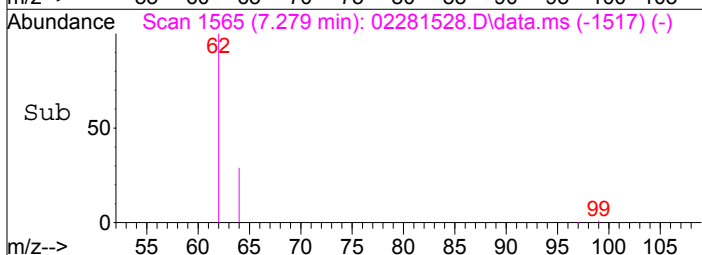
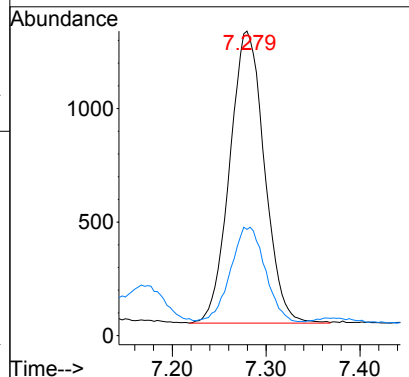
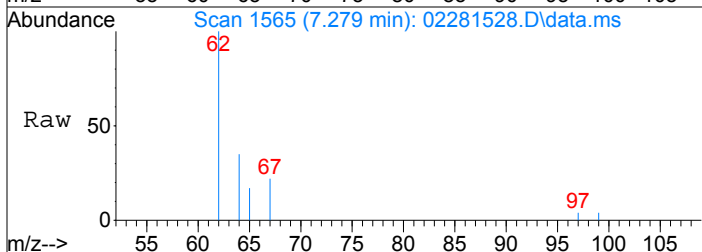
Tgt Ion: 83 Resp: 6102
 Ion Ratio Lower Upper
 83 100
 85 67.6 45.4 85.4





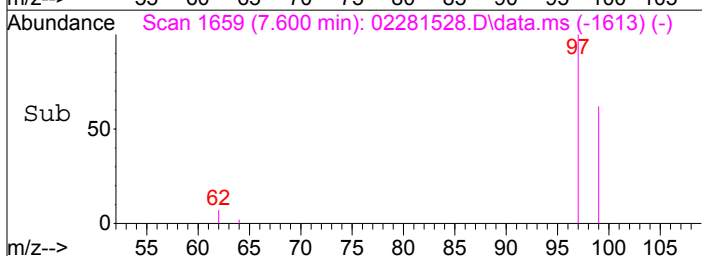
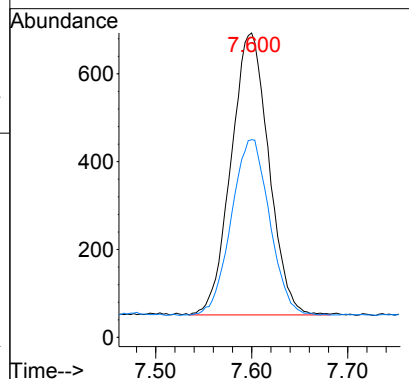
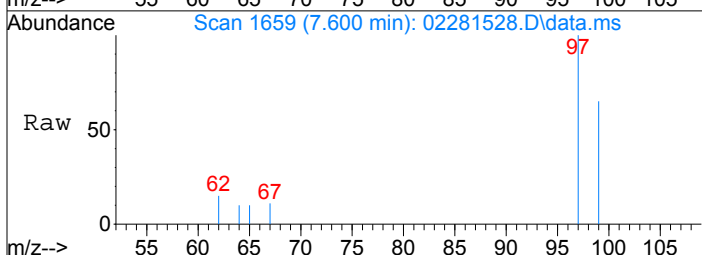
#18
 1,2-Dichloroethane
 Concen: 47.59 pg
 RT: 7.28 min Scan# 1565
 Delta R.T. 0.014 min
 Lab File: 02281528.D
 Acq: 28 Feb 2015 16:06

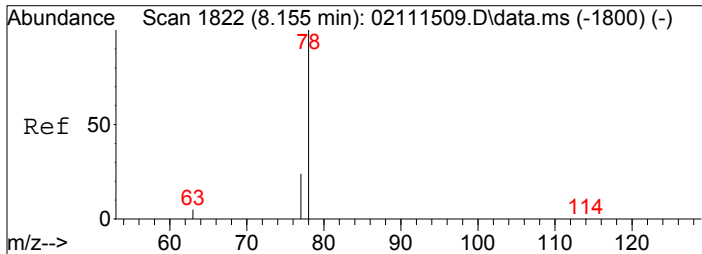
Tgt Ion:	62	Resp:	3309
Ion Ratio	Lower	Upper	
62	100		
64	32.2	11.6	51.6



#19
 1,1,1-Trichloroethane
 Concen: 20.61 pg
 RT: 7.60 min Scan# 1659
 Delta R.T. 0.007 min
 Lab File: 02281528.D
 Acq: 28 Feb 2015 16:06

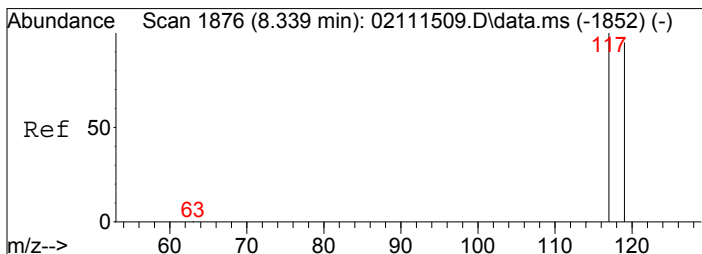
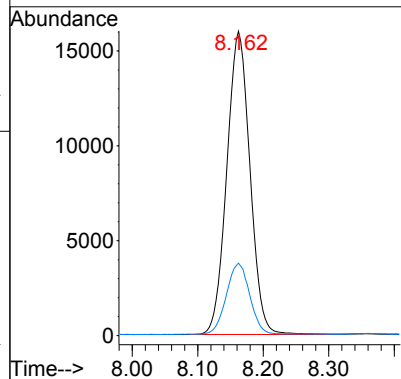
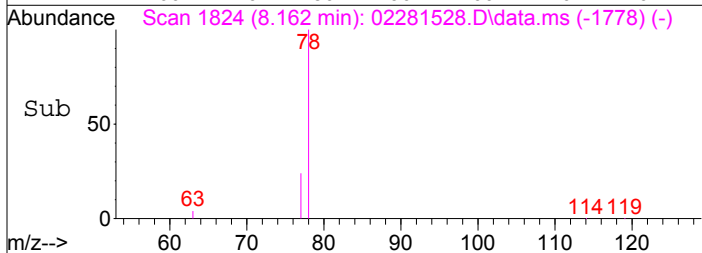
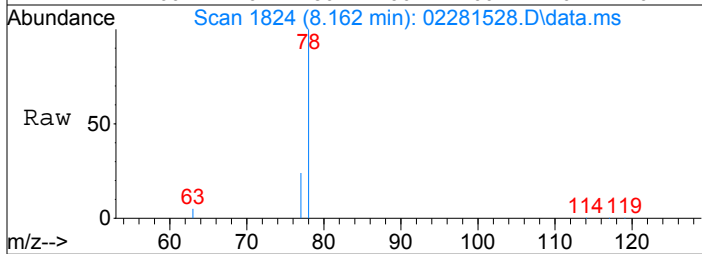
Tgt Ion:	97	Resp:	1750
Ion Ratio	Lower	Upper	
97	100		
99	63.4	44.0	84.0





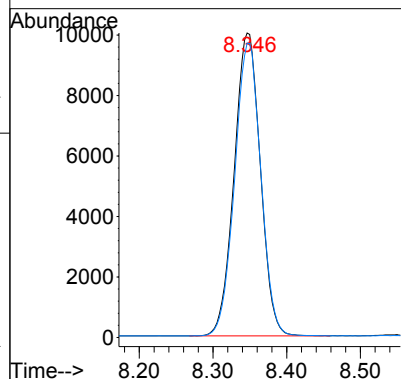
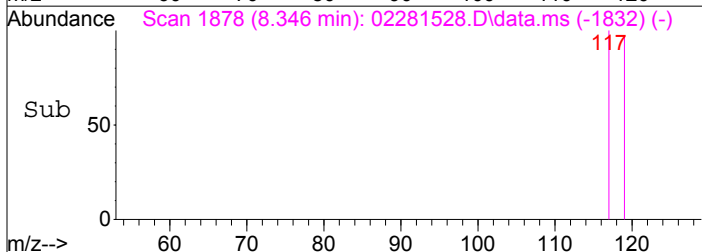
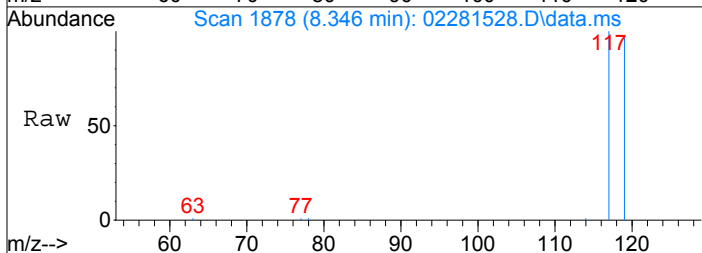
#20
Benzene
Concen: 218.01 pg
RT: 8.16 min Scan# 1824
Delta R.T. 0.007 min
Lab File: 02281528.D
Acq: 28 Feb 2015 16:06

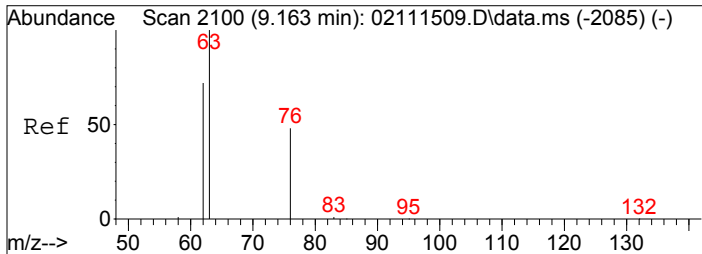
Tgt Ion	78	77	Ratio	Lower	Upper
Resp	39160				
Ratio	100	23.5			
Lower		3.7			
Upper		43.7			



#21
Carbon Tetrachloride
Concen: 388.48 pg
RT: 8.35 min Scan# 1878
Delta R.T. 0.007 min
Lab File: 02281528.D
Acq: 28 Feb 2015 16:06

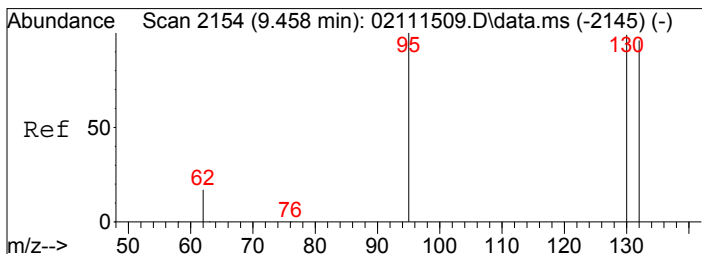
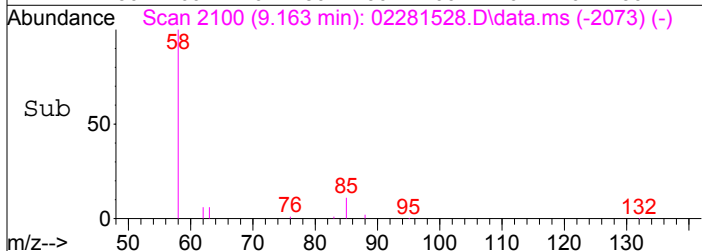
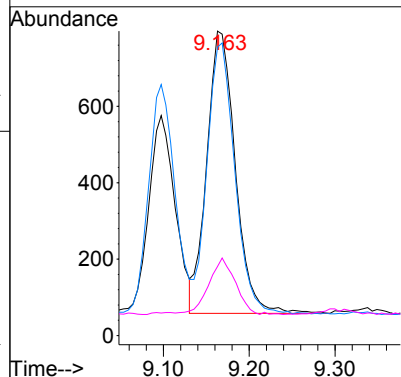
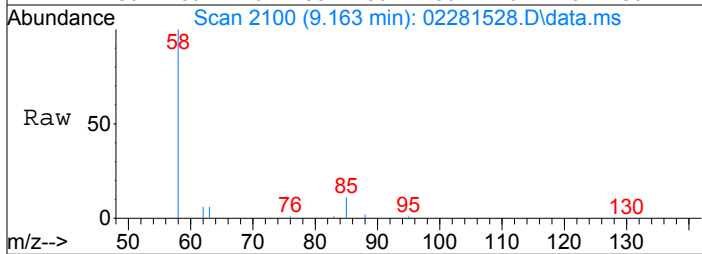
Tgt Ion	117	119	Ratio	Lower	Upper
Resp	24700				
Ratio	100	96.8			
Lower		75.5			
Upper		115.5			





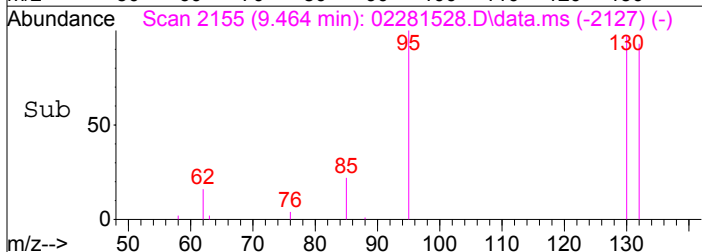
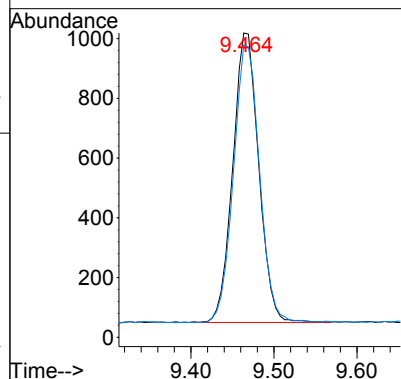
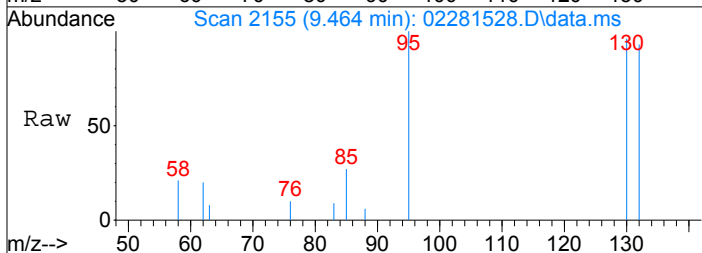
#23
1,2-Dichloropropane
Concen: 38.44 pg
RT: 9.16 min Scan# 2100
Delta R.T. 0.000 min
Lab File: 02281528.D
Acq: 28 Feb 2015 16:06

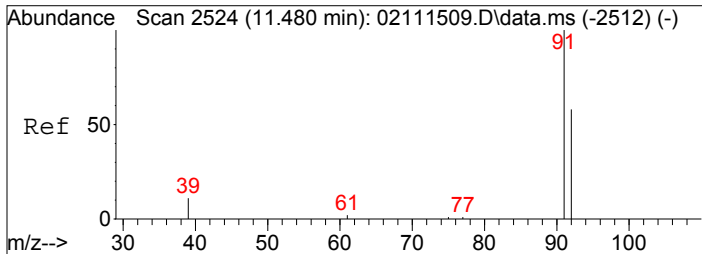
Tgt Ion: 63 Resp: 1712
Ion Ratio Lower Upper
63 100
62 91.9 52.0 92.0
76 18.7 28.1 68.1#



#25
Trichloroethene
Concen: 40.07 pg
RT: 9.46 min Scan# 2155
Delta R.T. 0.006 min
Lab File: 02281528.D
Acq: 28 Feb 2015 16:06

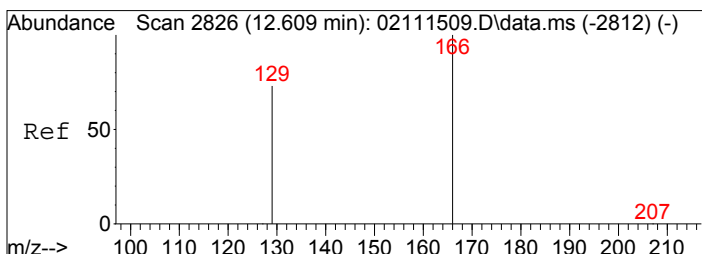
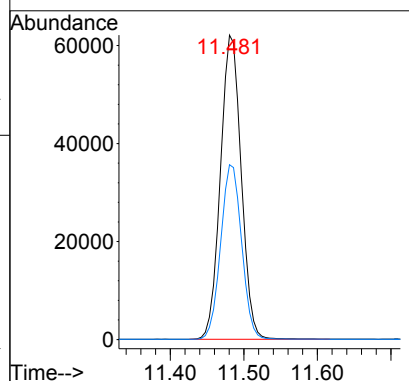
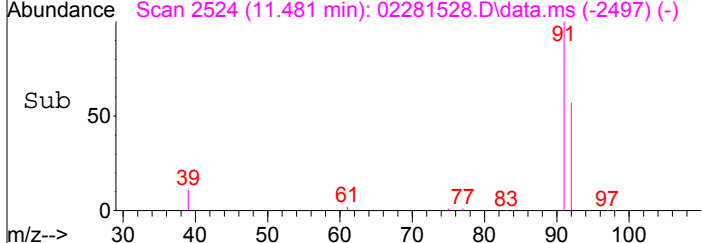
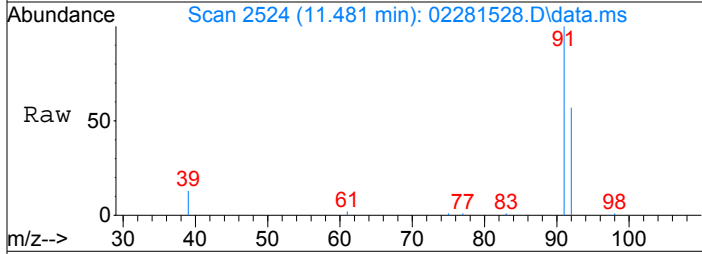
Tgt Ion: 130 Resp: 2102
Ion Ratio Lower Upper
130 100
132 97.1 77.1 117.1





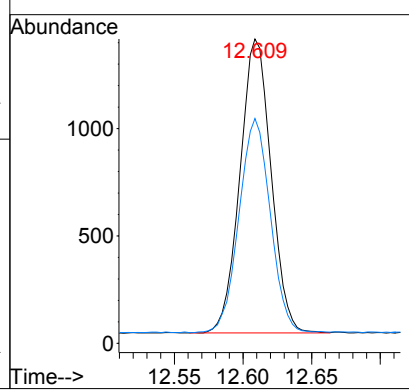
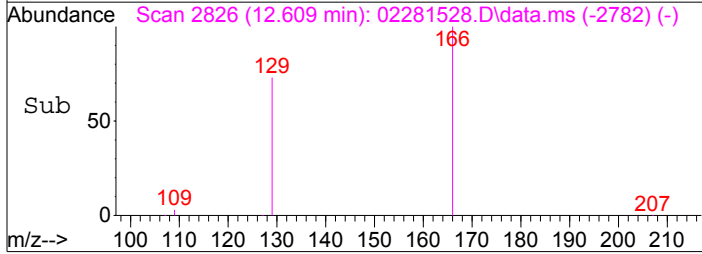
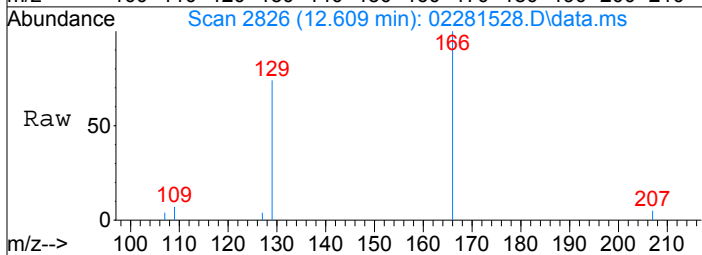
#31
Toluene
Concen: 608.46 pg
RT: 11.48 min Scan# 2524
Delta R.T. 0.000 min
Lab File: 02281528.D
Acq: 28 Feb 2015 16:06

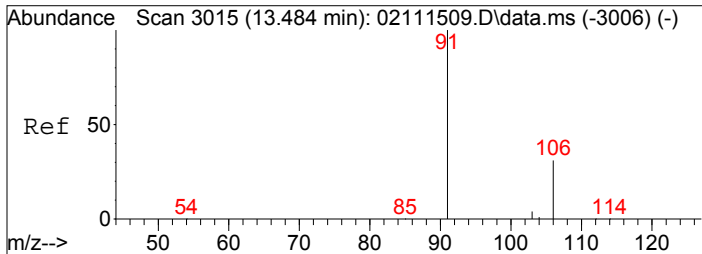
Tgt Ion:	91	Resp:	121858
Ion Ratio	Lower	Upper	
91	100		
92	57.9	37.7	77.7



#33
Tetrachloroethene
Concen: 34.80 pg
RT: 12.61 min Scan# 2826
Delta R.T. -0.000 min
Lab File: 02281528.D
Acq: 28 Feb 2015 16:06

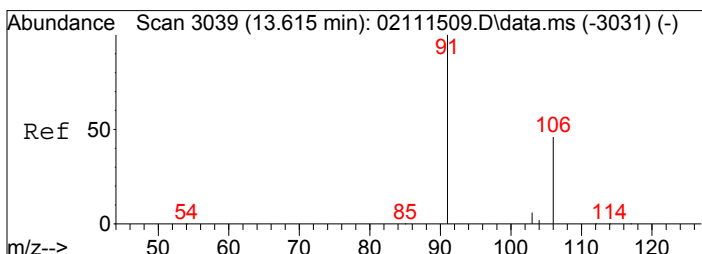
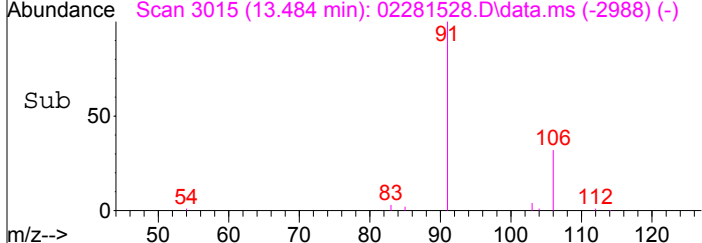
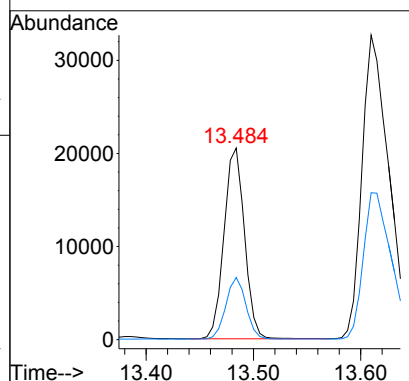
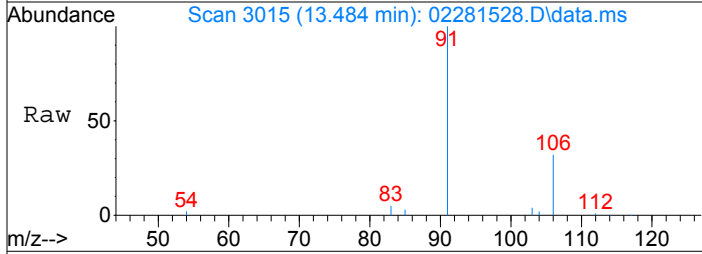
Tgt Ion:	166	Resp:	2158
Ion Ratio	Lower	Upper	
166	100		
129	73.3	53.3	93.3





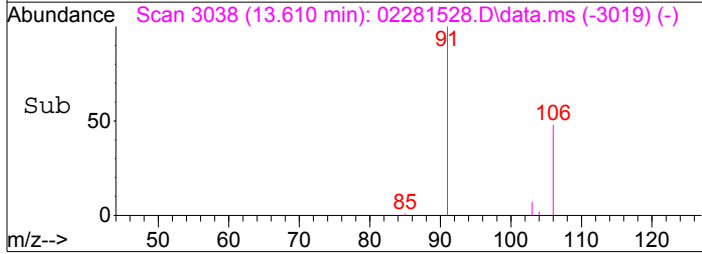
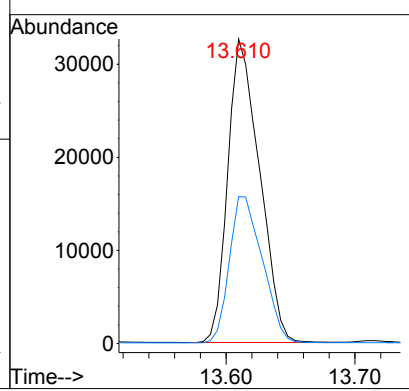
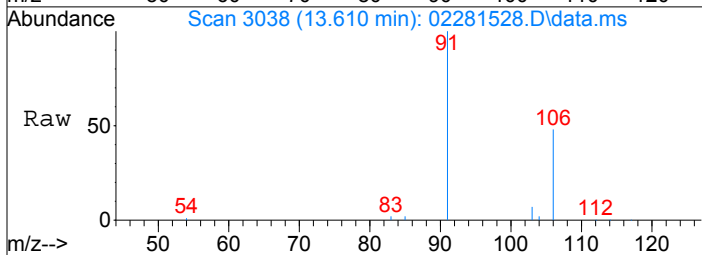
#36
Ethylbenzene
Concen: 129.96 pg
RT: 13.48 min Scan# 3015
Delta R.T. 0.000 min
Lab File: 02281528.D
Acq: 28 Feb 2015 16:06

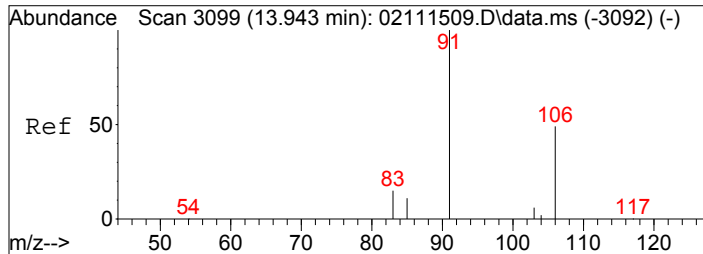
Tgt Ion:	91	Resp:	27232
Ion Ratio	Lower	Upper	
91	100		
106	31.6	10.9	50.9



#37
m,p-Xylene
Concen: 324.64 pg
RT: 13.61 min Scan# 3038
Delta R.T. -0.005 min
Lab File: 02281528.D
Acq: 28 Feb 2015 16:06

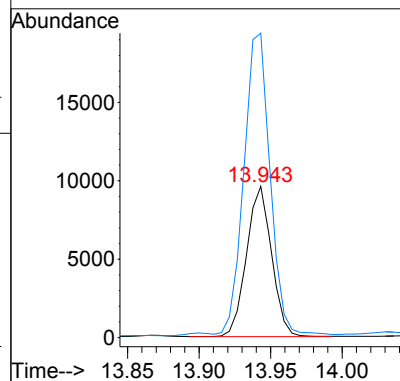
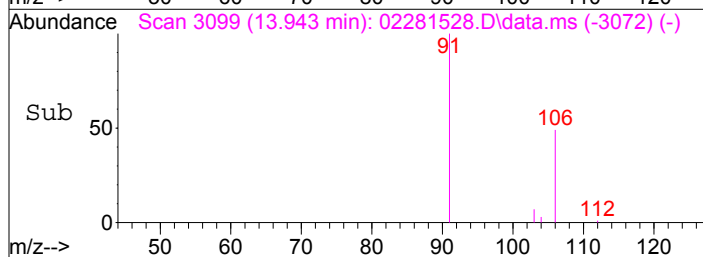
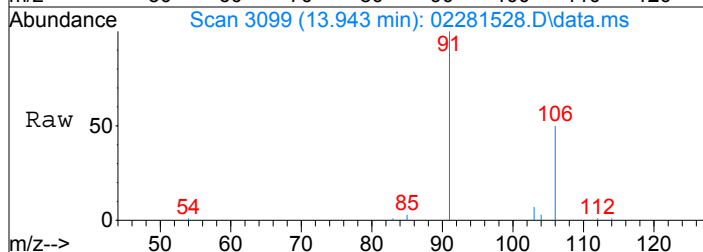
Tgt Ion:	91	Resp:	55909
Ion Ratio	Lower	Upper	
91	100		
106	50.1	27.5	67.5





#38
o-Xylene
Concen: 139.03 pg
RT: 13.94 min Scan# 3099
Delta R.T. 0.000 min
Lab File: 02281528.D
Acq: 28 Feb 2015 16:06

Tgt Ion:106 Resp: 11702
Ion Ratio Lower Upper
106 100
91 208.2 198.3 238.3



Data File: I:\MS19\DATA\2015 02\28\02281528.D

Acq On : 28 Feb 2015 16:06

Operator: WA

Sample : P1500729-022 (1000mL)

Misc : S29-02041502

ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 02 08:58:42 2015

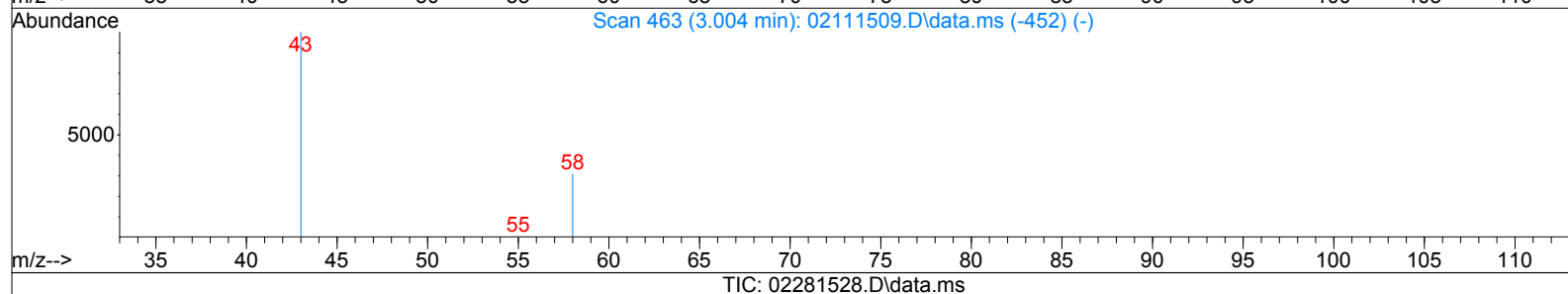
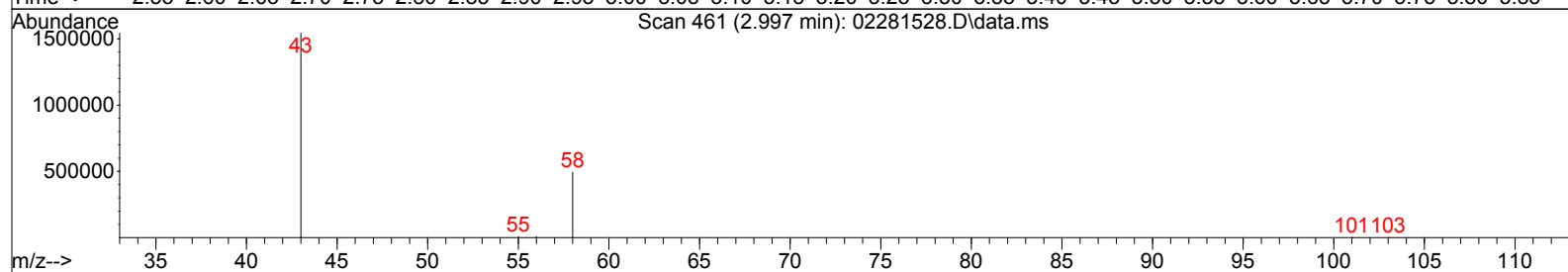
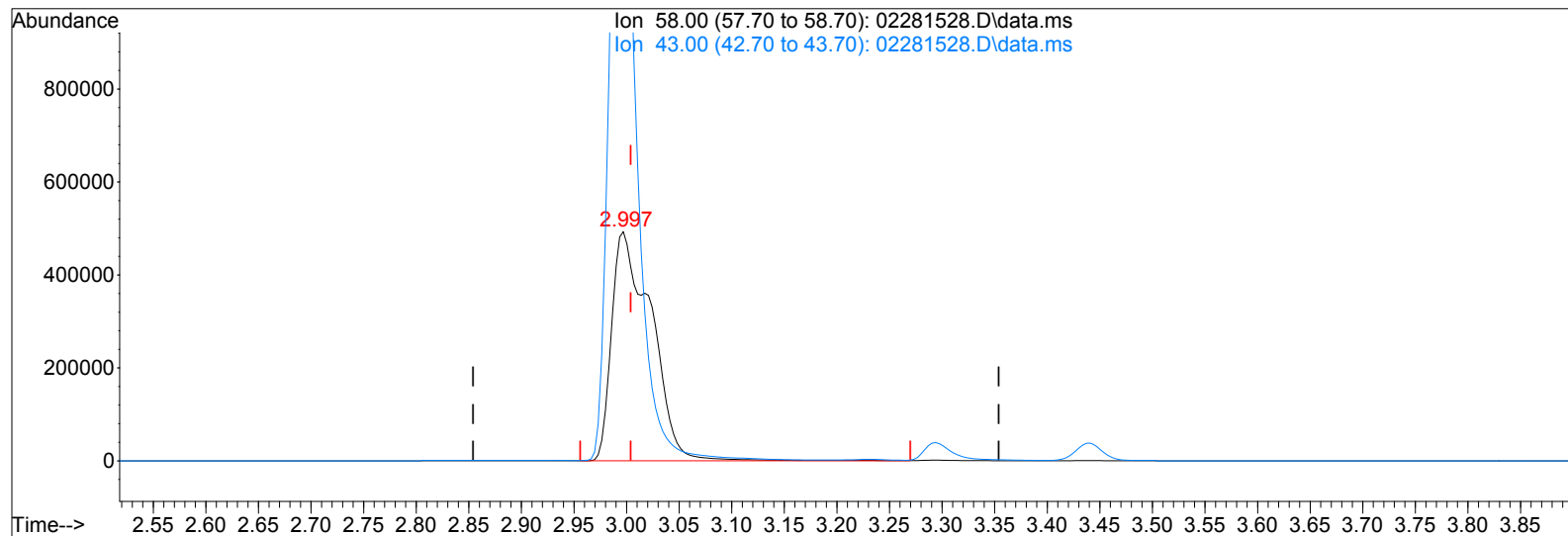
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



(7) Acetone (T)

2.997min (-0.007) 31554.26pg

response 1289901

Ion	Exp%	Act%
58.00	100	100
43.00	321.80	209.60#
0.00	0.00	0.00
0.00	0.00	0.00

Data File: I:\MS19\DATA\2015 02\28\02281528.D

Acq On : 28 Feb 2015 16:06

Operator: WA

Sample : P1500729-022 (1000mL)

Misc : S29-02041502

ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 02 08:58:42 2015

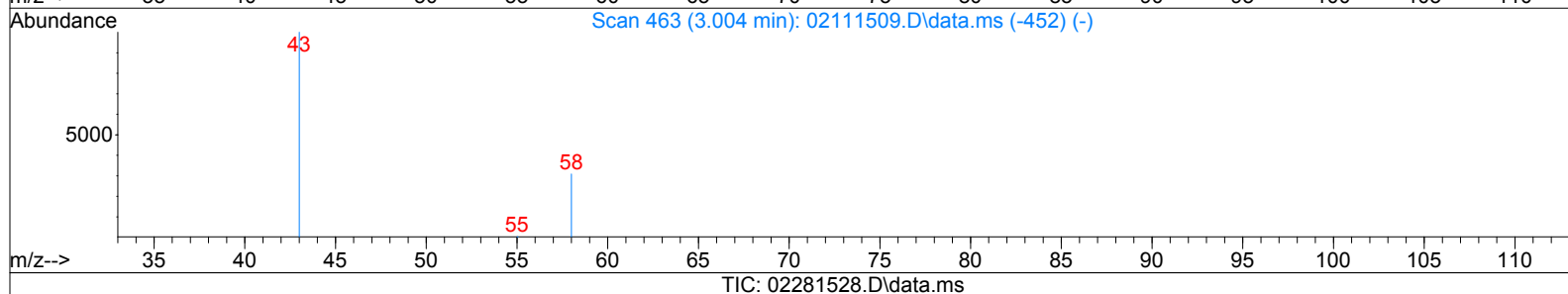
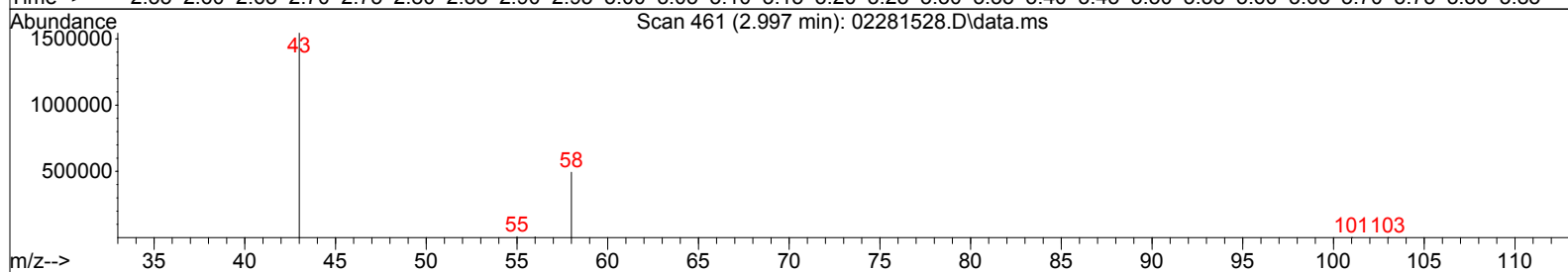
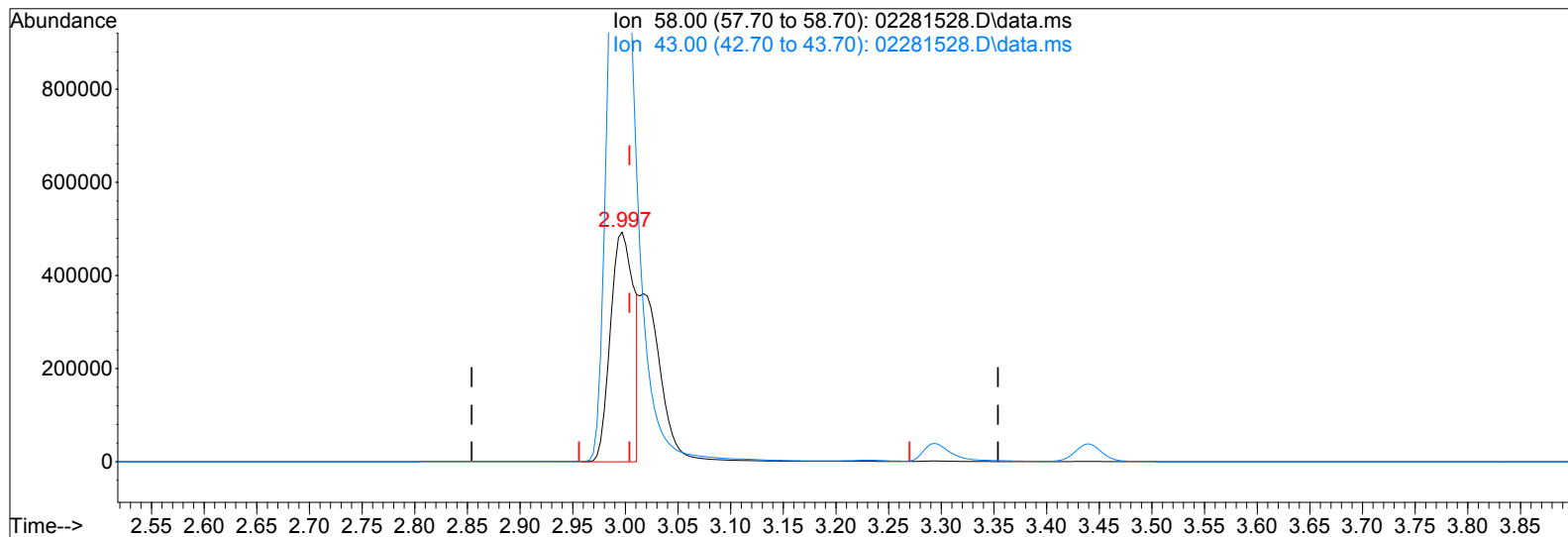
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



TIC: 02281528.D\data.ms

(7) Acetone (T)

2.997min (-0.007) 18571.86pg m

response 759196

IPC

107 3/2/15

Ion	Exp%	Act%
58.00	100	100
43.00	321.80	356.12#
0.00	0.00	0.00
0.00	0.00	0.00

3/3/15

Data File: I:\MS19\DATA\2015 02\28\02281529.D

Acq On : 28 Feb 2015 16:34

Operator: WA

Sample : P1500729-023 (1000mL)

Misc : S29-02041502

ALS Vial : 4 Sample Multiplier: 1

Quant Time: Mar 02 15:07:14 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

IDA 3/2/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.13	130	29017	1000.000	pg	0.01
22) 1,4-Difluorobenzene (IS2)	8.72	114	195613	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	33340	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.13	65	60747	857.254	pg	0.01
Spiked Amount 1000.000			Recovery	=	85.72%	
30) Toluene-d8 (SS2)	11.38	98	191668	1062.513	pg	0.00
Spiked Amount 1000.000			Recovery	=	106.25%	
40) Bromofluorobenzene (SS3)	14.25	174	82724	1229.021	pg	0.00
Spiked Amount 1000.000			Recovery	=	122.90%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.72	85	173012	1467.129	pg	100
3) Chloromethane	1.83	52	10639	451.761	pg	92
4) Vinyl Chloride	2.01	62	255	N.D.		
5) Bromomethane	2.32	94	1208	22.781	pg	100
6) Chloroethane	2.47	64	1267	28.400	pg	100
7) Acetone	2.99	58	969993m	23293.454	pg	
8) Trichlorofluoromethane	3.10	101	385605	3806.822	pg	100
9) 1,1-Dichloroethene	3.66	96	137	N.D.		
10) Methylene Chloride	3.81	84	10802	224.741	pg	95
11) Trichlorotrifluoroethane	4.10	151	15273	328.138	pg	100
12) trans-1,2-Dichloroethene	4.74	96	167	N.D.		
13) 1,1-Dichloroethane	4.96	63	459	N.D.		
14) Methyl tert-Butyl Ether	0.00	73	0	N.D.	d	
15) cis-1,2-Dichloroethene	5.94	96	5944	115.758	pg	100
16) Chloroform	6.33	83	5975	67.161	pg	96
18) 1,2-Dichloroethane	7.28	62	3207	45.274	pg	98
19) 1,1,1-Trichloroethane	7.60	97	1435	N.D.		
20) Benzene	8.16	78	39790	217.454	pg	99
21) Carbon Tetrachloride	8.34	117	22531	347.868	pg	99
23) 1,2-Dichloropropane	9.16	63	1744	40.878	pg	# 67
24) Bromodichloromethane	9.42	83	500	N.D.		
25) Trichloroethene	9.46	130	2320	46.165	pg	99
26) 1,4-Dioxane	9.52	88	616	N.D.		
27) cis-1,3-Dichloropropene	10.46	75	339	N.D.		
28) trans-1,3-Dichloropropene	11.05	75	194	N.D.		
29) 1,1,2-Trichloroethane	0.00	83	0	N.D.	d	
31) Toluene	11.48	91	107097	558.214	pg	99
32) 1,2-Dibromoethane	12.12	107	32	N.D.		
33) Tetrachloroethene	12.61	166	1560	26.260	pg	99
35) Chlorobenzene	13.17	112	644	N.D.		
36) Ethylbenzene	13.48	91	29493	141.068	pg	98
37) m,p-Xylene	13.61	91	77439	450.668	pg	96
38) o-Xylene	13.94	106	16116	191.908	pg	96
39) 1,1,2,2-Tetrachloroethane	13.96	83	1190	N.D.		
41) 1,3-Dichlorobenzene	0.00	146	0	N.D.	d	
42) 1,4-Dichlorobenzene	15.24	146	2751	23.877	pg	99
43) 1,2-Dichlorobenzene	15.46	146	100	N.D.		
44) 1,2,4-Trichlorobenzene	16.65	182	229	N.D.		
45) Naphthalene	16.70	128	14724	70.581	pg	98
46) Hexachlorobutadiene	16.96	225	29	N.D.		

(#)= qualifier out of range (m) = manual integration (+) = signals summed

Data File: I:\MS19\DATA\2015 02\28\02281529.D

Acq On : 28 Feb 2015 16:34

Operator: WA

Sample : P1500729-023 (1000mL)

Misc : S29-02041502

ALS Vial : 4 Sample Multiplier: 1

Quant Time: Mar 02 15:07:14 2015

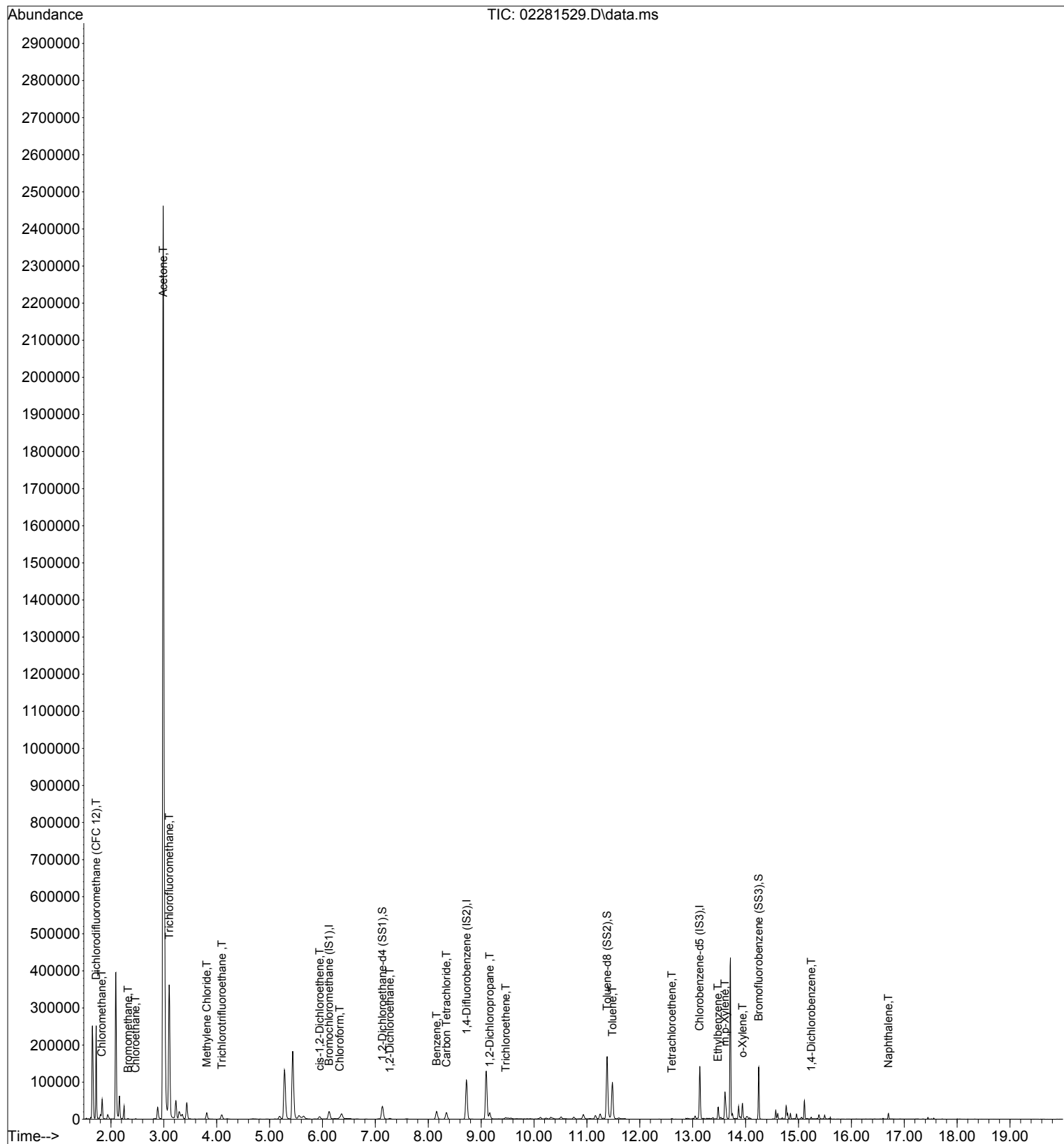
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 02\28\02281529.D

Acq On : 28 Feb 2015 16:34

Operator: WA

Sample : P1500729-023 (1000mL)

Misc : S29-02041502

ALS Vial : 4 Sample Multiplier: 1

Quant Time: Mar 02 15:07:14 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

WA 3/2/15

DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.13	130	29017	1000.000	pg	0.01
22) 1,4-Difluorobenzene (IS2)	8.72	114	195613	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	33340	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.13	65	60747	857.254	pg	0.01
Spiked Amount 1000.000			Recovery	=	85.72%	
30) Toluene-d8 (SS2)	11.38	98	191668	1062.513	pg	0.00
Spiked Amount 1000.000			Recovery	=	106.25%	
40) Bromofluorobenzene (SS3)	14.25	174	82724	1229.021	pg	0.00
Spiked Amount 1000.000			Recovery	=	122.90%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.72	85	173012	1467.129	pg	100
3) Chloromethane	1.83	52	10639	451.761	pg	92
5) Bromomethane	2.32	94	1208	22.781	pg	100
6) Chloroethane	2.47	64	1267	28.400	pg	100
7) Acetone	2.99	58	969993m	23293.454	pg	
8) Trichlorofluoromethane	3.10	101	385605	3806.822	pg	100
10) Methylene Chloride	3.81	84	10802	224.741	pg	95
11) Trichlorotrifluoroethane	4.10	151	15273	328.138	pg	100
15) cis-1,2-Dichloroethene	5.94	96	5944	115.758	pg	100
16) Chloroform	6.33	83	5975	67.161	pg	96
18) 1,2-Dichloroethane	7.28	62	3207	45.274	pg	98
20) Benzene	8.16	78	39790	217.454	pg	99
21) Carbon Tetrachloride	8.34	117	22531	347.868	pg	99
23) 1,2-Dichloropropane	9.16	63	1744	40.878	pg	# 67
25) Trichloroethene	9.46	130	2320	46.165	pg	99
31) Toluene	11.48	91	107097	558.214	pg	99
33) Tetrachloroethene	12.61	166	1560	26.260	pg	99
36) Ethylbenzene	13.48	91	29493	141.068	pg	98
37) m,p-Xylene	13.61	91	77439	450.668	pg	96
38) o-Xylene	13.94	106	16116	191.908	pg	96
42) 1,4-Dichlorobenzene	15.24	146	2751	23.877	pg	99
45) Naphthalene	16.70	128	14724	70.581	pg	98

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\28\02281529.D

Acq On : 28 Feb 2015 16:34

Operator: WA

Sample : P1500729-023 (1000mL)

Misc : S29-02041502

ALS Vial : 4 Sample Multiplier: 1

Quant Time: Mar 02 15:07:14 2015

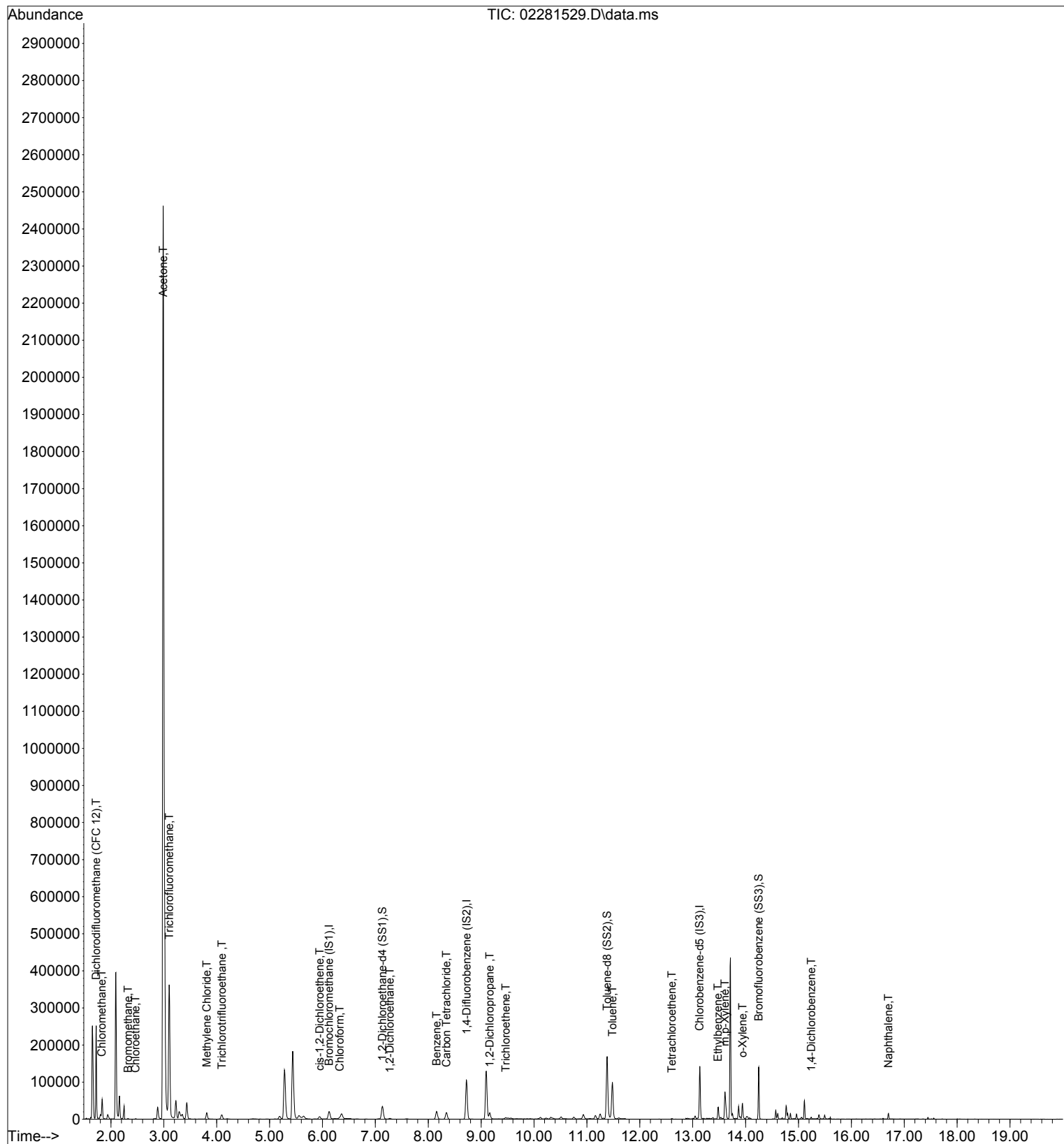
Quant Method : I:\MS19\METHODS\X19021115.M

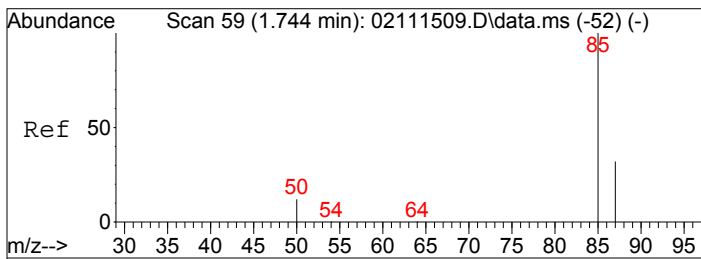
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

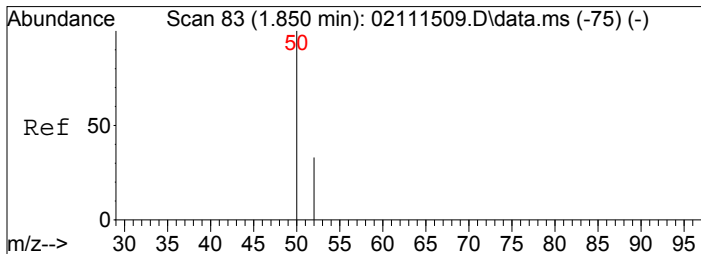
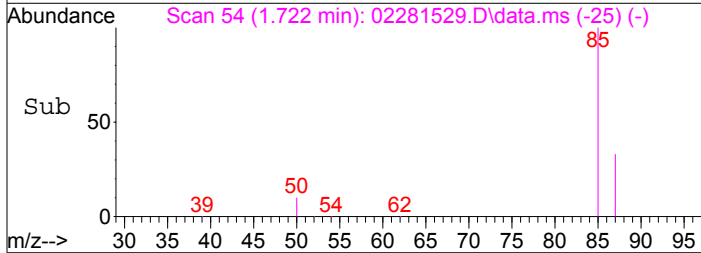
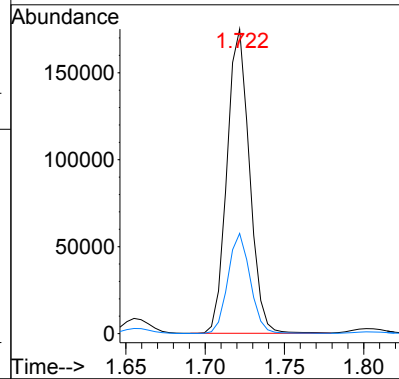
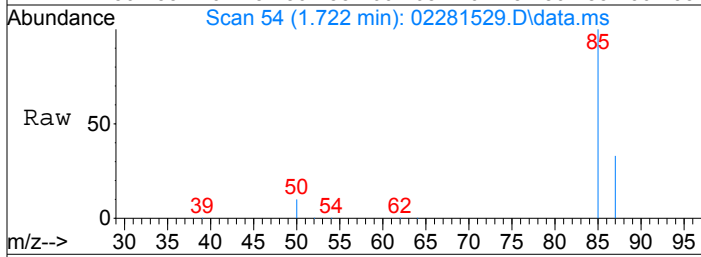
DataAcq Meth:TO15SIM.M





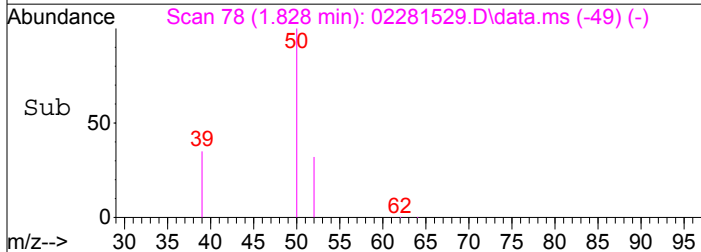
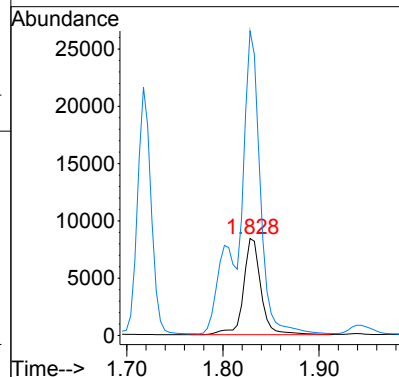
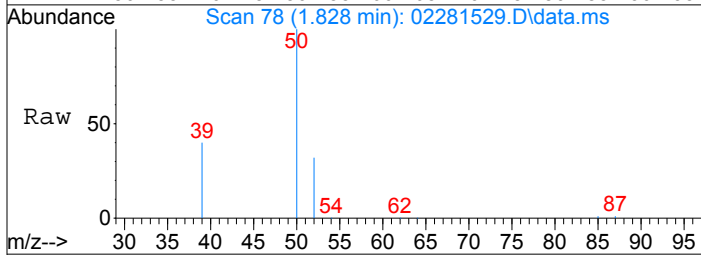
#2
 Dichlorodifluoromethane (CFC 12)
 Concen: 1467.13 pg
 RT: 1.72 min Scan# 54
 Delta R.T. -0.022 min
 Lab File: 02281529.D
 Acq: 28 Feb 2015 16:34

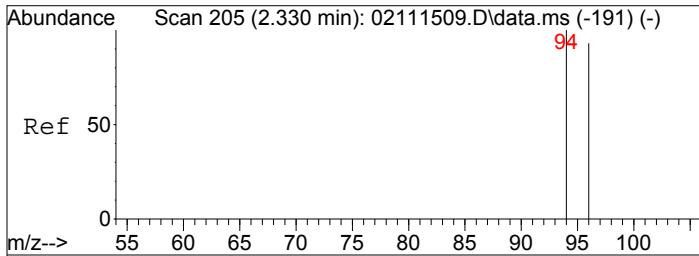
Tgt Ion: 85 Resp: 173012
 Ion Ratio Lower Upper
 85 100
 87 32.5 12.4 52.4



#3
 Chloromethane
 Concen: 451.76 pg
 RT: 1.83 min Scan# 78
 Delta R.T. -0.022 min
 Lab File: 02281529.D
 Acq: 28 Feb 2015 16:34

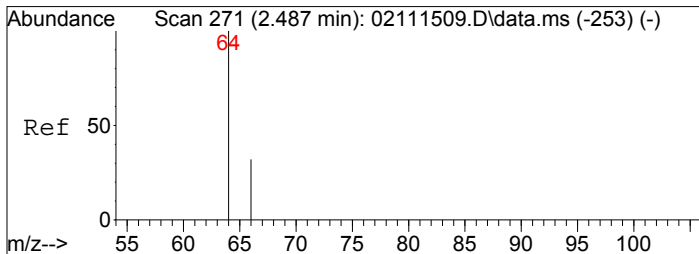
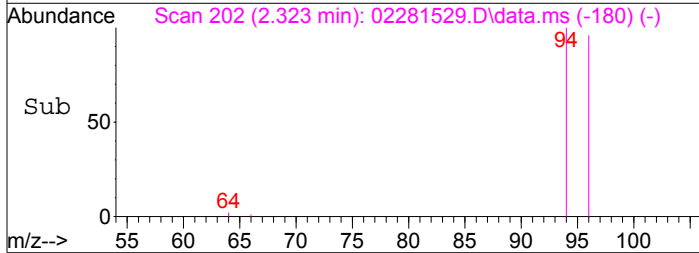
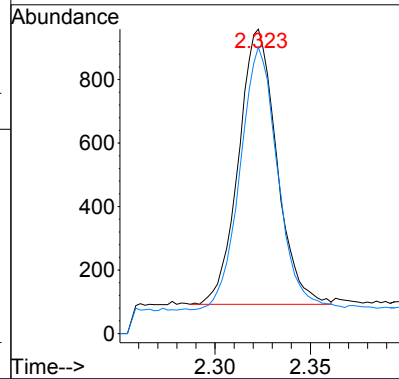
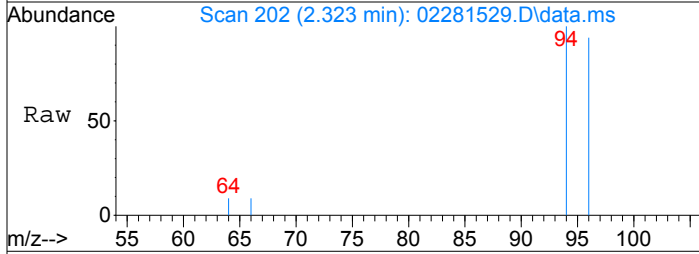
Tgt Ion: 52 Resp: 10639
 Ion Ratio Lower Upper
 52 100
 50 287.2 283.7 323.7





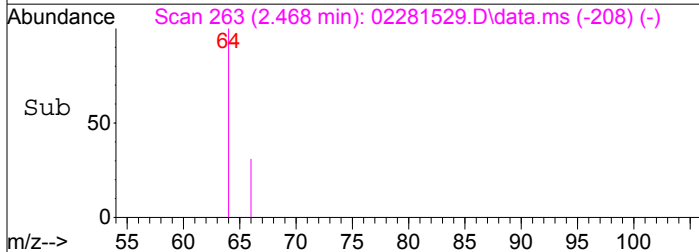
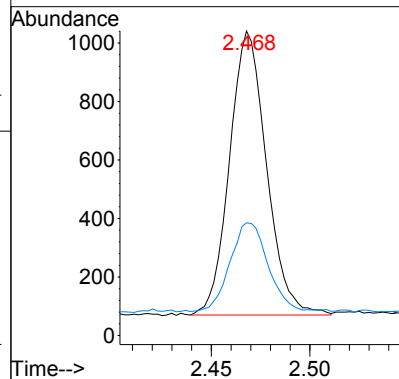
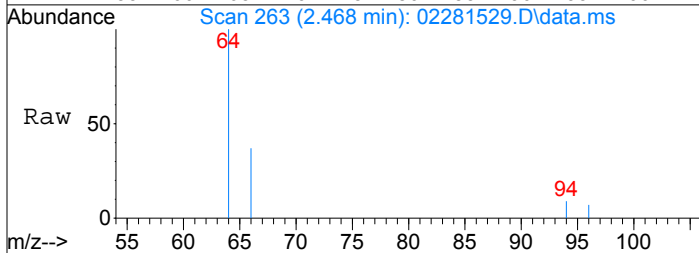
#5
 Bromomethane
 Concen: 22.78 pg
 RT: 2.32 min Scan# 202
 Delta R.T. -0.007 min
 Lab File: 02281529.D
 Acq: 28 Feb 2015 16:34

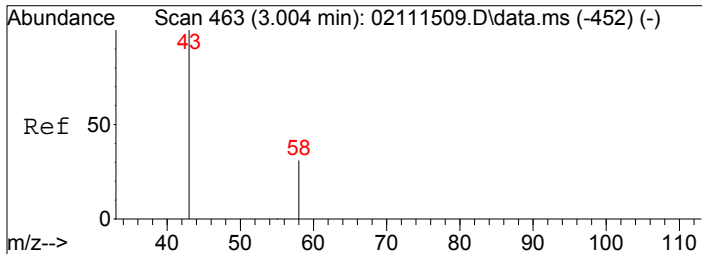
Tgt Ion: 94 Resp: 1208
 Ion Ratio Lower Upper
 94 100
 96 94.5 75.5 113.3



#6
 Chloroethane
 Concen: 28.40 pg
 RT: 2.47 min Scan# 263
 Delta R.T. -0.019 min
 Lab File: 02281529.D
 Acq: 28 Feb 2015 16:34

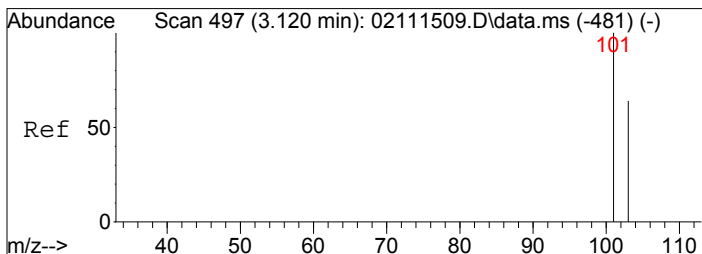
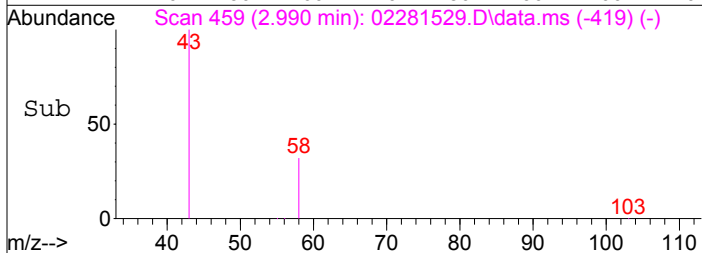
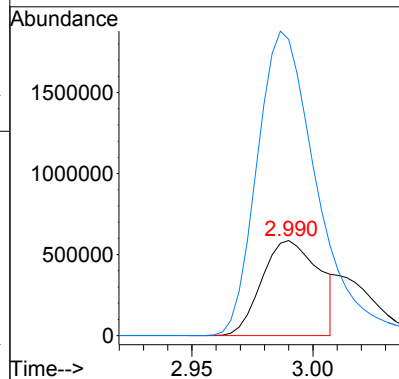
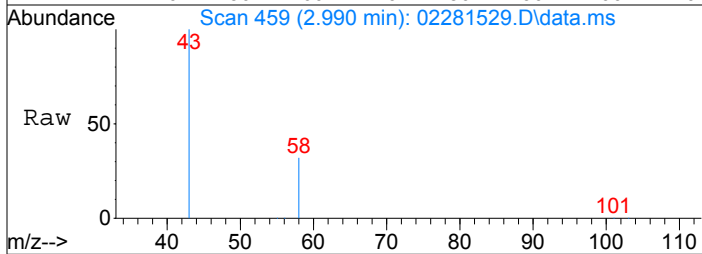
Tgt Ion: 64 Resp: 1267
 Ion Ratio Lower Upper
 64 100
 66 32.0 12.2 52.2





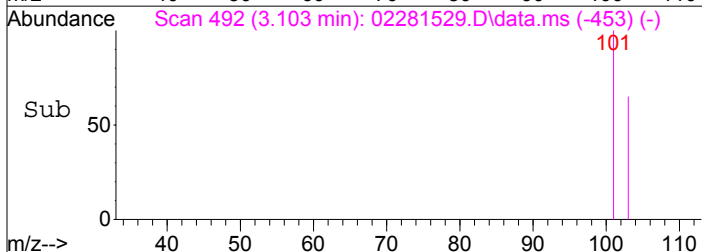
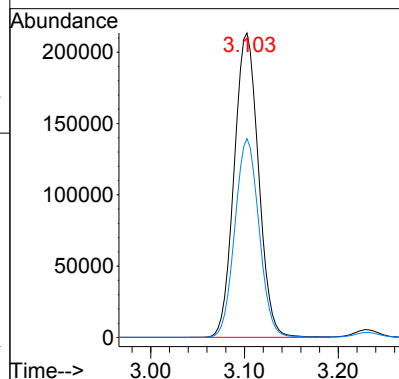
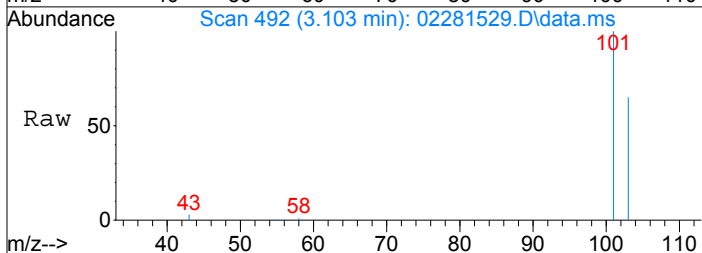
#7
Acetone
Concen: 23293.45 pg m
RT: 2.99 min Scan# 459
Delta R.T. -0.014 min
Lab File: 02281529.D
Acq: 28 Feb 2015 16:34

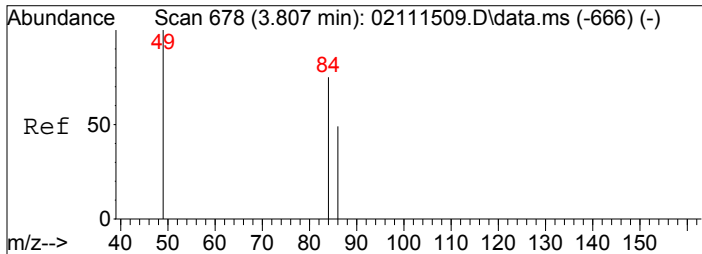
Tgt Ion: 58 Resp: 969993
Ion Ratio Lower Upper
58 100
43 338.1 301.8 341.8



#8
Trichlorofluoromethane
Concen: 3806.82 pg
RT: 3.10 min Scan# 492
Delta R.T. -0.017 min
Lab File: 02281529.D
Acq: 28 Feb 2015 16:34

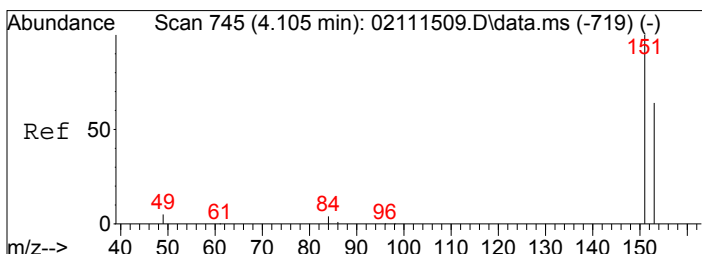
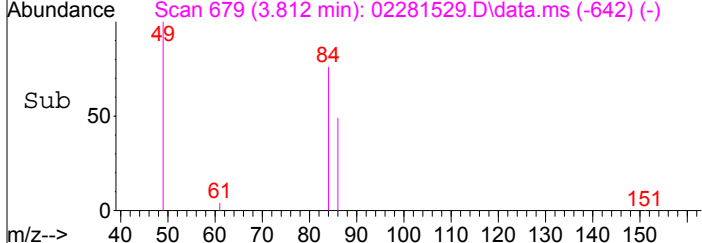
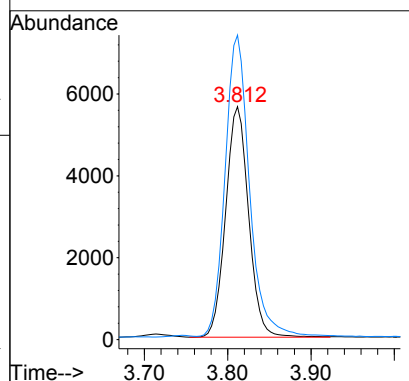
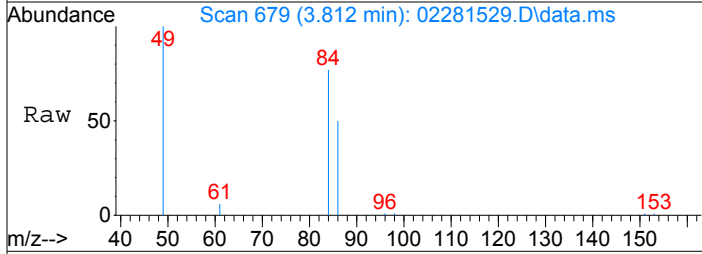
Tgt Ion: 101 Resp: 385605
Ion Ratio Lower Upper
101 100
103 65.0 51.8 77.6





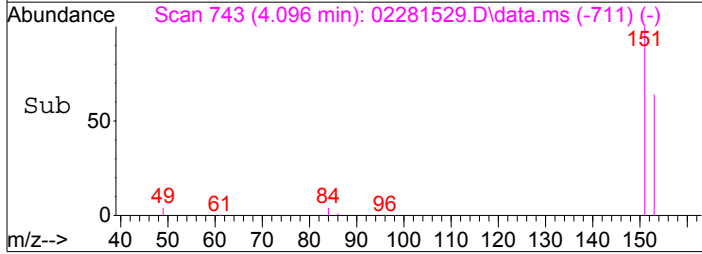
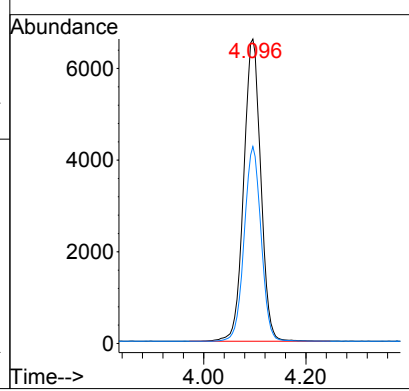
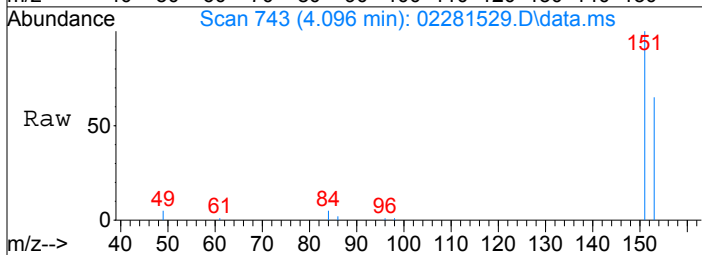
#10
 Methylene Chloride
 Concen: 224.74 pg
 RT: 3.81 min Scan# 679
 Delta R.T. 0.005 min
 Lab File: 02281529.D
 Acq: 28 Feb 2015 16:34

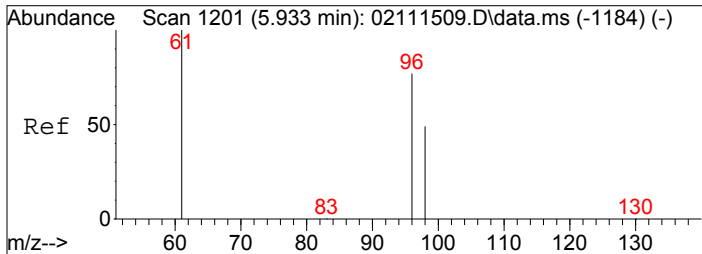
Tgt Ion: 84	Resp: 10802
Ion Ratio	Lower Upper
84	100
49	138.5 112.3 152.3



#11
 Trichlorotrifluoroethane
 Concen: 328.14 pg
 RT: 4.10 min Scan# 743
 Delta R.T. -0.009 min
 Lab File: 02281529.D
 Acq: 28 Feb 2015 16:34

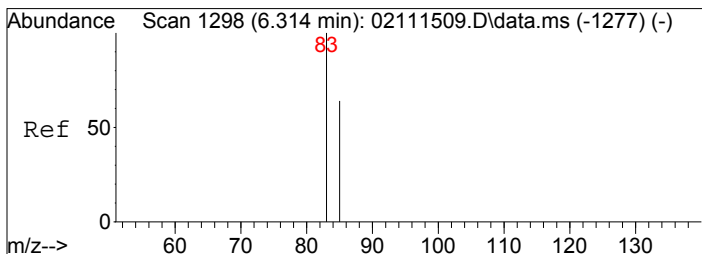
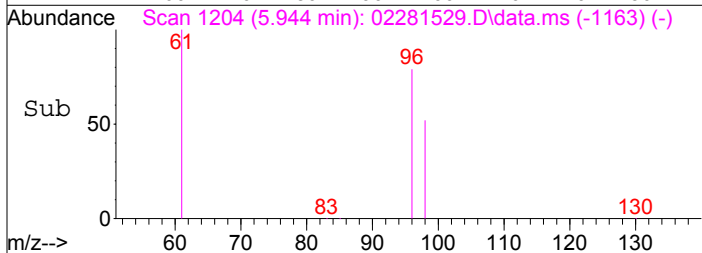
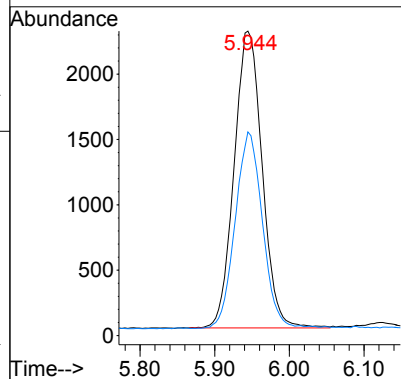
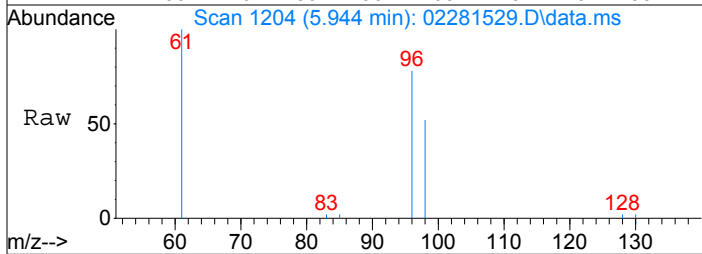
Tgt Ion: 151	Resp: 15273
Ion Ratio	Lower Upper
151	100
153	63.7 43.6 83.6





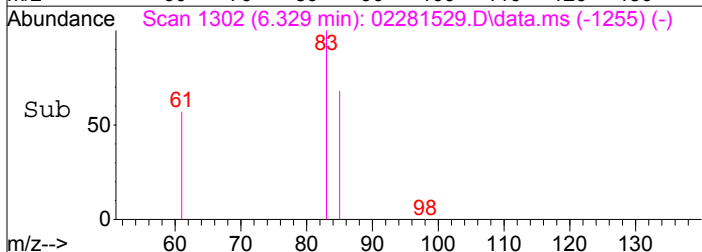
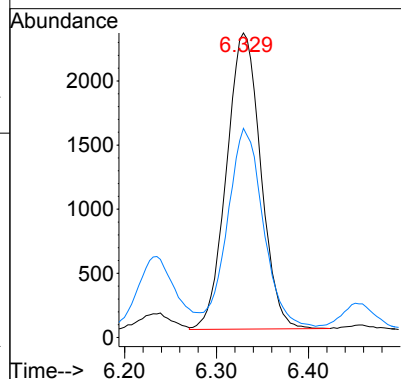
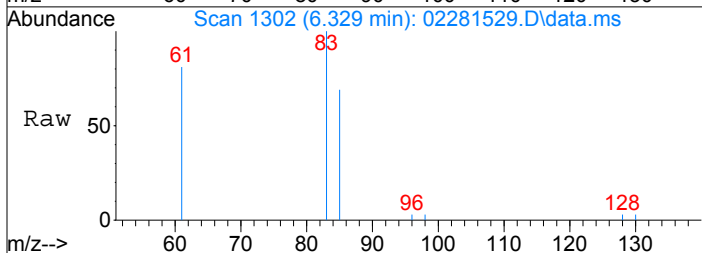
#15
 cis-1,2-Dichloroethene
 Concen: 115.76 pg
 RT: 5.94 min Scan# 1204
 Delta R.T. 0.012 min
 Lab File: 02281529.D
 Acq: 28 Feb 2015 16:34

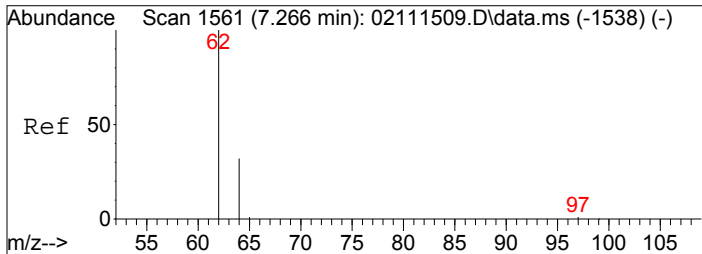
Tgt Ion: 96 Resp: 5944
 Ion Ratio Lower Upper
 96 100
 98 64.1 44.3 84.3



#16
 Chloroform
 Concen: 67.16 pg
 RT: 6.33 min Scan# 1302
 Delta R.T. 0.015 min
 Lab File: 02281529.D
 Acq: 28 Feb 2015 16:34

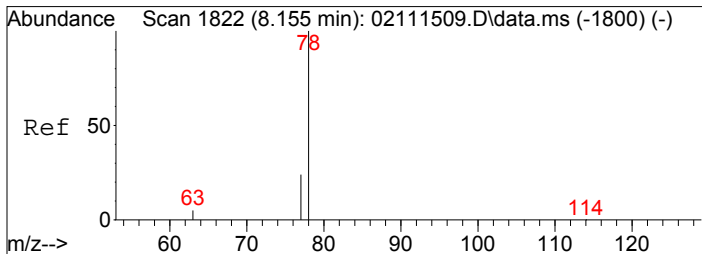
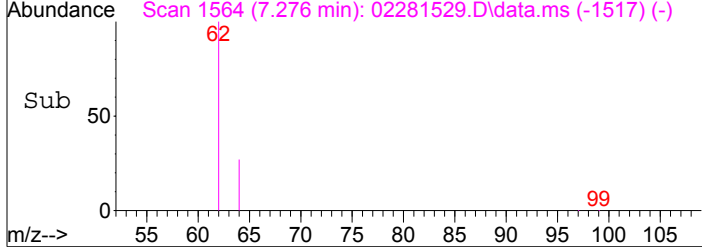
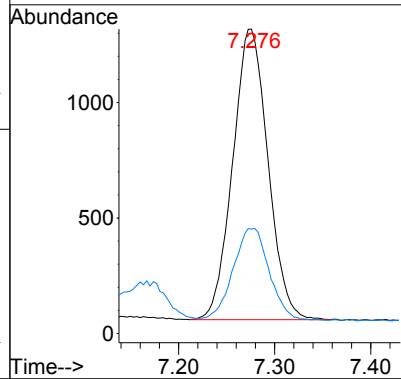
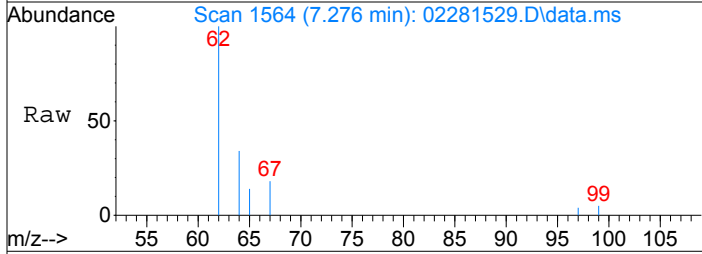
Tgt Ion: 83 Resp: 5975
 Ion Ratio Lower Upper
 83 100
 85 68.8 45.4 85.4





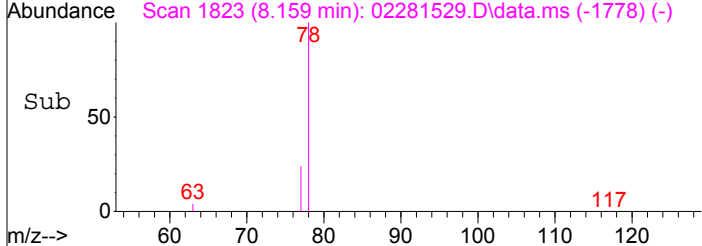
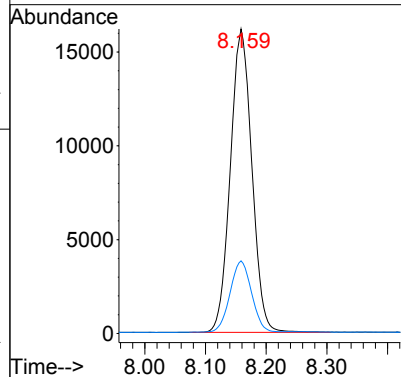
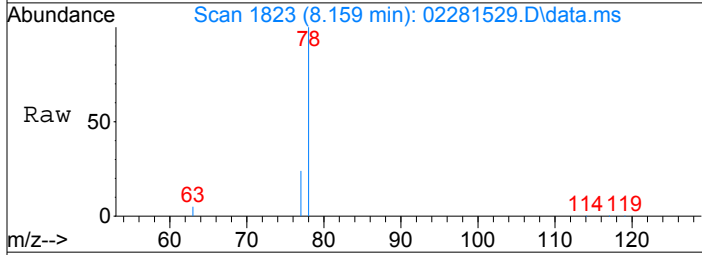
#18
1,2-Dichloroethane
Concen: 45.27 pg
RT: 7.28 min Scan# 1564
Delta R.T. 0.010 min
Lab File: 02281529.D
Acq: 28 Feb 2015 16:34

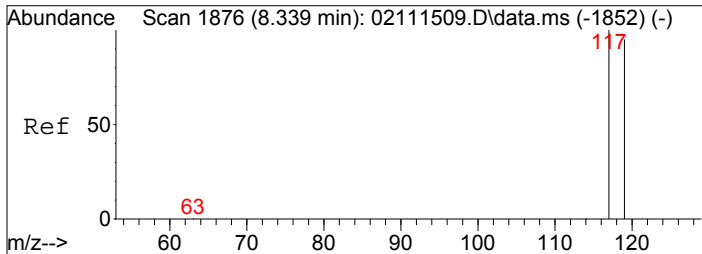
Tgt Ion: 62 Resp: 3207
Ion Ratio Lower Upper
62 100
64 32.5 11.6 51.6



#20
Benzene
Concen: 217.45 pg
RT: 8.16 min Scan# 1823
Delta R.T. 0.004 min
Lab File: 02281529.D
Acq: 28 Feb 2015 16:34

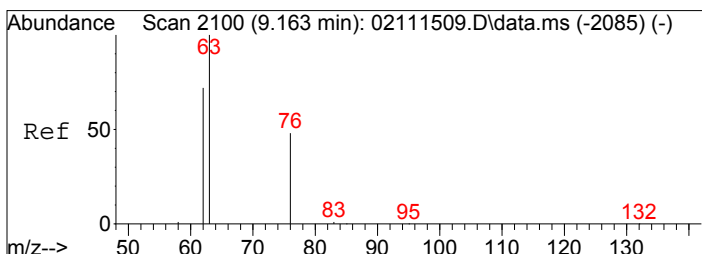
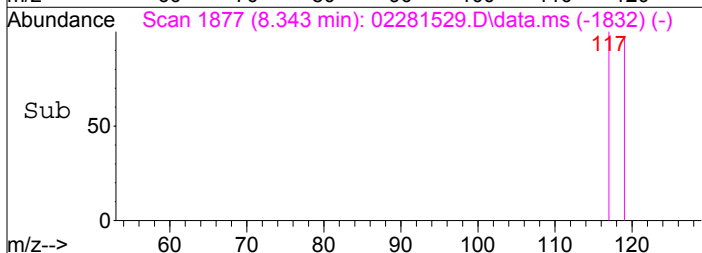
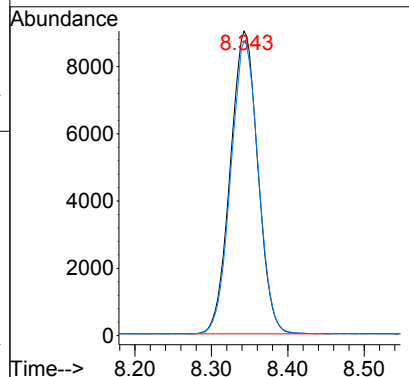
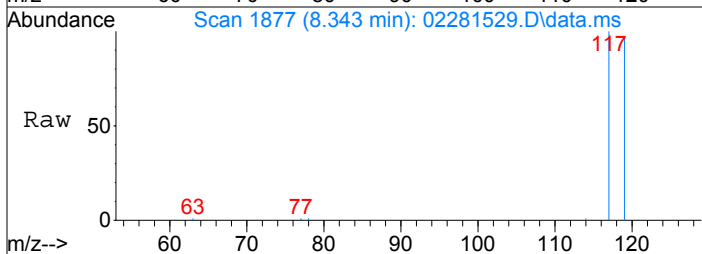
Tgt Ion: 78 Resp: 39790
Ion Ratio Lower Upper
78 100
77 23.4 3.7 43.7





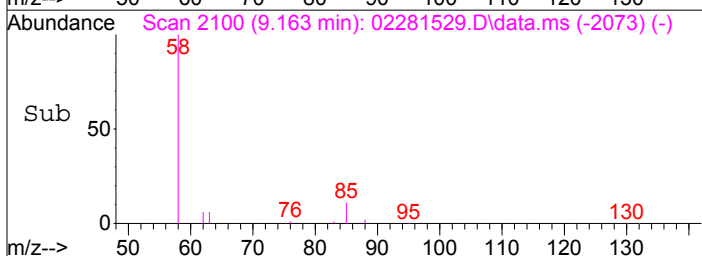
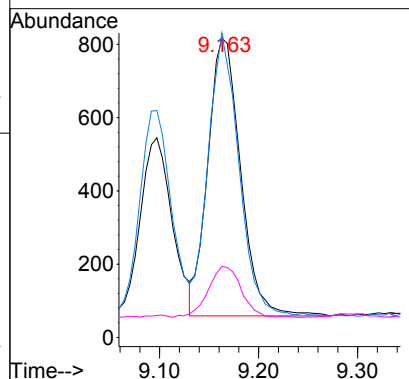
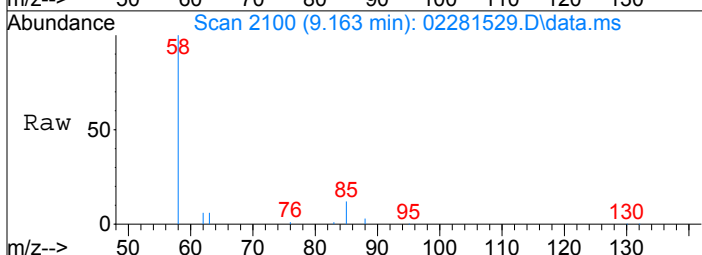
#21
Carbon Tetrachloride
Concen: 347.87 pg
RT: 8.34 min Scan# 1877
Delta R.T. 0.003 min
Lab File: 02281529.D
Acq: 28 Feb 2015 16:34

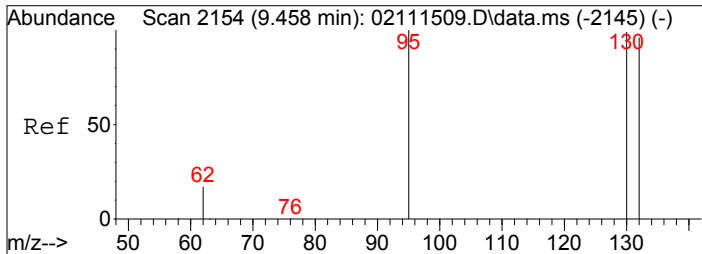
Tgt Ion: 117 Resp: 22531
Ion Ratio Lower Upper
117 100
119 96.7 75.5 115.5



#23
1,2-Dichloropropane
Concen: 40.88 pg
RT: 9.16 min Scan# 2100
Delta R.T. 0.000 min
Lab File: 02281529.D
Acq: 28 Feb 2015 16:34

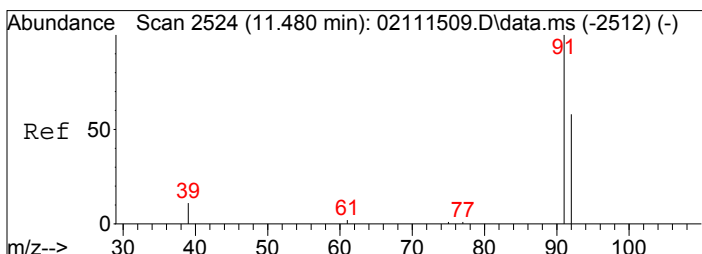
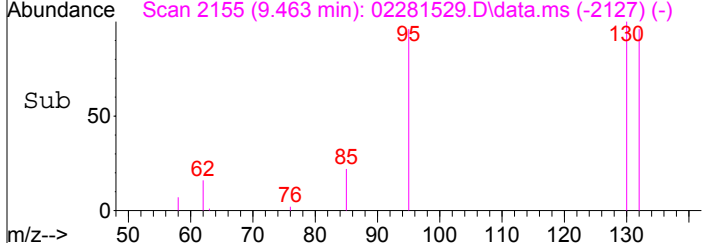
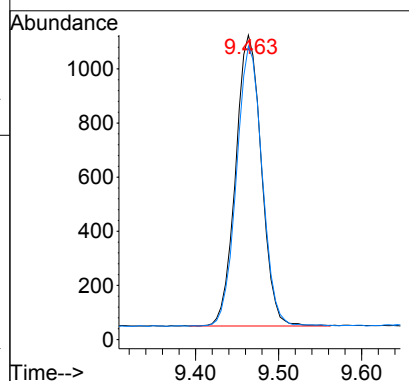
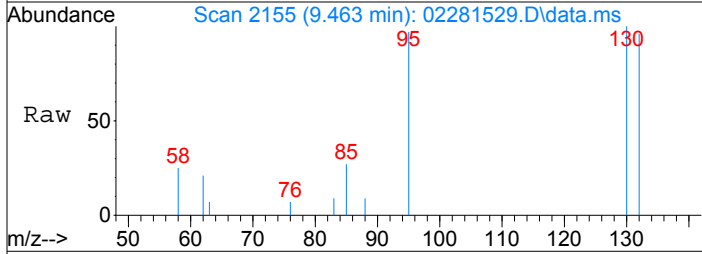
Tgt Ion: 63 Resp: 1744
Ion Ratio Lower Upper
63 100
62 94.0 52.0 92.0#
76 18.3 28.1 68.1#





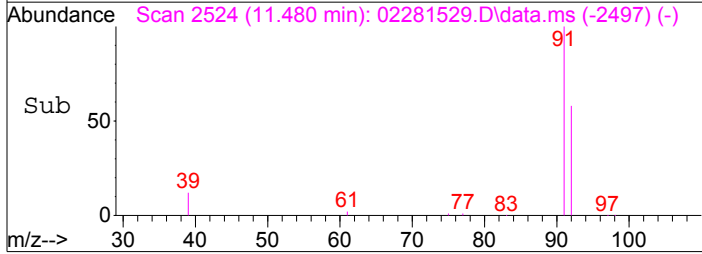
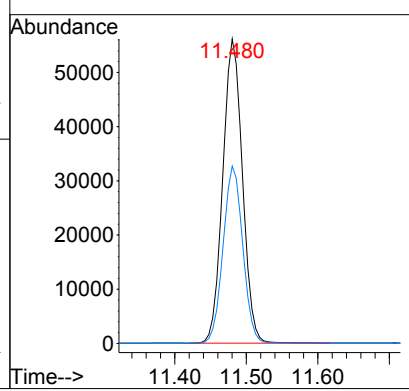
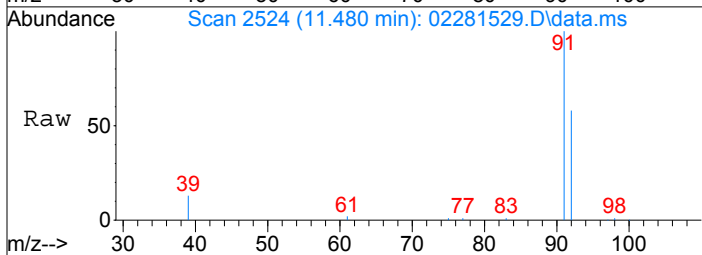
#25
 Trichloroethene
 Concen: 46.17 pg
 RT: 9.46 min Scan# 2155
 Delta R.T. 0.005 min
 Lab File: 02281529.D
 Acq: 28 Feb 2015 16:34

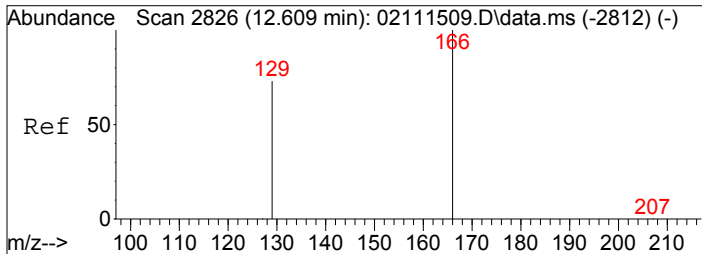
Tgt Ion:130	Resp:	2320
Ion Ratio	Lower	Upper
130	100	
132	95.7	77.1 117.1



#31
 Toluene
 Concen: 558.21 pg
 RT: 11.48 min Scan# 2524
 Delta R.T. 0.000 min
 Lab File: 02281529.D
 Acq: 28 Feb 2015 16:34

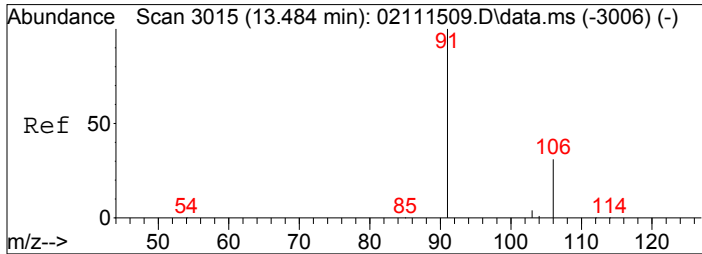
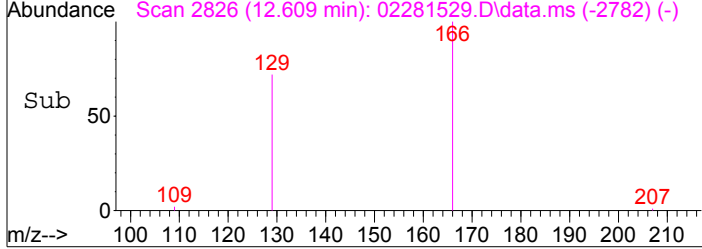
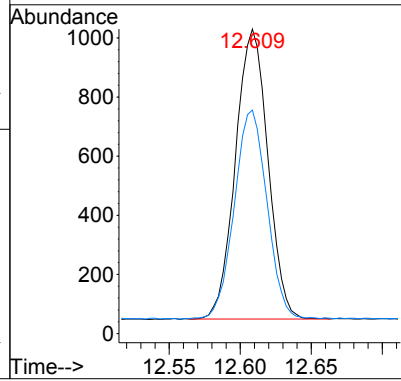
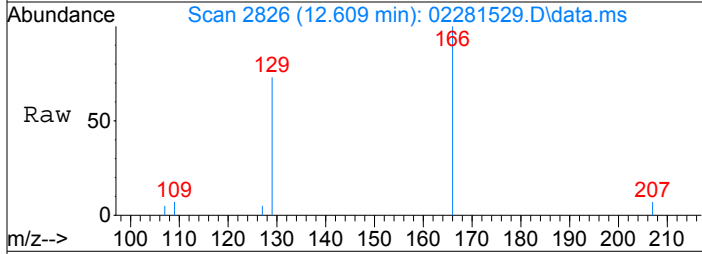
Tgt Ion: 91	Resp:	107097
Ion Ratio	Lower	Upper
91	100	
92	58.2	37.7 77.7





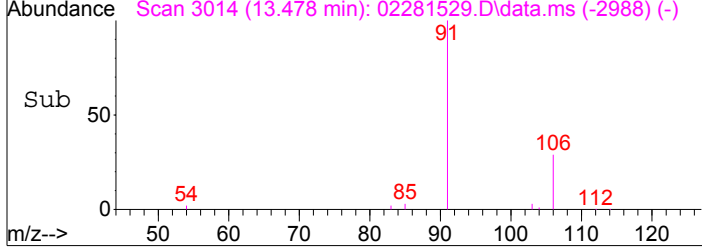
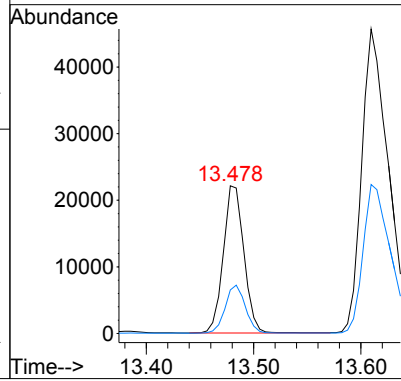
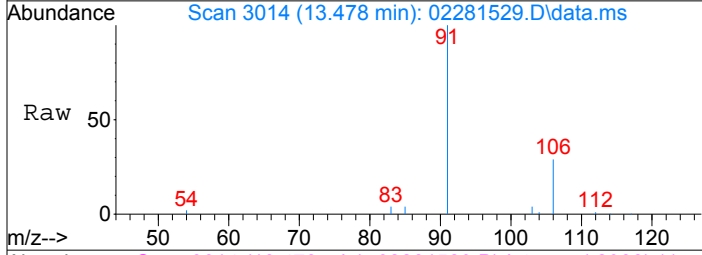
#33
Tetrachloroethene
Concen: 26.26 pg
RT: 12.61 min Scan# 2826
Delta R.T. -0.000 min
Lab File: 02281529.D
Acq: 28 Feb 2015 16:34

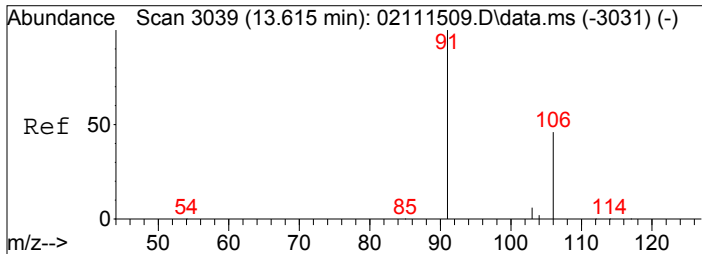
Tgt Ion: 166	Resp: 1560
Ion Ratio	Lower Upper
166	100
129	72.8 53.3 93.3



#36
Ethylbenzene
Concen: 141.07 pg
RT: 13.48 min Scan# 3014
Delta R.T. -0.005 min
Lab File: 02281529.D
Acq: 28 Feb 2015 16:34

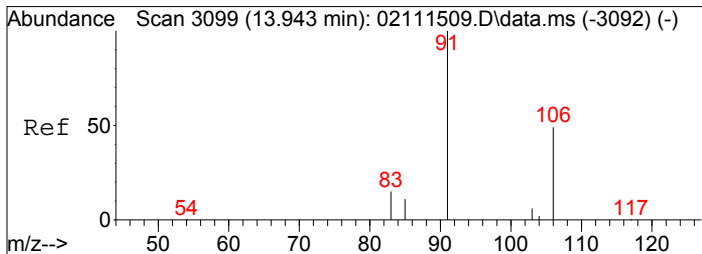
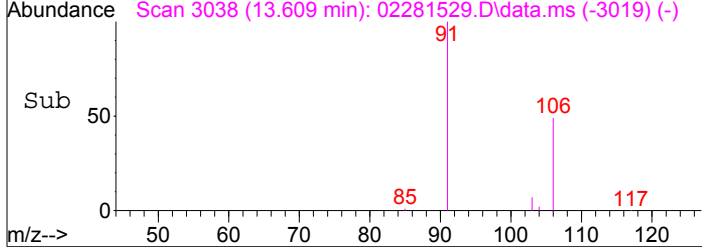
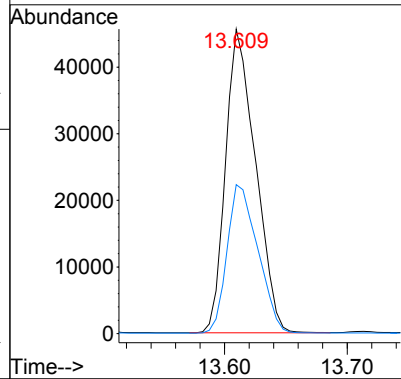
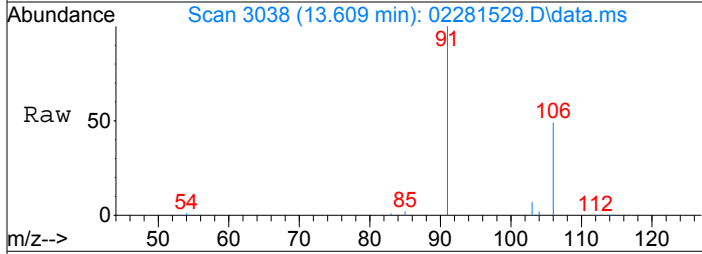
Tgt Ion: 91	Resp: 29493
Ion Ratio	Lower Upper
91	100
106	31.7 10.9 50.9





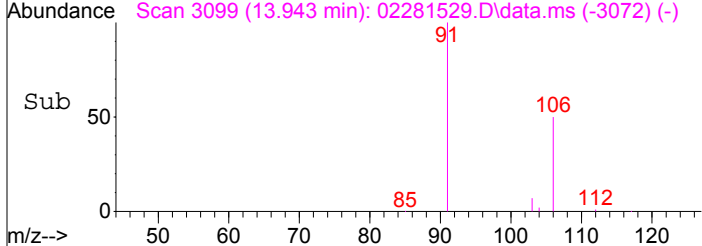
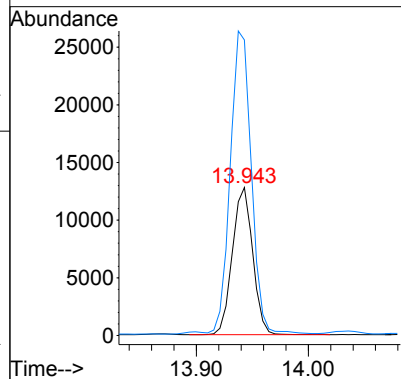
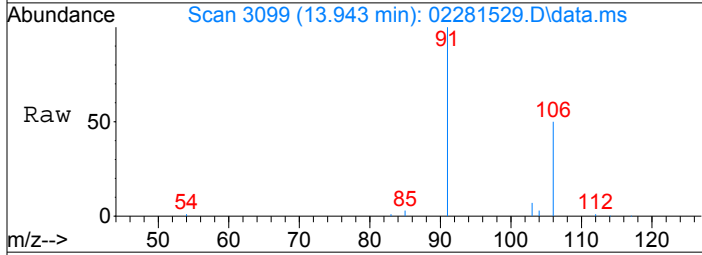
#37
 m,p-Xylene
 Concen: 450.67 pg
 RT: 13.61 min Scan# 3038
 Delta R.T. -0.005 min
 Lab File: 02281529.D
 Acq: 28 Feb 2015 16:34

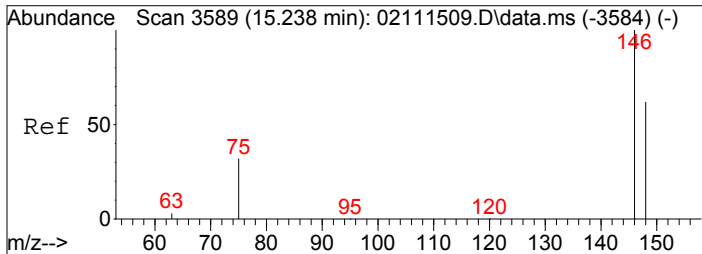
Tgt Ion: 91 Resp: 77439
 Ion Ratio Lower Upper
 91 100
 106 50.2 27.5 67.5



#38
 o-Xylene
 Concen: 191.91 pg
 RT: 13.94 min Scan# 3099
 Delta R.T. 0.000 min
 Lab File: 02281529.D
 Acq: 28 Feb 2015 16:34

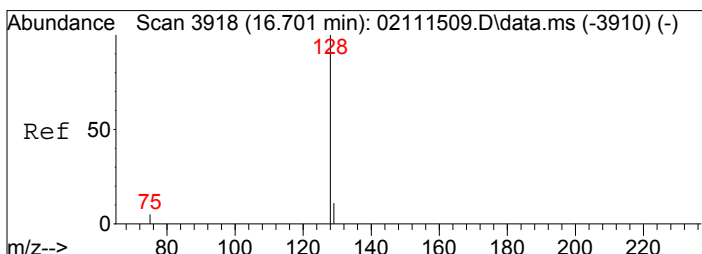
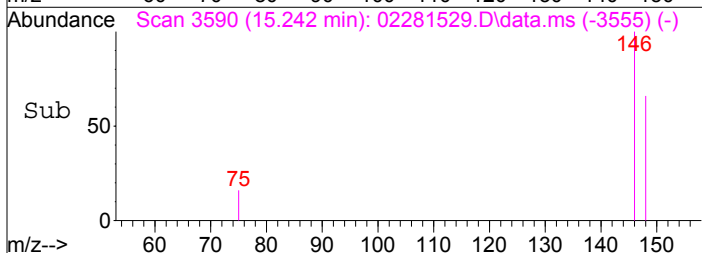
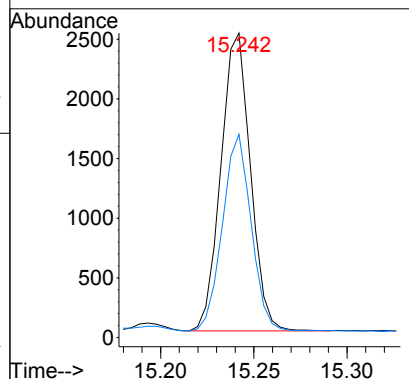
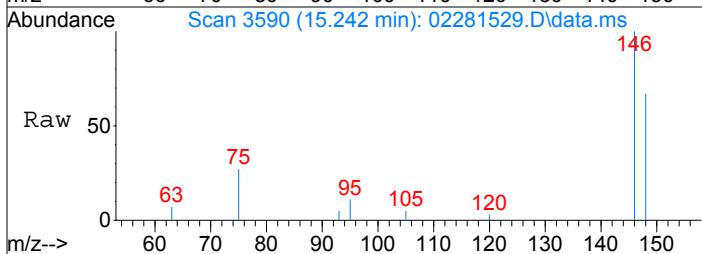
Tgt Ion: 106 Resp: 16116
 Ion Ratio Lower Upper
 106 100
 91 211.3 198.3 238.3





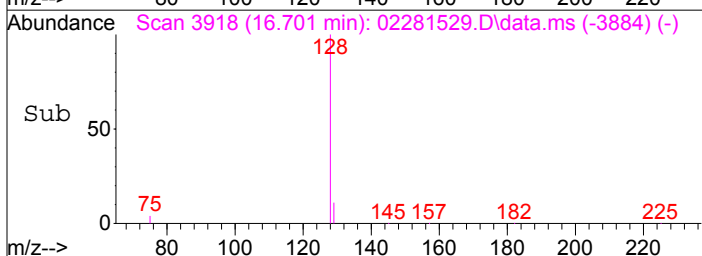
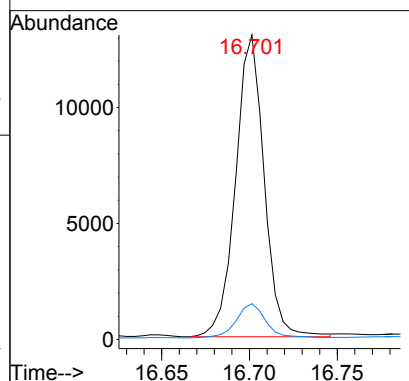
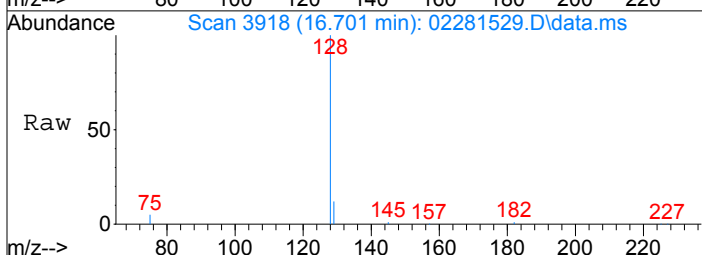
#42
 1,4-Dichlorobenzene
 Concen: 23.88 pg
 RT: 15.24 min Scan# 3590
 Delta R.T. 0.004 min
 Lab File: 02281529.D
 Acq: 28 Feb 2015 16:34

Tgt Ion: 146 Resp: 2751
 Ion Ratio Lower Upper
 146 100
 148 64.0 43.5 83.5



#45
 Naphthalene
 Concen: 70.58 pg
 RT: 16.70 min Scan# 3918
 Delta R.T. 0.000 min
 Lab File: 02281529.D
 Acq: 28 Feb 2015 16:34

Tgt Ion: 128 Resp: 14724
 Ion Ratio Lower Upper
 128 100
 129 11.8 0.0 30.9



Data File: I:\MS19\DATA\2015 02\28\02281529.D

Acq On : 28 Feb 2015 16:34

Operator: WA

Sample : P1500729-023 (1000mL)

Misc : S29-02041502

ALS Vial : 4 Sample Multiplier: 1

Quant Time: Mar 02 08:58:44 2015

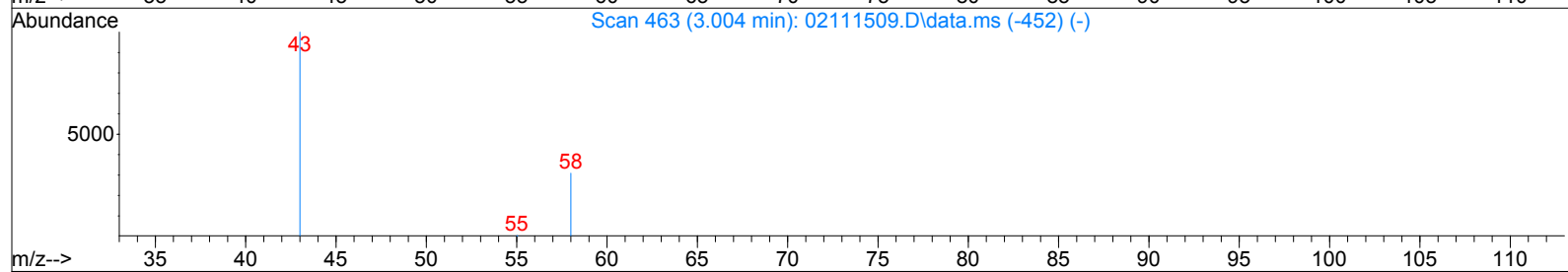
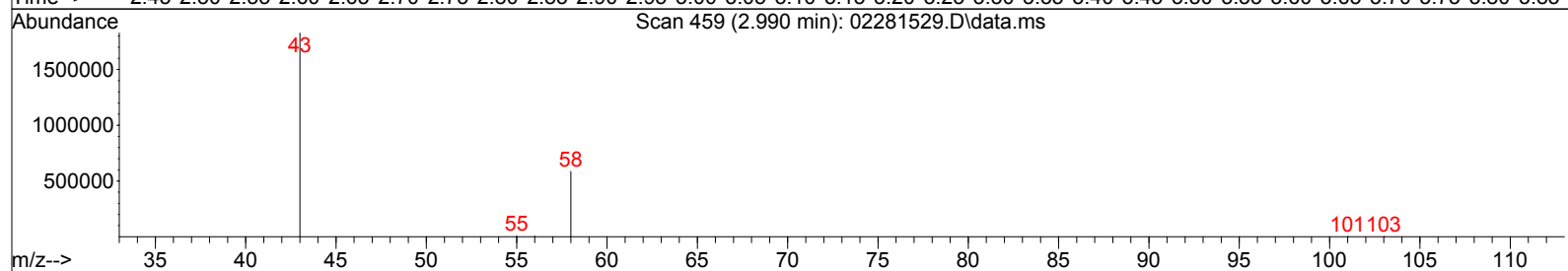
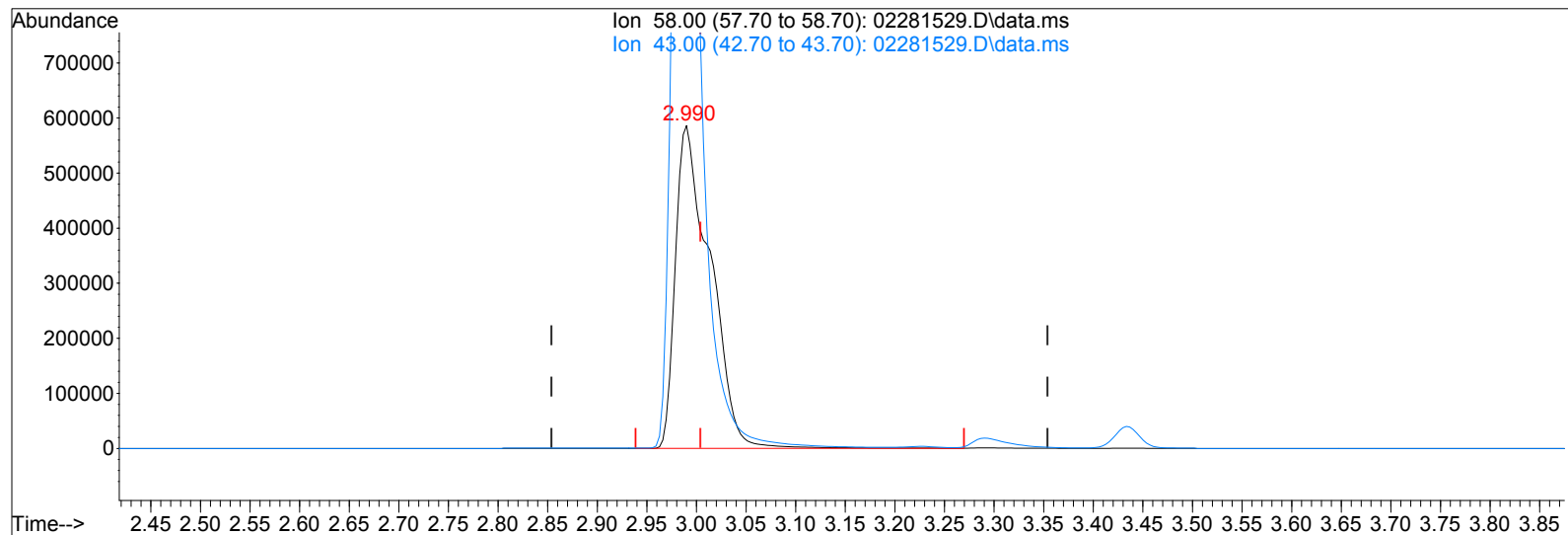
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



TIC: 02281529.D\data.ms

(7) Acetone (T)

2.990min (-0.014) 34315.23pg

response 1428965

Ion	Exp%	Act%
58.00	100	100
43.00	321.80	229.51#
0.00	0.00	0.00
0.00	0.00	0.00

Data File: I:\MS19\DATA\2015 02\28\02281529.D

Acq On : 28 Feb 2015 16:34

Operator: WA

Sample : P1500729-023 (1000mL)

Misc : S29-02041502

ALS Vial : 4 Sample Multiplier: 1

Quant Time: Mar 02 08:58:44 2015

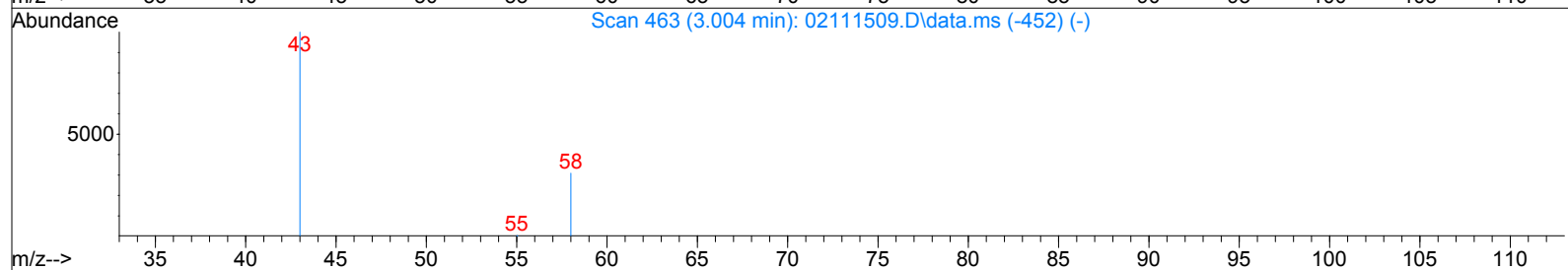
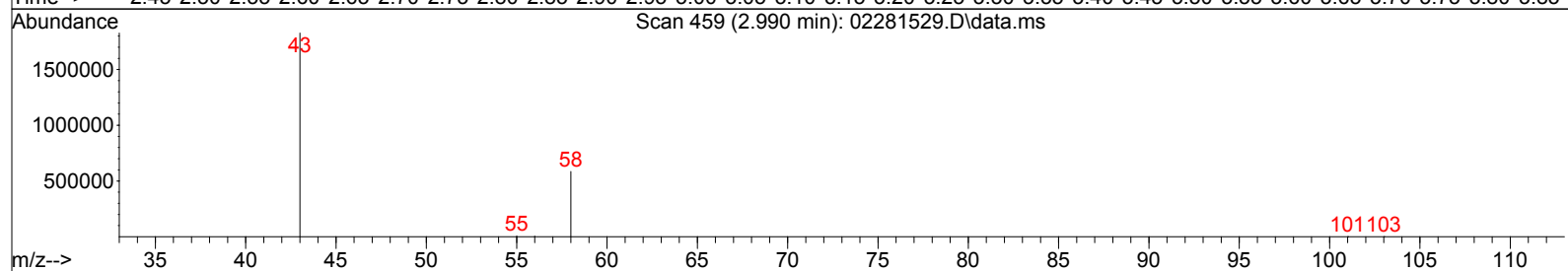
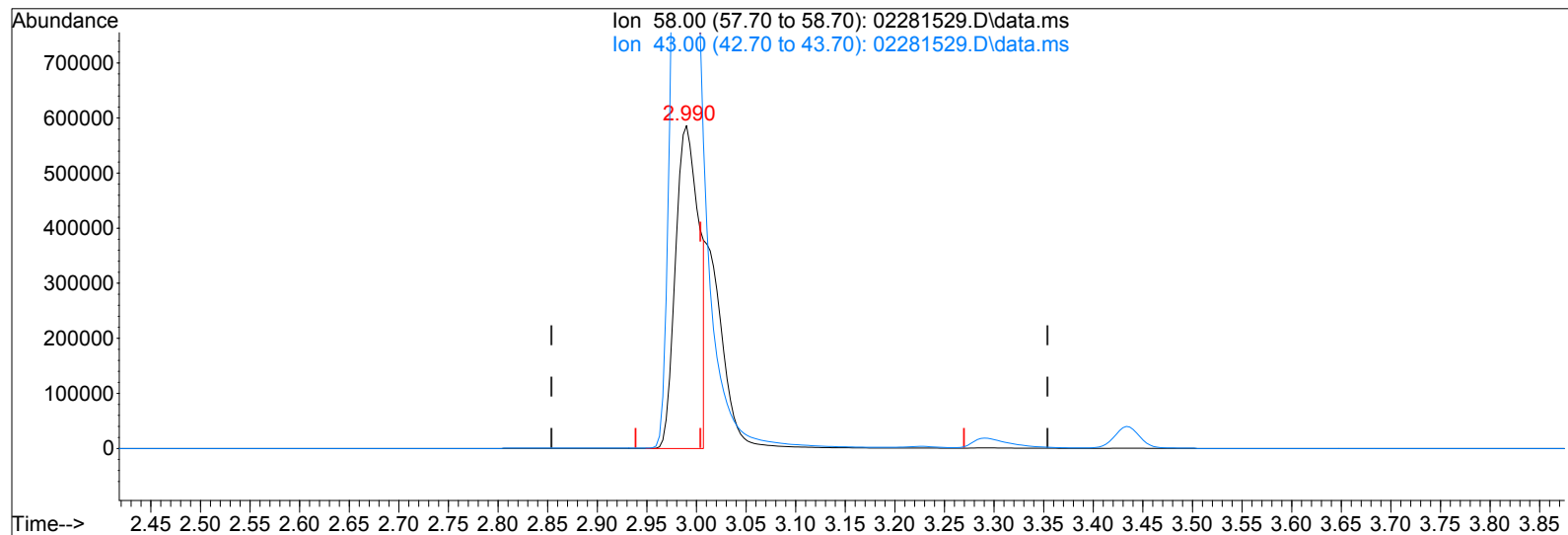
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



TIC: 02281529.D\data.ms

(7) Acetone (T)

2.990min (-0.014) 23293.45pg m

IPC

response 969993

~~107~~ 3/2/15 3/3/15

Ion	Exp%	Act%
58.00	100	100
43.00	321.80	338.10
0.00	0.00	0.00
0.00	0.00	0.00

Data File: I:\MS19\DATA\2015 02\28\02281530.D

Acq On : 28 Feb 2015 17:02

Operator: WA

Sample : P1500729-024 (1000mL)

Misc : S29-02041502

ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 02 15:09:45 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

WA 3/2/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.13	130	29577	1000.000	pg	0.02
22) 1,4-Difluorobenzene (IS2)	8.72	114	200421	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	35825	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.14	65	60727	840.746	pg	0.01
Spiked Amount 1000.000			Recovery	=	84.08%	
30) Toluene-d8 (SS2)	11.38	98	199285	1078.236	pg	0.00
Spiked Amount 1000.000			Recovery	=	107.82%	
40) Bromofluorobenzene (SS3)	14.25	174	89033	1231.000	pg	0.00
Spiked Amount 1000.000			Recovery	=	123.10%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.73	85	177750	1478.769	pg	100
3) Chloromethane	1.84	52	10898	453.997	pg	98
4) Vinyl Chloride	2.01	62	152	N.D.		
5) Bromomethane	2.33	94	1512	27.974	pg	99
6) Chloroethane	2.47	64	1204	26.477	pg	100
7) Acetone	2.99	58	1309394m	30848.498	pg	
8) Trichlorofluoromethane	3.11	101	108069	1046.693	pg	100
9) 1,1-Dichloroethene	3.66	96	183	N.D.		
10) Methylene Chloride	3.82	84	60242	1229.636	pg	93
11) Trichlorotrifluoroethane	4.10	151	16679	351.561	pg	100
12) trans-1,2-Dichloroethene	4.75	96	162	N.D.		
13) 1,1-Dichloroethane	4.96	63	306	N.D.		
14) Methyl tert-Butyl Ether	0.00	73	0	N.D.	d	
15) cis-1,2-Dichloroethene	5.95	96	783	N.D.		
16) Chloroform	6.33	83	6454	71.172	pg	96
18) 1,2-Dichloroethane	7.28	62	3310	45.843	pg	98
19) 1,1,1-Trichloroethane	7.59	97	1445	N.D.		
20) Benzene	8.16	78	46736	250.578	pg	100
21) Carbon Tetrachloride	8.35	117	23605	357.550	pg	99
23) 1,2-Dichloropropane	9.16	63	1652	37.793	pg	# 61
24) Bromodichloromethane	9.41	83	418	N.D.		
25) Trichloroethene	9.46	130	42926	833.687	pg	99
26) 1,4-Dioxane	9.52	88	444	N.D.		
27) cis-1,3-Dichloropropene	10.46	75	365	N.D.		
28) trans-1,3-Dichloropropene	11.05	75	195	N.D.		
29) 1,1,2-Trichloroethane	0.00	83	0	N.D.	d	
31) Toluene	11.48	91	144135	733.242	pg	99
32) 1,2-Dibromoethane	12.12	107	35	N.D.		
33) Tetrachloroethene	12.61	166	1566	25.729	pg	100
35) Chlorobenzene	13.17	112	700	N.D.		
36) Ethylbenzene	13.48	91	54213	241.319	pg	98
37) m,p-Xylene	13.61	91	70890	383.938	pg	96
38) o-Xylene	13.94	106	14135	156.643	pg	96
39) 1,1,2,2-Tetrachloroethane	13.96	83	1612	N.D.		
41) 1,3-Dichlorobenzene	15.17	146	276	N.D.		
42) 1,4-Dichlorobenzene	15.24	146	3182	25.703	pg	100
43) 1,2-Dichlorobenzene	15.46	146	96	N.D.		
44) 1,2,4-Trichlorobenzene	16.65	182	364	N.D.		
45) Naphthalene	16.70	128	9481	42.296	pg	98
46) Hexachlorobutadiene	16.99	225	26	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File: I:\MS19\DATA\2015 02\28\02281530.D

Acq On : 28 Feb 2015 17:02

Operator: WA

Sample : P1500729-024 (1000mL)

Misc : S29-02041502

ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 02 15:09:45 2015

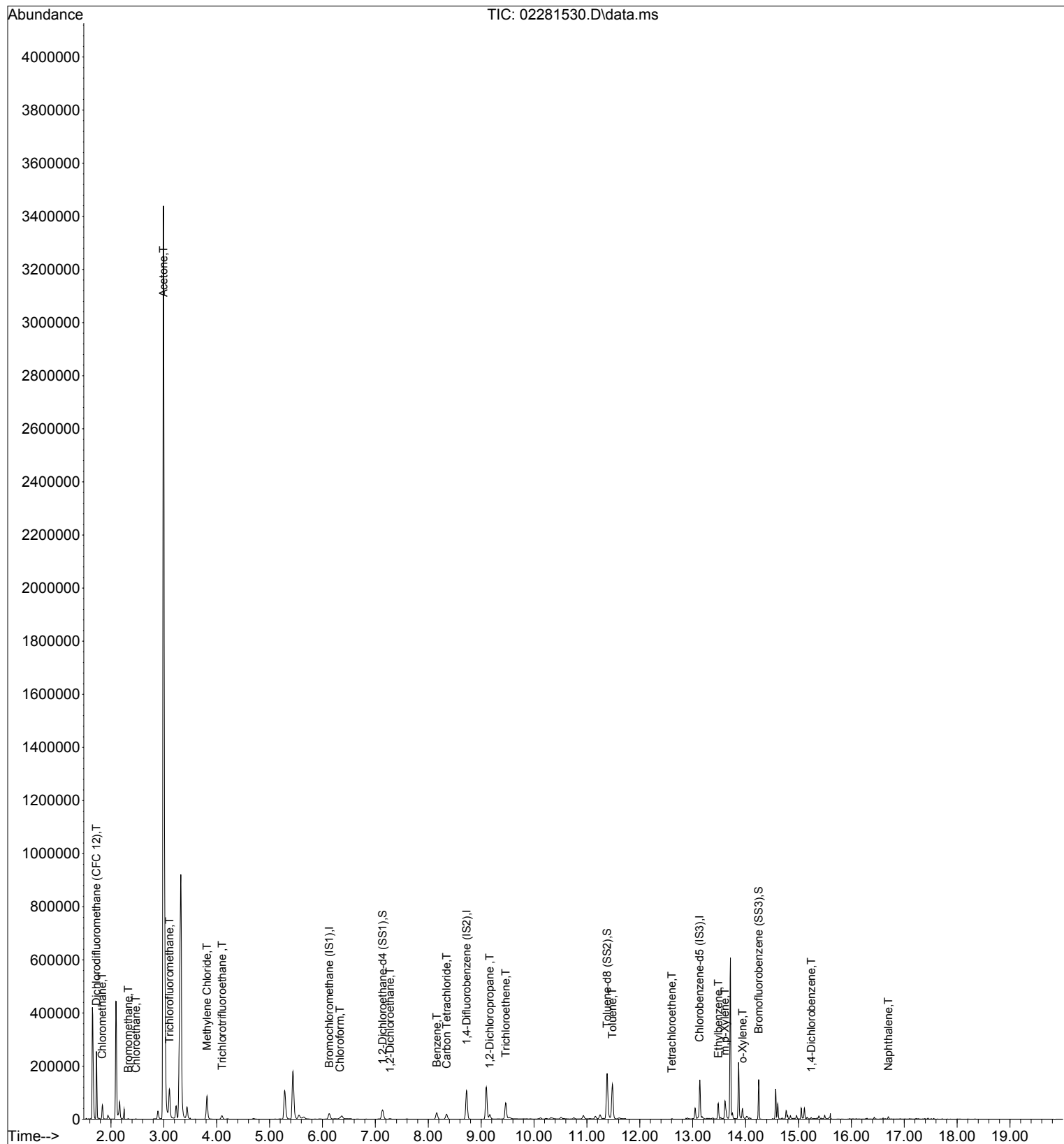
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 02\28\02281530.D

Acq On : 28 Feb 2015 17:02

Operator: WA

Sample : P1500729-024 (1000mL)

Misc : S29-02041502

ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 02 15:09:45 2015

Quant Method : I:\MS19\METHODS\X19021115.M

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QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

WA 3/2/15

DataAcq Meth:TO15SIM.M

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22) 1,4-Difluorobenzene (IS2)	8.72	114	200421	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	35825	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.14	65	60727	840.746	pg	0.01
Spiked Amount 1000.000			Recovery	=	84.08%	
30) Toluene-d8 (SS2)	11.38	98	199285	1078.236	pg	0.00
Spiked Amount 1000.000			Recovery	=	107.82%	
40) Bromofluorobenzene (SS3)	14.25	174	89033	1231.000	pg	0.00
Spiked Amount 1000.000			Recovery	=	123.10%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.73	85	177750	1478.769	pg	100
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6) Chloroethane	2.47	64	1204	26.477	pg	100
7) Acetone	2.99	58	1309394m	30848.498	pg	
8) Trichlorofluoromethane	3.11	101	108069	1046.693	pg	100
10) Methylene Chloride	3.82	84	60242	1229.636	pg	93
11) Trichlorotrifluoroethane	4.10	151	16679	351.561	pg	100
16) Chloroform	6.33	83	6454	71.172	pg	96
18) 1,2-Dichloroethane	7.28	62	3310	45.843	pg	98
20) Benzene	8.16	78	46736	250.578	pg	100
21) Carbon Tetrachloride	8.35	117	23605	357.550	pg	99
23) 1,2-Dichloropropane	9.16	63	1652	37.793	pg	# 61
25) Trichloroethene	9.46	130	42926	833.687	pg	99
31) Toluene	11.48	91	144135	733.242	pg	99
33) Tetrachloroethene	12.61	166	1566	25.729	pg	100
36) Ethylbenzene	13.48	91	54213	241.319	pg	98
37) m,p-Xylene	13.61	91	70890	383.938	pg	96
38) o-Xylene	13.94	106	14135	156.643	pg	96
42) 1,4-Dichlorobenzene	15.24	146	3182	25.703	pg	100
45) Naphthalene	16.70	128	9481	42.296	pg	98

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\28\02281530.D

Acq On : 28 Feb 2015 17:02

Operator: WA

Sample : P1500729-024 (1000mL)

Misc : S29-02041502

ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 02 15:09:45 2015

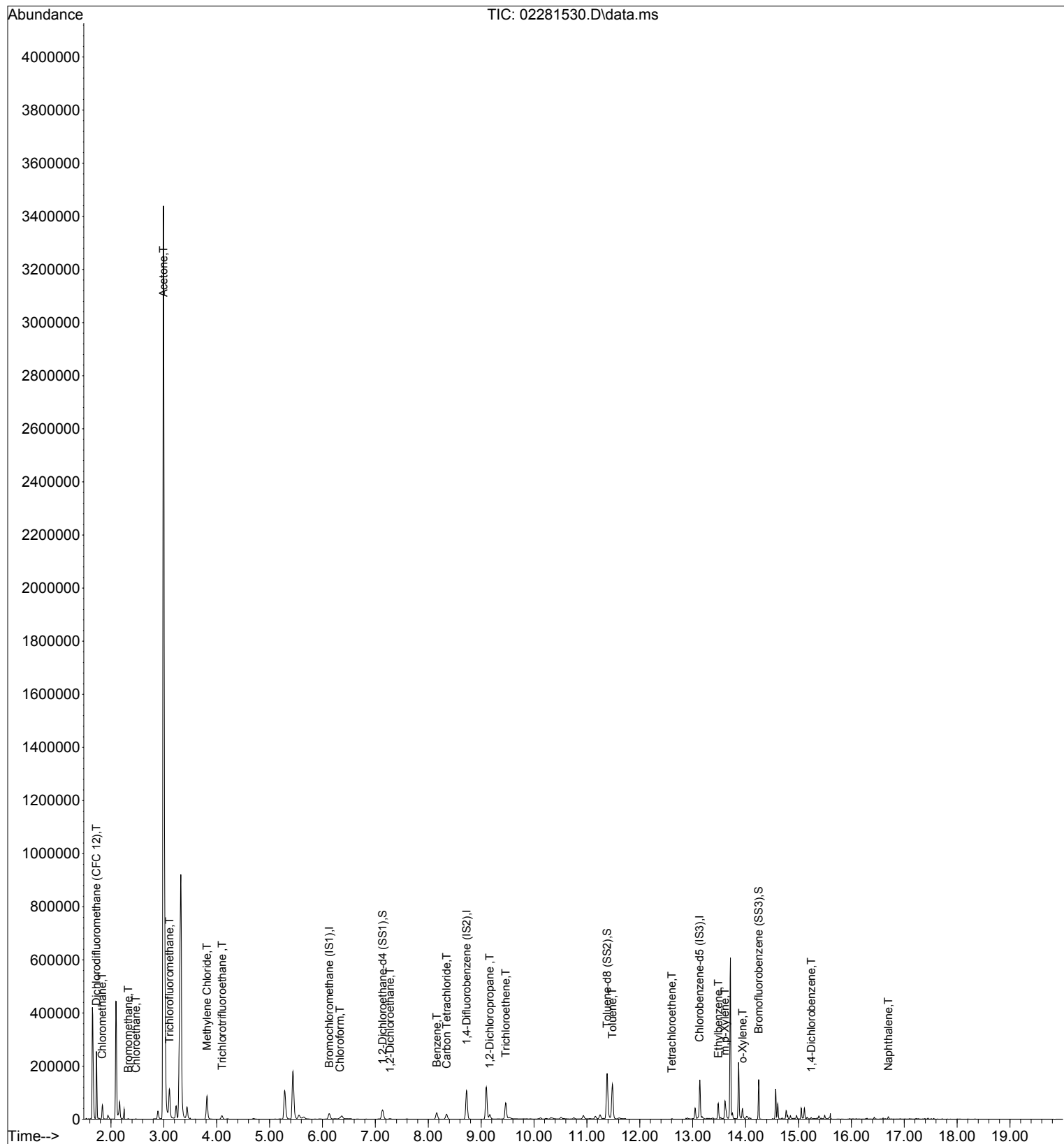
Quant Method : I:\MS19\METHODS\X19021115.M

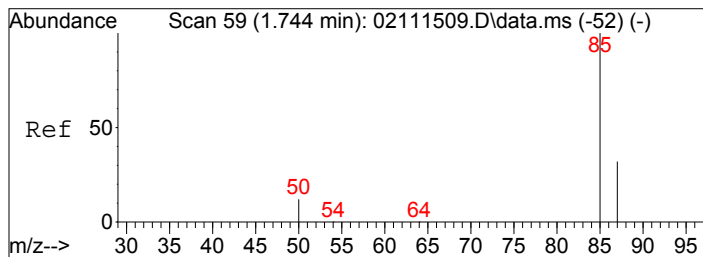
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

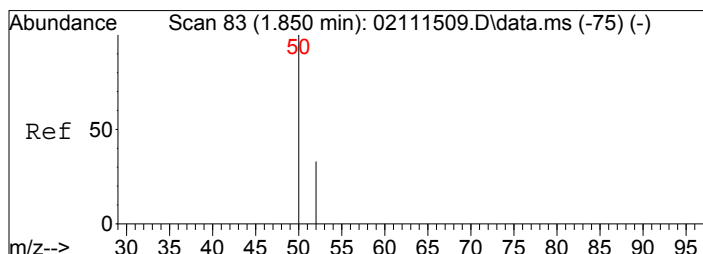
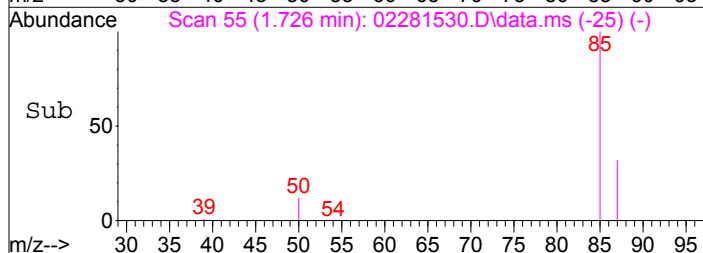
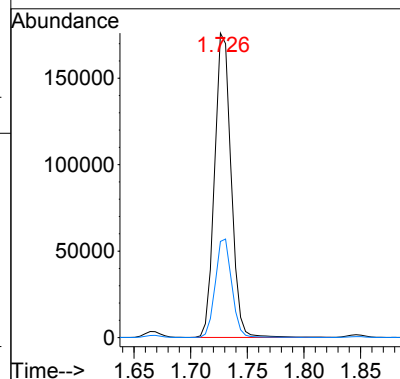
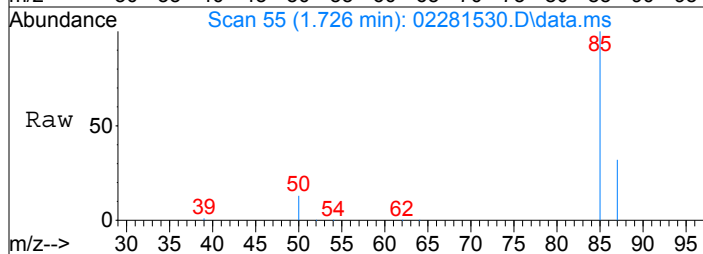
DataAcq Meth:TO15SIM.M





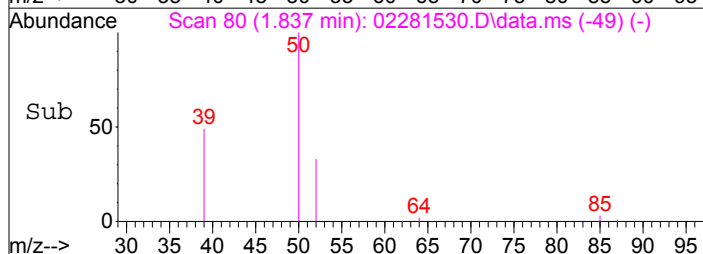
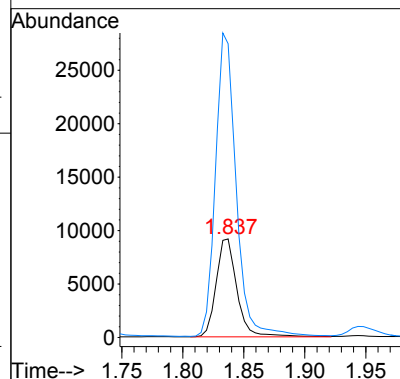
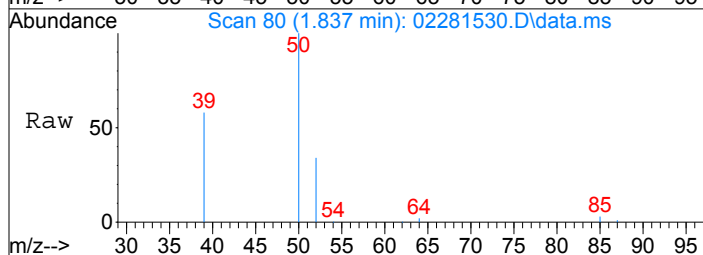
#2
 Dichlorodifluoromethane (CFC 12)
 Concen: 1478.77 pg
 RT: 1.73 min Scan# 55
 Delta R.T. -0.018 min
 Lab File: 02281530.D
 Acq: 28 Feb 2015 17:02

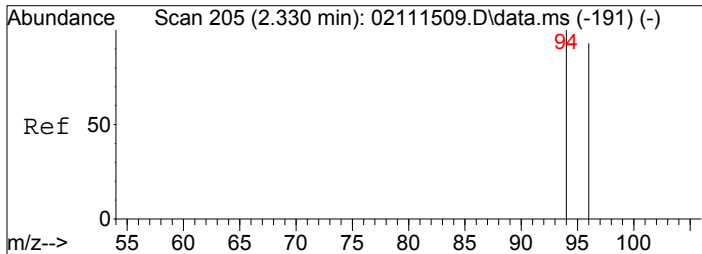
Tgt Ion: 85 Resp: 177750
 Ion Ratio Lower Upper
 85 100
 87 32.6 12.4 52.4



#3
 Chloromethane
 Concen: 454.00 pg
 RT: 1.84 min Scan# 80
 Delta R.T. -0.013 min
 Lab File: 02281530.D
 Acq: 28 Feb 2015 17:02

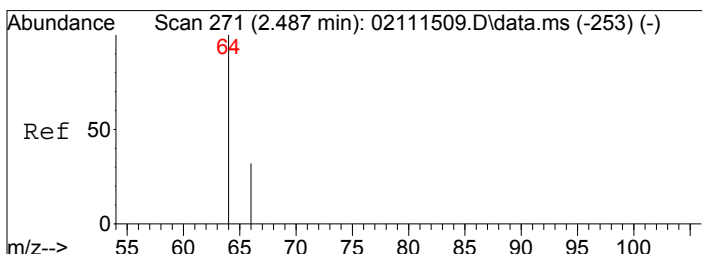
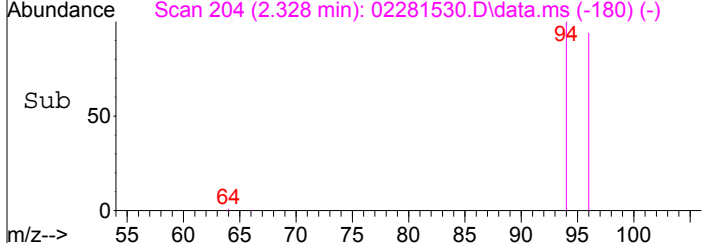
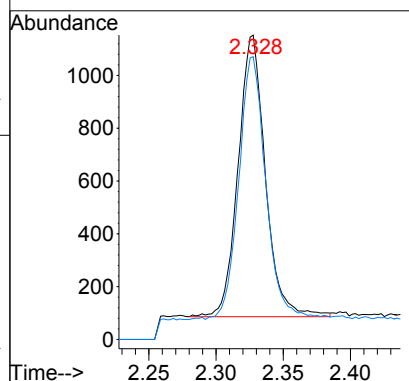
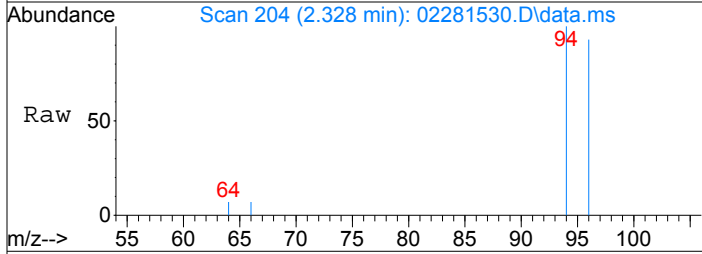
Tgt Ion: 52 Resp: 10898
 Ion Ratio Lower Upper
 52 100
 50 306.7 283.7 323.7





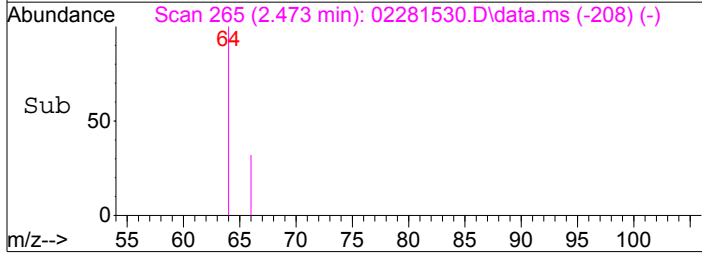
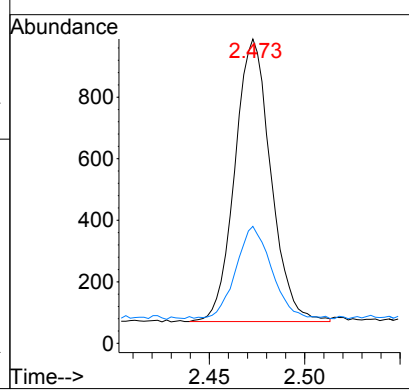
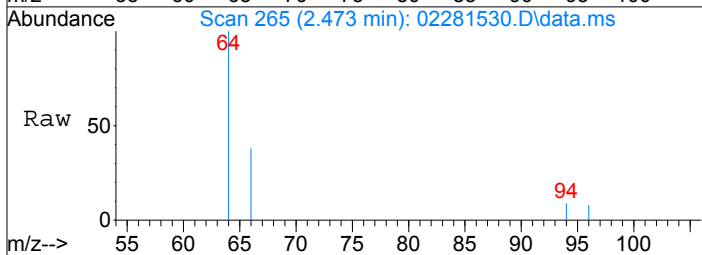
#5
 Bromomethane
 Concen: 27.97 pg
 RT: 2.33 min Scan# 204
 Delta R.T. -0.002 min
 Lab File: 02281530.D
 Acq: 28 Feb 2015 17:02

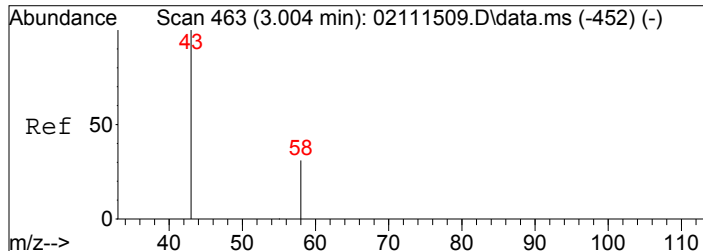
Tgt Ion:	94	Resp:	1512
Ion Ratio	Lower	Upper	
94	100		
96	93.1	75.5	113.3



#6
 Chloroethane
 Concen: 26.48 pg
 RT: 2.47 min Scan# 265
 Delta R.T. -0.014 min
 Lab File: 02281530.D
 Acq: 28 Feb 2015 17:02

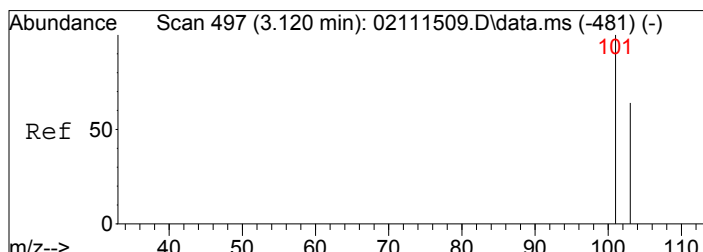
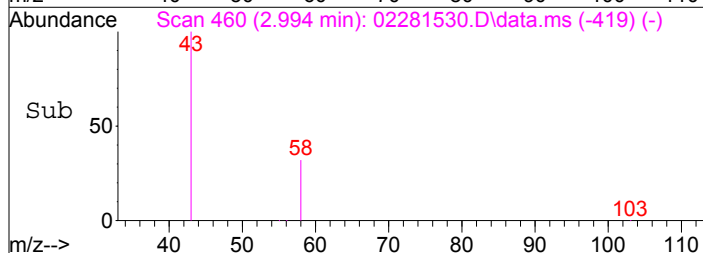
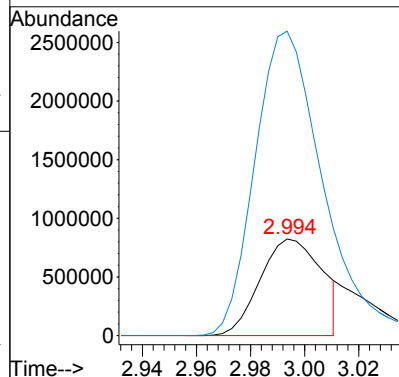
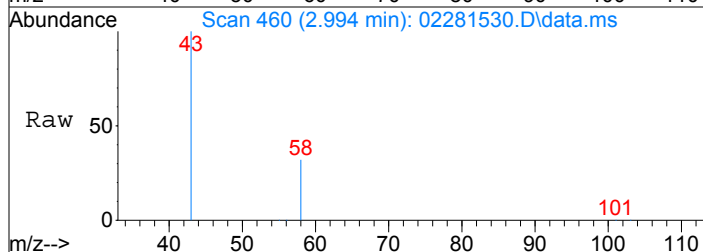
Tgt Ion:	64	Resp:	1204
Ion Ratio	Lower	Upper	
64	100		
66	32.5	12.2	52.2





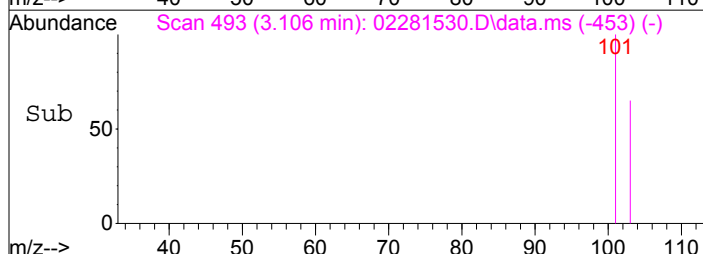
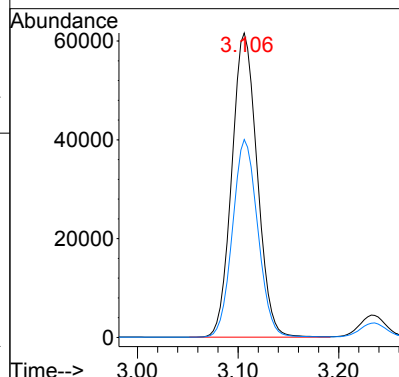
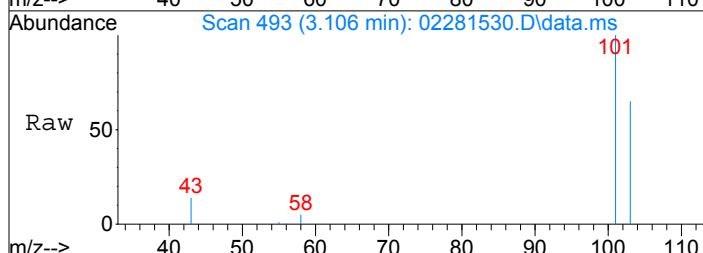
#7
Acetone
Concen: 30848.50 pg m
RT: 2.99 min Scan# 460
Delta R.T. -0.010 min
Lab File: 02281530.D
Acq: 28 Feb 2015 17:02

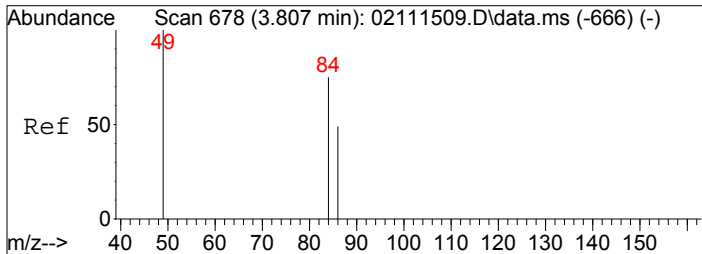
Tgt Ion: 58 Resp: 1309394
Ion Ratio Lower Upper
58 100
43 353.7 301.8 341.8#



#8
Trichlorofluoromethane
Concen: 1046.69 pg
RT: 3.11 min Scan# 493
Delta R.T. -0.013 min
Lab File: 02281530.D
Acq: 28 Feb 2015 17:02

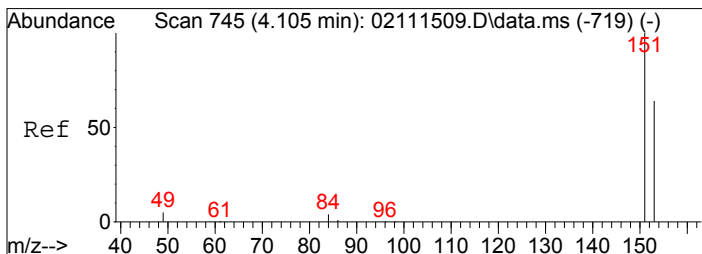
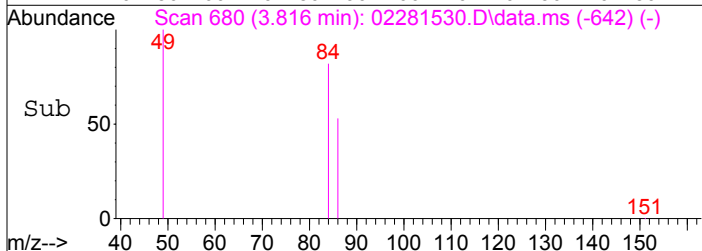
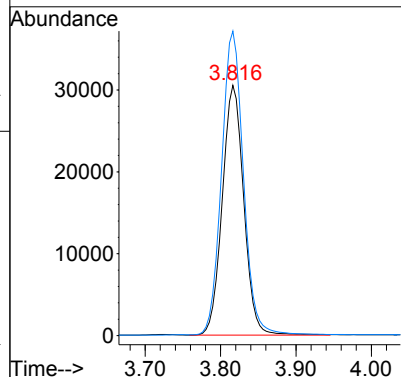
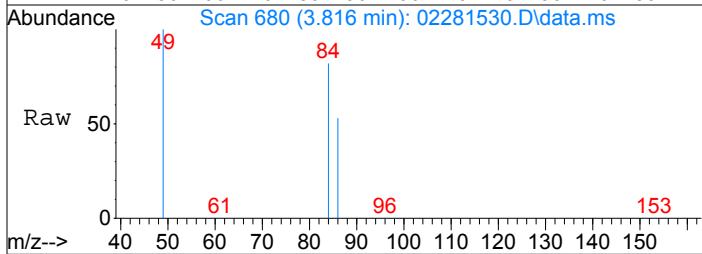
Tgt Ion: 101 Resp: 108069
Ion Ratio Lower Upper
101 100
103 64.7 51.8 77.6





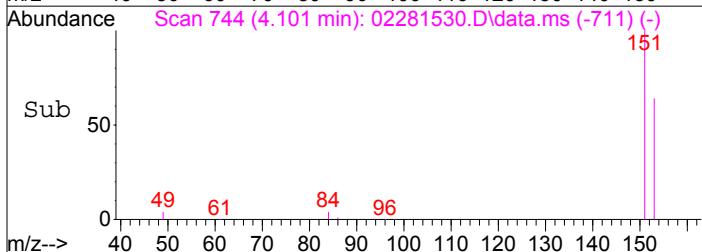
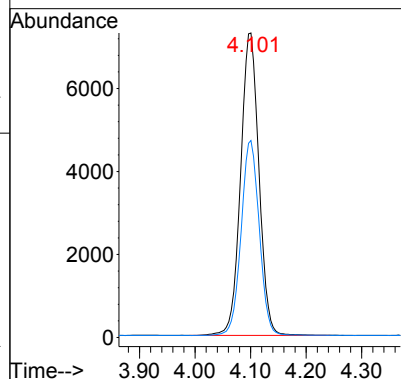
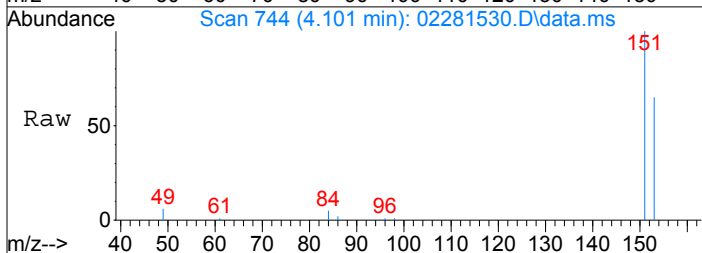
#10
Methylene Chloride
Concen: 1229.64 pg
RT: 3.82 min Scan# 680
Delta R.T. 0.009 min
Lab File: 02281530.D
Acq: 28 Feb 2015 17:02

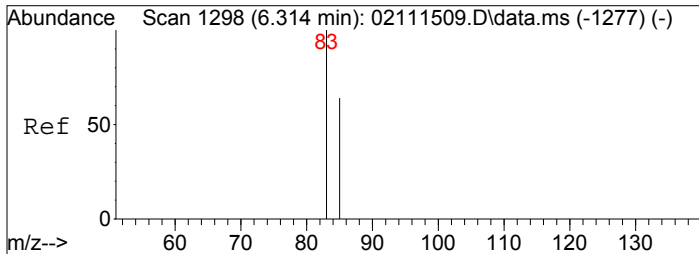
Tgt Ion: 84 Resp: 60242
Ion Ratio Lower Upper
84 100
49 123.8 112.3 152.3



#11
Trichlorotrifluoroethane
Concen: 351.56 pg
RT: 4.10 min Scan# 744
Delta R.T. -0.004 min
Lab File: 02281530.D
Acq: 28 Feb 2015 17:02

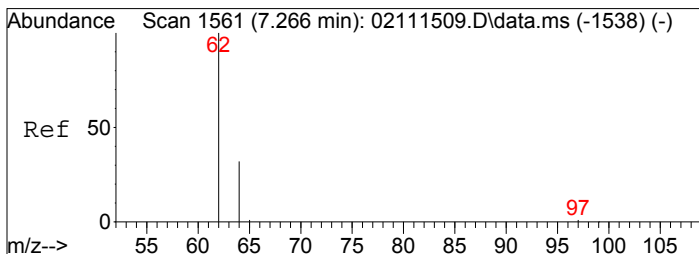
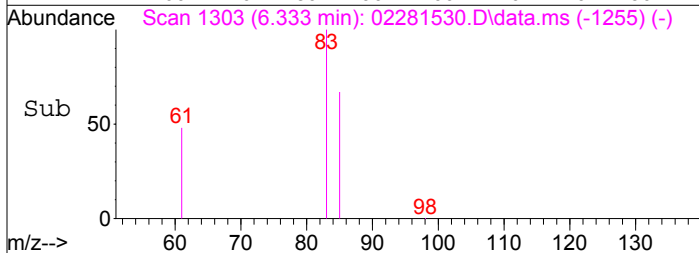
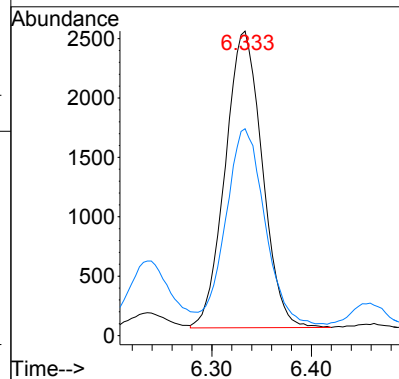
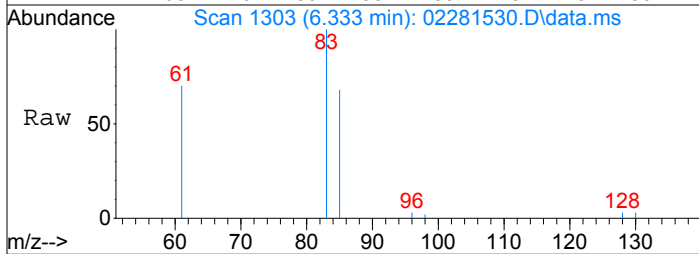
Tgt Ion: 151 Resp: 16679
Ion Ratio Lower Upper
151 100
153 63.9 43.6 83.6





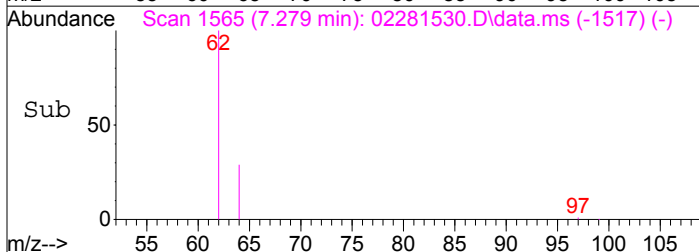
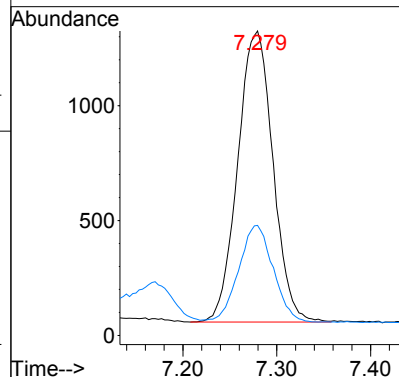
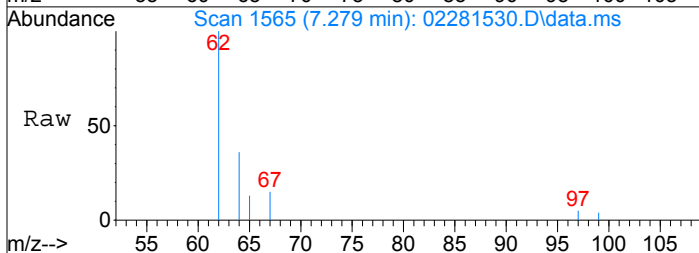
#16
Chloroform
Concen: 71.17 pg
RT: 6.33 min Scan# 1303
Delta R.T. 0.019 min
Lab File: 02281530.D
Acq: 28 Feb 2015 17:02

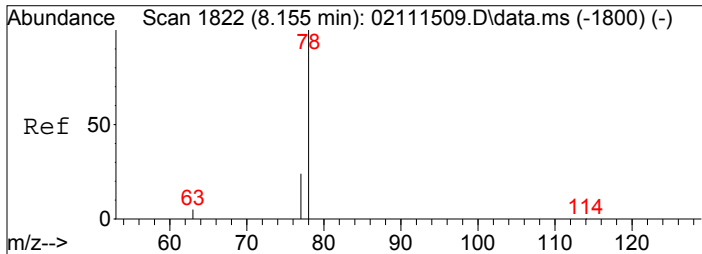
Tgt Ion: 83 Resp: 6454
Ion Ratio Lower Upper
83 100
85 68.8 45.4 85.4



#18
1,2-Dichloroethane
Concen: 45.84 pg
RT: 7.28 min Scan# 1565
Delta R.T. 0.014 min
Lab File: 02281530.D
Acq: 28 Feb 2015 17:02

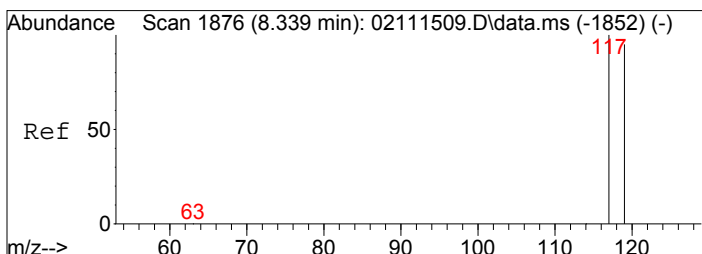
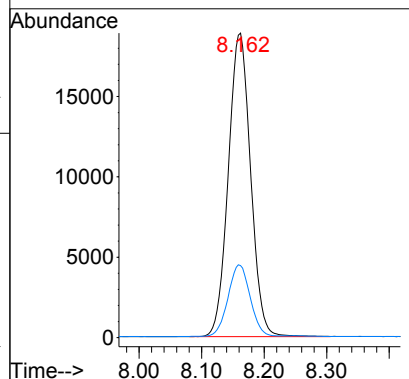
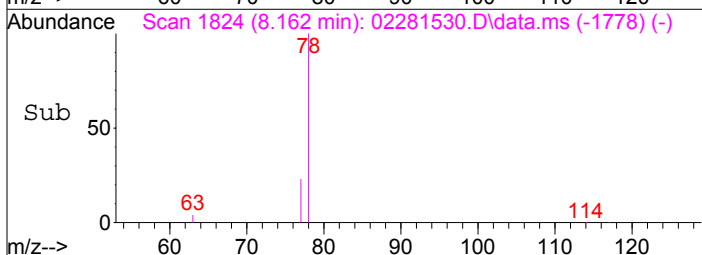
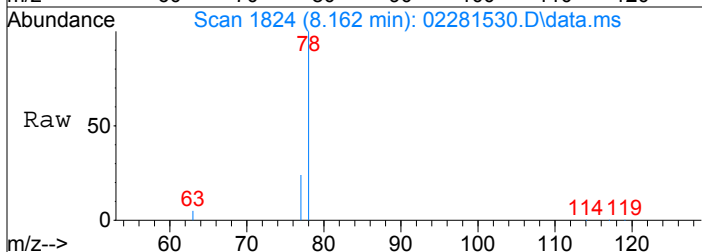
Tgt Ion: 62 Resp: 3310
Ion Ratio Lower Upper
62 100
64 32.5 11.6 51.6





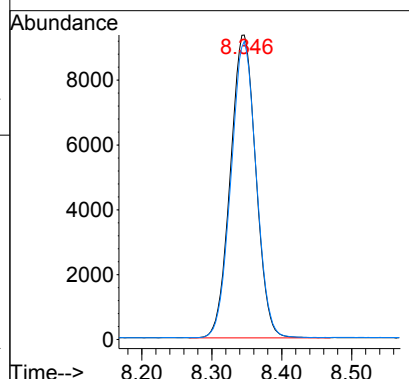
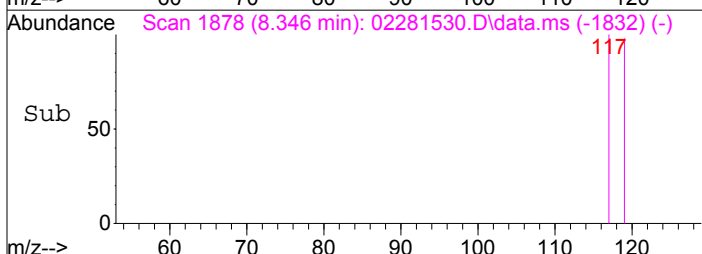
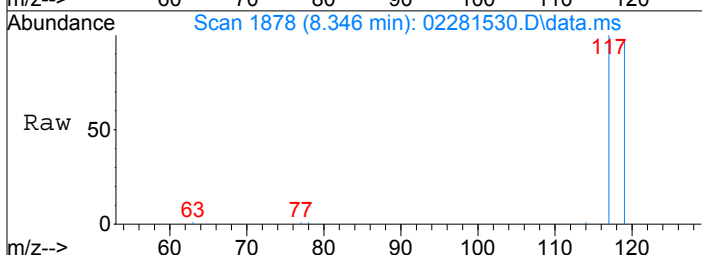
#20
Benzene
Concen: 250.58 pg
RT: 8.16 min Scan# 1824
Delta R.T. 0.007 min
Lab File: 02281530.D
Acq: 28 Feb 2015 17:02

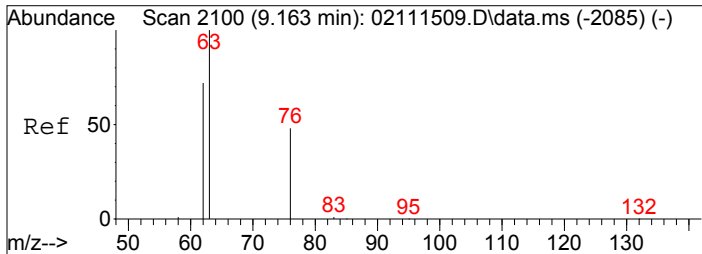
Tgt Ion: 78 Resp: 46736
Ion Ratio Lower Upper
78 100
77 23.7 3.7 43.7



#21
Carbon Tetrachloride
Concen: 357.55 pg
RT: 8.35 min Scan# 1878
Delta R.T. 0.007 min
Lab File: 02281530.D
Acq: 28 Feb 2015 17:02

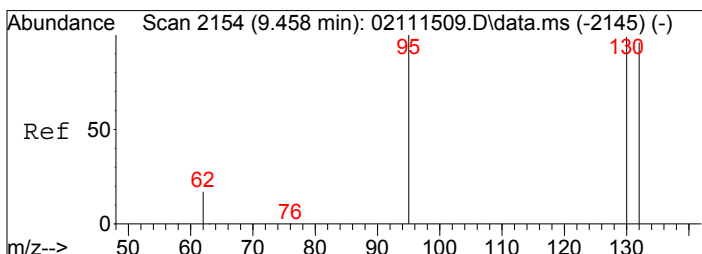
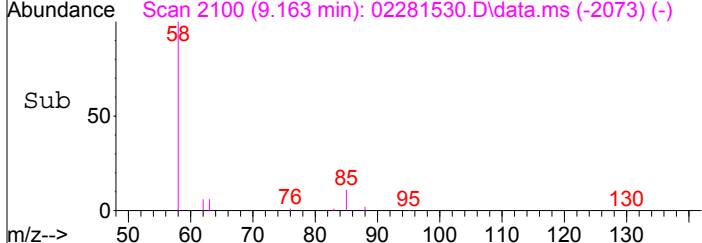
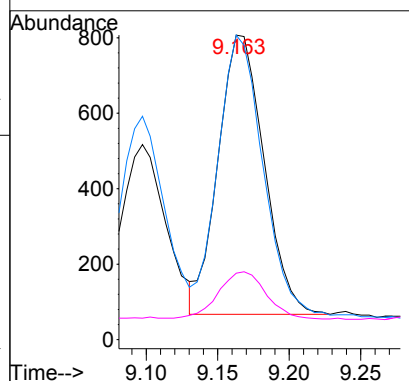
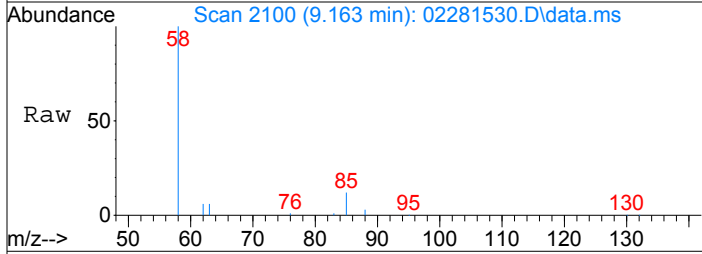
Tgt Ion: 117 Resp: 23605
Ion Ratio Lower Upper
117 100
119 96.8 75.5 115.5





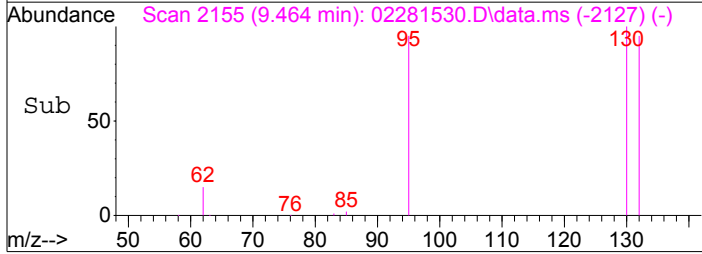
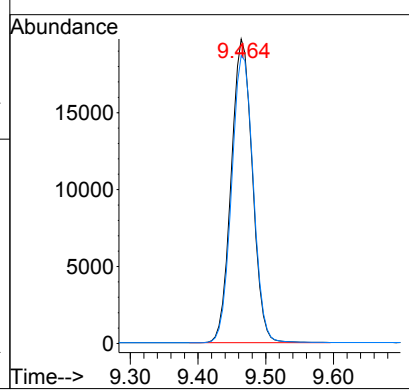
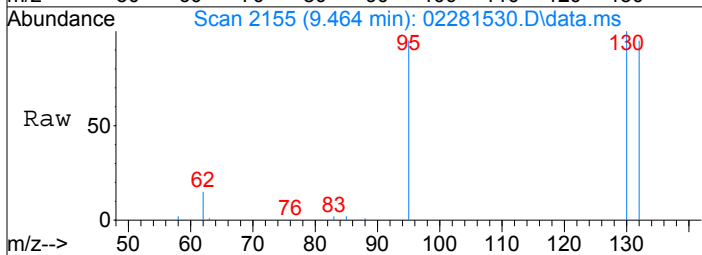
#23
 1,2-Dichloropropane
 Concen: 37.79 pg
 RT: 9.16 min Scan# 2100
 Delta R.T. 0.000 min
 Lab File: 02281530.D
 Acq: 28 Feb 2015 17:02

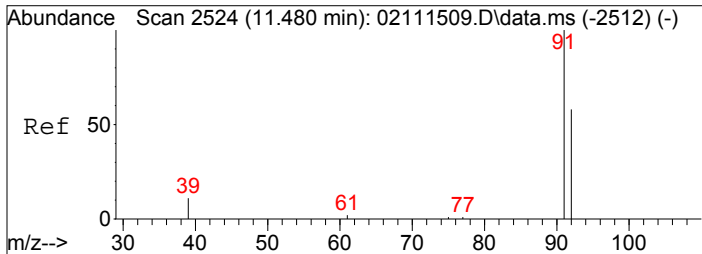
Tgt Ion:	63	Resp:	1652
Ion Ratio	Lower	Upper	
63	100		
62	101.7	52.0	92.0#
76	17.7	28.1	68.1#



#25
 Trichloroethene
 Concen: 833.69 pg
 RT: 9.46 min Scan# 2155
 Delta R.T. 0.006 min
 Lab File: 02281530.D
 Acq: 28 Feb 2015 17:02

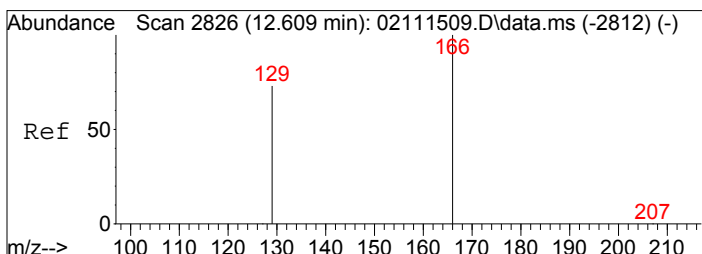
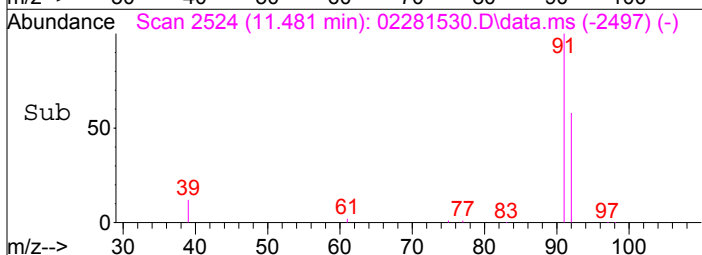
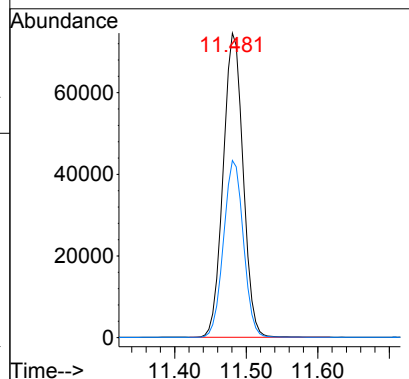
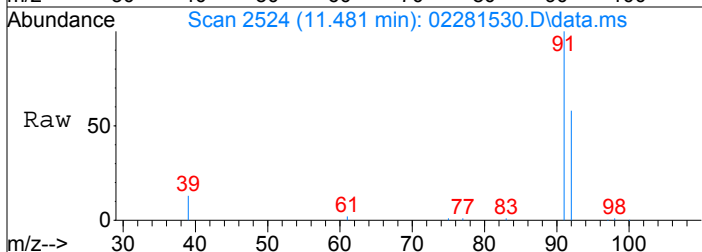
Tgt Ion:	130	Resp:	42926
Ion Ratio	Lower	Upper	
130	100		
132	96.3	77.1	117.1





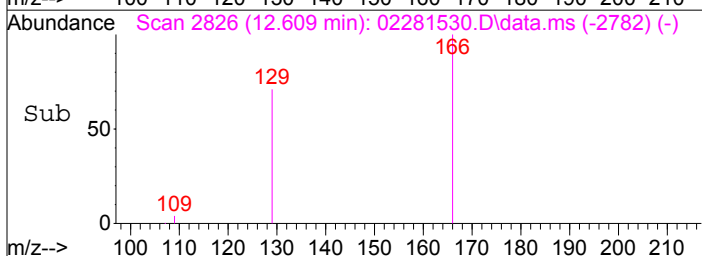
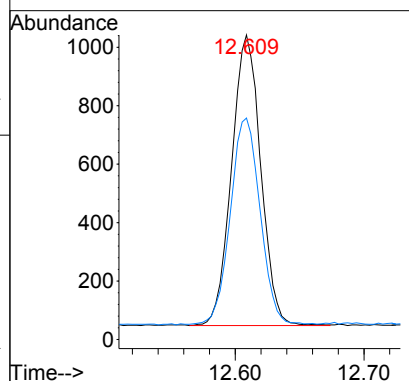
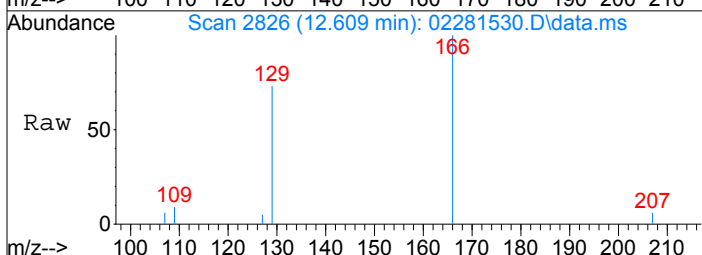
#31
Toluene
Concen: 733.24 pg
RT: 11.48 min Scan# 2524
Delta R.T. 0.000 min
Lab File: 02281530.D
Acq: 28 Feb 2015 17:02

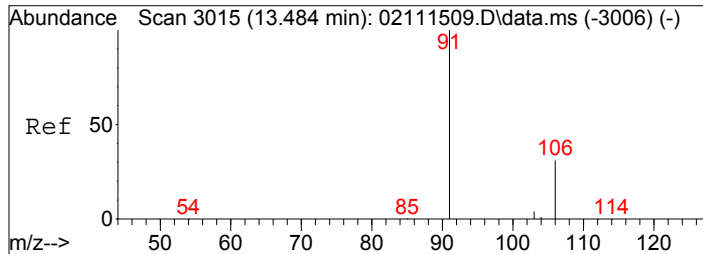
Tgt Ion	91	Resp	144135
Ion Ratio	100	Lower	Upper
91	100		
92	58.2	37.7	77.7



#33
Tetrachloroethene
Concen: 25.73 pg
RT: 12.61 min Scan# 2826
Delta R.T. -0.000 min
Lab File: 02281530.D
Acq: 28 Feb 2015 17:02

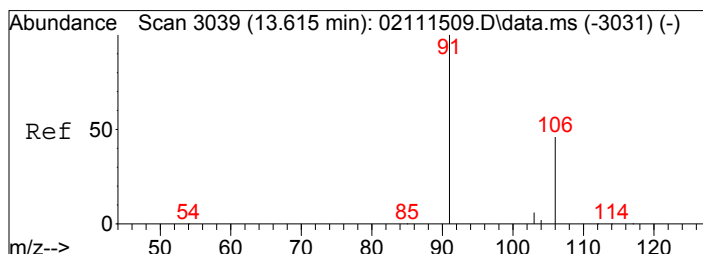
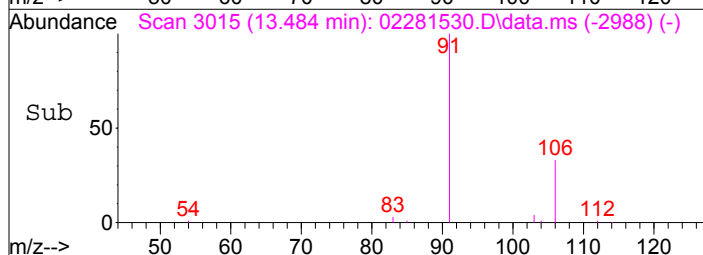
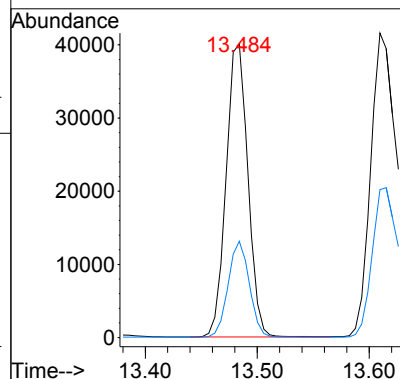
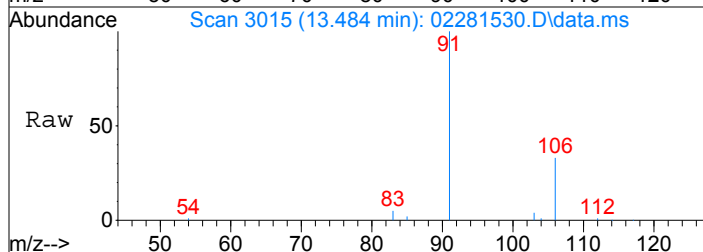
Tgt Ion	166	Resp	1566
Ion Ratio <td>100</td> <td>Lower</td> <td>Upper</td>	100	Lower	Upper
166	100		
129	73.1	53.3	93.3





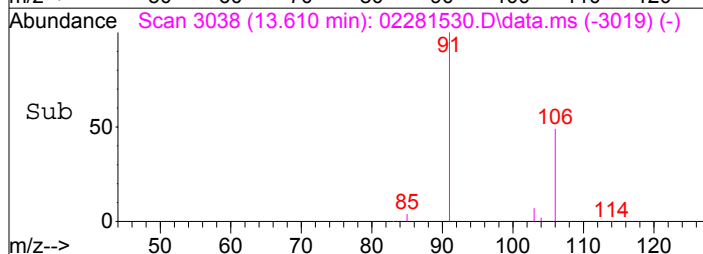
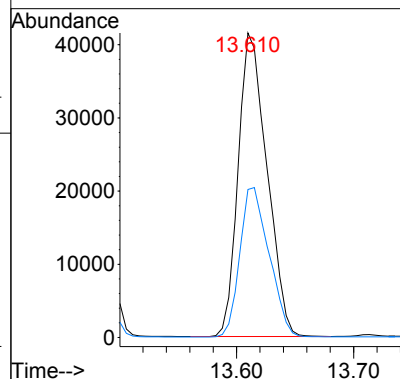
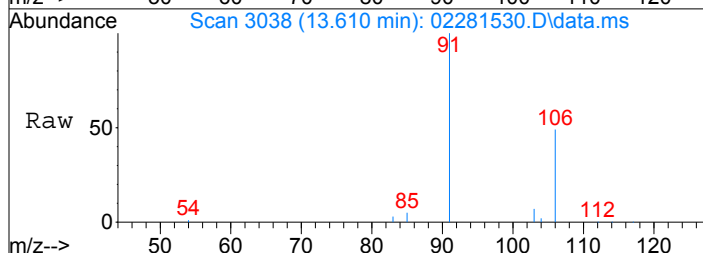
#36
Ethylbenzene
Concen: 241.32 pg
RT: 13.48 min Scan# 3015
Delta R.T. 0.000 min
Lab File: 02281530.D
Acq: 28 Feb 2015 17:02

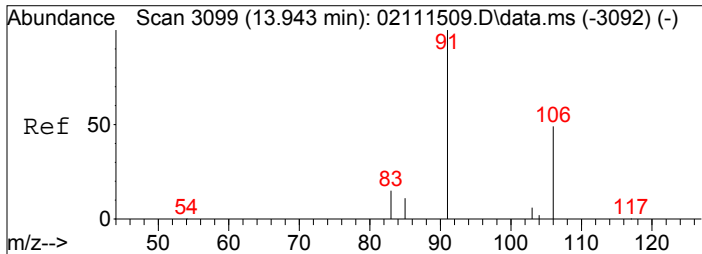
Tgt Ion: 91 Resp: 54213
Ion Ratio Lower Upper
91 100
106 31.8 10.9 50.9



#37
m,p-Xylene
Concen: 383.94 pg
RT: 13.61 min Scan# 3038
Delta R.T. -0.005 min
Lab File: 02281530.D
Acq: 28 Feb 2015 17:02

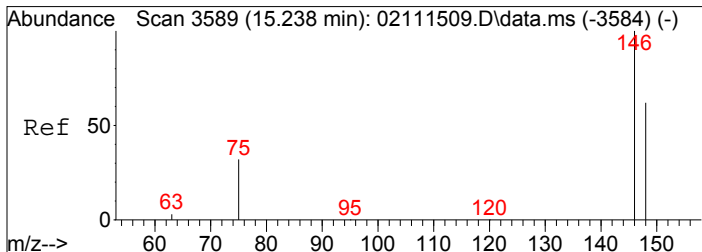
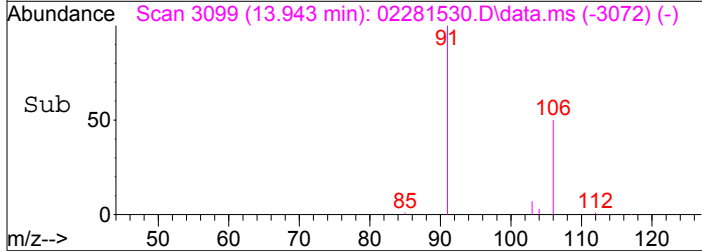
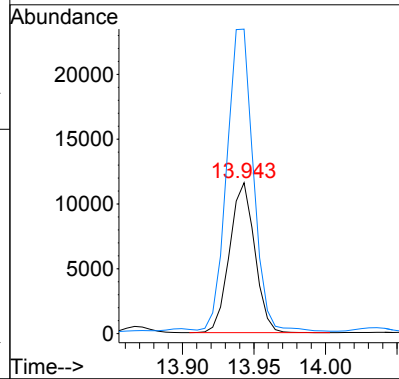
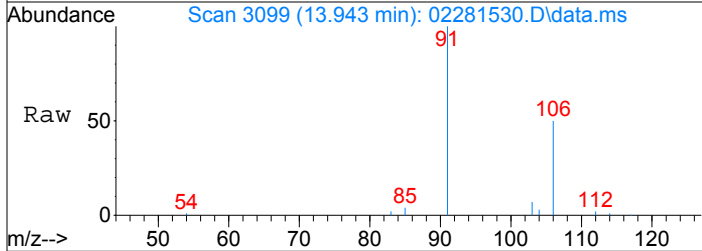
Tgt Ion: 91 Resp: 70890
Ion Ratio Lower Upper
91 100
106 50.1 27.5 67.5





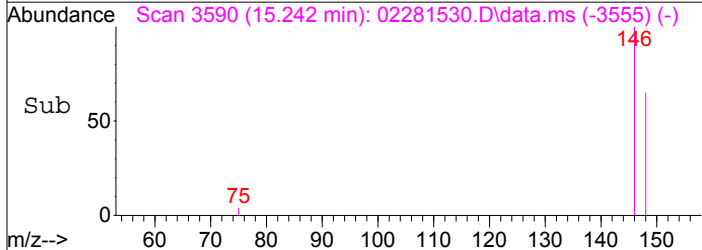
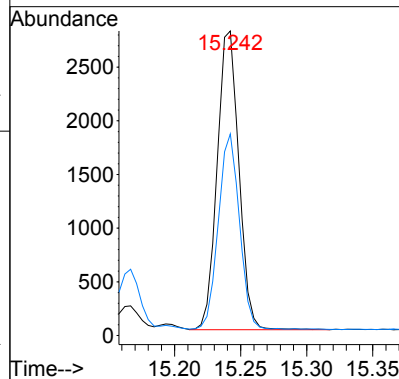
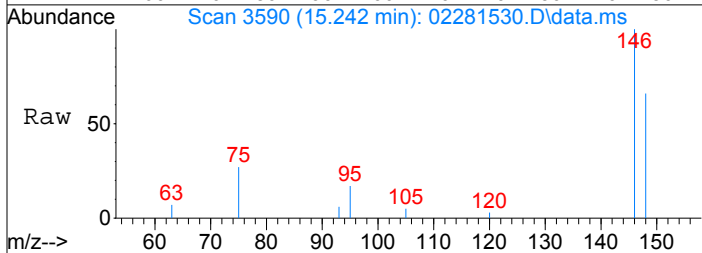
#38
o-Xylene
Concen: 156.64 pg
RT: 13.94 min Scan# 3099
Delta R.T. 0.000 min
Lab File: 02281530.D
Acq: 28 Feb 2015 17:02

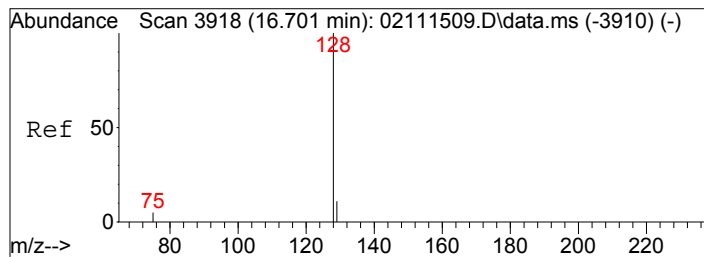
Tgt Ion	106	Resp	14135
Ion Ratio	100	Lower	Upper
91	212.3	198.3	238.3



#42
1,4-Dichlorobenzene
Concen: 25.70 pg
RT: 15.24 min Scan# 3590
Delta R.T. 0.005 min
Lab File: 02281530.D
Acq: 28 Feb 2015 17:02

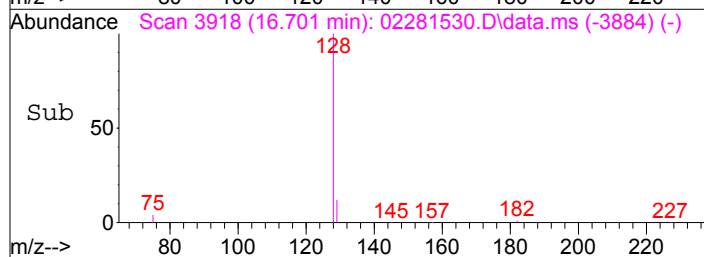
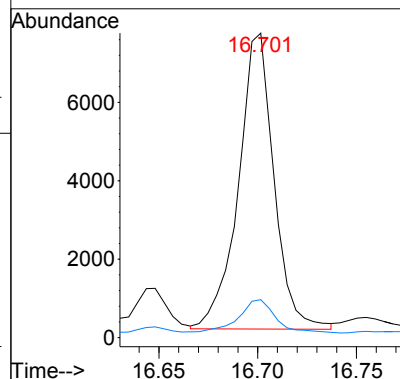
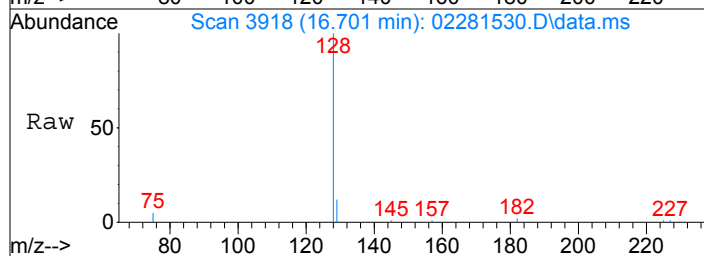
Tgt Ion	146	Resp	3182
Ion Ratio <td>100</td> <td>Lower</td> <td>Upper</td>	100	Lower	Upper
148	63.4	43.5	83.5





#45
Naphthalene
Concen: 42.30 pg
RT: 16.70 min Scan# 3918
Delta R.T. 0.000 min
Lab File: 02281530.D
Acq: 28 Feb 2015 17:02

Tgt Ion:128 Resp: 9481
Ion Ratio Lower Upper
128 100
129 11.7 0.0 30.9



Data File: I:\MS19\DATA\2015 02\28\02281530.D

Acq On : 28 Feb 2015 17:02

Operator: WA

Sample : P1500729-024 (1000mL)

Misc : S29-02041502

ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 02 08:58:47 2015

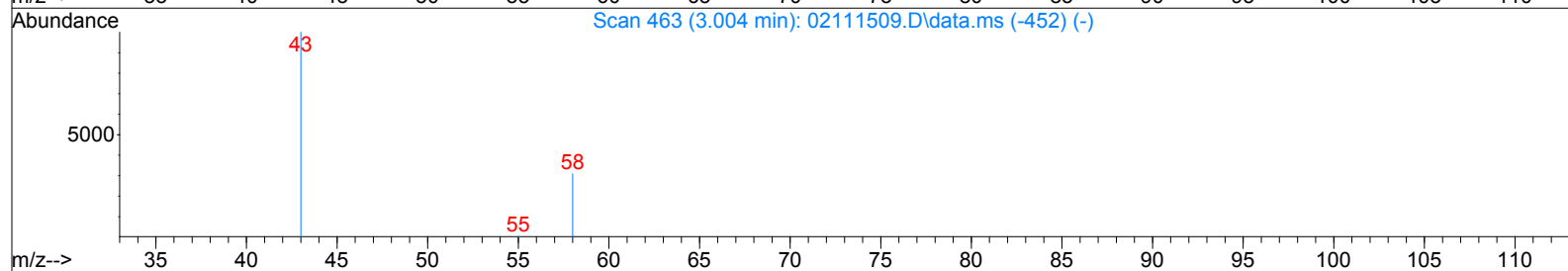
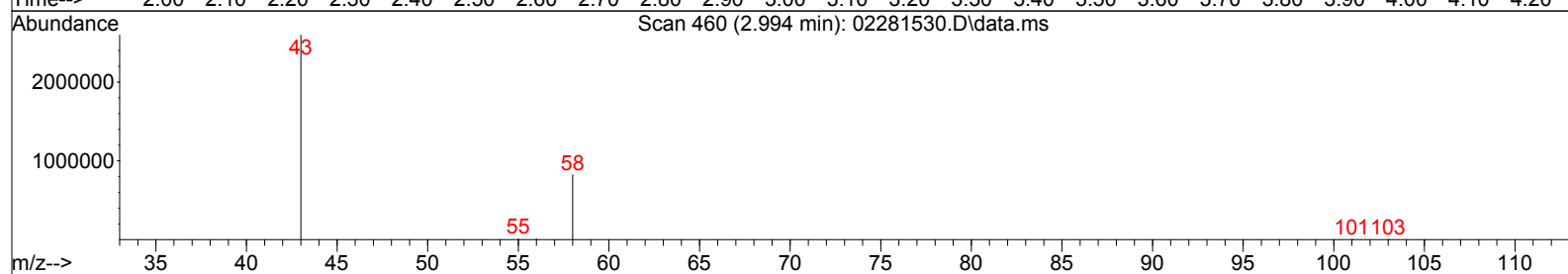
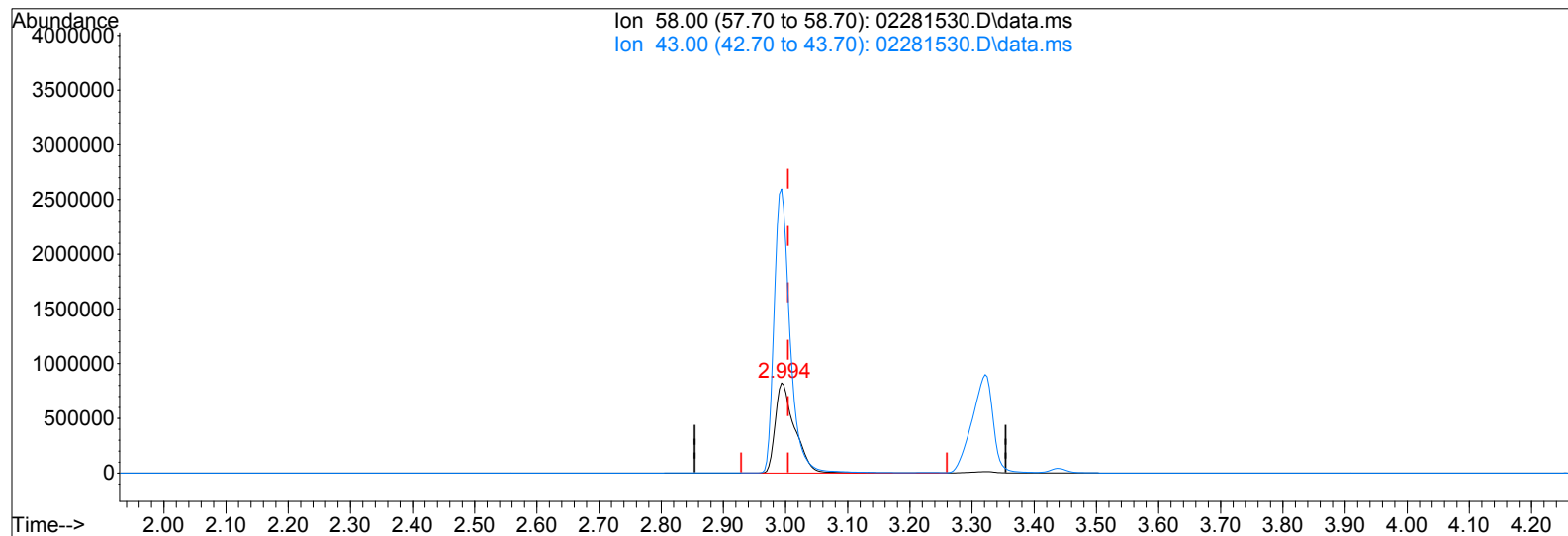
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



TIC: 02281530.D\data.ms

(7) Acetone (T)

2.994min (-0.010) 42083.37pg

response 1786269

Ion	Exp%	Act%
58.00	100	100
43.00	321.80	259.30#
0.00	0.00	0.00
0.00	0.00	0.00

Data File: I:\MS19\DATA\2015 02\28\02281530.D

Acq On : 28 Feb 2015 17:02

Operator: WA

Sample : P1500729-024 (1000mL)

Misc : S29-02041502

ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 02 08:58:47 2015

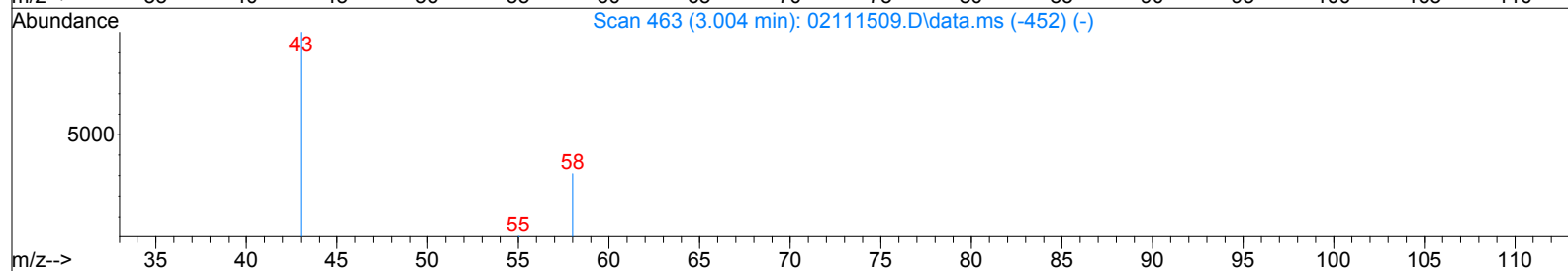
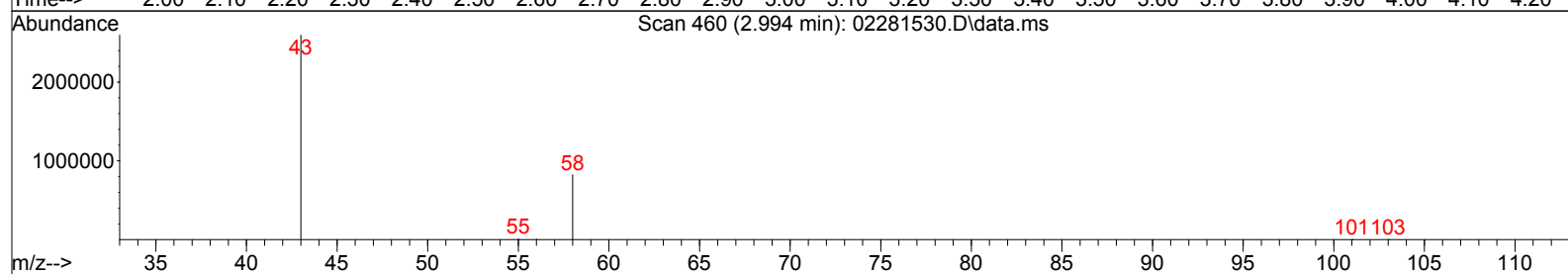
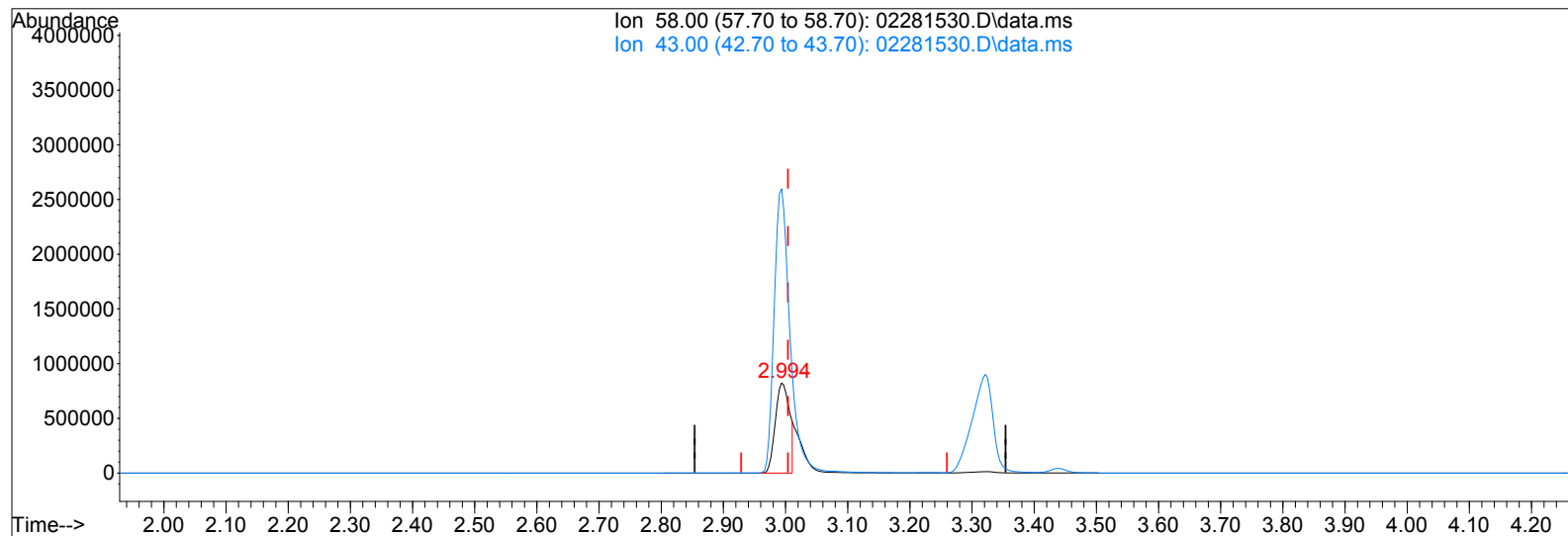
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



(7) Acetone (T)

2.994min (-0.010) 30848.50pg m

response 1309394

IPC

~~WA~~ 3/2/15

Ion	Exp%	Act%
58.00	100	100
43.00	321.80	353.74#
0.00	0.00	0.00
0.00	0.00	0.00

3/3/15

Data File: I:\MS19\DATA\2015 02\28\02281531.D

Acq On : 28 Feb 2015 17:29

Operator: WA

Sample : P1500729-025 (1000mL)

Misc : S29-02041502

ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 02 15:11:20 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DA 3/2/15

DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.13	130	30664	1000.000	pg	0.01
22) 1,4-Difluorobenzene (IS2)	8.72	114	206779	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	35043	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.13	65	62881	839.707	pg	0.01
Spiked Amount 1000.000			Recovery	=	83.97%	
30) Toluene-d8 (SS2)	11.38	98	199649	1046.991	pg	0.00
Spiked Amount 1000.000			Recovery	=	104.70%	
40) Bromofluorobenzene (SS3)	14.25	174	88024	1244.208	pg	0.00
Spiked Amount 1000.000			Recovery	=	124.42%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.73	85	186755	1498.608	pg	100
3) Chloromethane	1.83	52	11198	449.958	pg	91
4) Vinyl Chloride	2.01	62	297	N.D.		
5) Bromomethane	2.32	94	1531	27.321	pg	100
6) Chloroethane	2.47	64	1777	37.693	pg	99
7) Acetone	2.99	58	2230476	50685.828	pg	# 81
8) Trichlorofluoromethane	3.10	101	109158	1019.763	pg	100
9) 1,1-Dichloroethene	3.67	96	54	N.D.		
10) Methylene Chloride	3.82	84	17106	336.784	pg	96
11) Trichlorotrifluoroethane	4.10	151	17151	348.695	pg	100
12) trans-1,2-Dichloroethene	4.75	96	154	N.D.		
13) 1,1-Dichloroethane	4.96	63	282	N.D.		
14) Methyl tert-Butyl Ether	5.10	73	1142	N.D.		
15) cis-1,2-Dichloroethene	5.94	96	533	N.D.		
16) Chloroform	6.33	83	6045	64.298	pg	94
18) 1,2-Dichloroethane	7.28	62	3847	51.392	pg	98
19) 1,1,1-Trichloroethane	7.60	97	1282	N.D.		
20) Benzene	8.16	78	48856	252.659	pg	100
21) Carbon Tetrachloride	8.34	117	24390	356.344	pg	99
23) 1,2-Dichloropropane	9.16	63	1462	32.418	pg	# 68
24) Bromodichloromethane	9.42	83	411	N.D.		
25) Trichloroethene	9.46	130	5617	105.736	pg	99
26) 1,4-Dioxane	9.53	88	419	N.D.		
27) cis-1,3-Dichloropropene	10.46	75	353	N.D.		
28) trans-1,3-Dichloropropene	11.05	75	203	N.D.		
29) 1,1,2-Trichloroethane	0.00	83	0	N.D.	d	
31) Toluene	11.48	91	219444	1082.027	pg	99
32) 1,2-Dibromoethane	12.12	107	30	N.D.		
33) Tetrachloroethene	12.61	166	1435	22.852	pg	100
35) Chlorobenzene	13.17	112	901	N.D.		
36) Ethylbenzene	13.48	91	53335	242.709	pg	99
37) m,p-Xylene	13.61	91	166831	923.714	pg	96
38) o-Xylene	13.94	106	34331	388.943	pg	97
39) 1,1,2,2-Tetrachloroethane	13.97	83	1168	N.D.		
41) 1,3-Dichlorobenzene	0.00	146	0	N.D.	d	
42) 1,4-Dichlorobenzene	15.24	146	3263	26.945	pg	100
43) 1,2-Dichlorobenzene	15.46	146	105	N.D.		
44) 1,2,4-Trichlorobenzene	16.61	182	162	N.D.		
45) Naphthalene	16.70	128	35987	164.124	pg	96
46) Hexachlorobutadiene	16.96	225	33	N.D.		

(#)= qualifier out of range (m)= manual integration (+)= signals summed

Data File: I:\MS19\DATA\2015 02\28\02281531.D

Acq On : 28 Feb 2015 17:29

Operator: WA

Sample : P1500729-025 (1000mL)

Misc : S29-02041502

ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 02 15:11:20 2015

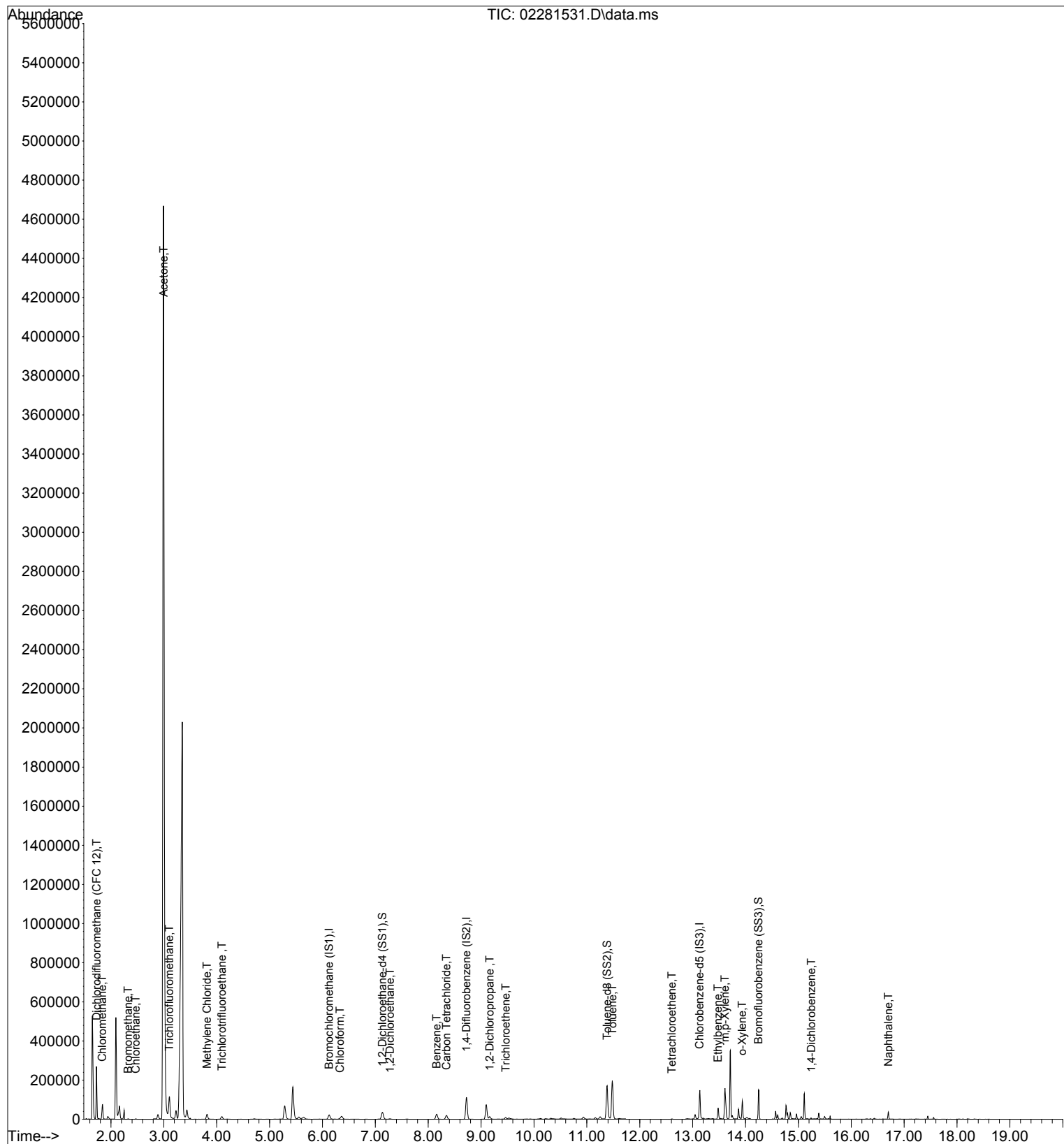
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 02\28\02281531.D

Acq On : 28 Feb 2015 17:29

Operator: WA

Sample : P1500729-025 (1000mL)

Misc : S29-02041502

ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 02 15:11:20 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

WA 3/2/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.13	130	30664	1000.000	pg	0.01
22) 1,4-Difluorobenzene (IS2)	8.72	114	206779	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	35043	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.13	65	62881	839.707	pg	0.01
Spiked Amount 1000.000			Recovery	=	83.97%	
30) Toluene-d8 (SS2)	11.38	98	199649	1046.991	pg	0.00
Spiked Amount 1000.000			Recovery	=	104.70%	
40) Bromofluorobenzene (SS3)	14.25	174	88024	1244.208	pg	0.00
Spiked Amount 1000.000			Recovery	=	124.42%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.73	85	186755	1498.608	pg	100
3) Chloromethane	1.83	52	11198	449.958	pg	91
5) Bromomethane	2.32	94	1531	27.321	pg	100
6) Chloroethane	2.47	64	1777	37.693	pg	99
7) Acetone	2.99	58	2230476	50685.828	pg	# 81
8) Trichlorofluoromethane	3.10	101	109158	1019.763	pg	100
10) Methylene Chloride	3.82	84	17106	336.784	pg	96
11) Trichlorotrifluoroethane	4.10	151	17151	348.695	pg	100
16) Chloroform	6.33	83	6045	64.298	pg	94
18) 1,2-Dichloroethane	7.28	62	3847	51.392	pg	98
20) Benzene	8.16	78	48856	252.659	pg	100
21) Carbon Tetrachloride	8.34	117	24390	356.344	pg	99
23) 1,2-Dichloropropane	9.16	63	1462	32.418	pg	# 68
25) Trichloroethene	9.46	130	5617	105.736	pg	99
31) Toluene	11.48	91	219444	1082.027	pg	99
33) Tetrachloroethene	12.61	166	1435	22.852	pg	100
36) Ethylbenzene	13.48	91	53335	242.709	pg	99
37) m,p-Xylene	13.61	91	166831	923.714	pg	96
38) o-Xylene	13.94	106	34331	388.943	pg	97
42) 1,4-Dichlorobenzene	15.24	146	3263	26.945	pg	100
45) Naphthalene	16.70	128	35987	164.124	pg	96

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\28\02281531.D

Acq On : 28 Feb 2015 17:29

Operator: WA

Sample : P1500729-025 (1000mL)

Misc : S29-02041502

ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 02 15:11:20 2015

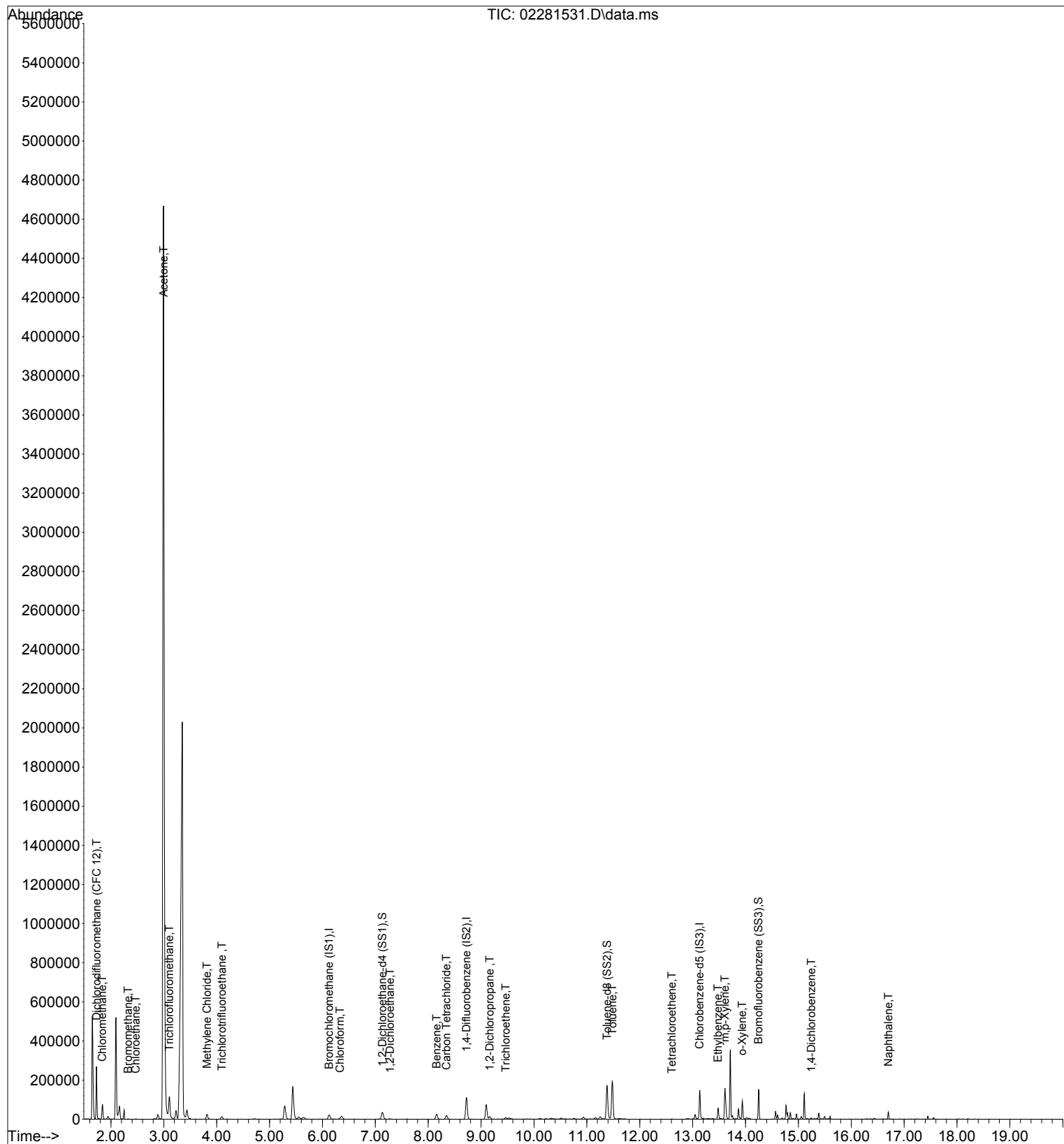
Quant Method : I:\MS19\METHODS\X19021115.M

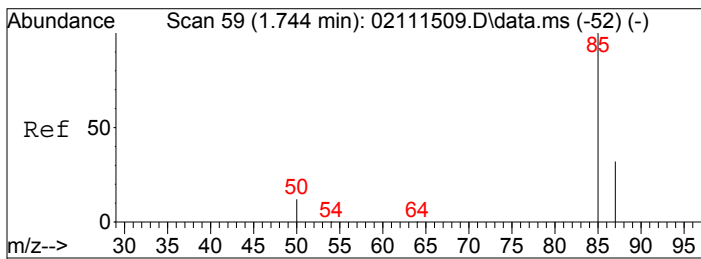
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

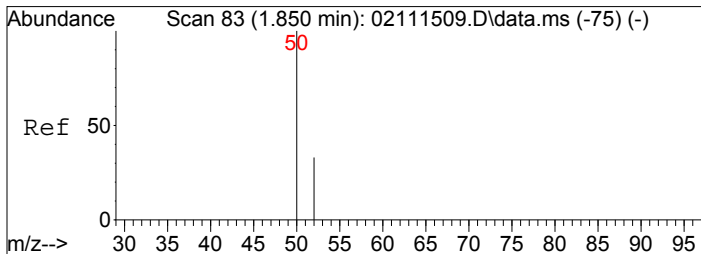
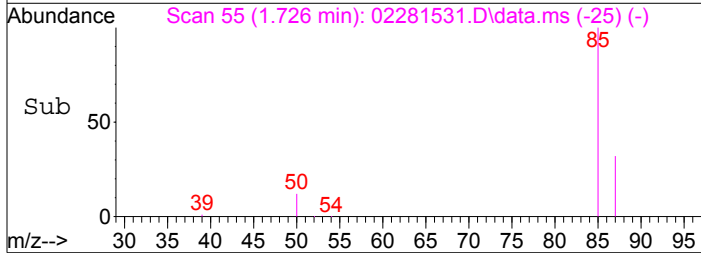
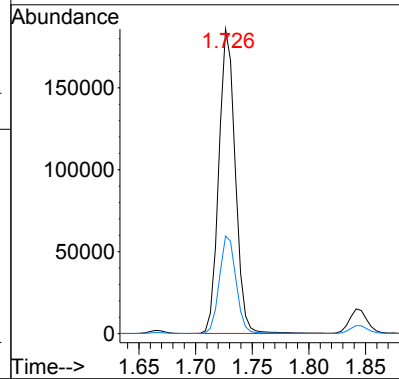
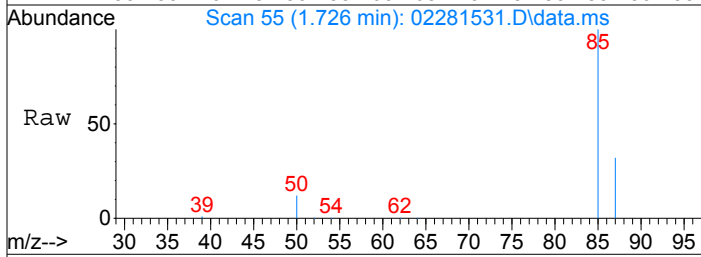
DataAcq Meth:TO15SIM.M





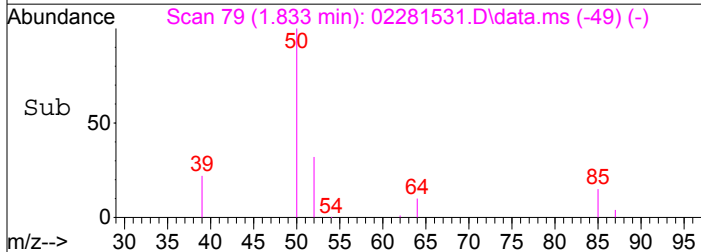
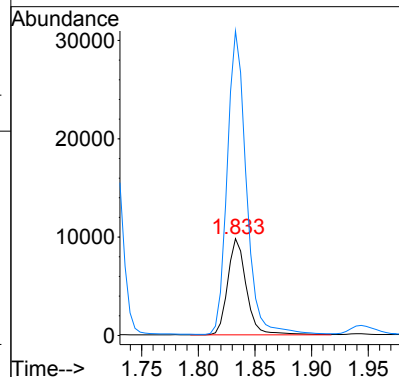
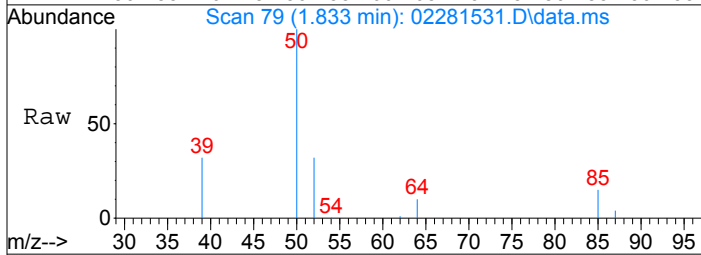
#2
 Dichlorodifluoromethane (CFC 12)
 Concen: 1498.61 pg
 RT: 1.73 min Scan# 55
 Delta R.T. -0.017 min
 Lab File: 02281531.D
 Acq: 28 Feb 2015 17:29

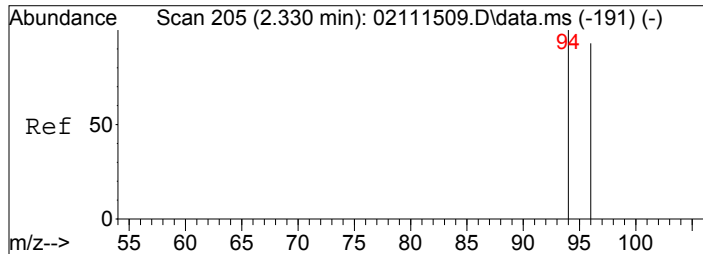
Tgt Ion: 85 Resp: 186755
 Ion Ratio Lower Upper
 85 100
 87 32.5 12.4 52.4



#3
 Chloromethane
 Concen: 449.96 pg
 RT: 1.83 min Scan# 79
 Delta R.T. -0.017 min
 Lab File: 02281531.D
 Acq: 28 Feb 2015 17:29

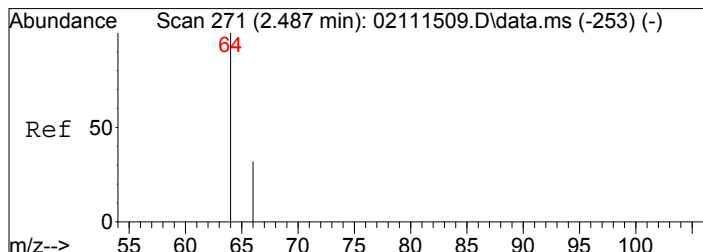
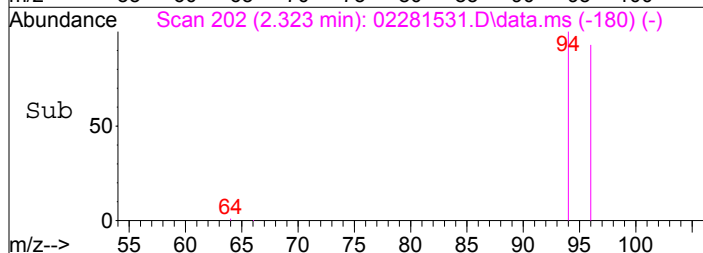
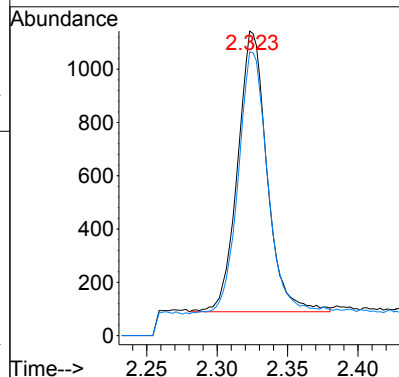
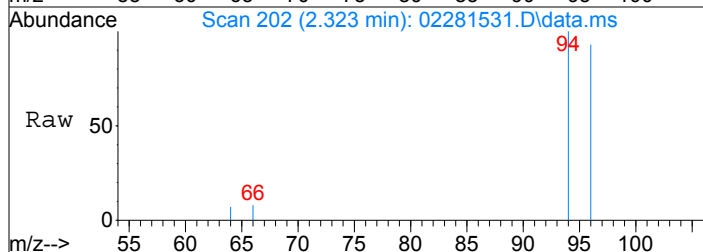
Tgt Ion: 52 Resp: 11198
 Ion Ratio Lower Upper
 52 100
 50 322.4 283.7 323.7





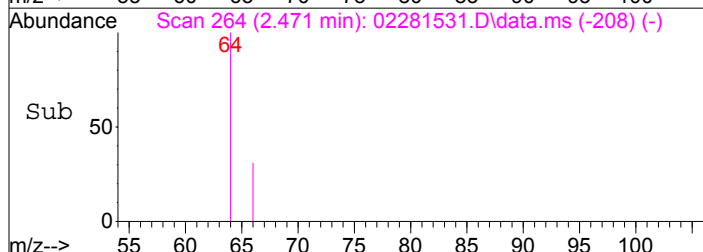
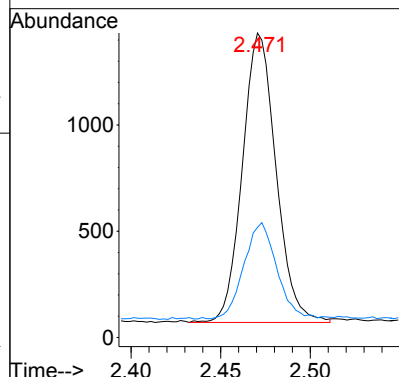
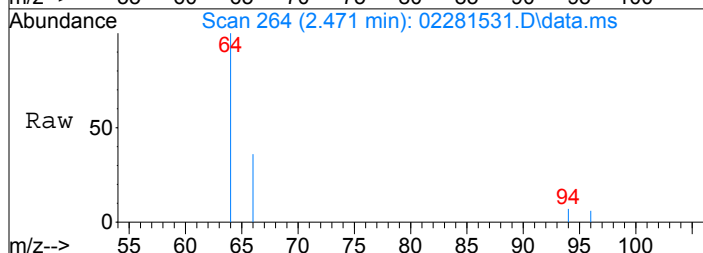
#5
Bromomethane
Concen: 27.32 pg
RT: 2.32 min Scan# 202
Delta R.T. -0.007 min
Lab File: 02281531.D
Acq: 28 Feb 2015 17:29

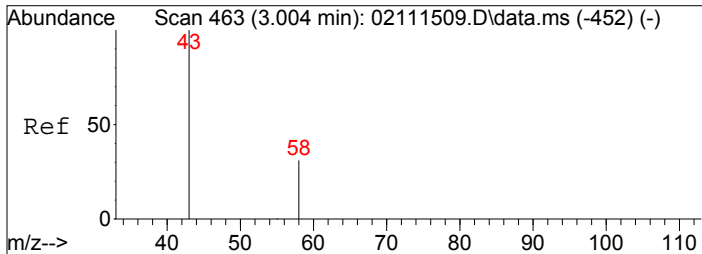
Tgt Ion: 94 Resp: 1531
Ion Ratio Lower Upper
94 100
96 94.0 75.5 113.3



#6
Chloroethane
Concen: 37.69 pg
RT: 2.47 min Scan# 264
Delta R.T. -0.016 min
Lab File: 02281531.D
Acq: 28 Feb 2015 17:29

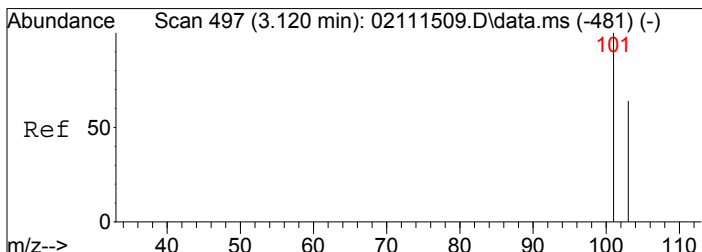
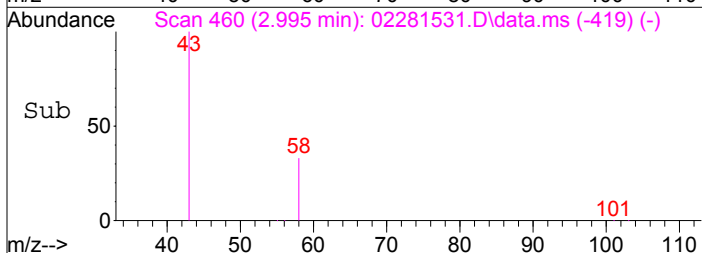
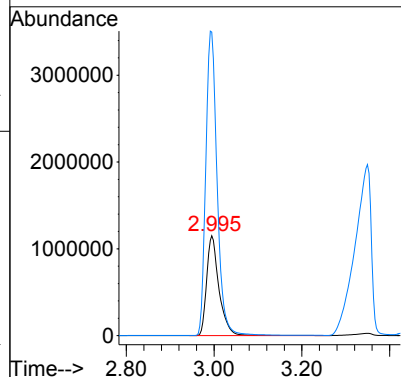
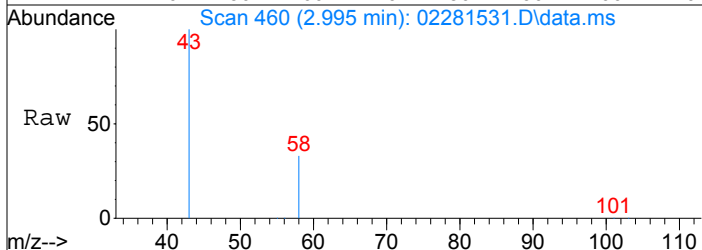
Tgt Ion: 64 Resp: 1777
Ion Ratio Lower Upper
64 100
66 32.6 12.2 52.2





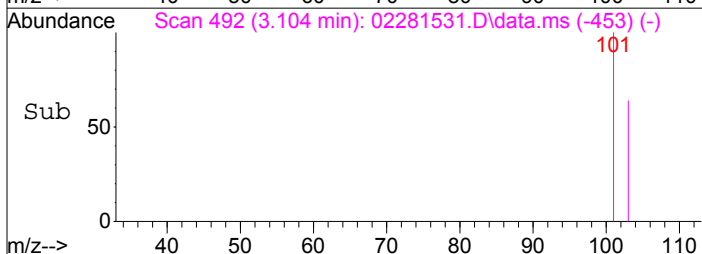
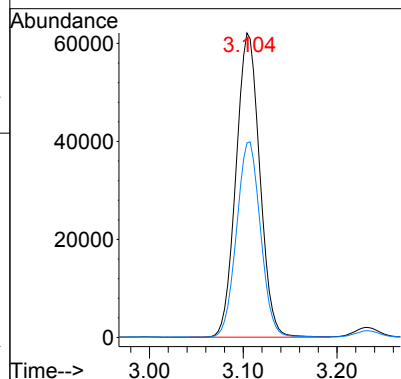
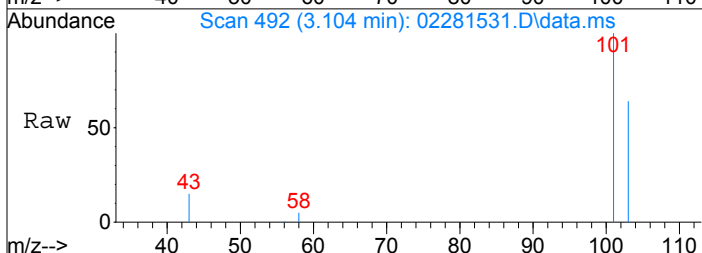
#7
Acetone
Concen: 50685.83 pg
RT: 2.99 min Scan# 460
Delta R.T. -0.009 min
Lab File: 02281531.D
Acq: 28 Feb 2015 17:29

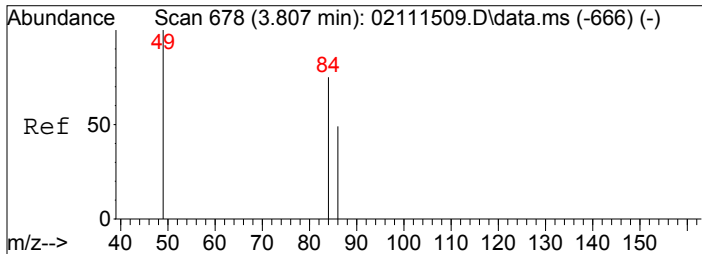
Tgt Ion: 58 Resp: 2230476
Ion Ratio Lower Upper
58 100
43 281.9 301.8 341.8#



#8
Trichlorofluoromethane
Concen: 1019.76 pg
RT: 3.10 min Scan# 492
Delta R.T. -0.016 min
Lab File: 02281531.D
Acq: 28 Feb 2015 17:29

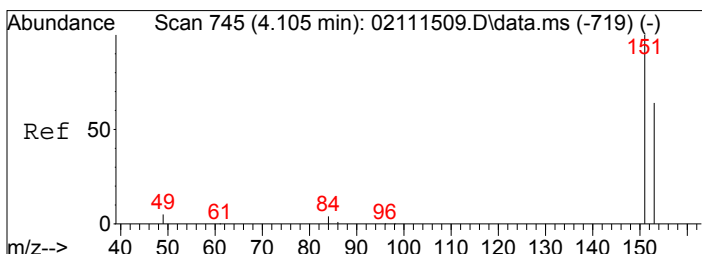
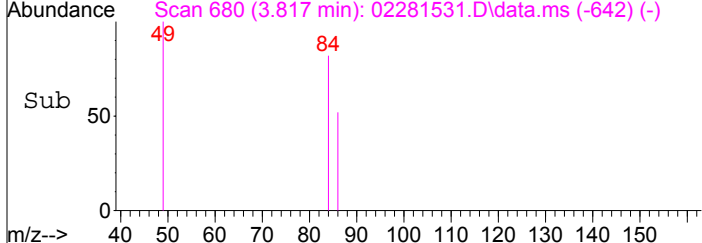
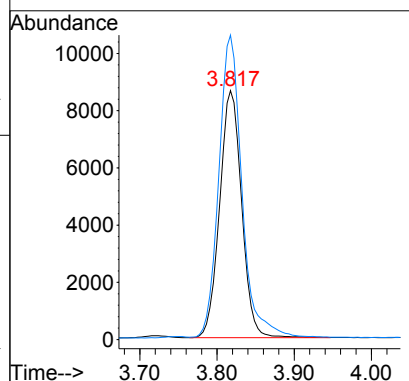
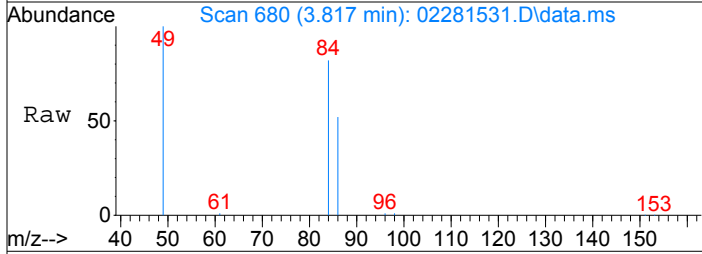
Tgt Ion: 101 Resp: 109158
Ion Ratio Lower Upper
101 100
103 64.7 51.8 77.6





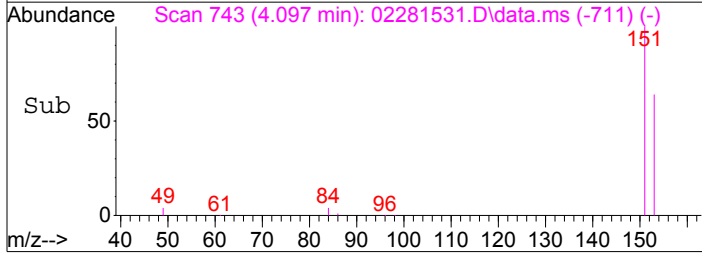
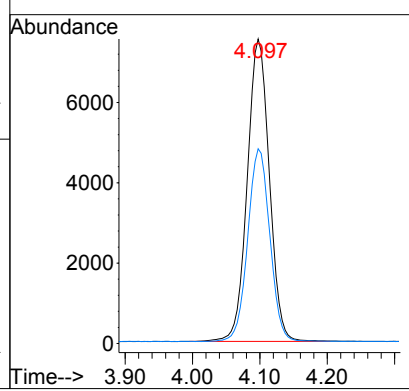
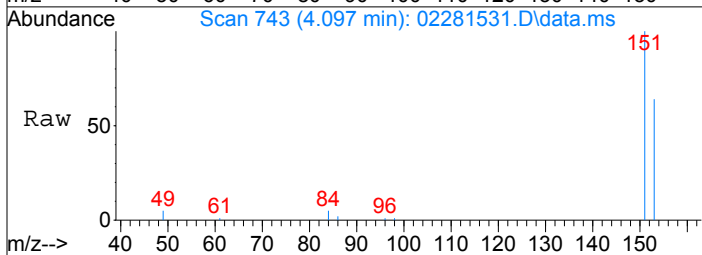
#10
 Methylene Chloride
 Concen: 336.78 pg
 RT: 3.82 min Scan# 680
 Delta R.T. 0.010 min
 Lab File: 02281531.D
 Acq: 28 Feb 2015 17:29

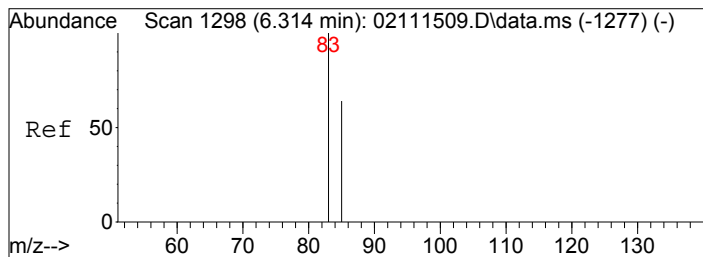
Tgt Ion: 84	Resp: 17106
Ion Ratio	Lower Upper
84	100
49	127.6 112.3 152.3



#11
 Trichlorotrifluoroethane
 Concen: 348.70 pg
 RT: 4.10 min Scan# 743
 Delta R.T. -0.008 min
 Lab File: 02281531.D
 Acq: 28 Feb 2015 17:29

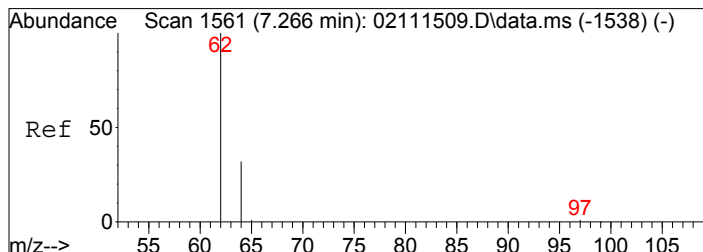
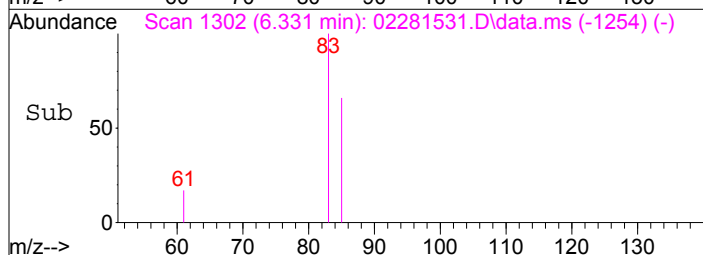
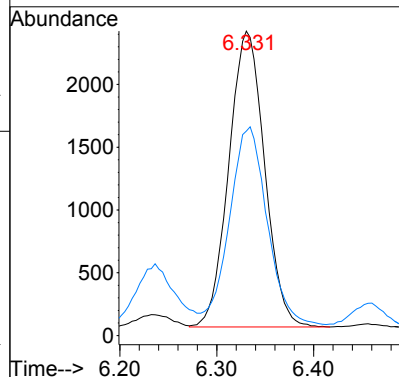
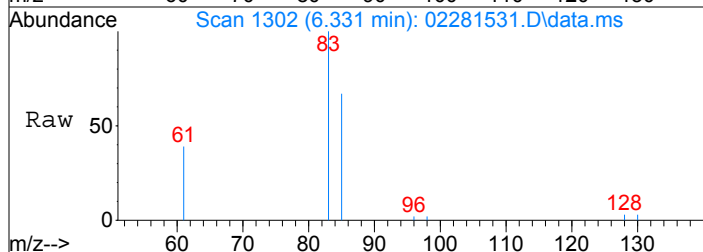
Tgt Ion: 151	Resp: 17151
Ion Ratio	Lower Upper
151	100
153	63.9 43.6 83.6





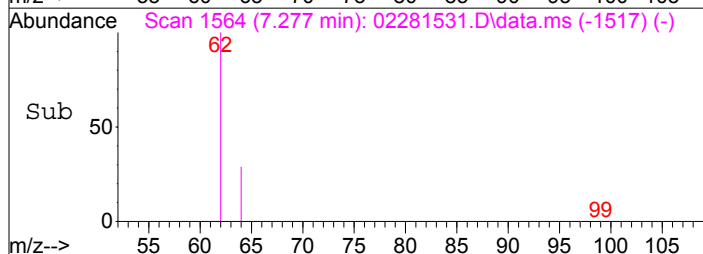
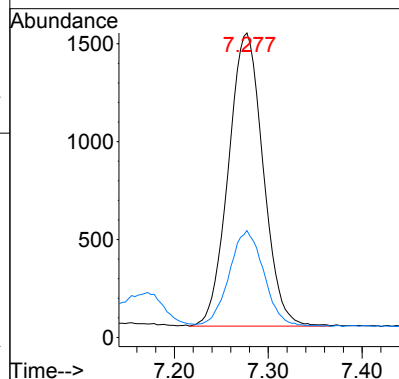
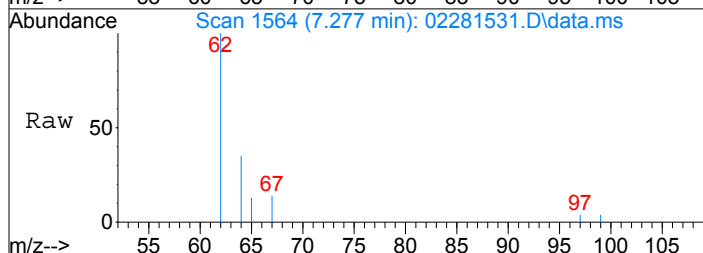
#16
Chloroform
Concen: 64.30 pg
RT: 6.33 min Scan# 1302
Delta R.T. 0.017 min
Lab File: 02281531.D
Acq: 28 Feb 2015 17:29

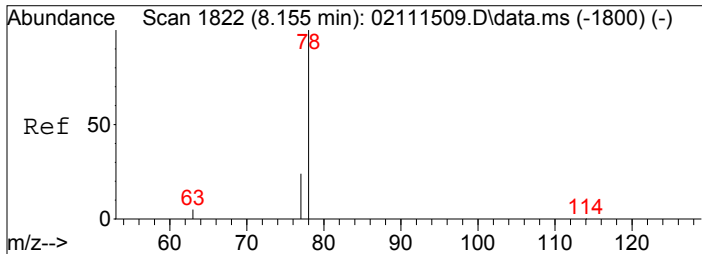
Tgt Ion: 83 Resp: 6045
Ion Ratio Lower Upper
83 100
85 69.8 45.4 85.4



#18
1,2-Dichloroethane
Concen: 51.39 pg
RT: 7.28 min Scan# 1564
Delta R.T. 0.012 min
Lab File: 02281531.D
Acq: 28 Feb 2015 17:29

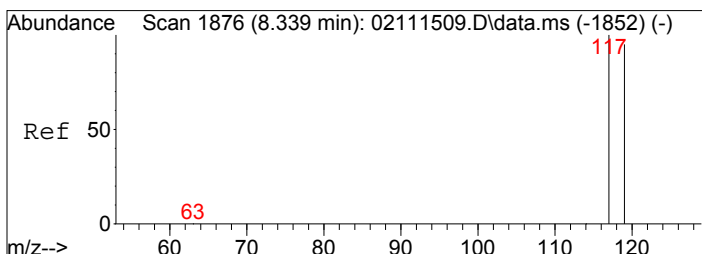
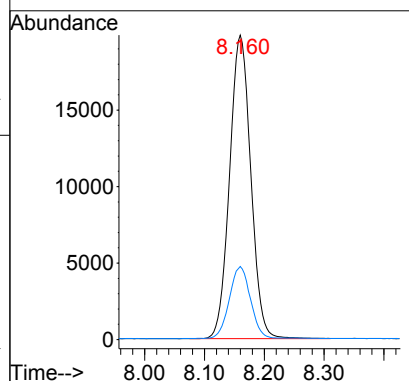
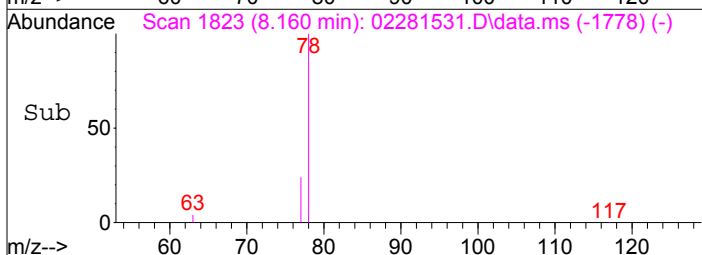
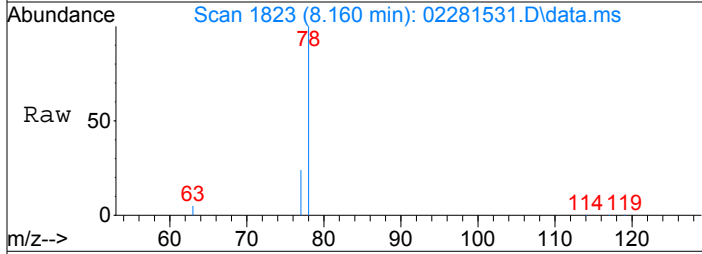
Tgt Ion: 62 Resp: 3847
Ion Ratio Lower Upper
62 100
64 32.5 11.6 51.6





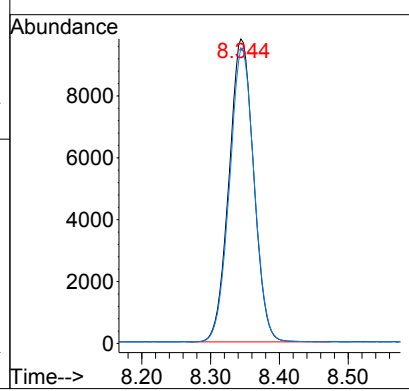
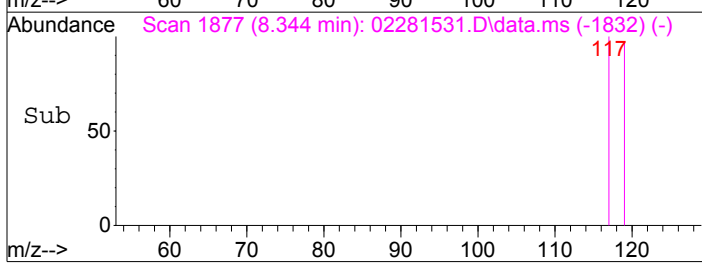
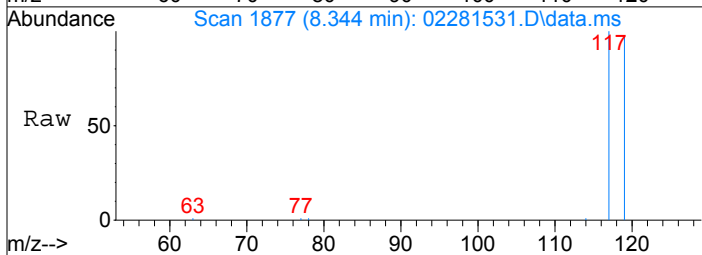
#20
Benzene
Concen: 252.66 pg
RT: 8.16 min Scan# 1823
Delta R.T. 0.005 min
Lab File: 02281531.D
Acq: 28 Feb 2015 17:29

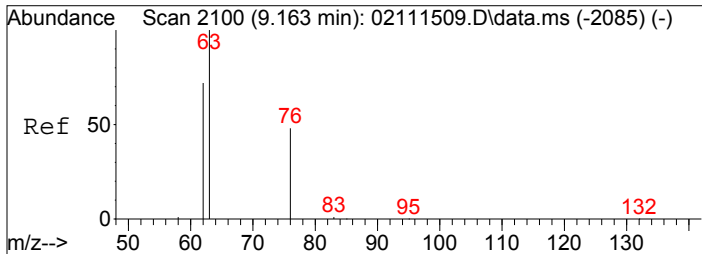
Tgt Ion:	78	Resp:	48856
Ion Ratio	Lower	Upper	
78	100		
77	23.9	3.7	43.7



#21
Carbon Tetrachloride
Concen: 356.34 pg
RT: 8.34 min Scan# 1877
Delta R.T. 0.005 min
Lab File: 02281531.D
Acq: 28 Feb 2015 17:29

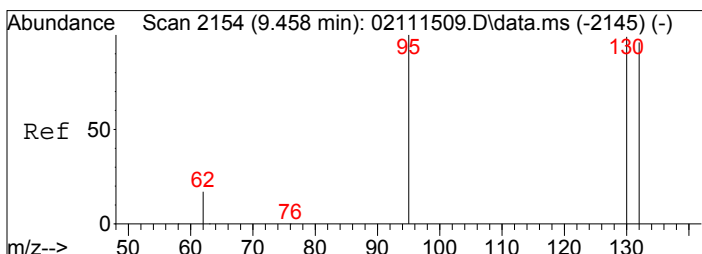
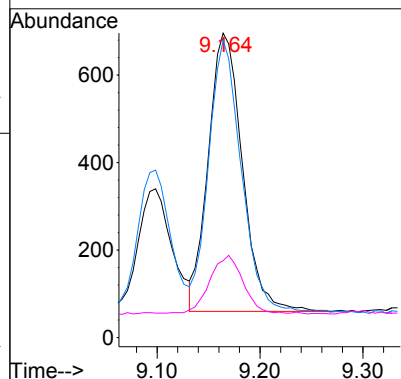
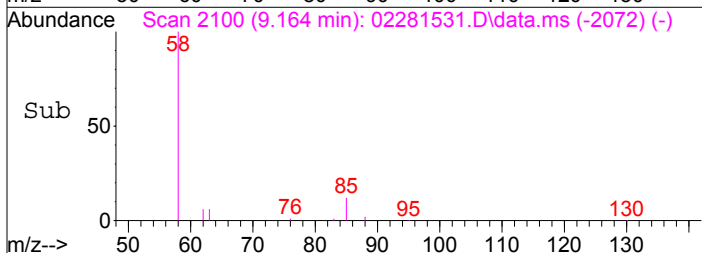
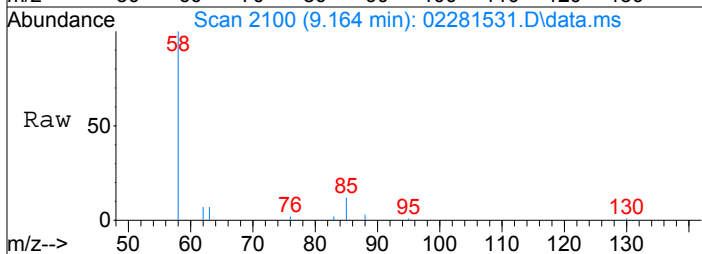
Tgt Ion:	117	Resp:	24390
Ion Ratio	Lower	Upper	
117	100		
119	96.4	75.5	115.5





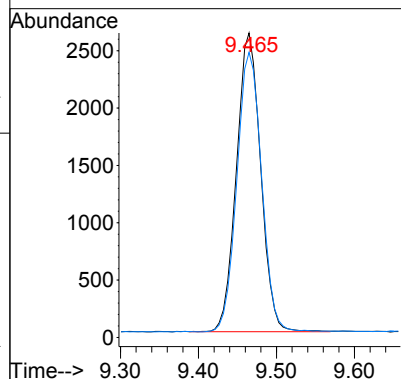
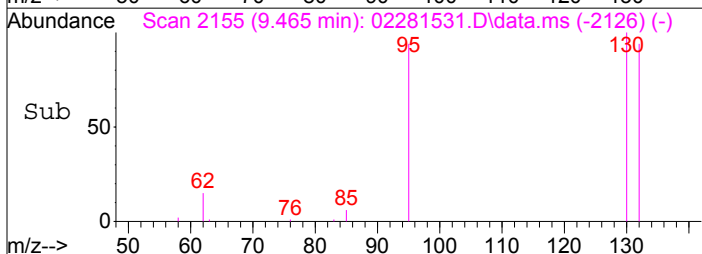
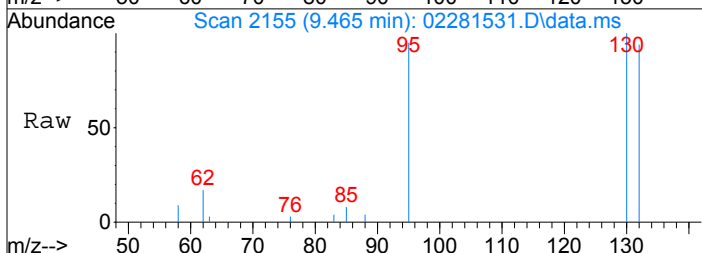
#23
1,2-Dichloropropane
Concen: 32.42 pg
RT: 9.16 min Scan# 2100
Delta R.T. 0.001 min
Lab File: 02281531.D
Acq: 28 Feb 2015 17:29

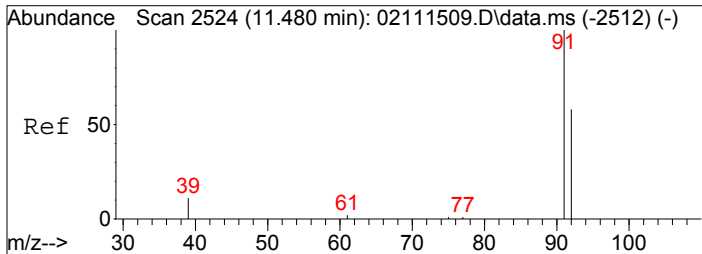
Tgt Ion: 63 Resp: 1462
Ion Ratio Lower Upper
63 100
62 93.2 52.0 92.0#
76 19.8 28.1 68.1#



#25
Trichloroethene
Concen: 105.74 pg
RT: 9.46 min Scan# 2155
Delta R.T. 0.007 min
Lab File: 02281531.D
Acq: 28 Feb 2015 17:29

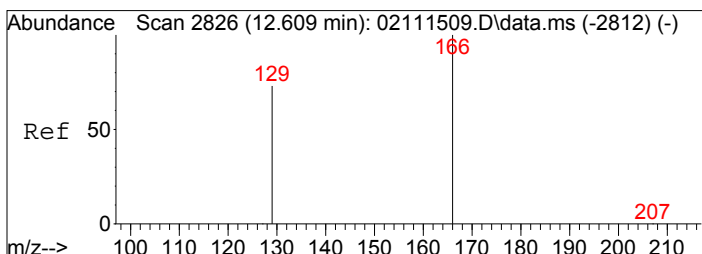
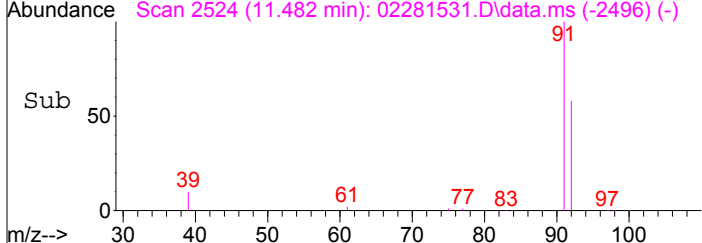
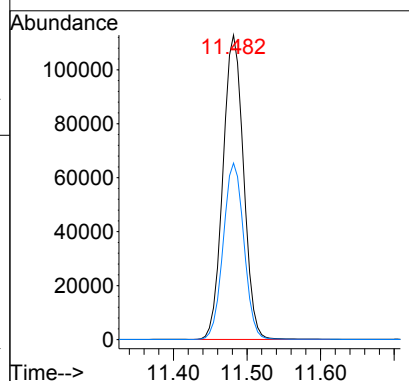
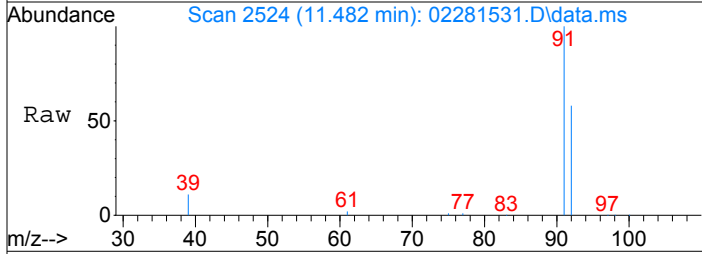
Tgt Ion: 130 Resp: 5617
Ion Ratio Lower Upper
130 100
132 95.6 77.1 117.1





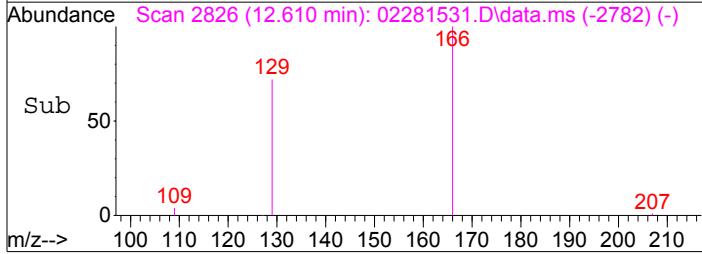
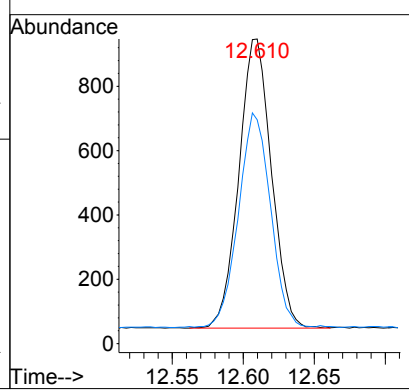
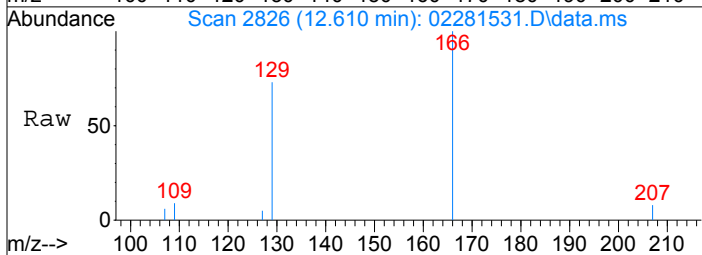
#31
Toluene
Concen: 1082.03 pg
RT: 11.48 min Scan# 2524
Delta R.T. 0.001 min
Lab File: 02281531.D
Acq: 28 Feb 2015 17:29

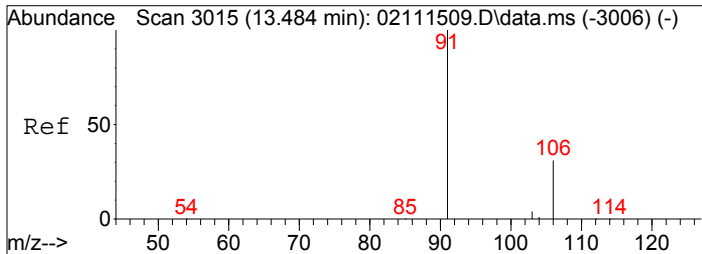
Tgt Ion:	91	Resp:	219444
Ion Ratio	Lower	Upper	
91	100		
92	58.2	37.7	77.7



#33
Tetrachloroethene
Concen: 22.85 pg
RT: 12.61 min Scan# 2826
Delta R.T. 0.001 min
Lab File: 02281531.D
Acq: 28 Feb 2015 17:29

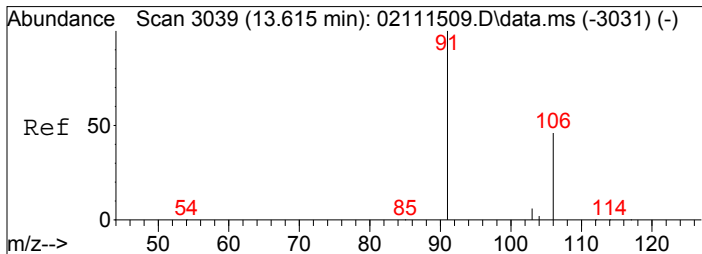
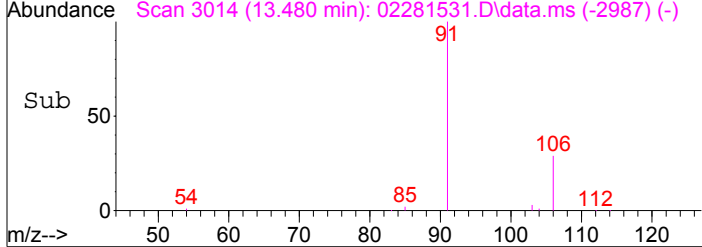
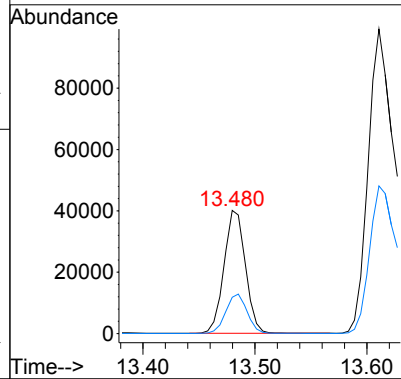
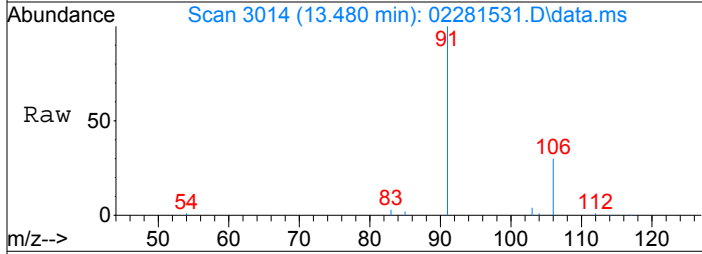
Tgt Ion:	166	Resp:	1435
Ion Ratio	Lower	Upper	
166	100		
129	73.0	53.3	93.3





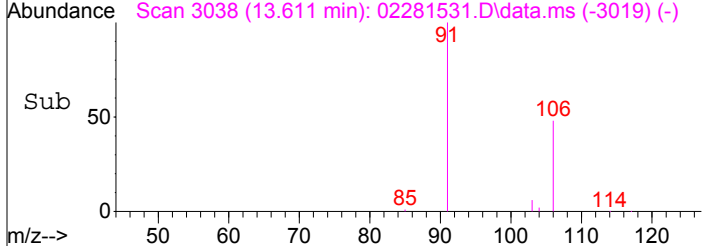
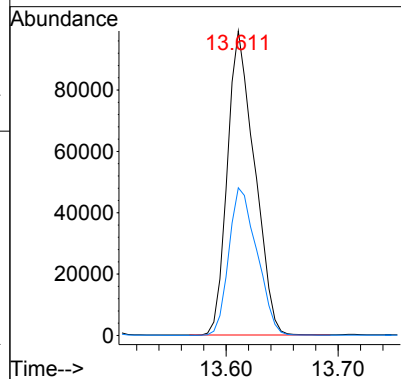
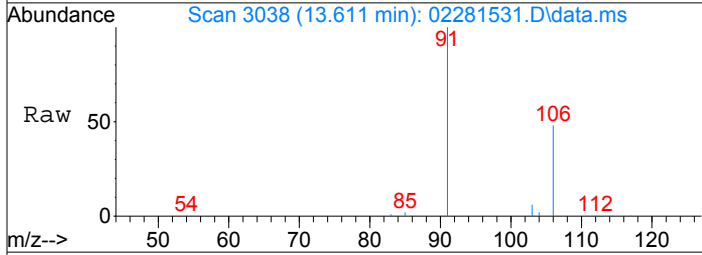
#36
Ethylbenzene
Concen: 242.71 pg
RT: 13.48 min Scan# 3014
Delta R.T. -0.004 min
Lab File: 02281531.D
Acq: 28 Feb 2015 17:29

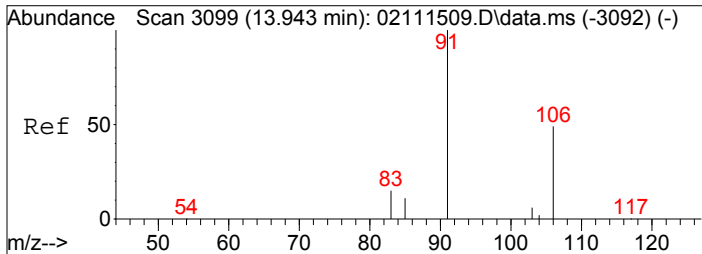
Tgt Ion: 91 Resp: 53335
Ion Ratio Lower Upper
91 100
106 31.7 10.9 50.9



#37
m,p-Xylene
Concen: 923.71 pg
RT: 13.61 min Scan# 3038
Delta R.T. -0.004 min
Lab File: 02281531.D
Acq: 28 Feb 2015 17:29

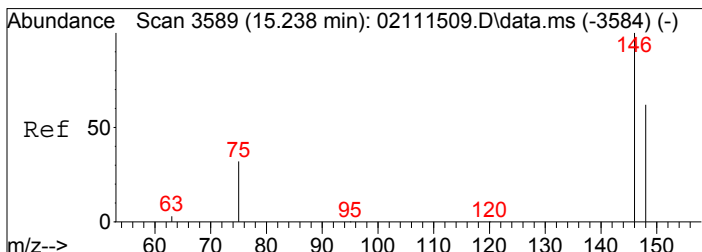
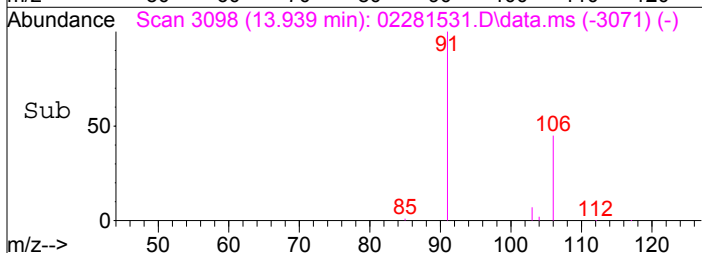
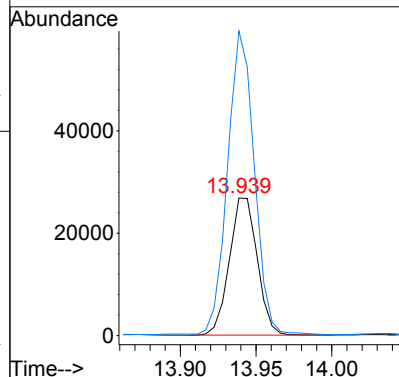
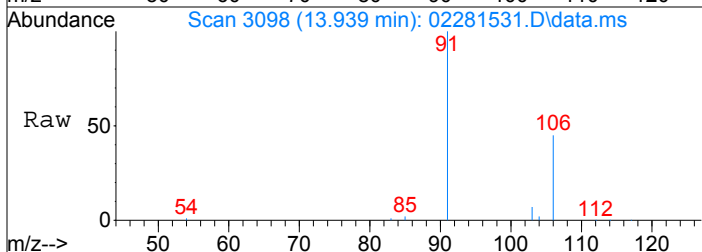
Tgt Ion: 91 Resp: 166831
Ion Ratio Lower Upper
91 100
106 50.2 27.5 67.5





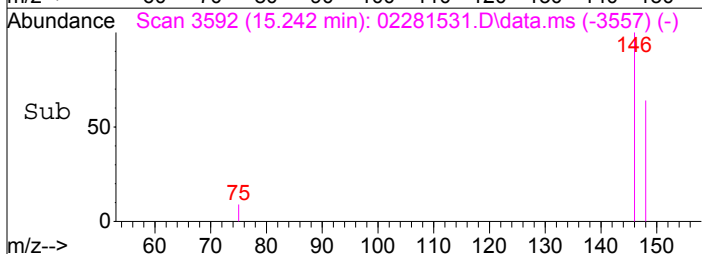
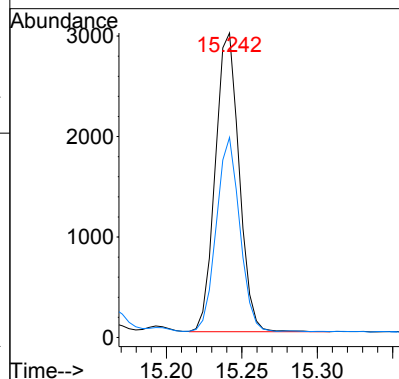
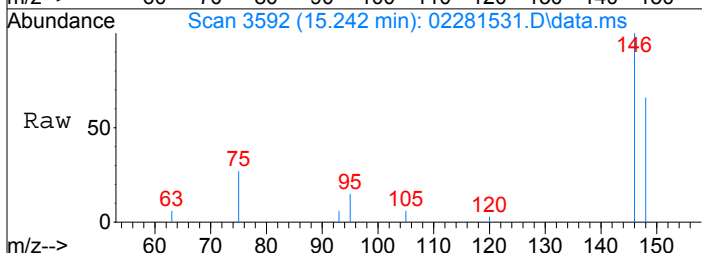
#38
o-Xylene
Concen: 388.94 pg
RT: 13.94 min Scan# 3098
Delta R.T. -0.004 min
Lab File: 02281531.D
Acq: 28 Feb 2015 17:29

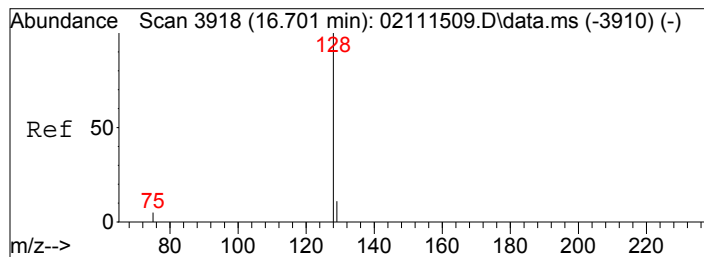
Tgt Ion:106 Resp: 34331
Ion Ratio Lower Upper
106 100
91 213.3 198.3 238.3



#42
1,4-Dichlorobenzene
Concen: 26.95 pg
RT: 15.24 min Scan# 3592
Delta R.T. 0.004 min
Lab File: 02281531.D
Acq: 28 Feb 2015 17:29

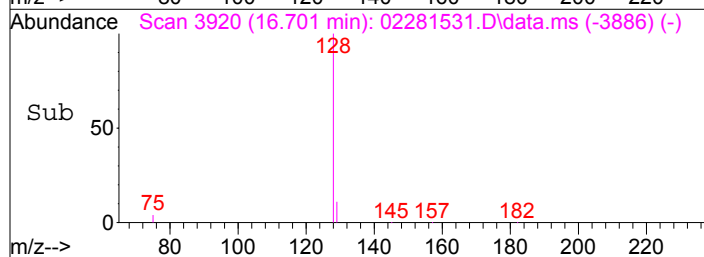
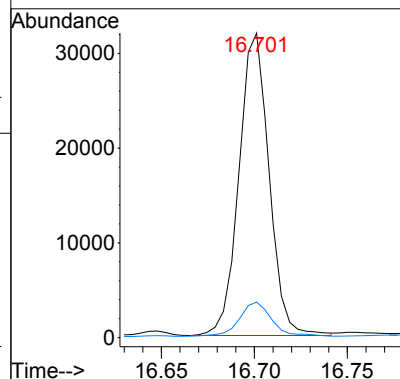
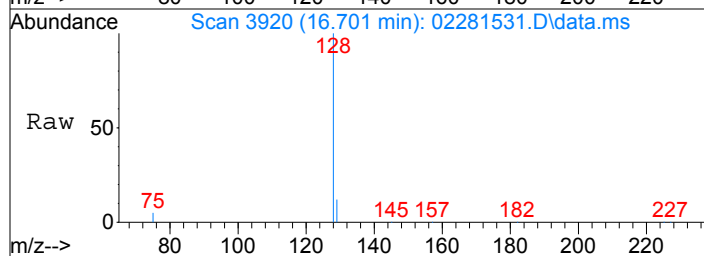
Tgt Ion:146 Resp: 3263
Ion Ratio Lower Upper
146 100
148 63.6 43.5 83.5





#45
Naphthalene
Concen: 164.12 pg
RT: 16.70 min Scan# 3920
Delta R.T. 0.000 min
Lab File: 02281531.D
Acq: 28 Feb 2015 17:29

Tgt Ion:128	Resp:	35987
Ion Ratio	Lower	Upper
128	100	
129	12.3	0.0 30.9



Data File: I:\MS19\DATA\2015 03\02\03021506.D

Acq On : 2 Mar 2015 10:39

Operator: WA

Sample : P1500729-026 (1000mL)

Misc : S29-02041502

ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 02 12:27:51 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

3/2/15

DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	24974	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.71	114	178907	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	31299	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	55512	910.198	pg	0.00
Spiked Amount 1000.000			Recovery	=	91.02%	
30) Toluene-d8 (SS2)	11.38	98	167699	1016.449	pg	0.00
Spiked Amount 1000.000			Recovery	=	101.65%	
40) Bromofluorobenzene (SS3)	14.25	174	73198	1158.409	pg	0.00
Spiked Amount 1000.000			Recovery	=	115.84%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.73	85	190884	1880.729	pg	100
3) Chloromethane	1.84	52	8754	431.896	pg	99
4) Vinyl Chloride	2.02	62	176	N.D.		
5) Bromomethane	2.33	94	1298	28.441	pg	100
6) Chloroethane	2.47	64	337	N.D.		
7) Acetone	2.99	58	253681	7078.115	pg	95
8) Trichlorofluoromethane	3.11	101	138402	1587.547	pg	100
9) 1,1-Dichloroethene	3.67	96	85	N.D.		
10) Methylene Chloride	3.80	84	22814	551.499	pg	93
11) Trichlorotrifluoroethane	4.10	151	13838	345.438	pg	100
12) trans-1,2-Dichloroethene	4.74	96	415	N.D.		
13) 1,1-Dichloroethane	4.95	63	499	N.D.		
14) Methyl tert-Butyl Ether	5.11	73	541	N.D.		
15) cis-1,2-Dichloroethene	5.94	96	543	N.D.		
16) Chloroform	6.31	83	13042	170.329	pg	99
18) 1,2-Dichloroethane	7.26	62	5002	82.045	pg	98
19) 1,1,1-Trichloroethane	7.59	97	6350	85.281	pg	100
20) Benzene	8.16	78	48066	305.208	pg	100
21) Carbon Tetrachloride	8.34	117	20258	363.408	pg	100
23) 1,2-Dichloropropane	9.16	63	792	20.297	pg	99
24) Bromodichloromethane	9.41	83	700	N.D.		
25) Trichloroethene	9.46	130	11108	241.676	pg	99
26) 1,4-Dioxane	9.55	88	367	N.D.		
27) cis-1,3-Dichloropropene	10.46	75	346	N.D.		
28) trans-1,3-Dichloropropene	11.05	75	219	N.D.		
29) 1,1,2-Trichloroethane	11.20	83	293	N.D.		
31) Toluene	11.48	91	249462	1421.667	pg	99
32) 1,2-Dibromoethane	12.13	107	63	N.D.		
33) Tetrachloroethene	12.61	166	1650	30.369	pg	99
35) Chlorobenzene	13.17	112	1178	N.D.		
36) Ethylbenzene	13.48	91	65649	334.481	pg	99
37) m,p-Xylene	13.61	91	101282	627.862	pg	97
38) o-Xylene	13.94	106	17449	221.331	pg	99
39) 1,1,1,2,2-Tetrachloroethane	13.93	83	147	N.D.		
41) 1,3-Dichlorobenzene	15.17	146	894	N.D.		
42) 1,4-Dichlorobenzene	15.24	146	3208	29.660	pg	100
43) 1,2-Dichlorobenzene	15.46	146	326	N.D.		
44) 1,2,4-Trichlorobenzene	16.63	182	340	N.D.		
45) Naphthalene	16.70	128	29726	151.787	pg	96
46) Hexachlorobutadiene	16.96	225	72	N.D.		

(#)= qualifier out of range (m)= manual integration (+)= signals summed

Data File: I:\MS19\DATA\2015 03\02\03021506.D

Acq On : 2 Mar 2015 10:39

Operator: WA

Sample : P1500729-026 (1000mL)

Misc : S29-02041502

ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 02 12:27:51 2015

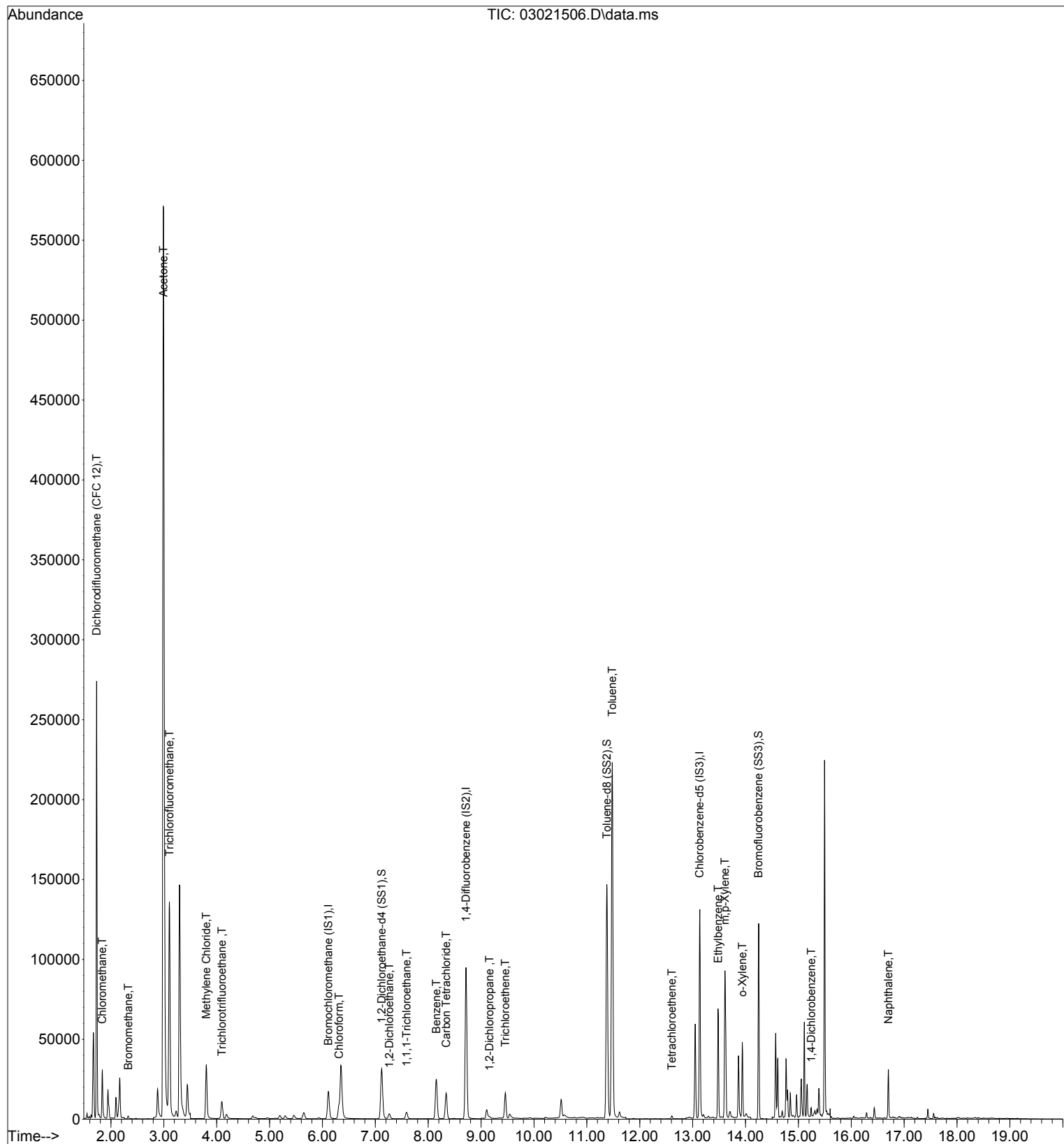
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 03\02\03021506.D

Acq On : 2 Mar 2015 10:39

Operator: WA

Sample : P1500729-026 (1000mL)

Misc : S29-02041502

ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 02 12:27:51 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

~~WA~~ 3/2/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	24974	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.71	114	178907	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	31299	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	55512	910.198	pg	0.00
Spiked Amount 1000.000			Recovery	=	91.02%	
30) Toluene-d8 (SS2)	11.38	98	167699	1016.449	pg	0.00
Spiked Amount 1000.000			Recovery	=	101.65%	
40) Bromofluorobenzene (SS3)	14.25	174	73198	1158.409	pg	0.00
Spiked Amount 1000.000			Recovery	=	115.84%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.73	85	190884	1880.729	pg	100
3) Chloromethane	1.84	52	8754	431.896	pg	99
5) Bromomethane	2.33	94	1298	28.441	pg	100
7) Acetone	2.99	58	253681	7078.115	pg	95
8) Trichlorofluoromethane	3.11	101	138402	1587.547	pg	100
10) Methylene Chloride	3.80	84	22814	551.499	pg	93
11) Trichlorotrifluoroethane	4.10	151	13838	345.438	pg	100
16) Chloroform	6.31	83	13042	170.329	pg	99
18) 1,2-Dichloroethane	7.26	62	5002	82.045	pg	98
19) 1,1,1-Trichloroethane	7.59	97	6350	85.281	pg	100
20) Benzene	8.16	78	48066	305.208	pg	100
21) Carbon Tetrachloride	8.34	117	20258	363.408	pg	100
23) 1,2-Dichloropropane	9.16	63	792	20.297	pg	99
25) Trichloroethene	9.46	130	11108	241.676	pg	99
31) Toluene	11.48	91	249462	1421.667	pg	99
33) Tetrachloroethene	12.61	166	1650	30.369	pg	99
36) Ethylbenzene	13.48	91	65649	334.481	pg	99
37) m,p-Xylene	13.61	91	101282	627.862	pg	97
38) o-Xylene	13.94	106	17449	221.331	pg	99
42) 1,4-Dichlorobenzene	15.24	146	3208	29.660	pg	100
45) Naphthalene	16.70	128	29726	151.787	pg	96

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 03\02\03021506.D

Acq On : 2 Mar 2015 10:39

Operator: WA

Sample : P1500729-026 (1000mL)

Misc : S29-02041502

ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 02 12:27:51 2015

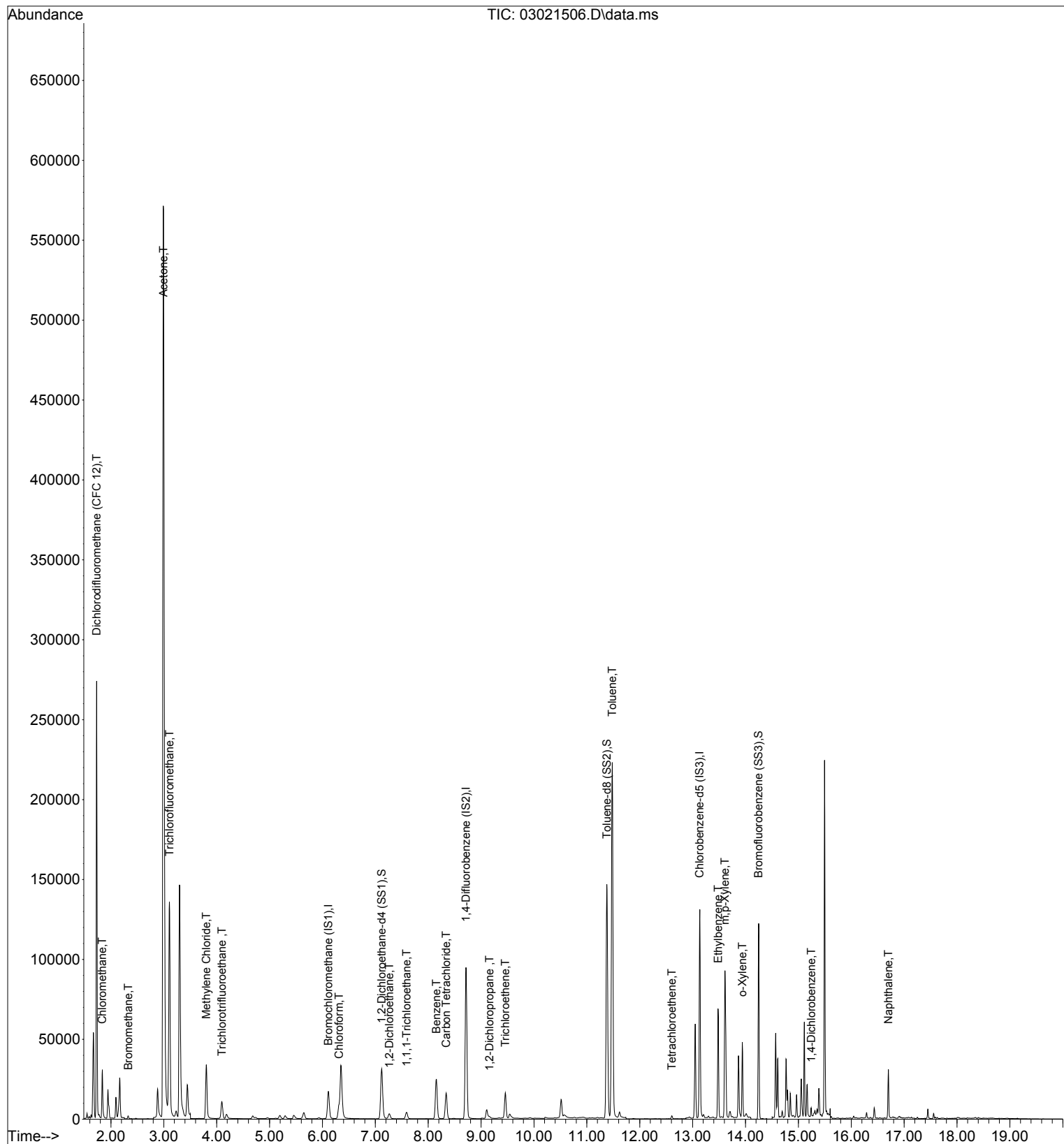
Quant Method : I:\MS19\METHODS\X19021115.M

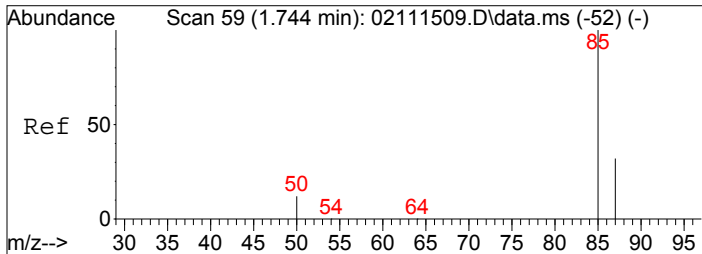
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

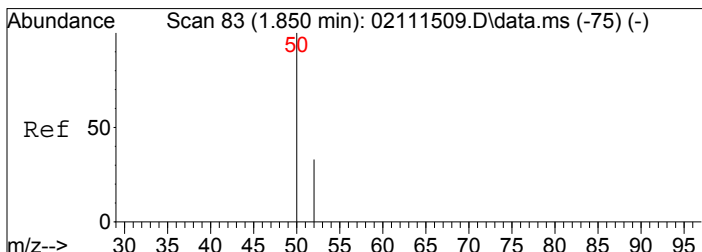
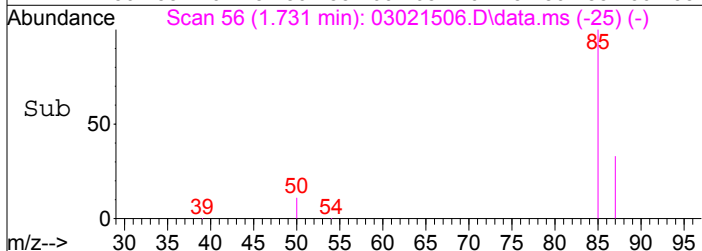
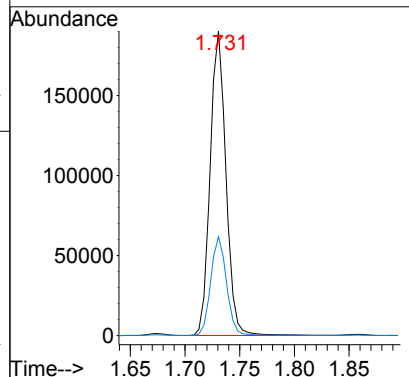
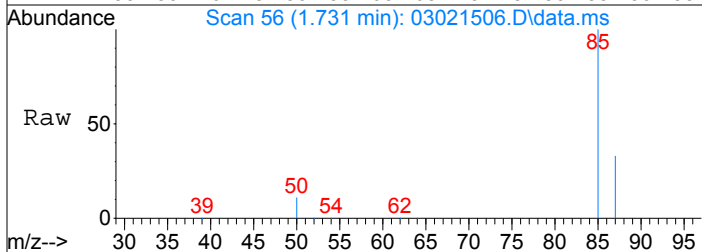
DataAcq Meth:TO15SIM.M





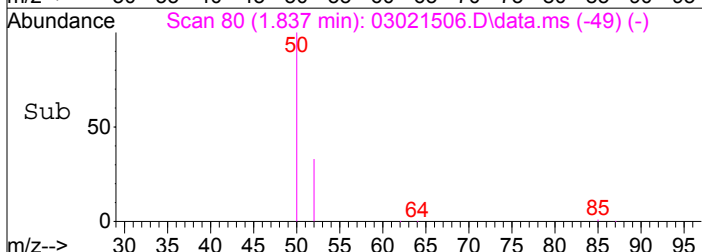
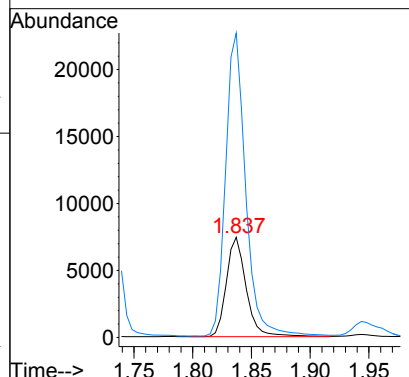
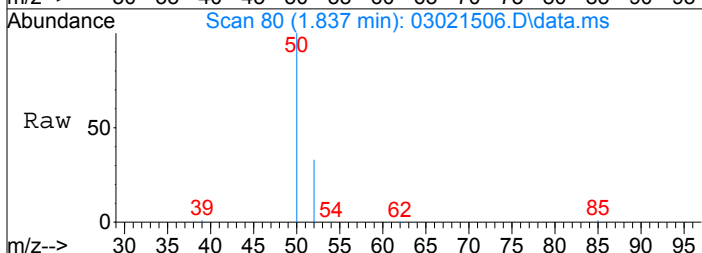
#2
 Dichlorodifluoromethane (CFC 12)
 Concen: 1880.73 pg
 RT: 1.73 min Scan# 56
 Delta R.T. -0.013 min
 Lab File: 03021506.D
 Acq: 2 Mar 2015 10:39

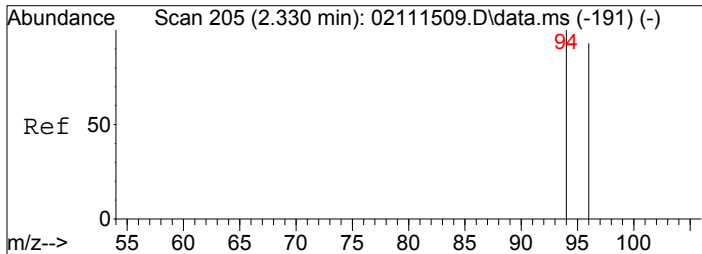
Tgt Ion	85	Resp	190884
Ion Ratio	100	Lower	Upper
87	32.5	12.4	52.4



#3
 Chloromethane
 Concen: 431.90 pg
 RT: 1.84 min Scan# 80
 Delta R.T. -0.013 min
 Lab File: 03021506.D
 Acq: 2 Mar 2015 10:39

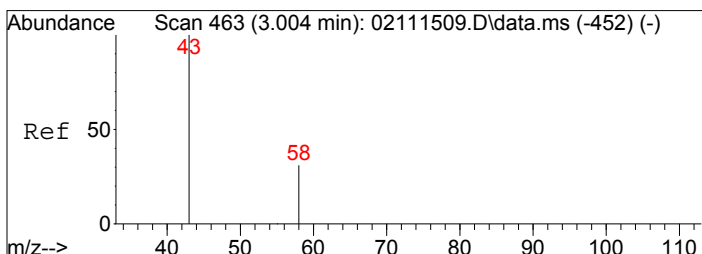
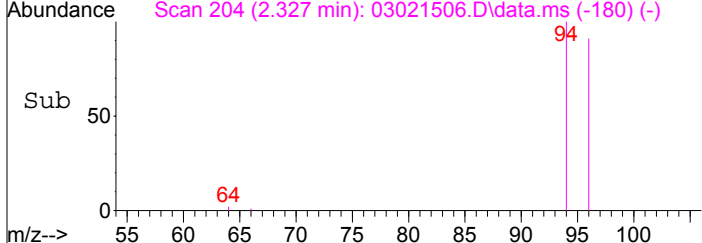
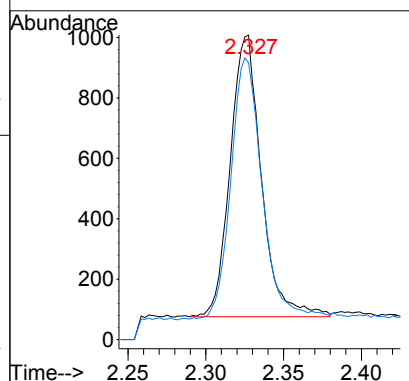
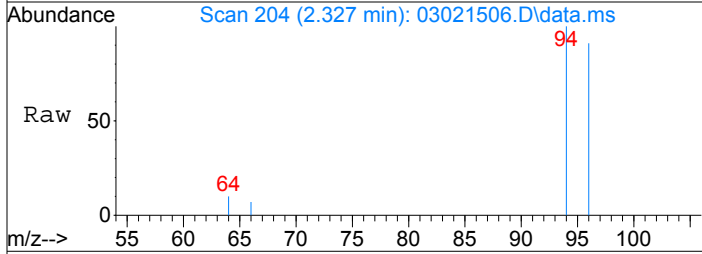
Tgt Ion	52	Resp	8754
Ion Ratio	100	Lower	Upper
50	305.9	283.7	323.7





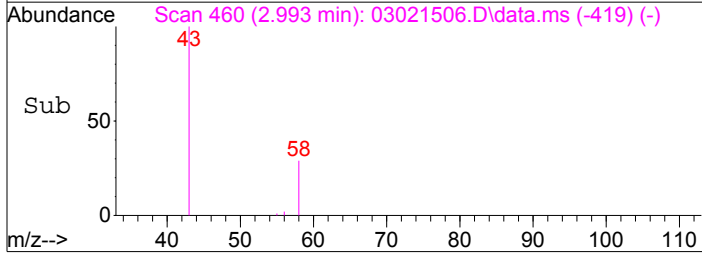
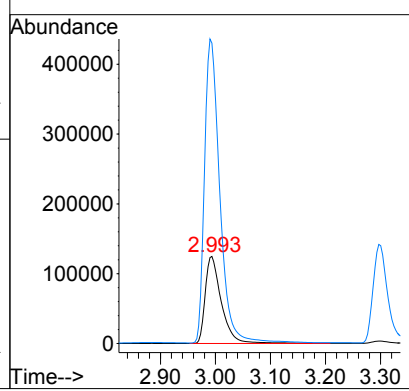
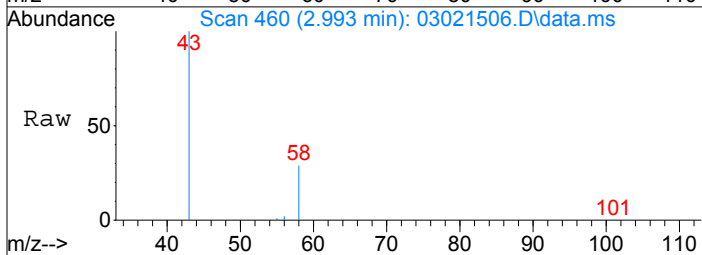
#5
 Bromomethane
 Concen: 28.44 pg
 RT: 2.33 min Scan# 204
 Delta R.T. -0.003 min
 Lab File: 03021506.D
 Acq: 2 Mar 2015 10:39

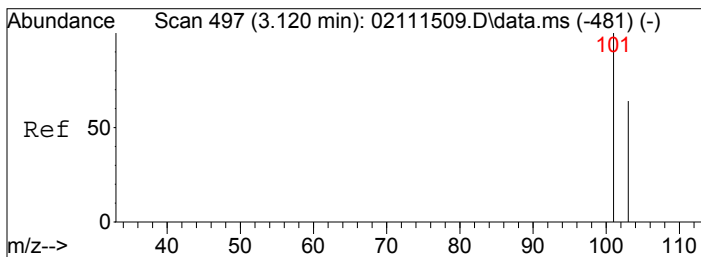
Tgt Ion:	94	Resp:	1298
Ion Ratio	Lower	Upper	
94	100		
96	94.4	75.5	113.3



#7
 Acetone
 Concen: 7078.12 pg
 RT: 2.99 min Scan# 460
 Delta R.T. -0.011 min
 Lab File: 03021506.D
 Acq: 2 Mar 2015 10:39

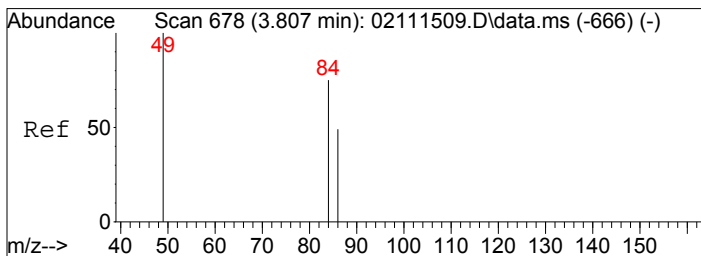
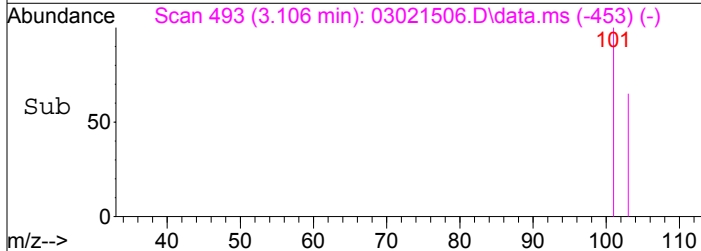
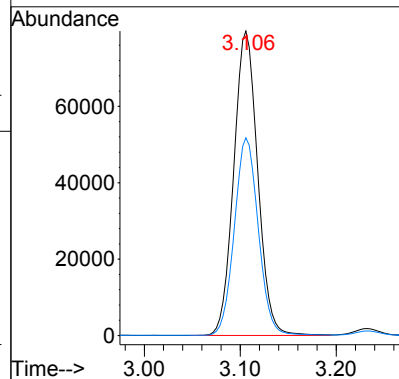
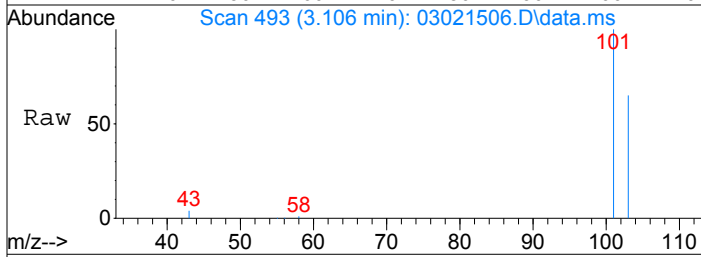
Tgt Ion:	58	Resp:	253681
Ion Ratio	Lower	Upper	
58	100		
43	332.6	301.8	341.8





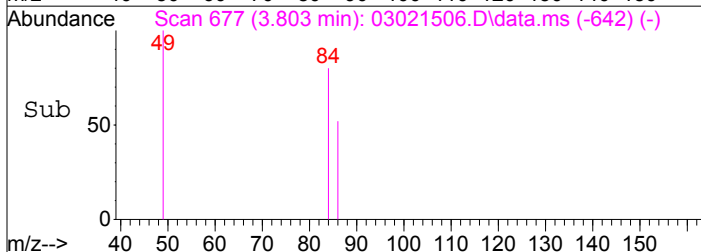
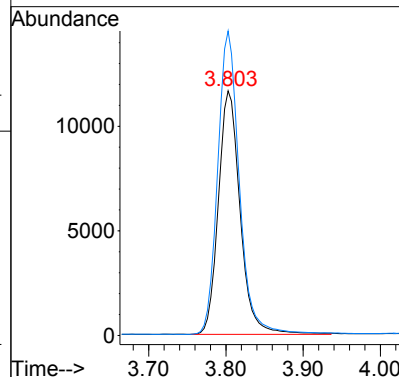
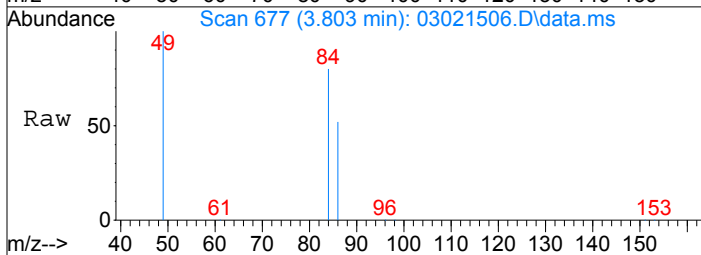
#8
Trichlorofluoromethane
Concen: 1587.55 pg
RT: 3.11 min Scan# 493
Delta R.T. -0.014 min
Lab File: 03021506.D
Acq: 2 Mar 2015 10:39

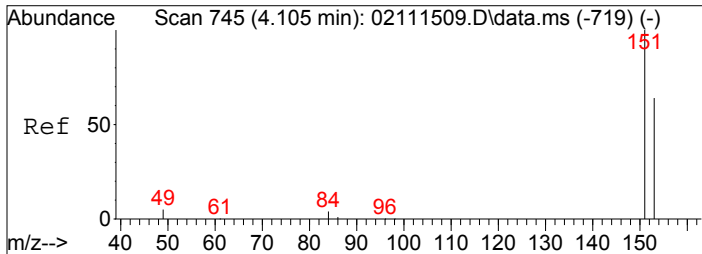
Tgt Ion: 101 Resp: 138402
Ion Ratio Lower Upper
101 100
103 64.9 51.8 77.6



#10
Methylene Chloride
Concen: 551.50 pg
RT: 3.80 min Scan# 677
Delta R.T. -0.004 min
Lab File: 03021506.D
Acq: 2 Mar 2015 10:39

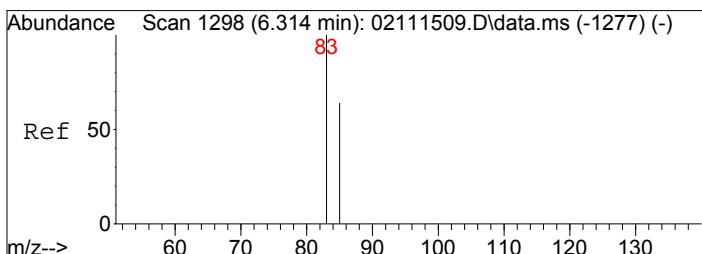
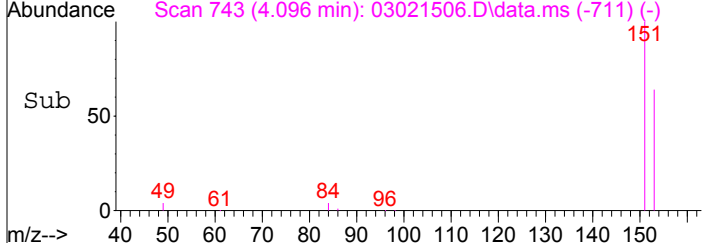
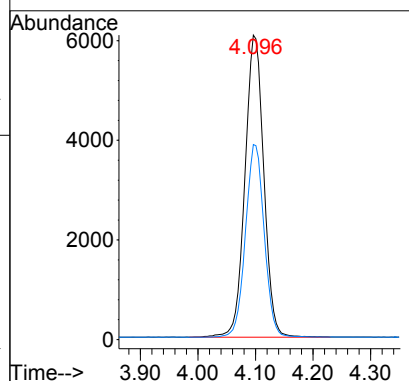
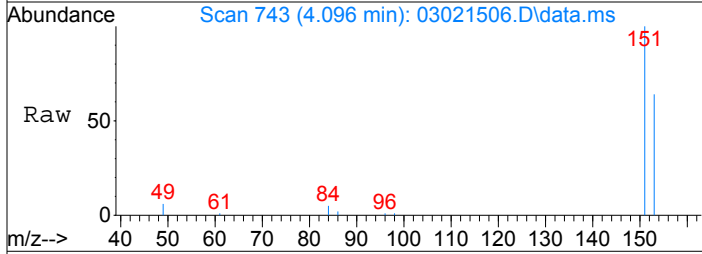
Tgt Ion: 84 Resp: 22814
Ion Ratio Lower Upper
84 100
49 123.8 112.3 152.3





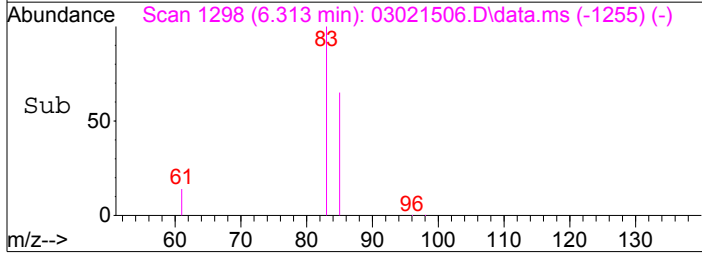
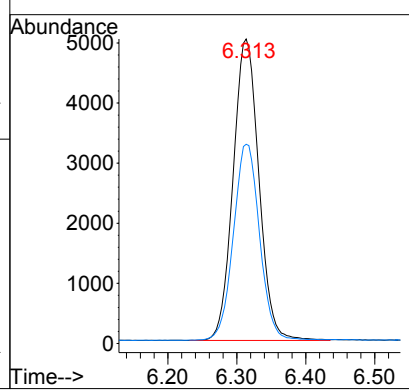
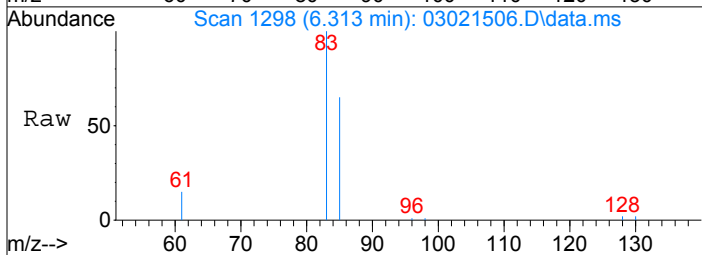
#11
 Trichlorotrifluoroethane
 Concen: 345.44 pg
 RT: 4.10 min Scan# 743
 Delta R.T. -0.009 min
 Lab File: 03021506.D
 Acq: 2 Mar 2015 10:39

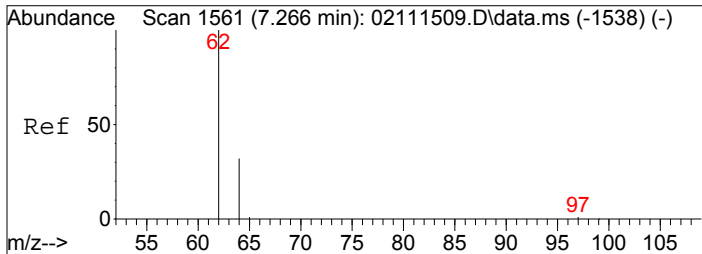
Tgt Ion: 151	Resp: 13838
Ion Ratio	Lower Upper
151	100
153	63.7 43.6 83.6



#16
 Chloroform
 Concen: 170.33 pg
 RT: 6.31 min Scan# 1298
 Delta R.T. -0.001 min
 Lab File: 03021506.D
 Acq: 2 Mar 2015 10:39

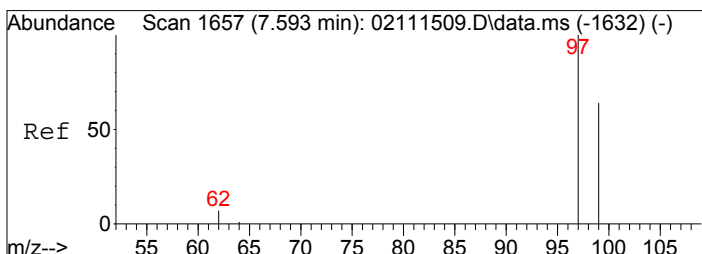
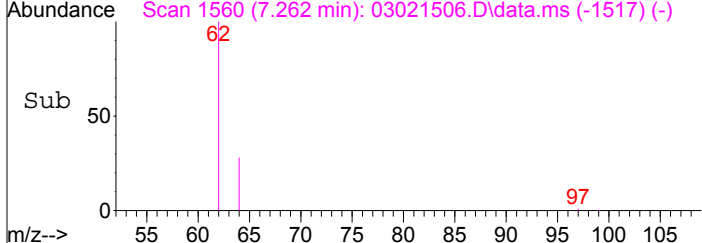
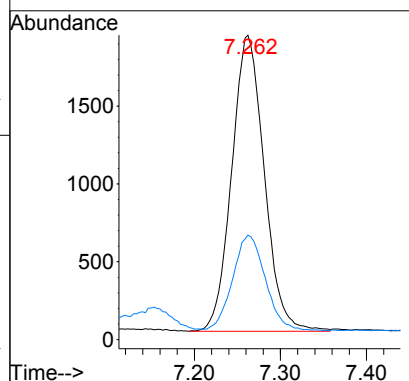
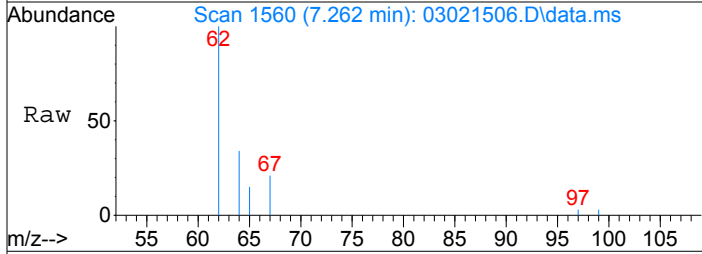
Tgt Ion: 83	Resp: 13042
Ion Ratio	Lower Upper
83	100
85	66.1 45.4 85.4





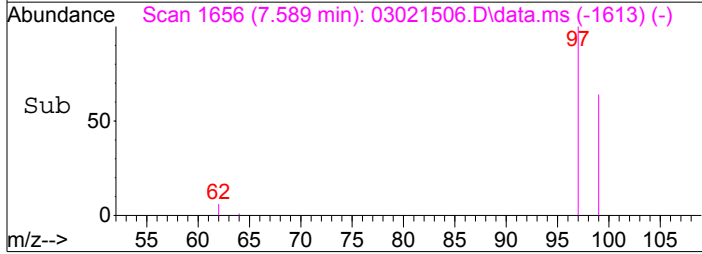
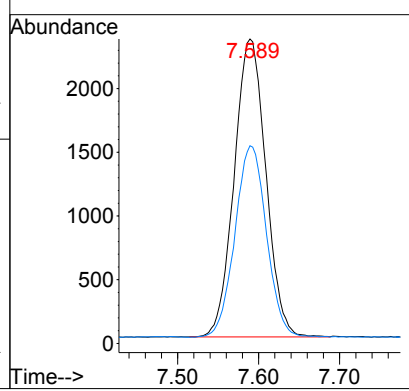
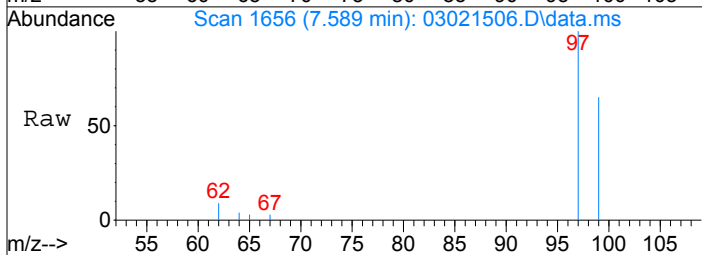
#18
 1,2-Dichloroethane
 Concen: 82.05 pg
 RT: 7.26 min Scan# 1560
 Delta R.T. -0.003 min
 Lab File: 03021506.D
 Acq: 2 Mar 2015 10:39

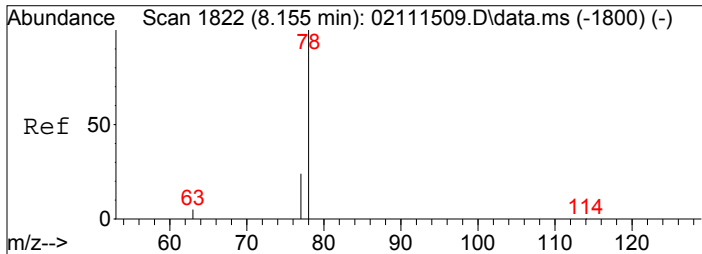
Tgt Ion:	62	Resp:	5002
Ion Ratio	Lower	Upper	
62	100		
64	32.5	11.6	51.6



#19
 1,1,1-Trichloroethane
 Concen: 85.28 pg
 RT: 7.59 min Scan# 1656
 Delta R.T. -0.003 min
 Lab File: 03021506.D
 Acq: 2 Mar 2015 10:39

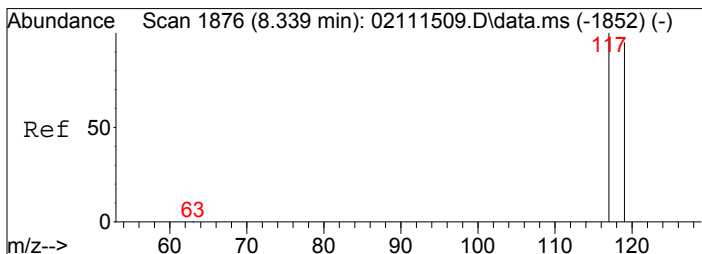
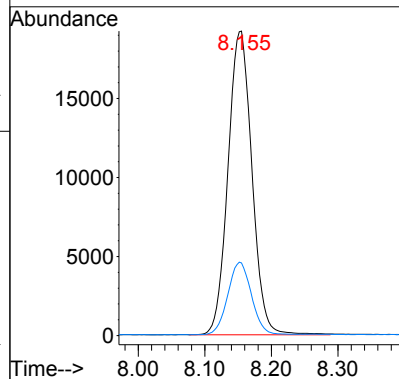
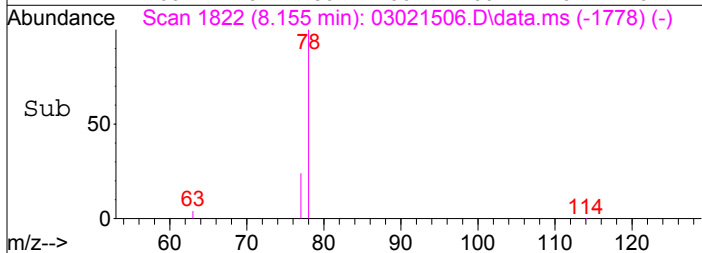
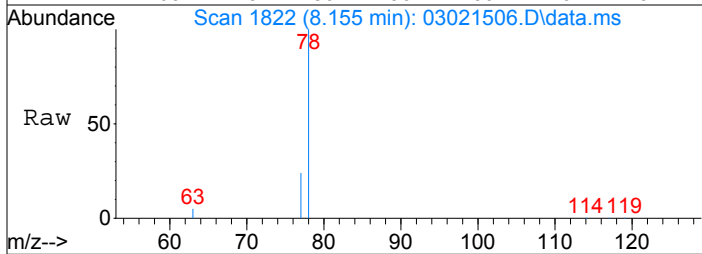
Tgt Ion:	97	Resp:	6350
Ion Ratio	Lower	Upper	
97	100		
99	64.2	44.0	84.0





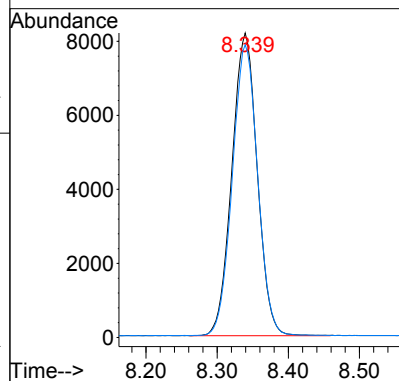
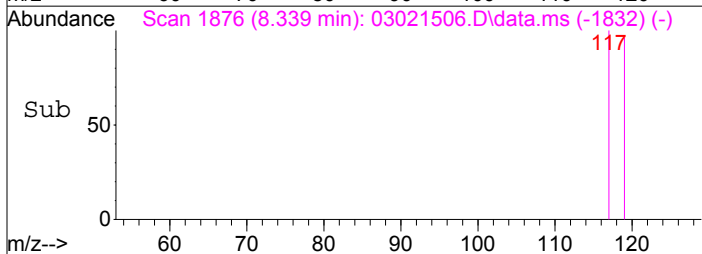
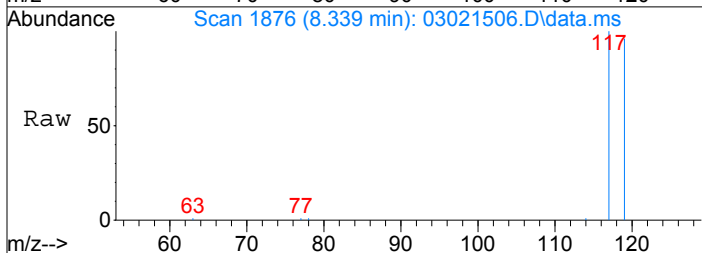
#20
Benzene
Concen: 305.21 pg
RT: 8.16 min Scan# 1822
Delta R.T. 0.000 min
Lab File: 03021506.D
Acq: 2 Mar 2015 10:39

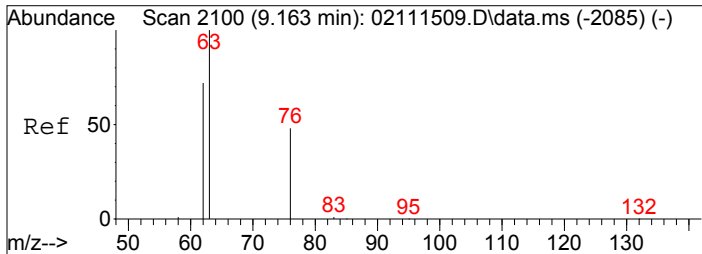
Tgt Ion	78	77	Resp	48066	Lower	Upper
Ion Ratio	100	23.6				
			3.7			43.7



#21
Carbon Tetrachloride
Concen: 363.41 pg
RT: 8.34 min Scan# 1876
Delta R.T. -0.000 min
Lab File: 03021506.D
Acq: 2 Mar 2015 10:39

Tgt Ion	117	119	Resp	20258	Lower	Upper
Ion Ratio	100	95.9				
			75.5			115.5

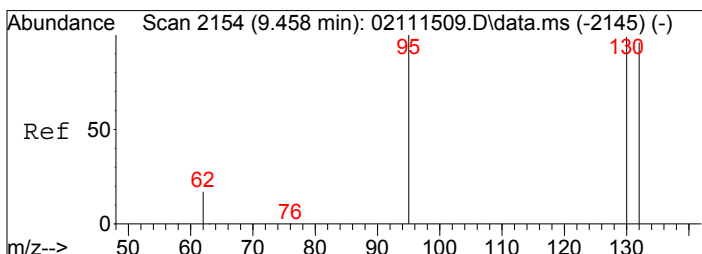
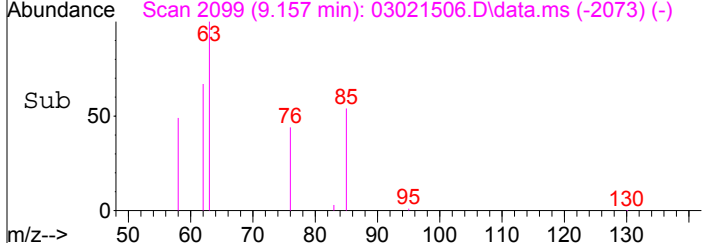
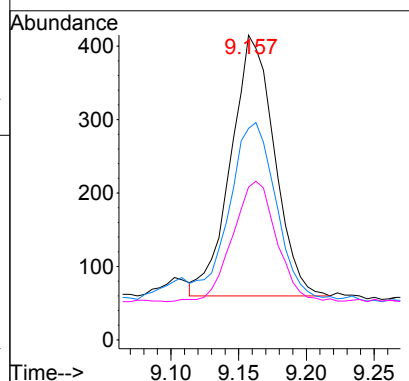
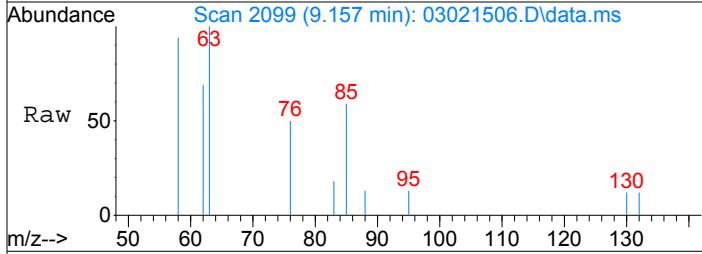




#23
 1,2-Dichloropropane
 Concen: 20.30 pg
 RT: 9.16 min Scan# 2099
 Delta R.T. -0.005 min
 Lab File: 03021506.D
 Acq: 2 Mar 2015 10:39

Tgt Ion: 63 Resp: 792

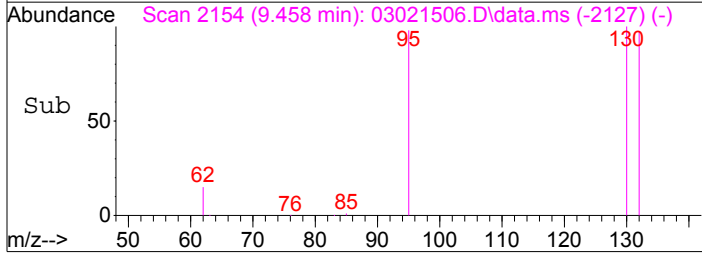
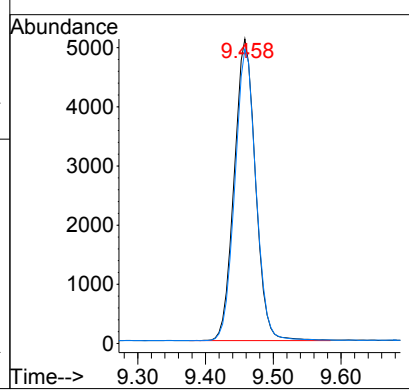
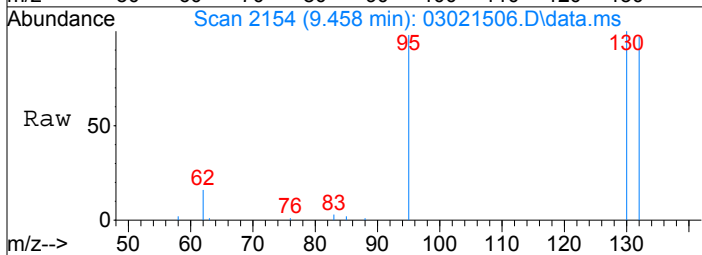
Ion	Ratio	Lower	Upper
63	100		
62	71.5	52.0	92.0
76	46.8	28.1	68.1

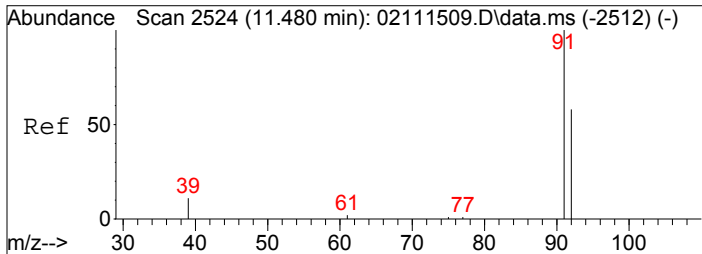


#25
 Trichloroethene
 Concen: 241.68 pg
 RT: 9.46 min Scan# 2154
 Delta R.T. -0.000 min
 Lab File: 03021506.D
 Acq: 2 Mar 2015 10:39

Tgt Ion: 130 Resp: 11108

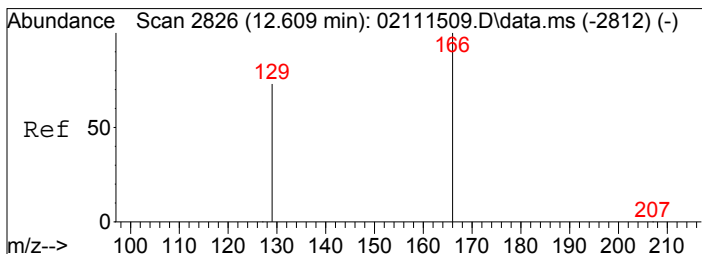
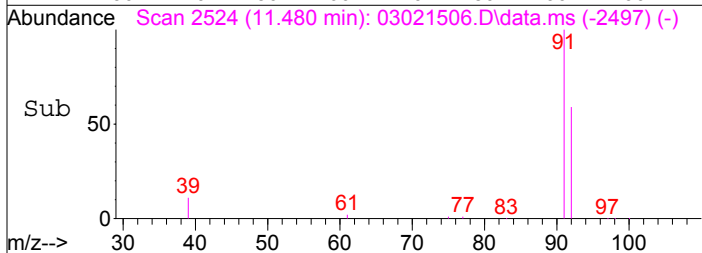
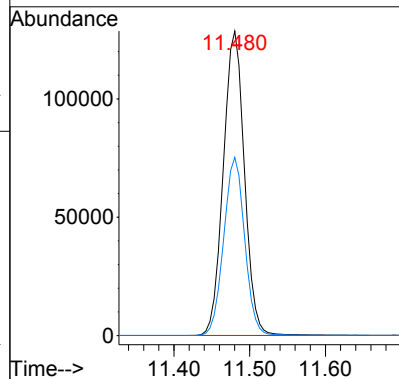
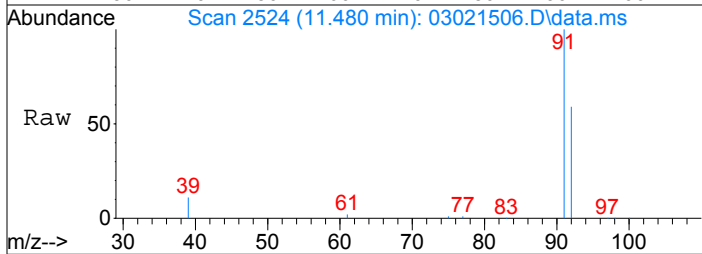
Ion	Ratio	Lower	Upper
130	100		
132	95.8	77.1	117.1





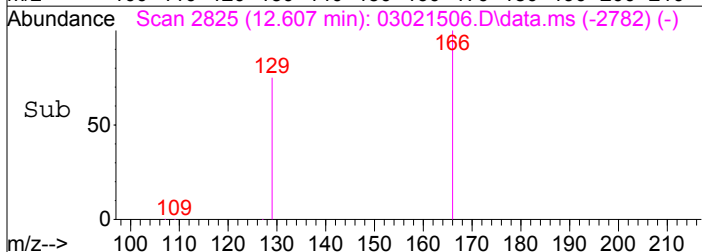
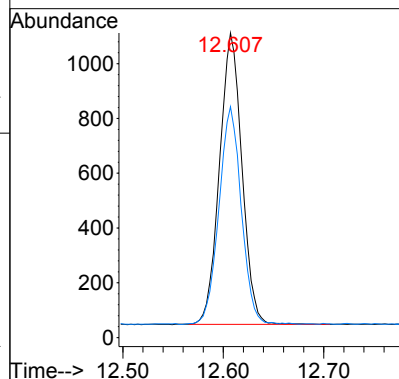
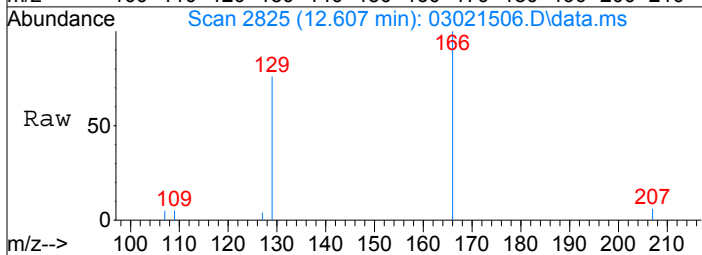
#31
Toluene
Concen: 1421.67 pg
RT: 11.48 min Scan# 2524
Delta R.T. 0.000 min
Lab File: 03021506.D
Acq: 2 Mar 2015 10:39

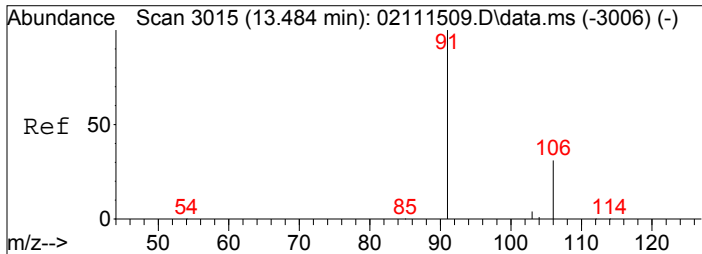
Tgt Ion	91	92	Resp	249462	Lower	Upper
Ion Ratio	100	58.1			37.7	77.7



#33
Tetrachloroethene
Concen: 30.37 pg
RT: 12.61 min Scan# 2825
Delta R.T. -0.002 min
Lab File: 03021506.D
Acq: 2 Mar 2015 10:39

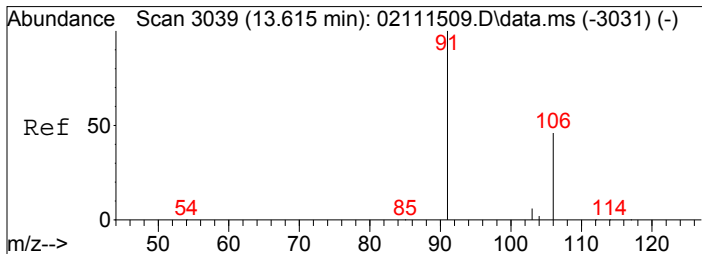
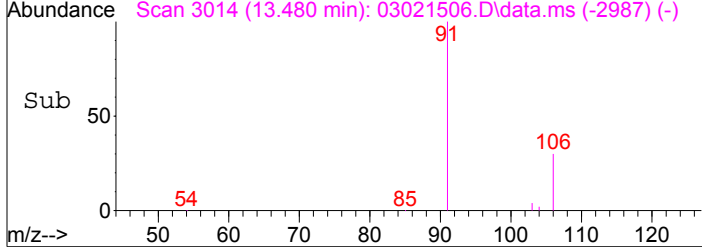
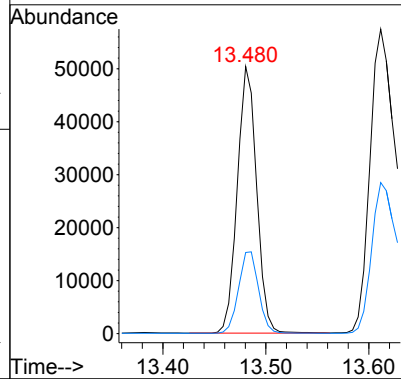
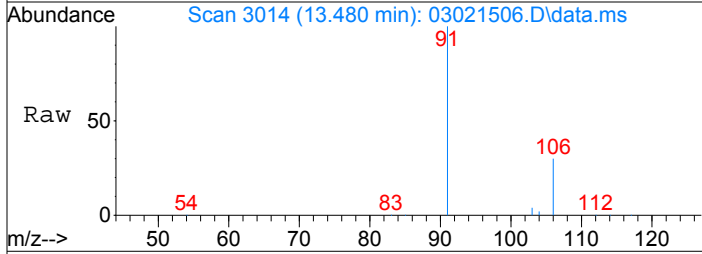
Tgt Ion	166	129	Resp	1650	Lower	Upper
Ion Ratio	100	74.2			53.3	93.3





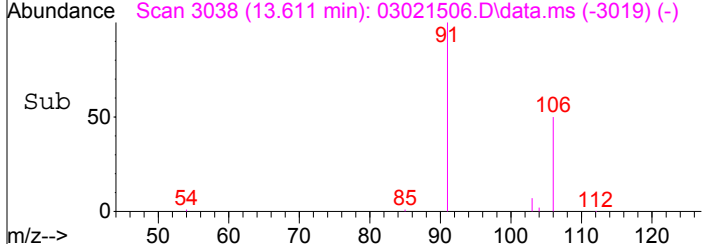
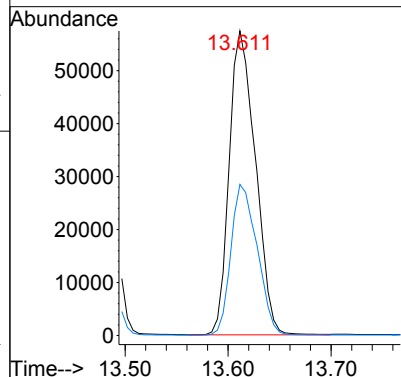
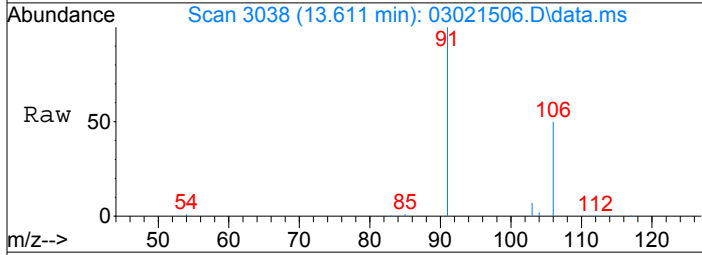
#36
Ethylbenzene
Concen: 334.48 pg
RT: 13.48 min Scan# 3014
Delta R.T. -0.003 min
Lab File: 03021506.D
Acq: 2 Mar 2015 10:39

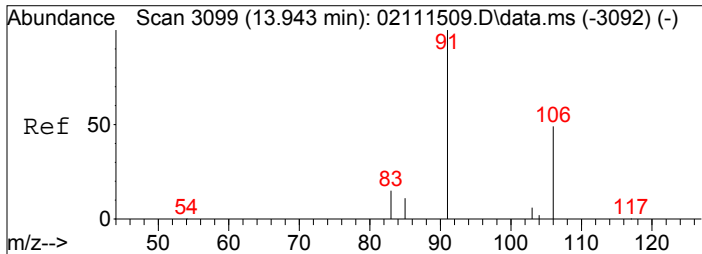
Tgt Ion: 91 Resp: 65649
Ion Ratio Lower Upper
91 100
106 31.6 10.9 50.9



#37
m,p-Xylene
Concen: 627.86 pg
RT: 13.61 min Scan# 3038
Delta R.T. -0.003 min
Lab File: 03021506.D
Acq: 2 Mar 2015 10:39

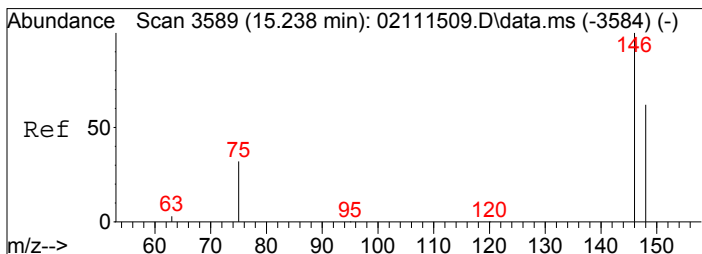
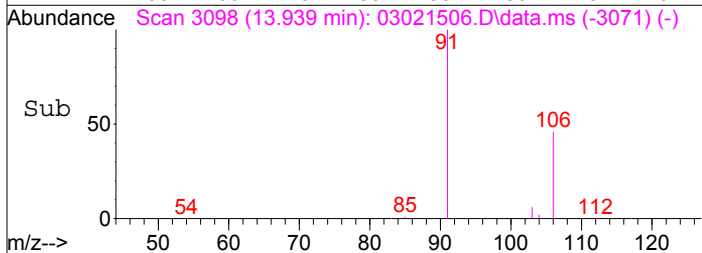
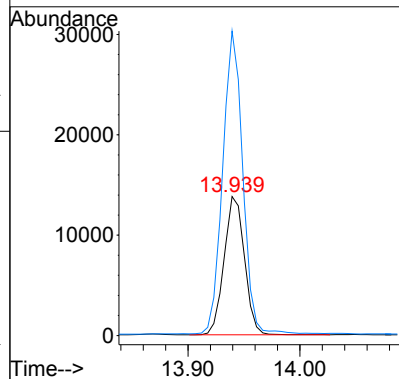
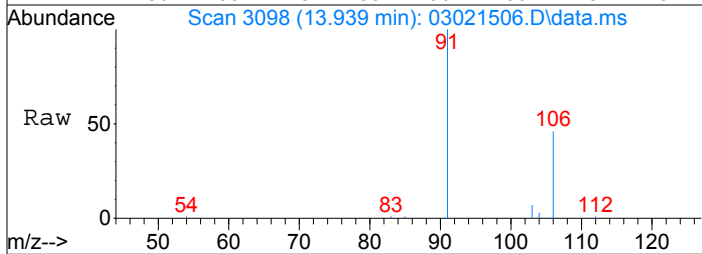
Tgt Ion: 91 Resp: 101282
Ion Ratio Lower Upper
91 100
106 49.8 27.5 67.5





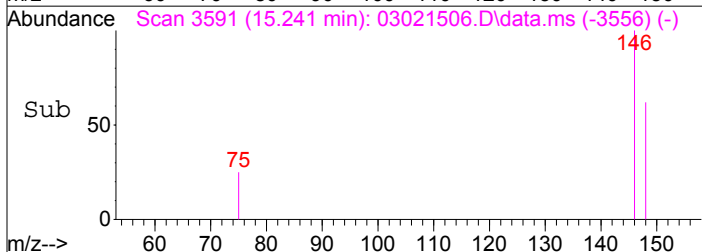
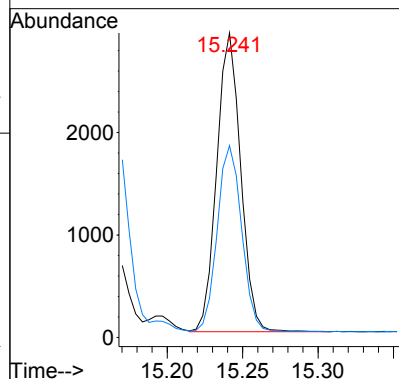
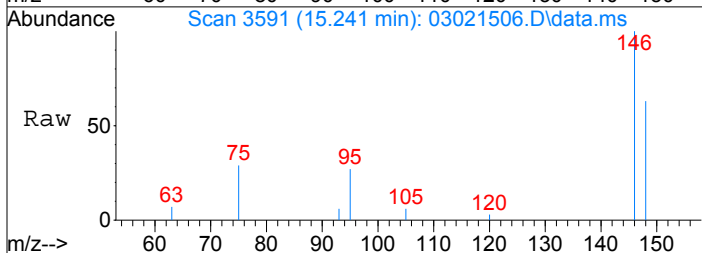
#38
o-Xylene
Concen: 221.33 pg
RT: 13.94 min Scan# 3098
Delta R.T. -0.003 min
Lab File: 03021506.D
Acq: 2 Mar 2015 10:39

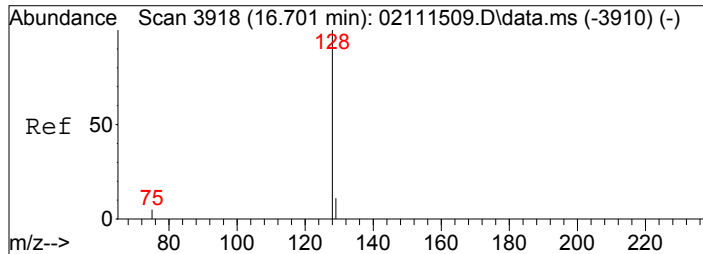
Tgt Ion	106	Resp	17449
Ion Ratio	100	Lower	Upper
91	216.8	198.3	238.3



#42
1,4-Dichlorobenzene
Concen: 29.66 pg
RT: 15.24 min Scan# 3591
Delta R.T. 0.004 min
Lab File: 03021506.D
Acq: 2 Mar 2015 10:39

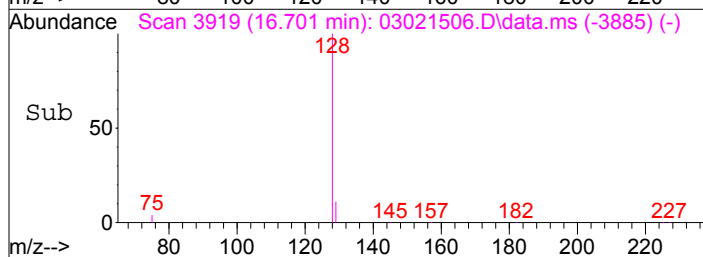
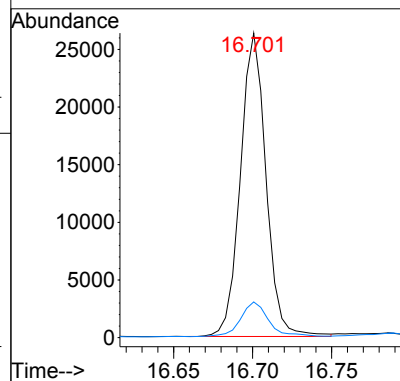
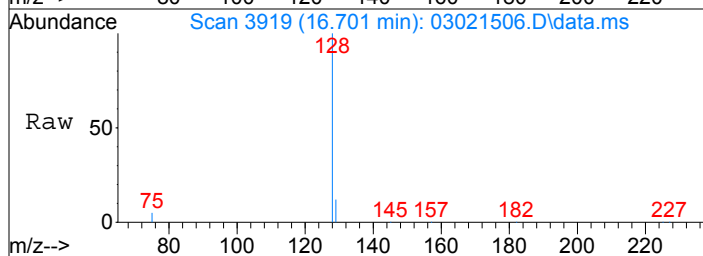
Tgt Ion	146	Resp	3208
Ion Ratio <td>100</td> <td>Lower</td> <td>Upper</td>	100	Lower	Upper
148	63.8	43.5	83.5





#45
Naphthalene
Concen: 151.79 pg
RT: 16.70 min Scan# 3919
Delta R.T. -0.000 min
Lab File: 03021506.D
Acq: 2 Mar 2015 10:39

Tgt Ion:128 Resp: 29726
Ion Ratio Lower Upper
128 100
129 12.5 0.0 30.9



Data File: I:\MS19\DATA\2015 03\02\03021507.D

Acq On : 2 Mar 2015 11:06
 Sample : P1500729-027 (1000mL)
 Misc : S29-02041502
 ALS Vial : 3 Sample Multiplier: 1

Operator: WA

Quant Time: Mar 02 12:28:08 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

WA 3/2/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	25818	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	180756	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	30270	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	56001	888.199	pg	0.00
Spiked Amount 1000.000			Recovery	=	88.82%	
30) Toluene-d8 (SS2)	11.38	98	170063	1020.233	pg	0.00
Spiked Amount 1000.000			Recovery	=	102.02%	
40) Bromofluorobenzene (SS3)	14.25	174	71616	1171.901	pg	0.00
Spiked Amount 1000.000			Recovery	=	117.19%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.73	85	167139	1592.942	pg	100
3) Chloromethane	1.83	52	9569	456.672	pg	96
4) Vinyl Chloride	2.01	62	122	N.D.		
5) Bromomethane	2.33	94	3234	68.544	pg	100
6) Chloroethane	2.47	64	651	N.D.		
7) Acetone	2.99	58	425786	11491.761	pg	94
8) Trichlorofluoromethane	3.10	101	96061	1065.852	pg	100
9) 1,1-Dichloroethene	3.67	96	68	N.D.		
10) Methylene Chloride	3.80	84	48580	1135.969	pg	92
11) Trichlorotrifluoroethane	4.10	151	14798	357.327	pg	99
12) trans-1,2-Dichloroethene	4.74	96	152	N.D.		
13) 1,1-Dichloroethane	4.95	63	286	N.D.		
14) Methyl tert-Butyl Ether	5.11	73	515	N.D.		
15) cis-1,2-Dichloroethene	5.93	96	732	N.D.		
16) Chloroform	6.31	83	5879	74.270	pg	98
18) 1,2-Dichloroethane	7.26	62	2943	46.694	pg	98
19) 1,1,1-Trichloroethane	7.59	97	1079	N.D.		
20) Benzene	8.15	78	38073	233.852	pg	100
21) Carbon Tetrachloride	8.34	117	20419	354.322	pg	99
23) 1,2-Dichloropropane	9.16	63	690	N.D.		
24) Bromodichloromethane	9.40	83	144	N.D.		
25) Trichloroethene	9.46	130	52967	1140.613	pg	99
26) 1,4-Dioxane	9.53	88	160	N.D.		
27) cis-1,3-Dichloropropene	10.46	75	367	N.D.		
28) trans-1,3-Dichloropropene	11.05	75	165	N.D.		
29) 1,1,2-Trichloroethane	11.19	83	159	N.D.		
31) Toluene	11.48	91	91968	518.758	pg	100
32) 1,2-Dibromoethane	12.12	107	21	N.D.		
33) Tetrachloroethene	12.61	166	3179	57.913	pg	99
35) Chlorobenzene	13.17	112	462	N.D.		
36) Ethylbenzene	13.48	91	14982	78.928	pg	99
37) m,p-Xylene	13.61	91	35403	226.929	pg	97
38) o-Xylene	13.94	106	7230	94.826	pg	98
39) 1,1,2,2-Tetrachloroethane	13.90	83	451	N.D.		
41) 1,3-Dichlorobenzene	15.24	146	1803	N.D.		
42) 1,4-Dichlorobenzene	15.24	146	1802	N.D.		
43) 1,2-Dichlorobenzene	15.46	146	94	N.D.		
44) 1,2,4-Trichlorobenzene	16.62	182	138	N.D.		
45) Naphthalene	16.70	128	10298	54.371	pg	65
46) Hexachlorobutadiene	16.96	225	57	N.D.		

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 03\02\03021507.D

Acq On : 2 Mar 2015 11:06

Operator: WA

Sample : P1500729-027 (1000mL)

Misc : S29-02041502

ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 02 12:28:08 2015

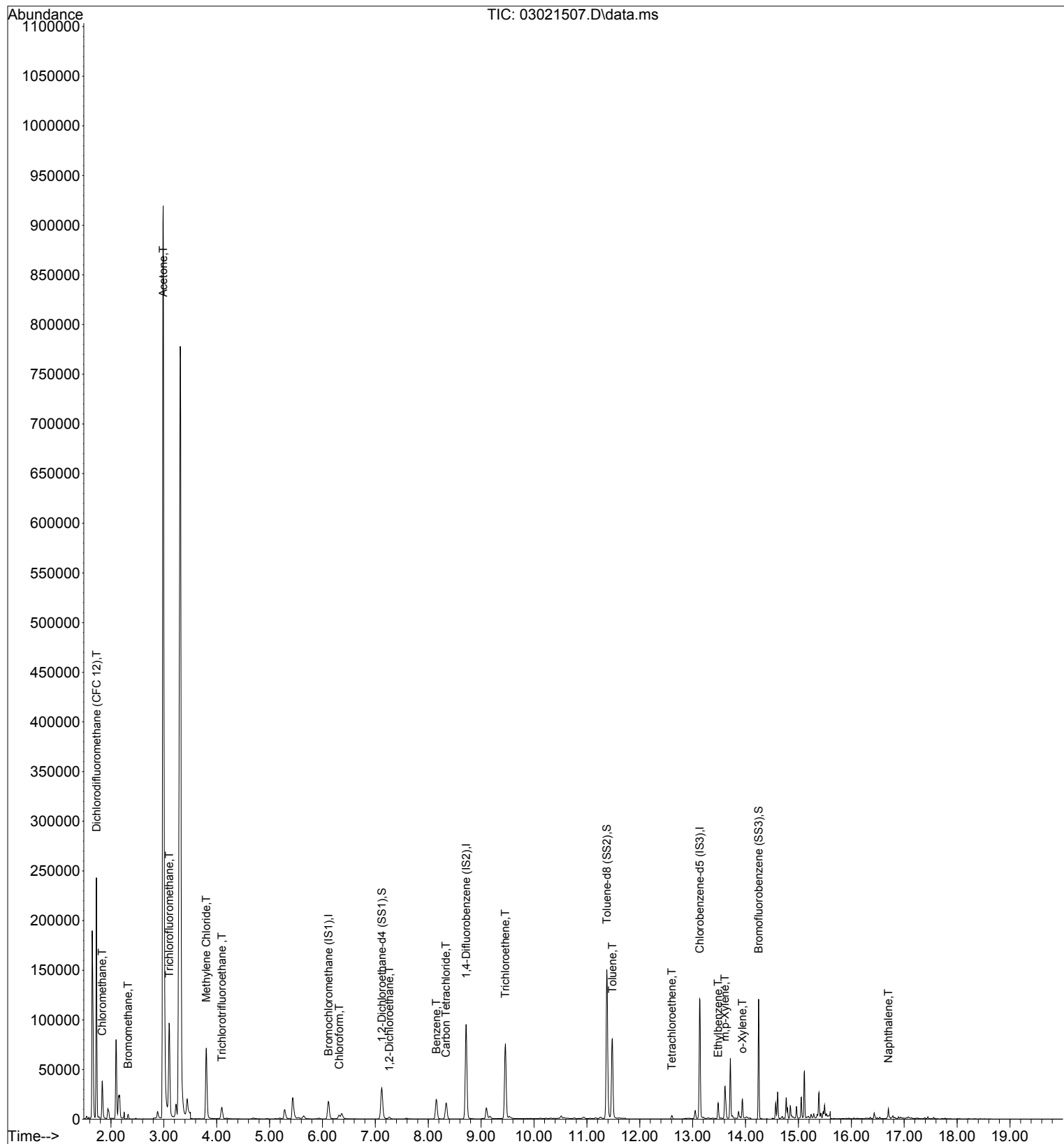
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 03\02\03021507.D

Acq On : 2 Mar 2015 11:06

Operator: WA

Sample : P1500729-027 (1000mL)

Misc : S29-02041502

ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 02 12:28:08 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

~~107~~ 3/2/15

DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	25818	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	180756	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	30270	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	56001	888.199	pg	0.00
Spiked Amount 1000.000			Recovery	=	88.82%	
30) Toluene-d8 (SS2)	11.38	98	170063	1020.233	pg	0.00
Spiked Amount 1000.000			Recovery	=	102.02%	
40) Bromofluorobenzene (SS3)	14.25	174	71616	1171.901	pg	0.00
Spiked Amount 1000.000			Recovery	=	117.19%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.73	85	167139	1592.942	pg	100
3) Chloromethane	1.83	52	9569	456.672	pg	96
5) Bromomethane	2.33	94	3234	68.544	pg	100
7) Acetone	2.99	58	425786	11491.761	pg	94
8) Trichlorofluoromethane	3.10	101	96061	1065.852	pg	100
10) Methylene Chloride	3.80	84	48580	1135.969	pg	92
11) Trichlorotrifluoroethane	4.10	151	14798	357.327	pg	99
16) Chloroform	6.31	83	5879	74.270	pg	98
18) 1,2-Dichloroethane	7.26	62	2943	46.694	pg	98
20) Benzene	8.15	78	38073	233.852	pg	100
21) Carbon Tetrachloride	8.34	117	20419	354.322	pg	99
25) Trichloroethene	9.46	130	52967	1140.613	pg	99
31) Toluene	11.48	91	91968	518.758	pg	100
33) Tetrachloroethene	12.61	166	3179	57.913	pg	99
36) Ethylbenzene	13.48	91	14982	78.928	pg	99
37) m,p-Xylene	13.61	91	35403	226.929	pg	97
38) o-Xylene	13.94	106	7230	94.826	pg	98
45) Naphthalene	16.70	128	10298	54.371	pg	65

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File: I:\MS19\DATA\2015 03\02\03021507.D

Acq On : 2 Mar 2015 11:06

Operator: WA

Sample : P1500729-027 (1000mL)

Misc : S29-02041502

ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 02 12:28:08 2015

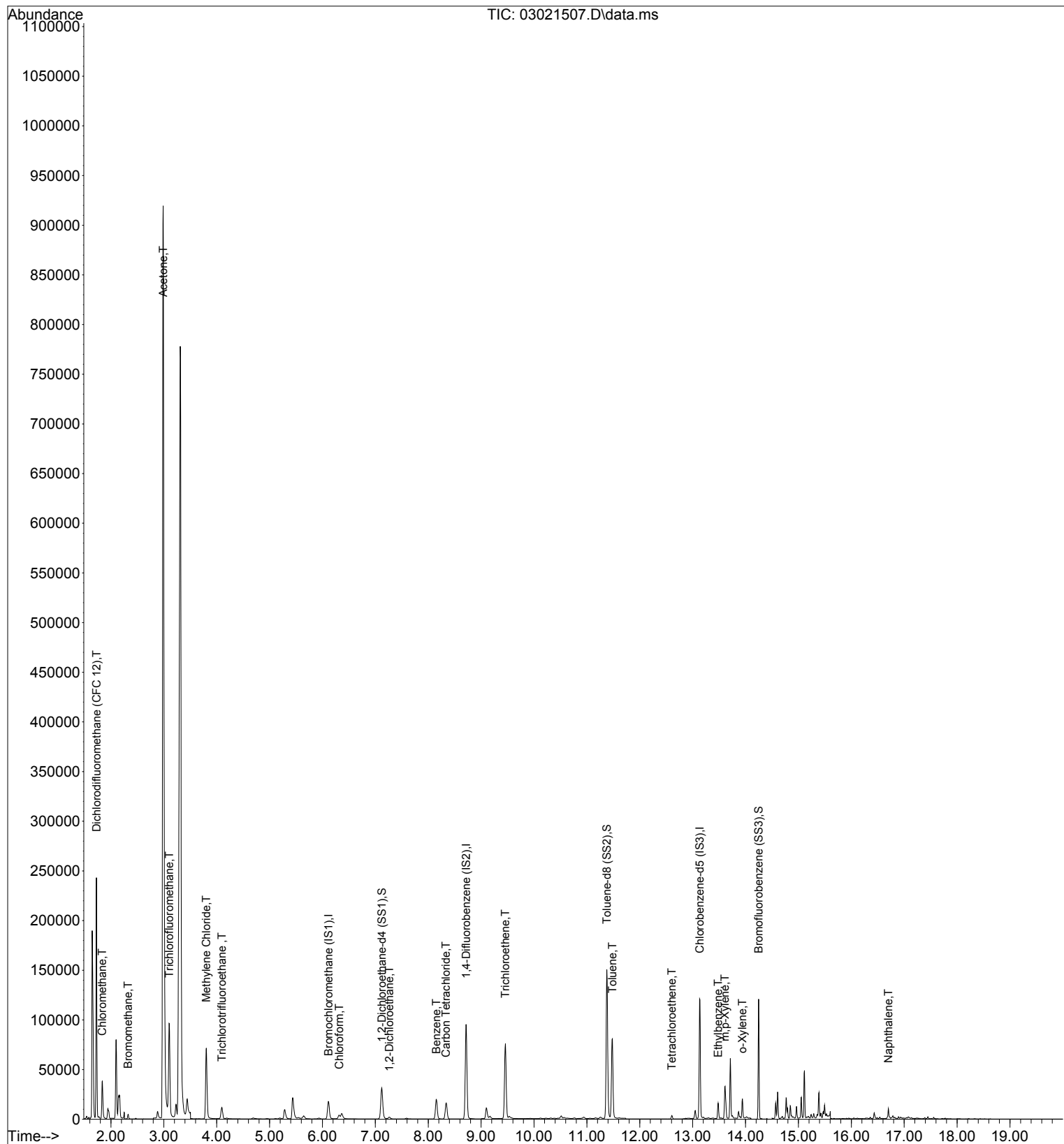
Quant Method : I:\MS19\METHODS\X19021115.M

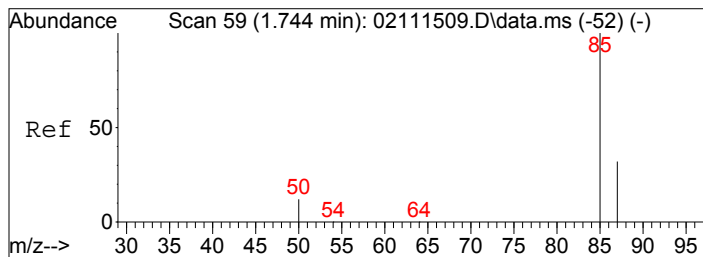
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

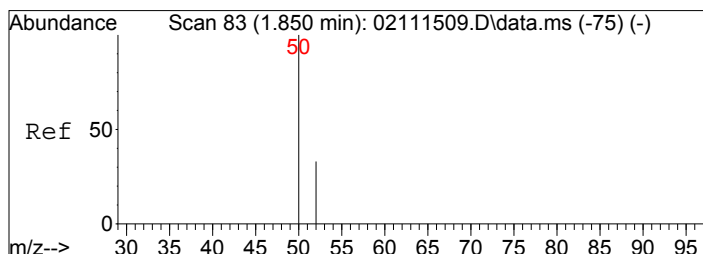
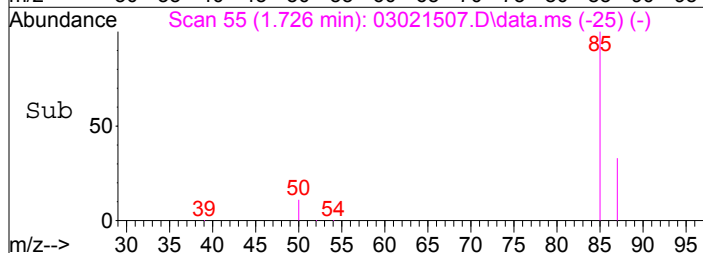
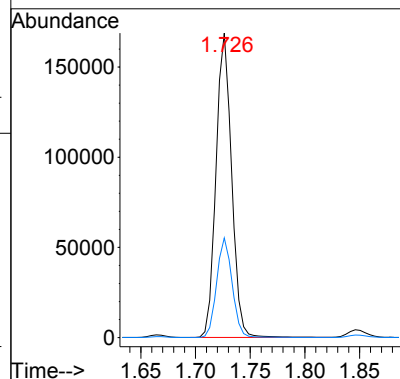
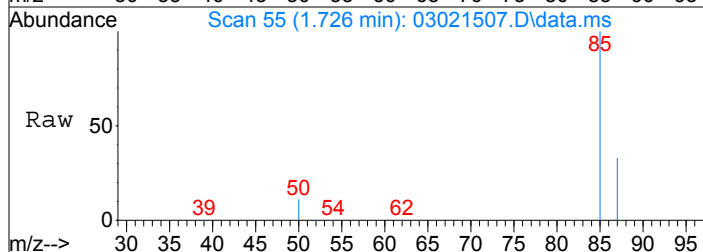
DataAcq Meth:TO15SIM.M





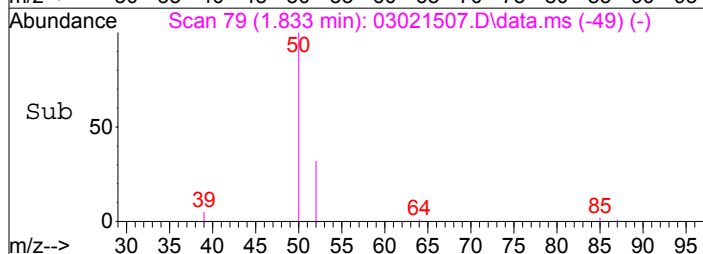
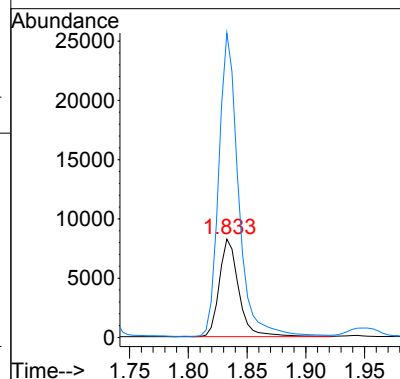
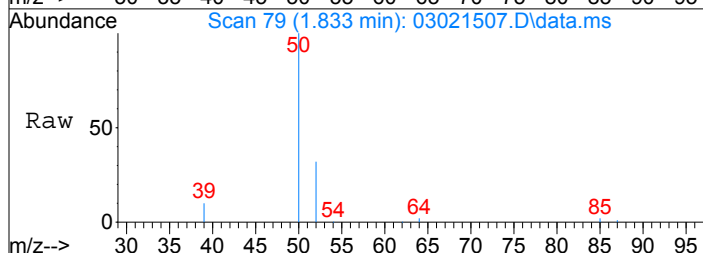
#2
 Dichlorodifluoromethane (CFC 12)
 Concen: 1592.94 pg
 RT: 1.73 min Scan# 55
 Delta R.T. -0.018 min
 Lab File: 03021507.D
 Acq: 2 Mar 2015 11:06

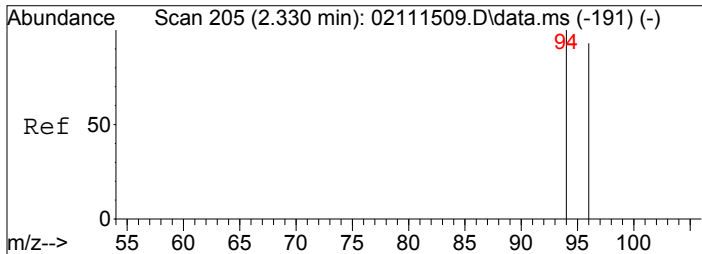
Tgt Ion: 85 Resp: 167139
 Ion Ratio Lower Upper
 85 100
 87 32.5 12.4 52.4



#3
 Chloromethane
 Concen: 456.67 pg
 RT: 1.83 min Scan# 79
 Delta R.T. -0.017 min
 Lab File: 03021507.D
 Acq: 2 Mar 2015 11:06

Tgt Ion: 52 Resp: 9569
 Ion Ratio Lower Upper
 52 100
 50 312.0 283.7 323.7

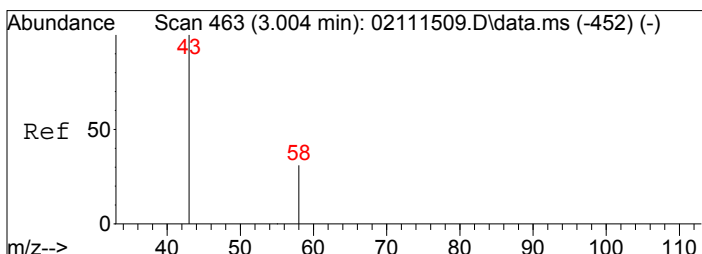
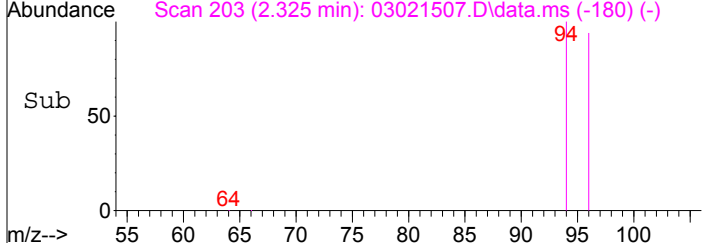
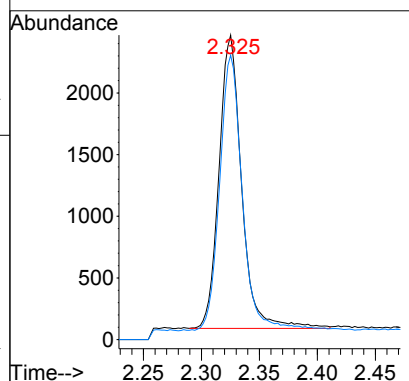
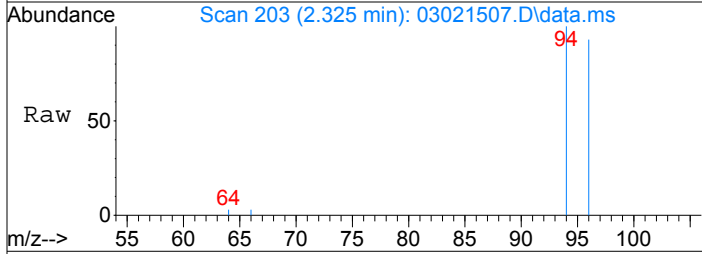




#5
 Bromomethane
 Concen: 68.54 pg
 RT: 2.33 min Scan# 203
 Delta R.T. -0.005 min
 Lab File: 03021507.D
 Acq: 2 Mar 2015 11:06

Tgt Ion: 94 Resp: 3234

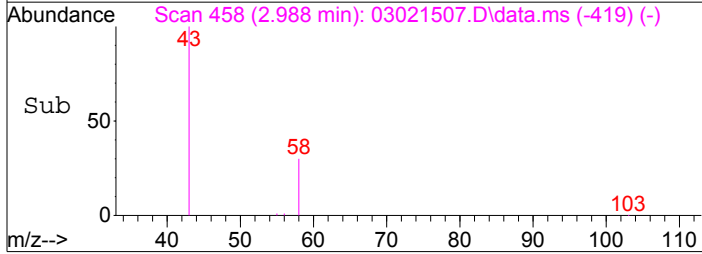
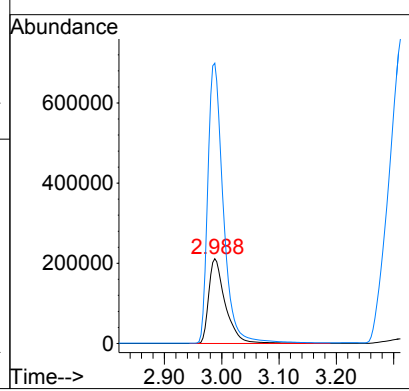
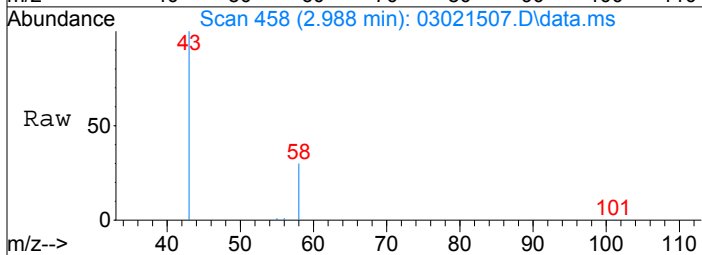
Ion	Ratio	Lower	Upper
94	100		
96	94.2	75.5	113.3

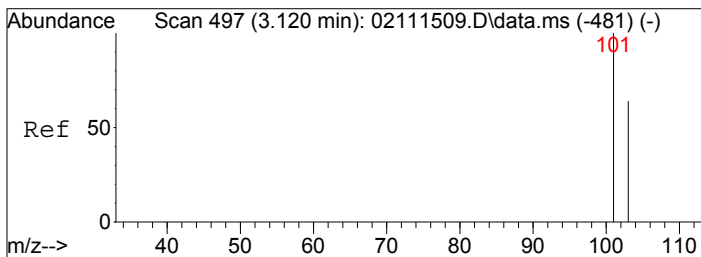


#7
 Acetone
 Concen: 11491.76 pg
 RT: 2.99 min Scan# 458
 Delta R.T. -0.016 min
 Lab File: 03021507.D
 Acq: 2 Mar 2015 11:06

Tgt Ion: 58 Resp: 425786

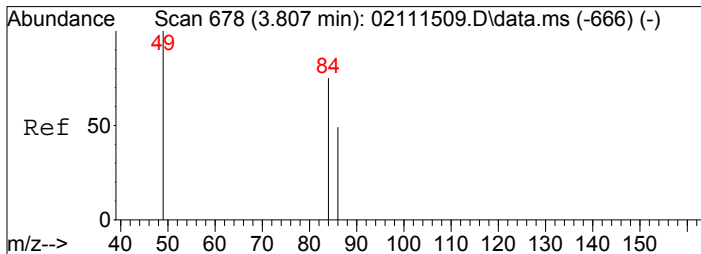
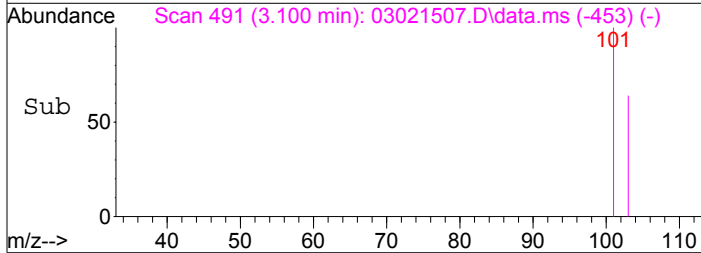
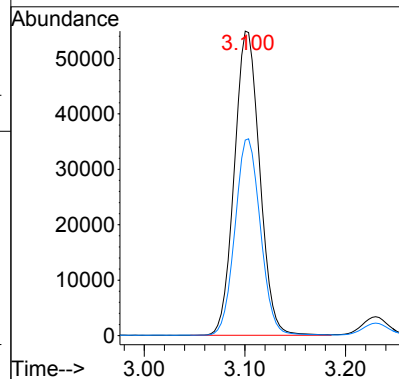
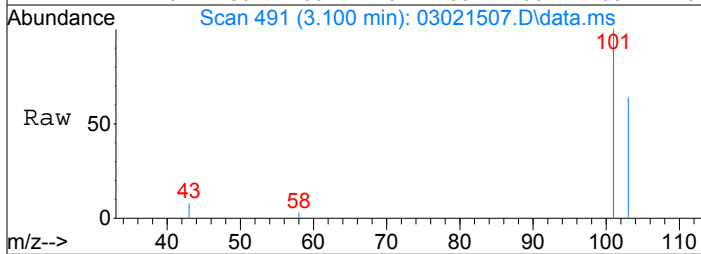
Ion	Ratio	Lower	Upper
58	100		
43	308.5	301.8	341.8





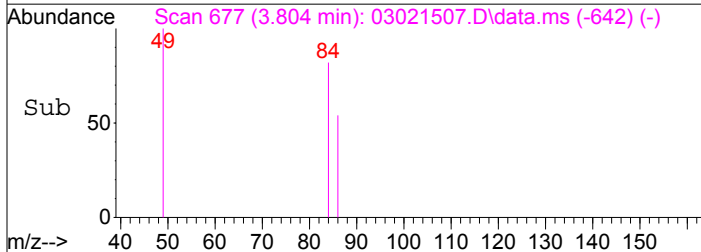
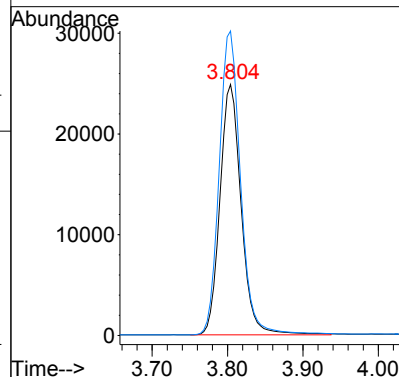
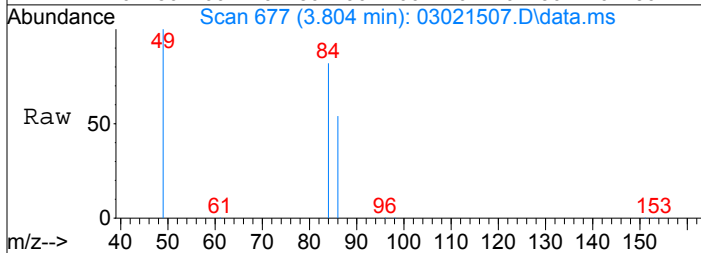
#8
 Trichlorofluoromethane
 Concen: 1065.85 pg
 RT: 3.10 min Scan# 491
 Delta R.T. -0.019 min
 Lab File: 03021507.D
 Acq: 2 Mar 2015 11:06

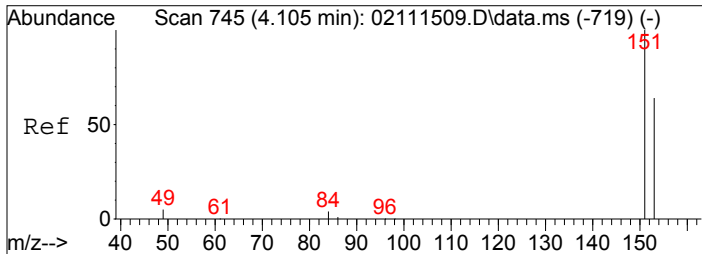
Tgt Ion: 101 Resp: 96061
 Ion Ratio Lower Upper
 101 100
 103 64.8 51.8 77.6



#10
 Methylene Chloride
 Concen: 1135.97 pg
 RT: 3.80 min Scan# 677
 Delta R.T. -0.003 min
 Lab File: 03021507.D
 Acq: 2 Mar 2015 11:06

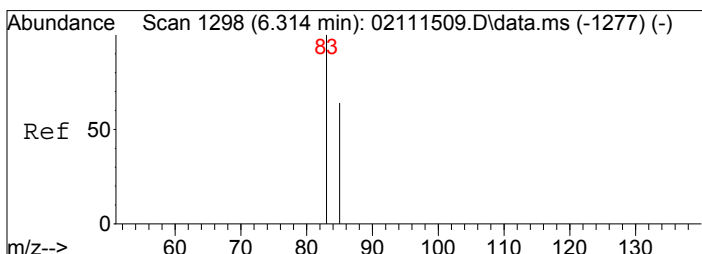
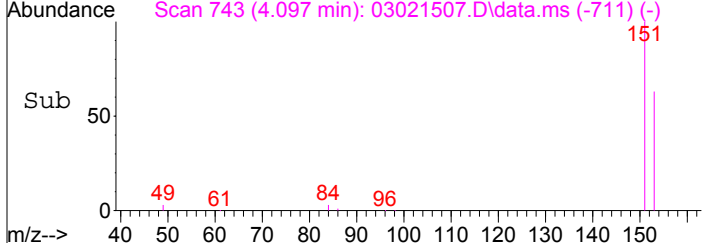
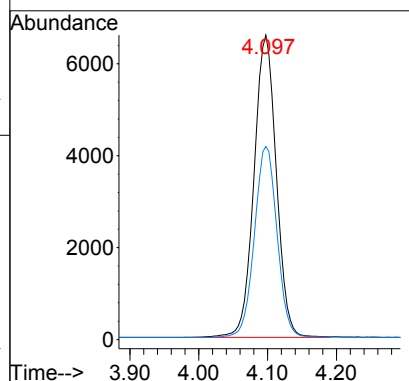
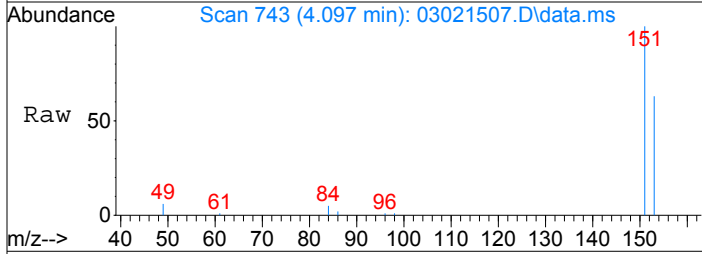
Tgt Ion: 84 Resp: 48580
 Ion Ratio Lower Upper
 84 100
 49 122.4 112.3 152.3





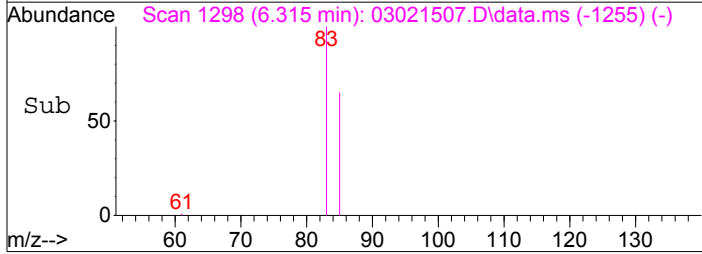
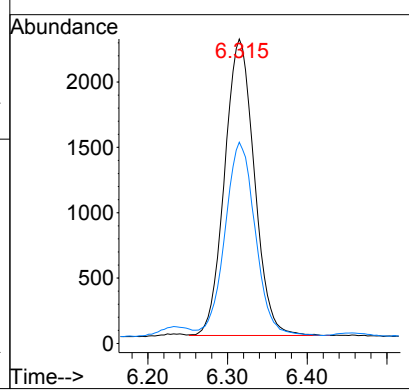
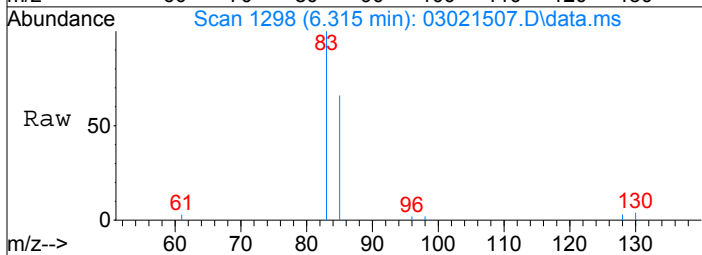
#11
 Trichlorotrifluoroethane
 Concen: 357.33 pg
 RT: 4.10 min Scan# 743
 Delta R.T. -0.008 min
 Lab File: 03021507.D
 Acq: 2 Mar 2015 11:06

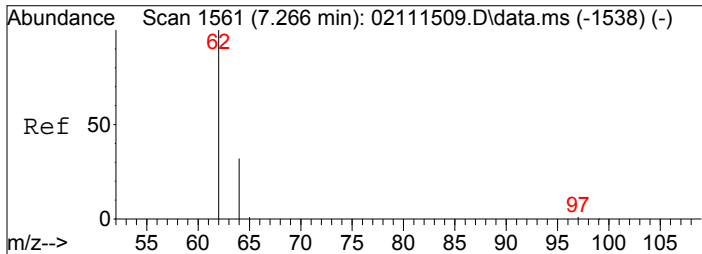
Tgt Ion: 151	Resp: 14798
Ion Ratio	Lower Upper
151	100
153	64.2 43.6 83.6



#16
 Chloroform
 Concen: 74.27 pg
 RT: 6.31 min Scan# 1298
 Delta R.T. 0.001 min
 Lab File: 03021507.D
 Acq: 2 Mar 2015 11:06

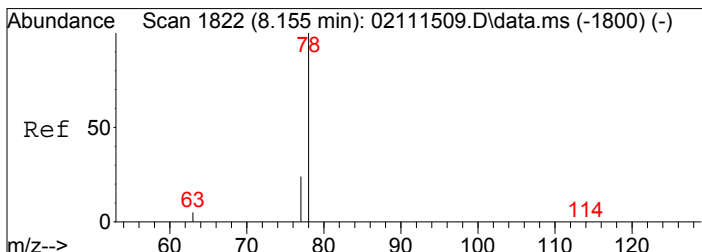
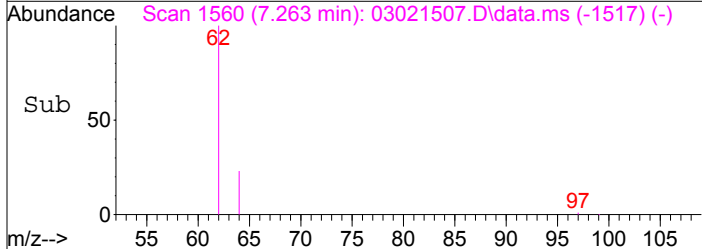
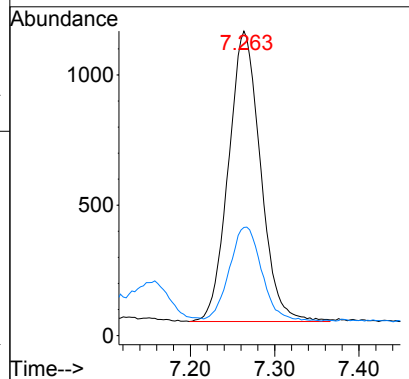
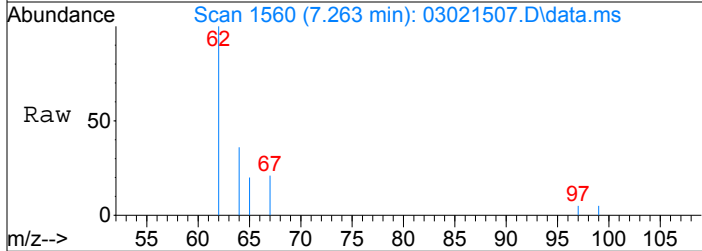
Tgt Ion: 83	Resp: 5879
Ion Ratio	Lower Upper
83	100
85	66.7 45.4 85.4





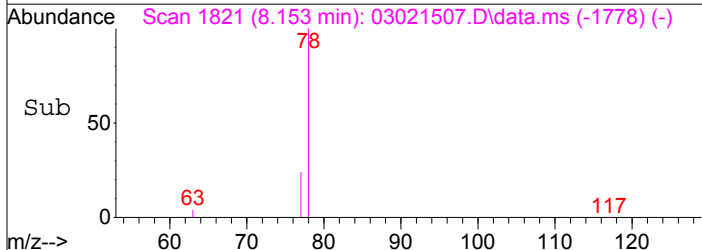
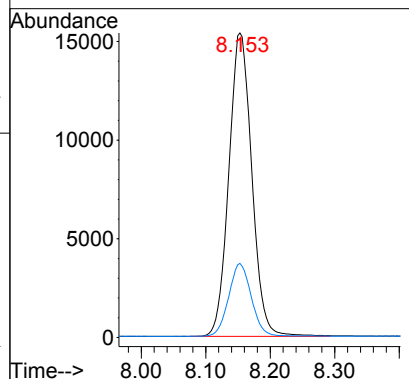
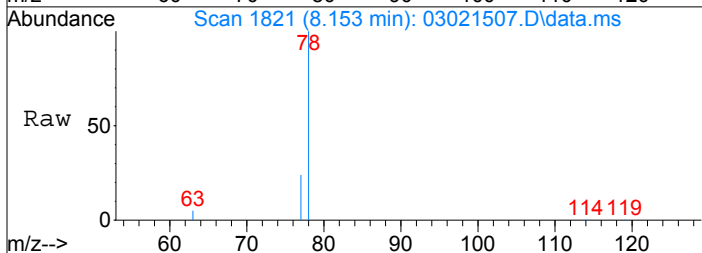
#18
1,2-Dichloroethane
Concen: 46.69 pg
RT: 7.26 min Scan# 1560
Delta R.T. -0.002 min
Lab File: 03021507.D
Acq: 2 Mar 2015 11:06

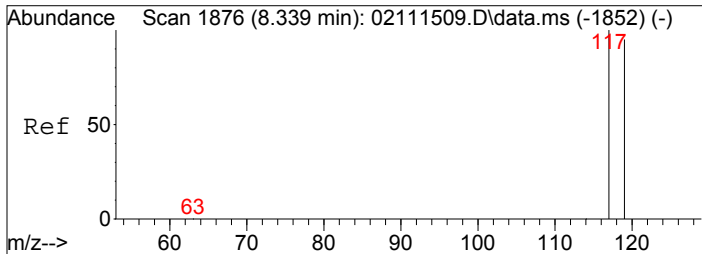
Tgt Ion	Ratio	Resp	Lower	Upper
62	100	2943		
64	32.8	11.6		51.6



#20
Benzene
Concen: 233.85 pg
RT: 8.15 min Scan# 1821
Delta R.T. -0.002 min
Lab File: 03021507.D
Acq: 2 Mar 2015 11:06

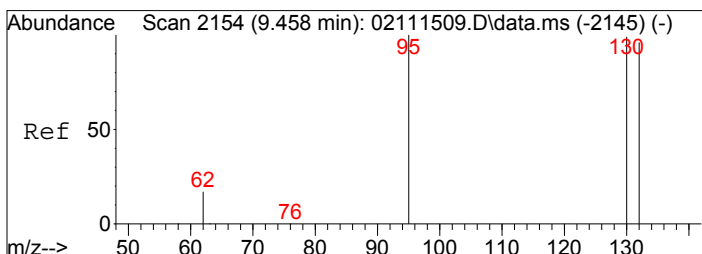
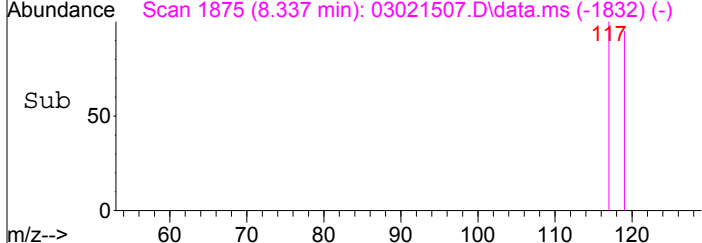
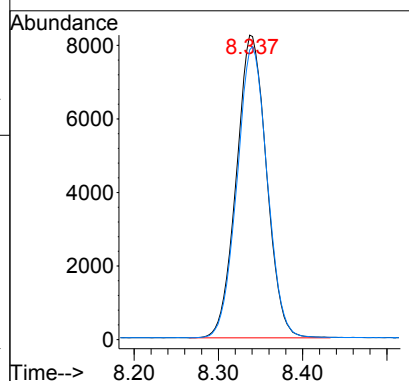
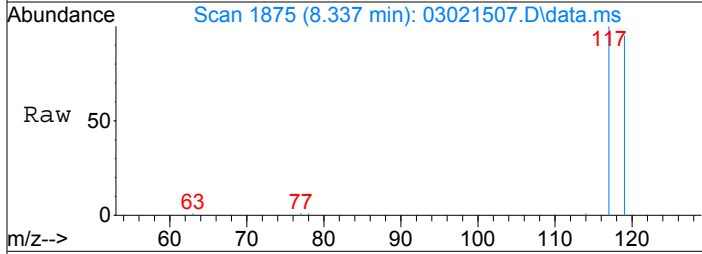
Tgt Ion	Ratio	Resp	Lower	Upper
78	100	38073		
77	23.6	3.7		43.7





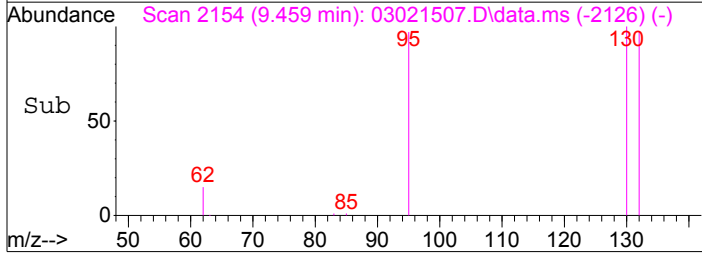
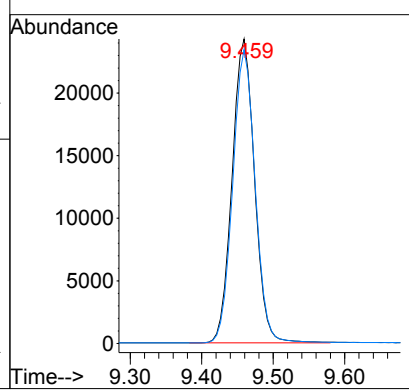
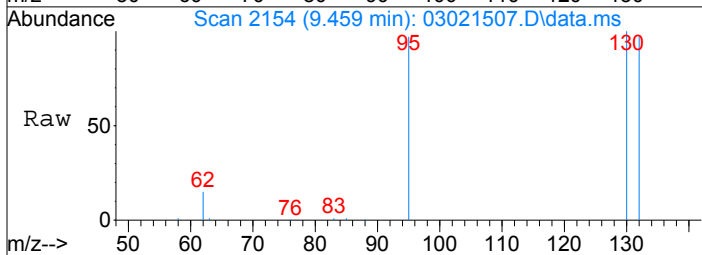
#21
Carbon Tetrachloride
Concen: 354.32 pg
RT: 8.34 min Scan# 1875
Delta R.T. -0.002 min
Lab File: 03021507.D
Acq: 2 Mar 2015 11:06

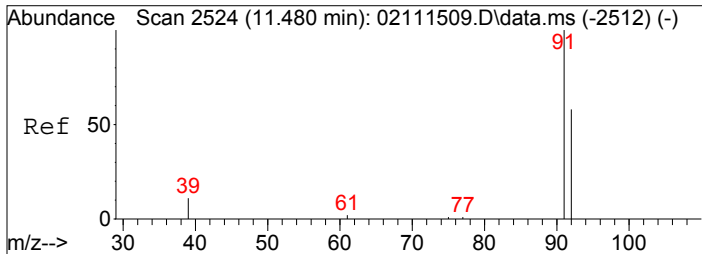
Tgt Ion:117	Resp:	20419
Ion Ratio	Lower	Upper
117	100	
119	96.5	75.5 115.5



#25
Trichloroethene
Concen: 1140.61 pg
RT: 9.46 min Scan# 2154
Delta R.T. 0.001 min
Lab File: 03021507.D
Acq: 2 Mar 2015 11:06

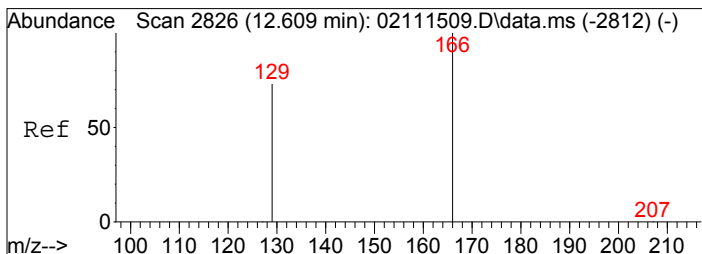
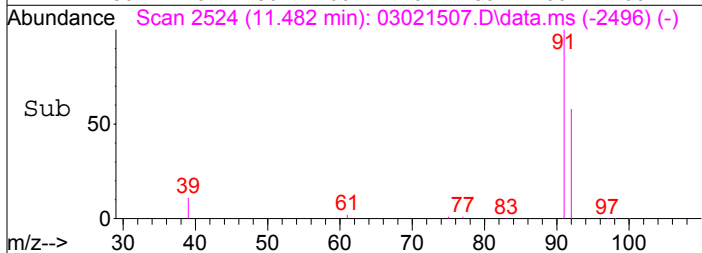
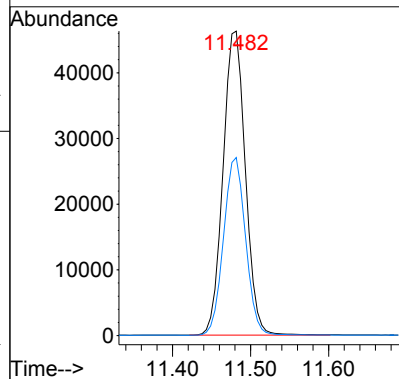
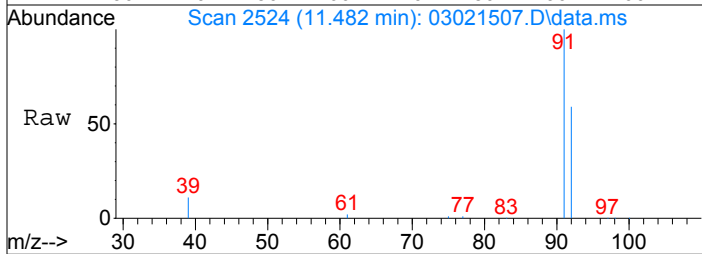
Tgt Ion:130	Resp:	52967
Ion Ratio	Lower	Upper
130	100	
132	96.2	77.1 117.1





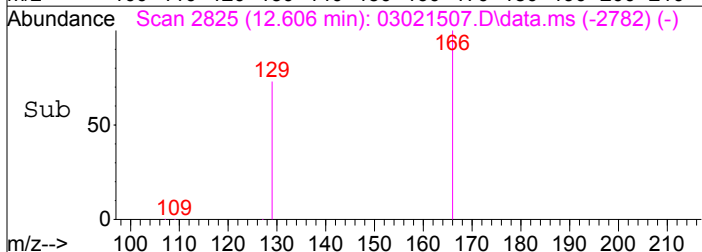
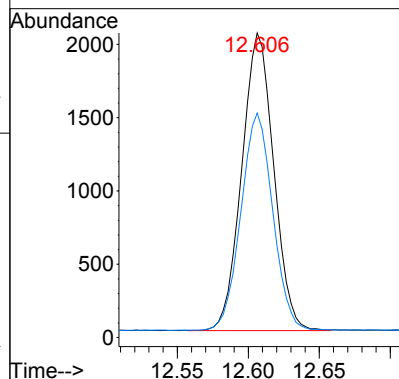
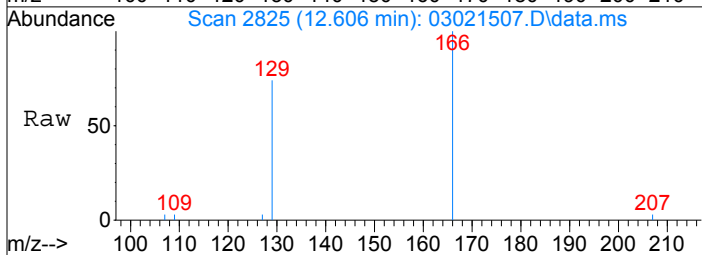
#31
Toluene
Concen: 518.76 pg
RT: 11.48 min Scan# 2524
Delta R.T. 0.001 min
Lab File: 03021507.D
Acq: 2 Mar 2015 11:06

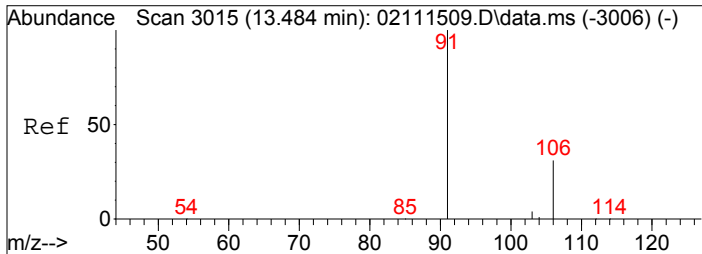
Tgt Ion	91	Resp	91968
Ion Ratio	100	Lower	Upper
91	100		
92	57.9	37.7	77.7



#33
Tetrachloroethene
Concen: 57.91 pg
RT: 12.61 min Scan# 2825
Delta R.T. -0.003 min
Lab File: 03021507.D
Acq: 2 Mar 2015 11:06

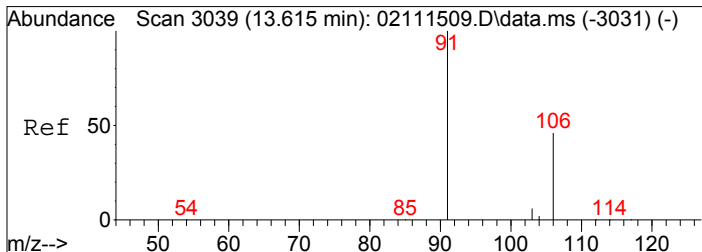
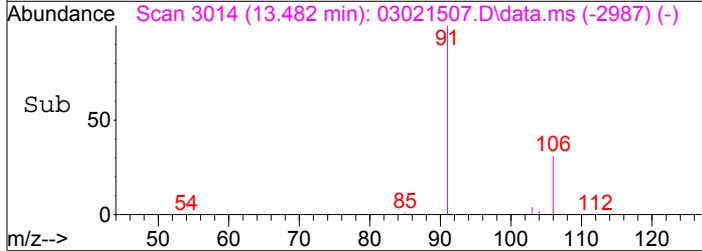
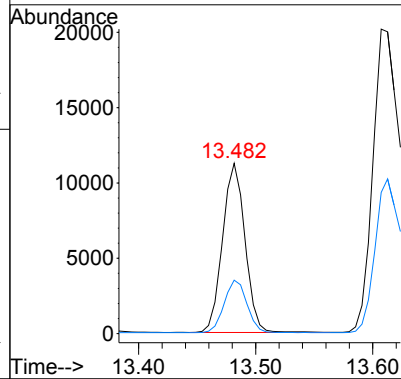
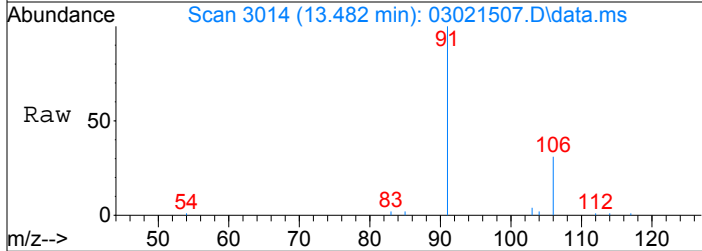
Tgt Ion	166	Resp	3179
Ion Ratio <td>100</td> <td>Lower</td> <td>Upper</td>	100	Lower	Upper
166	100		
129	72.8	53.3	93.3





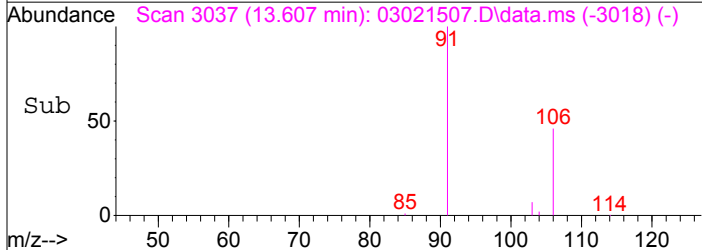
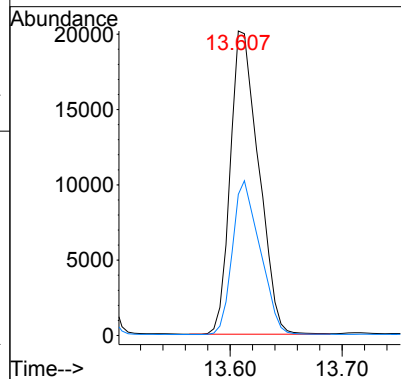
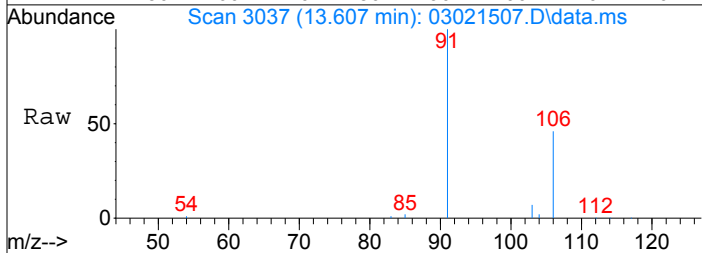
#36
Ethylbenzene
Concen: 78.93 pg
RT: 13.48 min Scan# 3014
Delta R.T. -0.002 min
Lab File: 03021507.D
Acq: 2 Mar 2015 11:06

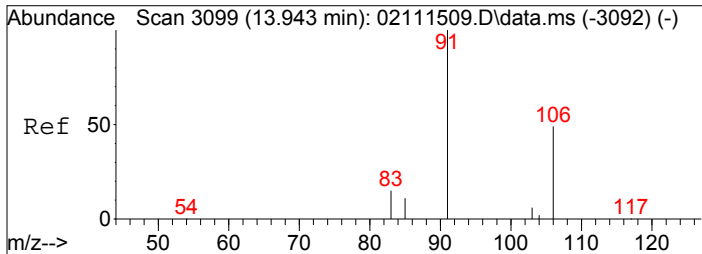
Tgt Ion: 91 Resp: 14982
Ion Ratio Lower Upper
91 100
106 31.4 10.9 50.9



#37
m,p-Xylene
Concen: 226.93 pg
RT: 13.61 min Scan# 3037
Delta R.T. -0.008 min
Lab File: 03021507.D
Acq: 2 Mar 2015 11:06

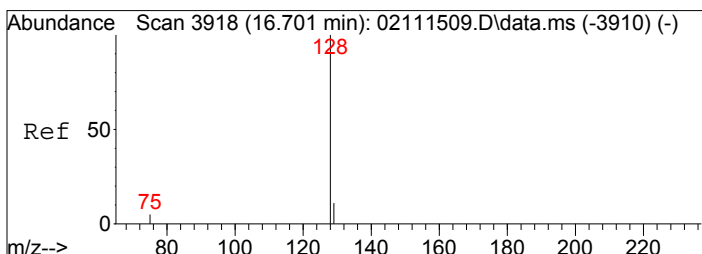
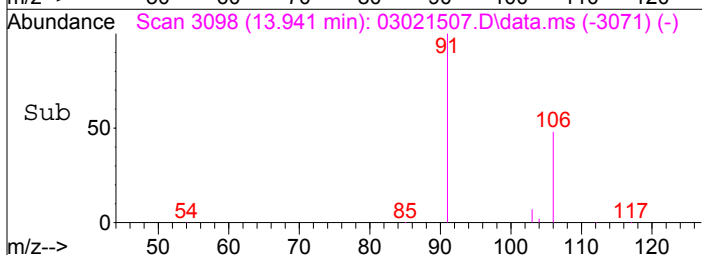
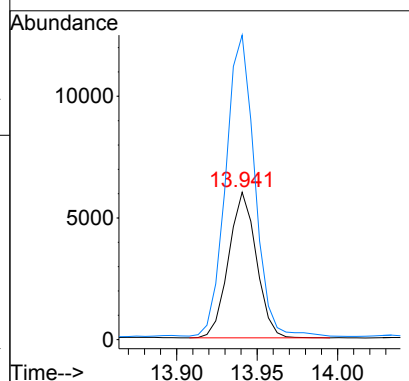
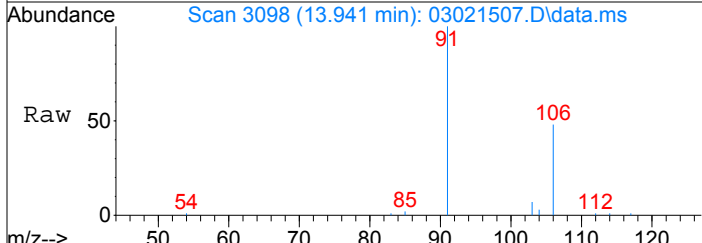
Tgt Ion: 91 Resp: 35403
Ion Ratio Lower Upper
91 100
106 49.6 27.5 67.5





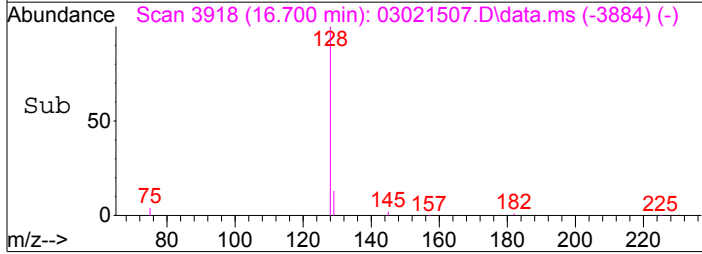
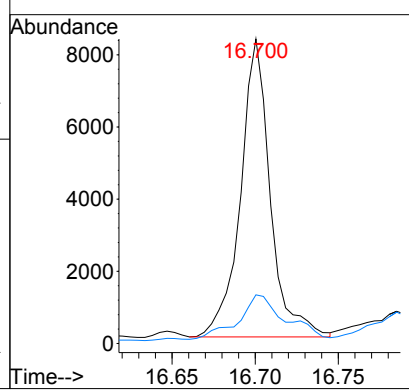
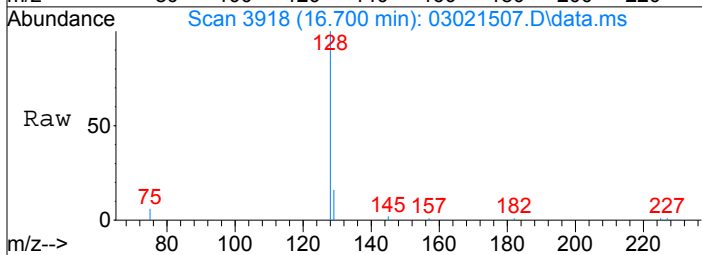
#38
 o-Xylene
 Concen: 94.83 pg
 RT: 13.94 min Scan# 3098
 Delta R.T. -0.002 min
 Lab File: 03021507.D
 Acq: 2 Mar 2015 11:06

Tgt Ion:106	Resp:	7230
Ion Ratio	Lower	Upper
106	100	
91	214.3	198.3 238.3



#45
 Naphthalene
 Concen: 54.37 pg
 RT: 16.70 min Scan# 3918
 Delta R.T. -0.001 min
 Lab File: 03021507.D
 Acq: 2 Mar 2015 11:06

Tgt Ion:128	Resp:	10298
Ion Ratio	Lower	Upper
128	100	
129	24.1	0.0 30.9



Data File: I:\MS19\DATA\2015 03\02\03021508.D

Acq On : 2 Mar 2015 11:34

Operator: WA

Sample : P1500729-028 (1000mL)

Misc : S29-02041502

ALS Vial : 4 Sample Multiplier: 1

Quant Time: Mar 02 12:29:51 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

3/2/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	25464	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	181891	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	30020	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	55545	893.214	pg	0.00
Spiked Amount 1000.000			Recovery	=	89.32%	
30) Toluene-d8 (SS2)	11.38	98	167709	999.833	pg	0.00
Spiked Amount 1000.000			Recovery	=	99.98%	
40) Bromofluorobenzene (SS3)	14.25	174	69113	1140.361	pg	0.00
Spiked Amount 1000.000			Recovery	=	114.04%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.72	85	177386	1714.105	pg	100
3) Chloromethane	1.83	52	10383	502.408	pg	99
4) Vinyl Chloride	2.01	62	222	N.D.		
5) Bromomethane	2.33	94	1752	37.650	pg	99
6) Chloroethane	2.47	64	477	N.D.		
7) Acetone	2.99	58	181765	4973.950	pg	# 88
8) Trichlorofluoromethane	3.10	101	141435	1591.119	pg	100
9) 1,1-Dichloroethene	3.67	96	85	N.D.		
10) Methylene Chloride	3.80	84	9928	235.378	pg	93
11) Trichlorotrifluoroethane	4.10	151	18190	445.340	pg	100
12) trans-1,2-Dichloroethene	4.74	96	668	N.D.		
13) 1,1-Dichloroethane	4.95	63	366	N.D.		
14) Methyl tert-Butyl Ether	5.11	73	542	N.D.		
15) cis-1,2-Dichloroethene	5.93	96	1208	26.808	pg	100
16) Chloroform	6.31	83	9179	117.571	pg	98
18) 1,2-Dichloroethane	7.26	62	4224	67.951	pg	98
19) 1,1,1-Trichloroethane	7.59	97	1825	24.038	pg	98
20) Benzene	8.15	78	47681	296.937	pg	100
21) Carbon Tetrachloride	8.34	117	24380	428.937	pg	99
23) 1,2-Dichloropropane	9.16	63	996	25.107	pg	93
24) Bromodichloromethane	9.42	83	754	N.D.		
25) Trichloroethene	9.46	130	6728	143.979	pg	99
26) 1,4-Dioxane	9.56	88	180	N.D.		
27) cis-1,3-Dichloropropene	10.46	75	331	N.D.		
28) trans-1,3-Dichloropropene	11.06	75	136	N.D.		
29) 1,1,2-Trichloroethane	11.20	83	130	N.D.		
31) Toluene	11.48	91	207624	1163.824	pg	100
32) 1,2-Dibromoethane	12.12	107	14	N.D.		
33) Tetrachloroethene	12.61	166	1451	26.268	pg	98
35) Chlorobenzene	13.17	112	919	N.D.		
36) Ethylbenzene	13.48	91	24627	130.820	pg	99
37) m,p-Xylene	13.61	91	52876	341.751	pg	97
38) o-Xylene	13.94	106	9866	130.476	pg	100
39) 1,1,2,2-Tetrachloroethane	13.97	83	158	N.D.		
41) 1,3-Dichlorobenzene	15.17	146	680	N.D.		
42) 1,4-Dichlorobenzene	15.24	146	1722	N.D.		
43) 1,2-Dichlorobenzene	15.46	146	147	N.D.		
44) 1,2,4-Trichlorobenzene	16.63	182	120	N.D.		
45) Naphthalene	16.70	128	6491	34.556	pg	94
46) Hexachlorobutadiene	16.96	225	42	N.D.		

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 03\02\03021508.D

Acq On : 2 Mar 2015 11:34

Operator: WA

Sample : P1500729-028 (1000mL)

Misc : S29-02041502

ALS Vial : 4 Sample Multiplier: 1

Quant Time: Mar 02 12:29:51 2015

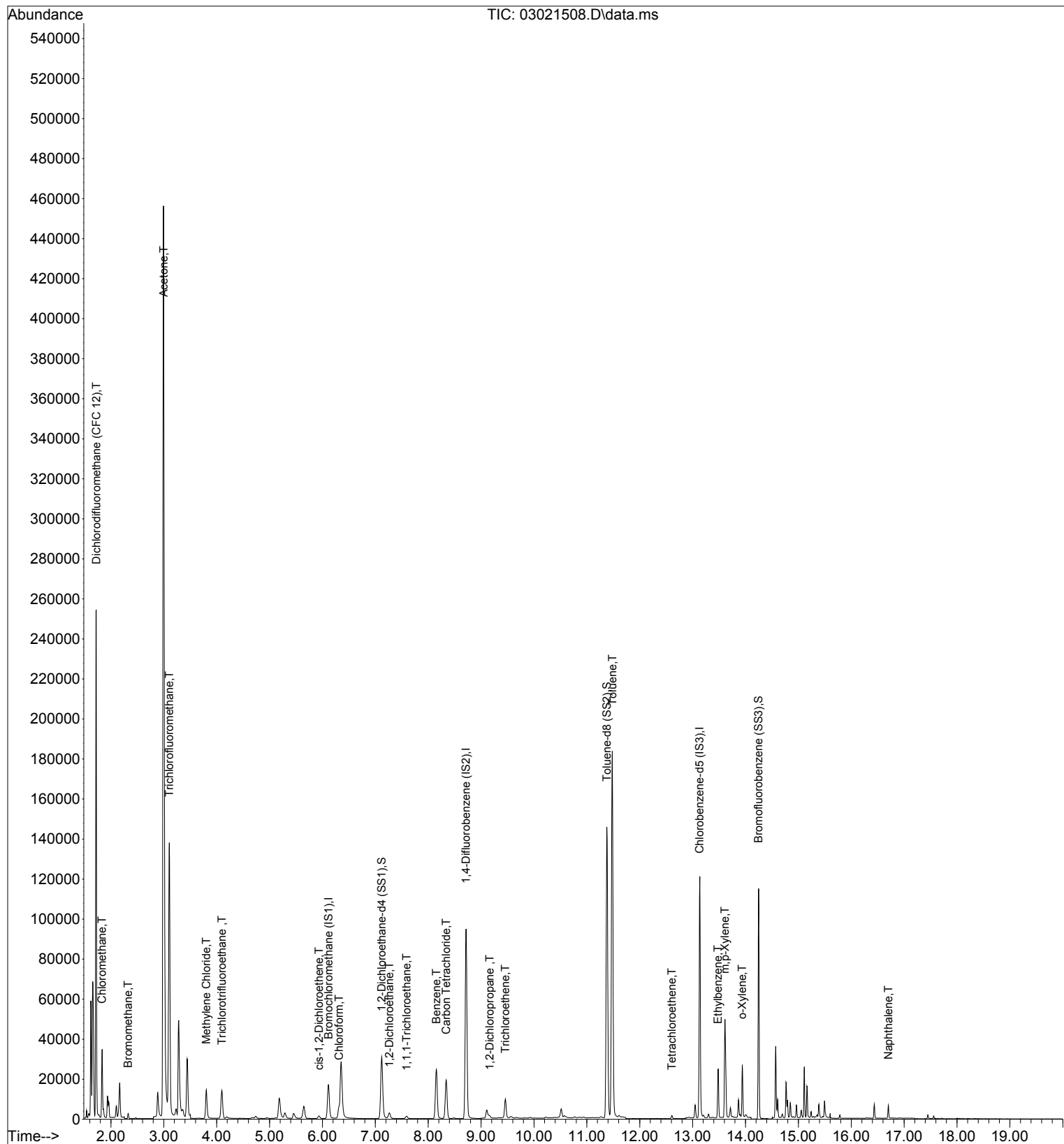
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 03\02\03021508.D

Acq On : 2 Mar 2015 11:34
 Sample : P1500729-028 (1000mL)
 Misc : S29-02041502
 ALS Vial : 4 Sample Multiplier: 1

Operator: WA

Quant Time: Mar 02 12:29:51 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

407 3/2/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	25464	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	181891	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	30020	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	55545	893.214	pg	0.00
Spiked Amount 1000.000			Recovery	=	89.32%	
30) Toluene-d8 (SS2)	11.38	98	167709	999.833	pg	0.00
Spiked Amount 1000.000			Recovery	=	99.98%	
40) Bromofluorobenzene (SS3)	14.25	174	69113	1140.361	pg	0.00
Spiked Amount 1000.000			Recovery	=	114.04%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.72	85	177386	1714.105	pg	100
3) Chloromethane	1.83	52	10383	502.408	pg	99
5) Bromomethane	2.33	94	1752	37.650	pg	99
7) Acetone	2.99	58	181765	4973.950	pg	# 88
8) Trichlorofluoromethane	3.10	101	141435	1591.119	pg	100
10) Methylene Chloride	3.80	84	9928	235.378	pg	93
11) Trichlorotrifluoroethane	4.10	151	18190	445.340	pg	100
15) cis-1,2-Dichloroethene	5.93	96	1208	26.808	pg	100
16) Chloroform	6.31	83	9179	117.571	pg	98
18) 1,2-Dichloroethane	7.26	62	4224	67.951	pg	98
19) 1,1,1-Trichloroethane	7.59	97	1825	24.038	pg	98
20) Benzene	8.15	78	47681	296.937	pg	100
21) Carbon Tetrachloride	8.34	117	24380	428.937	pg	99
23) 1,2-Dichloropropane	9.16	63	996	25.107	pg	93
25) Trichloroethene	9.46	130	6728	143.979	pg	99
31) Toluene	11.48	91	207624	1163.824	pg	100
33) Tetrachloroethene	12.61	166	1451	26.268	pg	98
36) Ethylbenzene	13.48	91	24627	130.820	pg	99
37) m,p-Xylene	13.61	91	52876	341.751	pg	97
38) o-Xylene	13.94	106	9866	130.476	pg	100
45) Naphthalene	16.70	128	6491	34.556	pg	94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File: I:\MS19\DATA\2015 03\02\03021508.D

Acq On : 2 Mar 2015 11:34

Operator: WA

Sample : P1500729-028 (1000mL)

Misc : S29-02041502

ALS Vial : 4 Sample Multiplier: 1

Quant Time: Mar 02 12:29:51 2015

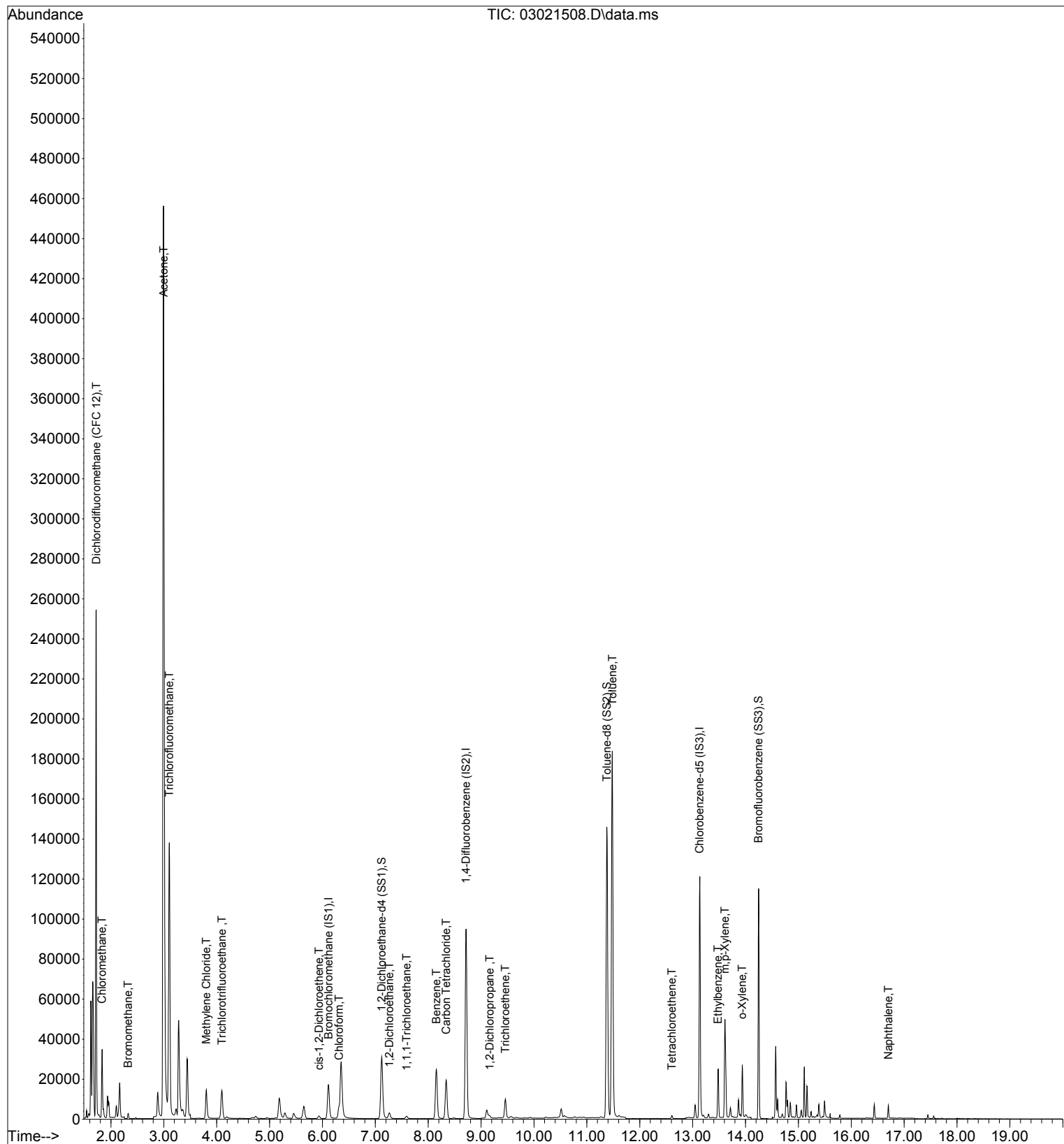
Quant Method : I:\MS19\METHODS\X19021115.M

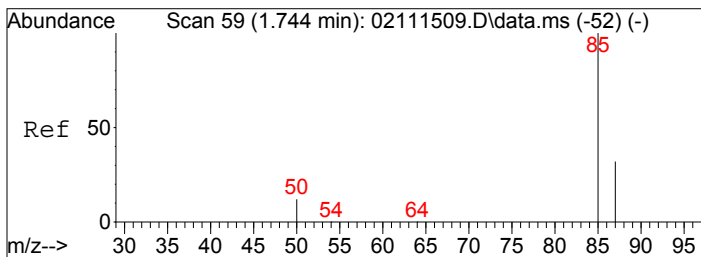
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

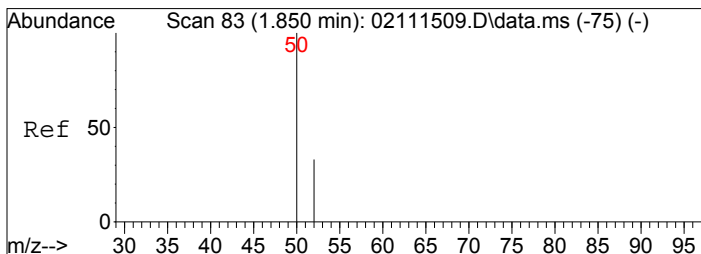
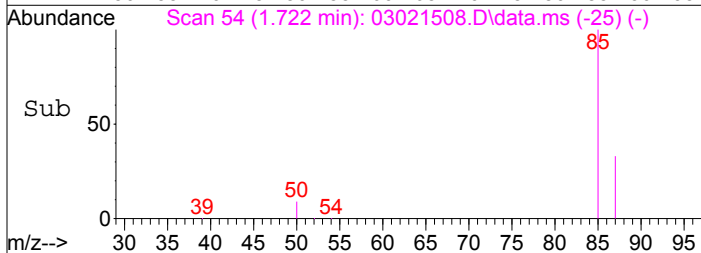
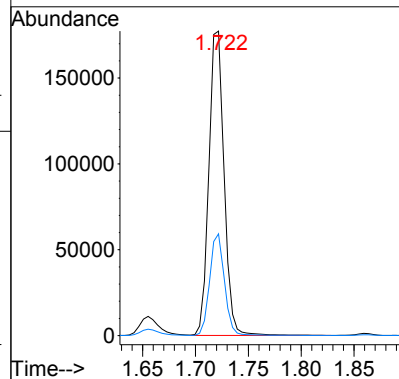
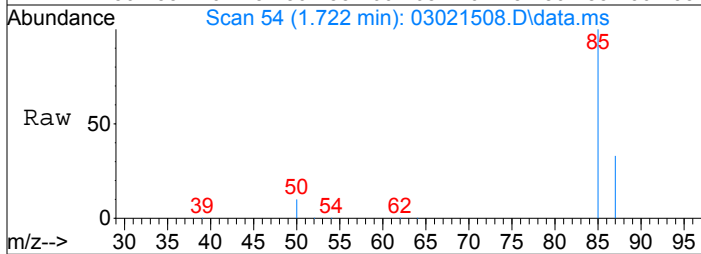
DataAcq Meth:TO15SIM.M





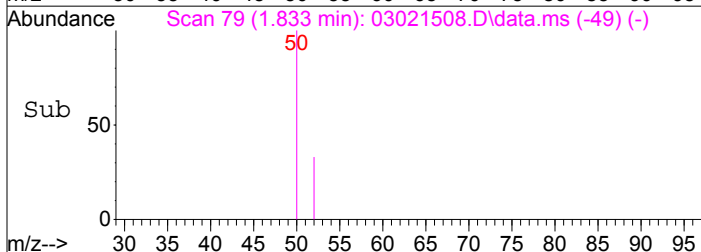
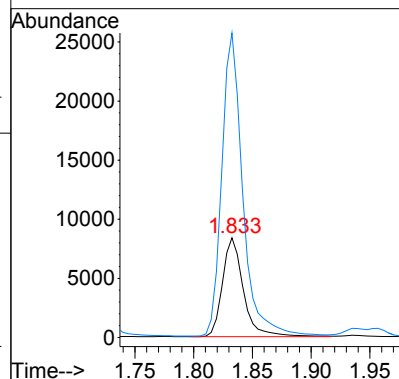
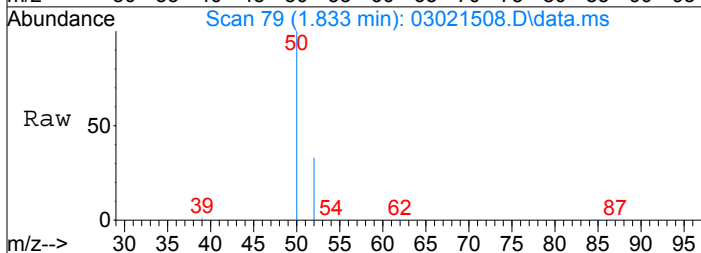
#2
 Dichlorodifluoromethane (CFC 12)
 Concen: 1714.11 pg
 RT: 1.72 min Scan# 54
 Delta R.T. -0.022 min
 Lab File: 03021508.D
 Acq: 2 Mar 2015 11:34

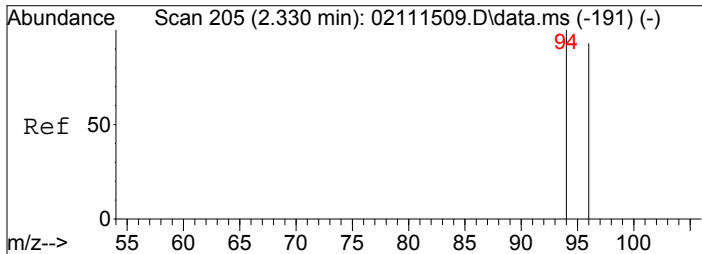
Tgt Ion: 85 Resp: 177386
 Ion Ratio Lower Upper
 85 100
 87 32.5 12.4 52.4



#3
 Chloromethane
 Concen: 502.41 pg
 RT: 1.83 min Scan# 79
 Delta R.T. -0.017 min
 Lab File: 03021508.D
 Acq: 2 Mar 2015 11:34

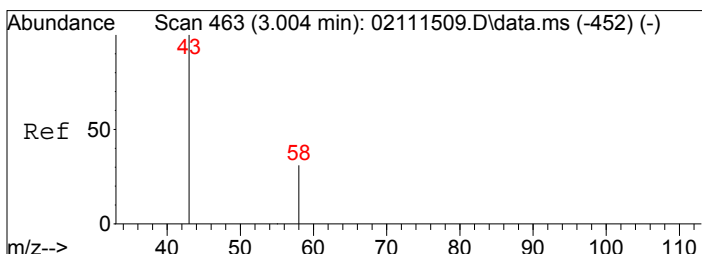
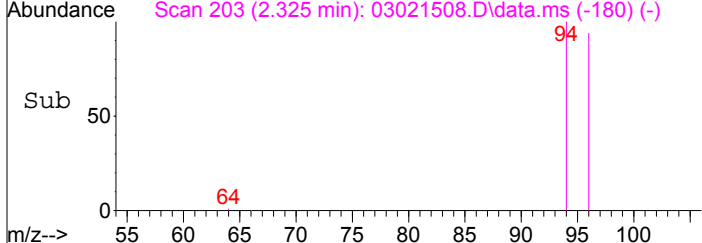
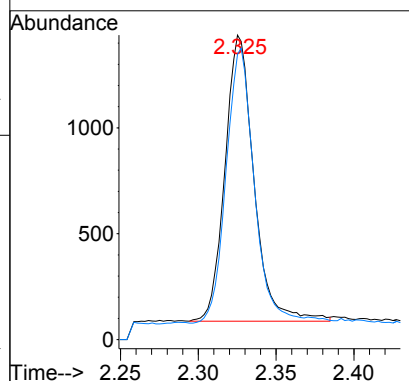
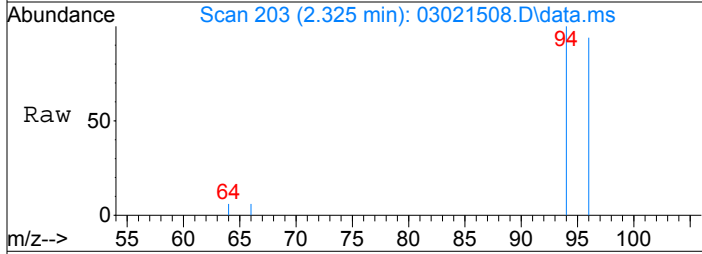
Tgt Ion: 52 Resp: 10383
 Ion Ratio Lower Upper
 52 100
 50 306.3 283.7 323.7





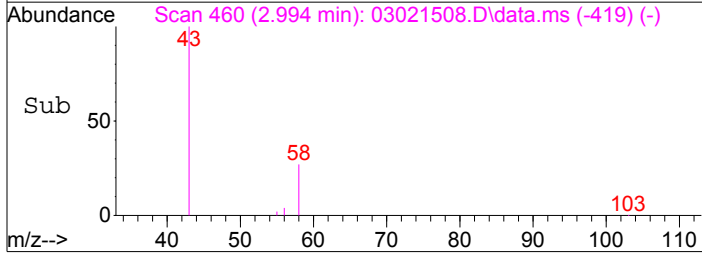
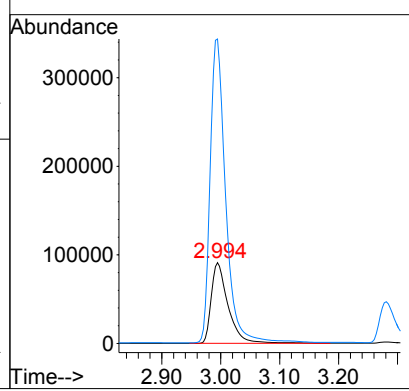
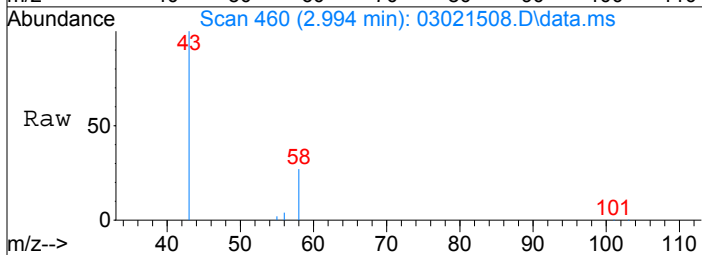
#5
 Bromomethane
 Concen: 37.65 pg
 RT: 2.33 min Scan# 203
 Delta R.T. -0.005 min
 Lab File: 03021508.D
 Acq: 2 Mar 2015 11:34

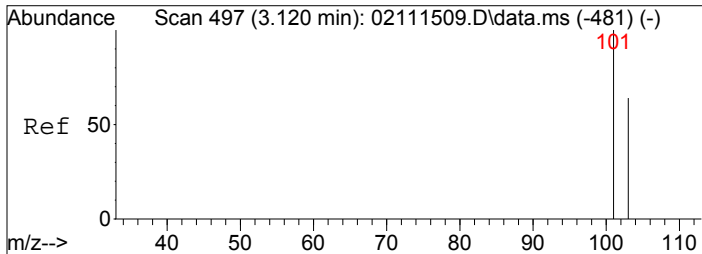
Tgt Ion: 94	Resp: 1752
Ion Ratio	Lower Upper
94	100
96	93.0 75.5 113.3



#7
 Acetone
 Concen: 4973.95 pg
 RT: 2.99 min Scan# 460
 Delta R.T. -0.010 min
 Lab File: 03021508.D
 Acq: 2 Mar 2015 11:34

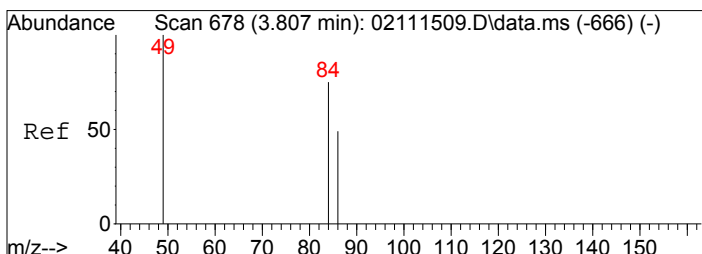
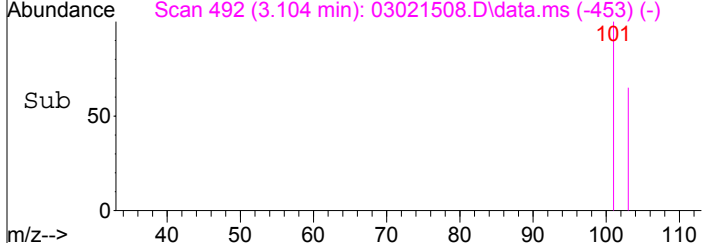
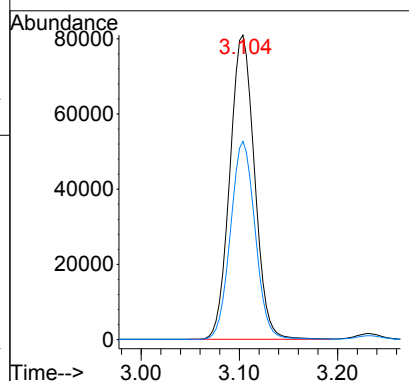
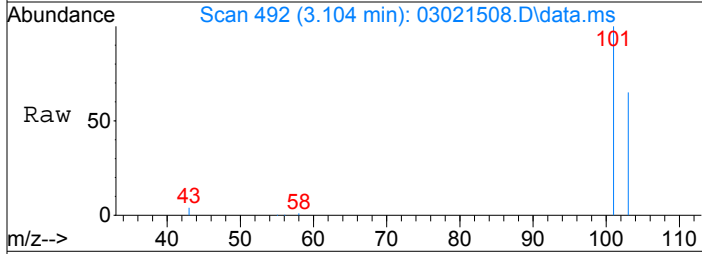
Tgt Ion: 58	Resp: 181765
Ion Ratio	Lower Upper
58	100
43	346.5 301.8 341.8#





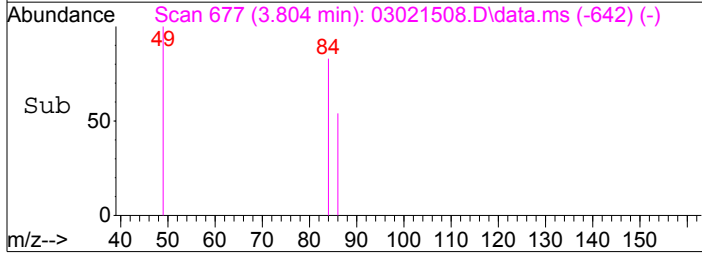
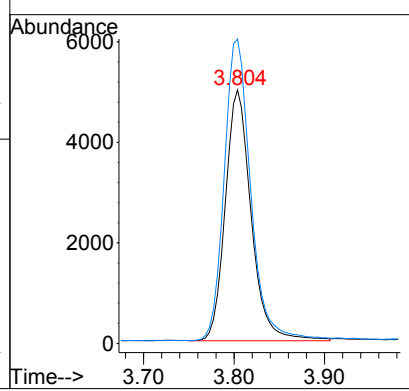
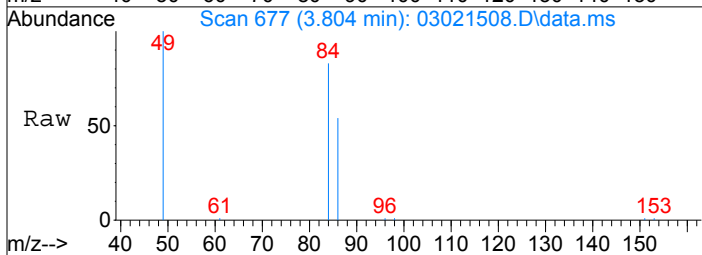
#8
 Trichlorofluoromethane
 Concen: 1591.12 pg
 RT: 3.10 min Scan# 492
 Delta R.T. -0.016 min
 Lab File: 03021508.D
 Acq: 2 Mar 2015 11:34

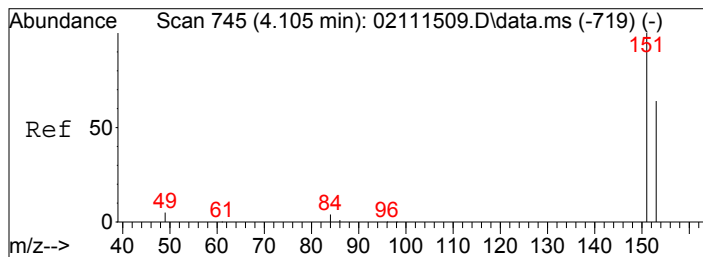
Tgt Ion: 101	Resp:	141435
Ion Ratio	Lower	Upper
101	100	
103	64.9	51.8 77.6



#10
 Methylene Chloride
 Concen: 235.38 pg
 RT: 3.80 min Scan# 677
 Delta R.T. -0.003 min
 Lab File: 03021508.D
 Acq: 2 Mar 2015 11:34

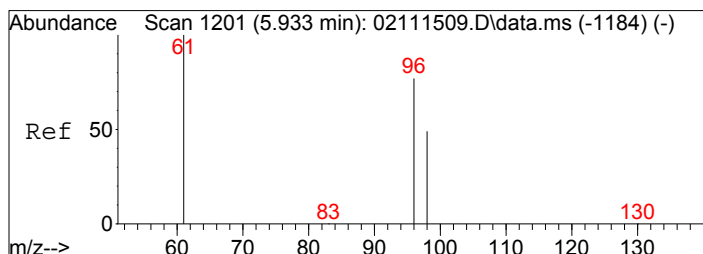
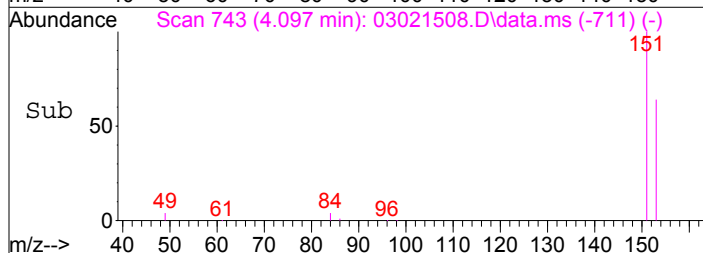
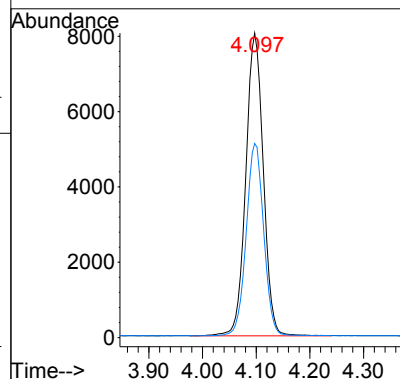
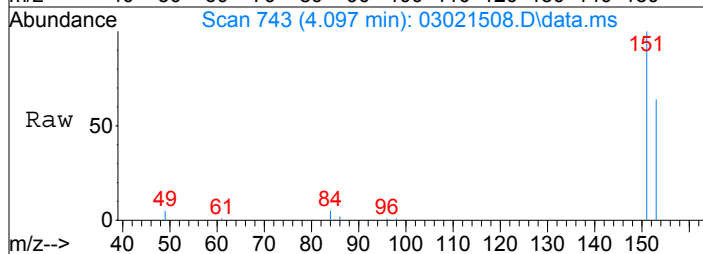
Tgt Ion: 84	Resp:	9928
Ion Ratio	Lower	Upper
84	100	
49	124.5	112.3 152.3





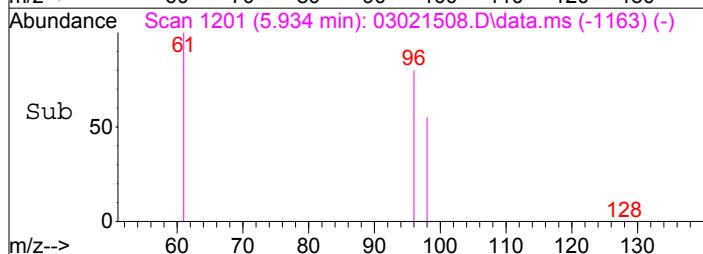
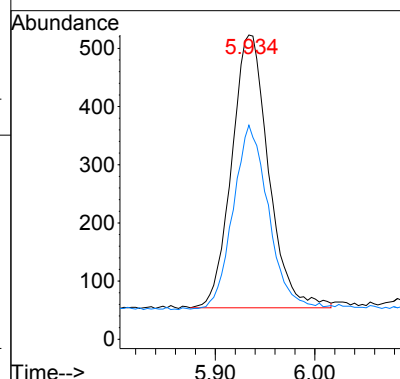
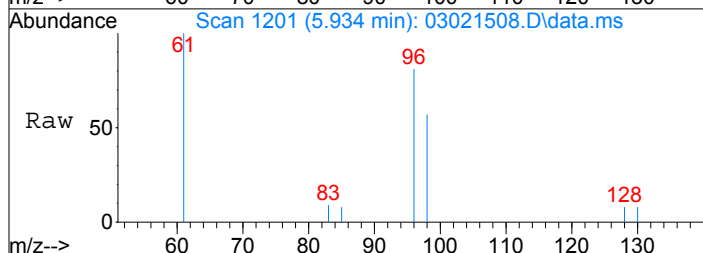
#11
Trichlorotrifluoroethane
Concen: 445.34 pg
RT: 4.10 min Scan# 743
Delta R.T. -0.008 min
Lab File: 03021508.D
Acq: 2 Mar 2015 11:34

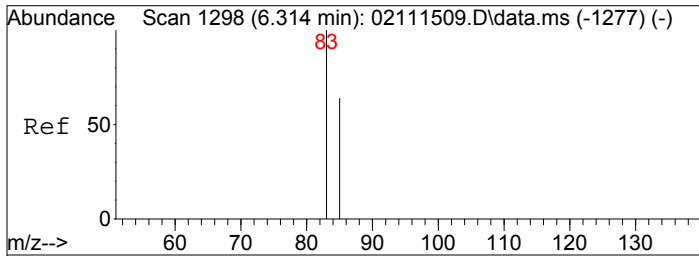
Tgt Ion: 151 Resp: 18190
Ion Ratio Lower Upper
151 100
153 63.6 43.6 83.6



#15
cis-1,2-Dichloroethene
Concen: 26.81 pg
RT: 5.93 min Scan# 1201
Delta R.T. 0.001 min
Lab File: 03021508.D
Acq: 2 Mar 2015 11:34

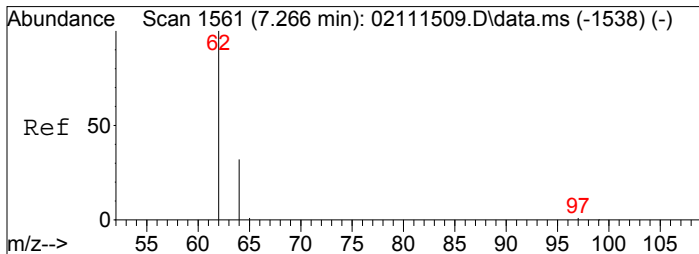
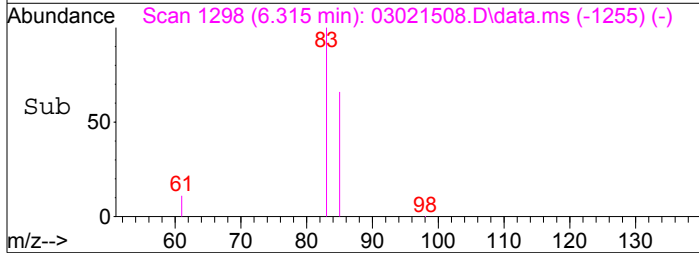
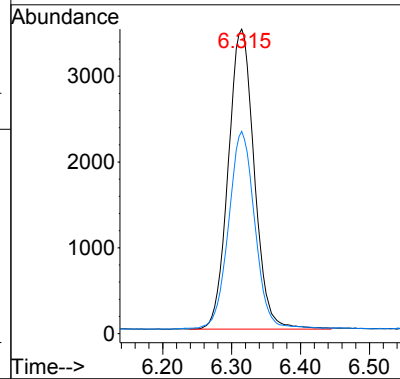
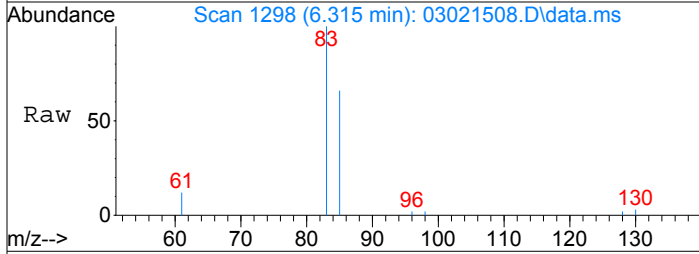
Tgt Ion: 96 Resp: 1208
Ion Ratio Lower Upper
96 100
98 64.6 44.3 84.3





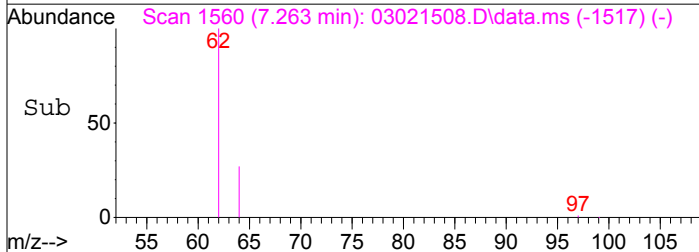
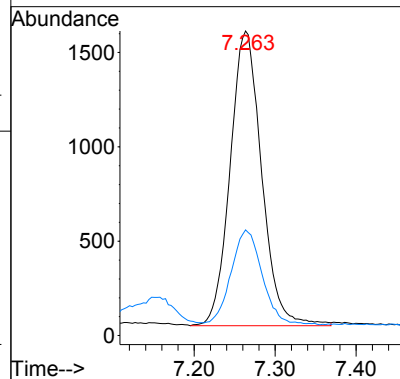
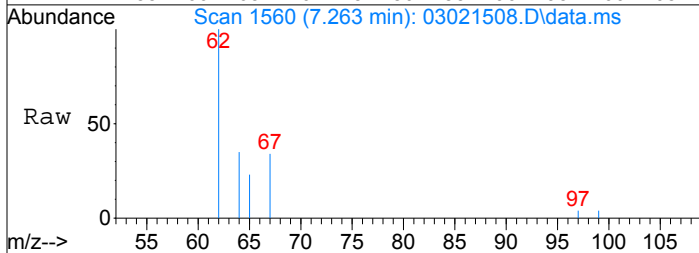
#16
Chloroform
Concen: 117.57 pg
RT: 6.31 min Scan# 1298
Delta R.T. 0.001 min
Lab File: 03021508.D
Acq: 2 Mar 2015 11:34

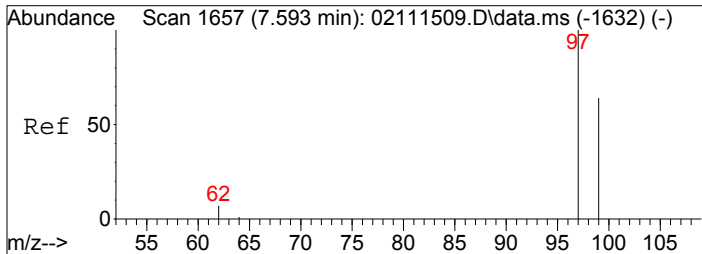
Tgt Ion: 83 Resp: 9179
Ion Ratio Lower Upper
83 100
85 66.9 45.4 85.4



#18
1,2-Dichloroethane
Concen: 67.95 pg
RT: 7.26 min Scan# 1560
Delta R.T. -0.002 min
Lab File: 03021508.D
Acq: 2 Mar 2015 11:34

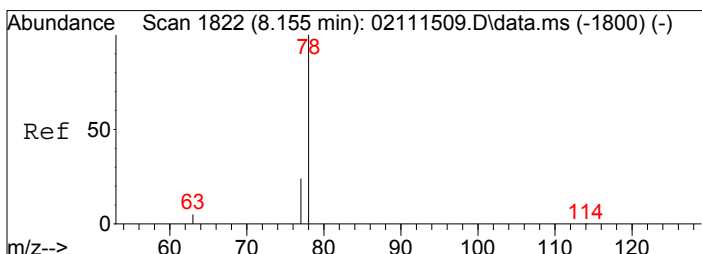
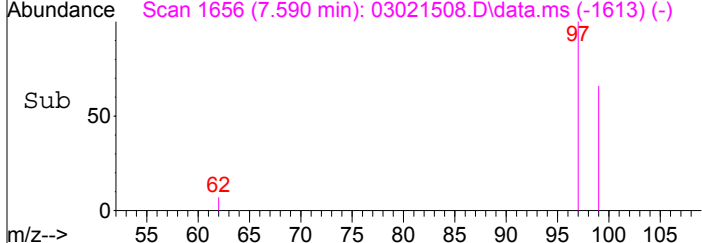
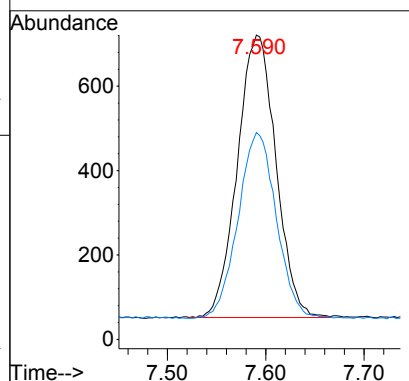
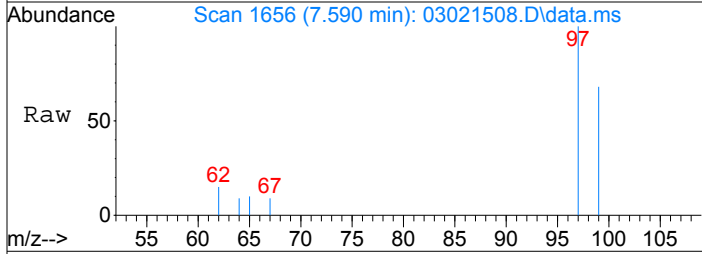
Tgt Ion: 62 Resp: 4224
Ion Ratio Lower Upper
62 100
64 30.7 11.6 51.6





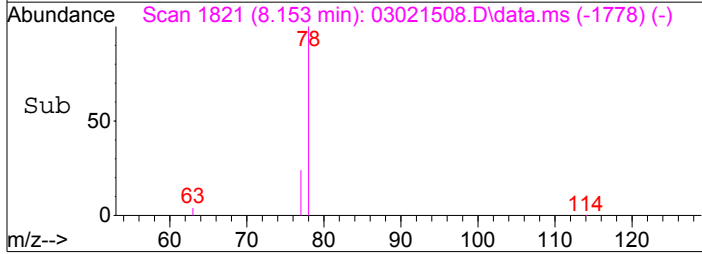
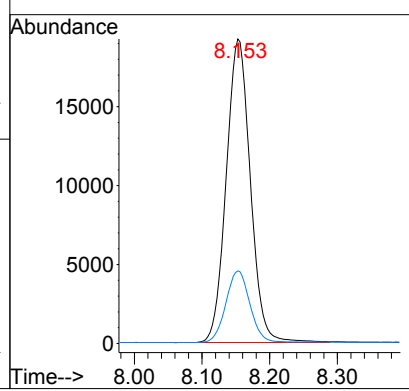
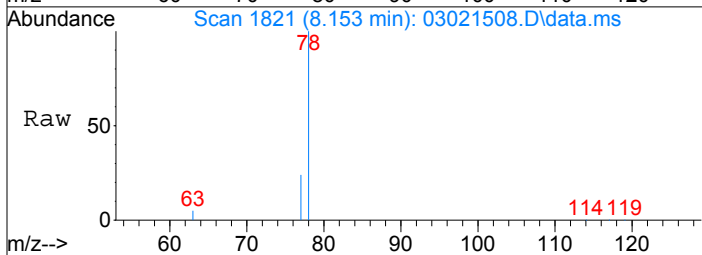
#19
 1,1,1-Trichloroethane
 Concen: 24.04 pg
 RT: 7.59 min Scan# 1656
 Delta R.T. -0.002 min
 Lab File: 03021508.D
 Acq: 2 Mar 2015 11:34

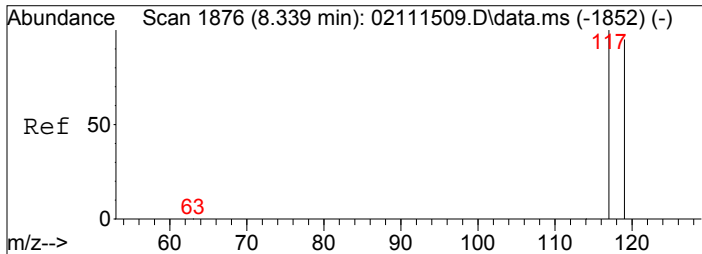
Tgt Ion: 97	Resp: 1825
Ion Ratio	Lower Upper
97	100
99	65.4 44.0 84.0



#20
 Benzene
 Concen: 296.94 pg
 RT: 8.15 min Scan# 1821
 Delta R.T. -0.002 min
 Lab File: 03021508.D
 Acq: 2 Mar 2015 11:34

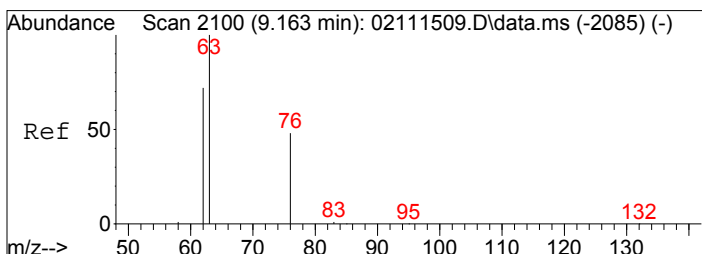
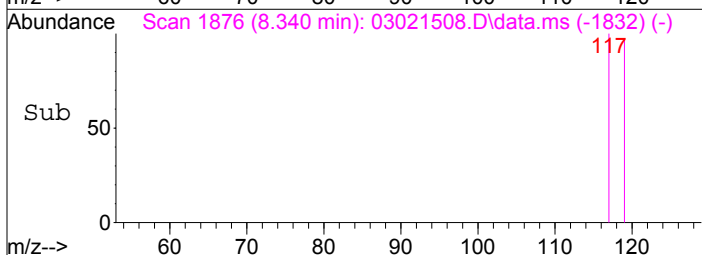
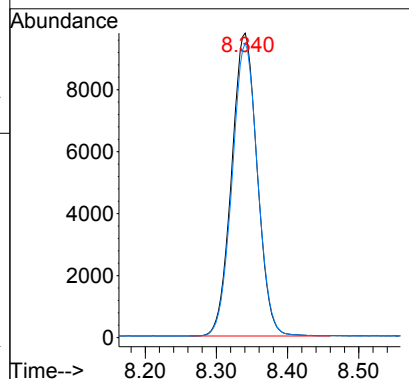
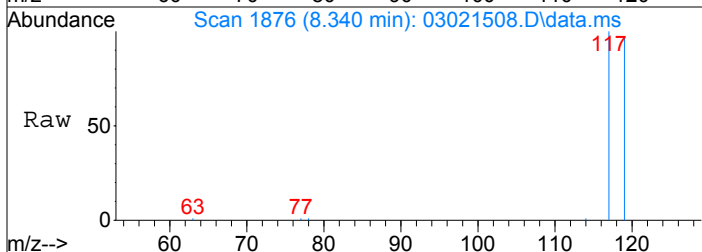
Tgt Ion: 78	Resp: 47681
Ion Ratio	Lower Upper
78	100
77	23.5 3.7 43.7





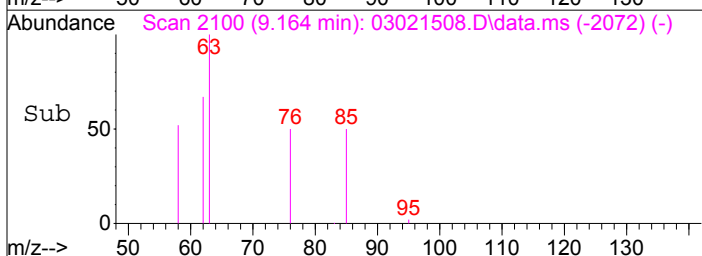
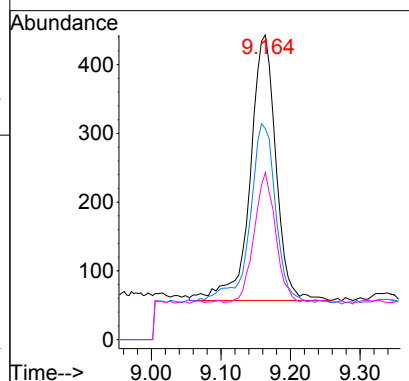
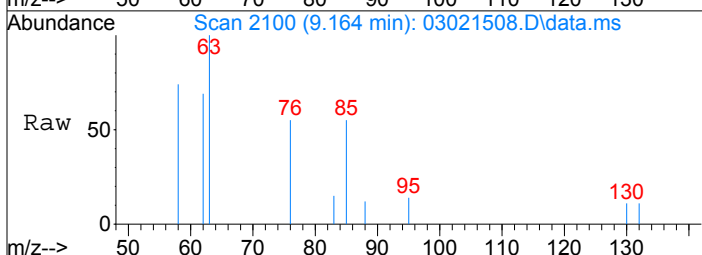
#21
Carbon Tetrachloride
Concen: 428.94 pg
RT: 8.34 min Scan# 1876
Delta R.T. 0.001 min
Lab File: 03021508.D
Acq: 2 Mar 2015 11:34

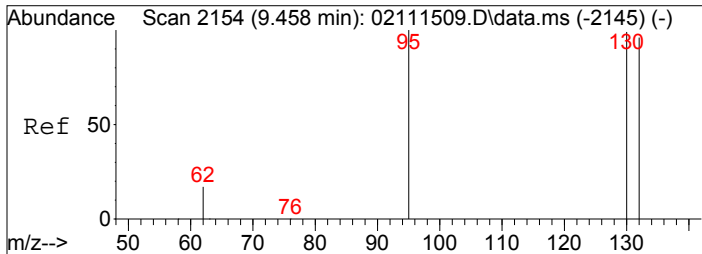
Tgt Ion	117	119	Resp	24380	Lower	Upper
Ion Ratio	100	96.4			75.5	115.5



#23
1,2-Dichloropropane
Concen: 25.11 pg
RT: 9.16 min Scan# 2100
Delta R.T. 0.001 min
Lab File: 03021508.D
Acq: 2 Mar 2015 11:34

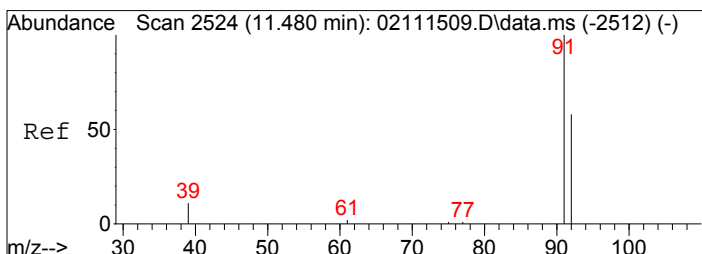
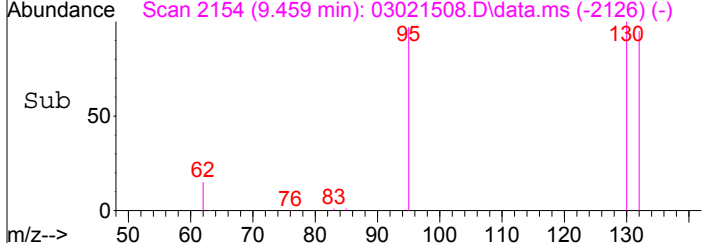
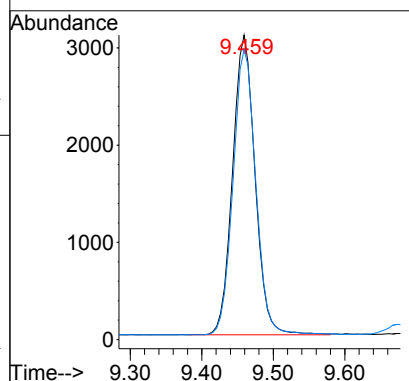
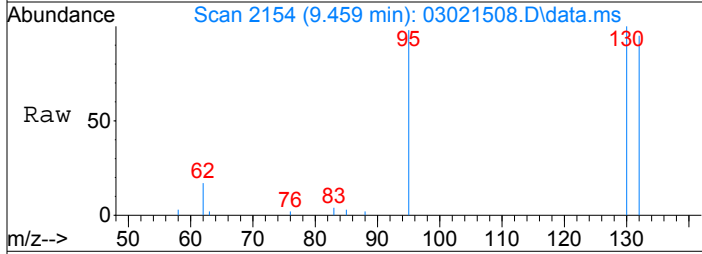
Tgt Ion	63	62	76	Resp	996	Lower	Upper
Ion Ratio	100	68.0	40.6			52.0	92.0





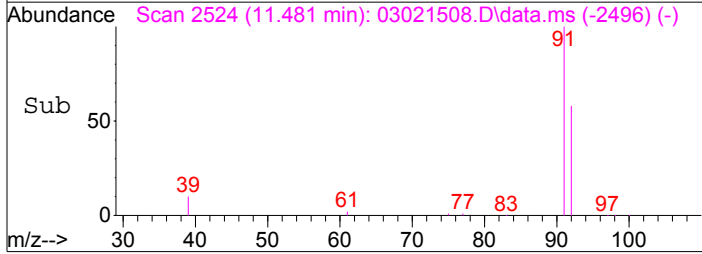
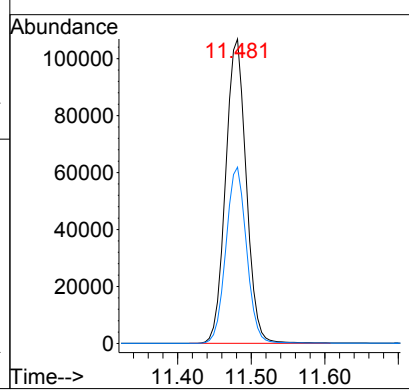
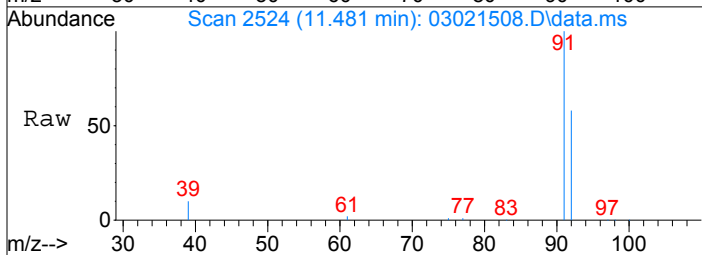
#25
 Trichloroethene
 Concen: 143.98 pg
 RT: 9.46 min Scan# 2154
 Delta R.T. 0.001 min
 Lab File: 03021508.D
 Acq: 2 Mar 2015 11:34

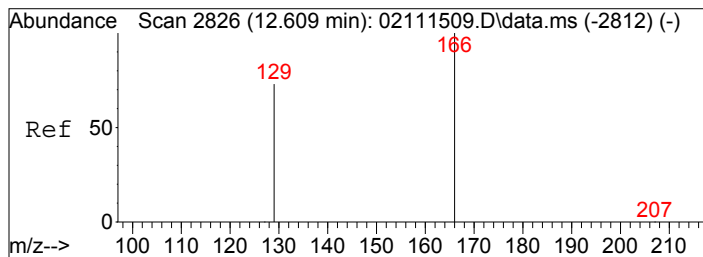
Tgt Ion:130	Resp:	6728
Ion Ratio	Lower	Upper
130	100	
132	96.3	77.1 117.1



#31
 Toluene
 Concen: 1163.82 pg
 RT: 11.48 min Scan# 2524
 Delta R.T. 0.001 min
 Lab File: 03021508.D
 Acq: 2 Mar 2015 11:34

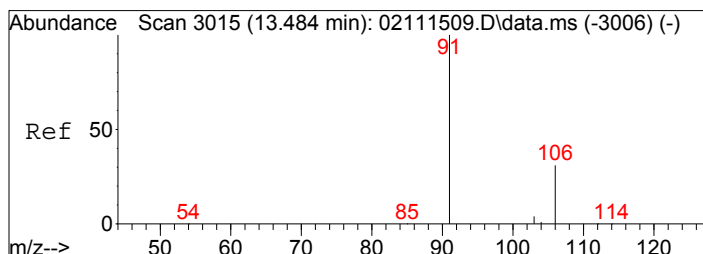
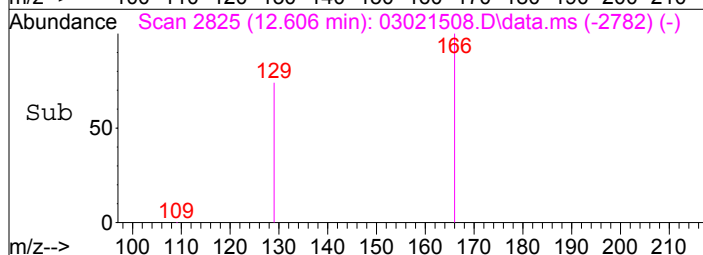
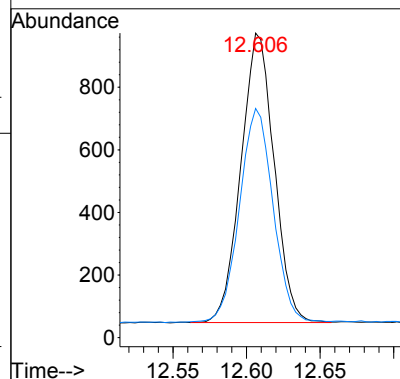
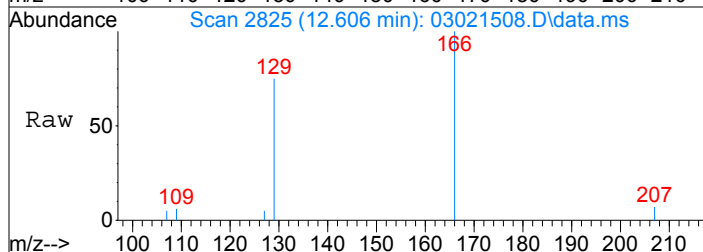
Tgt Ion: 91	Resp:	207624
Ion Ratio	Lower	Upper
91	100	
92	58.0	37.7 77.7





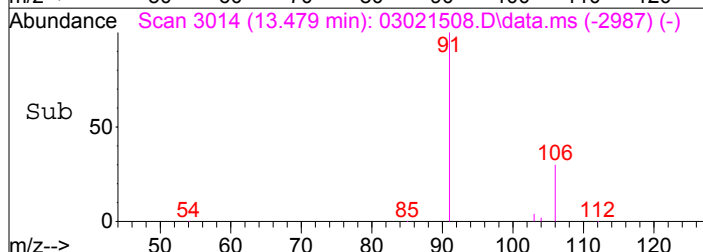
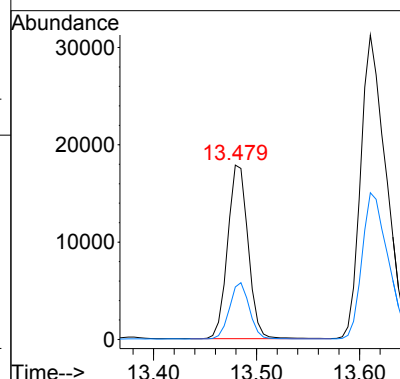
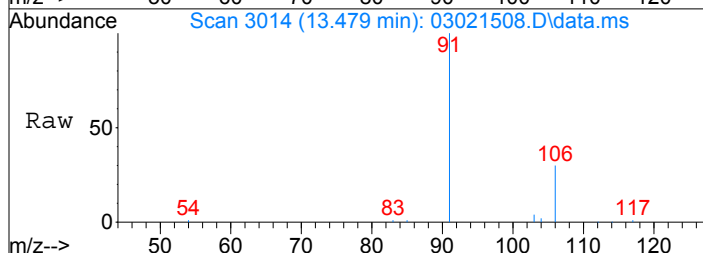
#33
Tetrachloroethene
Concen: 26.27 pg
RT: 12.61 min Scan# 2825
Delta R.T. -0.003 min
Lab File: 03021508.D
Acq: 2 Mar 2015 11:34

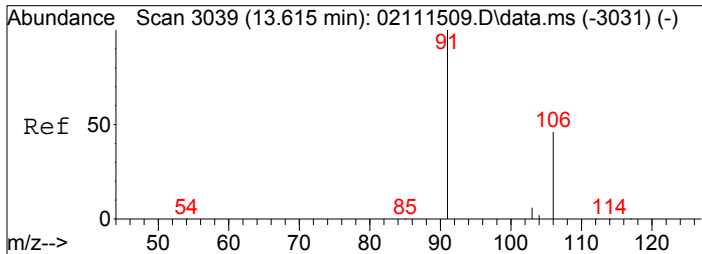
Tgt Ion: 166 Resp: 1451
Ion Ratio Lower Upper
166 100
129 75.3 53.3 93.3



#36
Ethylbenzene
Concen: 130.82 pg
RT: 13.48 min Scan# 3014
Delta R.T. -0.004 min
Lab File: 03021508.D
Acq: 2 Mar 2015 11:34

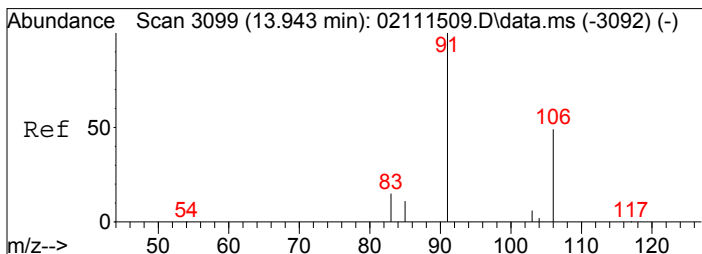
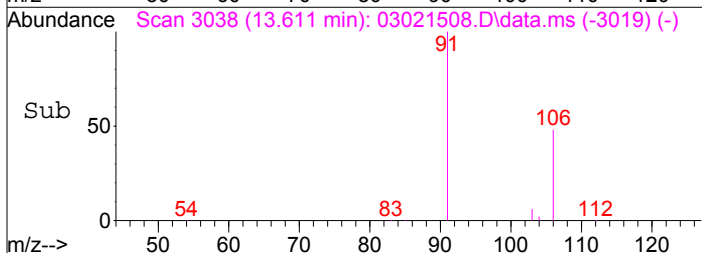
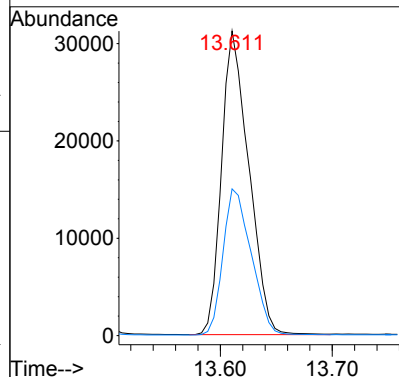
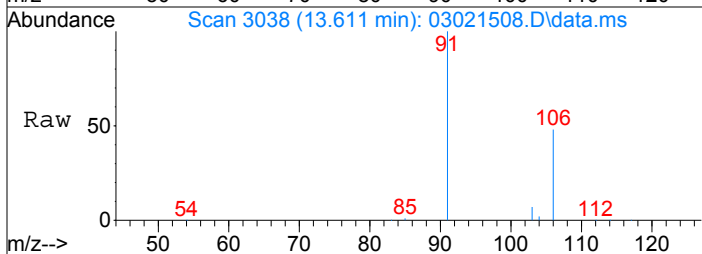
Tgt Ion: 91 Resp: 24627
Ion Ratio Lower Upper
91 100
106 31.4 10.9 50.9





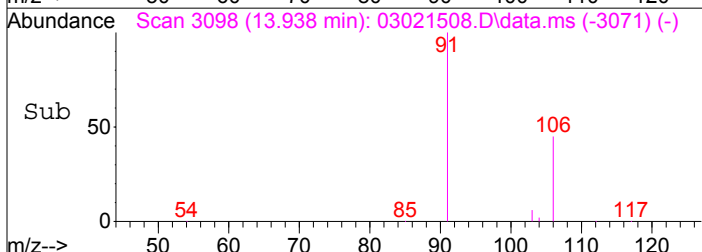
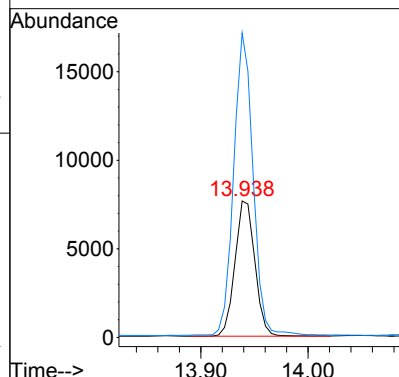
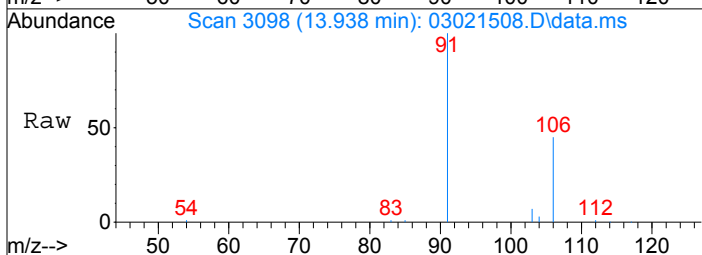
#37
m,p-Xylene
Concen: 341.75 pg
RT: 13.61 min Scan# 3038
Delta R.T. -0.004 min
Lab File: 03021508.D
Acq: 2 Mar 2015 11:34

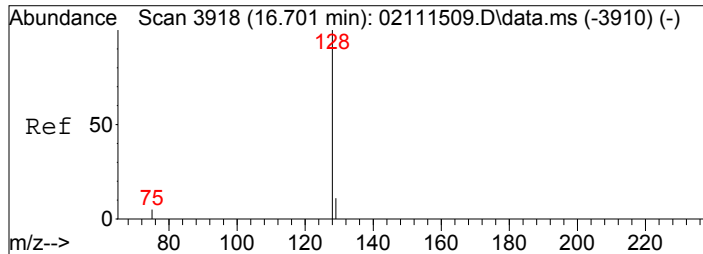
Tgt Ion: 91 Resp: 52876
Ion Ratio Lower Upper
91 100
106 49.7 27.5 67.5



#38
o-Xylene
Concen: 130.48 pg
RT: 13.94 min Scan# 3098
Delta R.T. -0.004 min
Lab File: 03021508.D
Acq: 2 Mar 2015 11:34

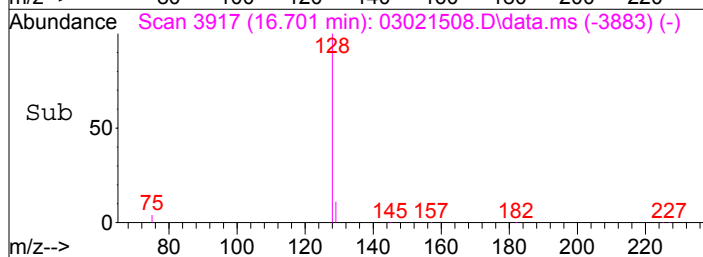
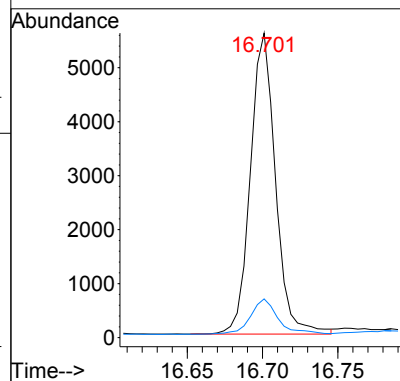
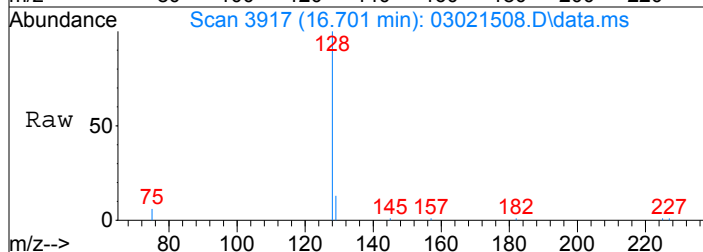
Tgt Ion: 106 Resp: 9866
Ion Ratio Lower Upper
106 100
91 217.7 198.3 238.3





#45
Naphthalene
Concen: 34.56 pg
RT: 16.70 min Scan# 3917
Delta R.T. -0.000 min
Lab File: 03021508.D
Acq: 2 Mar 2015 11:34

Tgt Ion:128	Resp:	6491
Ion Ratio	Lower	Upper
128	100	
129	13.1	0.0 30.9



Data File: I:\MS19\DATA\2015 03\02\03021509.D

Acq On : 2 Mar 2015 12:01

Operator: WA

Sample : P1500729-029 (1000mL)

Misc : S29-02041502

ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 02 16:33:44 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

107 3/2/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.13	130	27211	1000.000	pg	0.01
22) 1,4-Difluorobenzene (IS2)	8.72	114	188133	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	31938	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.13	65	56983	857.508	pg	0.01
Spiked Amount 1000.000			Recovery	=	85.75%	
30) Toluene-d8 (SS2)	11.38	98	174639	1006.604	pg	0.00
Spiked Amount 1000.000			Recovery	=	100.66%	
40) Bromofluorobenzene (SS3)	14.25	174	75638	1173.074	pg	0.00
Spiked Amount 1000.000			Recovery	=	117.31%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.74	85	145734	1317.835	pg	100
3) Chloromethane	1.84	52	9169	415.182	pg	99
4) Vinyl Chloride	2.03	62	63	N.D.		
5) Bromomethane	2.33	94	1247	25.077	pg	98
6) Chloroethane	2.48	64	1036	24.764	pg	98
7) Acetone	2.99	58	438124	11219.418	pg	# 73
8) Trichlorofluoromethane	3.11	101	97014	1021.321	pg	100
9) 1,1-Dichloroethene	3.67	96	44	N.D.		
10) Methylene Chloride	3.81	84	8549	189.672	pg	97
11) Trichlorotrifluoroethane	4.10	151	13586	311.266	pg	100
12) trans-1,2-Dichloroethene	4.74	96	1478	34.131	pg	99
13) 1,1-Dichloroethane	4.96	63	223	N.D.		
14) Methyl tert-Butyl Ether	0.00	73	0	N.D.	d	
15) cis-1,2-Dichloroethene	5.94	96	213	N.D.		
16) Chloroform	6.33	83	7996	95.843	pg	98
18) 1,2-Dichloroethane	7.27	62	4033	60.713	pg	98
19) 1,1,1-Trichloroethane	7.59	97	1665	20.523	pg	99
20) Benzene	8.16	78	50532	294.488	pg	100
21) Carbon Tetrachloride	8.34	117	18618	306.531	pg	99
23) 1,2-Dichloropropane	9.17	63	837	20.399	pg	90
24) Bromodichloromethane	9.41	83	636	N.D.		
25) Trichloroethene	9.46	130	1402	29.007	pg	99
26) 1,4-Dioxane	9.55	88	583	N.D.		
27) cis-1,3-Dichloropropene	10.46	75	241	N.D.		
28) trans-1,3-Dichloropropene	11.05	75	134	N.D.		
29) 1,1,2-Trichloroethane	11.20	83	364	N.D.		
31) Toluene	11.48	91	171778	930.944	pg	100
32) 1,2-Dibromoethane	12.13	107	43	N.D.		
33) Tetrachloroethene	12.61	166	1528	26.744	pg	96
35) Chlorobenzene	13.17	112	729	N.D.		
36) Ethylbenzene	13.48	91	34354	171.531	pg	98
37) m,p-Xylene	13.61	91	77122	468.525	pg	96
38) o-Xylene	13.94	106	13479	167.553	pg	98
39) 1,1,2,2-Tetrachloroethane	13.97	83	231	N.D.		
41) 1,3-Dichlorobenzene	0.00	146	0	N.D.	d	
42) 1,4-Dichlorobenzene	15.24	146	2874	26.040	pg	100
43) 1,2-Dichlorobenzene	15.46	146	97	N.D.		
44) 1,2,4-Trichlorobenzene	16.61	182	319	N.D.		
45) Naphthalene	16.70	128	7641	38.236	pg	54
46) Hexachlorobutadiene	16.96	225	37	N.D.		

(#)= qualifier out of range (m)= manual integration (+)= signals summed

Data File: I:\MS19\DATA\2015 03\02\03021509.D

Acq On : 2 Mar 2015 12:01

Operator: WA

Sample : P1500729-029 (1000mL)

Misc : S29-02041502

ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 02 16:33:44 2015

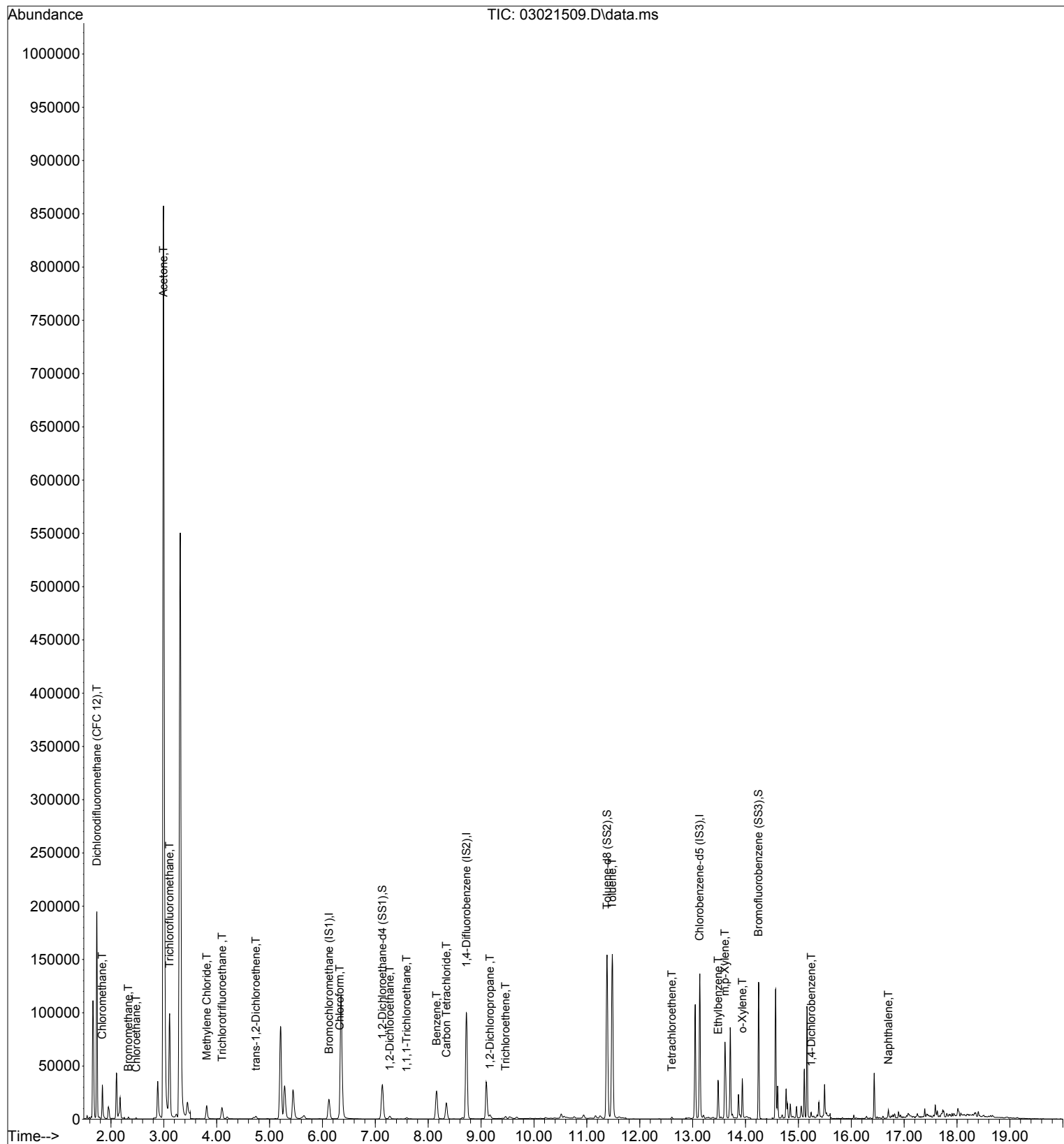
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 03\02\03021509.D

Acq On : 2 Mar 2015 12:01
 Sample : P1500729-029 (1000mL)
 Misc : S29-02041502
 ALS Vial : 5 Sample Multiplier: 1

Operator: WA

Quant Time: Mar 02 16:33:44 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

3/2/15

DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.13	130	27211	1000.000	pg	0.01
22) 1,4-Difluorobenzene (IS2)	8.72	114	188133	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	31938	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.13	65	56983	857.508	pg	0.01
Spiked Amount 1000.000			Recovery	=	85.75%	
30) Toluene-d8 (SS2)	11.38	98	174639	1006.604	pg	0.00
Spiked Amount 1000.000			Recovery	=	100.66%	
40) Bromofluorobenzene (SS3)	14.25	174	75638	1173.074	pg	0.00
Spiked Amount 1000.000			Recovery	=	117.31%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.74	85	145734	1317.835	pg	100
3) Chloromethane	1.84	52	9169	415.182	pg	99
5) Bromomethane	2.33	94	1247	25.077	pg	98
6) Chloroethane	2.48	64	1036	24.764	pg	98
7) Acetone	2.99	58	438124	11219.418	pg	# 73
8) Trichlorofluoromethane	3.11	101	97014	1021.321	pg	100
10) Methylene Chloride	3.81	84	8549	189.672	pg	97
11) Trichlorotrifluoroethane	4.10	151	13586	311.266	pg	100
12) trans-1,2-Dichloroethene	4.74	96	1478	34.131	pg	99
16) Chloroform	6.33	83	7996	95.843	pg	98
18) 1,2-Dichloroethane	7.27	62	4033	60.713	pg	98
19) 1,1,1-Trichloroethane	7.59	97	1665	20.523	pg	99
20) Benzene	8.16	78	50532	294.488	pg	100
21) Carbon Tetrachloride	8.34	117	18618	306.531	pg	99
23) 1,2-Dichloropropane	9.17	63	837	20.399	pg	90
25) Trichloroethene	9.46	130	1402	29.007	pg	99
31) Toluene	11.48	91	171778	930.944	pg	100
33) Tetrachloroethene	12.61	166	1528	26.744	pg	96
36) Ethylbenzene	13.48	91	34354	171.531	pg	98
37) m,p-Xylene	13.61	91	77122	468.525	pg	96
38) o-Xylene	13.94	106	13479	167.553	pg	98
42) 1,4-Dichlorobenzene	15.24	146	2874	26.040	pg	100
45) Naphthalene	16.70	128	7641	38.236	pg	54

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 03\02\03021509.D

Acq On : 2 Mar 2015 12:01

Operator: WA

Sample : P1500729-029 (1000mL)

Misc : S29-02041502

ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 02 16:33:44 2015

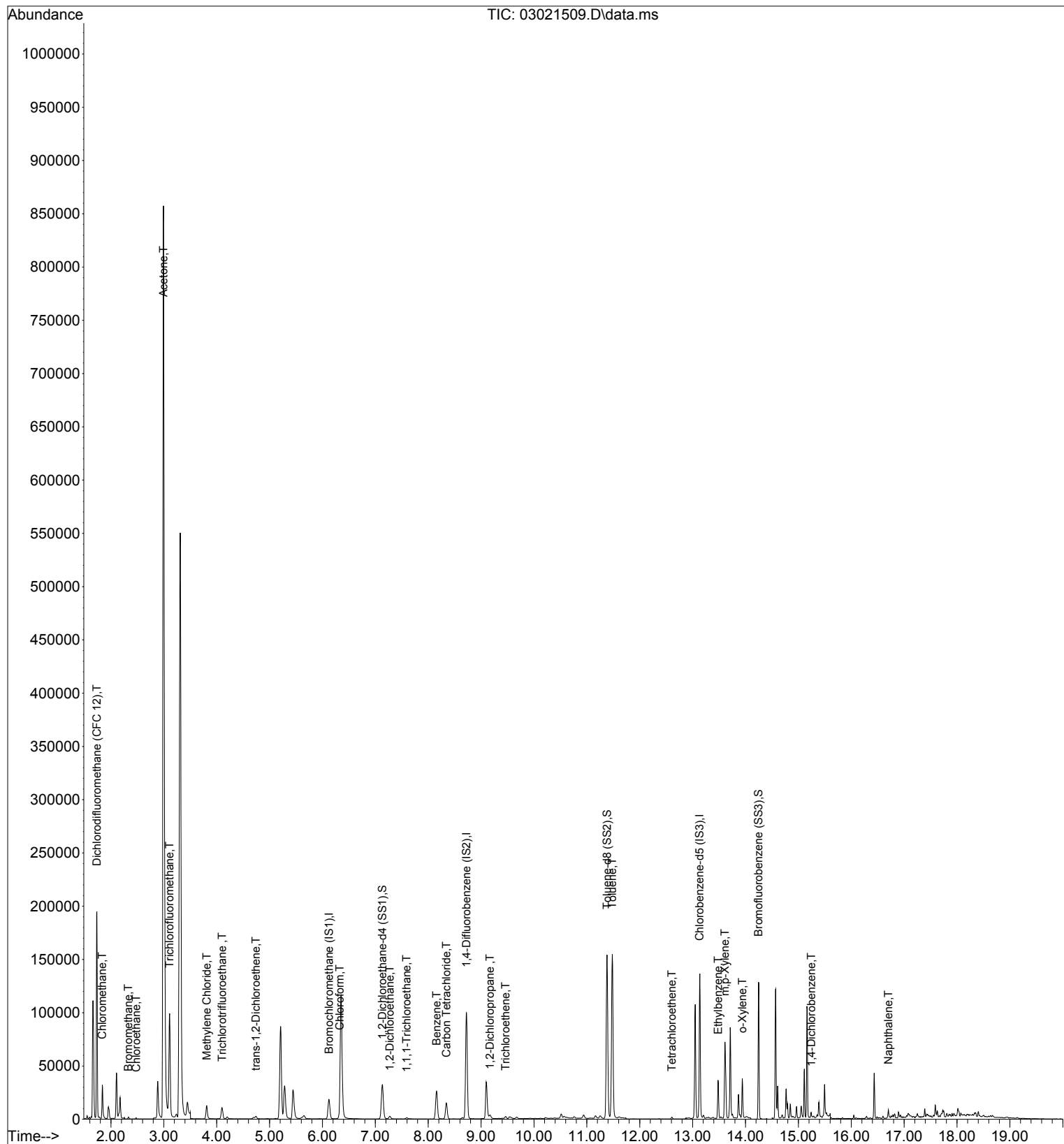
Quant Method : I:\MS19\METHODS\X19021115.M

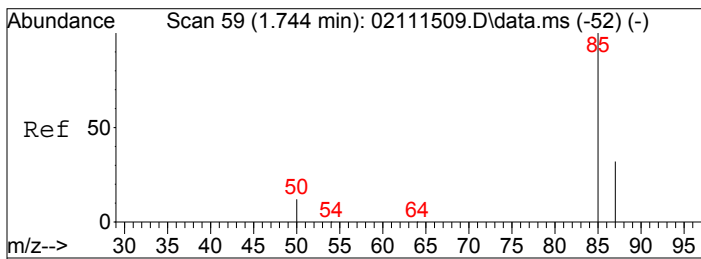
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

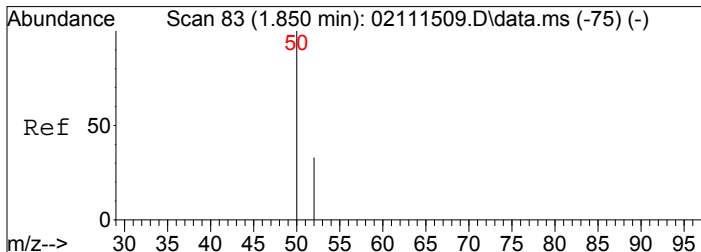
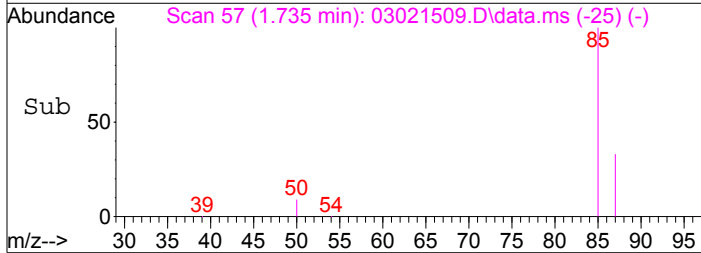
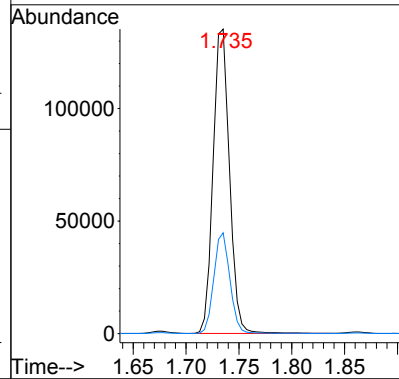
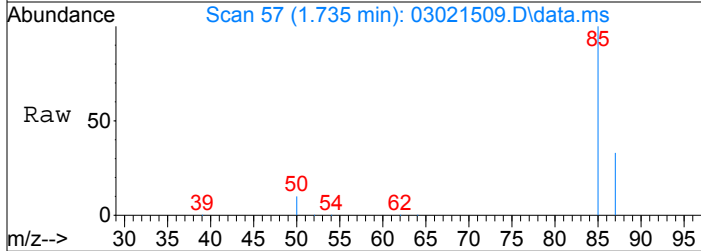
DataAcq Meth:TO15SIM.M





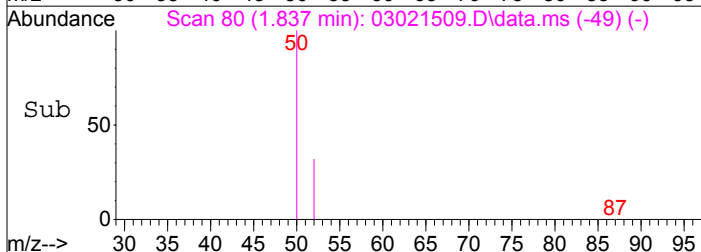
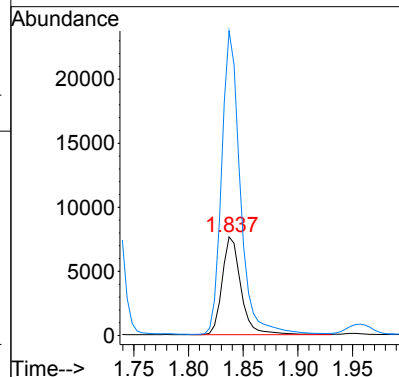
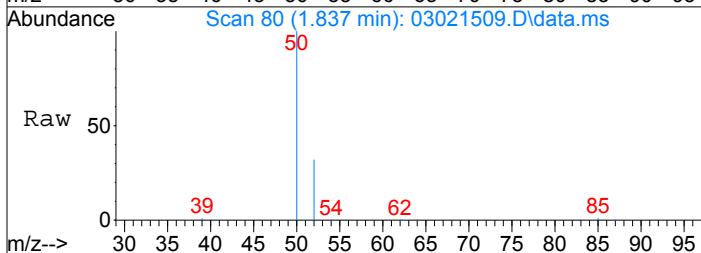
#2
 Dichlorodifluoromethane (CFC 12)
 Concen: 1317.84 pg
 RT: 1.74 min Scan# 57
 Delta R.T. -0.009 min
 Lab File: 03021509.D
 Acq: 2 Mar 2015 12:01

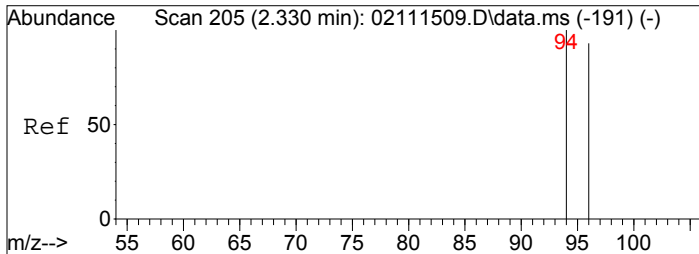
Tgt Ion: 85 Resp: 145734
 Ion Ratio Lower Upper
 85 100
 87 32.4 12.4 52.4



#3
 Chloromethane
 Concen: 415.18 pg
 RT: 1.84 min Scan# 80
 Delta R.T. -0.013 min
 Lab File: 03021509.D
 Acq: 2 Mar 2015 12:01

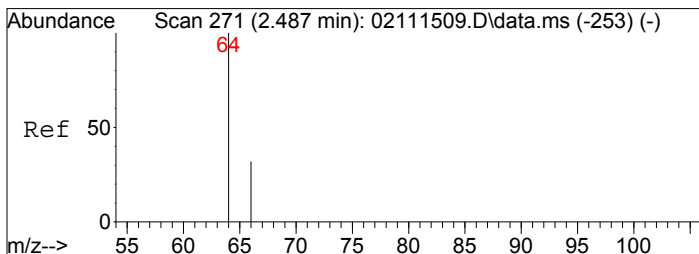
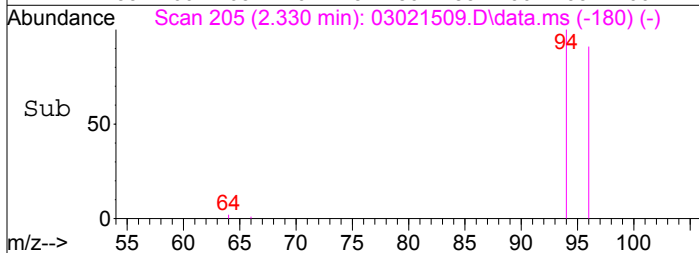
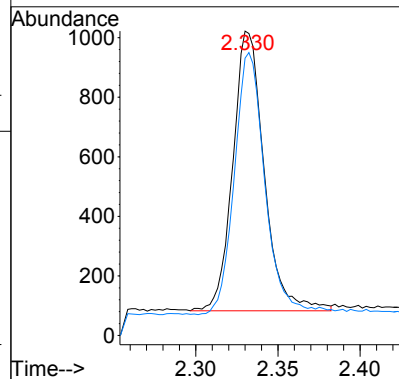
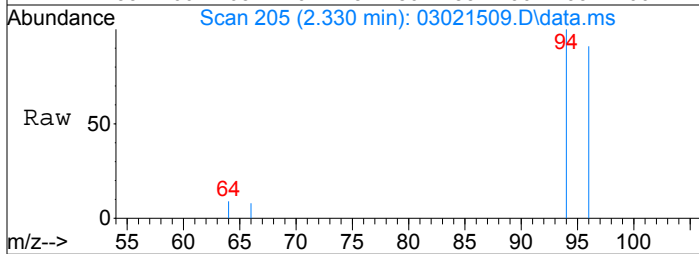
Tgt Ion: 52 Resp: 9169
 Ion Ratio Lower Upper
 52 100
 50 305.3 283.7 323.7





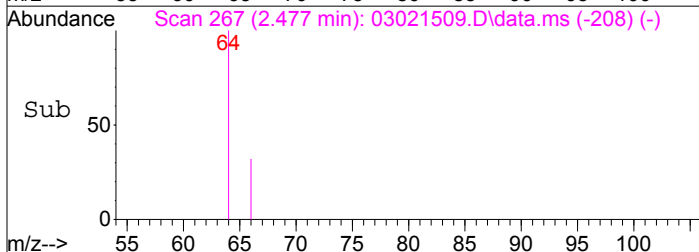
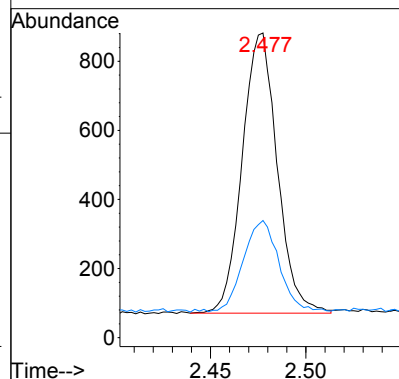
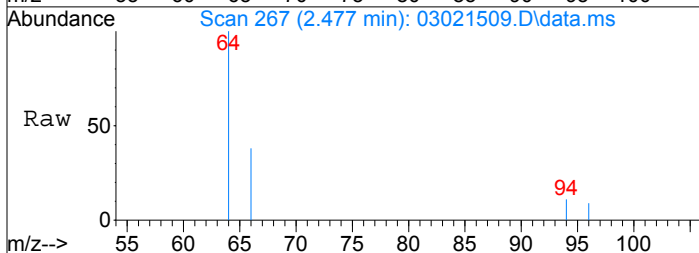
#5
Bromomethane
Concen: 25.08 pg
RT: 2.33 min Scan# 205
Delta R.T. -0.000 min
Lab File: 03021509.D
Acq: 2 Mar 2015 12:01

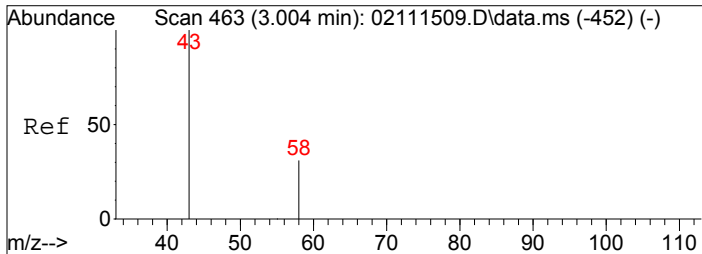
Tgt Ion: 94 Resp: 1247
Ion Ratio Lower Upper
94 100
96 92.4 75.5 113.3



#6
Chloroethane
Concen: 24.76 pg
RT: 2.48 min Scan# 267
Delta R.T. -0.009 min
Lab File: 03021509.D
Acq: 2 Mar 2015 12:01

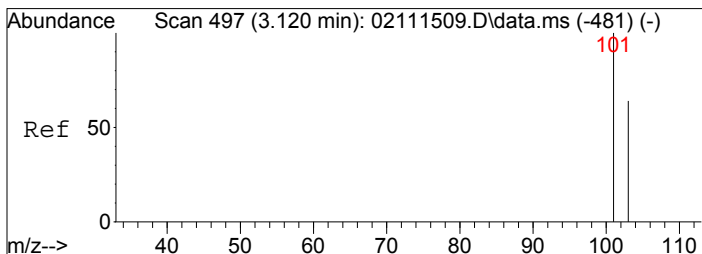
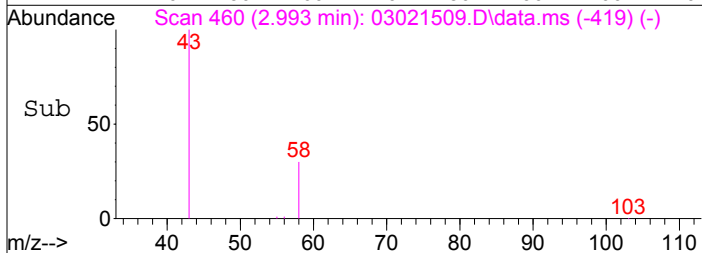
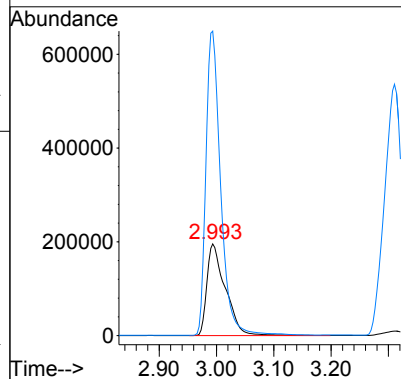
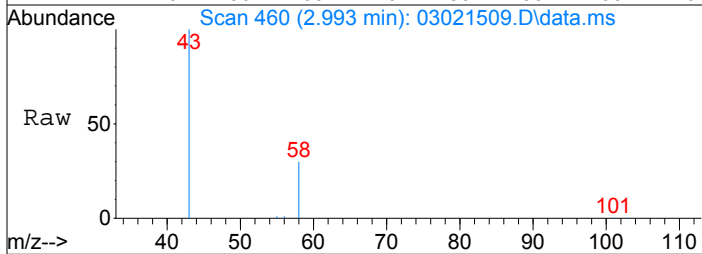
Tgt Ion: 64 Resp: 1036
Ion Ratio Lower Upper
64 100
66 33.1 12.2 52.2





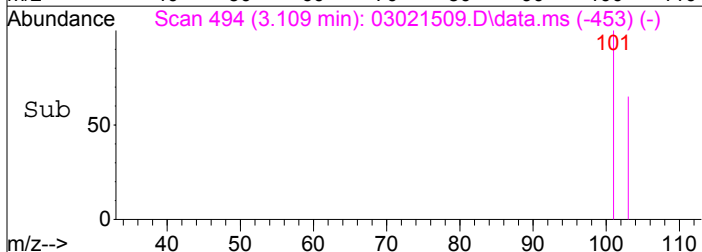
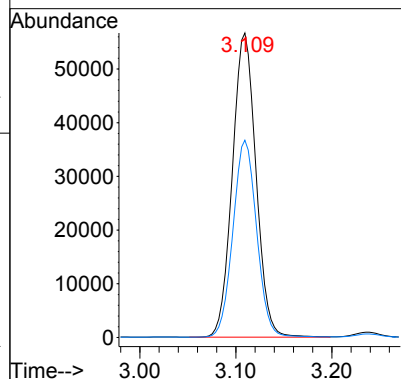
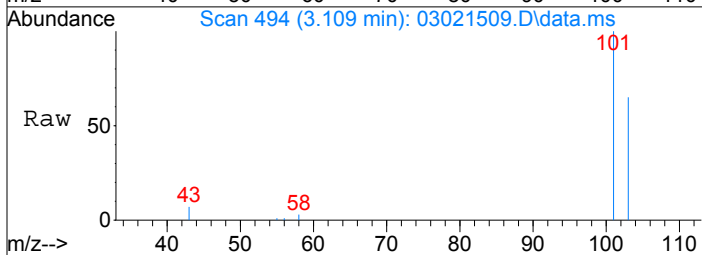
#7
Acetone
Concen: 11219.42 pg
RT: 2.99 min Scan# 460
Delta R.T. -0.011 min
Lab File: 03021509.D
Acq: 2 Mar 2015 12:01

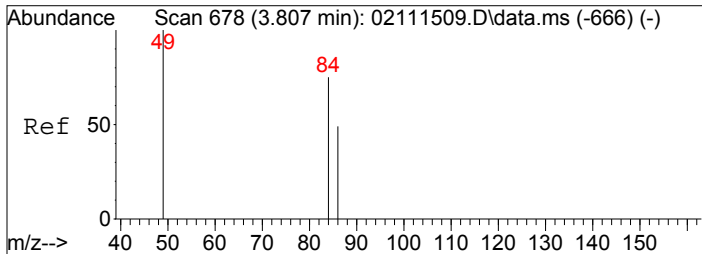
Tgt Ion: 58 Resp: 438124
Ion Ratio Lower Upper
58 100
43 265.5 301.8 341.8#



#8
Trichlorofluoromethane
Concen: 1021.32 pg
RT: 3.11 min Scan# 494
Delta R.T. -0.010 min
Lab File: 03021509.D
Acq: 2 Mar 2015 12:01

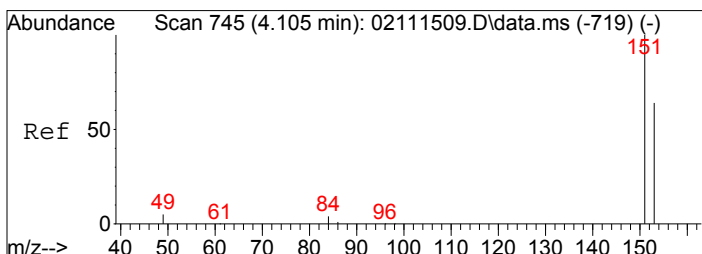
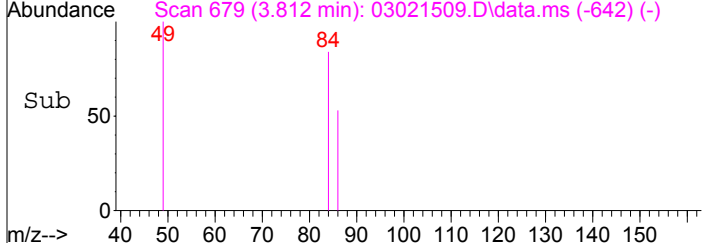
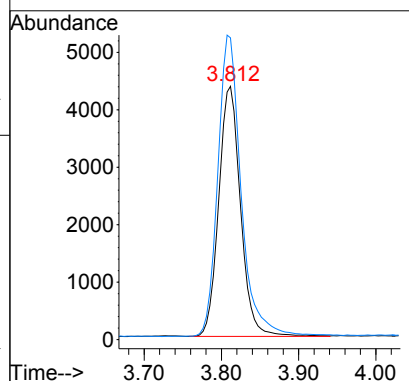
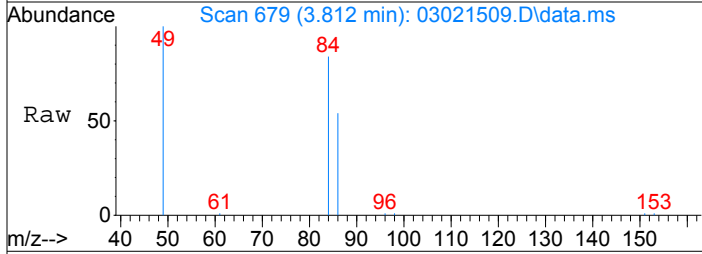
Tgt Ion: 101 Resp: 97014
Ion Ratio Lower Upper
101 100
103 64.9 51.8 77.6





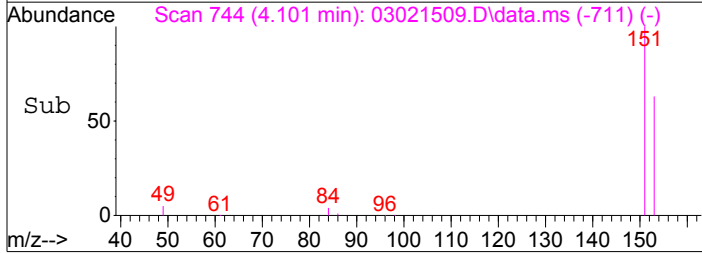
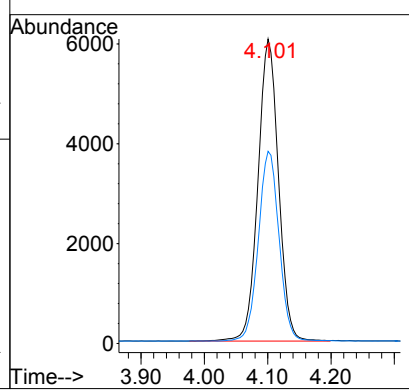
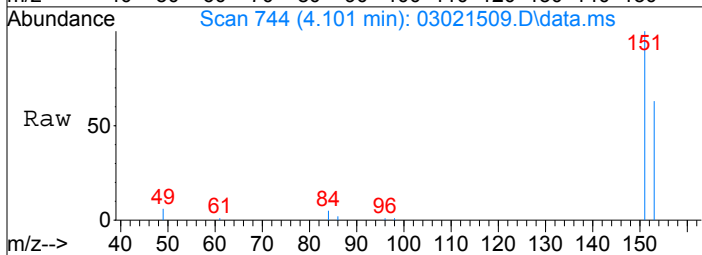
#10
 Methylene Chloride
 Concen: 189.67 pg
 RT: 3.81 min Scan# 679
 Delta R.T. 0.005 min
 Lab File: 03021509.D
 Acq: 2 Mar 2015 12:01

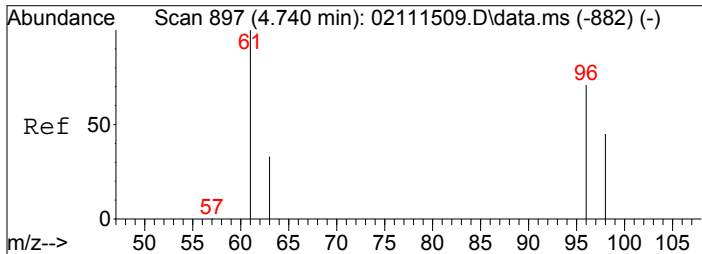
Tgt Ion: 84	Resp: 8549
Ion Ratio	Lower Upper
84	100
49	129.0 112.3 152.3



#11
 Trichlorotrifluoroethane
 Concen: 311.27 pg
 RT: 4.10 min Scan# 744
 Delta R.T. -0.004 min
 Lab File: 03021509.D
 Acq: 2 Mar 2015 12:01

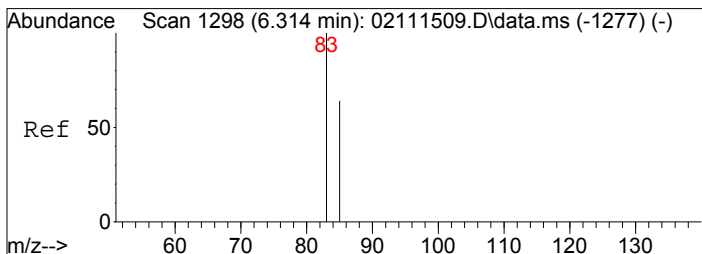
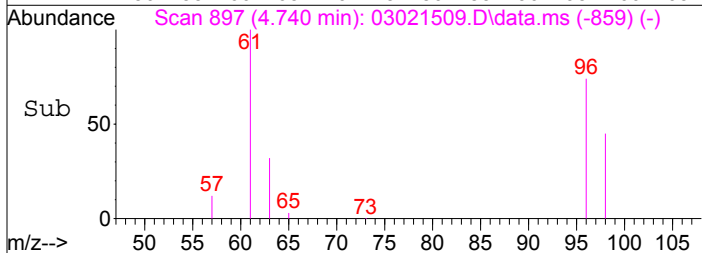
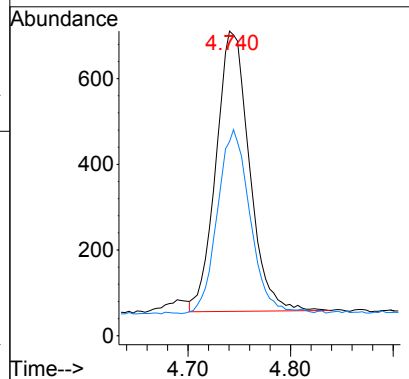
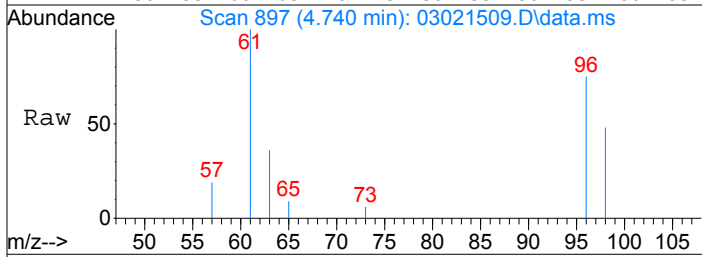
Tgt Ion: 151	Resp: 13586
Ion Ratio	Lower Upper
151	100
153	63.5 43.6 83.6





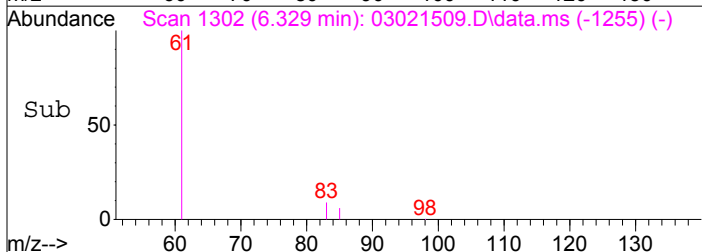
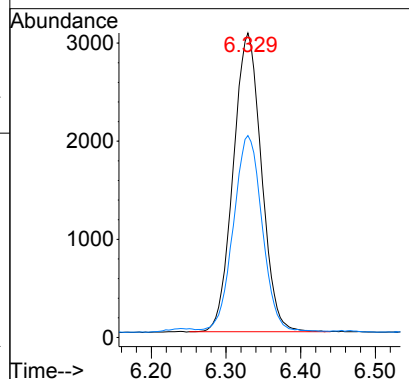
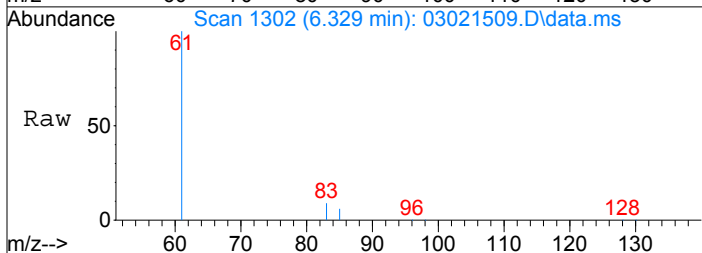
#12
trans-1,2-Dichloroethene
Concen: 34.13 pg
RT: 4.74 min Scan# 897
Delta R.T. 0.000 min
Lab File: 03021509.D
Acq: 2 Mar 2015 12:01

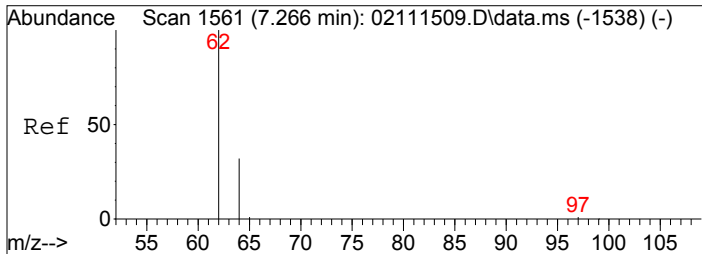
Tgt Ion: 96 Resp: 1478
Ion Ratio Lower Upper
96 100
98 64.3 43.7 83.7



#16
Chloroform
Concen: 95.84 pg
RT: 6.33 min Scan# 1302
Delta R.T. 0.015 min
Lab File: 03021509.D
Acq: 2 Mar 2015 12:01

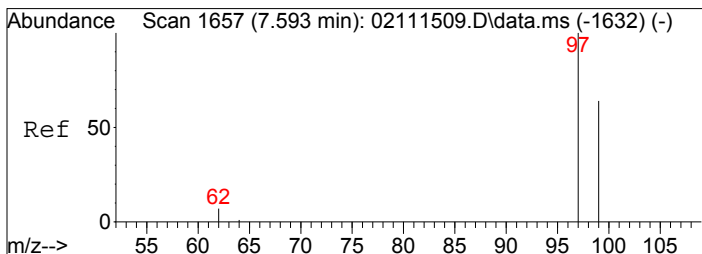
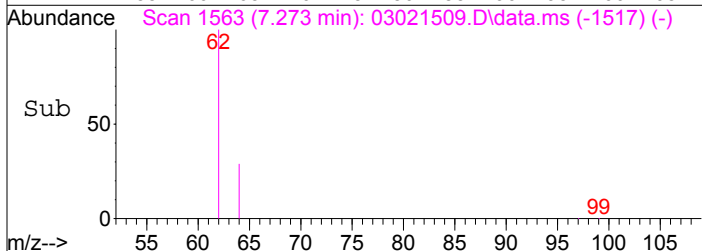
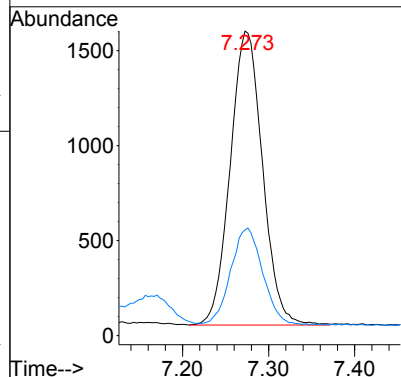
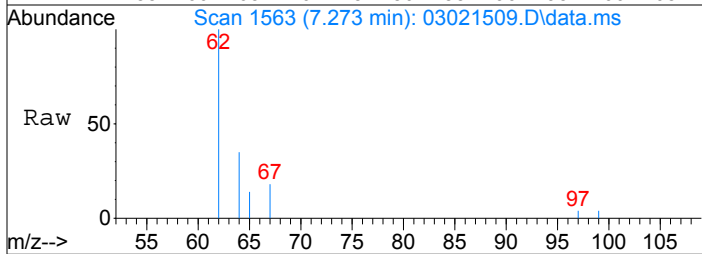
Tgt Ion: 83 Resp: 7996
Ion Ratio Lower Upper
83 100
85 66.6 45.4 85.4





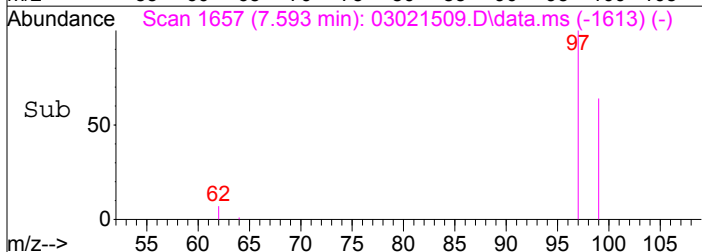
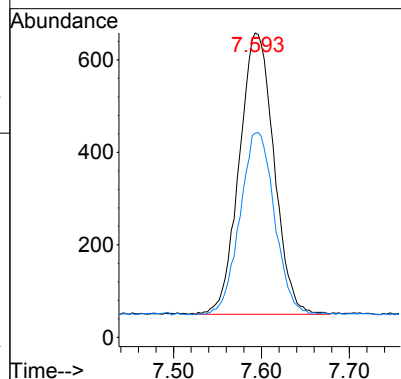
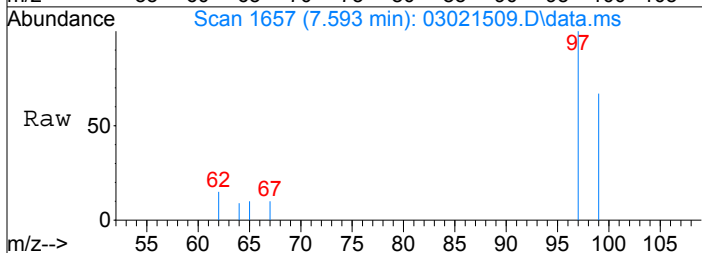
#18
 1,2-Dichloroethane
 Concen: 60.71 pg
 RT: 7.27 min Scan# 1563
 Delta R.T. 0.007 min
 Lab File: 03021509.D
 Acq: 2 Mar 2015 12:01

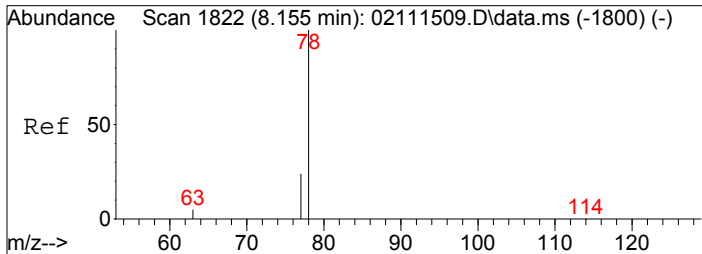
Tgt Ion: 62 Resp: 4033
 Ion Ratio Lower Upper
 62 100
 64 32.6 11.6 51.6



#19
 1,1,1-Trichloroethane
 Concen: 20.52 pg
 RT: 7.59 min Scan# 1657
 Delta R.T. 0.000 min
 Lab File: 03021509.D
 Acq: 2 Mar 2015 12:01

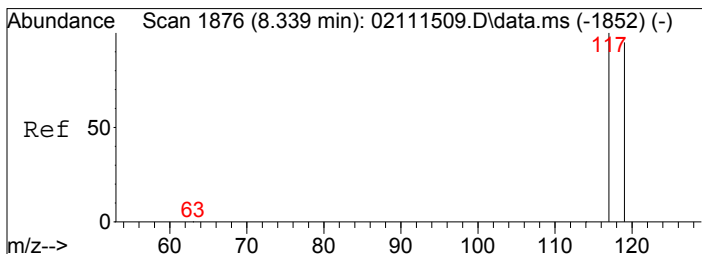
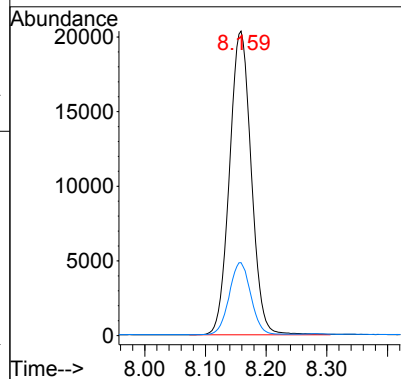
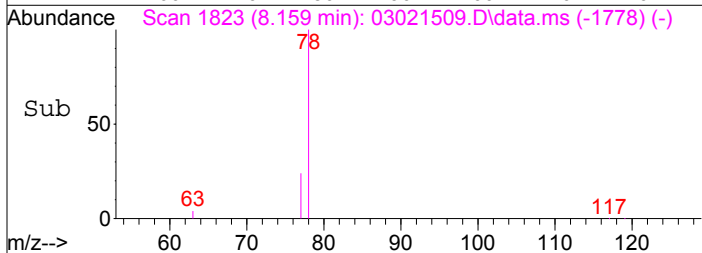
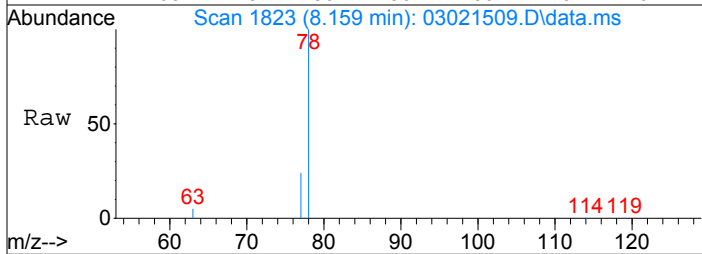
Tgt Ion: 97 Resp: 1665
 Ion Ratio Lower Upper
 97 100
 99 64.7 44.0 84.0





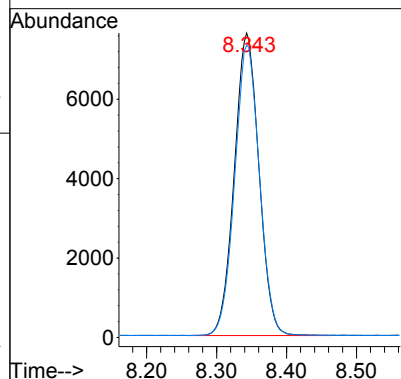
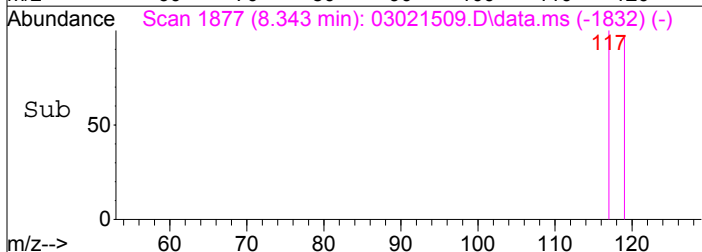
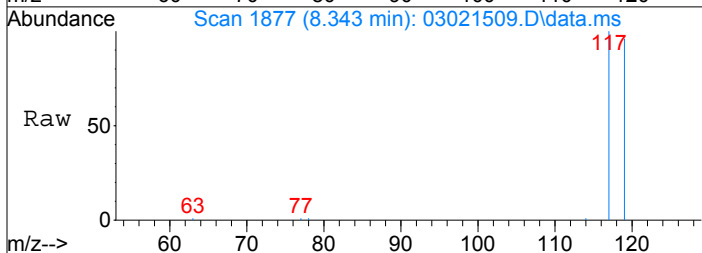
#20
Benzene
Concen: 294.49 pg
RT: 8.16 min Scan# 1823
Delta R.T. 0.004 min
Lab File: 03021509.D
Acq: 2 Mar 2015 12:01

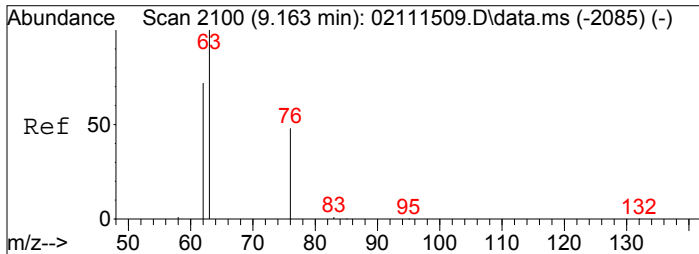
Tgt Ion: 78 Resp: 50532
Ion Ratio Lower Upper
78 100
77 23.6 3.7 43.7



#21
Carbon Tetrachloride
Concen: 306.53 pg
RT: 8.34 min Scan# 1877
Delta R.T. 0.004 min
Lab File: 03021509.D
Acq: 2 Mar 2015 12:01

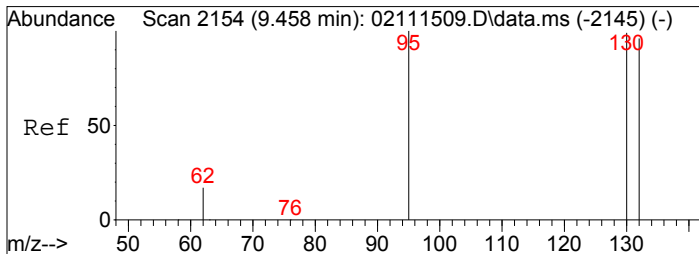
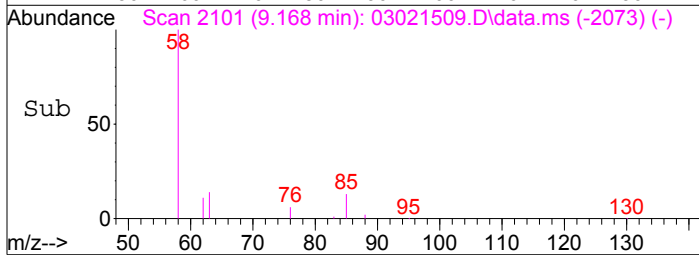
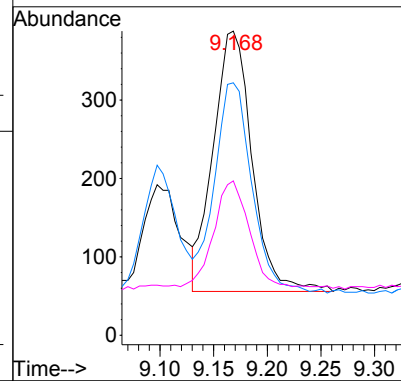
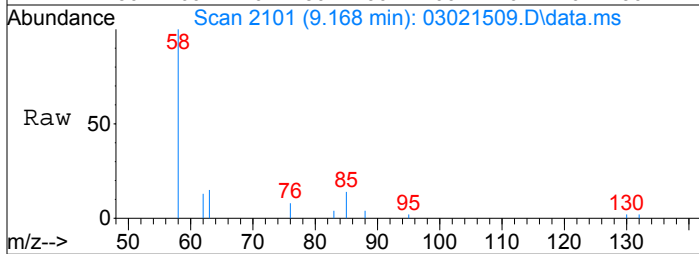
Tgt Ion: 117 Resp: 18618
Ion Ratio Lower Upper
117 100
119 96.5 75.5 115.5





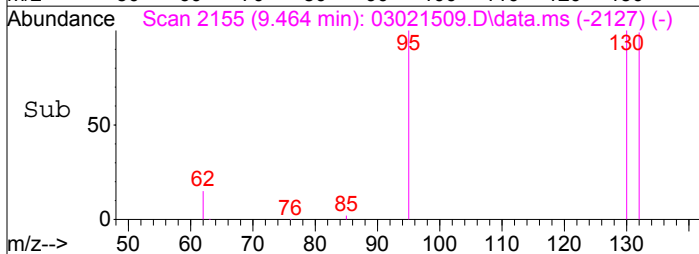
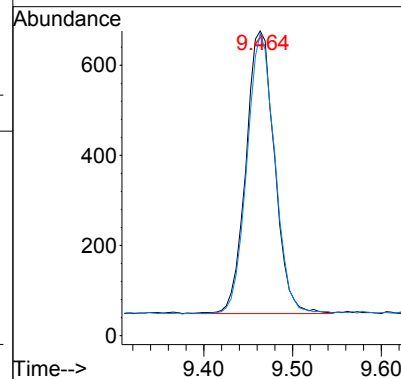
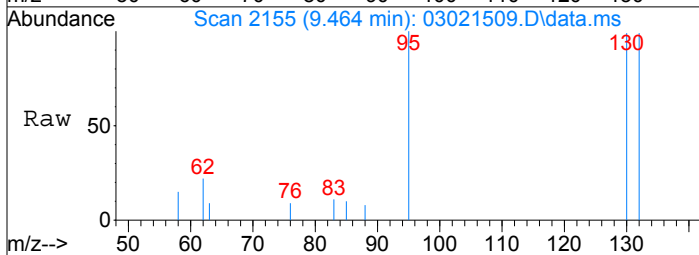
#23
1,2-Dichloropropane
Concen: 20.40 pg
RT: 9.17 min Scan# 2101
Delta R.T. 0.006 min
Lab File: 03021509.D
Acq: 2 Mar 2015 12:01

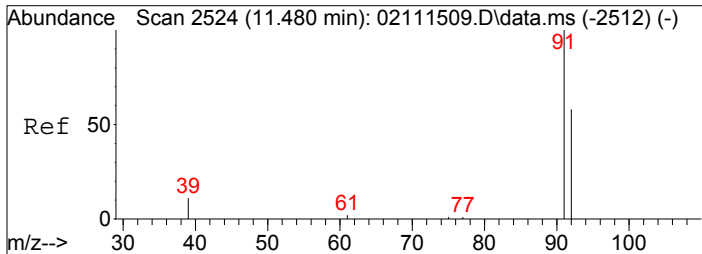
Tgt Ion: 63 Resp: 837
Ion Ratio Lower Upper
63 100
62 78.4 52.0 92.0
76 39.4 28.1 68.1



#25
Trichloroethene
Concen: 29.01 pg
RT: 9.46 min Scan# 2155
Delta R.T. 0.006 min
Lab File: 03021509.D
Acq: 2 Mar 2015 12:01

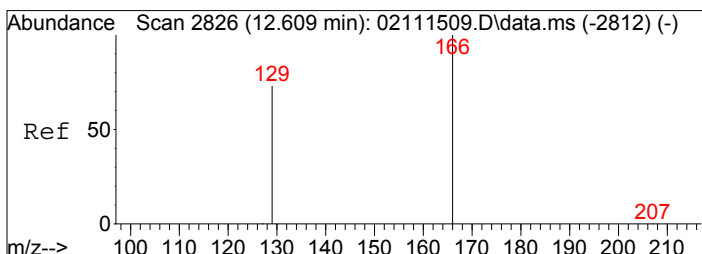
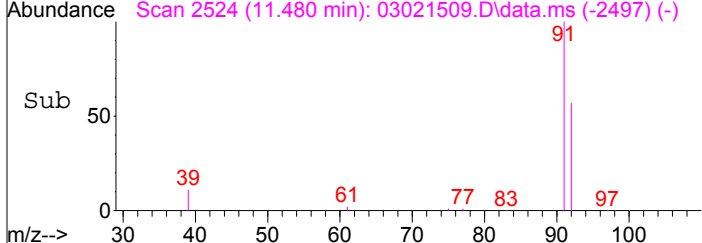
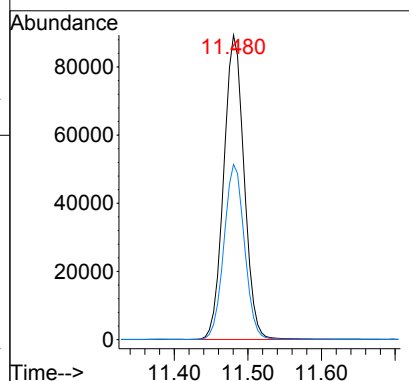
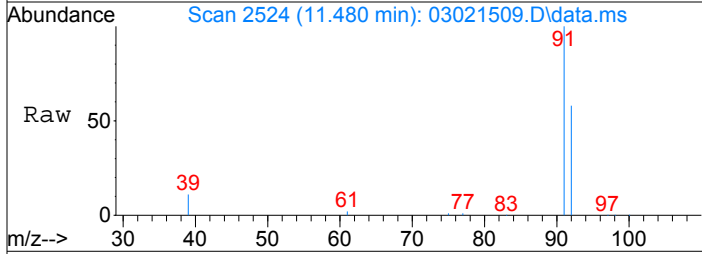
Tgt Ion: 130 Resp: 1402
Ion Ratio Lower Upper
130 100
132 96.2 77.1 117.1





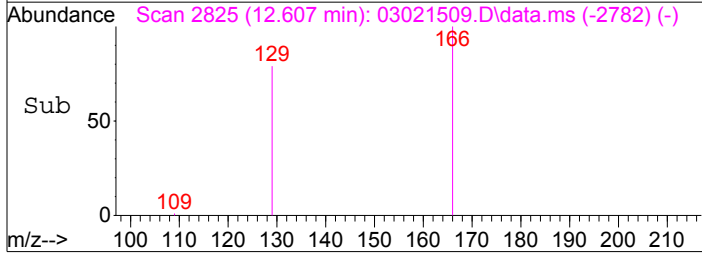
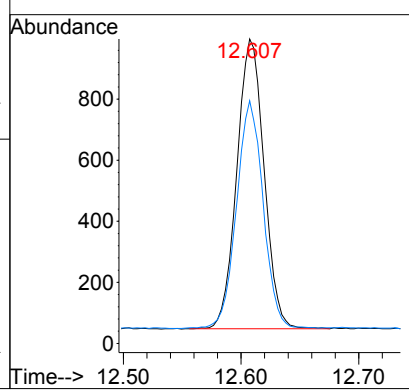
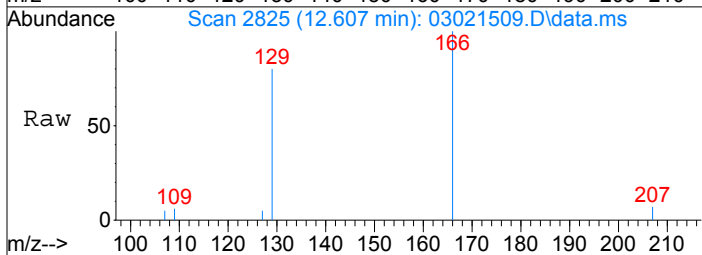
#31
Toluene
Concen: 930.94 pg
RT: 11.48 min Scan# 2524
Delta R.T. 0.000 min
Lab File: 03021509.D
Acq: 2 Mar 2015 12:01

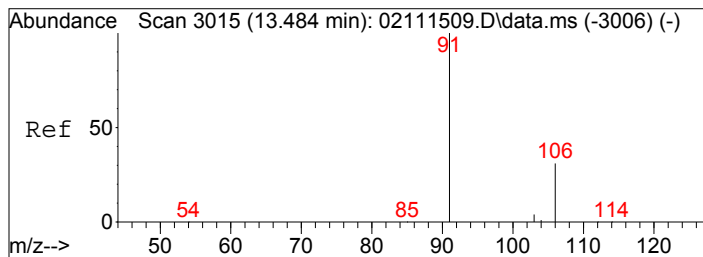
Tgt Ion:	91	Resp:	171778
Ion Ratio	Lower	Upper	
91	100		
92	58.0	37.7	77.7



#33
Tetrachloroethene
Concen: 26.74 pg
RT: 12.61 min Scan# 2825
Delta R.T. -0.002 min
Lab File: 03021509.D
Acq: 2 Mar 2015 12:01

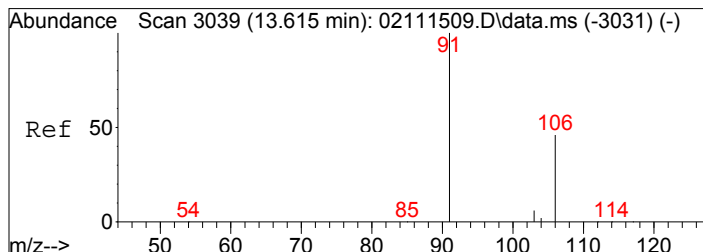
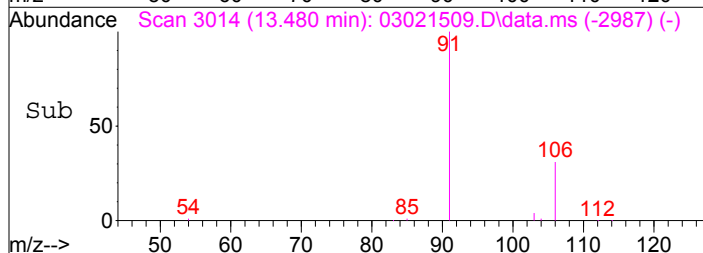
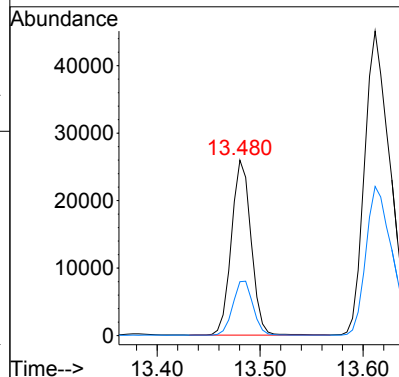
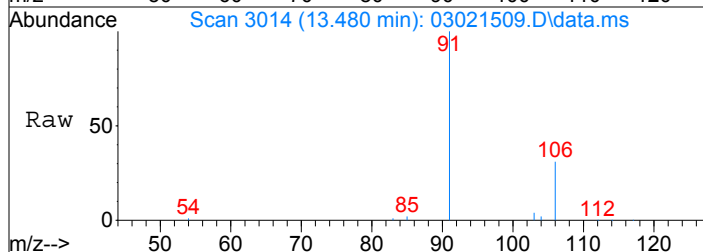
Tgt Ion:	166	Resp:	1528
Ion Ratio	Lower	Upper	
166	100		
129	76.9	53.3	93.3





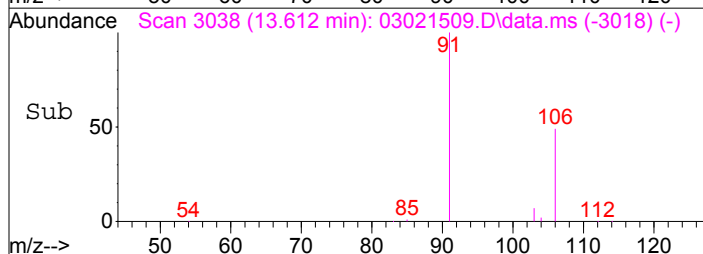
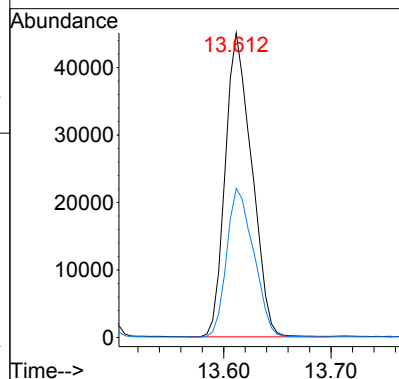
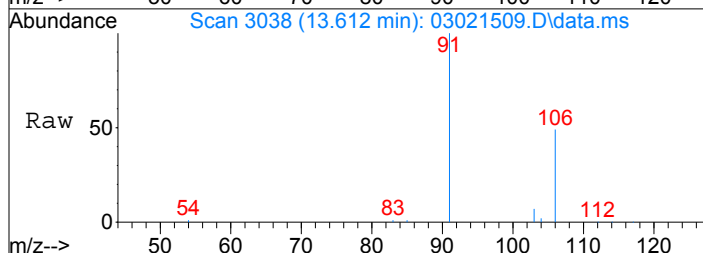
#36
Ethylbenzene
Concen: 171.53 pg
RT: 13.48 min Scan# 3014
Delta R.T. -0.003 min
Lab File: 03021509.D
Acq: 2 Mar 2015 12:01

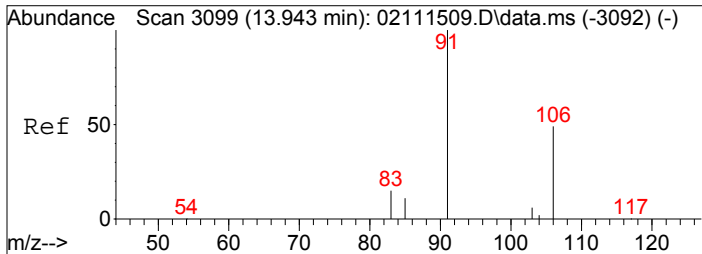
Tgt Ion: 91 Resp: 34354
Ion Ratio Lower Upper
91 100
106 31.8 10.9 50.9



#37
m,p-Xylene
Concen: 468.52 pg
RT: 13.61 min Scan# 3038
Delta R.T. -0.003 min
Lab File: 03021509.D
Acq: 2 Mar 2015 12:01

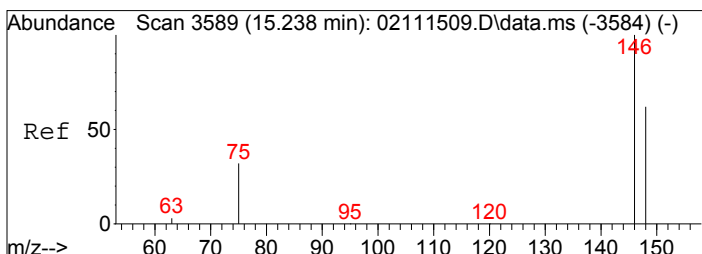
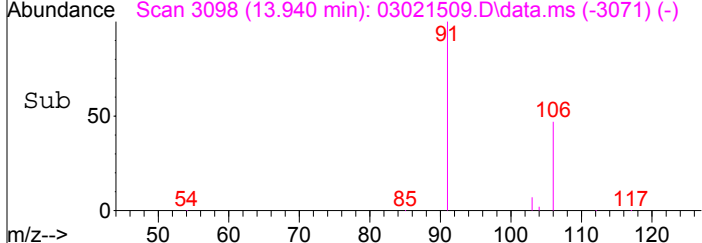
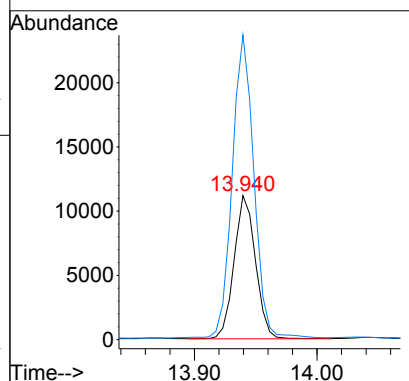
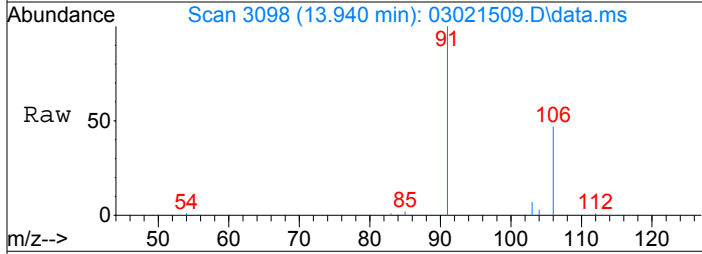
Tgt Ion: 91 Resp: 77122
Ion Ratio Lower Upper
91 100
106 49.9 27.5 67.5





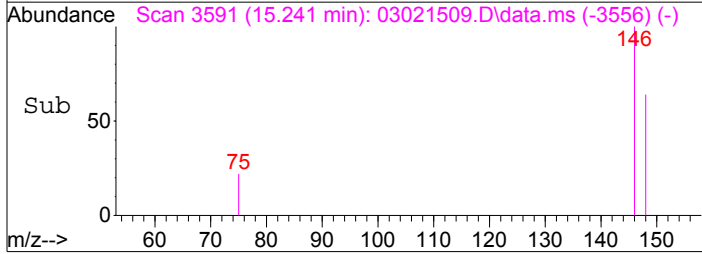
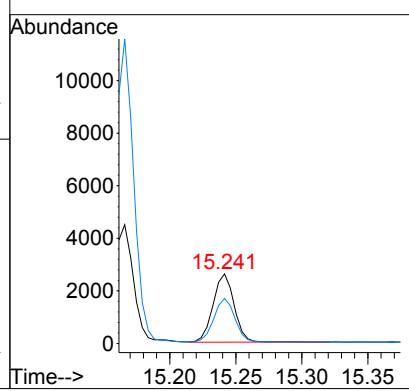
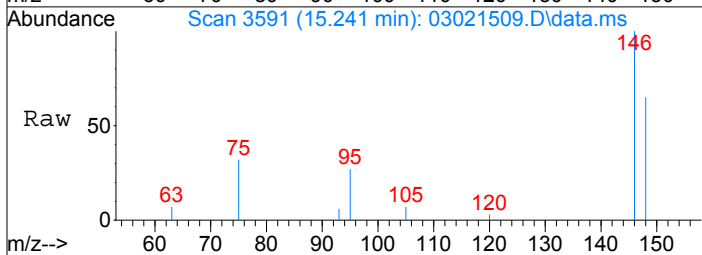
#38
 o-Xylene
 Concen: 167.55 pg
 RT: 13.94 min Scan# 3098
 Delta R.T. -0.003 min
 Lab File: 03021509.D
 Acq: 2 Mar 2015 12:01

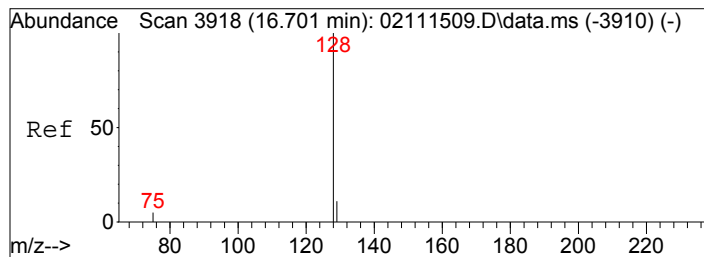
Tgt Ion:106	Resp:	13479
Ion Ratio	Lower	Upper
106	100	
91	214.4	198.3 238.3



#42
 1,4-Dichlorobenzene
 Concen: 26.04 pg
 RT: 15.24 min Scan# 3591
 Delta R.T. 0.004 min
 Lab File: 03021509.D
 Acq: 2 Mar 2015 12:01

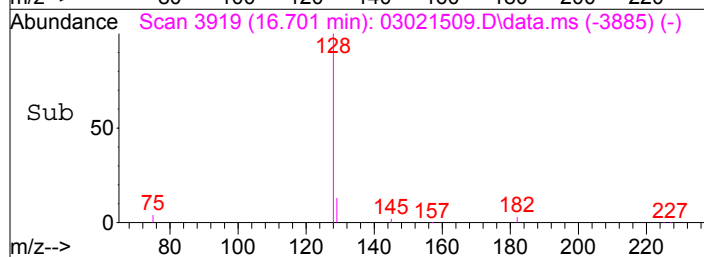
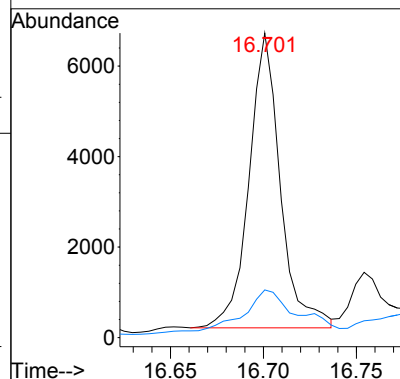
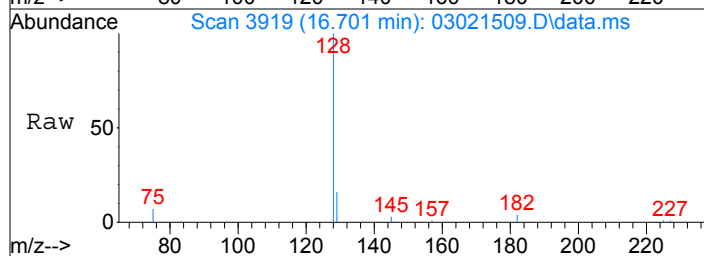
Tgt Ion:146	Resp:	2874
Ion Ratio	Lower	Upper
146	100	
148	63.7	43.5 83.5





#45
Naphthalene
Concen: 38.24 pg
RT: 16.70 min Scan# 3919
Delta R.T. -0.000 min
Lab File: 03021509.D
Acq: 2 Mar 2015 12:01

Tgt Ion:128 Resp: 7641
Ion Ratio Lower Upper
128 100
129 28.2 0.0 30.9



Data File: I:\MS19\DATA\2015 03\02\03021510.D

Acq On : 2 Mar 2015 12:29

Operator: WA

Sample : P1500729-030 (1000mL)

Misc : S29-02041502

ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 02 14:34:00 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

3/2/15

DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	25819	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	183481	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	30371	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	55894	886.468	pg	0.00
Spiked Amount 1000.000			Recovery	=	88.65%	
30) Toluene-d8 (SS2)	11.38	98	175214	1035.524	pg	0.00
Spiked Amount 1000.000			Recovery	=	103.55%	
40) Bromofluorobenzene (SS3)	14.25	174	69701	1136.771	pg	0.00
Spiked Amount 1000.000			Recovery	=	113.68%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.74	85	166326	1585.132	pg	100
3) Chloromethane	1.85	52	10328	492.876	pg	99
4) Vinyl Chloride	2.04	62	58	N.D.		
5) Bromomethane	2.34	94	1454	30.816	pg	96
6) Chloroethane	2.49	64	263	N.D.		
7) Acetone	3.01	58	58118	1568.516	pg	96
8) Trichlorofluoromethane	3.11	101	73513	815.637	pg	100
9) 1,1-Dichloroethene	3.67	96	20	N.D.		
10) Methylene Chloride	3.82	84	7574	177.099	pg	91
11) Trichlorotrifluoroethane	4.11	151	15208	367.213	pg	100
12) trans-1,2-Dichloroethene	4.75	96	226	N.D.		
13) 1,1-Dichloroethane	4.95	63	194	N.D.		
14) Methyl tert-Butyl Ether	5.16	73	344	N.D.		
15) cis-1,2-Dichloroethene	5.95	96	45	N.D.		
16) Chloroform	6.31	83	4608	58.211	pg	100
18) 1,2-Dichloroethane	7.27	62	2843	45.106	pg	100
19) 1,1,1-Trichloroethane	7.60	97	886	N.D.		
20) Benzene	8.16	78	31537	193.699	pg	100
21) Carbon Tetrachloride	8.34	117	20587	357.224	pg	99
23) 1,2-Dichloropropane	9.16	63	703	N.D.		
24) Bromodichloromethane	9.42	83	229	N.D.		
25) Trichloroethene	9.46	130	221	N.D.		
26) 1,4-Dioxane	9.56	88	237	N.D.		
27) cis-1,3-Dichloropropene	10.46	75	243	N.D.		
28) trans-1,3-Dichloropropene	11.06	75	84	N.D.		
29) 1,1,2-Trichloroethane	11.19	83	57	N.D.		
31) Toluene	11.48	91	44213	245.686	pg	99
32) 1,2-Dibromoethane	12.13	107	21	N.D.		
33) Tetrachloroethene	12.61	166	826	N.D.		
35) Chlorobenzene	13.17	112	352	N.D.		
36) Ethylbenzene	13.48	91	7991	41.958	pg	99
37) m,p-Xylene	13.61	91	20244	129.330	pg	97
38) o-Xylene	13.94	106	3824	49.987	pg	98
39) 1,1,1,2,2-Tetrachloroethane	13.94	83	43	N.D.		
41) 1,3-Dichlorobenzene	15.20	146	47	N.D.		
42) 1,4-Dichlorobenzene	15.24	146	841	N.D.		
43) 1,2-Dichlorobenzene	15.46	146	98	N.D.		
44) 1,2,4-Trichlorobenzene	16.63	182	70	N.D.		
45) Naphthalene	16.70	128	6092	32.057	pg	95
46) Hexachlorobutadiene	16.95	225	42	N.D.		

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 03\02\03021510.D

Acq On : 2 Mar 2015 12:29

Operator: WA

Sample : P1500729-030 (1000mL)

Misc : S29-02041502

ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 02 14:34:00 2015

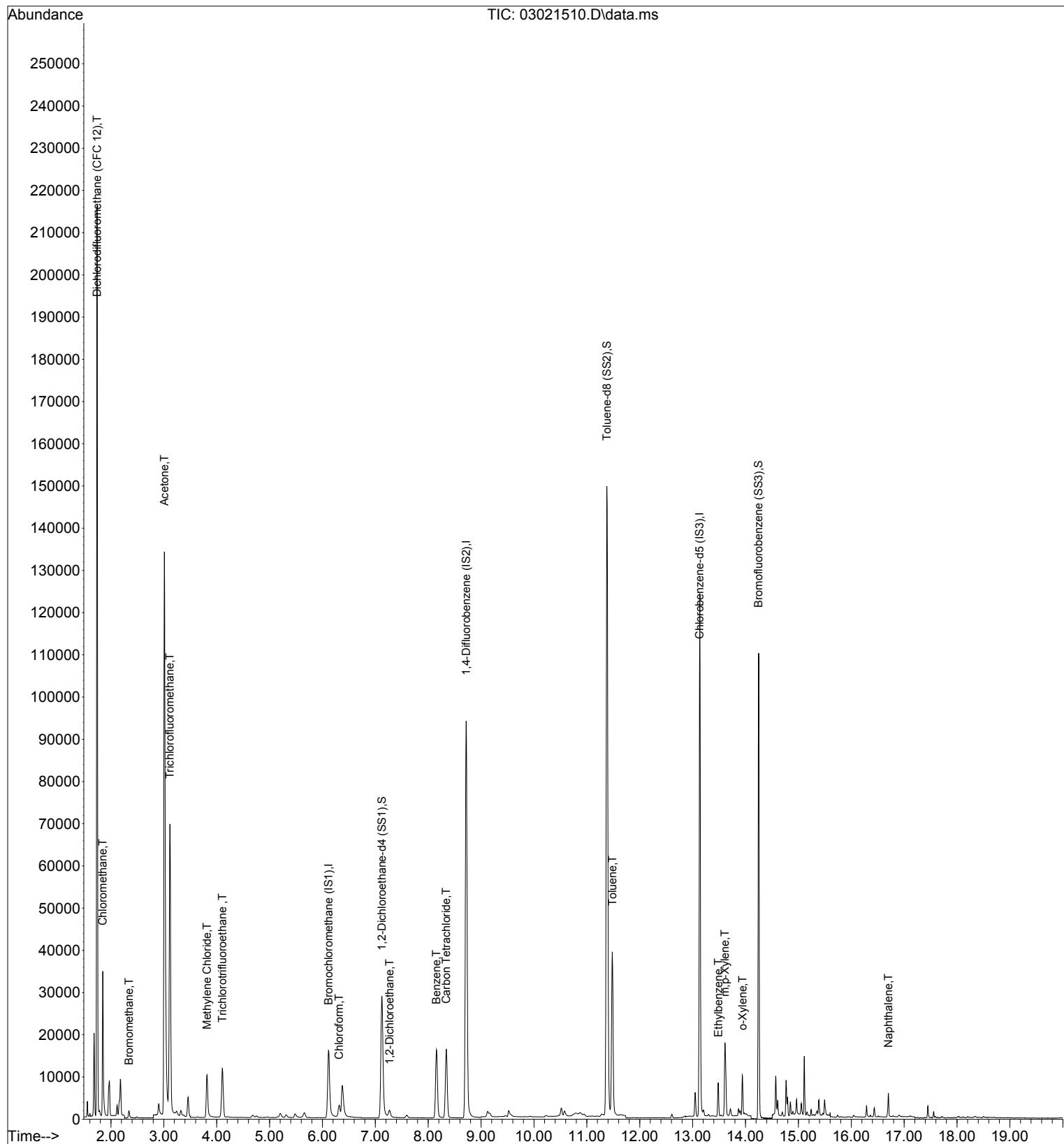
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 03\02\03021510.D

Acq On : 2 Mar 2015 12:29

Operator: WA

Sample : P1500729-030 (1000mL)

Misc : S29-02041502

ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 02 14:34:00 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

3/2/15

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1) Bromochloromethane (IS1)	6.11	130	25819	1000.000	pg	0.00
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34) Chlorobenzene-d5 (IS3)	13.13	54	30371	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	55894	886.468	pg	0.00
Spiked Amount 1000.000			Recovery	=	88.65%	
30) Toluene-d8 (SS2)	11.38	98	175214	1035.524	pg	0.00
Spiked Amount 1000.000			Recovery	=	103.55%	
40) Bromofluorobenzene (SS3)	14.25	174	69701	1136.771	pg	0.00
Spiked Amount 1000.000			Recovery	=	113.68%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.74	85	166326	1585.132	pg	100
3) Chloromethane	1.85	52	10328	492.876	pg	99
5) Bromomethane	2.34	94	1454	30.816	pg	96
7) Acetone	3.01	58	58118	1568.516	pg	96
8) Trichlorofluoromethane	3.11	101	73513	815.637	pg	100
10) Methylene Chloride	3.82	84	7574	177.099	pg	91
11) Trichlorotrifluoroethane	4.11	151	15208	367.213	pg	100
16) Chloroform	6.31	83	4608	58.211	pg	100
18) 1,2-Dichloroethane	7.27	62	2843	45.106	pg	100
20) Benzene	8.16	78	31537	193.699	pg	100
21) Carbon Tetrachloride	8.34	117	20587	357.224	pg	99
31) Toluene	11.48	91	44213	245.686	pg	99
36) Ethylbenzene	13.48	91	7991	41.958	pg	99
37) m,p-Xylene	13.61	91	20244	129.330	pg	97
38) o-Xylene	13.94	106	3824	49.987	pg	98
45) Naphthalene	16.70	128	6092	32.057	pg	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File: I:\MS19\DATA\2015 03\02\03021510.D

Acq On : 2 Mar 2015 12:29

Operator: WA

Sample : P1500729-030 (1000mL)

Misc : S29-02041502

ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 02 14:34:00 2015

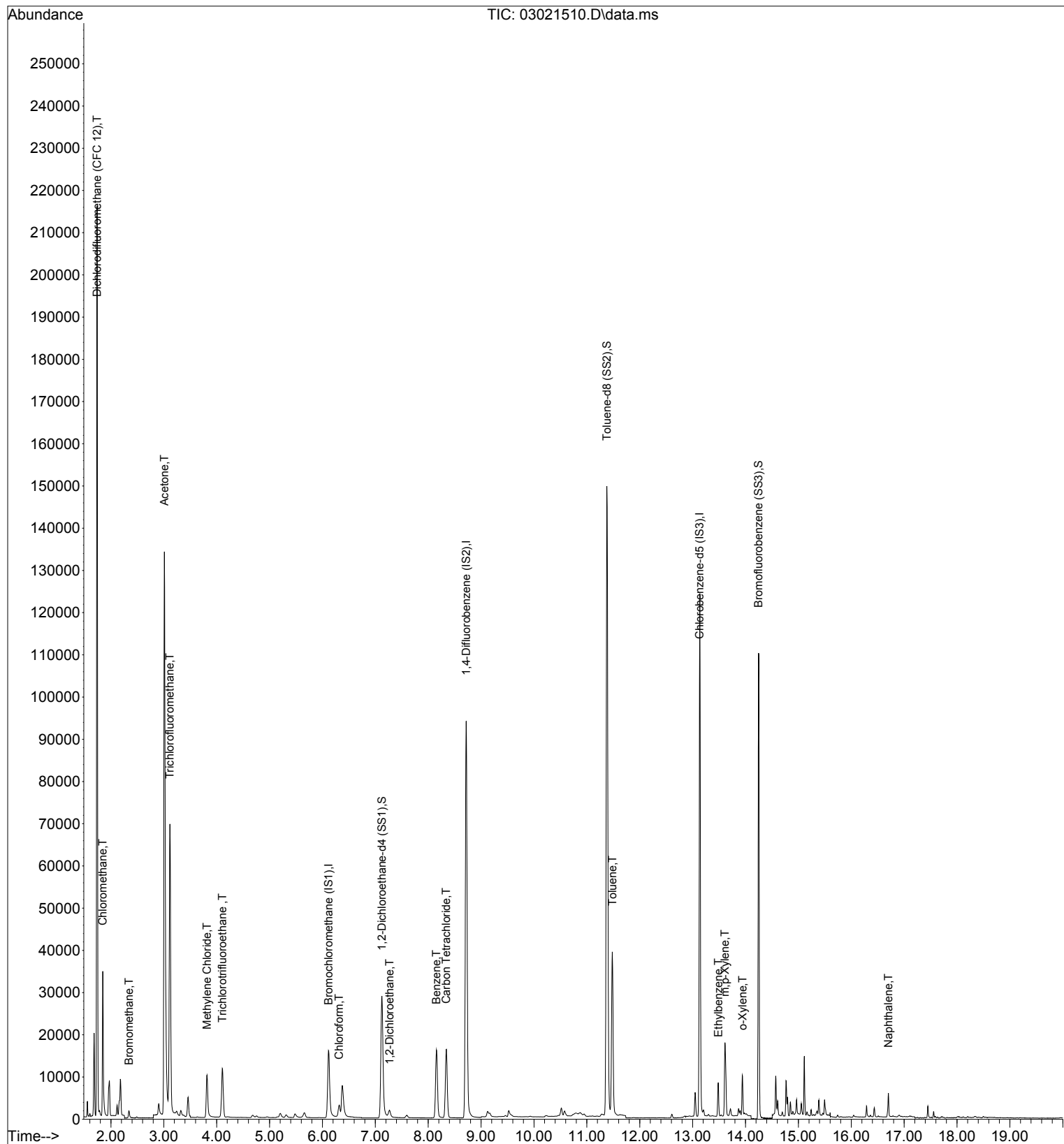
Quant Method : I:\MS19\METHODS\X19021115.M

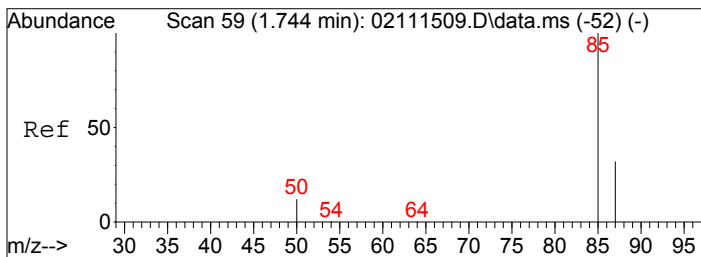
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

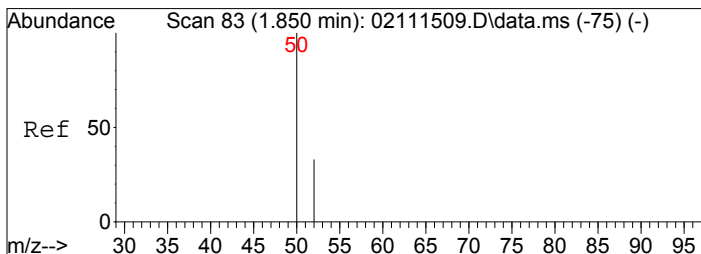
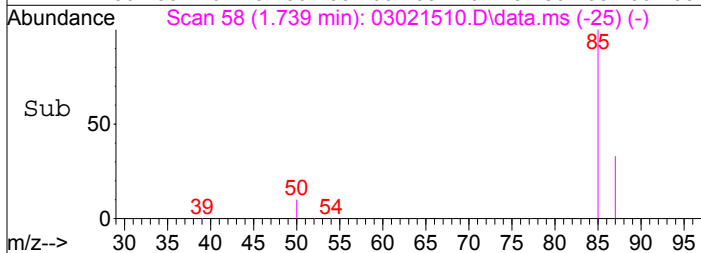
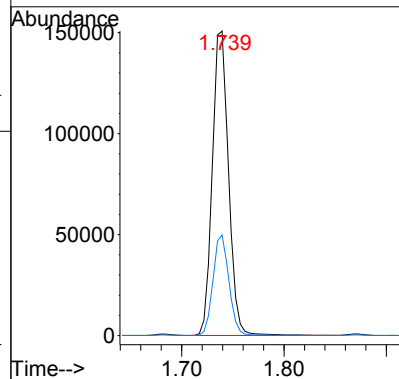
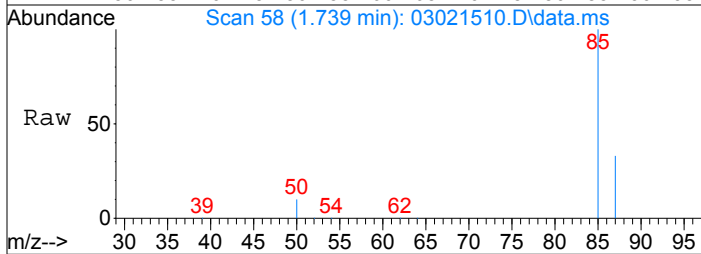
DataAcq Meth:TO15SIM.M





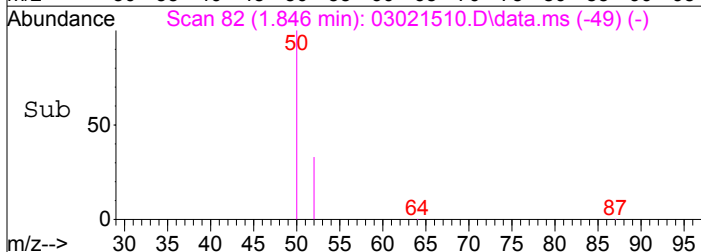
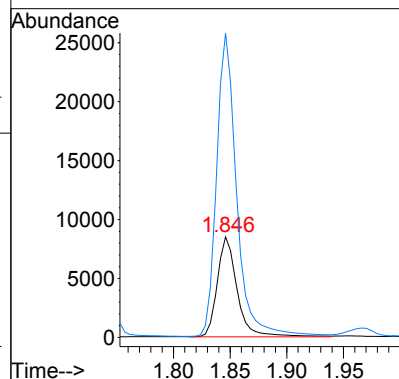
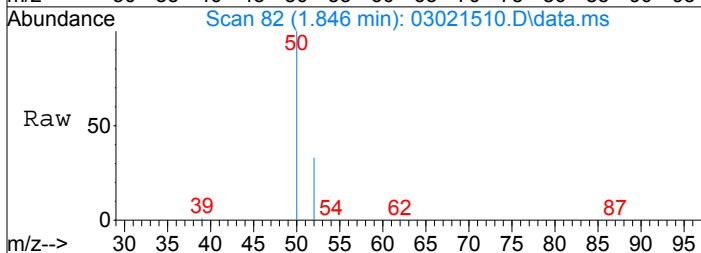
#2
 Dichlorodifluoromethane (CFC 12)
 Concen: 1585.13 pg
 RT: 1.74 min Scan# 58
 Delta R.T. -0.004 min
 Lab File: 03021510.D
 Acq: 2 Mar 2015 12:29

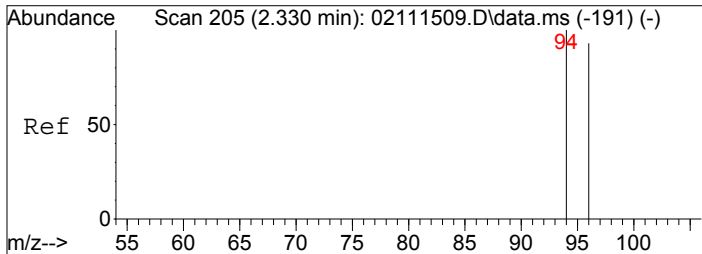
Tgt Ion: 85 Resp: 166326
 Ion Ratio Lower Upper
 85 100
 87 32.5 12.4 52.4



#3
 Chloromethane
 Concen: 492.88 pg
 RT: 1.85 min Scan# 82
 Delta R.T. -0.004 min
 Lab File: 03021510.D
 Acq: 2 Mar 2015 12:29

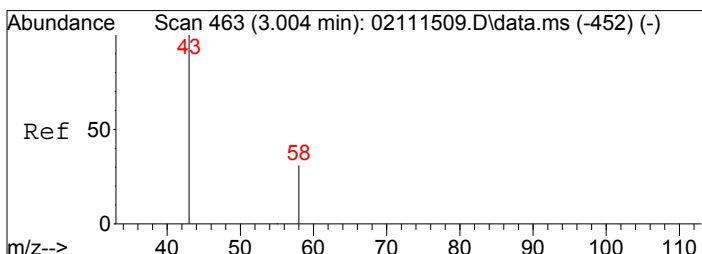
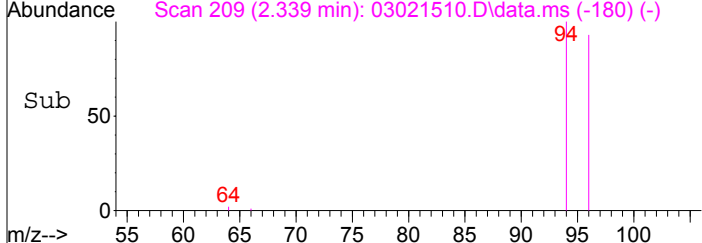
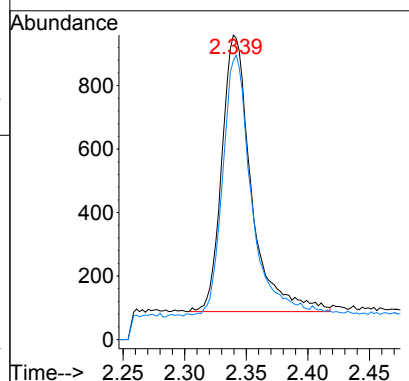
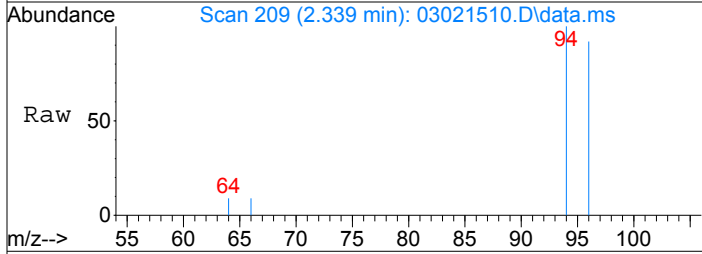
Tgt Ion: 52 Resp: 10328
 Ion Ratio Lower Upper
 52 100
 50 305.0 283.7 323.7





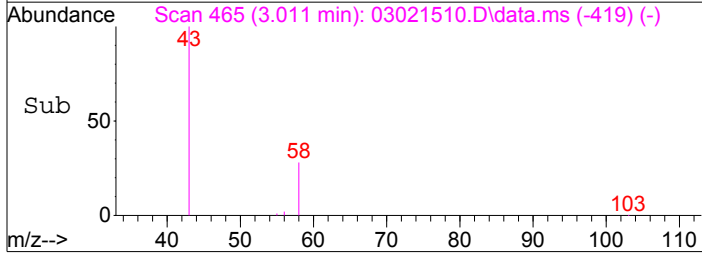
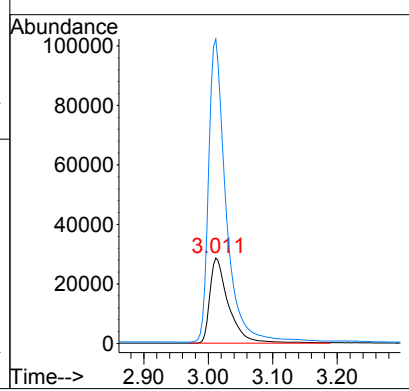
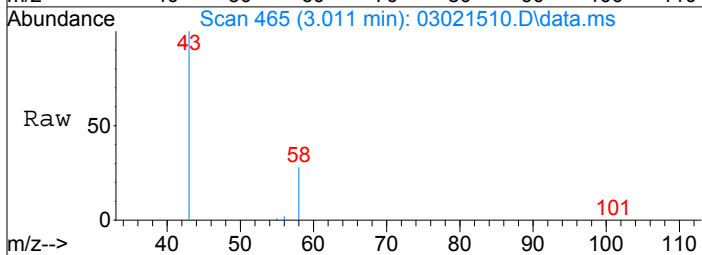
#5
 Bromomethane
 Concen: 30.82 pg
 RT: 2.34 min Scan# 209
 Delta R.T. 0.009 min
 Lab File: 03021510.D
 Acq: 2 Mar 2015 12:29

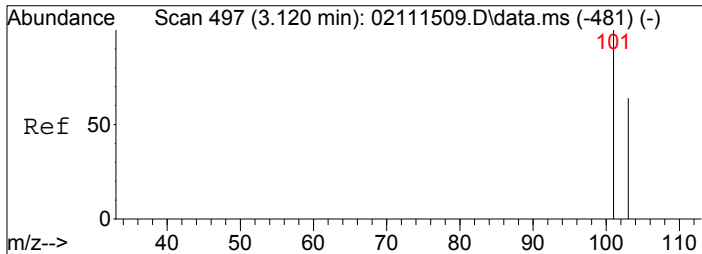
Tgt Ion: 94	Resp: 1454
Ion Ratio	Lower Upper
94	100
96	90.6 75.5 113.3



#7
 Acetone
 Concen: 1568.52 pg
 RT: 3.01 min Scan# 465
 Delta R.T. 0.007 min
 Lab File: 03021510.D
 Acq: 2 Mar 2015 12:29

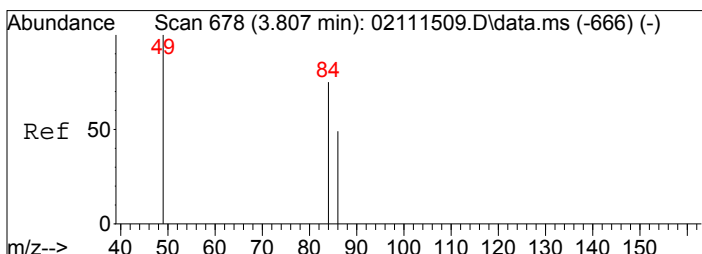
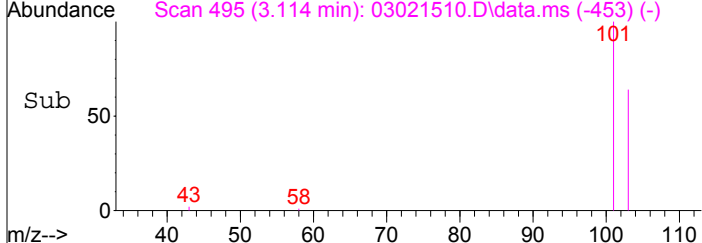
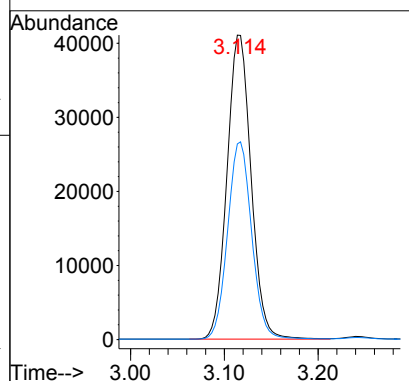
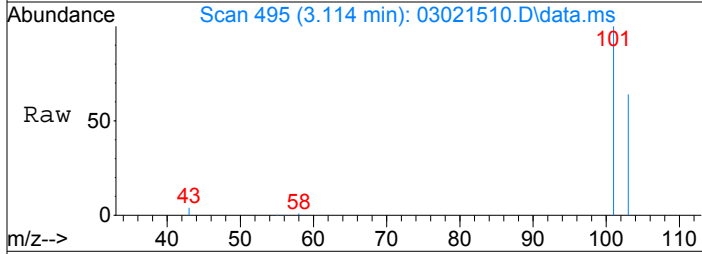
Tgt Ion: 58	Resp: 58118
Ion Ratio	Lower Upper
58	100
43	330.1 301.8 341.8





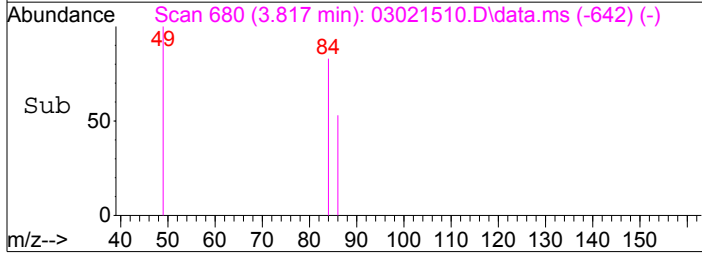
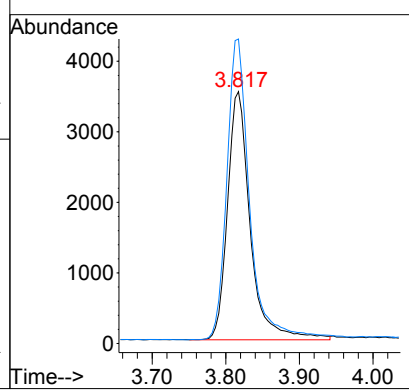
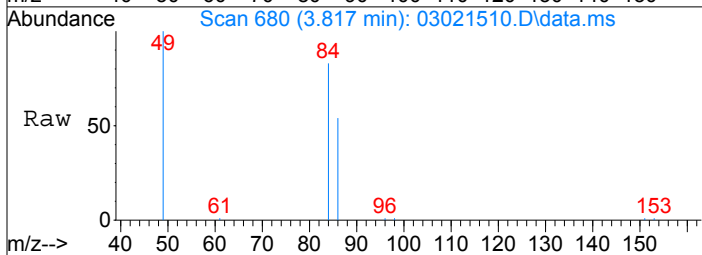
#8
 Trichlorofluoromethane
 Concen: 815.64 pg
 RT: 3.11 min Scan# 495
 Delta R.T. -0.006 min
 Lab File: 03021510.D
 Acq: 2 Mar 2015 12:29

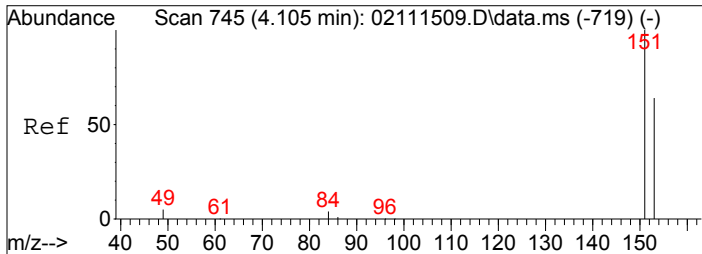
Tgt Ion:101	Resp:	73513
Ion Ratio	Lower	Upper
101	100	
103	64.7	51.8 77.6



#10
 Methylene Chloride
 Concen: 177.10 pg
 RT: 3.82 min Scan# 680
 Delta R.T. 0.010 min
 Lab File: 03021510.D
 Acq: 2 Mar 2015 12:29

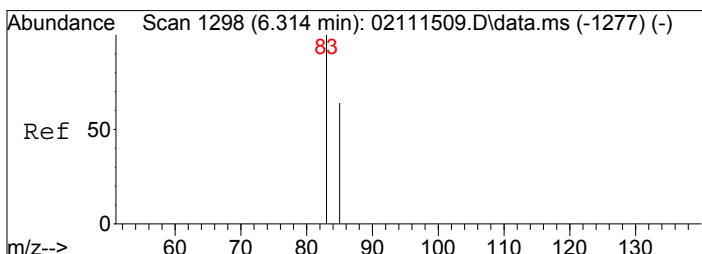
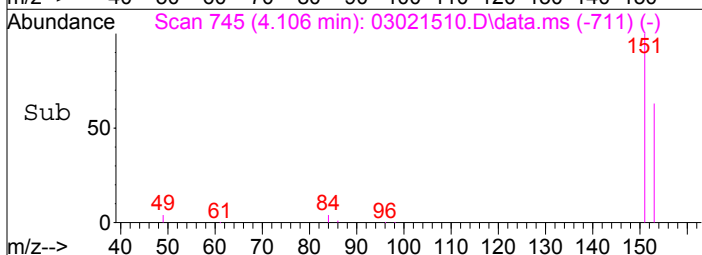
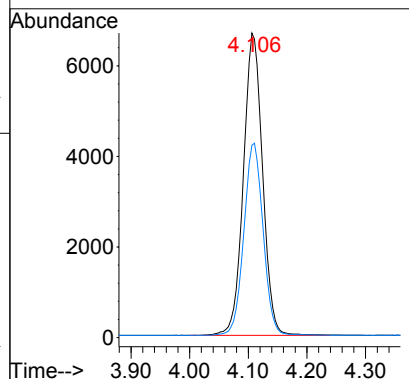
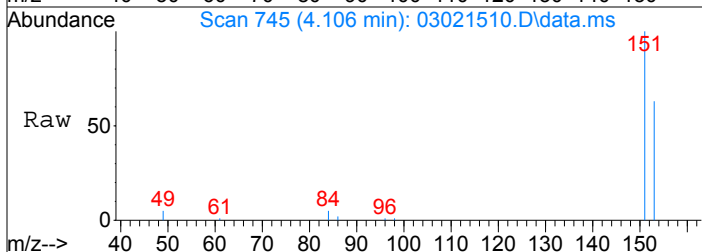
Tgt Ion: 84	Resp:	7574
Ion Ratio	Lower	Upper
84	100	
49	121.6	112.3 152.3





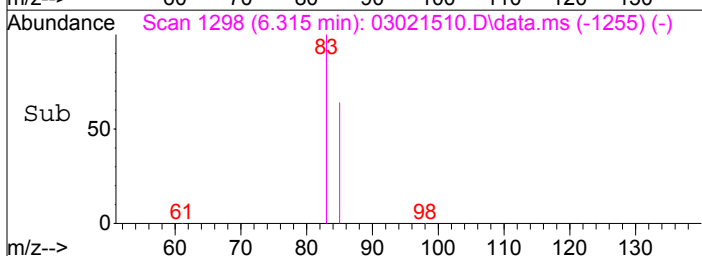
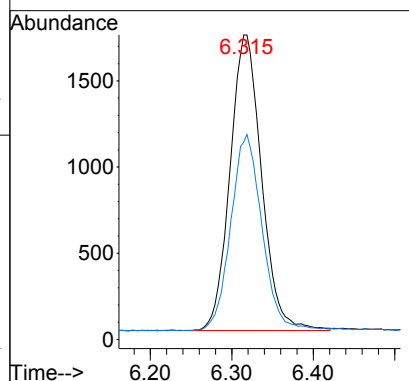
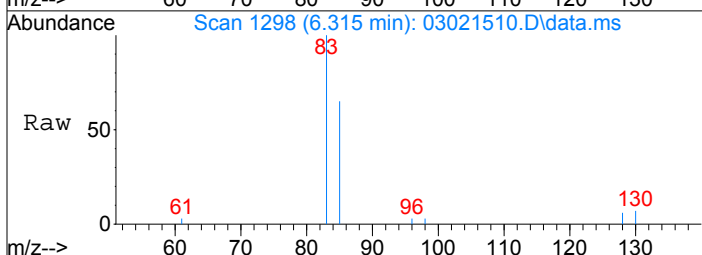
#11
 Trichlorotrifluoroethane
 Concen: 367.21 pg
 RT: 4.11 min Scan# 745
 Delta R.T. 0.001 min
 Lab File: 03021510.D
 Acq: 2 Mar 2015 12:29

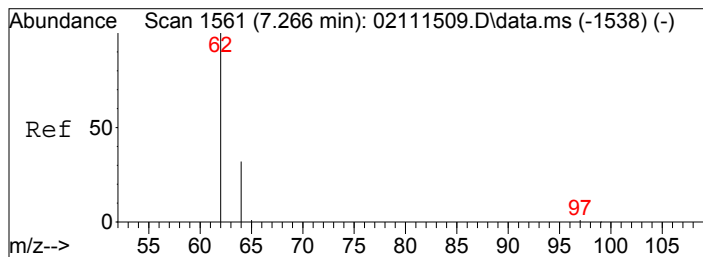
Tgt Ion: 151 Resp: 15208
 Ion Ratio Lower Upper
 151 100
 153 63.8 43.6 83.6



#16
 Chloroform
 Concen: 58.21 pg
 RT: 6.31 min Scan# 1298
 Delta R.T. 0.001 min
 Lab File: 03021510.D
 Acq: 2 Mar 2015 12:29

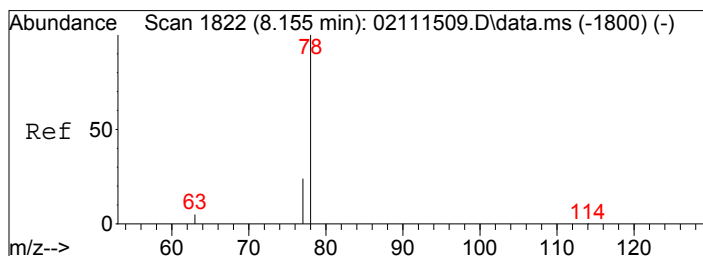
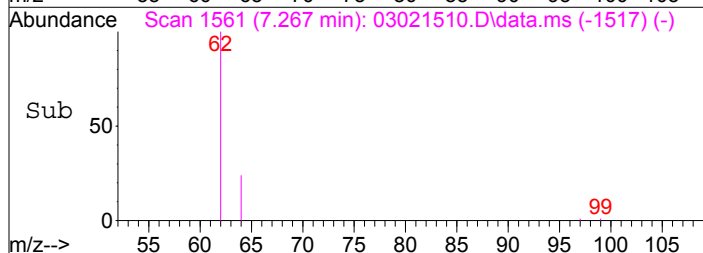
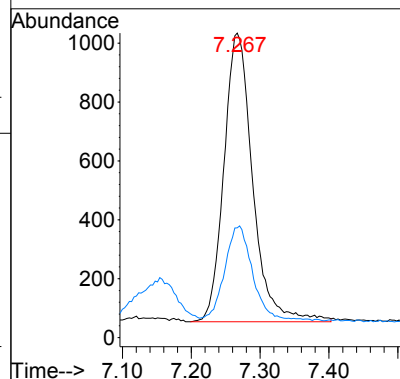
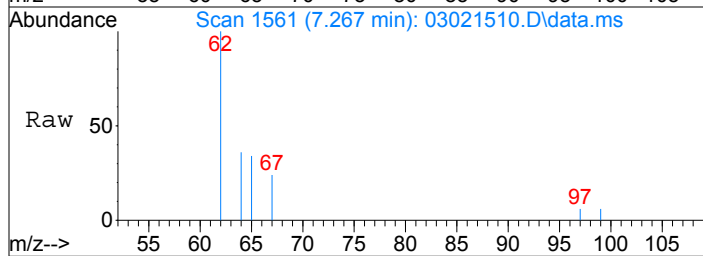
Tgt Ion: 83 Resp: 4608
 Ion Ratio Lower Upper
 83 100
 85 65.4 45.4 85.4





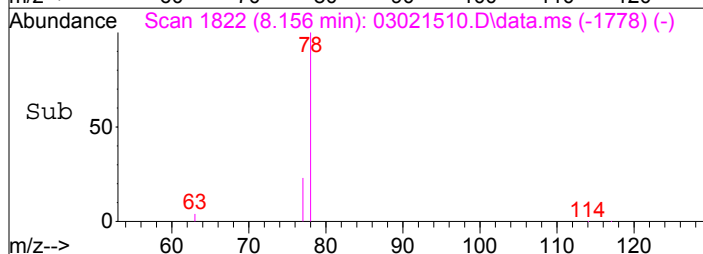
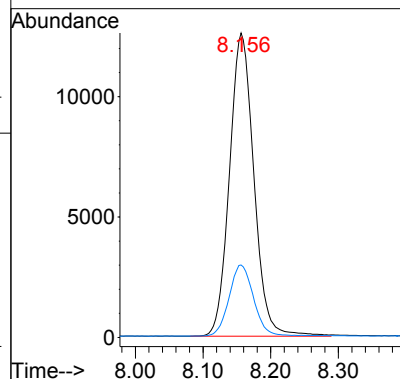
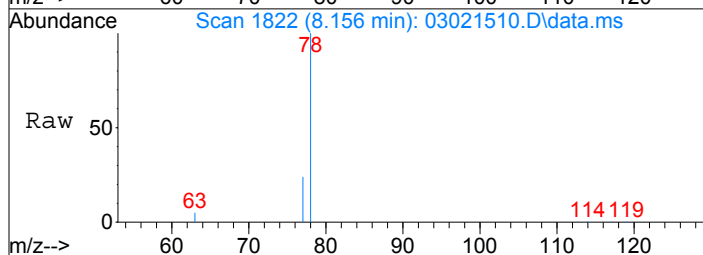
#18
1,2-Dichloroethane
Concen: 45.11 pg
RT: 7.27 min Scan# 1561
Delta R.T. 0.001 min
Lab File: 03021510.D
Acq: 2 Mar 2015 12:29

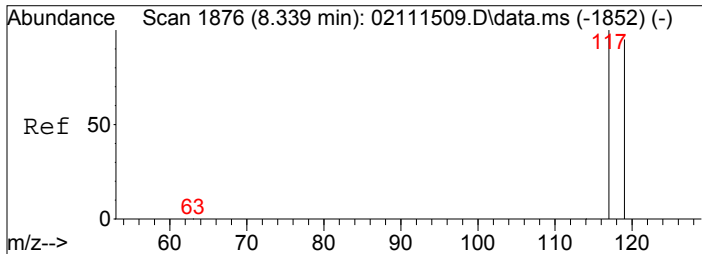
Tgt Ion: 62 Resp: 2843
Ion Ratio Lower Upper
62 100
64 31.8 11.6 51.6



#20
Benzene
Concen: 193.70 pg
RT: 8.16 min Scan# 1822
Delta R.T. 0.001 min
Lab File: 03021510.D
Acq: 2 Mar 2015 12:29

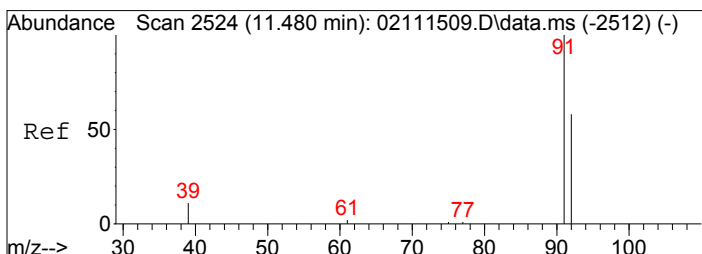
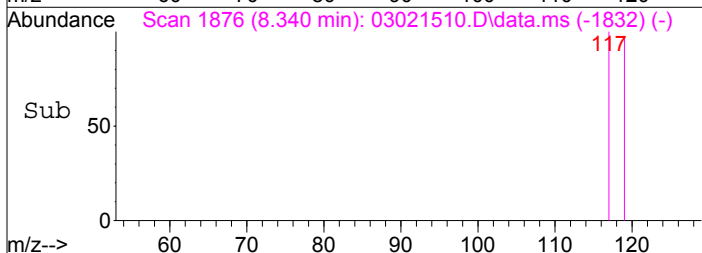
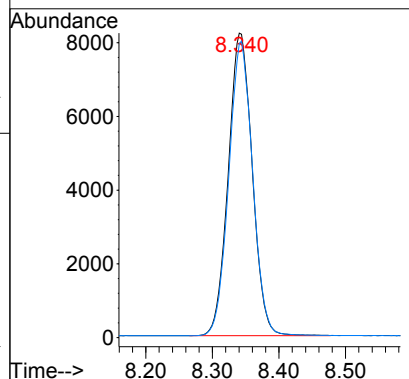
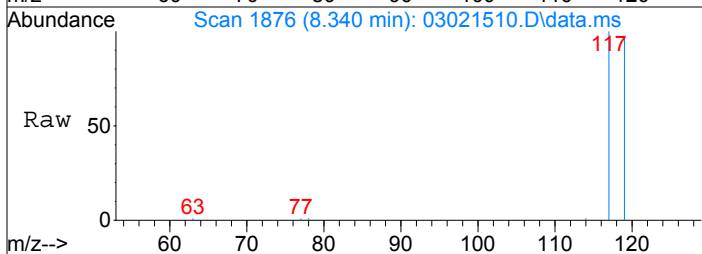
Tgt Ion: 78 Resp: 31537
Ion Ratio Lower Upper
78 100
77 23.5 3.7 43.7





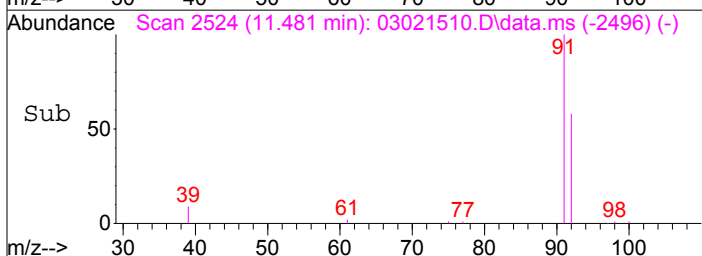
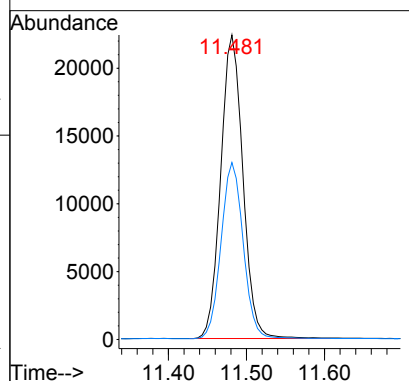
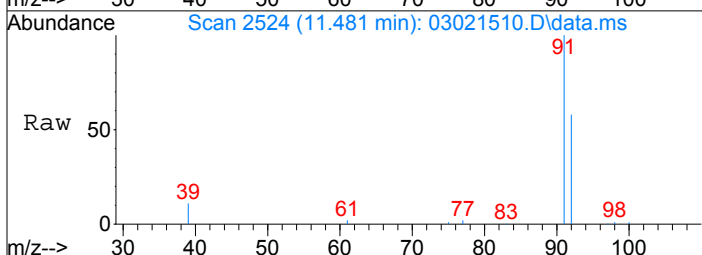
#21
Carbon Tetrachloride
Concen: 357.22 pg
RT: 8.34 min Scan# 1876
Delta R.T. 0.001 min
Lab File: 03021510.D
Acq: 2 Mar 2015 12:29

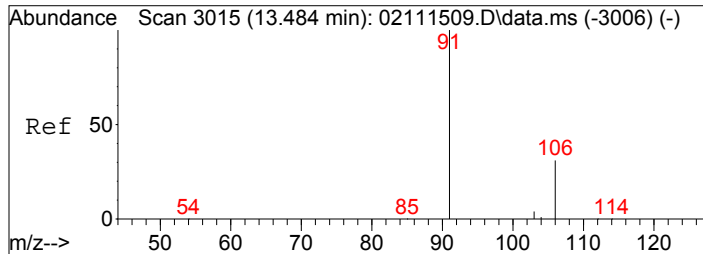
Tgt Ion	117	119	Resp	20587	Lower	Upper
Ion Ratio	100	96.5				
			75.5			115.5



#31
Toluene
Concen: 245.69 pg
RT: 11.48 min Scan# 2524
Delta R.T. 0.001 min
Lab File: 03021510.D
Acq: 2 Mar 2015 12:29

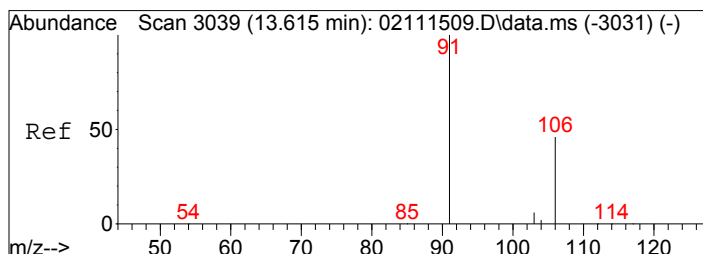
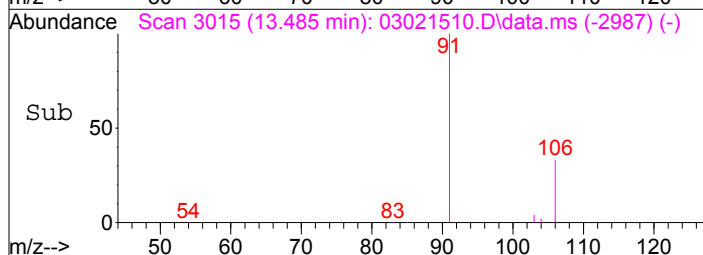
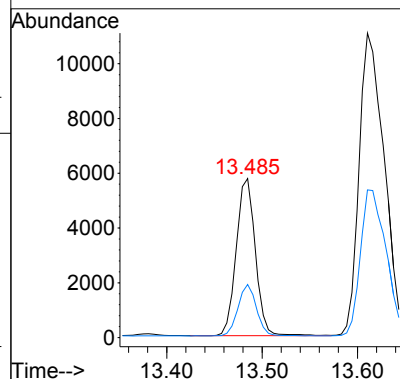
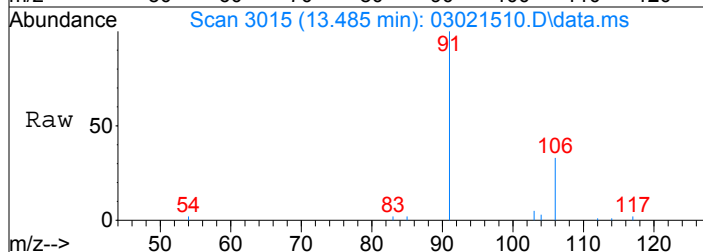
Tgt Ion	91	92	Resp	44213	Lower	Upper
Ion Ratio	100	58.1				
			37.7			77.7





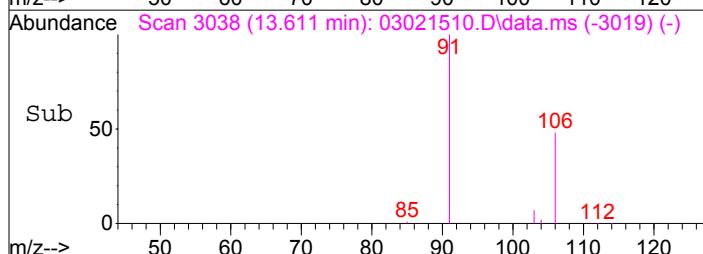
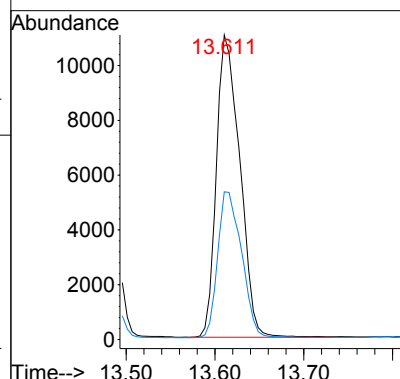
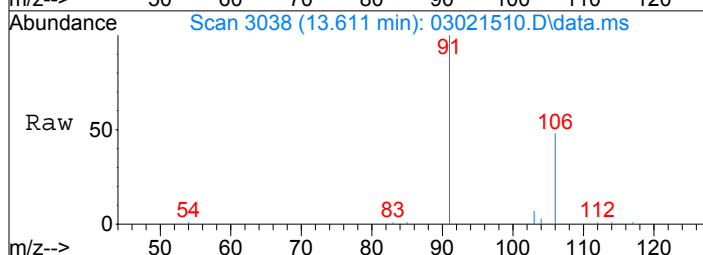
#36
Ethylbenzene
Concen: 41.96 pg
RT: 13.48 min Scan# 3015
Delta R.T. 0.001 min
Lab File: 03021510.D
Acq: 2 Mar 2015 12:29

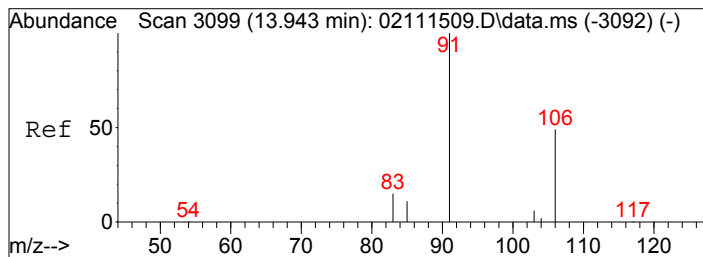
Tgt Ion: 91 Resp: 7991
Ion Ratio Lower Upper
91 100
106 31.6 10.9 50.9



#37
m,p-Xylene
Concen: 129.33 pg
RT: 13.61 min Scan# 3038
Delta R.T. -0.004 min
Lab File: 03021510.D
Acq: 2 Mar 2015 12:29

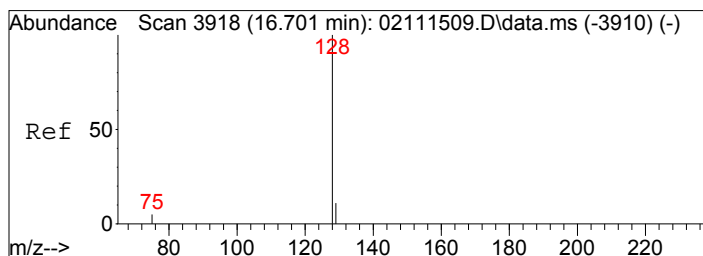
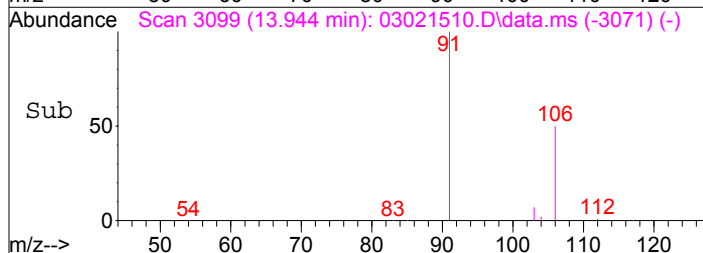
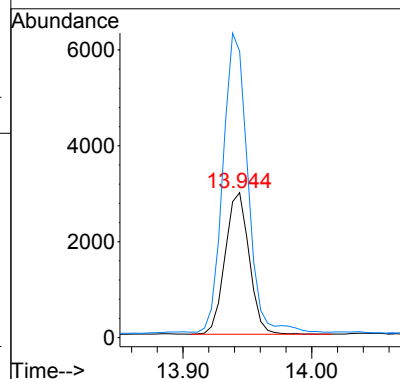
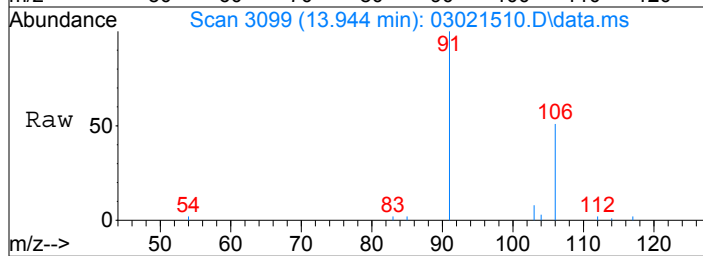
Tgt Ion: 91 Resp: 20244
Ion Ratio Lower Upper
91 100
106 49.5 27.5 67.5





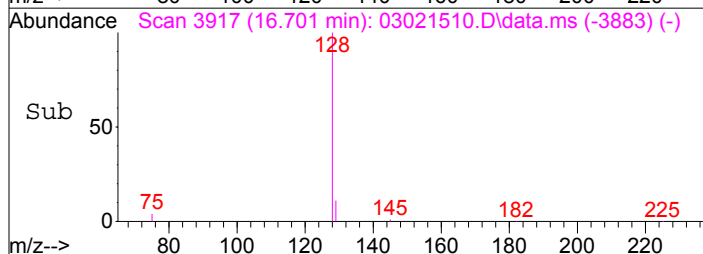
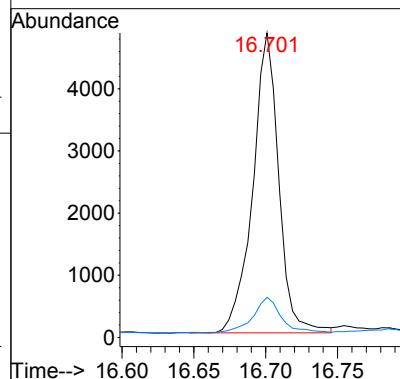
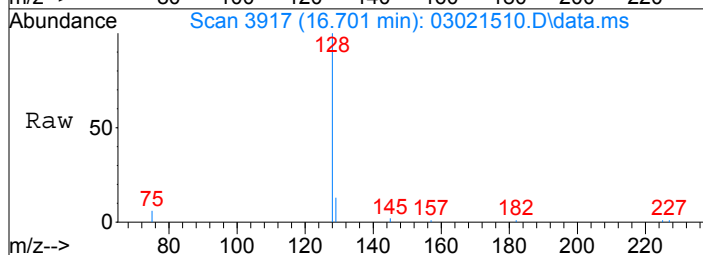
#38
o-Xylene
Concen: 49.99 pg
RT: 13.94 min Scan# 3099
Delta R.T. 0.001 min
Lab File: 03021510.D
Acq: 2 Mar 2015 12:29

Tgt Ion:106 Resp: 3824
Ion Ratio Lower Upper
106 100
91 221.6 198.3 238.3



#45
Naphthalene
Concen: 32.06 pg
RT: 16.70 min Scan# 3917
Delta R.T. -0.000 min
Lab File: 03021510.D
Acq: 2 Mar 2015 12:29

Tgt Ion:128 Resp: 6092
Ion Ratio Lower Upper
128 100
129 12.7 0.0 30.9



Data File: I:\MS19\DATA\2015 02\27\02271503.D

Acq On : 27 Feb 2015 11:54

Operator: WA

Sample : MB X19022715_1000mL

Misc : S29-02041502

ALS Vial : 2 Sample Multiplier: 1

Quant Time: Feb 27 12:28:03 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

2/27/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.12	130	25784	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	190987	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	31113	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.13	65	57870	919.053	pg	0.00
Spiked Amount 1000.000			Recovery	=	91.90%	
30) Toluene-d8 (SS2)	11.38	98	176134	1000.050	pg	0.00
Spiked Amount 1000.000			Recovery	=	100.01%	
40) Bromofluorobenzene (SS3)	14.25	174	72476	1153.840	pg	0.00
Spiked Amount 1000.000			Recovery	=	115.38%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.76	85	53	N.D.		
3) Chloromethane	1.87	52	111	5.304	pg	95
4) Vinyl Chloride	2.05	62	38	N.D.		
5) Bromomethane	2.36	94	371	7.874	pg	89
6) Chloroethane	2.51	64	67	N.D.		
7) Acetone	3.05	58	12260	331.328	pg	# 67
8) Trichlorofluoromethane	3.13	101	94	N.D.		
9) 1,1-Dichloroethene	3.69	96	8	N.D.		
10) Methylene Chloride	3.82	84	737	17.256	pg	93
11) Trichlorotrifluoroethane	4.00	151	3	N.D.		
12) trans-1,2-Dichloroethene	4.75	96	3	N.D.		
13) 1,1-Dichloroethane	4.95	63	27	N.D.		
14) Methyl tert-Butyl Ether	5.24	73	133	N.D.		
15) cis-1,2-Dichloroethene	5.93	96	5	N.D.		
16) Chloroform	6.32	83	528	6.679	pg	98
18) 1,2-Dichloroethane	7.27	62	25	N.D.		
19) 1,1,1-Trichloroethane	7.59	97	25	N.D.		
20) Benzene	8.16	78	1511	9.293	pg	99
21) Carbon Tetrachloride	8.34	117	24	N.D.		
23) 1,2-Dichloropropane	9.13	63	11	N.D.		
24) Bromodichloromethane	9.39	83	16	N.D.		
25) Trichloroethene	9.46	130	18	N.D.		
26) 1,4-Dioxane	9.50	88	5	N.D.		
27) cis-1,3-Dichloropropene	10.44	75	5	N.D.		
28) trans-1,3-Dichloropropene	11.06	75	4	N.D.		
29) 1,1,2-Trichloroethane	11.20	83	15	N.D.		
31) Toluene	11.48	91	616	N.D.		
32) 1,2-Dibromoethane	12.13	107	15	N.D.		
33) Tetrachloroethene	12.61	166	22	N.D.		
35) Chlorobenzene	13.17	112	90	N.D.		
36) Ethylbenzene	13.49	91	137	N.D.		
37) m,p-Xylene	13.61	91	339	N.D.		
38) o-Xylene	13.95	106	69	N.D.		
39) 1,1,2,2-Tetrachloroethane	13.90	83	76	N.D.		
41) 1,3-Dichlorobenzene	15.20	146	76	N.D.		
42) 1,4-Dichlorobenzene	15.24	146	75	N.D.		
43) 1,2-Dichlorobenzene	15.46	146	46	N.D.		
44) 1,2,4-Trichlorobenzene	16.63	182	69	N.D.		
45) Naphthalene	16.71	128	694	N.D.		
46) Hexachlorobutadiene	16.95	225	15	N.D.		

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\27\02271503.D

Acq On : 27 Feb 2015 11:54

Operator: WA

Sample : MB X19022715_1000mL

Misc : S29-02041502

ALS Vial : 2 Sample Multiplier: 1

Quant Time: Feb 27 12:28:03 2015

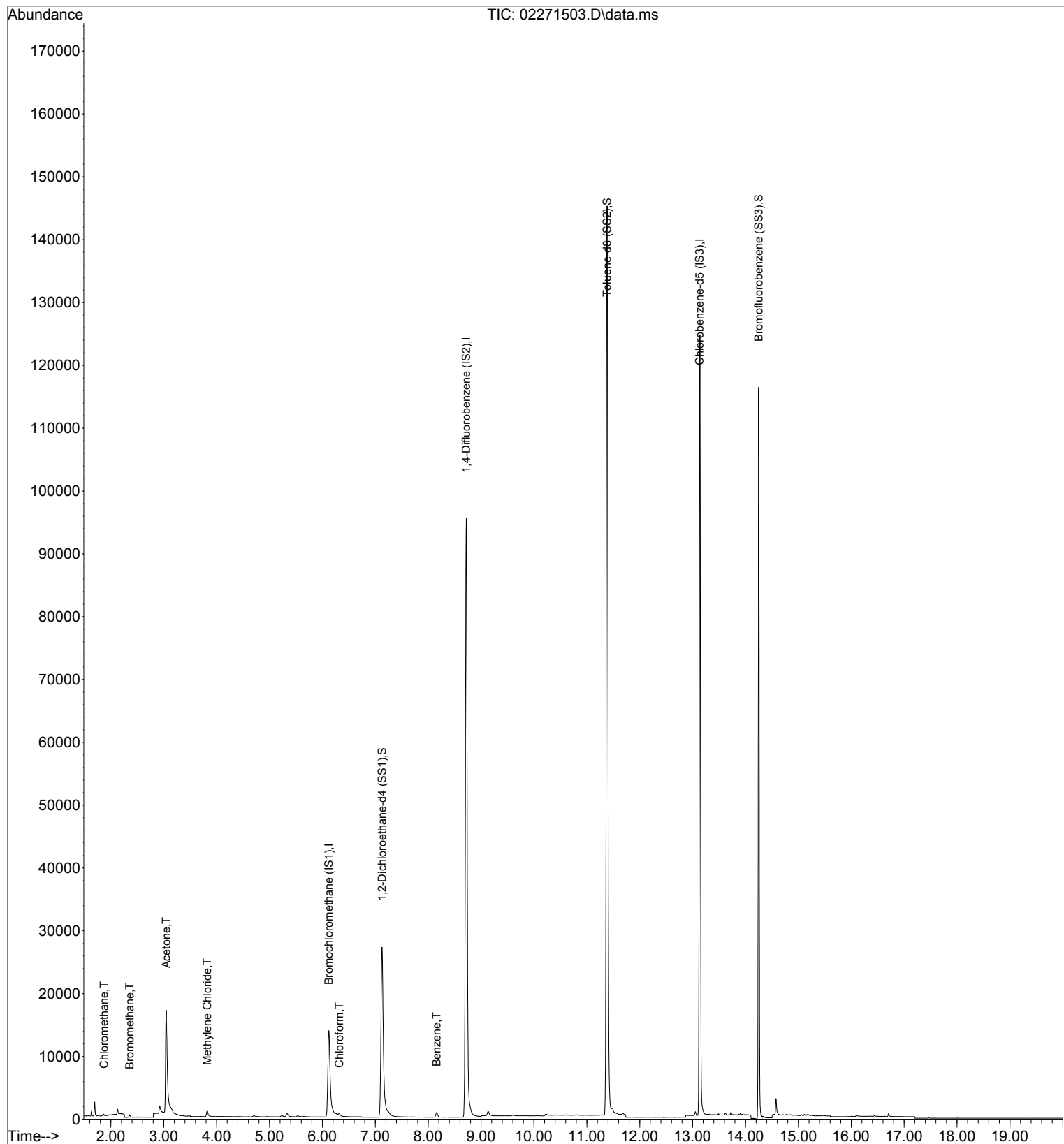
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 02\28\02281504.D

Acq On : 28 Feb 2015 3:52

Operator: WA

Sample : MB X19022715_1000mL

Misc : S29-02041502

ALS Vial : 2 Sample Multiplier: 1

Quant Time: Feb 28 06:51:31 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

2/28/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.12	130	22086	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	161659	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	27224	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	51172	948.752	pg	0.00
Spiked Amount 1000.000			Recovery	=	94.88%	
30) Toluene-d8 (SS2)	11.38	98	150663	1010.623	pg	0.00
Spiked Amount 1000.000			Recovery	=	101.06%	
40) Bromofluorobenzene (SS3)	14.25	174	60197	1095.257	pg	0.00
Spiked Amount 1000.000			Recovery	=	109.53%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.76	85	62	N.D.		
3) Chloromethane	1.86	52	111	6.193	pg	90
4) Vinyl Chloride	2.05	62	14	N.D.		
5) Bromomethane	2.35	94	280	6.937	pg	99
6) Chloroethane	2.49	64	10	N.D.		
7) Acetone	3.05	58	11239	354.592	pg	# 69
8) Trichlorofluoromethane	3.13	101	85	N.D.		
9) 1,1-Dichloroethene	3.68	96	18	N.D.		
10) Methylene Chloride	3.82	84	679	18.560	pg	90
11) Trichlorotrifluoroethane	4.11	151	21	N.D.		
12) trans-1,2-Dichloroethene	4.73	96	3	N.D.		
13) 1,1-Dichloroethane	4.95	63	12	N.D.		
14) Methyl tert-Butyl Ether	5.19	73	11	N.D.		
15) cis-1,2-Dichloroethene	5.94	96	23	N.D.		
16) Chloroform	6.32	83	721	10.648	pg	100
18) 1,2-Dichloroethane	7.27	62	11	N.D.		
19) 1,1,1-Trichloroethane	7.59	97	21	N.D.		
20) Benzene	8.16	78	1182	8.487	pg	99
21) Carbon Tetrachloride	8.35	117	42	N.D.		
23) 1,2-Dichloropropane	9.16	63	8	N.D.		
24) Bromodichloromethane	9.39	83	2	N.D.		
25) Trichloroethene	9.46	130	16	N.D.		
26) 1,4-Dioxane	9.51	88	5	N.D.		
27) cis-1,3-Dichloropropene	10.45	75	9	N.D.		
28) trans-1,3-Dichloropropene	11.07	75	14	N.D.		
29) 1,1,2-Trichloroethane	11.19	83	3	N.D.		
31) Toluene	11.48	91	481	N.D.		
32) 1,2-Dibromoethane	12.12	107	3	N.D.		
33) Tetrachloroethene	12.61	166	20	N.D.		
35) Chlorobenzene	13.17	112	81	N.D.		
36) Ethylbenzene	13.49	91	110	N.D.		
37) m,p-Xylene	13.62	91	257	N.D.		
38) o-Xylene	13.94	106	44	N.D.		
39) 1,1,2,2-Tetrachloroethane	13.90	83	77	N.D.		
41) 1,3-Dichlorobenzene	15.20	146	78	N.D.		
42) 1,4-Dichlorobenzene	15.24	146	72	N.D.		
43) 1,2-Dichlorobenzene	15.46	146	51	N.D.		
44) 1,2,4-Trichlorobenzene	16.63	182	81	N.D.		
45) Naphthalene	16.71	128	488	N.D.		
46) Hexachlorobutadiene	16.95	225	18	N.D.		

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\28\02281504.D

Acq On : 28 Feb 2015 3:52

Operator: WA

Sample : MB X19022715_1000mL

Misc : S29-02041502

ALS Vial : 2 Sample Multiplier: 1

Quant Time: Feb 28 06:51:31 2015

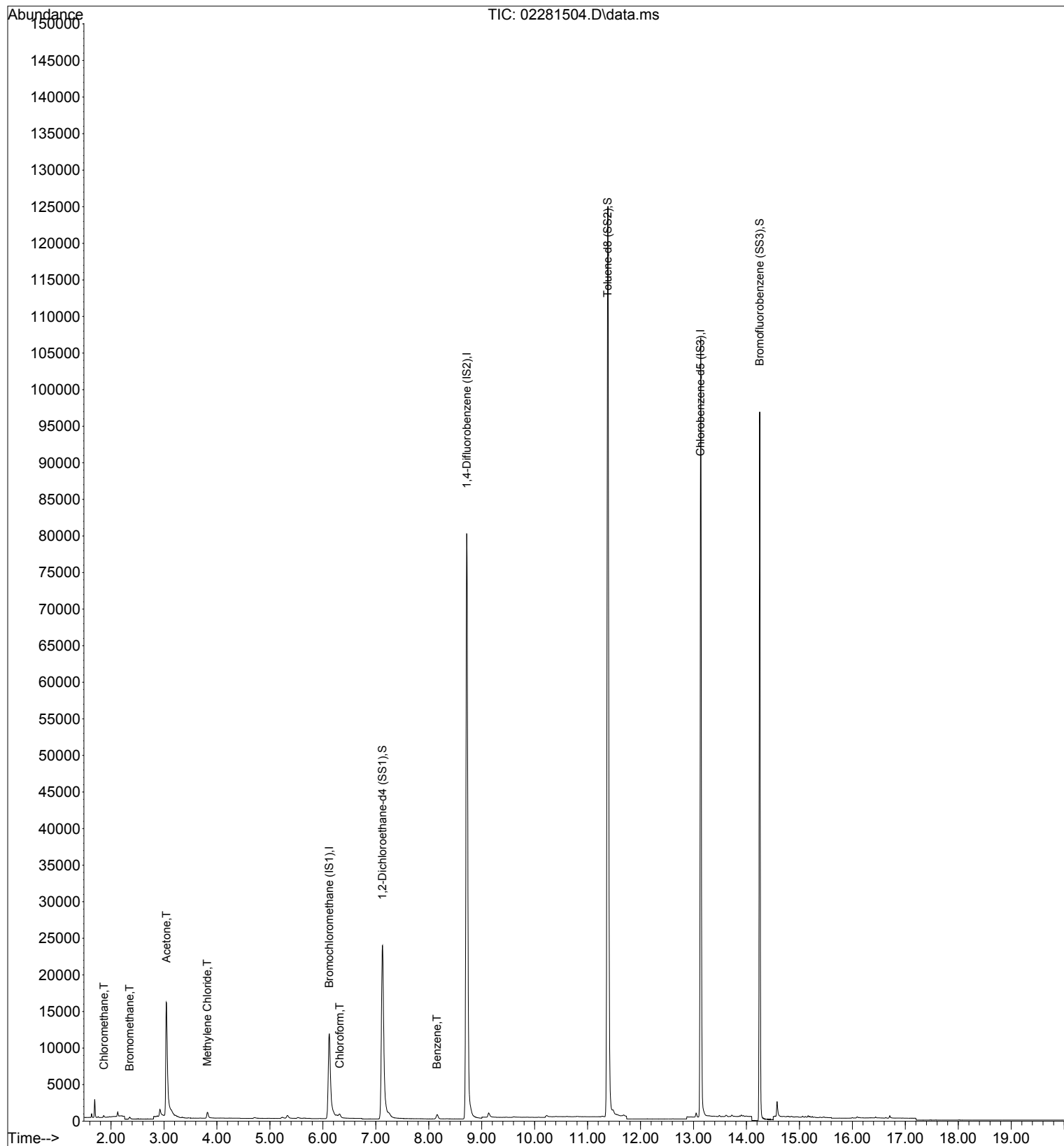
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 03\02\03021503.D

Acq On : 2 Mar 2015 8:32

Operator: WA

Sample : MB X19030215_1000mL

Misc : S29-02041502

ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 02 16:16:37 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

WA 3/2/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.12	130	24205	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	174156	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	28911	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.13	65	54966	929.879	pg	0.00
Spiked Amount	1000.000		Recovery	=	92.99%	
30) Toluene-d8 (SS2)	11.38	98	161372	1004.782	pg	0.00
Spiked Amount	1000.000		Recovery	=	100.48%	
40) Bromofluorobenzene (SS3)	14.25	174	64600	1106.783	pg	0.00
Spiked Amount	1000.000		Recovery	=	110.68%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.76	85	76	N.D.		
3) Chloromethane	1.86	52	133	6.770	pg	91
4) Vinyl Chloride	2.05	62	26	N.D.		
5) Bromomethane	2.36	94	330	7.460	pg	91
6) Chloroethane	2.50	64	55	N.D.		
7) Acetone	3.05	58	16302	469.303	pg	# 62
8) Trichlorofluoromethane	3.13	101	63	N.D.		
9) 1,1-Dichloroethene	3.68	96	3	N.D.		
10) Methylene Chloride	3.82	84	702	17.509	pg	94
11) Trichlorotrifluoroethane	4.07	151	42	N.D.		
12) trans-1,2-Dichloroethene	4.76	96	8	N.D.		
13) 1,1-Dichloroethane	4.96	63	16	N.D.		
14) Methyl tert-Butyl Ether	5.23	73	154	N.D.		
15) cis-1,2-Dichloroethene	5.93	96	2	N.D.		
16) Chloroform	6.31	83	1262	17.005	pg	99
18) 1,2-Dichloroethane	7.26	62	5	N.D.		
19) 1,1,1-Trichloroethane	7.59	97	2	N.D.		
20) Benzene	8.16	78	1538	10.076	pg	97
21) Carbon Tetrachloride	8.35	117	61	N.D.		
23) 1,2-Dichloropropane	9.17	63	8	N.D.		
24) Bromodichloromethane	9.40	83	8	N.D.		
25) Trichloroethene	9.46	130	18	N.D.		
26) 1,4-Dioxane	9.49	88	3	N.D.		
27) cis-1,3-Dichloropropene	10.46	75	12	N.D.		
28) trans-1,3-Dichloropropene	11.06	75	8	N.D.		
29) 1,1,2-Trichloroethane	11.20	83	4	N.D.		
31) Toluene	11.48	91	511	N.D.		
32) 1,2-Dibromoethane	12.13	107	9	N.D.		
33) Tetrachloroethene	12.61	166	33	N.D.		
35) Chlorobenzene	13.17	112	71	N.D.		
36) Ethylbenzene	13.48	91	122	N.D.		
37) m,p-Xylene	13.61	91	262	N.D.		
38) o-Xylene	13.94	106	51	N.D.		
39) 1,1,2,2-Tetrachloroethane	13.90	83	88	N.D.		
41) 1,3-Dichlorobenzene	15.19	146	66	N.D.		
42) 1,4-Dichlorobenzene	15.24	146	76	N.D.		
43) 1,2-Dichlorobenzene	15.46	146	41	N.D.		
44) 1,2,4-Trichlorobenzene	16.63	182	54	N.D.		
45) Naphthalene	16.71	128	418	N.D.		
46) Hexachlorobutadiene	16.95	225	14	N.D.		

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 03\02\03021503.D

Acq On : 2 Mar 2015 8:32

Operator: WA

Sample : MB X19030215_1000mL

Misc : S29-02041502

ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 02 16:16:37 2015

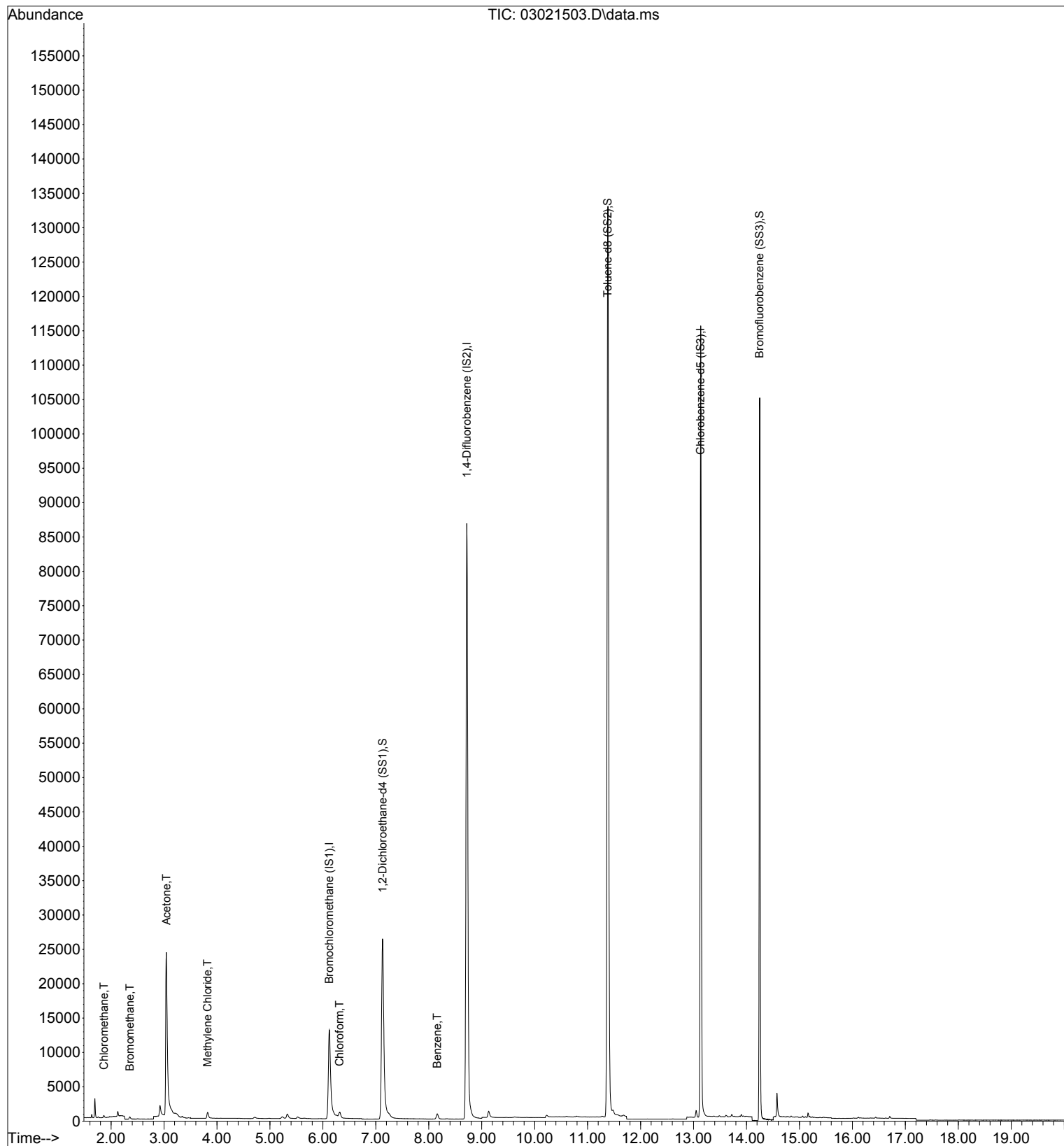
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 03\02\03021503.D

Acq On : 2 Mar 2015 8:32

Operator: WA

Sample : MB X19030215_1000mL

Misc : S29-02041502

ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 02 16:16:37 2015

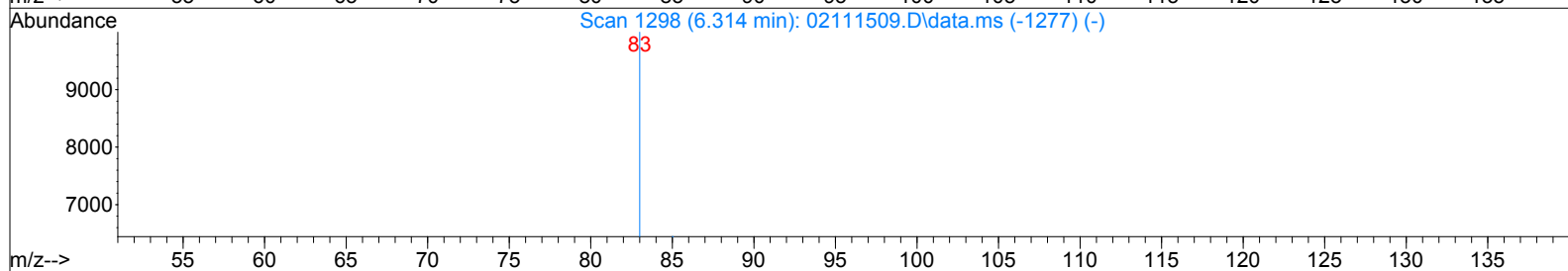
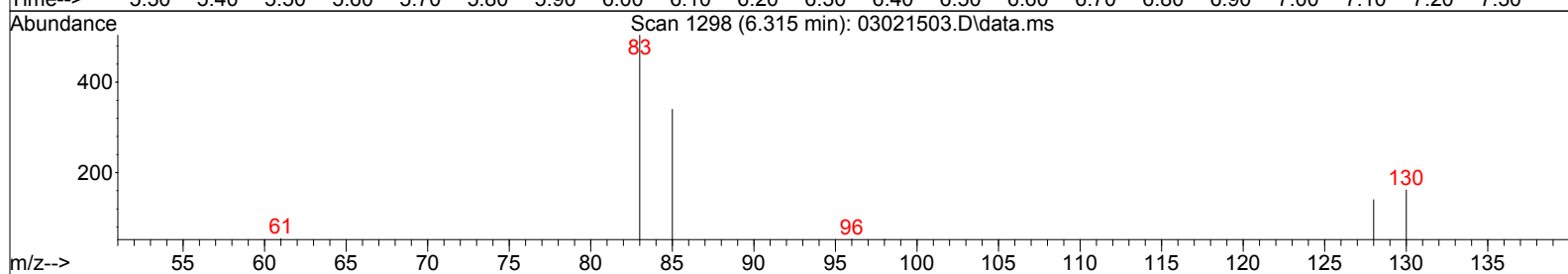
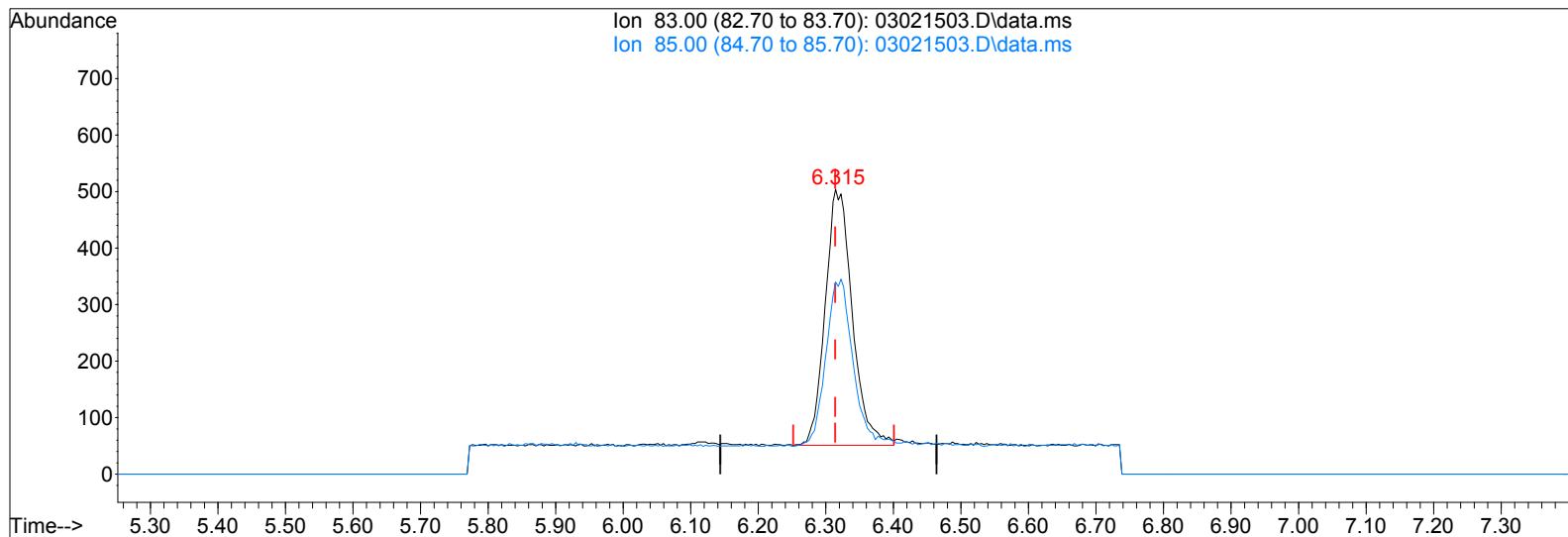
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



TIC: 03021503.D\data.ms

(16) Chloroform (T)

6.315min (+0.001) 17.01pg

response 1262

Ion	Exp%	Act%
83.00	100	100
85.00	65.40	66.09
0.00	0.00	0.00
0.00	0.00	0.00

Data File: I:\MS19\DATA\2015 03\02\03021503.D

Acq On : 2 Mar 2015 8:32

Operator: WA

Sample : MB X19030215_1000mL

Misc : S29-02041502

ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 02 16:16:37 2015

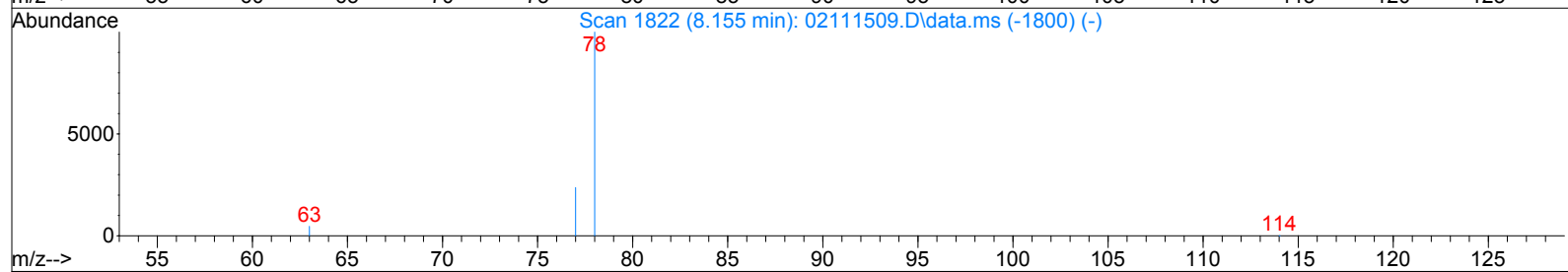
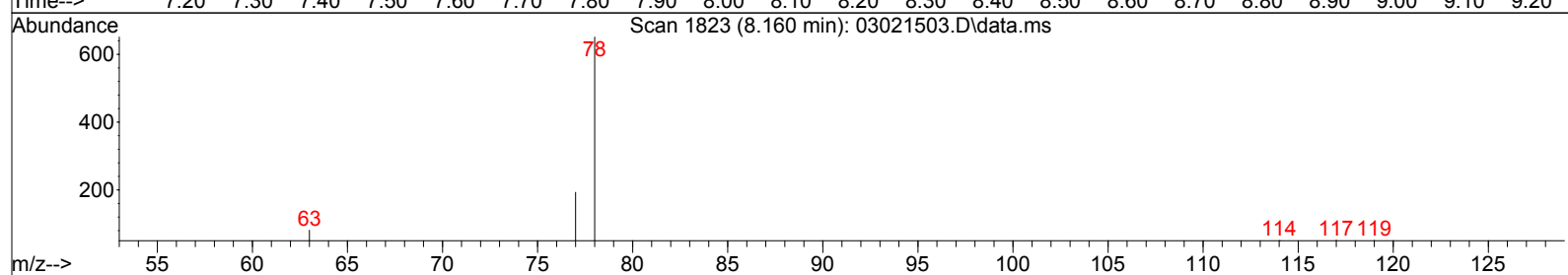
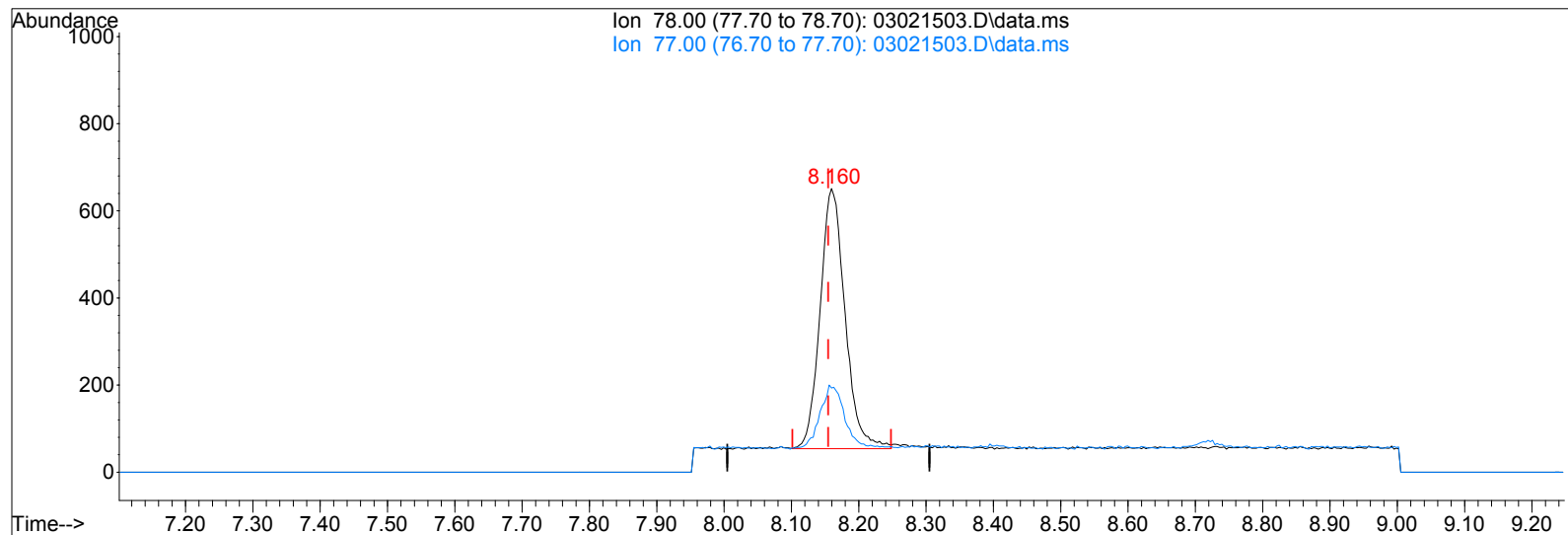
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



TIC: 03021503.D\data.ms

(20) Benzene (T)

8.160min (+0.005) 10.08pg

response 1538

Ion	Exp%	Act%
78.00	100	100
77.00	23.70	25.16
0.00	0.00	0.00
0.00	0.00	0.00

Data File: I:\MS19\DATA\2015 02\27\02271504.D

Acq On : 27 Feb 2015 12:22

Operator: WA

Sample : LCS X19022715 500pg

Misc : S29-02041502/S29-01291510 (2/27)

ALS Vial : 2 Sample Multiplier: 1

Quant Time: Feb 27 13:11:41 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

2/27/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	26611	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	192953	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	31615	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	60001	923.282	pg	0.00
Spiked Amount 1000.000			Recovery	=	92.33%	
30) Toluene-d8 (SS2)	11.38	98	177386	996.896	pg	0.00
Spiked Amount 1000.000			Recovery	=	99.69%	
40) Bromofluorobenzene (SS3)	14.25	174	74946	1174.217	pg	0.00
Spiked Amount 1000.000			Recovery	=	117.42%	

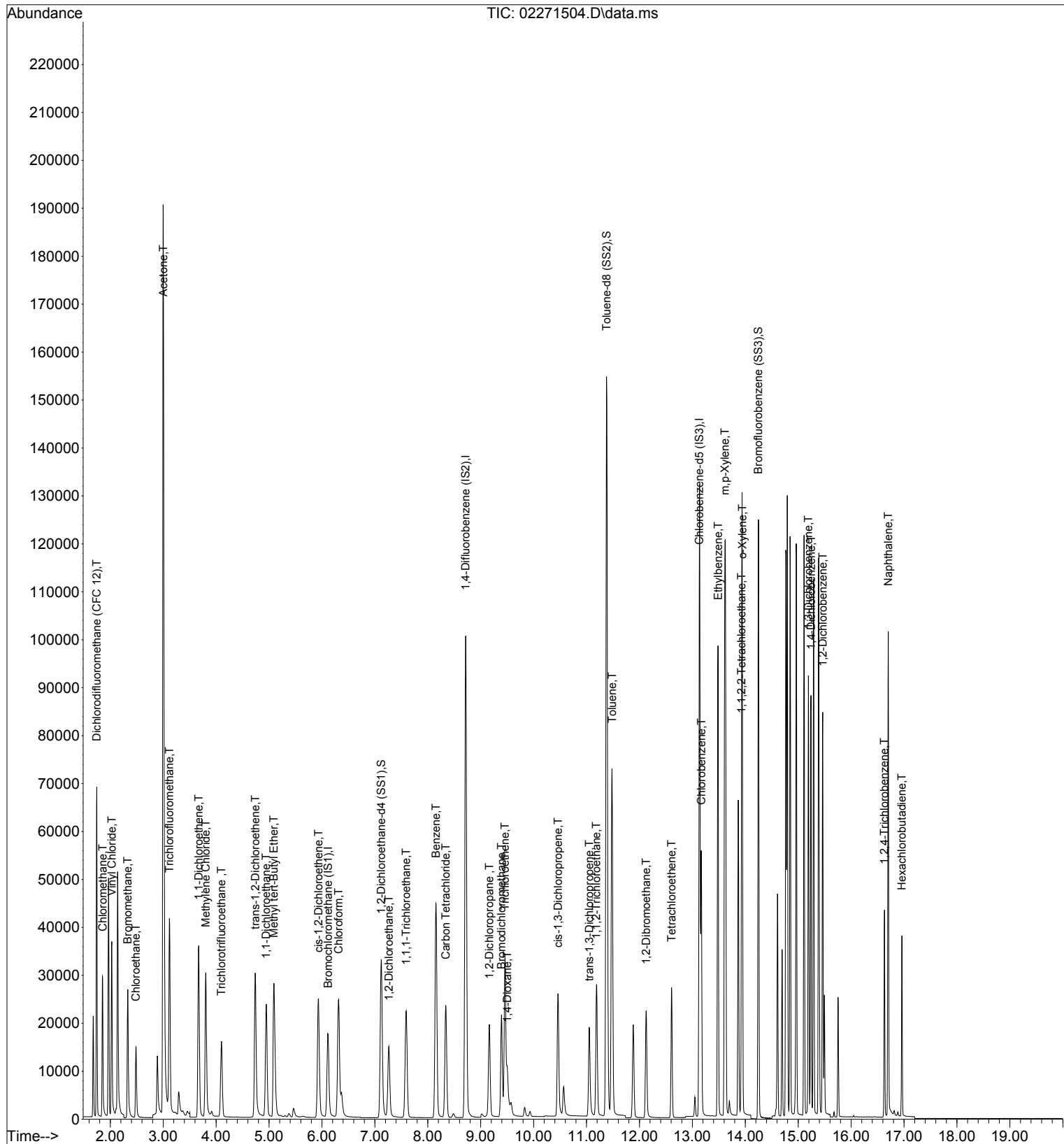
Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.74	85	48944	452.567	pg	100
3) Chloromethane	1.85	52	9490	439.406	pg	99
4) Vinyl Chloride	2.03	62	35479	421.840	pg	100
5) Bromomethane	2.33	94	21627	444.724	pg	100
6) Chloroethane	2.48	64	17521	428.251	pg	100
7) Acetone	3.00	58	82173	2151.720	pg	97
8) Trichlorofluoromethane	3.12	101	41471	446.432	pg	100
9) 1,1-Dichloroethene	3.67	96	20796	501.484	pg	93
10) Methylene Chloride	3.80	84	21496	487.672	pg	92
11) Trichlorotrifluoroethane	4.10	151	20458	479.278	pg	100
12) trans-1,2-Dichloroethene	4.74	96	21039	496.806	pg	100
13) 1,1-Dichloroethane	4.95	63	35823	471.225	pg	100
14) Methyl tert-Butyl Ether	5.09	73	59716	443.157	pg	99
15) cis-1,2-Dichloroethene	5.93	96	22550	478.860	pg	100
16) Chloroform	6.31	83	39175	480.154	pg	100
18) 1,2-Dichloroethane	7.26	62	29179	449.166	pg	100
19) 1,1,1-Trichloroethane	7.59	97	35368	445.775	pg	100
20) Benzene	8.15	78	86529	515.640	pg	100
21) Carbon Tetrachloride	8.34	117	29632	498.869	pg	99
23) 1,2-Dichloropropane	9.16	63	20022	475.772	pg	99
24) Bromodichloromethane	9.39	83	28857	475.056	pg	100
25) Trichloroethene	9.46	130	23300	470.035	pg	100
26) 1,4-Dioxane	9.50	88	16651	450.704	pg	93
27) cis-1,3-Dichloropropene	10.46	75	29131	509.017	pg	96
28) trans-1,3-Dichloropropene	11.05	75	22098	476.886	pg	100
29) 1,1,2-Trichloroethane	11.19	83	17491	483.067	pg	97
31) Toluene	11.48	91	83907	443.371	pg	100
32) 1,2-Dibromoethane	12.13	107	22758	495.394	pg	100
33) Tetrachloroethene	12.61	166	24742	422.239	pg	99
35) Chlorobenzene	13.17	112	58859	503.412	pg	100
36) Ethylbenzene	13.48	91	95977	484.114	pg	99
37) m,p-Xylene	13.62	91	155558	954.688	pg	98
38) o-Xylene	13.94	106	37681	473.185	pg	96
39) 1,1,2,2-Tetrachloroethane	13.93	83	36548	466.300	pg	100
41) 1,3-Dichlorobenzene	15.19	146	50685	498.907	pg	100
42) 1,4-Dichlorobenzene	15.24	146	51416	470.617	pg	100
43) 1,2-Dichlorobenzene	15.46	146	49127	501.758	pg	100
44) 1,2,4-Trichlorobenzene	16.63	182	31709	527.229	pg	99
45) Naphthalene	16.70	128	100950	510.319	pg	100
46) Hexachlorobutadiene	16.96	225	21321	531.451	pg	100

(#)=qualifier out of range (m)=manual integration (+)=signals summed

ALS Vial : 2 Sample Multiplier: 1

DataAcq Meth:T015SIM.M



Data File: I:\MS19\DATA\2015 02\28\02281532.D

Acq On : 28 Feb 2015 17:57

Operator: WA

Sample : LCS X19022815 500pg

Misc : S29-02041502/S29-02191508 (3/20)

ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 02 08:58:50 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

WA 3/2/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	27174	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	198914	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	32424	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	61564	927.706	pg	0.00
Spiked Amount 1000.000			Recovery	=	92.77%	
30) Toluene-d8 (SS2)	11.38	98	182511	994.961	pg	0.00
Spiked Amount 1000.000			Recovery	=	99.50%	
40) Bromofluorobenzene (SS3)	14.25	174	78596	1200.680	pg	0.00
Spiked Amount 1000.000			Recovery	=	120.07%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.74	85	55933	506.476	pg	100
3) Chloromethane	1.85	52	10837	491.379	pg	99
4) Vinyl Chloride	2.03	62	39884	464.390	pg	100
5) Bromomethane	2.33	94	22508	453.251	pg	100
6) Chloroethane	2.48	64	19532	467.513	pg	99
7) Acetone	3.00	58	102475	2627.739	pg	98
8) Trichlorofluoromethane	3.12	101	59680	629.140	pg	100
9) 1,1-Dichloroethene	3.67	96	23437	553.461	pg	93
10) Methylene Chloride	3.80	84	24018	533.599	pg	91
11) Trichlorotrifluoroethane	4.10	151	23292	534.366	pg	100
12) trans-1,2-Dichloroethene	4.74	96	23828	551.007	pg	99
13) 1,1-Dichloroethane	4.95	63	40070	516.171	pg	100
14) Methyl tert-Butyl Ether	5.09	73	69564	505.544	pg	99
15) cis-1,2-Dichloroethene	5.93	96	25510	530.494	pg	100
16) Chloroform	6.31	83	43892	526.822	pg	100
18) 1,2-Dichloroethane	7.26	62	32413	488.611	pg	100
19) 1,1,1-Trichloroethane	7.59	97	39936	492.921	pg	99
20) Benzene	8.16	78	95685	558.388	pg	100
21) Carbon Tetrachloride	8.34	117	34255	564.751	pg	100
23) 1,2-Dichloropropane	9.16	63	22102	509.459	pg	99
24) Bromodichloromethane	9.39	83	32498	518.963	pg	100
25) Trichloroethene	9.46	130	25938	507.571	pg	99
26) 1,4-Dioxane	9.50	88	19181	503.627	pg	93
27) cis-1,3-Dichloropropene	10.46	75	33097	560.986	pg	96
28) trans-1,3-Dichloropropene	11.05	75	25558	535.026	pg	100
29) 1,1,2-Trichloroethane	11.19	83	19402	519.788	pg	97
31) Toluene	11.48	91	93889	481.249	pg	100
32) 1,2-Dibromoethane	12.12	107	25568	539.883	pg	100
33) Tetrachloroethene	12.61	166	27267	451.385	pg	99
35) Chlorobenzene	13.17	112	65413	545.508	pg	99
36) Ethylbenzene	13.48	91	107118	526.829	pg	98
37) m,p-Xylene	13.62	91	173791	1039.975	pg	98
38) o-Xylene	13.94	106	41921	513.294	pg	96
39) 1,1,2,2-Tetrachloroethane	13.93	83	41009	510.161	pg	99
41) 1,3-Dichlorobenzene	15.19	146	56876	545.878	pg	100
42) 1,4-Dichlorobenzene	15.24	146	57752	515.422	pg	99
43) 1,2-Dichlorobenzene	15.46	146	55504	552.745	pg	100
44) 1,2,4-Trichlorobenzene	16.63	182	38767	628.500	pg	99
45) Naphthalene	16.70	128	132340	652.308	pg	100
46) Hexachlorobutadiene	16.96	225	25170	611.738	pg	100

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\28\02281532.D

Acq On : 28 Feb 2015 17:57

Operator: WA

Sample : LCS X19022815 500pg

Misc : S29-02041502/S29-02191508 (3/20)

ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 02 08:58:50 2015

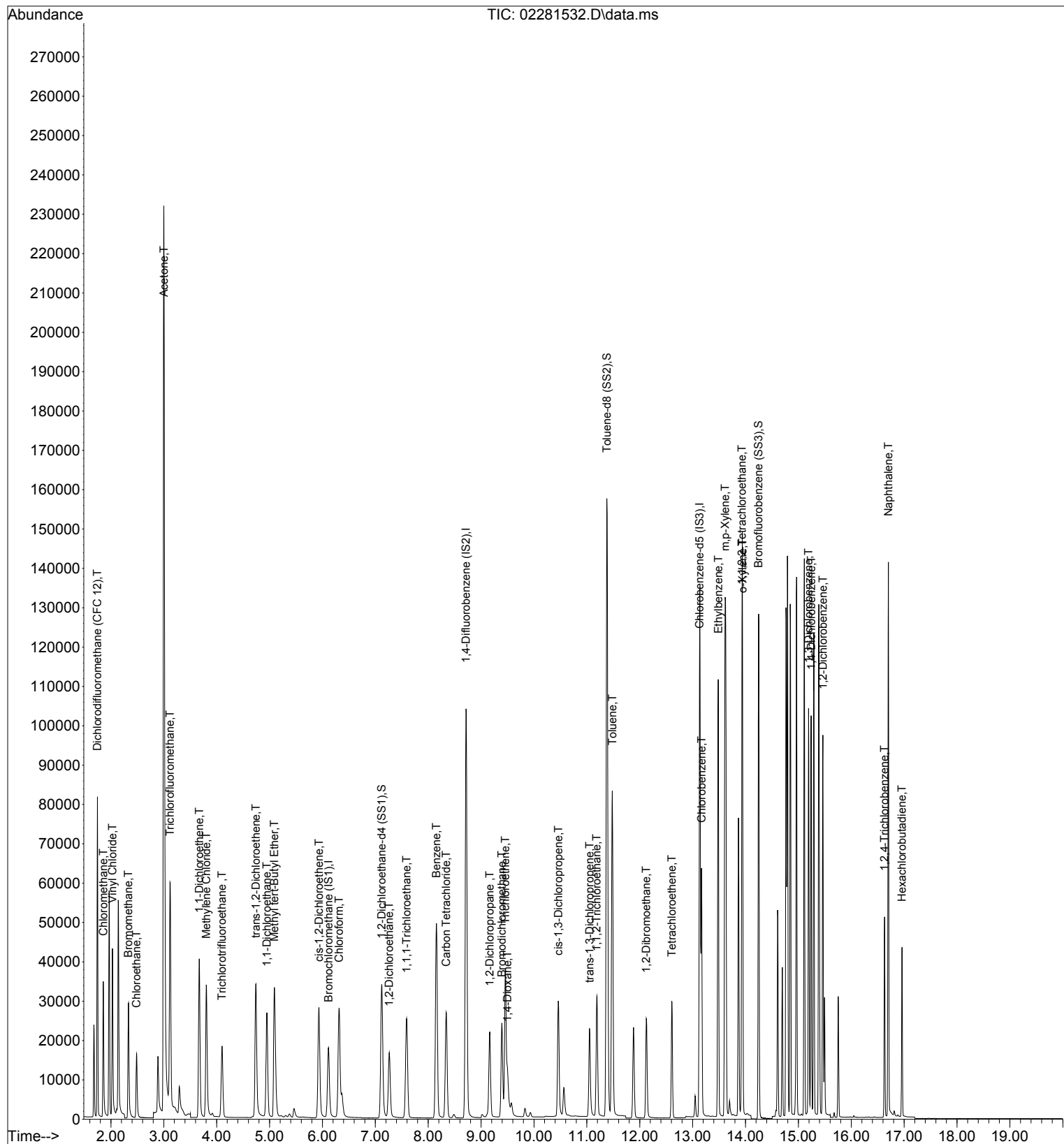
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 03\02\03021504.D

Acq On : 2 Mar 2015 8:59

Operator: WA

Sample : LCS X19030215 500pg

Misc : S29-02041502/S29-02191508 (3/20)

ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 02 09:23:02 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

107 3/2/15

DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	23607	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	173462	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	29306	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	55495	962.610	pg	0.00
Spiked Amount 1000.000			Recovery	=	96.26%	
30) Toluene-d8 (SS2)	11.38	98	160293	1002.057	pg	0.00
Spiked Amount 1000.000			Recovery	=	100.21%	
40) Bromofluorobenzene (SS3)	14.25	174	67529	1141.372	pg	0.00
Spiked Amount 1000.000			Recovery	=	114.14%	

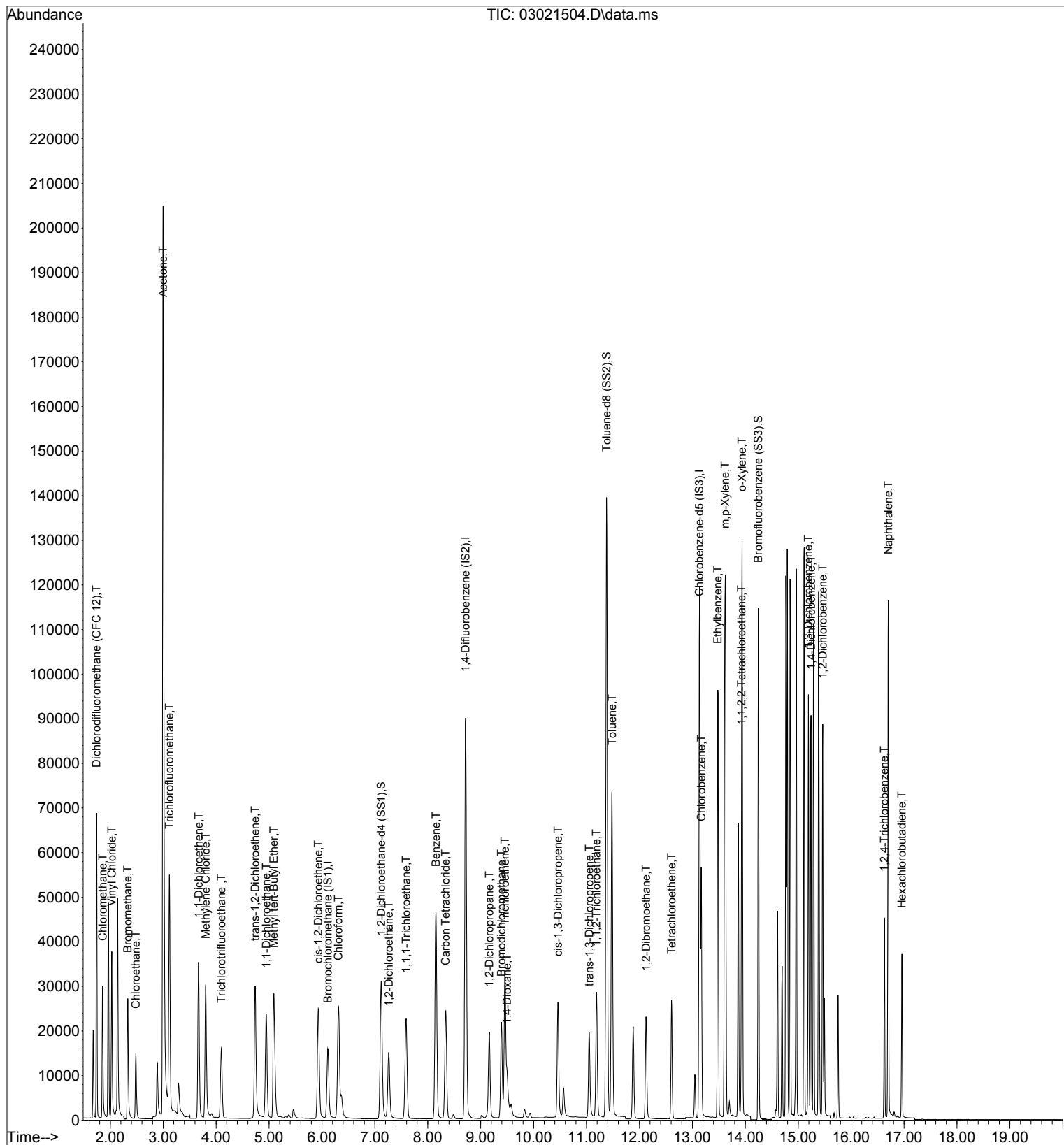
Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.74	85	48113	501.495	pg	100
3) Chloromethane	1.85	52	9379	489.527	pg	99
4) Vinyl Chloride	2.03	62	35261	472.597	pg	100
5) Bromomethane	2.33	94	20680	479.363	pg	100
6) Chloroethane	2.48	64	17558	483.766	pg	100
7) Acetone	3.00	58	92929	2743.015	pg	96
8) Trichlorofluoromethane	3.12	101	54318	659.136	pg	100
9) 1,1-Dichloroethene	3.67	96	20412	554.860	pg	94
10) Methylene Chloride	3.80	84	21256	543.591	pg	92
11) Trichlorotrifluoroethane	4.10	151	20182	532.977	pg	100
12) trans-1,2-Dichloroethene	4.74	96	20795	553.530	pg	100
13) 1,1-Dichloroethane	4.95	63	35727	529.765	pg	100
14) Methyl tert-Butyl Ether	5.09	73	58809	491.961	pg	99
15) cis-1,2-Dichloroethene	5.93	96	22280	533.332	pg	100
16) Chloroform	6.31	83	39996	552.597	pg	100
18) 1,2-Dichloroethane	7.26	62	29214	506.930	pg	99
19) 1,1,1-Trichloroethane	7.59	97	35379	502.656	pg	100
20) Benzene	8.15	78	89770	603.026	pg	100
21) Carbon Tetrachloride	8.34	117	30894	586.300	pg	100
23) 1,2-Dichloropropane	9.16	63	19851	524.712	pg	99
24) Bromodichloromethane	9.39	83	29478	539.807	pg	100
25) Trichloroethene	9.46	130	22928	514.503	pg	100
26) 1,4-Dioxane	9.50	88	16635	500.866	pg	94
27) cis-1,3-Dichloropropene	10.46	75	29128	566.155	pg	96
28) trans-1,3-Dichloropropene	11.05	75	22443	538.754	pg	100
29) 1,1,2-Trichloroethane	11.19	83	17571	539.805	pg	98
31) Toluene	11.48	91	82934	487.471	pg	100
32) 1,2-Dibromoethane	12.12	107	22824	552.657	pg	100
33) Tetrachloroethene	12.61	166	24233	460.021	pg	100
35) Chlorobenzene	13.17	112	59132	545.594	pg	100
36) Ethylbenzene	13.48	91	95361	518.905	pg	99
37) m,p-Xylene	13.62	91	155787	1031.423	pg	99
38) o-Xylene	13.94	106	37308	505.413	pg	97
39) 1,1,2,2-Tetrachloroethane	13.93	83	37813	520.451	pg	100
41) 1,3-Dichlorobenzene	15.19	146	51311	544.863	pg	100
42) 1,4-Dichlorobenzene	15.24	146	52685	520.227	pg	100
43) 1,2-Dichlorobenzene	15.46	146	50192	553.025	pg	100
44) 1,2,4-Trichlorobenzene	16.63	182	33632	603.262	pg	99
45) Naphthalene	16.70	128	113255	617.631	pg	100
46) Hexachlorobutadiene	16.96	225	21557	579.669	pg	100

(#)=qualifier out of range (m)=manual integration (+)=signals summed

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ALS Vial      : 2      Sample Multiplier: 1
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DataAcq Meth:T015SIM.M



Data File: I:\MS19\DATA\2015 02\28\02281520.D

Acq On : 28 Feb 2015 12:25
 Sample : P1500729-014 dup (1000mL)
 Misc : S29-02041502
 ALS Vial : 9 Sample Multiplier: 1

Operator: WA

Quant Time: Mar 02 11:21:46 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

3/2/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	27827	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	186908	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	31678	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	57388	844.485	pg	0.00
Spiked Amount 1000.000			Recovery	=	84.45%	
30) Toluene-d8 (SS2)	11.38	98	176892	1026.272	pg	0.00
Spiked Amount 1000.000			Recovery	=	102.63%	
40) Bromofluorobenzene (SS3)	14.25	174	75258	1176.761	pg	0.00
Spiked Amount 1000.000			Recovery	=	117.68%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.71	85	187458	1657.610	pg	100
3) Chloromethane	1.83	52	8294	367.247	pg	99
4) Vinyl Chloride	2.01	62	17558	199.639	pg	99
5) Bromomethane	2.31	94	1241	24.404	pg	100
6) Chloroethane	2.47	64	671	N.D.		
7) Acetone	3.00	58	174950	4380.920	pg	91
8) Trichlorofluoromethane	3.10	101	109546	1127.723	pg	100
9) 1,1-Dichloroethene	3.65	96	11317	260.978	pg	91
10) Methylene Chloride	3.79	84	10398	225.587	pg	96
11) Trichlorotrifluoroethane	4.09	151	18318	410.390	pg	100
12) trans-1,2-Dichloroethene	4.73	96	5544	125.193	pg	97
13) 1,1-Dichloroethane	4.94	63	21084	265.225	pg	99
14) Methyl tert-Butyl Ether	5.11	73	721	N.D.		
15) cis-1,2-Dichloroethene	5.92	96	765625	15547.957	pg	100
16) Chloroform	6.31	83	7132	83.594	pg	99
18) 1,2-Dichloroethane	7.26	62	3715	54.688	pg	99
19) 1,1,1-Trichloroethane	7.59	97	3239	39.040	pg	99
20) Benzene	8.15	78	46906	267.305	pg	100
21) Carbon Tetrachloride	8.34	117	25256	406.616	pg	99
23) 1,2-Dichloropropane	9.16	63	858	21.048	pg	91
24) Bromodichloromethane	9.33	83	923	N.D.		
25) Trichloroethene	9.46	130	167646	3491.332	pg	99
26) 1,4-Dioxane	9.55	88	455	N.D.		
27) cis-1,3-Dichloropropene	10.46	75	506	N.D.		
28) trans-1,3-Dichloropropene	11.05	75	288	N.D.		
29) 1,1,2-Trichloroethane	11.18	83	163	N.D.		
31) Toluene	11.48	91	106627	581.648	pg	100
32) 1,2-Dibromoethane	12.12	107	68	N.D.		
33) Tetrachloroethene	12.61	166	5863	103.292	pg	99
35) Chlorobenzene	13.17	112	647	N.D.		
36) Ethylbenzene	13.48	91	25680	129.274	pg	99
37) m,p-Xylene	13.61	91	69009	422.678	pg	97
38) o-Xylene	13.94	106	15063	188.780	pg	97
39) 1,1,2,2-Tetrachloroethane	13.96	83	145	N.D.		
41) 1,3-Dichlorobenzene	0.00	146	0	N.D.	d	
42) 1,4-Dichlorobenzene	15.24	146	13494	123.267	pg	100
43) 1,2-Dichlorobenzene	15.46	146	179	N.D.		
44) 1,2,4-Trichlorobenzene	16.63	182	491	N.D.		
45) Naphthalene	16.70	128	8056	40.643	pg	97
46) Hexachlorobutadiene	16.96	225	50	N.D.		

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\28\02281520.D

Acq On : 28 Feb 2015 12:25

Operator: WA

Sample : P1500729-014 dup (1000mL)

Misc : S29-02041502

ALS Vial : 9 Sample Multiplier: 1

Quant Time: Mar 02 11:21:46 2015

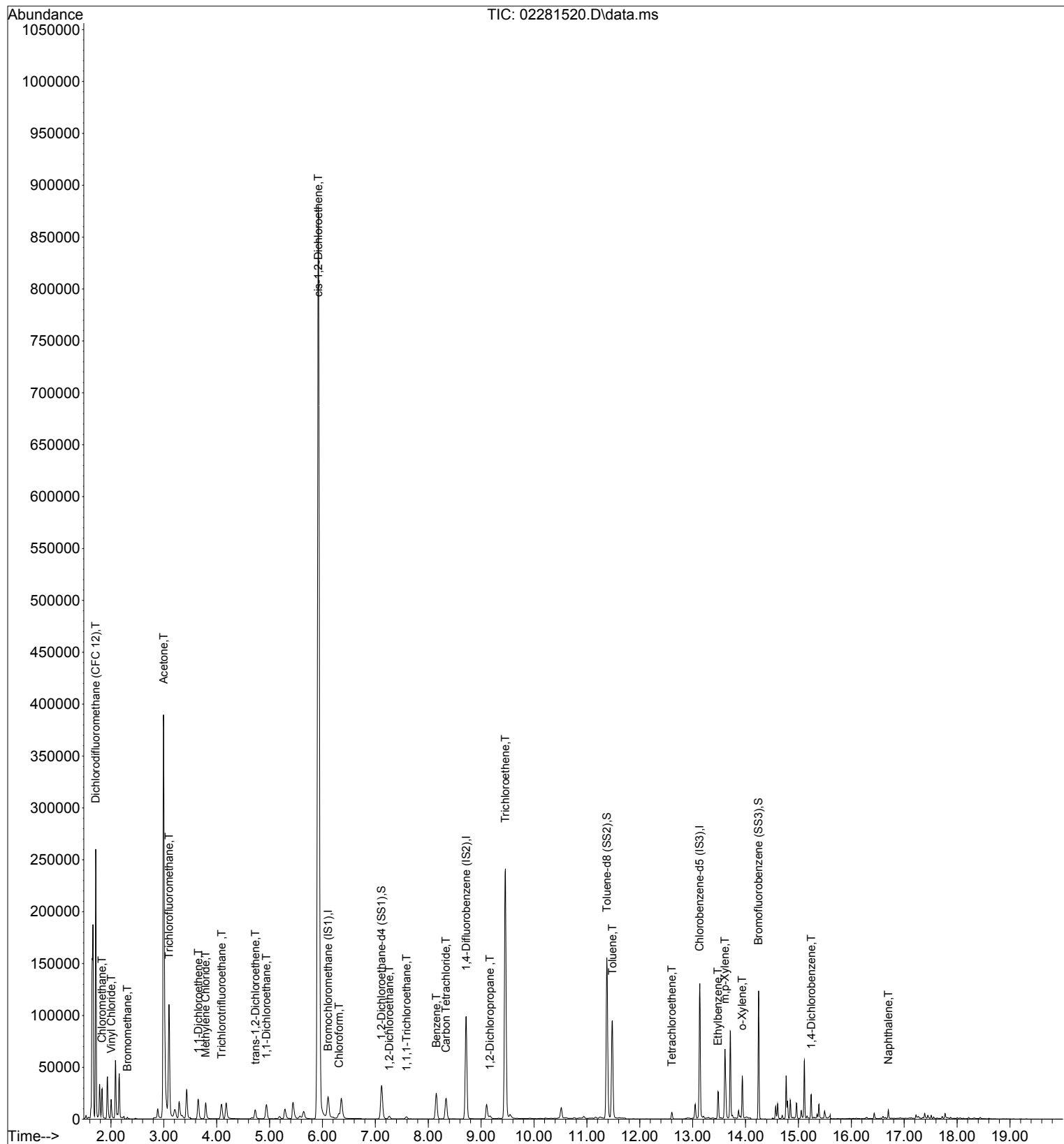
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Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 02\28\02281520.D

Acq On : 28 Feb 2015 12:25
 Sample : P1500729-014 dup (1000mL)
 Misc : S29-02041502
 ALS Vial : 9 Sample Multiplier: 1

Operator: WA

Quant Time: Mar 02 11:21:46 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

3/2/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	27827	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	186908	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	31678	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	57388	844.485	pg	0.00
Spiked Amount 1000.000			Recovery	=	84.45%	
30) Toluene-d8 (SS2)	11.38	98	176892	1026.272	pg	0.00
Spiked Amount 1000.000			Recovery	=	102.63%	
40) Bromofluorobenzene (SS3)	14.25	174	75258	1176.761	pg	0.00
Spiked Amount 1000.000			Recovery	=	117.68%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.71	85	187458	1657.610	pg	100
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5) Bromomethane	2.31	94	1241	24.404	pg	100
7) Acetone	3.00	58	174950	4380.920	pg	91
8) Trichlorofluoromethane	3.10	101	109546	1127.723	pg	100
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12) trans-1,2-Dichloroethene	4.73	96	5544	125.193	pg	97
13) 1,1-Dichloroethane	4.94	63	21084	265.225	pg	99
15) cis-1,2-Dichloroethene	5.92	96	765625	15547.957	pg	100
16) Chloroform	6.31	83	7132	83.594	pg	99
18) 1,2-Dichloroethane	7.26	62	3715	54.688	pg	99
19) 1,1,1-Trichloroethane	7.59	97	3239	39.040	pg	99
20) Benzene	8.15	78	46906	267.305	pg	100
21) Carbon Tetrachloride	8.34	117	25256	406.616	pg	99
23) 1,2-Dichloropropane	9.16	63	858	21.048	pg	91
25) Trichloroethene	9.46	130	167646	3491.332	pg	99
31) Toluene	11.48	91	106627	581.648	pg	100
33) Tetrachloroethene	12.61	166	5863	103.292	pg	99
36) Ethylbenzene	13.48	91	25680	129.274	pg	99
37) m,p-Xylene	13.61	91	69009	422.678	pg	97
38) o-Xylene	13.94	106	15063	188.780	pg	97
42) 1,4-Dichlorobenzene	15.24	146	13494	123.267	pg	100
45) Naphthalene	16.70	128	8056	40.643	pg	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File: I:\MS19\DATA\2015 02\28\02281520.D

Acq On : 28 Feb 2015 12:25

Operator: WA

Sample : P1500729-014 dup (1000mL)

Misc : S29-02041502

ALS Vial : 9 Sample Multiplier: 1

Quant Time: Mar 02 11:21:46 2015

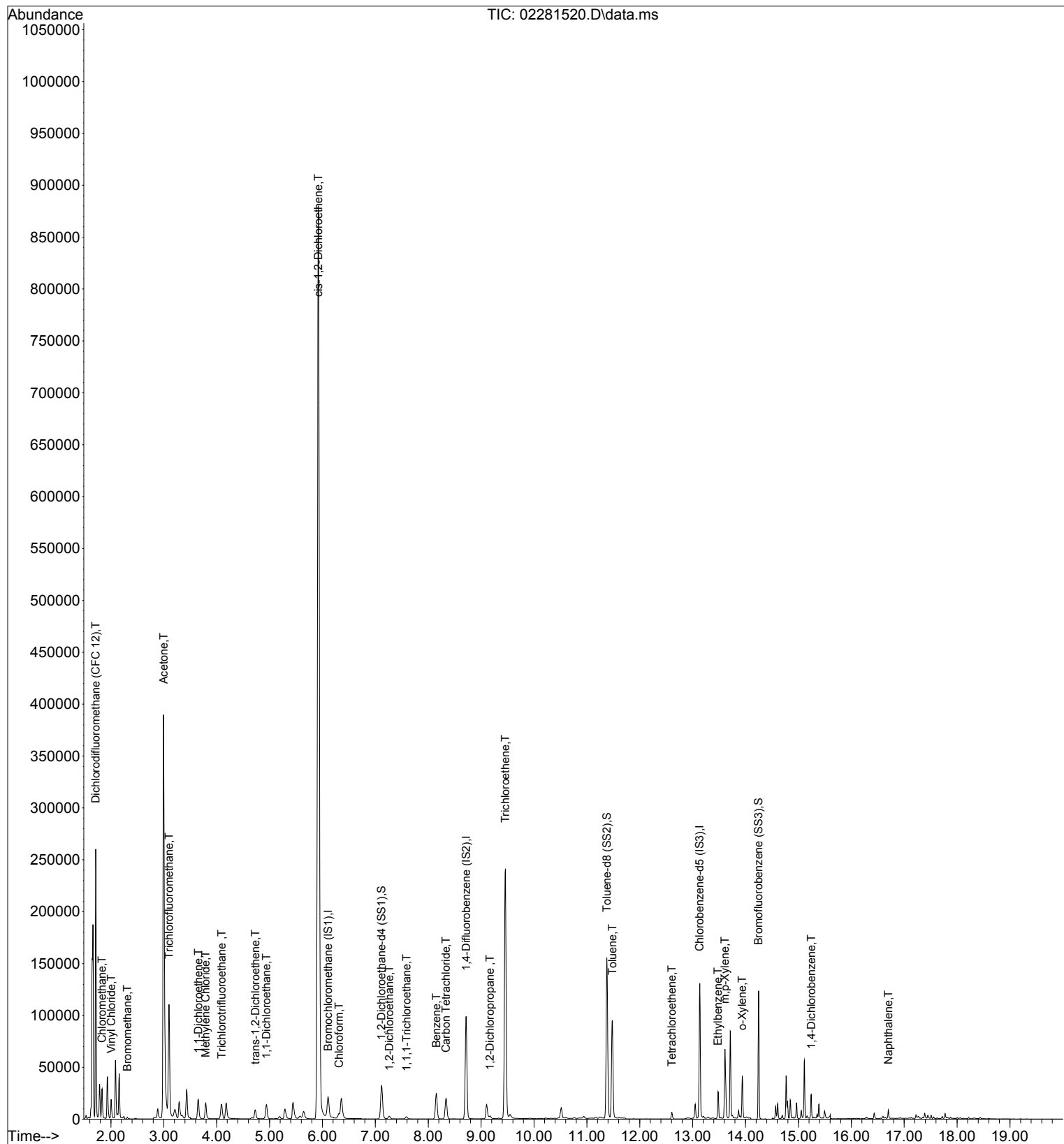
Quant Method : I:\MS19\METHODS\X19021115.M

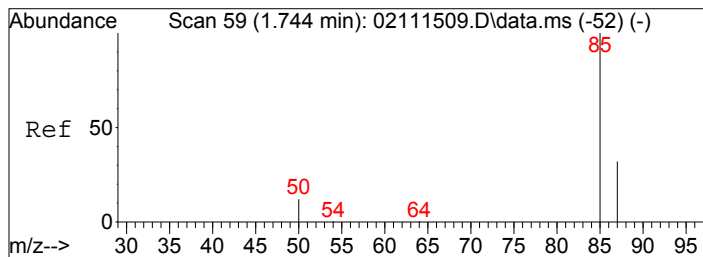
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

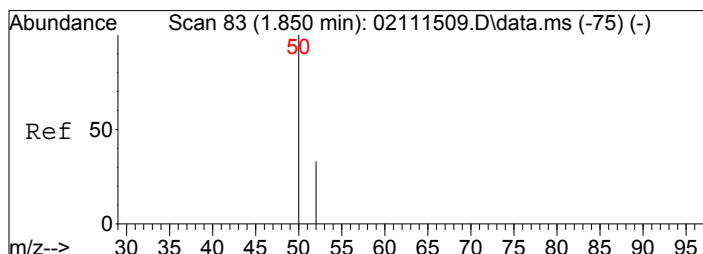
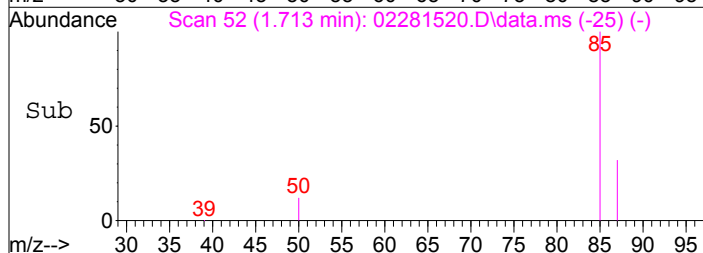
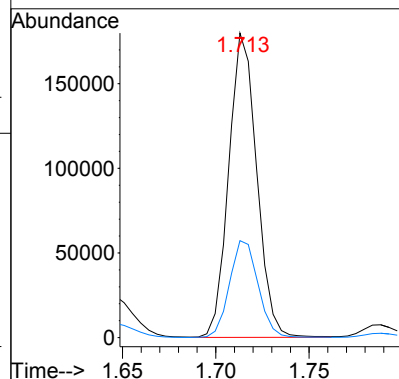
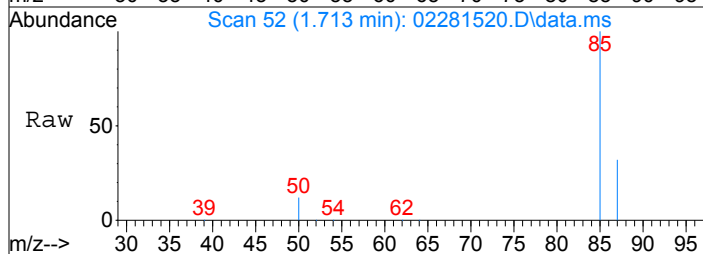
DataAcq Meth:TO15SIM.M





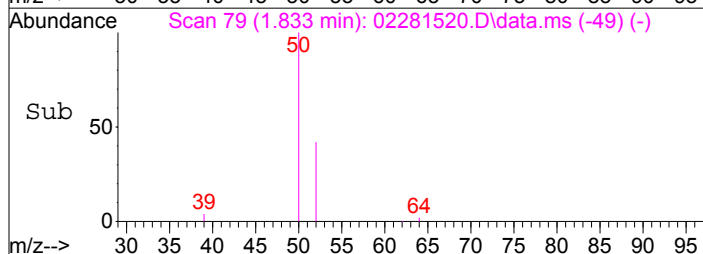
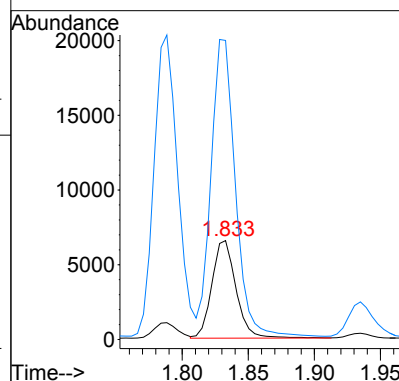
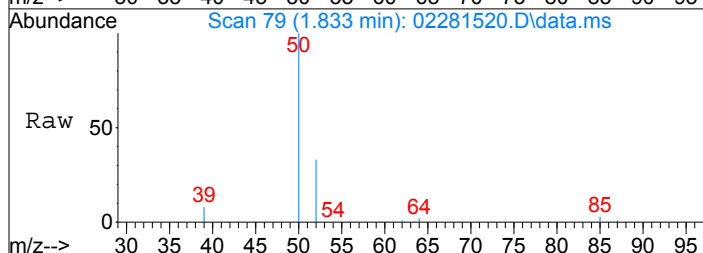
#2
 Dichlorodifluoromethane (CFC 12)
 Concen: 1657.61 pg
 RT: 1.71 min Scan# 52
 Delta R.T. -0.031 min
 Lab File: 02281520.D
 Acq: 28 Feb 2015 12:25

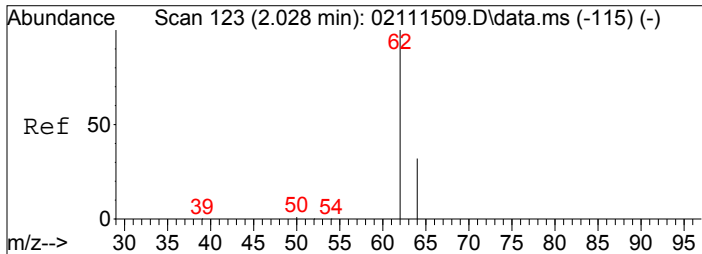
Tgt Ion: 85 Resp: 187458
 Ion Ratio Lower Upper
 85 100
 87 32.5 12.4 52.4



#3
 Chloromethane
 Concen: 367.25 pg
 RT: 1.83 min Scan# 79
 Delta R.T. -0.017 min
 Lab File: 02281520.D
 Acq: 28 Feb 2015 12:25

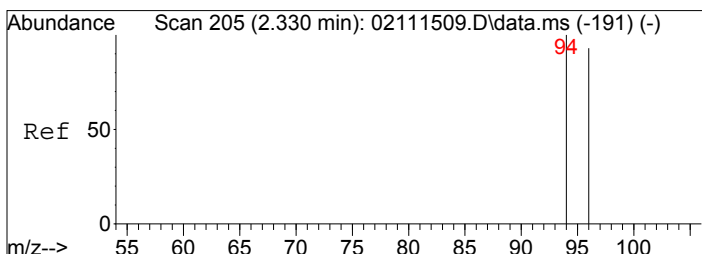
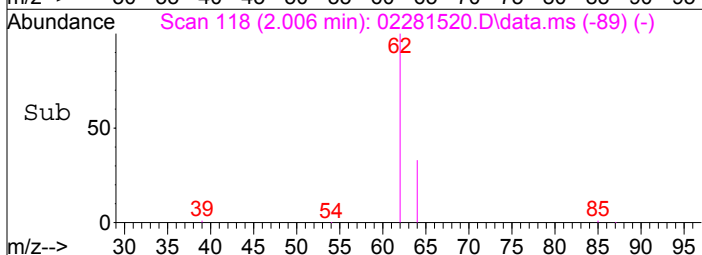
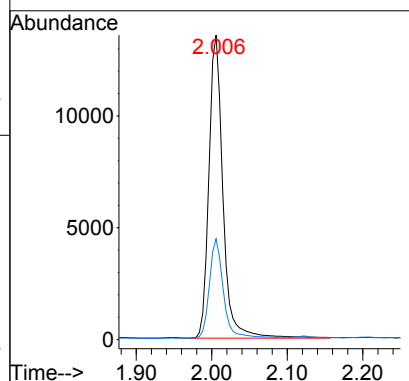
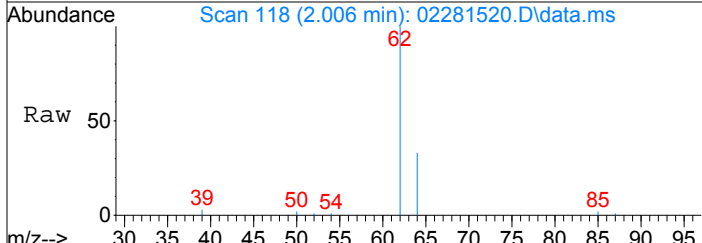
Tgt Ion: 52 Resp: 8294
 Ion Ratio Lower Upper
 52 100
 50 306.3 283.7 323.7





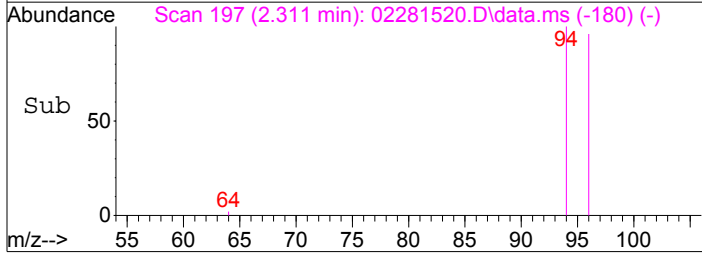
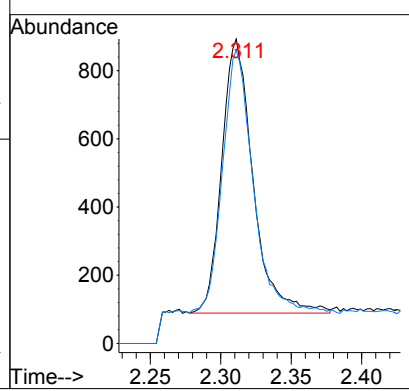
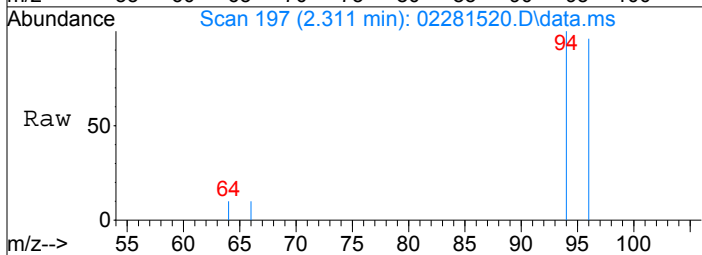
#4
 Vinyl Chloride
 Concen: 199.64 pg
 RT: 2.01 min Scan# 118
 Delta R.T. -0.022 min
 Lab File: 02281520.D
 Acq: 28 Feb 2015 12:25

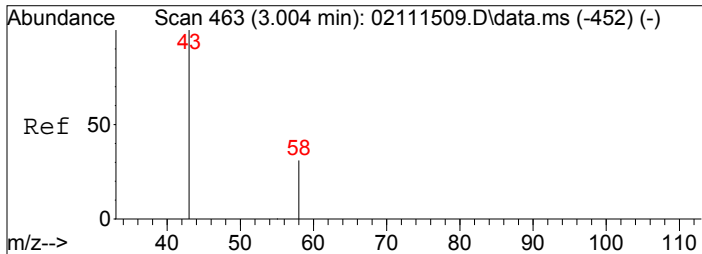
Tgt Ion:	62	Resp:	17558
Ion Ratio	Lower	Upper	
62	100		
64	32.7	12.4	52.4



#5
 Bromomethane
 Concen: 24.40 pg
 RT: 2.31 min Scan# 197
 Delta R.T. -0.019 min
 Lab File: 02281520.D
 Acq: 28 Feb 2015 12:25

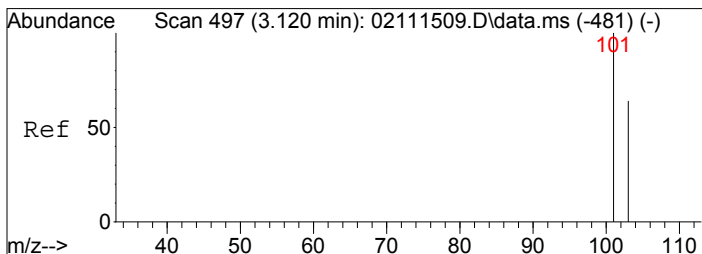
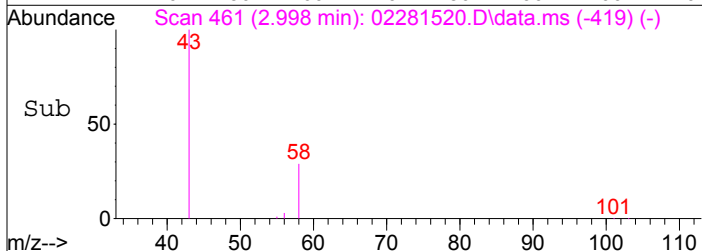
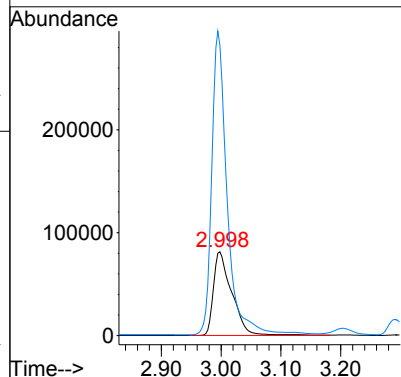
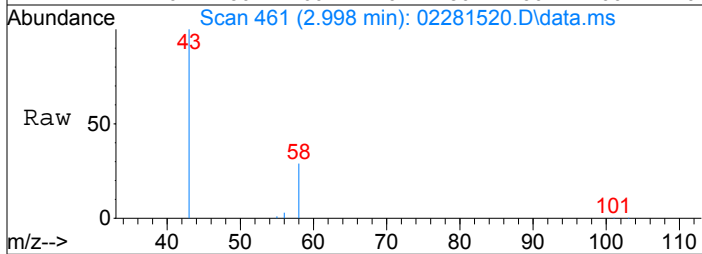
Tgt Ion:	94	Resp:	1241
Ion Ratio	Lower	Upper	
94	100		
96	94.8	75.5	113.3





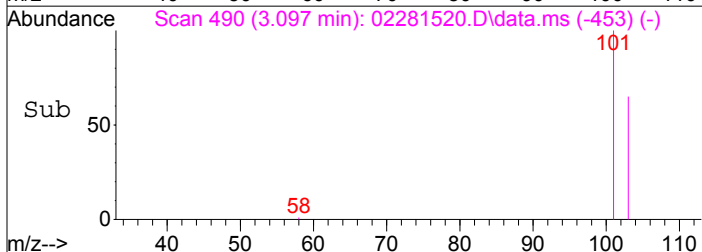
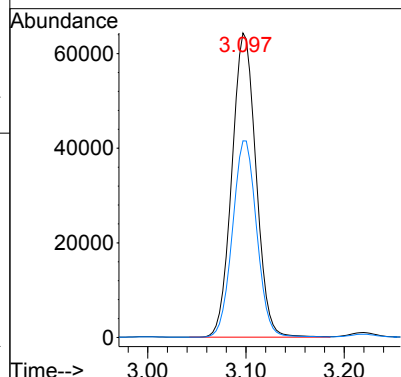
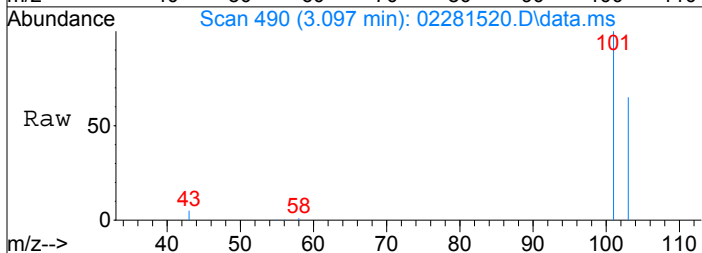
#7
Acetone
Concen: 4380.92 pg
RT: 3.00 min Scan# 461
Delta R.T. -0.006 min
Lab File: 02281520.D
Acq: 28 Feb 2015 12:25

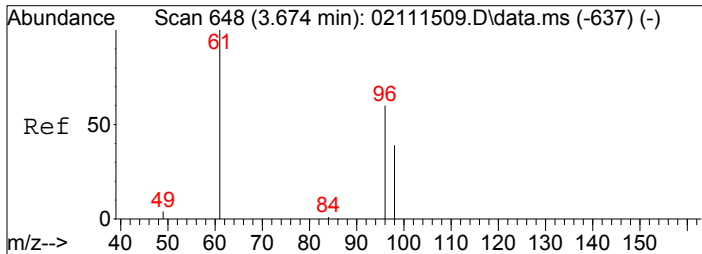
Tgt Ion: 58 Resp: 174950
Ion Ratio Lower Upper
58 100
43 302.7 301.8 341.8



#8
Trichlorofluoromethane
Concen: 1127.72 pg
RT: 3.10 min Scan# 490
Delta R.T. -0.023 min
Lab File: 02281520.D
Acq: 28 Feb 2015 12:25

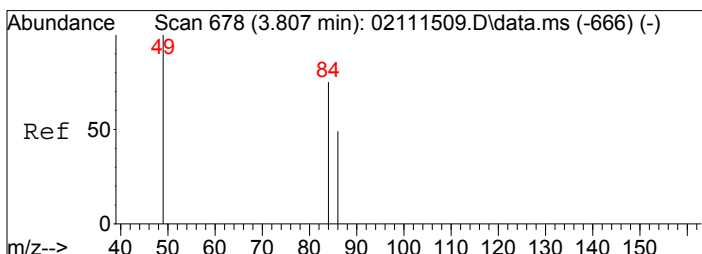
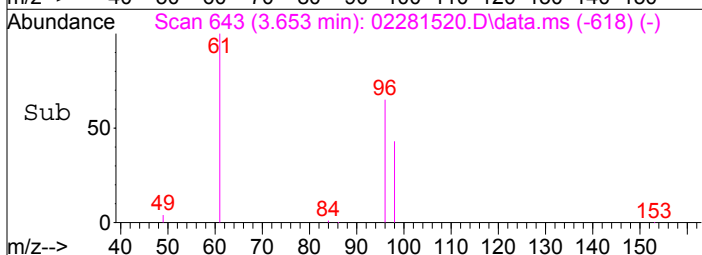
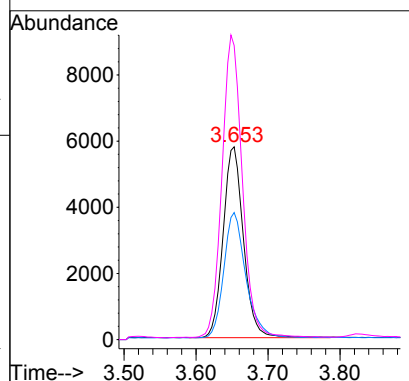
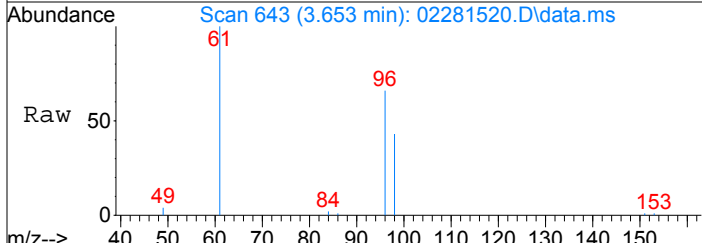
Tgt Ion: 101 Resp: 109546
Ion Ratio Lower Upper
101 100
103 64.9 51.8 77.6





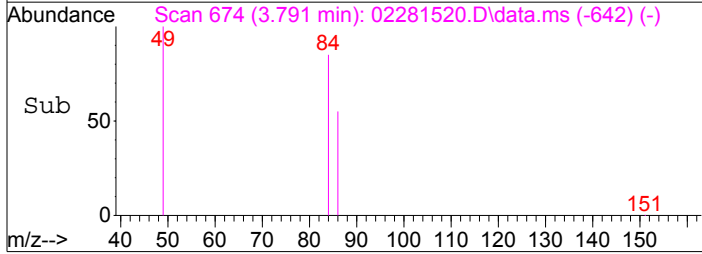
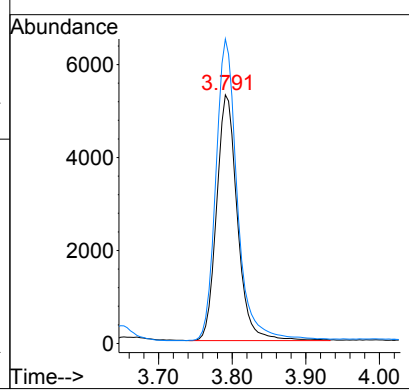
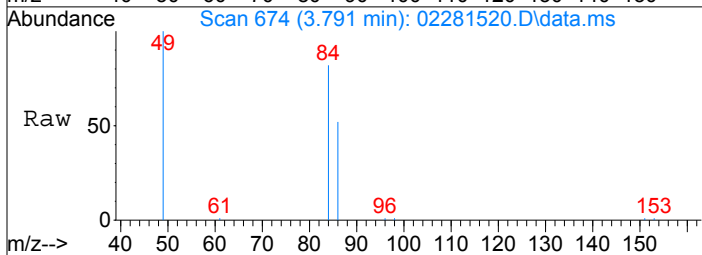
#9
 1,1-Dichloroethene
 Concen: 260.98 pg
 RT: 3.65 min Scan# 643
 Delta R.T. -0.021 min
 Lab File: 02281520.D
 Acq: 28 Feb 2015 12:25

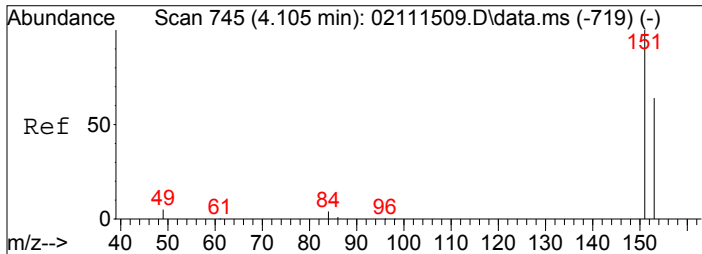
Tgt Ion: 96	Resp: 11317
Ion Ratio	Lower Upper
96	100
98	71.2 44.0 84.0
61	159.9 151.5 191.5



#10
 Methylene Chloride
 Concen: 225.59 pg
 RT: 3.79 min Scan# 674
 Delta R.T. -0.016 min
 Lab File: 02281520.D
 Acq: 28 Feb 2015 12:25

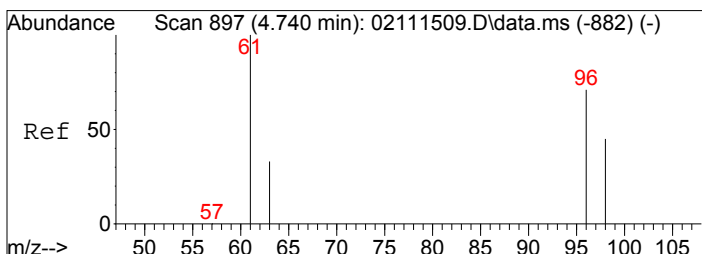
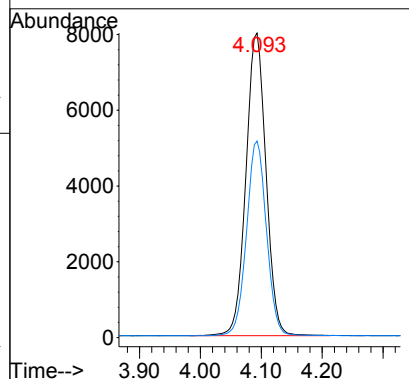
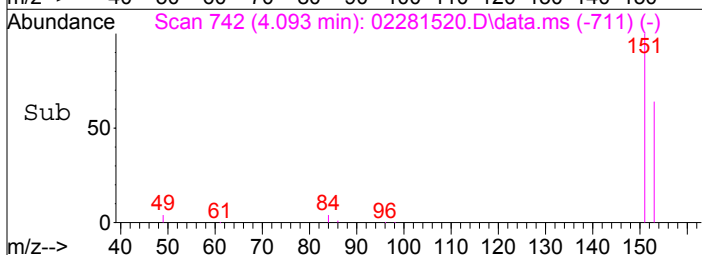
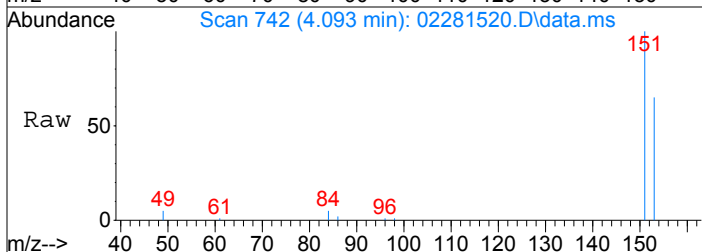
Tgt Ion: 84	Resp: 10398
Ion Ratio	Lower Upper
84	100
49	127.4 112.3 152.3





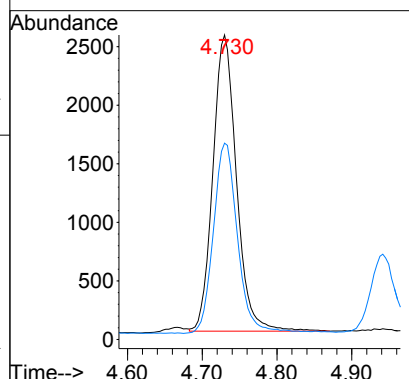
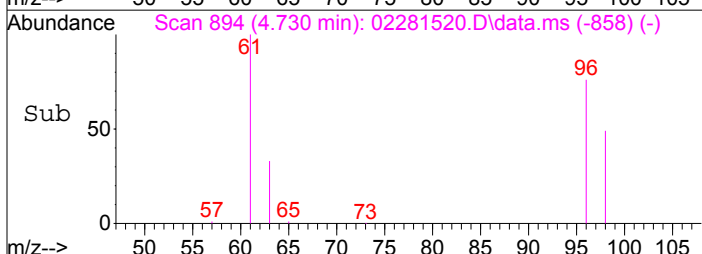
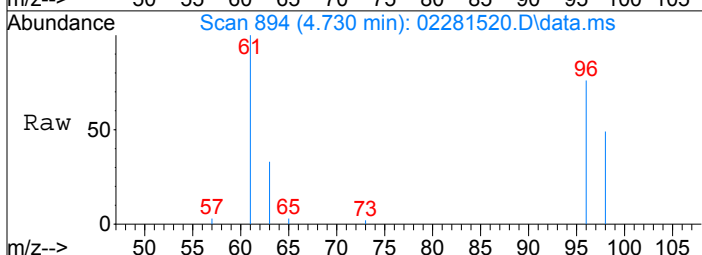
#11
 Trichlorotrifluoroethane
 Concen: 410.39 pg
 RT: 4.09 min Scan# 742
 Delta R.T. -0.012 min
 Lab File: 02281520.D
 Acq: 28 Feb 2015 12:25

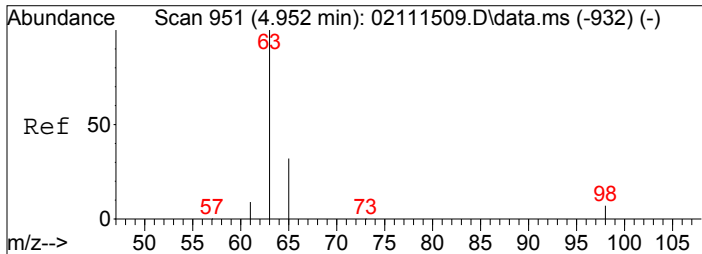
Tgt Ion	151	153	Resp	18318	Lower	Upper
Ion Ratio	100	64.0	43.6	83.6		



#12
 trans-1,2-Dichloroethene
 Concen: 125.19 pg
 RT: 4.73 min Scan# 894
 Delta R.T. -0.011 min
 Lab File: 02281520.D
 Acq: 28 Feb 2015 12:25

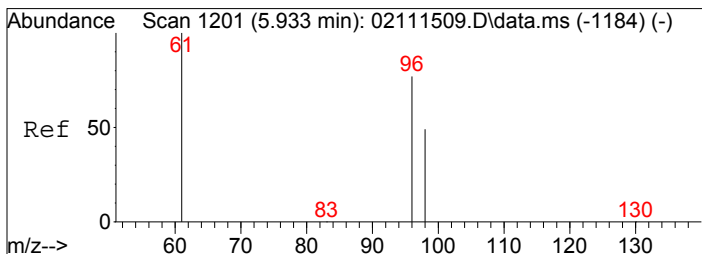
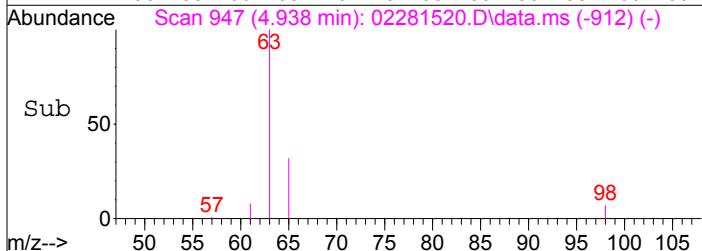
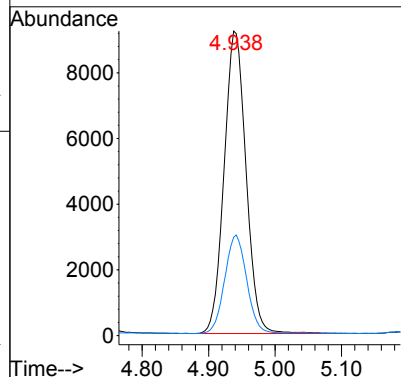
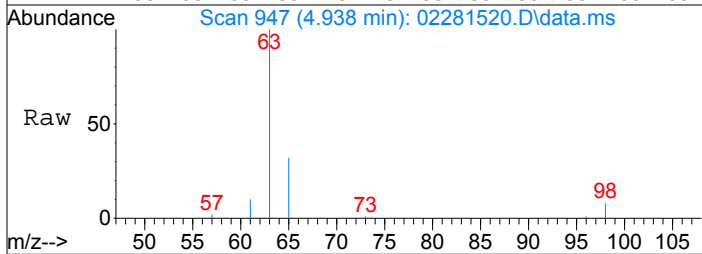
Tgt Ion	96	98	Resp	5544	Lower	Upper
Ion Ratio	100	66.0	43.7	83.7		





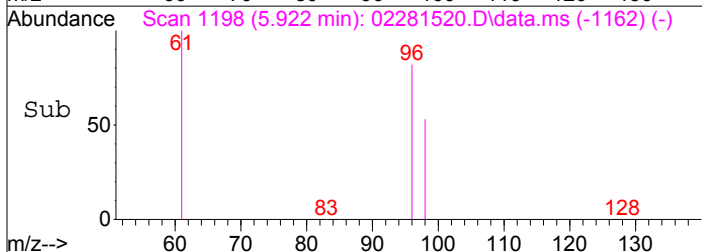
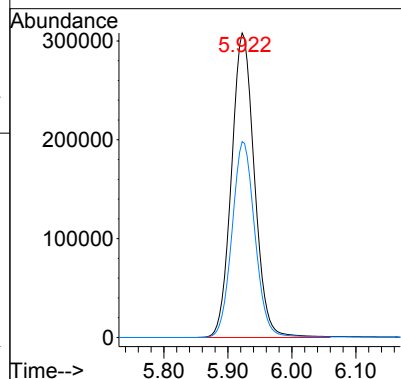
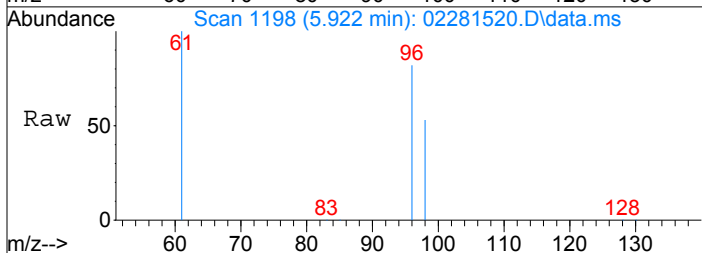
#13
1,1-Dichloroethane
Concen: 265.22 pg
RT: 4.94 min Scan# 947
Delta R.T. -0.015 min
Lab File: 02281520.D
Acq: 28 Feb 2015 12:25

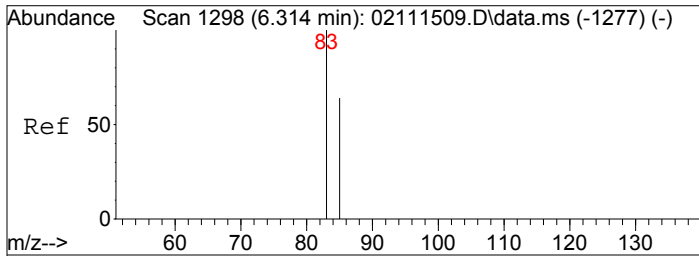
Tgt Ion: 63 Resp: 21084
Ion Ratio Lower Upper
63 100
65 32.7 12.2 52.2



#15
cis-1,2-Dichloroethene
Concen: 15547.96 pg
RT: 5.92 min Scan# 1198
Delta R.T. -0.011 min
Lab File: 02281520.D
Acq: 28 Feb 2015 12:25

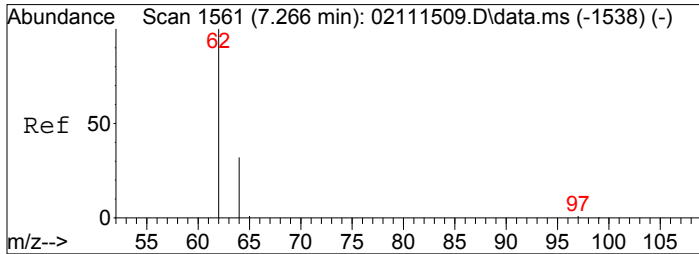
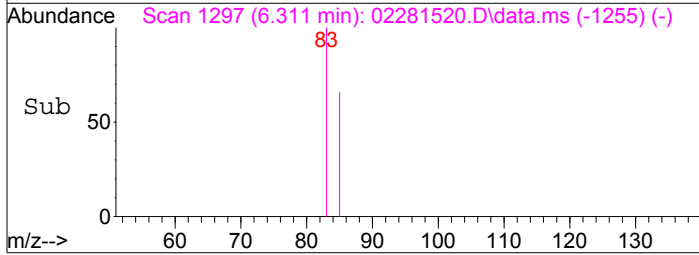
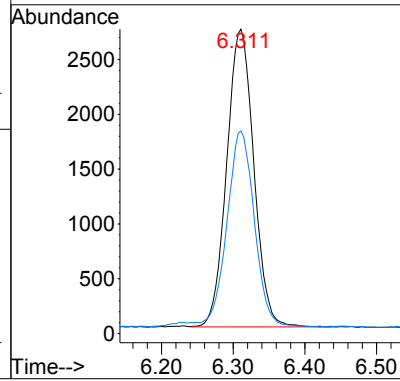
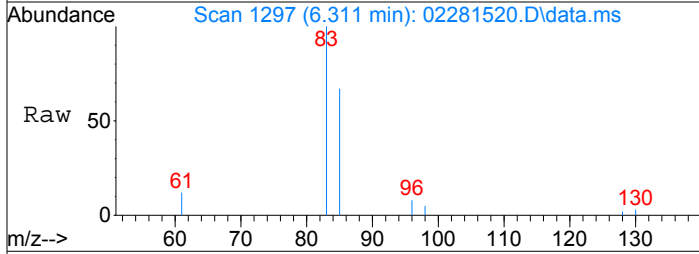
Tgt Ion: 96 Resp: 765625
Ion Ratio Lower Upper
96 100
98 64.4 44.3 84.3





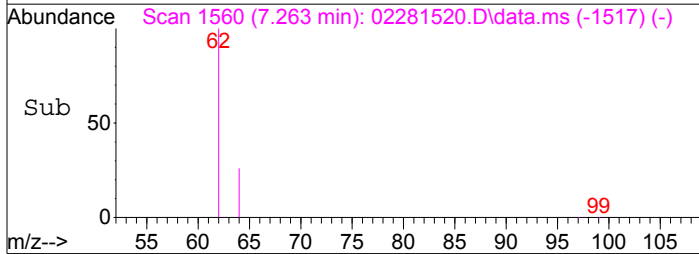
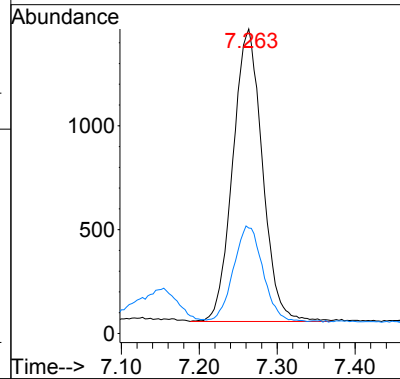
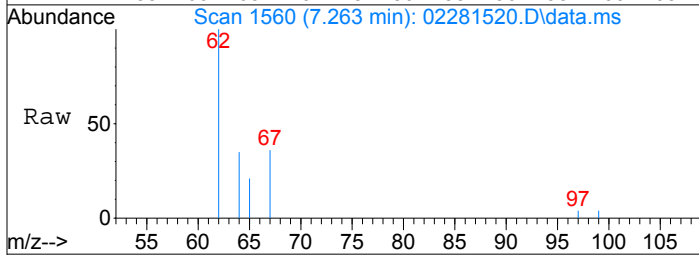
#16
Chloroform
Concen: 83.59 pg
RT: 6.31 min Scan# 1297
Delta R.T. -0.003 min
Lab File: 02281520.D
Acq: 28 Feb 2015 12:25

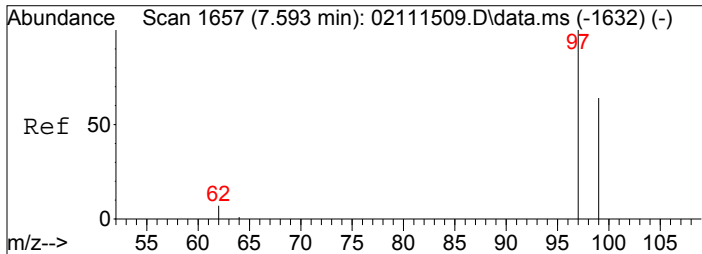
Tgt Ion: 83 Resp: 7132
Ion Ratio Lower Upper
83 100
85 66.2 45.4 85.4



#18
1,2-Dichloroethane
Concen: 54.69 pg
RT: 7.26 min Scan# 1560
Delta R.T. -0.002 min
Lab File: 02281520.D
Acq: 28 Feb 2015 12:25

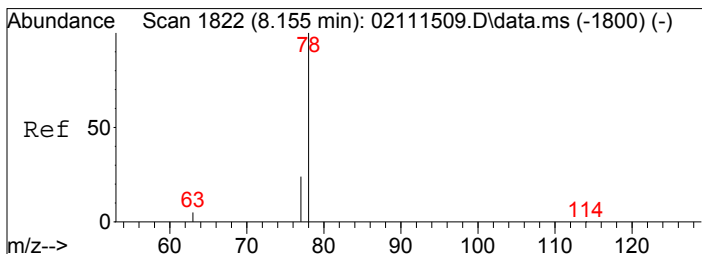
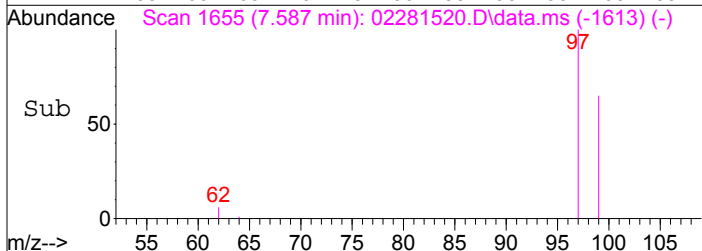
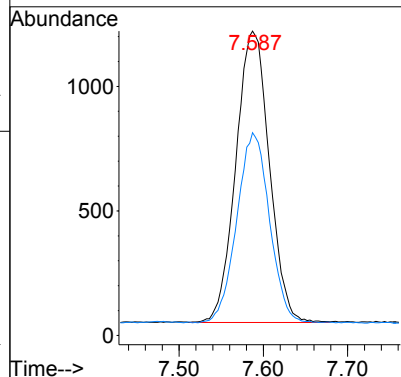
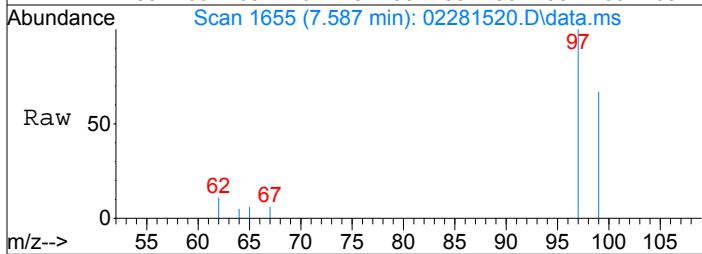
Tgt Ion: 62 Resp: 3715
Ion Ratio Lower Upper
62 100
64 32.3 11.6 51.6





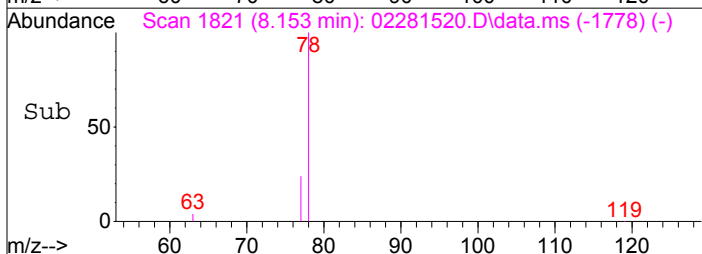
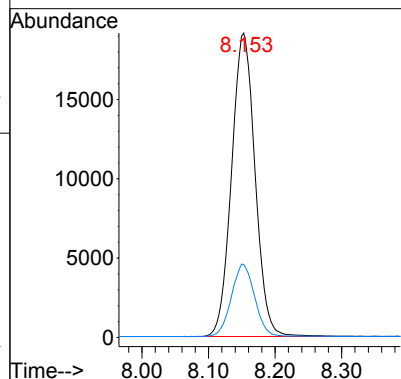
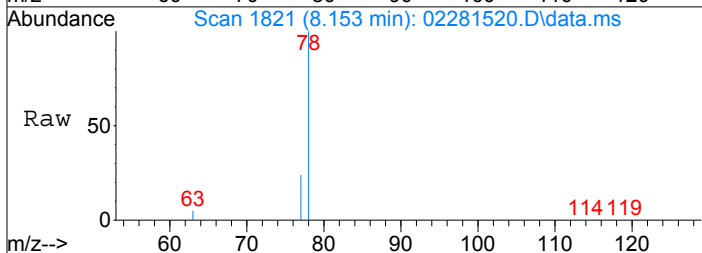
#19
 1,1,1-Trichloroethane
 Concen: 39.04 pg
 RT: 7.59 min Scan# 1655
 Delta R.T. -0.006 min
 Lab File: 02281520.D
 Acq: 28 Feb 2015 12:25

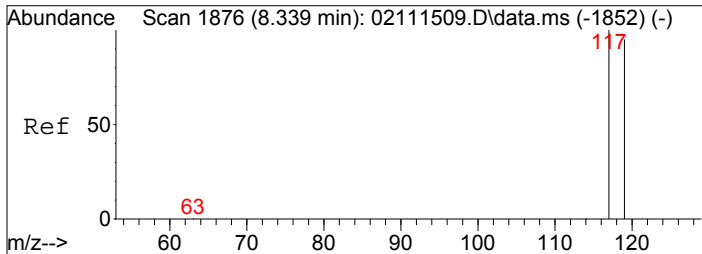
Tgt Ion	97	Resp	3239
Ion Ratio	100	Lower	Upper
99	63.5	44.0	84.0



#20
 Benzene
 Concen: 267.31 pg
 RT: 8.15 min Scan# 1821
 Delta R.T. -0.002 min
 Lab File: 02281520.D
 Acq: 28 Feb 2015 12:25

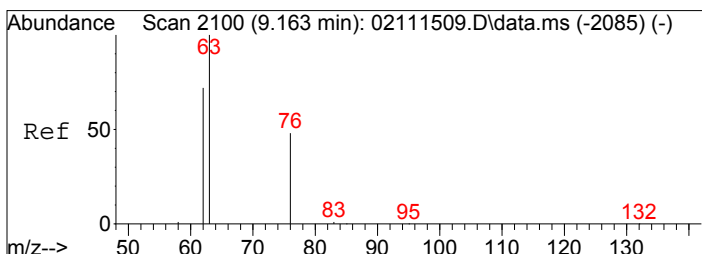
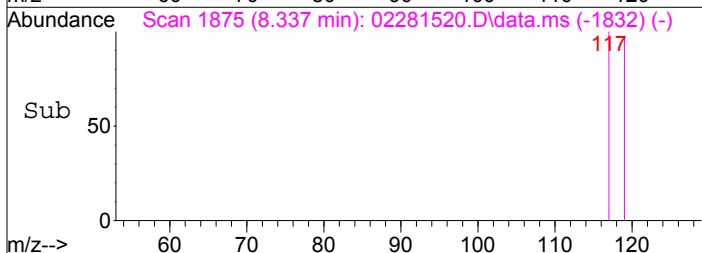
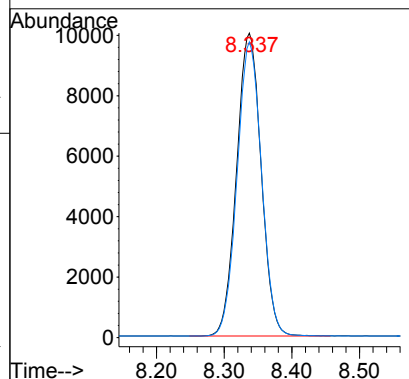
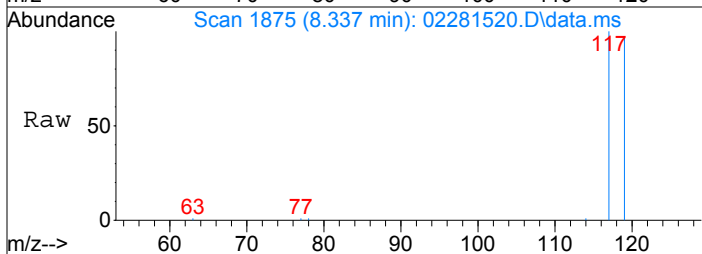
Tgt Ion	78	Resp	46906
Ion Ratio	100	Lower	Upper
77	23.6	3.7	43.7





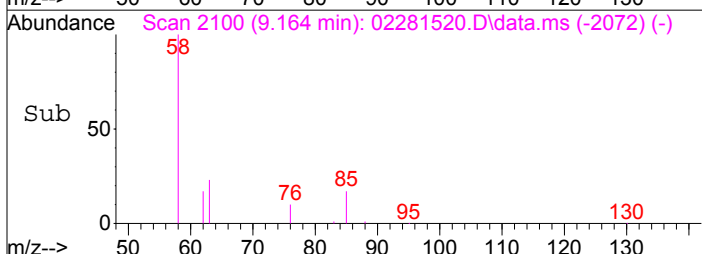
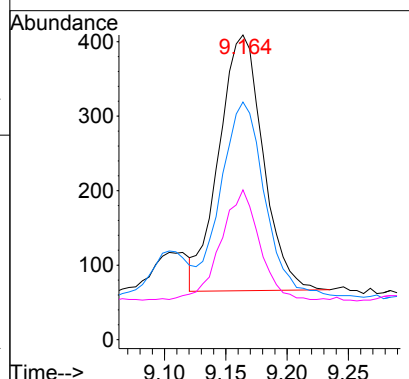
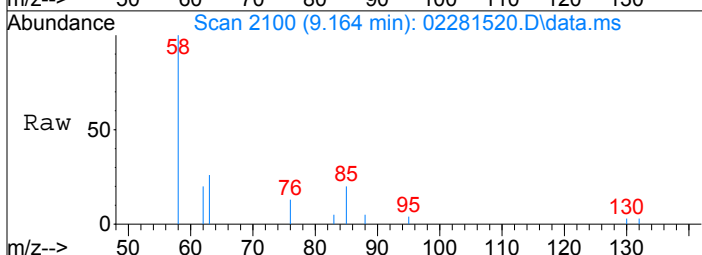
#21
Carbon Tetrachloride
Concen: 406.62 pg
RT: 8.34 min Scan# 1875
Delta R.T. -0.002 min
Lab File: 02281520.D
Acq: 28 Feb 2015 12:25

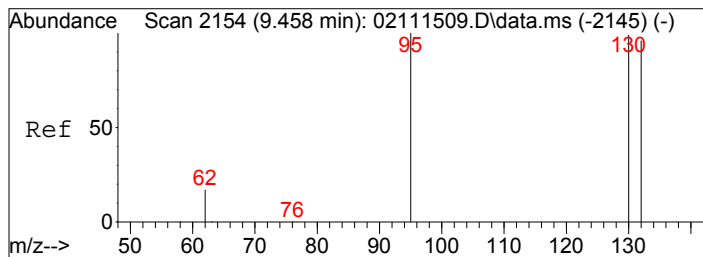
Tgt Ion: 117 Resp: 25256
Ion Ratio Lower Upper
117 100
119 96.4 75.5 115.5



#23
1,2-Dichloropropane
Concen: 21.05 pg
RT: 9.16 min Scan# 2100
Delta R.T. 0.001 min
Lab File: 02281520.D
Acq: 28 Feb 2015 12:25

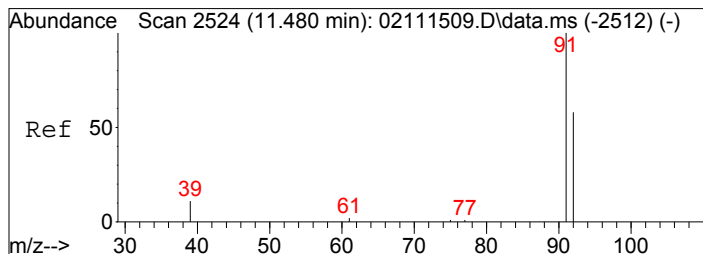
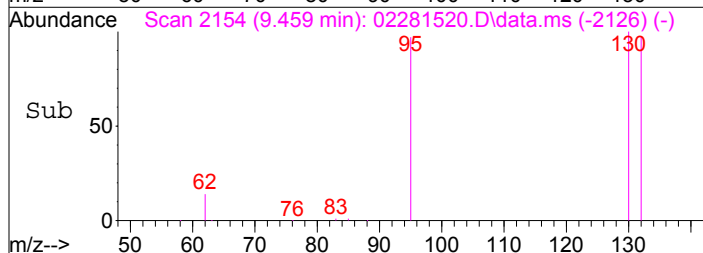
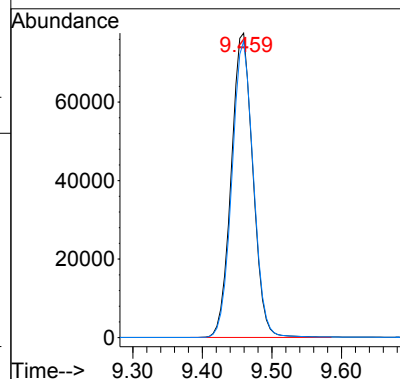
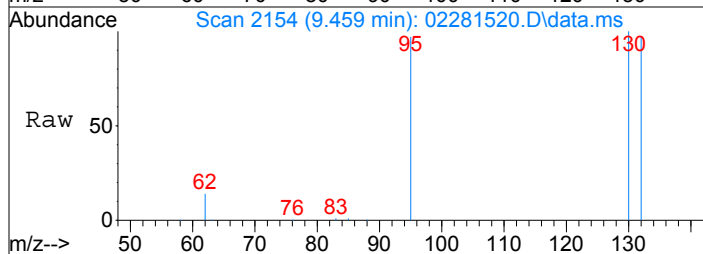
Tgt Ion: 63 Resp: 858
Ion Ratio Lower Upper
63 100
62 76.3 52.0 92.0
76 38.0 28.1 68.1





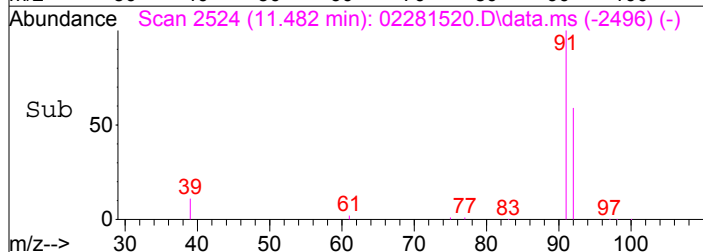
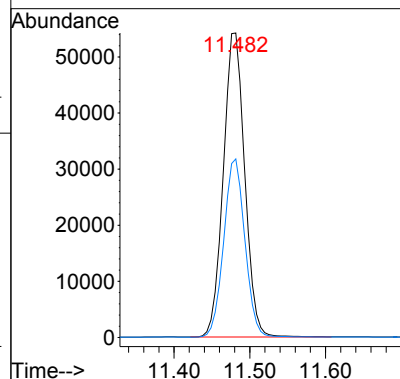
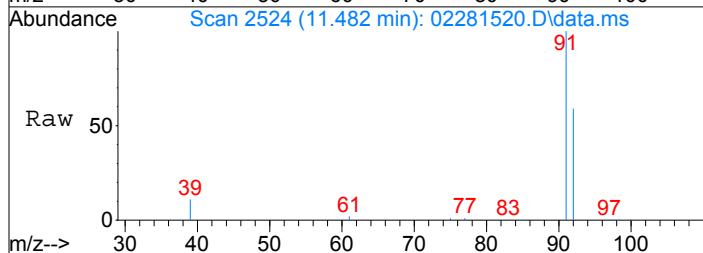
#25
Trichloroethene
Concen: 3491.33 pg
RT: 9.46 min Scan# 2154
Delta R.T. 0.001 min
Lab File: 02281520.D
Acq: 28 Feb 2015 12:25

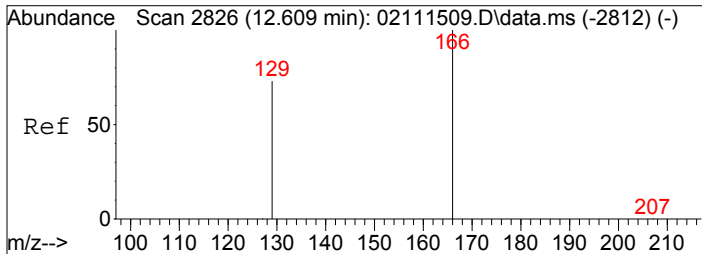
Tgt Ion: 130 Resp: 167646
Ion Ratio Lower Upper
130 100
132 96.4 77.1 117.1



#31
Toluene
Concen: 581.65 pg
RT: 11.48 min Scan# 2524
Delta R.T. 0.001 min
Lab File: 02281520.D
Acq: 28 Feb 2015 12:25

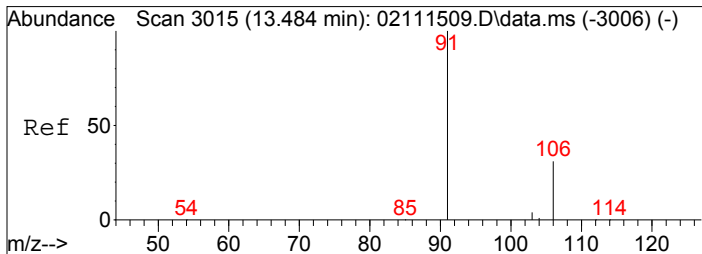
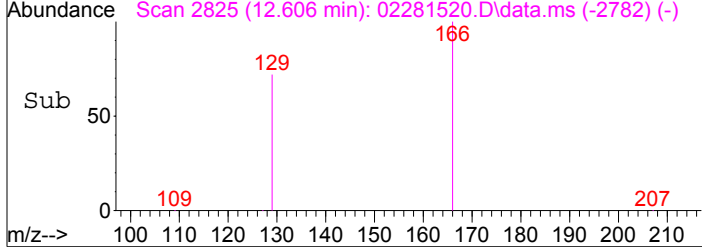
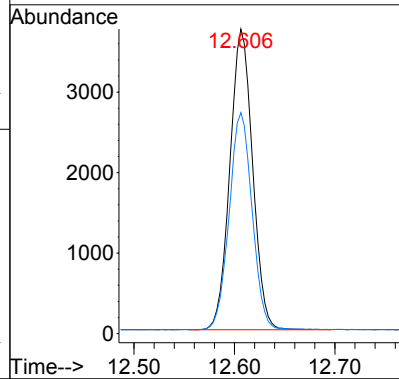
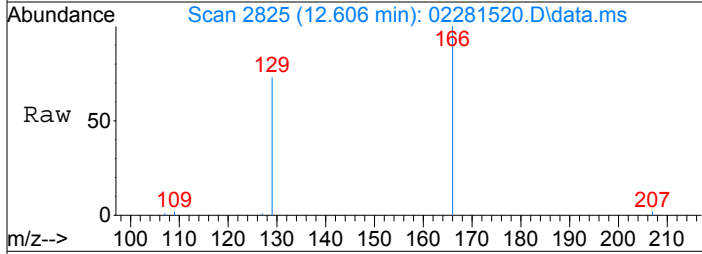
Tgt Ion: 91 Resp: 106627
Ion Ratio Lower Upper
91 100
92 58.0 37.7 77.7





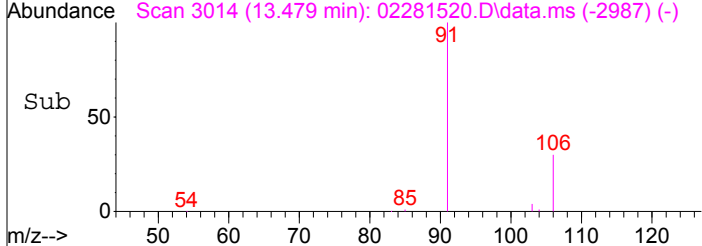
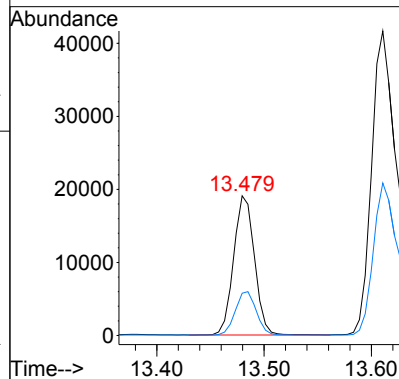
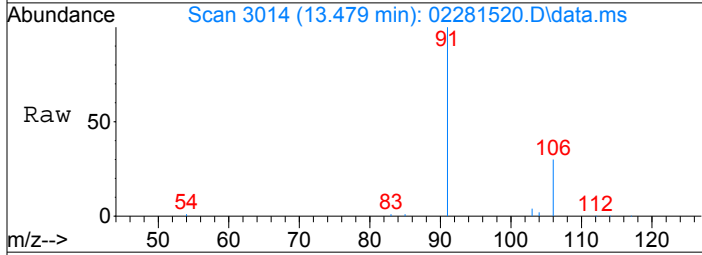
#33
Tetrachloroethene
Concen: 103.29 pg
RT: 12.61 min Scan# 2825
Delta R.T. -0.003 min
Lab File: 02281520.D
Acq: 28 Feb 2015 12:25

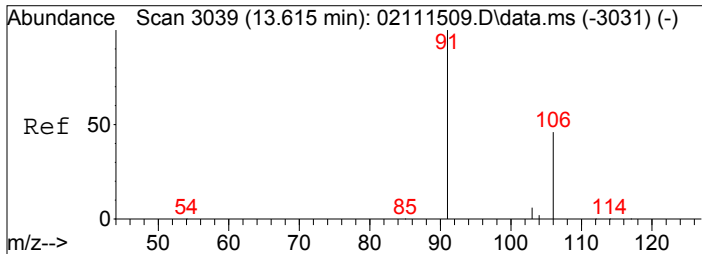
Tgt Ion	Ratio	Lower	Upper
166	100		
129	72.7	53.3	93.3



#36
Ethylbenzene
Concen: 129.27 pg
RT: 13.48 min Scan# 3014
Delta R.T. -0.004 min
Lab File: 02281520.D
Acq: 28 Feb 2015 12:25

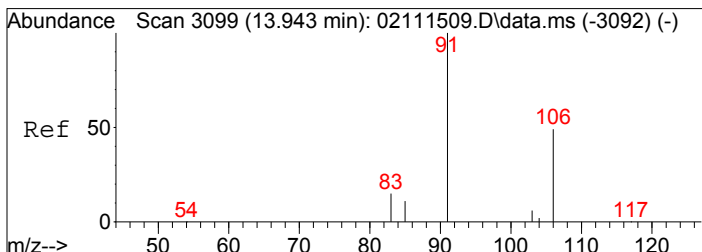
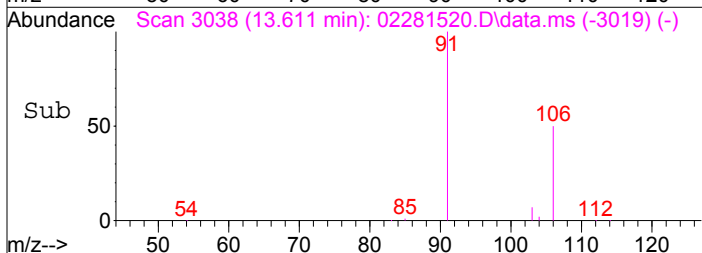
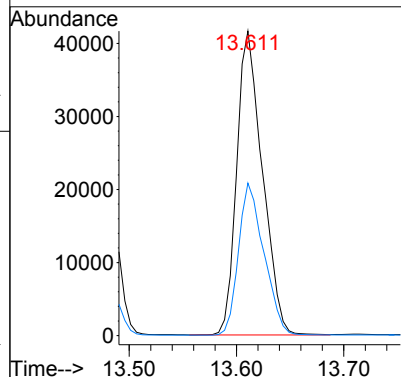
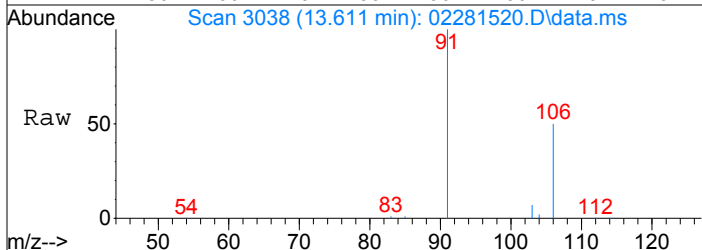
Tgt Ion	Ratio	Lower	Upper
91	100		
106	31.4	10.9	50.9





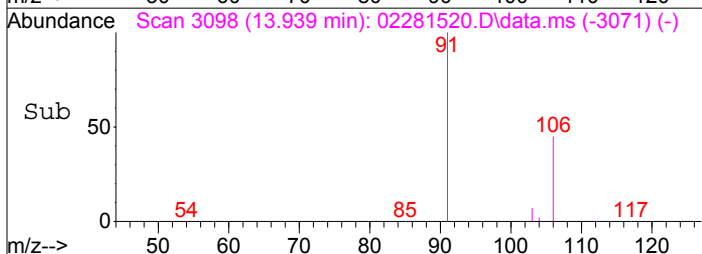
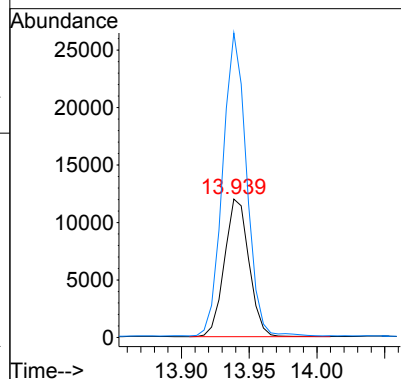
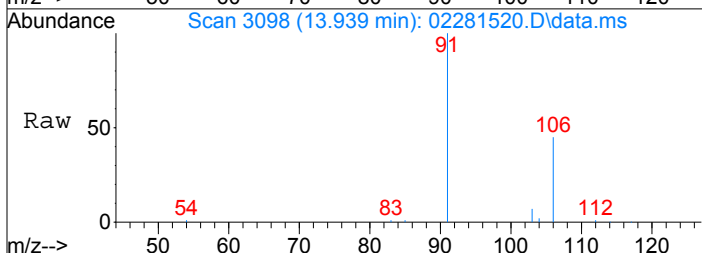
#37
m,p-Xylene
Concen: 422.68 pg
RT: 13.61 min Scan# 3038
Delta R.T. -0.004 min
Lab File: 02281520.D
Acq: 28 Feb 2015 12:25

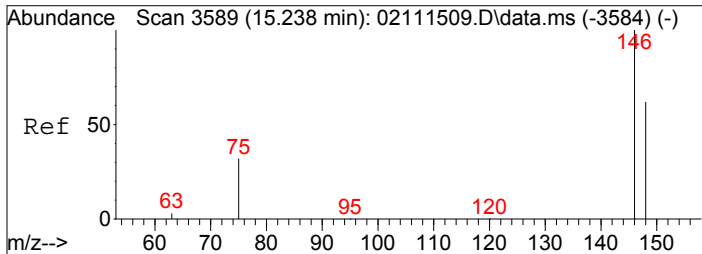
Tgt Ion: 91 Resp: 69009
Ion Ratio Lower Upper
91 100
106 49.7 27.5 67.5



#38
o-Xylene
Concen: 188.78 pg
RT: 13.94 min Scan# 3098
Delta R.T. -0.004 min
Lab File: 02281520.D
Acq: 28 Feb 2015 12:25

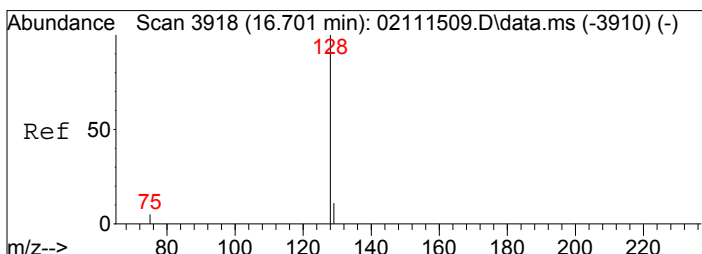
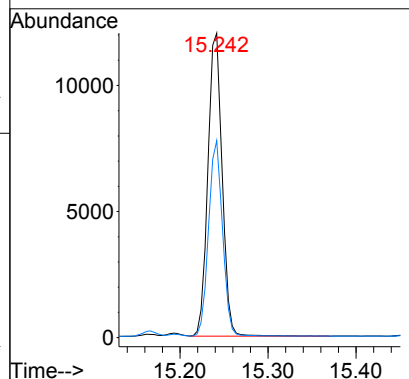
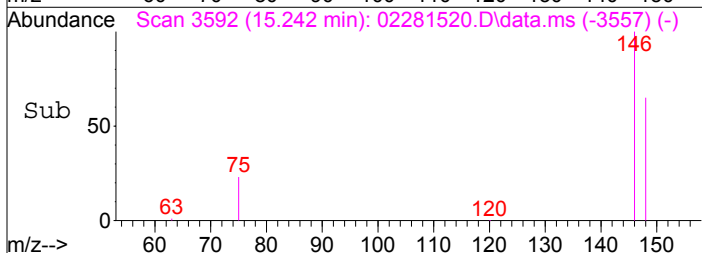
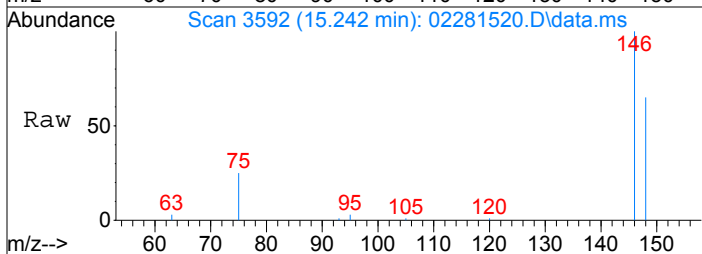
Tgt Ion: 106 Resp: 15063
Ion Ratio Lower Upper
106 100
91 213.8 198.3 238.3





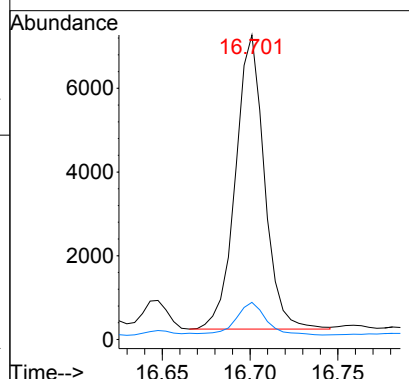
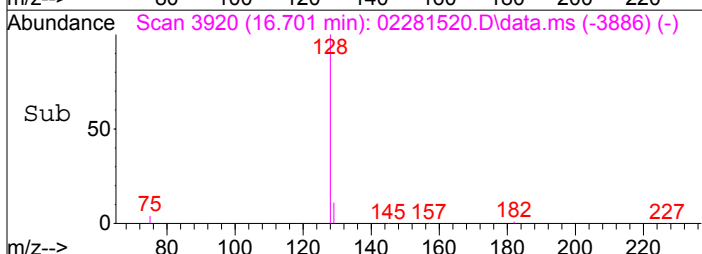
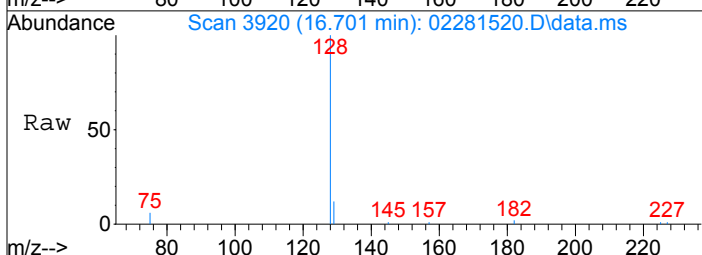
#42
 1,4-Dichlorobenzene
 Concen: 123.27 pg
 RT: 15.24 min Scan# 3592
 Delta R.T. 0.004 min
 Lab File: 02281520.D
 Acq: 28 Feb 2015 12:25

Tgt Ion	146	148	Resp	13494	Lower	Upper
Ion Ratio	100	63.2	43.5	83.5		



#45
 Naphthalene
 Concen: 40.64 pg
 RT: 16.70 min Scan# 3920
 Delta R.T. 0.000 min
 Lab File: 02281520.D
 Acq: 28 Feb 2015 12:25

Tgt Ion	128	129	Resp	8056	Lower	Upper
Ion Ratio	100	12.2	0.0	30.9		



Data File: I:\MS19\DATA\2015 03\02\03021511.D

Acq On : 2 Mar 2015 12:58

Operator: WA

Sample : P1500729-028 dup (1000mL)

Misc : S29-02041502

ALS Vial : 4 Sample Multiplier: 1

Quant Time: Mar 02 14:34:14 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

107 3/2/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.12	130	25112	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	180763	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	30269	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	54601	890.341	pg	0.00
Spiked Amount 1000.000			Recovery	=	89.03%	
30) Toluene-d8 (SS2)	11.38	98	166948	1001.507	pg	0.00
Spiked Amount 1000.000			Recovery	=	100.15%	
40) Bromofluorobenzene (SS3)	14.25	174	69433	1136.217	pg	0.00
Spiked Amount 1000.000			Recovery	=	113.62%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.72	85	175899	1723.561	pg	100
3) Chloromethane	1.83	52	9038	443.457	pg	99
4) Vinyl Chloride	2.01	62	200	N.D.		
5) Bromomethane	2.33	94	1659	36.151	pg	99
6) Chloroethane	2.47	64	478	N.D.		
7) Acetone	3.00	58	181830	5045.475	pg	# 89
8) Trichlorofluoromethane	3.11	101	116052	1323.865	pg	100
9) 1,1-Dichloroethene	3.66	96	87	N.D.		
10) Methylene Chloride	3.81	84	10046	241.515	pg	92
11) Trichlorotrifluoroethane	4.10	151	18044	447.957	pg	99
12) trans-1,2-Dichloroethene	4.74	96	685	N.D.		
13) 1,1-Dichloroethane	4.96	63	372	N.D.		
14) Methyl tert-Butyl Ether	5.12	73	563	N.D.		
15) cis-1,2-Dichloroethene	5.94	96	1245	28.016	pg	98
16) Chloroform	6.32	83	9184	119.284	pg	98
18) 1,2-Dichloroethane	7.27	62	4165	67.941	pg	98
19) 1,1,1-Trichloroethane	7.59	97	1836	24.522	pg	99
20) Benzene	8.16	78	47876	302.331	pg	100
21) Carbon Tetrachloride	8.34	117	24431	435.859	pg	99
23) 1,2-Dichloropropane	9.16	63	932	23.640	pg	95
24) Bromodichloromethane	9.42	83	729	N.D.		
25) Trichloroethene	9.46	130	6806	146.558	pg	99
26) 1,4-Dioxane	9.57	88	183	N.D.		
27) cis-1,3-Dichloropropene	10.46	75	335	N.D.		
28) trans-1,3-Dichloropropene	11.05	75	126	N.D.		
29) 1,1,2-Trichloroethane	11.20	83	135	N.D.		
31) Toluene	11.48	91	209254	1180.280	pg	100
32) 1,2-Dibromoethane	12.12	107	30	N.D.		
33) Tetrachloroethene	12.61	166	1497	27.270	pg	99
35) Chlorobenzene	13.17	112	907	N.D.		
36) Ethylbenzene	13.48	91	24702	130.139	pg	99
37) m,p-Xylene	13.61	91	53727	344.395	pg	98
38) o-Xylene	13.94	106	9896	129.796	pg	99
39) 1,1,1,2,2-Tetrachloroethane	13.90	83	327	N.D.		
41) 1,3-Dichlorobenzene	15.17	146	711	N.D.		
42) 1,4-Dichlorobenzene	15.24	146	1727	N.D.		
43) 1,2-Dichlorobenzene	15.46	146	148	N.D.		
44) 1,2,4-Trichlorobenzene	16.63	182	118	N.D.		
45) Naphthalene	16.70	128	6491	34.272	pg	94
46) Hexachlorobutadiene	16.96	225	42	N.D.		

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 03\02\03021511.D

Acq On : 2 Mar 2015 12:58

Operator: WA

Sample : P1500729-028 dup (1000mL)

Misc : S29-02041502

ALS Vial : 4 Sample Multiplier: 1

Quant Time: Mar 02 14:34:14 2015

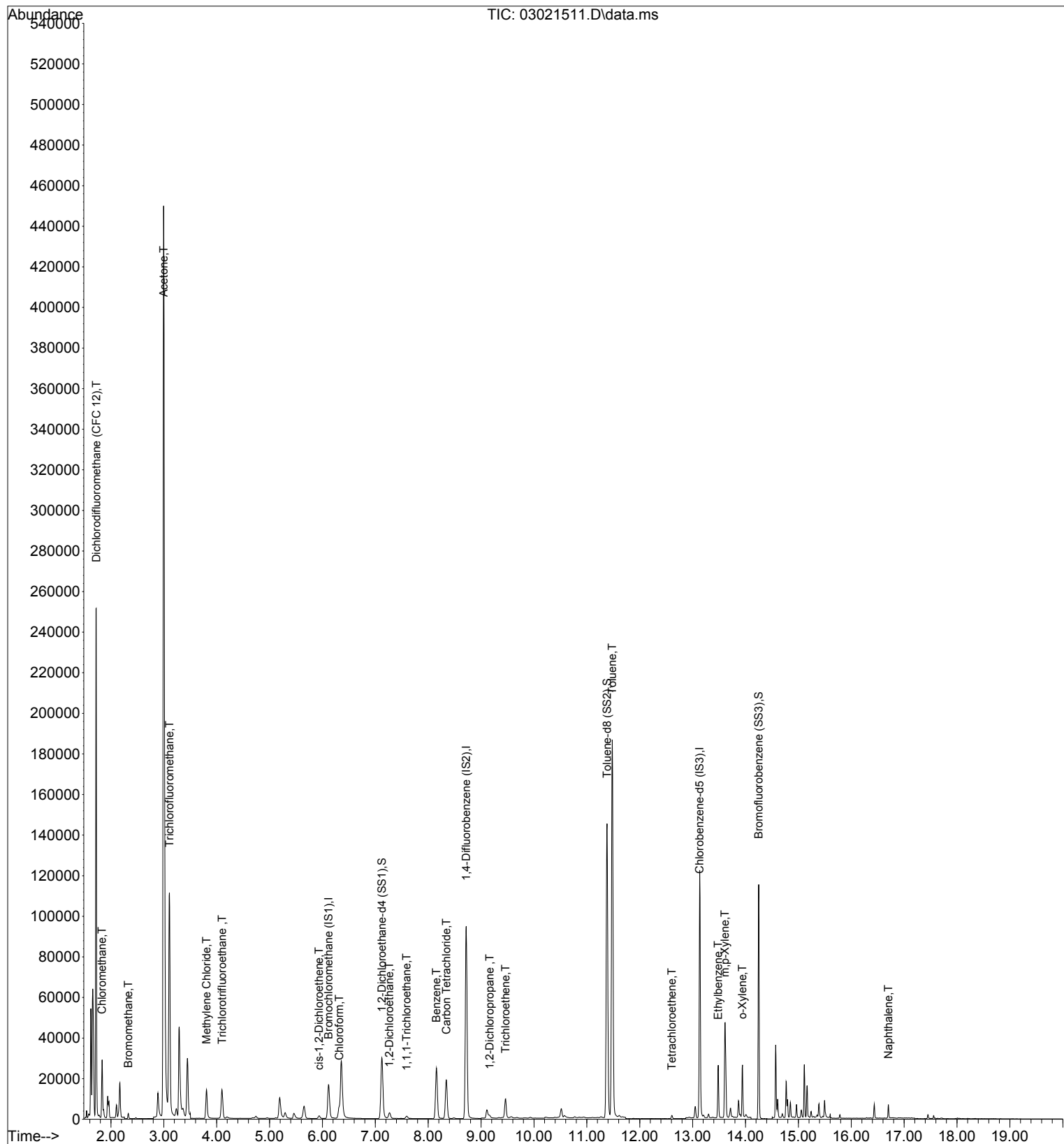
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 03\02\03021511.D

Acq On : 2 Mar 2015 12:58
 Sample : P1500729-028 dup (1000mL)
 Misc : S29-02041502
 ALS Vial : 4 Sample Multiplier: 1

Operator: WA

Quant Time: Mar 02 14:34:14 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

3/2/15

DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.12	130	25112	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	180763	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	30269	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	54601	890.341	pg	0.00
Spiked Amount 1000.000			Recovery	=	89.03%	
30) Toluene-d8 (SS2)	11.38	98	166948	1001.507	pg	0.00
Spiked Amount 1000.000			Recovery	=	100.15%	
40) Bromofluorobenzene (SS3)	14.25	174	69433	1136.217	pg	0.00
Spiked Amount 1000.000			Recovery	=	113.62%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.72	85	175899	1723.561	pg	100
3) Chloromethane	1.83	52	9038	443.457	pg	99
5) Bromomethane	2.33	94	1659	36.151	pg	99
7) Acetone	3.00	58	181830	5045.475	pg	# 89
8) Trichlorofluoromethane	3.11	101	116052	1323.865	pg	100
10) Methylene Chloride	3.81	84	10046	241.515	pg	92
11) Trichlorotrifluoroethane	4.10	151	18044	447.957	pg	99
15) cis-1,2-Dichloroethene	5.94	96	1245	28.016	pg	98
16) Chloroform	6.32	83	9184	119.284	pg	98
18) 1,2-Dichloroethane	7.27	62	4165	67.941	pg	98
19) 1,1,1-Trichloroethane	7.59	97	1836	24.522	pg	99
20) Benzene	8.16	78	47876	302.331	pg	100
21) Carbon Tetrachloride	8.34	117	24431	435.859	pg	99
23) 1,2-Dichloropropane	9.16	63	932	23.640	pg	95
25) Trichloroethene	9.46	130	6806	146.558	pg	99
31) Toluene	11.48	91	209254	1180.280	pg	100
33) Tetrachloroethene	12.61	166	1497	27.270	pg	99
36) Ethylbenzene	13.48	91	24702	130.139	pg	99
37) m,p-Xylene	13.61	91	53727	344.395	pg	98
38) o-Xylene	13.94	106	9896	129.796	pg	99
45) Naphthalene	16.70	128	6491	34.272	pg	94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File: I:\MS19\DATA\2015 03\02\03021511.D

Acq On : 2 Mar 2015 12:58

Operator: WA

Sample : P1500729-028 dup (1000mL)

Misc : S29-02041502

ALS Vial : 4 Sample Multiplier: 1

Quant Time: Mar 02 14:34:14 2015

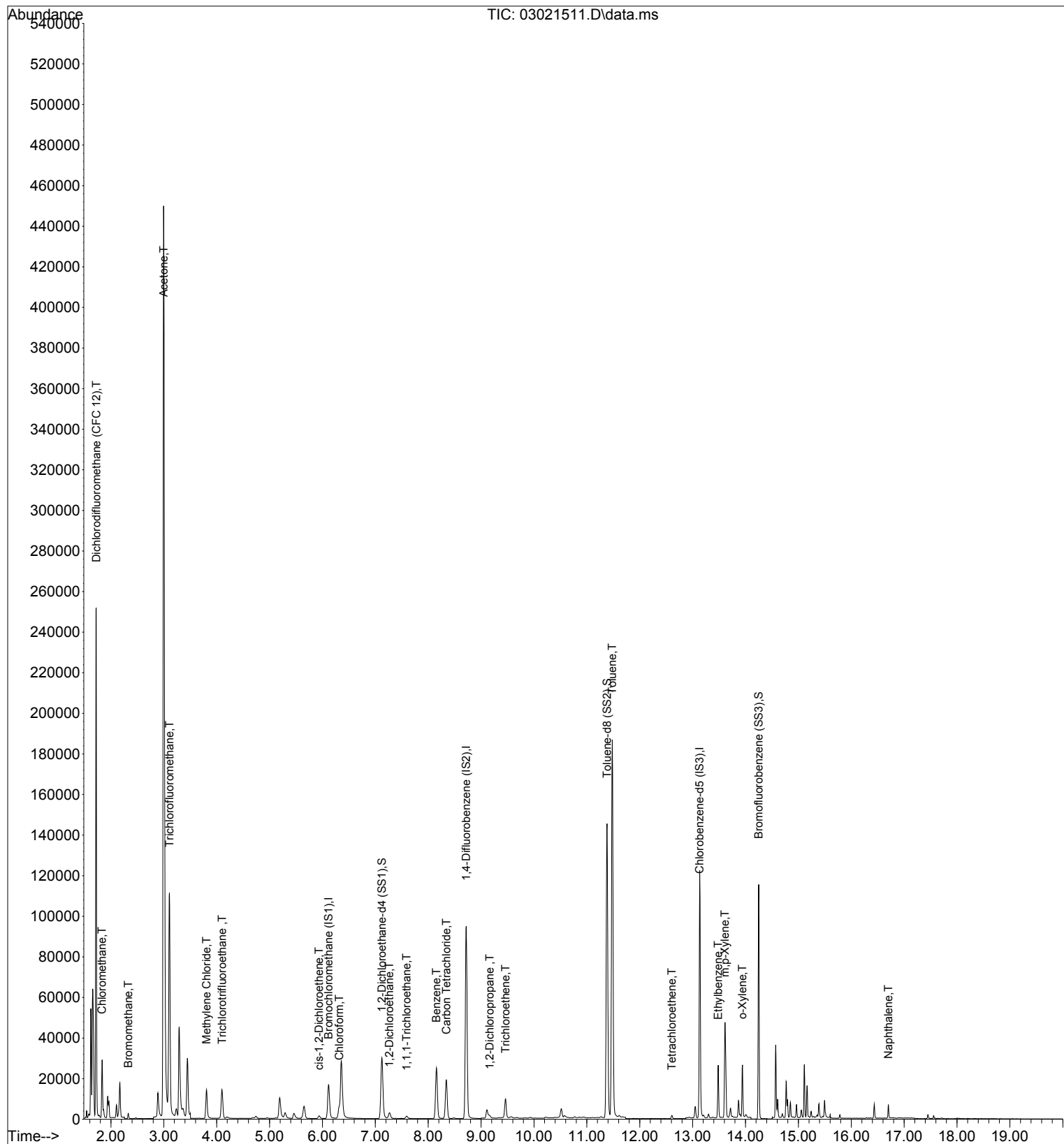
Quant Method : I:\MS19\METHODS\X19021115.M

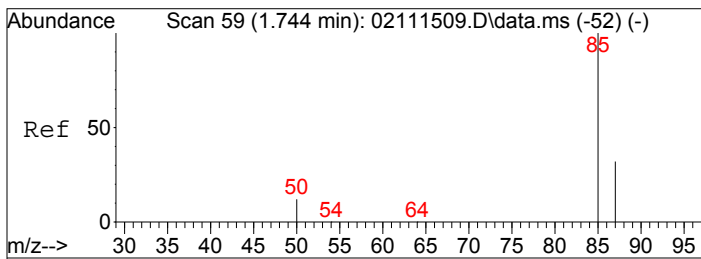
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

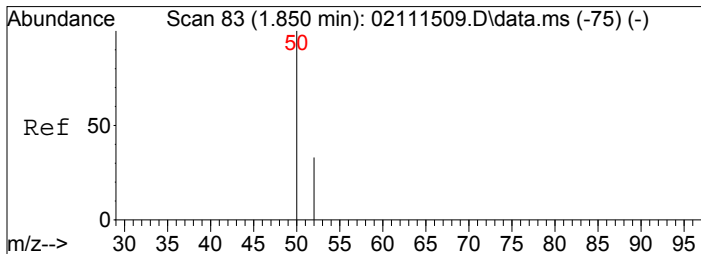
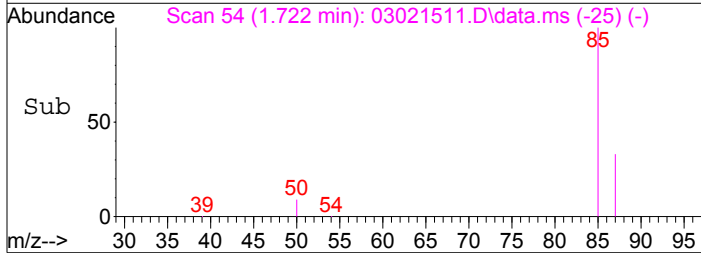
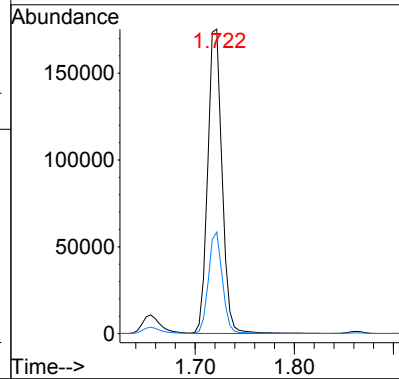
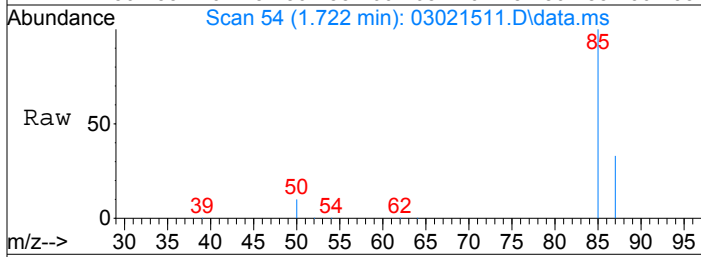
DataAcq Meth:TO15SIM.M





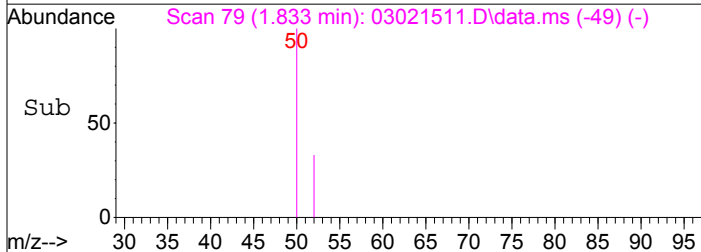
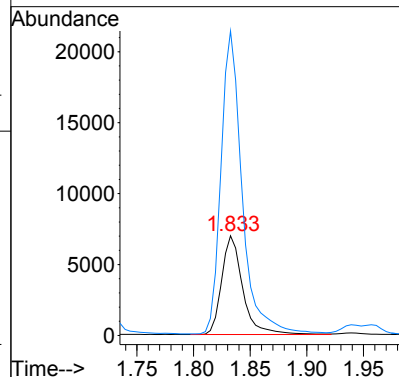
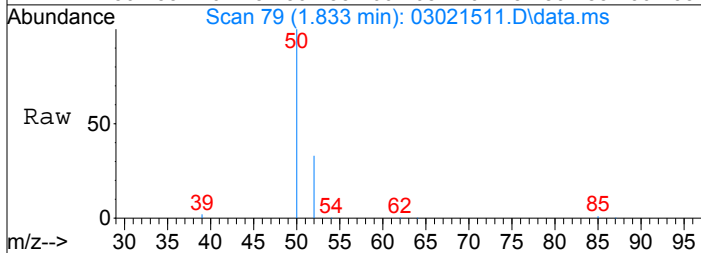
#2
 Dichlorodifluoromethane (CFC 12)
 Concen: 1723.56 pg
 RT: 1.72 min Scan# 54
 Delta R.T. -0.022 min
 Lab File: 03021511.D
 Acq: 2 Mar 2015 12:58

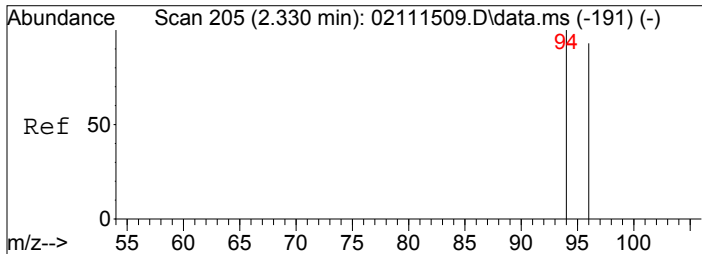
Tgt Ion: 85 Resp: 175899
 Ion Ratio Lower Upper
 85 100
 87 32.5 12.4 52.4



#3
 Chloromethane
 Concen: 443.46 pg
 RT: 1.83 min Scan# 79
 Delta R.T. -0.017 min
 Lab File: 03021511.D
 Acq: 2 Mar 2015 12:58

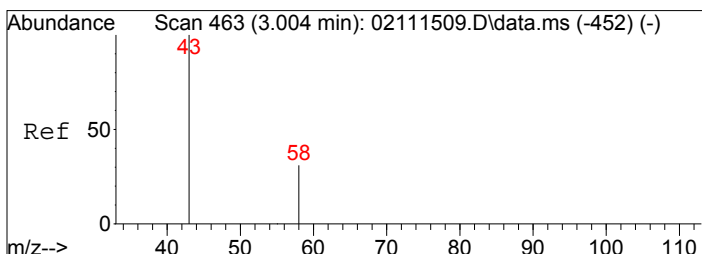
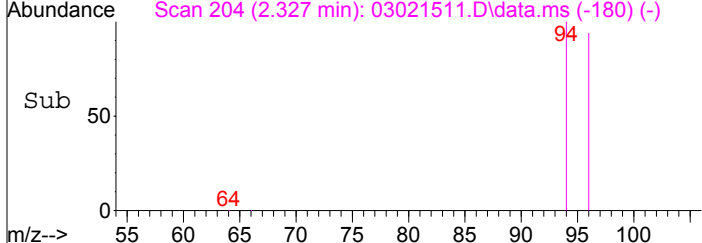
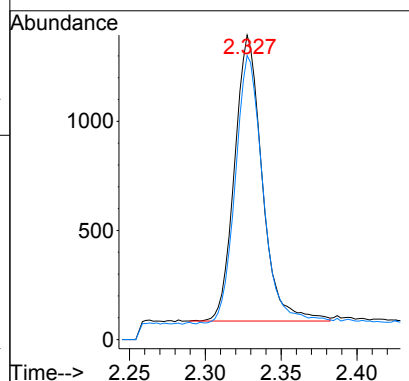
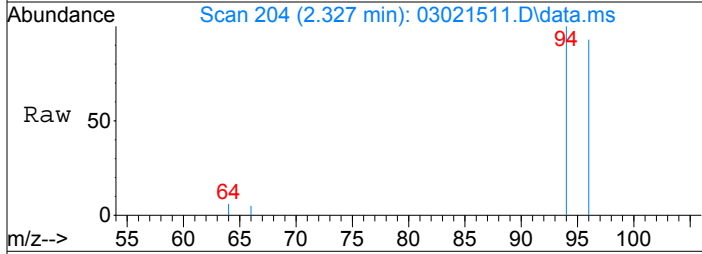
Tgt Ion: 52 Resp: 9038
 Ion Ratio Lower Upper
 52 100
 50 306.1 283.7 323.7





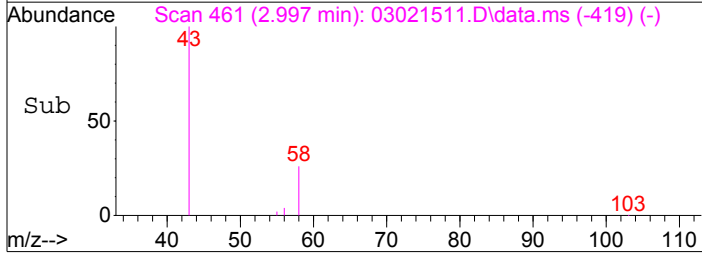
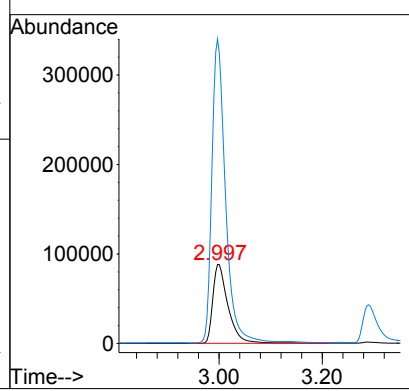
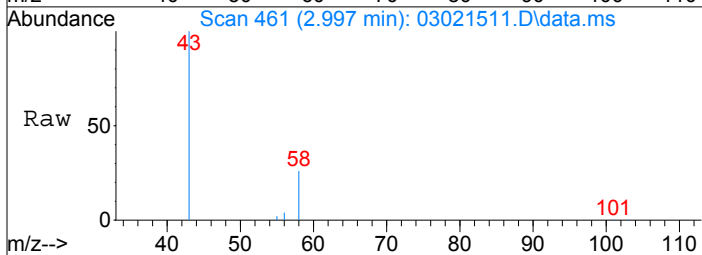
#5
 Bromomethane
 Concen: 36.15 pg
 RT: 2.33 min Scan# 204
 Delta R.T. -0.003 min
 Lab File: 03021511.D
 Acq: 2 Mar 2015 12:58

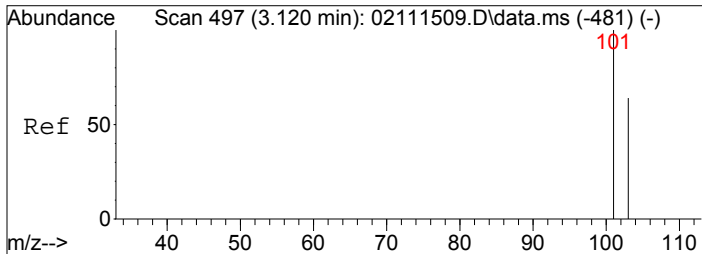
Tgt Ion: 94	Resp: 1659
Ion Ratio	Lower Upper
94	100
96	95.2 75.5 113.3



#7
 Acetone
 Concen: 5045.47 pg
 RT: 3.00 min Scan# 461
 Delta R.T. -0.007 min
 Lab File: 03021511.D
 Acq: 2 Mar 2015 12:58

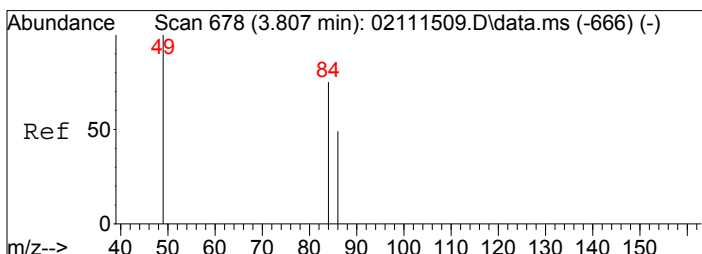
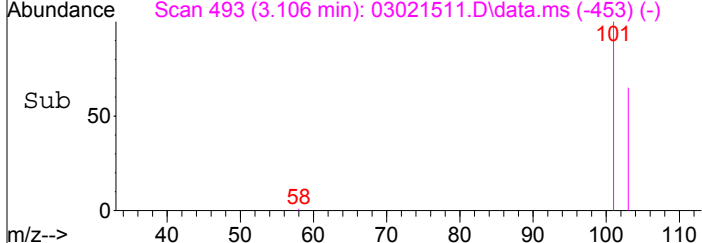
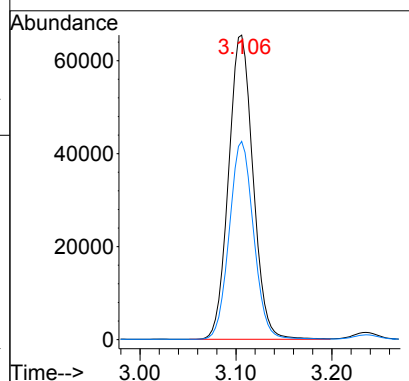
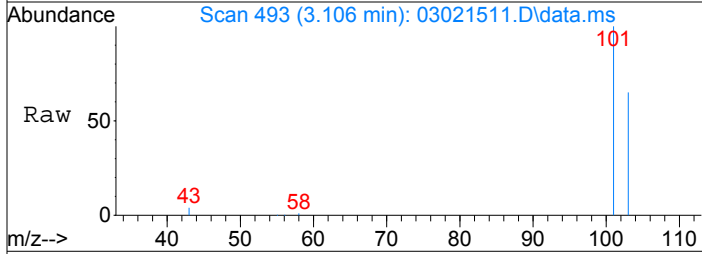
Tgt Ion: 58	Resp: 181830
Ion Ratio	Lower Upper
58	100
43	344.0 301.8 341.8#





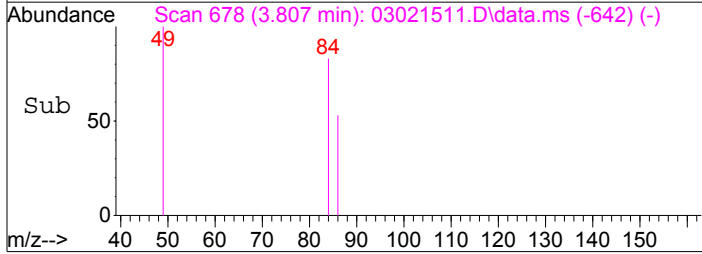
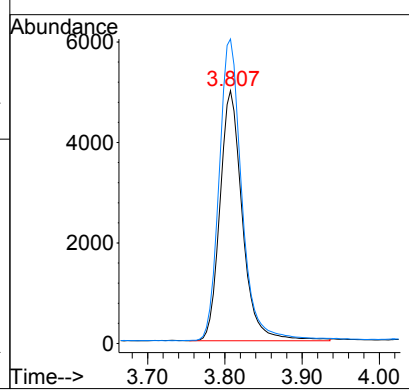
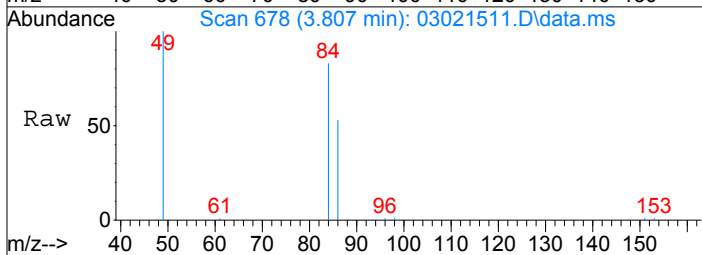
#8
 Trichlorofluoromethane
 Concen: 1323.86 pg
 RT: 3.11 min Scan# 493
 Delta R.T. -0.014 min
 Lab File: 03021511.D
 Acq: 2 Mar 2015 12:58

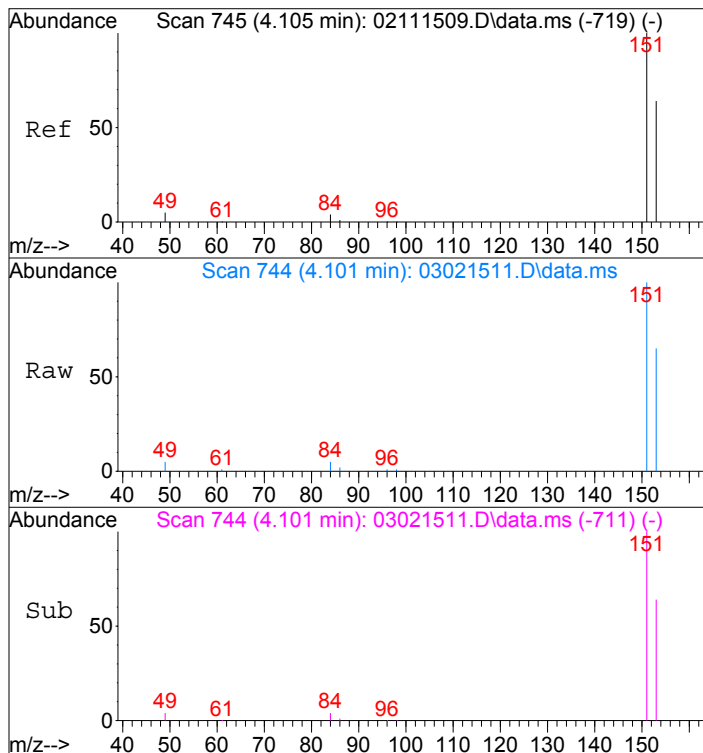
Tgt Ion:	101	Resp:	116052
Ion Ratio	Lower	Upper	
101	100		
103	64.8	51.8	77.6



#10
 Methylene Chloride
 Concen: 241.51 pg
 RT: 3.81 min Scan# 678
 Delta R.T. 0.000 min
 Lab File: 03021511.D
 Acq: 2 Mar 2015 12:58

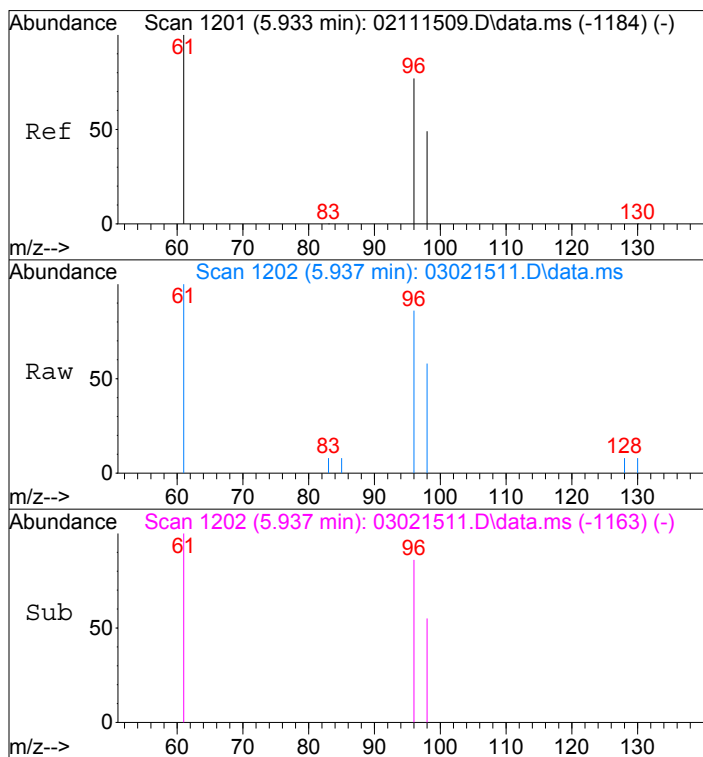
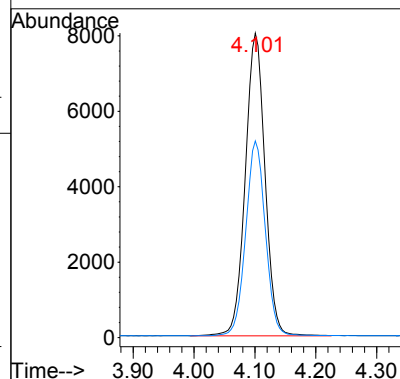
Tgt Ion:	84	Resp:	10046
Ion Ratio	Lower	Upper	
84	100		
49	122.9	112.3	152.3





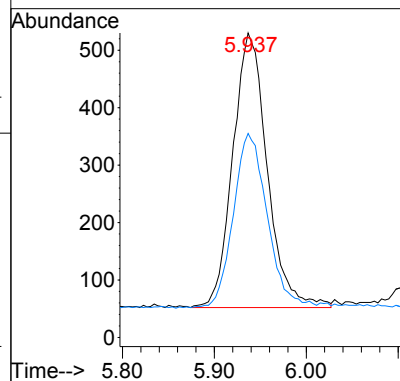
#11
Trichlorotrifluoroethane
Concen: 447.96 pg
RT: 4.10 min Scan# 744
Delta R.T. -0.004 min
Lab File: 03021511.D
Acq: 2 Mar 2015 12:58

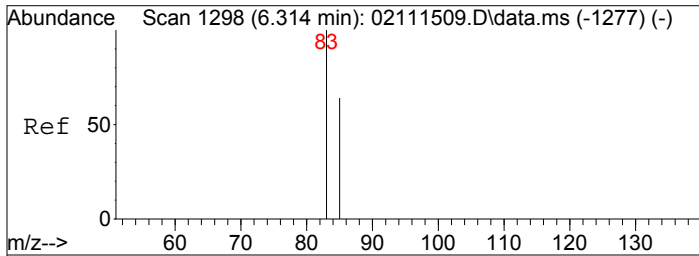
Tgt Ion: 151 Resp: 18044
Ion Ratio Lower Upper
151 100
153 64.2 43.6 83.6



#15
cis-1,2-Dichloroethene
Concen: 28.02 pg
RT: 5.94 min Scan# 1202
Delta R.T. 0.004 min
Lab File: 03021511.D
Acq: 2 Mar 2015 12:58

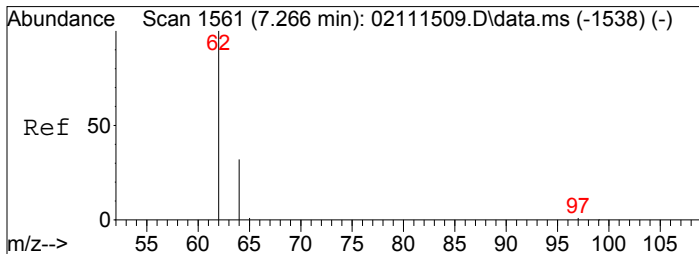
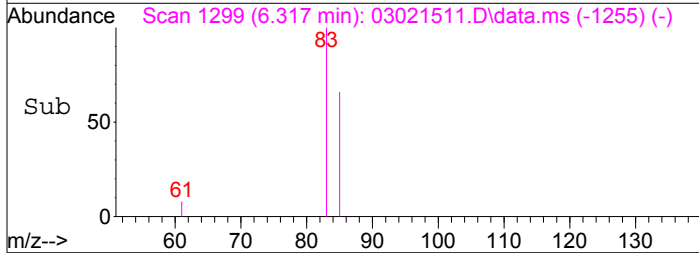
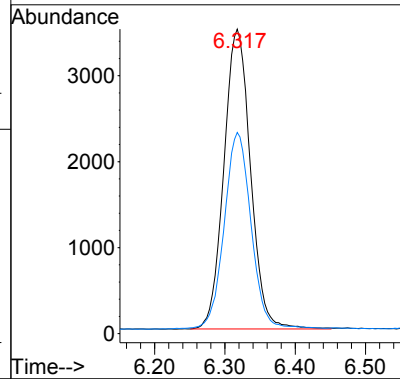
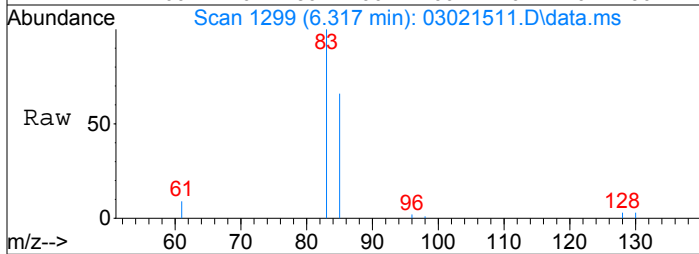
Tgt Ion: 96 Resp: 1245
Ion Ratio Lower Upper
96 100
98 62.9 44.3 84.3





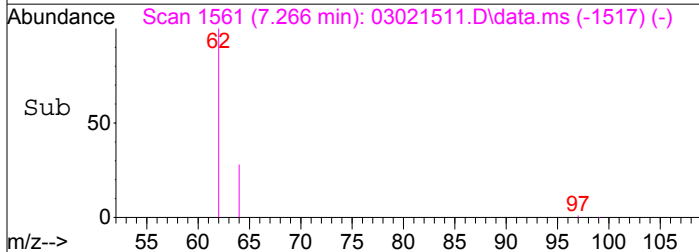
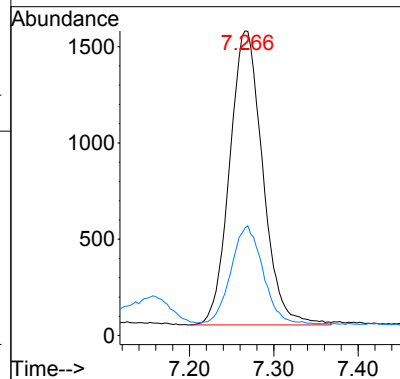
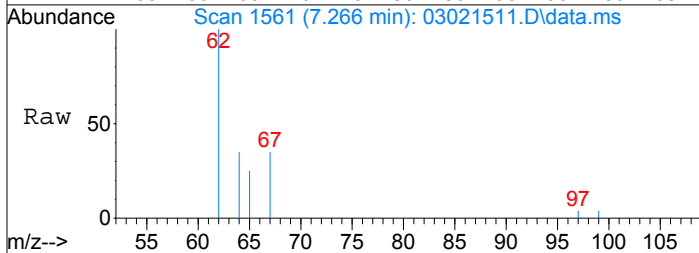
#16
Chloroform
Concen: 119.28 pg
RT: 6.32 min Scan# 1299
Delta R.T. 0.003 min
Lab File: 03021511.D
Acq: 2 Mar 2015 12:58

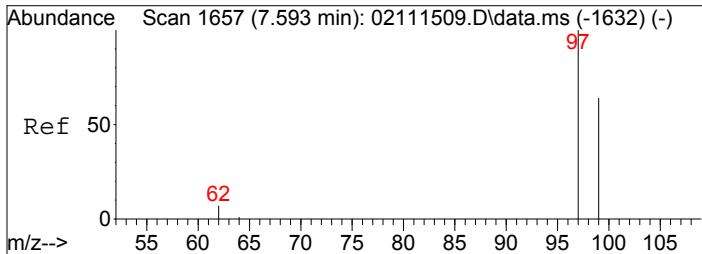
Tgt Ion: 83 Resp: 9184
Ion Ratio Lower Upper
83 100
85 66.7 45.4 85.4



#18
1,2-Dichloroethane
Concen: 67.94 pg
RT: 7.27 min Scan# 1561
Delta R.T. 0.000 min
Lab File: 03021511.D
Acq: 2 Mar 2015 12:58

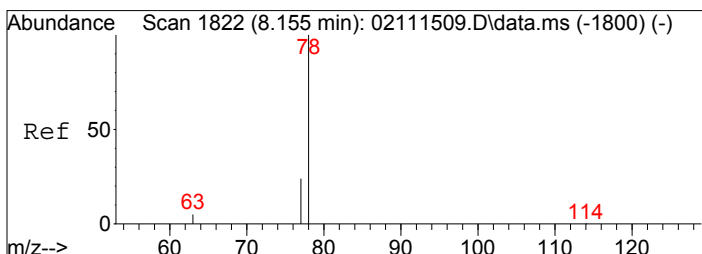
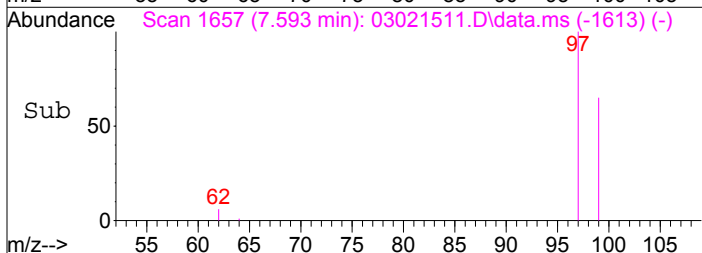
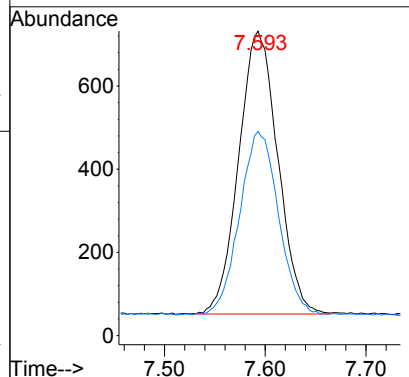
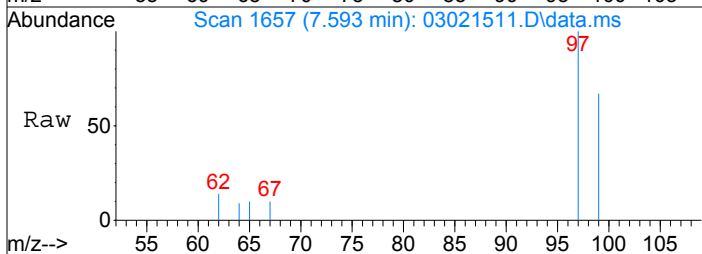
Tgt Ion: 62 Resp: 4165
Ion Ratio Lower Upper
62 100
64 32.5 11.6 51.6





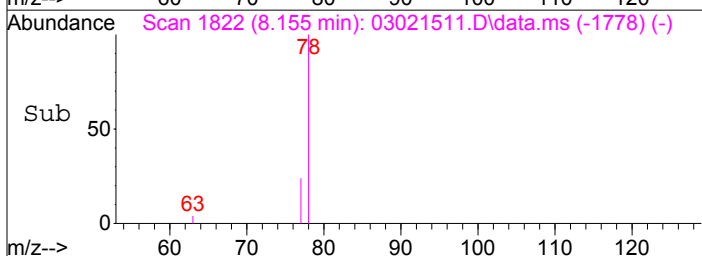
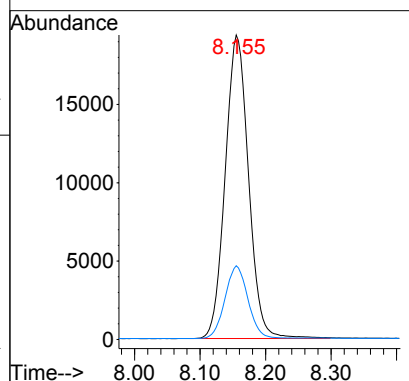
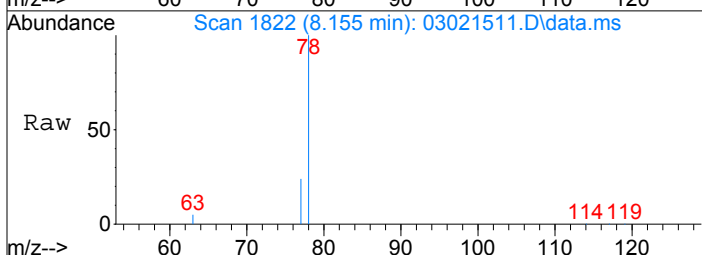
#19
 1,1,1-Trichloroethane
 Concen: 24.52 pg
 RT: 7.59 min Scan# 1657
 Delta R.T. 0.000 min
 Lab File: 03021511.D
 Acq: 2 Mar 2015 12:58

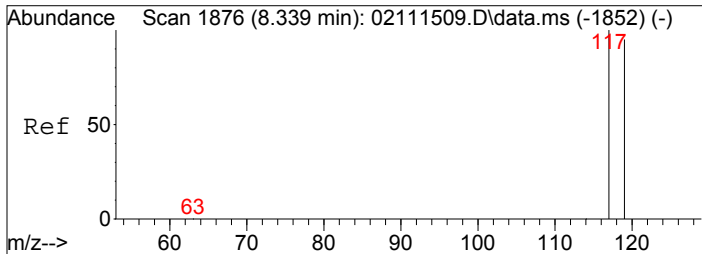
Tgt Ion	97	Resp	1836
Ion Ratio	100	Lower	Upper
97	100		
99	64.5	44.0	84.0



#20
 Benzene
 Concen: 302.33 pg
 RT: 8.16 min Scan# 1822
 Delta R.T. 0.000 min
 Lab File: 03021511.D
 Acq: 2 Mar 2015 12:58

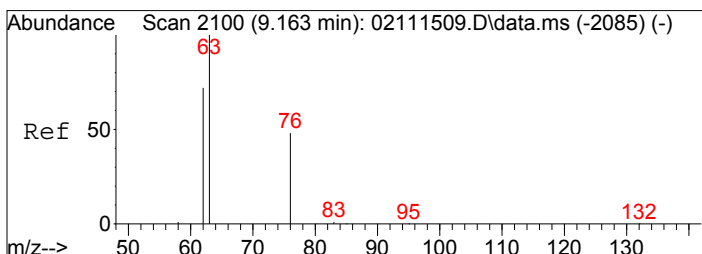
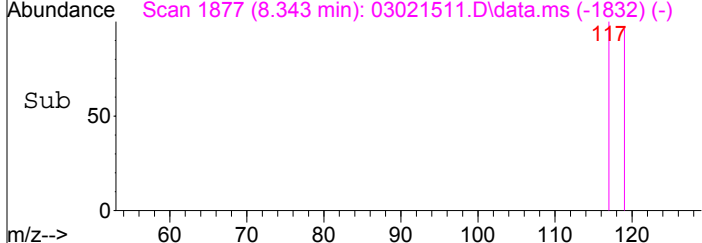
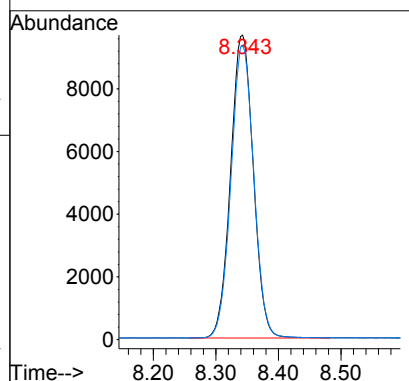
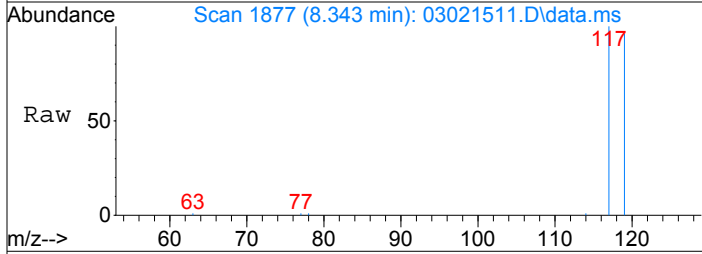
Tgt Ion	78	Resp	47876
Ion Ratio <td>100</td> <td>Lower</td> <td>Upper</td>	100	Lower	Upper
78	100		
77	23.6	3.7	43.7





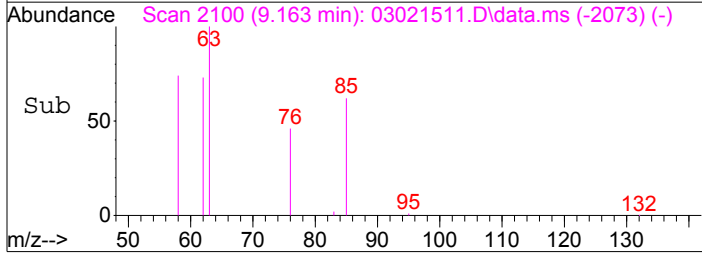
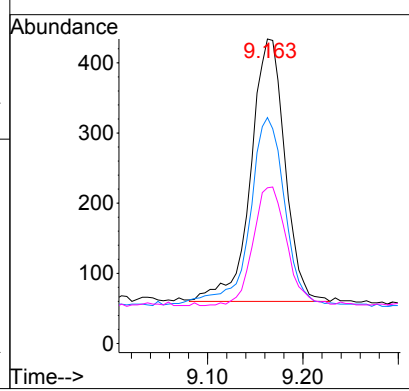
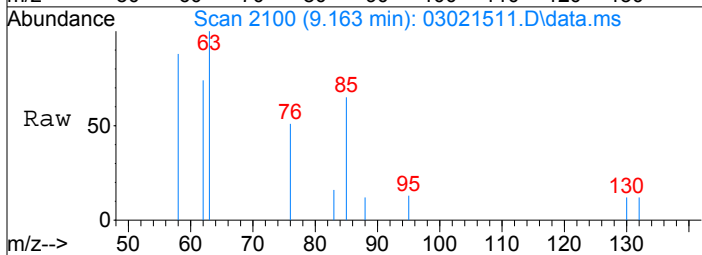
#21
Carbon Tetrachloride
Concen: 435.86 pg
RT: 8.34 min Scan# 1877
Delta R.T. 0.003 min
Lab File: 03021511.D
Acq: 2 Mar 2015 12:58

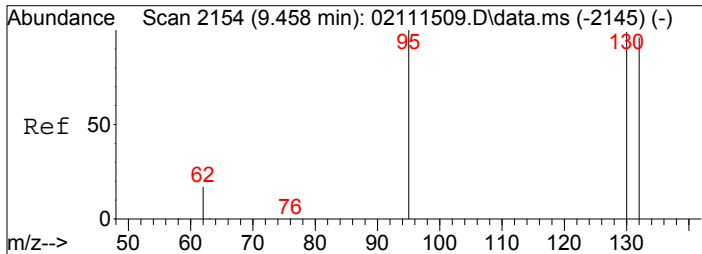
Tgt Ion:117	Resp:	24431
Ion Ratio	Lower	Upper
117	100	
119	96.6	75.5 115.5



#23
1,2-Dichloropropane
Concen: 23.64 pg
RT: 9.16 min Scan# 2100
Delta R.T. 0.000 min
Lab File: 03021511.D
Acq: 2 Mar 2015 12:58

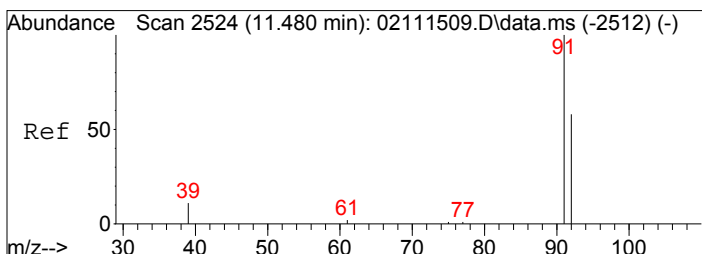
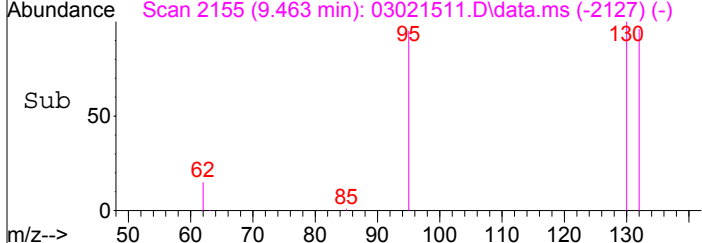
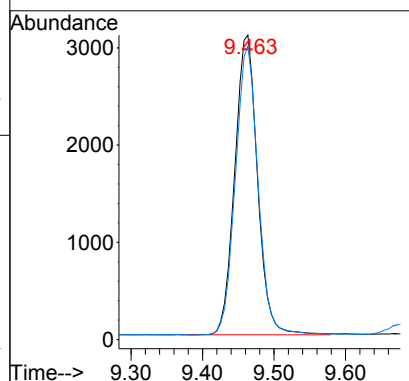
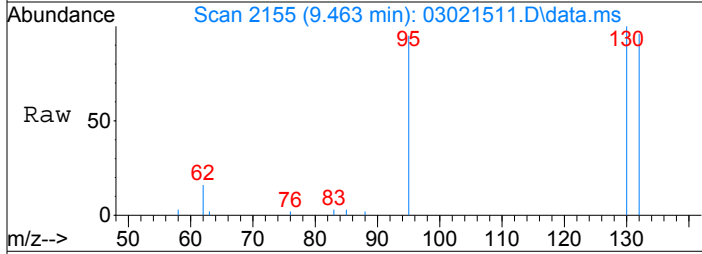
Tgt Ion: 63	Resp:	932
Ion Ratio	Lower	Upper
63	100	
62	76.0	52.0 92.0
76	44.6	28.1 68.1





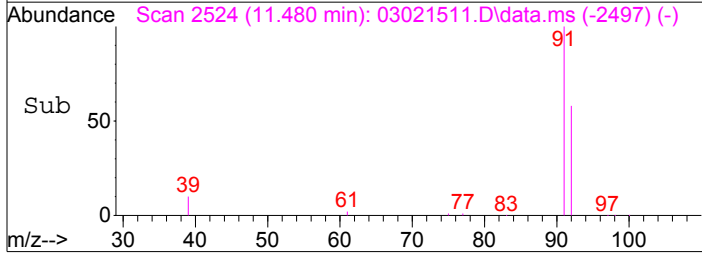
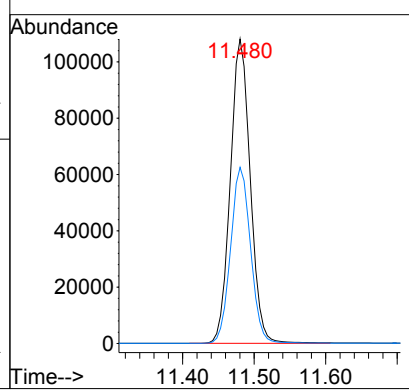
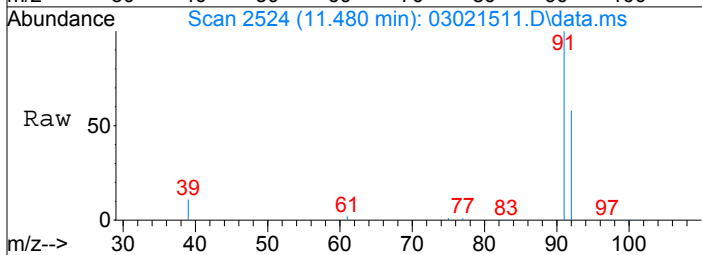
#25
 Trichloroethene
 Concen: 146.56 pg
 RT: 9.46 min Scan# 2155
 Delta R.T. 0.005 min
 Lab File: 03021511.D
 Acq: 2 Mar 2015 12:58

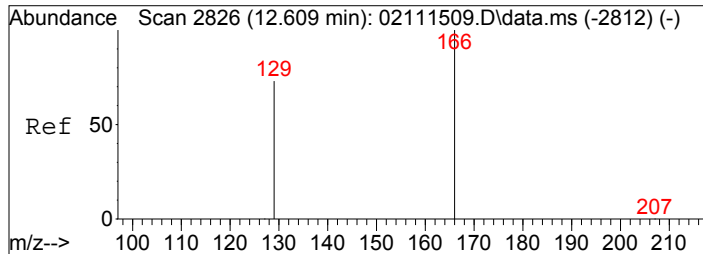
Tgt Ion:130	Resp:	6806
Ion Ratio	Lower	Upper
130	100	
132	96.2	77.1 117.1



#31
 Toluene
 Concen: 1180.28 pg
 RT: 11.48 min Scan# 2524
 Delta R.T. 0.000 min
 Lab File: 03021511.D
 Acq: 2 Mar 2015 12:58

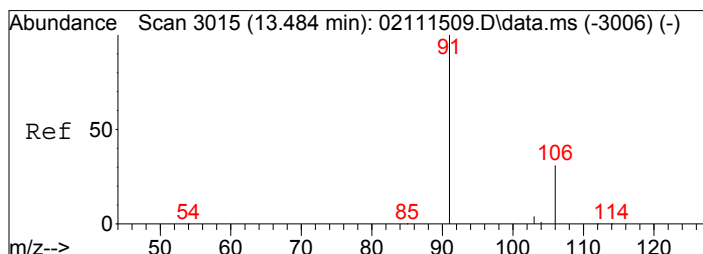
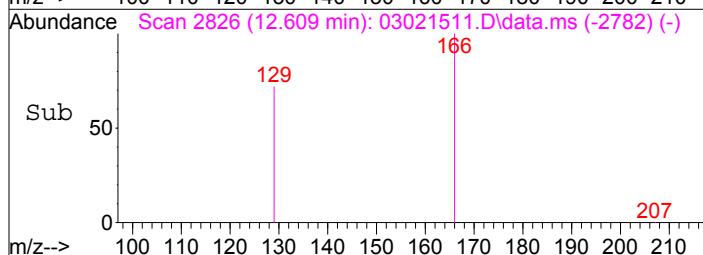
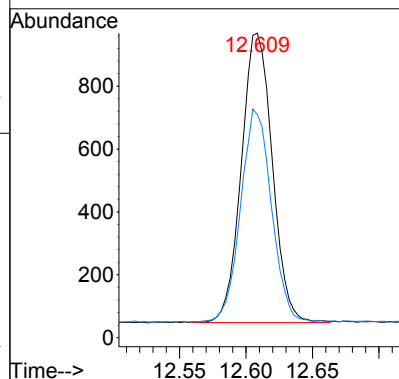
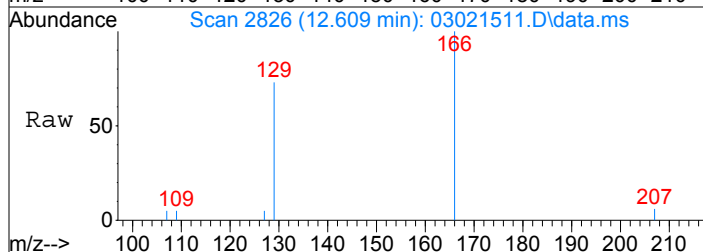
Tgt Ion: 91	Resp:	209254
Ion Ratio	Lower	Upper
91	100	
92	58.0	37.7 77.7





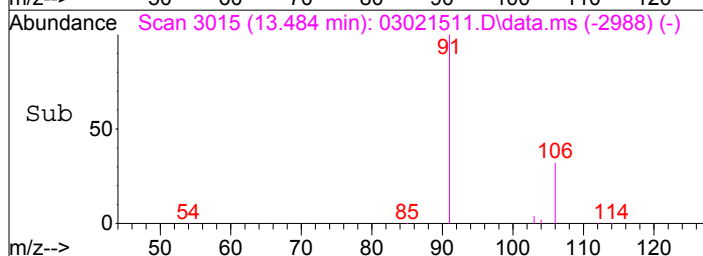
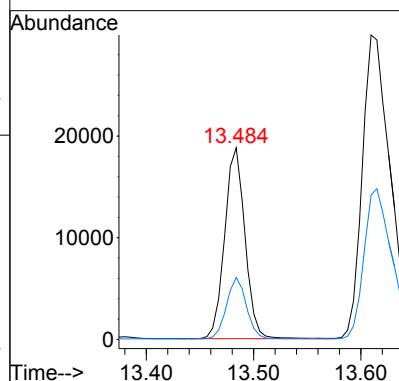
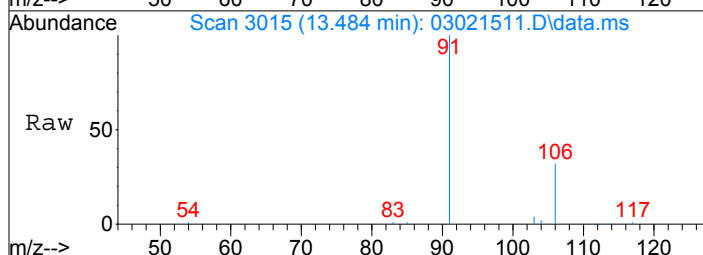
#33
Tetrachloroethene
Concen: 27.27 pg
RT: 12.61 min Scan# 2826
Delta R.T. -0.000 min
Lab File: 03021511.D
Acq: 2 Mar 2015 12:58

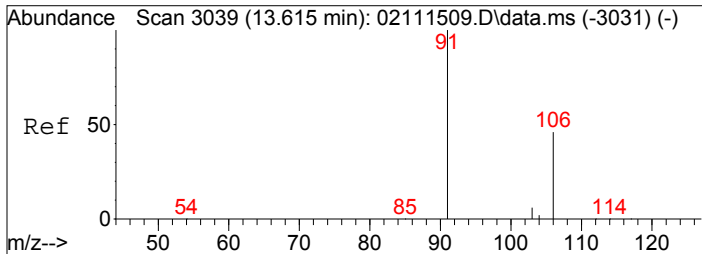
Tgt Ion: 166 Resp: 1497
Ion Ratio Lower Upper
166 100
129 72.8 53.3 93.3



#36
Ethylbenzene
Concen: 130.14 pg
RT: 13.48 min Scan# 3015
Delta R.T. 0.000 min
Lab File: 03021511.D
Acq: 2 Mar 2015 12:58

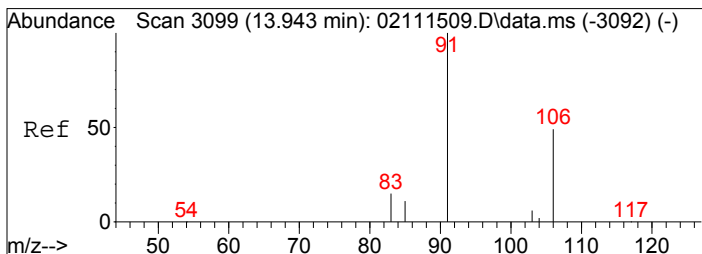
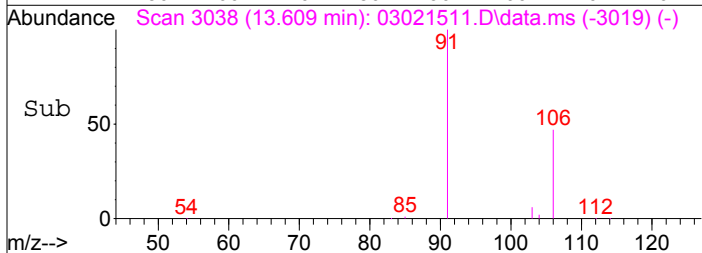
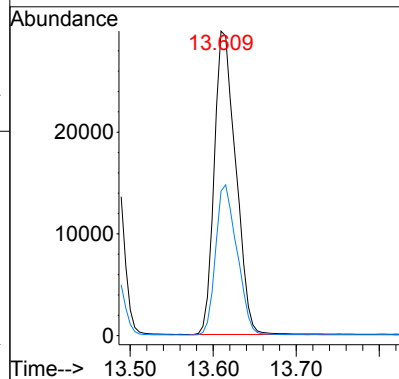
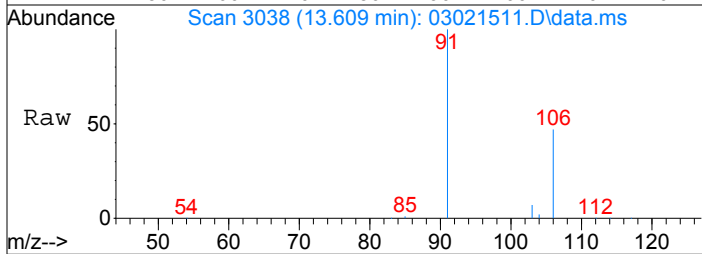
Tgt Ion: 91 Resp: 24702
Ion Ratio Lower Upper
91 100
106 31.6 10.9 50.9





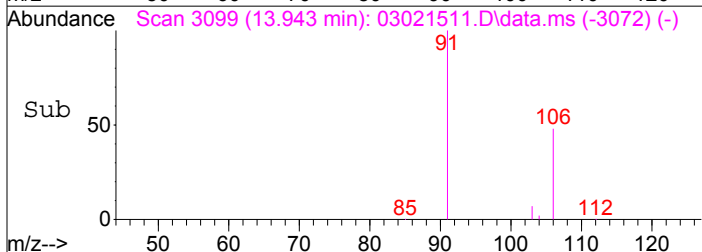
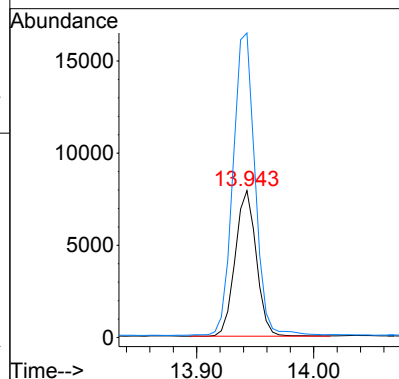
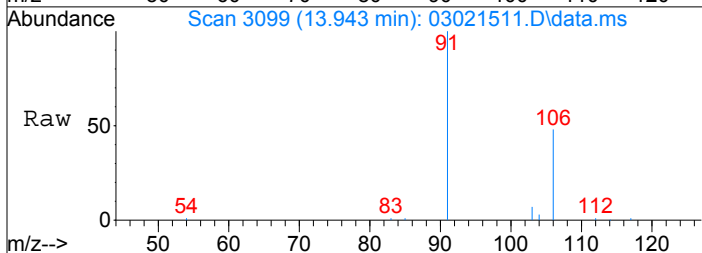
#37
m,p-Xylene
Concen: 344.39 pg
RT: 13.61 min Scan# 3038
Delta R.T. -0.005 min
Lab File: 03021511.D
Acq: 2 Mar 2015 12:58

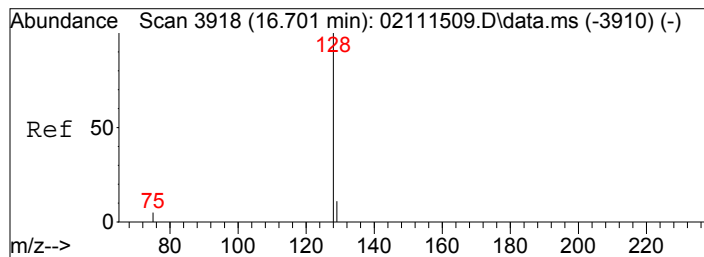
Tgt Ion: 91 Resp: 53727
Ion Ratio Lower Upper
91 100
106 49.2 27.5 67.5



#38
o-Xylene
Concen: 129.80 pg
RT: 13.94 min Scan# 3099
Delta R.T. 0.000 min
Lab File: 03021511.D
Acq: 2 Mar 2015 12:58

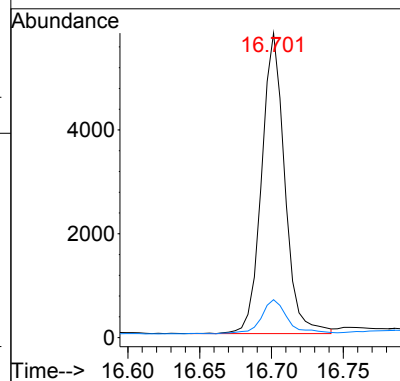
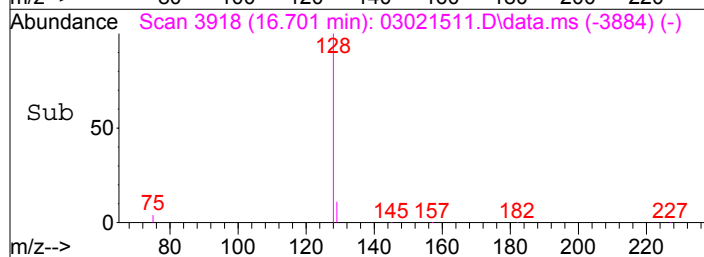
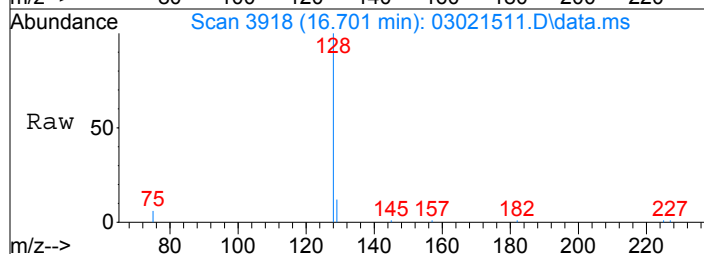
Tgt Ion: 106 Resp: 9896
Ion Ratio Lower Upper
106 100
91 217.2 198.3 238.3





#45
Naphthalene
Concen: 34.27 pg
RT: 16.70 min Scan# 3918
Delta R.T. 0.000 min
Lab File: 03021511.D
Acq: 2 Mar 2015 12:58

Tgt Ion:128 Resp: 6491
Ion Ratio Lower Upper
128 100
129 13.0 0.0 30.9



Method Path : I:\MS19\METHODS\
Method File : X19021115.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
Last Update : Thu Feb 12 14:42:03 2015
Response Via : Initial Calibration

2/12/15

Calibration Files

10 =021111505.D 20 =021111506.D 50 =021111507.D 100 =021111508.D 500 =021111509.D 1000=021111510.D 2500=021111514.D
20K =021111512.D 50K =021111513.D

Compound		10	20	50	100	500	1000	2500	20K	50K	Avg	%RSD

1) I	Bromochloromethane...	5.674	4.401	4.088	4.017	4.078	3.833	3.537	3.282	3.667	4.064	16.97
2) T	Dichlorodifluo...	1.107	0.953	0.838	0.822	0.765	0.688	0.647	0.672	0.812	0.812	19.32
3) T	Chloromethane	4.549	3.494	3.276	3.292	3.175	2.965	2.519	2.603	2.572	3.161	19.93
4) T	Vinyl Chloride	2.525	1.972	1.670	1.883	1.731	1.542	1.665	1.632	1.827	1.827	17.20
5) T	Bromomethane	2.213	1.693	1.568	1.546	1.559	1.456	1.301	1.256	1.537	1.537	19.37
6) T	Chloroethane	1.808	1.978	1.832	1.371	1.516	0.903	1.057	1.016	1.435	1.435	28.90
7) T	Acetone	4.241	3.423	4.573	4.451	3.206	3.074	2.721	2.853	2.876	3.491	20.98
8) T	Trichlorofluor...	1.958	1.613	1.494	1.483	1.553	1.487	1.428	1.492	1.515	1.558	10.16
9) T	1,1-Dichloroet...	2.206	1.874	1.598	1.521	1.417	1.503	1.475	1.656	1.656	1.656	17.15
10) T	Methylene Chlo...	2.301	1.652	1.578	1.525	1.516	1.445	1.429	1.466	1.524	1.604	16.84
11) T	Trichlorotrifl...	1.866	1.557	1.527	1.496	1.618	1.567	1.499	1.591	1.602	1.591	7.03
12) T	trans-1,2-Dich...	3.843	3.165	2.876	2.475	2.981	2.756	2.528	2.588	2.499	2.857	15.41
13) T	1,1-Dichloroet...	6.824	5.281	4.946	4.850	5.031	4.791	4.480	4.688	4.684	5.064	13.80
14) T	Methyl tert-Bu...	2.223	1.866	1.729	1.707	1.761	1.694	1.573	1.703	1.670	1.770	10.56
15) T	cis-1,2-Dichlo...	3.529	3.139	3.141	2.962	2.612	2.990	3.089	3.066	3.066	3.066	8.92
16) T	Chloroform	2.646	2.642	2.679	2.657	2.513	2.455	2.222	2.187	1.978	2.442	10.42
17) S	1,2-Dichloroet...	3.260	2.548	2.468	2.423	2.532	2.385	2.047	2.190	2.116	2.441	14.61
18) T	1,2-Dichloroet...	3.850	3.125	2.919	2.864	3.016	2.858	2.592	2.828	2.780	2.981	12.00
19) T	1,1,1-Trichlor...	8.203	6.815	6.387	6.279	5.936	5.302	5.841	5.685	6.306	6.306	14.20
20) T	Benzene	2.276	1.947	1.863	1.896	2.269	2.218	2.096	2.690	2.834	2.232	15.23
21) T	Carbon Tetrach...											

22) I	1,4-Difluorobenzen...	0.263	0.225	0.210	0.204	0.224	0.215	0.193	0.209	0.219	0.218	9.00
23) T	1,2-Dichloropr...	0.364	0.304	0.284	0.287	0.320	0.313	0.287	0.329	0.345	0.315	8.83
24) T	Bromodichlorom...	0.309	0.253	0.233	0.232	0.245	0.239	0.226	0.271	0.306	0.257	12.27
25) T	Trichloroethene	0.238	0.179	0.164	0.162	0.204	0.200	0.165	0.195	0.216	0.191	13.63
26) T	1,4-Dioxane	0.242	0.234	0.246	0.303	0.308	0.302	0.356	0.380	0.297	0.297	18.09
27) T	cis-1,3-Dichlo...	0.162	0.180	0.242	0.256	0.265	0.336	0.240	0.240	0.240	0.240	26.19
28) T	trans-1,3-Dich...	0.223	0.188	0.172	0.174	0.189	0.185	0.164	0.192	0.201	0.188	9.37
29) T	1,1,2-Trichlor...	0.910	0.923	0.930	0.935	0.925	0.924	0.905	0.928	0.920	0.922	1.04
30) S	Toluene-d8 (SS2)	1.476	0.994	0.887	0.871	0.913	0.889	0.819	0.962	1.016	0.981	19.98
31) T	Toluene	0.266	0.216	0.207	0.211	0.238	0.236	0.218	0.269	0.281	0.238	11.75
32) T	1,2-Dibromoethane	0.285	0.265	0.264	0.280	0.272	0.255	0.354	0.454	0.304	0.304	22.46
33) T	Tetrachloroethene											

34) I	Chlorobenzene-d5 (...)	4.919	3.630	3.298	3.245	3.590	3.519	3.341	3.924	3.818	3.698	13.85
35) T	Chlorobenzene	7.828	5.941	5.342	5.354	6.291	6.206	5.916	7.004	6.557	6.271	12.59
36) T	Ethylbenzene	5.953	4.562	4.210	4.164	5.185	5.142	4.953	6.397	5.071	5.071	15.62
37) T	m,p-Xylene	2.834	2.200	1.986	2.021	2.491	2.473	2.370	3.083	3.211	2.519	17.51
38) T	o-Xylene	2.995	2.295	2.124	2.154	2.458	2.405	2.088	2.892	2.902	2.479	14.54
39) T	1,1,2,2-Tetrac...	1.822	1.890	1.933	2.006	2.023	2.065	2.236	2.196	1.999	2.019	6.64
40) S	Bromofluoroben...	2.847	2.639	2.662	2.998	2.986	2.715	4.311	4.550	3.213	3.213	23.83
41) T	1,3-Dichlorobe...											

Method Path : I:\MS19\METHODS\ Method File : X19021115.M Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)														
42)	T	1,4-Dichlorob...	3.944	3.183	2.894	2.905	3.265	3.249	2.924	4.335	4.403	3.456	17.61	
43)	T	1,2-Dichlorob...	3.640	2.813	2.594	2.641	2.986	2.977	2.590	3.818	3.813	3.097	16.75	
44)	T	1,2,4-Trichlor...		1.796	1.707	1.734	1.809	1.828	1.796	2.646		1.902	17.38	
45)	T	Naphthalene	7.829	5.345	4.905	5.051	6.007	6.228	6.232	8.458		6.257	20.48	
46)	T	Hexachlorobuta...		1.273	1.150	1.159	1.208	1.207	1.099	1.788		1.269	18.54	

(#) = Out of Range														

TO-15 (SIM) INITIAL CALIBRATION CONCENTRATIONS

0.2ng/L Working Standard ID: S29-01221514

4ng/L Working Standard ID: S29-01221510

5ng/L Working Standard ID: 0

20ng/L Working Standard ID: S29-01221506

50ng/L Working Standard ID: 0

200ng/L Working Standard ID: S29-02031501

Std. Canister Utilized (ng/L) Injection Amt(mL)	0.2 50	0.2 100	0.2 250	0.2 500	4 125	4 250	20 125	NA FALSE	200 100	200 250
Compound Name	Conc. 10pg	Conc. 20pg	Conc. 50pg	Conc. 100pg	Conc. 500pg	Conc. 1000pg	Conc. 2500pg	Conc. 10,000pg	Conc. 20,000pg	Conc. 50,000pg
Freon-12	9.50	19.00	47.50	95.0	475	950	2375	FALSE	19000	47500
Chloromethane	10.10	20.20	50.50	101.0	505	1010	2525	FALSE	20200	50500
Vinyl Chloride	10.00	20.00	50.00	100.0	500	1000	2500	FALSE	20000	50000
1,3-Butadiene	10.40	20.80	52.00	104.0	520	1040	2600	FALSE	20800	52000
Bromomethane	10.20	20.40	51.00	102.0	510	1020	2550	FALSE	20400	51000
Chloroethane	10.10	20.20	50.50	101.0	505	1010	2525	FALSE	20200	50500
Acrolein	11.30	22.60	56.50	113.0	565	1130	2825	FALSE	22600	56500
Acetone	54.60	109.20	273.00	546.0	2730	5460	13650	FALSE	109200	273000
Freon-11	10.80	21.60	54.00	108.0	540	1080	2700	FALSE	21600	54000
1,1-Dichloroethene	10.90	21.80	54.50	109.0	545	1090	2725	FALSE	21800	54500
Methylene Chloride	11.30	22.60	56.50	113.0	565	1130	2825	FALSE	22600	56500
Freon-113	10.90	21.80	54.50	109.0	545	1090	2725	FALSE	21800	54500
trans-1,2-Dichloroethene	10.60	21.20	53.00	106.0	530	1060	2650	FALSE	21200	53000
1,1-Dichloroethane	10.70	21.40	53.50	107.0	535	1070	2675	FALSE	21400	53500
Methyl tert-Butyl Ether	10.90	21.80	54.50	109.0	545	1090	2725	FALSE	21800	54500
cis-1,2-Dichloroethene	11.00	22.00	55.00	110.0	550	1100	2750	FALSE	22000	55000
Chloroform	11.20	22.40	56.00	112.0	560	1120	2800	FALSE	22400	56000
1,2-Dichloroethane	10.80	21.60	54.00	108.0	540	1080	2700	FALSE	21600	54000
1,1,1-Trichloroethane	10.50	21.00	52.50	105.0	525	1050	2625	FALSE	21000	52500
Benzene	11.30	22.60	56.50	113.0	565	1130	2825	FALSE	22600	56500
Carbon Tetrachloride	11.50	23.00	57.50	115.0	575	1150	2875	FALSE	23000	57500
1,2-Dichloropropane	10.90	21.80	54.50	109.0	545	1090	2725	FALSE	21800	54500
Bromodichloromethane	10.90	21.80	54.50	109.0	545	1090	2725	FALSE	21800	54500
Trichloroethene	10.80	21.60	54.00	108.0	540	1080	2700	FALSE	21600	54000
1,4-Dioxane	10.90	21.80	54.50	109.0	545	1090	2725	FALSE	21800	54500
cis-1,3-Dichloropropene	10.50	21.00	52.50	105.0	525	1050	2625	FALSE	21000	52500
trans-1,3-Dichloropropene	10.60	21.20	53.00	106.0	530	1060	2650	FALSE	21200	53000
1,1,2-Trichloroethane	10.90	21.80	54.50	109.0	545	1090	2725	FALSE	21800	54500
Toluene	11.00	22.00	55.00	110.0	550	1100	2750	FALSE	22000	55000
1,2-Dibromoethane	11.00	22.00	55.00	110.0	550	1100	2750	FALSE	22000	55000
Tetrachloroethene	10.10	20.20	50.50	101.0	505	1010	2525	FALSE	20200	50500
Chlorobenzene	11.10	22.20	55.50	111.0	555	1110	2775	FALSE	22200	55500
Ethylbenzene	11.00	22.00	55.00	110.0	550	1100	2750	FALSE	22000	55000
m,p-Xylenes	21.60	43.20	108.00	216.0	1080	2160	5400	FALSE	43200	108000
o-Xylene	10.60	21.20	53.00	106.0	530	1060	2650	FALSE	21200	53000
1,1,2,2-Tetrachloroethane	10.50	21.00	52.50	105.0	525	1050	2625	FALSE	21000	52500
1,3-Dichlorobenzene	11.40	22.80	57.00	114.0	570	1140	2850	FALSE	22800	57000
1,4-Dichlorobenzene	10.60	21.20	53.00	106.0	530	1060	2650	FALSE	21200	53000
1,2-Dichlorobenzene	11.10	22.20	55.50	111.0	555	1110	2775	FALSE	22200	55500
1,2-Dibromo-3-chloropropane	11.00	22.00	55.00	110.0	550	1100	2750	FALSE	22000	55000
1,2,4-Trichlorobenzene	11.30	22.60	56.50	113.0	565	1130	2825	FALSE	22600	56500
Naphthalene	11.10	22.20	55.50	111.0	555	1110	2775	FALSE	22200	55500
Hexachloro-1,3-butadiene	11.20	22.40	56.00	112.0	560	1120	2800	FALSE	22400	56000

Method : I:\MS19\METHODS\X19021115.M (RTE Integrator)
 Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 Last Update : Thu Feb 12 14:42:03 2015
 Response via : Initial Calibration

EA 2/12/15

#	ID	Conc	ISTD Conc	Path\File
1	10	10	1000	I:\MS19\DATA\2015_02\11\02111505.D
2	20	19	1000	I:\MS19\DATA\2015_02\11\02111506.D
3	50	48	1000	I:\MS19\DATA\2015_02\11\02111507.D
4	100	95	1000	I:\MS19\DATA\2015_02\11\02111508.D
5	500	475	1000	I:\MS19\DATA\2015_02\11\02111509.D
6	1000	950	1000	I:\MS19\DATA\2015_02\11\02111510.D
7	2500	2375	1000	I:\MS19\DATA\2015_02\11\02111514.D
8	20K	19000	1000	I:\MS19\DATA\2015_02\11\02111512.D
9	50K	47500	1000	I:\MS19\DATA\2015_02\11\02111513.D

#	ID	Update Time	Quant Time	Acquisition Time
1	10	Feb 12 14:16 2015	Feb 12 14:16 2015	11 Feb 2015 12:19
2	20	Feb 12 14:16 2015	Feb 12 14:16 2015	11 Feb 2015 12:48
3	50	Feb 12 14:16 2015	Feb 12 14:16 2015	11 Feb 2015 13:19
4	100	Feb 12 14:16 2015	Feb 12 14:16 2015	11 Feb 2015 13:46
5	500	Feb 12 14:16 2015	Feb 12 14:16 2015	11 Feb 2015 14:14
6	1000	Feb 12 14:16 2015	Feb 12 14:16 2015	11 Feb 2015 14:41
7	2500	Feb 12 14:16 2015	Feb 12 14:16 2015	11 Feb 2015 16:36
8	20K	Feb 12 14:41 2015	Feb 12 14:16 2015	11 Feb 2015 15:39
9	50K	Feb 12 14:42 2015	Feb 12 14:16 2015	11 Feb 2015 16:06

X19021115.M

Thu Feb 12 15:06:36 2015

Data File : I:\MS19\DATA\2015 02\11\02111505.D
 Acq On : 11 Feb 2015 12:19
 Sample : 10pg TO-15-SIM Std
 Misc : S29-02041502/S29-01221514 (2/20)

Vial: 5
 Operator: EA
 Inst : MS19

EA 2/12/15

Quant Time: Feb 12 14:46:58 2015
 Quant Method : I:\MS19\METHODS\X19021115.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Thu Feb 12 14:42:03 2015
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.12	130	12839	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	101008	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.14	54	16409	1000.000	pg	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev(Min)
17) 1,2-Dichloroethane-d4 ...	7.13	65	33976	1083.623	pg	0.00
Spiked Amount 1000.000			Recovery	=	108.36%	
30) Toluene-d8 (SS2)	11.38	98	91896	986.559	pg	0.00
Spiked Amount 1000.000			Recovery	=	98.66%	
40) Bromofluorobenzene (SS3)	14.25	174	29897	902.482	pg	0.00
Spiked Amount 1000.000			Recovery	=	90.25%	

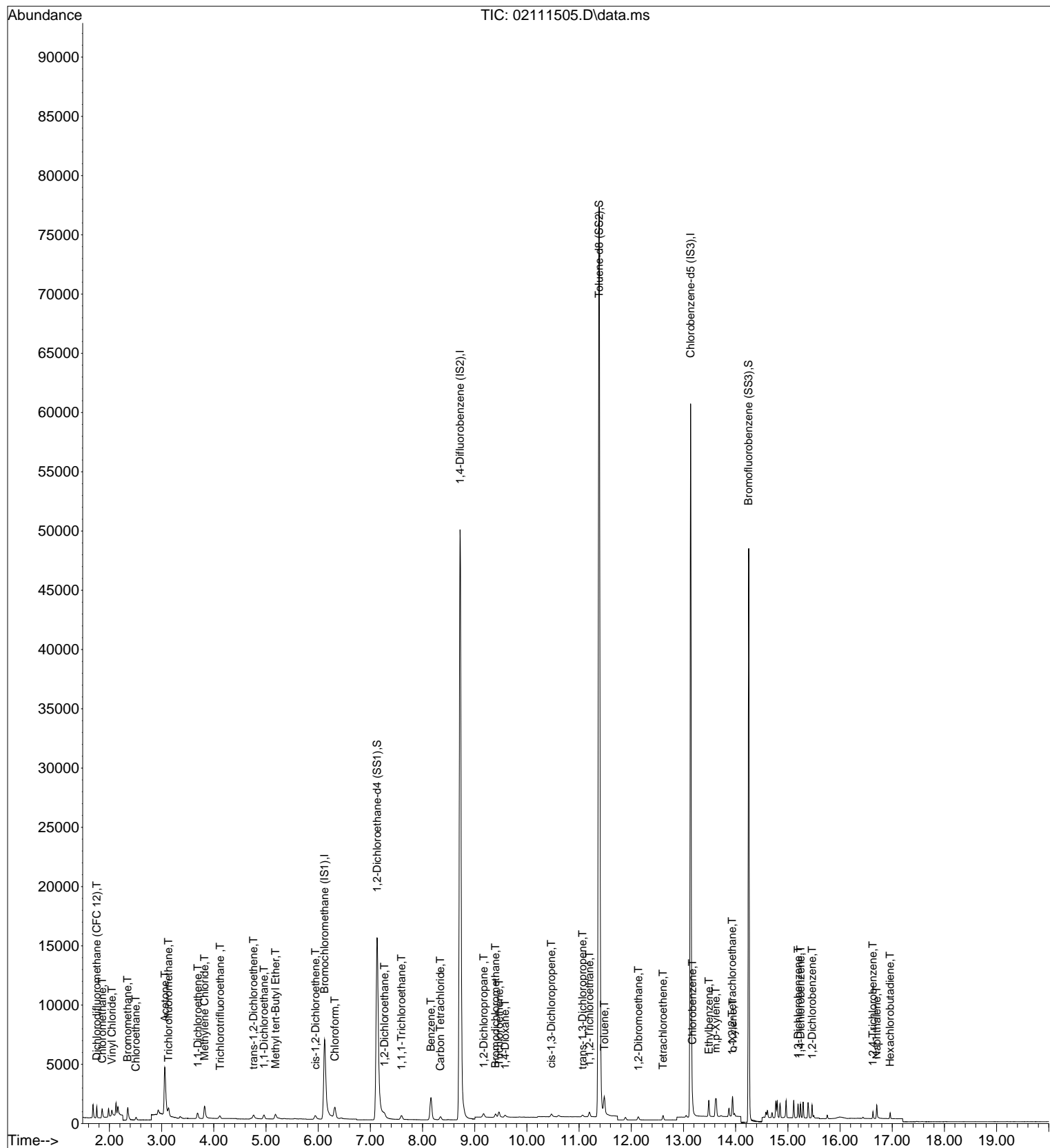
Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethan...	1.76	85	692	13.262	pg	99
3) Chloromethane	1.86	52	295	28.311	pg	99
4) Vinyl Chloride	2.05	62	584	14.392	pg	95
5) Bromomethane	2.35	94	1022	43.559	pg	98
6) Chloroethane	2.51	64	287	14.540	pg	98
7) Acetone	3.06	58	2564	139.157	pg	# 90
8) Trichlorofluoromethane	3.13	101	588	13.120	pg	99
9) 1,1-Dichloroethene	3.69	96	274	13.695	pg	94
10) Methylene Chloride	3.82	84	821	38.605	pg	98
11) Trichlorotrifluoroethane	4.12	151	322	15.635	pg	94
12) trans-1,2-Dichloroethene	4.76	96	254	12.432	pg	98
13) 1,1-Dichloroethane	4.96	63	528	14.396	pg	98
14) Methyl tert-Butyl Ether	5.18	73	955	14.689	pg	100
15) cis-1,2-Dichloroethene	5.95	96	314	13.820	pg	99
16) Chloroform	6.32	83	1568	39.833	pg	99
18) 1,2-Dichloroethane	7.27	62	452	14.421	pg	97
19) 1,1,1-Trichloroethane	7.59	97	519	13.558	pg	100
20) Benzene	8.16	78	3818	47.157	pg	99
21) Carbon Tetrachloride	8.34	117	336	11.725	pg	97
23) 1,2-Dichloropropane	9.17	63	290	13.164	pg	95
24) Bromodichloromethane	9.40	83	401	12.611	pg	95
25) Trichloroethene	9.46	130	337	12.987	pg	97
26) 1,4-Dioxane	9.58	88	262	13.547	pg	# 51
27) cis-1,3-Dichloropropene	10.47	75	323	10.781	pg	99
28) trans-1,3-Dichloropropene	11.07	75	193	7.956	pg	# 87
29) 1,1,2-Trichloroethane	11.20	83	246	12.978	pg	98
31) Toluene	11.48	91	1640	16.554	pg	98
32) 1,2-Dibromoethane	12.14	107	296	12.308	pg	98
33) Tetrachloroethene	12.61	166	352	11.475	pg	97
35) Chlorobenzene	13.17	112	896	14.765	pg	99
36) Ethylbenzene	13.49	91	1413	13.732	pg	99
37) m,p-Xylene	13.62	91	2110	24.950	pg	99
38) o-Xylene	13.94	106	493	11.928	pg	97
39) 1,1,2,2-Tetrachloroethane	13.93	83	516	12.684	pg	100
41) 1,3-Dichlorobenzene	15.20	146	680	12.896	pg	99
42) 1,4-Dichlorobenzene	15.24	146	686	12.098	pg	97
43) 1,2-Dichlorobenzene	15.46	146	663	13.047	pg	99
44) 1,2,4-Trichlorobenzene	16.63	182	462	14.800	pg	98
45) Naphthalene	16.70	128	1426	13.819	pg	100
46) Hexachlorobutadiene	16.96	225	289	13.879	pg	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File : I:\MS19\DATA\2015 02\11\02111505.D
Acq On : 11 Feb 2015 12:19
Sample : 10pg TO-15-SIM Std
Misc : S29-02041502/S29-01221514 (2/20)

Vial: 5
Operator: EA
Inst : MS19

Quant Time: Feb 12 14:46:58 2015
Quant Method : I:\MS19\METHODS\X19021115.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 12 14:42:03 2015
Response via : Initial Calibration
DataAcq Meth:TO15SIM.M



Data File : I:\MS19\DATA\2015 02\11\02111506.D
 Acq On : 11 Feb 2015 12:48
 Sample : 20pg TO-15-SIM Std
 Misc : S29-02041502/S29-01221514 (2/20)

Vial: 5
 Operator: EA
 Inst : MS19

EA 2/12/15

Quant Time: Feb 12 14:16:18 2015
 Quant Method : I:\MS19\METHODS\X19021115.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Thu Feb 12 14:16:17 2015
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.12	130	15297	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	118372	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	19855	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.13	65	40410	998.255	pg	0.00
Spiked Amount 1000.000			Recovery	=	99.83%	
30) Toluene-d8 (SS2)	11.38	98	109244	1014.397	pg	0.00
Spiked Amount 1000.000			Recovery	=	101.44%	
40) Bromofluorobenzene (SS3)	14.25	174	37529	1037.413	pg	0.00
Spiked Amount 1000.000			Recovery	=	103.74%	

Target Compounds

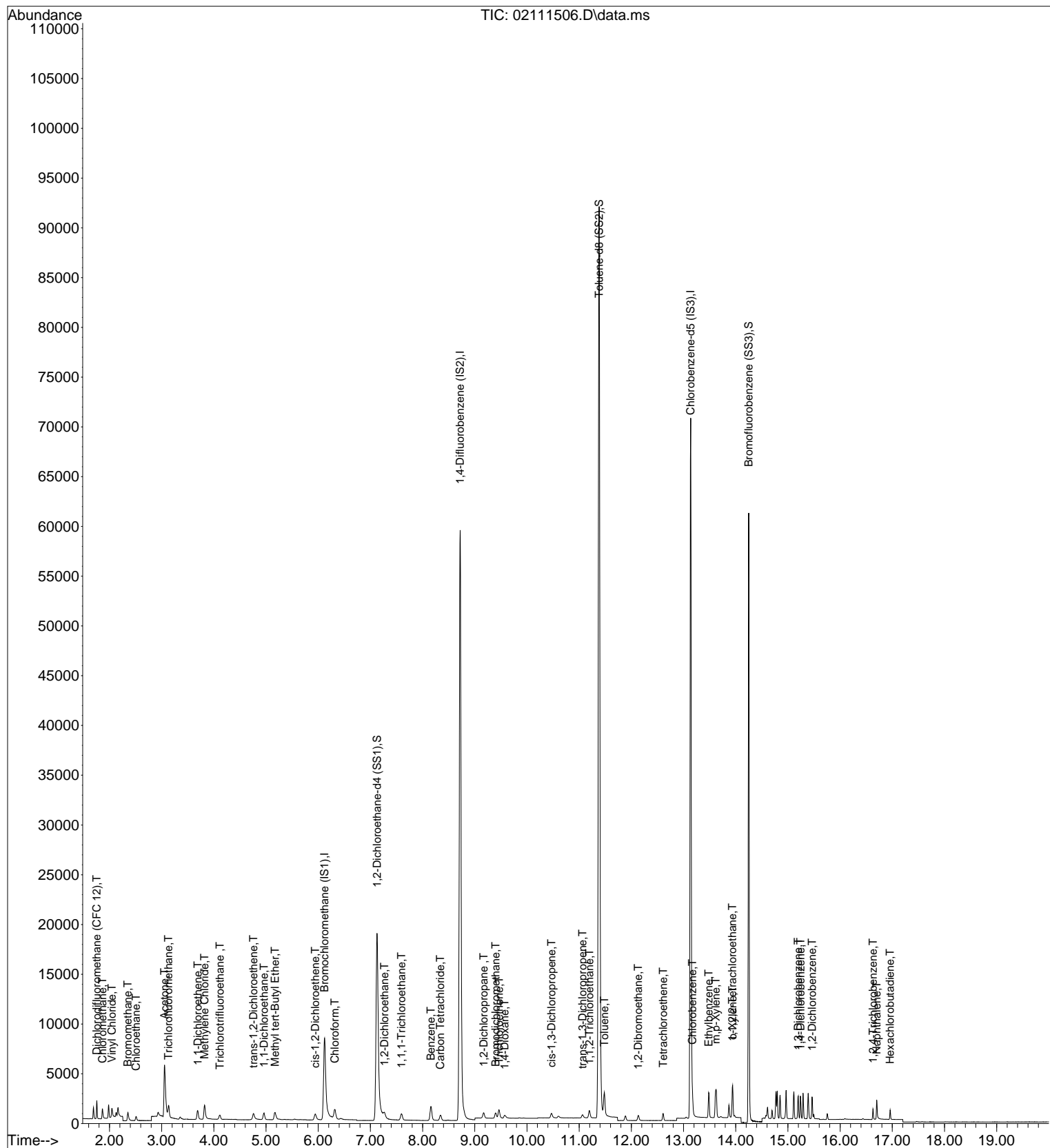
						Qvalue
2) Dichlorodifluoromethan...	1.76	85	1279	14.737	pg	99
3) Chloromethane	1.87	52	342	9.828	pg	93
4) Vinyl Chloride	2.05	62	1069	15.363	pg	95
5) Bromomethane	2.35	94	788	6.601	pg	98
6) Chloroethane	2.51	64	523	15.448	pg	98
7) Acetone	3.06	58	3020	53.977	pg	92
8) Trichlorofluoromethane	3.13	101	1131	17.435	pg	100
9) 1,1-Dichloroethene	3.69	96	538	17.963	pg	99
10) Methylene Chloride	3.82	84	1117	12.904	pg	99
11) Trichlorotrifluoroethane	4.12	151	551	15.655	pg	99
12) trans-1,2-Dichloroethene	4.76	96	505	17.688	pg	97
13) 1,1-Dichloroethane	4.96	63	1036	17.621	pg	100
14) Methyl tert-Butyl Ether	5.17	73	1761	16.870	pg	98
15) cis-1,2-Dichloroethene	5.94	96	628	18.465	pg	98
16) Chloroform	6.31	83	1612	9.664	pg	98
18) 1,2-Dichloroethane	7.27	62	842	16.886	pg	100
19) 1,1,1-Trichloroethane	7.60	97	1004	17.048	pg	99
20) Benzene	8.16	78	2836	7.045	pg	99
21) Carbon Tetrachloride	8.34	117	685	19.678	pg	99
23) 1,2-Dichloropropane	9.17	63	580	18.602	pg	100
24) Bromodichloromethane	9.40	83	785	18.208	pg	97
25) Trichloroethene	9.46	130	647	17.693	pg	98
26) 1,4-Dioxane	9.57	88	461	16.366	pg	# 57
27) cis-1,3-Dichloropropene	10.47	75	602	16.699	pg	97
28) trans-1,3-Dichloropropene	11.07	75	452	21.183	pg	96
29) 1,1,2-Trichloroethane	11.20	83	484	18.300	pg	98
31) Toluene	11.48	91	2589	14.818	pg	99
32) 1,2-Dibromoethane	12.13	107	562	17.821	pg	99
33) Tetrachloroethene	12.61	166	682	16.698	pg	99
35) Chlorobenzene	13.17	112	1600	16.381	pg	96
36) Ethylbenzene	13.48	91	2595	16.696	pg	99
37) m,p-Xylene	13.62	91	3913	33.105	pg	100
38) o-Xylene	13.94	106	926	16.454	pg	98
39) 1,1,2,2-Tetrachloroethane	13.94	83	957	16.094	pg	97
41) 1,3-Dichlorobenzene	15.20	146	1289	17.859	pg	100
42) 1,4-Dichlorobenzene	15.24	146	1340	17.112	pg	99
43) 1,2-Dichlorobenzene	15.46	146	1240	17.157	pg	100
44) 1,2,4-Trichlorobenzene	16.63	182	806	16.292	pg	99
45) Naphthalene	16.70	128	2356	15.156	pg	100
46) Hexachlorobutadiene	16.96	225	566	18.128	pg	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File : I:\MS19\DATA\2015 02\11\02111506.D
Acq On : 11 Feb 2015 12:48
Sample : 20pg TO-15-SIM Std
Misc : S29-02041502/S29-01221514 (2/20)

Vial: 5
Operator: EA
Inst : MS19

Quant Time: Feb 12 14:16:18 2015
Quant Method : I:\MS19\METHODS\X19021115.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 12 14:16:17 2015
Response via : Initial Calibration
DataAcq Meth:TO15SIM.M



Data File : I:\MS19\DATA\2015 02\11\02111507.D
 Acq On : 11 Feb 2015 13:19
 Sample : 50pg TO-15-SIM Std
 Misc : S29-02041502/S29-01221514 (2/20)

Vial: 5
 Operator: EA
 Inst : MS19

EA 2/12/15

Quant Time: Feb 12 14:16:19 2015
 Quant Method : I:\MS19\METHODS\X19021115.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Thu Feb 12 14:16:18 2015
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.12	130	15141	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	117882	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	20349	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	40563	1013.243	pg	0.00
Spiked Amount 1000.000			Recovery	=	101.32%	
30) Toluene-d8 (SS2)	11.38	98	109649	1015.083	pg	0.00
Spiked Amount 1000.000			Recovery	=	101.51%	
40) Bromofluorobenzene (SS3)	14.25	174	39340	1041.590	pg	0.00
Spiked Amount 1000.000			Recovery	=	104.16%	

Target Compounds

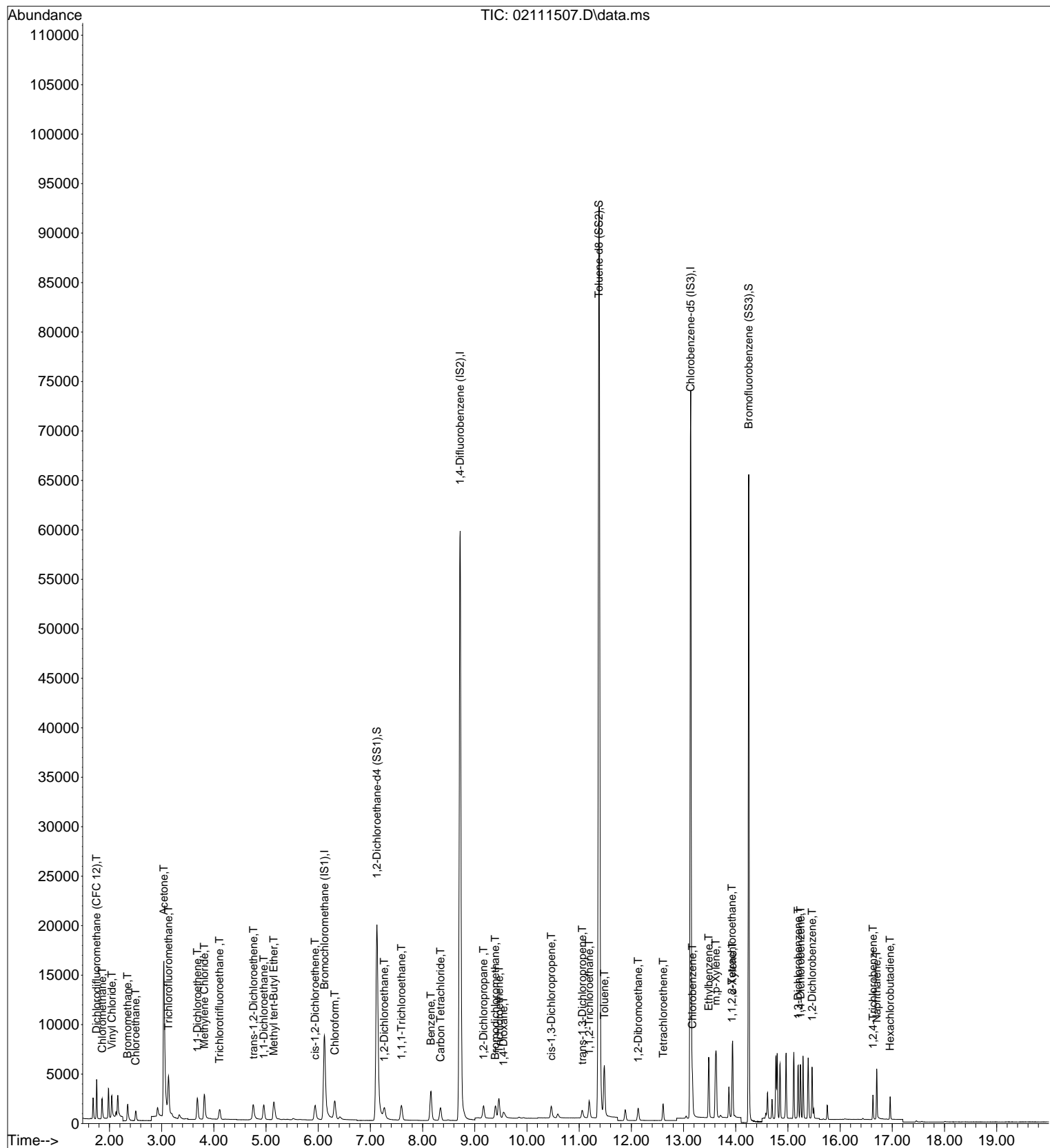
						Qvalue
2) Dichlorodifluoromethan...	1.75	85	2940	38.549	pg	99
3) Chloromethane	1.86	52	729	28.475	pg	98
4) Vinyl Chloride	2.05	62	2480	40.731	pg	97
5) Bromomethane	2.35	94	1523	19.476	pg	99
6) Chloroethane	2.50	64	1199	40.549	pg	100
7) Acetone	3.04	58	8176	197.600	pg	# 86
8) Trichlorofluoromethane	3.13	101	3739	64.447	pg	98
9) 1,1-Dichloroethene	3.68	96	1233	45.606	pg	98
10) Methylene Chloride	3.82	84	1887	28.038	pg	99
11) Trichlorotrifluoroethane	4.11	151	1302	43.505	pg	100
12) trans-1,2-Dichloroethene	4.76	96	1225	47.264	pg	100
13) 1,1-Dichloroethane	4.96	63	2330	43.916	pg	100
14) Methyl tert-Butyl Ether	5.15	73	4081	44.533	pg	100
15) cis-1,2-Dichloroethene	5.94	96	1440	46.513	pg	99
16) Chloroform	6.32	83	2992	25.320	pg	99
18) 1,2-Dichloroethane	7.27	62	2018	45.895	pg	93
19) 1,1,1-Trichloroethane	7.59	97	2320	43.934	pg	100
20) Benzene	8.16	78	5830	22.309	pg	100
21) Carbon Tetrachloride	8.34	117	1622	50.739	pg	99
23) 1,2-Dichloropropane	9.17	63	1352	46.989	pg	99
24) Bromodichloromethane	9.39	83	1824	46.297	pg	98
25) Trichloroethene	9.46	130	1482	44.742	pg	99
26) 1,4-Dioxane	9.55	88	1053	42.882	pg	# 58
27) cis-1,3-Dichloropropene	10.47	75	1451	45.028	pg	97
28) trans-1,3-Dichloropropene	11.06	75	1013	47.691	pg	98
29) 1,1,2-Trichloroethane	11.19	83	1108	45.739	pg	99
31) Toluene	11.48	91	5750	39.493	pg	100
32) 1,2-Dibromoethane	12.13	107	1339	47.111	pg	99
33) Tetrachloroethene	12.61	166	1577	42.452	pg	99
35) Chlorobenzene	13.17	112	3725	42.824	pg	100
36) Ethylbenzene	13.48	91	5979	42.679	pg	100
37) m,p-Xylene	13.62	91	9252	86.478	pg	99
38) o-Xylene	13.94	106	2142	41.818	pg	99
39) 1,1,2,2-Tetrachloroethane	13.93	83	2269	42.156	pg	98
41) 1,3-Dichlorobenzene	15.20	146	3061	46.409	pg	100
42) 1,4-Dichlorobenzene	15.24	146	3121	43.037	pg	100
43) 1,2-Dichlorobenzene	15.46	146	2930	44.625	pg	99
44) 1,2,4-Trichlorobenzene	16.63	182	1963	44.996	pg	99
45) Naphthalene	16.70	128	5540	41.331	pg	99
46) Hexachlorobutadiene	16.96	225	1310	45.254	pg	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File : I:\MS19\DATA\2015 02\11\02111507.D
Acq On : 11 Feb 2015 13:19
Sample : 50pg TO-15-SIM Std
Misc : S29-02041502/S29-01221514 (2/20)

Vial: 5
Operator: EA
Inst : MS19

Quant Time: Feb 12 14:16:19 2015
Quant Method : I:\MS19\METHODS\X19021115.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 12 14:16:18 2015
Response via : Initial Calibration
DataAcq Meth:TO15SIM.M



Data File : I:\MS19\DATA\2015 02\11\02111508.D
 Acq On : 11 Feb 2015 13:46
 Sample : 100pg TO-15-SIM Std
 Misc : S29-02041502/S29-01221514 (2/20)

Vial: 5
 Operator: EA
 Inst : MS19

EA 2/12/15

Quant Time: Feb 12 14:16:21 2015
 Quant Method : I:\MS19\METHODS\X19021115.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Thu Feb 12 14:16:20 2015
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	15096	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	116197	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	20087	1000.000	pg	0.00

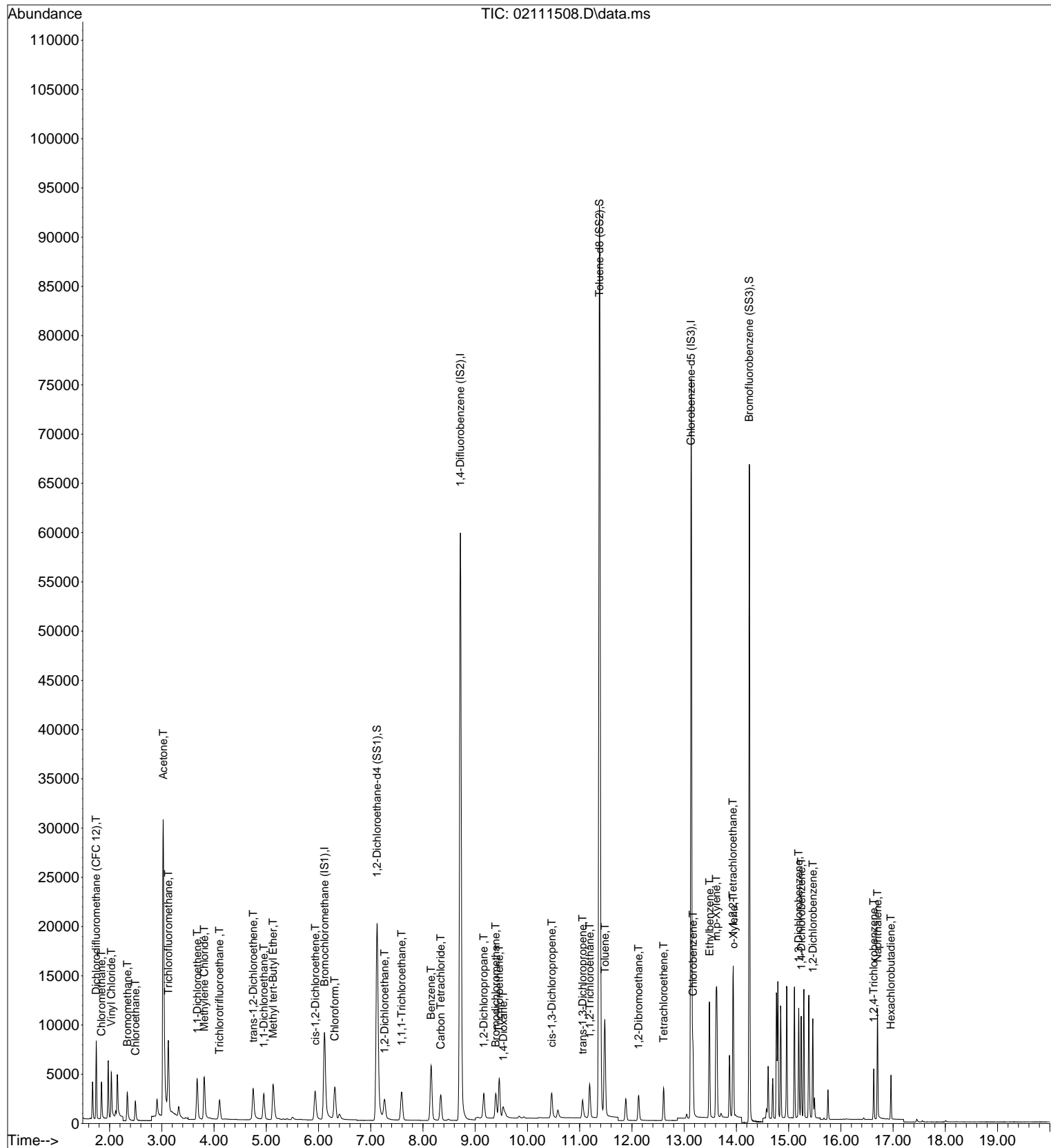
System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	40106	1000.398	pg	0.00
Spiked Amount 1000.000				Recovery =	100.04%	
30) Toluene-d8 (SS2)	11.38	98	108595	1014.802	pg	0.00
Spiked Amount 1000.000				Recovery =	101.48%	
40) Bromofluorobenzene (SS3)	14.25	174	40293	1065.959	pg	0.00
Spiked Amount 1000.000				Recovery =	106.60%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.74	85	5761	80.841	pg	100
3) Chloromethane	1.85	52	1278	58.585	pg	100
4) Vinyl Chloride	2.03	62	4969	87.244	pg	99
5) Bromomethane	2.34	94	2571	41.534	pg	99
6) Chloroethane	2.49	64	2357	85.570	pg	100
7) Acetone	3.03	58	15102	403.197	pg	94
8) Trichlorofluoromethane	3.12	101	7257	117.857	pg	100
9) 1,1-Dichloroethene	3.68	96	2441	95.766	pg	100
10) Methylene Chloride	3.81	84	3196	57.241	pg	100
11) Trichlorotrifluoroethane	4.11	151	2509	90.148	pg	99
12) trans-1,2-Dichloroethene	4.75	96	2394	96.110	pg	99
13) 1,1-Dichloroethane	4.95	63	3997	80.359	pg	99
14) Methyl tert-Butyl Ether	5.13	73	7980	93.009	pg	100
15) cis-1,2-Dichloroethene	5.94	96	2835	96.826	pg	98
16) Chloroform	6.31	83	5307	55.109	pg	100
18) 1,2-Dichloroethane	7.26	62	3951	94.871	pg	100
19) 1,1,1-Trichloroethane	7.59	97	4540	91.190	pg	100
20) Benzene	8.16	78	10895	52.381	pg	99
21) Carbon Tetrachloride	8.34	117	3291	107.467	pg	100
23) 1,2-Dichloropropane	9.16	63	2590	95.718	pg	99
24) Bromodichloromethane	9.39	83	3629	98.384	pg	99
25) Trichloroethene	9.46	130	2909	94.498	pg	99
26) 1,4-Dioxane	9.54	88	2058	91.529	pg	# 61
27) cis-1,3-Dichloropropene	10.47	75	3004	99.283	pg	99
28) trans-1,3-Dichloropropene	11.06	75	2218	109.595	pg	99
29) 1,1,2-Trichloroethane	11.19	83	2200	97.351	pg	99
31) Toluene	11.48	91	11133	85.621	pg	100
32) 1,2-Dibromoethane	12.13	107	2701	101.251	pg	100
33) Tetrachloroethene	12.61	166	3099	89.381	pg	99
35) Chlorobenzene	13.17	112	7235	91.205	pg	100
36) Ethylbenzene	13.49	91	11829	92.441	pg	100
37) m,p-Xylene	13.62	91	18067	183.247	pg	100
38) o-Xylene	13.94	106	4303	91.541	pg	99
39) 1,1,2,2-Tetrachloroethane	13.93	83	4544	91.536	pg	100
41) 1,3-Dichlorobenzene	15.19	146	6095	99.795	pg	100
42) 1,4-Dichlorobenzene	15.24	146	6185	92.177	pg	99
43) 1,2-Dichlorobenzene	15.46	146	5888	97.194	pg	100
44) 1,2,4-Trichlorobenzene	16.63	182	3935	98.027	pg	100
45) Naphthalene	16.70	128	11263	93.040	pg	99
46) Hexachlorobutadiene	16.96	225	2608	97.505	pg	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed



Data File : I:\MS19\DATA\2015 02\11\02111509.D
 Acq On : 11 Feb 2015 14:14
 Sample : 500pg TO-15-SIM Std
 Misc : S29-02041502/S29-01221510 (2/20)

Vial: 15
 Operator: EA
 Inst : MS19

EA 2/12/15

Quant Time: Feb 12 14:16:23 2015
 Quant Method : I:\MS19\METHODS\X19021115.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Thu Feb 12 14:16:22 2015
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	16085	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	120298	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	20216	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	40423	946.214	pg	0.00
Spiked Amount 1000.000			Recovery	=	94.62%	
30) Toluene-d8 (SS2)	11.38	98	111252	1000.487	pg	0.00
Spiked Amount 1000.000			Recovery	=	100.05%	
40) Bromofluorobenzene (SS3)	14.25	174	40901	1057.698	pg	0.00
Spiked Amount 1000.000			Recovery	=	105.77%	

Target Compounds

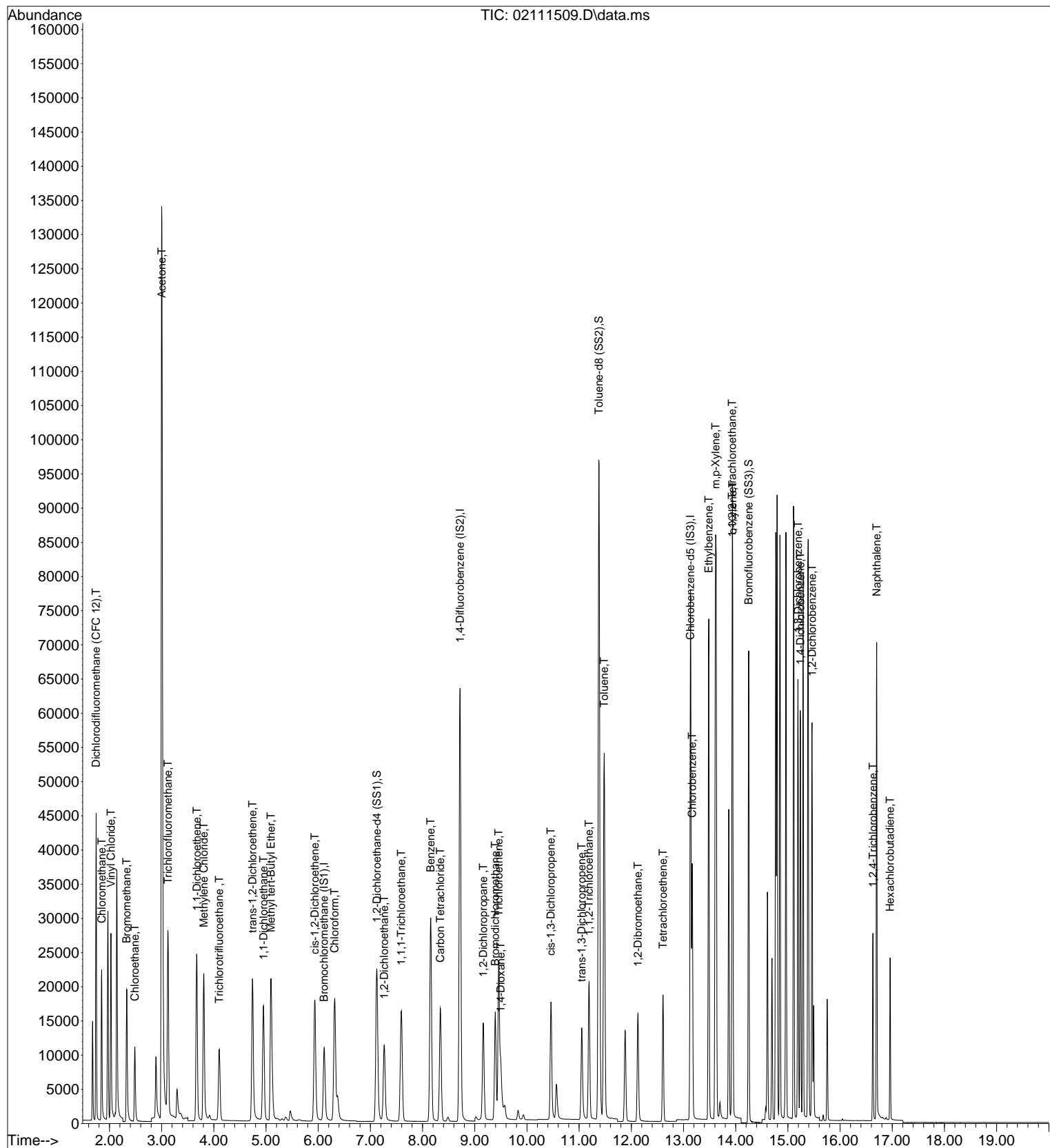
						Qvalue
2) Dichlorodifluoromethan...	1.74	85	31157	426.209	pg	100
3) Chloromethane	1.85	52	6681	321.150	pg	100
4) Vinyl Chloride	2.03	62	25538	434.678	pg	100
5) Bromomethane	2.33	94	15446	274.929	pg	100
6) Chloroethane	2.49	64	12666	448.699	pg	100
7) Acetone	3.00	58	60194	1613.781	pg	100
8) Trichlorofluoromethane	3.12	101	27843	414.914	pg	100
9) 1,1-Dichloroethene	3.67	96	13612	516.882	pg	100
10) Methylene Chloride	3.81	84	14524	278.489	pg	100
11) Trichlorotrifluoroethane	4.10	151	13292	468.469	pg	100
12) trans-1,2-Dichloroethene	4.74	96	13790	531.985	pg	100
13) 1,1-Dichloroethane	4.95	63	25656	516.228	pg	100
14) Methyl tert-Butyl Ether	5.09	73	44101	500.773	pg	100
15) cis-1,2-Dichloroethene	5.93	96	15575	514.648	pg	100
16) Chloroform	6.31	83	28294	315.856	pg	100
18) 1,2-Dichloroethane	7.27	62	21996	511.229	pg	100
19) 1,1,1-Trichloroethane	7.59	97	25473	496.516	pg	100
20) Benzene	8.16	78	57066	297.373	pg	100
21) Carbon Tetrachloride	8.34	117	20985	653.837	pg	100
23) 1,2-Dichloropropane	9.16	63	14657	539.650	pg	100
24) Bromodichloromethane	9.39	83	21004	563.744	pg	100
25) Trichloroethene	9.46	130	15892	514.735	pg	100
26) 1,4-Dioxane	9.50	88	13366	598.151	pg	100
27) cis-1,3-Dichloropropene	10.46	75	19166	620.291	pg	100
28) trans-1,3-Dichloropropene	11.05	75	15425	730.002	pg	100
29) 1,1,2-Trichloroethane	11.19	83	12410	544.987	pg	100
31) Toluene	11.48	91	60430	475.238	pg	100
32) 1,2-Dibromoethane	12.13	107	15753	581.964	pg	100
33) Tetrachloroethene	12.61	166	17012	487.964	pg	100
35) Chlorobenzene	13.17	112	40274	527.996	pg	100
36) Ethylbenzene	13.48	91	69944	565.682	pg	100
37) m,p-Xylene	13.61	91	113197	1185.738	pg	100
38) o-Xylene	13.94	106	26689	584.070	pg	100
39) 1,1,2,2-Tetrachloroethane	13.93	83	26083	539.365	pg	100
41) 1,3-Dichlorobenzene	15.19	146	34549	580.143	pg	100
42) 1,4-Dichlorobenzene	15.24	146	34983	535.493	pg	100
43) 1,2-Dichlorobenzene	15.46	146	33498	567.060	pg	100
44) 1,2,4-Trichlorobenzene	16.63	182	20666	529.064	pg	100
45) Naphthalene	16.70	128	67395	576.497	pg	100
46) Hexachlorobutadiene	16.96	225	13676	525.027	pg	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File : I:\MS19\DATA\2015 02\11\02111509.D
Acq On : 11 Feb 2015 14:14
Sample : 500pg TO-15-SIM Std
Misc : S29-02041502/S29-01221510 (2/20)

Vial: 15
Operator: EA
Inst : MS19

Quant Time: Feb 12 14:16:23 2015
Quant Method : I:\MS19\METHODS\X19021115.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 12 14:16:22 2015
Response via : Initial Calibration
DataAcq Meth:TO15SIM.M



Data File : I:\MS19\DATA\2015 02\11\02111510.D
 Acq On : 11 Feb 2015 14:41
 Sample : 1000pg TO-15-SIM Std
 Misc : S29-02041502/S29-01221510 (2/20)

Vial: 15
 Operator: EA
 Inst : MS19

Quant Time: Feb 12 14:16:24 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:16:24 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

EA 2/12/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.12	130	17049	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	125008	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	20857	1000.000	pg	0.00

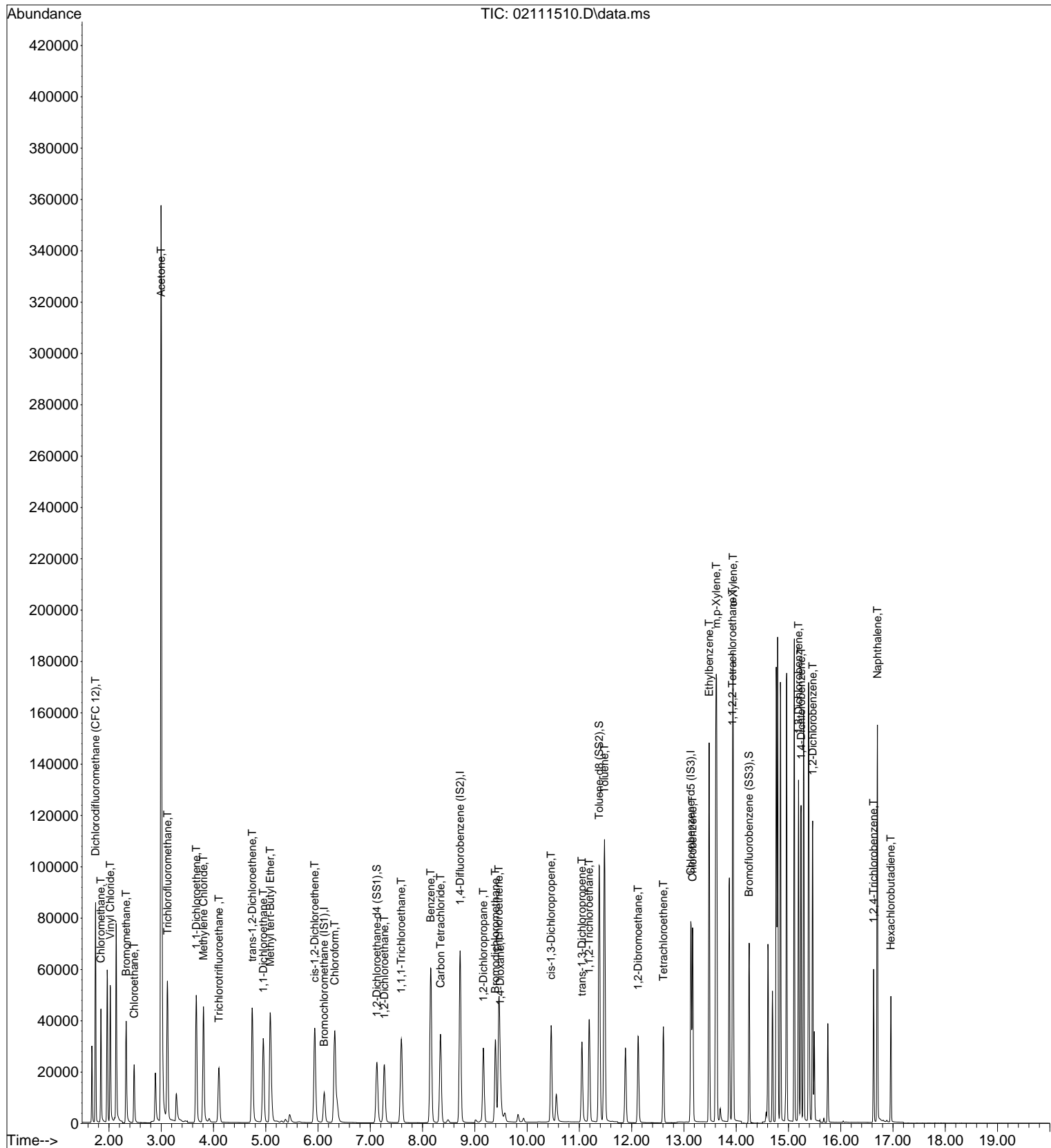
System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.13	65	41862	934.545	pg	0.00
Spiked Amount 1000.000			Recovery	=	93.45%	
30) Toluene-d8 (SS2)	11.38	98	115558	999.959	pg	0.00
Spiked Amount 1000.000			Recovery	=	100.00%	
40) Bromofluorobenzene (SS3)	14.25	174	43063	1067.069	pg	0.00
Spiked Amount 1000.000			Recovery	=	106.71%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.74	85	62078	817.978	pg	100
3) Chloromethane	1.85	52	13169	644.131	pg	100
4) Vinyl Chloride	2.02	62	50542	833.401	pg	100
5) Bromomethane	2.33	94	30107	556.925	pg	100
6) Chloroethane	2.48	64	25063	856.769	pg	100
7) Acetone	3.00	58	141112	3887.122	pg	96
8) Trichlorofluoromethane	3.12	101	56600	834.414	pg	100
9) 1,1-Dichloroethene	3.67	96	27640	1000.540	pg	99
10) Methylene Chloride	3.81	84	29309	590.050	pg	99
11) Trichlorotrifluoroethane	4.10	151	26854	918.742	pg	99
12) trans-1,2-Dichloroethene	4.74	96	28320	1029.972	pg	100
13) 1,1-Dichloroethane	4.95	63	50280	961.233	pg	100
14) Methyl tert-Butyl Ether	5.09	73	89027	969.489	pg	100
15) cis-1,2-Dichloroethene	5.94	96	31769	1003.291	pg	100
16) Chloroform	6.32	83	56566	652.671	pg	100
18) 1,2-Dichloroethane	7.27	62	43916	973.351	pg	99
19) 1,1,1-Trichloroethane	7.59	97	51167	951.269	pg	100
20) Benzene	8.16	78	114365	621.103	pg	100
21) Carbon Tetrachloride	8.34	117	43494	1244.409	pg	99
23) 1,2-Dichloropropane	9.16	63	29289	1039.791	pg	100
24) Bromodichloromethane	9.39	83	42717	1095.782	pg	100
25) Trichloroethene	9.46	130	32223	1013.852	pg	100
26) 1,4-Dioxane	9.49	88	27269	1151.886	pg	97
27) cis-1,3-Dichloropropene	10.46	75	40380	1213.570	pg	99
28) trans-1,3-Dichloropropene	11.05	75	33903	1435.682	pg	100
29) 1,1,2-Trichloroethane	11.19	83	25193	1064.675	pg	99
31) Toluene	11.48	91	122179	950.487	pg	100
32) 1,2-Dibromoethane	12.12	107	32518	1142.769	pg	100
33) Tetrachloroethene	12.61	166	34320	953.763	pg	100
35) Chlorobenzene	13.16	112	81474	1045.479	pg	100
36) Ethylbenzene	13.48	91	142378	1109.785	pg	100
37) m,p-Xylene	13.62	91	231649	2306.778	pg	100
38) o-Xylene	13.94	106	54677	1136.603	pg	99
39) 1,1,2,2-Tetrachloroethane	13.93	83	52662	1049.773	pg	99
41) 1,3-Dichlorobenzene	15.19	146	70989	1151.307	pg	100
42) 1,4-Dichlorobenzene	15.24	146	71821	1063.390	pg	100
43) 1,2-Dichlorobenzene	15.46	146	68925	1126.023	pg	100
44) 1,2,4-Trichlorobenzene	16.63	182	43093	1083.084	pg	100
45) Naphthalene	16.70	128	144193	1186.330	pg	100
46) Hexachlorobutadiene	16.96	225	28194	1062.384	pg	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed



Data File : I:\MS19\DATA\2015 02\11\02111514.D
 Acq On : 11 Feb 2015 16:36
 Sample : 2500pg TO-15-SIM Std
 Misc : S29-02041502/S29-01221506 (2/20)

Vial: 6
 Operator: EA
 Inst : MS19

EA 2/12/15

Quant Time: Feb 12 14:16:26 2015
 Quant Method : I:\MS19\METHODS\X19021115.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Thu Feb 12 14:16:25 2015
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.12	130	19999	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	142519	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	22557	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.13	65	44439	855.065	pg	0.00
Spiked Amount 1000.000			Recovery	=	85.51%	
30) Toluene-d8 (SS2)	11.38	98	128917	978.499	pg	0.00
Spiked Amount 1000.000			Recovery	=	97.85%	
40) Bromofluorobenzene (SS3)	14.25	174	50432	1142.713	pg	0.00
Spiked Amount 1000.000			Recovery	=	114.27%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.74	85	168004	1931.931	pg	100
3) Chloromethane	1.84	52	34728	1541.122	pg	100
4) Vinyl Chloride	2.01	62	125955	1821.113	pg	100
5) Bromomethane	2.32	94	78615	1341.208	pg	100
6) Chloroethane	2.48	64	62915	1881.040	pg	100
7) Acetone	2.99	58	246584	6082.587	pg	98
8) Trichlorofluoromethane	3.11	101	146912	1919.077	pg	100
9) 1,1-Dichloroethene	3.66	96	77847	2435.626	pg	94
10) Methylene Chloride	3.81	84	80073	1493.159	pg	93
11) Trichlorotrifluoroethane	4.10	151	77871	2332.250	pg	100
12) trans-1,2-Dichloroethene	4.74	96	79429	2474.328	pg	100
13) 1,1-Dichloroethane	4.95	63	135243	2242.124	pg	99
14) Methyl tert-Butyl Ether	5.08	73	244123	2308.860	pg	99
15) cis-1,2-Dichloroethene	5.94	96	86492	2363.200	pg	100
16) Chloroform	6.32	83	146238	1545.944	pg	100
18) 1,2-Dichloroethane	7.27	62	110526	2123.288	pg	99
19) 1,1,1-Trichloroethane	7.59	97	136070	2190.919	pg	100
20) Benzene	8.16	78	299538	1499.336	pg	100
21) Carbon Tetrachloride	8.34	117	120516	2899.794	pg	99
23) 1,2-Dichloropropane	9.16	63	74958	2352.185	pg	99
24) Bromodichloromethane	9.39	83	111568	2508.096	pg	100
25) Trichloroethene	9.46	130	86855	2421.723	pg	100
26) 1,4-Dioxane	9.48	88	64196	2356.260	pg	98
27) cis-1,3-Dichloropropene	10.46	75	113024	2904.039	pg	97
28) trans-1,3-Dichloropropene	11.05	75	99950	3505.447	pg	100
29) 1,1,2-Trichloroethane	11.19	83	63795	2373.962	pg	98
31) Toluene	11.48	91	321039	2241.422	pg	99
32) 1,2-Dibromoethane	12.12	107	85325	2613.189	pg	100
33) Tetrachloroethene	12.61	166	91874	2260.477	pg	98
35) Chlorobenzene	13.17	112	209127	2505.560	pg	100
36) Ethylbenzene	13.48	91	366983	2641.003	pg	99
37) m,p-Xylene	13.62	91	603359	5493.267	pg	98
38) o-Xylene	13.94	106	141650	2690.244	pg	97
39) 1,1,2,2-Tetrachloroethane	13.93	83	123631	2278.829	pg	100
41) 1,3-Dichlorobenzene	15.19	146	174513	2612.649	pg	100
42) 1,4-Dichlorobenzene	15.24	146	174802	2391.809	pg	99
43) 1,2-Dichlorobenzene	15.46	146	162141	2443.375	pg	100
44) 1,2,4-Trichlorobenzene	16.63	182	114424	2677.680	pg	99
45) Naphthalene	16.70	128	390111	2934.074	pg	100
46) Hexachlorobutadiene	16.96	225	69382	2438.270	pg	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File : I:\MS19\DATA\2015 02\11\02111512.D
 Acq On : 11 Feb 2015 15:39
 Sample : 20000pg TO-15-SIM Std
 Misc : S29-02041502/S29-02031501 (3/4)

Vial: 7
 Operator: EA
 Inst : MS19

Quant Time: Feb 12 14:16:28 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:16:27 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

EA 2/12/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.15	130	21067	1000.000	pg	0.04
22) 1,4-Difluorobenzene (IS2)	8.74	114	149917	1000.000	pg	0.02
34) Chlorobenzene-d5 (IS3)	13.13	54	25271	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.15	65	46065	859.207	pg	0.03
Spiked Amount 1000.000			Recovery	=	85.92%	
30) Toluene-d8 (SS2)	11.39	98	139171	1007.295	pg	0.01
Spiked Amount 1000.000			Recovery	=	100.73%	
40) Bromofluorobenzene (SS3)	14.25	174	55485	1099.766	pg	0.00
Spiked Amount 1000.000			Recovery	=	109.98%	

Target Compounds

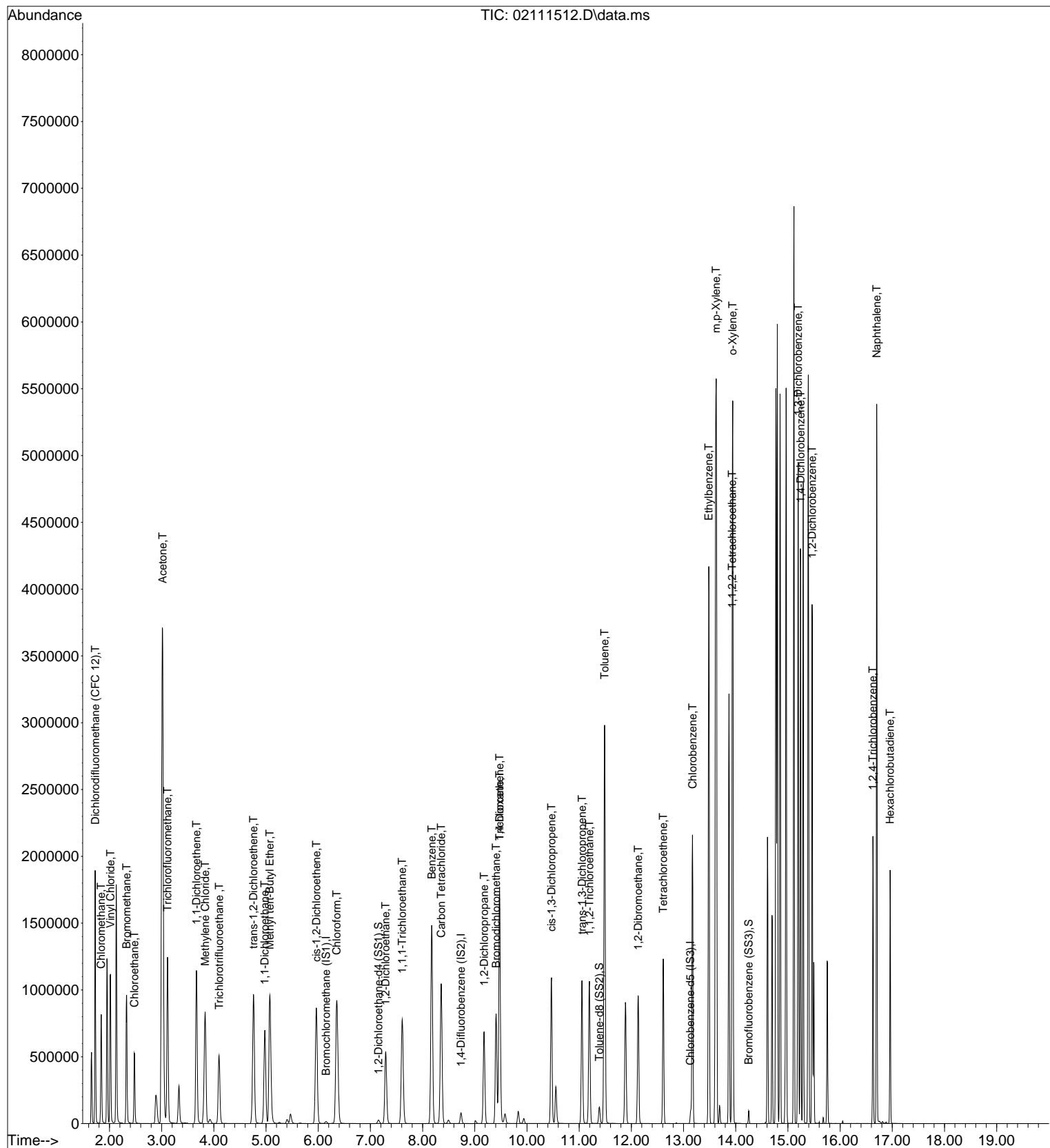
						Qvalue
2) Dichlorodifluoromethan...	1.73	85	1313757	14734.112	pg	100
3) Chloromethane	1.84	52	275355	12283.710	pg	100
4) Vinyl Chloride	2.02	62	1096906	15663.177	pg	100
5) Bromomethane	2.33	94	715521	12430.030	pg	100
6) Chloroethane	2.48	64	553577	16305.938	pg	100
7) Acetone	3.02	58	2226627	56625.289	pg	98
8) Trichlorofluoromethane	3.11	101	1298323	16793.807	pg	100
9) 1,1-Dichloroethene	3.67	96	685316	20668.270	pg	93
10) Methylene Chloride	3.83	84	715830	13586.781	pg	93
11) Trichlorotrifluoroethane	4.10	151	673456	19550.123	pg	99
12) trans-1,2-Dichloroethene	4.76	96	710419	21209.514	pg	100
13) 1,1-Dichloroethane	4.98	63	1166548	18793.634	pg	100
14) Methyl tert-Butyl Ether	5.07	73	2153128	19762.588	pg	99
15) cis-1,2-Dichloroethene	5.96	96	789346	20893.586	pg	100
16) Chloroform	6.35	83	1411126	15129.370	pg	100
18) 1,2-Dichloroethane	7.29	62	996736	18749.451	pg	98
19) 1,1,1-Trichloroethane	7.61	97	1251330	19589.534	pg	99
20) Benzene	8.18	78	2780931	14163.758	pg	100
21) Carbon Tetrachloride	8.36	117	1303647	29740.848	pg	100
23) 1,2-Dichloropropane	9.18	63	684537	20827.850	pg	100
24) Bromodichloromethane	9.41	83	1073842	23213.118	pg	100
25) Trichloroethene	9.47	130	877553	23608.414	pg	99
26) 1,4-Dioxane	9.47	88	637589	22685.873	pg	98
27) cis-1,3-Dichloropropene	10.47	75	1122250	27002.113	pg	96
28) trans-1,3-Dichloropropene	11.05	75	1068731	34062.082	pg	100
29) 1,1,2-Trichloroethane	11.20	83	626897	22592.900	pg	96
31) Toluene	11.49	91	3173858	21637.321	pg	98
32) 1,2-Dibromoethane	12.13	107	887704	26030.477	pg	100
33) Tetrachloroethene	12.61	166	1070981	25430.793	pg	96
35) Chlorobenzene	13.17	112	2201289	23872.445	pg	99
36) Ethylbenzene	13.48	91	3893702	25154.207	pg	97
37) m,p-Xylene	13.62	91	6984006	56617.173	pg	96
38) o-Xylene	13.94	106	1651727	27940.300	pg	93
39) 1,1,2,2-Tetrachloroethane	13.93	83	1534837	25737.439	pg	99
41) 1,3-Dichlorobenzene	15.20	146	2483787	33591.122	pg	99
42) 1,4-Dichlorobenzene	15.24	146	2322203	28762.488	pg	99
43) 1,2-Dichlorobenzene	15.46	146	2141930	29311.622	pg	100
44) 1,2,4-Trichlorobenzene	16.63	182	1511133	31801.728	pg	98
45) Naphthalene	16.70	128	4745255	31597.978	pg	99
46) Hexachlorobutadiene	16.96	225	1012054	32343.543	pg	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File : I:\MS19\DATA\2015 02\11\02111512.D
Acq On : 11 Feb 2015 15:39
Sample : 20000pg TO-15-SIM Std
Misc : S29-02041502/S29-02031501 (3/4)

Vial: 7
Operator: EA
Inst : MS19

Quant Time: Feb 12 14:16:28 2015
Quant Method : I:\MS19\METHODS\X19021115.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Feb 12 14:16:27 2015
Response via : Initial Calibration
DataAcq Meth:TO15SIM.M



Data File : I:\MS19\DATA\2015 02\11\02111513.D
 Acq On : 11 Feb 2015 16:06
 Sample : 50000pg TO-15-SIM Std
 Misc : S29-02041502/S29-02031501 (3/4)

Vial: 7
 Operator: EA
 Inst : MS19

EA 2/12/15

Quant Time: Feb 12 14:16:30 2015
 Quant Method : I:\MS19\METHODS\X19021115.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Thu Feb 12 14:16:29 2015
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.17	130	23612	1000.000	pg	0.06
22) 1,4-Difluorobenzene (IS2)	8.75	114	157211	1000.000	pg	0.03
34) Chlorobenzene-d5 (IS3)	13.14	54	29867	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.17	65	46704	791.156	pg	0.05
Spiked Amount 1000.000			Recovery	=	79.12%	
30) Toluene-d8 (SS2)	11.39	98	144659	997.529	pg	0.02
Spiked Amount 1000.000			Recovery	=	99.75%	
40) Bromofluorobenzene (SS3)	14.25	174	59710	989.055	pg	0.00
Spiked Amount 1000.000			Recovery	=	98.91%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.73	85	4112873	42343.519	pg	98
3) Chloromethane	1.85	52	801676	33552.040	pg	99
4) Vinyl Chloride	2.02	62	3036723	39766.708	pg	99
5) Bromomethane	2.34	94	1964997	32020.345	pg	100
6) Chloroethane	2.49	64	1497263	40320.794	pg	100
7) Acetone	3.04	58	6547708	157083.771	pg	92
8) Trichlorofluoromethane	3.12	101	3667435	43536.070	pg	99
9) 1,1-Dichloroethene	3.67	96	1950013	52813.886	pg	92
10) Methylene Chloride	3.85	84	1968122	35078.201	pg	93
11) Trichlorotrifluoroethane	4.11	151	1961060	51456.497	pg	99
12) trans-1,2-Dichloroethene	4.78	96	2005139	53407.985	pg	99
13) 1,1-Dichloroethane	5.00	63	3156258	46069.463	pg	100
14) Methyl tert-Butyl Ether	5.09	73	6028184	49949.813	pg	100
15) cis-1,2-Dichloroethene	5.98	96	2169119	51551.066	pg	100
16) Chloroform	6.38	83	4084339	40722.525	pg	100
18) 1,2-Dichloroethane	7.31	62	2698537	46050.110	pg	98
19) 1,1,1-Trichloroethane	7.62	97	3446414	48545.746	pg	99
20) Benzene	8.19	78	7583659	36148.433	pg	99
21) Carbon Tetrachloride	8.37	117	3847287	75542.604	pg	100
23) 1,2-Dichloropropane	9.19	63	1874972	54706.369	pg	100
24) Bromodichloromethane	9.42	83	2953877	60401.630	pg	100
25) Trichloroethene	9.49	130	2593830	65778.553	pg	99
26) 1,4-Dioxane	9.49	88	1849222	62426.824	pg	98
27) cis-1,3-Dichloropropene	10.47	75	3138578	69528.647	pg	97
28) trans-1,3-Dichloropropene	11.07	75	3018924	85285.684	pg	99
29) 1,1,2-Trichloroethane	11.20	83	1726084	59052.140	pg	96
31) Toluene	11.50	91	8783250	57218.314	pg	97
32) 1,2-Dibromoethane	12.14	107	2432141	66487.084	pg	99
33) Tetrachloroethene	12.62	166	3608209	79141.251	pg	93
35) Chlorobenzene	13.18	112	6329502	57537.319	pg	98
36) Ethylbenzene	13.49	91	10770641	57837.026	pg	92
37) m,p-Xylene	13.62	91	18769950	123935.588	pg	86
38) o-Xylene	13.95	106	5083425	69976.838	pg	# 86
39) 1,1,2,2-Tetrachloroethane	13.94	83	4549980	62786.488	pg	98
41) 1,3-Dichlorobenzene	15.20	146	7746022	83686.881	pg	98
42) 1,4-Dichlorobenzene	15.25	146	6969520	69922.031	pg	97
43) 1,2-Dichlorobenzene	15.47	146	6320666	70368.287	pg	98
44) 1,2,4-Trichlorobenzene	16.63	182	4877913	82652.078	pg	98
45) Naphthalene	16.70	128	10842812	58020.109	pg	88
46) Hexachlorobutadiene	16.96	225	3473978	88999.647	pg	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

[illegible]

Data File : I:\MS19\DATA\2015 02\11\02111515.D
 Acq On : 11 Feb 2015 17:05
 Sample : 500pg TO-15-SIM ICV Std
 Misc : S29-02041502/S29-01291510 (2/27)

Vial: 16
 Operator: EA
 Inst : MS19

EA 2/12/15

Quant Time: Feb 12 15:13:20 2015
 Quant Method : I:\MS19\METHODS\X19021115.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Thu Feb 12 14:42:03 2015
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	18013	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	133680	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	21848	1000.000	pg	0.00

System Monitoring Compounds						
17) 1,2-Dichloroethane-d4 ...	7.12	65	42920	975.688	pg	0.00
Spiked Amount 1000.000			Recovery	=	97.57%	
30) Toluene-d8 (SS2)	11.38	98	121238	983.455	pg	0.00
Spiked Amount 1000.000			Recovery	=	98.35%	
40) Bromofluorobenzene (SS3)	14.25	174	45495	1031.443	pg	0.00
Spiked Amount 1000.000			Recovery	=	103.14%	

Target Compounds						Qvalue
2) Dichlorodifluoromethan...	1.74	85	39472	539.197	pg	100
3) Chloromethane	1.86	52	7719	528.002	pg	100
4) Vinyl Chloride	2.03	62	28496	500.536	pg	99
5) Bromomethane	2.33	94	16808	510.605	pg	100
6) Chloroethane	2.49	64	13898	501.842	pg	99
7) Acetone	3.01	58	64204	2483.670	pg	96
8) Trichlorofluoromethane	3.12	101	32689	519.862	pg	100
9) 1,1-Dichloroethene	3.68	96	16483	587.204	pg	95
10) Methylene Chloride	3.81	84	16997	569.662	pg	94
11) Trichlorotrifluoroethane	4.11	151	16050	555.487	pg	100
12) trans-1,2-Dichloroethene	4.74	96	16624	579.926	pg	100
13) 1,1-Dichloroethane	4.95	63	28983	563.229	pg	100
14) Methyl tert-Butyl Ether	5.09	73	51042	559.589	pg	99
15) cis-1,2-Dichloroethene	5.93	96	17780	557.788	pg	100
16) Chloroform	6.31	83	30905	559.597	pg	100
18) 1,2-Dichloroethane	7.26	62	23575	536.122	pg	100
19) 1,1,1-Trichloroethane	7.59	97	28398	528.771	pg	100
20) Benzene	8.15	78	63658	560.419	pg	100
21) Carbon Tetrachloride	8.34	117	23345	580.623	pg	100
23) 1,2-Dichloropropane	9.16	63	15897	545.245	pg	100
24) Bromodichloromethane	9.39	83	23267	552.865	pg	100
25) Trichloroethene	9.46	130	17801	518.327	pg	100
26) 1,4-Dioxane	9.50	88	13327	520.677	pg	97
27) cis-1,3-Dichloropropene	10.46	75	23820	600.764	pg	98
28) trans-1,3-Dichloropropene	11.05	75	18332	571.027	pg	100
29) 1,1,2-Trichloroethane	11.19	83	13532	539.436	pg	99
31) Toluene	11.48	91	65842	502.178	pg	99
32) 1,2-Dibromoethane	12.12	107	17523	550.567	pg	100
33) Tetrachloroethene	12.61	166	18681	460.160	pg	99
35) Chlorobenzene	13.16	112	44788	554.312	pg	100
36) Ethylbenzene	13.48	91	76658	559.525	pg	100
37) m,p-Xylene	13.62	91	124817	1126.644	pg	100
38) o-Xylene	13.94	106	29388	534.023	pg	99
39) 1,1,2,2-Tetrachloroethane	13.93	83	28448	525.213	pg	100
41) 1,3-Dichlorobenzene	15.19	146	39066	556.443	pg	100
42) 1,4-Dichlorobenzene	15.24	146	39922	528.766	pg	99
43) 1,2-Dichlorobenzene	15.46	146	37979	561.305	pg	100
44) 1,2,4-Trichlorobenzene	16.63	182	25507	613.702	pg	100
45) Naphthalene	16.70	128	85798	627.616	pg	100
46) Hexachlorobutadiene	16.96	225	16709	602.681	pg	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

INITIAL CALIBRATION VERIFICATION CHECK SHEET - MS19

EA 2/12/15

Data File Name: 02111515.D
 Data File Path: I:\MS19\DATA\2015_02\11\
 Operator: EA
 Instrument Name: MS19
 Sample Name: 500pg TO-15-SIM ICV Std
 Misc Info: S29-02041502/S29-01291510 (2/27)
 Date Acquired: 2/11/2015 17:05
 Acq. Method File: TO15SIM.M

#	Compound Name	Ret. Time	Amount Spiked (pg)	Amount Found (pg)	Percent Recovery	Lower Limit	Upper Limit	Flag
2)	Dichlorodifluoromethane (CFC 12)	1.74	510.0	539.2	105.7	70	130	*
3)	Chloromethane	1.86	495.0	528.0	106.7	70	130	*
4)	Vinyl Chloride	2.03	505.0	500.5	99.1	70	130	*
5)	Bromomethane	2.33	505.0	510.6	101.1	70	130	*
6)	Chloroethane	2.49	505.0	501.8	99.4	70	130	*
7)	Acetone	3.01	2700.0	2483.7	92.0	70	130	*
8)	Trichlorofluoromethane	3.12	495.0	519.9	105.0	70	130	*
9)	1,1-Dichloroethene	3.68	535.0	587.2	109.8	70	130	*
10)	Methylene Chloride	3.81	540.0	569.7	105.5	70	130	*
11)	Trichlorotrifluoroethane	4.11	540.0	555.5	102.9	70	130	*
12)	trans-1,2-Dichloroethene	4.74	530.0	579.9	109.4	70	130	*
13)	1,1-Dichloroethane	4.95	520.0	563.2	108.3	70	130	*
14)	Methyl tert-Butyl Ether	5.09	530.0	559.6	105.6	70	130	*
15)	cis-1,2-Dichloroethene	5.93	535.0	557.8	104.3	70	130	*
16)	Chloroform	6.31	540.0	559.6	103.6	70	130	*
18)	1,2-Dichloroethane	7.26	525.0	536.1	102.1	70	130	*
19)	1,1,1-Trichloroethane	7.59	520.0	528.8	101.7	70	130	*
20)	Benzene	8.15	550.0	560.4	101.9	70	130	*
21)	Carbon Tetrachloride	8.34	535.0	580.6	108.5	70	130	*
23)	1,2-Dichloropropane	9.16	530.0	545.2	102.9	70	130	*
24)	Bromodichloromethane	9.39	540.0	552.9	102.4	70	130	*
25)	Trichloroethene	9.46	520.0	518.3	99.7	70	130	*
26)	1,4-Dioxane	9.50	545.0	520.7	95.5	70	130	*
27)	cis-1,3-Dichloropropene	10.46	565.0	600.8	106.3	70	130	*
28)	trans-1,3-Dichloropropene	11.05	540.0	571.0	105.7	70	130	*
29)	1,1,2-Trichloroethane	11.19	530.0	539.4	101.8	70	130	*
31)	Toluene	11.48	530.0	502.2	94.8	70	130	*
32)	1,2-Dibromoethane	12.12	540.0	550.6	102.0	70	130	*
33)	Tetrachloroethene	12.61	495.0	460.2	93.0	70	130	*
35)	Chlorobenzene	13.16	540.0	554.3	102.7	70	130	*
36)	Ethylbenzene	13.48	530.0	559.5	105.6	70	130	*
37)	m,p-Xylene	13.62	1050.0	1126.6	107.3	70	130	*
38)	o-Xylene	13.94	515.0	534.0	103.7	70	130	*
39)	1,1,2,2-Tetrachloroethane	13.93	505.0	525.2	104.0	70	130	*
41)	1,3-Dichlorobenzene	15.19	545.0	556.4	102.1	70	130	*
42)	1,4-Dichlorobenzene	15.24	530.0	528.8	99.8	70	130	*
43)	1,2-Dichlorobenzene	15.46	535.0	561.3	104.9	70	130	*
44)	1,2,4-Trichlorobenzene	16.63	525.0	613.7	116.9	70	130	*
45)	Naphthalene	16.70	490.0	627.6	128.1	70	130	*
46)	Hexachlorobutadiene	16.96	535.0	602.7	112.7	70	130	*

Acetone limits 70 - 130 as advisory limits

Data File: I:\MS19\DATA\2015 02\27\02271502.D

Acq On : 27 Feb 2015 11:27

Operator: WA

Sample : CCV X19022715 500pg

Misc : S29-02041502/S29-02181509 (3/19)

ALS Vial : 16 Sample Multiplier: 1

Quant Time: Feb 27 12:28:01 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

2/27/15

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min

Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1 I	Bromochloromethane (IS1)	1.000	1.000	0.0	174	0.00
2 T	Dichlorodifluoromethane (CF	4.064	4.020	1.1	171	0.00
3 T	Chloromethane	0.812	0.791	2.6	167	0.00
4 T	Vinyl Chloride	3.161	2.895	8.4	158	0.00
5 T	Bromomethane	1.827	1.674	8.4	154	0.00
6 T	Chloroethane	1.537	1.400	8.9	156	0.00
7 T	Acetone	1.435	1.262	12.1	160	0.00
8 T	Trichlorofluoromethane	3.491	3.636	-4.2	197	0.00
9 T	1,1-Dichloroethene	1.558	1.588	-1.9	177	0.00
10 T	Methylene Chloride	1.656	1.562	5.7	170	0.00
11 T	Trichlorotrifluoroethane	1.604	1.574	1.9	180	0.00
12 T	trans-1,2-Dichloroethene	1.591	1.615	-1.5	173	0.00
13 T	1,1-Dichloroethane	2.857	2.798	2.1	163	0.00
14 T	Methyl tert-Butyl Ether	5.064	4.763	5.9	164	0.00
15 T	cis-1,2-Dichloroethene	1.770	1.718	2.9	169	0.00
16 T	Chloroform	3.066	2.914	5.0	161	0.00
17 S	1,2-Dichloroethane-d4 (SS1)	2.442	2.244	8.1	155	0.00
18 T	1,2-Dichloroethane	2.441	2.237	8.4	153	0.00
19 T	1,1,1-Trichloroethane	2.981	2.805	5.9	161	0.00
20 T	Benzene	6.306	5.944	5.7	164	0.00
21 T	Carbon Tetrachloride	2.232	2.165	3.0	166	0.00
22 I	1,4-Difluorobenzene (IS2)	1.000	1.000	0.0	171	0.00
23 T	1,2-Dichloropropane	0.218	0.208	4.6	159	0.00
24 T	Bromodichloromethane	0.315	0.293	7.0	156	0.00
25 T	Trichloroethene	0.257	0.245	4.7	171	0.00
26 T	1,4-Dioxane	0.191	0.185	3.1	155	0.00
27 T	cis-1,3-Dichloropropene	0.297	0.280	5.7	157	0.00
28 T	trans-1,3-Dichloropropene	0.240	0.219	8.7	155	0.00
29 T	1,1,2-Trichloroethane	0.188	0.180	4.3	163	0.00
30 S	Toluene-d8 (SS2)	0.922	0.912	1.1	168	0.00
31 T	Toluene	0.981	0.872	11.1	163	0.00
32 T	1,2-Dibromoethane	0.238	0.231	2.9	165	0.00
33 T	Tetrachloroethene	0.304	0.279	8.2	170	0.00
34 I	Chlorobenzene-d5 (IS3)	1.000	1.000	0.0	162	0.00
35 T	Chlorobenzene	3.698	3.763	-1.8	170	0.00
36 T	Ethylbenzene	6.271	6.206	1.0	160	0.00
37 T	m,p-Xylene	5.154	5.097	1.1	159	0.00
38 T	o-Xylene	2.519	2.513	0.2	164	0.00
39 T	1,1,2,2-Tetrachloroethane	2.479	2.420	2.4	160	0.00
40 S	Bromofluorobenzene (SS3)	2.019	2.425	-20.1	194	0.00
41 T	1,3-Dichlorobenzene	3.213	3.184	0.9	172	0.00
42 T	1,4-Dichlorobenzene	3.456	3.435	0.6	171	0.00
43 T	1,2-Dichlorobenzene	3.097	3.127	-1.0	170	0.00
44 T	1,2,4-Trichlorobenzene	1.902	2.131	-12.0	191	0.00
45 T	Naphthalene	6.257	7.054	-12.7	190	0.00
46 T	Hexachlorobutadiene	1.269	1.362	-7.3	183	0.00

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

Data File: I:\MS19\DATA\2015 02\27\02271502.D

Acq On : 27 Feb 2015 11:27

Operator: WA

Sample : CCV X19022715 500pg

Misc : S29-02041502/S29-02181509 (3/19)

ALS Vial : 16 Sample Multiplier: 1

Quant Time: Feb 27 12:28:01 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

2/27/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.12	130	27915	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	205350	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	32788	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	62633	918.761	pg	0.00
Spiked Amount 1000.000			Recovery	=	91.88%	
30) Toluene-d8 (SS2)	11.38	98	187306	989.098	pg	0.00
Spiked Amount 1000.000			Recovery	=	98.91%	
40) Bromofluorobenzene (SS3)	14.25	174	79509	1201.143	pg	0.00
Spiked Amount 1000.000			Recovery	=	120.11%	

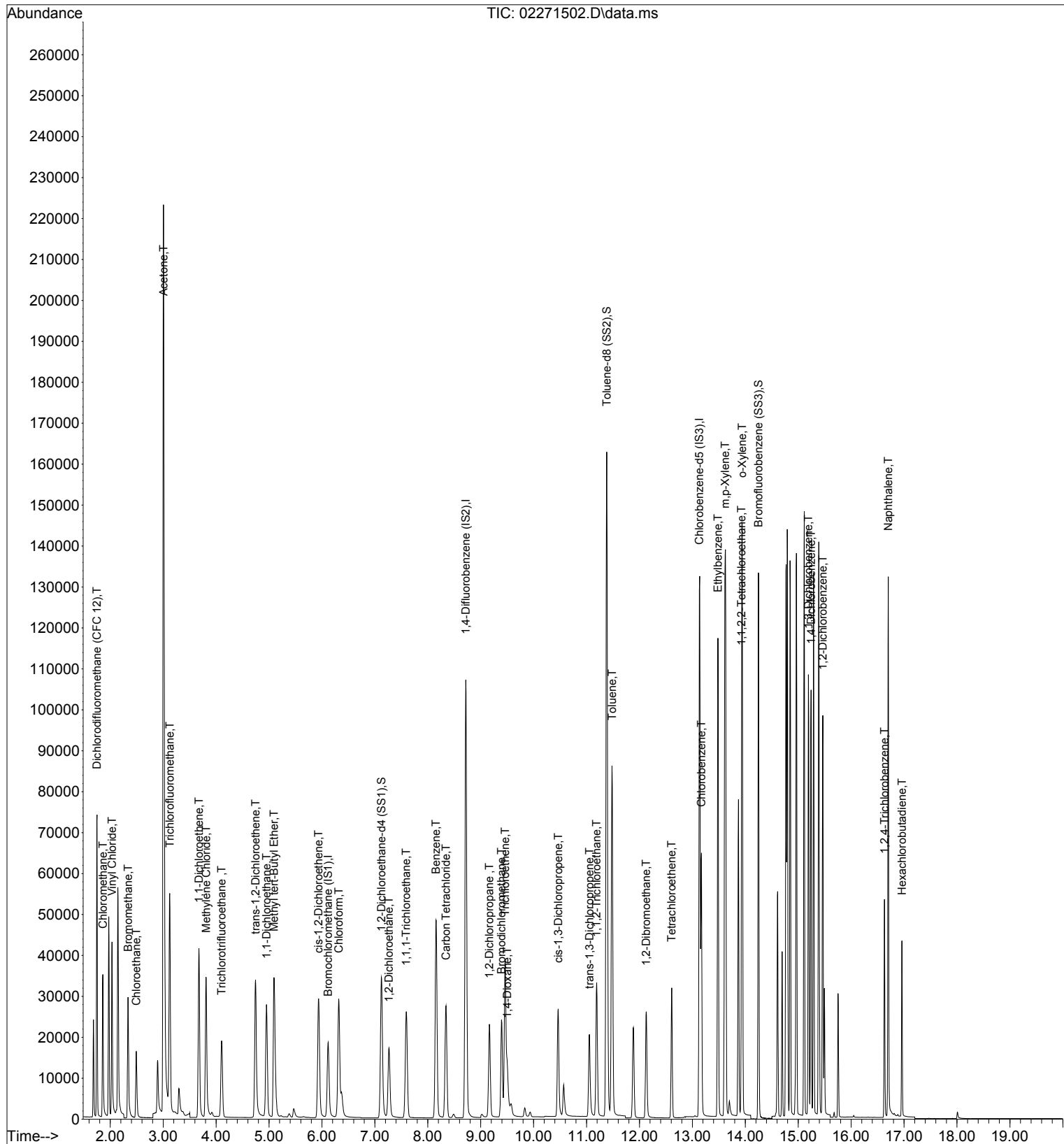
Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.75	85	53307	469.885	pg	100
3) Chloromethane	1.86	52	11144	491.886	pg	99
4) Vinyl Chloride	2.03	62	40409	458.013	pg	100
5) Bromomethane	2.34	94	23828	467.095	pg	100
6) Chloroethane	2.49	64	19737	459.880	pg	100
7) Acetone	3.01	58	96155	2400.225	pg	97
8) Trichlorofluoromethane	3.12	101	54811	562.474	pg	100
9) 1,1-Dichloroethene	3.67	96	24161	555.413	pg	93
10) Methylene Chloride	3.81	84	24634	532.756	pg	92
11) Trichlorotrifluoroethane	4.11	151	23949	534.854	pg	99
12) trans-1,2-Dichloroethene	4.74	96	23897	537.934	pg	100
13) 1,1-Dichloroethane	4.95	63	41792	524.063	pg	100
14) Methyl tert-Butyl Ether	5.09	73	72470	512.682	pg	99
15) cis-1,2-Dichloroethene	5.94	96	26372	533.862	pg	100
16) Chloroform	6.32	83	45552	532.234	pg	100
18) 1,2-Dichloroethane	7.27	62	33725	494.894	pg	100
19) 1,1,1-Trichloroethane	7.59	97	41113	493.978	pg	99
20) Benzene	8.16	78	93756	532.607	pg	100
21) Carbon Tetrachloride	8.34	117	34746	557.640	pg	100
23) 1,2-Dichloropropane	9.16	63	23310	520.464	pg	99
24) Bromodichloromethane	9.39	83	32841	508.003	pg	100
25) Trichloroethene	9.46	130	27155	514.732	pg	100
26) 1,4-Dioxane	9.50	88	20725	527.112	pg	95
27) cis-1,3-Dichloropropene	10.46	75	30180	495.511	pg	96
28) trans-1,3-Dichloropropene	11.05	75	23842	483.461	pg	100
29) 1,1,2-Trichloroethane	11.19	83	20187	523.868	pg	97
31) Toluene	11.48	91	98521	489.164	pg	99
32) 1,2-Dibromoethane	12.13	107	26059	533.005	pg	99
33) Tetrachloroethene	12.61	166	28914	463.648	pg	99
35) Chlorobenzene	13.17	112	68471	564.671	pg	100
36) Ethylbenzene	13.48	91	111921	544.341	pg	98
37) m,p-Xylene	13.62	91	180495	1068.101	pg	98
38) o-Xylene	13.94	106	43668	528.749	pg	97
39) 1,1,2,2-Tetrachloroethane	13.93	83	41652	512.408	pg	99
41) 1,3-Dichlorobenzene	15.19	146	59510	564.817	pg	100
42) 1,4-Dichlorobenzene	15.24	146	59692	526.822	pg	99
43) 1,2-Dichlorobenzene	15.46	146	56894	560.297	pg	100
44) 1,2,4-Trichlorobenzene	16.63	182	39475	632.874	pg	99
45) Naphthalene	16.70	128	128355	625.642	pg	100
46) Hexachlorobutadiene	16.96	225	25005	600.981	pg	99

(#)=qualifier out of range (m)=manual integration (+)=signals summed

ALS Vial : 16 Sample Multiplier: 1

DataAcq Meth:T015SIM.M



Data File: I:\MS19\DATA\2015 02\28\02281503.D

Acq On : 28 Feb 2015 3:23

Operator: WA

Sample : CCV X19022715 500pg

Misc : S29-02041502/S29-02181509 (3/19)

ALS Vial : 16 Sample Multiplier: 1

Quant Time: Feb 28 06:51:30 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

~~107~~ 2/28/15

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min

Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1 I	Bromochloromethane (IS1)	1.000	1.000	0.0	148	0.00
2 T	Dichlorodifluoromethane (CF	4.064	3.905	3.9	141	0.00
3 T	Chloromethane	0.812	0.765	5.8	137	0.00
4 T	Vinyl Chloride	3.161	2.886	8.7	134	0.00
5 T	Bromomethane	1.827	1.690	7.5	133	0.00
6 T	Chloroethane	1.537	1.397	9.1	132	0.00
7 T	Acetone	1.435	1.269	11.6	137	0.00
8 T	Trichlorofluoromethane	3.491	4.000	-14.6	184	0.00
9 T	1,1-Dichloroethene	1.558	1.550	0.5	147	0.00
10 T	Methylene Chloride	1.656	1.546	6.6	143	0.00
11 T	Trichlorotrifluoroethane	1.604	1.521	5.2	148	0.00
12 T	trans-1,2-Dichloroethene	1.591	1.574	1.1	144	0.00
13 T	1,1-Dichloroethane	2.857	2.768	3.1	137	0.00
14 T	Methyl tert-Butyl Ether	5.064	4.468	11.8	131	0.00
15 T	cis-1,2-Dichloroethene	1.770	1.688	4.6	142	0.00
16 T	Chloroform	3.066	2.938	4.2	138	0.00
17 S	1,2-Dichloroethane-d4 (SS1)	2.442	2.311	5.4	136	0.00
18 T	1,2-Dichloroethane	2.441	2.252	7.7	131	0.00
19 T	1,1,1-Trichloroethane	2.981	2.789	6.4	136	0.00
20 T	Benzene	6.306	5.855	7.2	138	0.00
21 T	Carbon Tetrachloride	2.232	2.185	2.1	142	0.00
22 I	1,4-Difluorobenzene (IS2)	1.000	1.000	0.0	144	0.00
23 T	1,2-Dichloropropane	0.218	0.210	3.7	135	0.00
24 T	Bromodichloromethane	0.315	0.303	3.8	136	0.00
25 T	Trichloroethene	0.257	0.240	6.6	141	0.00
26 T	1,4-Dioxane	0.191	0.181	5.2	128	0.00
27 T	cis-1,3-Dichloropropene	0.297	0.280	5.7	133	0.00
28 T	trans-1,3-Dichloropropene	0.240	0.220	8.3	131	0.00
29 T	1,1,2-Trichloroethane	0.188	0.183	2.7	139	0.00
30 S	Toluene-d8 (SS2)	0.922	0.924	-0.2	144	0.00
31 T	Toluene	0.981	0.866	11.7	136	0.00
32 T	1,2-Dibromoethane	0.238	0.232	2.5	140	0.00
33 T	Tetrachloroethene	0.304	0.273	10.2	140	0.00
34 I	Chlorobenzene-d5 (IS3)	1.000	1.000	0.0	142	0.00
35 T	Chlorobenzene	3.698	3.589	2.9	142	0.00
36 T	Ethylbenzene	6.271	5.937	5.3	134	0.00
37 T	m,p-Xylene	5.154	4.941	4.1	135	0.00
38 T	o-Xylene	2.519	2.411	4.3	137	0.00
39 T	1,1,2,2-Tetrachloroethane	2.479	2.424	2.2	140	0.00
40 S	Bromofluorobenzene (SS3)	2.019	2.345	-16.1	164	0.00
41 T	1,3-Dichlorobenzene	3.213	3.082	4.1	146	0.00
42 T	1,4-Dichlorobenzene	3.456	3.331	3.6	145	0.00
43 T	1,2-Dichlorobenzene	3.097	3.042	1.8	144	0.00
44 T	1,2,4-Trichlorobenzene	1.902	2.024	-6.4	159	0.00
45 T	Naphthalene	6.257	6.682	-6.8	158	0.00
46 T	Hexachlorobutadiene	1.269	1.308	-3.1	153	0.00

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

Data File: I:\MS19\DATA\2015 02\28\02281503.D

Acq On : 28 Feb 2015 3:23

Operator: WA

Sample : CCV X19022715 500pg

Misc : S29-02041502/S29-02181509 (3/19)

ALS Vial : 16 Sample Multiplier: 1

Quant Time: Feb 28 06:51:30 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

WA 2/28/15

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	23749	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	173150	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	28656	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	54891	946.440	pg	0.00
Spiked Amount 1000.000			Recovery	=	94.64%	
30) Toluene-d8 (SS2)	11.38	98	160040	1002.278	pg	0.00
Spiked Amount 1000.000			Recovery	=	100.23%	
40) Bromofluorobenzene (SS3)	14.25	174	67196	1161.505	pg	0.00
Spiked Amount 1000.000			Recovery	=	116.15%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.74	85	44048	456.379	pg	100
3) Chloromethane	1.85	52	9171	475.808	pg	99
4) Vinyl Chloride	2.02	62	34264	456.489	pg	100
5) Bromomethane	2.33	94	20466	471.566	pg	100
6) Chloroethane	2.48	64	16758	458.963	pg	100
7) Acetone	3.00	58	82296	2414.633	pg	99
8) Trichlorofluoromethane	3.12	101	51295	618.731	pg	100
9) 1,1-Dichloroethene	3.67	96	20062	542.085	pg	94
10) Methylene Chloride	3.80	84	20743	527.300	pg	92
11) Trichlorotrifluoroethane	4.10	151	19683	516.691	pg	100
12) trans-1,2-Dichloroethene	4.74	96	19808	524.105	pg	100
13) 1,1-Dichloroethane	4.95	63	35172	518.417	pg	100
14) Methyl tert-Butyl Ether	5.09	73	57829	480.870	pg	99
15) cis-1,2-Dichloroethene	5.93	96	22052	524.718	pg	100
16) Chloroform	6.31	83	39079	536.699	pg	100
18) 1,2-Dichloroethane	7.26	62	28880	498.138	pg	100
19) 1,1,1-Trichloroethane	7.59	97	34770	491.050	pg	99
20) Benzene	8.15	78	78570	524.635	pg	100
21) Carbon Tetrachloride	8.34	117	29841	562.930	pg	99
23) 1,2-Dichloropropane	9.16	63	19833	525.181	pg	99
24) Bromodichloromethane	9.39	83	28588	524.453	pg	100
25) Trichloroethene	9.46	130	22410	503.785	pg	100
26) 1,4-Dioxane	9.50	88	17119	516.367	pg	92
27) cis-1,3-Dichloropropene	10.46	75	25495	496.434	pg	96
28) trans-1,3-Dichloropropene	11.05	75	20234	486.601	pg	100
29) 1,1,2-Trichloroethane	11.19	83	17289	532.099	pg	98
31) Toluene	11.48	91	82480	485.676	pg	100
32) 1,2-Dibromoethane	12.12	107	22062	535.169	pg	100
33) Tetrachloroethene	12.61	166	23864	453.833	pg	100
35) Chlorobenzene	13.17	112	57073	538.541	pg	100
36) Ethylbenzene	13.48	91	93567	520.692	pg	99
37) m,p-Xylene	13.62	91	152903	1035.291	pg	99
38) o-Xylene	13.94	106	36618	507.318	pg	98
39) 1,1,2,2-Tetrachloroethane	13.93	83	36465	513.282	pg	99
41) 1,3-Dichlorobenzene	15.19	146	50344	546.720	pg	100
42) 1,4-Dichlorobenzene	15.24	146	50590	510.872	pg	99
43) 1,2-Dichlorobenzene	15.46	146	48376	545.107	pg	100
44) 1,2,4-Trichlorobenzene	16.63	182	32775	601.225	pg	99
45) Naphthalene	16.70	128	106274	592.706	pg	100
46) Hexachlorobutadiene	16.96	225	20983	577.033	pg	100

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 02\28\02281503.D

Acq On : 28 Feb 2015 3:23

Operator: WA

Sample : CCV X19022715 500pg

Misc : S29-02041502/S29-02181509 (3/19)

ALS Vial : 16 Sample Multiplier: 1

Quant Time: Feb 28 06:51:30 2015

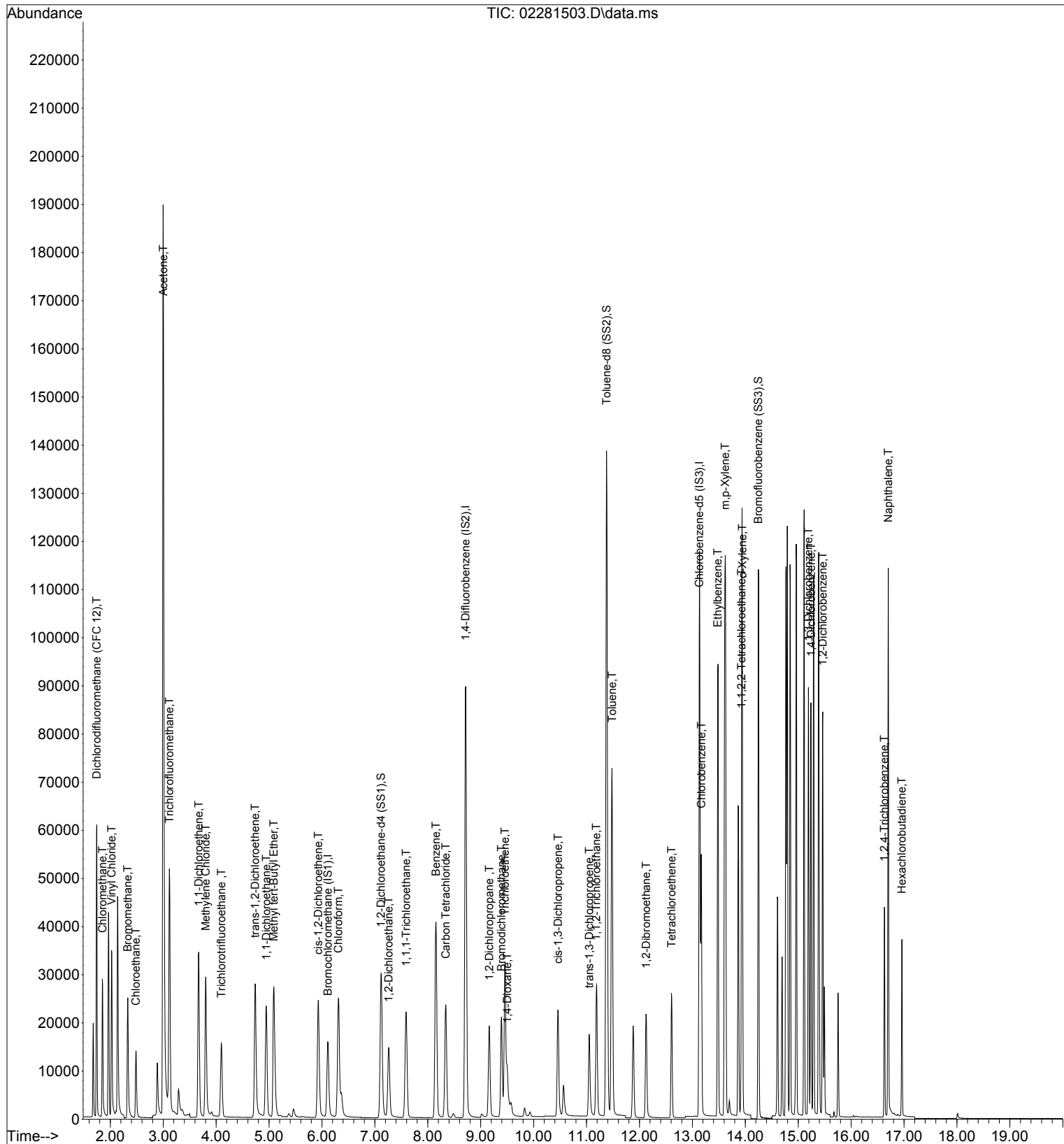
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M



Data File: I:\MS19\DATA\2015 03\02\03021502.D

Acq On : 2 Mar 2015 8:04

Operator: WA

Sample : CCV X19030215 500pg

Misc : S29-02041502/S29-02181509 (3/19)

ALS Vial : 16 Sample Multiplier: 1

Quant Time: Mar 02 08:56:56 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

3/2/15

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min

Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1 I	Bromochloromethane (IS1)	1.000	1.000	0.0	162	0.00
2 T	Dichlorodifluoromethane (CF	4.064	3.753	7.7	149	0.00
3 T	Chloromethane	0.812	0.739	9.0	146	0.00
4 T	Vinyl Chloride	3.161	2.748	13.1	140	0.00
5 T	Bromomethane	1.827	1.618	11.4	140	0.00
6 T	Chloroethane	1.537	1.323	13.9	138	0.00
7 T	Acetone	1.435	1.214	15.4	144	0.00
8 T	Trichlorofluoromethane	3.491	3.810	-9.1	193	0.00
9 T	1,1-Dichloroethene	1.558	1.497	3.9	156	0.00
10 T	Methylene Chloride	1.656	1.493	9.8	152	0.00
11 T	Trichlorotrifluoroethane	1.604	1.474	8.1	158	0.00
12 T	trans-1,2-Dichloroethene	1.591	1.515	4.8	152	0.00
13 T	1,1-Dichloroethane	2.857	2.645	7.4	144	0.00
14 T	Methyl tert-Butyl Ether	5.064	4.410	12.9	142	0.00
15 T	cis-1,2-Dichloroethene	1.770	1.623	8.3	150	0.00
16 T	Chloroform	3.066	2.876	6.2	149	0.00
17 S	1,2-Dichloroethane-d4 (SS1)	2.442	2.260	7.5	146	0.00
18 T	1,2-Dichloroethane	2.441	2.140	12.3	137	0.00
19 T	1,1,1-Trichloroethane	2.981	2.692	9.7	145	0.00
20 T	Benzene	6.306	5.597	11.2	145	0.00
21 T	Carbon Tetrachloride	2.232	2.133	4.4	153	0.00
22 I	1,4-Difluorobenzene (IS2)	1.000	1.000	0.0	155	0.00
23 T	1,2-Dichloropropane	0.218	0.203	6.9	140	0.00
24 T	Bromodichloromethane	0.315	0.298	5.4	144	0.00
25 T	Trichloroethene	0.257	0.234	8.9	148	0.00
26 T	1,4-Dioxane	0.191	0.177	7.3	134	0.00
27 T	cis-1,3-Dichloropropene	0.297	0.281	5.4	143	0.00
28 T	trans-1,3-Dichloropropene	0.240	0.227	5.4	145	0.00
29 T	1,1,2-Trichloroethane	0.188	0.178	5.3	145	0.00
30 S	Toluene-d8 (SS2)	0.922	0.918	0.4	154	0.00
31 T	Toluene	0.981	0.842	14.2	143	0.00
32 T	1,2-Dibromoethane	0.238	0.228	4.2	148	0.00
33 T	Tetrachloroethene	0.304	0.266	12.5	147	0.00
34 I	Chlorobenzene-d5 (IS3)	1.000	1.000	0.0	150	0.00
35 T	Chlorobenzene	3.698	3.540	4.3	148	0.00
36 T	Ethylbenzene	6.271	5.843	6.8	139	0.00
37 T	m,p-Xylene	5.154	4.846	6.0	140	0.00
38 T	o-Xylene	2.519	2.372	5.8	143	0.00
39 T	1,1,2,2-Tetrachloroethane	2.479	2.383	3.9	145	0.00
40 S	Bromofluorobenzene (SS3)	2.019	2.341	-15.9	174	0.00
41 T	1,3-Dichlorobenzene	3.213	3.010	6.3	151	0.00
42 T	1,4-Dichlorobenzene	3.456	3.265	5.5	150	0.00
43 T	1,2-Dichlorobenzene	3.097	2.982	3.7	150	0.00
44 T	1,2,4-Trichlorobenzene	1.902	1.981	-4.2	164	0.00
45 T	Naphthalene	6.257	6.507	-4.0	163	0.00
46 T	Hexachlorobutadiene	1.269	1.279	-0.8	159	0.00

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

Data File: I:\MS19\DATA\2015 03\02\03021502.D

Acq On : 2 Mar 2015 8:04

Operator: WA

Sample : CCV X19030215 500pg

Misc : S29-02041502/S29-02181509 (3/19)

ALS Vial : 16 Sample Multiplier: 1

Quant Time: Mar 02 08:56:56 2015

Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DA 3/2/15

DataAcq Meth:TO15SIM.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	6.11	130	26106	1000.000	pg	0.00
22) 1,4-Difluorobenzene (IS2)	8.72	114	186126	1000.000	pg	0.00
34) Chlorobenzene-d5 (IS3)	13.13	54	30328	1000.000	pg	0.00

System Monitoring Compounds

17) 1,2-Dichloroethane-d4 ...	7.12	65	59008	925.567	pg	0.00
Spiked Amount 1000.000			Recovery	=	92.56%	
30) Toluene-d8 (SS2)	11.38	98	170847	995.365	pg	0.00
Spiked Amount 1000.000			Recovery	=	99.54%	
40) Bromofluorobenzene (SS3)	14.25	174	70994	1159.501	pg	0.00
Spiked Amount 1000.000			Recovery	=	115.95%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethan...	1.74	85	46544	438.700	pg	100
3) Chloromethane	1.85	52	9749	460.130	pg	99
4) Vinyl Chloride	2.03	62	35870	434.739	pg	100
5) Bromomethane	2.33	94	21548	451.671	pg	99
6) Chloroethane	2.49	64	17442	434.567	pg	100
7) Acetone	3.00	58	86515	2309.239	pg	99
8) Trichlorofluoromethane	3.12	101	53705	589.314	pg	100
9) 1,1-Dichloroethene	3.68	96	21302	523.623	pg	93
10) Methylene Chloride	3.81	84	22024	509.316	pg	91
11) Trichlorotrifluoroethane	4.10	151	20974	500.871	pg	100
12) trans-1,2-Dichloroethene	4.74	96	20963	504.587	pg	99
13) 1,1-Dichloroethane	4.95	63	36944	495.372	pg	100
14) Methyl tert-Butyl Ether	5.09	73	62746	474.650	pg	99
15) cis-1,2-Dichloroethene	5.93	96	23304	504.445	pg	100
16) Chloroform	6.31	83	42049	525.349	pg	100
18) 1,2-Dichloroethane	7.26	62	30168	473.374	pg	100
19) 1,1,1-Trichloroethane	7.59	97	36893	473.991	pg	100
20) Benzene	8.15	78	82555	501.474	pg	100
21) Carbon Tetrachloride	8.34	117	32020	549.500	pg	100
23) 1,2-Dichloropropane	9.16	63	20555	506.353	pg	99
24) Bromodichloromethane	9.39	83	30214	515.639	pg	100
25) Trichloroethene	9.46	130	23503	491.521	pg	100
26) 1,4-Dioxane	9.50	88	17947	503.602	pg	92
27) cis-1,3-Dichloropropene	10.46	75	27474	497.673	pg	96
28) trans-1,3-Dichloropropene	11.05	75	22408	501.314	pg	100
29) 1,1,2-Trichloroethane	11.19	83	18034	516.333	pg	97
31) Toluene	11.48	91	86156	471.954	pg	100
32) 1,2-Dibromoethane	12.12	107	23296	525.706	pg	100
33) Tetrachloroethene	12.61	166	25035	442.910	pg	99
35) Chlorobenzene	13.17	112	59586	531.257	pg	100
36) Ethylbenzene	13.48	91	97465	512.482	pg	99
37) m,p-Xylene	13.62	91	158719	1015.424	pg	99
38) o-Xylene	13.94	106	38134	499.195	pg	97
39) 1,1,2,2-Tetrachloroethane	13.93	83	37941	504.615	pg	99
41) 1,3-Dichlorobenzene	15.19	146	52027	533.849	pg	100
42) 1,4-Dichlorobenzene	15.24	146	52488	500.817	pg	99
43) 1,2-Dichlorobenzene	15.46	146	50185	534.315	pg	100
44) 1,2,4-Trichlorobenzene	16.63	182	33945	588.358	pg	99
45) Naphthalene	16.70	128	109526	577.167	pg	100
46) Hexachlorobutadiene	16.96	225	21715	564.241	pg	100

(#)=qualifier out of range (m)=manual integration (+)=signals summed

Data File: I:\MS19\DATA\2015 03\02\03021502.D

Acq On : 2 Mar 2015 8:04

Operator: WA

Sample : CCV X19030215 500pg

Misc : S29-02041502/S29-02181509 (3/19)

ALS Vial : 16 Sample Multiplier: 1

Quant Time: Mar 02 08:56:56 2015

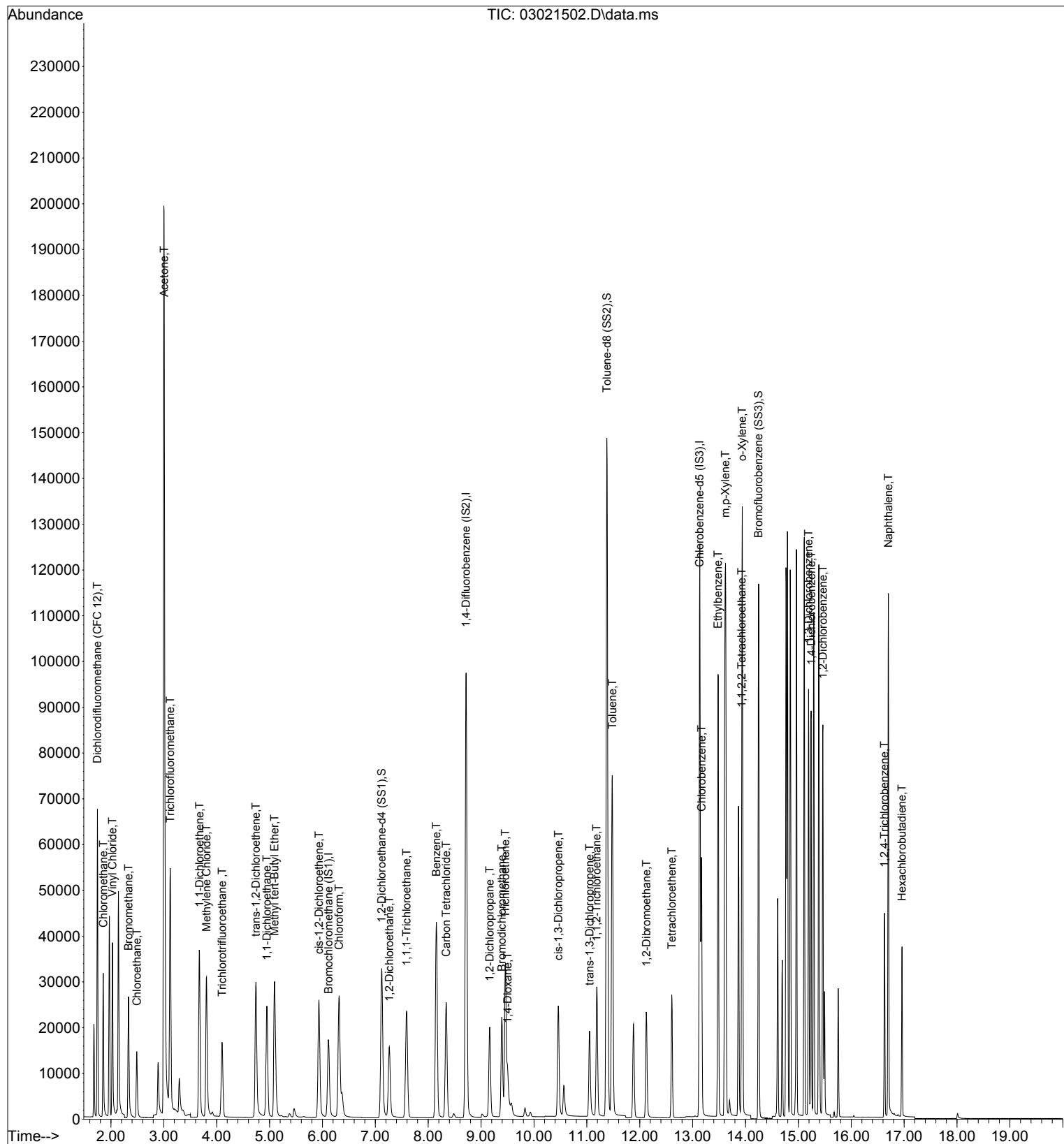
Quant Method : I:\MS19\METHODS\X19021115.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Feb 12 14:42:03 2015

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

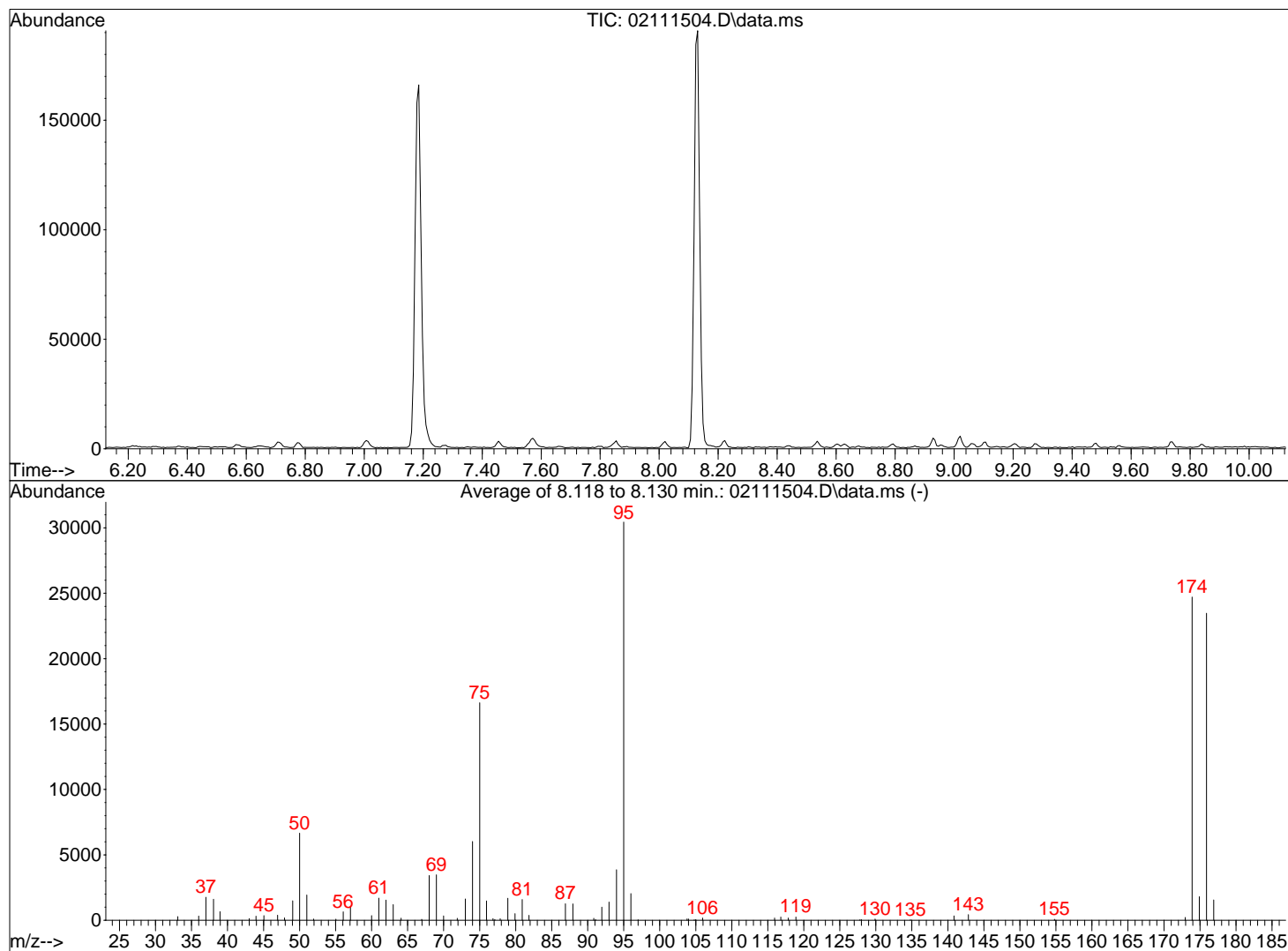


Data Path : I:\MS19\DATA\2015 02\11\
 Data File : 02111504.D
 Acq On : 11 Feb 2015 11:55
 Operator : EA
 Sample : BFB X19021115
 Misc : S29-02041502
 ALS Vial : 14 Sample Multiplier: 1

EA 2/12/15

Integration File: rteint.p

Method : I:\MS19\METHODS\X19021115.M
 Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 Last Update : Thu Feb 12 14:42:03 2015



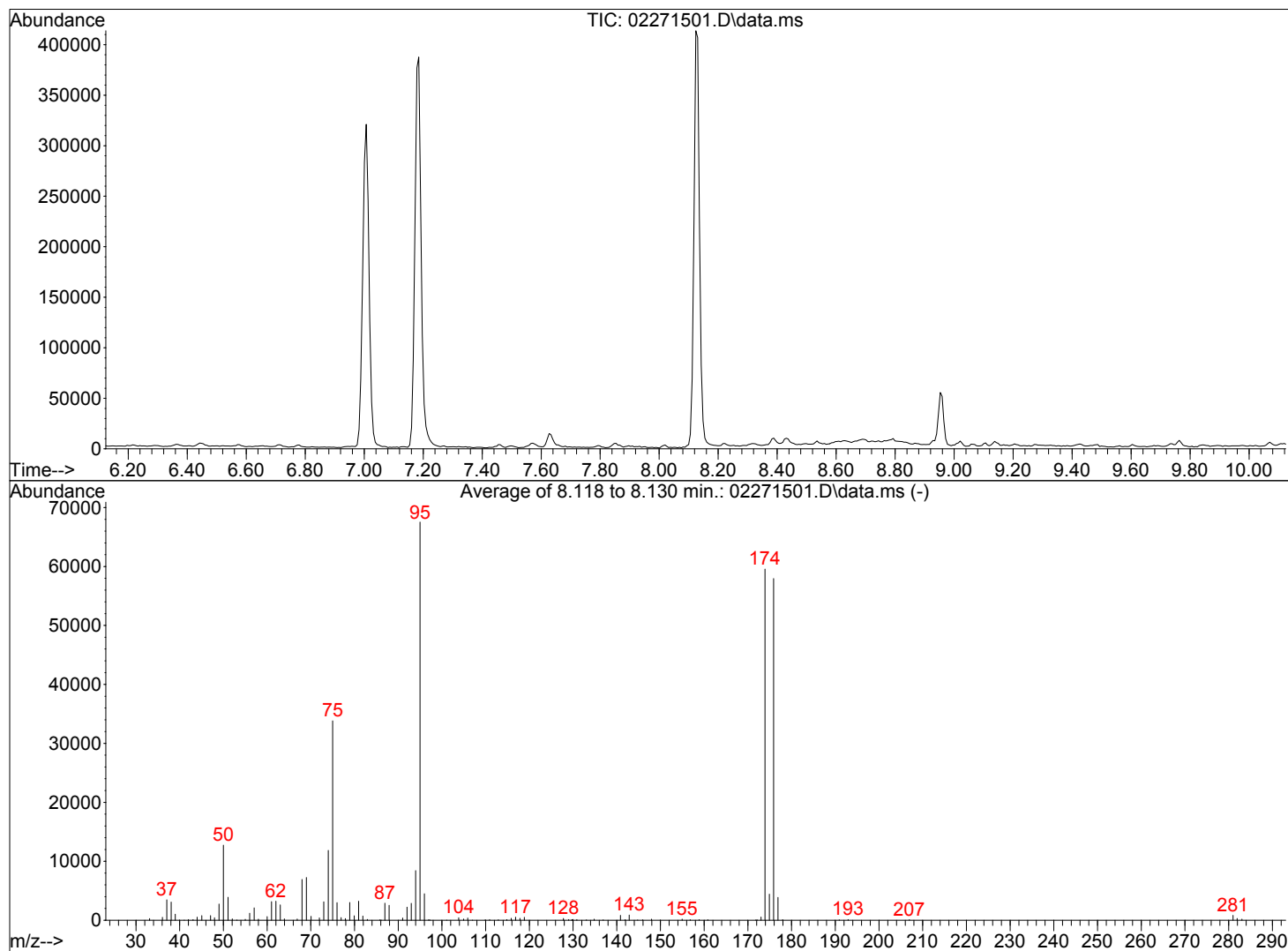
AutoFind: Scans 901, 902, 903; Background Corrected with Scan 896

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	21.9	6653	PASS
75	95	30	66	54.6	16628	PASS
95	95	100	100	100.0	30440	PASS
96	95	5	9	6.7	2037	PASS
173	174	0.00	2	0.9	219	PASS
174	95	50	120	81.2	24714	PASS
175	174	4	9	7.3	1805	PASS
176	174	93	101	95.0	23475	PASS
177	176	5	9	6.6	1552	PASS

Data Path : I:\MS19\DATA\2015 02\27\
 Data File : 02271501.D
 Acq On : 27 Feb 2015 11:04
 Operator : WA
 Sample : BFB X19022715
 Misc : S29-02041502
 ALS Vial : 3 Sample Multiplier: 1

Integration File: rteint.p

Method : I:\MS19\METHODS\X19021115.M
 Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 Last Update : Thu Feb 12 14:42:03 2015



AutoFind: Scans 901, 902, 903; Background Corrected with Scan 895

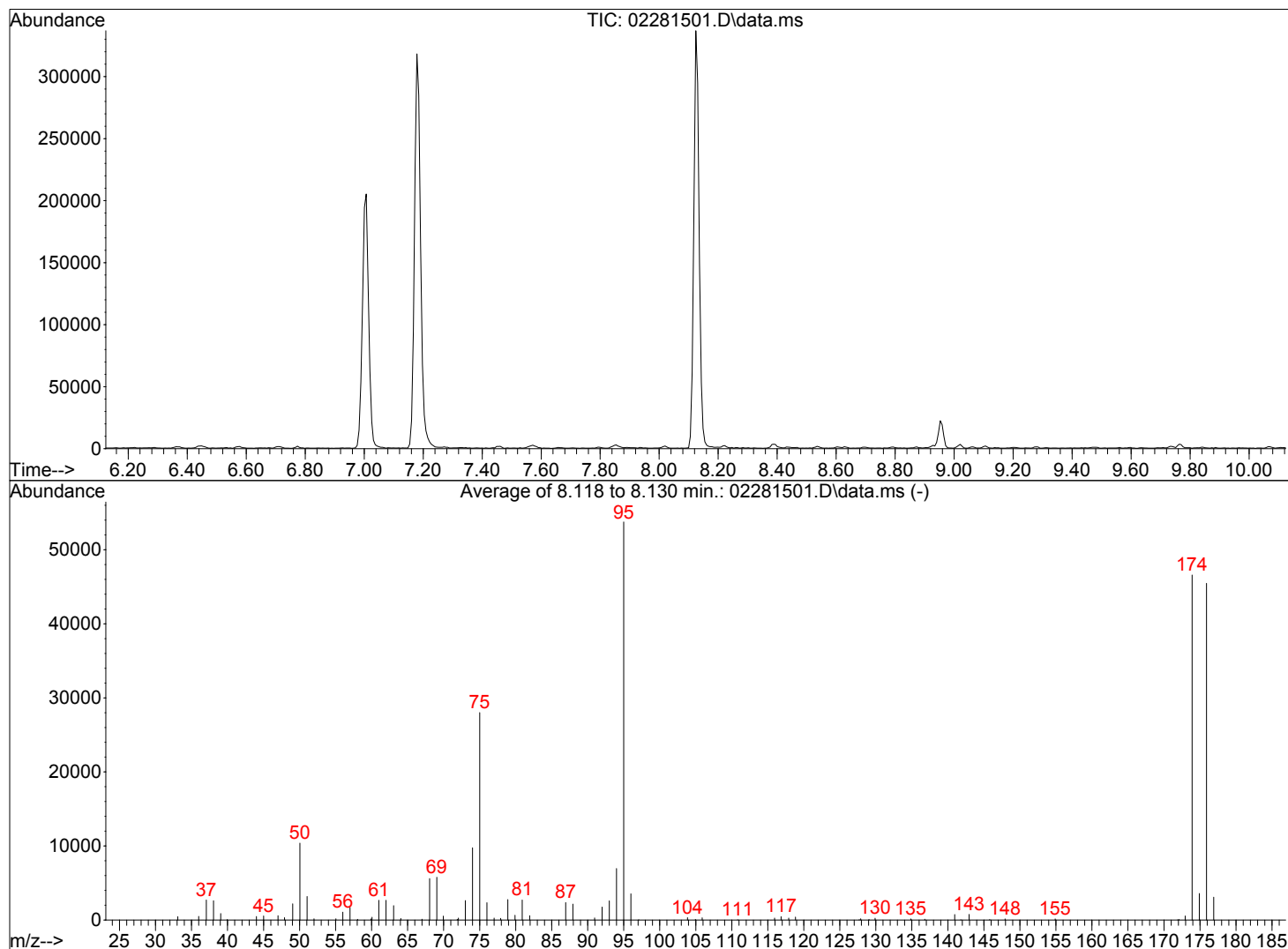
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	18.9	12738	PASS
75	95	30	66	50.1	33824	PASS
95	95	100	100	100.0	67531	PASS
96	95	5	9	6.7	4509	PASS
173	174	0.00	2	0.9	544	PASS
174	95	50	120	88.2	59560	PASS
175	174	4	9	7.5	4440	PASS
176	174	93	101	97.3	57952	PASS
177	176	5	9	6.7	3872	PASS

WA 2/27/15

Data Path : I:\MS19\DATA\2015 02\28\
 Data File : 02281501.D
 Acq On : 28 Feb 2015 2:33
 Operator : WA
 Sample : BFB X19022815
 Misc : S29-02041502
 ALS Vial : 3 Sample Multiplier: 1

Integration File: rteint.p

Method : I:\MS19\METHODS\X19021115.M
 Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 Last Update : Thu Feb 12 14:42:03 2015



AutoFind: Scans 901, 902, 903; Background Corrected with Scan 895

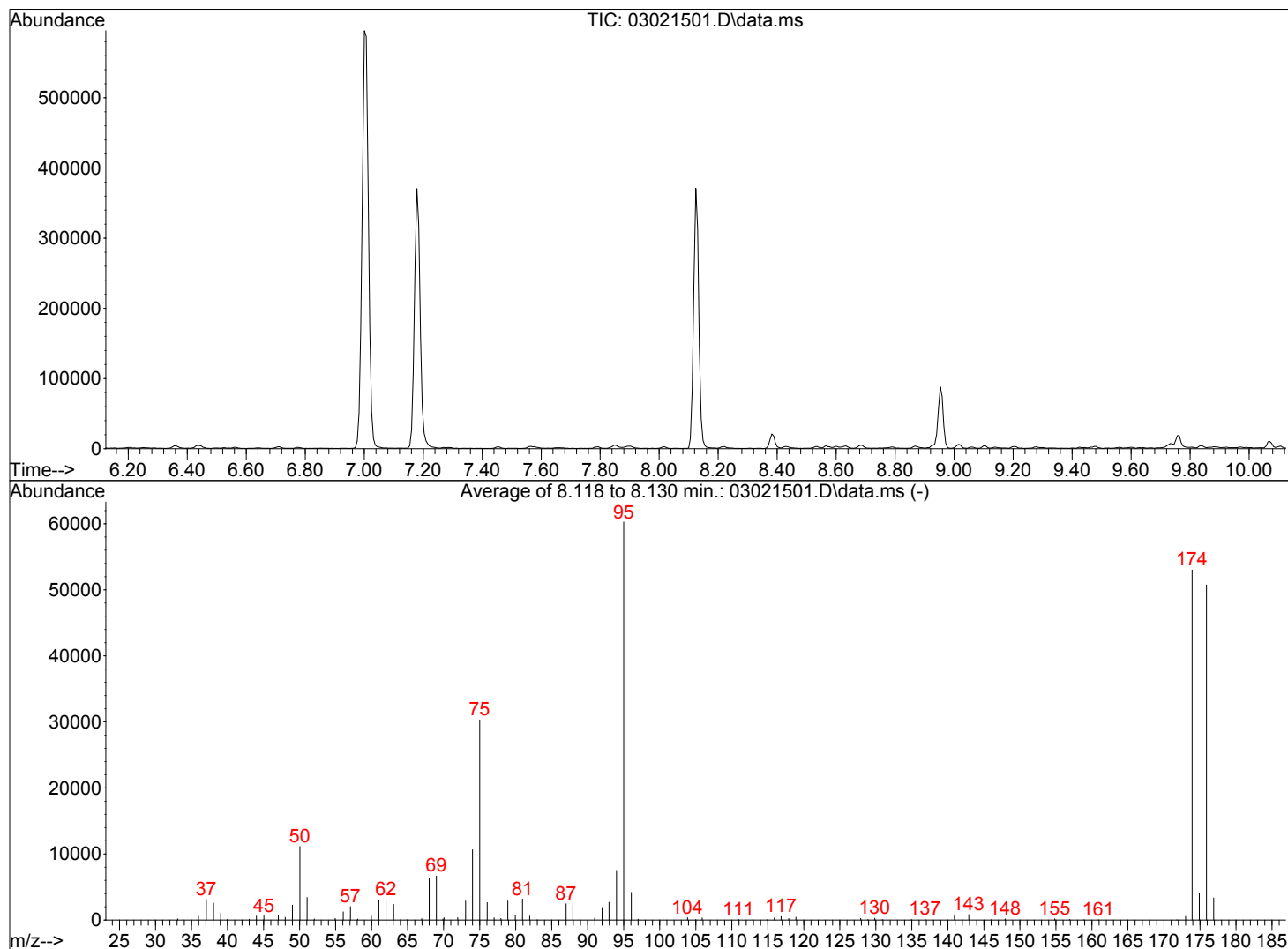
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	19.3	10386	PASS
75	95	30	66	52.1	28013	PASS
95	95	100	100	100.0	53752	PASS
96	95	5	9	6.6	3542	PASS
173	174	0.00	2	1.2	550	PASS
174	95	50	120	86.7	46581	PASS
175	174	4	9	7.7	3589	PASS
176	174	93	101	97.6	45469	PASS
177	176	5	9	6.8	3085	PASS

WA 2/28/15

Data Path : I:\MS19\DATA\2015 03\02\
 Data File : 03021501.D
 Acq On : 2 Mar 2015 7:42
 Operator : WA
 Sample : BFB X19030215
 Misc : S29-02041502
 ALS Vial : 3 Sample Multiplier: 1

Integration File: rteint.p

Method : I:\MS19\METHODS\X19021115.M
 Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 Last Update : Thu Feb 12 14:42:03 2015



AutoFind: Scans 901, 902, 903; Background Corrected with Scan 895

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	18.5	11130	PASS
75	95	30	66	50.3	30299	PASS
95	95	100	100	100.0	60280	PASS
96	95	5	9	6.9	4187	PASS
173	174	0.00	2	1.1	561	PASS
174	95	50	120	87.9	53013	PASS
175	174	4	9	7.7	4101	PASS
176	174	93	101	95.7	50752	PASS
177	176	5	9	6.6	3358	PASS

~~WA~~ 3/2/15

	Date/Time	File Name	Sample ID	Misc Info	Operator	Vial	Comment
1	2/11/15 9:58	02111501.D	blank	S29-02041502	EA	1	
1	2/11/15 10:25	02111502.D	500pg TO-15-SIM ICV Std	S29-02041502	EA	16	
2	2/11/15 10:52	02111503.D	500pg can chk	S29-02041502	EA	8	
3	2/11/15 11:55	02111504.D	BFB X19021115	S29-02041502	EA	14	
4	2/11/15 12:19	02111505.D	10pg TO-15-SIM Std	S29-02041502/S29-01221514 (2/20)	EA	5	
5	2/11/15 12:48	02111506.D	20pg TO-15-SIM Std	S29-02041502/S29-01221514 (2/20)	EA	5	
6	2/11/15 13:19	02111507.D	50pg TO-15-SIM Std	S29-02041502/S29-01221514 (2/20)	EA	5	
7	2/11/15 13:46	02111508.D	100pg TO-15-SIM Std	S29-02041502/S29-01221514 (2/20)	EA	5	
8	2/11/15 14:14	02111509.D	500pg TO-15-SIM Std	S29-02041502/S29-01221510 (2/20)	EA	15	
9	2/11/15 14:41	02111510.D	1000pg TO-15-SIM Std	S29-02041502/S29-01221510 (2/20)	EA	15	
10	2/11/15 15:09	02111511.D	2500pg TO-15-SIM Std	S29-02041502/S29-01221506 (2/20)	EA	6	can closed, not used
11	2/11/15 15:39	02111512.D	20000pg TO-15-SIM Std	S29-02041502/S29-02031501 (3/4)	EA	7	
12	2/11/15 16:06	02111513.D	50000pg TO-15-SIM Std	S29-02041502/S29-02031501 (3/4)	EA	7	
13	2/11/15 16:36	02111514.D	2500pg TO-15-SIM Std	S29-02041502/S29-01221506 (2/20)	EA	6	
14	2/11/15 17:05	02111515.D	500pg TO-15-SIM ICV Std	S29-02041502/S29-01291510 (2/27)	EA	16	Passed
15	2/11/15 17:44	02111516.D	blank	S29-02041502	EA	1	
16	2/11/15 18:11	02111517.D	500pg TO-15-SIM ICV Std	S29-02041502/S29-01291509 (2/27)	EA	16	not used
17	2/11/15 18:40	02111518.D	500pg TO-15-SIM ICV Std	S29-02041502/S29-02111502	EA	12	not used
18	2/11/15 19:08	02111519.D	500pg TO-15-SIM ICV Std	S29-02041502/S29-02111502	EA	12	not used
	Saved as X19021115.M: good from 10pg--->50,000pg except:						
	20-50,000pg: Chloromethane, Bromomethane, Acetone, benzene, cis-1,3-dichloropropene, TCE, 1,3-dichlorobenzene						
	50-50,000pg: MeCl2, chloroform; 10-20,000pg: m,p-xylene, naphthalene; 50-20,000pg: trans-1,3-dichloropropene;						
	20-20,000pg: 1,2,4-trichlorobenzene, Hexachloro-1,3-butadiene						
					EA	2/12/15	

	Date/Time	File Name	Sample ID	Misc Info	Operator	Vial	Comment
1	2/27/15 11:04	02271501.D	BFB X19022715	S29-02041502	WA	3	Passed
1	2/27/15 11:27	02271502.D	CCV X19022715_500pg	S29-02041502/S29-02181509 (3/19)	WA	16	Passed
2	2/27/15 11:54	02271503.D	MB X19022715_1000mL	S29-02041502	WA	2	Passed
3	2/27/15 12:22	02271504.D	LCS X19022715_500pg	S29-02041502/S29-01291510 (2/27)	WA	2	Passed
4	2/27/15 12:49	02271505.D	LCSD X19022715_500pg	S29-02041502/S29-01291510 (2/27)	WA	2	Passed
5	2/27/15 13:17	02271506.D	P1500660-013 (1000ml)	S29-02041502	WA	8	
6	2/27/15 13:44	02271507.D	P1500660-014 (1000ml)	S29-02041502	WA	9	
7	2/27/15 14:12	02271508.D	P1500660-015 (1000ml)	S29-02041502	WA	10	
8	2/27/15 14:39	02271509.D	P1500660-016 (1000ml)	S29-02041502	WA	11	
9	2/27/15 15:07	02271510.D	P1500660-017 (1000ml)	S29-02041502	WA	12	
10	2/27/15 15:34	02271511.D	P1500660-018 (1000ml)	S29-02041502	WA	13	
11	2/27/15 16:02	02271512.D	P1500660-019 (1000ml)	S29-02041502	WA	14	
12	2/27/15 16:59	02271513.D	P1500660-004RA (500ml)	S29-02041502	WA	1	
13	2/27/15 17:26	02271514.D	P1500660-020 (1000ml)	S29-02041502	WA	3	
14	2/27/15 17:55	02271515.D	P1500660-020 dup (1000ml)	S29-02041502	WA	3	Pass as dup
15	2/27/15 18:23	02271516.D	P1500660-021 (1000ml)	S29-02041502	WA	4	
16	2/27/15 18:50	02271517.D	P1500660-022 (1000ml)	S29-02041502	WA	5	
17	2/27/15 19:18	02271518.D	P1500660-023 (1000ml)	S29-02041502	WA	6	
18	2/27/15 19:45	02271519.D	P1500660-024 (1000ml)	S29-02041502	WA	7	
19	2/27/15 20:13	02271520.D	P1500660-025 (1000ml)	S29-02041502	WA	8	
20	2/27/15 20:41	02271521.D	P1500660-026 (1000ml)	S29-02041502	WA	9	
21	2/27/15 21:09	02271522.D	P1500729-001 (1000ml)	S29-02041502	WA	10	
22	2/27/15 21:36	02271523.D	P1500729-002 (1000ml)	S29-02041502	WA	11	
23	2/27/15 22:04	02271524.D	P1500729-003 (1000ml)	S29-02041502	WA	12	
24	2/27/15 22:32	02271525.D	P1500729-004 (1000ml)	S29-02041502	WA	13	

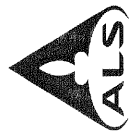
~~107~~ 2/28/15

	Date/Time	File Name	Sample ID	Misc Info	Operator	Vial	Comment
1	2/28/15 2:33	02281501.D	BFB X19022815	S29-02041502	WA	3	Passed
1	2/28/15 2:55	02281502.D	CCV X19022815_500pg	S29-02041502/S29-02181509 (3/19)	WA	16	Passed
2	2/28/15 3:23	02281503.D	CCV X19022715_500pg	S29-02041502/S29-02181509 (3/19)	WA	16	Passed
3	2/28/15 3:52	02281504.D	MB X19022715_1000mL	S29-02041502	WA	2	Passed
7	2/28/15 5:43	02281508.D	P1500729-005 (1000mL)		WA	14	
8	2/28/15 6:11	02281509.D	P1500729-006 (1000mL)		WA	15	
9	2/28/15 7:05	02281510.D	LCS X19022715_500pg	S29-02041502/S29-02191508 (3/20)	WA	2	CF-rerun
10	2/28/15 7:38	02281511.D	LCSD X19022815_500pg	S29-02041502/S29-02191508 (3/20)	WA	2	CF-rerun
11	2/28/15 8:06	02281512.D	P1500729-007 (1000mL)	S29-02041502	WA	1	
12	2/28/15 8:50	02281513.D	P1500729-008 (1000mL)	S29-02041502	WA	3	
13	2/28/15 9:18	02281514.D	P1500729-009 (1000mL)	S29-02041502	WA	4	
14	2/28/15 9:45	02281515.D	P1500729-010 (1000mL)	S29-02041502	WA	5	
15	2/28/15 10:13	02281516.D	P1500729-011 (1000mL)	S29-02041502	WA	6	
16	2/28/15 11:03	02281517.D	P1500729-012 (1000mL)	S29-02041502	WA	7	
17	2/28/15 11:30	02281518.D	P1500729-013 (1000mL)	S29-02041502	WA	8	
18	2/28/15 11:58	02281519.D	P1500729-014 (1000mL)	S29-02041502	WA	9	
19	2/28/15 12:25	02281520.D	P1500729-014 dup (1000mL)	S29-02041502	WA	9	Pass as dup
20	2/28/15 12:53	02281521.D	P1500729-015 (1000mL)	S29-02041502	WA	10	
21	2/28/15 13:20	02281522.D	P1500729-016 (1000mL)	S29-02041502	WA	11	
22	2/28/15 13:48	02281523.D	P1500729-017 (1000mL)	S29-02041502	WA	12	
23	2/28/15 14:15	02281524.D	P1500729-018 (1000mL)	S29-02041502	WA	13	
24	2/28/15 14:43	02281525.D	P1500729-019 (1000mL)	S29-02041502	WA	14	
25	2/28/15 15:11	02281526.D	P1500729-020 (1000mL)	S29-02041502	WA	15	
26	2/28/15 15:38	02281527.D	P1500729-021 (1000mL)	S29-02041502	WA	1	
27	2/28/15 16:06	02281528.D	P1500729-022 (1000mL)	S29-02041502	WA	3	
28	2/28/15 16:34	02281529.D	P1500729-023 (1000mL)	S29-02041502	WA	4	
29	2/28/15 17:02	02281530.D	P1500729-024 (1000mL)	S29-02041502	WA	5	
30	2/28/15 17:29	02281531.D	P1500729-025 (1000mL)	S29-02041502	WA	6	
31	2/28/15 17:57	02281532.D	LCS X19022815_500pg	S29-02041502/S29-02191508 (3/20)	WA	2	Passed
32	2/28/15 18:24	02281533.D	LCSD X19022815_500pg	S29-02041502/S29-02191508 (3/20)	WA	2	Passed

WA 3/2/15

	Date/Time	File Name	Sample ID	Misc Info	Operator	Vial	Comment
1	3/2/15 7:42	03021501.D	BFB X19030215	S29-02041502	WA	3	Passed
1	3/2/15 8:04	03021502.D	CCV X19030215_500pg	S29-02041502/S29-02181509 (3/19)	WA	16	Passed
2	3/2/15 8:32	03021503.D	MB X19030215_1000mL	S29-02041502	WA	2	Passed
3	3/2/15 8:59	03021504.D	LCS X19030215_500pg	S29-02041502/S29-02191508 (3/20)	WA	2	Passed
4	3/2/15 9:26	03021505.D	LCSD X19030215_500pg	S29-02041502/S29-02191508 (3/20)	WA	2	Passed
5	3/2/15 10:39	03021506.D	P1500729-026 (1000mL)	S29-02041502	WA	1	
6	3/2/15 11:06	03021507.D	P1500729-027 (1000mL)	S29-02041502	WA	3	
7	3/2/15 11:34	03021508.D	P1500729-028 (1000mL)	S29-02041502	WA	4	
8	3/2/15 12:01	03021509.D	P1500729-029 (1000mL)	S29-02041502	WA	5	
9	3/2/15 12:29	03021510.D	P1500729-030 (1000mL)	S29-02041502	WA	6	
10	3/2/15 12:58	03021511.D	P1500729-028 dup (1000mL)	S29-02041502	WA	4	Pass as dup
11	3/2/15 13:41	03021512.D	P1500729-015 dil(100mL)	S29-02041502	WA	1	
12	3/2/15 14:09	03021513.D	Blank	S29-02041502	WA	7	
13	3/2/15 14:36	03021514.D	P1500702-002 (1000mL)	S29-02041502	WA	8	
14	3/2/15 15:03	03021515.D	P1500702-001 (1000mL)	S29-02041502	WA	7	
15	3/2/15 16:00	03021516.D	P1500702-003 (1000mL)	S29-02041502	WA	9	
16	3/2/15 16:27	03021517.D	P1500702-004 (1000mL)	S29-02041502	WA	10	
17	3/2/15 16:54	03021518.D	P1500702-005 (1000mL)	S29-02041502	WA	11	
18	3/2/15 17:21	03021519.D	P1500702-006 (1000mL)	S29-02041502	WA	12	
19	3/2/15 17:48	03021520.D	P1500702-007 (1000mL)	S29-02041502	WA	13	
20	3/2/15 18:15	03021521.D	P1500702-008 (1000mL)	S29-02041502	WA	14	
21	3/2/15 18:43	03021522.D	P1500702-009 (1000mL)	S29-02041502	WA	15	
22	3/2/15 19:11	03021523.D	P1500702-010 (1000mL)	S29-02041502	WA	3	
23	3/2/15 19:38	03021524.D	P1500702-011 (1000mL)	S29-02041502	WA	4	
24	3/2/15 20:06	03021525.D	P1500702-012 (1000mL)	S29-02041502	WA	5	
25	3/2/15 20:33	03021526.D	P1500702-013 (1000mL)	S29-02041502	WA	6	

WA 3/3/15



ALS Environmental
2655 Park Center Drive, Suite A
Simi Valley, CA 93065
Ph. 805-526-7161
Fax 805-526-7270

QC Certification

<u>Container IDs</u>	<u>Cleaned Date</u>	<u>Date Analyzed</u>	<u>QC Results</u>	<u>Comments</u>
AC00717*	2/16/15	2/18/15	Pass w/ Conditions	EPA TO-15 (Client Specified)
AC00819*	2/18/15	2/20/15	Pass w/ Conditions	EPA TO-15 (Client Specified)
AC01005*	2/16/15	2/18/15	Pass w/ Conditions	EPA TO-15 (Client Specified)
AC01384*	2/13/15	2/16/15	Pass w/ Conditions	EPA TO-15 (Client Specified)
AC01462*	2/18/15	2/19/15	Pass w/ Conditions	EPA TO-15 (Client Specified)
AC01476*	2/16/15	2/18/15	Pass w/ Conditions	EPA TO-15 (Client Specified)
AC01656*	2/18/15	2/19/15	Pass w/ Conditions	EPA TO-15 (Client Specified)
AC01802*	2/19/15	2/20/15	Pass w/ Conditions	EPA TO-15 (Client Specified)
AC01893*	2/16/15	2/18/15	Pass w/ Conditions	EPA TO-15 (Client Specified)
AC01920*	2/18/15	2/19/15	Pass w/ Conditions	EPA TO-15 (Client Specified)
AC02024*	2/16/15	2/18/15	Pass w/ Conditions	EPA TO-15 (Client Specified)
AC02045*	2/16/15	2/19/15	Pass w/ Conditions	EPA TO-15 (Client Specified)
AS00091*	2/13/15	2/16/15	Pass w/ Conditions	EPA TO-15 (Client Specified)
AS00163*	2/16/15	2/16/15	Pass w/ Conditions	EPA TO-15 (Client Specified)
AS00182*	2/18/15	2/19/15	Pass w/ Conditions	EPA TO-15 (Client Specified)
AS00228*	2/18/15	2/19/15	Pass w/ Conditions	EPA TO-15 (Client Specified)
AS00442*	2/18/15	2/19/15	Pass w/ Conditions	EPA TO-15 (Client Specified)
AS00479*	2/19/15	2/20/15	Pass w/ Conditions	EPA TO-15 (Client Specified)
AS00514*	2/18/15	2/18/15	Pass w/ Conditions	EPA TO-15 (Client Specified)
AS00570*	2/18/15	2/19/15	Pass w/ Conditions	EPA TO-15 (Client Specified)
AS00671*	2/18/15	2/19/15	Pass w/ Conditions	EPA TO-15 (Client Specified)
AS00678*	2/13/15	2/16/15	Pass w/ Conditions	EPA TO-15 (Client Specified)
AS00720*	2/16/15	2/18/15	Pass w/ Conditions	EPA TO-15 (Client Specified)
AS00743*	2/13/15	2/16/15	Pass w/ Conditions	EPA TO-15 (Client Specified)
AS00749*	2/16/15	2/18/15	Pass w/ Conditions	EPA TO-15 (Client Specified)
AS00750*	2/13/15	2/16/15	Pass w/ Conditions	EPA TO-15 (Client Specified)
AS00764*	2/13/15	2/16/15	Pass w/ Conditions	EPA TO-15 (Client Specified)
AS00799*	2/16/15	2/18/15	Pass w/ Conditions	EPA TO-15 (Client Specified)

* QC Canister

<u>Container IDs</u>	<u>Cleaned Date</u>	<u>Date Analyzed</u>	<u>QC Results</u>	<u>Comments</u>
AS00812*	2/16/15	2/18/15	Pass w/ Conditions	EPA TO-15 (Client Specified)
AS00826*	2/18/15	2/19/15	Pass w/ Conditions	EPA TO-15 (Client Specified)
AS00836*	2/16/15	2/18/15	Pass w/ Conditions	EPA TO-15 (Client Specified)
FCA00065	2/4/15	2/5/15		
FCA00265	2/11/15	2/11/15		
FCA00343	1/29/15	1/30/15		
FCA00454	2/2/15	2/4/15		
FCA00588	2/16/15	2/16/15		
FCA00678	2/10/15	2/10/15		
FCA00699	2/16/15	2/16/15		
FCA00716	2/4/15	2/5/15		
FCA00731	1/29/15	1/29/15		
FCA00747	1/22/15	1/22/15		
FCA00754	2/4/15	2/5/15		
FCA00801	2/18/15	2/18/15		
FCA00815	2/18/15	2/18/15		
FCA00829	2/16/15	2/16/15		
FCA00961	2/16/15	2/16/15		
FCA00964	2/16/15	2/16/15		
FCS00047	2/18/15	2/18/15		
FCS00101	2/18/15	2/18/15		
FCS00119	2/18/15	2/18/15		
FCS00122	2/18/15	2/18/15		
FCS00254	10/9/14	10/17/14		
FCS00261	2/18/15	2/18/15		
OA00225	10/22/14	10/22/14		
OA00447	10/31/14	10/31/14		
OA00779	12/31/14	12/31/14		
OA00795	10/10/14	10/10/14		
OA01576	8/19/13	8/20/13		
OA01813	10/10/14	10/10/14		

Cans were QCed for full SIM list per client request

* QC Canister