SOP ERG-MOR-005
Air Toxics TO-15 Quality Control Review Checklist 2018-1

Sequence ID:	L19L1912030	**Instrument:**	MS1	**Batch:**	—
Cal Curve (Method):	9020003	**Analyst:**	MM	**Date Analyzed:**	2-12-19
10% Review Sample IDs:	9020003	**Reviewer:**	DST	**Date:**	2/15/19
Optional Additional Review Sample IDs:		**Reviewer:**		**Date:**	

Parameter	Acceptance Criteria	Analyst Check (Initials and Date)	Task Lead/Data (Initials and Date)	10% QA Review (Initials and Date)	Optional Additional QA Review (Initials and Date)	Comments
BFB Instrument Tune Performance Check – one per analysis sequence	Evaluation criteria presented in Section 16.1.1	✓ 2-14-19	RMB 2/15/19	DST 2/15/19		
Initial calibration with a minimum of 5 points - quarterly	1)RSD of response factors < ±30% with two exceptions of up to ±40% (non-Tier I compounds) ✓ 2) IS response < ±40% of mean ✓ 3) RRTs for target peaks ±0.06 units from mean RRT ✓ 4) IS RTs within 20sec of mean ✓ 5) Each calibration standard within ±30% of nominal conc (for Tier I compounds) ✓	✓ 2-14-19	RMB 2/15/19	DST 2/15/19		1,2,4-TCB and 2F +/- 30% OF target. Non-tier 1 compd 31.36% ✓ 2-14-19 OK. DST 2/15/19
ICV(LCS) Second source calibration verification check - immediately following ICAL	The response factor ≤ ±30% DEV from calibration curve average response factor	✓ 2-14-19	RMB 2/15/19	DST 2/15/19		
Continuing calibration verification (CCV), approximately mid-point of the calibration curve – one per analysis sequence	The response factor ≤ ±30% DEV from calibration curve average response factor	—	RMB 2/15/19	NA		
Method Blank Analysis – one per analysis sequence IUB	1) < 3xMDL or 0.2ppbv, whichever is lower 2) Internal Standard (IS) area response within < ±40% and IS Retention Time (RT) within ±0.33 min. of most recent initial calibration	— ✓ 2-14-19	RMB 2/15/19	DST 2/15/19		

Air Toxics TO-15 Quality Control Review Checklist 2018-1 (Continued)

Parameter	Acceptance Criteria	Analyst Check (Initials and Date)	Task Lead/Data (Initials and Date)	10% QA Review (Initials and Date)	Optional Additional QA Review (Initials and Date)	Comments
Replicate Analysis – one per analysis sequence /Duplicate Sample	< 25% RPD for compounds greater than 5 times the MDL	—	NA	NA		
Canister Cleaning Certification	<3xMDL or 0.2ppbv per VOC targeted compound, whichever is lower	—	NA	NA		
Preconcentrator Leak Check	≤ ± 0.2 psi/min	2-14-19	RMB 2/15/19	DST 2/15/19		
Samples/Internal Standard Check	IS area within ±40% and IS RT within ±0.33 min. of most recent initial calibration	2-14-19	RMB 2/15/19	DST 2/15/19		
COC Included and filled out	Lab receipt acknowledged, LIMS number added to COC	—	NA	NA		
Manual Integration and peak deletion	Conforms with ERG-SOP-097 "Procedure for Manual Integration of Chromatographic Peaks"	2-14-19	RMB 2/15/19	DST 2/15/19		
Manual Calculation Check	One compound manual check must agree with software generated result		2/15/19 RMB	DST 2/15/19		ICV MTBE 34680 (4.77 ppbv) / 49904 (1.318) = 2.515 ppbv
Qualifiers Check	Check to make sure LIMS data flags are correct	2-14-19	NA	NA		

This review check sheet must be completed by primary data reviewer/TL/QA.

L19BL015
tetrachloroethylene $\frac{6729 \times 4.74}{83483 \times 1.03} = 0.371$

ANALYSIS SEQUENCE

1902030

Instrument: ERGMS#1

Calibnration ID: 9020003

Printed: 2/20/2019 2:25:00PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
1902030-ICB1	QC		1			8L13002		
1902030-CAL1	QC		2		9B12002	8L13002		
1902030-CAL2	QC		3		9B12003	8L13002		
1902030-CAL3	QC		4		9B12004	8L13002		
1902030-CAL4	QC		5		9B12005	8L13002		
1902030-CAL5	QC		6		9B12006	8L13002		
1902030-CAL6	QC		7		9B12007	8L13002		
1902030-ICV1	QC		8		9B12008	8L13002		

Samples Loaded By Date

Data Processed By Date

Sequence Name: C:\msdchem\1\sequence\L19BL.s
Comment: ANALYZE 2/12/19,9020003 exp 5/13/19, L19BL
Operator: MAH
Data Path: C:\MSDCHEM\1\DATA\L19BL\
Instrument Control Pre-Seq Cmd:
Data Analysis Pre-Seq Cmd:

Instrument Control Post-Seq Cmd:
Data Analysis Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line			Sample Name/Misc Info		
1)	Sample	1	L19BL001	BFB	BFB
2)	Sample	2	L19BL002	9020003	-CCV1
3)	Sample	3	L19BL003	9020003	SNMOC-ICAL1
4)	Sample	4	L19BL004	9020003	SNMOC-ICAL2
5)	Sample	5	L19BL005	9020003	SNMOC-ICAL3
6)	Sample	6	L19BL006	9020003	SNMOC-ICAL4
7)	Sample	7	L19BL007	9020003	SNMOC-ICAL5
8)	Sample	8	L19BL008	9020003	SNMOC-ICAL6
9)	Sample	9	L19BL009	9020003	SNMOC-ICV1
10)	Sample	10	L19BL010	9020003	SNMOC-ICV1
11)	Sample	11	L19BL011	9020003	FLUSH
12)	Sample	12	L19BL012	9020003	1902030-ICB1
13)	Sample	13	L19BL013	9020003	1902030-ICAL1
14)	Sample	14	L19BL014	9020003	1902030-ICAL2
15)	Sample	15	L19BL015	9020003	1902030-ICAL3
16)	Sample	16	L19BL016	9020003	1902030-ICAL4
17)	Sample	17	L19BL017	9020003	1902030-ICAL5
18)	Sample	18	L19BL018	9020003	1902030-ICAL6
19)	Sample	19	L19BL019	9020003	1902030-ICV1
20)	Sample	20	L19BL020	9020003	1902030-ICV1
21)	Sample	100	OFF	FIDOFF	OFF

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ED_002475_00000354-00004

Sample	1	BFB	BFB	L19BL001	80 ML 8L13001	1
Sample	2	-CCV1	9020003	L19BL002	80 ML 8L13001,9A29016	1
Sample	3	SNMOC-ICAL1	9020003	L19BL003	SNMOC_L19001,9B11002	1
Sample	4	SNMOC-ICAL2	9020003	L19BL004	SNMOC_L19001,9B11003	1
Sample	5	SNMOC-ICAL3	9020003	L19BL005	SNMOC_L19001,9B11004	1
Sample	6	SNMOC-ICAL4	9020003	L19BL006	SNMOC_L19001,9B11005	1
Sample	7	SNMOC-ICAL5	9020003	L19BL007	SNMOC_L19001,9B11006	1
Sample	8	SNMOC-ICAL6	9020003	L19BL008	SNMOC_L19001,9B11007	1
Sample	9	SNMOC-ICV1	9020003	L19BL009	SNMOC_L19001,9A30040	1
Sample	10	SNMOC-ICV1	9020003	L19BL010	SNMOC_L19001,9A30040	1
Sample	11	FLUSH	9020003	L19BL011	80 ML 8L13001	1
Sample	12	1902030-ICB1	9020003	L19BL012	80 ML 8L13001,	1
Sample	13	1902030-ICAL1	9020003	L19BL013	80 ML 8L13001,9B12002	1
Sample	14	1902030-ICAL2	9020003	L19BL014	80 ML 8L13001,9B12003	1
Sample	15	1902030-ICAL3	9020003	L19BL015	80 ML 8L13001,9B12004	1
Sample	16	1902030-ICAL4	9020003	L19BL016	80 ML 8L13001,9B12005	1
Sample	17	1902030-ICAL5	9020003	L19BL017	80 ML 8L13001,9B12006	1
Sample	18	1902030-ICAL6	9020003	L19BL018	80 ML 8L13001,9B12007	1
Sample	19	1902030-ICV1	9020003	L19BL019	80 ML 8L13001,9B12008	1
Sample	20	1902030-ICV1	9020003	L19BL020	80 ML 8L13001,9B12008	1
Sample	100	OFF	FIDOFF	OFF	OFF	1

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----------SEQUENCE TABLE ----------

Sequence Name: C:\Smart\L19BL.SEQ
Date: 02-13-2019
Time: 06:47:18
Int. Std Volume: 80 cc

Sample Name	Inlet #	Auto Pos	Samp Vol.	Cal Std Vol.	Method	Time
BFB	1	1	0	0	C:\Smart\BFB.MPT	12:00
-CCV1	2	1	250	0	C:\Smart\TO-15A_MS1.MPT	12:00
SNMOC-ICAL1	1	2	250	0	C:\Smart\TO-15A_MS1.MPT	12:00
SNMOC-ICAL2	1	3	250	0	C:\Smart\TO-15A_MS1.MPT	12:00
SNMOC-ICAL3	1	4	250	0	C:\Smart\TO-15A_MS1.MPT	12:00
SNMOC-ICAL4	1	5	250	0	C:\Smart\TO-15A_MS1.MPT	12:00
SNMOC-ICAL5	1	6	250	0	C:\Smart\TO-15A_MS1.MPT	12:00
SNMOC-ICAL6	1	7	250	0	C:\Smart\TO-15A_MS1.MPT	12:00
SNMOC-ICV1	1	1	250	0	C:\Smart\TO-15A_MS1.MPT	12:00
SNMOC-ICV1	1	1	250	0	C:\Smart\TO-15A_MS1.MPT	12:00
FLUSH	1	8	250	0	C:\Smart\TO-15A_MS1.MPT	12:00
1902030-ICB1	1	8	250	0	C:\Smart\TO-15A_MS1.MPT	12:00
1902030-ICAL1	1	9	250	0	C:\Smart\TO-15A_MS1.MPT	12:00
1902030-ICAL2	1	10	250	0	C:\Smart\TO-15A_MS1.MPT	12:00
1902030-ICAL3	1	11	250	0	C:\Smart\TO-15A_MS1.MPT	12:00
1902030-ICAL4	1	12	250	0	C:\Smart\TO-15A_MS1.MPT	12:00
1902030-ICAL5	1	13	250	0	C:\Smart\TO-15A_MS1.MPT	12:00
1902030-ICAL6	1	14	250	0	C:\Smart\TO-15A_MS1.MPT	12:00
1902030-ICV1	1	15	250	0	C:\Smart\TO-15A_MS1.MPT	12:00
1902030-ICV1	1	15	250	0	C:\Smart\TO-15A_MS1.MPT	12:00

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---------- Leak Check Report ----------

2/13/2019 7:14:09 AM
Leak Check for C:\Smart\L19BL.SEQ
Report File: C:\Smart\L19BL.LCR
Leak Check Method: Evacuation
Pressurize/Evacuate time(sec) 20
Equilibration time(sec) 20
Maintanance time(sec) 60

Sample Inlet	Auto1	Auto2	Auto3	Start	End	Rate(psi/min)
1	2	---	---	1.2	1.2	0.00
1	3	---	---	1.1	1.2	0.10
1	4	---	---	1.1	1.2	0.10
1	5	---	---	1.1	1.2	0.10
1	6	---	---	1.1	1.2	0.10
1	7	---	---	1.1	1.2	0.10
1	1	---	---	1.2	1.4	0.20
1	8	---	---	1.1	1.2	0.10
1	9	---	---	1.2	1.3	0.10
1	10	---	---	1.1	1.2	0.10
1	11	---	---	1.1	1.2	0.10
1	12	---	---	1.1	1.2	0.10
1	13	---	---	1.2	1.3	0.10
1	14	---	---	1.2	1.3	0.10
1	15	---	---	1.2	1.2	0.00

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Initial Calibration Average Internal Standard Areas

Data File: L19BL
Sequence File: 1902030
Calibration File: 9020003 **Expires: 5/13/19**

File #	Level	Hexane-d14	% Recovery	1,4-Difluorobenzene	% Recovery	Chlorobenzene-d5	% Recovery
LA9BL013	1	49569	**102**	120191	**102**	87150	**101**
LA9BL014	2	48248	**99**	117858	**100**	83569	**97**
LA9BL015	3	48650	**100**	116736	**99**	83483	**96**
LA9BL016	4	49452	**102**	121177	**103**	88227	**102**
LA9BL017	5	49407	**102**	119248	**101**	88096	**102**
LA9BL018	6	46340	**95**	113666	**96**	88860	**103**
9020003	**IS Avg Area**	**48611**		**118146**		**86564**	
	+40%	68055		165404		121190	
	-40%	29167		70888		51939	

% Recovery must be +/- 40% of Avg. Internal Standard areas

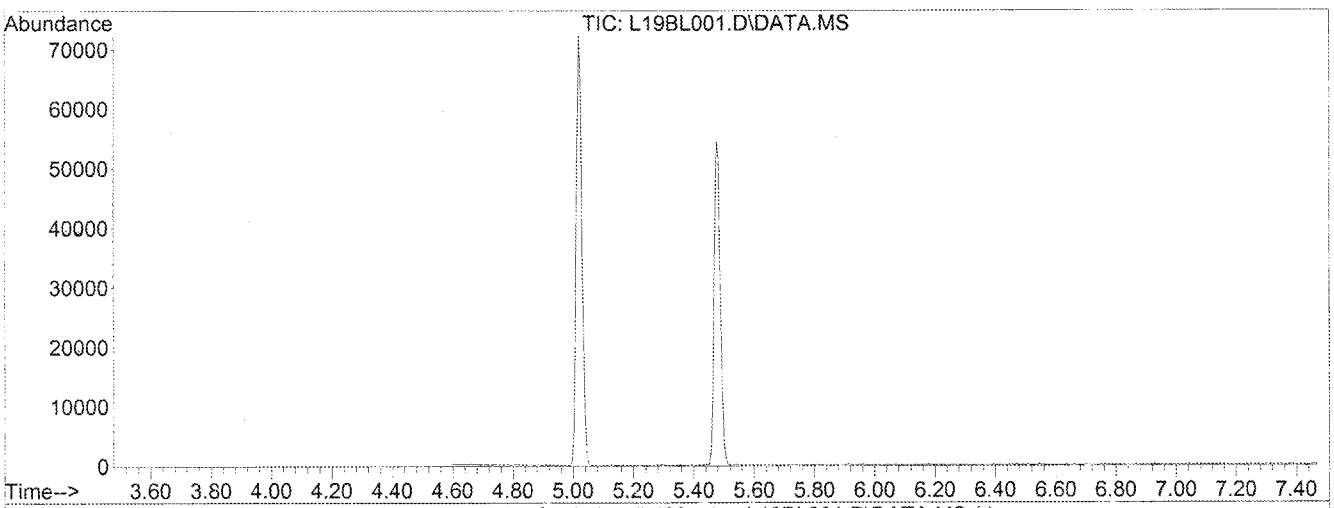
DT
2/15/19

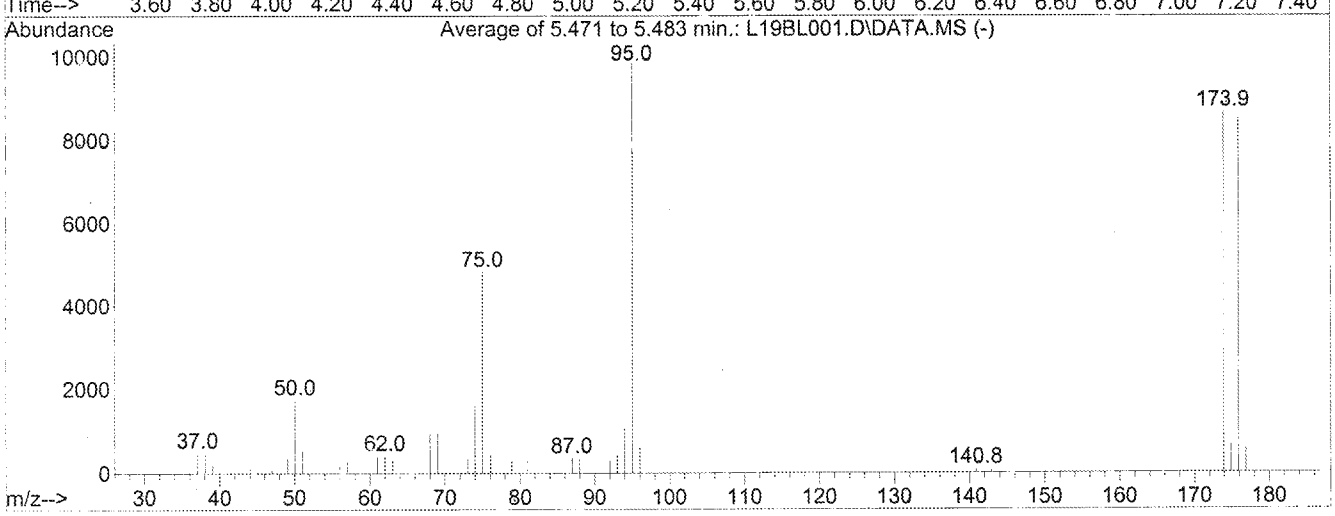
Data Path : C:\msdchem\1\DATA\L19BL\
Data File : L19BL001.D
Acq On : 12 Feb 2019 7:14 am
Operator : MAH
Sample : BFB
Misc : 80 ML 8L13001
ALS Vial : 1 Sample Multiplier: 1

2-14-19

Integration File: RTEINT.P

Method : C:\msdchem\1\METHODS\9020003.M
Title : TO-15 by Selective Ion Analysis
Last Update : Wed Feb 13 06:44:42 2019





AutoFind: Scans 145, 146, 147; Background Corrected with Scan 139

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	17.8	1757	PASS
75	95	30	66	48.9	4836	PASS
95	95	100	100	100.0	9895	PASS
96	95	5	9	6.6	656	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	87.6	8670	PASS
175	174	4	9	7.6	660	PASS
176	174	93	101	98.2	8512	PASS
177	176	5	9	6.6	563	PASS

GC/MS QA-QC Check Report

Tune File : C:\msdchem\1\DATA\L19BL\L19BL001.D
Tune Time : 12 Feb 2019 7:14 am

1902030003	IS Avg Area	48611	118146	86564
	+40%	68055	165404	121190
	-40%	29167	70888	51939

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File	Sample	Internal Standard Responses		
L19BL012.D	1902030-ICB1	48293	117116	84658
L19BL013.D	1902030-CAL1	49569	120191	87150
L19BL014.D	1902030-CAL2	48248	117858	83569
L19BL015.D	1902030-CAL3	48650	116736	83483
L19BL016.D	1902030-CAL4	49452	121177	88227
L19BL017.D	1902030-CAL5	49407	119248	88096
L19BL018.D	1902030-CAL6	46340	113666	88860
L19BL019.D	1902030-ICV1	49904	122171	89258

(fails) - fails 24hr time check * - fails criteria

Created: Thu Feb 14 12:19:58 2019 MS1

Compound Name			IS-Hexane-d14	IS-Hexane-d14	IS-Difluorobenzene	IS-Difluorobenzene	IS-Chlorobenzene-d5	IS-Chlorobenzene-d5
Labels	Date Acquired	Data File Name	(# 1) Target Response	(# 1) Ret Time	(# 28) Target Response	(# 28) Ret Time	(# 42) Target Response	(# 42) Ret Time
	2/13/2019 1:52	L19BL019.D	49904	19.99	122171	23.15	89258	30.11
Format 1 (Yes/No)								
Format 1 Title								
Format 2 (Yes/No)			YES	YES	YES	YES	YES	YES
Format 2 Title								
Show X Axis Title			YES	YES	YES	YES	YES	YES
Show Y Axis Title								
Lines To Chart								

Start of Data	Format 1 X-axis	Format 2 X-axis	IS-Hexane-d14	% Rec	RT	DEV (min)	IS-Difluorobenzene	% Rec	RT	DEV (min)	IS-Chlorobenzene-d5	% Rec	RT	DEV (min)
		IS AVG / AVG RT	**48611**		**19.99**		**118146**		**23.15**		**86564**		**30.11**	
	2/12/2019 18:46	L19BL012.D	48293 ✓	**99**	19.99 ✓	**0**	117116	**99**	23.15	**0**	84658	**98**	30.11	**0**
	2/12/2019 19:46	L19BL013.D	49569 ✓	**102**	19.97 ✓	**-0.02**	120191	**102**	23.15	**0**	87150	**101**	30.10	**-0.01**
	2/12/2019 20:46	L19BL014.D	48248 ✓	**99**	19.99 ✓	**0**	117858	**100**	23.15	**0**	83569	**97**	30.12	**0.01**
	2/12/2019 21:49	L19BL015.D	48650 ✓	**100**	19.99 ✓	**0**	116736	**99**	23.15	**0**	83483	**96**	30.12	**0.01**
	2/12/2019 22:49	L19BL016.D	49452 ✓	**102**	19.99 ✓	**0**	121177	**103**	23.15	**0**	88227	**102**	30.11	**0**
	2/12/2019 23:51	L19BL017.D	49407 ✓	**102**	19.99 ✓	**0**	119248	**101**	23.15	**0**	88096	**102**	30.11	**0**
	2/13/2019 12:52	L19BL018.D	46340 ✓	**95**	19.99 ✓	**0**	113666	**96**	23.15	**0**	88860	**103**	30.11	**0**
	2/13/2019 1:52	L19BL019.D	49904 ✓	**103**	19.99 ✓	**0**	122171	**103**	23.15	**0**	89258	**103**	30.11	**0**

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RT 2/15/19

Response Factor Report MS1

Method Path : C:\msdchem\1\METHODS\
Method File : 9020003.M
Title : TO-15 by Selective Ion Analysis
Last Update : Wed Feb 13 06:44:42 2019
Response Via : Initial Calibration

2-14-19

Calibration Files
1 =L19BL013.D 2 =L19BL014.D 3 =L19BL015.D 4 =L19BL016.D
5 =L19BL017.D 6 =L19BL018.D

		Compound	1	2	3	4	5	6	Avg	%RSD
1)	ISS	IS-Hexane-d14	ISTD							
2)	CT	Acetylene	0.392	0.386	0.380	0.382	0.385	0.420	0.391	3.80
3)	CT	Propylene	0.495	0.483	0.477	0.472	0.479	0.517	0.487	3.36
4)	CT	Dichlorodifluo...	2.266	2.262	2.282	2.250	2.289	2.453	2.300	3.31
5)	CT	Chloromethane	0.610	0.582	0.587	0.572	0.580	0.623	0.592	3.30
6)	CT	Dichlorotetraf...	1.968	1.982	1.995	1.971	2.006	2.159	2.013	3.61
7)	CT	Vinyl Chloride	0.639	0.651	0.654	0.653	0.663	0.714	0.662	3.96
8)	CT	1,3-Butadiene	0.426	0.430	0.447	0.447	0.462	0.490	0.450	5.17
9)	CT	Ethylene oxide	0.220	0.277	0.286	0.276	0.280	0.297	0.273	9.94
10)	CT	Bromomethane	0.606	0.604	0.623	0.622	0.631	0.676	0.627	4.20
11)	CT	Chloroethane	0.258	0.253	0.266	0.257	0.272	0.273	0.263	3.23
12)	CT	Acetonitrile	0.377	0.377	0.401	0.420	0.462	0.448	0.414	8.69
13)	CT	Acrolein	0.202	0.192	0.199	0.212	0.225	0.222	0.209	6.19
14)	CT	Trichlorofluor...	1.915	1.947	1.917	1.922	1.903	2.057	1.944	2.96
15)	CT	Acrylonitrile	0.290	0.299	0.323	0.340	0.368	0.362	0.330	9.78
16)	CT	1,1-Dichloroet...	0.829	0.824	0.836	0.838	0.867	0.866	0.843	2.21
17)	CT	Methylene Chlo...	0.536	0.530	0.557	0.547	0.591	0.581	0.557	4.42
18)	CT	Carbon Disulfide	1.652	1.668	1.700	1.702	1.746	1.829	1.716	3.75
19)	CT	Trichlorotrifl...	1.299	1.291	1.285	1.279	1.300	1.388	1.307	3.08
20)	CT	trans-1,2-Dich...	0.442	0.449	0.464	0.465	0.494	0.491	0.467	4.53
21)	CT	1,1-Dichloroet...	0.763	0.761	0.756	0.782	0.819	0.833	0.786	4.18
22)	CT	Methyl tert-Bu...	1.247	1.238	1.288	1.289	1.381	1.463	1.318	6.64
23)	CT	Chloroprene	0.615	0.611	0.605	0.640	0.674	0.690	0.639	5.53
24)	CT	cis-1,2-Dichlo...	0.622	0.590	0.598	0.612	0.654	0.645	0.620	4.09
25)	CT	Bromochloromet...	0.319	0.323	0.328	0.334	0.354	0.354	0.335	4.60
26)	CT	Chloroform	0.887	0.890	0.876	0.908	0.954	0.954	0.912	3.80
27)	CT	Ethyl tert-But...	1.170	1.187	1.213	1.244	1.355	1.393	1.260	7.34
28)	CT	1,2-Dichloroet...	0.542	0.534	0.547	0.552	0.596	0.586	0.560	4.52
29)	ISS	IS-1,4-Difluoroben...	ISTD							
30)	CT	1,1,1-Trichlor...	0.348	0.348	0.362	0.361	0.391	0.410	0.370	6.83
31)	CT	Benzene	0.527	0.519	0.509	0.519	0.547	0.551	0.529	3.16
32)	CT	Carbon Tetrach...	0.383	0.382	0.387	0.388	0.412	0.425	0.396	4.54
33)	CT	tert-Amyl Meth...	0.413	0.429	0.435	0.440	0.486	0.492	0.449	7.18
34)	CT	1,2-Dichloropr...	0.192	0.193	0.191	0.200	0.216	0.214	0.201	5.69
35)	CT	Ethyl Acrylate	0.144	0.152	0.160	0.165	0.202	0.203	0.171	14.95
36)	CT	Bromodichlorom...	0.341	0.345	0.343	0.350	0.379	0.378	0.356	4.96
37)	CT	Trichloroethylene	0.251	0.246	0.241	0.249	0.264	0.260	0.252	3.43
38)	CT	Methyl Methacr...	0.457	0.459	0.469	0.496	0.589	0.607	0.513	13.21
39)	CT	cis-1,3-Dichlo...	0.164	0.167	0.160	0.170	0.191	0.196	0.175	8.66
40)	CT	Methyl Isobuty...	0.341	0.338	0.363	0.363	0.426	0.431	0.377	10.95
41)	CT	trans-1,3-Dich...	0.103	0.106	0.107	0.116	0.129	0.141	0.117	12.94
42)	CT	1,1,2-Trichlor...	0.178	0.178	0.174	0.182	0.197	0.196	0.184	5.36
43)	ISS	IS-Chlorobenzene-d5	ISTD							
44)	CT	Toluene	0.769	0.767	0.753	0.774	0.834	0.777	0.779	3.64
45)	CT	Dibromochlorom...	1.451	1.495	1.481	1.522	1.645	1.581	1.529	4.69
46)	CT	1,2-Dibromoethane	0.279	0.284	0.273	0.295	0.311	0.310	0.292	5.56
47)	CT	n-Octane	0.450	0.456	0.454	0.467	0.515	0.472	0.469	5.15
48)	CT	Tetrachloroeth...	0.374	0.385	0.371	0.369	0.386	0.365	0.375	2.27
49)	CT	Chlorobenzene	0.483	0.491	0.475	0.497	0.538	0.499	0.497	4.44
50)	CT	Ethylbenzene	0.771	0.788	0.784	0.815	0.918	0.838	0.819	6.62
51)	CT	m,p-Xylene	0.640	0.656	0.655	0.691	0.785	0.717	0.691	7.82
52)	CT	Bromoform	0.284	0.283	0.277	0.292	0.326	0.313	0.296	6.55
53)	CT	Styrene	0.361	0.364	0.371	0.389	0.450	0.416	0.392	8.92

ED_002475_00000354-00012

Method Path : C:\msdchem\1\METHODS\
Method File : 9020003.M
Title : TO-15 by Selective Ion Analysis

54)	CT	1,1,2,2-Tetrac...	0.430	0.425	0.439	0.437	0.490	0.453	0.446	5.36
55)	CT	o-Xylene	0.651	0.659	0.658	0.674	0.756	0.691	0.682	5.76
56)	CT	1,3,5-Trimethy...	0.678	0.700	0.729	0.719	0.817	0.752	0.732	6.64
57)	CT	1,2,4-Trimethy...	0.579	0.591	0.621	0.626	0.708	0.676	0.633	7.84
58)	CT	m-Dichlorobenzene	0.312	0.313	0.312	0.332	0.367	0.363	0.333	7.74
59)	CT	p-Dichlorobenzene	0.258	0.258	0.247	0.271	0.296	0.298	0.271	7.83
60)	CT	o-Dichlorobenzene	0.280	0.284	0.293	0.302	0.333	0.334	0.305	7.79
61)	CT	1,2,4-Trichlor...	0.089	0.080	0.119	0.097	0.136	0.100	0.103	19.81
62)	CT	Hexachloro-1,3...	0.230	0.230	0.296	0.250	0.325	0.252	0.264	14.58

(#) = Out of Range

TO-15 Method Blank and
Annual Canister Certification Blank

Analyst: [illegible] Date: 2-14-19

Reviewer: RMB Date: 2/15/19

Data File Name	L19BL012.D
Operator	MAH
Acq. Method File	9020003.M
Sample Name	1902030-ICB1
Misc Info	80 ML 8L13001,

#	Name	Target Response	Amount (ppbv)	PASS*		Blank Criteria
1)	IS-Hexane-d14	48293		NA		NA
2)	Acetylene	0	0.000	Y		0.118
3)	Propylene	51	0.010	Y		0.192
4)	Dichlorodifluoromethane	0	0.000	Y		0.082
5)	Chloromethane	0	0.000	Y		0.139
6)	Dichlorotetrafluoroethane	0	0.000	Y		0.040
7)	Vinyl Chloride	0	0.000	Y		0.038
8)	1,3-Butadiene	0	0.000	Y		0.058
	Ethylene oxide	0	0.000	Y		0.136
9)	Bromomethane	0	0.000	Y		0.035
10)	Chloroethane	0	0.000	Y		0.075
11)	Acetonitrile	0	0.000	Y		0.049
12)	Acrolein	0	0.000	Y		0.200
13)	Trichlorofluoromethane	0	0.000	Y		0.035
14)	Acrylonitrile	0	0.000	Y		0.032
15)	1,1-Dichloroethene	0	0.000	Y		0.036
16)	Methylene Chloride	0	0.000	Y		0.043
17)	Carbon Disulfide	56	0.003	Y		0.200
18)	Trichlorotrifluoroethane	0	0.000	Y		0.029
19)	trans-1,2-Dichloroethylene	0	0.000	Y		0.040
20)	1,1-Dichloroethane	0	0.000	Y		0.043
21)	Methyl tert-Butyl Ether	0	0.000	Y		0.031
22)	Chloroprene	0	0.000	Y		0.039
23)	cis-1,2-Dichloroethylene	0	0.000	Y		0.056
24)	Bromochloromethane	0	0.000	Y		0.040
25)	Chloroform	0	0.000	Y		0.039
26)	Ethyl tert-Butyl Ether	0	0.000	Y		0.033
27)	1,2-Dichloroethane	0	0.000	Y		0.042
28)	IS-1,4-Difluorobenzene	117116		NA		NA
29)	1,1,1-Trichloroethane	0	0.000	Y		0.041
30)	Benzene	60	0.005	Y		0.043
31)	Carbon Tetrachloride	0	0.000	Y		0.040
32)	tert-Amyl Methyl Ether	0	0.000	Y		0.037
33)	1,2-Dichloropropane	0	0.000	Y		0.061
34)	Ethyl Acrylate	0	0.000	Y		0.070
35)	Bromodichloromethane	0	0.000	Y		0.049
36)	Trichloroethylene	0	0.000	Y		0.045
37)	Methyl Methacrylate	289	0.024	Y	MAX	0.200
38)	cis-1,3-dichloropropene	0	0.000	Y		0.059
39)	Methyl Isobutyl Ketone	0	0.000	Y		0.071
40)	trans-1,3-Dichloropropene	0	0.000	Y		0.059
41)	1,1,2-Trichloroethane	0	0.000	Y		0.057
42)	IS-Chlorobenzene-d5	84658		NA		NA
43)	Toluene	0	0.000	Y		0.200
44)	Dibromochloromethane	0	0.000	Y		0.046
45)	1,2-Dibromoethane	0	0.000	Y		0.057
46)	n-Octane	0	0.000	Y		0.097
47)	Tetrachloroethylene	0	0.000	Y		0.041
48)	Chlorobenzene	0	0.000	Y		0.058
49)	Ethylbenzene	97	0.007	Y		0.077
50)	m,p-Xylene	56	0.005	Y		0.108
51)	Bromoform	0	0.000	Y		0.053
52)	Styrene	0	0.000	Y		0.109
53)	1,1,2,2-Tetrachloroethane	0	0.000	Y		0.063
54)	o-Xylene	104	0.009	Y		0.080
55)	1,3,5-Trimethylbenzene	43	0.003	Y		0.102
56)	1,2,4-Trimethylbenzene	49	0.004	Y		0.080
57)	m-Dichlorobenzene	0	0.000	Y		0.055
58)	p-Dichlorobenzene	0	0.000	Y		0.060
59)	o-Dichlorobenzene	0	0.000	Y		0.062
60)	1,2,4-Trichlorobenzene	0	0.000	Y		0.200
61)	Hexachloro-1,3-butadiene	0	0.000	Y		0.082

*All Blanks must be below 0.2 ppb or 3 times the MDL whichever value is lower

TO-15_BLANK_TEMPLATES_3-19-18
2018 BLANK
Y:\AIR TOX\TO-15 BLANK TEST\TO-15_BLANK_TEMPLATES_8-29-18.xlsx

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\L19BL\
Data File : L19BL012.D
Acq On : 12 Feb 2019 6:46 pm
Operator : MAH
Sample : 1902030-ICB1
Misc : 80 ML 8L13001,
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Feb 14 11:31:27 2019
Quant Method : C:\msdchem\1\METHODS\9020003.M
Quant Title : TO-15 by Selective Ion Analysis
QLast Update : Wed Feb 13 06:44:42 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) IS-Hexane-d14	19.990	66	48293	4.7700 ppbv	0.00
29) IS-1,4-Difluorobenzene	23.149	114	117116	4.9900 ppbv	0.00
43) IS-Chlorobenzene-d5	30.114	117	84658	4.7400 ppbv	0.00

System Monitoring Compounds

Target Compounds					Qvalue
2) Acetylene	0.000	26	0	N.D.	
3) Propylene	7.823	41	51	0.0103 ppbv #	56
4) Dichlorodifluoromethane	0.000	85	0	N.D.	
5) Chloromethane	0.000	50	0	N.D.	
6) Dichlorotetrafluoroethane	0.000	85	0	N.D.	
7) Vinyl Chloride	0.000	62	0	N.D.	
8) 1,3-Butadiene	0.000	54	0	N.D.	
9) Ethylene oxide	0.000	29	0	N.D. d	
10) Bromomethane	0.000	94	0	N.D.	
11) Chloroethane	0.000	64	0	N.D.	
12) Acetonitrile	0.000	41	0	N.D.	
13) Acrolein	0.000	56	0	N.D.	
14) Trichlorofluoromethane	0.000	101	0	N.D.	
15) Acrylonitrile	0.000	53	0	N.D.	
16) 1,1-Dichloroethene	0.000	61	0	N.D.	
17) Methylene Chloride	0.000	49	0	N.D.	
18) Carbon Disulfide	16.930	76	56	0.0032 ppbv #	79
19) Trichlorotrifluoroethane	0.000	101	0	N.D.	
20) trans-1,2-Dichloroethy...	0.000	96	0	N.D.	
21) 1,1-Dichloroethane	0.000	63	0	N.D.	
22) Methyl tert-Butyl Ether	0.000	73	0	N.D.	
23) Chloroprene	0.000	53	0	N.D.	
24) cis-1,2-Dichloroethylene	0.000	61	0	N.D. d	
25) Bromochloromethane	0.000	128	0	N.D.	
26) Chloroform	0.000	83	0	N.D.	
27) Ethyl tert-Butyl Ether	0.000	59	0	N.D.	
28) 1,2-Dichloroethane	0.000	62	0	N.D.	
30) 1,1,1-Trichloroethane	0.000	97	0	N.D.	
31) Benzene	22.533	78	60	0.0048 ppbv #	53
32) Carbon Tetrachloride	0.000	117	0	N.D.	
33) tert-Amyl Methyl Ether	0.000	73	0	N.D.	
34) 1,2-Dichloropropane	0.000	63	0	N.D.	
35) Ethyl Acrylate	0.000	55	0	N.D.	
36) Bromodichloromethane	0.000	83	0	N.D.	
37) Trichloroethylene	0.000	130	0	N.D.	
38) Methyl Methacrylate	24.550	41	289	0.0240 ppbv #	95
39) cis-1,3-Dichloropropene	0.000	75	0	N.D.	
40) Methyl Isobutyl Ketone	0.000	43	0	N.D.	
41) trans-1,3-Dichloropropene	0.000	75	0	N.D.	
42) 1,1,2-Trichloroethane	0.000	97	0	N.D.	
44) Toluene	0.000	91	0	N.D.	
45) Dibromochloromethane	0.000	129	0	N.D.	
46) 1,2-Dibromoethane	0.000	107	0	N.D.	
47) n-Octane	0.000	43	0	N.D.	
48) Tetrachloroethylene	0.000	166	0	N.D.	
49) Chlorobenzene	0.000	112	0	N.D.	
50) Ethylbenzene	30.915	91	97	0.0066 ppbv #	42

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\L19BL\
Data File : L19BL012.D
Acq On : 12 Feb 2019 6:46 pm
Operator : MAH
Sample : 1902030-ICB1
Misc : 80 ML 8L13001,
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Feb 14 11:31:27 2019
Quant Method : C:\msdchem\1\METHODS\9020003.M
Quant Title : TO-15 by Selective Ion Analysis
QLast Update : Wed Feb 13 06:44:42 2019
Response via : Initial Calibration

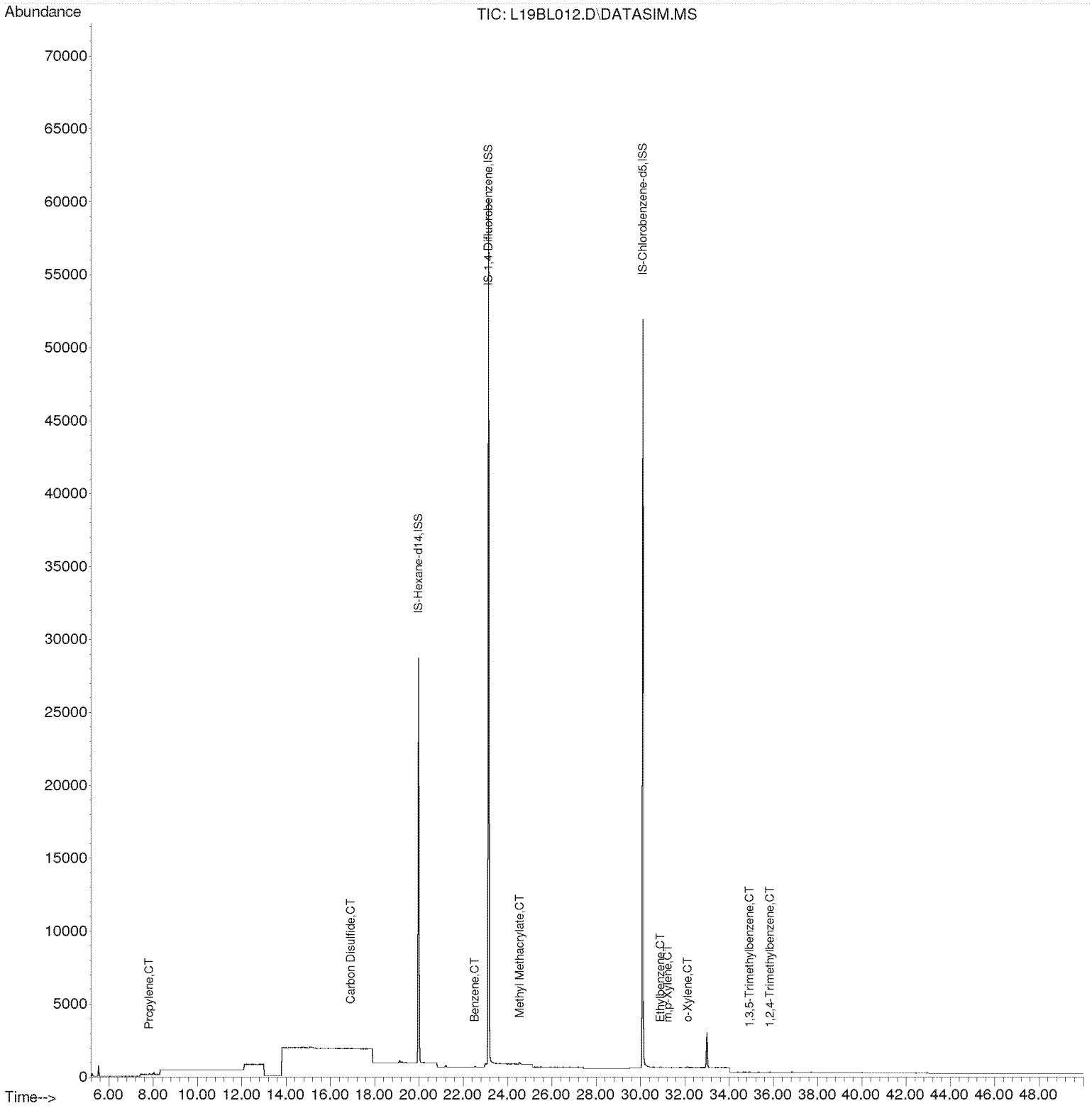
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
51) m,p-Xylene	31.240	91	56	0.0045 ppbv #	30
52) Bromoform	0.000	173	0	N.D.	
53) Styrene	0.000	104	0	N.D.	
54) 1,1,2,2-Tetrachloroethane	0.000	83	0	N.D.	
55) o-Xylene	32.137	91	104	0.0085 ppbv	90
56) 1,3,5-Trimethylbenzene	34.936	105	43	0.0033 ppbv #	30
57) 1,2,4-Trimethylbenzene	35.863	105	49	0.0043 ppbv #	32
58) m-Dichlorobenzene	0.000	146	0	N.D.	
59) p-Dichlorobenzene	0.000	146	0	N.D.	
60) o-Dichlorobenzene	0.000	146	0	N.D.	
61) 1,2,4-Trichlorobenzene	0.000	180	0	N.D.	
62) Hexachloro-1,3-butadiene	0.000	225	0	N.D.	

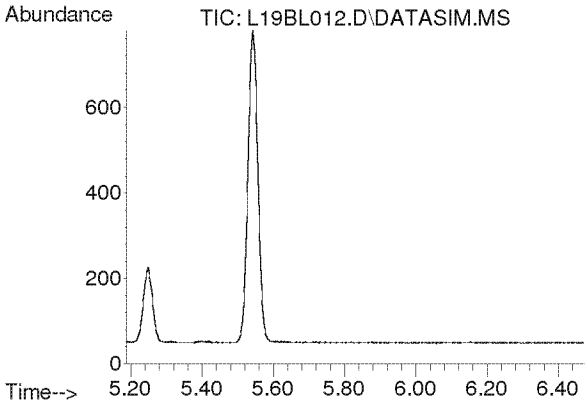
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Y:\MASS SPEC 1 DATA\L19BL\
Data File : L19BL012.D
Acq On : 12 Feb 2019 6:46 pm
Operator : MAH
Sample : 1902030-ICB1
Misc : 80 ML 8L13001,
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Feb 14 11:31:19 2019
Quant Method : C:\msdchem\1\METHODS\9020003.M
Quant Title : TO-15 by Selective Ion Analysis
QLast Update : Wed Feb 13 06:44:42 2019
Response via : Initial Calibration

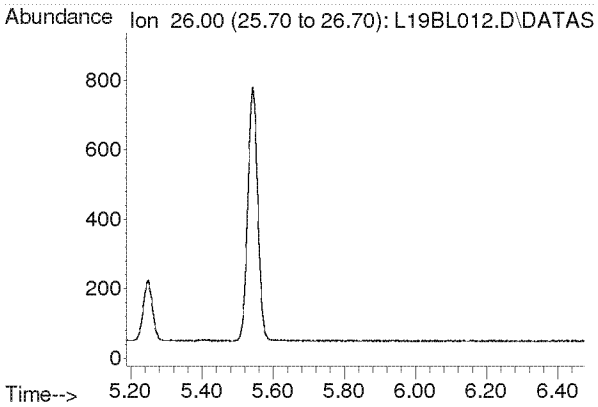


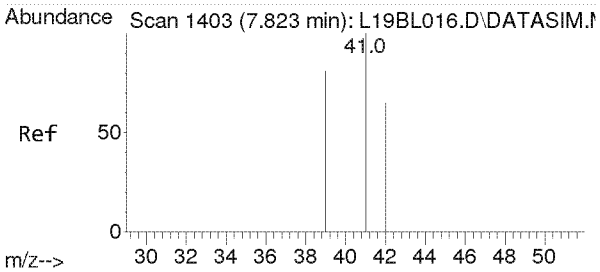


#2
Acetylene
Concen: N.D.
Expected RT: 5.40 min

Lab File: L19BL012.D
Acq: 12 Feb 2019 6:46 pm

Tgt Ion: 26

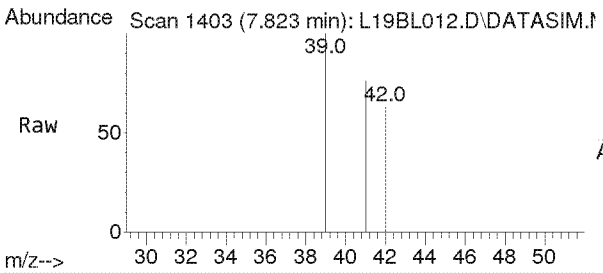


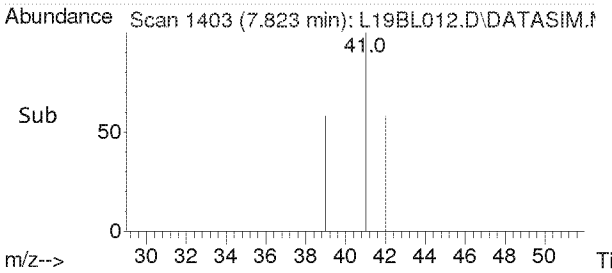


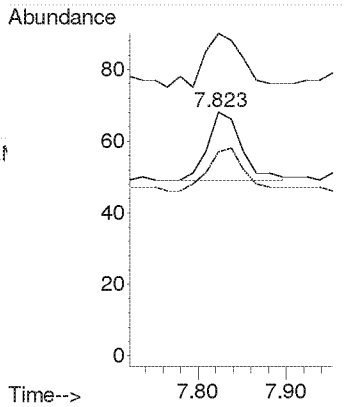
#3
Propylene
Concen: 0.010 ppbv
RT: 7.823 min Scan# 1403
Delta R.T. -0.000 min
Lab File: L19BL012.D
Acq: 12 Feb 2019 6:46 pm

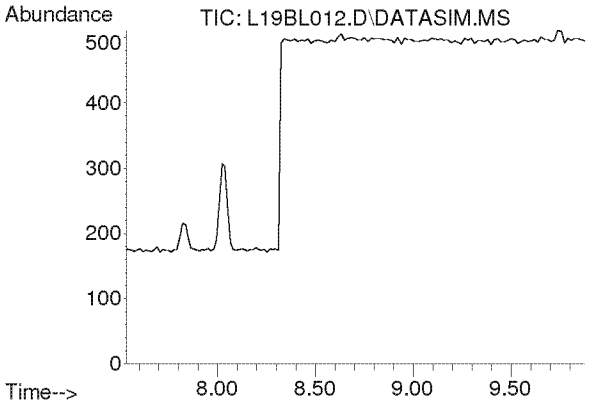
Tgt Ion: 41 Resp: 51

Ion	Ratio	Lower	Upper
41	100		
39	90.2	64.2	96.2
42	0.0	52.6	79.0#







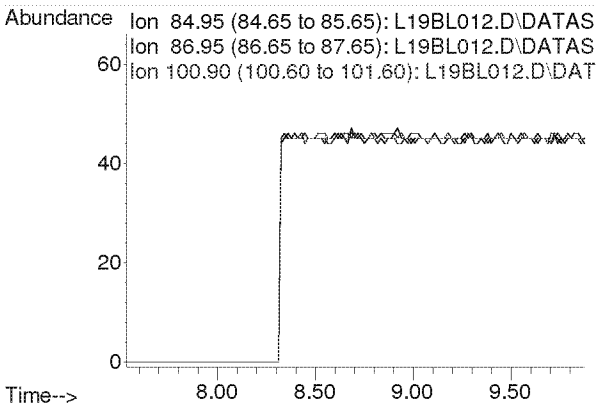


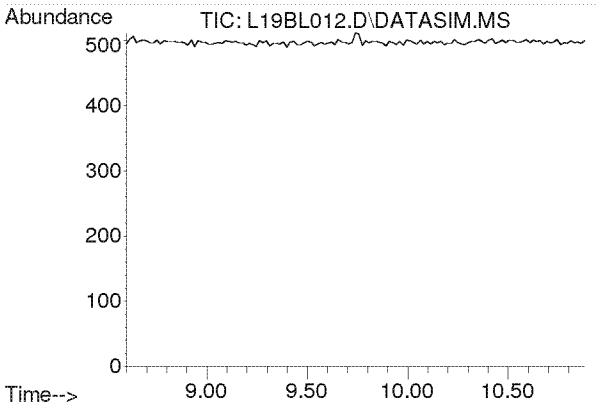
#4
Dichlorodifluoromethane
Concen: N.D.
Expected RT: 8.68 min

Lab File: L19BL012.D
Acq: 12 Feb 2019 6:46 pm

Tgt Ion: 85

Sig	Exp Ratio
85	100
87	32.5
101	9.1



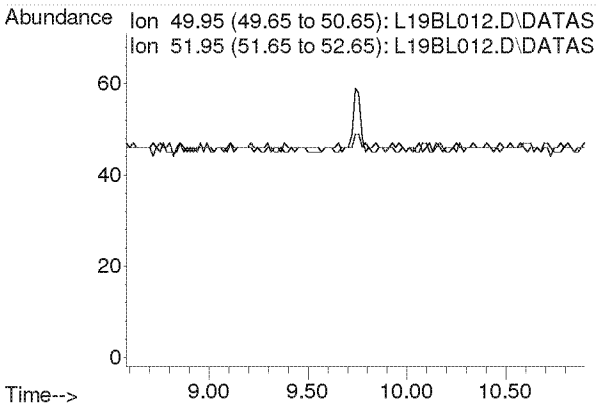


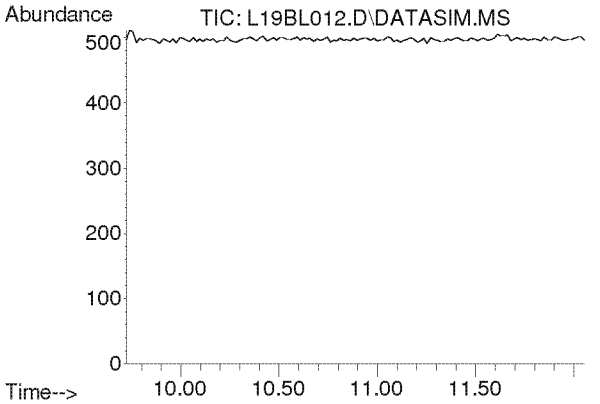
#5
Chloromethane
Concen: N.D.
Expected RT: 9.74 min

Lab File: L19BL012.D
Acq: 12 Feb 2019 6:46 pm

Tgt Ion: 50

Sig	Exp Ratio
50	100
52	32.6



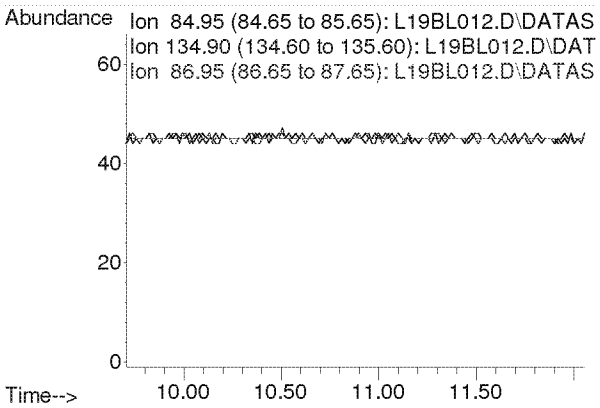


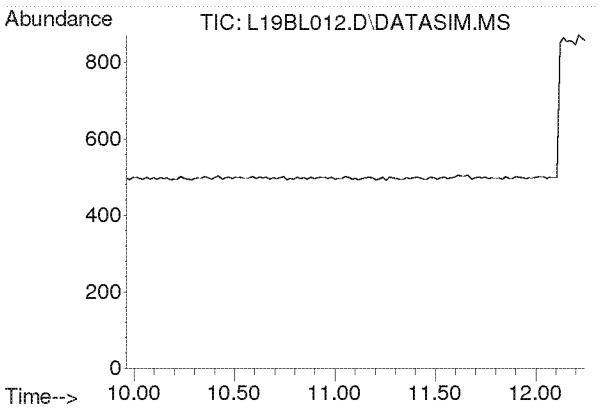
#6
Dichlorotetrafluoroethane
Concen: N.D.
Expected RT: 10.86 min

Lab File: L19BL012.D
Acq: 12 Feb 2019 6:46 pm

Tgt Ion: 85

Sig	Exp Ratio
85	100
135	79.0
87	32.4



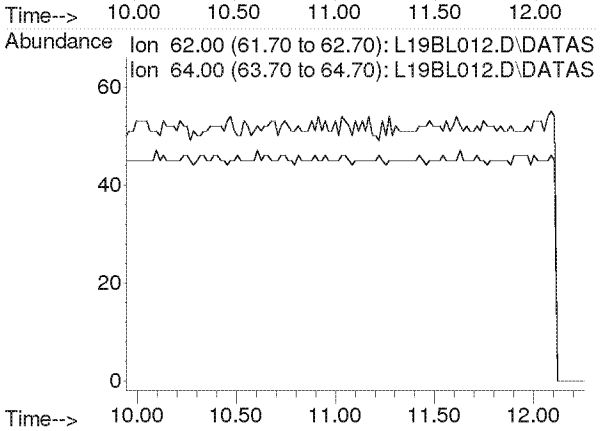


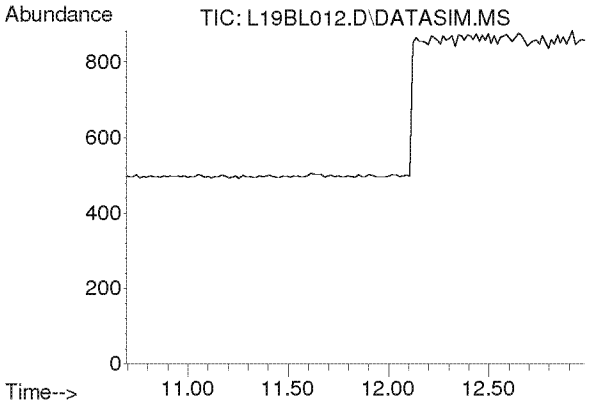
#7
Vinyl Chloride
Concen: N.D.
Expected RT: 11.10 min

Lab File: L19BL012.D
Acq: 12 Feb 2019 6:46 pm

Tgt Ion: 62

Sig	Exp Ratio
62	100
64	31.7



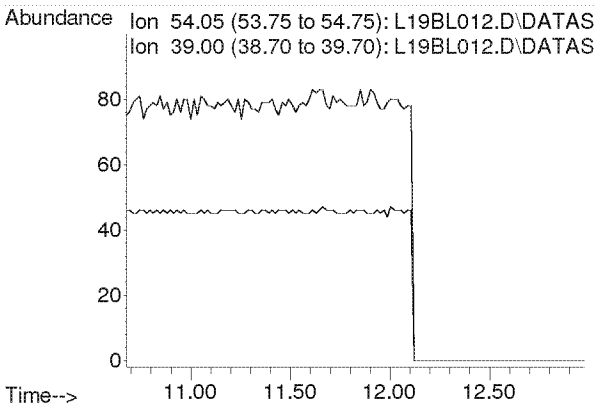


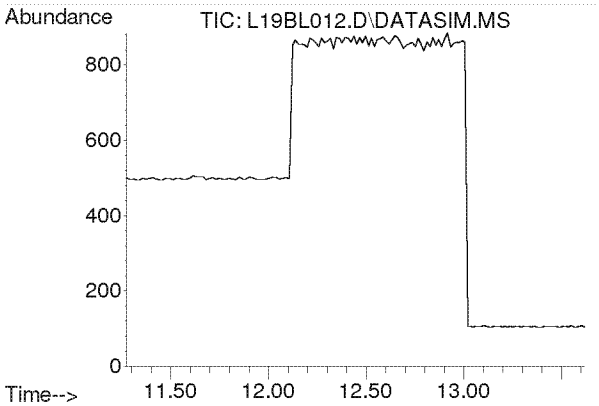
#8
1,3-Butadiene
Concen: N.D.
Expected RT: 11.78 min

Lab File: L19BL012.D
Acq: 12 Feb 2019 6:46 pm

Tgt Ion: 54

Sig	Exp Ratio
54	100
39	102.0



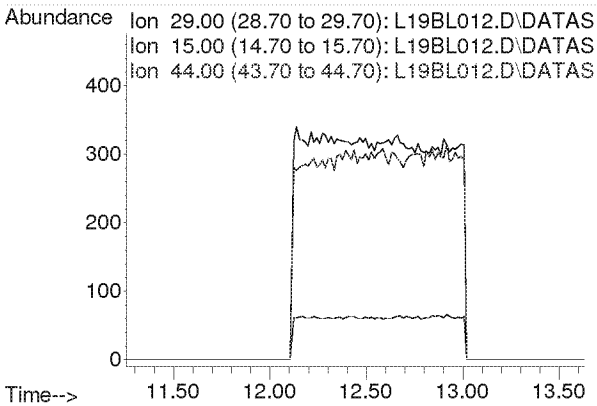


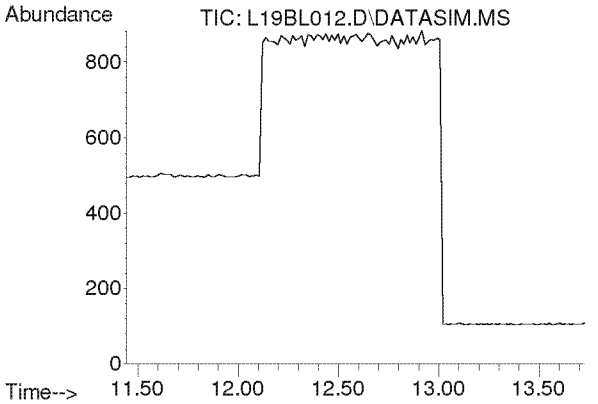
#9
Ethylene oxide
Concen: N.D.
Expected RT: 12.38 min

Lab File: L19BL012.D
Acq: 12 Feb 2019 6:46 pm

Tgt Ion: 29

Sig	Exp Ratio
29	100
15	20.0
44	81.8



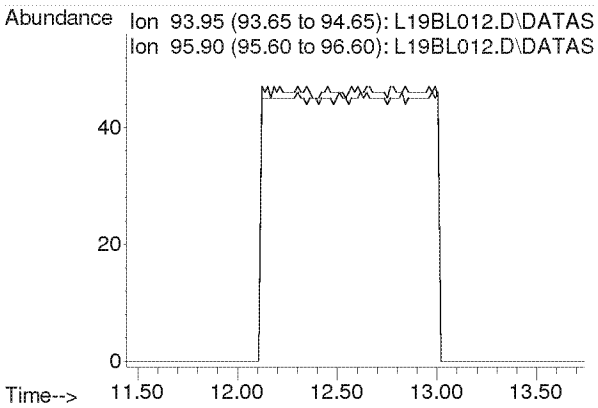


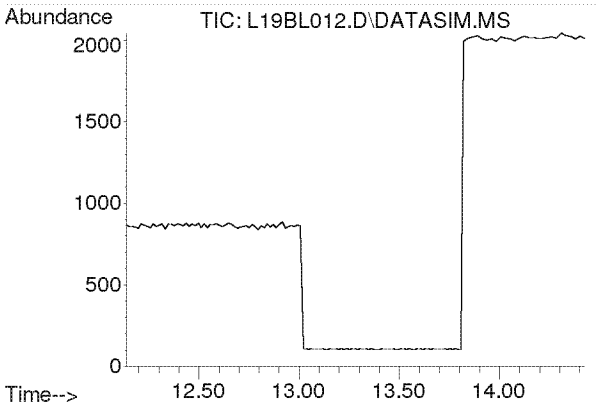
#10
Bromomethane
Concen: N.D.
Expected RT: 12.59 min

Lab File: L19BL012.D
Acq: 12 Feb 2019 6:46 pm

Tgt Ion: 94

Sig	Exp Ratio
94	100
96	94.4



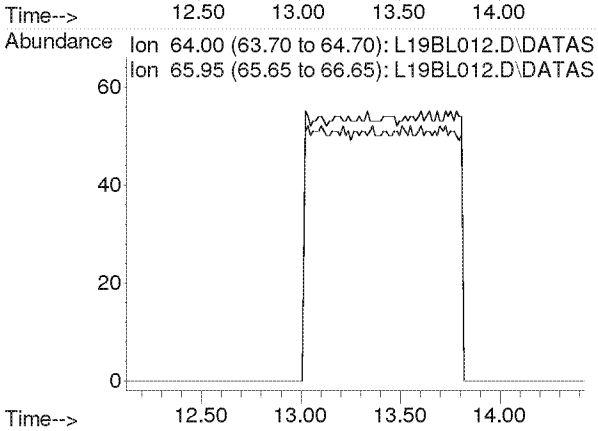


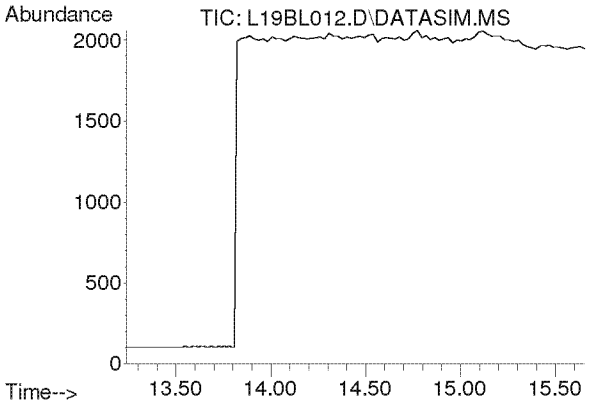
#11
Chloroethane
Concen: N.D.
Expected RT: 13.28 min

Lab File: L19BL012.D
Acq: 12 Feb 2019 6:46 pm

Tgt Ion: 64

Sig	Exp Ratio
64	100
66	32.2



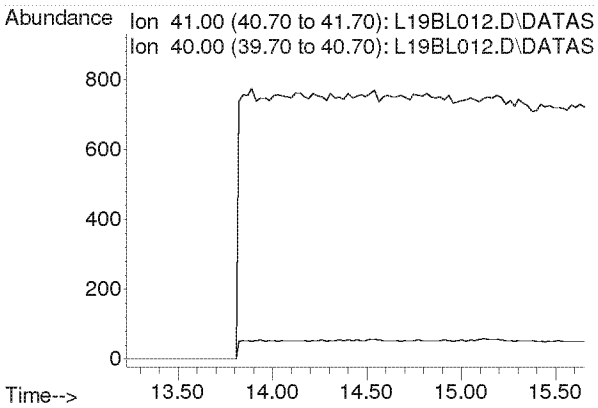


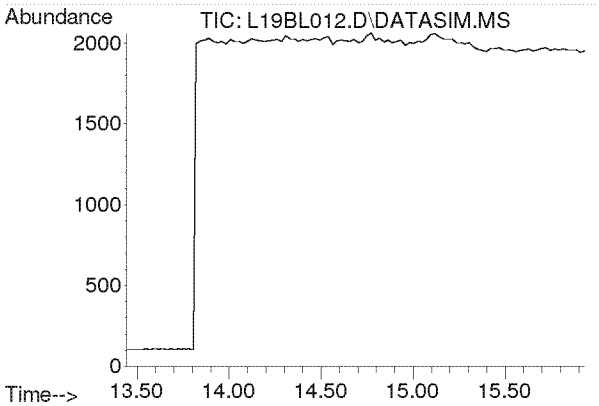
#12
Acetonitrile
Concen: N.D.
Expected RT: 14.36 min

Lab File: L19BL012.D
Acq: 12 Feb 2019 6:46 pm

Tgt Ion: 41

Sig	Exp Ratio
41	100
40	52.8



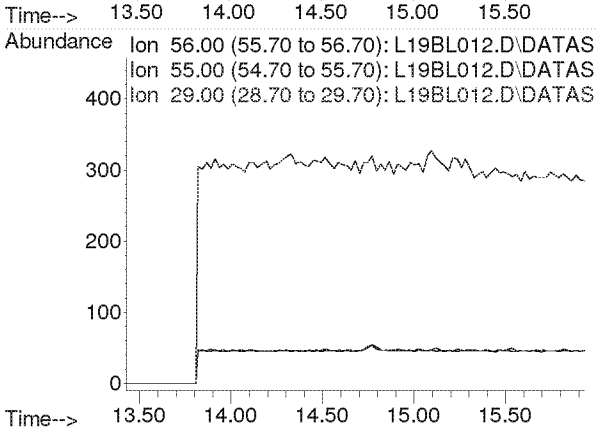


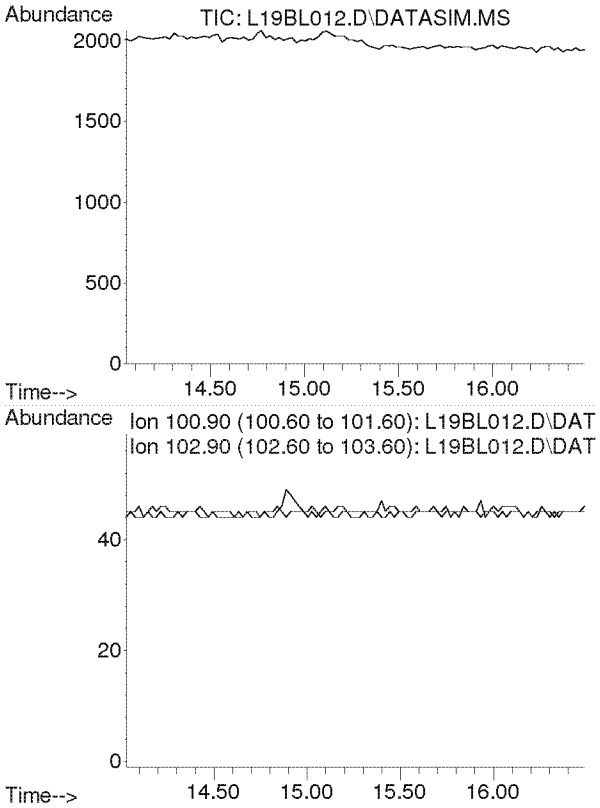
#13
Acrolein
Concen: N.D.
Expected RT: 14.63 min

Lab File: L19BL012.D
Acq: 12 Feb 2019 6:46 pm

Tgt Ion: 56

Sig	Exp Ratio
56	100
55	76.0
29	54.7



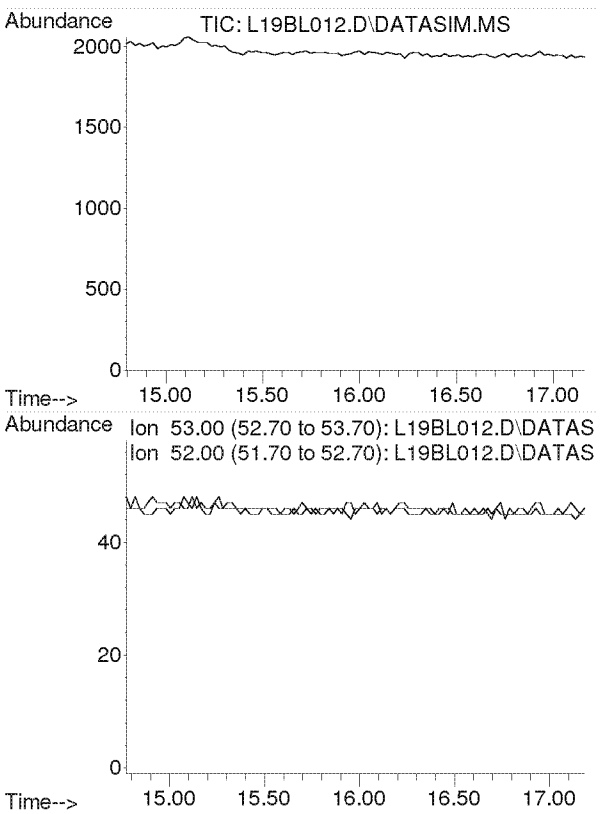


#14
Trichlorofluoromethane
Concen: N.D.
Expected RT: 15.19 min

Lab File: L19BL012.D
Acq: 12 Feb 2019 6:46 pm

Tgt Ion: 101

Sig	Exp Ratio
101	100
103	64.6

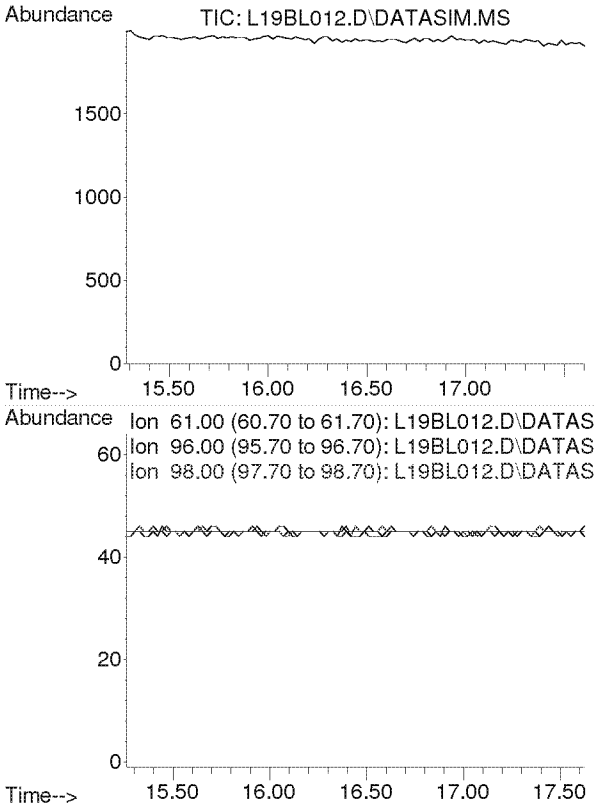


#15
Acrylonitrile
Concen: N.D.
Expected RT: 15.93 min

Lab File: L19BL012.D
Acq: 12 Feb 2019 6:46 pm

Tgt Ion: 53

Sig	Exp Ratio
53	100
52	86.9

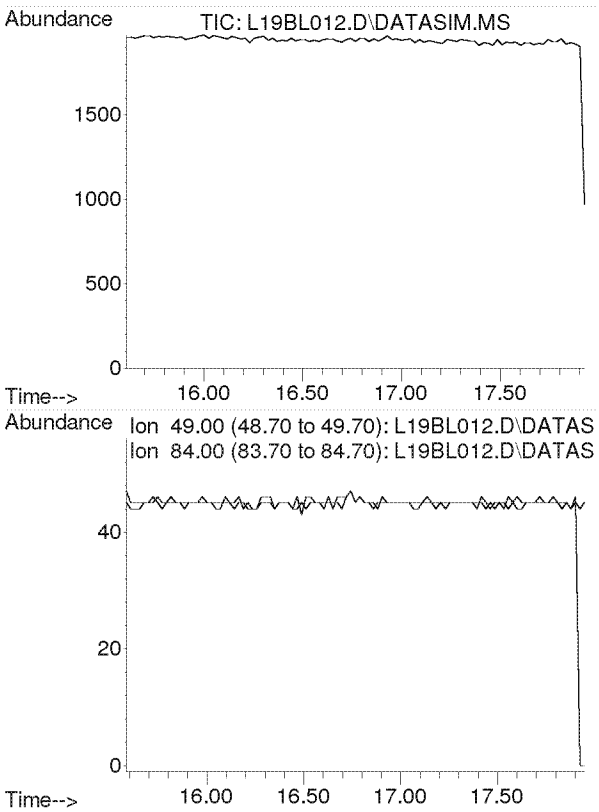


#16
1,1-Dichloroethene
Concen: N.D.
Expected RT: 16.42 min

Lab File: L19BL012.D
Acq: 12 Feb 2019 6:46 pm

Tgt Ion: 61

Sig	Exp Ratio
61	100
96	59.1
98	38.2

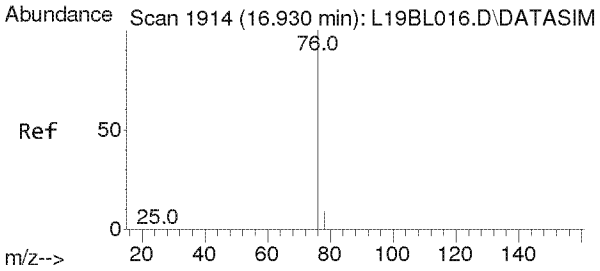


#17
Methylene Chloride
Concen: N.D.
Expected RT: 16.74 min

Lab File: L19BL012.D
Acq: 12 Feb 2019 6:46 pm

Tgt Ion: 49

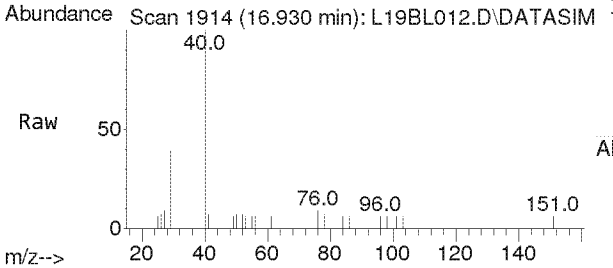
Sig	Exp Ratio
49	100
84	77.2

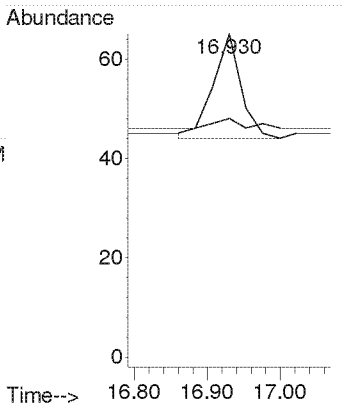


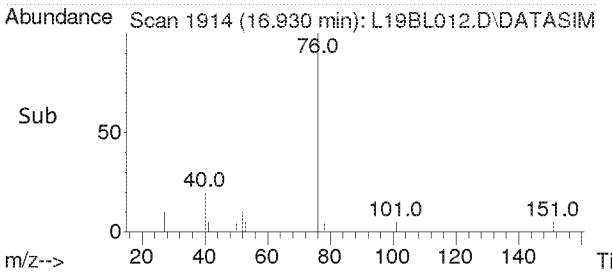
#18
Carbon Disulfide
Concen: 0.003 ppbv
RT: 16.930 min Scan# 1914
Delta R.T. -0.000 min
Lab File: L19BL012.D
Acq: 12 Feb 2019 6:46 pm

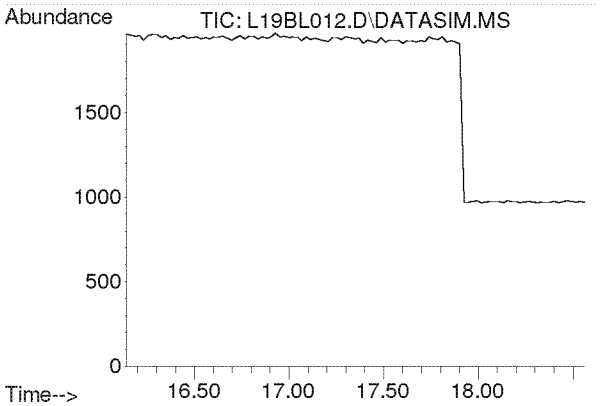
Tgt Ion: 76 Resp: 56

Ion	Ratio	Lower	Upper
76	100		
78	0.0	7.4	11.0#







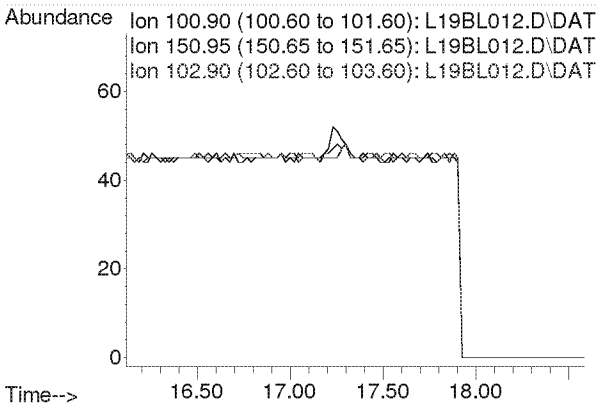


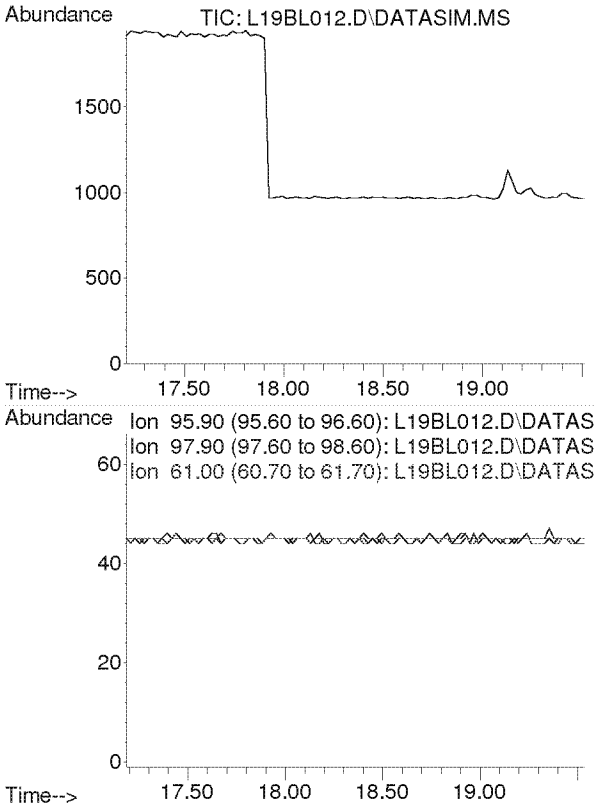
#19
Trichlorotrifluoroethane
Concen: N.D.
Expected RT: 17.28 min

Lab File: L19BL012.D
Acq: 12 Feb 2019 6:46 pm

Tgt Ion: 101

Sig	Exp Ratio
101	100
151	94.8
103	63.9



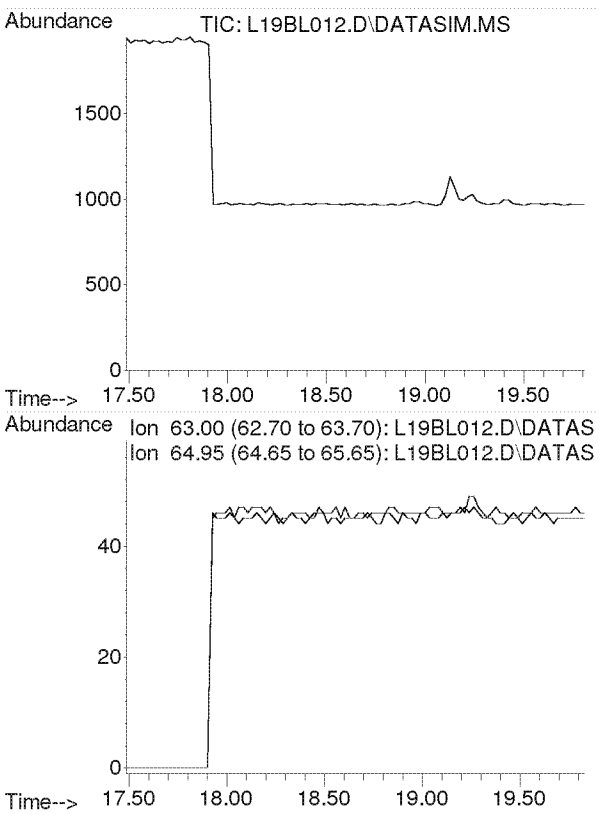


#20
trans-1,2-Dichloroethylene
Concen: N.D.
Expected RT: 18.34 min

Lab File: L19BL012.D
Acq: 12 Feb 2019 6:46 pm

Tgt Ion: 96

Sig	Exp Ratio
96	100
98	64.4
61	153.6

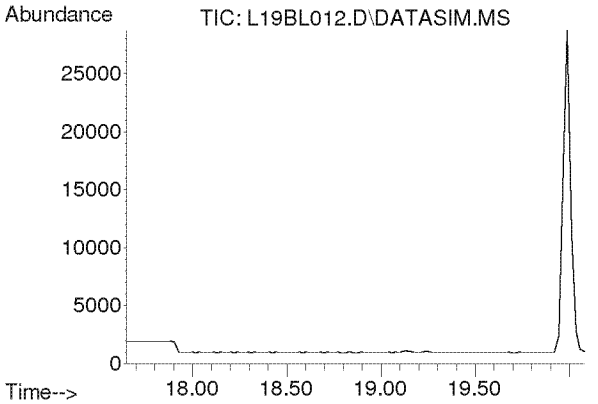


#21
1,1-Dichloroethane
Concen: N.D.
Expected RT: 18.63 min

Lab File: L19BL012.D
Acq: 12 Feb 2019 6:46 pm

Tgt Ion: 63

Sig	Exp Ratio
63	100
65	31.7

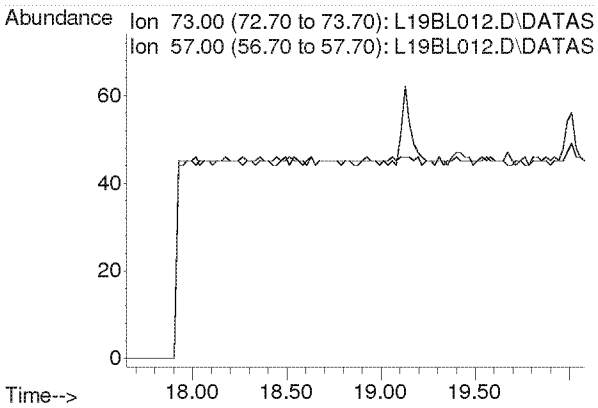


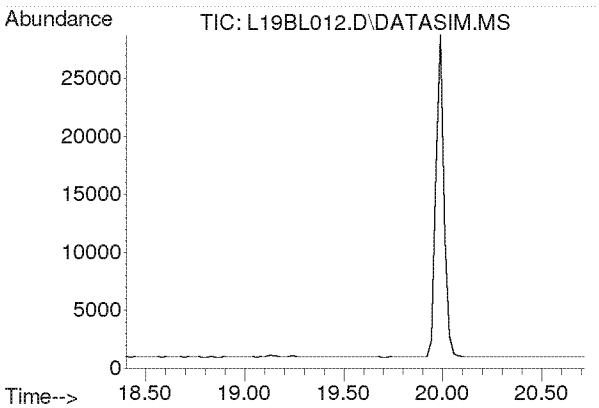
#22
Methyl tert-Butyl Ether
Concen: N.D.
Expected RT: 18.79 min

Lab File: L19BL012.D
Acq: 12 Feb 2019 6:46 pm

Tgt Ion: 73

Sig	Exp Ratio
73	100
57	22.5



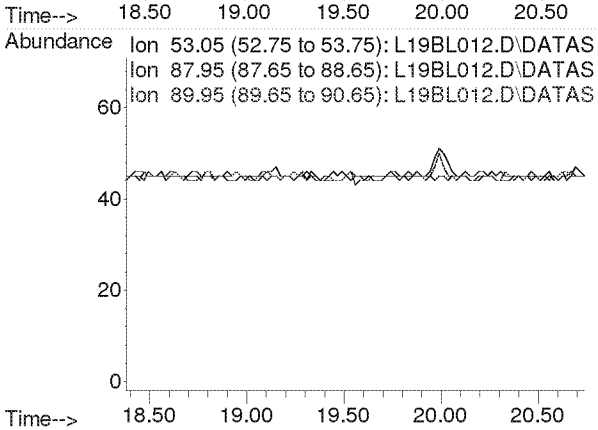


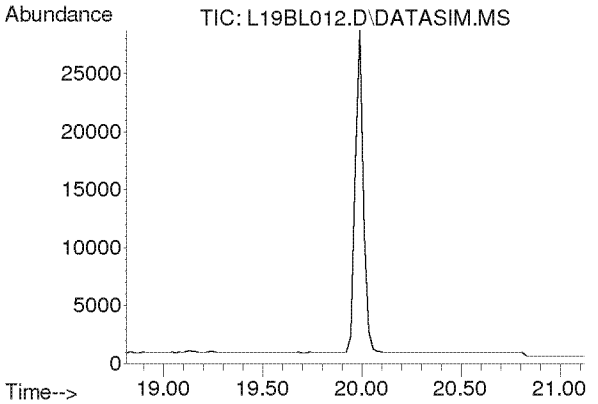
#23
Chloroprene
Concen: N.D.
Expected RT: 19.54 min

Lab File: L19BL012.D
Acq: 12 Feb 2019 6:46 pm

Tgt Ion: 53

Sig	Exp Ratio
53	100
88	53.3
90	17.4



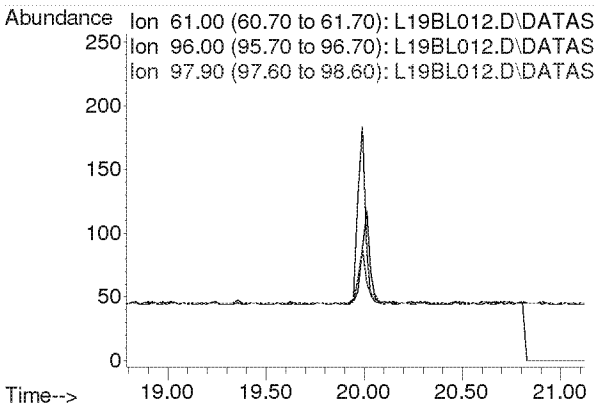


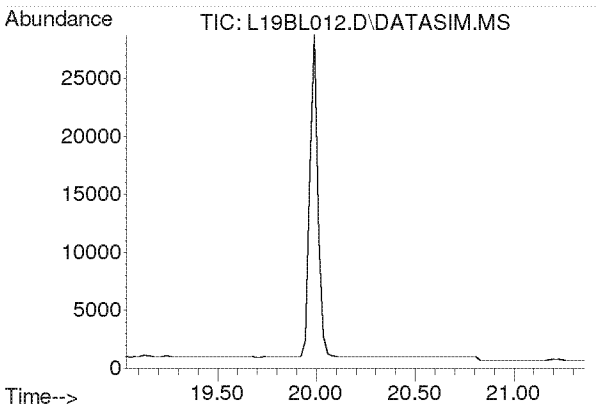
#24
cis-1,2-Dichloroethylene
Concen: N.D.
Expected RT: 19.95 min

Lab File: L19BL012.D
Acq: 12 Feb 2019 6:46 pm

Tgt Ion: 61

Sig	Exp Ratio
61	100
96	73.8
98	47.0



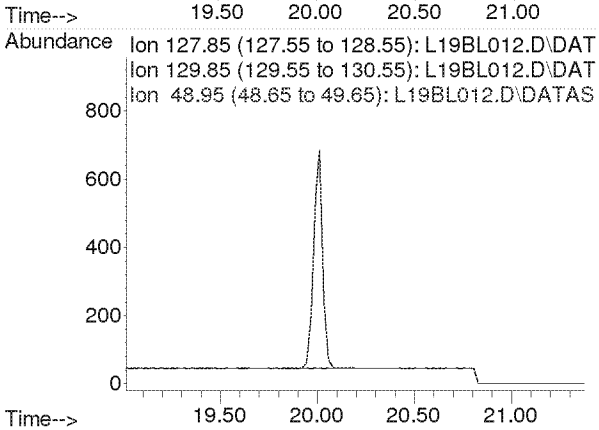


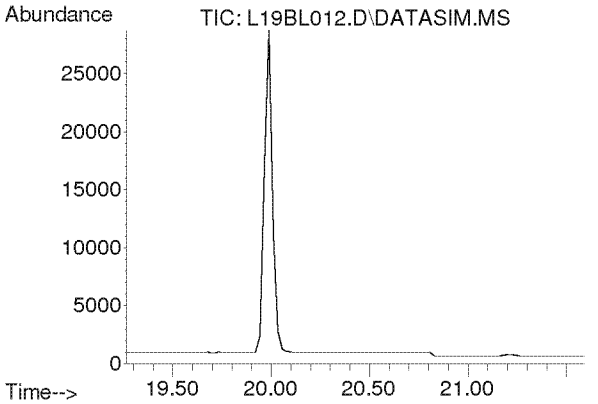
#25
Bromochloromethane
Concen: N.D.
Expected RT: 20.17 min

Lab File: L19BL012.D
Acq: 12 Feb 2019 6:46 pm

Tgt Ion: 128

Sig	Exp Ratio
128	100
130	129.1
49	160.4



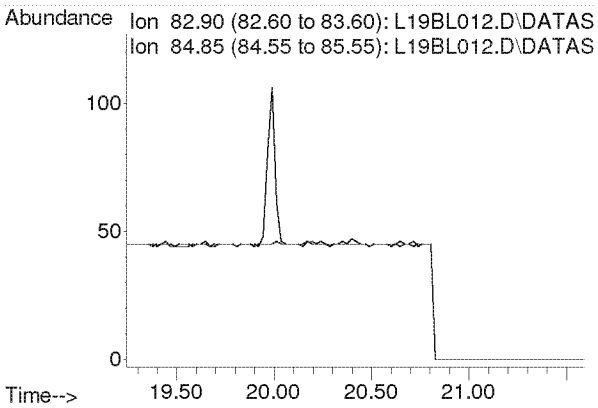


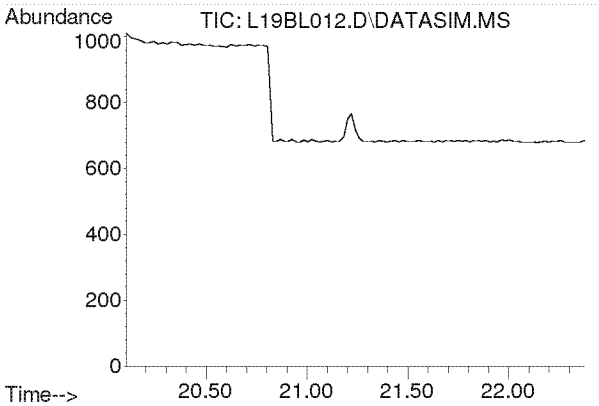
#26
Chloroform
Concen: N.D.
Expected RT: 20.40 min

Lab File: L19BL012.D
Acq: 12 Feb 2019 6:46 pm

Tgt Ion: 83

Sig	Exp Ratio
83	100
85	64.4



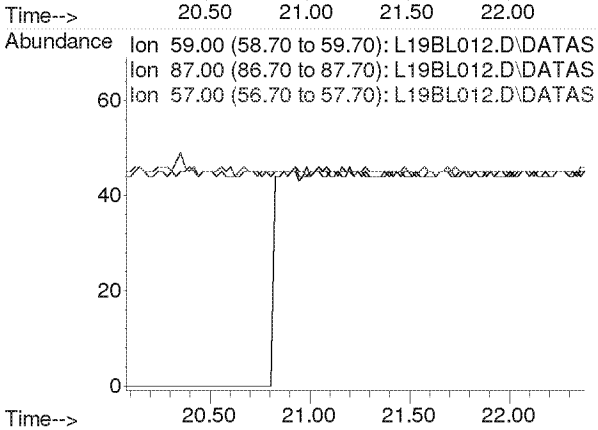


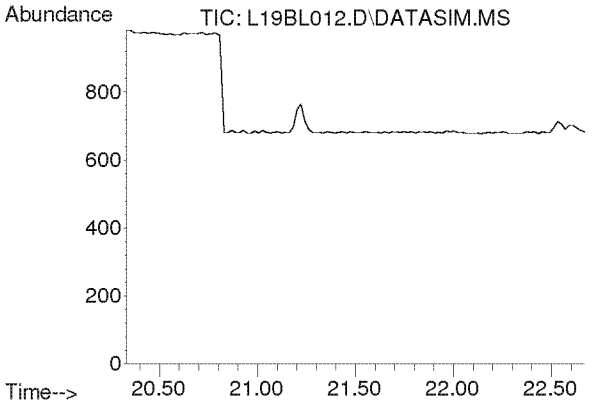
#27
Ethyl tert-Butyl Ether
Concen: N.D.
Expected RT: 21.18 min

Lab File: L19BL012.D
Acq: 12 Feb 2019 6:46 pm

Tgt Ion: 59

Sig	Exp Ratio
59	100
87	39.4
57	33.2



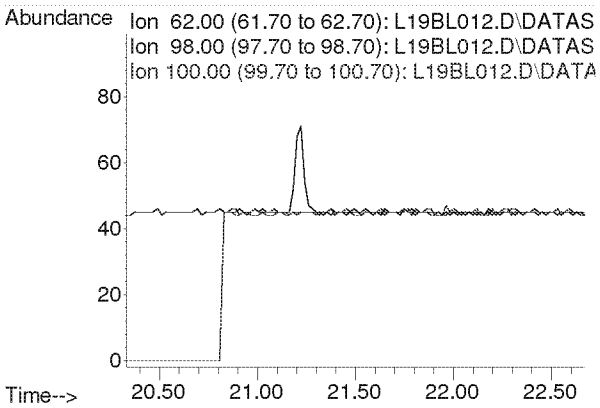


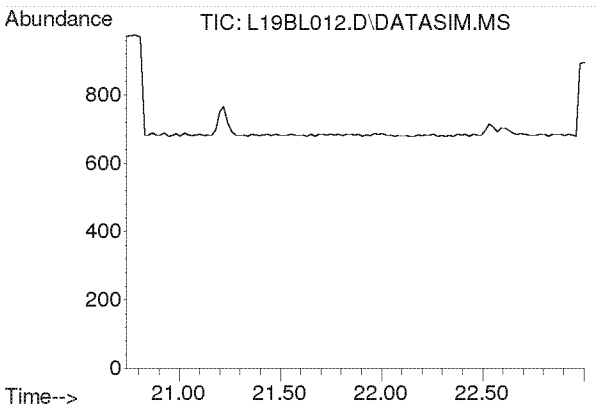
#28
1,2-Dichloroethane
Concen: N.D.
Expected RT: 21.48 min

Lab File: L19BL012.D
Acq: 12 Feb 2019 6:46 pm

Tgt Ion: 62

Sig	Exp Ratio
62	100
98	6.3
100	4.0



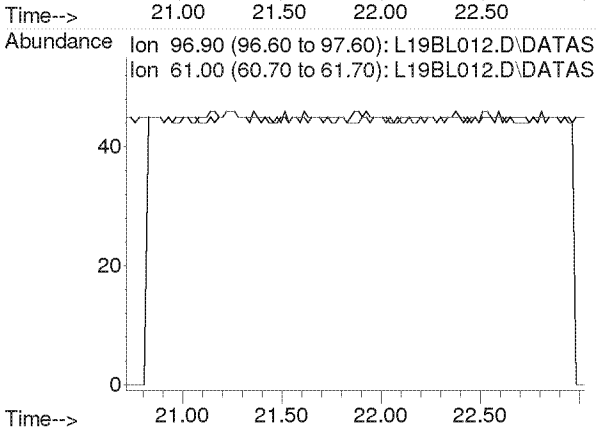


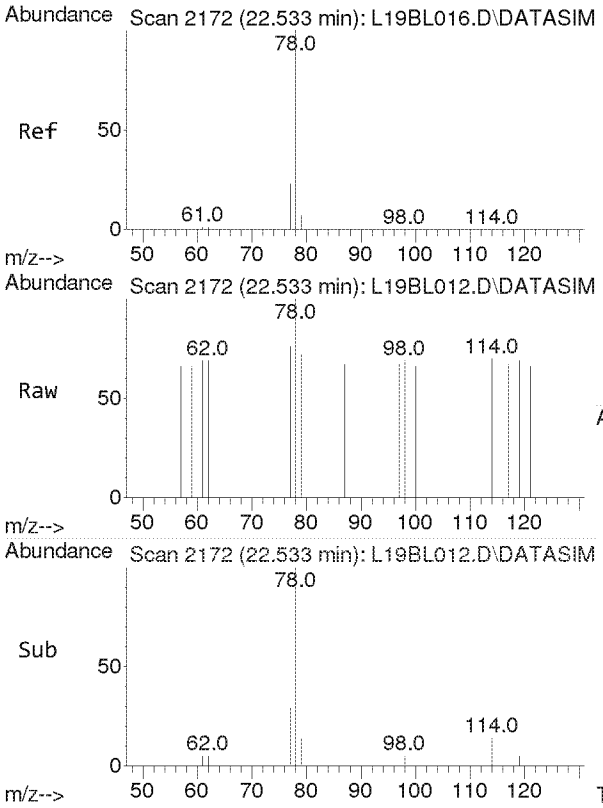
#30
1,1,1-Trichloroethane
Concen: N.D.
Expected RT: 21.87 min

Lab File: L19BL012.D
Acq: 12 Feb 2019 6:46 pm

Tgt Ion: 97

Sig	Exp Ratio
97	100
61	62.1

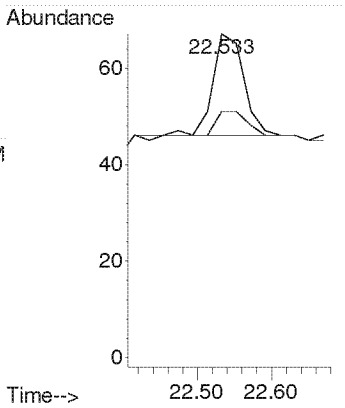


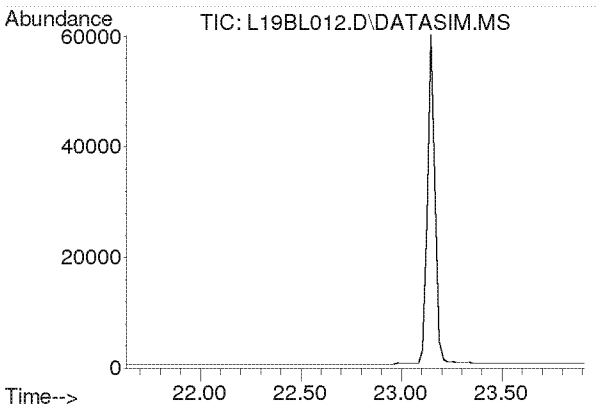


#31
Benzene
Concen: 0.005 ppbv
RT: 22.533 min Scan# 2172
Delta R.T. -0.000 min
Lab File: L19BL012.D
Acq: 12 Feb 2019 6:46 pm

Tgt Ion: 78 Resp: 60

Ion	Ratio	Lower	Upper
78	100		
77	0.0	18.2	27.4#



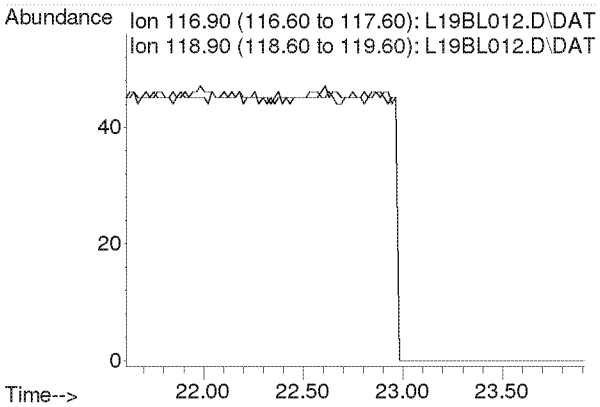


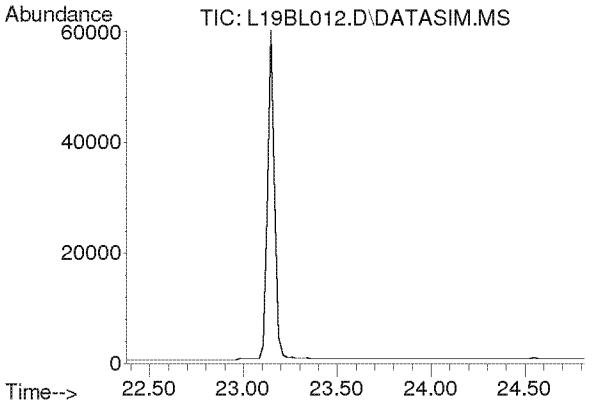
#32
Carbon Tetrachloride
Concen: N.D.
Expected RT: 22.77 min

Lab File: L19BL012.D
Acq: 12 Feb 2019 6:46 pm

Tgt Ion: 117

Sig	Exp Ratio
117	100
119	96.3



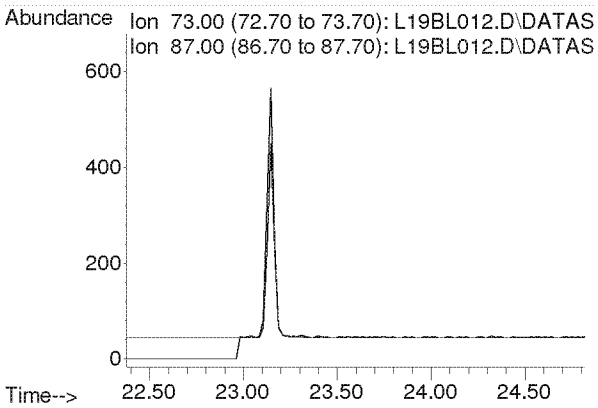


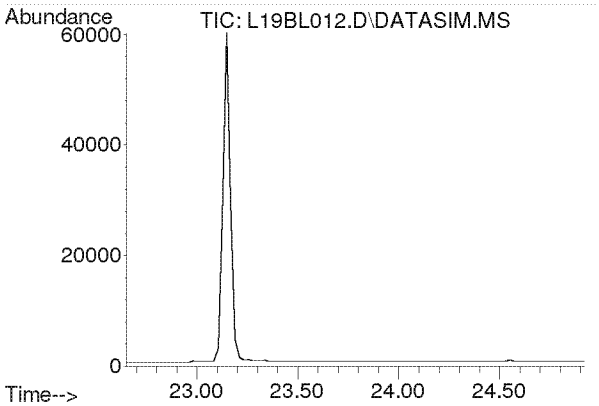
#33
tert-Amyl Methyl Ether
Concen: N.D.
Expected RT: 23.52 min

Lab File: L19BL012.D
Acq: 12 Feb 2019 6:46 pm

Tgt Ion: 73

Sig	Exp Ratio
73	100
87	25.1



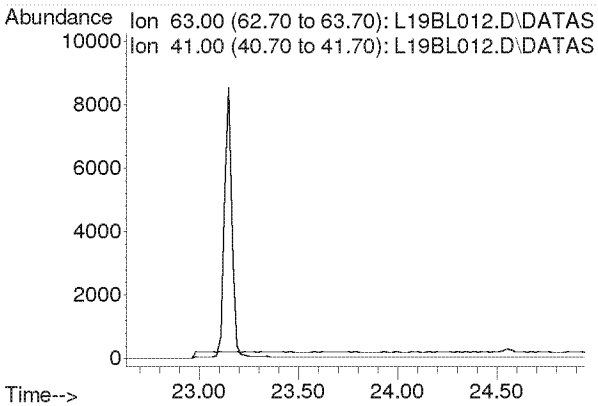


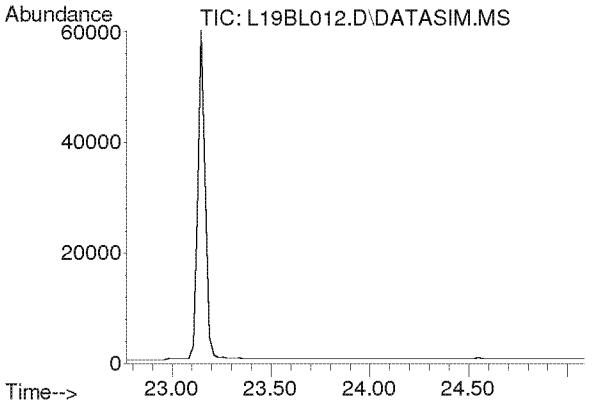
#34
1,2-Dichloropropane
Concen: N.D.
Expected RT: 23.79 min

Lab File: L19BL012.D
Acq: 12 Feb 2019 6:46 pm

Tgt Ion: 63

Sig	Exp Ratio
63	100
41	219.9



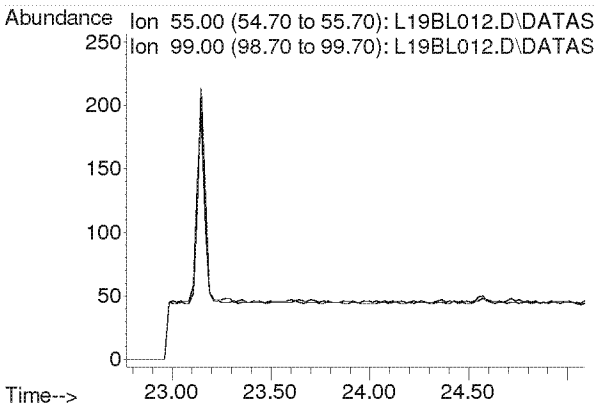


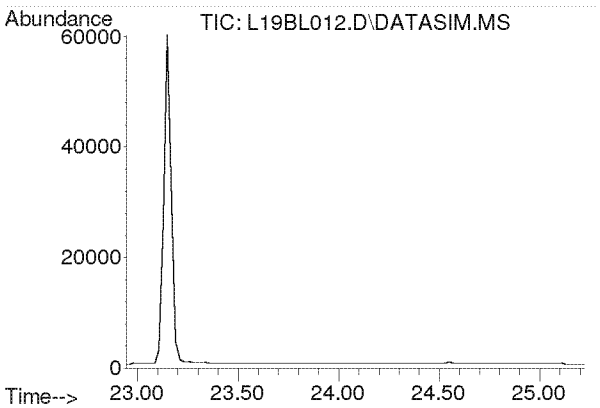
#35
Ethyl Acrylate
Concen: N.D.
Expected RT: 23.89 min

Lab File: L19BL012.D
Acq: 12 Feb 2019 6:46 pm

Tgt Ion: 55

Sig	Exp Ratio
55	100
99	6.3



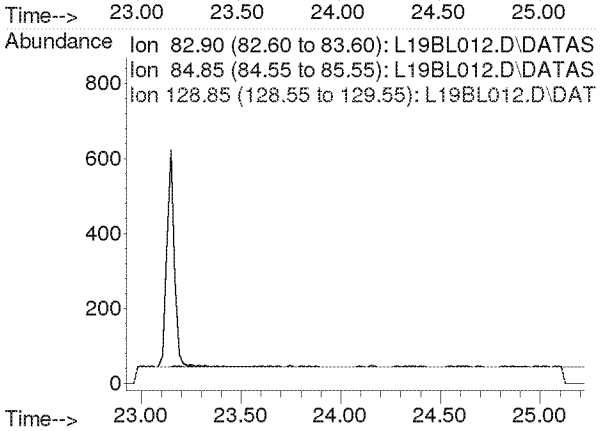


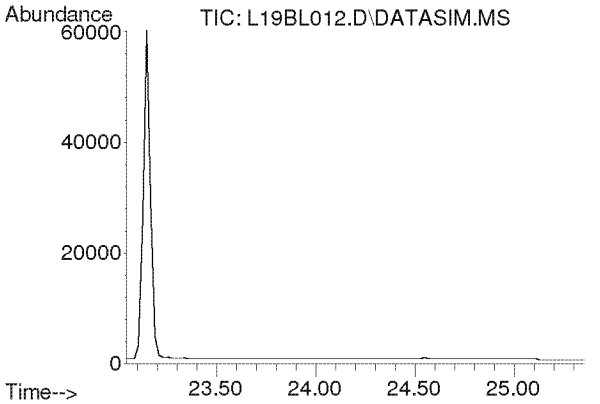
#36
Bromodichloromethane
Concen: N.D.
Expected RT: 24.08 min

Lab File: L19BL012.D
Acq: 12 Feb 2019 6:46 pm

Tgt Ion: 83

Sig	Exp Ratio
83	100
85	63.7
129	12.4



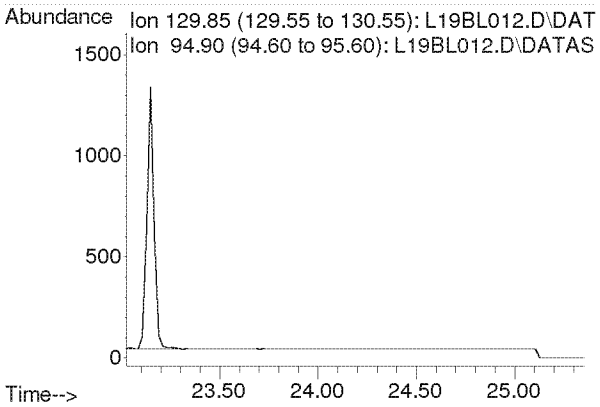


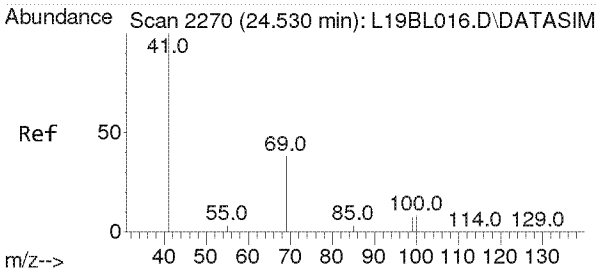
#37
Trichloroethylene
Concen: N.D.
Expected RT: 24.18 min

Lab File: L19BL012.D
Acq: 12 Feb 2019 6:46 pm

Tgt Ion: 130

Sig	Exp Ratio
130	100
95	106.1

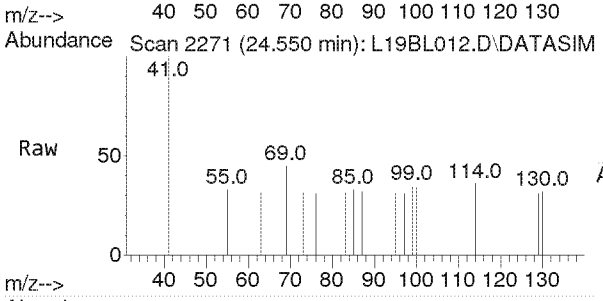


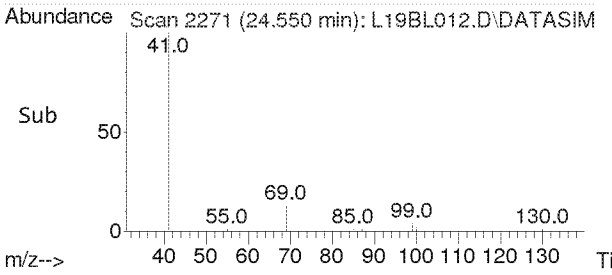


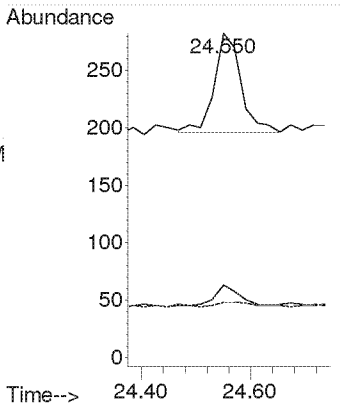
#38
Methyl Methacrylate
Concen: 0.024 ppbv
RT: 24.550 min Scan# 2271
Delta R.T. 0.021 min
Lab File: L19BL012.D
Acq: 12 Feb 2019 6:46 pm

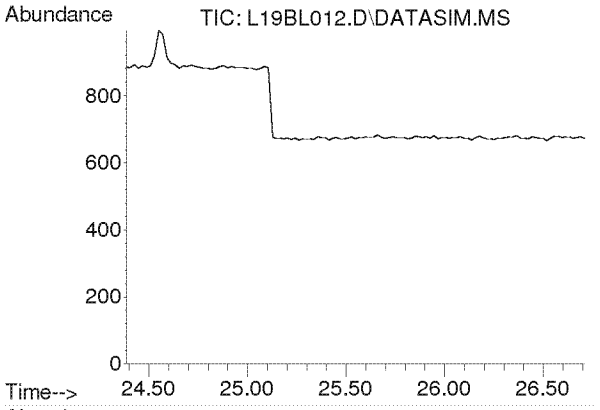
Tgt Ion: 41 Resp: 289

Ion	Ratio	Lower	Upper
41	100		
69	22.1	16.8	25.2
100	0.0	4.5	6.7#







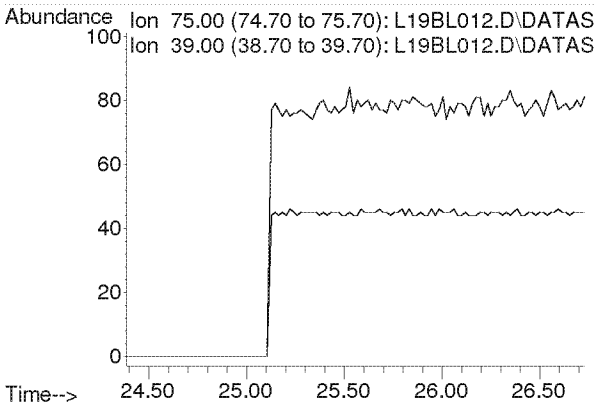


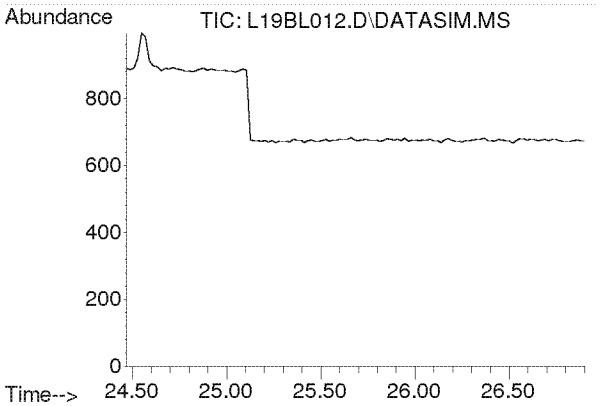
#39
cis-1,3-Dichloropropene
Concen: N.D.
Expected RT: 25.53 min

Lab File: L19BL012.D
Acq: 12 Feb 2019 6:46 pm

Tgt Ion: 75

Sig	Exp Ratio
75	100
39	54.2



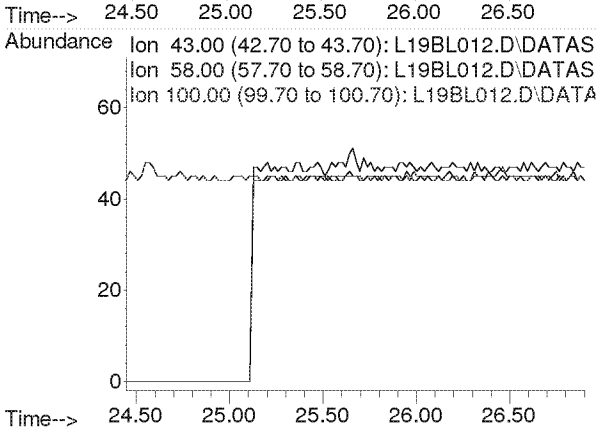


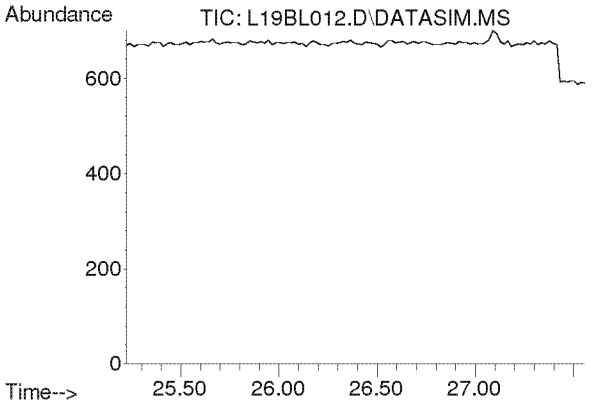
#40
Methyl Isobutyl Ketone
Concen: N.D.
Expected RT: 25.60 min

Lab File: L19BL012.D
Acq: 12 Feb 2019 6:46 pm

Tgt Ion: 43

Sig	Exp Ratio
43	100
58	35.0
100	8.7



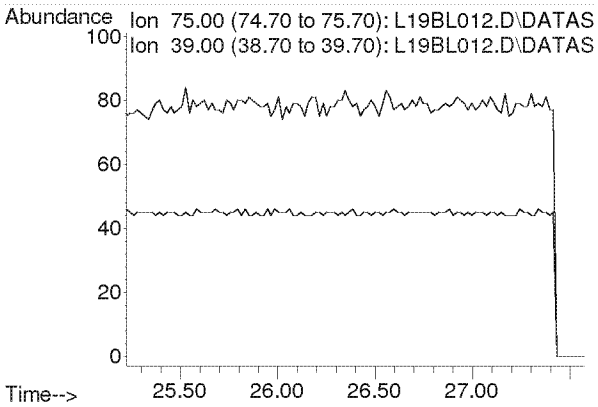


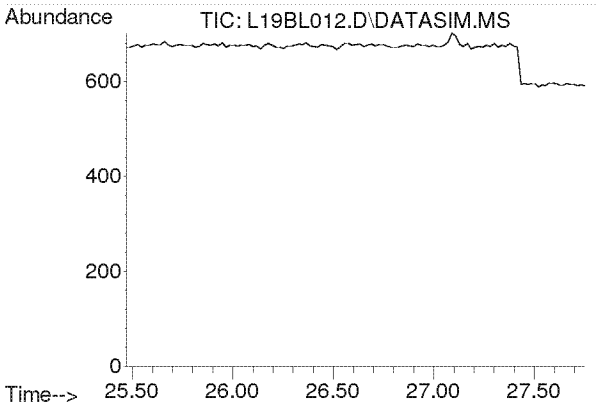
#41
trans-1,3-Dichloropropene
Concen: N.D.
Expected RT: 26.37 min

Lab File: L19BL012.D
Acq: 12 Feb 2019 6:46 pm

Tgt Ion: 75

Sig	Exp Ratio
75	100
39	53.6



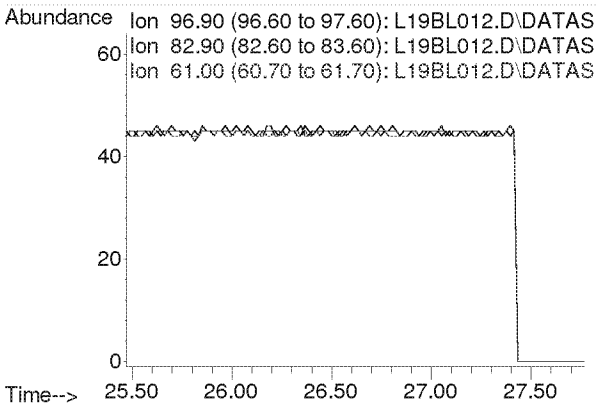


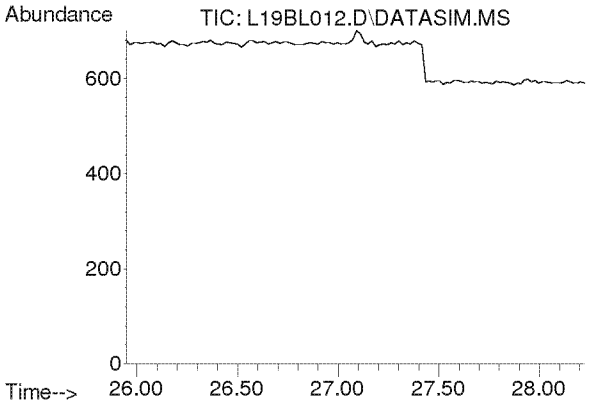
#42
1,1,2-Trichloroethane
Concen: N.D.
Expected RT: 26.62 min

Lab File: L19BL012.D
Acq: 12 Feb 2019 6:46 pm

Tgt Ion: 97

Sig	Exp Ratio
97	100
83	94.2
61	62.2



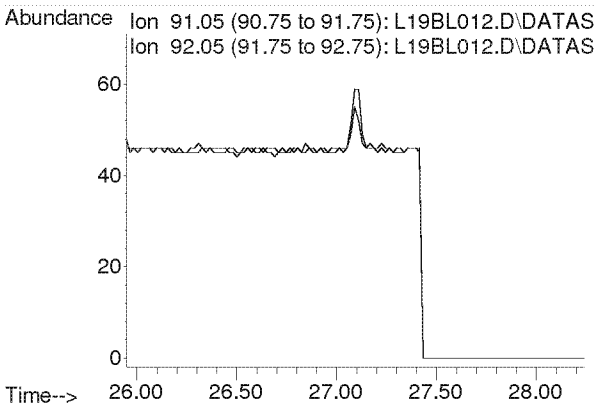


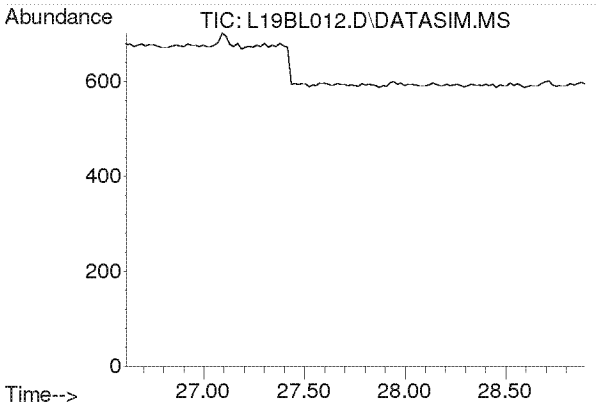
#44
Toluene
Concen: N.D.
Expected RT: 27.09 min

Lab File: L19BL012.D
Acq: 12 Feb 2019 6:46 pm

Tgt Ion: 91

Sig	Exp Ratio
91	100
92	52.5



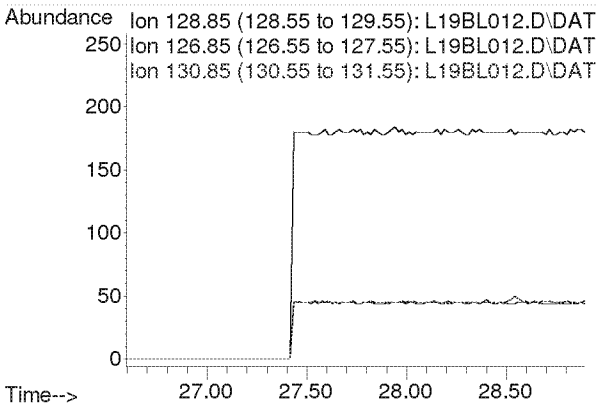


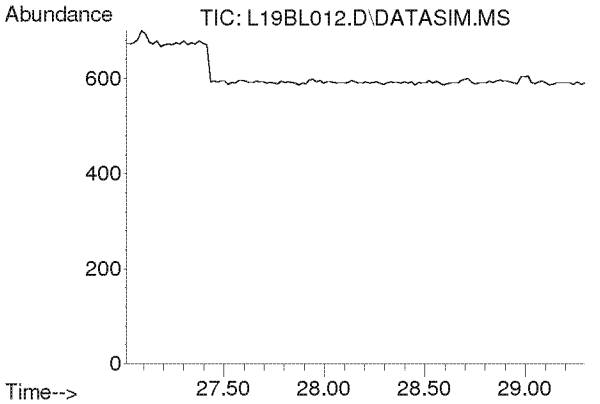
#45
Dibromochloromethane
Concen: N.D.
Expected RT: 27.75 min

Lab File: L19BL012.D
Acq: 12 Feb 2019 6:46 pm

Tgt Ion: 129

Sig	Exp Ratio
129	100
127	19.3
131	6.0



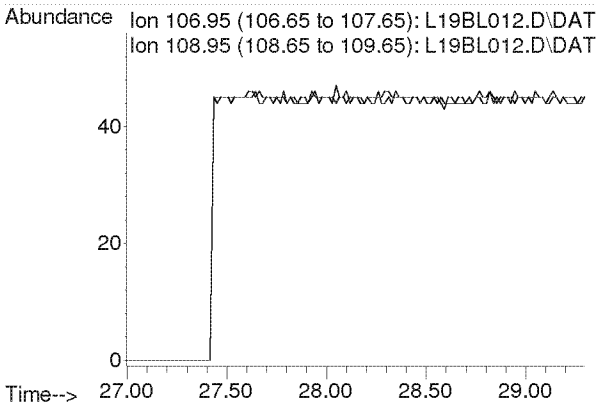


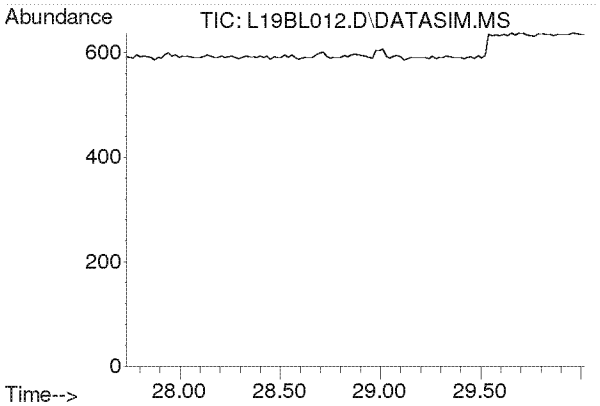
#46
1,2-Dibromoethane
Concen: N.D.
Expected RT: 28.15 min

Lab File: L19BL012.D
Acq: 12 Feb 2019 6:46 pm

Tgt Ion: 107

Sig	Exp Ratio
107	100
109	94.2



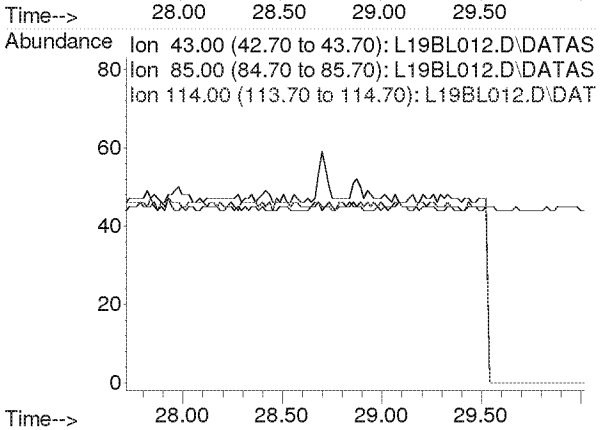


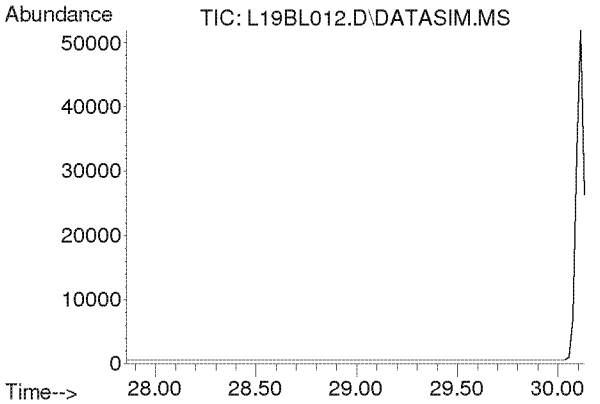
#47
n-Octane
Concen: N.D.
Expected RT: 28.87 min

Lab File: L19BL012.D
Acq: 12 Feb 2019 6:46 pm

Tgt Ion: 43

Sig	Exp Ratio
43	100
85	41.3
114	2.8



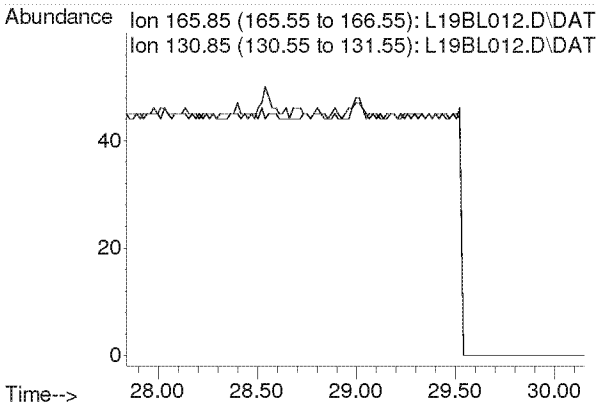


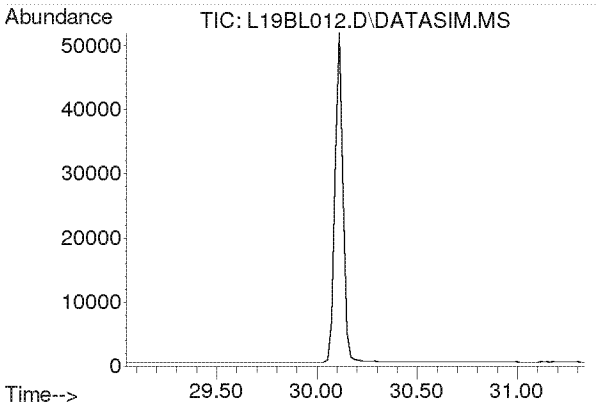
#48
Tetrachloroethylene
Concen: N.D.
Expected RT: 29.00 min

Lab File: L19BL012.D
Acq: 12 Feb 2019 6:46 pm

Tgt Ion: 166

Sig	Exp Ratio
166	100
131	76.9



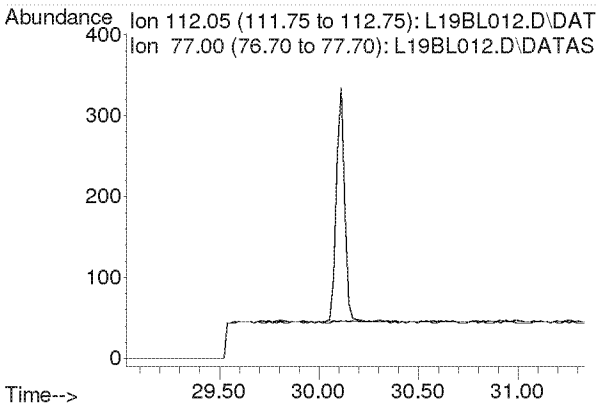


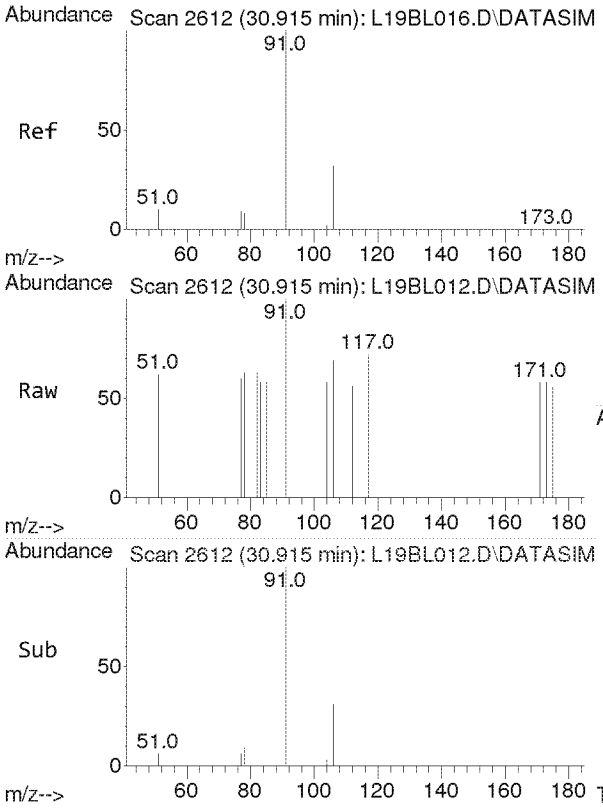
#49
Chlorobenzene
Concen: N.D.
Expected RT: 30.19 min

Lab File: L19BL012.D
Acq: 12 Feb 2019 6:46 pm

Tgt Ion: 112

Sig	Exp Ratio
112	100
77	59.7

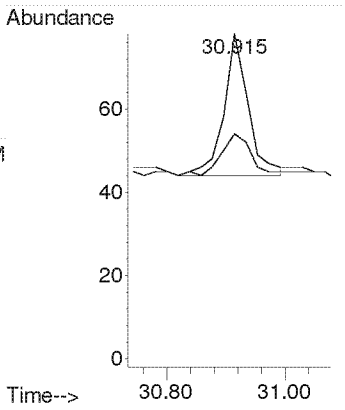


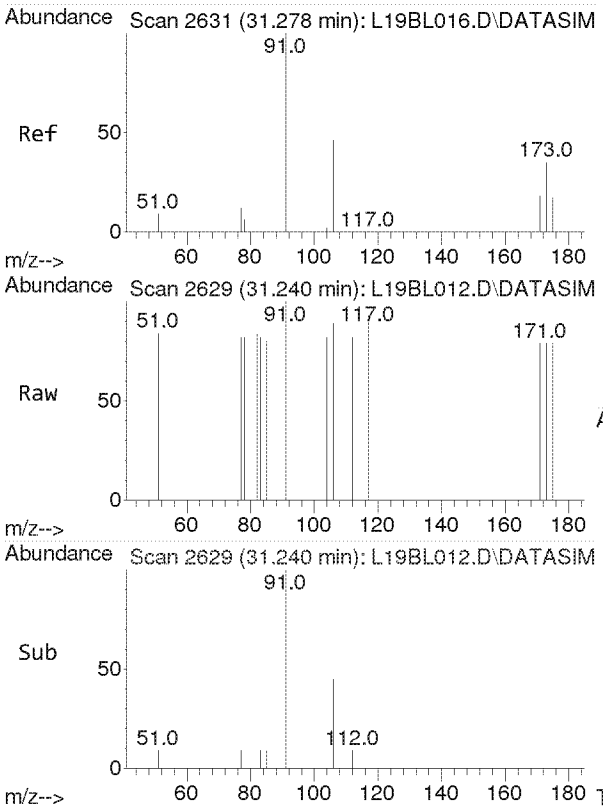


#50
Ethylbenzene
Concen: 0.007 ppbv
RT: 30.915 min Scan# 2612
Delta R.T. -0.000 min
Lab File: L19BL012.D
Acq: 12 Feb 2019 6:46 pm

Tgt Ion: 91 Resp: 97

Ion	Ratio	Lower	Upper
91	100		
106	0.0	26.0	39.0#

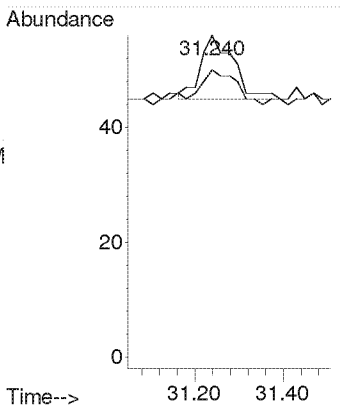


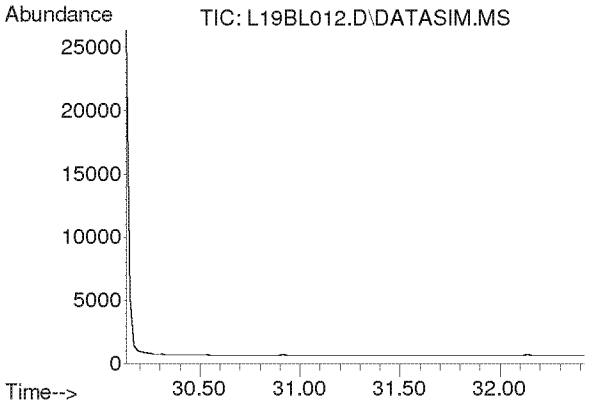


#51
m,p-Xylene
Concen: 0.005 ppbv
RT: 31.240 min Scan# 2629
Delta R.T. -0.038 min
Lab File: L19BL012.D
Acq: 12 Feb 2019 6:46 pm

Tgt Ion: 91 Resp: 56

Ion	Ratio	Lower	Upper
91	100		
106	0.0	37.3	55.9#



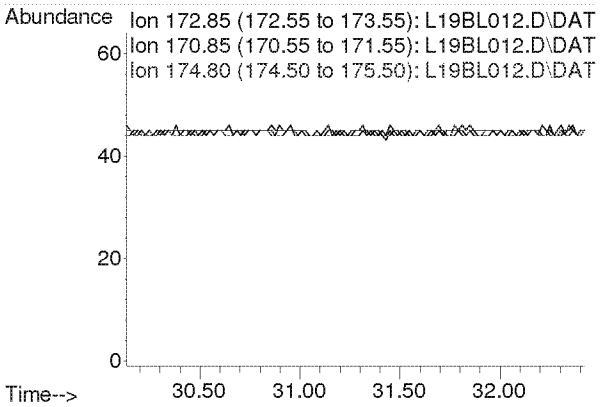


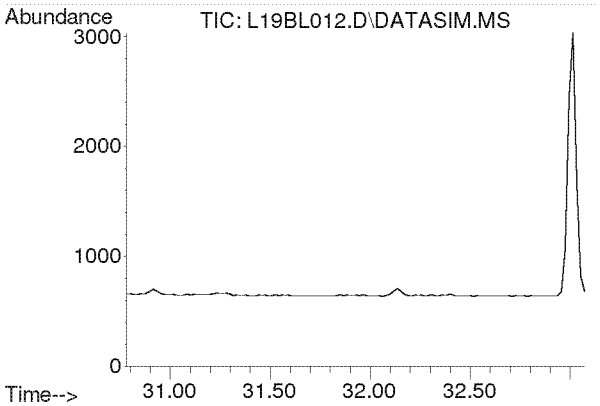
#52
Bromoform
Concen: N.D.
Expected RT: 31.28 min

Lab File: L19BL012.D
Acq: 12 Feb 2019 6:46 pm

Tgt Ion: 173

Sig	Exp Ratio
173	100
171	51.3
175	48.9



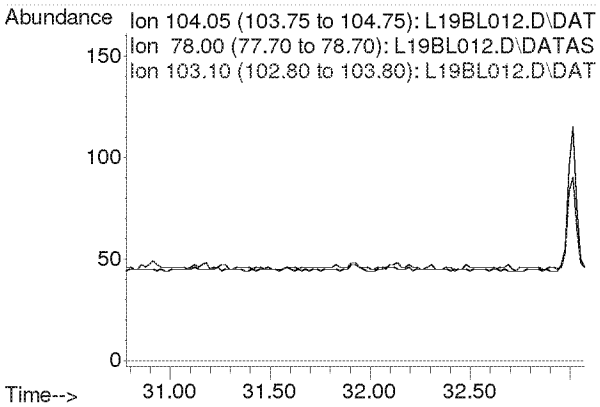


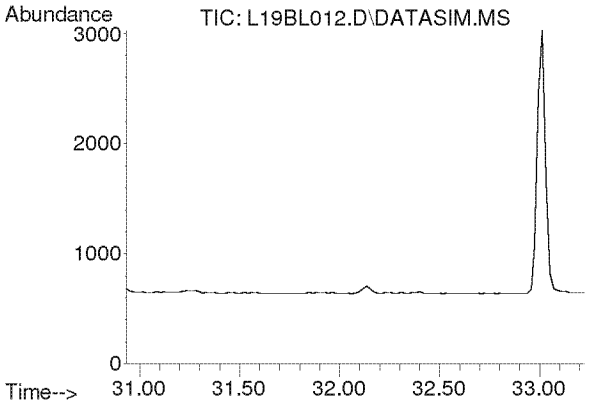
#53
Styrene
Concen: N.D.
Expected RT: 31.93 min

Lab File: L19BL012.D
Acq: 12 Feb 2019 6:46 pm

Tgt Ion: 104

Sig	Exp Ratio
104	100
78	44.3
103	0.0



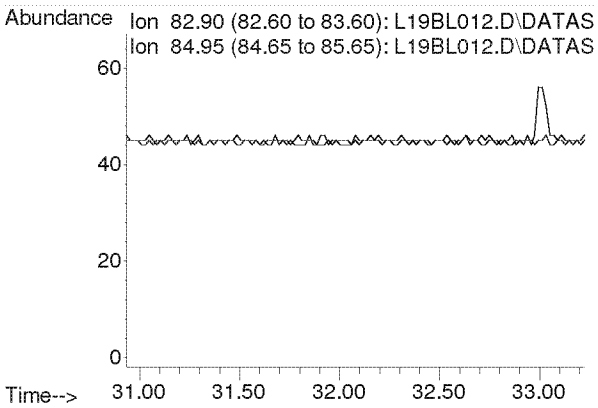


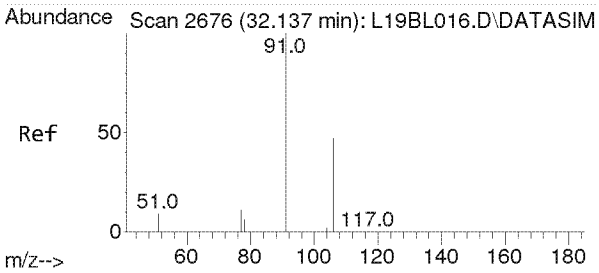
#54
1,1,2,2-Tetrachloroethane
Concen: N.D.
Expected RT: 32.08 min

Lab File: L19BL012.D
Acq: 12 Feb 2019 6:46 pm

Tgt Ion: 83

Sig	Exp Ratio
83	100
85	64.5

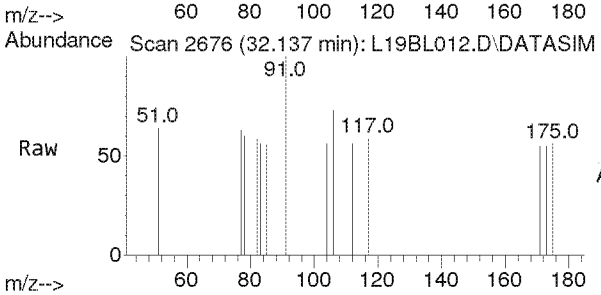


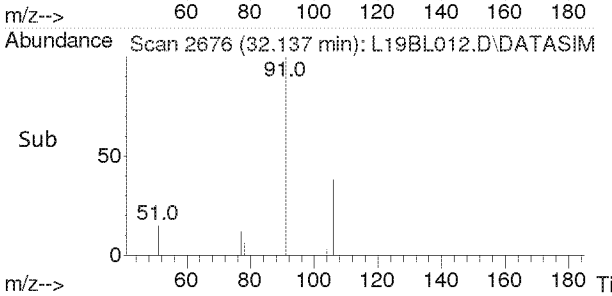


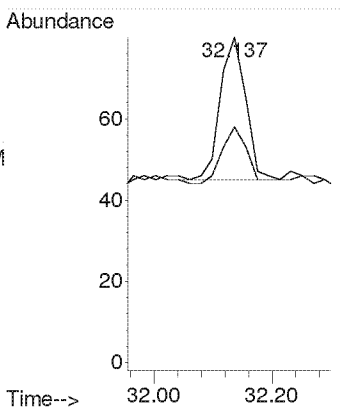
#55
o-Xylene
Concen: 0.009 ppbv
RT: 32.137 min Scan# 2676
Delta R.T. -0.000 min
Lab File: L19BL012.D
Acq: 12 Feb 2019 6:46 pm

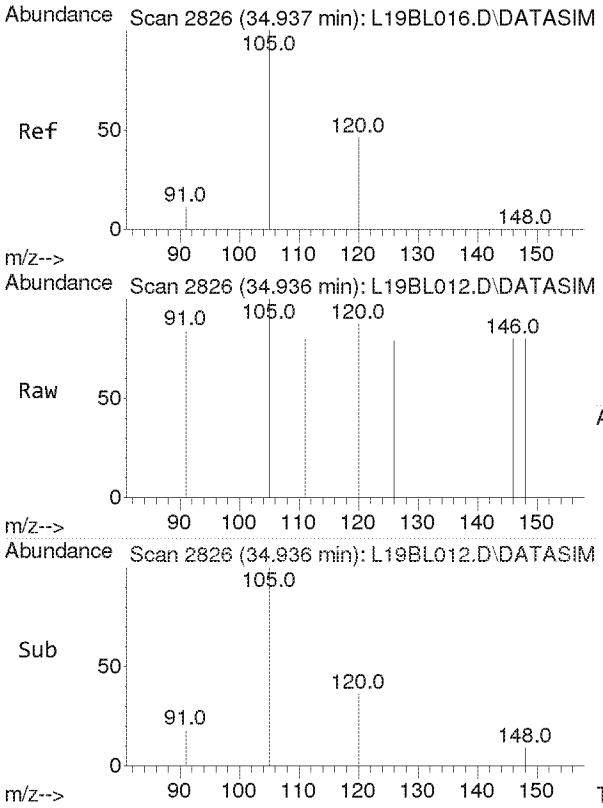
Tgt Ion: 91 Resp: 104

Ion	Ratio	Lower	Upper
91	100		
106	39.4	36.6	55.0





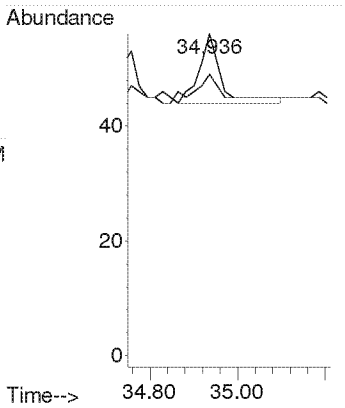


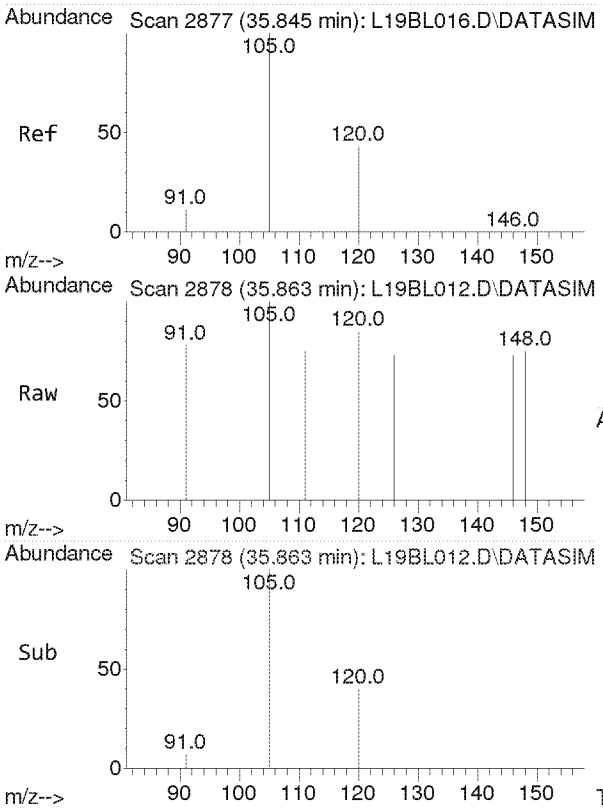


#56
1,3,5-Trimethylbenzene
Concen: 0.003 ppbv
RT: 34.936 min Scan# 2826
Delta R.T. -0.000 min
Lab File: L19BL012.D
Acq: 12 Feb 2019 6:46 pm

Tgt Ion:105 Resp: 43

Ion	Ratio	Lower	Upper
105	100		
120	0.0	36.8	55.2#

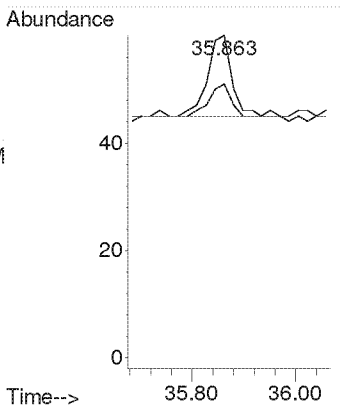


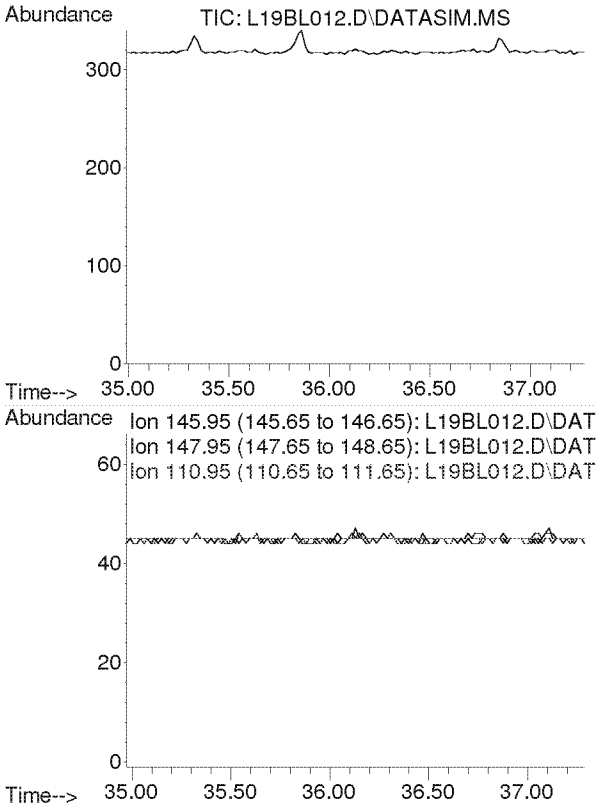


#57
1,2,4-Trimethylbenzene
Concen: 0.004 ppbv
RT: 35.863 min Scan# 2878
Delta R.T. 0.018 min
Lab File: L19BL012.D
Acq: 12 Feb 2019 6:46 pm

Tgt Ion:105 Resp: 49

Ion	Ratio	Lower	Upper
105	100		
120	0.0	35.2	52.8#



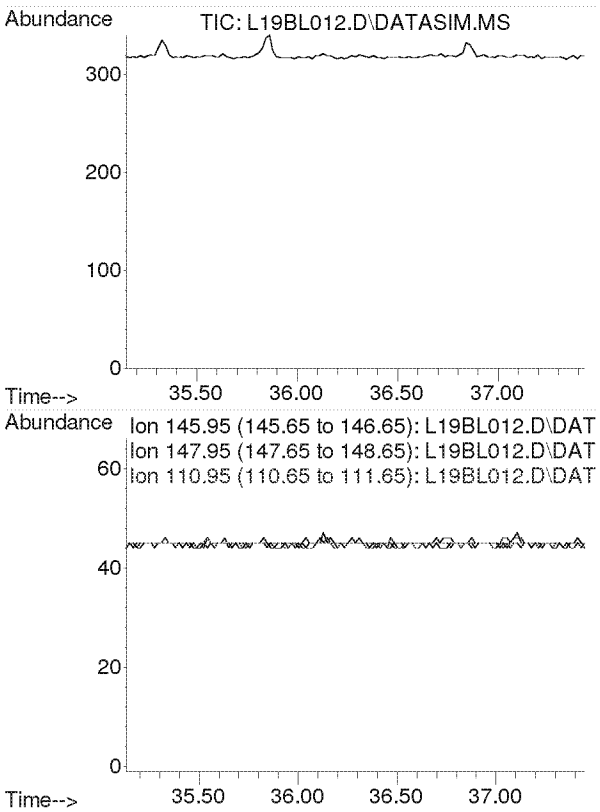


#58
m-Dichlorobenzene
Concen: N.D.
Expected RT: 36.13 min

Lab File: L19BL012.D
Acq: 12 Feb 2019 6:46 pm

Tgt Ion: 146

Sig	Exp Ratio
146	100
148	64.1
111	40.1

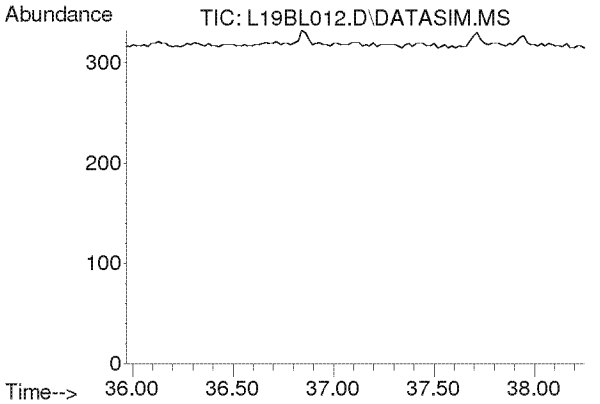


#59
p-Dichlorobenzene
Concen: N.D.
Expected RT: 36.29 min

Lab File: L19BL012.D
Acq: 12 Feb 2019 6:46 pm

Tgt Ion: 146

Sig	Exp Ratio
146	100
148	64.3
111	38.7

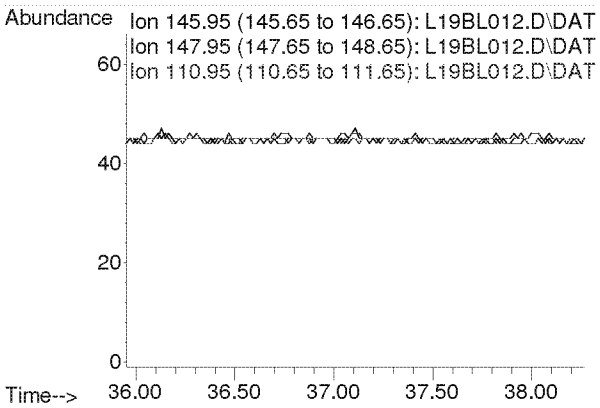


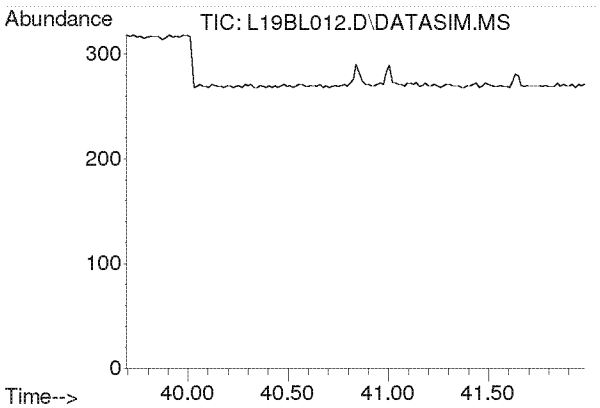
#60
o-Dichlorobenzene
Concen: N.D.
Expected RT: 37.11 min

Lab File: L19BL012.D
Acq: 12 Feb 2019 6:46 pm

Tgt Ion: 146

Sig	Exp Ratio
146	100
148	64.0
111	40.8



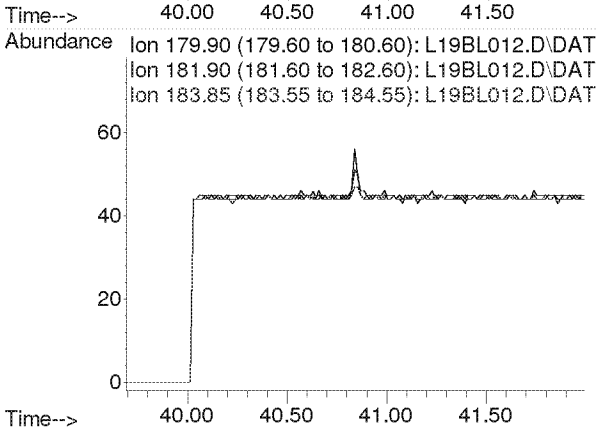


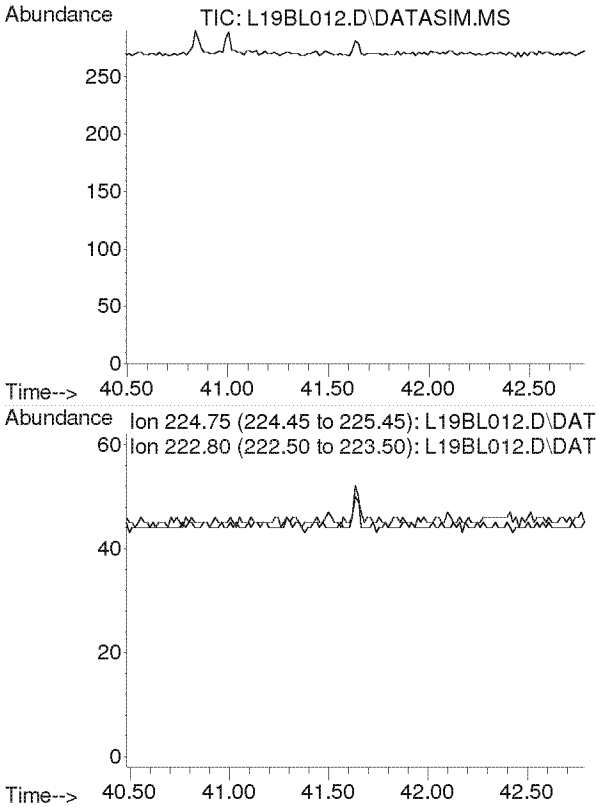
#61
1,2,4-Trichlorobenzene
Concen: N.D.
Expected RT: 40.84 min

Lab File: L19BL012.D
Acq: 12 Feb 2019 6:46 pm

Tgt Ion: 180

Sig	Exp Ratio
180	100
182	94.6
184	30.2





#62
Hexachloro-1,3-butadiene
Concen: N.D.
Expected RT: 41.63 min

Lab File: L19BL012.D
Acq: 12 Feb 2019 6:46 pm

Tgt Ion: 225

Sig	Exp Ratio
225	100
223	62.4

Analytical Standard Record

Eastern Research Group

9B12002

Description:	0.25 ppbv ICal	Expires:	03/14/19
Standard Type:	Calibration Stan	Prepared:	02/12/19
Solvent:	Scientific Air	Prepared By:	Mitch Howell
Final Volume (mls):	6000	Department:	Air Toxics
Vials:	1	Last Edit:	02/12/19 08:45 by MH

canister# 3238

Analyte	CAS Number	Concentration	Units
1,1,1-Trichloroethane	71-55-6	0.000246	ppmv
1,1,2,2-Tetrachloroethane	79-34-5	0.000252	ppmv
1,1,2-Trichloroethane	79-00-5	0.000254	ppmv
1,1-Dichloroethane	75-34-3	0.000256	ppmv
1,1-Dichloroethene	75-35-4	0.000272	ppmv
1,2,4-Trichlorobenzene	120-82-1	0.000238	ppmv
1,2,4-Trimethylbenzene	95-63-6	0.000245	ppmv
1,2-Dibromoethane	106-93-4	0.000257	ppmv
1,2-Dichloroethane	107-06-2	0.000258	ppmv
1,2-Dichloropropane	78-87-5	0.000252	ppmv
1,3,5-Trimethylbenzene	108-67-8	0.000248	ppmv
1,3-Butadiene	106-99-0	0.000248	ppmv
Acetonitrile	75-05-8	0.000229	ppmv
Acetylene	74-86-2	0.000228	ppmv
Acrolein	107-02-8	0.0002	ppmv
Acrylonitrile	107-13-1	0.000238	ppmv
Benzene	71-43-2	0.000273	ppmv
Bromochloromethane	74-97-5	0.000255	ppmv
Bromodichloromethane	75-27-4	0.00024	ppmv
Bromoform	75-25-2	0.000243	ppmv
Bromomethane	74-83-9	0.000252	ppmv
Carbon Disulfide	75-15-0	0.000252	ppmv
Carbon Tetrachloride	56-23-5	0.000279	ppmv
Chlorobenzene	108-90-7	0.000256	ppmv
Chloroethane	75-00-3	0.000252	ppmv
Chloroform	67-66-3	0.000254	ppmv
Chloromethane	74-87-3	0.000251	ppmv
Chloroprene	126-99-8	0.000258	ppmv
cis-1,2-Dichloroethylene	156-59-2	0.000257	ppmv
cis-1,3-Dichloropropene	10061-01-5	0.00025	ppmv

Reviewed By 6-14-19 Date

Analytical Standard Record

Eastern Research Group

9B12002

Dibromochloromethane	124-48-1	0.00024	ppmv
Dichlorodifluoromethane	75-71-8	0.000246	ppmv
Dichloromethane	75-09-2	0.00027	ppmv
Dichlorotetrafluoroethane	76-14-2	0.000278	ppmv
Ethyl Acrylate	140-88-5	0.000244	ppmv
Ethyl tert-Butyl Ether	637-92-3	0.000235	ppmv
Ethylbenzene	100-41-4	0.000254	ppmv
Ethylene oxide	75-21-8	0.000246	ppmv
Hexachloro-1,3-butadiene	87-68-3	0.00024	ppmv
m,p-Xylene	108-38-3, 106-42-3	0.000486	ppmv
m-Dichlorobenzene	541-73-1	0.000232	ppmv
Methyl Isobutyl Ketone	108-10-1	0.000228	ppmv
Methyl Methacrylate	80-62-6	0.000238	ppmv
Methyl tert-Butyl Ether	1634-04-4	0.000238	ppmv
n-Octane	111-65-9	0.000259	ppmv
o-Dichlorobenzene	95-50-1	0.000242	ppmv
o-Xylene	95-47-6	0.000252	ppmv
p-Dichlorobenzene	106-46-7	0.000249	ppmv
Propylene	115-07-1	0.000242	ppmv
Styrene	100-42-5	0.000246	ppmv
tert-Amyl Methyl Ether	994-05-8	0.000242	ppmv
Tetrachloroethylene	127-18-4	0.000258	ppmv
Toluene	108-88-3	0.000257	ppmv
trans-1,2-Dichloroethylene	156-60-5	0.00025	ppmv
trans-1,3-Dichloropropene	10061-02-6	0.000246	ppmv
Trichloroethylene	79-01-6	0.00024	ppmv
Trichlorofluoromethane	75-69-4	0.000233	ppmv
Trichlorotrifluoroethane	76-13-1	0.000259	ppmv
Vinyl chloride	75-01-4	0.000256	ppmv

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
8K20014	TO-15 Primary Primary Stock Stan	11/20/18	Mitch Howell	10/26/19	11/26/18 09:26 by MH	3
8L18003	Ethylene Oxide Stock Standard	12/06/18	** Vendor **	12/06/19	12/18/18 10:28 by MH	1.5

Reviewed By _____ Date 1-14-15

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\L19BL\
Data File : L19BL013.D
Acq On : 12 Feb 2019 7:46 pm
Operator : MAH
Sample : 1902030-CAL1
Misc : 80 ML 8L13001,9B12002
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Feb 13 06:42:28 2019
Quant Method : C:\msdchem\1\METHODS\9020003.M
Quant Title : TO-15 by Selective Ion Analysis
QLast Update : Wed Feb 13 06:40:07 2019
Response via : Initial Calibration

2-14-19

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) IS-Hexane-d14	19.970	66	49569	4.7700	ppbv	-0.02
29) IS-1,4-Difluorobenzene	23.151	114	120191	4.9900	ppbv	0.00
43) IS-Chlorobenzene-d5	30.097	117	87150	4.7400	ppbv	-0.02

System Monitoring Compounds

Target Compounds						Qvalue
2) Acetylene	5.403	26	928	0.2336	ppbv	100
3) Propylene	7.823	41	1246	0.2539	ppbv	98
4) Dichlorodifluoromethane	8.685	85	5793	0.2478	ppbv	100
5) Chloromethane	9.740	50	1591	0.2675	ppbv	100
6) Dichlorotetrafluoroethane	10.881	85	5686	0.2776	ppbv	99
7) Vinyl Chloride	11.102	62	1701	0.2505	ppbv	97
8) 1,3-Butadiene	11.783	54	1099	0.2366	ppbv	97
9) Ethylene oxide	12.455	29	562m	0.1957	ppbv	
10) Bromomethane	12.590	94	1586	0.2455	ppbv	100
11) Chloroethane	13.282	64	676	0.2530	ppbv	97
12) Acetonitrile	14.427	41	896	0.2054	ppbv	94
13) Acrolein	14.682	56	420	0.1908	ppbv #	87
14) Trichlorofluoromethane	15.193	101	4637	0.2321	ppbv	100
15) Acrylonitrile	15.958	53	717	0.2029	ppbv	97
16) 1,1-Dichloroethene	16.422	61	2342	0.2688	ppbv	99
17) Methylene Chloride	16.723	49	1503	0.2643	ppbv	100
18) Carbon Disulfide	16.932	76	4325	0.2446	ppbv	100
19) Trichlorotrifluoroethane	17.280	101	3497	0.2630	ppbv	99
20) trans-1,2-Dichloroethy...	18.315	96	1149	0.2377	ppbv	99
21) 1,1-Dichloroethane	18.632	63	2029	0.2498	ppbv	100
22) Methyl tert-Butyl Ether	18.814	73	3085	0.2304	ppbv	100
23) Chloroprene	19.539	53	1650	0.2481	ppbv	90
24) cis-1,2-Dichloroethylene	19.947	61	1661m	0.2610	ppbv	[illegible]
25) Bromochloromethane	20.174	128	845	0.2437	ppbv	98
26) Chloroform	20.401	83	2340	0.2479	ppbv	99
27) Ethyl tert-Butyl Ether	21.184	59	2857	0.2211	ppbv	99
28) 1,2-Dichloroethane	21.478	62	1454	0.2533	ppbv	99
30) 1,1,1-Trichloroethane	21.869	97	2060	0.2372	ppbv	97
31) Benzene	22.535	78	3468	0.2772	ppbv	100
32) Carbon Tetrachloride	22.770	117	2575	0.2756	ppbv	99
33) tert-Amyl Methyl Ether	23.522	73	2406	0.2268	ppbv	98
34) 1,2-Dichloropropane	23.790	63	1163	0.2411	ppbv	98
35) Ethyl Acrylate	23.893	55	844	0.2128	ppbv	98
36) Bromodichloromethane	24.078	83	1971	0.2341	ppbv	100
37) Trichloroethylene	24.161	130	1452	0.2421	ppbv	98
38) Methyl Methacrylate	24.532	41	2622	0.2195	ppbv	100
39) cis-1,3-Dichloropropene	25.511	75	985	0.2402	ppbv	100
40) Methyl Isobutyl Ketone	25.607	43	1871	0.2140	ppbv	100
41) trans-1,3-Dichloropropene	26.350	75	608	0.2174	ppbv	96
42) 1,1,2-Trichloroethane	26.617	97	1086	0.2479	ppbv	97
44) Toluene	27.094	91	3633	0.2554	ppbv	100
45) Dibromochloromethane	27.734	129	6401	0.2287	ppbv	99
46) 1,2-Dibromoethane	28.138	107	1317	0.2427	ppbv	98
47) n-Octane	28.857	43	2143	0.2496	ppbv	98
48) Tetrachloroethylene	28.998	166	1772	0.2613	ppbv	100
49) Chlorobenzene	30.173	112	2273	0.2489	ppbv	98
50) Ethylbenzene	30.898	91	3599	0.2402	ppbv	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\L19BL\
Data File : L19BL013.D
Acq On : 12 Feb 2019 7:46 pm
Operator : MAH
Sample : 1902030-CAL1
Misc : 80 ML 8L13001,9B12002
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Feb 13 06:42:28 2019
Quant Method : C:\msdchem\1\METHODS\9020003.M
Quant Title : TO-15 by Selective Ion Analysis
QLast Update : Wed Feb 13 06:40:07 2019
Response via : Initial Calibration

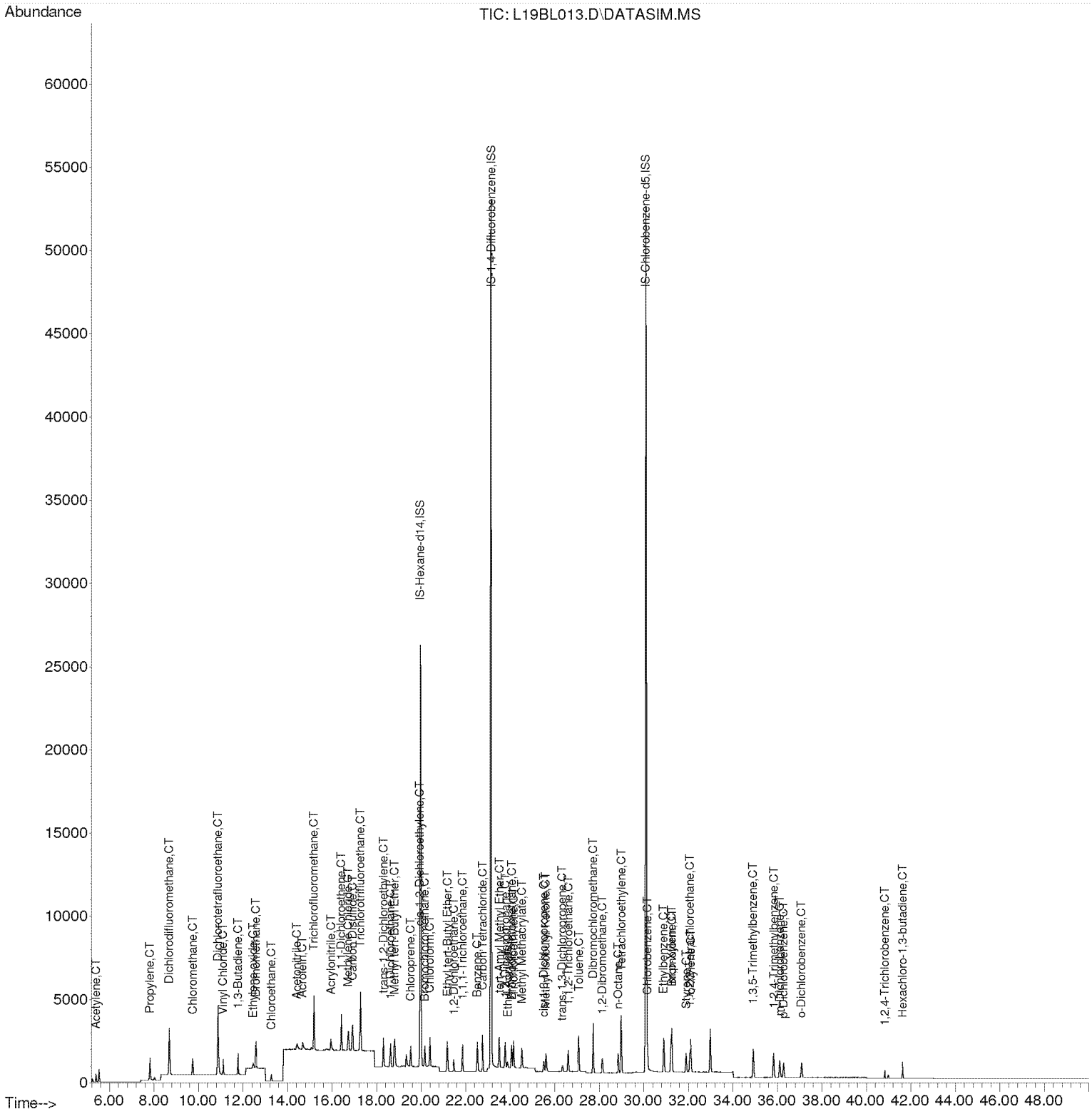
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
51) m,p-Xylene	31.261	91	5723	0.4504 ppbv	99
52) Bromoform	31.280	173	1267	0.2364 ppbv	99
53) Styrene	31.910	104	1631	0.2281 ppbv #	99
54) 1,1,2,2-Tetrachloroethane	32.082	83	1994	0.2480 ppbv	98
55) o-Xylene	32.120	91	3016	0.2434 ppbv	99
56) 1,3,5-Trimethylbenzene	34.920	105	3091	0.2340 ppbv	100
57) 1,2,4-Trimethylbenzene	35.846	105	2609	0.2267 ppbv	98
58) m-Dichlorobenzene	36.113	146	1331	0.2183 ppbv	99
59) p-Dichlorobenzene	36.291	146	1181	0.2373 ppbv	99
60) o-Dichlorobenzene	37.093	146	1247	0.2244 ppbv	99
61) 1,2,4-Trichlorobenzene	40.842	180	388	0.2183 ppbv	97
62) Hexachloro-1,3-butadiene	41.636	225	1013	0.2208 ppbv	100

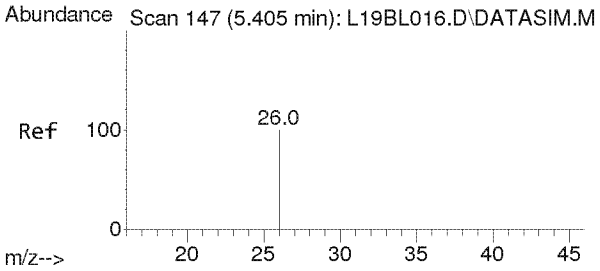
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : Y:\MASS SPEC 1 DATA\L19BL\
Data File : L19BL013.D
Acq On : 12 Feb 2019 7:46 pm
Operator : MAH
Sample : 1902030-CAL1
Misc : 80 ML 8L13001,9B12002
ALS Vial : 13 Sample Multiplier: 1

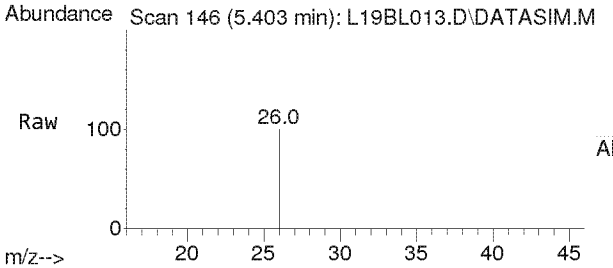
Quant Time: Feb 13 06:40:25 2019
Quant Method : C:\msdchem\1\METHODS\9020003.M
Quant Title : TO-15 by Selective Ion Analysis
QLast Update : Wed Feb 13 06:40:07 2019
Response via : Initial Calibration

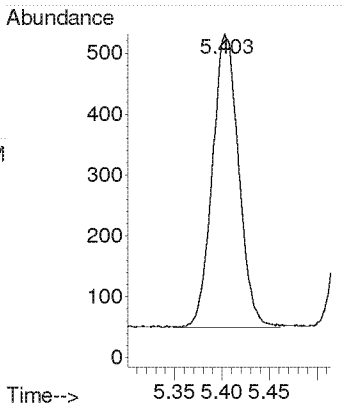


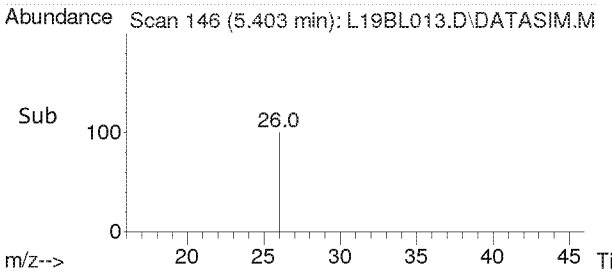


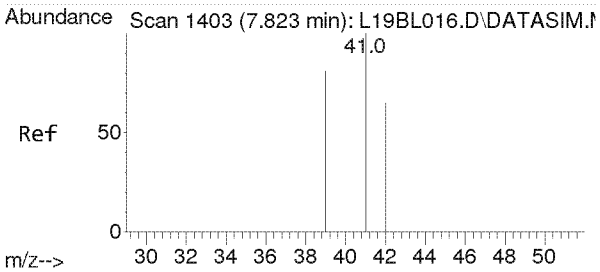
#2
Acetylene
Concen: 0.234 ppbv
RT: 5.403 min Scan# 146
Delta R.T. -0.001 min
Lab File: L19BL013.D
Acq: 12 Feb 2019 7:46 pm

Tgt Ion: 26 Resp: 928





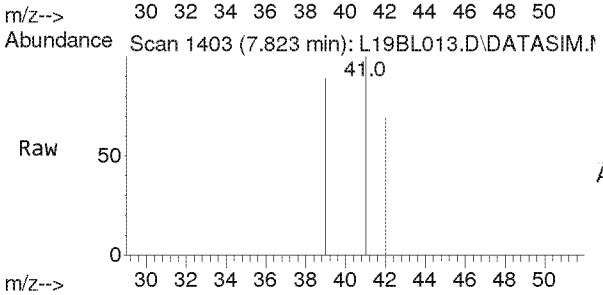


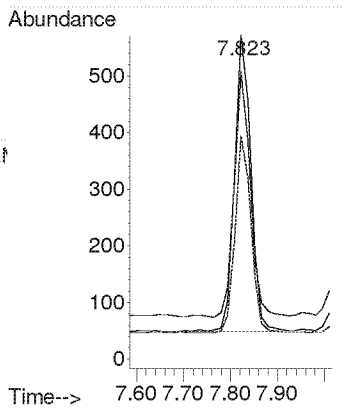


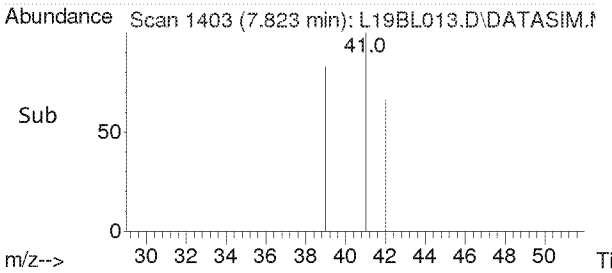
#3
Propylene
Concen: 0.254 ppbv
RT: 7.823 min Scan# 1403
Delta R.T. 0.000 min
Lab File: L19BL013.D
Acq: 12 Feb 2019 7:46 pm

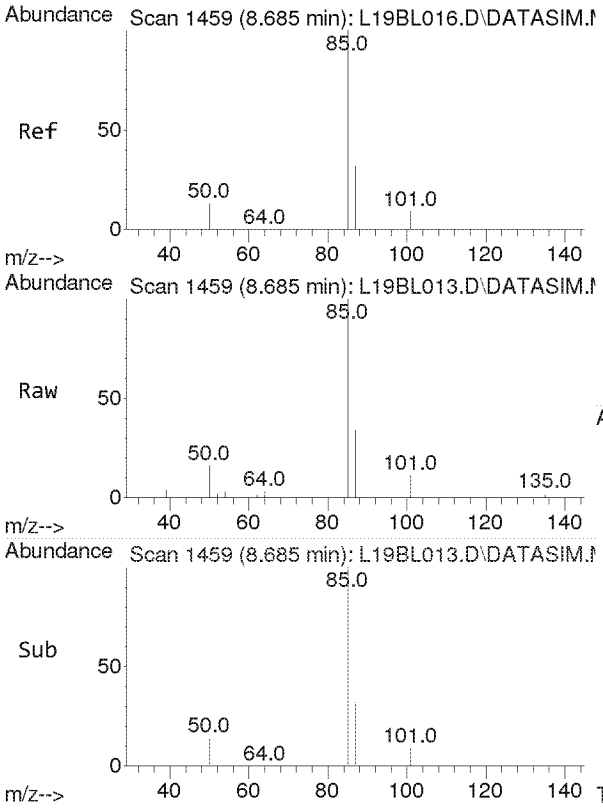
Tgt Ion: 41 Resp: 1246

Ion	Ratio	Lower	Upper
41	100		
39	82.9	64.2	96.2
42	65.1	52.6	79.0





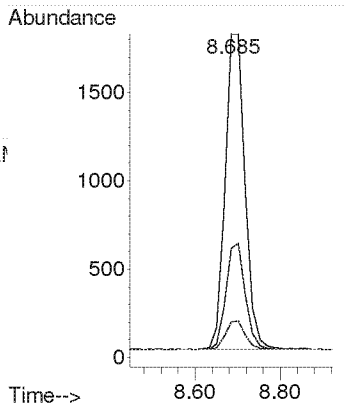


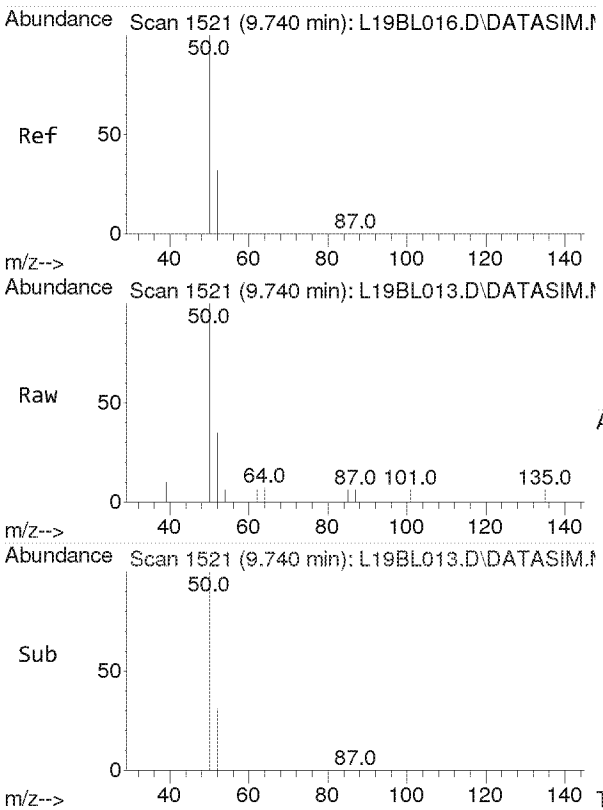


#4
Dichlorodifluoromethane
Concen: 0.248 ppbv
RT: 8.685 min Scan# 1459
Delta R.T. 0.000 min
Lab File: L19BL013.D
Acq: 12 Feb 2019 7:46 pm

Tgt Ion: 85 Resp: 5793

Ion	Ratio	Lower	Upper
85	100		
87	32.7	26.0	39.0
101	9.0	7.3	10.9

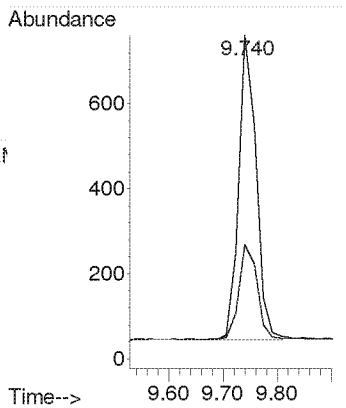


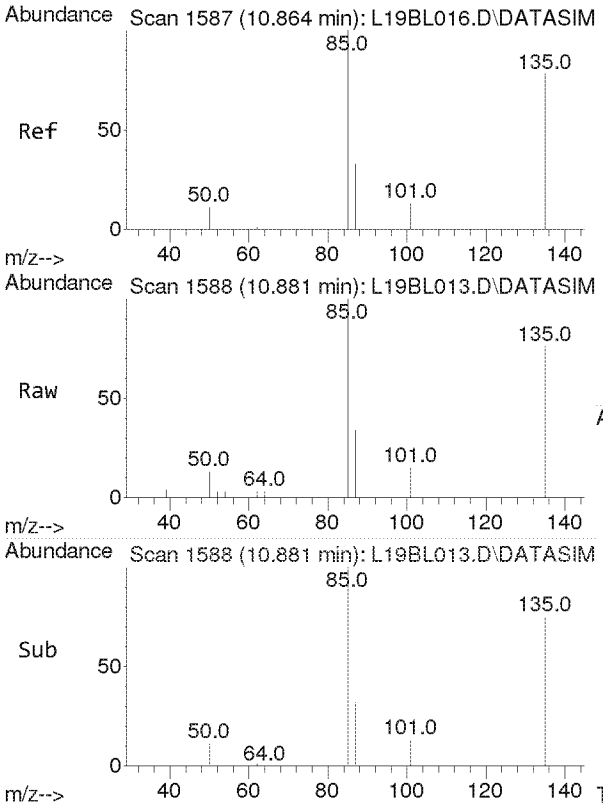


#5
Chloromethane
Concen: 0.268 ppbv
RT: 9.740 min Scan# 1521
Delta R.T. 0.000 min
Lab File: L19BL013.D
Acq: 12 Feb 2019 7:46 pm

Tgt Ion: 50 Resp: 1591

Ion	Ratio	Lower	Upper
50	100		
52	32.7	26.1	39.1

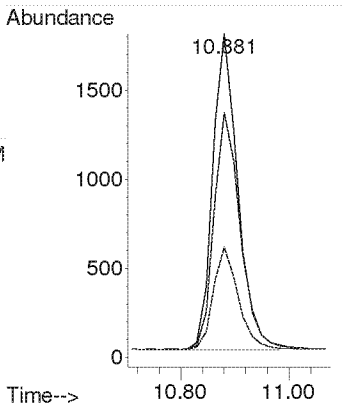


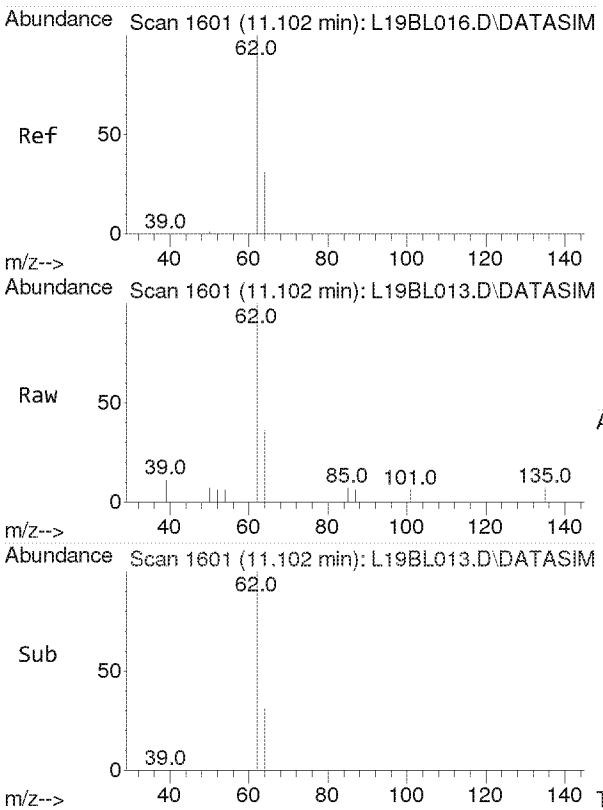


#6
Dichlorotetrafluoroethane
Concen: 0.278 ppbv
RT: 10.881 min Scan# 1588
Delta R.T. 0.017 min
Lab File: L19BL013.D
Acq: 12 Feb 2019 7:46 pm

Tgt Ion: 85 Resp: 5686

Ion	Ratio	Lower	Upper
85	100		
135	78.4	63.2	94.8
87	32.2	25.9	38.9

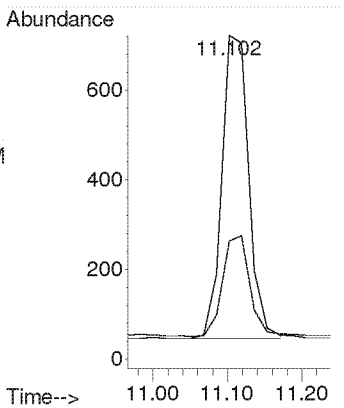


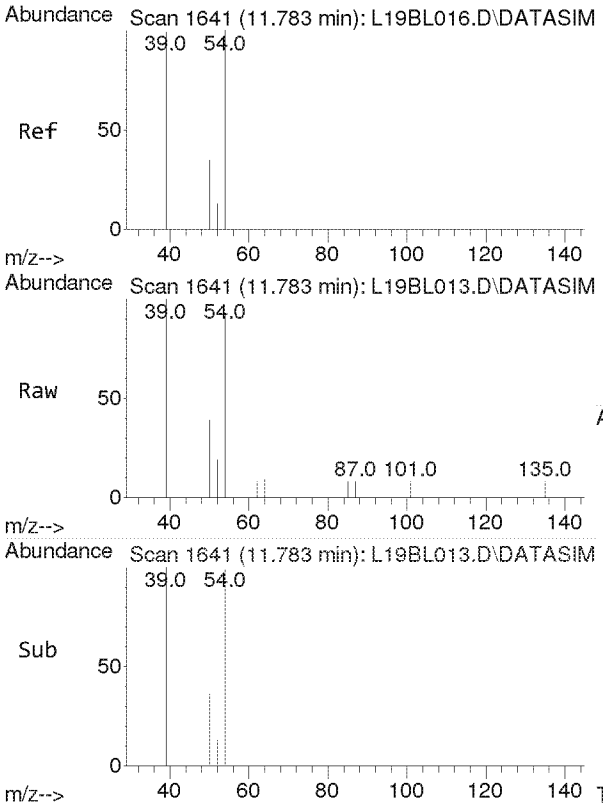


#7
Vinyl Chloride
Concen: 0.251 ppbv
RT: 11.102 min Scan# 1601
Delta R.T. 0.000 min
Lab File: L19BL013.D
Acq: 12 Feb 2019 7:46 pm

Tgt Ion: 62 Resp: 1701

Ion	Ratio	Lower	Upper
62	100		
64	33.4	25.4	38.0

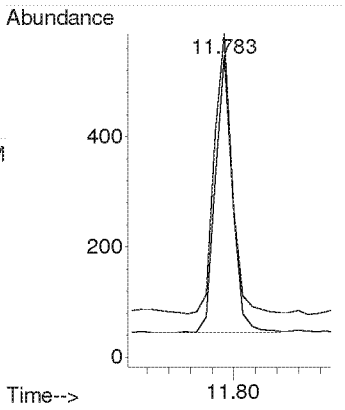


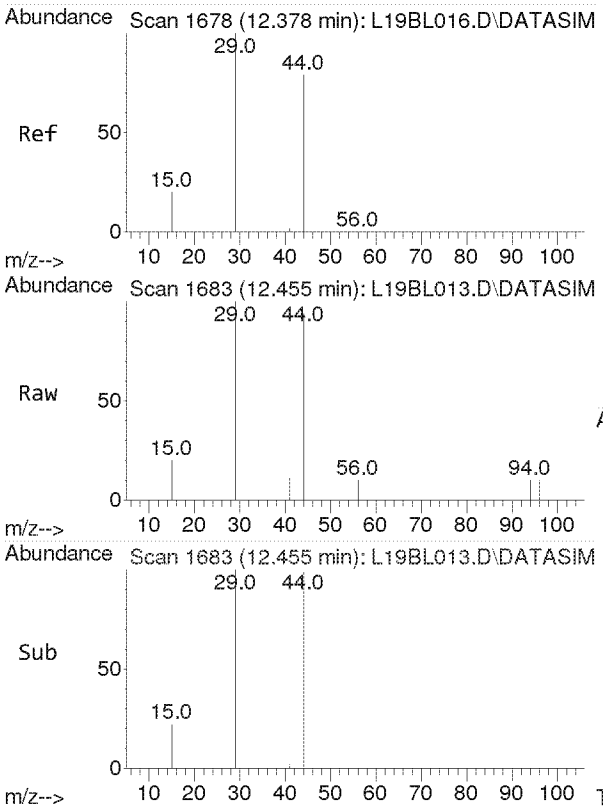


#8
1,3-Butadiene
Concen: 0.237 ppbv
RT: 11.783 min Scan# 1641
Delta R.T. 0.000 min
Lab File: L19BL013.D
Acq: 12 Feb 2019 7:46 pm

Tgt Ion: 54 Resp: 1099

Ion	Ratio	Lower	Upper
54	100		
39	104.5	81.6	122.4

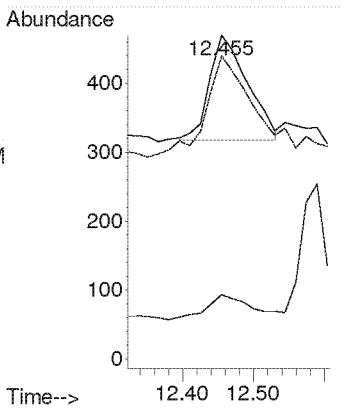


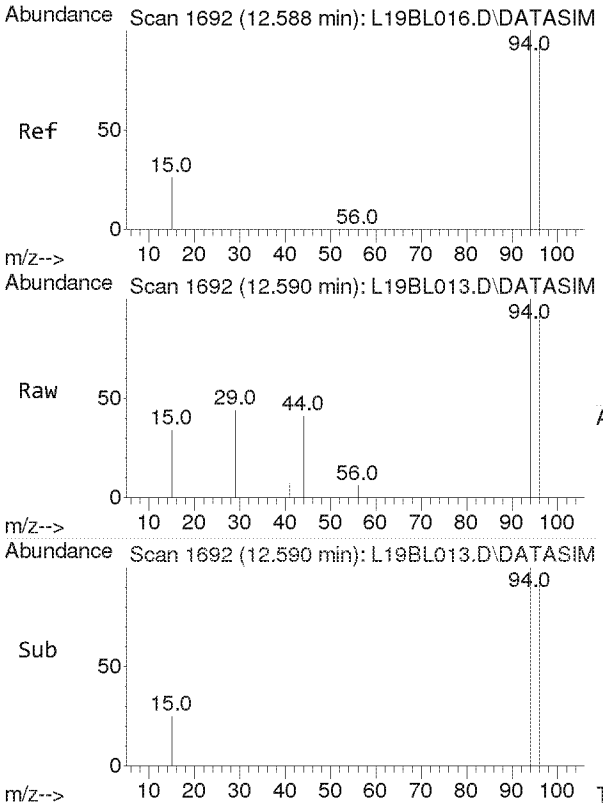


#9
Ethylene oxide
Concen: 0.196 ppbv m
RT: 12.455 min Scan# 1683
Delta R.T. 0.077 min
Lab File: L19BL013.D
Acq: 12 Feb 2019 7:46 pm

Tgt Ion: 29 Resp: 562

Ion	Ratio	Lower	Upper
29	100		
15	29.2	16.0	24.0#
44	122.4	65.4	98.2#

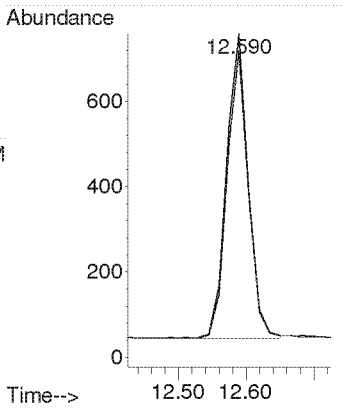


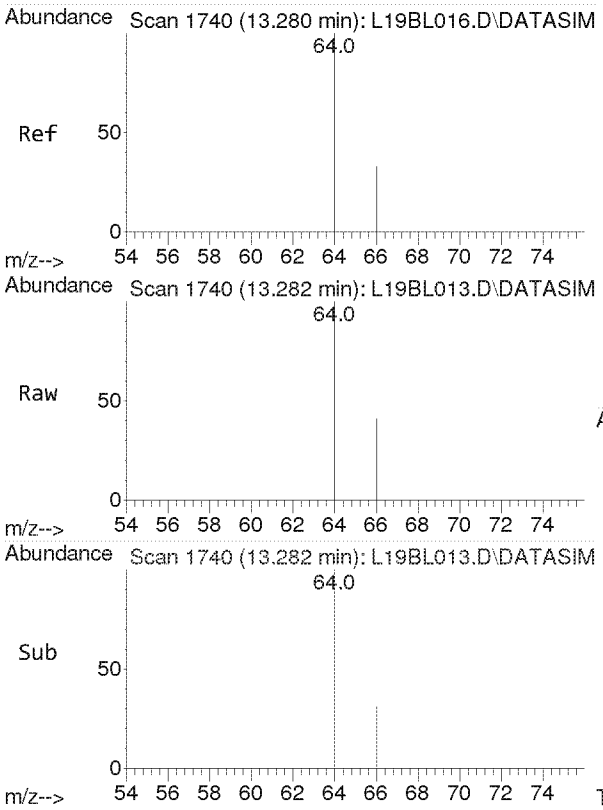


#10
Bromomethane
Concen: 0.245 ppbv
RT: 12.590 min Scan# 1692
Delta R.T. 0.002 min
Lab File: L19BL013.D
Acq: 12 Feb 2019 7:46 pm

Tgt Ion: 94 Resp: 1586

Ion	Ratio	Lower	Upper
94	100		
96	94.0	75.5	113.3

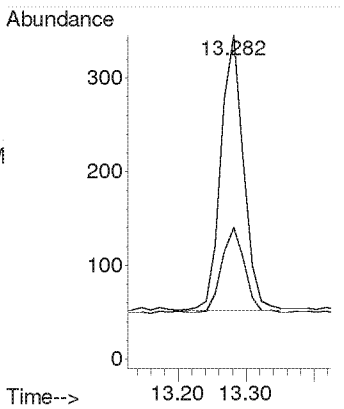


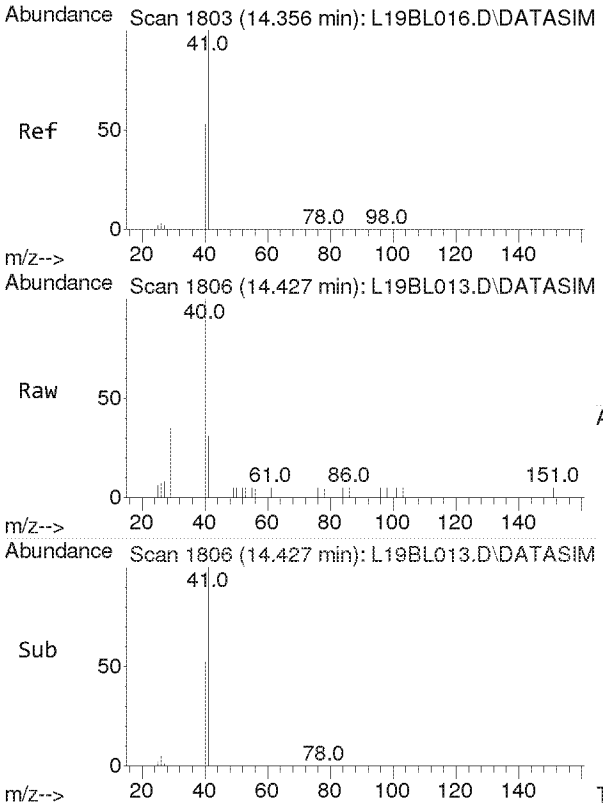


#11
Chloroethane
Concen: 0.253 ppbv
RT: 13.282 min Scan# 1740
Delta R.T. 0.002 min
Lab File: L19BL013.D
Acq: 12 Feb 2019 7:46 pm

Tgt Ion: 64 Resp: 676

Ion	Ratio	Lower	Upper
64	100		
66	30.5	25.8	38.6

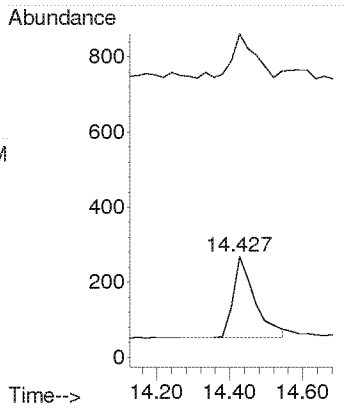


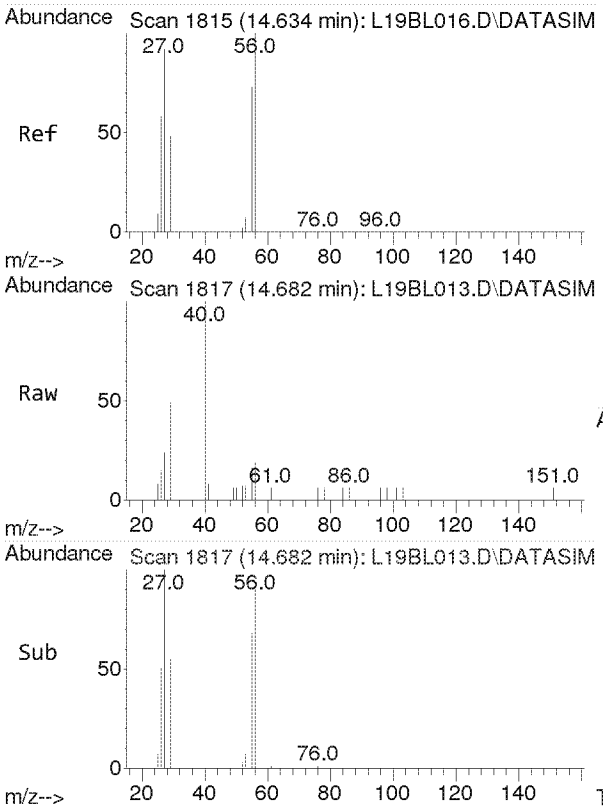


#12
Acetonitrile
Concen: 0.205 ppbv
RT: 14.427 min Scan# 1806
Delta R.T. 0.072 min
Lab File: L19BL013.D
Acq: 12 Feb 2019 7:46 pm

Tgt Ion: 41 Resp: 896

Ion	Ratio	Lower	Upper
41	100		
40	57.0	42.2	63.4

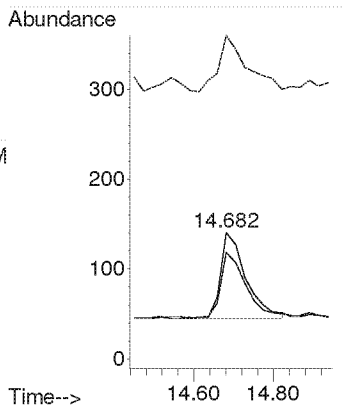


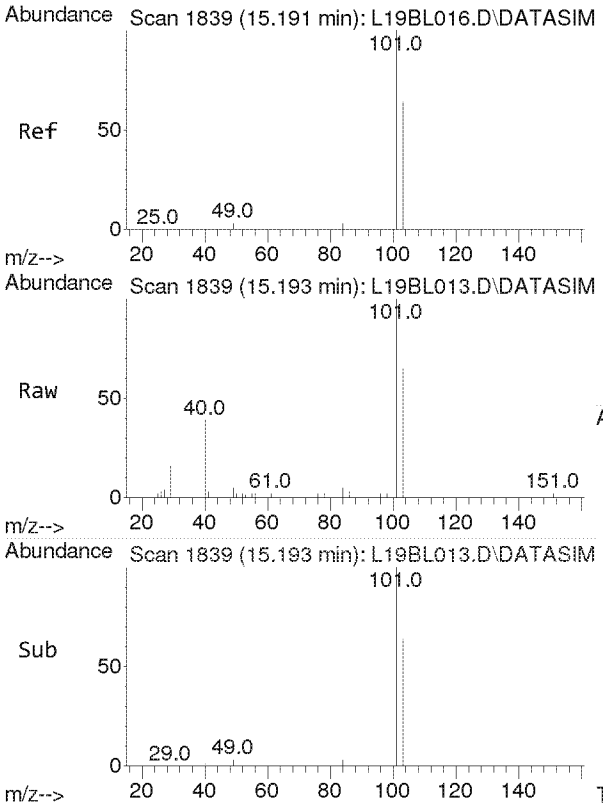


#13
Acrolein
Concen: 0.191 ppbv
RT: 14.682 min Scan# 1817
Delta R.T. 0.048 min
Lab File: L19BL013.D
Acq: 12 Feb 2019 7:46 pm

Tgt Ion: 56 Resp: 420

Ion	Ratio	Lower	Upper
56	100		
55	77.1	60.8	91.2
29	76.0	43.8	65.6#

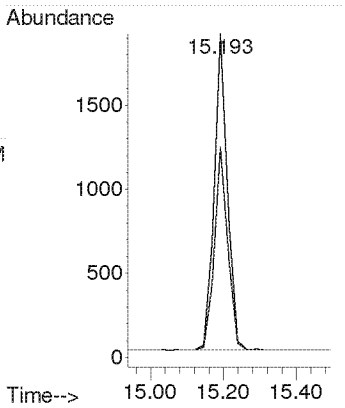


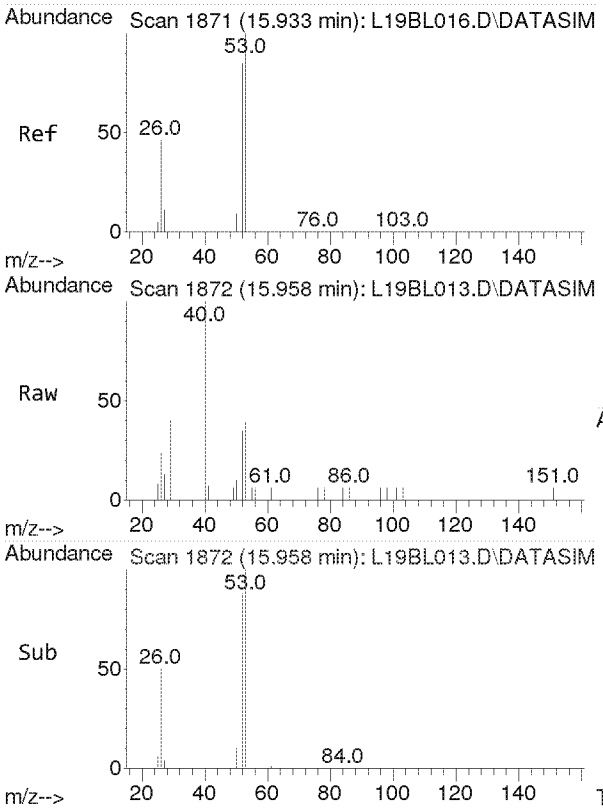


#14
Trichlorofluoromethane
Concen: 0.232 ppbv
RT: 15.193 min Scan# 1839
Delta R.T. 0.002 min
Lab File: L19BL013.D
Acq: 12 Feb 2019 7:46 pm

Tgt Ion:101 Resp: 4637

Ion	Ratio	Lower	Upper
101	100		
103	65.0	51.7	77.5

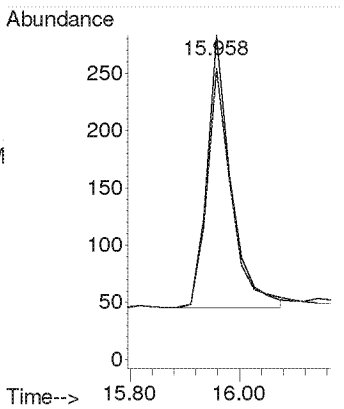


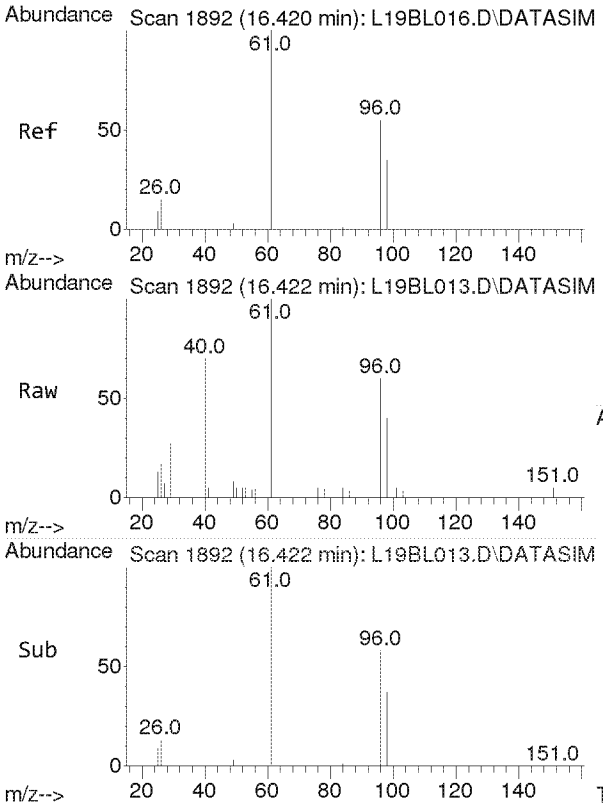


#15
Acrylonitrile
Concen: 0.203 ppbv
RT: 15.958 min Scan# 1872
Delta R.T. 0.025 min
Lab File: L19BL013.D
Acq: 12 Feb 2019 7:46 pm

Tgt Ion: 53 Resp: 717

Ion	Ratio	Lower	Upper
53	100		
52	89.5	69.5	104.3

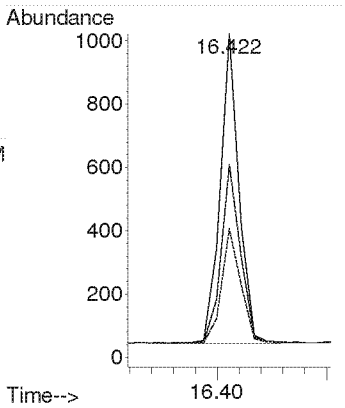


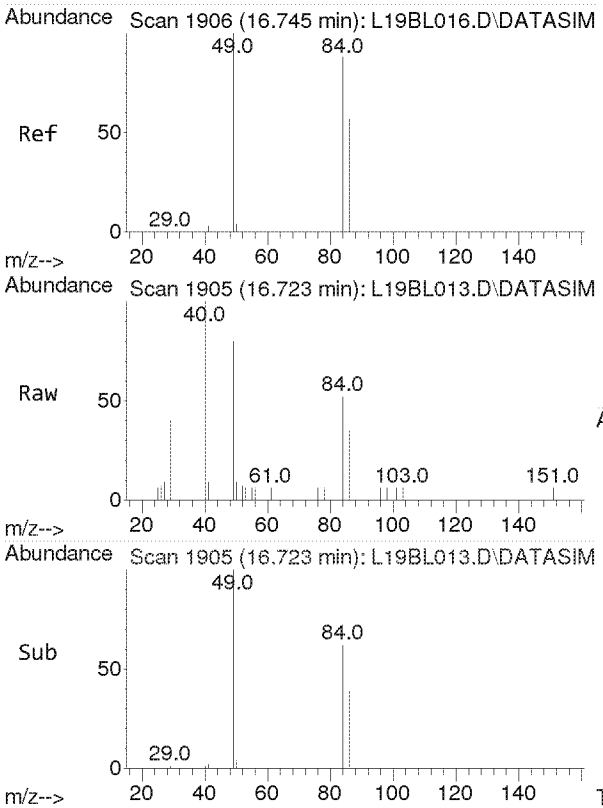


#16
1,1-Dichloroethene
Concen: 0.269 ppbv
RT: 16.422 min Scan# 1892
Delta R.T. 0.002 min
Lab File: L19BL013.D
Acq: 12 Feb 2019 7:46 pm

Tgt Ion: 61 Resp: 2342

Ion	Ratio	Lower	Upper
61	100		
96	59.3	47.3	70.9
98	37.6	30.6	45.8

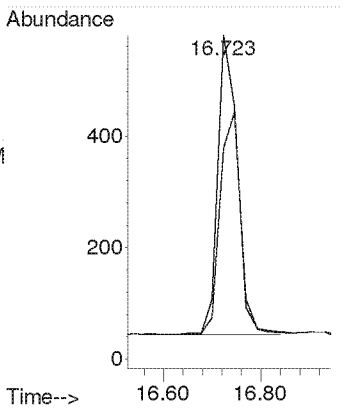


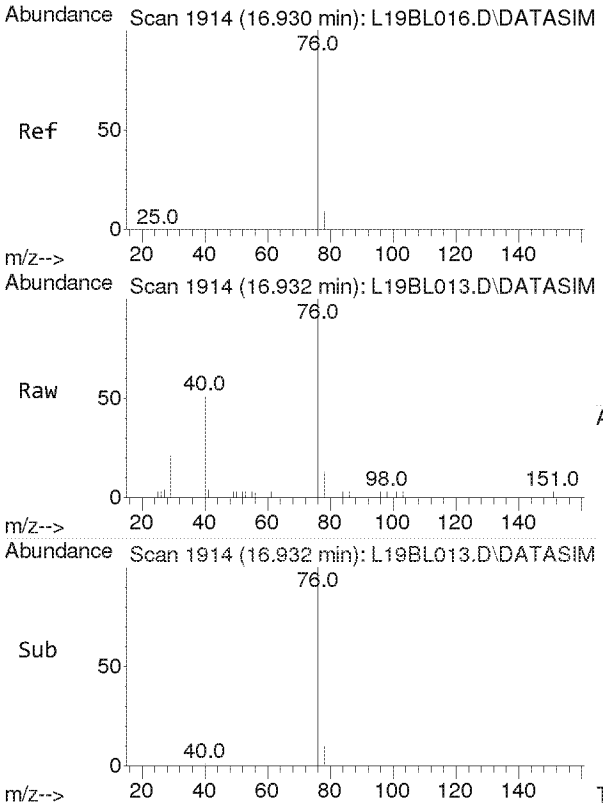


#17
Methylene Chloride
Concen: 0.264 ppbv
RT: 16.723 min Scan# 1905
Delta R.T. -0.021 min
Lab File: L19BL013.D
Acq: 12 Feb 2019 7:46 pm

Tgt Ion: 49 Resp: 1503

Ion	Ratio	Lower	Upper
49	100		
84	77.4	54.0	100.4

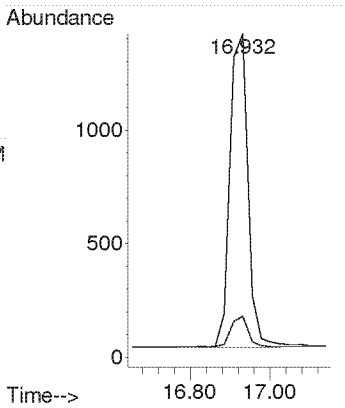


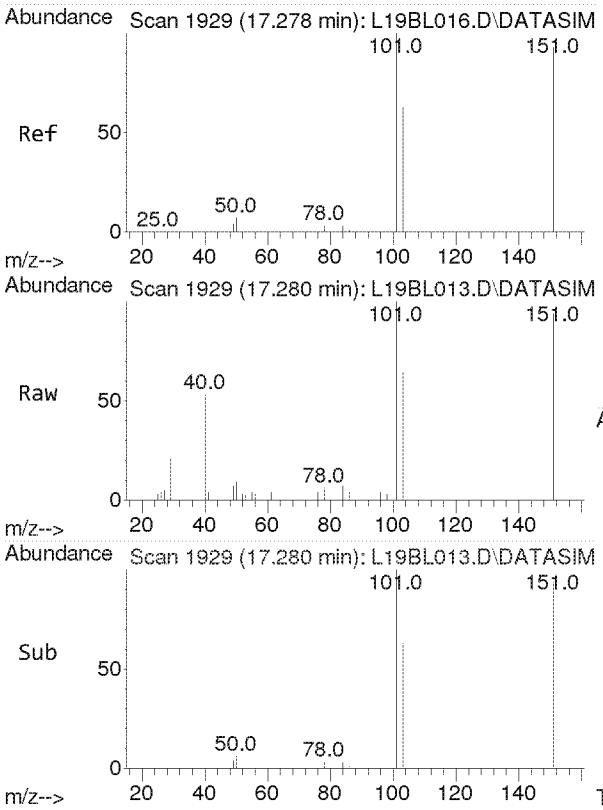


#18
Carbon Disulfide
Concen: 0.245 ppbv
RT: 16.932 min Scan# 1914
Delta R.T. 0.002 min
Lab File: L19BL013.D
Acq: 12 Feb 2019 7:46 pm

Tgt Ion: 76 Resp: 4325

Ion	Ratio	Lower	Upper
76	100		
78	9.2	7.4	11.0

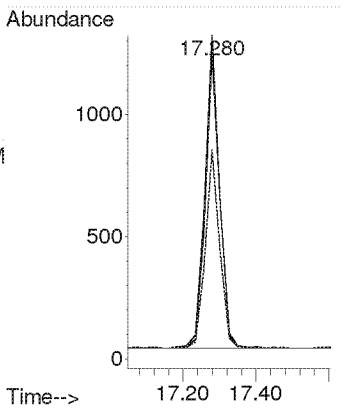


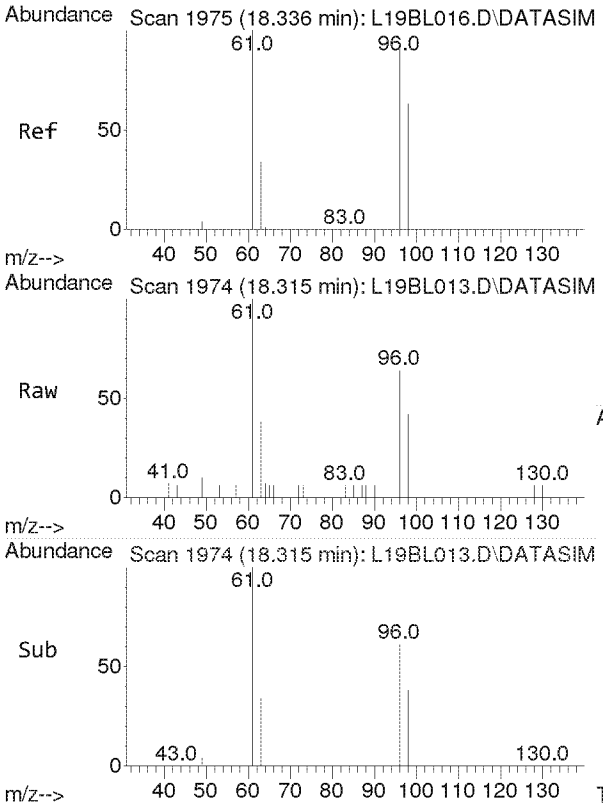


#19
Trichlorotrifluoroethane
Concen: 0.263 ppbv
RT: 17.280 min Scan# 1929
Delta R.T. 0.002 min
Lab File: L19BL013.D
Acq: 12 Feb 2019 7:46 pm

Tgt Ion:101 Resp: 3497

Ion	Ratio	Lower	Upper
101	100		
151	93.6	75.8	113.8
103	62.8	51.1	76.7

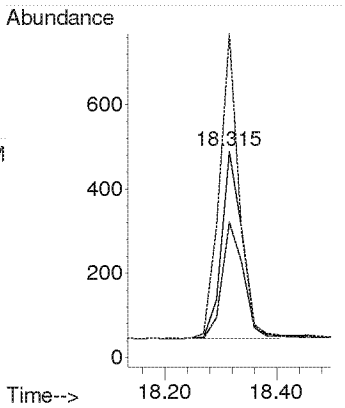


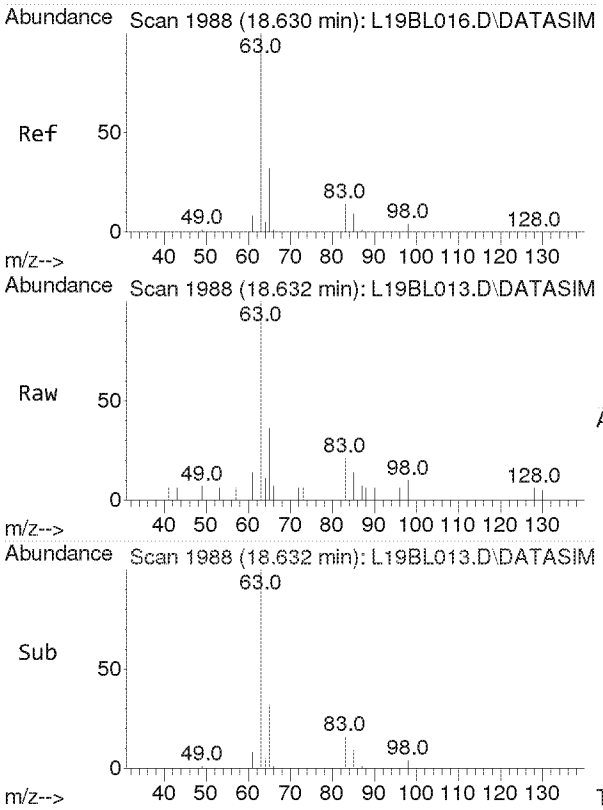


#20
trans-1,2-Dichloroethylene
Concen: 0.238 ppbv
RT: 18.315 min Scan# 1974
Delta R.T. -0.021 min
Lab File: L19BL013.D
Acq: 12 Feb 2019 7:46 pm

Tgt Ion: 96 Resp: 1149

Ion	Ratio	Lower	Upper
96	100		
98	65.4	51.5	77.3
61	155.0	122.9	184.3

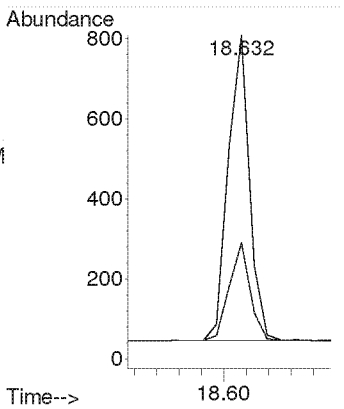


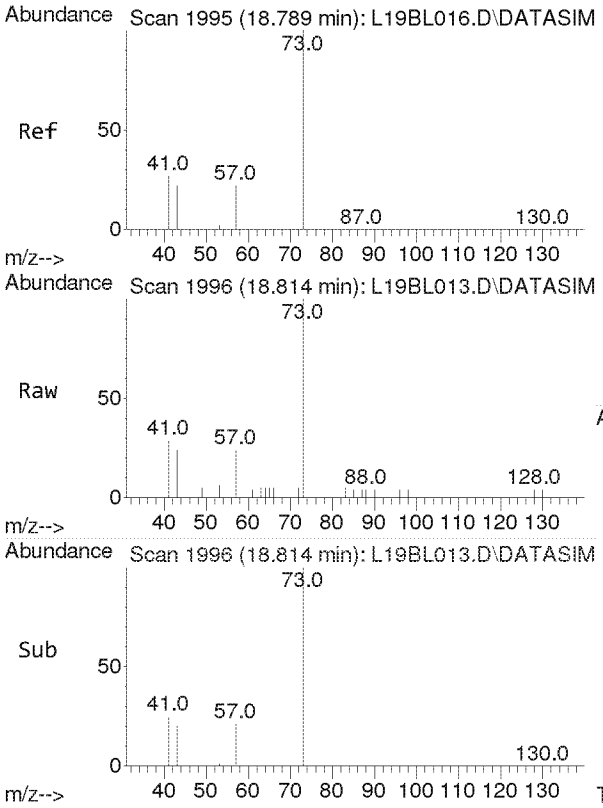


#21
1,1-Dichloroethane
Concen: 0.250 ppbv
RT: 18.632 min Scan# 1988
Delta R.T. 0.002 min
Lab File: L19BL013.D
Acq: 12 Feb 2019 7:46 pm

Tgt Ion: 63 Resp: 2029

Ion	Ratio	Lower	Upper
63	100		
65	31.8	25.4	38.0

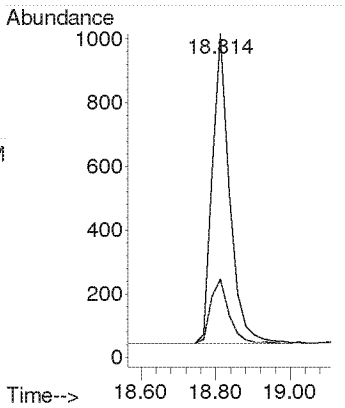


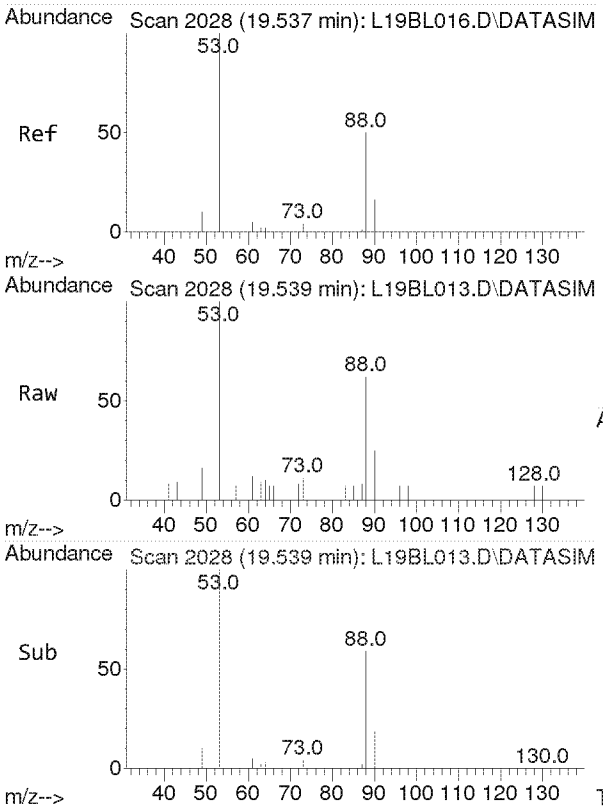


#22
Methyl tert-Butyl Ether
Concen: 0.230 ppbv
RT: 18.814 min Scan# 1996
Delta R.T. 0.025 min
Lab File: L19BL013.D
Acq: 12 Feb 2019 7:46 pm

Tgt Ion: 73 Resp: 3085

Ion	Ratio	Lower	Upper
73	100		
57	22.3	18.0	27.0

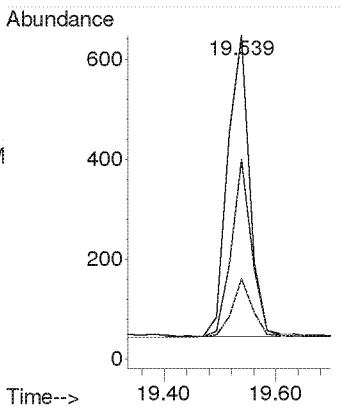


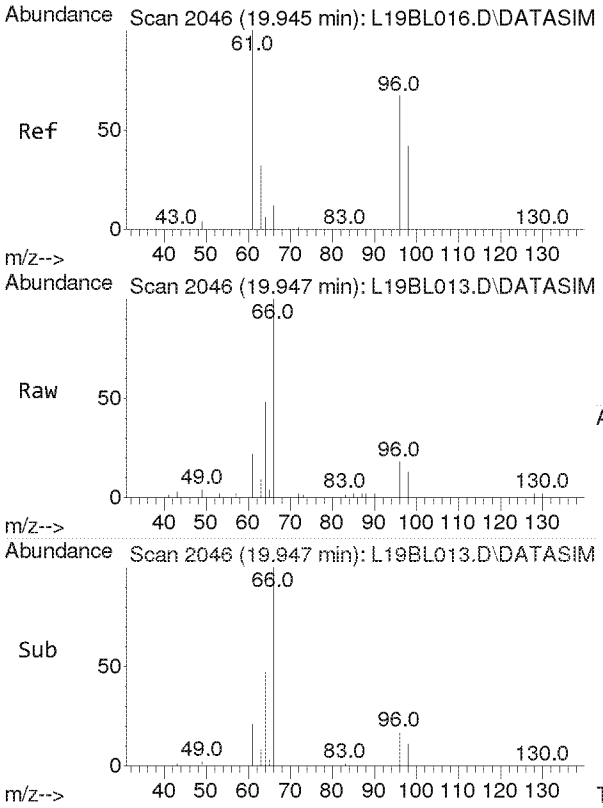


#23
Chloroprene
Concen: 0.248 ppbv
RT: 19.539 min Scan# 2028
Delta R.T. 0.002 min
Lab File: L19BL013.D
Acq: 12 Feb 2019 7:46 pm

Tgt Ion: 53 Resp: 1650

Ion	Ratio	Lower	Upper
53	100		
88	55.1	42.6	64.0
90	18.1	13.9	20.9

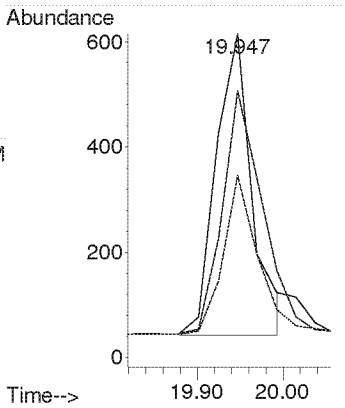


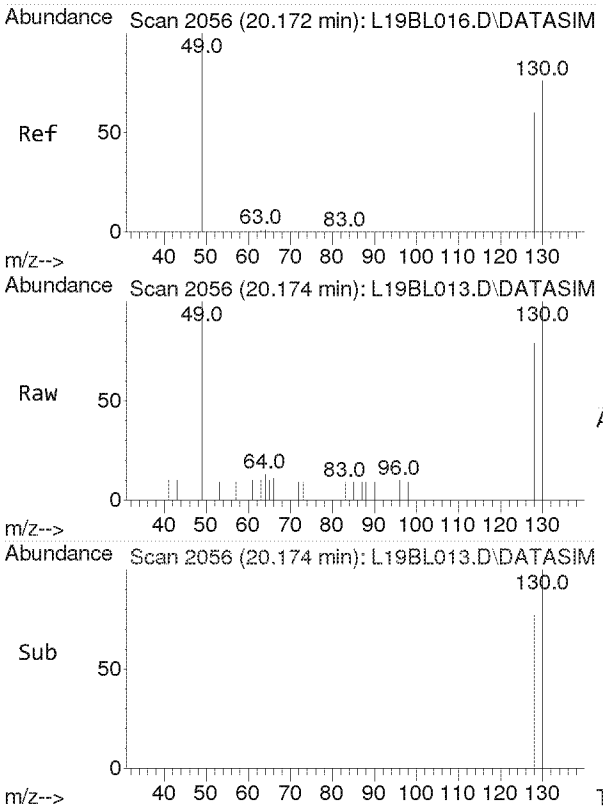


#24
cis-1,2-Dichloroethylene
Concen: 0.261 ppbv m
RT: 19.947 min Scan# 2046
Delta R.T. 0.002 min
Lab File: L19BL013.D
Acq: 12 Feb 2019 7:46 pm

Tgt Ion: 61 Resp: 1661

Ion	Ratio	Lower	Upper
61	100		
96	90.5	59.0	88.6#
98	51.1	37.6	56.4

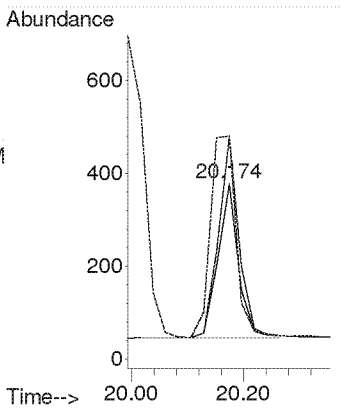


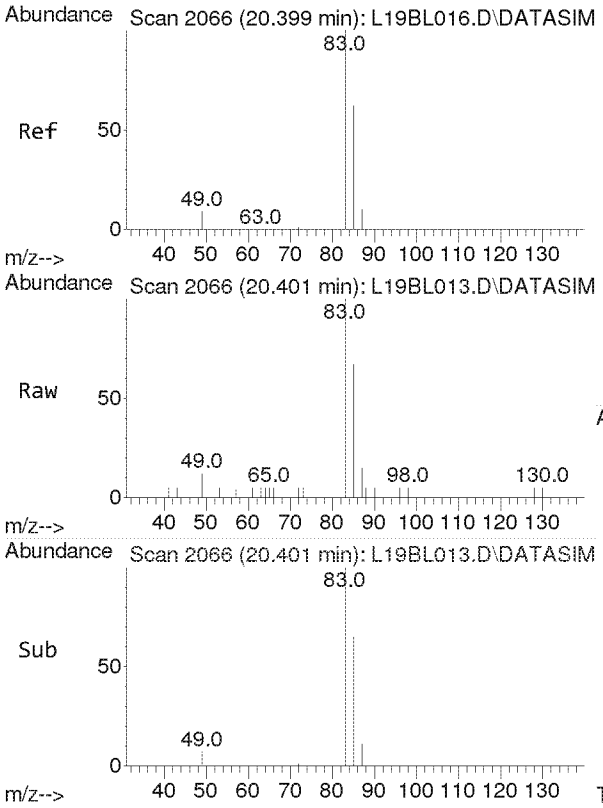


#25
Bromochloromethane
Concen: 0.244 ppbv
RT: 20.174 min Scan# 2056
Delta R.T. 0.002 min
Lab File: L19BL013.D
Acq: 12 Feb 2019 7:46 pm

Tgt Ion:128 Resp: 845

Ion	Ratio	Lower	Upper
128	100		
130	130.9	103.3	154.9
49	163.7	128.3	192.5

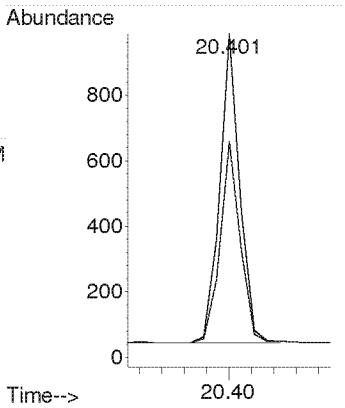


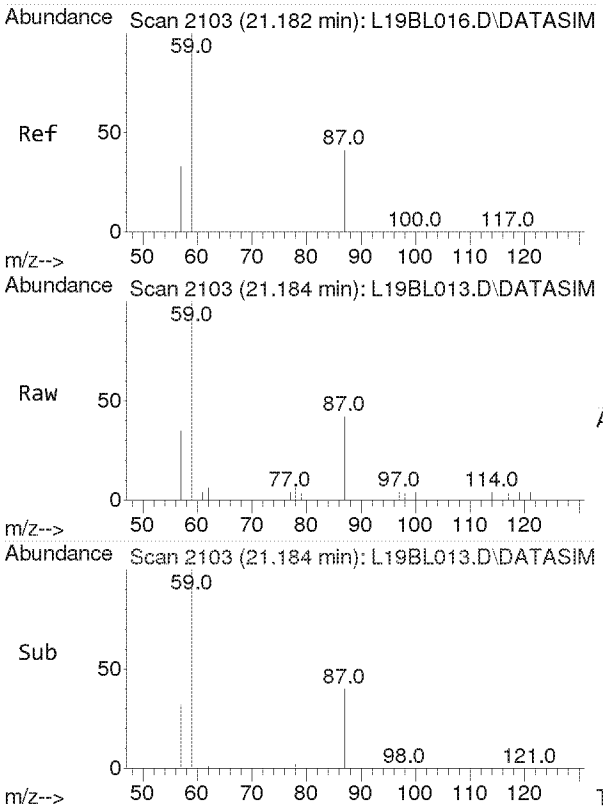


#26
Chloroform
Concen: 0.248 ppbv
RT: 20.401 min Scan# 2066
Delta R.T. 0.002 min
Lab File: L19BL013.D
Acq: 12 Feb 2019 7:46 pm

Tgt Ion: 83 Resp: 2340

Ion	Ratio	Lower	Upper
83	100		
85	65.5	51.5	77.3

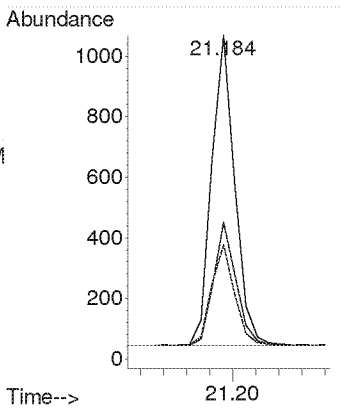


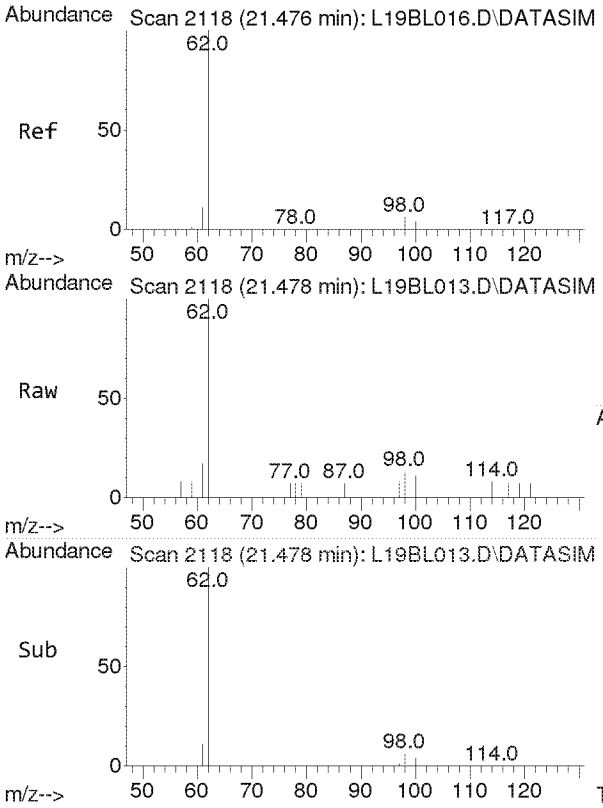


#27
Ethyl tert-Butyl Ether
Concen: 0.221 ppbv
RT: 21.184 min Scan# 2103
Delta R.T. 0.002 min
Lab File: L19BL013.D
Acq: 12 Feb 2019 7:46 pm

Tgt Ion: 59 Resp: 2857

Ion	Ratio	Lower	Upper
59	100		
87	39.0	31.5	47.3
57	32.1	26.6	39.8

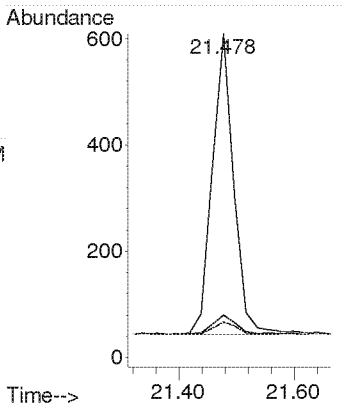


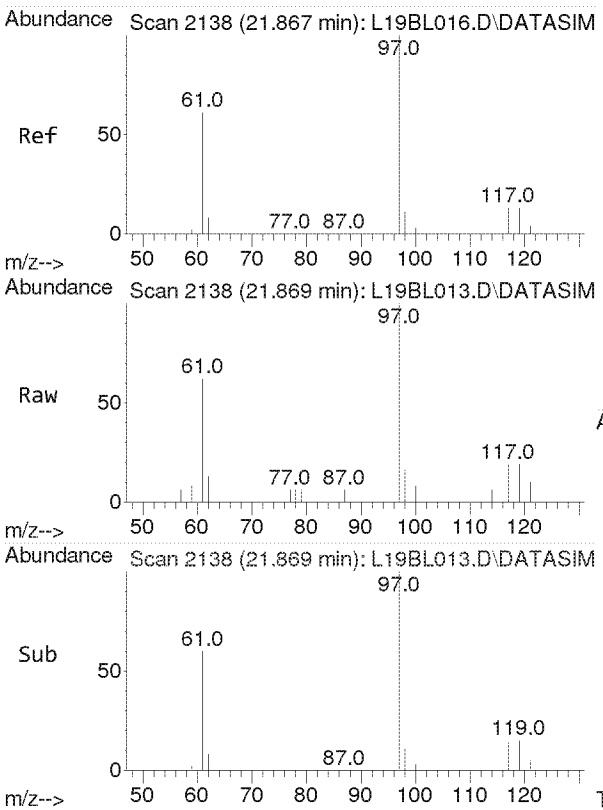


#28
1,2-Dichloroethane
Concen: 0.253 ppbv
RT: 21.478 min Scan# 2118
Delta R.T. 0.002 min
Lab File: L19BL013.D
Acq: 12 Feb 2019 7:46 pm

Tgt Ion: 62 Resp: 1454

Ion	Ratio	Lower	Upper
62	100		
98	6.9	5.0	7.6
100	4.2	3.2	4.8

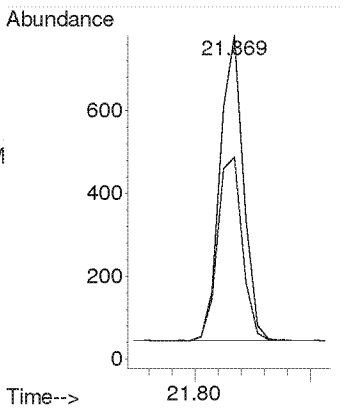


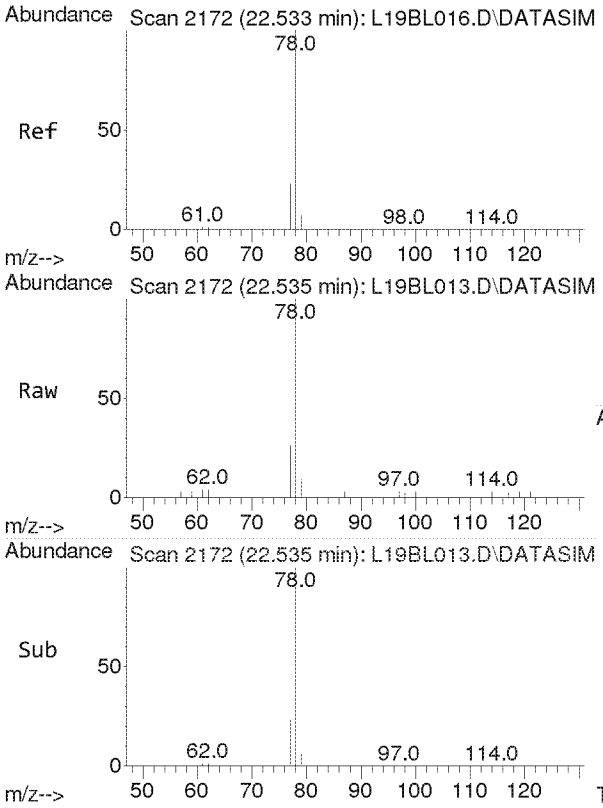


#30
1,1,1-Trichloroethane
Concen: 0.237 ppbv
RT: 21.869 min Scan# 2138
Delta R.T. 0.002 min
Lab File: L19BL013.D
Acq: 12 Feb 2019 7:46 pm

Tgt Ion: 97 Resp: 2060

Ion	Ratio	Lower	Upper
97	100		
61	64.5	49.7	74.5

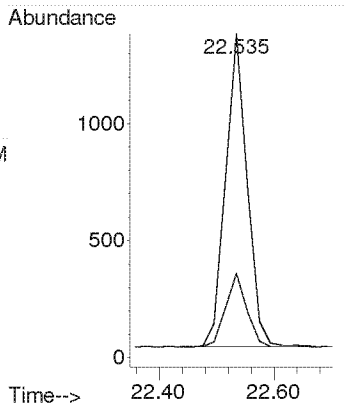


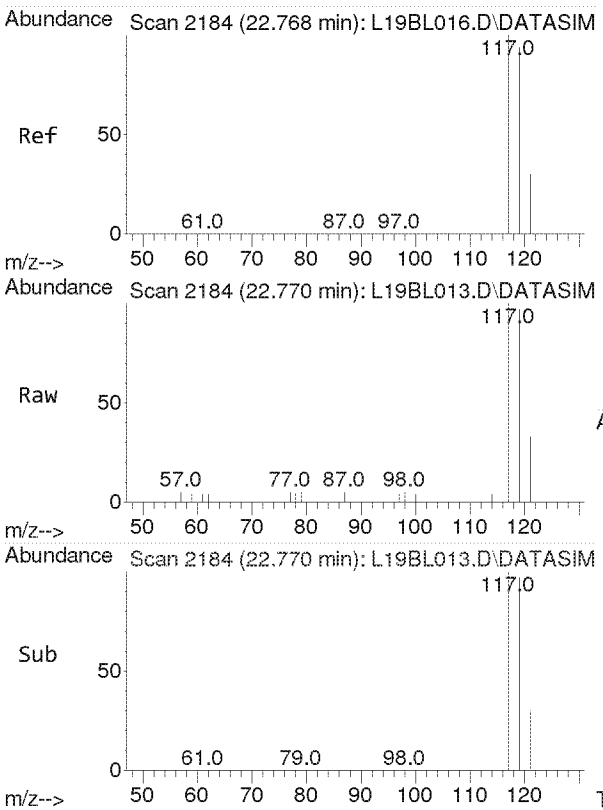


#31
Benzene
Concen: 0.277 ppbv
RT: 22.535 min Scan# 2172
Delta R.T. 0.002 min
Lab File: L19BL013.D
Acq: 12 Feb 2019 7:46 pm

Tgt Ion: 78 Resp: 3468

Ion	Ratio	Lower	Upper
78	100		
77	23.0	18.2	27.4

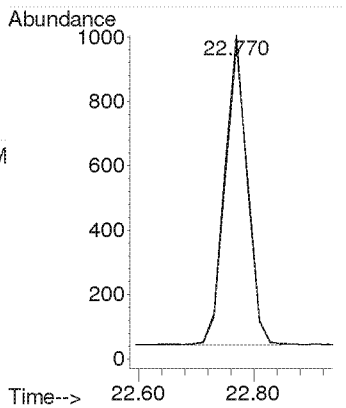


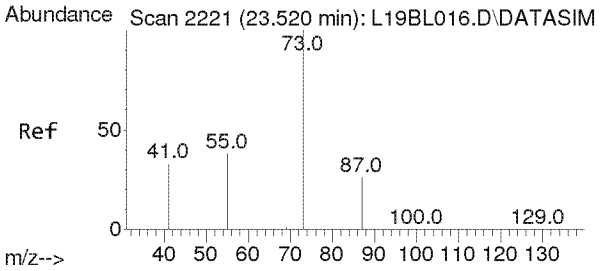


#32
Carbon Tetrachloride
Concen: 0.276 ppbv
RT: 22.770 min Scan# 2184
Delta R.T. 0.002 min
Lab File: L19BL013.D
Acq: 12 Feb 2019 7:46 pm

Tgt Ion:117 Resp: 2575

Ion	Ratio	Lower	Upper
117	100		
119	97.7	77.0	115.6

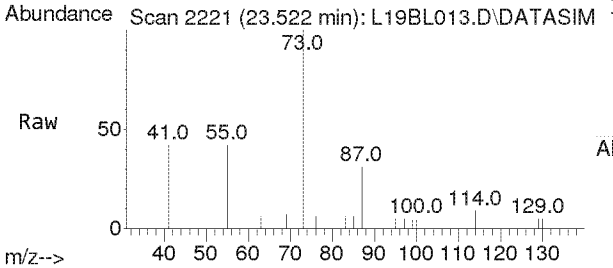


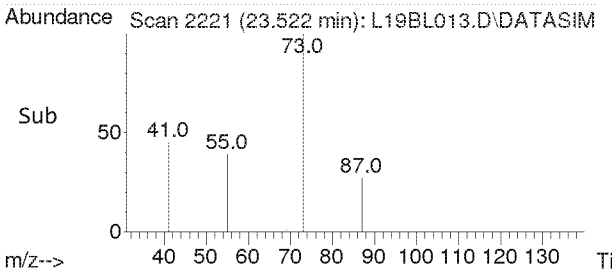


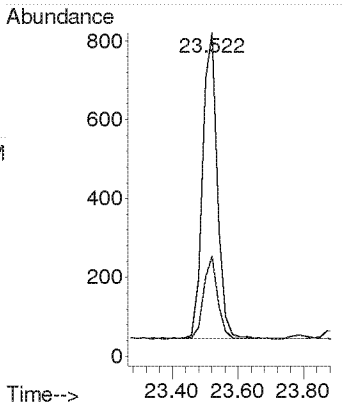
#33
tert-Amyl Methyl Ether
Concen: 0.227 ppbv
RT: 23.522 min Scan# 2221
Delta R.T. 0.002 min
Lab File: L19BL013.D
Acq: 12 Feb 2019 7:46 pm

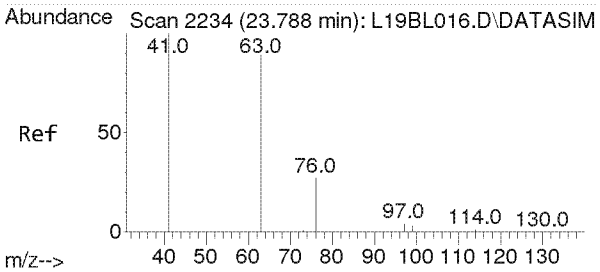
Tgt Ion: 73 Resp: 2406

Ion	Ratio	Lower	Upper
73	100		
87	26.0	20.1	30.1





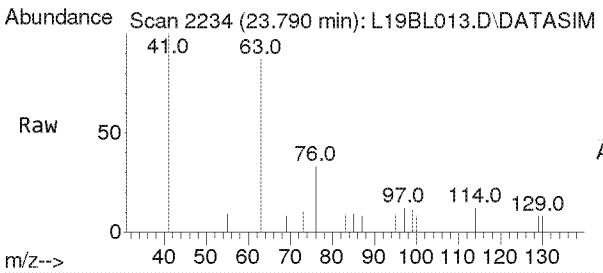


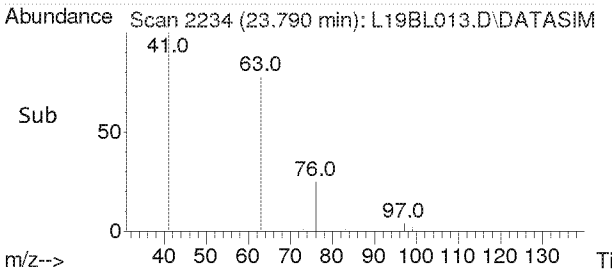


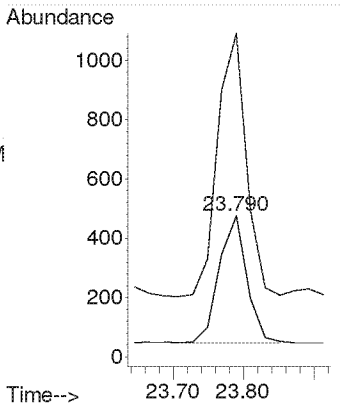
#34
1,2-Dichloropropane
Concen: 0.241 ppbv
RT: 23.790 min Scan# 2234
Delta R.T. 0.002 min
Lab File: L19BL013.D
Acq: 12 Feb 2019 7:46 pm

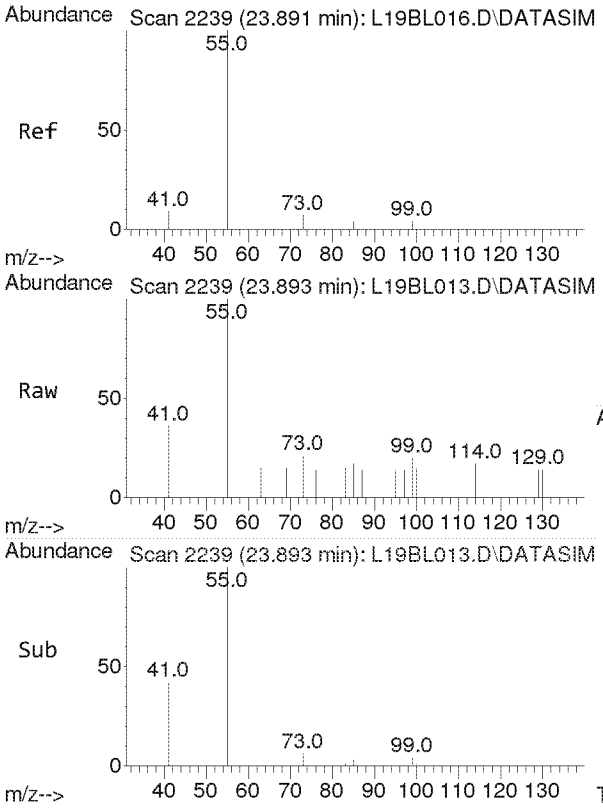
Tgt Ion: 63 Resp: 1163

Ion	Ratio	Lower	Upper
63	100		
41	217.4	175.9	263.9





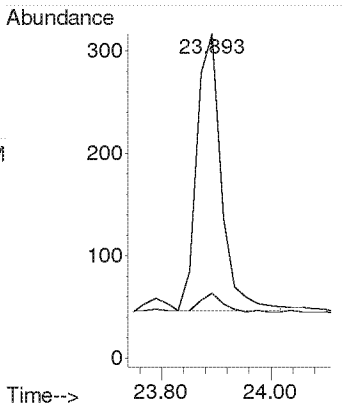


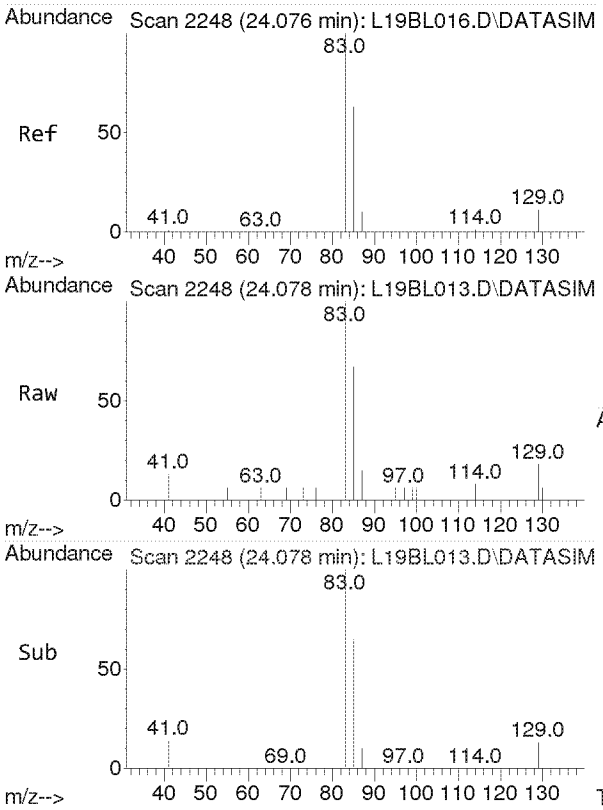


#35
Ethyl Acrylate
Concen: 0.213 ppbv
RT: 23.893 min Scan# 2239
Delta R.T. 0.002 min
Lab File: L19BL013.D
Acq: 12 Feb 2019 7:46 pm

Tgt Ion: 55 Resp: 844

Ion	Ratio	Lower	Upper
55	100		
99	5.7	5.0	7.6

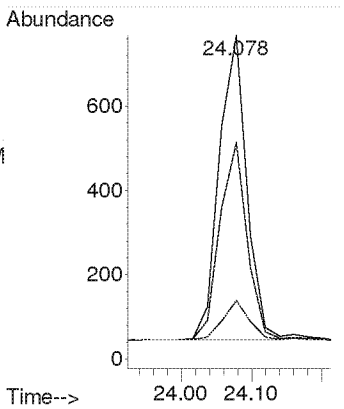


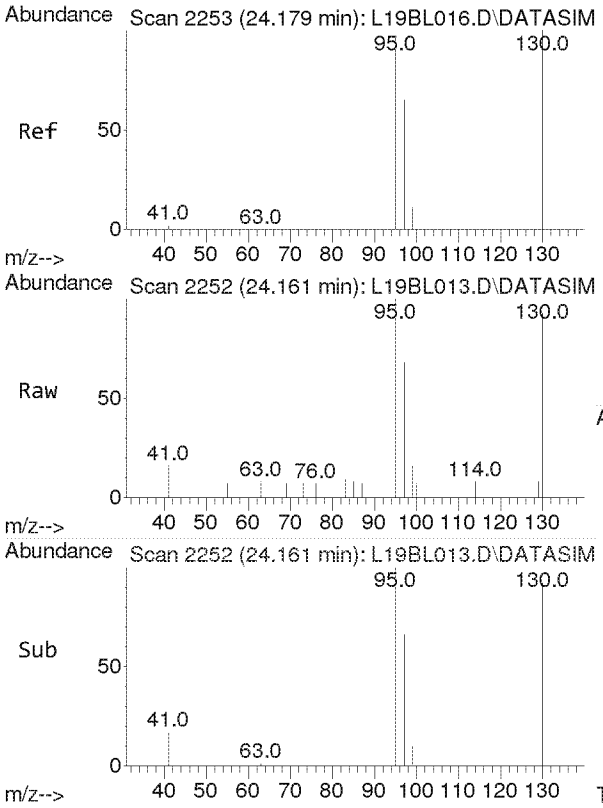


#36
Bromodichloromethane
Concen: 0.234 ppbv
RT: 24.078 min Scan# 2248
Delta R.T. 0.002 min
Lab File: L19BL013.D
Acq: 12 Feb 2019 7:46 pm

Tgt Ion: 83 Resp: 1971

Ion	Ratio	Lower	Upper
83	100		
85	63.7	51.0	76.4
129	12.2	9.9	14.9

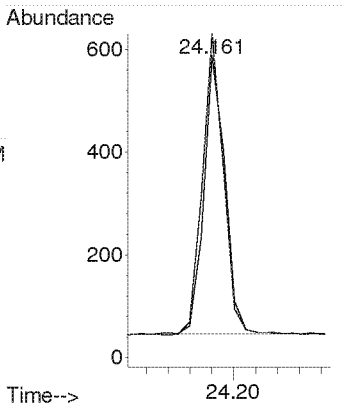


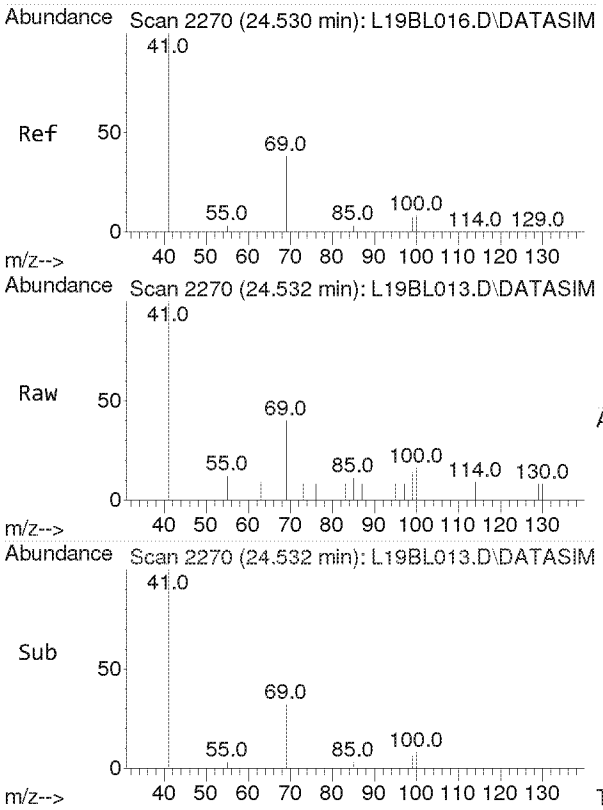


#37
Trichloroethylene
Concen: 0.242 ppbv
RT: 24.161 min Scan# 2252
Delta R.T. -0.018 min
Lab File: L19BL013.D
Acq: 12 Feb 2019 7:46 pm

Tgt Ion:130 Resp: 1452

Ion	Ratio	Lower	Upper
130	100		
95	108.3	84.9	127.3

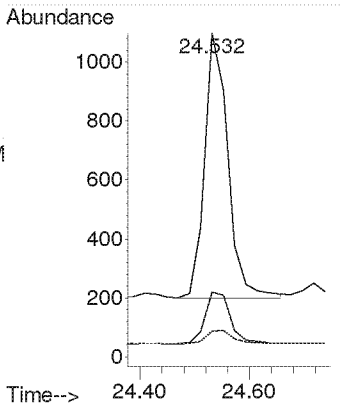


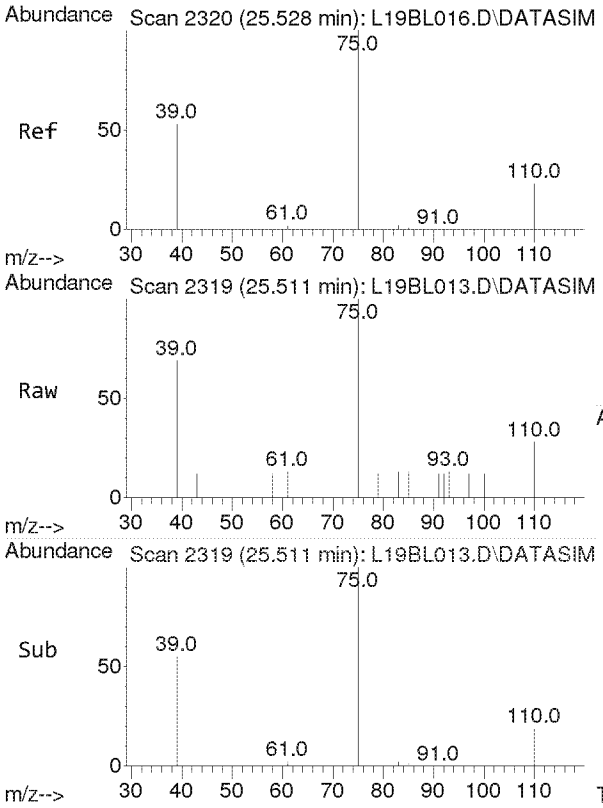


#38
Methyl Methacrylate
Concen: 0.219 ppbv
RT: 24.532 min Scan# 2270
Delta R.T. 0.002 min
Lab File: L19BL013.D
Acq: 12 Feb 2019 7:46 pm

Tgt Ion: 41 Resp: 2622

Ion	Ratio	Lower	Upper
41	100		
69	20.9	16.8	25.2
100	5.8	4.5	6.7

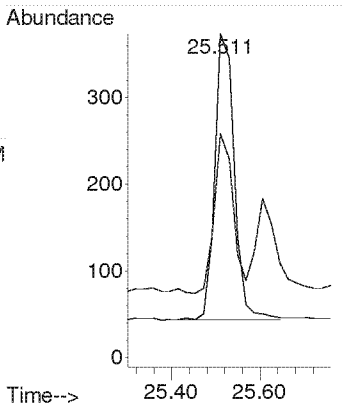


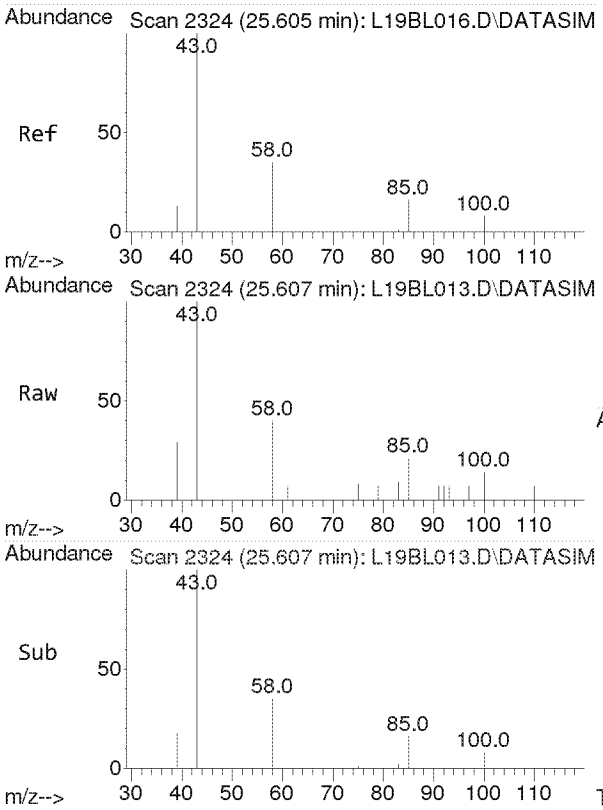


#39
cis-1,3-Dichloropropene
Concen: 0.240 ppbv
RT: 25.511 min Scan# 2319
Delta R.T. -0.017 min
Lab File: L19BL013.D
Acq: 12 Feb 2019 7:46 pm

Tgt Ion: 75 Resp: 985

Ion	Ratio	Lower	Upper
75	100		
39	54.5	43.4	65.0

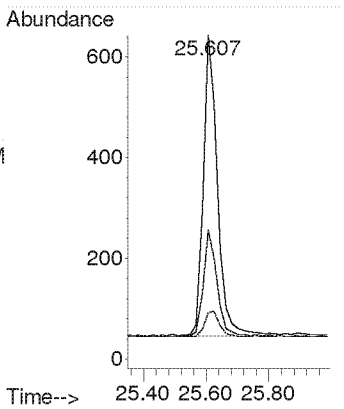


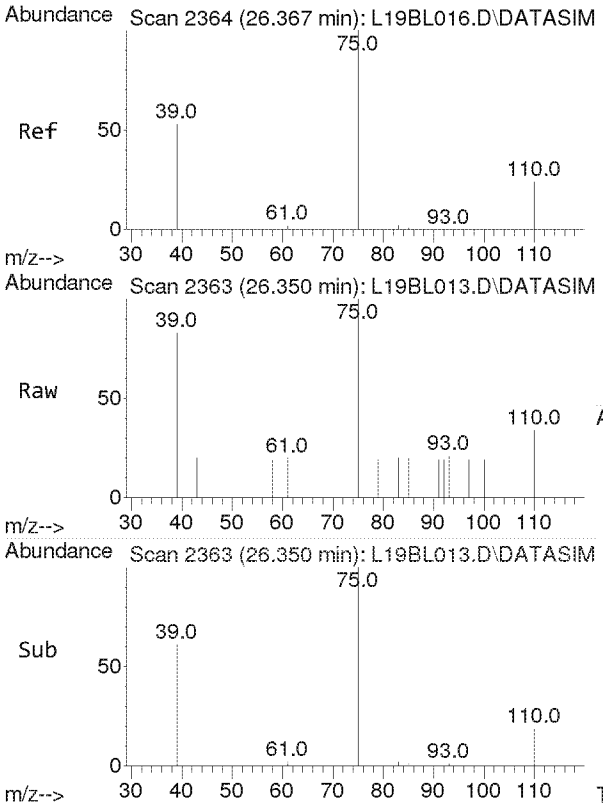


#40
Methyl Isobutyl Ketone
Concen: 0.214 ppbv
RT: 25.607 min Scan# 2324
Delta R.T. 0.002 min
Lab File: L19BL013.D
Acq: 12 Feb 2019 7:46 pm

Tgt Ion: 43 Resp: 1871

Ion	Ratio	Lower	Upper
43	100		
58	34.9	28.0	42.0
100	9.0	7.0	10.4

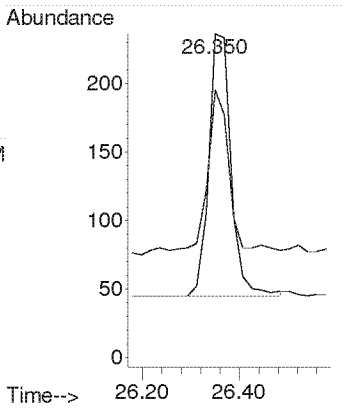


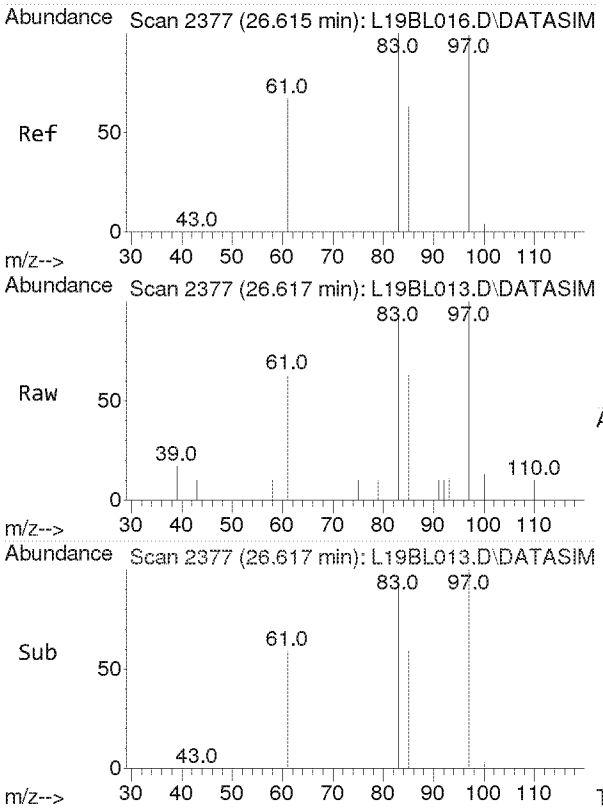


#41
trans-1,3-Dichloropropene
Concen: 0.217 ppbv
RT: 26.350 min Scan# 2363
Delta R.T. -0.017 min
Lab File: L19BL013.D
Acq: 12 Feb 2019 7:46 pm

Tgt Ion: 75 Resp: 608

Ion	Ratio	Lower	Upper
75	100		
39	56.6	42.9	64.3

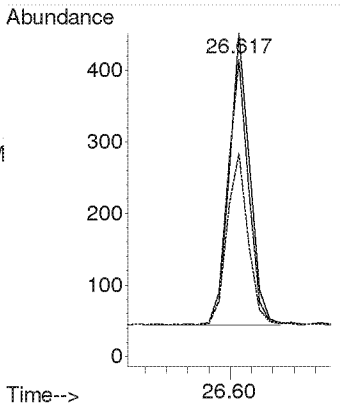


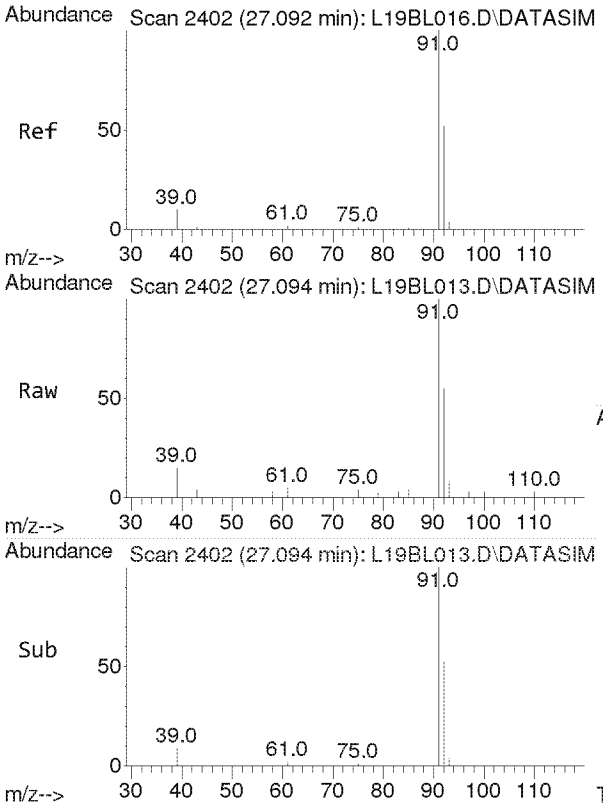


#42
1,1,2-Trichloroethane
Concen: 0.248 ppbv
RT: 26.617 min Scan# 2377
Delta R.T. 0.002 min
Lab File: L19BL013.D
Acq: 12 Feb 2019 7:46 pm

Tgt Ion: 97 Resp: 1086

Ion	Ratio	Lower	Upper
97	100		
83	91.3	75.4	113.0
61	60.1	49.8	74.6

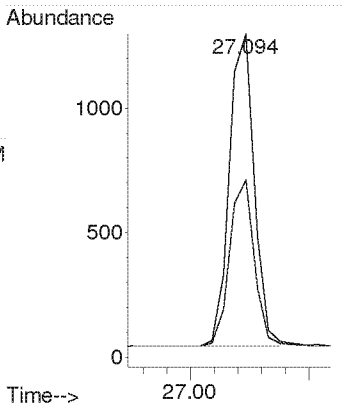


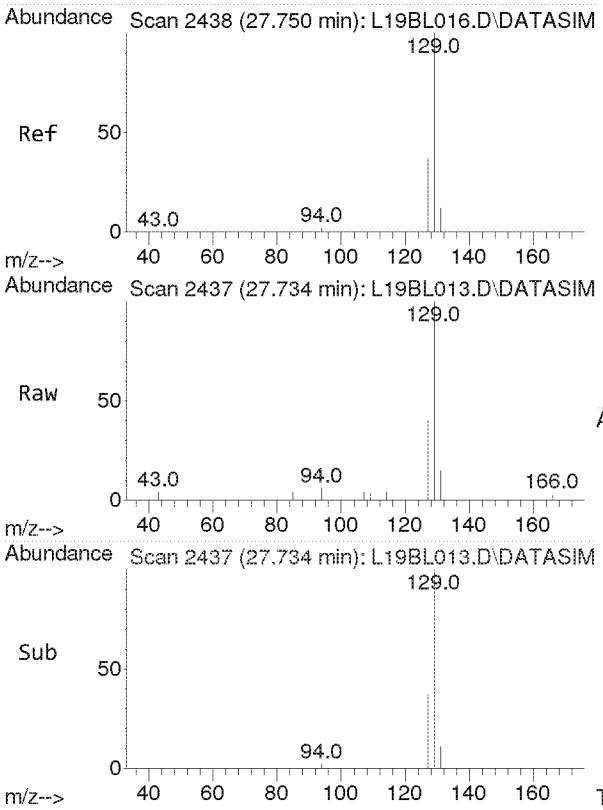


#44
Toluene
Concen: 0.255 ppbv
RT: 27.094 min Scan# 2402
Delta R.T. 0.002 min
Lab File: L19BL013.D
Acq: 12 Feb 2019 7:46 pm

Tgt Ion: 91 Resp: 3633

Ion	Ratio	Lower	Upper
91	100		
92	52.8	42.0	63.0

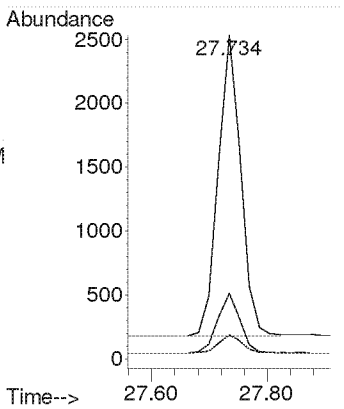


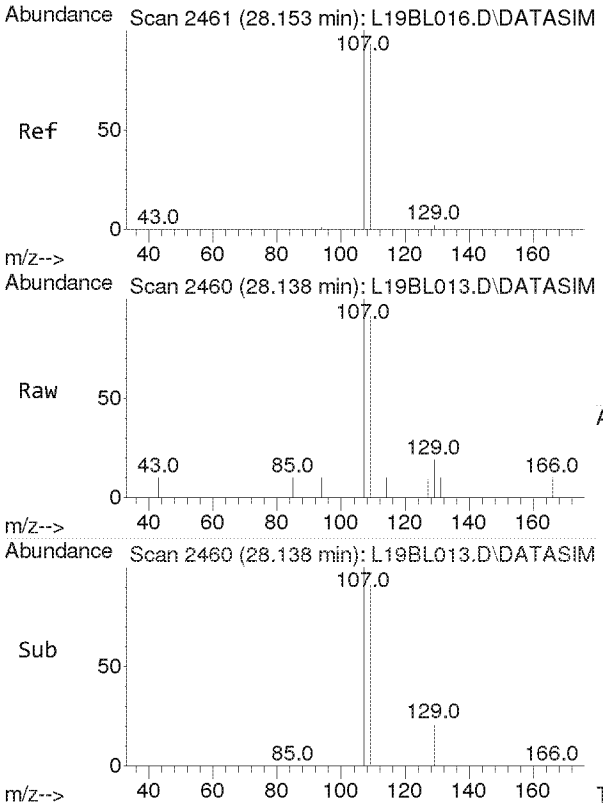


#45
Dibromochloromethane
Concen: 0.229 ppbv
RT: 27.734 min Scan# 2437
Delta R.T. -0.015 min
Lab File: L19BL013.D
Acq: 12 Feb 2019 7:46 pm

Tgt Ion:129 Resp: 6401

Ion	Ratio	Lower	Upper
129	100		
127	19.7	15.4	23.2
131	6.1	4.8	7.2

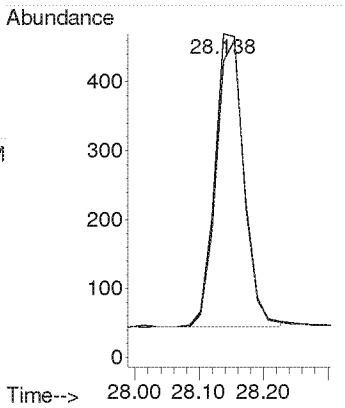


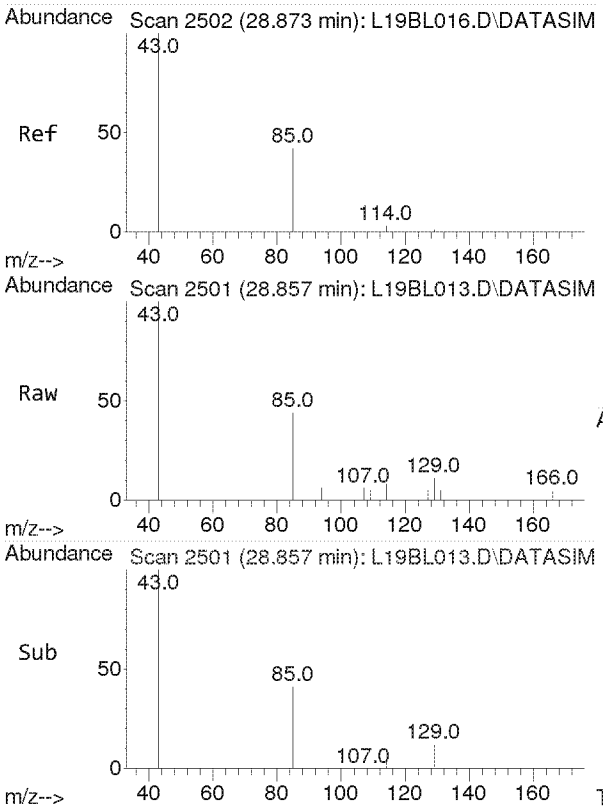


#46
1,2-Dibromoethane
Concen: 0.243 ppbv
RT: 28.138 min Scan# 2460
Delta R.T. -0.015 min
Lab File: L19BL013.D
Acq: 12 Feb 2019 7:46 pm

Tgt Ion:107 Resp: 1317

Ion	Ratio	Lower	Upper
107	100		
109	96.0	75.4	113.0

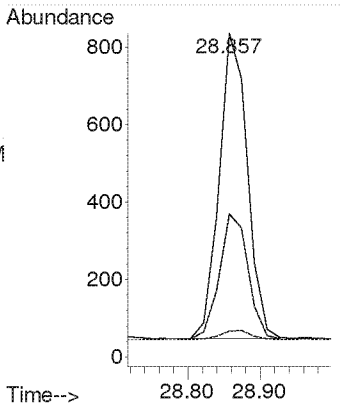


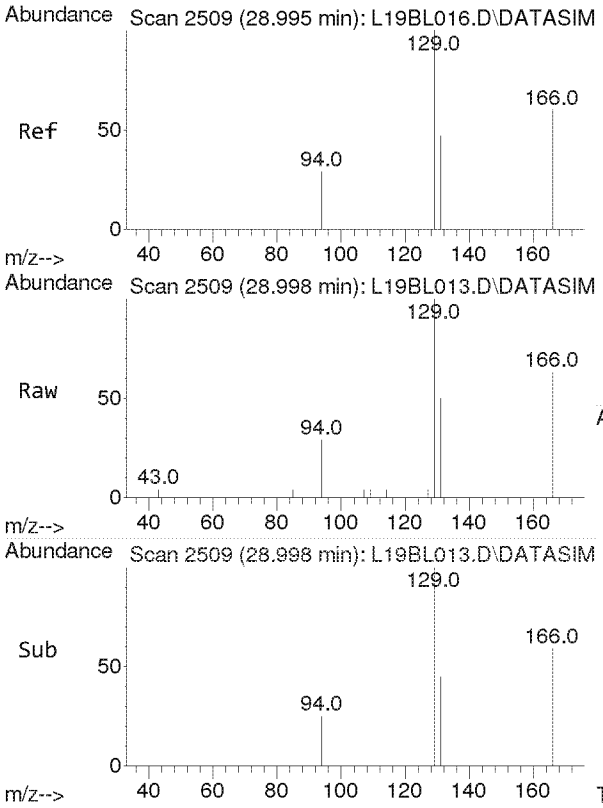


#47
n-Octane
Concen: 0.250 ppbv
RT: 28.857 min Scan# 2501
Delta R.T. -0.015 min
Lab File: L19BL013.D
Acq: 12 Feb 2019 7:46 pm

Tgt Ion: 43 Resp: 2143

Ion	Ratio	Lower	Upper
43	100		
85	42.4	33.0	49.6
114	2.9	2.2	3.4

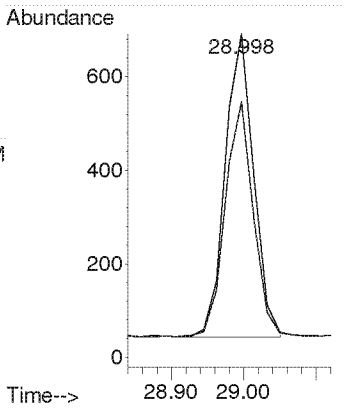


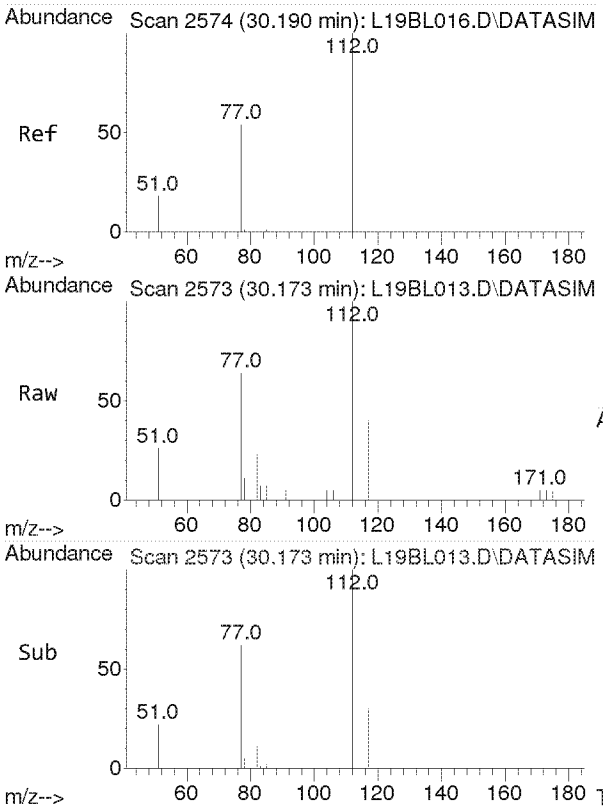


#48
Tetrachloroethylene
Concen: 0.261 ppbv
RT: 28.998 min Scan# 2509
Delta R.T. 0.002 min
Lab File: L19BL013.D
Acq: 12 Feb 2019 7:46 pm

Tgt Ion:166 Resp: 1772

Ion	Ratio	Lower	Upper
166	100		
131	76.9	61.5	92.3

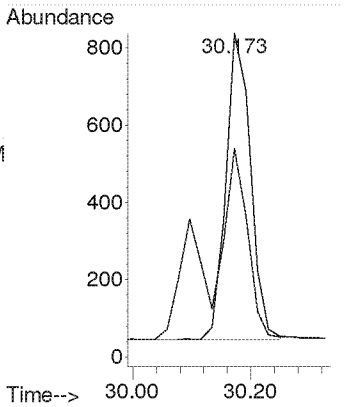


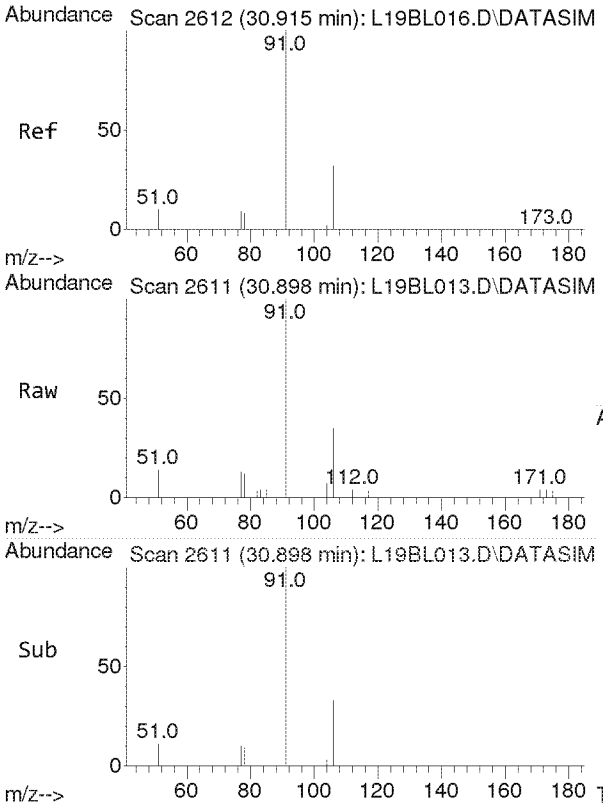


#49
Chlorobenzene
Concen: 0.249 ppbv
RT: 30.173 min Scan# 2573
Delta R.T. -0.017 min
Lab File: L19BL013.D
Acq: 12 Feb 2019 7:46 pm

Tgt Ion:112 Resp: 2273

Ion	Ratio	Lower	Upper
112	100		
77	56.1	47.8	71.6

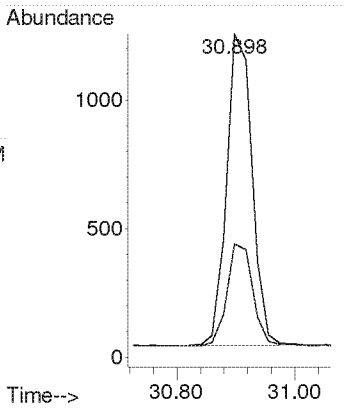


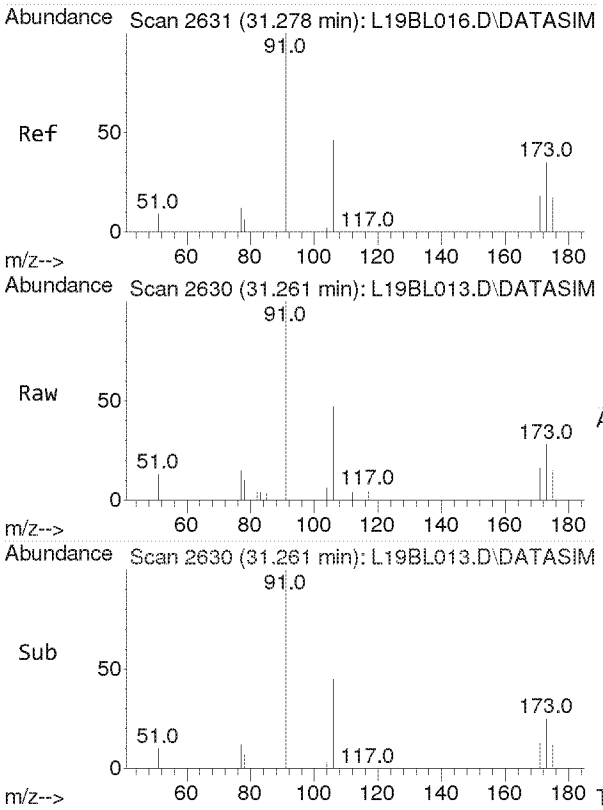


#50
Ethylbenzene
Concen: 0.240 ppbv
RT: 30.898 min Scan# 2611
Delta R.T. -0.017 min
Lab File: L19BL013.D
Acq: 12 Feb 2019 7:46 pm

Tgt Ion: 91 Resp: 3599

Ion	Ratio	Lower	Upper
91	100		
106	33.1	26.0	39.0

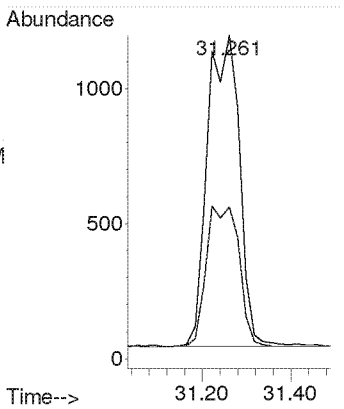


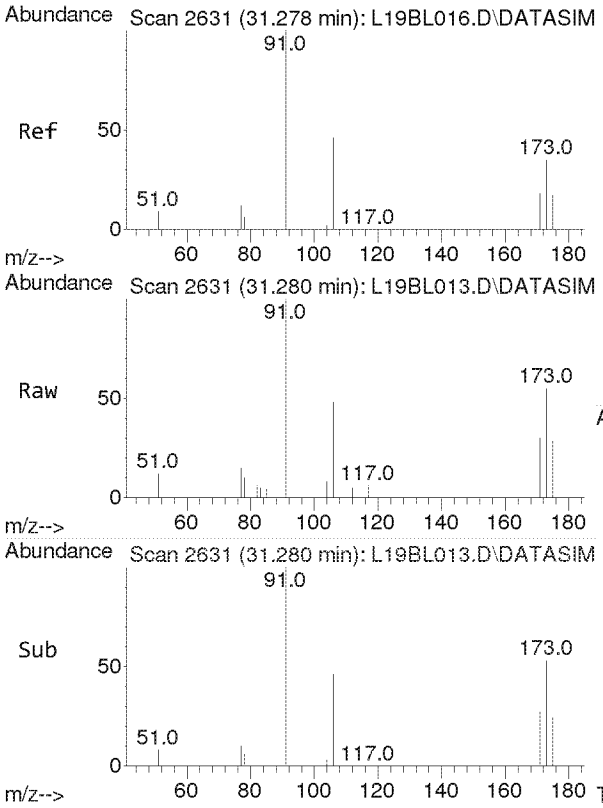


#51
m,p-Xylene
Concen: 0.450 ppbv
RT: 31.261 min Scan# 2630
Delta R.T. -0.017 min
Lab File: L19BL013.D
Acq: 12 Feb 2019 7:46 pm

Tgt Ion: 91 Resp: 5723

Ion	Ratio	Lower	Upper
91	100		
106	46.0	37.3	55.9

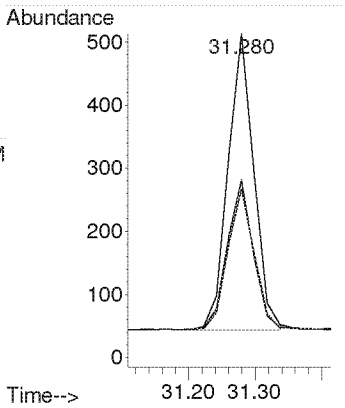


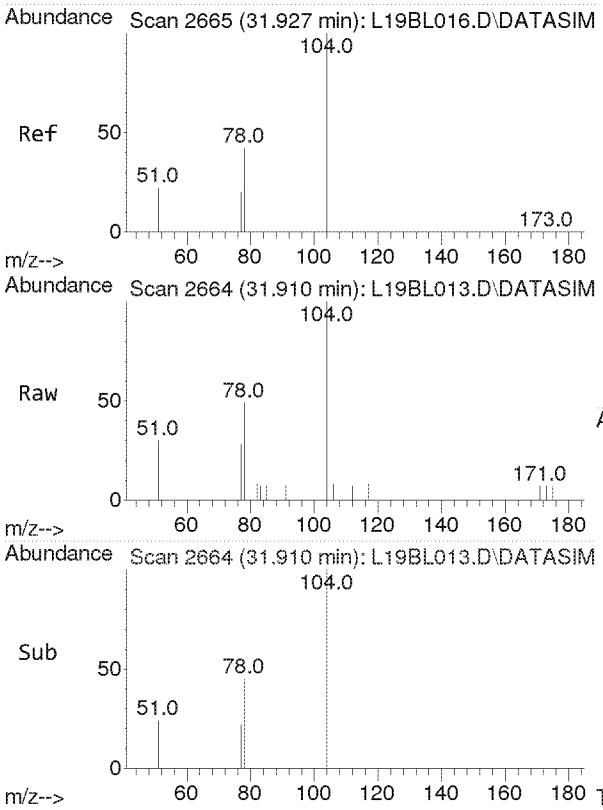


#52
Bromoform
Concen: 0.236 ppbv
RT: 31.280 min Scan# 2631
Delta R.T. 0.002 min
Lab File: L19BL013.D
Acq: 12 Feb 2019 7:46 pm

Tgt Ion:173 Resp: 1267

Ion	Ratio	Lower	Upper
173	100		
171	51.1	41.0	61.6
175	48.1	39.1	58.7

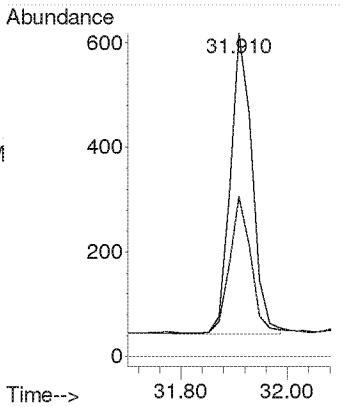


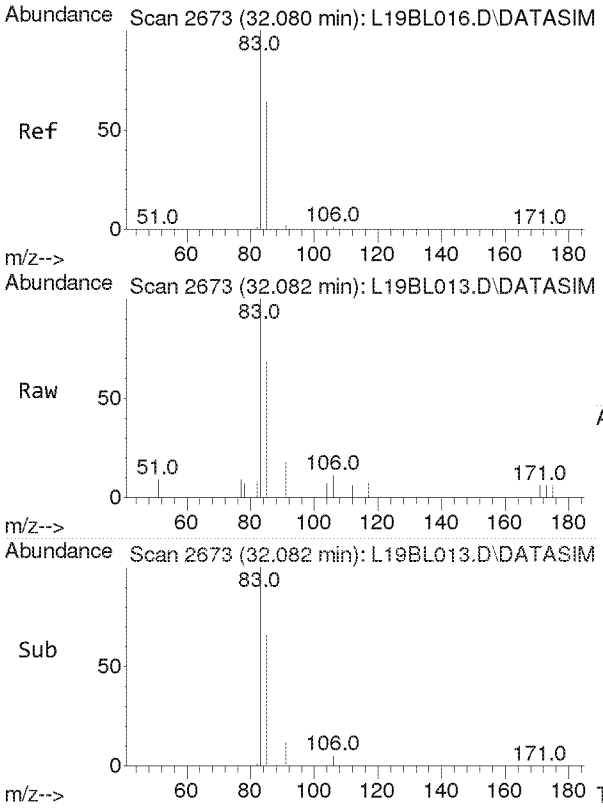


#53
Styrene
Concen: 0.228 ppbv
RT: 31.910 min Scan# 2664
Delta R.T. -0.017 min
Lab File: L19BL013.D
Acq: 12 Feb 2019 7:46 pm

Tgt Ion:104 Resp: 1631

Ion	Ratio	Lower	Upper
104	100		
78	43.7	35.4	53.2
103	0.0	0.0	0.0

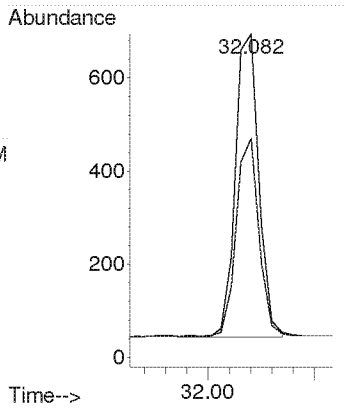


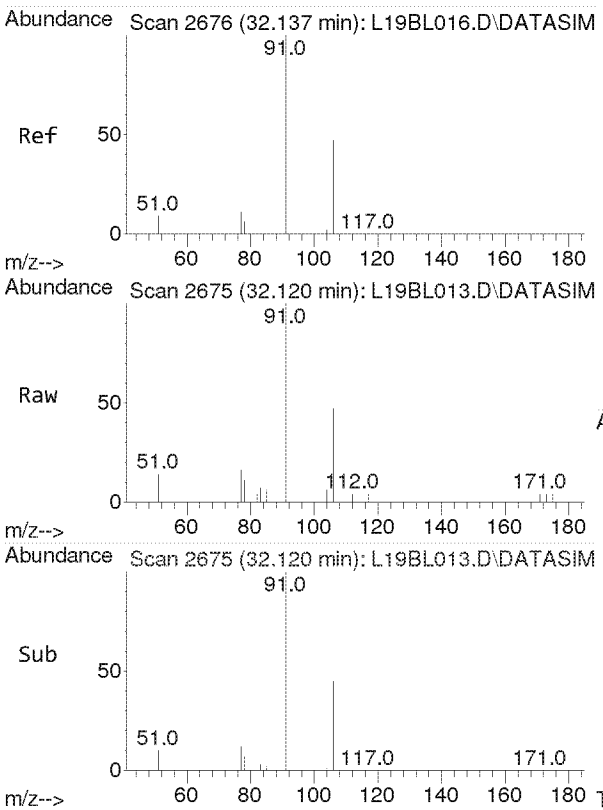


#54
1,1,2,2-Tetrachloroethane
Concen: 0.248 ppbv
RT: 32.082 min Scan# 2673
Delta R.T. 0.002 min
Lab File: L19BL013.D
Acq: 12 Feb 2019 7:46 pm

Tgt Ion: 83 Resp: 1994

Ion	Ratio	Lower	Upper
83	100		
85	63.3	51.6	77.4

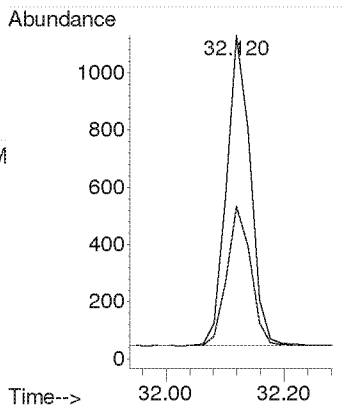


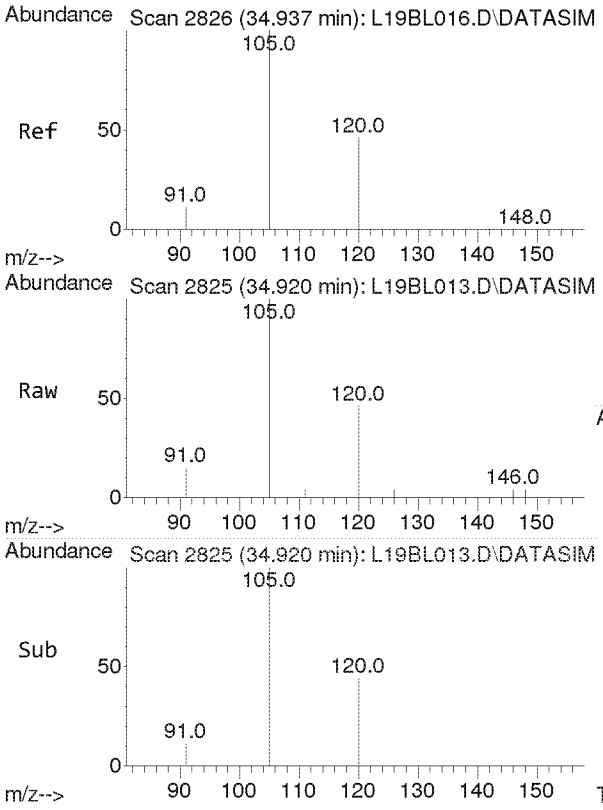


#55
o-Xylene
Concen: 0.243 ppbv
RT: 32.120 min Scan# 2675
Delta R.T. -0.017 min
Lab File: L19BL013.D
Acq: 12 Feb 2019 7:46 pm

Tgt Ion: 91 Resp: 3016

Ion	Ratio	Lower	Upper
91	100		
106	45.5	36.6	55.0

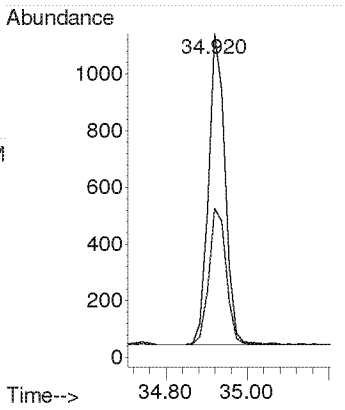


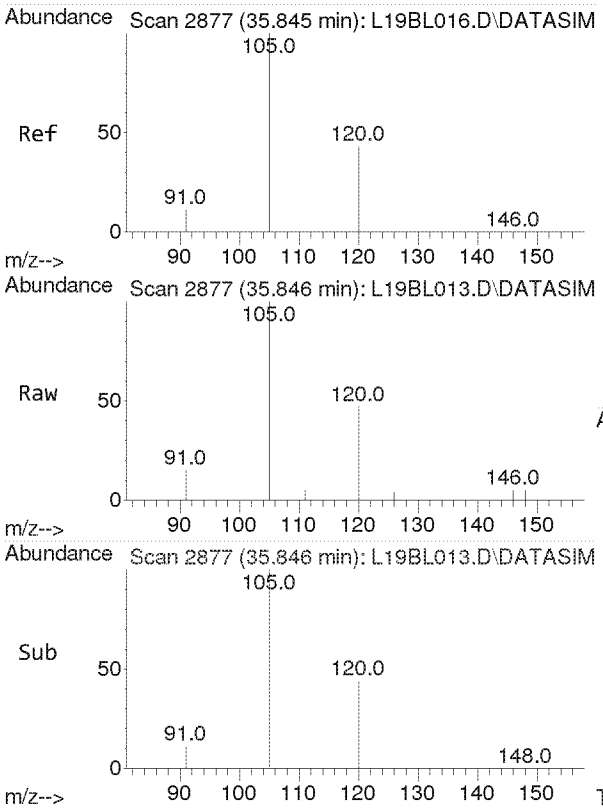


#56
1,3,5-Trimethylbenzene
Concen: 0.234 ppbv
RT: 34.920 min Scan# 2825
Delta R.T. -0.017 min
Lab File: L19BL013.D
Acq: 12 Feb 2019 7:46 pm

Tgt Ion:105 Resp: 3091

Ion	Ratio	Lower	Upper
105	100		
120	46.2	36.8	55.2

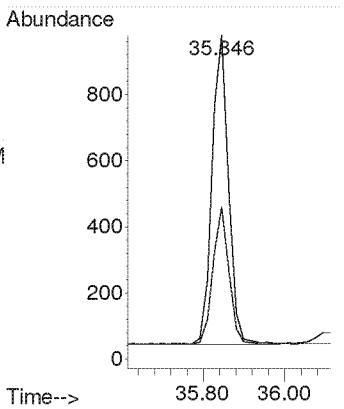


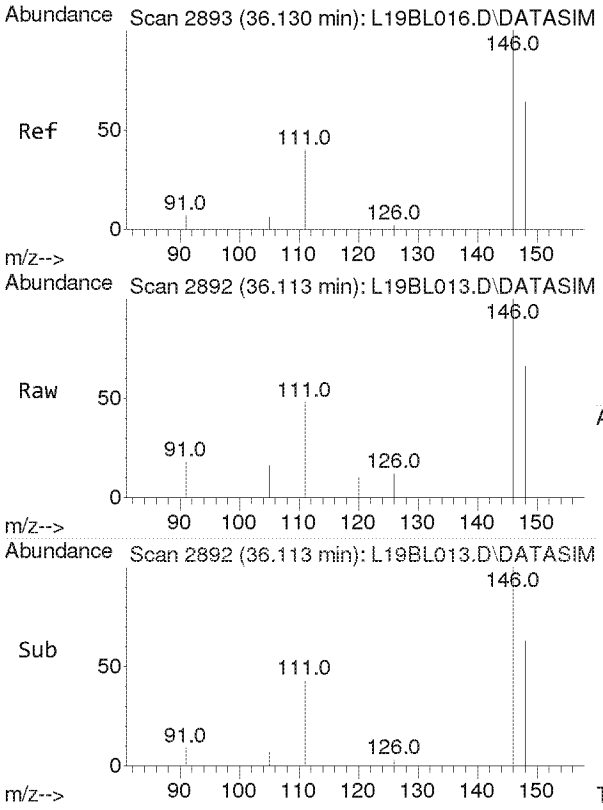


#57
1,2,4-Trimethylbenzene
Concen: 0.227 ppbv
RT: 35.846 min Scan# 2877
Delta R.T. 0.001 min
Lab File: L19BL013.D
Acq: 12 Feb 2019 7:46 pm

Tgt Ion:105 Resp: 2609

Ion	Ratio	Lower	Upper
105	100		
120	42.9	35.2	52.8

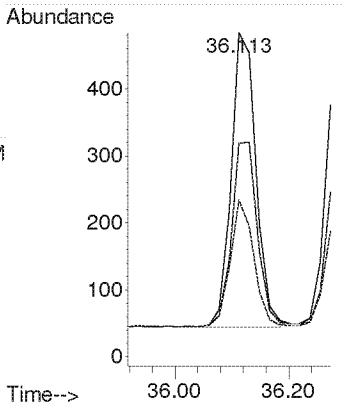


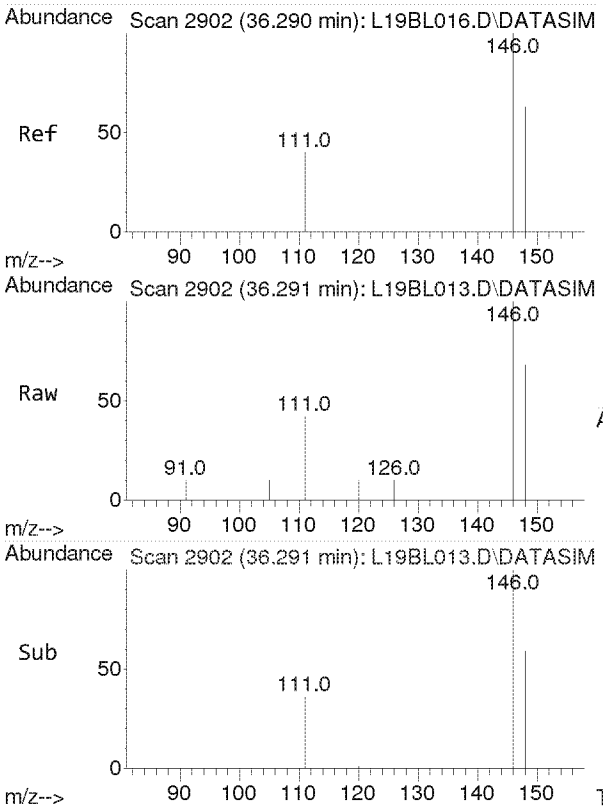


#58
m-Dichlorobenzene
Concen: 0.218 ppbv
RT: 36.113 min Scan# 2892
Delta R.T. -0.017 min
Lab File: L19BL013.D
Acq: 12 Feb 2019 7:46 pm

Tgt Ion:146 Resp: 1331

Ion	Ratio	Lower	Upper
146	100		
148	64.8	51.3	76.9
111	40.7	32.1	48.1

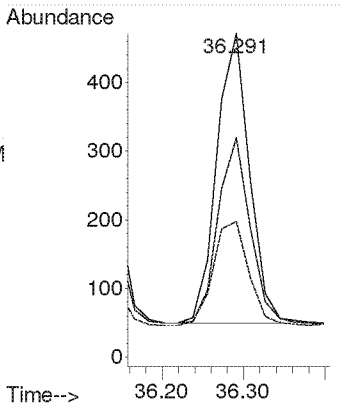


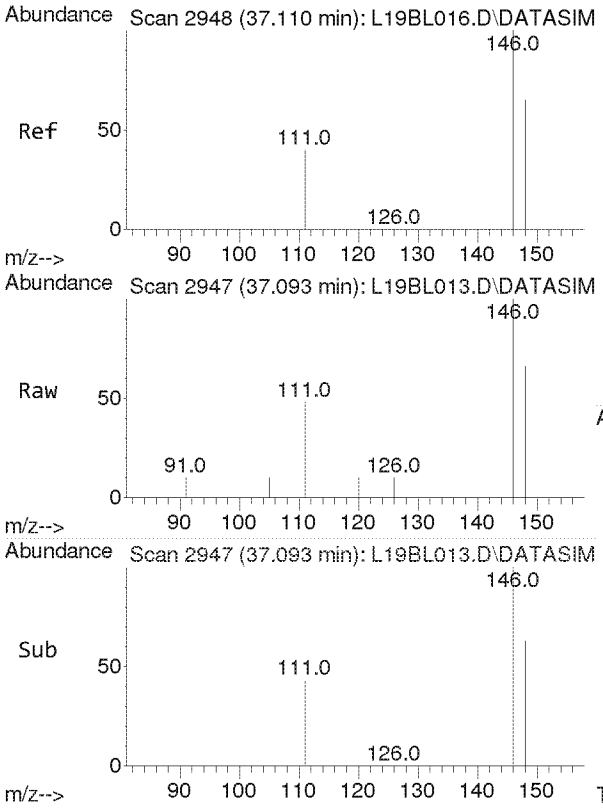


#59
p-Dichlorobenzene
Concen: 0.237 ppbv
RT: 36.291 min Scan# 2902
Delta R.T. 0.001 min
Lab File: L19BL013.D
Acq: 12 Feb 2019 7:46 pm

Tgt Ion:146 Resp: 1181

Ion	Ratio	Lower	Upper
146	100		
148	62.7	51.4	77.2
111	38.7	31.0	46.4

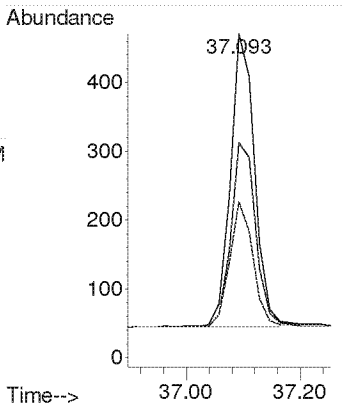


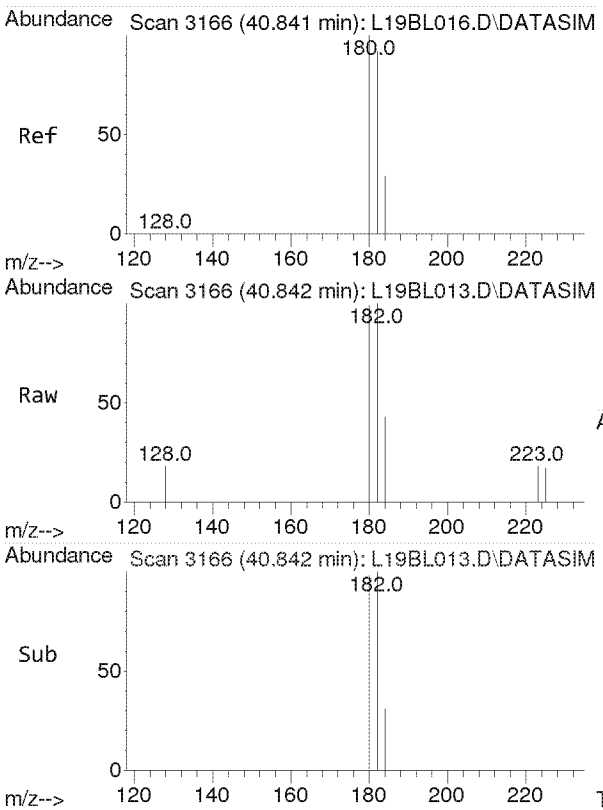


#60
o-Dichlorobenzene
Concen: 0.224 ppbv
RT: 37.093 min Scan# 2947
Delta R.T. -0.017 min
Lab File: L19BL013.D
Acq: 12 Feb 2019 7:46 pm

Tgt Ion:146 Resp: 1247

Ion	Ratio	Lower	Upper
146	100		
148	63.4	51.2	76.8
111	41.2	32.6	49.0

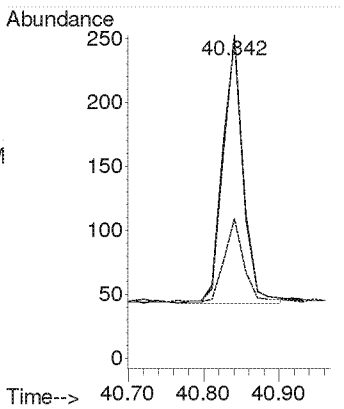


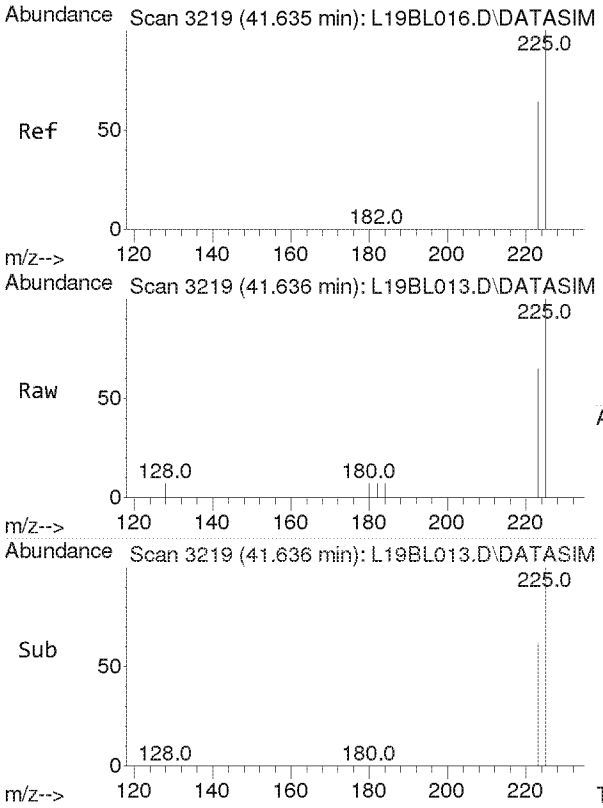


#61
1,2,4-Trichlorobenzene
Concen: 0.218 ppbv
RT: 40.842 min Scan# 3166
Delta R.T. 0.001 min
Lab File: L19BL013.D
Acq: 12 Feb 2019 7:46 pm

Tgt Ion:180 Resp: 388

Ion	Ratio	Lower	Upper
180	100		
182	97.7	75.7	113.5
184	29.4	24.2	36.2

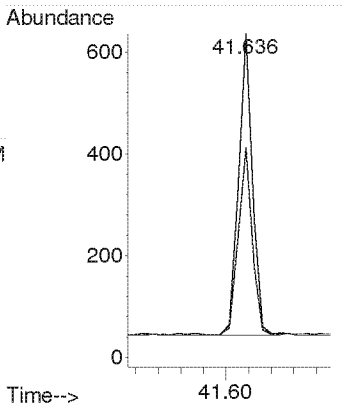




#62
Hexachloro-1,3-butadiene
Concen: 0.221 ppbv
RT: 41.636 min Scan# 3219
Delta R.T. 0.001 min
Lab File: L19BL013.D
Acq: 12 Feb 2019 7:46 pm

Tgt Ion:225 Resp: 1013

Ion	Ratio	Lower	Upper
225	100		
223	62.2	49.9	74.9



Analytical Standard Record
Eastern Research Group
9B12003

Description:	0.50 ppbv ICal	Expires:	03/14/19
Standard Type:	Calibration Stan	Prepared:	02/12/19
Solvent:	Scientific Air	Prepared By:	Mitch Howell
Final Volume (mls):	6000	Department:	Air Toxics
Vials:	1	Last Edit:	02/12/19 08:45 by MH

canister# 3238

Analyte	CAS Number	Concentration	Units
1,1,1-Trichloroethane	71-55-6	0.000491	ppmv
1,1,2,2-Tetrachloroethane	79-34-5	0.000505	ppmv
1,1,2-Trichloroethane	79-00-5	0.000507	ppmv
1,1-Dichloroethane	75-34-3	0.000512	ppmv
1,1-Dichloroethene	75-35-4	0.000544	ppmv
1,2,4-Trichlorobenzene	120-82-1	0.000475	ppmv
1,2,4-Trimethylbenzene	95-63-6	0.00049	ppmv
1,2-Dibromoethane	106-93-4	0.000514	ppmv
1,2-Dichloroethane	107-06-2	0.000517	ppmv
1,2-Dichloropropane	78-87-5	0.000503	ppmv
1,3,5-Trimethylbenzene	108-67-8	0.000496	ppmv
1,3-Butadiene	106-99-0	0.000496	ppmv
Acetonitrile	75-05-8	0.000458	ppmv
Acetylene	74-86-2	0.000456	ppmv
Acrolein	107-02-8	0.0004	ppmv
Acrylonitrile	107-13-1	0.000476	ppmv
Benzene	71-43-2	0.000546	ppmv
Bromochloromethane	74-97-5	0.00051	ppmv
Bromodichloromethane	75-27-4	0.00048	ppmv
Bromoform	75-25-2	0.000486	ppmv
Bromomethane	74-83-9	0.000505	ppmv
Carbon Disulfide	75-15-0	0.000505	ppmv
Carbon Tetrachloride	56-23-5	0.000558	ppmv
Chlorobenzene	108-90-7	0.000513	ppmv
Chloroethane	75-00-3	0.000505	ppmv
Chloroform	67-66-3	0.000509	ppmv
Chloromethane	74-87-3	0.000502	ppmv
Chloroprene	126-99-8	0.000515	ppmv
cis-1,2-Dichloroethylene	156-59-2	0.000514	ppmv
cis-1,3-Dichloropropene	10061-01-5	0.0005	ppmv

Reviewed By — Date: 1-14-19

Analytical Standard Record

Eastern Research Group

9B12003

Dibromochloromethane	124-48-1	0.00048	ppmv
Dichlorodifluoromethane	75-71-8	0.000492	ppmv
Dichloromethane	75-09-2	0.00054	ppmv
Dichlorotetrafluoroethane	76-14-2	0.000555	ppmv
Ethyl Acrylate	140-88-5	0.000489	ppmv
Ethyl tert-Butyl Ether	637-92-3	0.00047	ppmv
Ethylbenzene	100-41-4	0.000507	ppmv
Ethylene oxide	75-21-8	0.000492	ppmv
Hexachloro-1,3-butadiene	87-68-3	0.000481	ppmv
m,p-Xylene	108-38-3, 106-42-3	0.000972	ppmv
m-Dichlorobenzene	541-73-1	0.000463	ppmv
Methyl Isobutyl Ketone	108-10-1	0.000457	ppmv
Methyl Methacrylate	80-62-6	0.000475	ppmv
Methyl tert-Butyl Ether	1634-04-4	0.000475	ppmv
n-Octane	111-65-9	0.000518	ppmv
o-Dichlorobenzene	95-50-1	0.000483	ppmv
o-Xylene	95-47-6	0.000505	ppmv
p-Dichlorobenzene	106-46-7	0.000498	ppmv
Propylene	115-07-1	0.000484	ppmv
Styrene	100-42-5	0.000491	ppmv
tert-Amyl Methyl Ether	994-05-8	0.000483	ppmv
Tetrachloroethylene	127-18-4	0.000515	ppmv
Toluene	108-88-3	0.000514	ppmv
trans-1,2-Dichloroethylene	156-60-5	0.000501	ppmv
trans-1,3-Dichloropropene	10061-02-6	0.000493	ppmv
Trichloroethylene	79-01-6	0.00048	ppmv
Trichlorofluoromethane	75-69-4	0.000466	ppmv
Trichlorotrifluoroethane	76-13-1	0.000518	ppmv
Vinyl chloride	75-01-4	0.000513	ppmv

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
8K20014	TO-15 Primary Primary Stock Stan	11/20/18	Mitch Howell	10/26/19	11/26/18 09:26 by MH	6
8L18003	Ethylene Oxide Stock Standard	12/06/18	** Vendor **	12/06/19	12/18/18 10:28 by MH	3

r 2-14-19

Reviewed By Date

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\L19BL\
Data File : L19BL014.D
Acq On : 12 Feb 2019 8:46 pm
Operator : MAH
Sample : 1902030-CAL2
Misc : 80 ML 8L13001,9B12003
ALS Vial : 14 Sample Multiplier: 1

L-14-19

Quant Time: Feb 13 06:42:57 2019
Quant Method : C:\msdchem\1\METHODS\9020003.M
Quant Title : TO-15 by Selective Ion Analysis
QLast Update : Wed Feb 13 06.40:07 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) IS-Hexane-d14	19.992	66	48248	4.7700	ppbv	0.00
29) IS-1,4-Difluorobenzene	23.151	114	117858	4.9900	ppbv	0.00
43) IS-Chlorobenzene-d5	30.116	117	83569	4.7400	ppbv	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Acetylene	5.401	26	1779	0.4600	ppbv	100
3) Propylene	7.823	41	2366	0.4953	ppbv	99
4) Dichlorodifluoromethane	8.685	85	11257	0.4946	ppbv	99
5) Chloromethane	9.740	50	2953	0.5101	ppbv	97
6) Dichlorotetrafluoroethane	10.881	85	11125	0.5580	ppbv	100
7) Vinyl Chloride	11.102	62	3376	0.5108	ppbv	100
8) 1,3-Butadiene	11.783	54	2157	0.4772	ppbv	99
9) Ethylene oxide	12.440	29	1379m	0.4933	ppbv	
10) Bromomethane	12.590	94	3086	0.4908	ppbv	99
11) Chloroethane	13.282	64	1291	0.4964	ppbv	100
12) Acetonitrile	14.404	41	1746	0.4113	ppbv	99
13) Acrolein	14.682	56	778	0.3631	ppbv	91
14) Trichlorofluoromethane	15.193	101	9178	0.4721	ppbv	99
15) Acrylonitrile	15.958	53	1438	0.4180	ppbv	99
16) 1,1-Dichloroethene	16.422	61	4535	0.5347	ppbv	100
17) Methylene Chloride	16.747	49	2897	0.5233	ppbv	98
18) Carbon Disulfide	16.932	76	8518	0.4949	ppbv	100
19) Trichlorotrifluoroethane	17.280	101	6765	0.5227	ppbv	99
20) trans-1,2-Dichloroethy...	18.315	96	2274	0.4832	ppbv	99
21) 1,1-Dichloroethane	18.632	63	3942	0.4986	ppbv	99
22) Methyl tert-Butyl Ether	18.814	73	5950	0.4565	ppbv	100
23) Chloroprene	19.539	53	3182	0.4916	ppbv	100
24) cis-1,2-Dichloroethylene	19.947	61	3069m	0.4954	ppbv	[illegible]
25) Bromochloromethane	20.174	128	1665	0.4933	ppbv	99
26) Chloroform	20.401	83	4582	0.4987	ppbv	98
27) Ethyl tert-Butyl Ether	21.184	59	5642	0.4485	ppbv	100
28) 1,2-Dichloroethane	21.478	62	2791	0.4995	ppbv	100
30) 1,1,1-Trichloroethane	21.869	97	4039	0.4742	ppbv	97
31) Benzene	22.535	78	6698	0.5460	ppbv	99
32) Carbon Tetrachloride	22.770	117	5035	0.5496	ppbv	100
33) tert-Amyl Methyl Ether	23.522	73	4892	0.4703	ppbv	99
34) 1,2-Dichloropropane	23.790	63	2298	0.4858	ppbv	100
35) Ethyl Acrylate	23.893	55	1752	0.4504	ppbv	99
36) Bromodichloromethane	24.078	83	3910	0.4736	ppbv	99
37) Trichloroethylene	24.181	130	2792	0.4748	ppbv	98
38) Methyl Methacrylate	24.552	41	5144	0.4391	ppbv	99
39) cis-1,3-Dichloropropene	25.530	75	1972	0.4904	ppbv	97
40) Methyl Isobutyl Ketone	25.607	43	3651	0.4258	ppbv	100
41) trans-1,3-Dichloropropene	26.369	75	1235	0.4503	ppbv	98
42) 1,1,2-Trichloroethane	26.617	97	2127	0.4952	ppbv	100
44) Toluene	27.094	91	6950	0.5095	ppbv	99
45) Dibromochloromethane	27.734	129	12650	0.4714	ppbv	100
46) 1,2-Dibromoethane	28.155	107	2576	0.4950	ppbv	99
47) n-Octane	28.875	43	4164	0.5057	ppbv	100
48) Tetrachloroethylene	28.997	166	3492	0.5370	ppbv	99
49) Chlorobenzene	30.192	112	4437	0.5066	ppbv	85
50) Ethylbenzene	30.917	91	7043	0.4903	ppbv	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\L19BL\
Data File : L19BL014.D
Acq On : 12 Feb 2019 8:46 pm
Operator : MAH
Sample : 1902030-CAL2
Misc : 80 ML 8L13001,9B12003
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Feb 13 06:42:57 2019
Quant Method : C:\msdchem\1\METHODS\9020003.M
Quant Title : TO-15 by Selective Ion Analysis
QLast Update : Wed Feb 13 06:40:07 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
51) m,p-Xylene	31.280	91	11243	0.9228 ppbv	99
52) Bromoform	31.280	173	2422	0.4712 ppbv	100
53) Styrene	31.929	104	3148	0.4592 ppbv #	99
54) 1,1,2,2-Tetrachloroethane	32.082	83	3780	0.4904 ppbv	100
55) o-Xylene	32.139	91	5870	0.4941 ppbv	99
56) 1,3,5-Trimethylbenzene	34.937	105	6118	0.4829 ppbv	99
57) 1,2,4-Trimethylbenzene	35.846	105	5104	0.4626 ppbv	100
58) m-Dichlorobenzene	36.131	146	2551	0.4364 ppbv	99
59) p-Dichlorobenzene	36.291	146	2263	0.4743 ppbv	99
60) o-Dichlorobenzene	37.111	146	2421	0.4544 ppbv	99
61) 1,2,4-Trichlorobenzene	40.841	180	670	0.3932 ppbv	98
62) Hexachloro-1,3-butadiene	41.636	225	1952	0.4437 ppbv	98

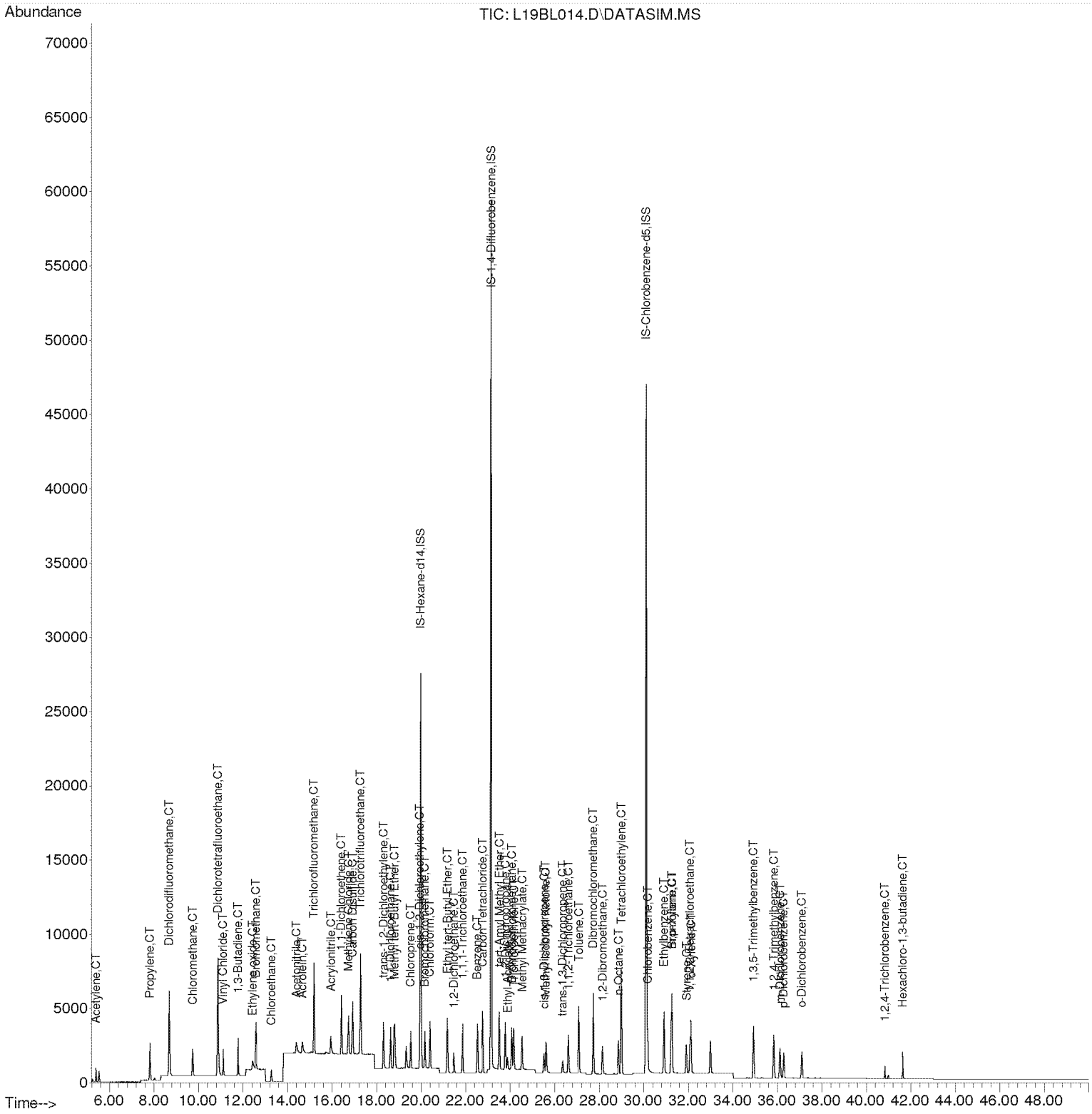
(#) = qualifier out of range (m) = manual integration (+) = signals summed

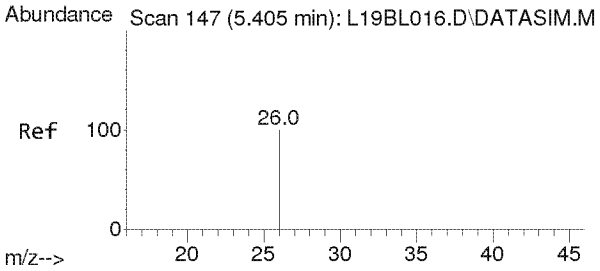
ED_002475_00000354-00086

Quantitation Report (QT Reviewed)

Data Path : Y:\MASS SPEC 1 DATA\L19BL\
Data File : L19BL014.D
Acq On : 12 Feb 2019 8:46 pm
Operator : MAH
Sample : 1902030-CAL2
Misc : 80 ML 8L13001,9B12003
ALS Vial : 14 Sample Multiplier: 1

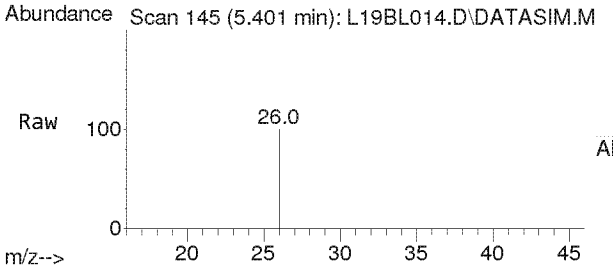
Quant Time: Feb 13 06:40:32 2019
Quant Method : C:\msdchem\1\METHODS\9020003.M
Quant Title : TO-15 by Selective Ion Analysis
QLast Update : Wed Feb 13 06:40:07 2019
Response via : Initial Calibration

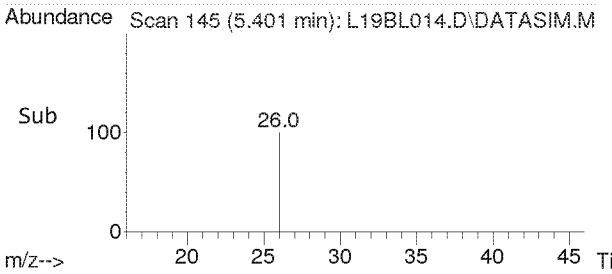


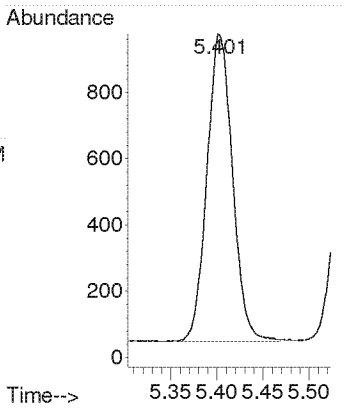


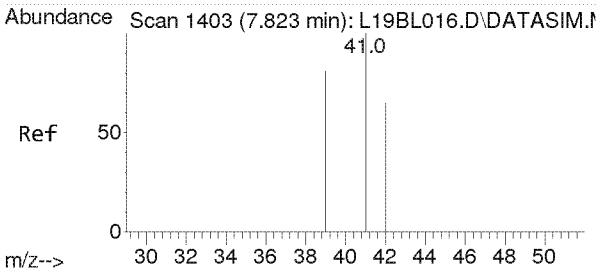
#2
Acetylene
Concen: 0.460 ppbv
RT: 5.401 min Scan# 145
Delta R.T. -0.003 min
Lab File: L19BL014.D
Acq: 12 Feb 2019 8:46 pm

Tgt Ion: 26 Resp: 1779





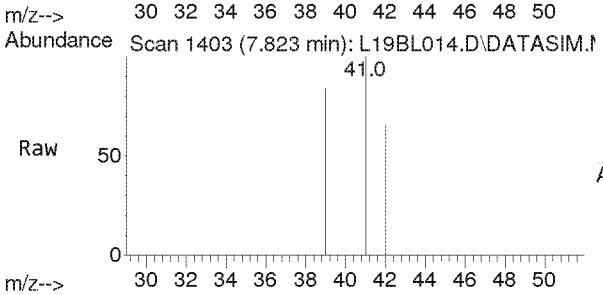


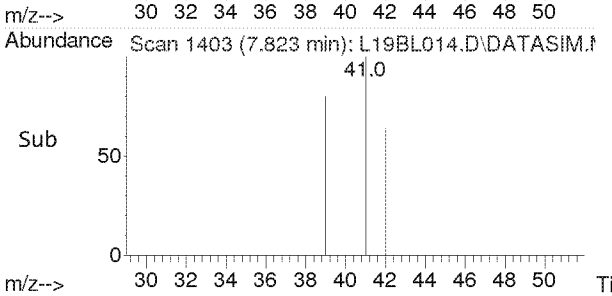


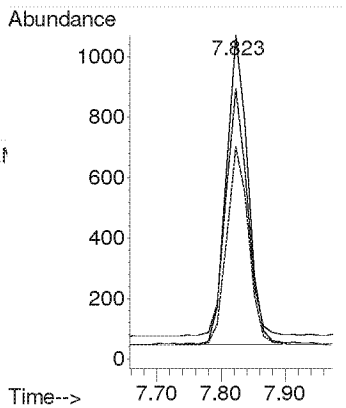
#3
Propylene
Concen: 0.495 ppbv
RT: 7.823 min Scan# 1403
Delta R.T. -0.000 min
Lab File: L19BL014.D
Acq: 12 Feb 2019 8:46 pm

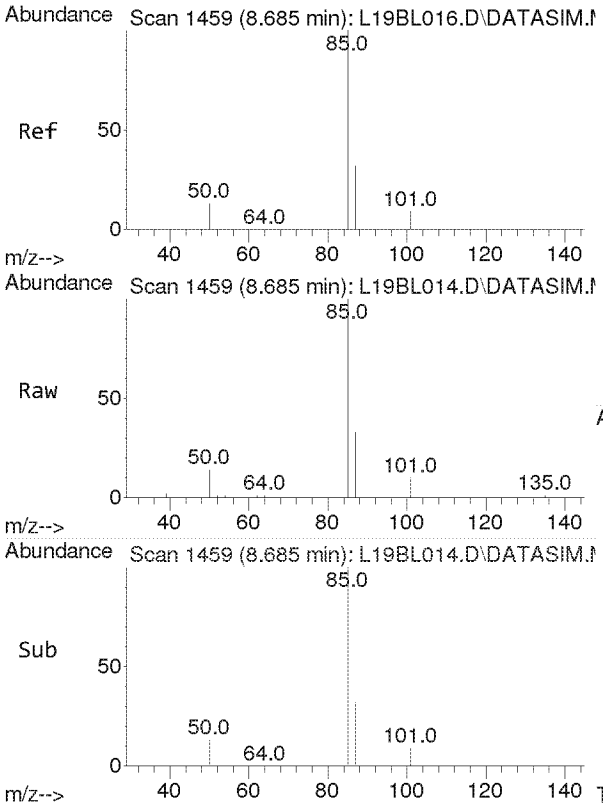
Tgt Ion: 41 Resp: 2366

Ion	Ratio	Lower	Upper
41	100		
39	79.5	64.2	96.2
42	65.0	52.6	79.0





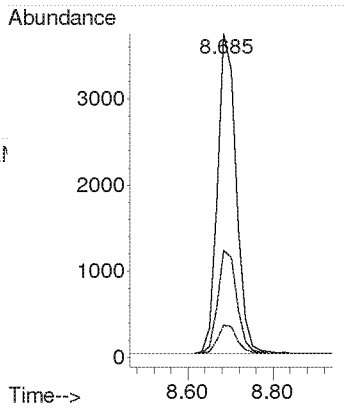


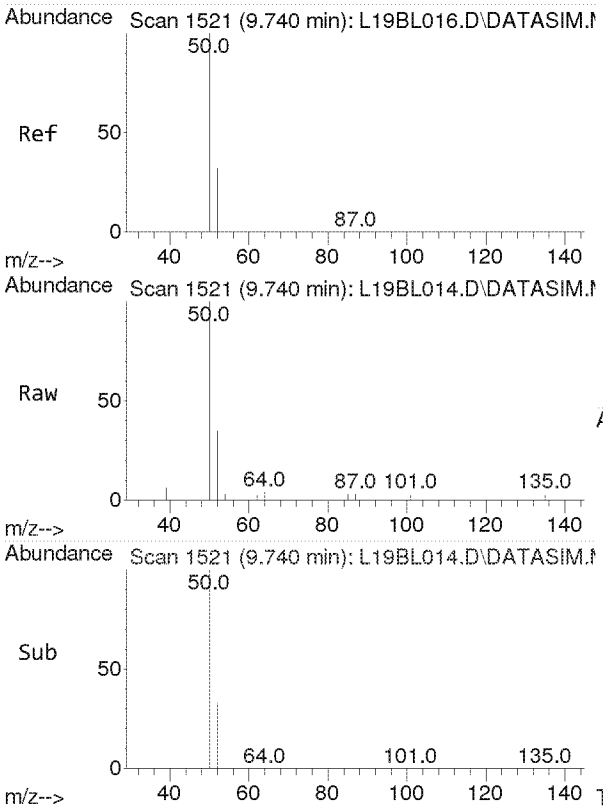


#4
Dichlorodifluoromethane
Concen: 0.495 ppbv
RT: 8.685 min Scan# 1459
Delta R.T. -0.000 min
Lab File: L19BL014.D
Acq: 12 Feb 2019 8:46 pm

Tgt Ion: 85 Resp: 11257

Ion	Ratio	Lower	Upper
85	100		
87	33.0	26.0	39.0
101	9.1	7.3	10.9

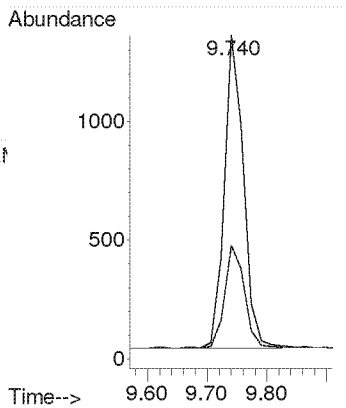


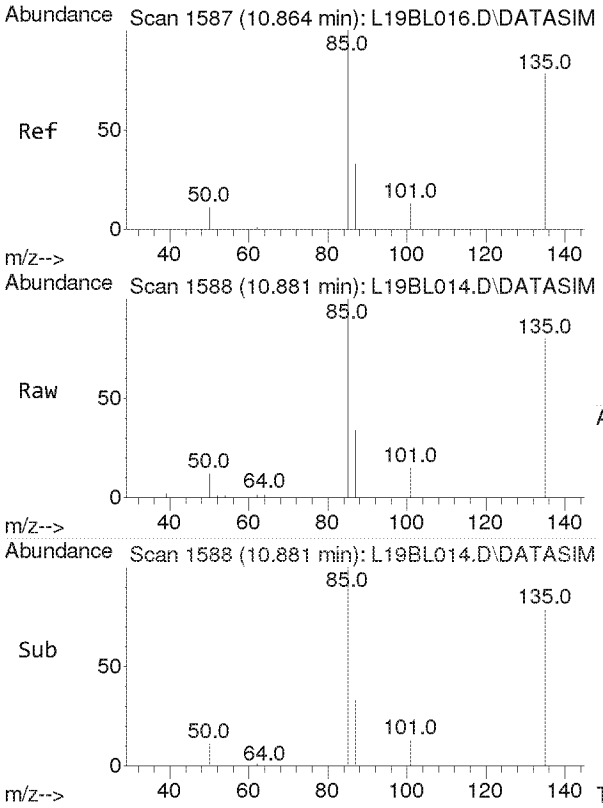


#5
Chloromethane
Concen: 0.510 ppbv
RT: 9.740 min Scan# 1521
Delta R.T. -0.000 min
Lab File: L19BL014.D
Acq: 12 Feb 2019 8:46 pm

Tgt Ion: 50 Resp: 2953

Ion	Ratio	Lower	Upper
50	100		
52	34.1	26.1	39.1

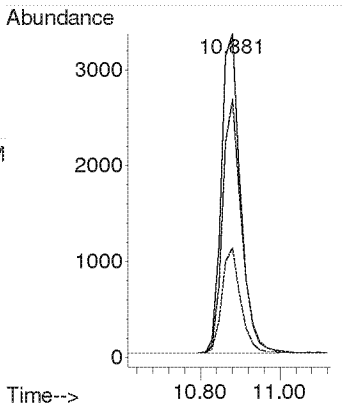


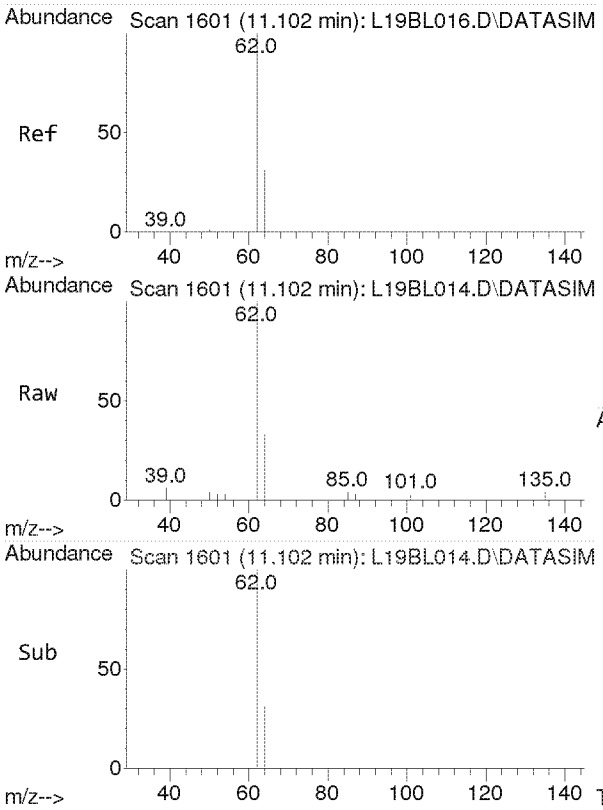


#6
Dichlorotetrafluoroethane
Concen: 0.558 ppbv
RT: 10.881 min Scan# 1588
Delta R.T. 0.017 min
Lab File: L19BL014.D
Acq: 12 Feb 2019 8:46 pm

Tgt Ion: 85 Resp: 11125

Ion	Ratio	Lower	Upper
85	100		
135	79.3	63.2	94.8
87	32.2	25.9	38.9

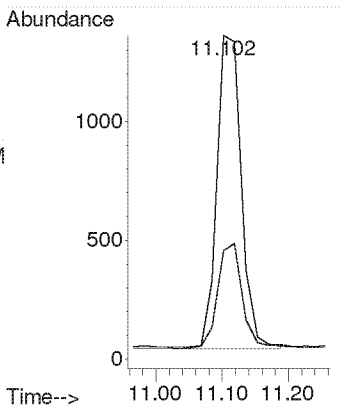


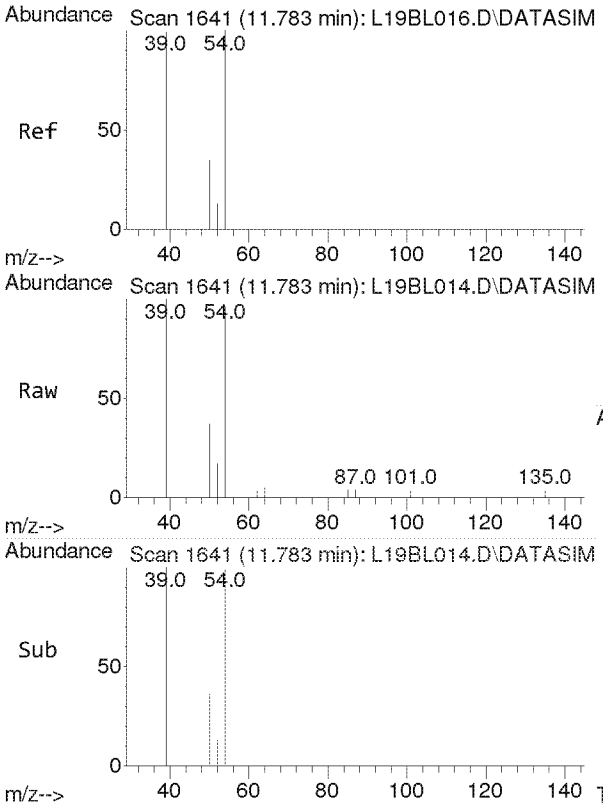


#7
Vinyl Chloride
Concen: 0.511 ppbv
RT: 11.102 min Scan# 1601
Delta R.T. -0.000 min
Lab File: L19BL014.D
Acq: 12 Feb 2019 8:46 pm

Tgt Ion: 62 Resp: 3376

Ion	Ratio	Lower	Upper
62	100		
64	31.8	25.4	38.0

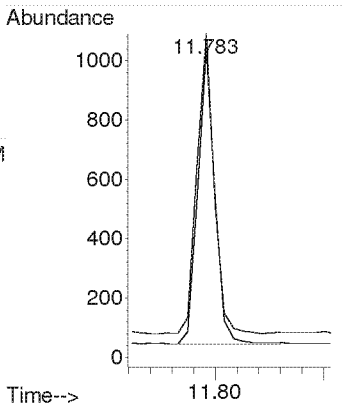


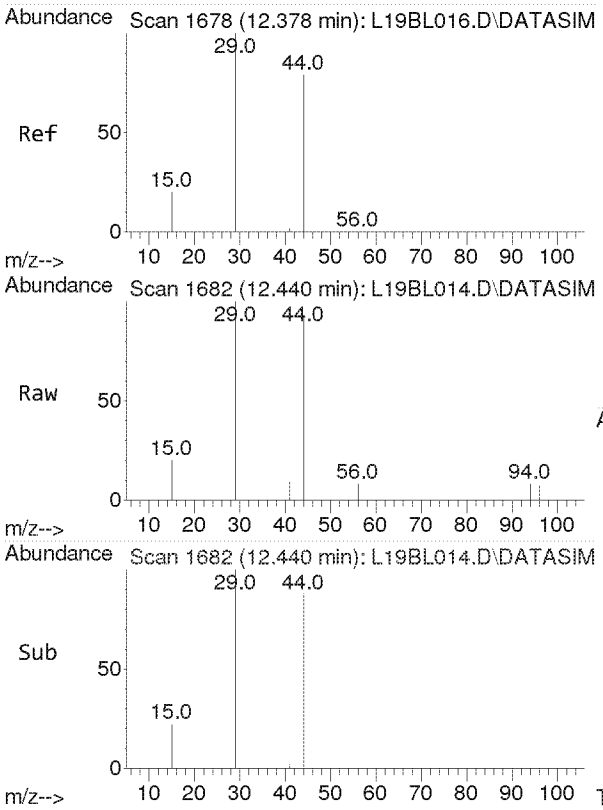


#8
1,3-Butadiene
Concen: 0.477 ppbv
RT: 11.783 min Scan# 1641
Delta R.T. -0.000 min
Lab File: L19BL014.D
Acq: 12 Feb 2019 8:46 pm

Tgt Ion: 54 Resp: 2157

Ion	Ratio	Lower	Upper
54	100		
39	101.3	81.6	122.4

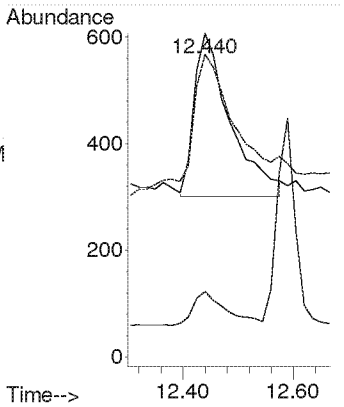


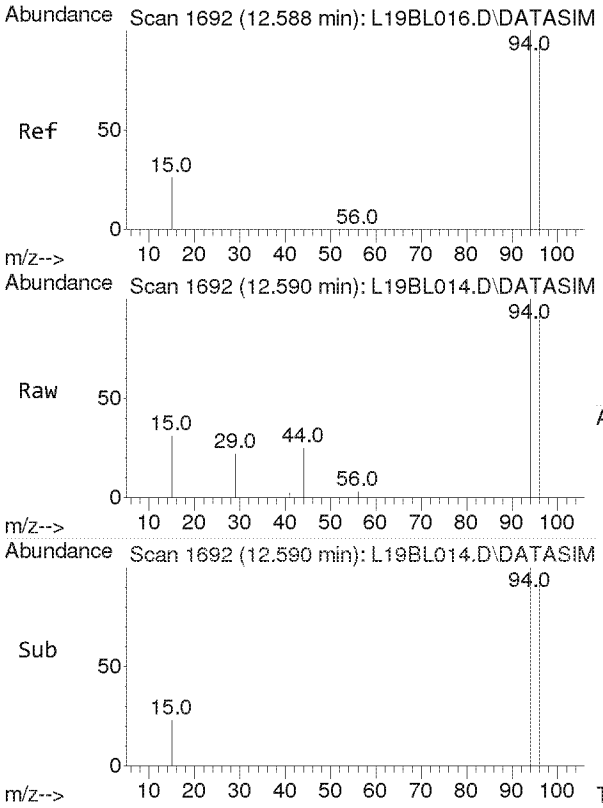


#9
Ethylene oxide
Concen: 0.493 ppbv m
RT: 12.440 min Scan# 1682
Delta R.T. 0.062 min
Lab File: L19BL014.D
Acq: 12 Feb 2019 8:46 pm

Tgt Ion: 29 Resp: 1379

Ion	Ratio	Lower	Upper
29	100		
15	18.9	16.0	24.0
44	107.9	65.4	98.2#

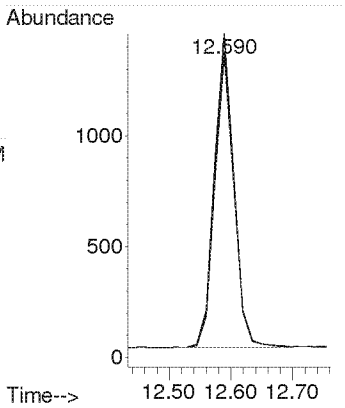


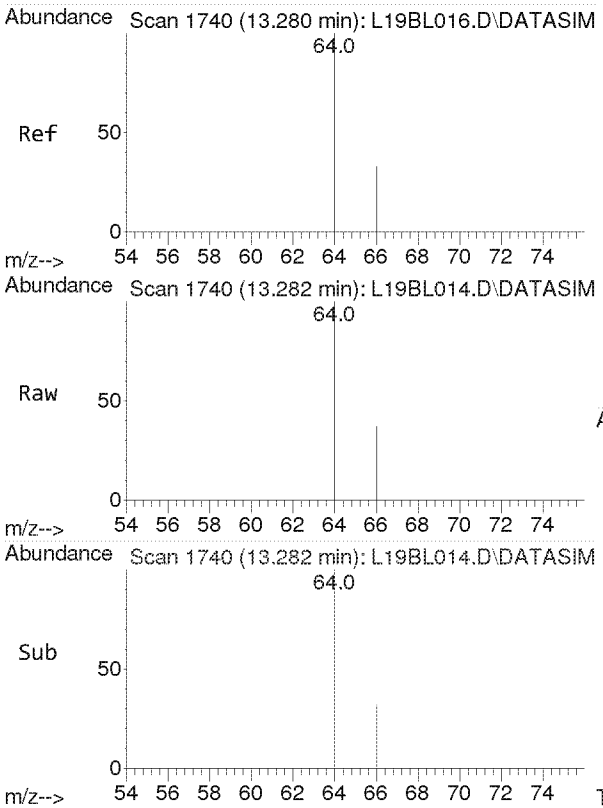


#10
Bromomethane
Concen: 0.491 ppbv
RT: 12.590 min Scan# 1692
Delta R.T. 0.002 min
Lab File: L19BL014.D
Acq: 12 Feb 2019 8:46 pm

Tgt Ion: 94 Resp: 3086

Ion	Ratio	Lower	Upper
94	100		
96	93.9	75.5	113.3

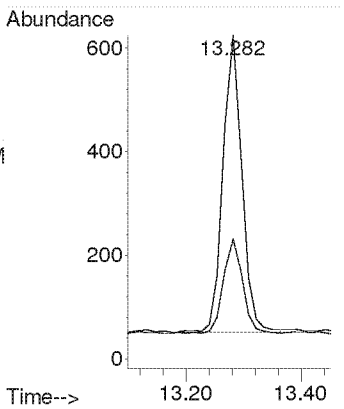


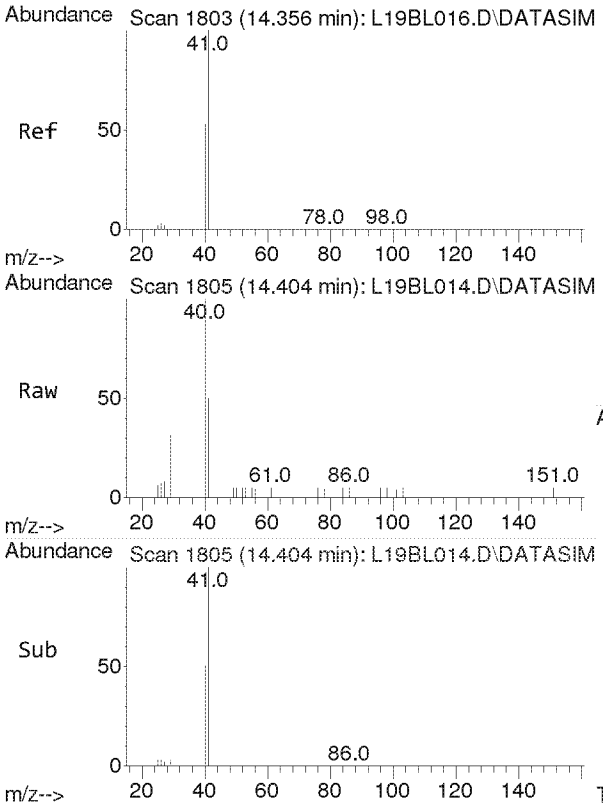


#11
Chloroethane
Concen: 0.496 ppbv
RT: 13.282 min Scan# 1740
Delta R.T. 0.002 min
Lab File: L19BL014.D
Acq: 12 Feb 2019 8:46 pm

Tgt Ion: 64 Resp: 1291

Ion	Ratio	Lower	Upper
64	100		
66	32.1	25.8	38.6

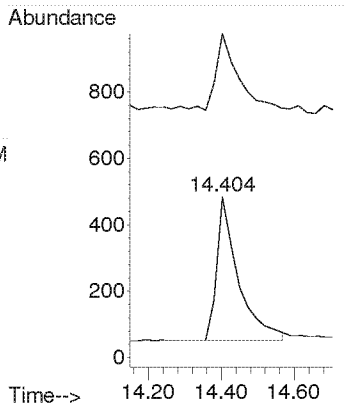


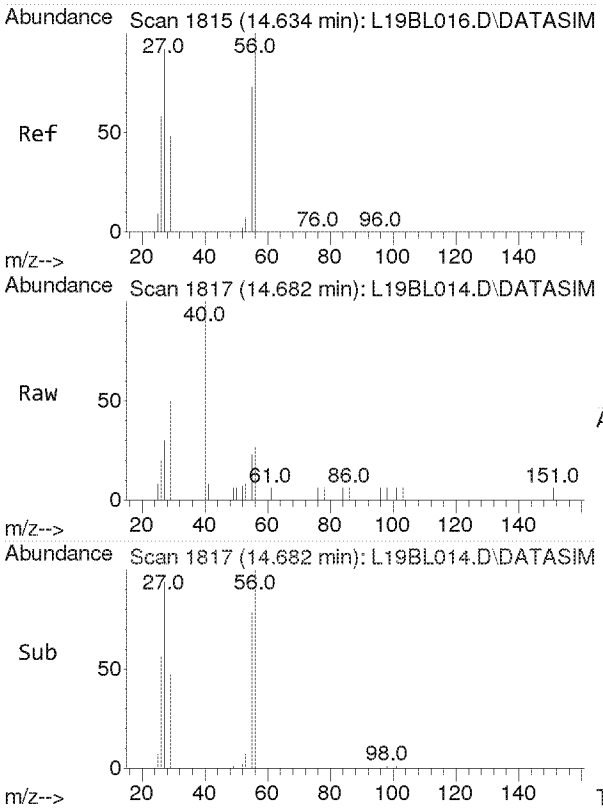


#12
Acetonitrile
Concen: 0.411 ppbv
RT: 14.404 min Scan# 1805
Delta R.T. 0.048 min
Lab File: L19BL014.D
Acq: 12 Feb 2019 8:46 pm

Tgt Ion: 41 Resp: 1746

Ion	Ratio	Lower	Upper
41	100		
40	52.2	42.2	63.4

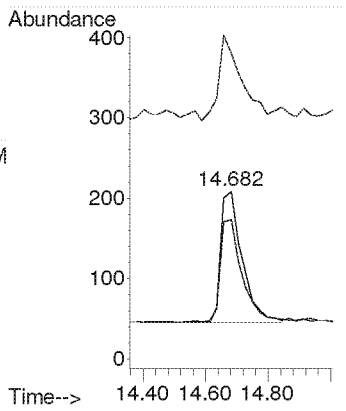


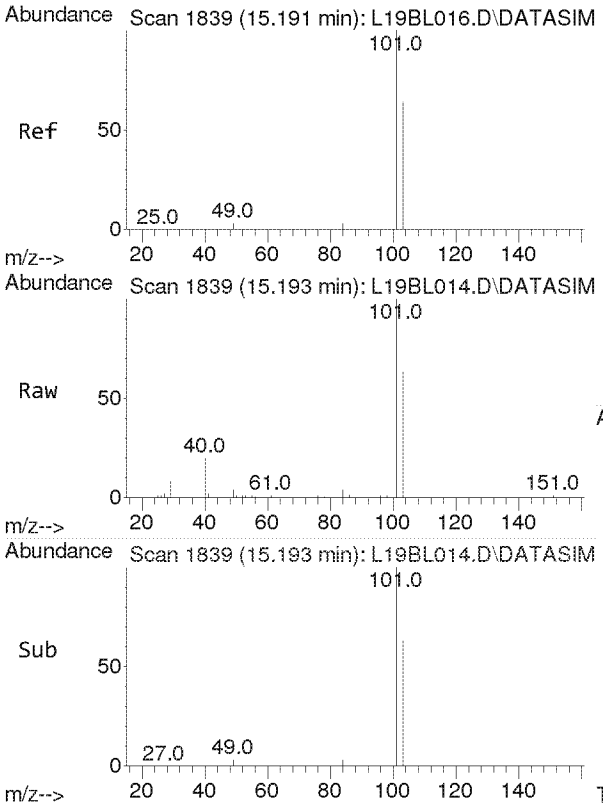


#13
Acrolein
Concen: 0.363 ppbv
RT: 14.682 min Scan# 1817
Delta R.T. 0.048 min
Lab File: L19BL014.D
Acq: 12 Feb 2019 8:46 pm

Tgt Ion: 56 Resp: 778

Ion	Ratio	Lower	Upper
56	100		
55	80.7	60.8	91.2
29	65.2	43.8	65.6

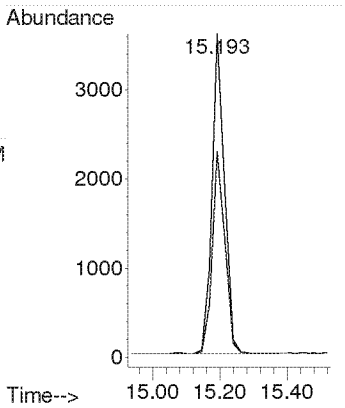


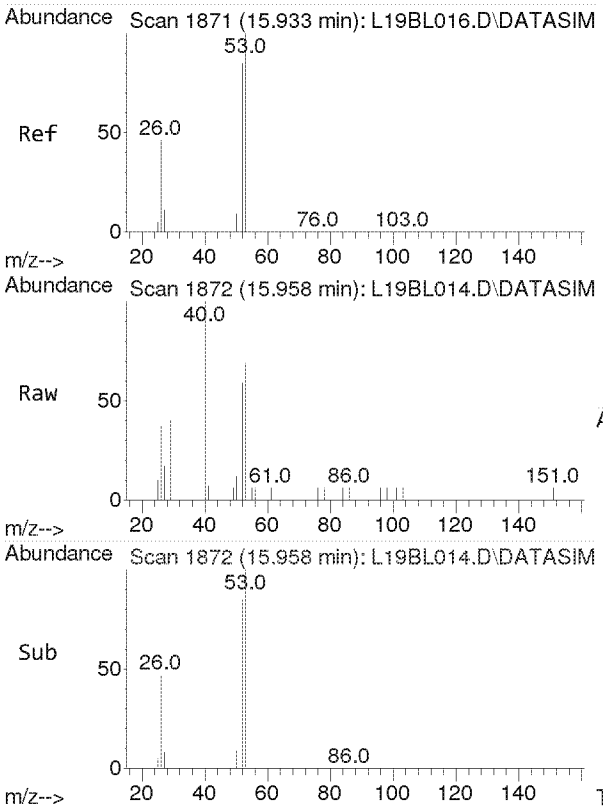


#14
Trichlorofluoromethane
Concen: 0.472 ppbv
RT: 15.193 min Scan# 1839
Delta R.T. 0.002 min
Lab File: L19BL014.D
Acq: 12 Feb 2019 8:46 pm

Tgt Ion:101 Resp: 9178

Ion	Ratio	Lower	Upper
101	100		
103	64.2	51.7	77.5

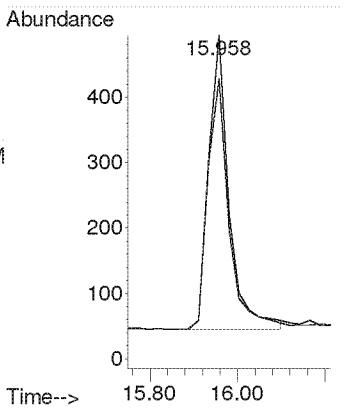


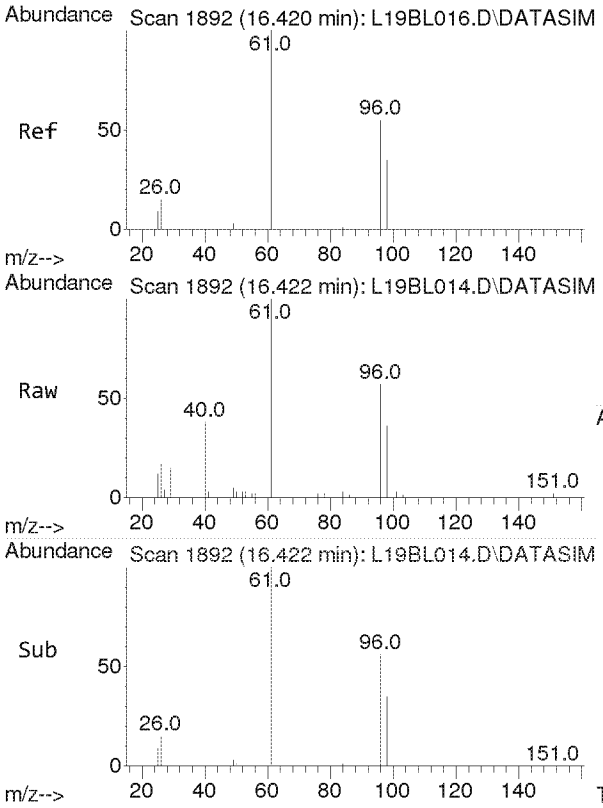


#15
Acrylonitrile
Concen: 0.418 ppbv
RT: 15.958 min Scan# 1872
Delta R.T. 0.025 min
Lab File: L19BL014.D
Acq: 12 Feb 2019 8:46 pm

Tgt Ion: 53 Resp: 1438

Ion	Ratio	Lower	Upper
53	100		
52	88.0	69.5	104.3

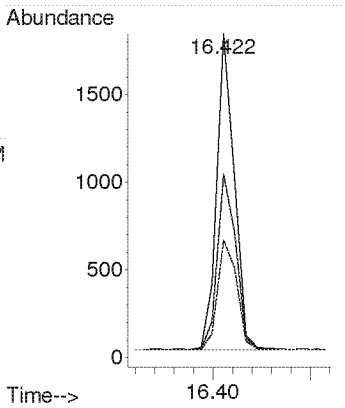


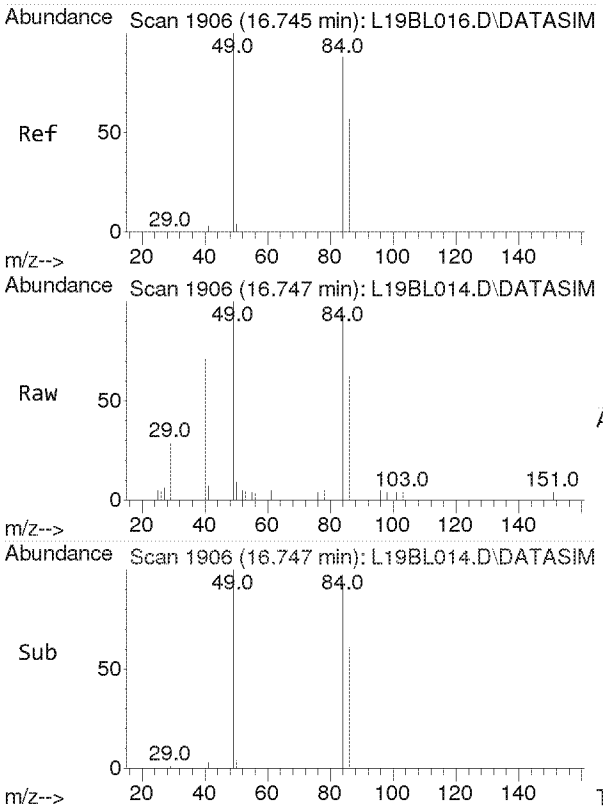


#16
1,1-Dichloroethene
Concen: 0.535 ppbv
RT: 16.422 min Scan# 1892
Delta R.T. 0.002 min
Lab File: L19BL014.D
Acq: 12 Feb 2019 8:46 pm

Tgt Ion: 61 Resp: 4535

Ion	Ratio	Lower	Upper
61	100		
96	58.7	47.3	70.9
98	38.0	30.6	45.8

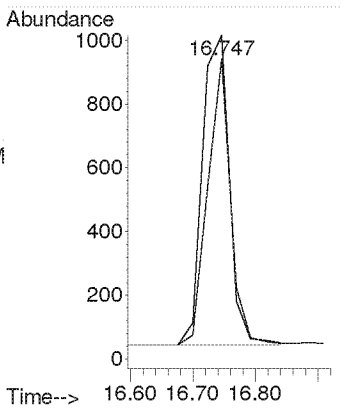


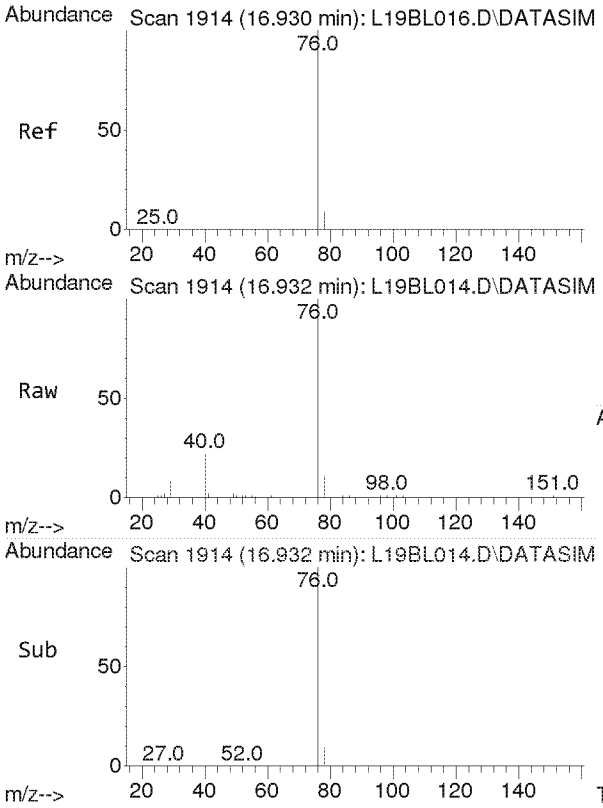


#17
Methylene Chloride
Concen: 0.523 ppbv
RT: 16.747 min Scan# 1906
Delta R.T. 0.002 min
Lab File: L19BL014.D
Acq: 12 Feb 2019 8:46 pm

Tgt Ion: 49 Resp: 2897

Ion	Ratio	Lower	Upper
49	100		
84	78.7	54.0	100.4

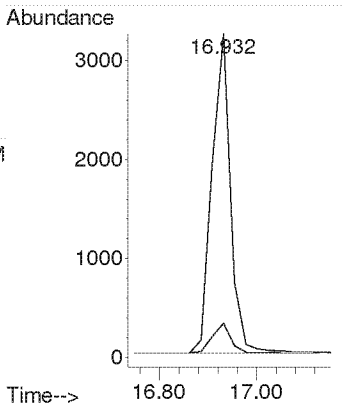


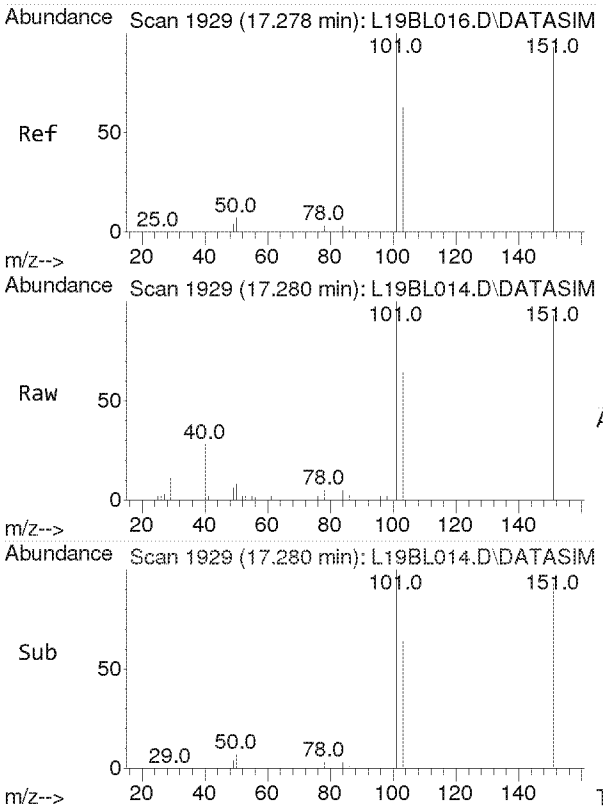


#18
Carbon Disulfide
Concen: 0.495 ppbv
RT: 16.932 min Scan# 1914
Delta R.T. 0.002 min
Lab File: L19BL014.D
Acq: 12 Feb 2019 8:46 pm

Tgt Ion: 76 Resp: 8518

Ion	Ratio	Lower	Upper
76	100		
78	9.2	7.4	11.0

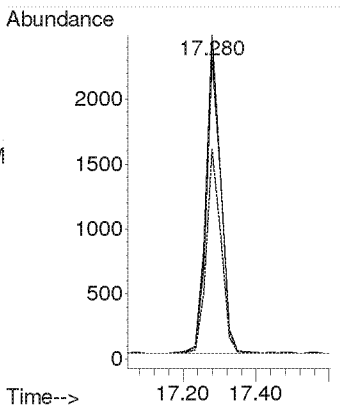


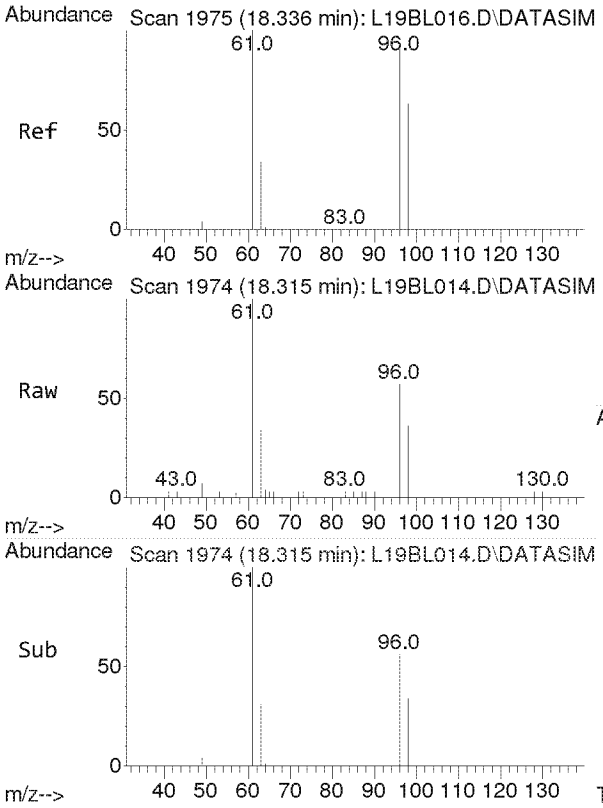


#19
Trichlorotrifluoroethane
Concen: 0.523 ppbv
RT: 17.280 min Scan# 1929
Delta R.T. 0.002 min
Lab File: L19BL014.D
Acq: 12 Feb 2019 8:46 pm

Tgt Ion:101 Resp: 6765

Ion	Ratio	Lower	Upper
101	100		
151	94.4	75.8	113.8
103	64.4	51.1	76.7

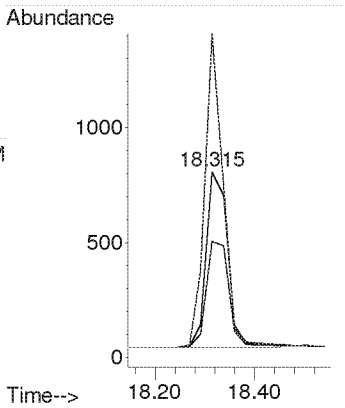


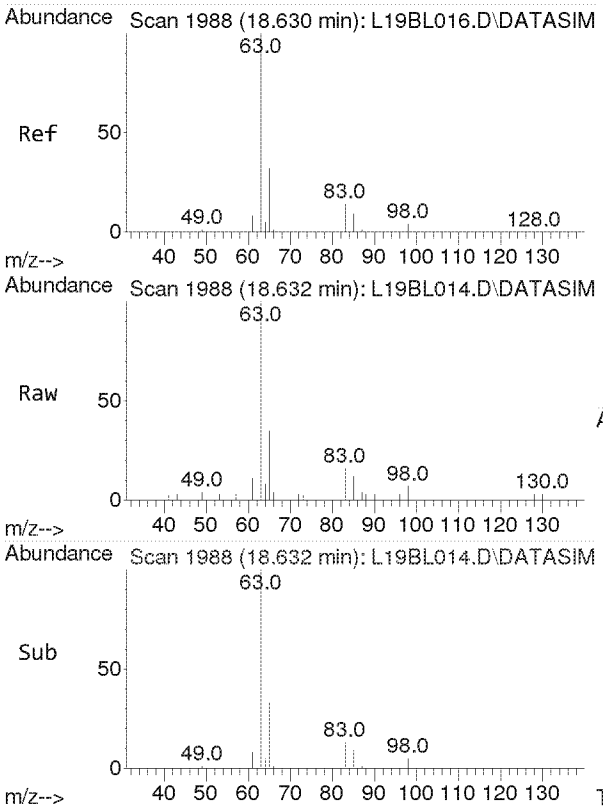


#20
trans-1,2-Dichloroethylene
Concen: 0.483 ppbv
RT: 18.315 min Scan# 1974
Delta R.T. -0.021 min
Lab File: L19BL014.D
Acq: 12 Feb 2019 8:46 pm

Tgt Ion: 96 Resp: 2274

Ion	Ratio	Lower	Upper
96	100		
98	63.7	51.5	77.3
61	152.6	122.9	184.3

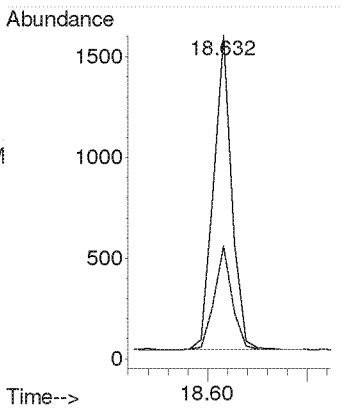


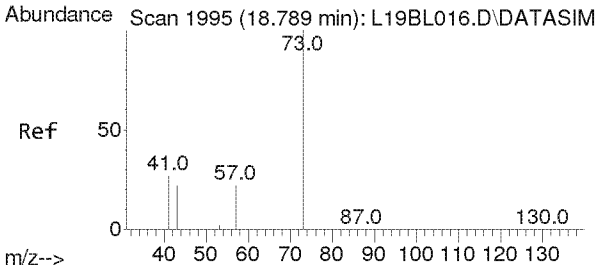


#21
1,1-Dichloroethane
Concen: 0.499 ppbv
RT: 18.632 min Scan# 1988
Delta R.T. 0.002 min
Lab File: L19BL014.D
Acq: 12 Feb 2019 8:46 pm

Tgt Ion: 63 Resp: 3942

Ion	Ratio	Lower	Upper
63	100		
65	32.4	25.4	38.0

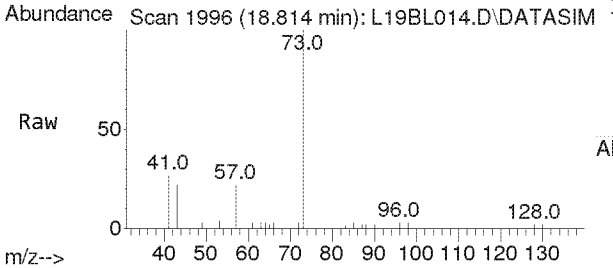


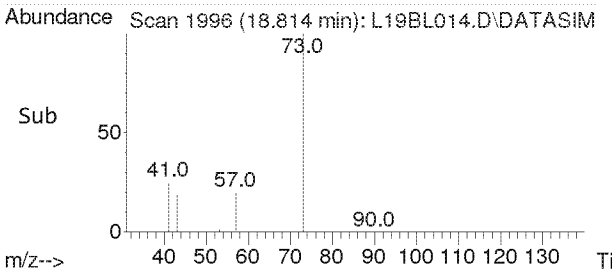


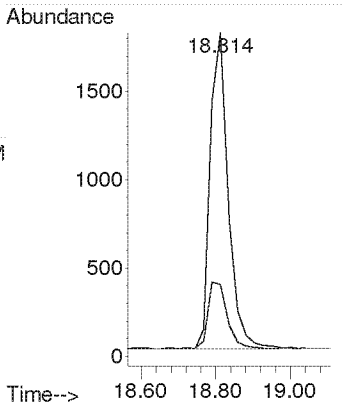
#22
Methyl tert-Butyl Ether
Concen: 0.457 ppbv
RT: 18.814 min Scan# 1996
Delta R.T. 0.025 min
Lab File: L19BL014.D
Acq: 12 Feb 2019 8:46 pm

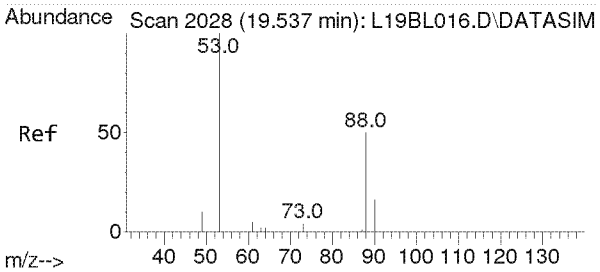
Tgt Ion: 73 Resp: 5950

Ion	Ratio	Lower	Upper
73	100		
57	22.4	18.0	27.0





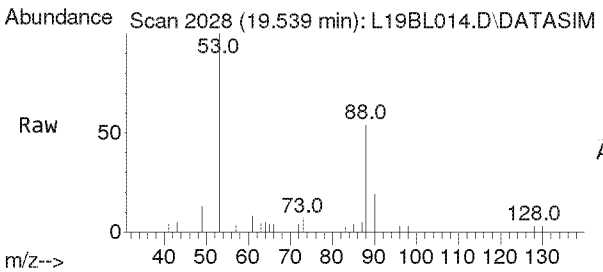


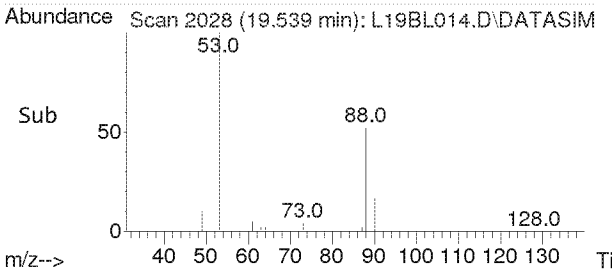


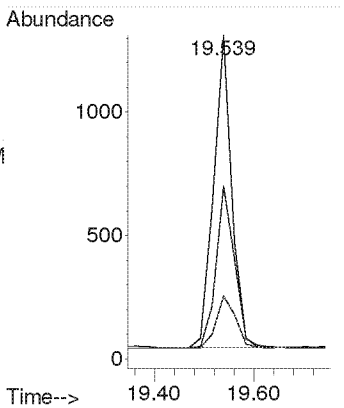
#23
Chloroprene
Concen: 0.492 ppbv
RT: 19.539 min Scan# 2028
Delta R.T. 0.002 min
Lab File: L19BL014.D
Acq: 12 Feb 2019 8:46 pm

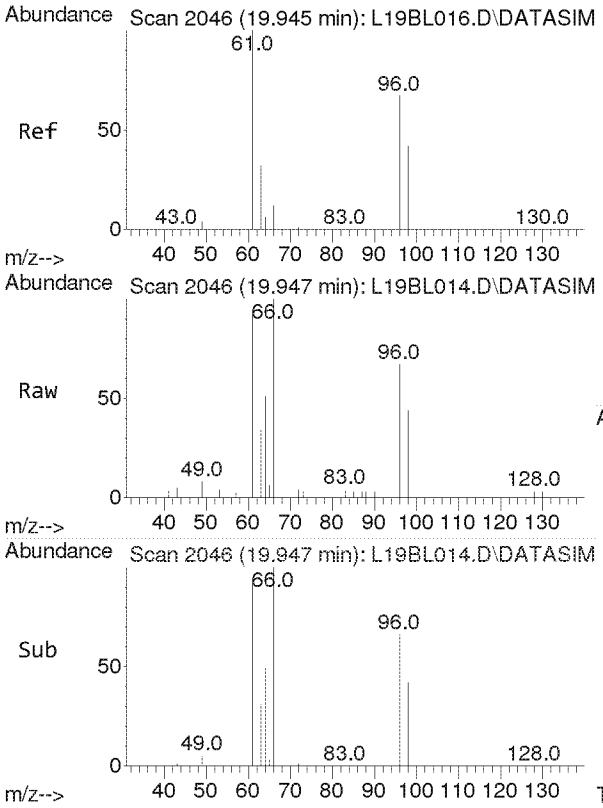
Tgt Ion: 53 Resp: 3182

Ion	Ratio	Lower	Upper
53	100		
88	53.1	42.6	64.0
90	17.9	13.9	20.9





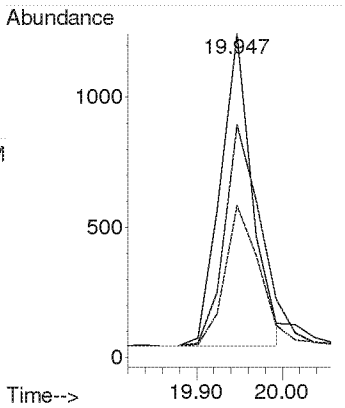


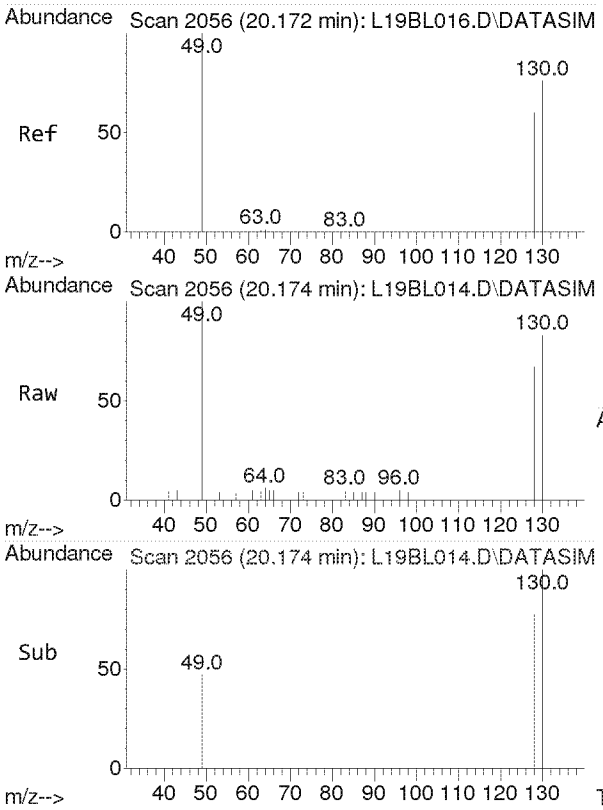


#24
cis-1,2-Dichloroethylene
Concen: 0.495 ppbv m
RT: 19.947 min Scan# 2046
Delta R.T. 0.002 min
Lab File: L19BL014.D
Acq: 12 Feb 2019 8:46 pm

Tgt Ion: 61 Resp: 3069

Ion	Ratio	Lower	Upper
61	100		
96	82.4	59.0	88.6
98	49.8	37.6	56.4

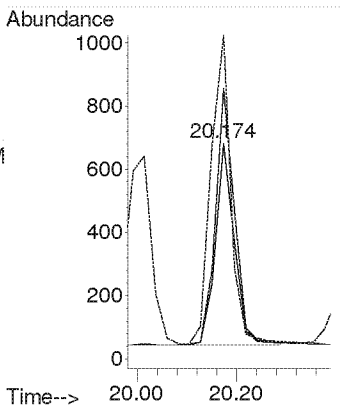


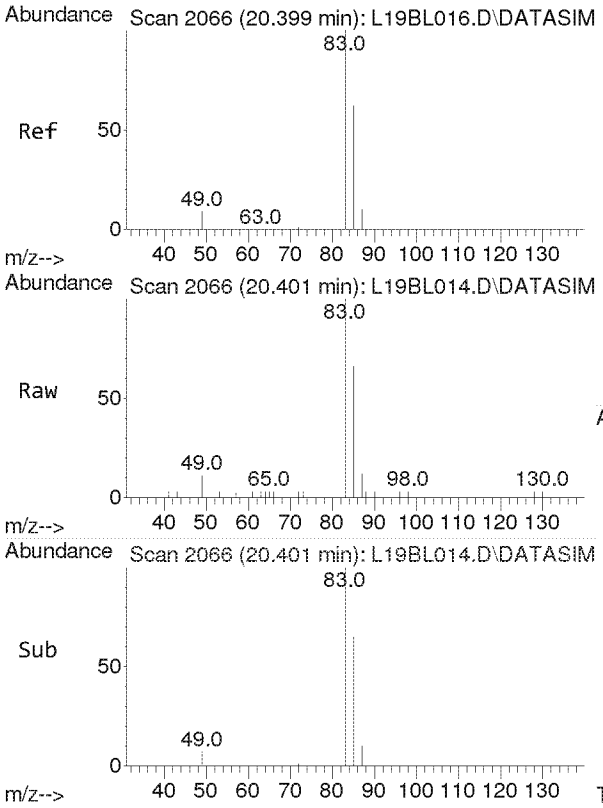


#25
Bromochloromethane
Concen: 0.493 ppbv
RT: 20.174 min Scan# 2056
Delta R.T. 0.002 min
Lab File: L19BL014.D
Acq: 12 Feb 2019 8:46 pm

Tgt Ion:128 Resp: 1665

Ion	Ratio	Lower	Upper
128	100		
130	128.1	103.3	154.9
49	159.6	128.3	192.5

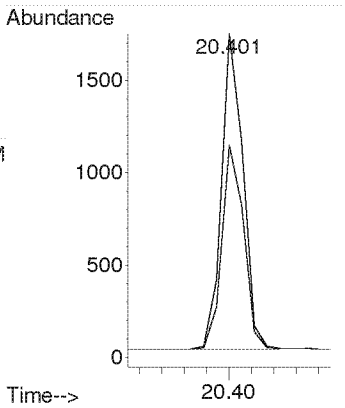


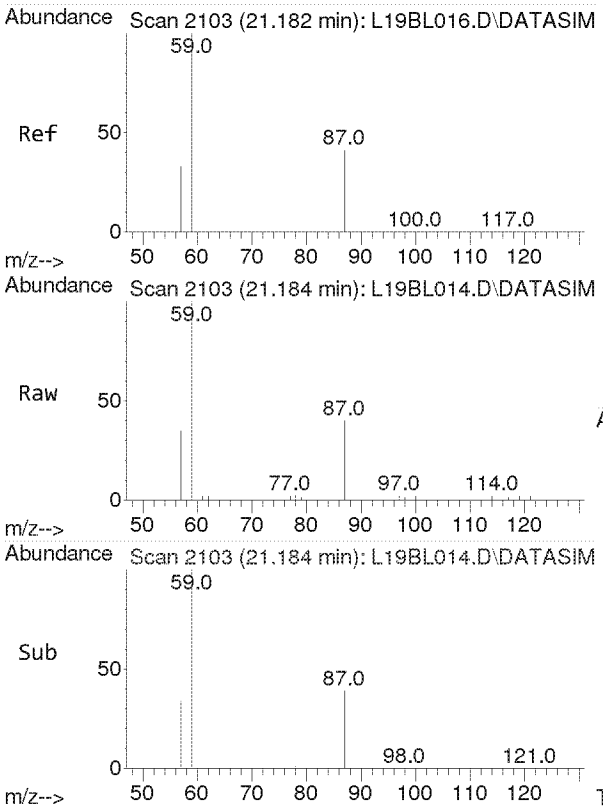


#26
Chloroform
Concen: 0.499 ppbv
RT: 20.401 min Scan# 2066
Delta R.T. 0.002 min
Lab File: L19BL014.D
Acq: 12 Feb 2019 8:46 pm

Tgt Ion: 83 Resp: 4582

Ion	Ratio	Lower	Upper
83	100		
85	65.9	51.5	77.3

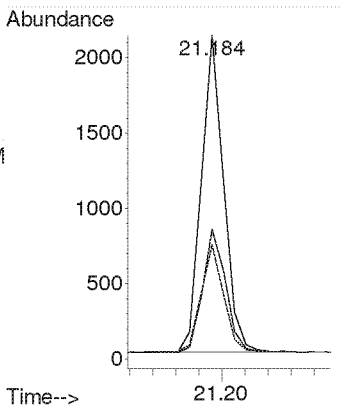


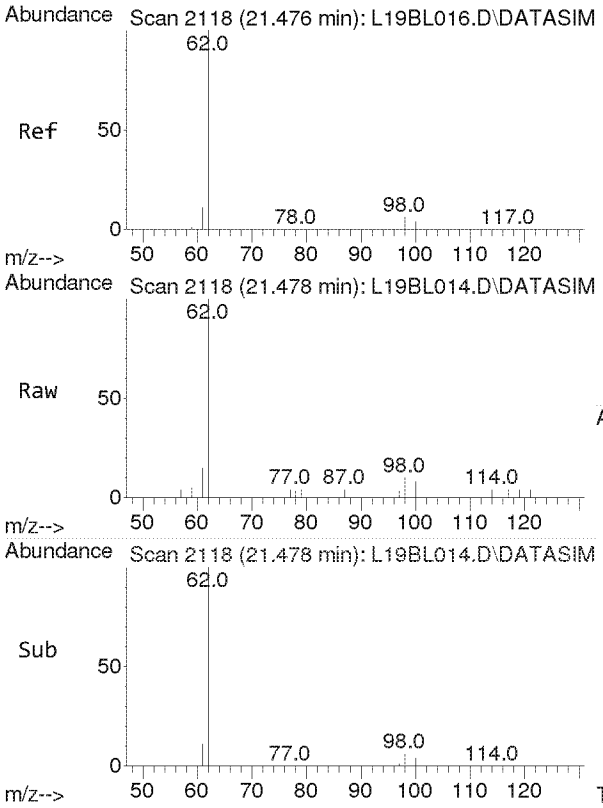


#27
Ethyl tert-Butyl Ether
Concen: 0.449 ppbv
RT: 21.184 min Scan# 2103
Delta R.T. 0.002 min
Lab File: L19BL014.D
Acq: 12 Feb 2019 8:46 pm

Tgt Ion: 59 Resp: 5642

Ion	Ratio	Lower	Upper
59	100		
87	40.1	31.5	47.3
57	33.9	26.6	39.8

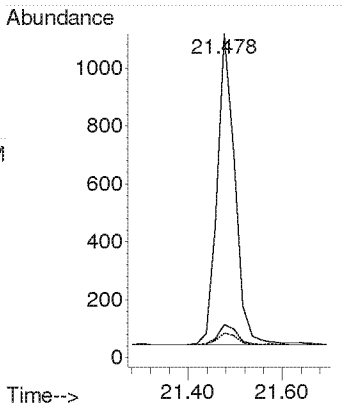


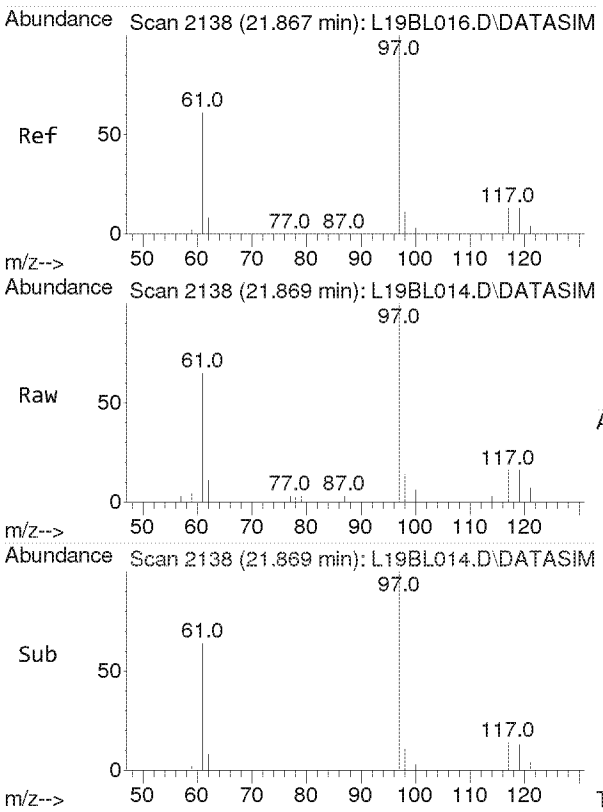


#28
1,2-Dichloroethane
Concen: 0.499 ppbv
RT: 21.478 min Scan# 2118
Delta R.T. 0.002 min
Lab File: L19BL014.D
Acq: 12 Feb 2019 8:46 pm

Tgt Ion: 62 Resp: 2791

Ion	Ratio	Lower	Upper
62	100		
98	6.4	5.0	7.6
100	4.2	3.2	4.8

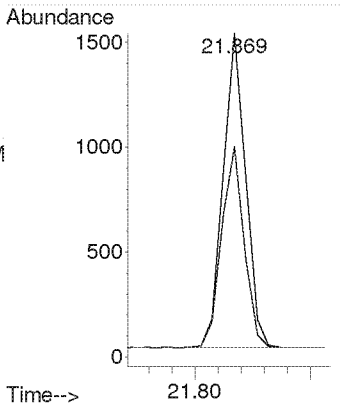


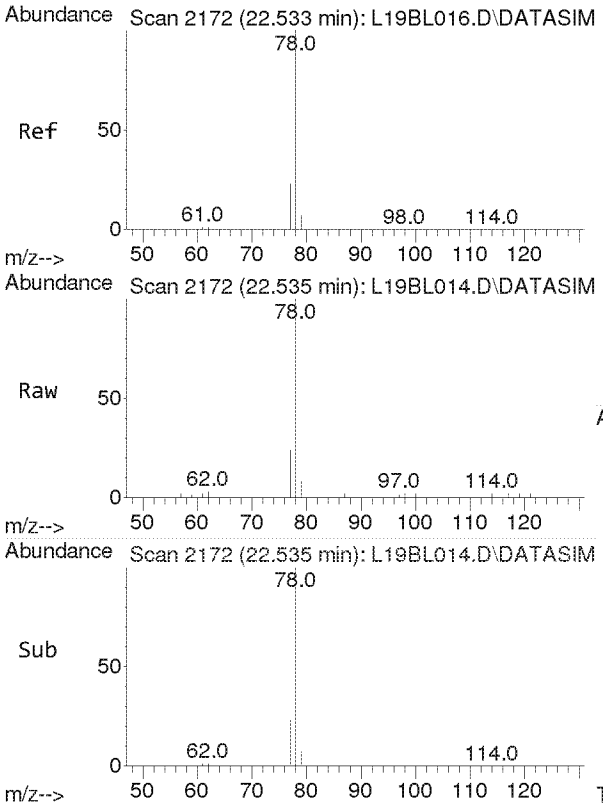


#30
1,1,1-Trichloroethane
Concen: 0.474 ppbv
RT: 21.869 min Scan# 2138
Delta R.T. 0.002 min
Lab File: L19BL014.D
Acq: 12 Feb 2019 8:46 pm

Tgt Ion: 97 Resp: 4039

Ion	Ratio	Lower	Upper
97	100		
61	64.3	49.7	74.5

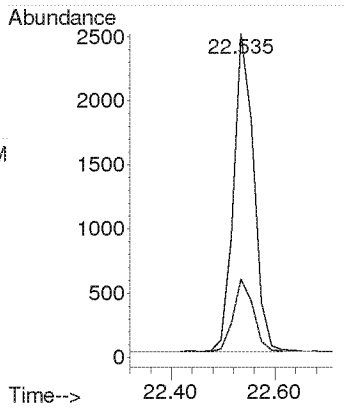


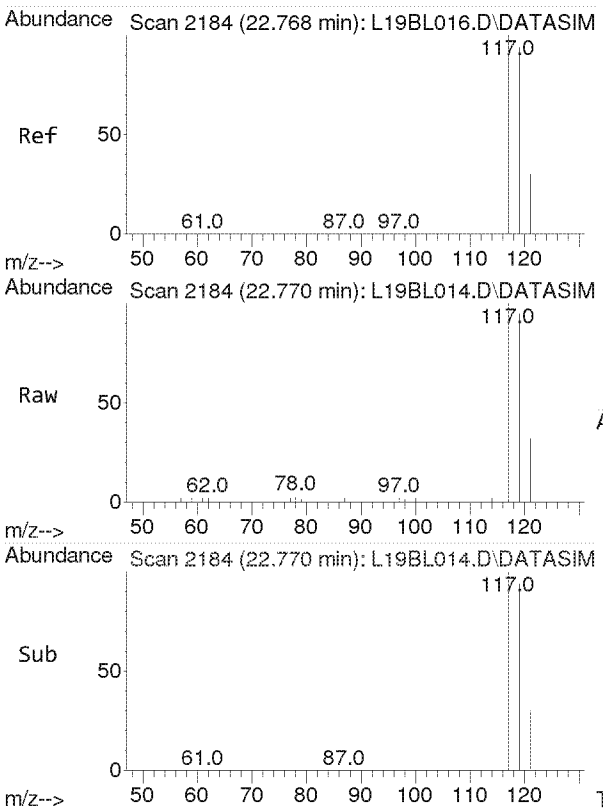


#31
Benzene
Concen: 0.546 ppbv
RT: 22.535 min Scan# 2172
Delta R.T. 0.002 min
Lab File: L19BL014.D
Acq: 12 Feb 2019 8:46 pm

Tgt Ion: 78 Resp: 6698

Ion	Ratio	Lower	Upper
78	100		
77	22.4	18.2	27.4

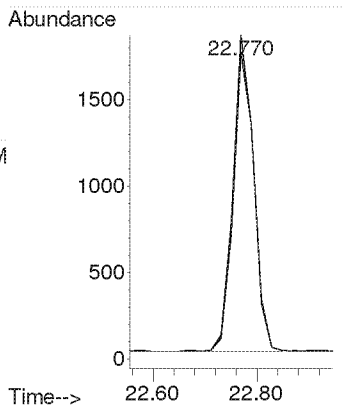


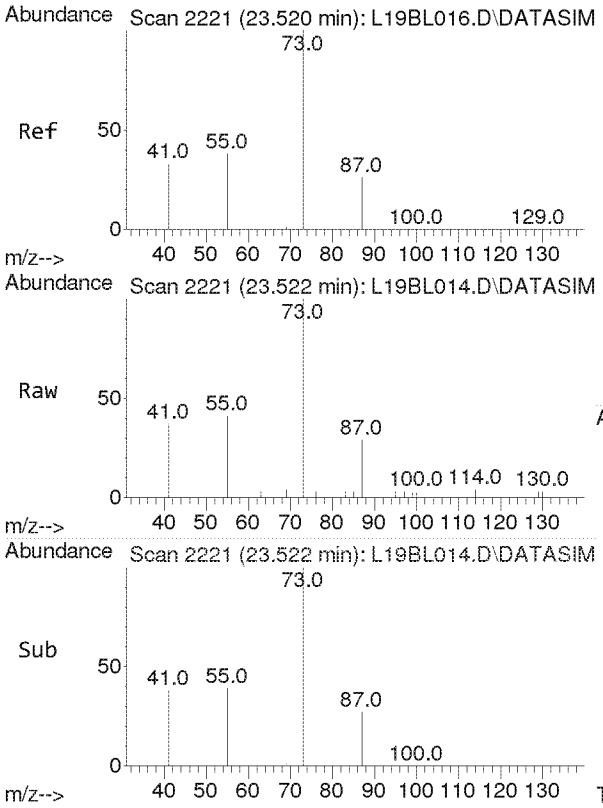


#32
Carbon Tetrachloride
Concen: 0.550 ppbv
RT: 22.770 min Scan# 2184
Delta R.T. 0.002 min
Lab File: L19BL014.D
Acq: 12 Feb 2019 8:46 pm

Tgt Ion:117 Resp: 5035

Ion	Ratio	Lower	Upper
117	100		
119	96.0	77.0	115.6

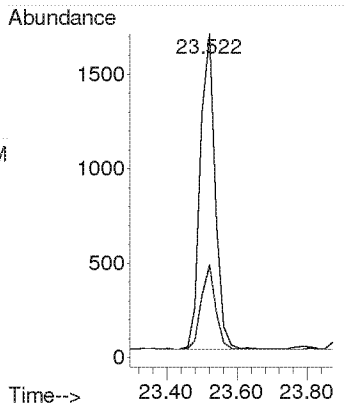


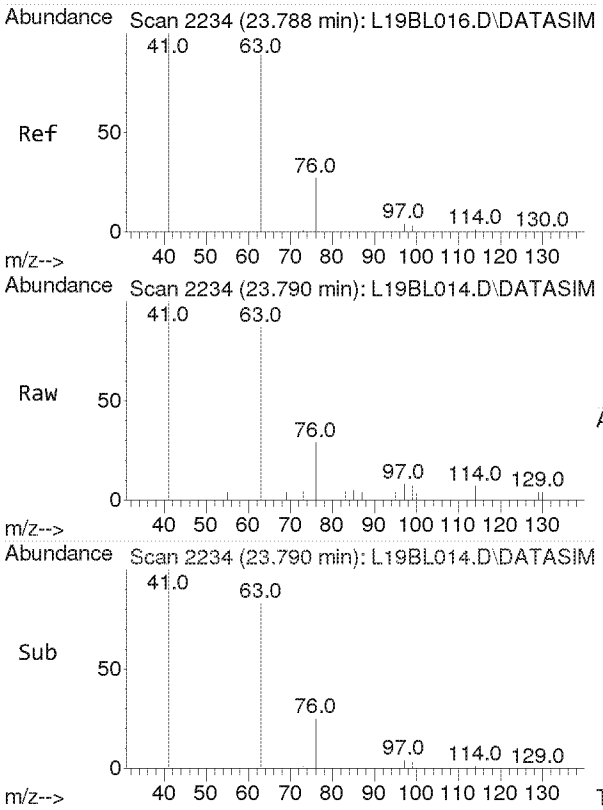


#33
tert-Amyl Methyl Ether
Concen: 0.470 ppbv
RT: 23.522 min Scan# 2221
Delta R.T. 0.002 min
Lab File: L19BL014.D
Acq: 12 Feb 2019 8:46 pm

Tgt Ion: 73 Resp: 4892

Ion	Ratio	Lower	Upper
73	100		
87	25.6	20.1	30.1

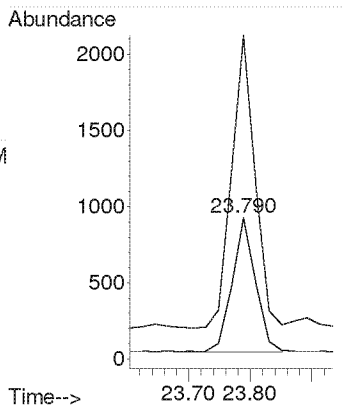


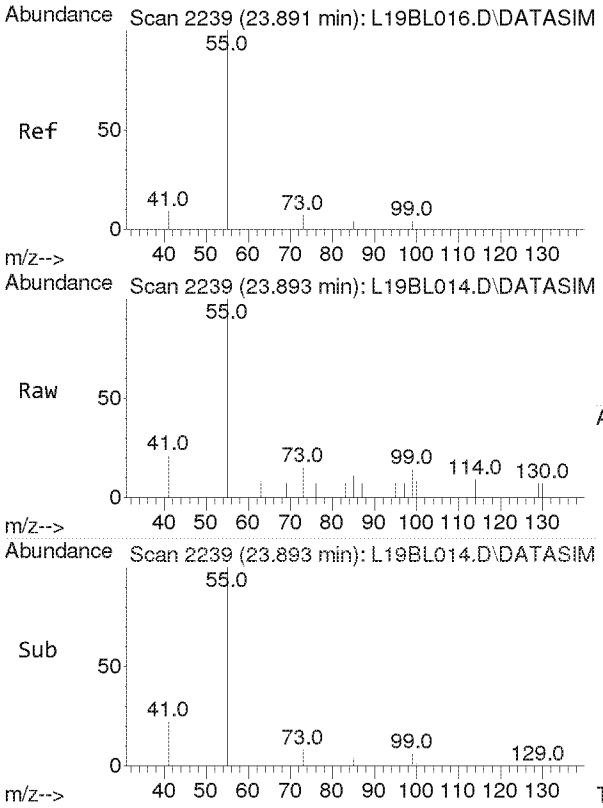


#34
1,2-Dichloropropane
Concen: 0.486 ppbv
RT: 23.790 min Scan# 2234
Delta R.T. 0.002 min
Lab File: L19BL014.D
Acq: 12 Feb 2019 8:46 pm

Tgt Ion: 63 Resp: 2298

Ion	Ratio	Lower	Upper
63	100		
41	220.3	175.9	263.9

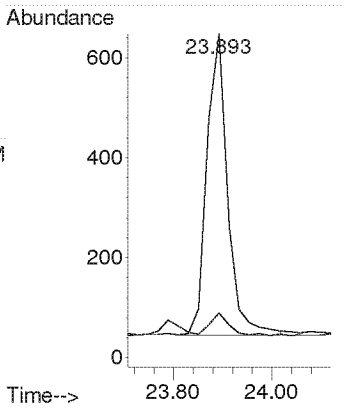


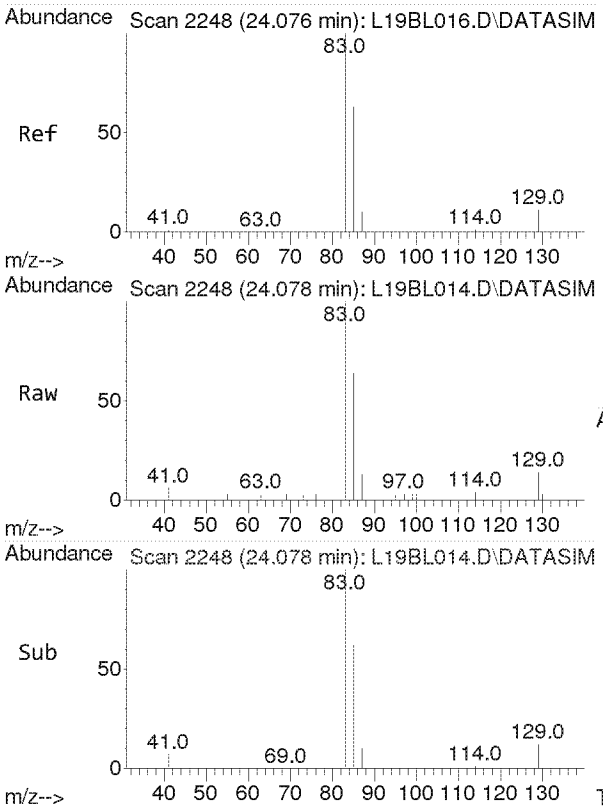


#35
Ethyl Acrylate
Concen: 0.450 ppbv
RT: 23.893 min Scan# 2239
Delta R.T. 0.002 min
Lab File: L19BL014.D
Acq: 12 Feb 2019 8:46 pm

Tgt Ion: 55 Resp: 1752

Ion	Ratio	Lower	Upper
55	100		
99	6.8	5.0	7.6

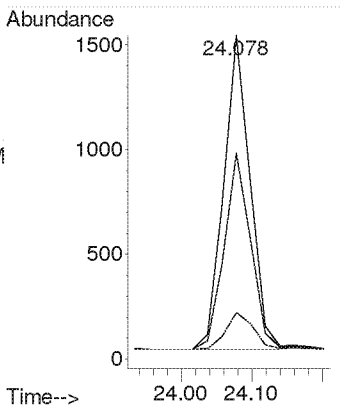


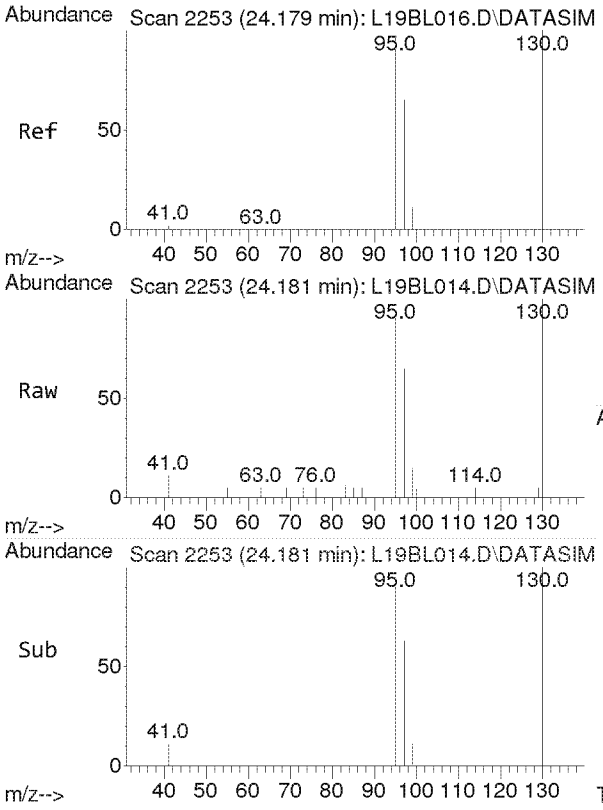


#36
Bromodichloromethane
Concen: 0.474 ppbv
RT: 24.078 min Scan# 2248
Delta R.T. 0.002 min
Lab File: L19BL014.D
Acq: 12 Feb 2019 8:46 pm

Tgt Ion: 83 Resp: 3910

Ion	Ratio	Lower	Upper
83	100		
85	62.9	51.0	76.4
129	12.3	9.9	14.9

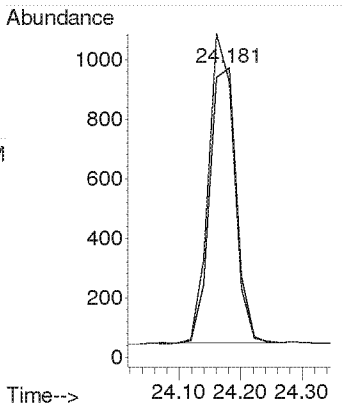


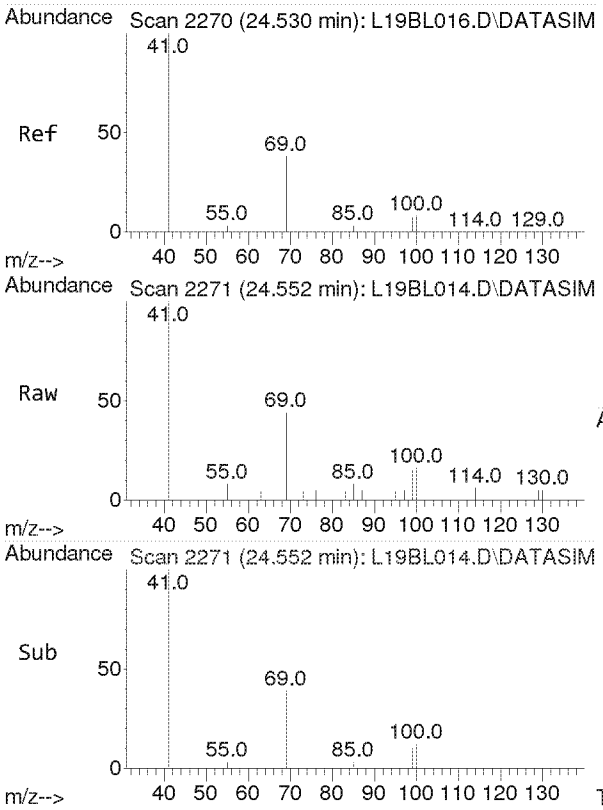


#37
Trichloroethylene
Concen: 0.475 ppbv
RT: 24.181 min Scan# 2253
Delta R.T. 0.002 min
Lab File: L19BL014.D
Acq: 12 Feb 2019 8:46 pm

Tgt Ion:130 Resp: 2792

Ion	Ratio	Lower	Upper
130	100		
95	108.2	84.9	127.3

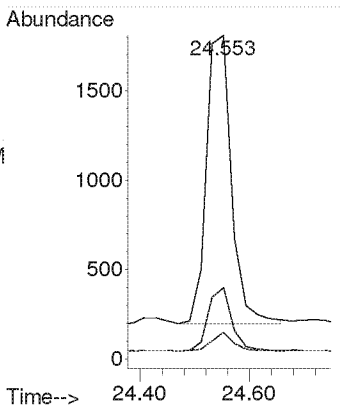


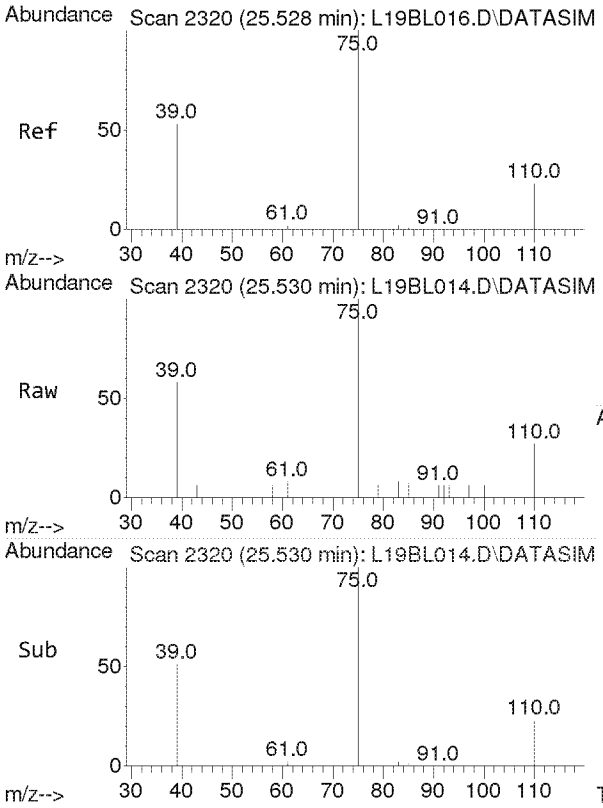


#38
Methyl Methacrylate
Concen: 0.439 ppbv
RT: 24.552 min Scan# 2271
Delta R.T. 0.023 min
Lab File: L19BL014.D
Acq: 12 Feb 2019 8:46 pm

Tgt Ion: 41 Resp: 5144

Ion	Ratio	Lower	Upper
41	100		
69	20.6	16.8	25.2
100	5.4	4.5	6.7

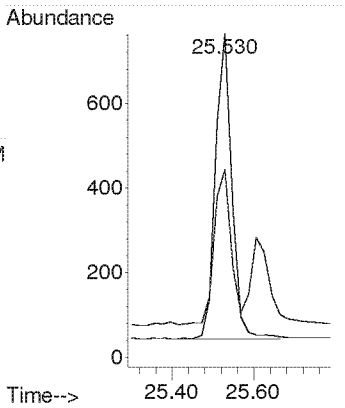


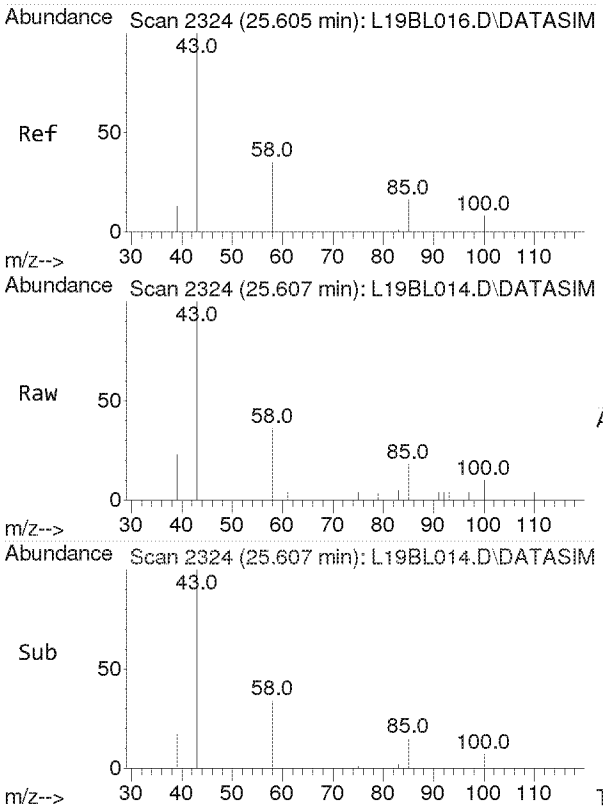


#39
cis-1,3-Dichloropropene
Concen: 0.490 ppbv
RT: 25.530 min Scan# 2320
Delta R.T. 0.002 min
Lab File: L19BL014.D
Acq: 12 Feb 2019 8:46 pm

Tgt Ion: 75 Resp: 1972

Ion	Ratio	Lower	Upper
75	100		
39	52.4	43.4	65.0

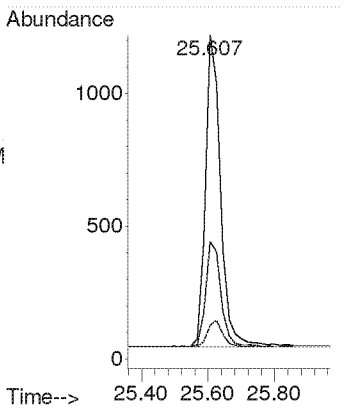


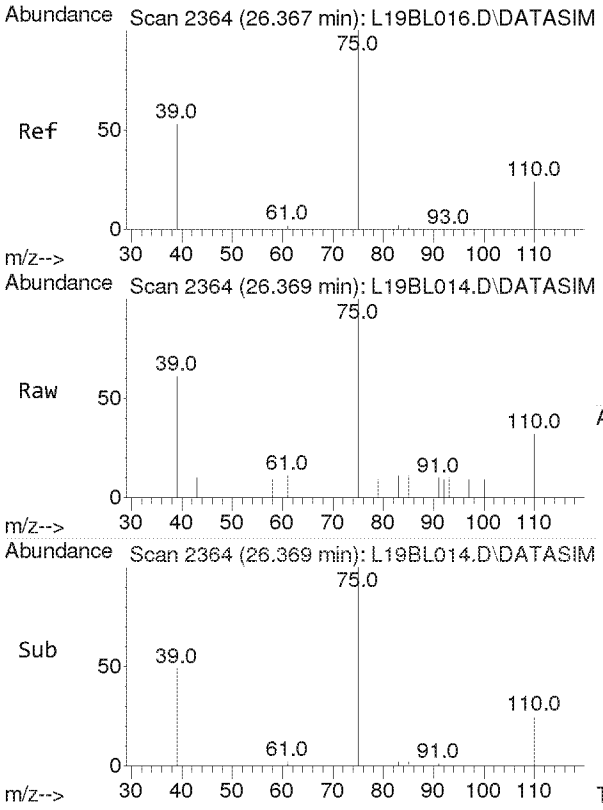


#40
Methyl Isobutyl Ketone
Concen: 0.426 ppbv
RT: 25.607 min Scan# 2324
Delta R.T. 0.002 min
Lab File: L19BL014.D
Acq: 12 Feb 2019 8:46 pm

Tgt Ion: 43 Resp: 3651

Ion	Ratio	Lower	Upper
43	100		
58	34.8	28.0	42.0
100	8.8	7.0	10.4

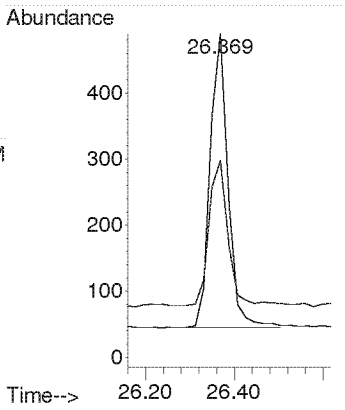


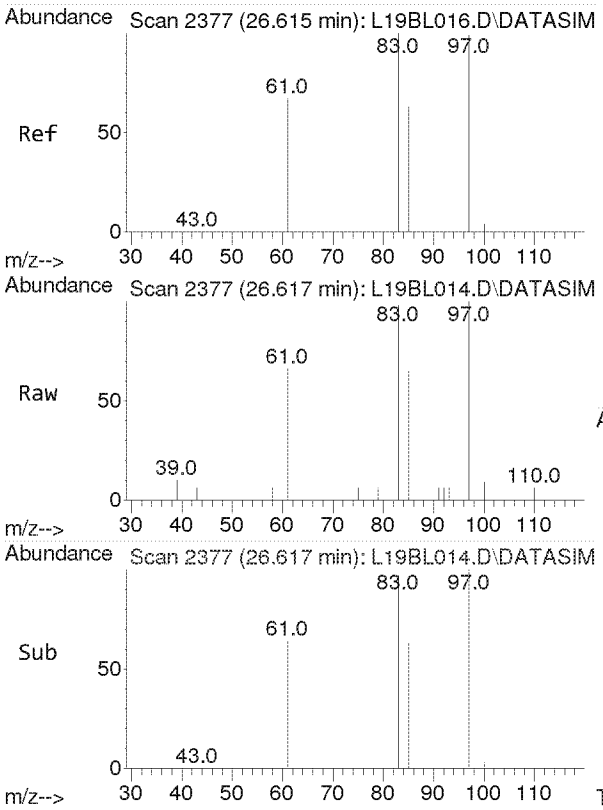


#41
trans-1,3-Dichloropropene
Concen: 0.450 ppbv
RT: 26.369 min Scan# 2364
Delta R.T. 0.002 min
Lab File: L19BL014.D
Acq: 12 Feb 2019 8:46 pm

Tgt Ion: 75 Resp: 1235

Ion	Ratio	Lower	Upper
75	100		
39	52.2	42.9	64.3

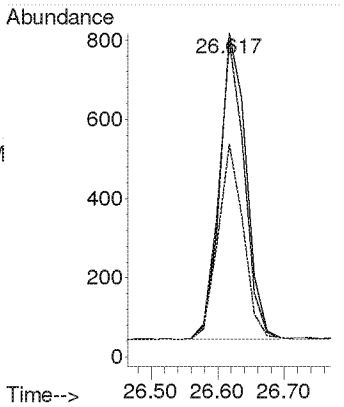


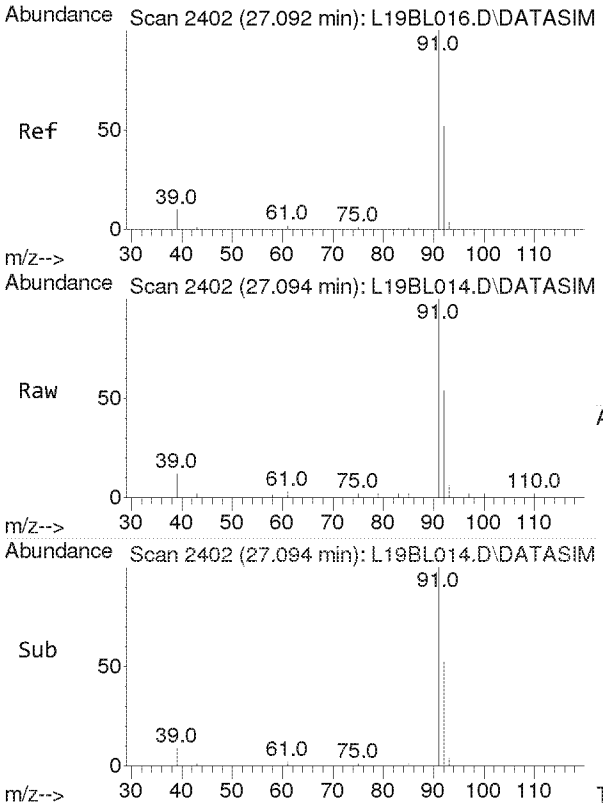


#42
1,1,2-Trichloroethane
Concen: 0.495 ppbv
RT: 26.617 min Scan# 2377
Delta R.T. 0.002 min
Lab File: L19BL014.D
Acq: 12 Feb 2019 8:46 pm

Tgt Ion: 97 Resp: 2127

Ion	Ratio	Lower	Upper
97	100		
83	93.9	75.4	113.0
61	62.2	49.8	74.6

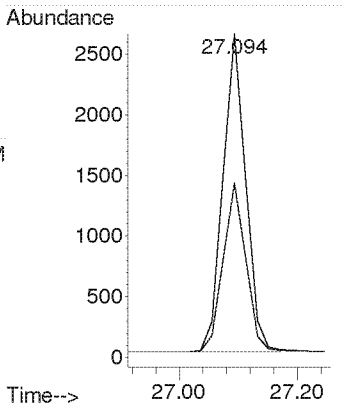


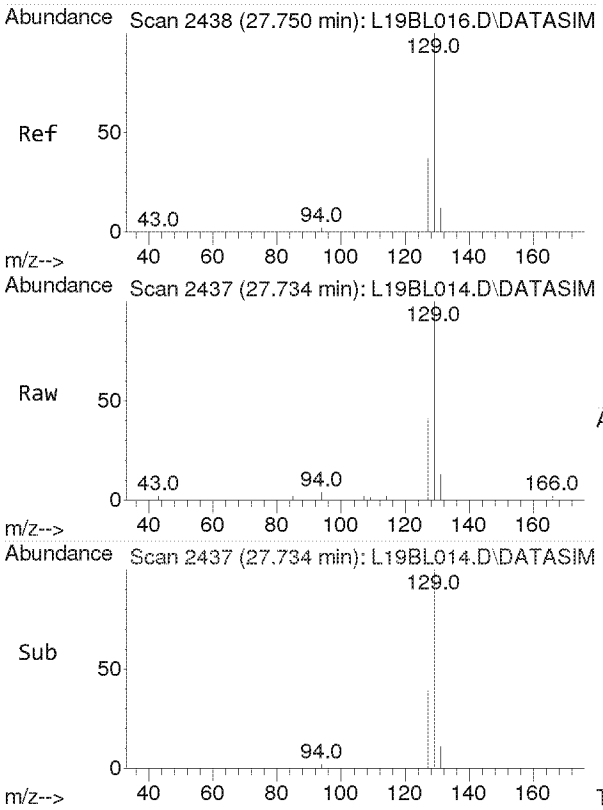


#44
Toluene
Concen: 0.509 ppbv
RT: 27.094 min Scan# 2402
Delta R.T. 0.002 min
Lab File: L19BL014.D
Acq: 12 Feb 2019 8:46 pm

Tgt Ion: 91 Resp: 6950

Ion	Ratio	Lower	Upper
91	100		
92	53.3	42.0	63.0

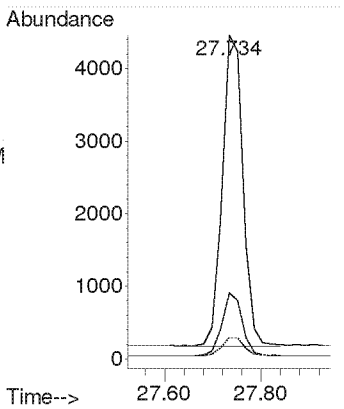


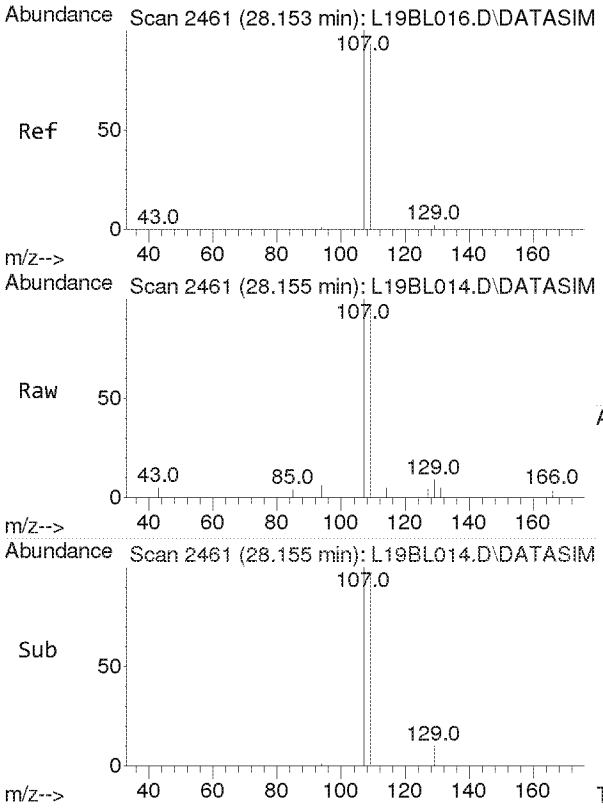


#45
Dibromochloromethane
Concen: 0.471 ppbv
RT: 27.734 min Scan# 2437
Delta R.T. -0.016 min
Lab File: L19BL014.D
Acq: 12 Feb 2019 8:46 pm

Tgt Ion:129 Resp: 12650

Ion	Ratio	Lower	Upper
129	100		
127	19.5	15.4	23.2
131	6.0	4.8	7.2

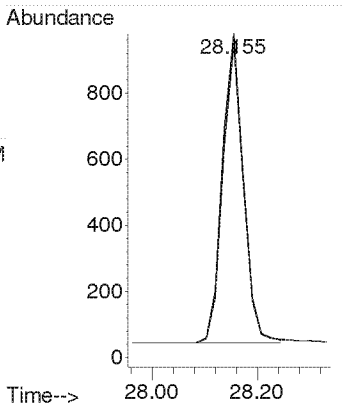


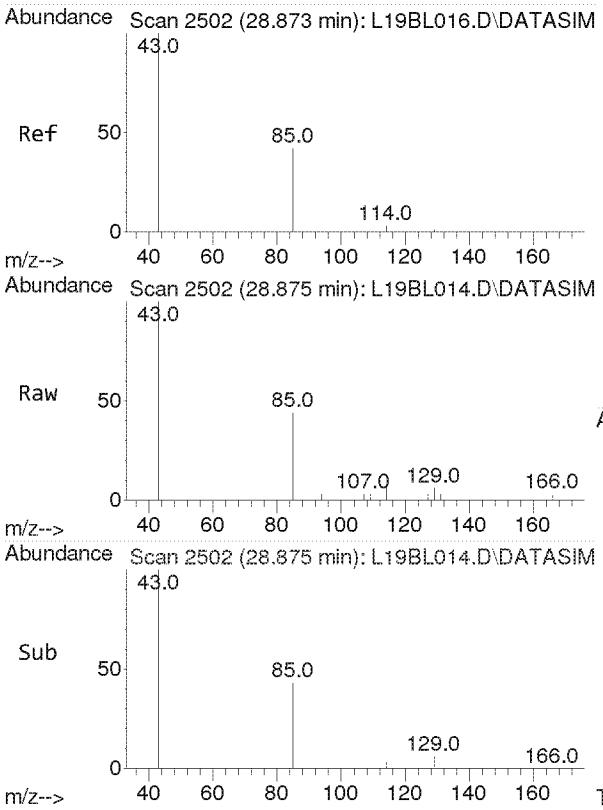


#46
1,2-Dibromoethane
Concen: 0.495 ppbv
RT: 28.155 min Scan# 2461
Delta R.T. 0.002 min
Lab File: L19BL014.D
Acq: 12 Feb 2019 8:46 pm

Tgt Ion:107 Resp: 2576

Ion	Ratio	Lower	Upper
107	100		
109	95.5	75.4	113.0

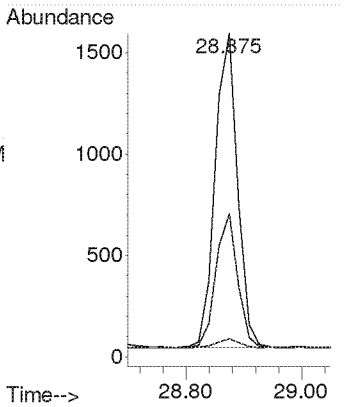


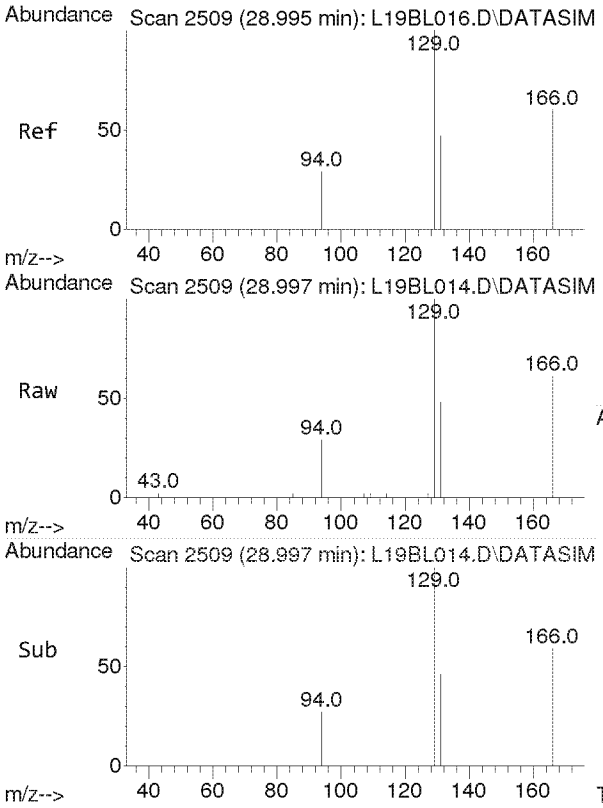


#47
n-Octane
Concen: 0.506 ppbv
RT: 28.875 min Scan# 2502
Delta R.T. 0.002 min
Lab File: L19BL014.D
Acq: 12 Feb 2019 8:46 pm

Tgt Ion: 43 Resp: 4164

Ion	Ratio	Lower	Upper
43	100		
85	41.4	33.0	49.6
114	2.8	2.2	3.4

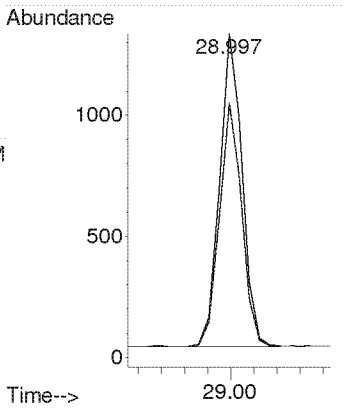


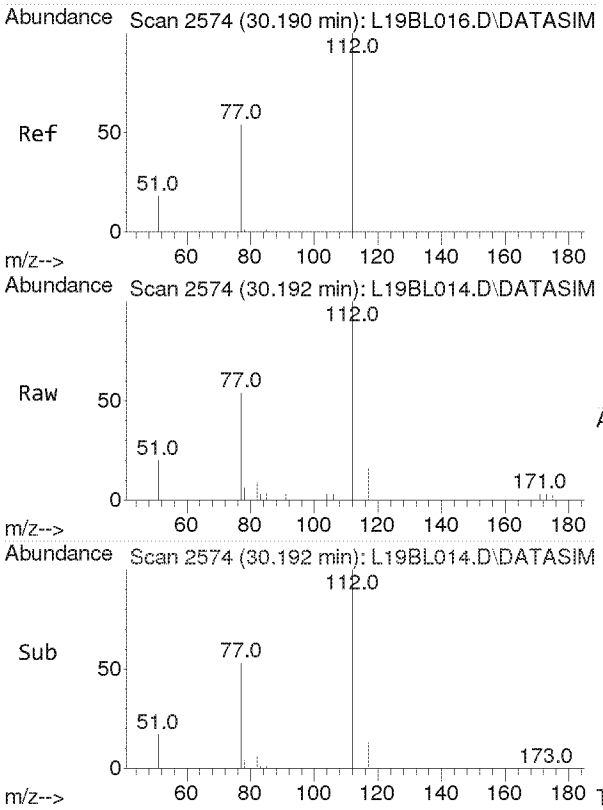


#48
Tetrachloroethylene
Concen: 0.537 ppbv
RT: 28.997 min Scan# 2509
Delta R.T. 0.002 min
Lab File: L19BL014.D
Acq: 12 Feb 2019 8:46 pm

Tgt Ion:166 Resp: 3492

Ion	Ratio	Lower	Upper
166	100		
131	77.7	61.5	92.3

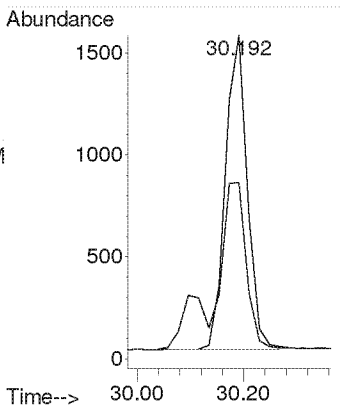


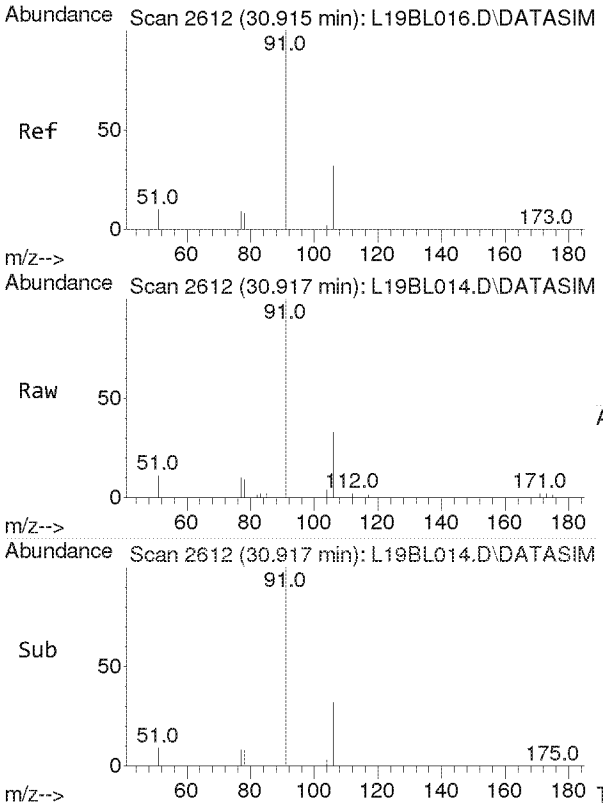


#49
Chlorobenzene
Concen: 0.507 ppbv
RT: 30.192 min Scan# 2574
Delta R.T. 0.002 min
Lab File: L19BL014.D
Acq: 12 Feb 2019 8:46 pm

Tgt Ion:112 Resp: 4437

Ion	Ratio	Lower	Upper
112	100		
77	71.3	47.8	71.6

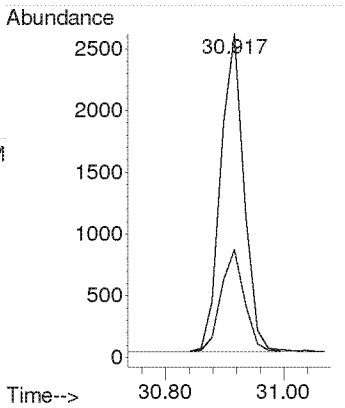


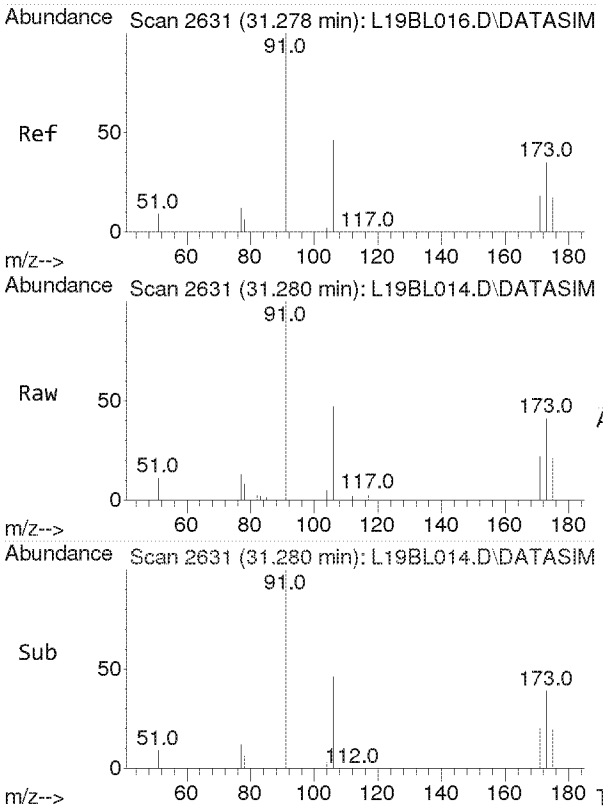


#50
Ethylbenzene
Concen: 0.490 ppbv
RT: 30.917 min Scan# 2612
Delta R.T. 0.002 min
Lab File: L19BL014.D
Acq: 12 Feb 2019 8:46 pm

Tgt Ion: 91 Resp: 7043

Ion	Ratio	Lower	Upper
91	100		
106	32.3	26.0	39.0

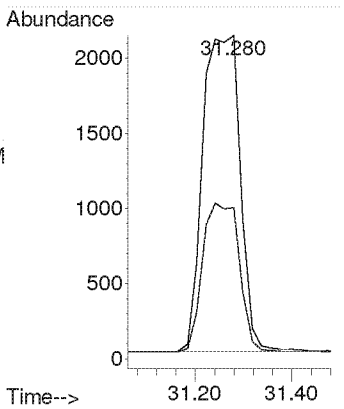


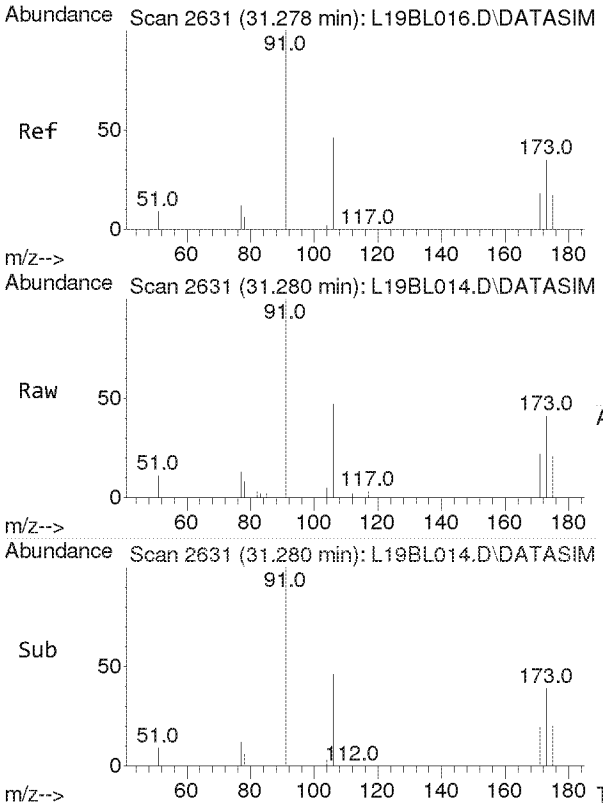


#51
m,p-Xylene
Concen: 0.923 ppbv
RT: 31.280 min Scan# 2631
Delta R.T. 0.002 min
Lab File: L19BL014.D
Acq: 12 Feb 2019 8:46 pm

Tgt Ion: 91 Resp: 11243

Ion	Ratio	Lower	Upper
91	100		
106	46.0	37.3	55.9

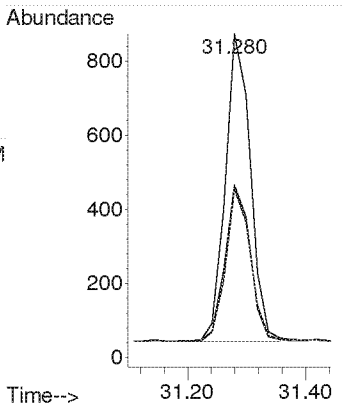


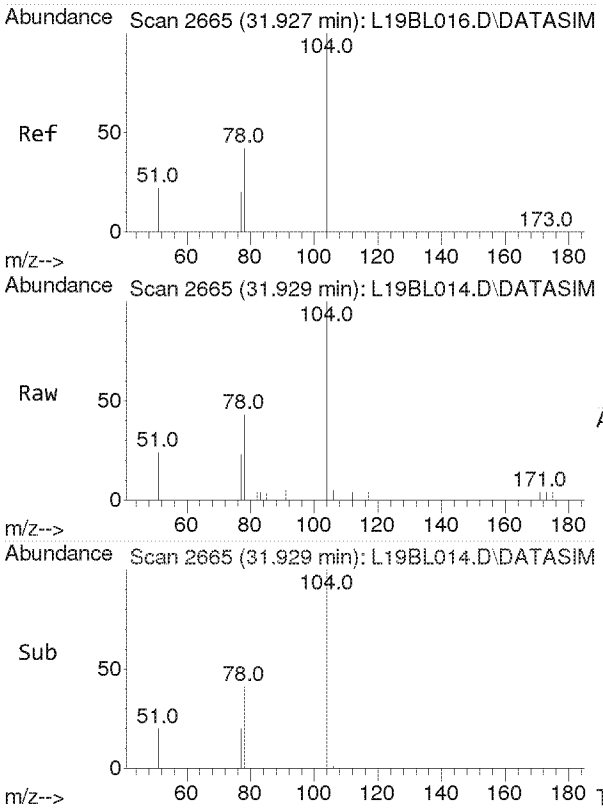


#52
Bromoform
Concen: 0.471 ppbv
RT: 31.280 min Scan# 2631
Delta R.T. 0.002 min
Lab File: L19BL014.D
Acq: 12 Feb 2019 8:46 pm

Tgt Ion:173 Resp: 2422

Ion	Ratio	Lower	Upper
173	100		
171	50.9	41.0	61.6
175	48.8	39.1	58.7

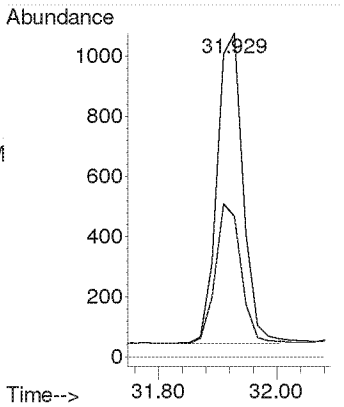


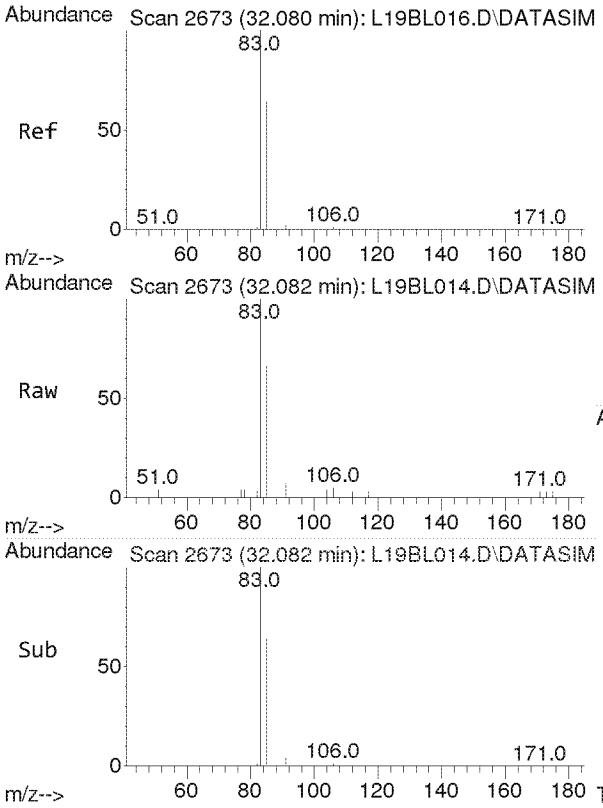


#53
Styrene
Concen: 0.459 ppbv
RT: 31.929 min Scan# 2665
Delta R.T. 0.002 min
Lab File: L19BL014.D
Acq: 12 Feb 2019 8:46 pm

Tgt Ion:104 Resp: 3148

Ion	Ratio	Lower	Upper
104	100		
78	43.9	35.4	53.2
103	0.0	0.0	0.0

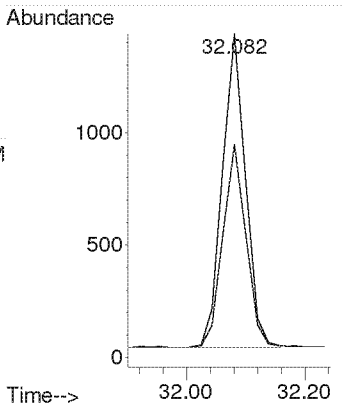


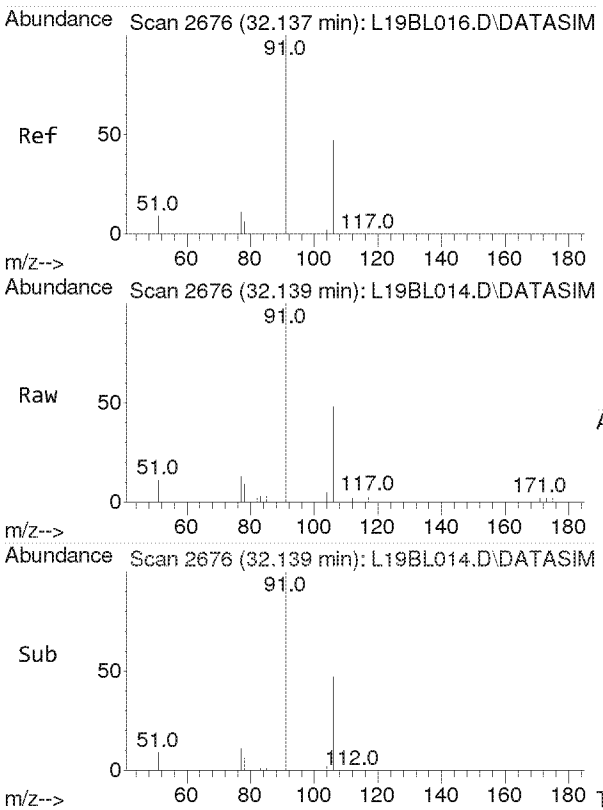


#54
1,1,2,2-Tetrachloroethane
Concen: 0.490 ppbv
RT: 32.082 min Scan# 2673
Delta R.T. 0.002 min
Lab File: L19BL014.D
Acq: 12 Feb 2019 8:46 pm

Tgt Ion: 83 Resp: 3780

Ion	Ratio	Lower	Upper
83	100		
85	64.9	51.6	77.4

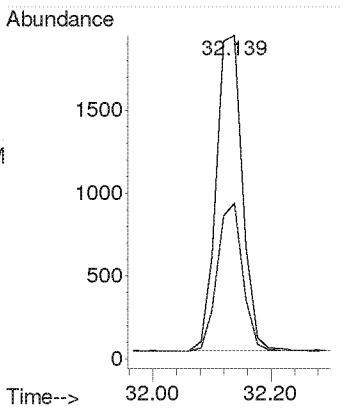


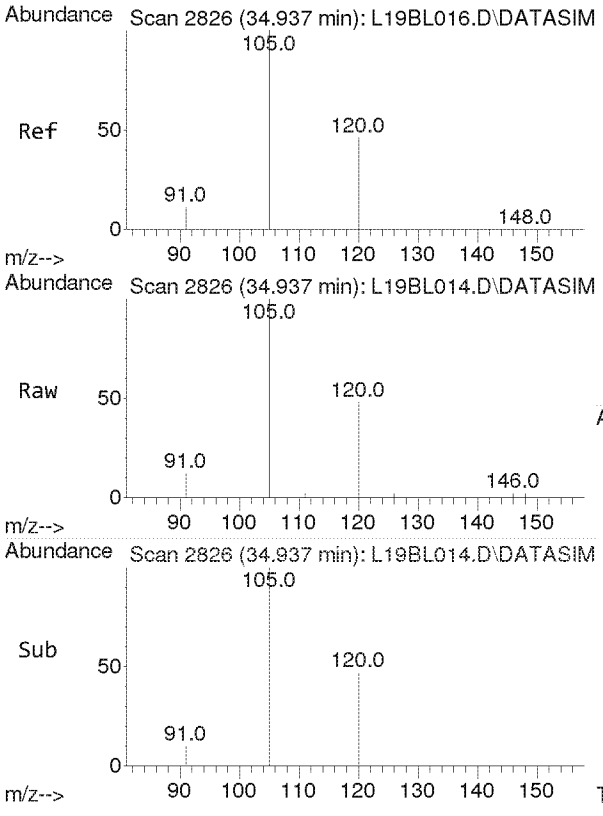


#55
o-Xylene
Concen: 0.494 ppbv
RT: 32.139 min Scan# 2676
Delta R.T. 0.002 min
Lab File: L19BL014.D
Acq: 12 Feb 2019 8:46 pm

Tgt Ion: 91 Resp: 5870

Ion	Ratio	Lower	Upper
91	100		
106	45.2	36.6	55.0

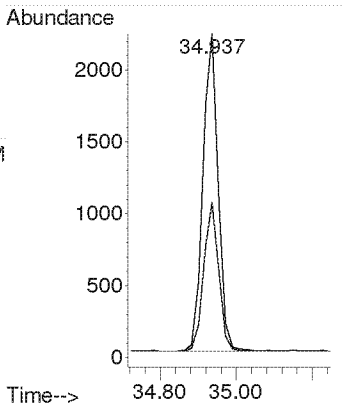


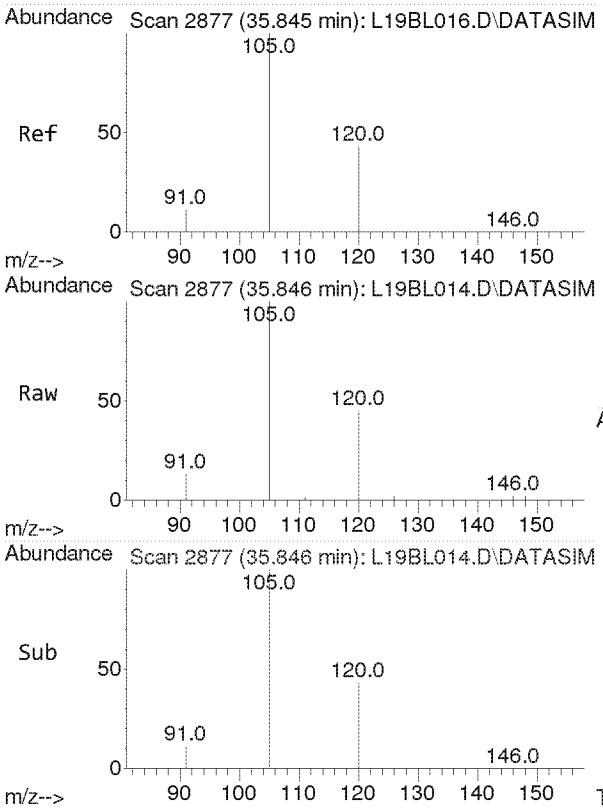


#56
1,3,5-Trimethylbenzene
Concen: 0.483 ppbv
RT: 34.937 min Scan# 2826
Delta R.T. 0.001 min
Lab File: L19BL014.D
Acq: 12 Feb 2019 8:46 pm

Tgt Ion:105 Resp: 6118

Ion	Ratio	Lower	Upper
105	100		
120	46.3	36.8	55.2

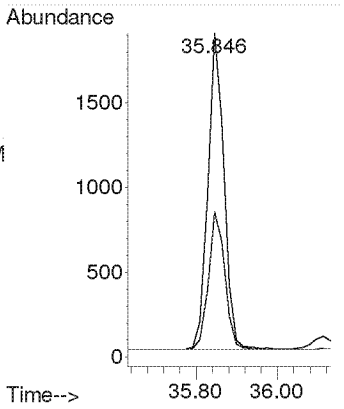


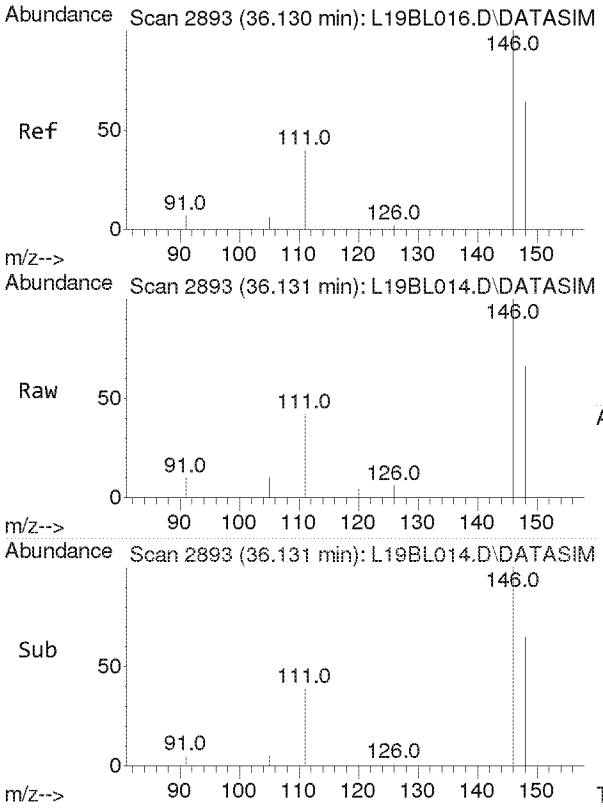


#57
1,2,4-Trimethylbenzene
Concen: 0.463 ppbv
RT: 35.846 min Scan# 2877
Delta R.T. 0.001 min
Lab File: L19BL014.D
Acq: 12 Feb 2019 8:46 pm

Tgt Ion:105 Resp: 5104

Ion	Ratio	Lower	Upper
105	100		
120	44.1	35.2	52.8

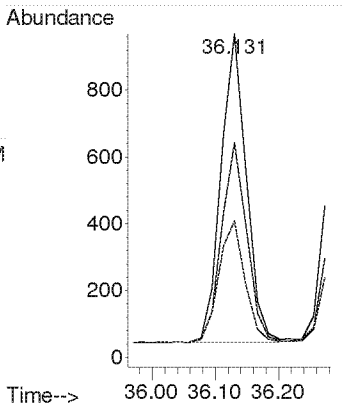


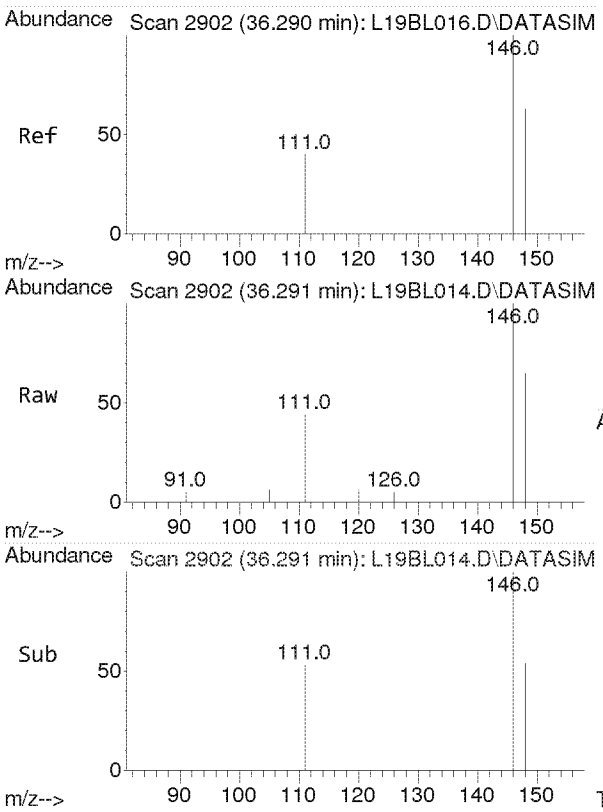


#58
m-Dichlorobenzene
Concen: 0.436 ppbv
RT: 36.131 min Scan# 2893
Delta R.T. 0.001 min
Lab File: L19BL014.D
Acq: 12 Feb 2019 8:46 pm

Tgt Ion:146 Resp: 2551

Ion	Ratio	Lower	Upper
146	100		
148	65.1	51.3	76.9
111	40.7	32.1	48.1

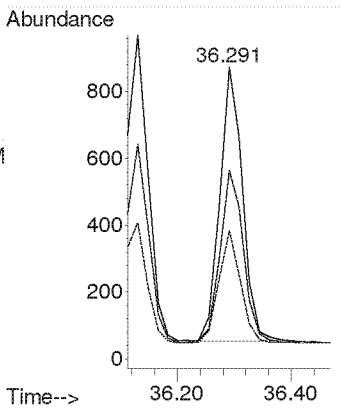


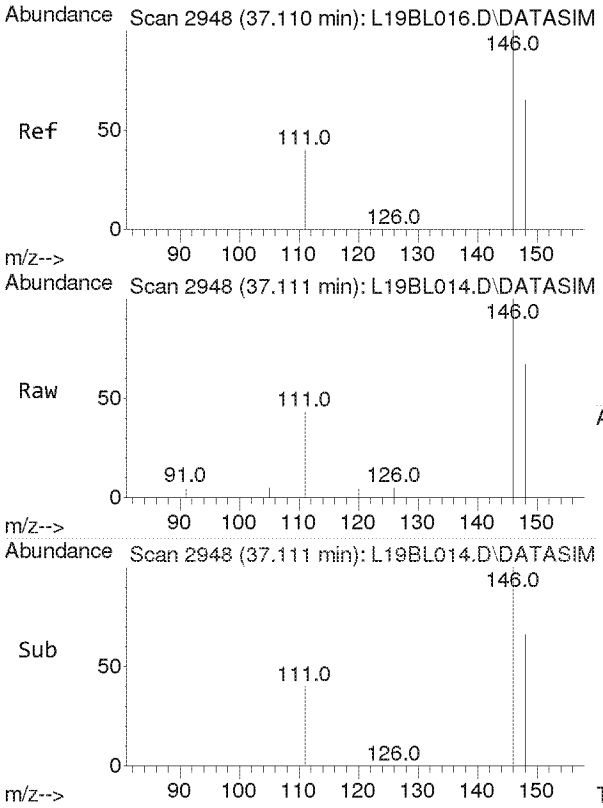


#59
p-Dichlorobenzene
Concen: 0.474 ppbv
RT: 36.291 min Scan# 2902
Delta R.T. 0.001 min
Lab File: L19BL014.D
Acq: 12 Feb 2019 8:46 pm

Tgt Ion:146 Resp: 2263

Ion	Ratio	Lower	Upper
146	100		
148	64.7	51.4	77.2
111	40.0	31.0	46.4

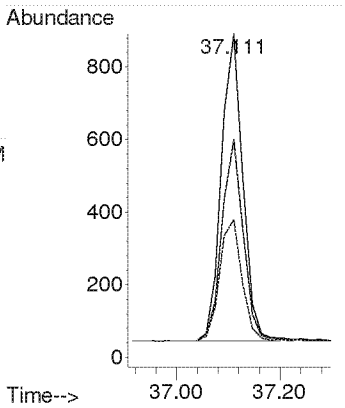


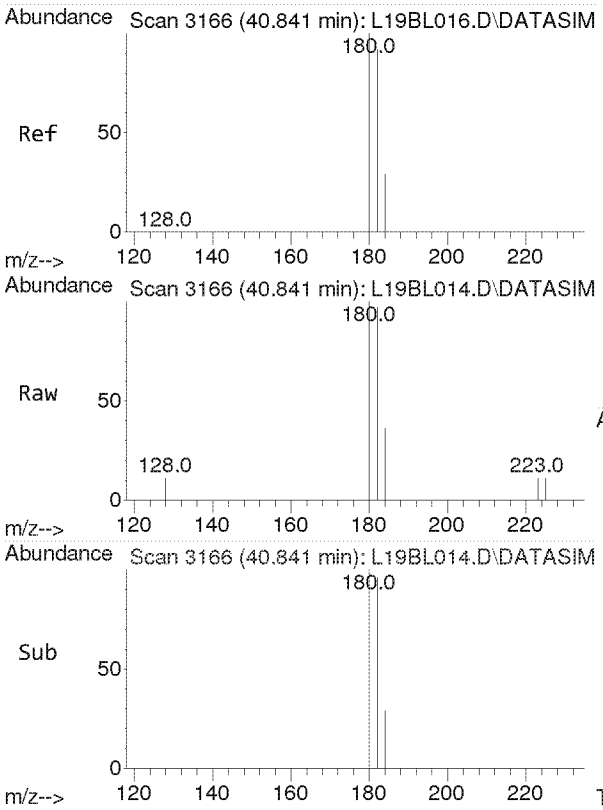


#60
o-Dichlorobenzene
Concen: 0.454 ppbv
RT: 37.111 min Scan# 2948
Delta R.T. 0.001 min
Lab File: L19BL014.D
Acq: 12 Feb 2019 8:46 pm

Tgt Ion:146 Resp: 2421

Ion	Ratio	Lower	Upper
146	100		
148	65.0	51.2	76.8
111	41.1	32.6	49.0

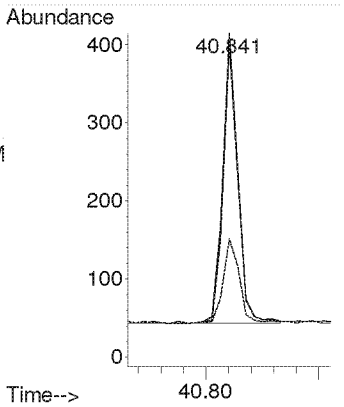


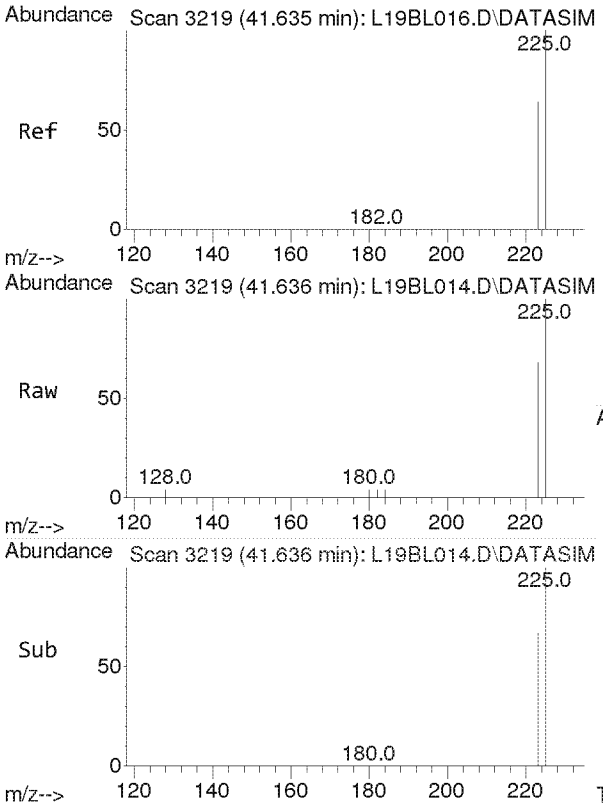


#61
1,2,4-Trichlorobenzene
Concen: 0.393 ppbv
RT: 40.841 min Scan# 3166
Delta R.T. 0.001 min
Lab File: L19BL014.D
Acq: 12 Feb 2019 8:46 pm

Tgt Ion:180 Resp: 670

Ion	Ratio	Lower	Upper
180	100		
182	95.8	75.7	113.5
184	32.2	24.2	36.2

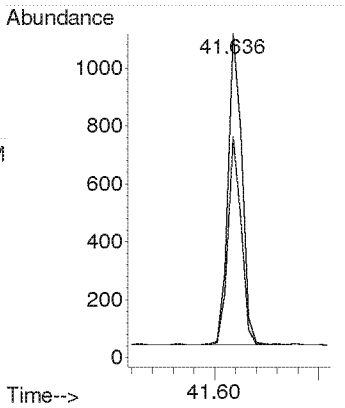




#62
Hexachloro-1,3-butadiene
Concen: 0.444 ppbv
RT: 41.636 min Scan# 3219
Delta R.T. 0.001 min
Lab File: L19BL014.D
Acq: 12 Feb 2019 8:46 pm

Tgt Ion:225 Resp: 1952

Ion	Ratio	Lower	Upper
225	100		
223	63.7	49.9	74.9



Analytical Standard Record

Eastern Research Group

9B12004

Description:	1.00 ppbv ICal	Expires:	03/14/19
Standard Type:	Calibration Stan	Prepared:	02/12/19
Solvent:	Scientific Air	Prepared By:	Mitch Howell
Final Volume (mls):	6000	Department:	Air Toxics
Vials:	1	Last Edit:	02/12/19 08:45 by MH

canister# 3238

Analyte	CAS Number	Concentration	Units
1,1,1-Trichloroethane	71-55-6	0.000982	ppmv
1,1,2,2-Tetrachloroethane	79-34-5	0.00101	ppmv
1,1,2-Trichloroethane	79-00-5	0.00101	ppmv
1,1-Dichloroethane	75-34-3	0.00102	ppmv
1,1-Dichloroethene	75-35-4	0.00109	ppmv
1,2,4-Trichlorobenzene	120-82-1	0.00095	ppmv
1,2,4-Trimethylbenzene	95-63-6	0.00098	ppmv
1,2-Dibromoethane	106-93-4	0.00103	ppmv
1,2-Dichloroethane	107-06-2	0.00103	ppmv
1,2-Dichloropropane	78-87-5	0.00101	ppmv
1,3,5-Trimethylbenzene	108-67-8	0.000992	ppmv
1,3-Butadiene	106-99-0	0.000992	ppmv
Acetonitrile	75-05-8	0.000916	ppmv
Acetylene	74-86-2	0.000912	ppmv
Acrolein	107-02-8	0.0008	ppmv
Acrylonitrile	107-13-1	0.000952	ppmv
Benzene	71-43-2	0.00109	ppmv
Bromochloromethane	74-97-5	0.00102	ppmv
Bromodichloromethane	75-27-4	0.00096	ppmv
Bromoform	75-25-2	0.000972	ppmv
Bromomethane	74-83-9	0.00101	ppmv
Carbon Disulfide	75-15-0	0.00101	ppmv
Carbon Tetrachloride	56-23-5	0.00112	ppmv
Chlorobenzene	108-90-7	0.00103	ppmv
Chloroethane	75-00-3	0.00101	ppmv
Chloroform	67-66-3	0.00102	ppmv
Chloromethane	74-87-3	0.001	ppmv
Chloroprene	126-99-8	0.00103	ppmv
cis-1,2-Dichloroethylene	156-59-2	0.00103	ppmv
cis-1,3-Dichloropropene	10061-01-5	0.001	ppmv

Reviewed By: r 2-14-19 Date

Analytical Standard Record

Eastern Research Group

9B12004

Dibromochloromethane	124-48-1	0.00096	ppmv
Dichlorodifluoromethane	75-71-8	0.000984	ppmv
Dichloromethane	75-09-2	0.00108	ppmv
Dichlorotetrafluoroethane	76-14-2	0.00111	ppmv
Ethyl Acrylate	140-88-5	0.000978	ppmv
Ethyl tert-Butyl Ether	637-92-3	0.00094	ppmv
Ethylbenzene	100-41-4	0.00101	ppmv
Ethylene oxide	75-21-8	0.000984	ppmv
Hexachloro-1,3-butadiene	87-68-3	0.000962	ppmv
m,p-Xylene	108-38-3, 106-42-3	0.00194	ppmv
m-Dichlorobenzene	541-73-1	0.000926	ppmv
Methyl Isobutyl Ketone	108-10-1	0.000914	ppmv
Methyl Methacrylate	80-62-6	0.00095	ppmv
Methyl tert-Butyl Ether	1634-04-4	0.00095	ppmv
n-Octane	111-65-9	0.00104	ppmv
o-Dichlorobenzene	95-50-1	0.000966	ppmv
o-Xylene	95-47-6	0.00101	ppmv
p-Dichlorobenzene	106-46-7	0.000996	ppmv
Propylene	115-07-1	0.000968	ppmv
Styrene	100-42-5	0.000982	ppmv
tert-Amyl Methyl Ether	994-05-8	0.000966	ppmv
Tetrachloroethylene	127-18-4	0.00103	ppmv
Toluene	108-88-3	0.00103	ppmv
trans-1,2-Dichloroethylene	156-60-5	0.001	ppmv
trans-1,3-Dichloropropene	10061-02-6	0.0009860001	ppmv
Trichloroethylene	79-01-6	0.00096	ppmv
Trichlorofluoromethane	75-69-4	0.000932	ppmv
Trichlorotrifluoroethane	76-13-1	0.00104	ppmv
Vinyl chloride	75-01-4	0.00103	ppmv

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
8K20014	TO-15 Primary Primary Stock Stan	11/20/18	Mitch Howell	10/26/19	11/26/18 09:26 by MH	12
8L18003	Ethylene Oxide Stock Standard	12/06/18	** Vendor **	12/06/19	12/18/18 10:28 by MH	6

r 2-14-19

Reviewed By Date

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\L19BL\
Data File : L19BL015.D
Acq On : 12 Feb 2019 9:49 pm
Operator : MAH
Sample : 1902030-CAL3
Misc : 80 ML 8L13001,9B12004
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Feb 13 06:43:16 2019
Quant Method : C:\msdchem\1\METHODS\9020003.M
Quant Title : TO-15 by Selective Ion Analysis
QLast Update : Wed Feb 13 06:40:07 2019
Response via : Initial Calibration

2-14-19

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) IS-Hexane-d14	19.992	66	48650	4.7700	ppbv	0.00
29) IS-1,4-Difluorobenzene	23.150	114	116736	4.9900	ppbv	0.00
43) IS-Chlorobenzene-d5	30.115	117	83483	4.7400	ppbv	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Acetylene	5.403	26	3530	0.9052	ppbv	100
3) Propylene	7.823	41	4711	0.9780	ppbv	100
4) Dichlorodifluoromethane	8.685	85	22905	0.9982	ppbv	100
5) Chloromethane	9.740	50	5987	1.0257	ppbv	99
6) Dichlorotetrafluoroethane	10.864	85	22585	1.1234	ppbv	100
7) Vinyl Chloride	11.102	62	6874	1.0315	ppbv	99
8) 1,3-Butadiene	11.783	54	4522	0.9921	ppbv	100
9) Ethylene oxide	12.410	29	2873	1.0193	ppbv	99
10) Bromomethane	12.590	94	6417	1.0120	ppbv	99
11) Chloroethane	13.268	64	2736	1.0432	ppbv	100
12) Acetonitrile	14.381	41	3743	0.8744	ppbv	98
13) Acrolein	14.636	56	1625	0.7522	ppbv	94
14) Trichlorofluoromethane	15.192	101	18227	0.9297	ppbv	100
15) Acrylonitrile	15.935	53	3137	0.9044	ppbv	98
16) 1,1-Dichloroethene	16.422	61	9290	1.0863	ppbv	99
17) Methylene Chloride	16.723	49	6134	1.0990	ppbv	98
18) Carbon Disulfide	16.932	76	17508	1.0089	ppbv	100
19) Trichlorotrifluoroethane	17.280	101	13634	1.0448	ppbv	99
20) trans-1,2-Dichloroethy...	18.315	96	4730	0.9968	ppbv	100
21) 1,1-Dichloroethane	18.632	63	7868	0.9869	ppbv	99
22) Methyl tert-Butyl Ether	18.791	73	12478	0.9495	ppbv	99
23) Chloroprene	19.539	53	6358	0.9742	ppbv	99
24) cis-1,2-Dichloroethylene	19.947	61	6284m	1.0060	ppbv	100
25) Bromochloromethane	20.174	128	3416	1.0038	ppbv	99
26) Chloroform	20.400	83	9117	0.9841	ppbv	100
27) Ethyl tert-Butyl Ether	21.184	59	11630	0.9169	ppbv	100
28) 1,2-Dichloroethane	21.477	62	5745	1.0197	ppbv	99
30) 1,1,1-Trichloroethane	21.869	97	8306	0.9845	ppbv	99
31) Benzene	22.535	78	12986	1.0688	ppbv	100
32) Carbon Tetrachloride	22.770	117	10136	1.1170	ppbv	100
33) tert-Amyl Methyl Ether	23.521	73	9838	0.9549	ppbv	100
34) 1,2-Dichloropropane	23.789	63	4510	0.9627	ppbv	100
35) Ethyl Acrylate	23.893	55	3664	0.9509	ppbv	99
36) Bromodichloromethane	24.078	83	7707	0.9424	ppbv	100
37) Trichloroethylene	24.181	130	5417	0.9300	ppbv	100
38) Methyl Methacrylate	24.532	41	10416	0.8976	ppbv	100
39) cis-1,3-Dichloropropene	25.530	75	3741	0.9392	ppbv	100
40) Methyl Isobutyl Ketone	25.606	43	7761	0.9138	ppbv	99
41) trans-1,3-Dichloropropene	26.369	75	2470	0.9092	ppbv	99
42) 1,1,2-Trichloroethane	26.617	97	4119	0.9682	ppbv	99
44) Toluene	27.094	91	13656	1.0021	ppbv	99
45) Dibromochloromethane	27.734	129	25042	0.9341	ppbv	100
46) 1,2-Dibromoethane	28.155	107	4949	0.9520	ppbv	100
47) n-Octane	28.874	43	8320	1.0116	ppbv	100
48) Tetrachloroethylene	28.997	166	6729	1.0359	ppbv	99
49) Chlorobenzene	30.192	112	8618	0.9850	ppbv	100
50) Ethylbenzene	30.917	91	13944	0.9716	ppbv	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\L19BL\
Data File : L19BL015.D
Acq On : 12 Feb 2019 9:49 pm
Operator : MAH
Sample : 1902030-CAL3
Misc : 80 ML 8L13001,9B12004
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Feb 13 06:43:16 2019
Quant Method : C:\msdchem\1\METHODS\9020003.M
Quant Title : TO-15 by Selective Ion Analysis
QLast Update : Wed Feb 13 06:40:07 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
51) m,p-Xylene	31.280	91	22371	1.8381	ppbv	100
52) Bromoform	31.280	173	4746	0.9243	ppbv	100
53) Styrene	31.929	104	6419	0.9372	ppbv #	98
54) 1,1,2,2-Tetrachloroethane	32.081	83	7803	1.0133	ppbv	100
55) o-Xylene	32.139	91	11710	0.9867	ppbv	100
56) 1,3,5-Trimethylbenzene	34.937	105	12734	1.0062	ppbv	99
57) 1,2,4-Trimethylbenzene	35.846	105	10713	0.9719	ppbv	100
58) m-Dichlorobenzene	36.131	146	5093	0.8722	ppbv	99
59) p-Dichlorobenzene	36.291	146	4339	0.9103	ppbv	100
60) o-Dichlorobenzene	37.110	146	4993	0.9381	ppbv	100
61) 1,2,4-Trichlorobenzene	40.841	180	1984	1.1654	ppbv	100
62) Hexachloro-1,3-butadiene	41.635	225	5023	1.1428	ppbv	100

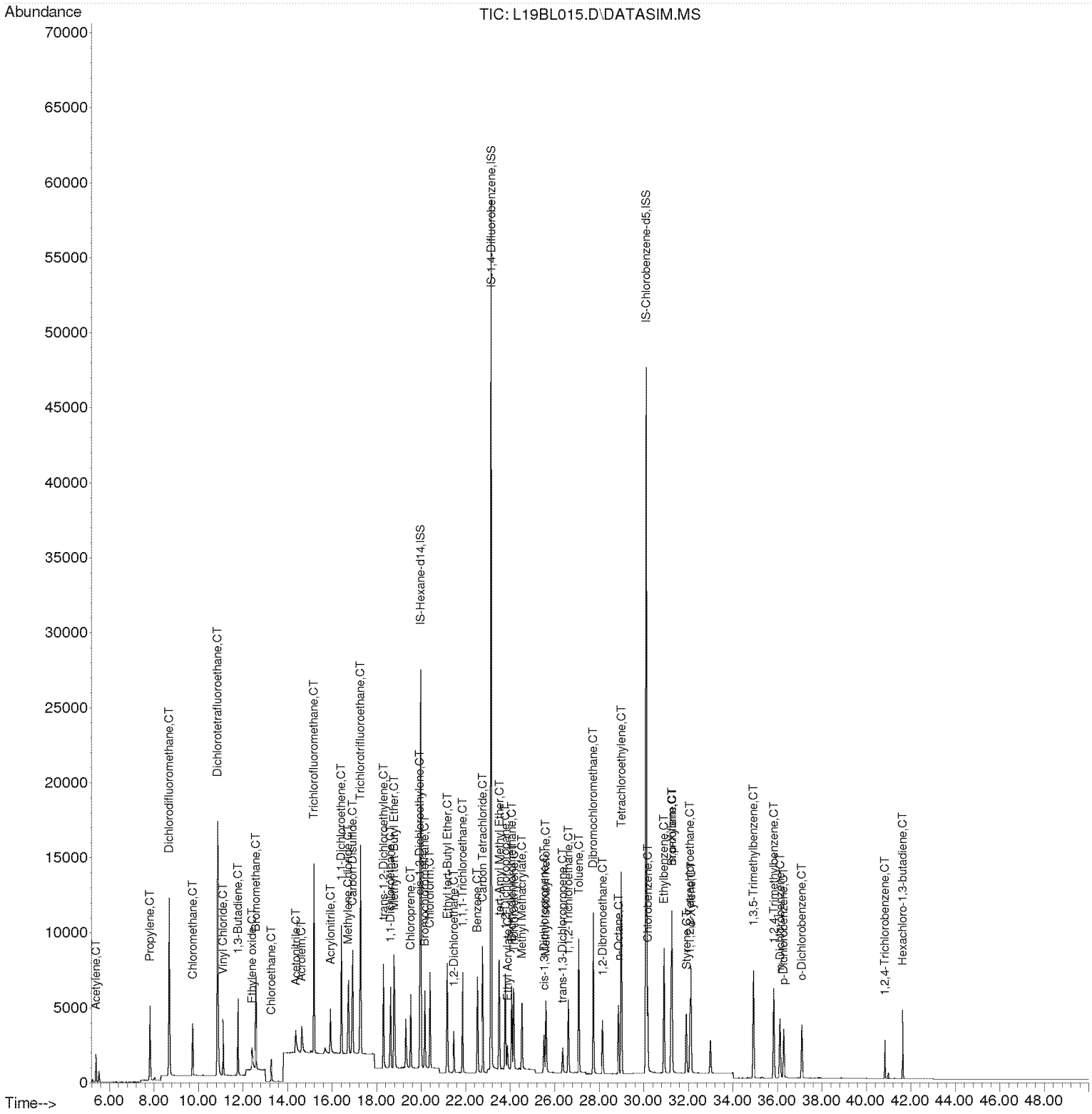
(#) = qualifier out of range (m) = manual integration (+) = signals summed

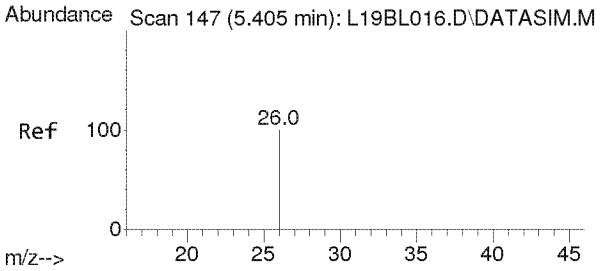
ED_002475_00000354-00121

Quantitation Report (QT Reviewed)

Data Path : Y:\MASS SPEC 1 DATA\L19BL\
Data File : L19BL015.D
Acq On : 12 Feb 2019 9:49 pm
Operator : MAH
Sample : 1902030-CAL3
Misc : 80 ML 8L13001,9B12004
ALS Vial : 15 Sample Multiplier: 1

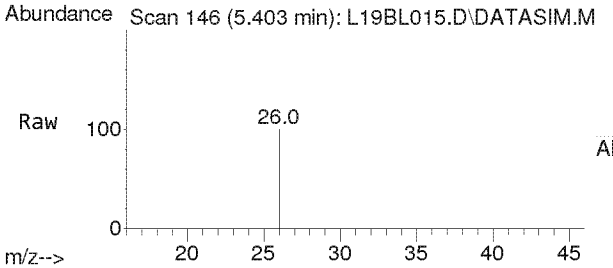
Quant Time: Feb 13 06:40:39 2019
Quant Method : C:\msdchem\1\METHODS\9020003.M
Quant Title : TO-15 by Selective Ion Analysis
QLast Update : Wed Feb 13 06:40:07 2019
Response via : Initial Calibration

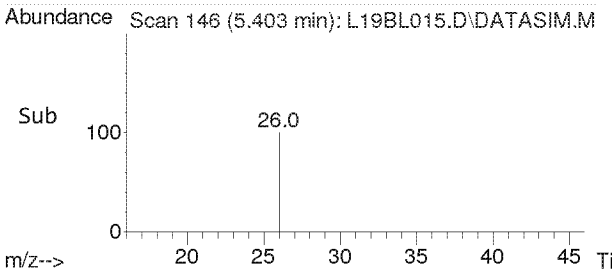


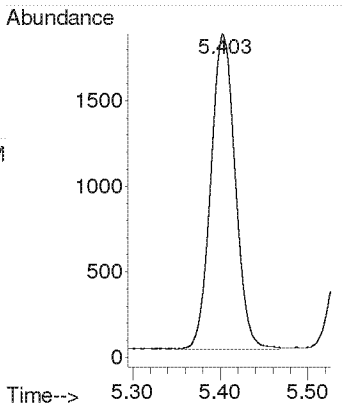


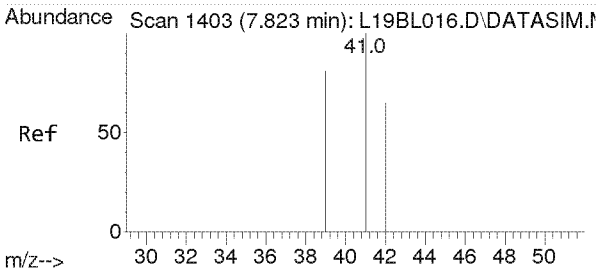
#2
Acetylene
Concen: 0.905 ppbv
RT: 5.403 min Scan# 146
Delta R.T. -0.002 min
Lab File: L19BL015.D
Acq: 12 Feb 2019 9:49 pm

Tgt Ion: 26 Resp: 3530





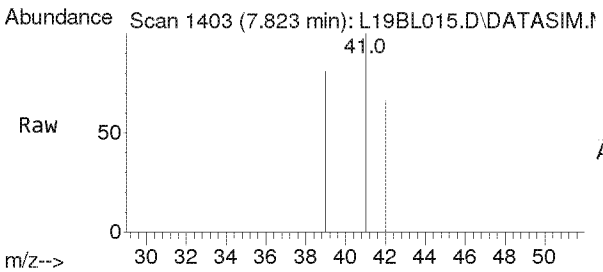


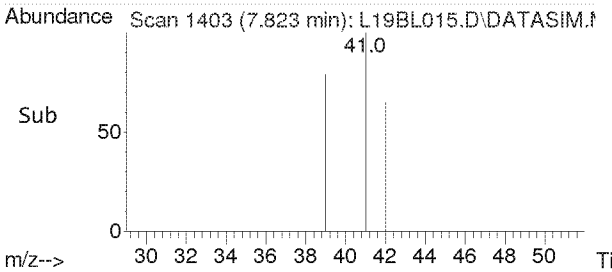


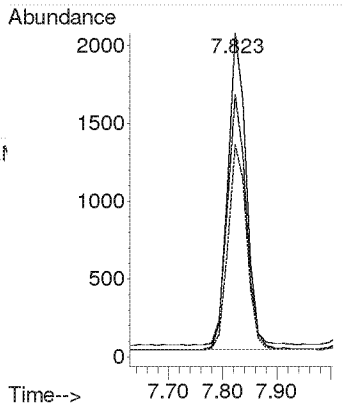
#3
Propylene
Concen: 0.978 ppbv
RT: 7.823 min Scan# 1403
Delta R.T. -0.000 min
Lab File: L19BL015.D
Acq: 12 Feb 2019 9:49 pm

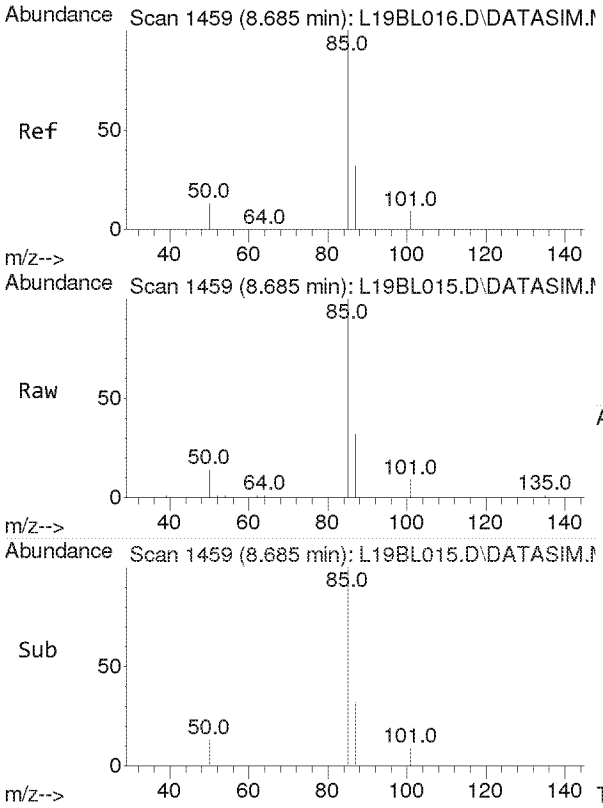
Tgt Ion: 41 Resp: 4711

Ion	Ratio	Lower	Upper
41	100		
39	80.3	64.2	96.2
42	66.3	52.6	79.0





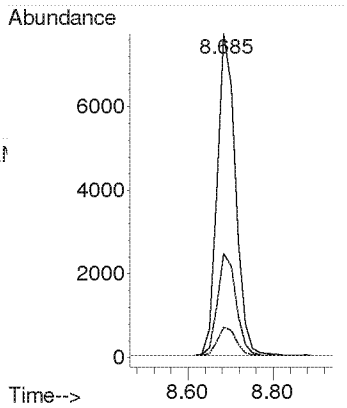


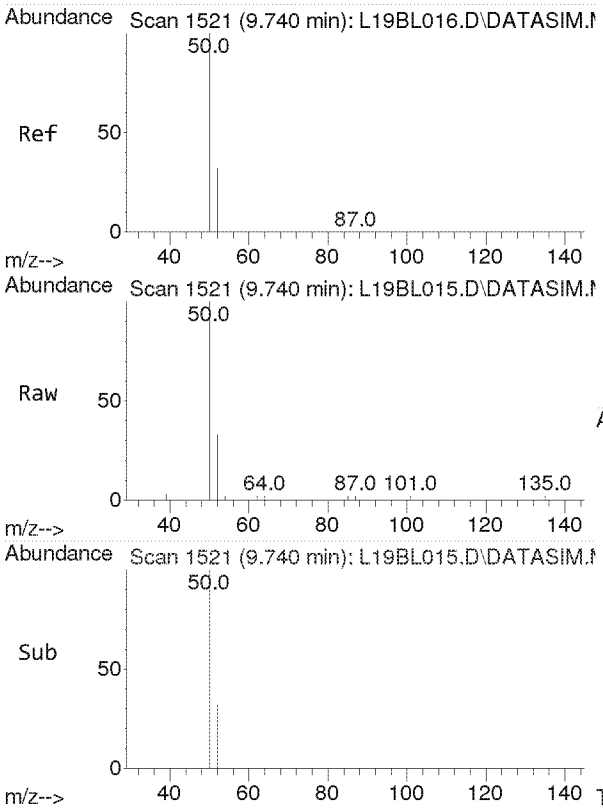


#4
Dichlorodifluoromethane
Concen: 0.998 ppbv
RT: 8.685 min Scan# 1459
Delta R.T. -0.000 min
Lab File: L19BL015.D
Acq: 12 Feb 2019 9:49 pm

Tgt Ion: 85 Resp: 22905

Ion	Ratio	Lower	Upper
85	100		
87	32.2	26.0	39.0
101	9.0	7.3	10.9

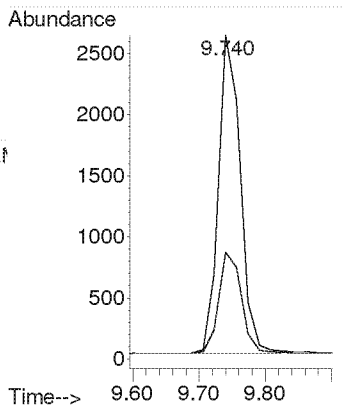


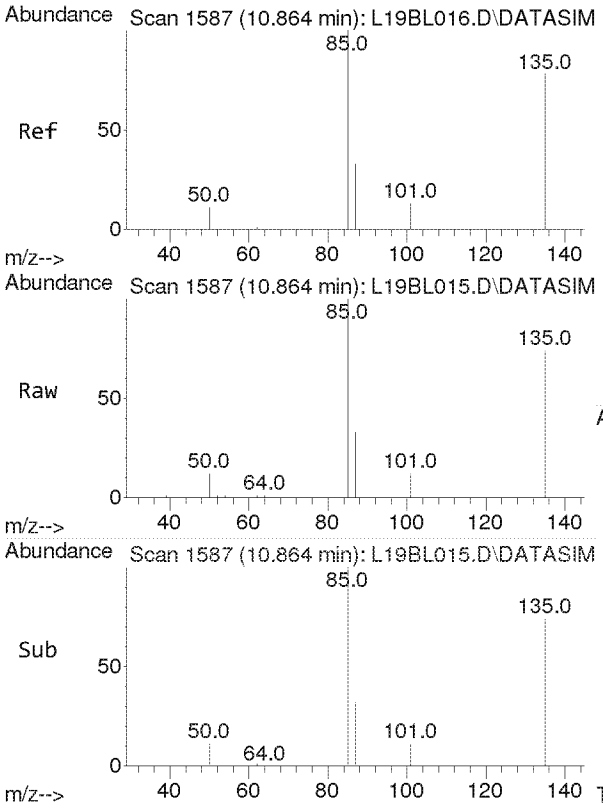


#5
Chloromethane
Concen: 1.026 ppbv
RT: 9.740 min Scan# 1521
Delta R.T. -0.000 min
Lab File: L19BL015.D
Acq: 12 Feb 2019 9:49 pm

Tgt Ion: 50 Resp: 5987

Ion	Ratio	Lower	Upper
50	100		
52	32.9	26.1	39.1

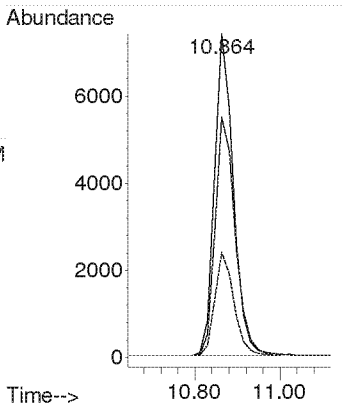


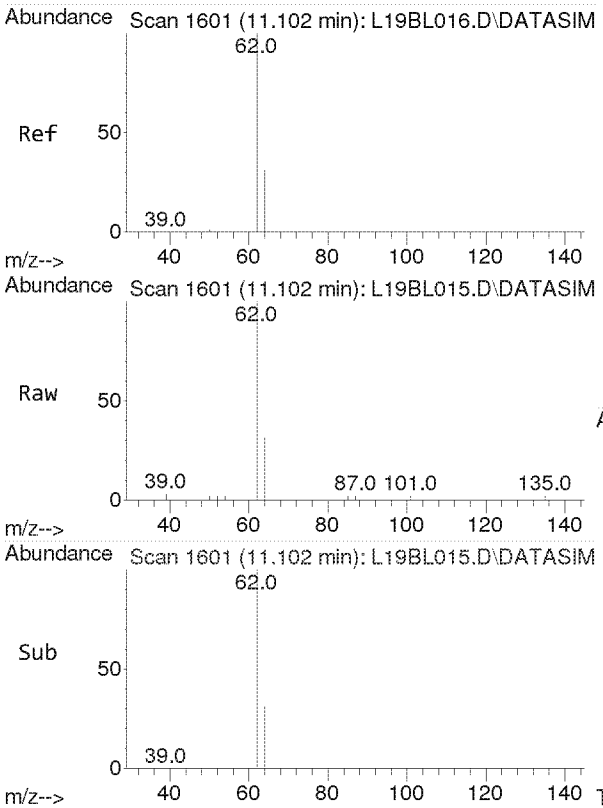


#6
Dichlorotetrafluoroethane
Concen: 1.123 ppbv
RT: 10.864 min Scan# 1587
Delta R.T. -0.000 min
Lab File: L19BL015.D
Acq: 12 Feb 2019 9:49 pm

Tgt Ion: 85 Resp: 22585

Ion	Ratio	Lower	Upper
85	100		
135	79.1	63.2	94.8
87	32.3	25.9	38.9

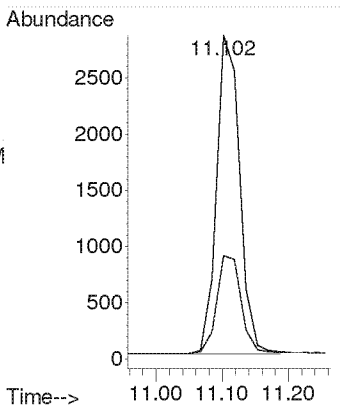


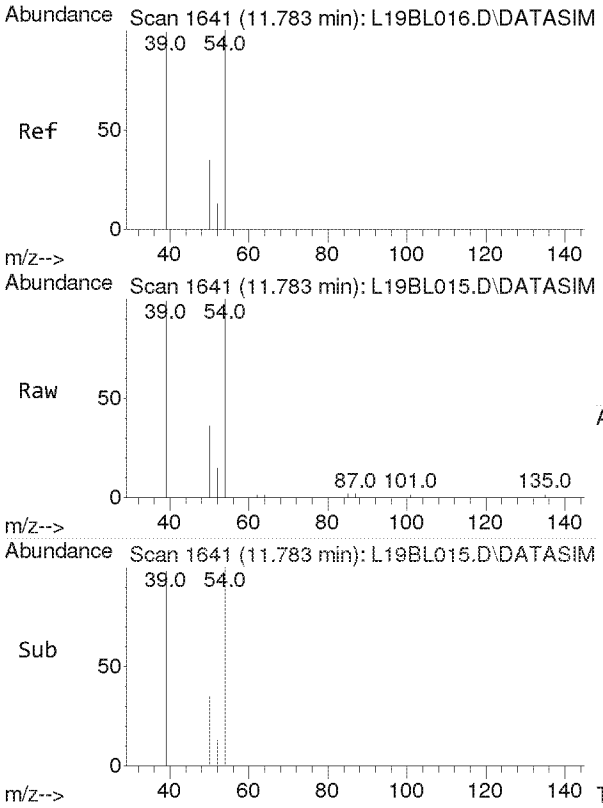


#7
Vinyl Chloride
Concen: 1.031 ppbv
RT: 11.102 min Scan# 1601
Delta R.T. -0.000 min
Lab File: L19BL015.D
Acq: 12 Feb 2019 9:49 pm

Tgt Ion: 62 Resp: 6874

Ion	Ratio	Lower	Upper
62	100		
64	32.0	25.4	38.0

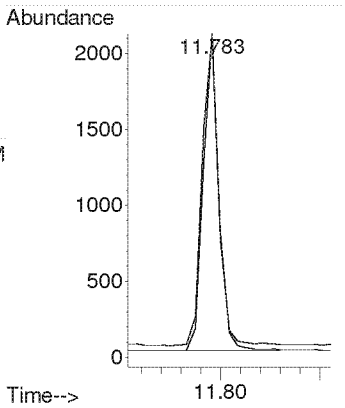


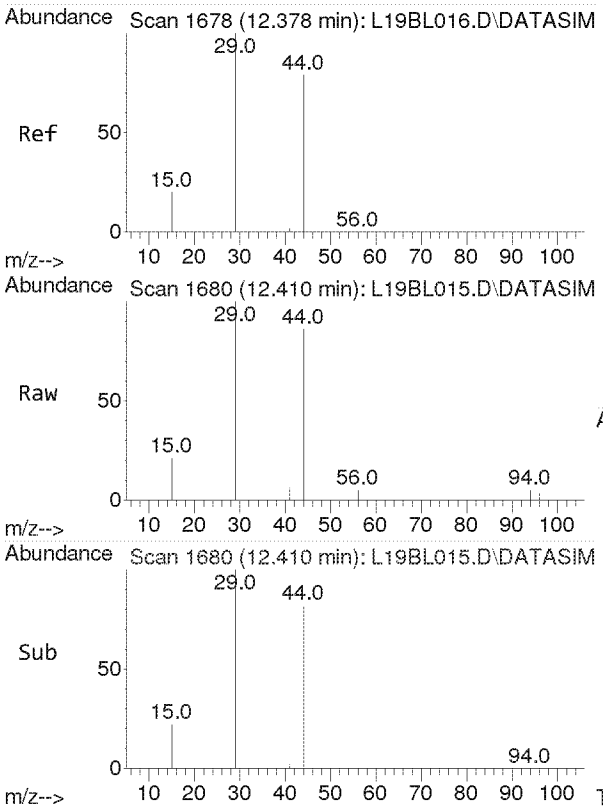


#8
1,3-Butadiene
Concen: 0.992 ppbv
RT: 11.783 min Scan# 1641
Delta R.T. -0.000 min
Lab File: L19BL015.D
Acq: 12 Feb 2019 9:49 pm

Tgt Ion: 54 Resp: 4522

Ion	Ratio	Lower	Upper
54	100		
39	102.2	81.6	122.4

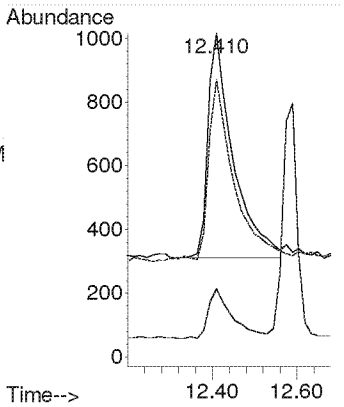


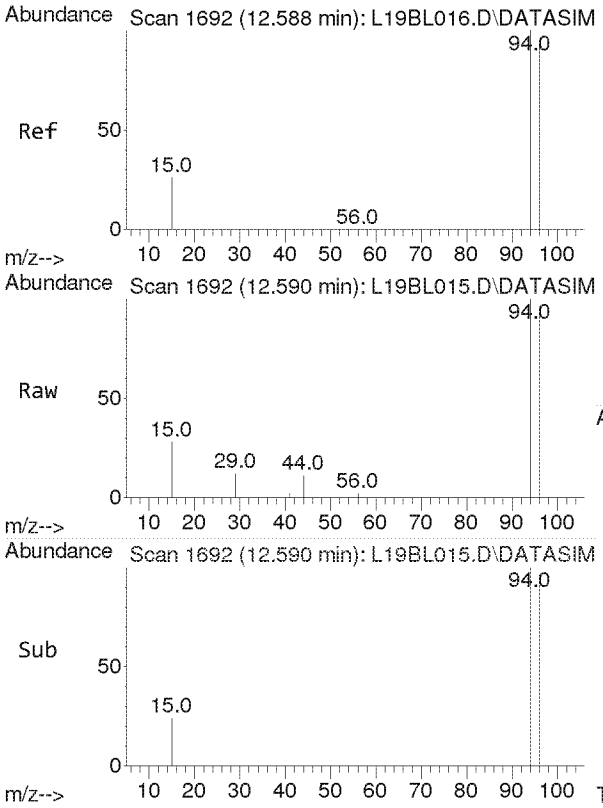


#9
Ethylene oxide
Concen: 1.019 ppbv
RT: 12.410 min Scan# 1680
Delta R.T. 0.032 min
Lab File: L19BL015.D
Acq: 12 Feb 2019 9:49 pm

Tgt Ion: 29 Resp: 2873

Ion	Ratio	Lower	Upper
29	100		
15	20.6	16.0	24.0
44	82.2	65.4	98.2

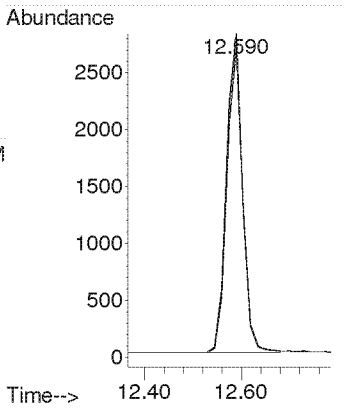


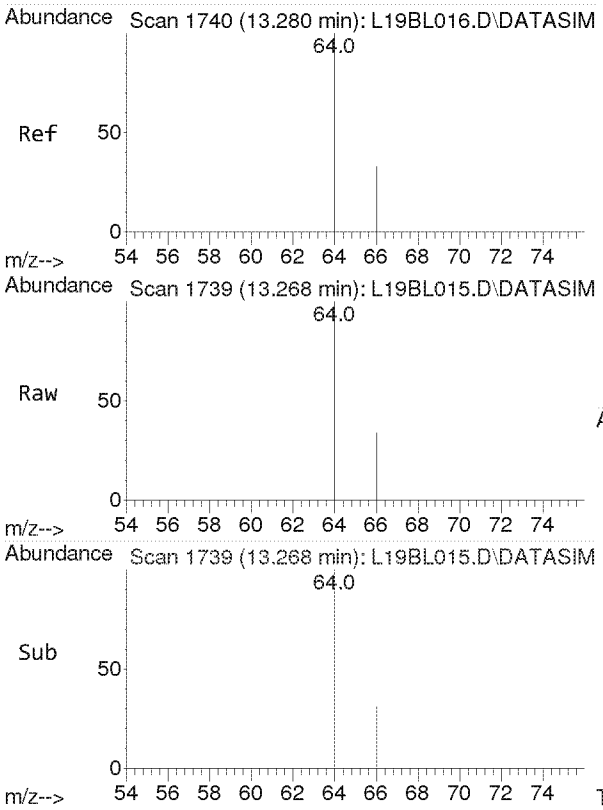


#10
Bromomethane
Concen: 1.012 ppbv
RT: 12.590 min Scan# 1692
Delta R.T. 0.002 min
Lab File: L19BL015.D
Acq: 12 Feb 2019 9:49 pm

Tgt Ion: 94 Resp: 6417

Ion	Ratio	Lower	Upper
94	100		
96	95.2	75.5	113.3

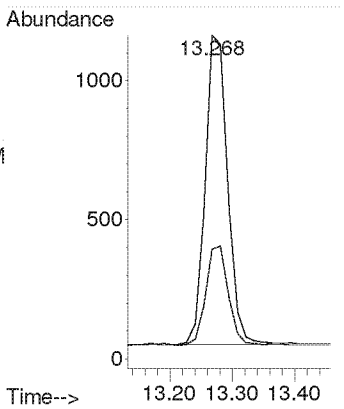


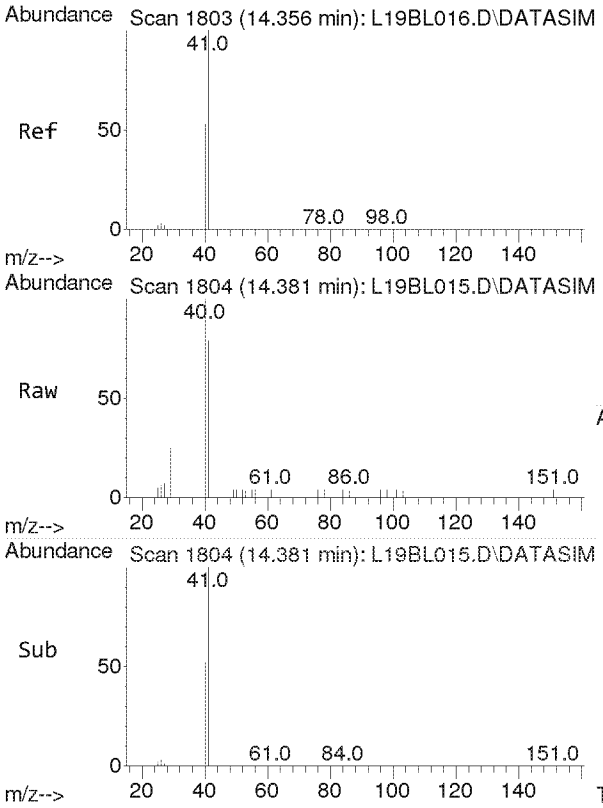


#11
Chloroethane
Concen: 1.043 ppbv
RT: 13.268 min Scan# 1739
Delta R.T. -0.012 min
Lab File: L19BL015.D
Acq: 12 Feb 2019 9:49 pm

Tgt Ion: 64 Resp: 2736

Ion	Ratio	Lower	Upper
64	100		
66	32.3	25.8	38.6

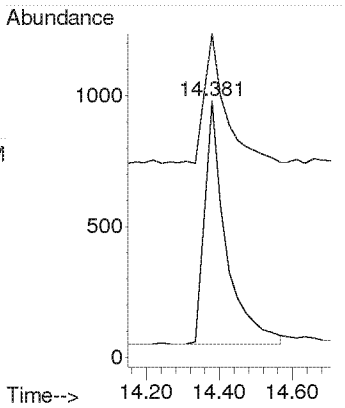


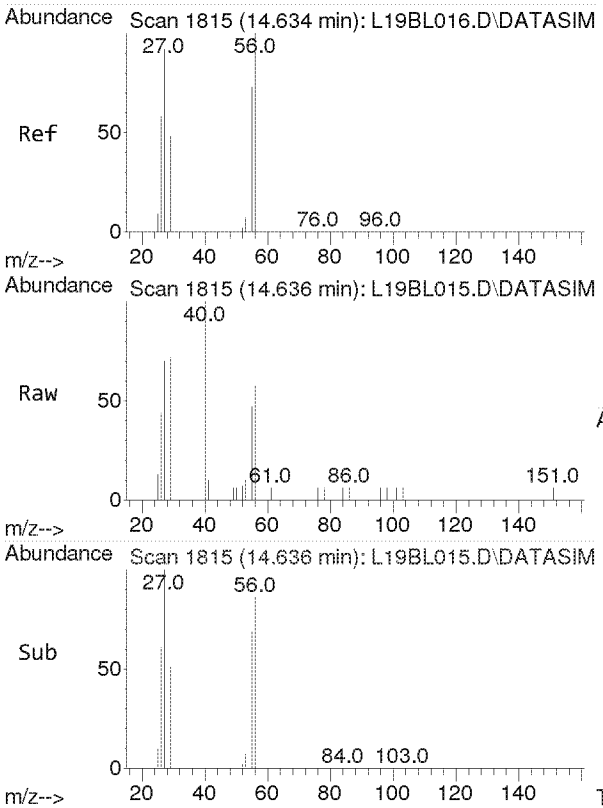


#12
Acetonitrile
Concen: 0.874 ppbv
RT: 14.381 min Scan# 1804
Delta R.T. 0.025 min
Lab File: L19BL015.D
Acq: 12 Feb 2019 9:49 pm

Tgt Ion: 41 Resp: 3743

Ion	Ratio	Lower	Upper
41	100		
40	51.6	42.2	63.4

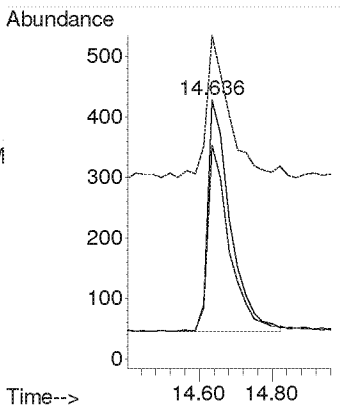


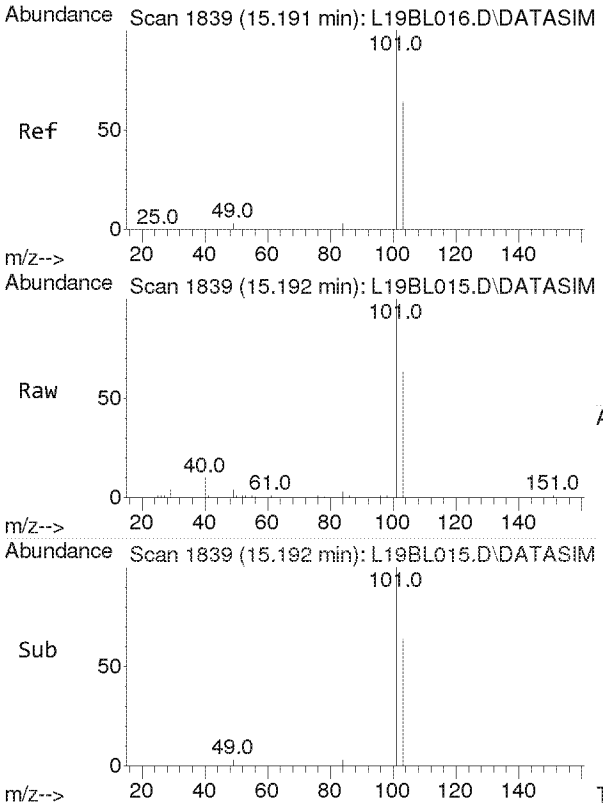


#13
Acrolein
Concen: 0.752 ppbv
RT: 14.636 min Scan# 1815
Delta R.T. 0.002 min
Lab File: L19BL015.D
Acq: 12 Feb 2019 9:49 pm

Tgt Ion: 56 Resp: 1625

Ion	Ratio	Lower	Upper
56	100		
55	77.8	60.8	91.2
29	63.4	43.8	65.6

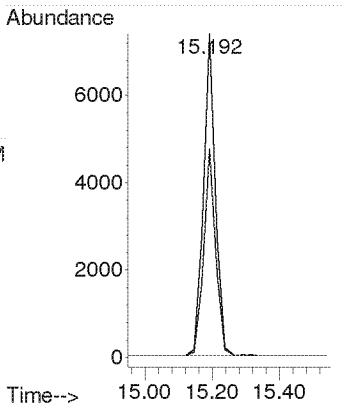


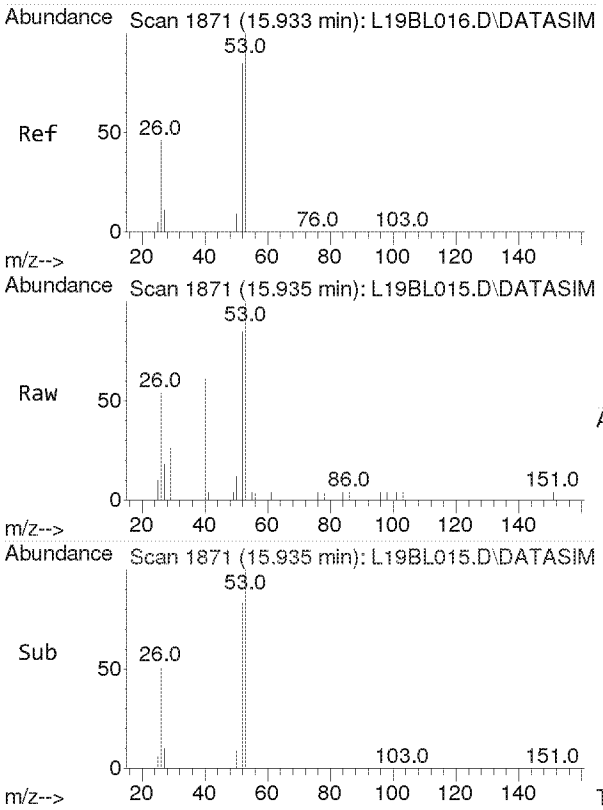


#14
Trichlorofluoromethane
Concen: 0.930 ppbv
RT: 15.192 min Scan# 1839
Delta R.T. 0.002 min
Lab File: L19BL015.D
Acq: 12 Feb 2019 9:49 pm

Tgt Ion:101 Resp: 18227

Ion	Ratio	Lower	Upper
101	100		
103	64.7	51.7	77.5

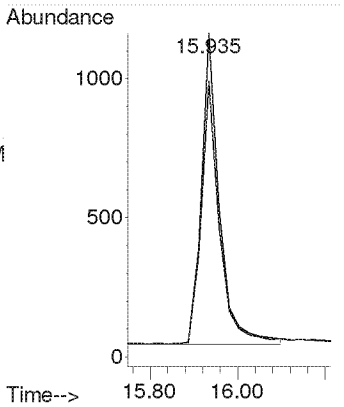


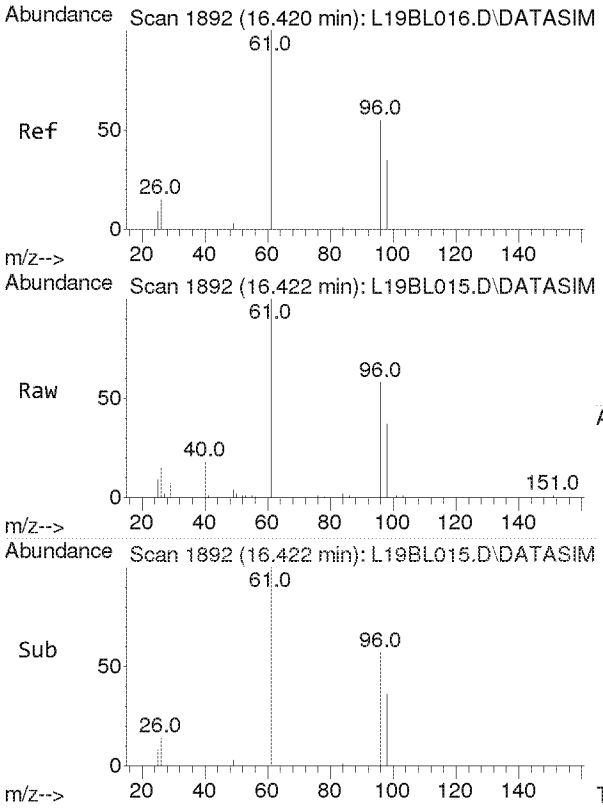


#15
Acrylonitrile
Concen: 0.904 ppbv
RT: 15.935 min Scan# 1871
Delta R.T. 0.002 min
Lab File: L19BL015.D
Acq: 12 Feb 2019 9:49 pm

Tgt Ion: 53 Resp: 3137

Ion	Ratio	Lower	Upper
53	100		
52	85.4	69.5	104.3

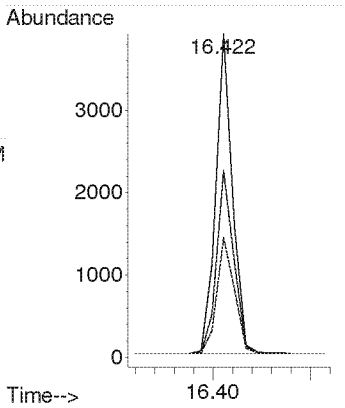


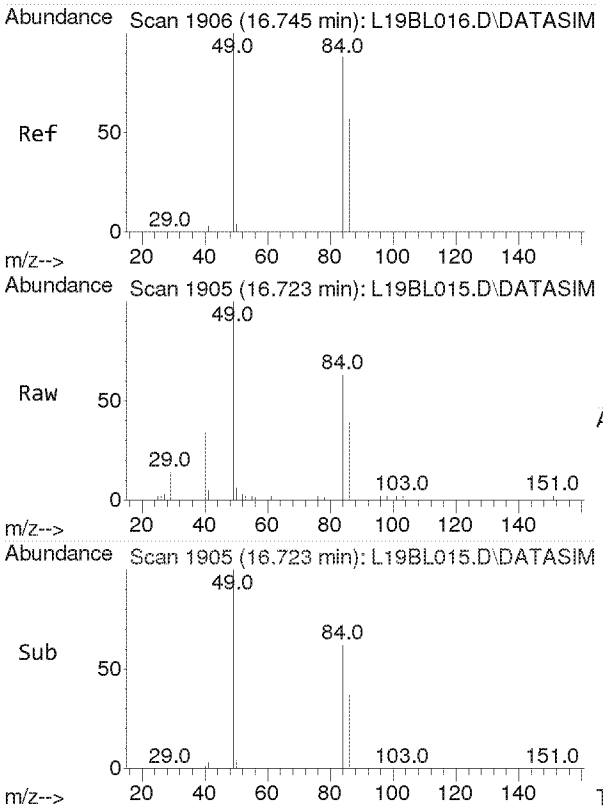


#16
1,1-Dichloroethene
Concen: 1.086 ppbv
RT: 16.422 min Scan# 1892
Delta R.T. 0.002 min
Lab File: L19BL015.D
Acq: 12 Feb 2019 9:49 pm

Tgt Ion: 61 Resp: 9290

Ion	Ratio	Lower	Upper
61	100		
96	58.6	47.3	70.9
98	38.0	30.6	45.8

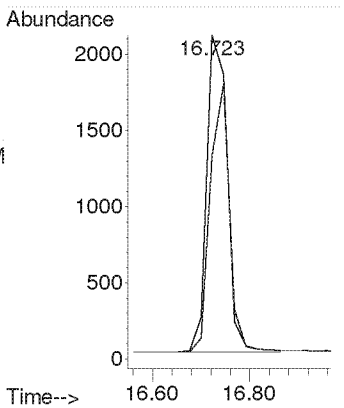


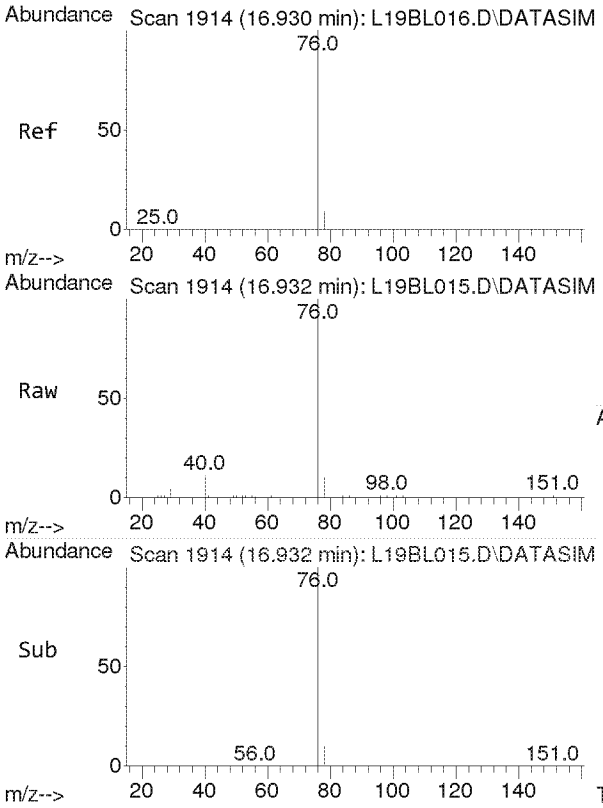


#17
Methylene Chloride
Concen: 1.099 ppbv
RT: 16.723 min Scan# 1905
Delta R.T. -0.021 min
Lab File: L19BL015.D
Acq: 12 Feb 2019 9:49 pm

Tgt Ion: 49 Resp: 6134

Ion	Ratio	Lower	Upper
49	100		
84	78.9	54.0	100.4

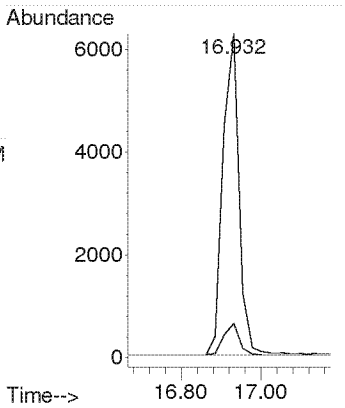


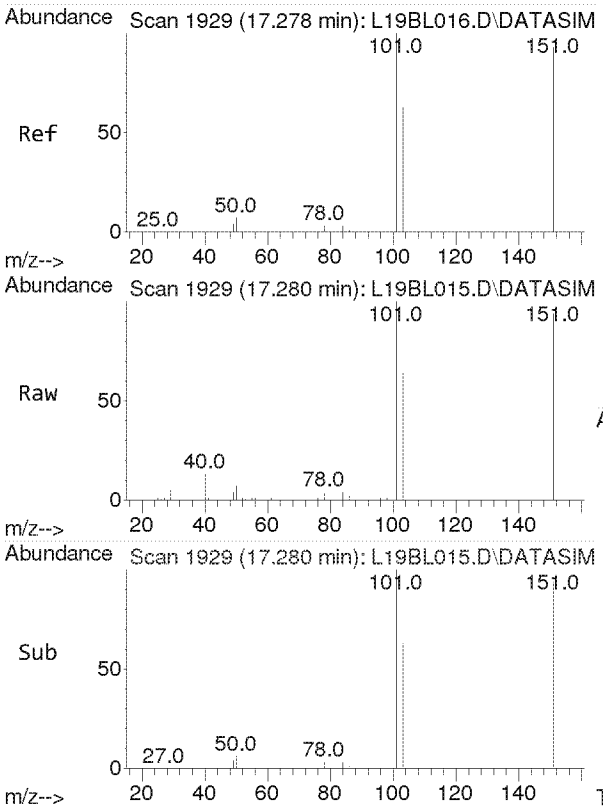


#18
Carbon Disulfide
Concen: 1.009 ppbv
RT: 16.932 min Scan# 1914
Delta R.T. 0.002 min
Lab File: L19BL015.D
Acq: 12 Feb 2019 9:49 pm

Tgt Ion: 76 Resp: 17508

Ion	Ratio	Lower	Upper
76	100		
78	9.3	7.4	11.0

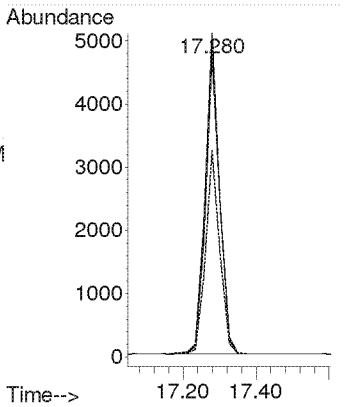


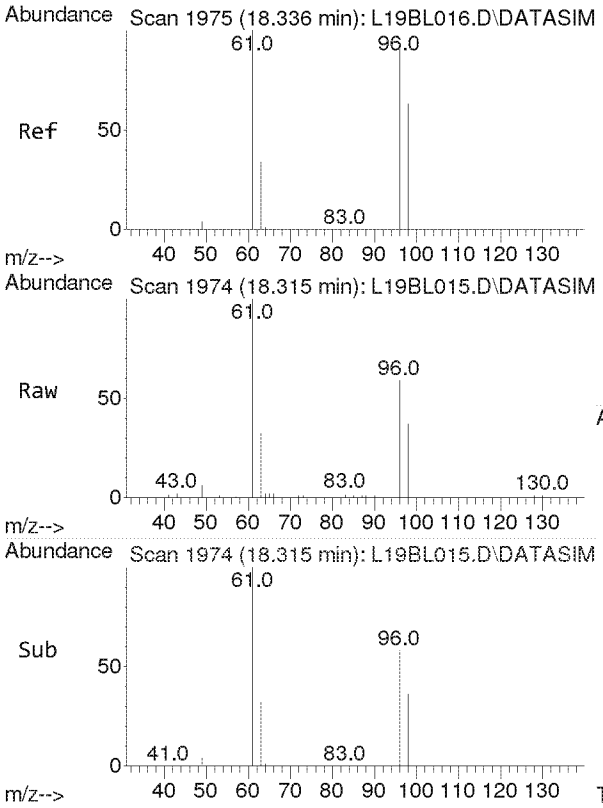


#19
Trichlorotrifluoroethane
Concen: 1.045 ppbv
RT: 17.280 min Scan# 1929
Delta R.T. 0.002 min
Lab File: L19BL015.D
Acq: 12 Feb 2019 9:49 pm

Tgt Ion:101 Resp: 13634

Ion	Ratio	Lower	Upper
101	100		
151	94.3	75.8	113.8
103	63.3	51.1	76.7

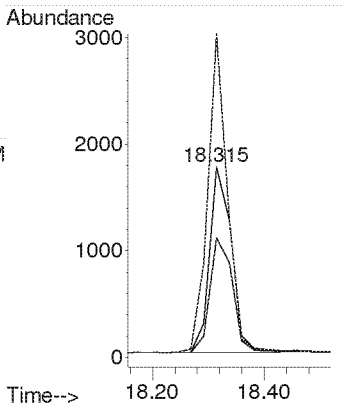


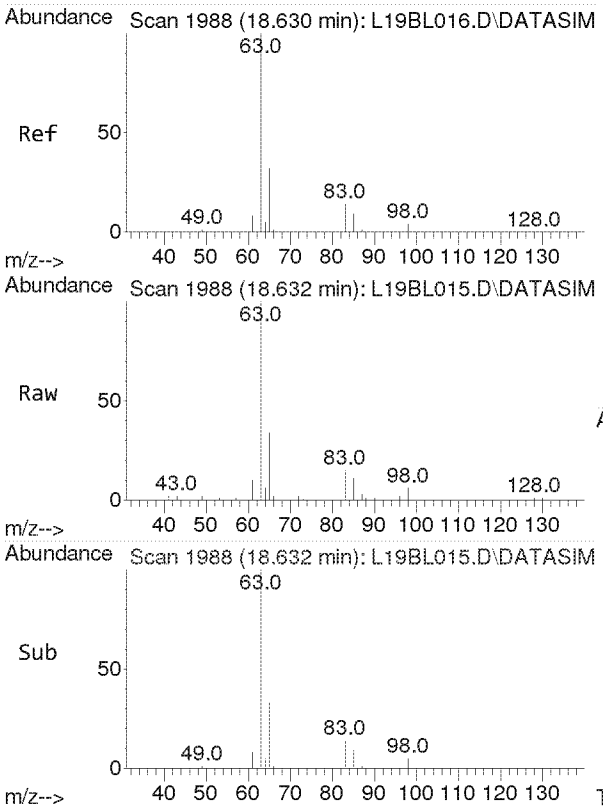


#20
trans-1,2-Dichloroethylene
Concen: 0.997 ppbv
RT: 18.315 min Scan# 1974
Delta R.T. -0.021 min
Lab File: L19BL015.D
Acq: 12 Feb 2019 9:49 pm

Tgt Ion: 96 Resp: 4730

Ion	Ratio	Lower	Upper
96	100		
98	64.2	51.5	77.3
61	153.7	122.9	184.3

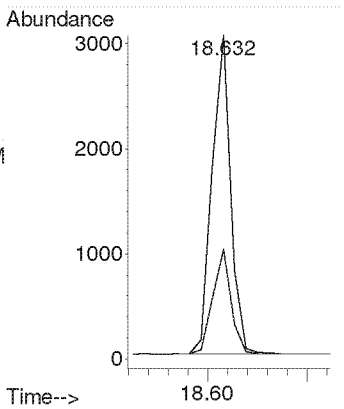


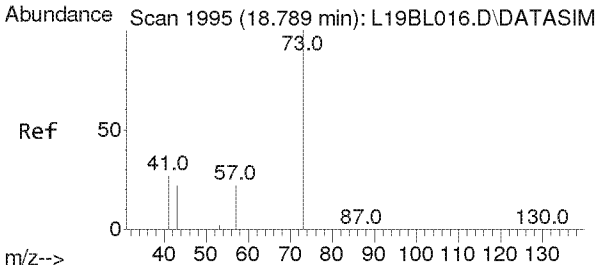


#21
1,1-Dichloroethane
Concen: 0.987 ppbv
RT: 18.632 min Scan# 1988
Delta R.T. 0.002 min
Lab File: L19BL015.D
Acq: 12 Feb 2019 9:49 pm

Tgt Ion: 63 Resp: 7868

Ion	Ratio	Lower	Upper
63	100		
65	32.4	25.4	38.0

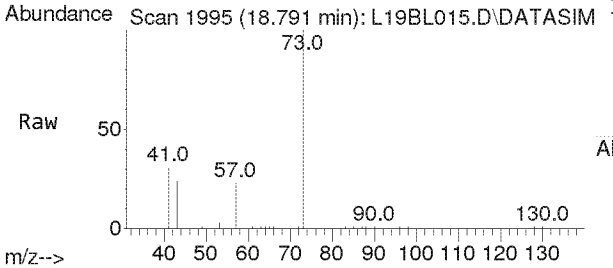


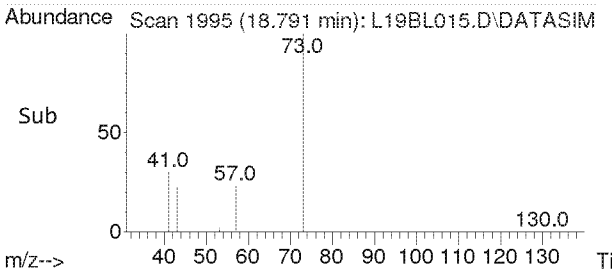


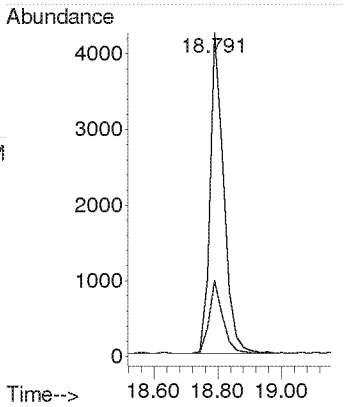
#22
Methyl tert-Butyl Ether
Concen: 0.949 ppbv
RT: 18.791 min Scan# 1995
Delta R.T. 0.002 min
Lab File: L19BL015.D
Acq: 12 Feb 2019 9:49 pm

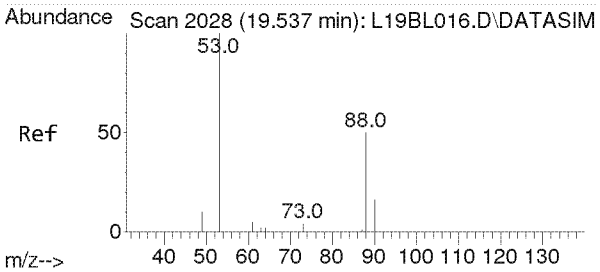
Tgt Ion: 73 Resp: 12478

Ion	Ratio	Lower	Upper
73	100		
57	22.1	18.0	27.0





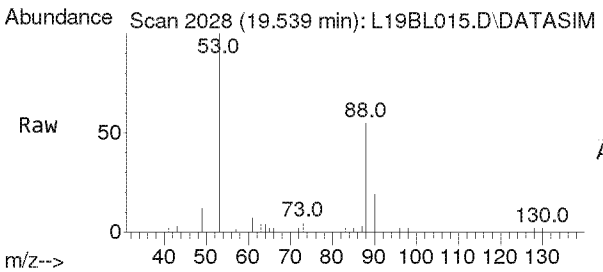


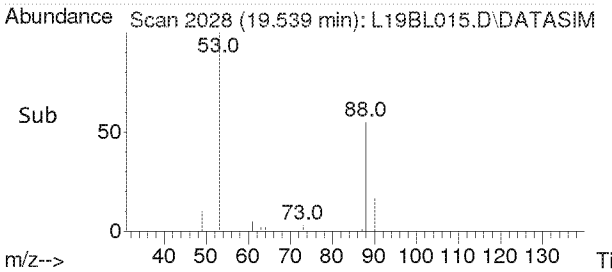


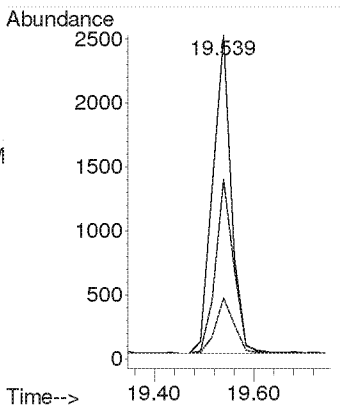
#23
Chloroprene
Concen: 0.974 ppbv
RT: 19.539 min Scan# 2028
Delta R.T. 0.002 min
Lab File: L19BL015.D
Acq: 12 Feb 2019 9:49 pm

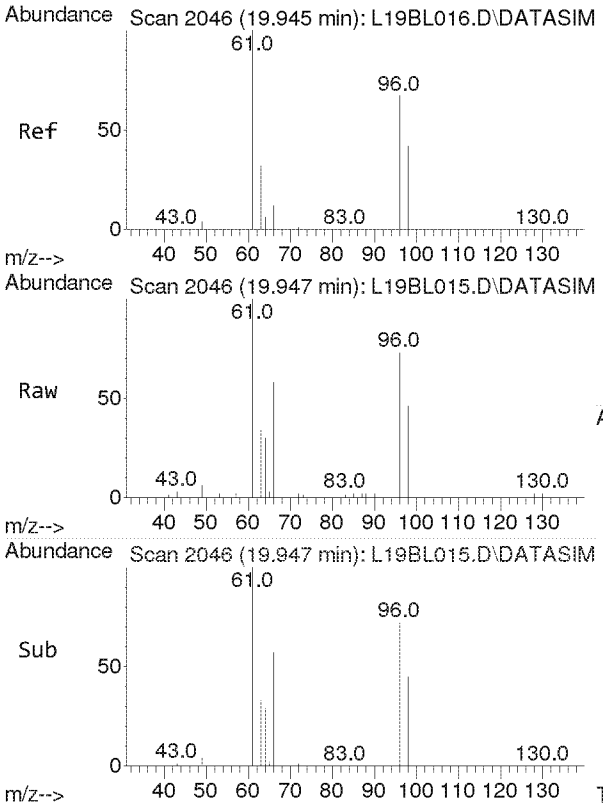
Tgt Ion: 53 Resp: 6358

Ion	Ratio	Lower	Upper
53	100		
88	53.8	42.6	64.0
90	17.1	13.9	20.9





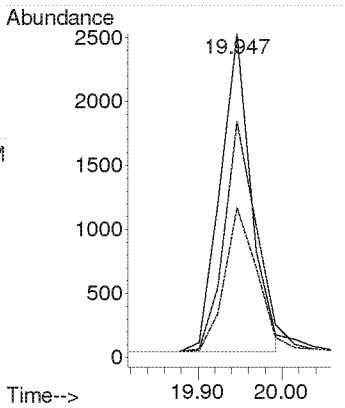


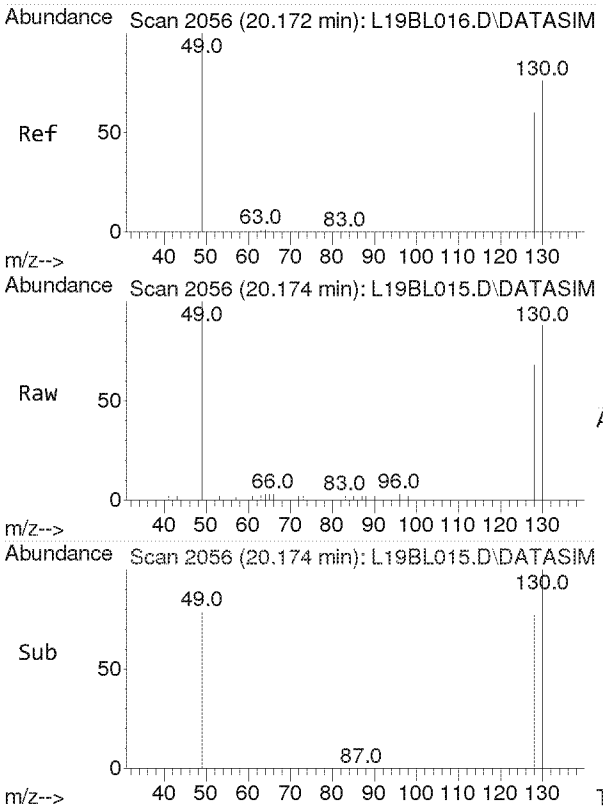


#24
cis-1,2-Dichloroethylene
Concen: 1.006 ppbv m
RT: 19.947 min Scan# 2046
Delta R.T. 0.002 min
Lab File: L19BL015.D
Acq: 12 Feb 2019 9:49 pm

Tgt Ion: 61 Resp: 6284

Ion	Ratio	Lower	Upper
61	100		
96	77.5	59.0	88.6
98	48.5	37.6	56.4

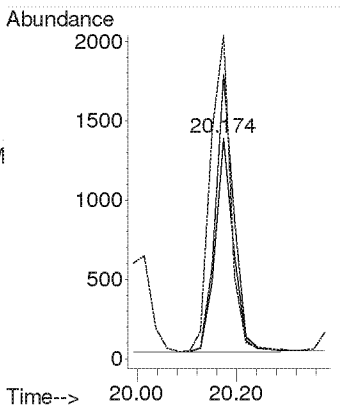


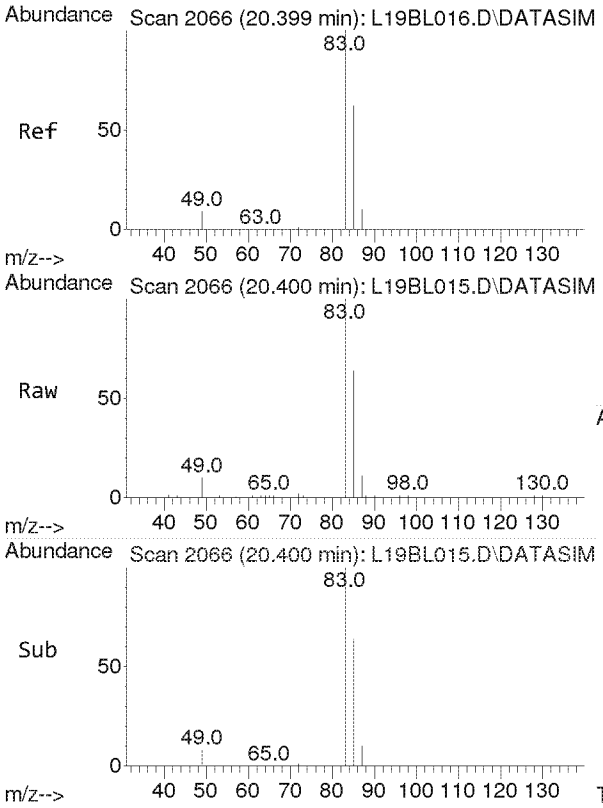


#25
Bromochloromethane
Concen: 1.004 ppbv
RT: 20.174 min Scan# 2056
Delta R.T. 0.002 min
Lab File: L19BL015.D
Acq: 12 Feb 2019 9:49 pm

Tgt Ion:128 Resp: 3416

Ion	Ratio	Lower	Upper
128	100		
130	130.4	103.3	154.9
49	162.0	128.3	192.5

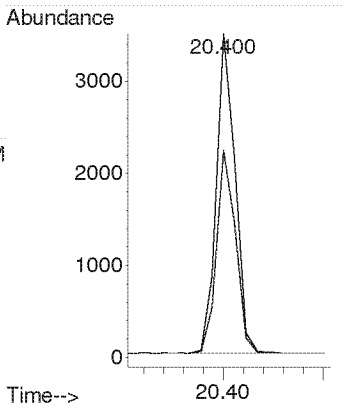


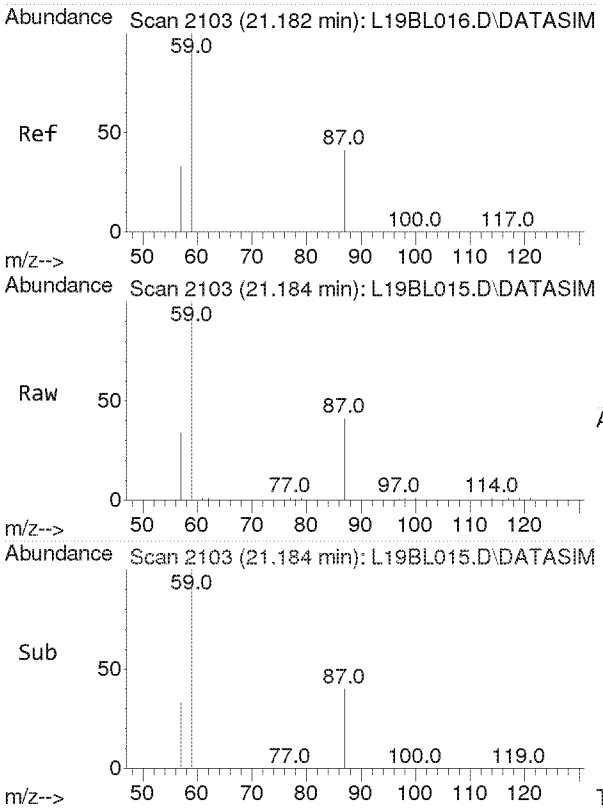


#26
Chloroform
Concen: 0.984 ppbv
RT: 20.400 min Scan# 2066
Delta R.T. 0.002 min
Lab File: L19BL015.D
Acq: 12 Feb 2019 9:49 pm

Tgt Ion: 83 Resp: 9117

Ion	Ratio	Lower	Upper
83	100		
85	64.5	51.5	77.3

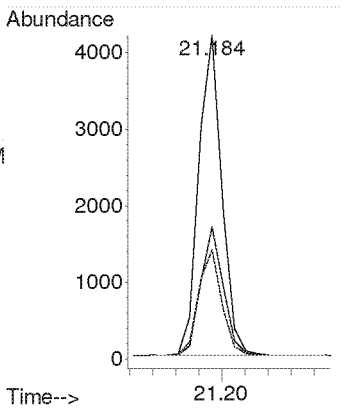


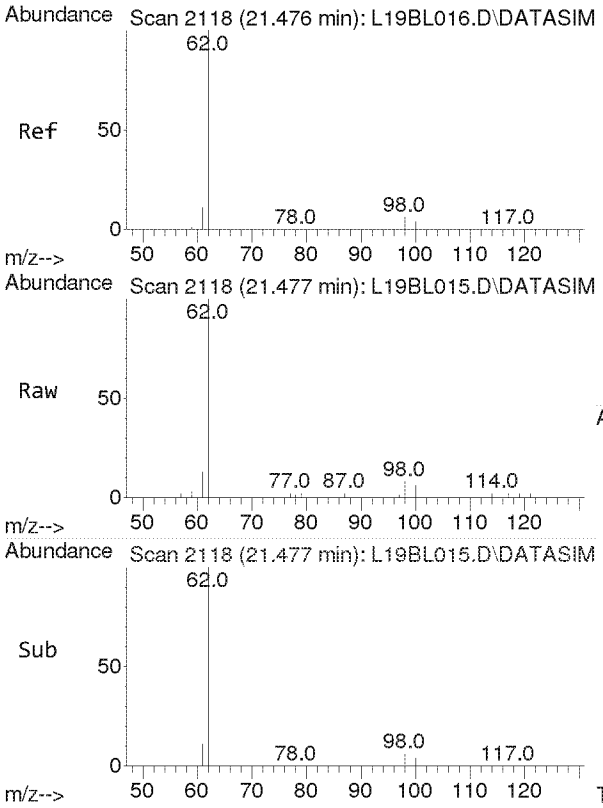


#27
Ethyl tert-Butyl Ether
Concen: 0.917 ppbv
RT: 21.184 min Scan# 2103
Delta R.T. 0.002 min
Lab File: L19BL015.D
Acq: 12 Feb 2019 9:49 pm

Tgt Ion: 59 Resp: 11630

Ion	Ratio	Lower	Upper
59	100		
87	39.2	31.5	47.3
57	32.9	26.6	39.8

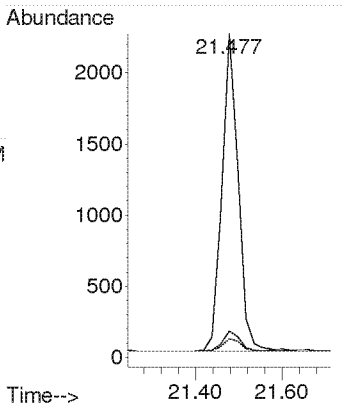


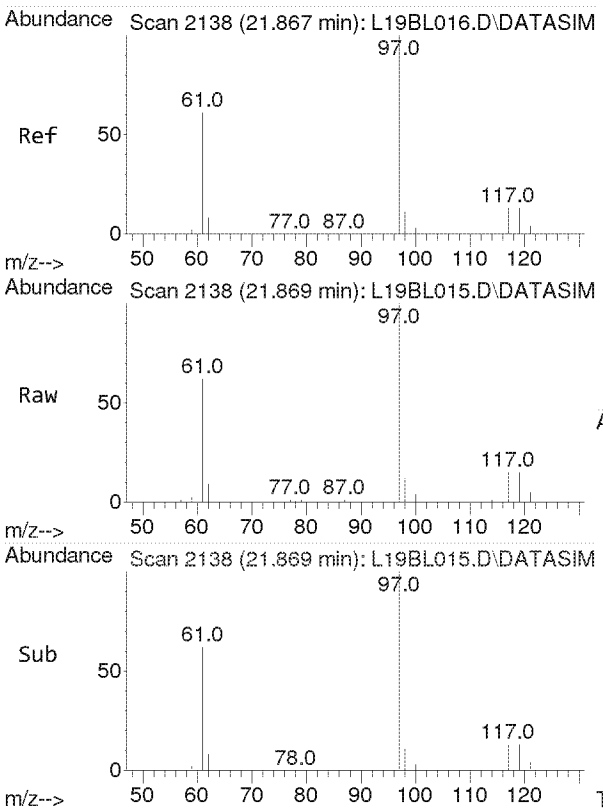


#28
1,2-Dichloroethane
Concen: 1.020 ppbv
RT: 21.477 min Scan# 2118
Delta R.T. 0.002 min
Lab File: L19BL015.D
Acq: 12 Feb 2019 9:49 pm

Tgt Ion: 62 Resp: 5745

Ion	Ratio	Lower	Upper
62	100		
98	6.4	5.0	7.6
100	4.3	3.2	4.8

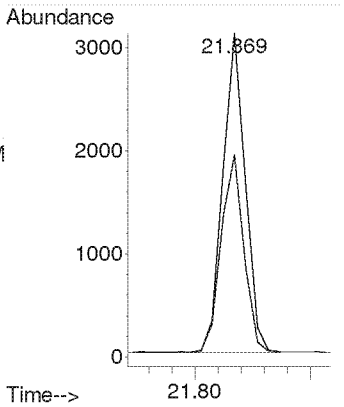


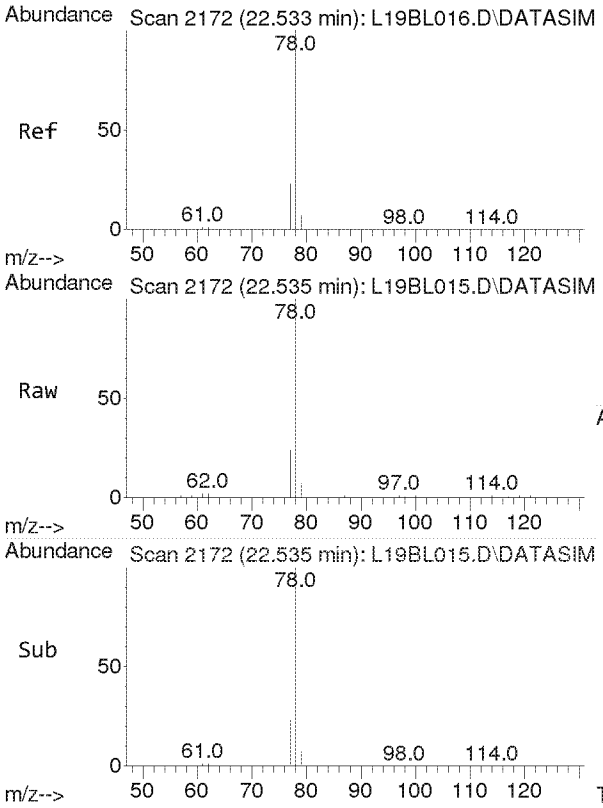


#30
1,1,1-Trichloroethane
Concen: 0.985 ppbv
RT: 21.869 min Scan# 2138
Delta R.T. 0.002 min
Lab File: L19BL015.D
Acq: 12 Feb 2019 9:49 pm

Tgt Ion: 97 Resp: 8306

Ion	Ratio	Lower	Upper
97	100		
61	62.9	49.7	74.5

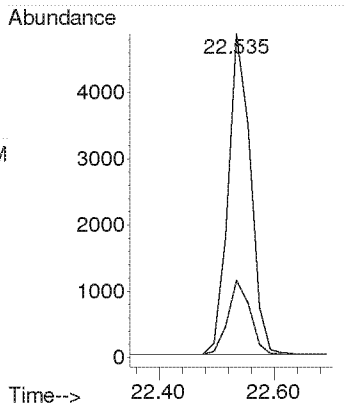


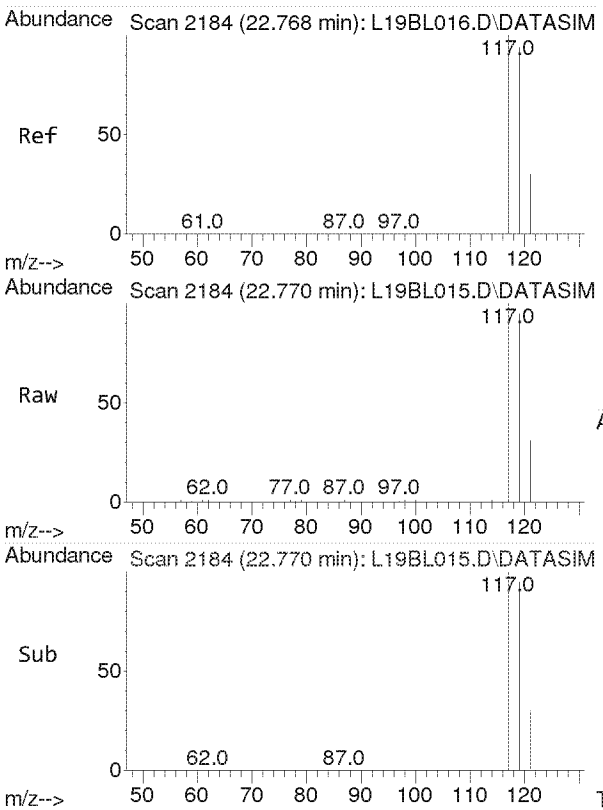


#31
Benzene
Concen: 1.069 ppbv
RT: 22.535 min Scan# 2172
Delta R.T. 0.002 min
Lab File: L19BL015.D
Acq: 12 Feb 2019 9:49 pm

Tgt Ion: 78 Resp: 12986

Ion	Ratio	Lower	Upper
78	100		
77	22.8	18.2	27.4

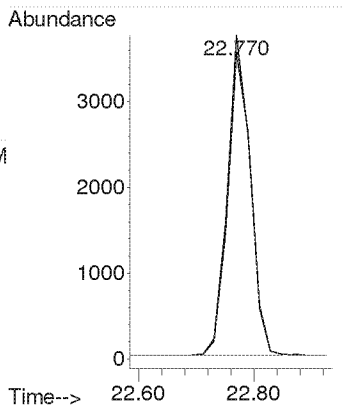


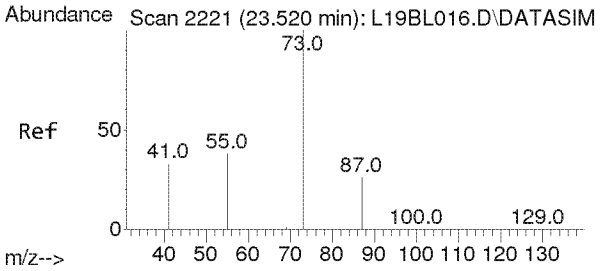


#32
Carbon Tetrachloride
Concen: 1.117 ppbv
RT: 22.770 min Scan# 2184
Delta R.T. 0.002 min
Lab File: L19BL015.D
Acq: 12 Feb 2019 9:49 pm

Tgt Ion:117 Resp: 10136

Ion	Ratio	Lower	Upper
117	100		
119	96.7	77.0	115.6

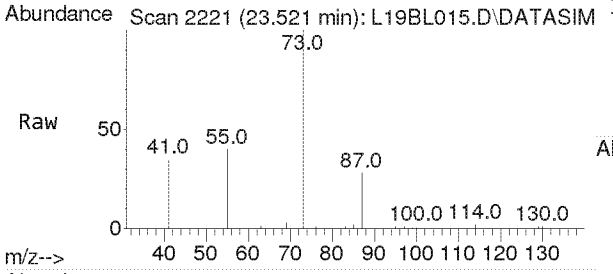


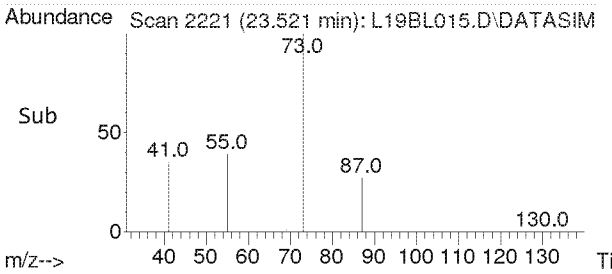


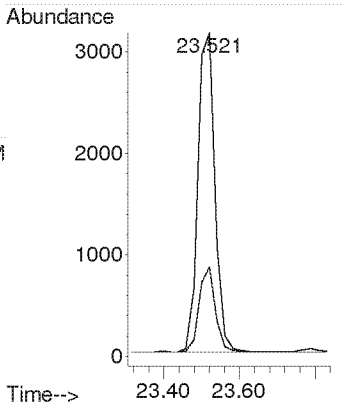
#33
tert-Amyl Methyl Ether
Concen: 0.955 ppbv
RT: 23.521 min Scan# 2221
Delta R.T. 0.002 min
Lab File: L19BL015.D
Acq: 12 Feb 2019 9:49 pm

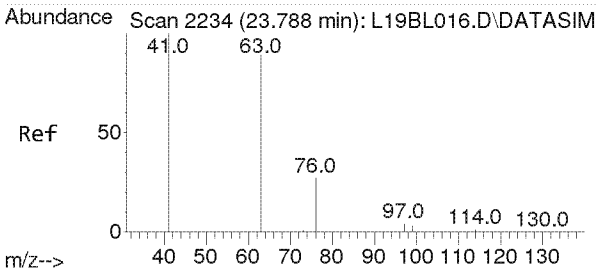
Tgt Ion: 73 Resp: 9838

Ion	Ratio	Lower	Upper
73	100		
87	25.3	20.1	30.1





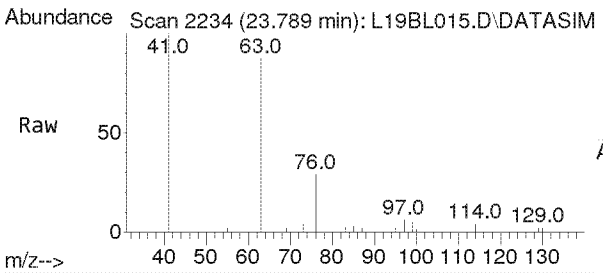


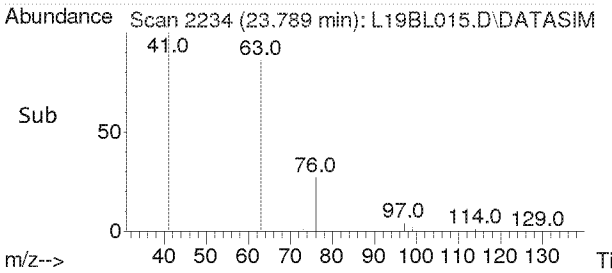


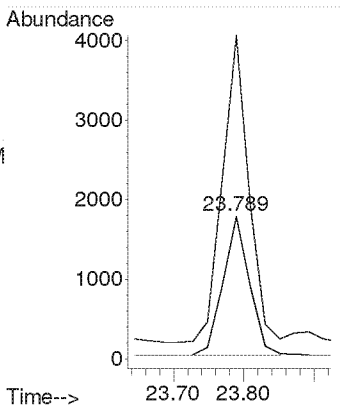
#34
1,2-Dichloropropane
Concen: 0.963 ppbv
RT: 23.789 min Scan# 2234
Delta R.T. 0.002 min
Lab File: L19BL015.D
Acq: 12 Feb 2019 9:49 pm

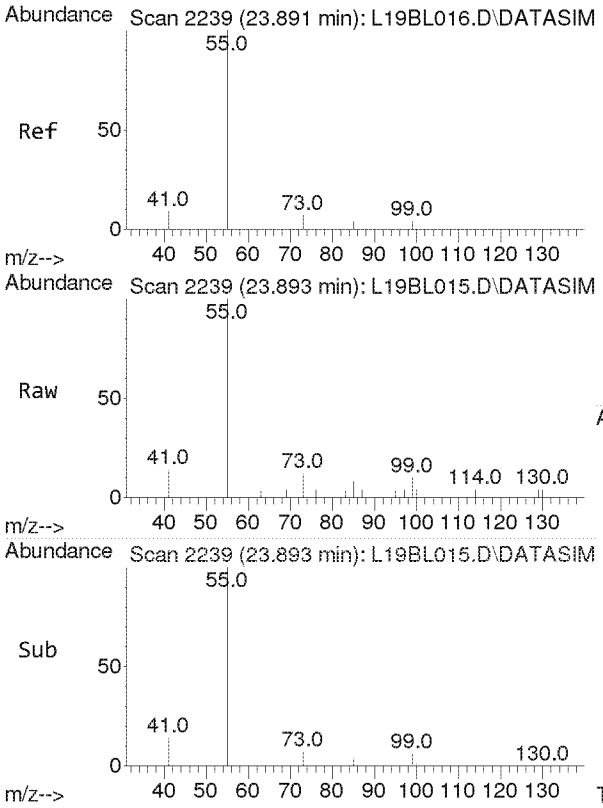
Tgt Ion: 63 Resp: 4510

Ion	Ratio	Lower	Upper
63	100		
41	220.5	175.9	263.9





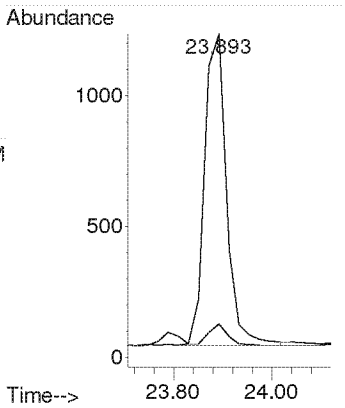


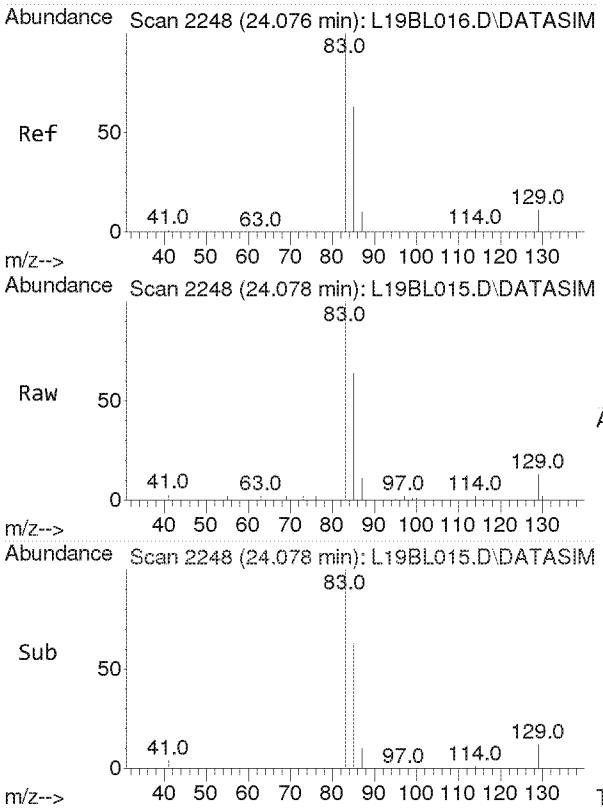


#35
Ethyl Acrylate
Concen: 0.951 ppbv
RT: 23.893 min Scan# 2239
Delta R.T. 0.002 min
Lab File: L19BL015.D
Acq: 12 Feb 2019 9:49 pm

Tgt Ion: 55 Resp: 3664

Ion	Ratio	Lower	Upper
55	100		
99	6.0	5.0	7.6

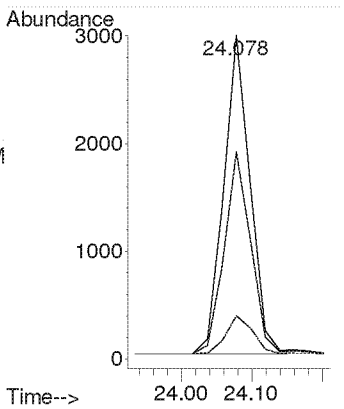


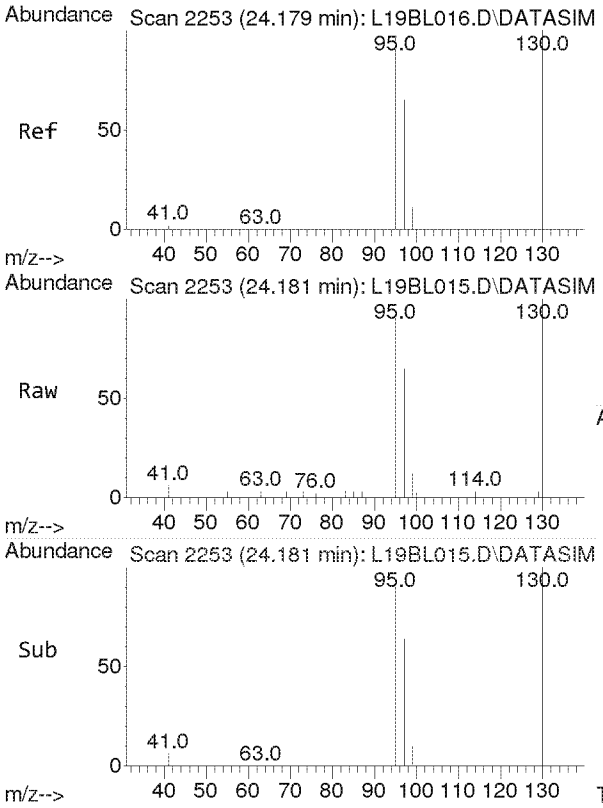


#36
Bromodichloromethane
Concen: 0.942 ppbv
RT: 24.078 min Scan# 2248
Delta R.T. 0.002 min
Lab File: L19BL015.D
Acq: 12 Feb 2019 9:49 pm

Tgt Ion: 83 Resp: 7707

Ion	Ratio	Lower	Upper
83	100		
85	63.7	51.0	76.4
129	12.2	9.9	14.9

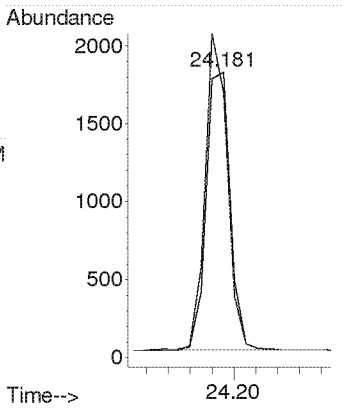


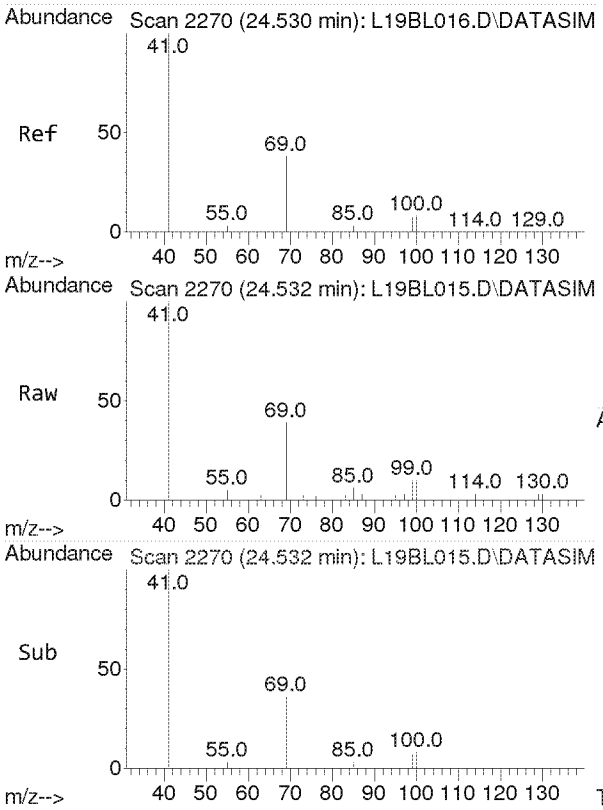


#37
Trichloroethylene
Concen: 0.930 ppbv
RT: 24.181 min Scan# 2253
Delta R.T. 0.002 min
Lab File: L19BL015.D
Acq: 12 Feb 2019 9:49 pm

Tgt Ion:130 Resp: 5417

Ion	Ratio	Lower	Upper
130	100		
95	106.4	84.9	127.3

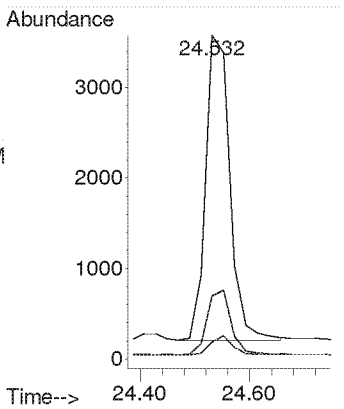


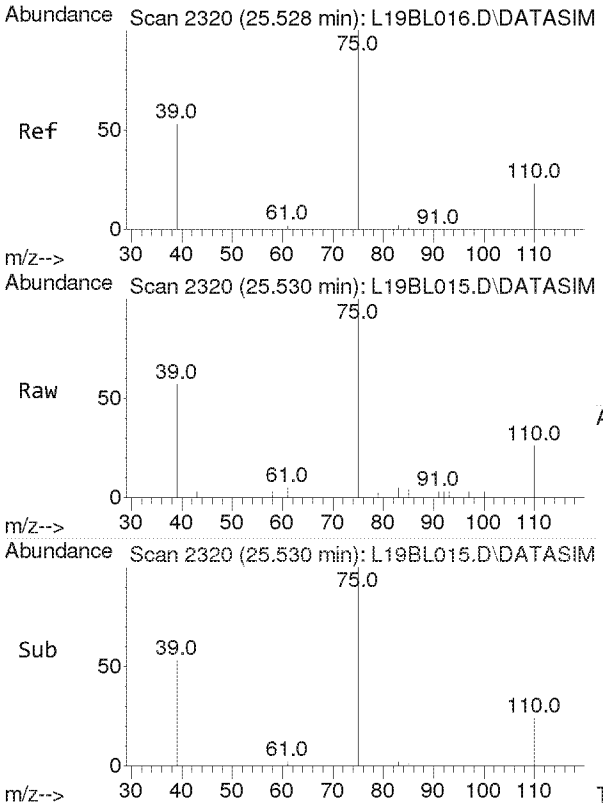


#38
Methyl Methacrylate
Concen: 0.898 ppbv
RT: 24.532 min Scan# 2270
Delta R.T. 0.002 min
Lab File: L19BL015.D
Acq: 12 Feb 2019 9:49 pm

Tgt Ion: 41 Resp: 10416

Ion	Ratio	Lower	Upper
41	100		
69	21.0	16.8	25.2
100	5.5	4.5	6.7

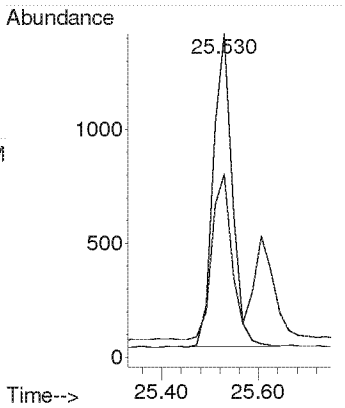


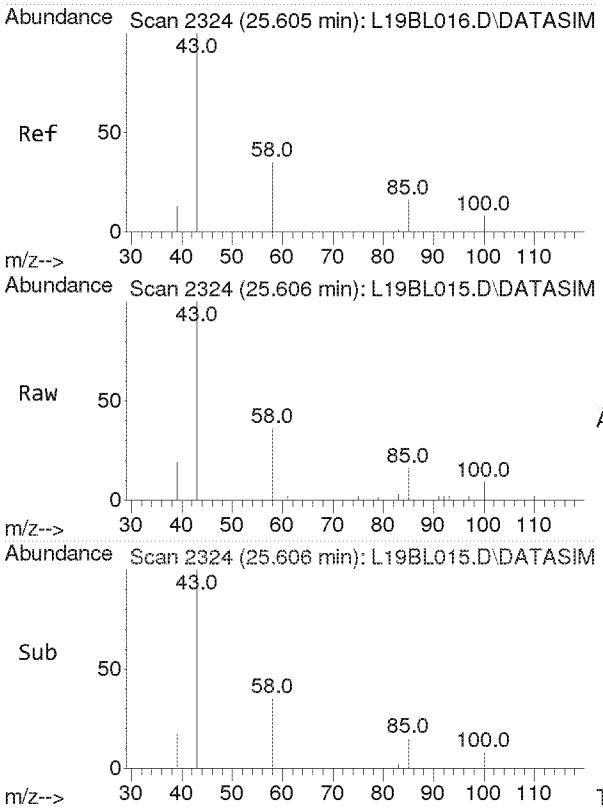


#39
cis-1,3-Dichloropropene
Concen: 0.939 ppbv
RT: 25.530 min Scan# 2320
Delta R.T. 0.002 min
Lab File: L19BL015.D
Acq: 12 Feb 2019 9:49 pm

Tgt Ion: 75 Resp: 3741

Ion	Ratio	Lower	Upper
75	100		
39	54.5	43.4	65.0

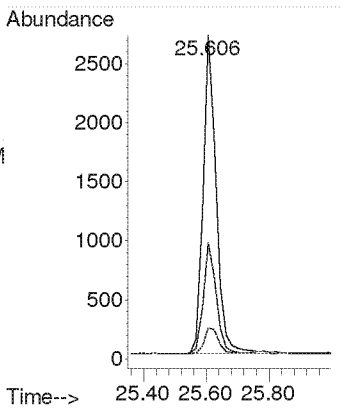


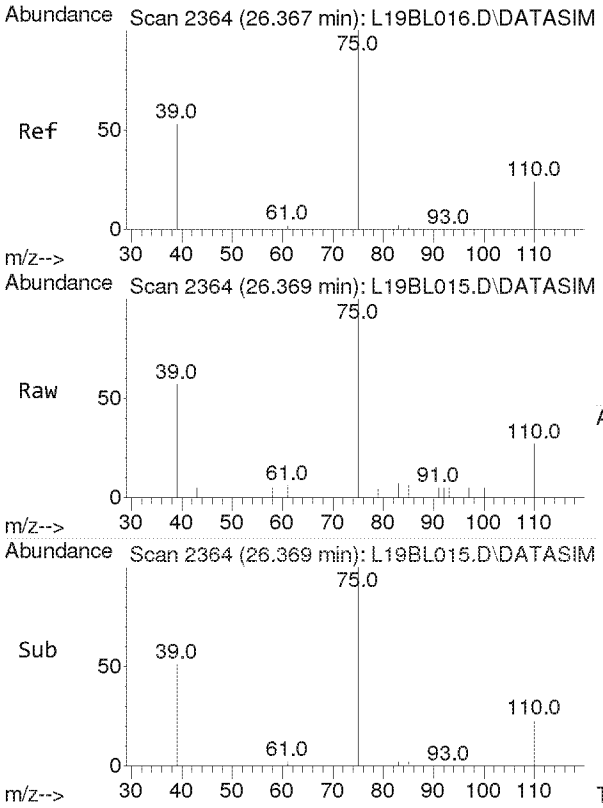


#40
Methyl Isobutyl Ketone
Concen: 0.914 ppbv
RT: 25.606 min Scan# 2324
Delta R.T. 0.002 min
Lab File: L19BL015.D
Acq: 12 Feb 2019 9:49 pm

Tgt Ion: 43 Resp: 7761

Ion	Ratio	Lower	Upper
43	100		
58	34.6	28.0	42.0
100	8.9	7.0	10.4

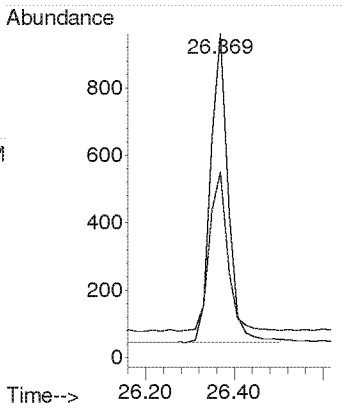


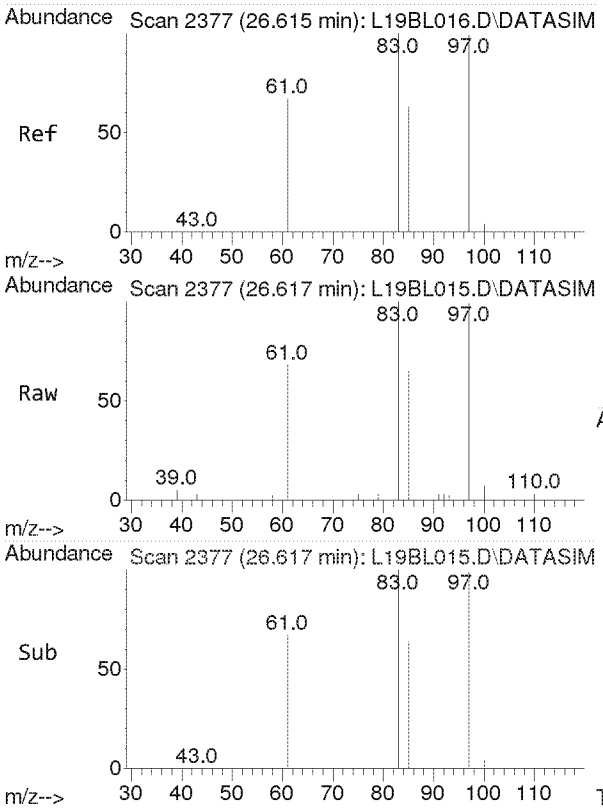


#41
trans-1,3-Dichloropropene
Concen: 0.909 ppbv
RT: 26.369 min Scan# 2364
Delta R.T. 0.002 min
Lab File: L19BL015.D
Acq: 12 Feb 2019 9:49 pm

Tgt Ion: 75 Resp: 2470

Ion	Ratio	Lower	Upper
75	100		
39	54.0	42.9	64.3

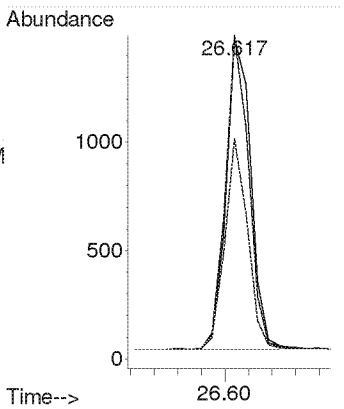


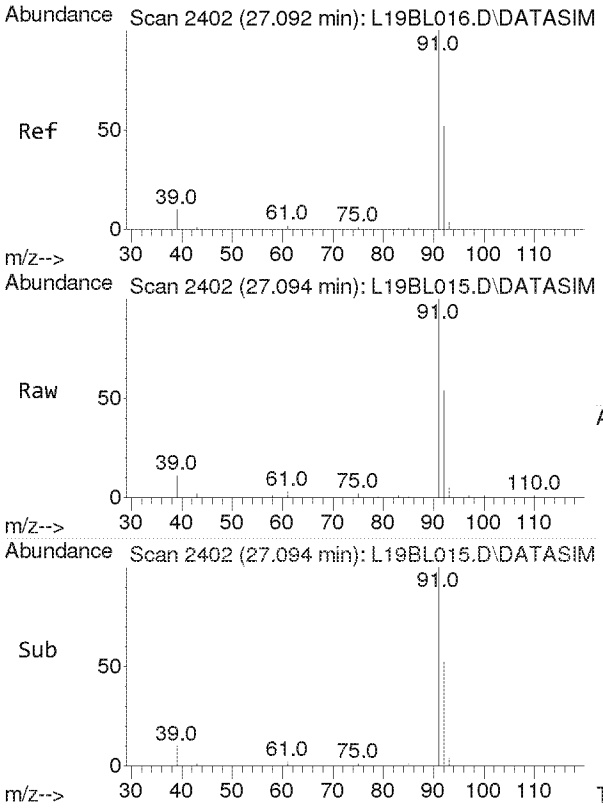


#42
1,1,2-Trichloroethane
Concen: 0.968 ppbv
RT: 26.617 min Scan# 2377
Delta R.T. 0.002 min
Lab File: L19BL015.D
Acq: 12 Feb 2019 9:49 pm

Tgt Ion: 97 Resp: 4119

Ion	Ratio	Lower	Upper
97	100		
83	95.2	75.4	113.0
61	62.6	49.8	74.6

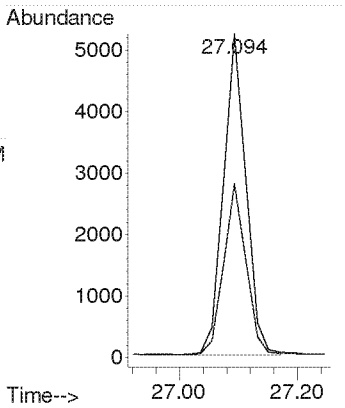


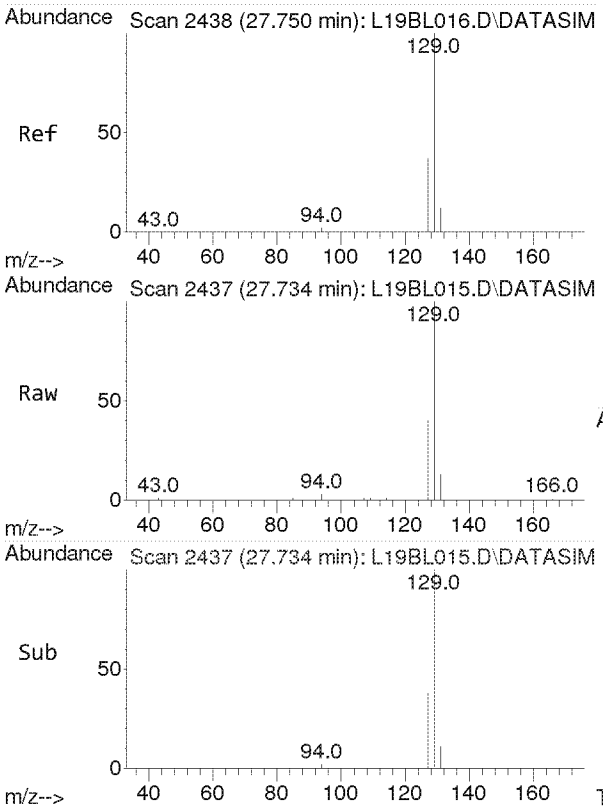


#44
Toluene
Concen: 1.002 ppbv
RT: 27.094 min Scan# 2402
Delta R.T. 0.002 min
Lab File: L19BL015.D
Acq: 12 Feb 2019 9:49 pm

Tgt Ion: 91 Resp: 13656

Ion	Ratio	Lower	Upper
91	100		
92	53.1	42.0	63.0

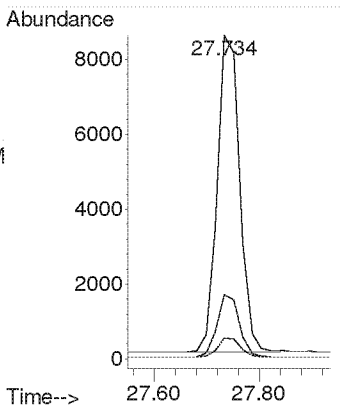


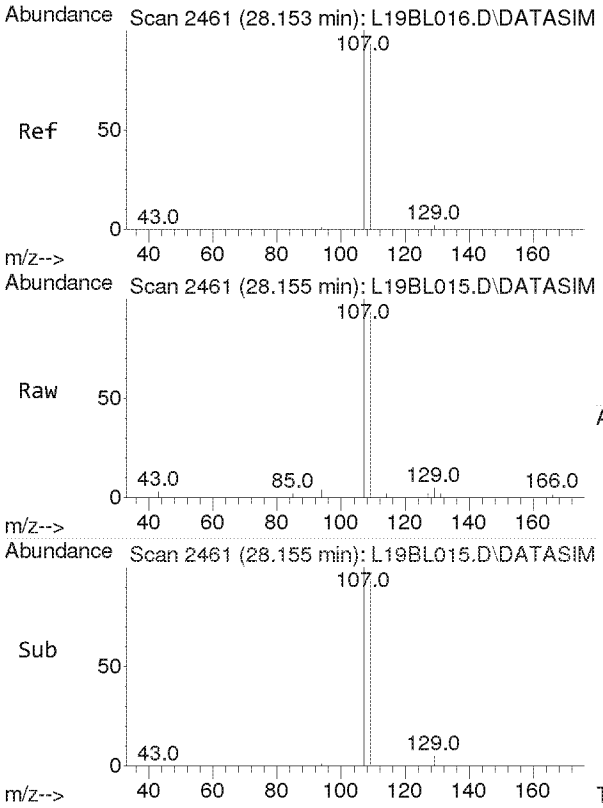


#45
Dibromochloromethane
Concen: 0.934 ppbv
RT: 27.734 min Scan# 2437
Delta R.T. -0.016 min
Lab File: L19BL015.D
Acq: 12 Feb 2019 9:49 pm

Tgt Ion:129 Resp: 25042

Ion	Ratio	Lower	Upper
129	100		
127	19.4	15.4	23.2
131	6.0	4.8	7.2

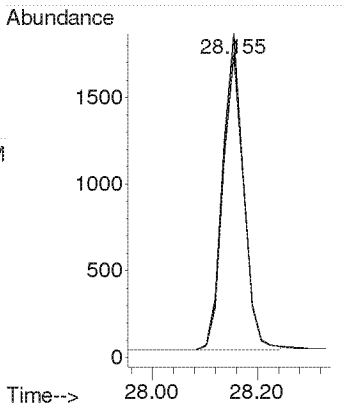


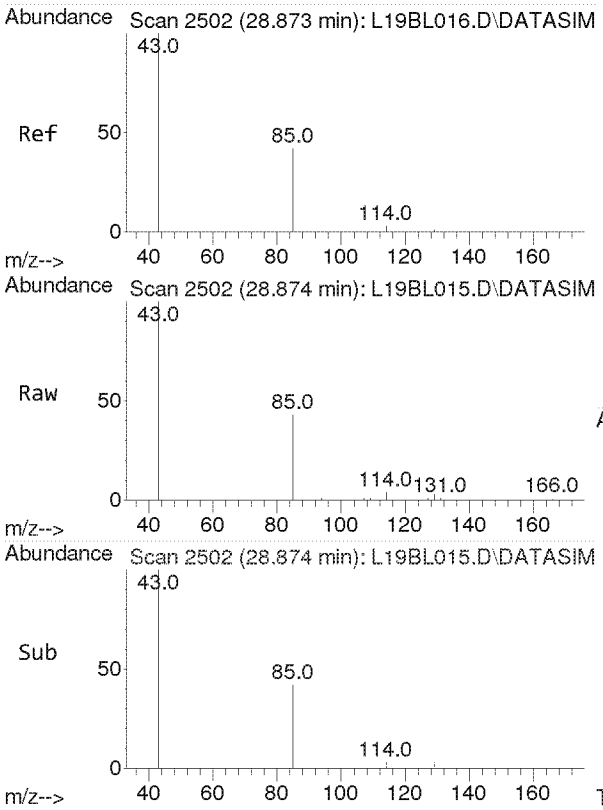


#46
1,2-Dibromoethane
Concen: 0.952 ppbv
RT: 28.155 min Scan# 2461
Delta R.T. 0.002 min
Lab File: L19BL015.D
Acq: 12 Feb 2019 9:49 pm

Tgt Ion:107 Resp: 4949

Ion	Ratio	Lower	Upper
107	100		
109	94.3	75.4	113.0

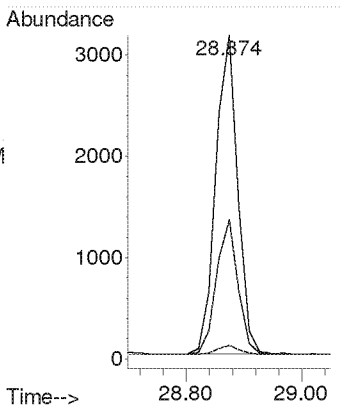


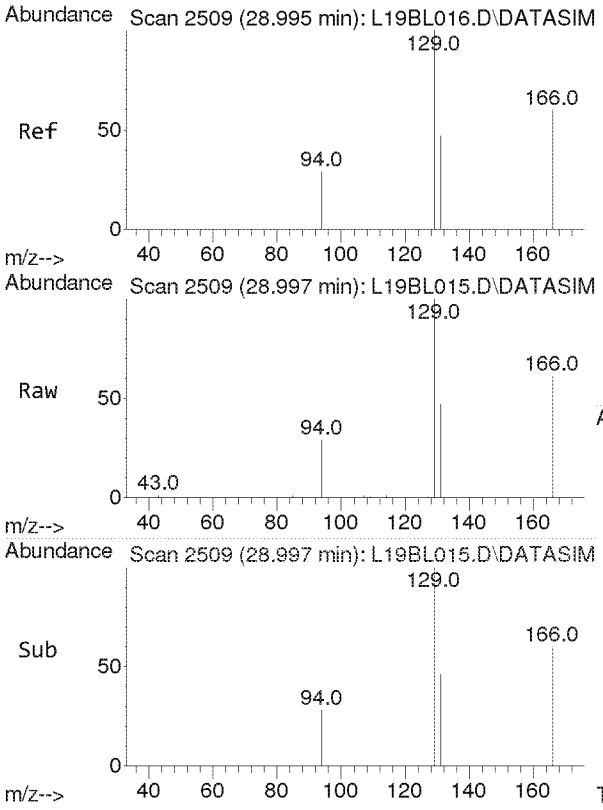


#47
n-Octane
Concen: 1.012 ppbv
RT: 28.874 min Scan# 2502
Delta R.T. 0.002 min
Lab File: L19BL015.D
Acq: 12 Feb 2019 9:49 pm

Tgt Ion: 43 Resp: 8320

Ion	Ratio	Lower	Upper
43	100		
85	41.5	33.0	49.6
114	2.8	2.2	3.4

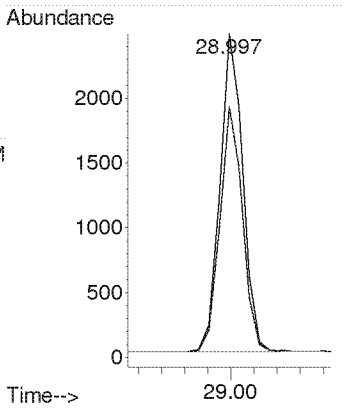


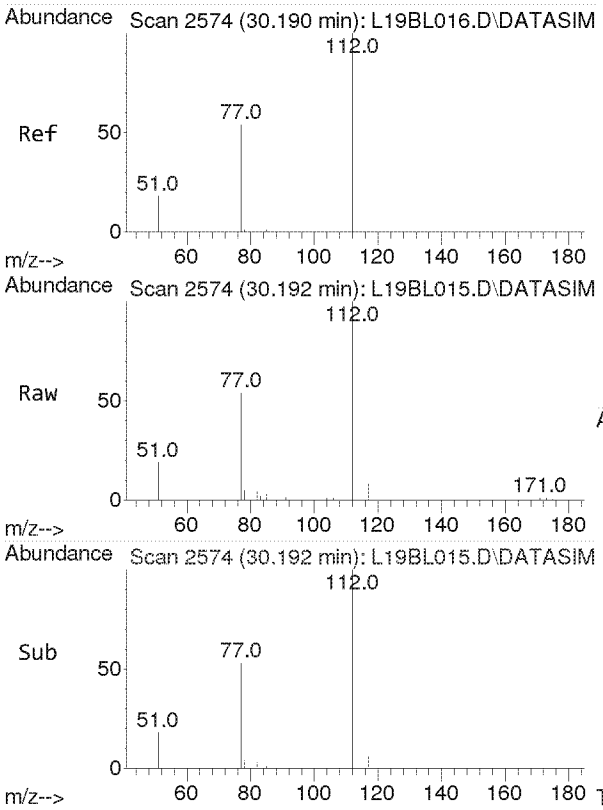


#48
Tetrachloroethylene
Concen: 1.036 ppbv
RT: 28.997 min Scan# 2509
Delta R.T. 0.002 min
Lab File: L19BL015.D
Acq: 12 Feb 2019 9:49 pm

Tgt Ion:166 Resp: 6729

Ion	Ratio	Lower	Upper
166	100		
131	76.5	61.5	92.3

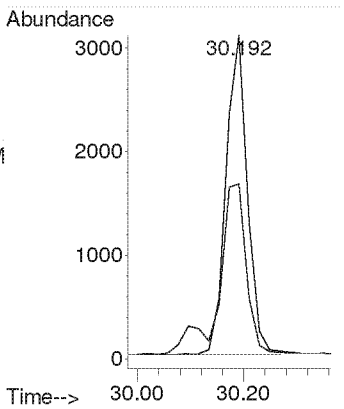


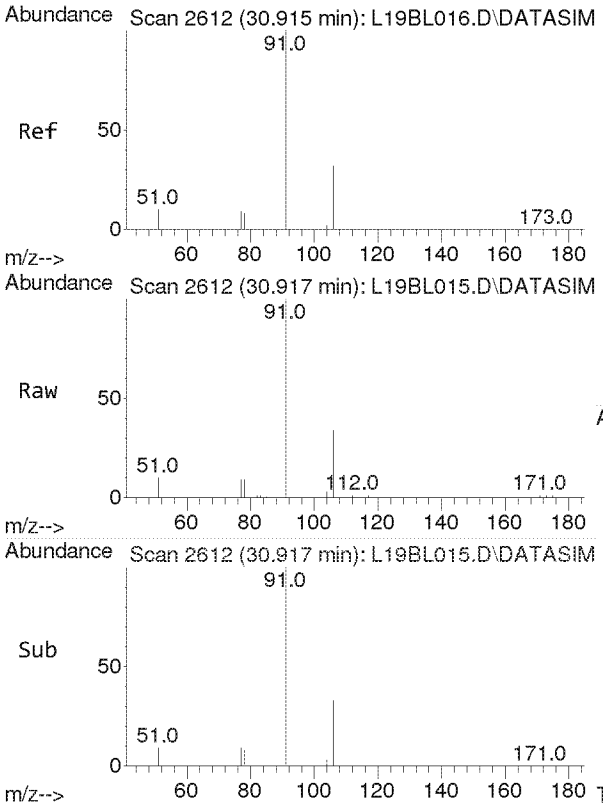


#49
Chlorobenzene
Concen: 0.985 ppbv
RT: 30.192 min Scan# 2574
Delta R.T. 0.002 min
Lab File: L19BL015.D
Acq: 12 Feb 2019 9:49 pm

Tgt Ion:112 Resp: 8618

Ion	Ratio	Lower	Upper
112	100		
77	64.9	47.8	71.6

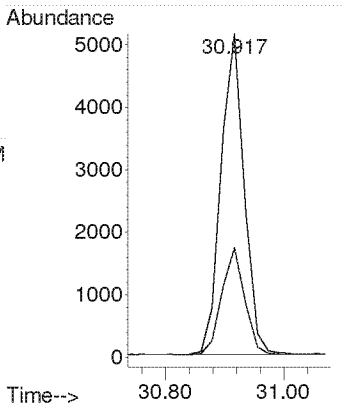


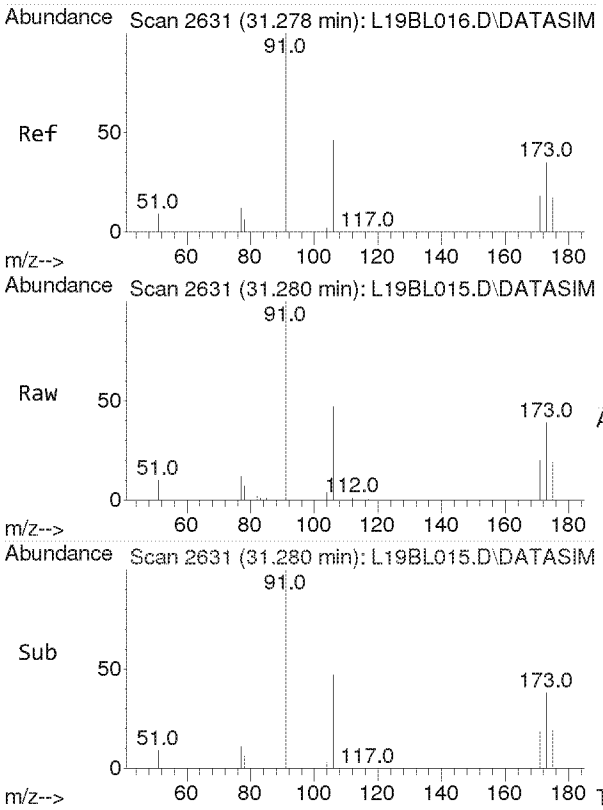


#50
Ethylbenzene
Concen: 0.972 ppbv
RT: 30.917 min Scan# 2612
Delta R.T. 0.002 min
Lab File: L19BL015.D
Acq: 12 Feb 2019 9:49 pm

Tgt Ion: 91 Resp: 13944

Ion	Ratio	Lower	Upper
91	100		
106	32.7	26.0	39.0

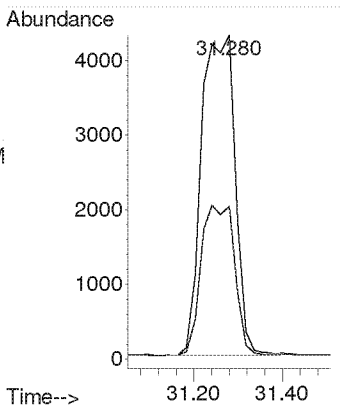


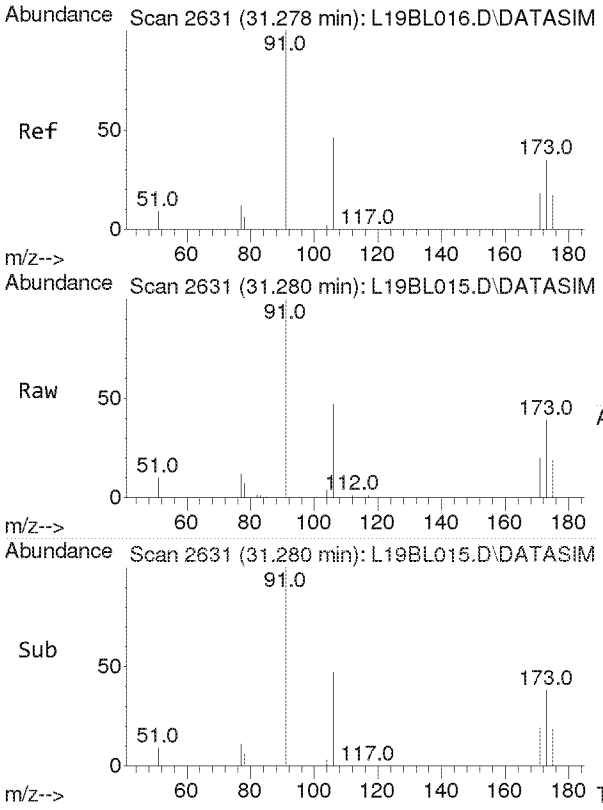


#51
m,p-Xylene
Concen: 1.838 ppbv
RT: 31.280 min Scan# 2631
Delta R.T. 0.002 min
Lab File: L19BL015.D
Acq: 12 Feb 2019 9:49 pm

Tgt Ion: 91 Resp: 22371

Ion	Ratio	Lower	Upper
91	100		
106	46.8	37.3	55.9

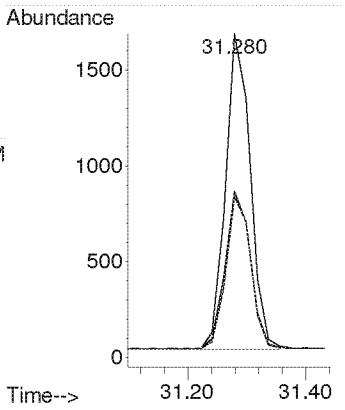


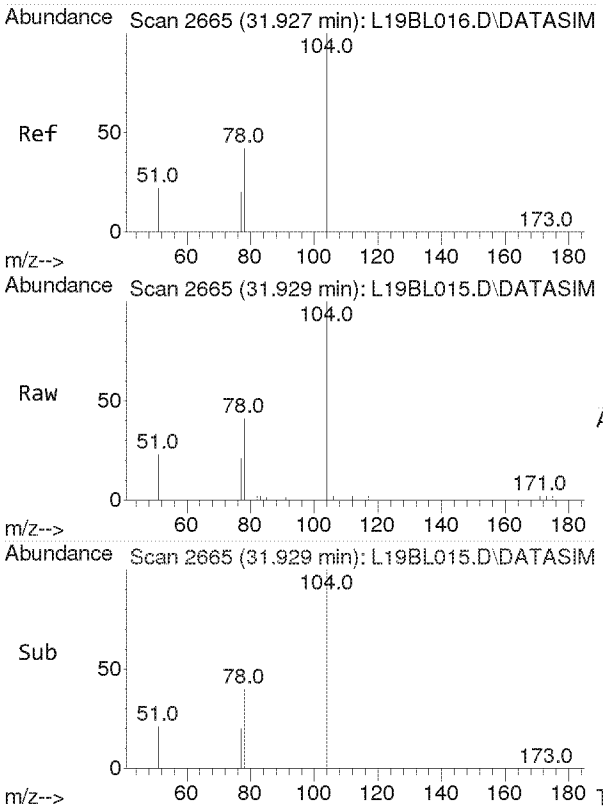


#52
Bromoform
Concen: 0.924 ppbv
RT: 31.280 min Scan# 2631
Delta R.T. 0.002 min
Lab File: L19BL015.D
Acq: 12 Feb 2019 9:49 pm

Tgt Ion:173 Resp: 4746

Ion	Ratio	Lower	Upper
173	100		
171	50.9	41.0	61.6
175	49.0	39.1	58.7

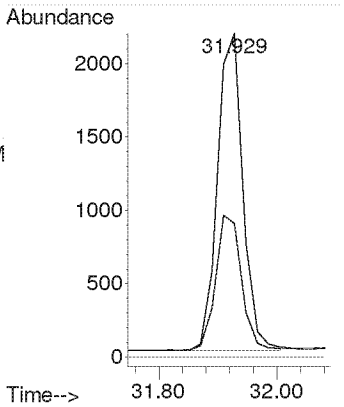


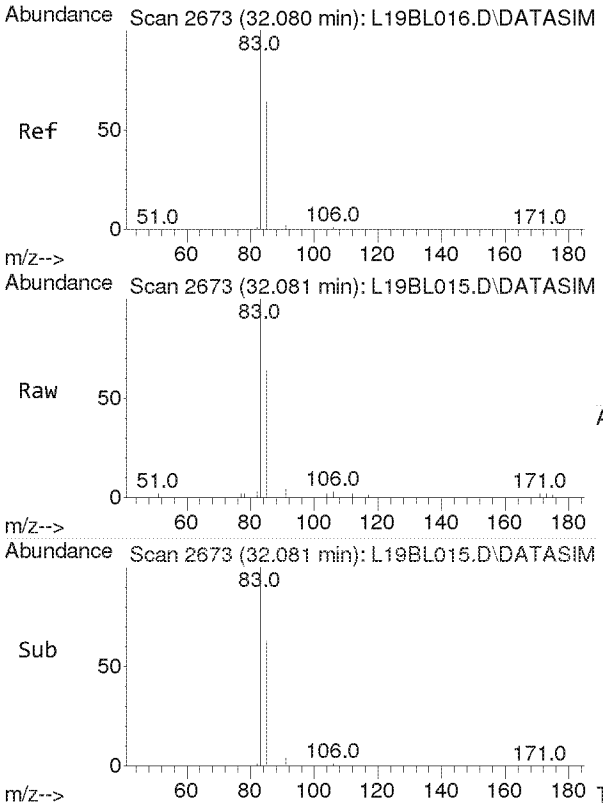


#53
Styrene
Concen: 0.937 ppbv
RT: 31.929 min Scan# 2665
Delta R.T. 0.002 min
Lab File: L19BL015.D
Acq: 12 Feb 2019 9:49 pm

Tgt Ion:104 Resp: 6419

Ion	Ratio	Lower	Upper
104	100		
78	43.3	35.4	53.2
103	0.0	0.0	0.0

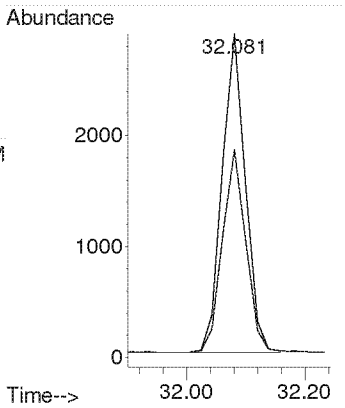


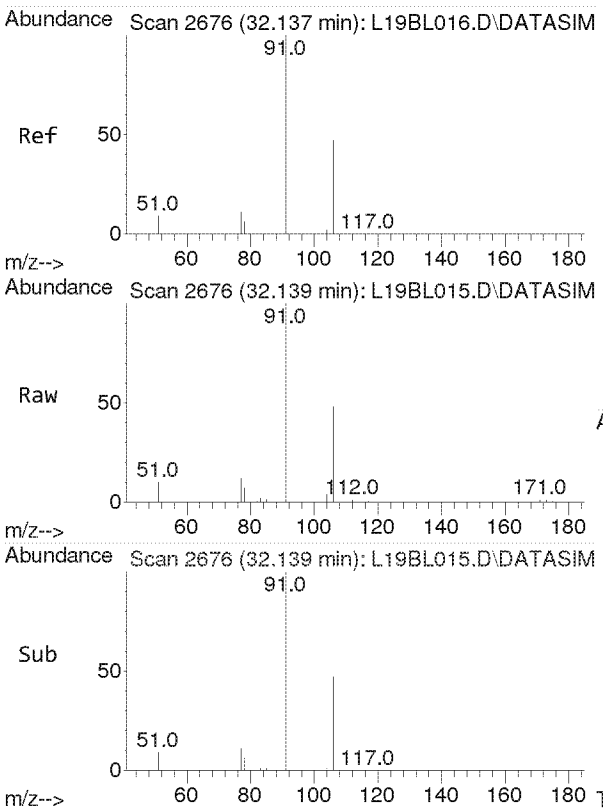


#54
1,1,2,2-Tetrachloroethane
Concen: 1.013 ppbv
RT: 32.081 min Scan# 2673
Delta R.T. 0.002 min
Lab File: L19BL015.D
Acq: 12 Feb 2019 9:49 pm

Tgt Ion: 83 Resp: 7803

Ion	Ratio	Lower	Upper
83	100		
85	64.3	51.6	77.4

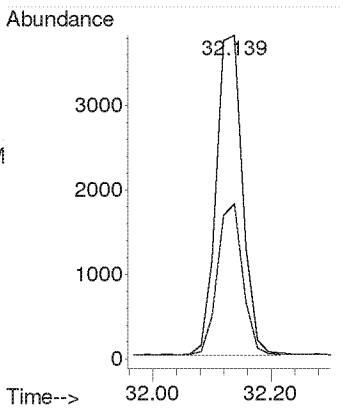


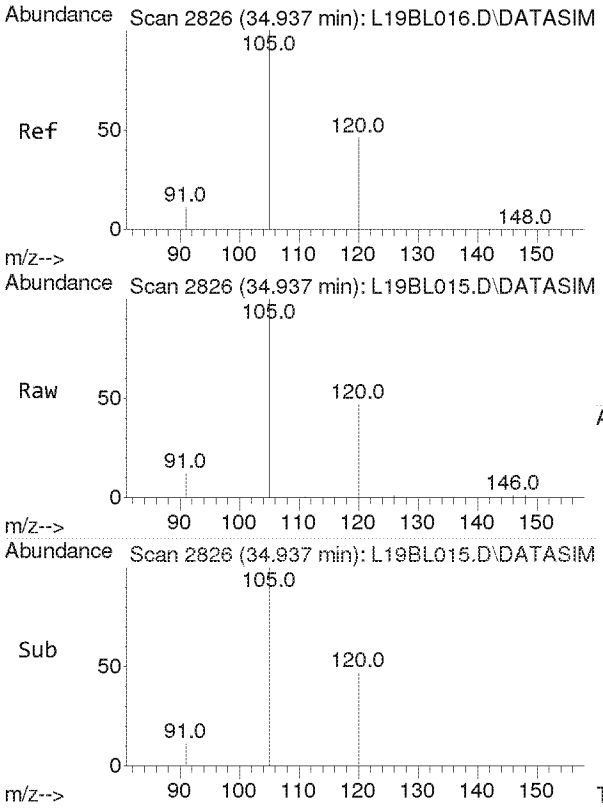


#55
o-Xylene
Concen: 0.987 ppbv
RT: 32.139 min Scan# 2676
Delta R.T. 0.002 min
Lab File: L19BL015.D
Acq: 12 Feb 2019 9:49 pm

Tgt Ion: 91 Resp: 11710

Ion	Ratio	Lower	Upper
91	100		
106	45.6	36.6	55.0

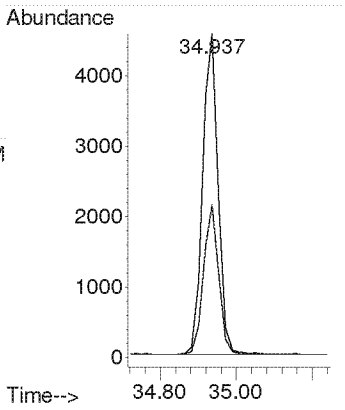


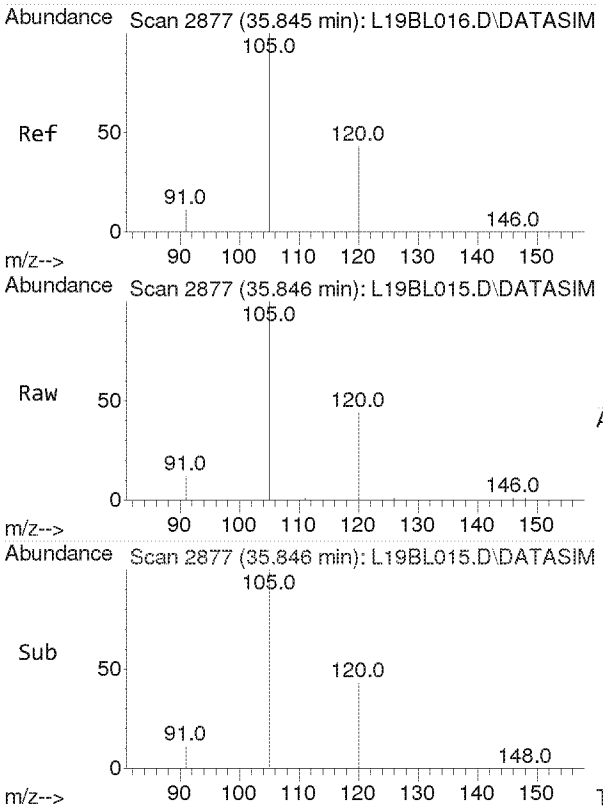


#56
1,3,5-Trimethylbenzene
Concen: 1.006 ppbv
RT: 34.937 min Scan# 2826
Delta R.T. 0.000 min
Lab File: L19BL015.D
Acq: 12 Feb 2019 9:49 pm

Tgt Ion:105 Resp: 12734

Ion	Ratio	Lower	Upper
105	100		
120	45.6	36.8	55.2

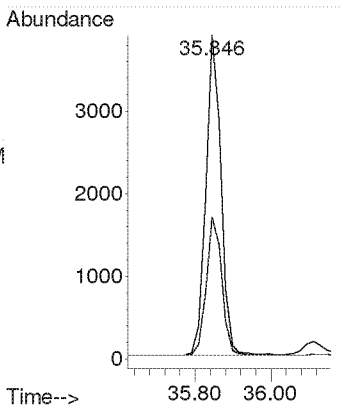


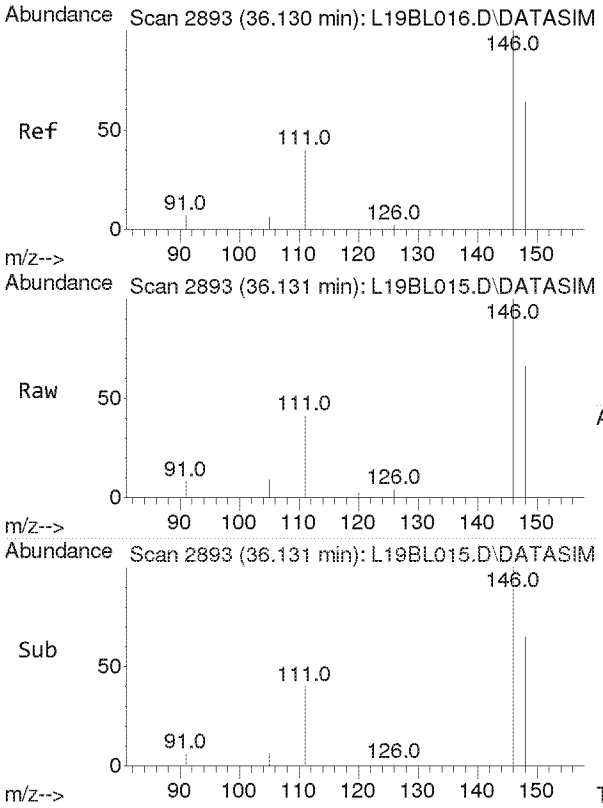


#57
1,2,4-Trimethylbenzene
Concen: 0.972 ppbv
RT: 35.846 min Scan# 2877
Delta R.T. 0.000 min
Lab File: L19BL015.D
Acq: 12 Feb 2019 9:49 pm

Tgt Ion:105 Resp: 10713

Ion	Ratio	Lower	Upper
105	100		
120	43.9	35.2	52.8

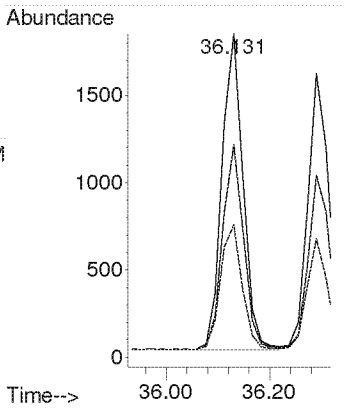


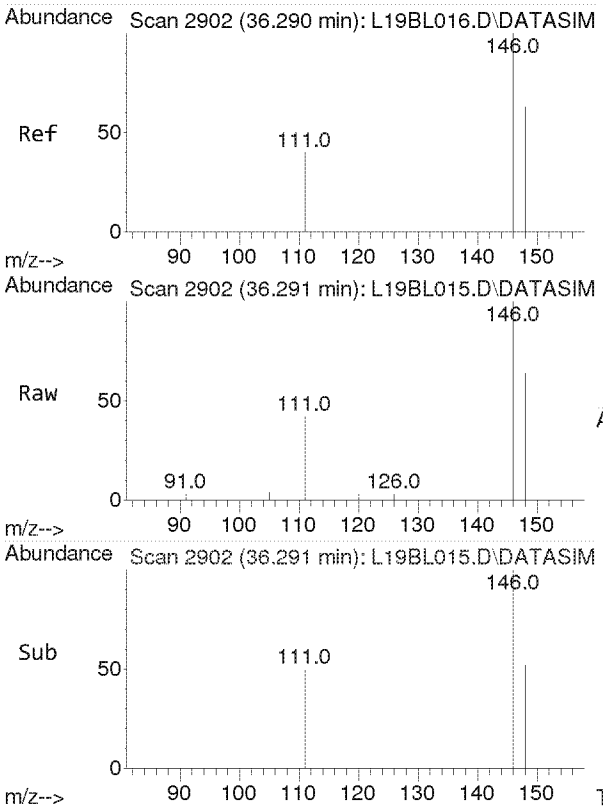


#58
m-Dichlorobenzene
Concen: 0.872 ppbv
RT: 36.131 min Scan# 2893
Delta R.T. 0.001 min
Lab File: L19BL015.D
Acq: 12 Feb 2019 9:49 pm

Tgt Ion:146 Resp: 5093

Ion	Ratio	Lower	Upper
146	100		
148	64.5	51.3	76.9
111	40.6	32.1	48.1

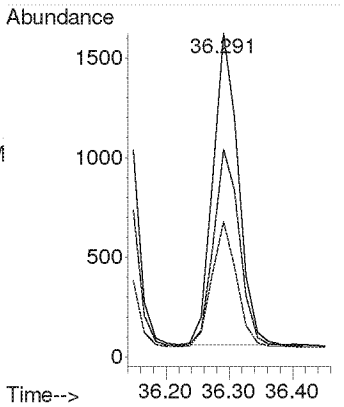


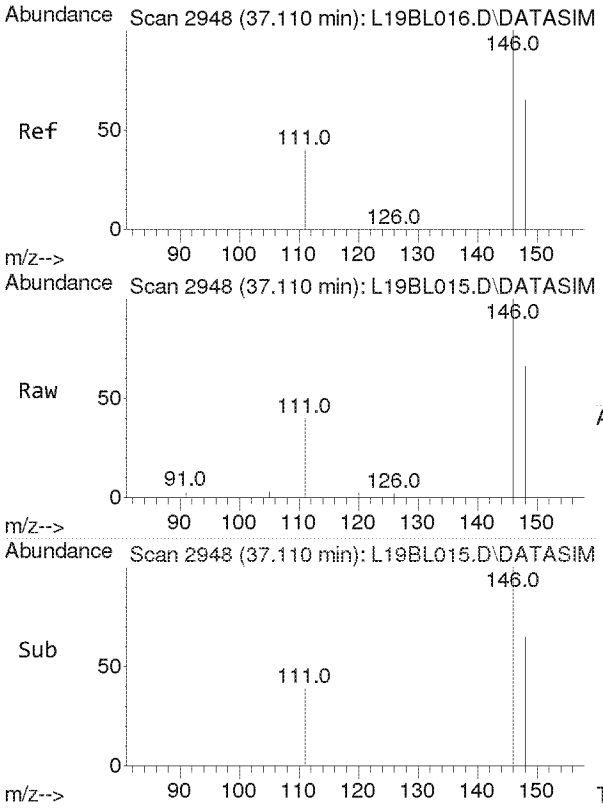


#59
p-Dichlorobenzene
Concen: 0.910 ppbv
RT: 36.291 min Scan# 2902
Delta R.T. 0.001 min
Lab File: L19BL015.D
Acq: 12 Feb 2019 9:49 pm

Tgt Ion:146 Resp: 4339

Ion	Ratio	Lower	Upper
146	100		
148	64.4	51.4	77.2
111	39.3	31.0	46.4

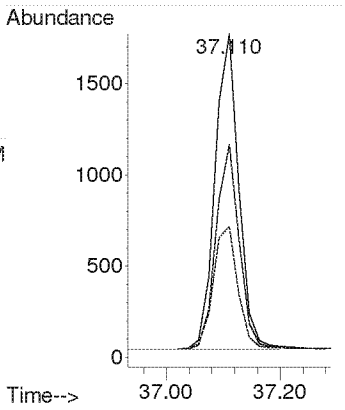


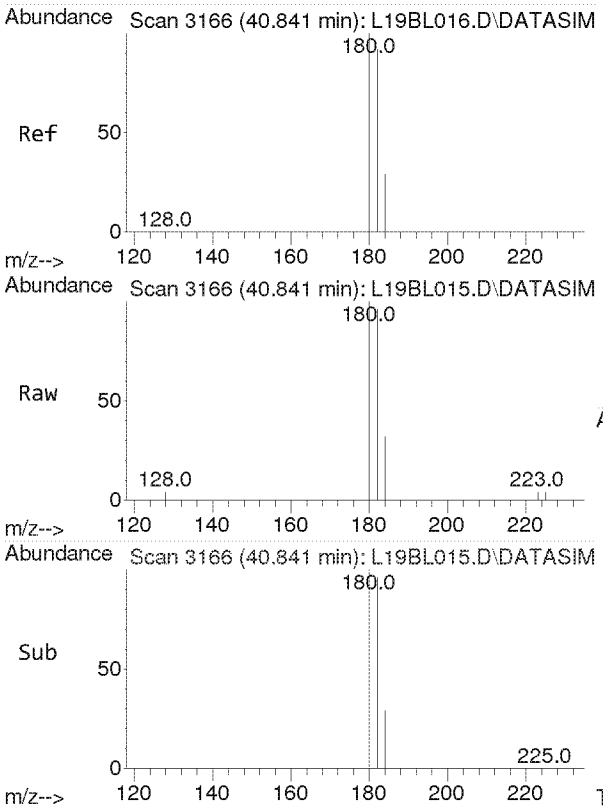


#60
o-Dichlorobenzene
Concen: 0.938 ppbv
RT: 37.110 min Scan# 2948
Delta R.T. 0.000 min
Lab File: L19BL015.D
Acq: 12 Feb 2019 9:49 pm

Tgt Ion:146 Resp: 4993

Ion	Ratio	Lower	Upper
146	100		
148	63.6	51.2	76.8
111	40.6	32.6	49.0

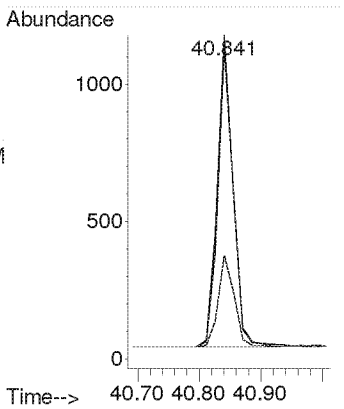


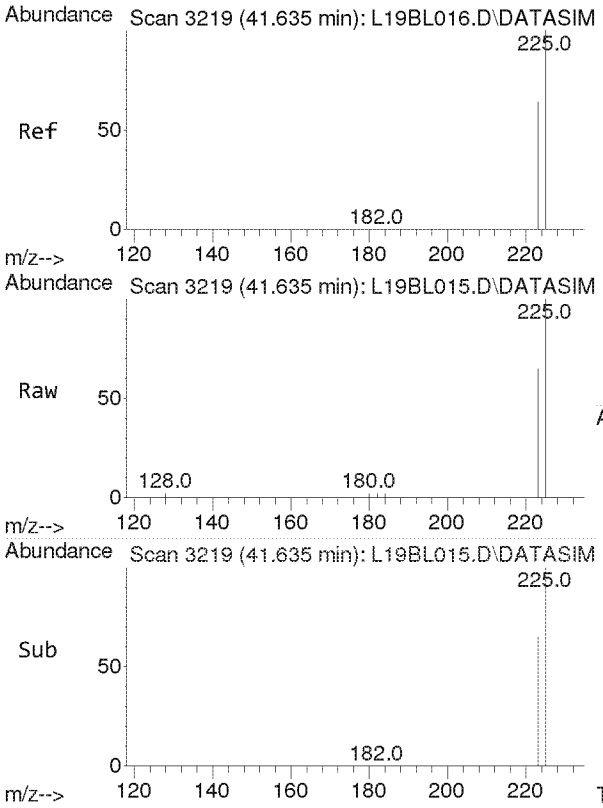


#61
1,2,4-Trichlorobenzene
Concen: 1.165 ppbv
RT: 40.841 min Scan# 3166
Delta R.T. 0.001 min
Lab File: L19BL015.D
Acq: 12 Feb 2019 9:49 pm

Tgt Ion:180 Resp: 1984

Ion	Ratio	Lower	Upper
180	100		
182	95.1	75.7	113.5
184	30.0	24.2	36.2

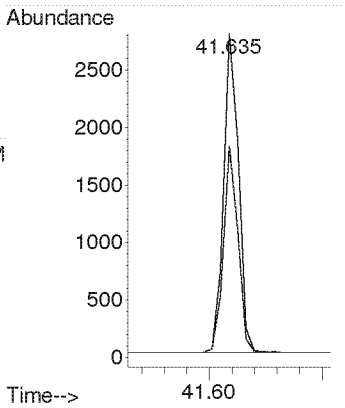




#62
Hexachloro-1,3-butadiene
Concen: 1.143 ppbv
RT: 41.635 min Scan# 3219
Delta R.T. 0.001 min
Lab File: L19BL015.D
Acq: 12 Feb 2019 9:49 pm

Tgt Ion:225 Resp: 5023

Ion	Ratio	Lower	Upper
225	100		
223	62.6	49.9	74.9



Analytical Standard Record
Eastern Research Group
9B12005

Description:	2.50 ppbv ICal	Expires:	03/14/19
Standard Type:	Calibration Stan	Prepared:	02/12/19
Solvent:	Scientific Air	Prepared By:	Mitch Howell
Final Volume (mls):	6000	Department:	Air Toxics
Vials:	1	Last Edit:	02/12/19 08:45 by MH

canister# 3238

Analyte	CAS Number	Concentration	Units
1,1,1-Trichloroethane	71-55-6	0.00246	ppmv
1,1,2,2-Tetrachloroethane	79-34-5	0.00252	ppmv
1,1,2-Trichloroethane	79-00-5	0.00254	ppmv
1,1-Dichloroethane	75-34-3	0.00256	ppmv
1,1-Dichloroethene	75-35-4	0.00272	ppmv
1,2,4-Trichlorobenzene	120-82-1	0.00238	ppmv
1,2,4-Trimethylbenzene	95-63-6	0.00245	ppmv
1,2-Dibromoethane	106-93-4	0.00257	ppmv
1,2-Dichloroethane	107-06-2	0.00258	ppmv
1,2-Dichloropropane	78-87-5	0.00252	ppmv
1,3,5-Trimethylbenzene	108-67-8	0.00248	ppmv
1,3-Butadiene	106-99-0	0.00248	ppmv
Acetonitrile	75-05-8	0.00229	ppmv
Acetylene	74-86-2	0.00228	ppmv
Acrolein	107-02-8	0.002	ppmv
Acrylonitrile	107-13-1	0.00238	ppmv
Benzene	71-43-2	0.00273	ppmv
Bromochloromethane	74-97-5	0.00255	ppmv
Bromodichloromethane	75-27-4	0.0024	ppmv
Bromoform	75-25-2	0.00243	ppmv
Bromomethane	74-83-9	0.00252	ppmv
Carbon Disulfide	75-15-0	0.00252	ppmv
Carbon Tetrachloride	56-23-5	0.00279	ppmv
Chlorobenzene	108-90-7	0.00256	ppmv
Chloroethane	75-00-3	0.00252	ppmv
Chloroform	67-66-3	0.00254	ppmv
Chloromethane	74-87-3	0.00251	ppmv
Chloroprene	126-99-8	0.00258	ppmv
cis-1,2-Dichloroethylene	156-59-2	0.00257	ppmv
cis-1,3-Dichloropropene	10061-01-5	0.0025	ppmv

r 2-14-19

Reviewed By Date

Analytical Standard Record

Eastern Research Group

9B12005

Dibromochloromethane	124-48-1	0.0024	ppmv
Dichlorodifluoromethane	75-71-8	0.00246	ppmv
Dichloromethane	75-09-2	0.0027	ppmv
Dichlorotetrafluoroethane	76-14-2	0.00278	ppmv
Ethyl Acrylate	140-88-5	0.00244	ppmv
Ethyl tert-Butyl Ether	637-92-3	0.00235	ppmv
Ethylbenzene	100-41-4	0.00254	ppmv
Ethylene oxide	75-21-8	0.00246	ppmv
Hexachloro-1,3-butadiene	87-68-3	0.0024	ppmv
m,p-Xylene	108-38-3, 106-42-3	0.00486	ppmv
m-Dichlorobenzene	541-73-1	0.00232	ppmv
Methyl Isobutyl Ketone	108-10-1	0.00228	ppmv
Methyl Methacrylate	80-62-6	0.00238	ppmv
Methyl tert-Butyl Ether	1634-04-4	0.00238	ppmv
n-Octane	111-65-9	0.00259	ppmv
o-Dichlorobenzene	95-50-1	0.00242	ppmv
o-Xylene	95-47-6	0.00252	ppmv
p-Dichlorobenzene	106-46-7	0.00249	ppmv
Propylene	115-07-1	0.00242	ppmv
Styrene	100-42-5	0.00246	ppmv
tert-Amyl Methyl Ether	994-05-8	0.00242	ppmv
Tetrachloroethylene	127-18-4	0.00258	ppmv
Toluene	108-88-3	0.00257	ppmv
trans-1,2-Dichloroethylene	156-60-5	0.0025	ppmv
trans-1,3-Dichloropropene	10061-02-6	0.00246	ppmv
Trichloroethylene	79-01-6	0.0024	ppmv
Trichlorofluoromethane	75-69-4	0.00233	ppmv
Trichlorotrifluoroethane	76-13-1	0.00259	ppmv
Vinyl chloride	75-01-4	0.00256	ppmv

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
8K20014	TO-15 Primary Primary Stock Stan	11/20/18	Mitch Howell	10/26/19	11/26/18 09:26 by MH	30
8L18003	Ethylene Oxide Stock Standard	12/06/18	** Vendor **	12/06/19	12/18/18 10:28 by MH	15

Reviewed By 2-14-19 Date

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\L19BL\
Data File : L19BL016.D
Acq On : 12 Feb 2019 10:49 pm
Operator : MAH
Sample : 1902030-CAL4
Misc : 80 ML 8L13001,9B12005
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Feb 13 06:40:50 2019
Quant Method : C:\msdchem\1\METHODS\9020003.M
Quant Title : TO-15 by Selective Ion Analysis
QLast Update : Wed Feb 13 06:40:07 2019
Response via : Initial Calibration

2-14-19

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) IS-Hexane-d14	19.991	66	49452	4.7700	ppbv	0.00
29) IS-1,4-Difluorobenzene	23.149	114	121177	4.9900	ppbv	0.00
43) IS-Chlorobenzene-d5	30.114	117	88227	4.7400	ppbv	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Acetylene	5.405	26	9038	2.2800	ppbv	100
3) Propylene	7.823	41	11849	2.4200	ppbv	100
4) Dichlorodifluoromethane	8.685	85	57381	2.4600	ppbv	100
5) Chloromethane	9.740	50	14892	2.5100	ppbv	100
6) Dichlorotetrafluoroethane	10.864	85	56810	2.7800	ppbv	100
7) Vinyl Chloride	11.102	62	17342	2.5600	ppbv	100
8) 1,3-Butadiene	11.783	54	11490	2.4800	ppbv	100
9) Ethylene oxide	12.378	29	7048	2.4600	ppbv	100
10) Bromomethane	12.588	94	16242	2.5200	ppbv	100
11) Chloroethane	13.280	64	6718	2.5200	ppbv	100
12) Acetonitrile	14.356	41	9964	2.2900	ppbv	100
13) Acrolein	14.634	56	4392	2.0000	ppbv	100
14) Trichlorofluoromethane	15.191	101	46432	2.3300	ppbv	100
15) Acrylonitrile	15.933	53	8391	2.3800	ppbv	100
16) 1,1-Dichloroethene	16.420	61	23644	2.7200	ppbv	100
17) Methylene Chloride	16.745	49	15319	2.7000	ppbv	100
18) Carbon Disulfide	16.930	76	44453	2.5200	ppbv	100
19) Trichlorotrifluoroethane	17.278	101	34356	2.5900	ppbv	100
20) trans-1,2-Dichloroethy...	18.336	96	12058	2.5000	ppbv	100
21) 1,1-Dichloroethane	18.630	63	20746	2.5600	ppbv	100
22) Methyl tert-Butyl Ether	18.789	73	31794	2.3800	ppbv	100
23) Chloroprene	19.537	53	17116	2.5800	ppbv	100
24) cis-1,2-Dichloroethylene	19.945	61	16318	2.5700	ppbv	100
25) Bromochloromethane	20.172	128	8821	2.5500	ppbv	100
26) Chloroform	20.399	83	23920	2.5400	ppbv	100
27) Ethyl tert-Butyl Ether	21.182	59	30300	2.3500	ppbv	100
28) 1,2-Dichloroethane	21.476	62	14776	2.5800	ppbv	100
30) 1,1,1-Trichloroethane	21.867	97	21543	2.4600	ppbv	100
31) Benzene	22.533	78	34433	2.7300	ppbv	100
32) Carbon Tetrachloride	22.768	117	26280	2.7900	ppbv	100
33) tert-Amyl Methyl Ether	23.520	73	25881	2.4200	ppbv	100
34) 1,2-Dichloropropane	23.788	63	12255	2.5200	ppbv	100
35) Ethyl Acrylate	23.891	55	9759	2.4400	ppbv	100
36) Bromodichloromethane	24.076	83	20373	2.4000	ppbv	100
37) Trichloroethylene	24.179	130	14511	2.4000	ppbv	100
38) Methyl Methacrylate	24.530	41	28669	2.3800	ppbv	100
39) cis-1,3-Dichloropropene	25.528	75	10337	2.5000	ppbv	100
40) Methyl Isobutyl Ketone	25.605	43	20102	2.2800	ppbv	100
41) trans-1,3-Dichloropropene	26.367	75	6937	2.4600	ppbv	100
42) 1,1,2-Trichloroethane	26.615	97	11217	2.5400	ppbv	100
44) Toluene	27.092	91	37013	2.5700	ppbv	100
45) Dibromochloromethane	27.750	129	67999	2.4000	ppbv	100
46) 1,2-Dibromoethane	28.153	107	14119	2.5700	ppbv	100
47) n-Octane	28.873	43	22513	2.5900	ppbv	100
48) Tetrachloroethylene	28.995	166	17711	2.5800	ppbv	100
49) Chlorobenzene	30.190	112	23670	2.5600	ppbv	100
50) Ethylbenzene	30.915	91	38523	2.5400	ppbv	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\L19BL\
Data File : L19BL016.D
Acq On : 12 Feb 2019 10:49 pm
Operator : MAH
Sample : 1902030-CAL4
Misc : 80 ML 8L13001,9B12005
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Feb 13 06:40:50 2019
Quant Method : C:\msdchem\1\METHODS\9020003.M
Quant Title : TO-15 by Selective Ion Analysis
QLast Update : Wed Feb 13 06:40:07 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
51) m,p-Xylene	31.278	91	62511	4.8600	ppbv	100
52) Bromoform	31.278	173	13187	2.4300	ppbv	100
53) Styrene	31.927	104	17806	2.4600	ppbv #	100
54) 1,1,2,2-Tetrachloroethane	32.080	83	20508	2.5200	ppbv	100
55) o-Xylene	32.137	91	31607	2.5200	ppbv	100
56) 1,3,5-Trimethylbenzene	34.937	105	33168	2.4800	ppbv	100
57) 1,2,4-Trimethylbenzene	35.845	105	28539	2.4500	ppbv	100
58) m-Dichlorobenzene	36.130	146	14317	2.3200	ppbv	100
59) p-Dichlorobenzene	36.290	146	12543	2.4900	ppbv	100
60) o-Dichlorobenzene	37.110	146	13612	2.4200	ppbv	100
61) 1,2,4-Trichlorobenzene	40.841	180	4282	2.3800	ppbv	100
62) Hexachloro-1,3-butadiene	41.635	225	11148	2.4000	ppbv	100

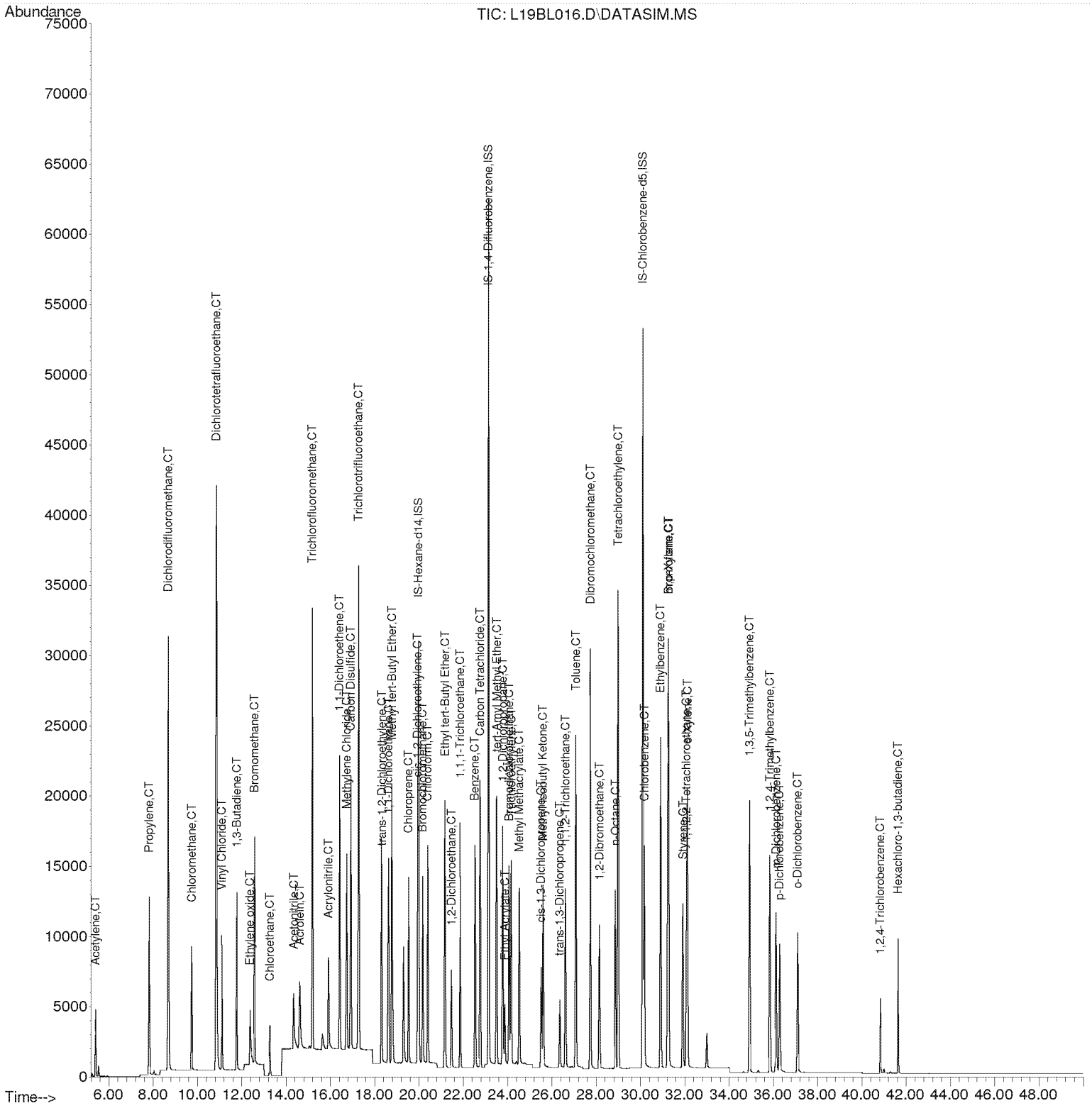
(#) = qualifier out of range (m) = manual integration (+) = signals summed

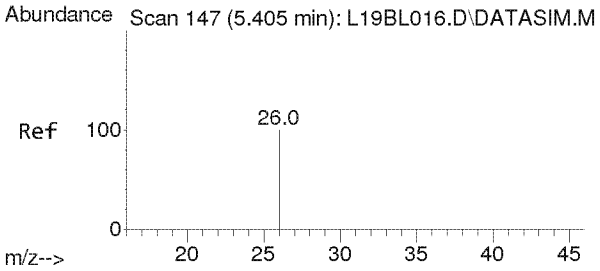
ED_002475_00000354-00156

Quantitation Report (QT Reviewed)

Data Path : Y:\MASS SPEC 1 DATA\L19BL\
Data File : L19BL016.D
Acq On : 12 Feb 2019 10:49 pm
Operator : MAH
Sample : 1902030-CAL4
Misc : 80 ML 8L13001,9B12005
ALS Vial : 16 Sample Multiplier: 1

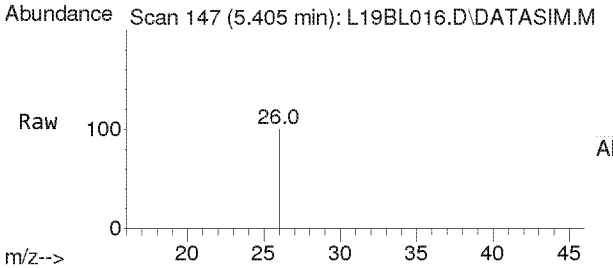
Quant Time: Feb 13 06:40:50 2019
Quant Method : C:\msdchem\1\METHODS\9020003.M
Quant Title : TO-15 by Selective Ion Analysis
QLast Update : Wed Feb 13 06:40:07 2019
Response via : Initial Calibration

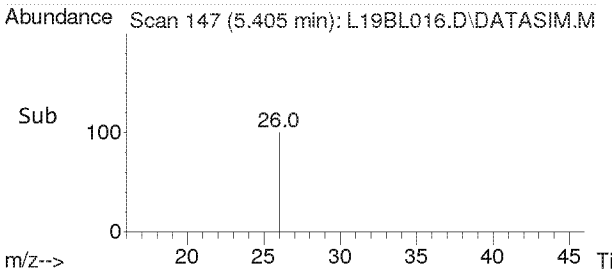


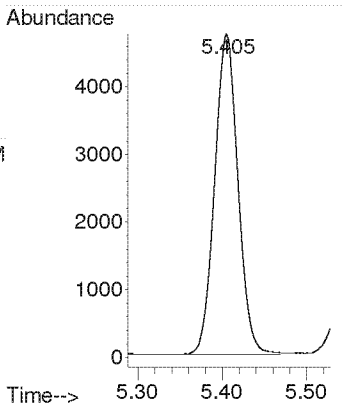


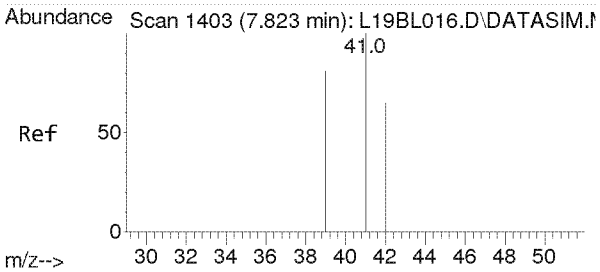
#2
Acetylene
Concen: 2.280 ppbv
RT: 5.405 min Scan# 147
Delta R.T. 0.000 min
Lab File: L19BL016.D
Acq: 12 Feb 2019 10:49 pm

Tgt Ion: 26 Resp: 9038





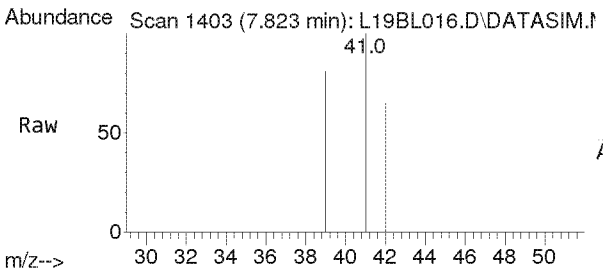


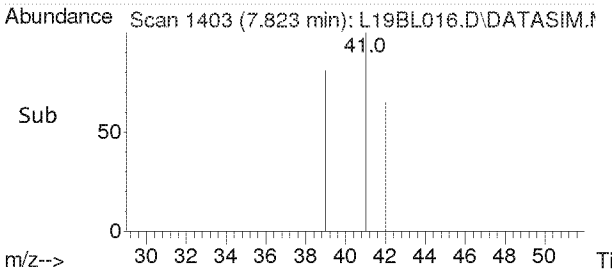


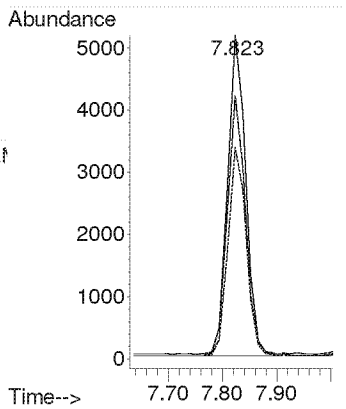
#3
Propylene
Concen: 2.420 ppbv
RT: 7.823 min Scan# 1403
Delta R.T. 0.000 min
Lab File: L19BL016.D
Acq: 12 Feb 2019 10:49 pm

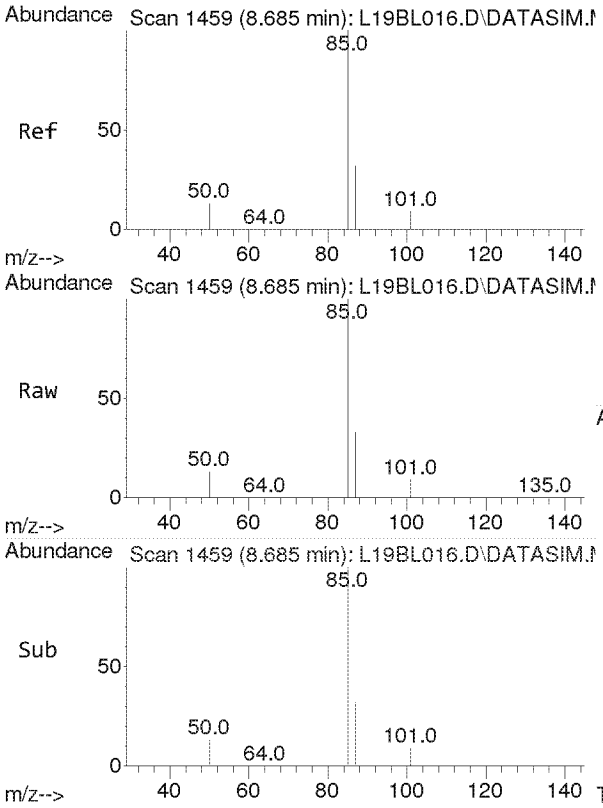
Tgt Ion: 41 Resp: 11849

Ion	Ratio	Lower	Upper
41	100		
39	80.2	64.2	96.2
42	65.8	52.6	79.0





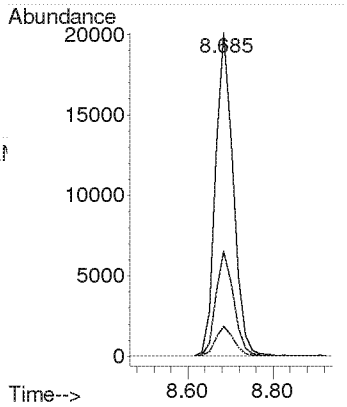


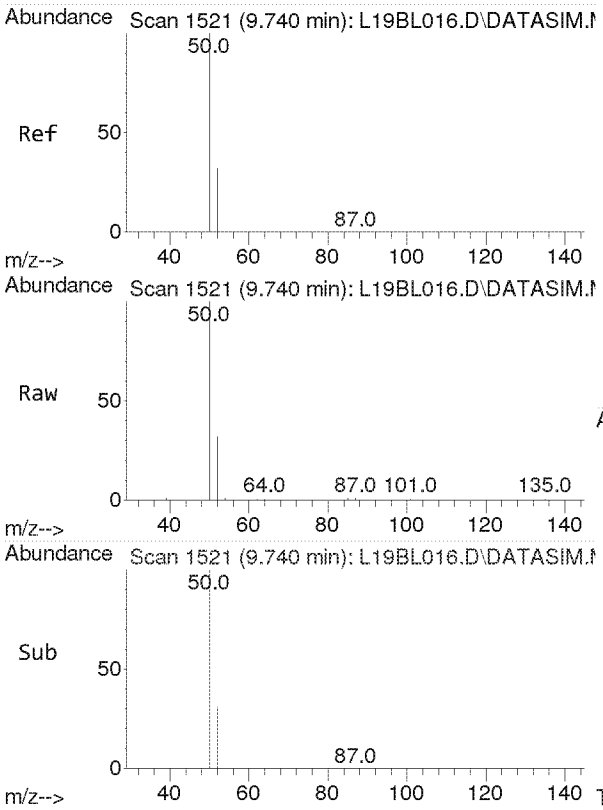


#4
Dichlorodifluoromethane
Concen: 2.460 ppbv
RT: 8.685 min Scan# 1459
Delta R.T. 0.000 min
Lab File: L19BL016.D
Acq: 12 Feb 2019 10:49 pm

Tgt Ion: 85 Resp: 57381

Ion	Ratio	Lower	Upper
85	100		
87	32.5	26.0	39.0
101	9.1	7.3	10.9

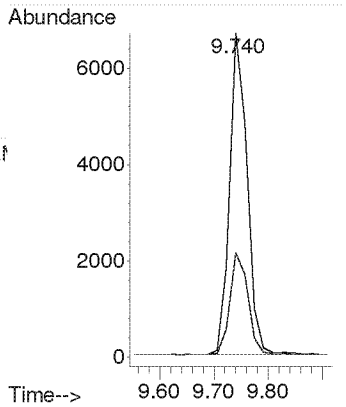


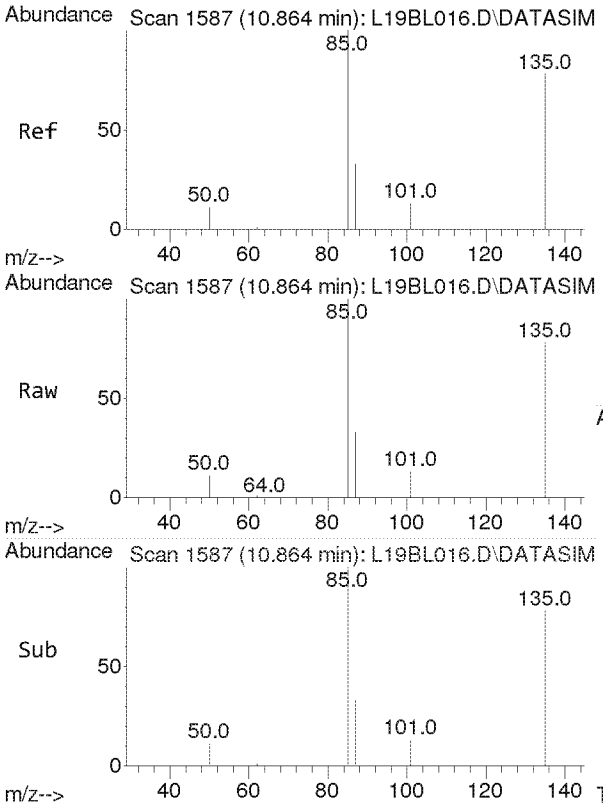


#5
Chloromethane
Concen: 2.510 ppbv
RT: 9.740 min Scan# 1521
Delta R.T. 0.000 min
Lab File: L19BL016.D
Acq: 12 Feb 2019 10:49 pm

Tgt Ion: 50 Resp: 14892

Ion	Ratio	Lower	Upper
50	100		
52	32.6	26.1	39.1

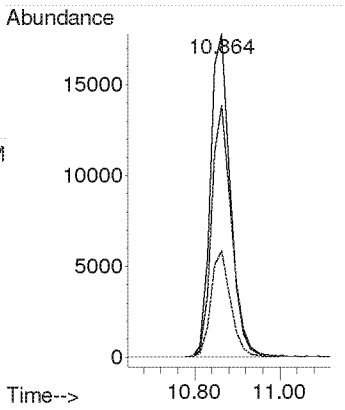


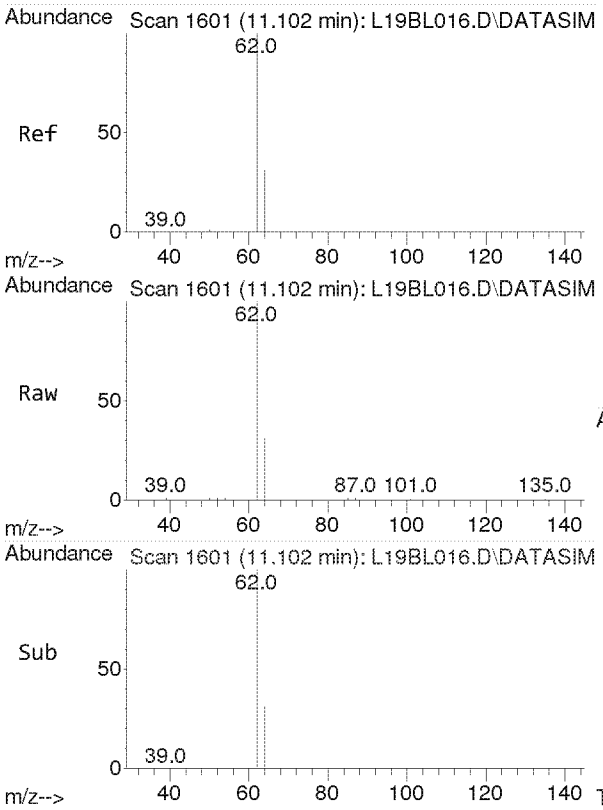


#6
Dichlorotetrafluoroethane
Concen: 2.780 ppbv
RT: 10.864 min Scan# 1587
Delta R.T. 0.000 min
Lab File: L19BL016.D
Acq: 12 Feb 2019 10:49 pm

Tgt Ion: 85 Resp: 56810

Ion	Ratio	Lower	Upper
85	100		
135	79.0	63.2	94.8
87	32.4	25.9	38.9

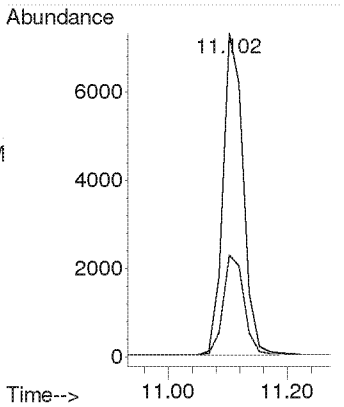


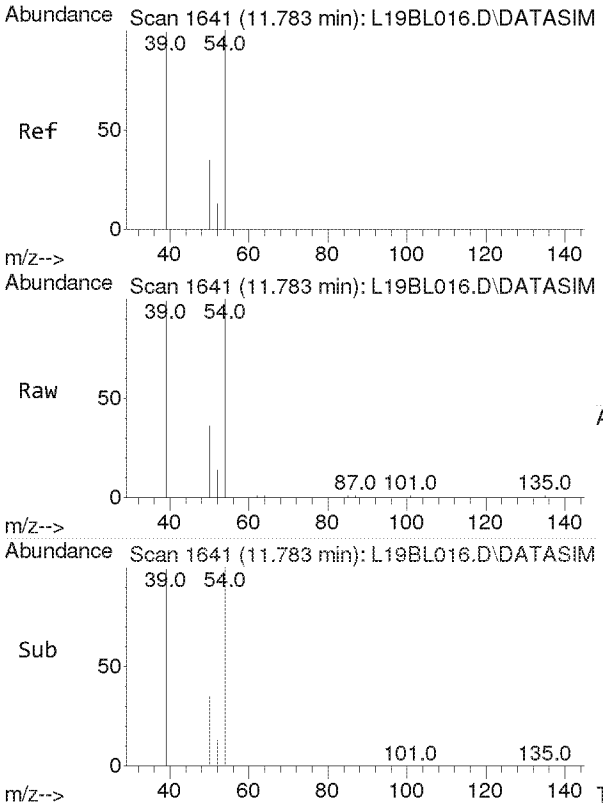


#7
Vinyl Chloride
Concen: 2.560 ppbv
RT: 11.102 min Scan# 1601
Delta R.T. 0.000 min
Lab File: L19BL016.D
Acq: 12 Feb 2019 10:49 pm

Tgt Ion: 62 Resp: 17342

Ion	Ratio	Lower	Upper
62	100		
64	31.7	25.4	38.0

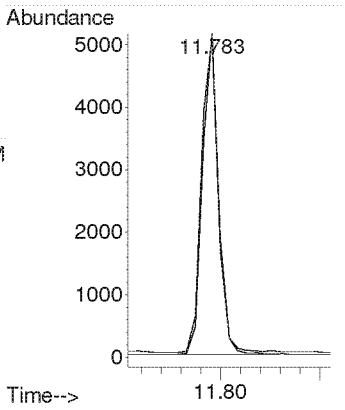


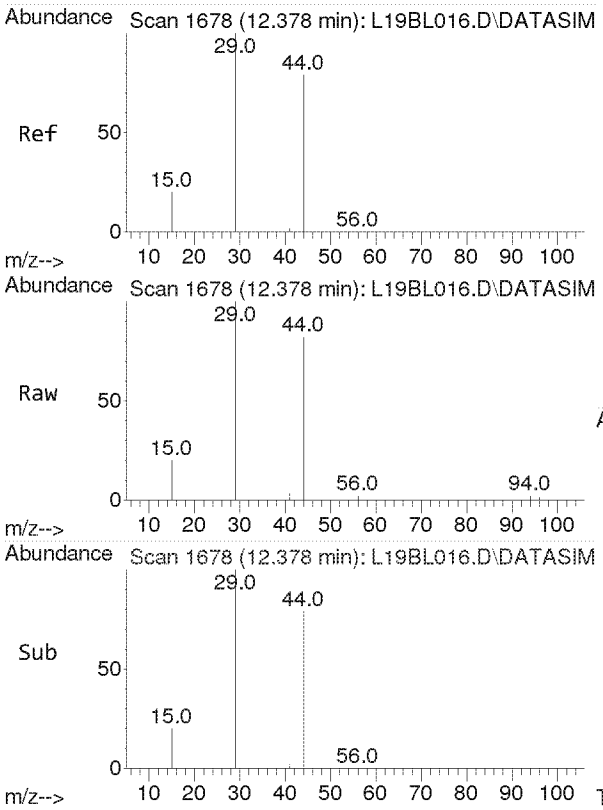


#8
1,3-Butadiene
Concen: 2.480 ppbv
RT: 11.783 min Scan# 1641
Delta R.T. 0.000 min
Lab File: L19BL016.D
Acq: 12 Feb 2019 10:49 pm

Tgt Ion: 54 Resp: 11490

Ion	Ratio	Lower	Upper
54	100		
39	102.0	81.6	122.4

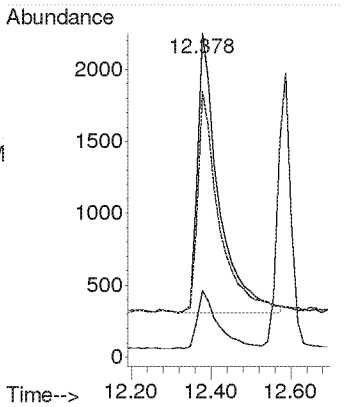


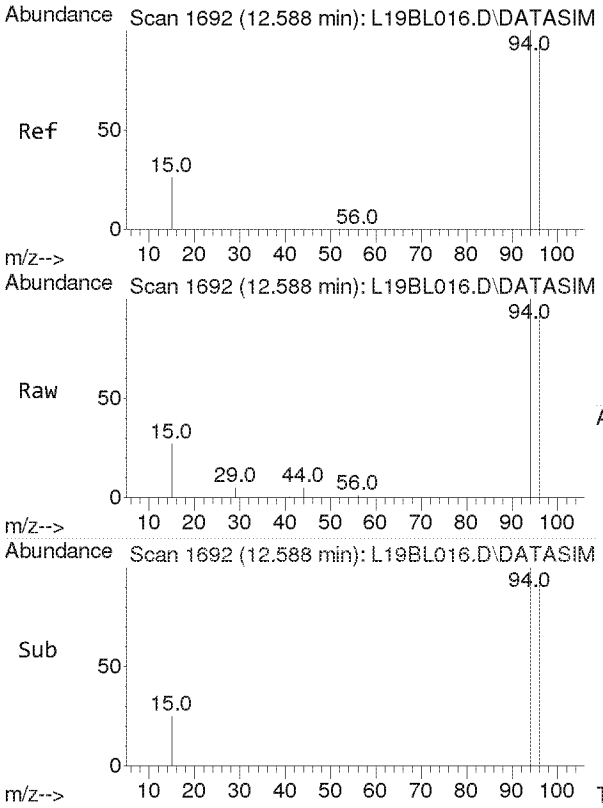


#9
Ethylene oxide
Concen: 2.460 ppbv
RT: 12.378 min Scan# 1678
Delta R.T. 0.000 min
Lab File: L19BL016.D
Acq: 12 Feb 2019 10:49 pm

Tgt Ion: 29 Resp: 7048

Ion	Ratio	Lower	Upper
29	100		
15	20.0	16.0	24.0
44	81.8	65.4	98.2

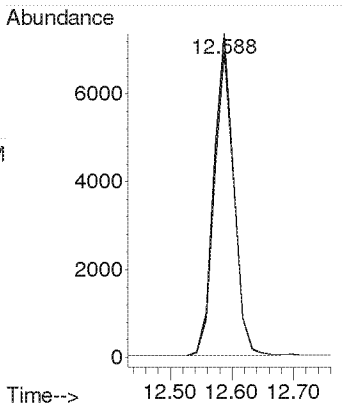


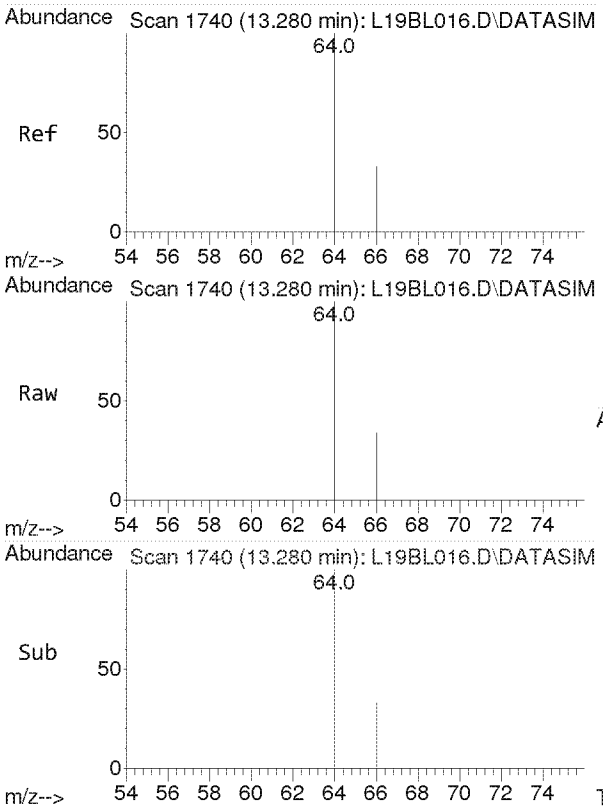


#10
Bromomethane
Concen: 2.520 ppbv
RT: 12.588 min Scan# 1692
Delta R.T. 0.000 min
Lab File: L19BL016.D
Acq: 12 Feb 2019 10:49 pm

Tgt Ion: 94 Resp: 16242

Ion	Ratio	Lower	Upper
94	100		
96	94.4	75.5	113.3

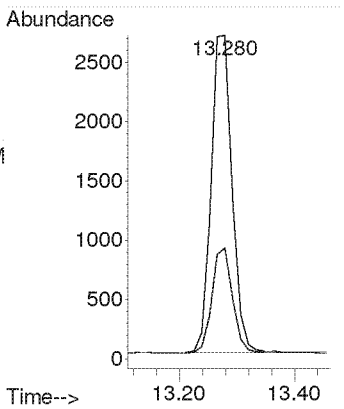


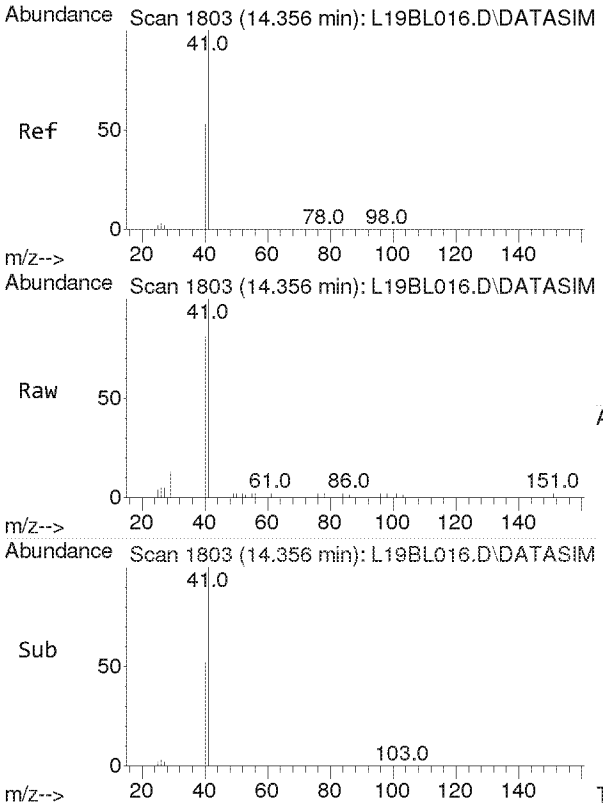


#11
Chloroethane
Concen: 2.520 ppbv
RT: 13.280 min Scan# 1740
Delta R.T. 0.000 min
Lab File: L19BL016.D
Acq: 12 Feb 2019 10:49 pm

Tgt Ion: 64 Resp: 6718

Ion	Ratio	Lower	Upper
64	100		
66	32.2	25.8	38.6

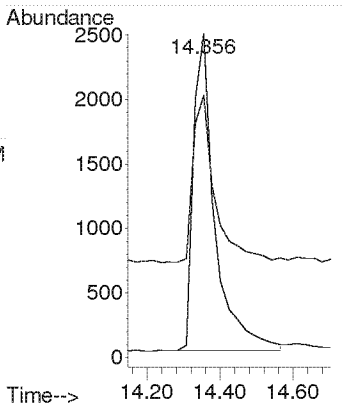


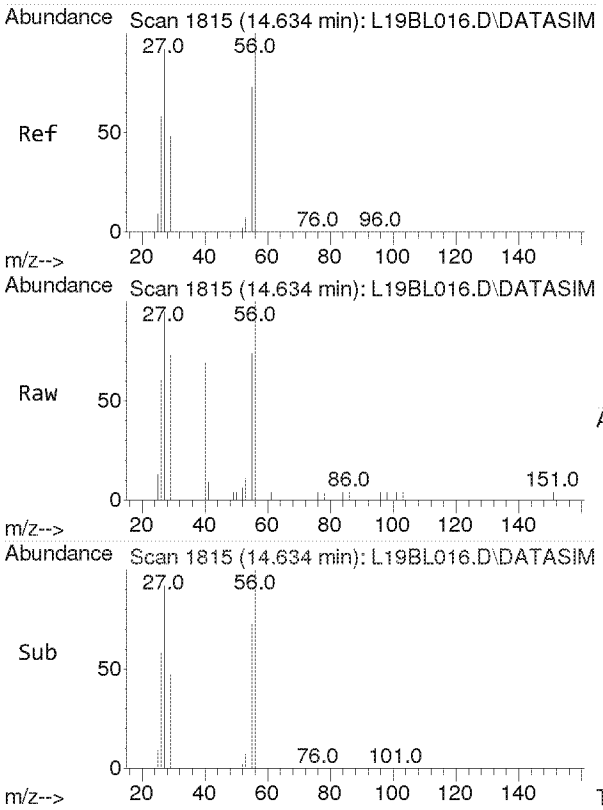


#12
Acetonitrile
Concen: 2.290 ppbv
RT: 14.356 min Scan# 1803
Delta R.T. 0.000 min
Lab File: L19BL016.D
Acq: 12 Feb 2019 10:49 pm

Tgt Ion: 41 Resp: 9964

Ion	Ratio	Lower	Upper
41	100		
40	52.8	42.2	63.4

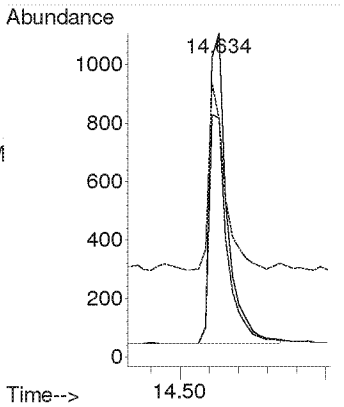


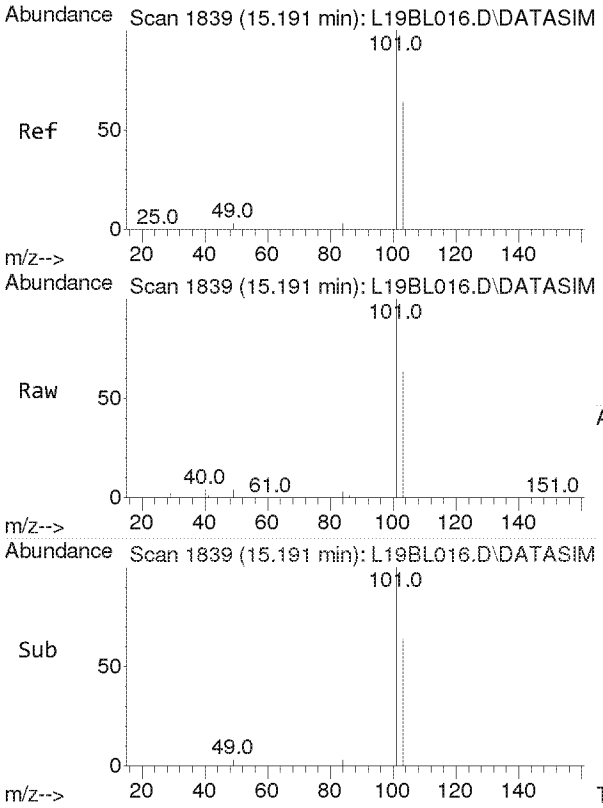


#13
Acrolein
Concen: 2.000 ppbv
RT: 14.634 min Scan# 1815
Delta R.T. 0.000 min
Lab File: L19BL016.D
Acq: 12 Feb 2019 10:49 pm

Tgt Ion: 56 Resp: 4392

Ion	Ratio	Lower	Upper
56	100		
55	76.0	60.8	91.2
29	54.7	43.8	65.6

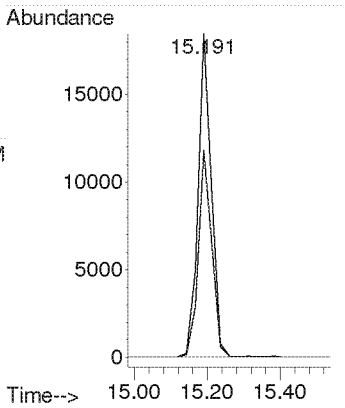


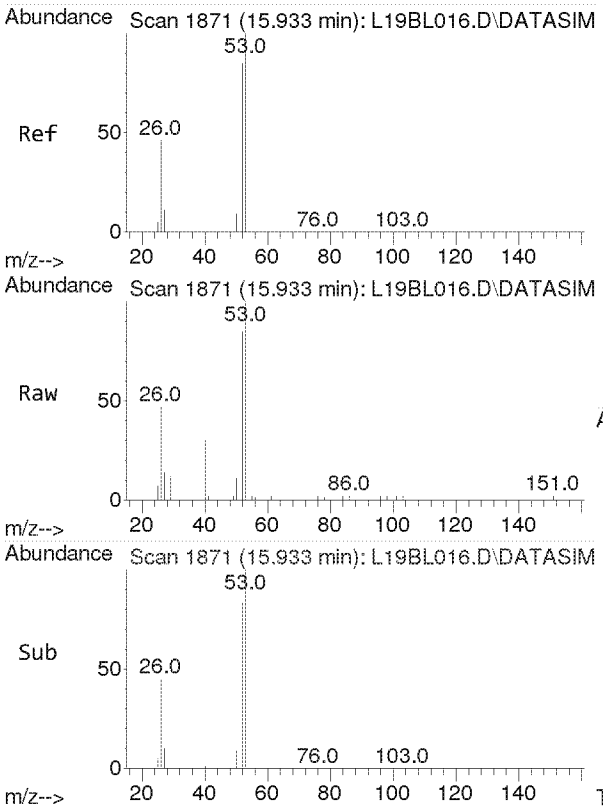


#14
Trichlorofluoromethane
Concen: 2.330 ppbv
RT: 15.191 min Scan# 1839
Delta R.T. 0.000 min
Lab File: L19BL016.D
Acq: 12 Feb 2019 10:49 pm

Tgt Ion:101 Resp: 46432

Ion	Ratio	Lower	Upper
101	100		
103	64.6	51.7	77.5

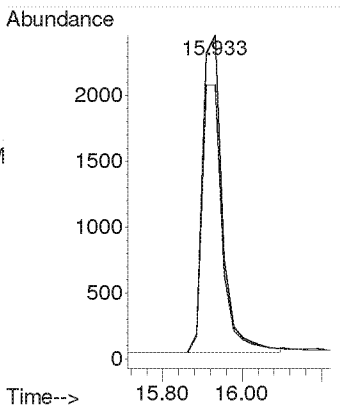


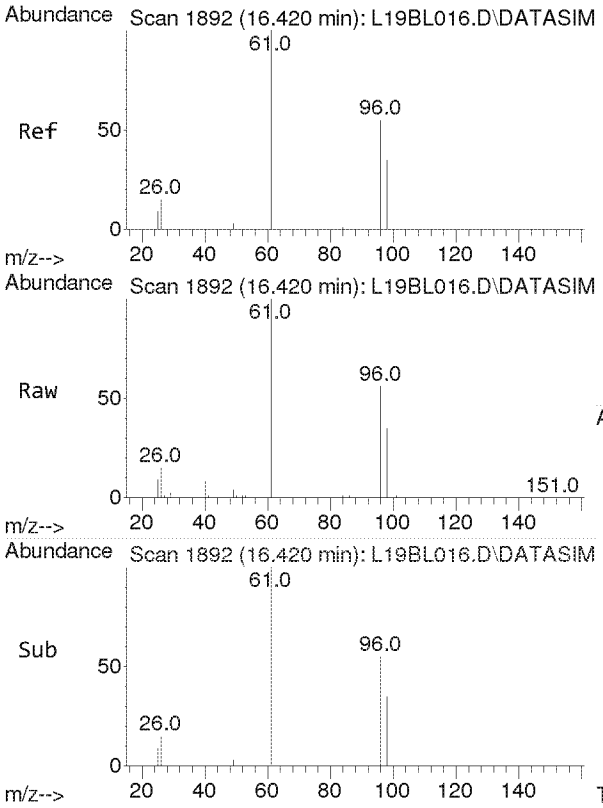


#15
Acrylonitrile
Concen: 2.380 ppbv
RT: 15.933 min Scan# 1871
Delta R.T. 0.000 min
Lab File: L19BL016.D
Acq: 12 Feb 2019 10:49 pm

Tgt Ion: 53 Resp: 8391

Ion	Ratio	Lower	Upper
53	100		
52	86.9	69.5	104.3

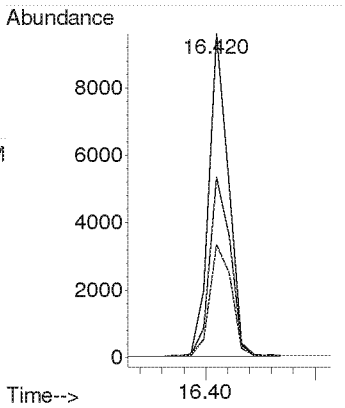


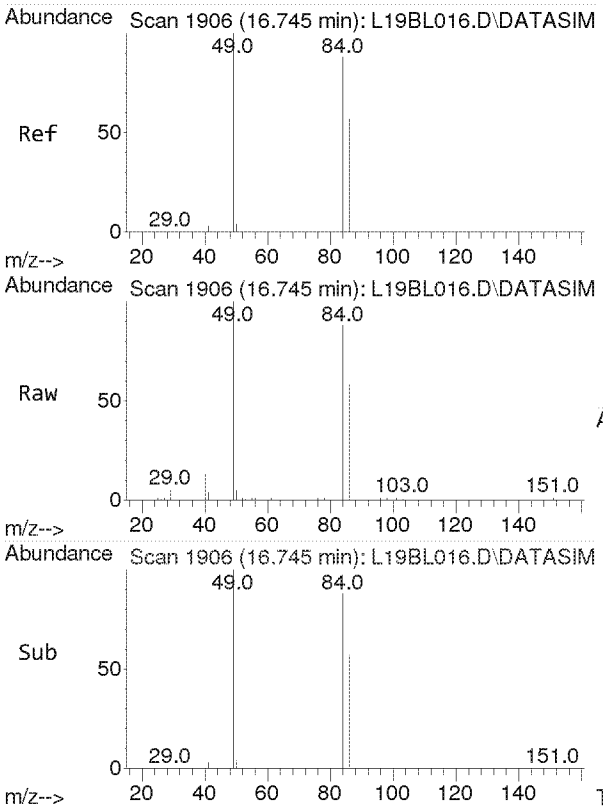


#16
1,1-Dichloroethene
Concen: 2.720 ppbv
RT: 16.420 min Scan# 1892
Delta R.T. 0.000 min
Lab File: L19BL016.D
Acq: 12 Feb 2019 10:49 pm

Tgt Ion: 61 Resp: 23644

Ion	Ratio	Lower	Upper
61	100		
96	59.1	47.3	70.9
98	38.2	30.6	45.8

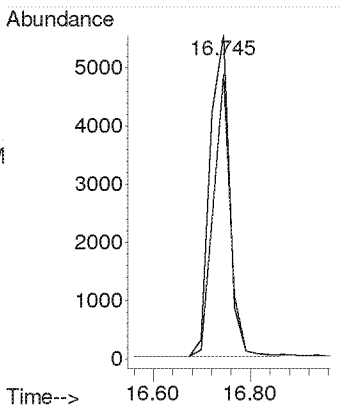


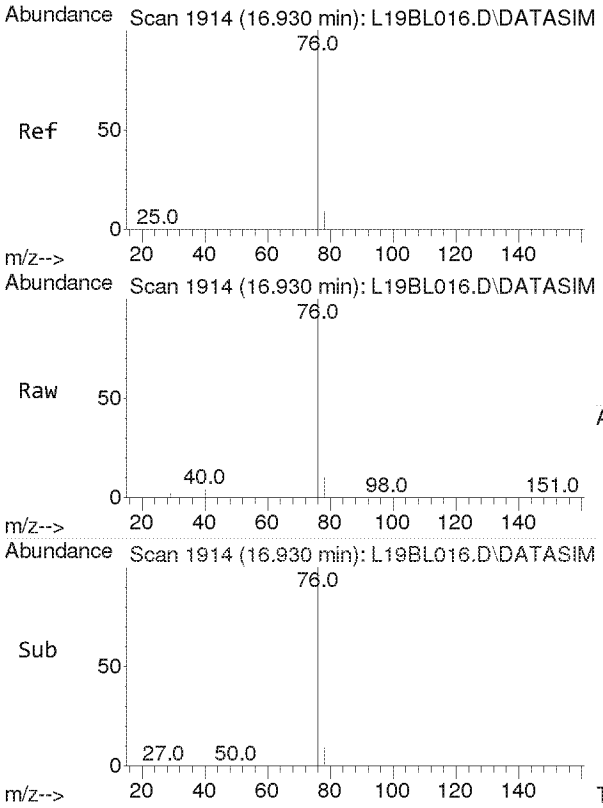


#17
Methylene Chloride
Concen: 2.700 ppbv
RT: 16.745 min Scan# 1906
Delta R.T. 0.000 min
Lab File: L19BL016.D
Acq: 12 Feb 2019 10:49 pm

Tgt Ion: 49 Resp: 15319

Ion	Ratio	Lower	Upper
49	100		
84	77.2	54.0	100.4

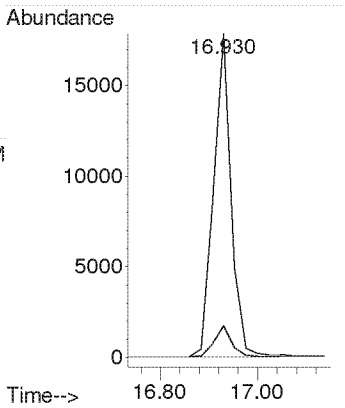


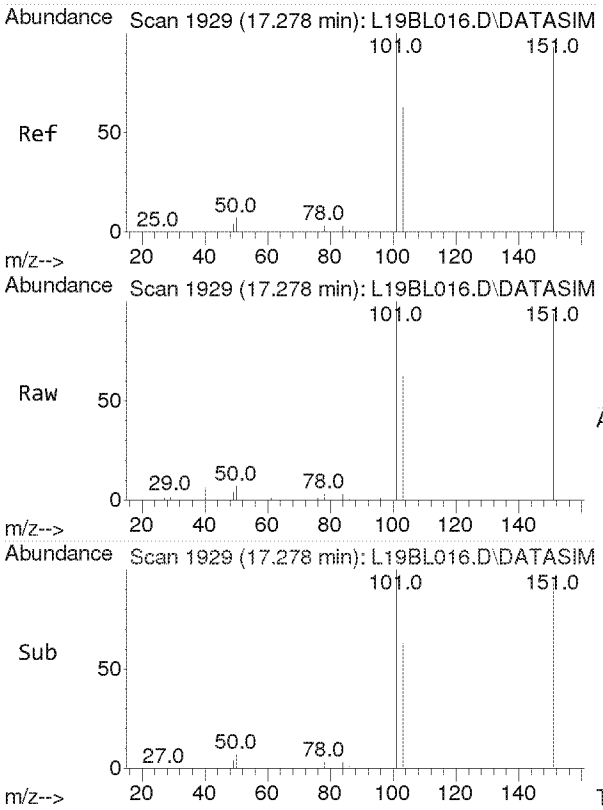


#18
Carbon Disulfide
Concen: 2.520 ppbv
RT: 16.930 min Scan# 1914
Delta R.T. 0.000 min
Lab File: L19BL016.D
Acq: 12 Feb 2019 10:49 pm

Tgt Ion: 76 Resp: 44453

Ion	Ratio	Lower	Upper
76	100		
78	9.2	7.4	11.0

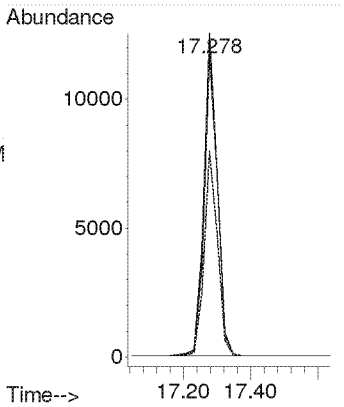


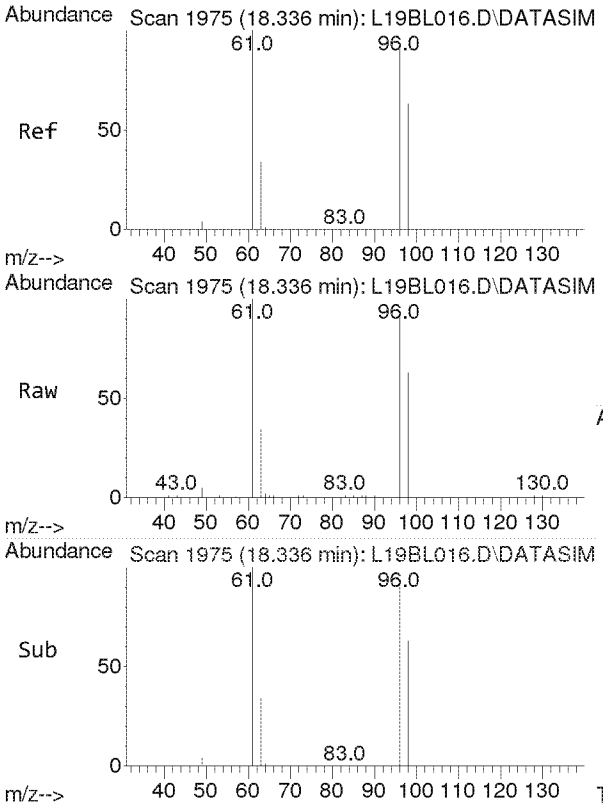


#19
Trichlorotrifluoroethane
Concen: 2.590 ppbv
RT: 17.278 min Scan# 1929
Delta R.T. 0.000 min
Lab File: L19BL016.D
Acq: 12 Feb 2019 10:49 pm

Tgt Ion:101 Resp: 34356

Ion	Ratio	Lower	Upper
101	100		
151	94.8	75.8	113.8
103	63.9	51.1	76.7

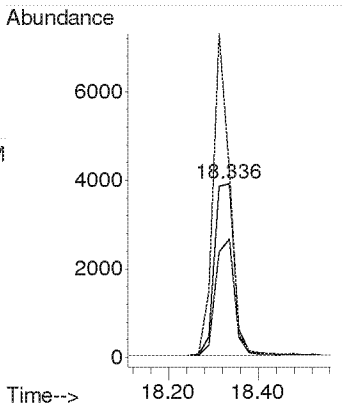


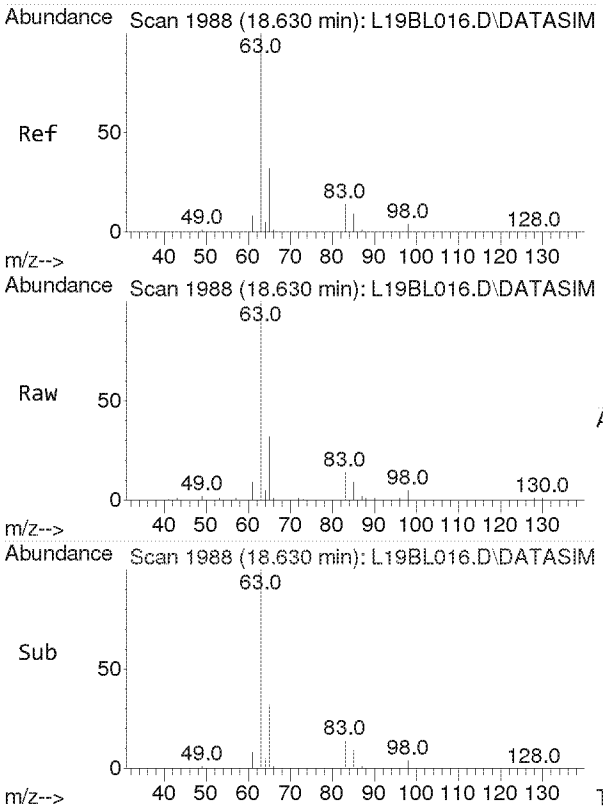


#20
trans-1,2-Dichloroethylene
Concen: 2.500 ppbv
RT: 18.336 min Scan# 1975
Delta R.T. 0.000 min
Lab File: L19BL016.D
Acq: 12 Feb 2019 10:49 pm

Tgt Ion: 96 Resp: 12058

Ion	Ratio	Lower	Upper
96	100		
98	64.4	51.5	77.3
61	153.6	122.9	184.3

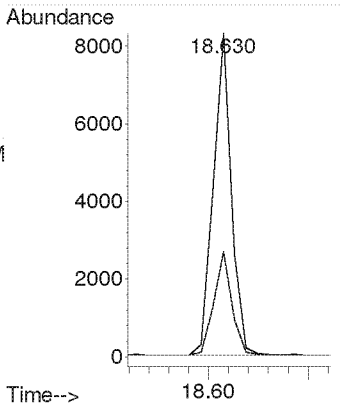


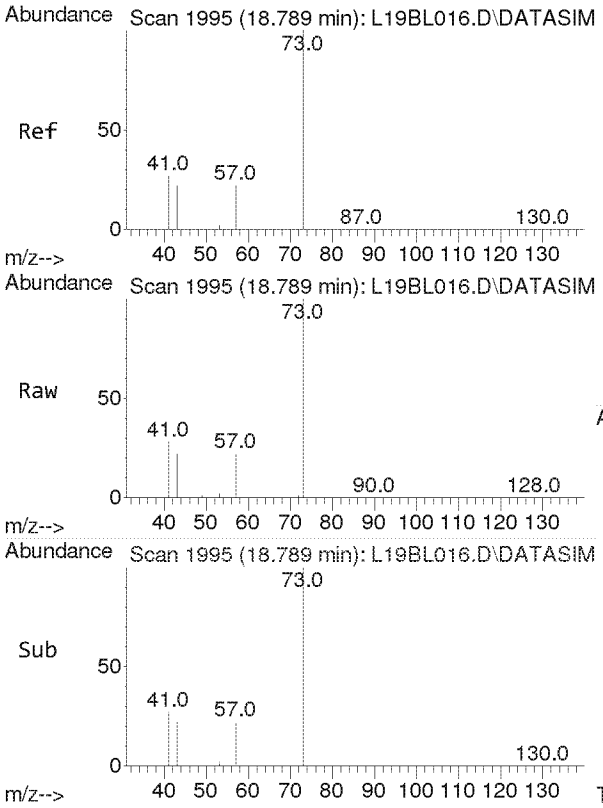


#21
1,1-Dichloroethane
Concen: 2.560 ppbv
RT: 18.630 min Scan# 1988
Delta R.T. 0.000 min
Lab File: L19BL016.D
Acq: 12 Feb 2019 10:49 pm

Tgt Ion: 63 Resp: 20746

Ion	Ratio	Lower	Upper
63	100		
65	31.7	25.4	38.0

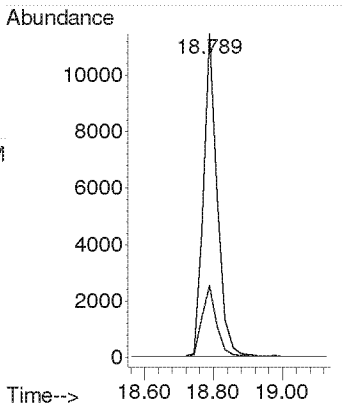


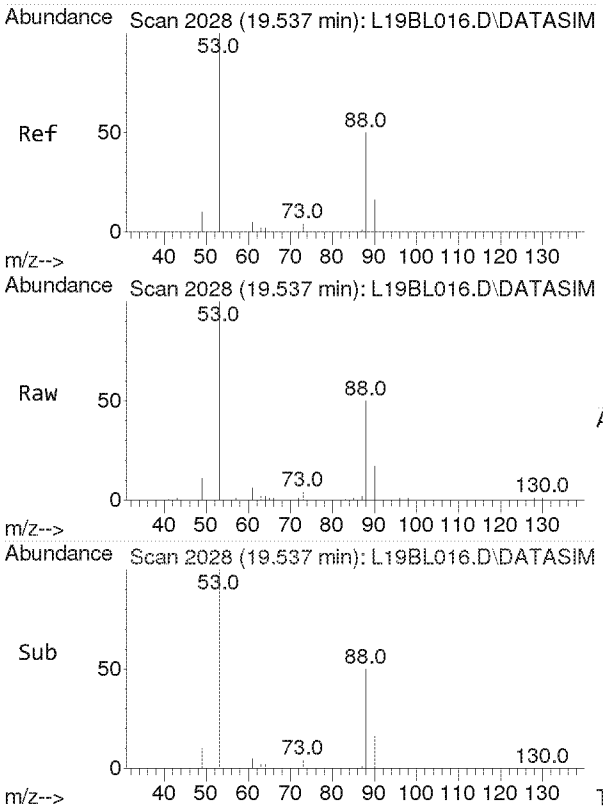


#22
Methyl tert-Butyl Ether
Concen: 2.380 ppbv
RT: 18.789 min Scan# 1995
Delta R.T. 0.000 min
Lab File: L19BL016.D
Acq: 12 Feb 2019 10:49 pm

Tgt Ion: 73 Resp: 31794

Ion	Ratio	Lower	Upper
73	100		
57	22.5	18.0	27.0

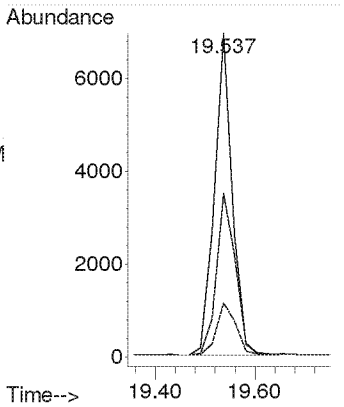


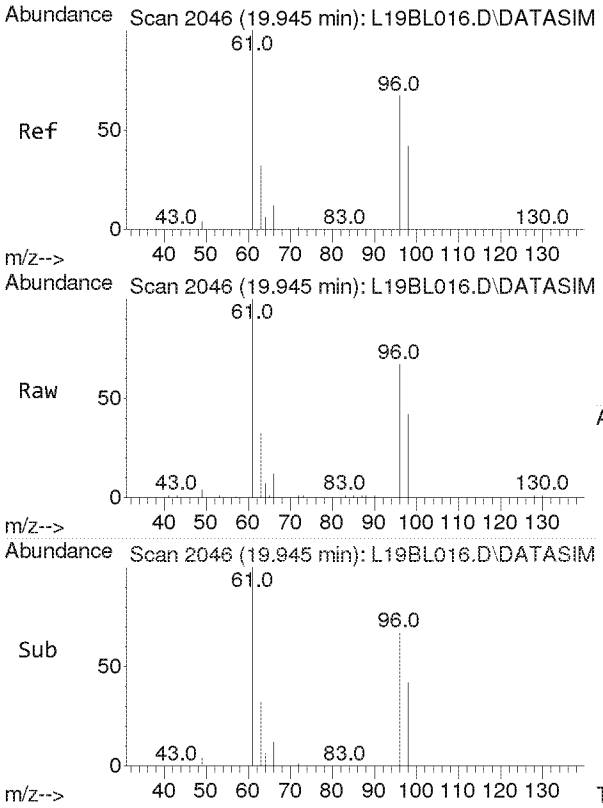


#23
Chloroprene
Concen: 2.580 ppbv
RT: 19.537 min Scan# 2028
Delta R.T. 0.000 min
Lab File: L19BL016.D
Acq: 12 Feb 2019 10:49 pm

Tgt Ion: 53 Resp: 17116

Ion	Ratio	Lower	Upper
53	100		
88	53.3	42.6	64.0
90	17.4	13.9	20.9

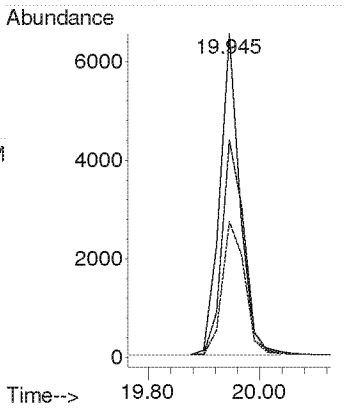


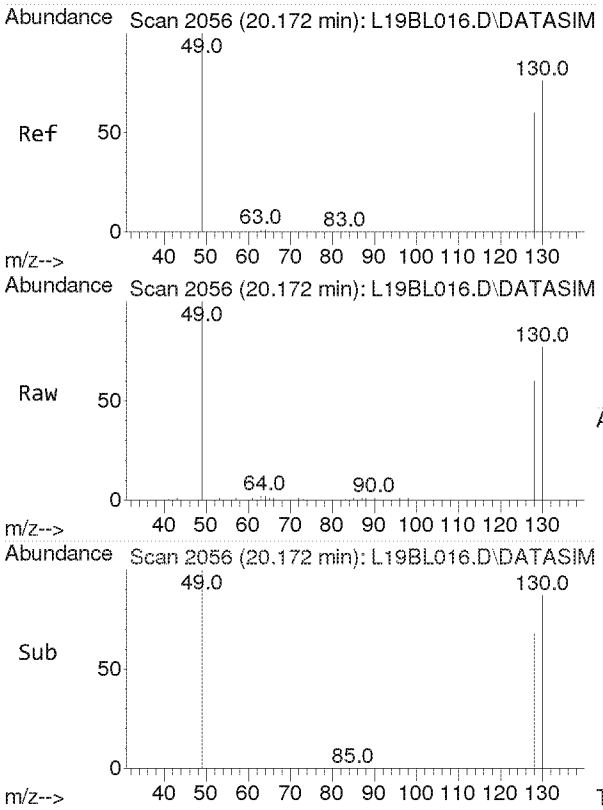


#24
cis-1,2-Dichloroethylene
Concen: 2.570 ppbv
RT: 19.945 min Scan# 2046
Delta R.T. 0.000 min
Lab File: L19BL016.D
Acq: 12 Feb 2019 10:49 pm

Tgt Ion: 61 Resp: 16318

Ion	Ratio	Lower	Upper
61	100		
96	73.8	59.0	88.6
98	47.0	37.6	56.4

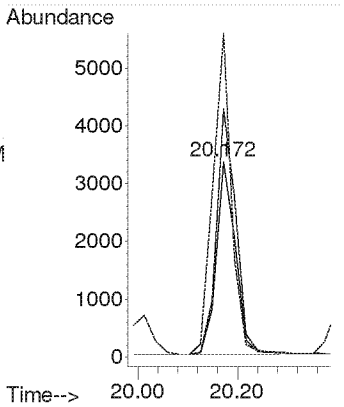


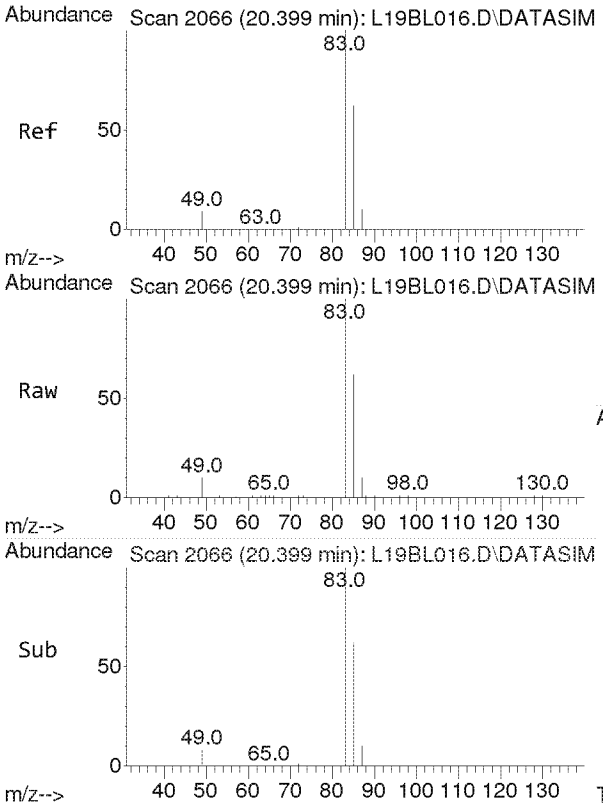


#25
Bromochloromethane
Concen: 2.550 ppbv
RT: 20.172 min Scan# 2056
Delta R.T. 0.000 min
Lab File: L19BL016.D
Acq: 12 Feb 2019 10:49 pm

Tgt Ion:128 Resp: 8821

Ion	Ratio	Lower	Upper
128	100		
130	129.1	103.3	154.9
49	160.4	128.3	192.5

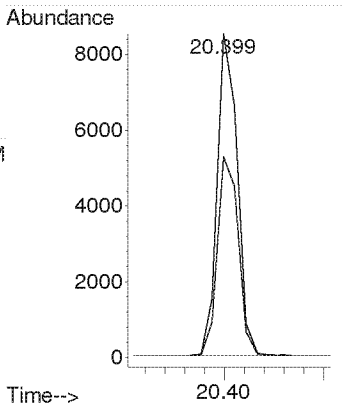


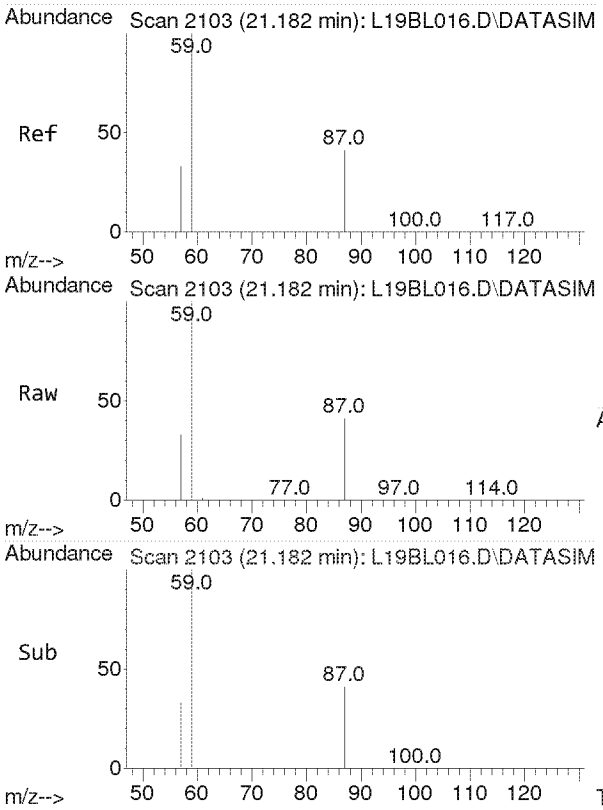


#26
Chloroform
Concen: 2.540 ppbv
RT: 20.399 min Scan# 2066
Delta R.T. 0.000 min
Lab File: L19BL016.D
Acq: 12 Feb 2019 10:49 pm

Tgt Ion: 83 Resp: 23920

Ion	Ratio	Lower	Upper
83	100		
85	64.4	51.5	77.3

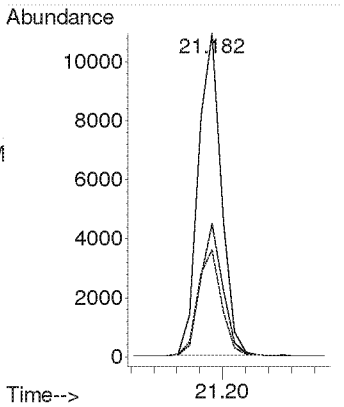


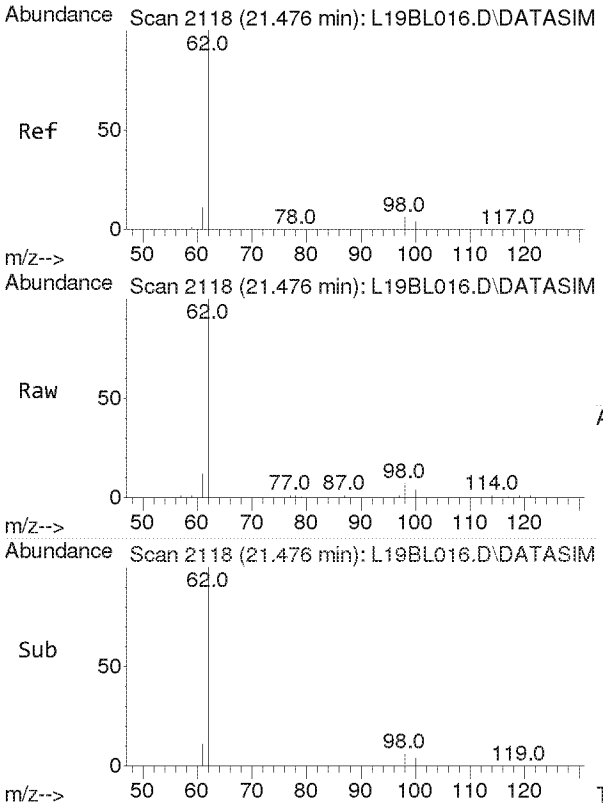


#27
Ethyl tert-Butyl Ether
Concen: 2.350 ppbv
RT: 21.182 min Scan# 2103
Delta R.T. 0.000 min
Lab File: L19BL016.D
Acq: 12 Feb 2019 10:49 pm

Tgt Ion: 59 Resp: 30300

Ion	Ratio	Lower	Upper
59	100		
87	39.4	31.5	47.3
57	33.2	26.6	39.8

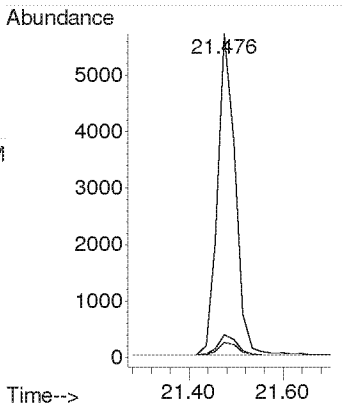


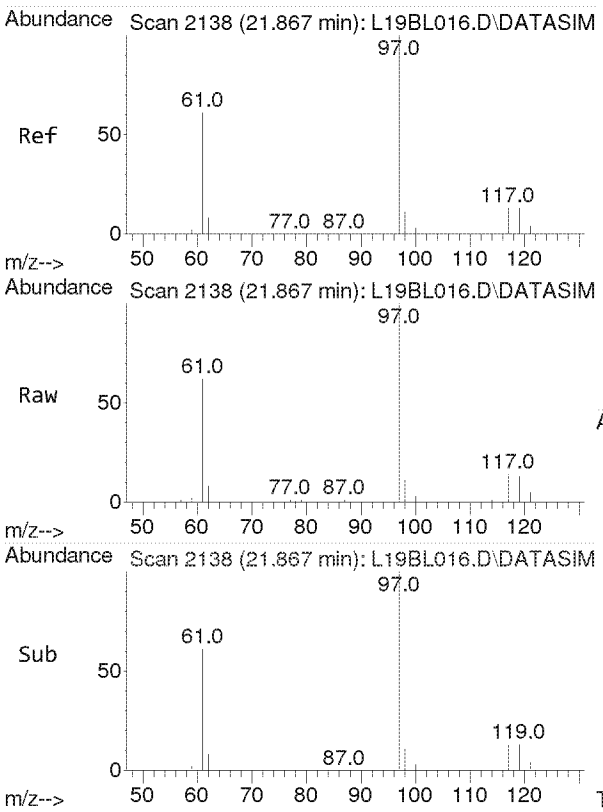


#28
1,2-Dichloroethane
Concen: 2.580 ppbv
RT: 21.476 min Scan# 2118
Delta R.T. 0.000 min
Lab File: L19BL016.D
Acq: 12 Feb 2019 10:49 pm

Tgt Ion: 62 Resp: 14776

Ion	Ratio	Lower	Upper
62	100		
98	6.3	5.0	7.6
100	4.0	3.2	4.8

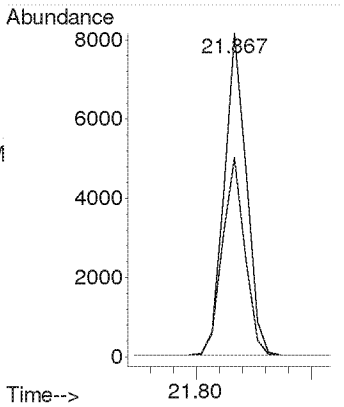


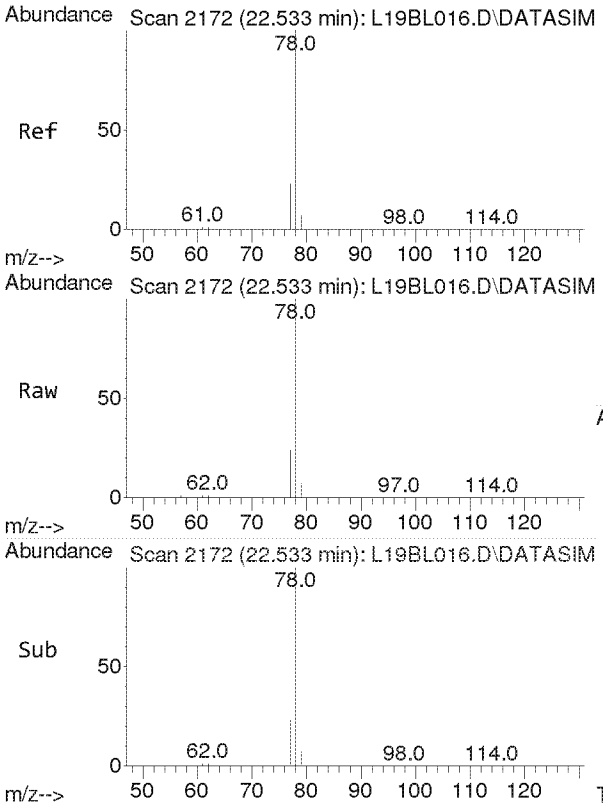


#30
1,1,1-Trichloroethane
Concen: 2.460 ppbv
RT: 21.867 min Scan# 2138
Delta R.T. 0.000 min
Lab File: L19BL016.D
Acq: 12 Feb 2019 10:49 pm

Tgt Ion: 97 Resp: 21543

Ion	Ratio	Lower	Upper
97	100		
61	62.1	49.7	74.5

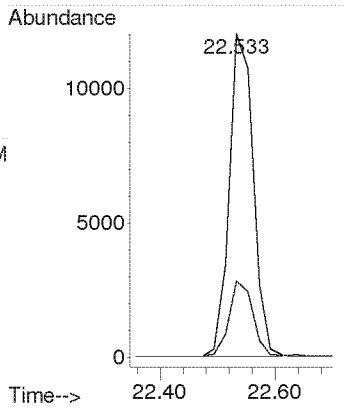


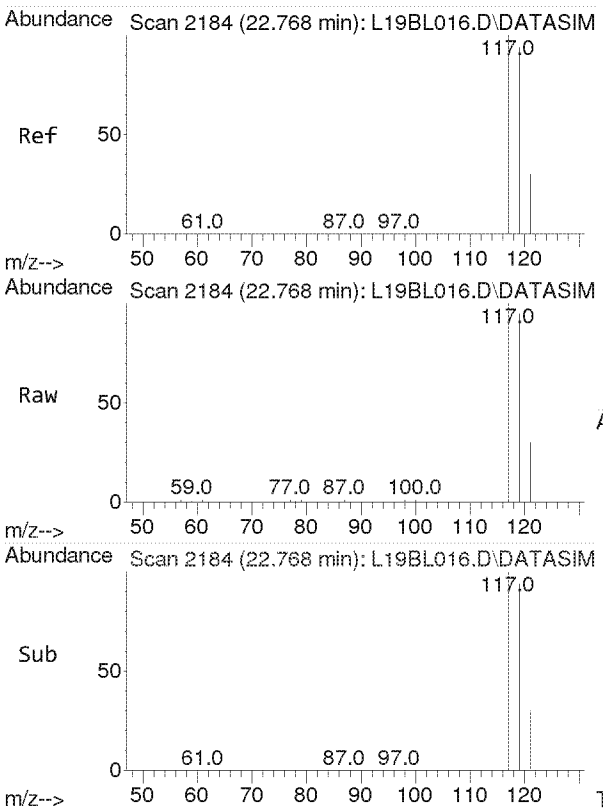


#31
Benzene
Concen: 2.730 ppbv
RT: 22.533 min Scan# 2172
Delta R.T. 0.000 min
Lab File: L19BL016.D
Acq: 12 Feb 2019 10:49 pm

Tgt Ion: 78 Resp: 34433

Ion	Ratio	Lower	Upper
78	100		
77	22.8	18.2	27.4

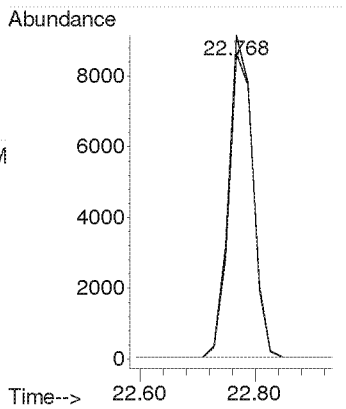


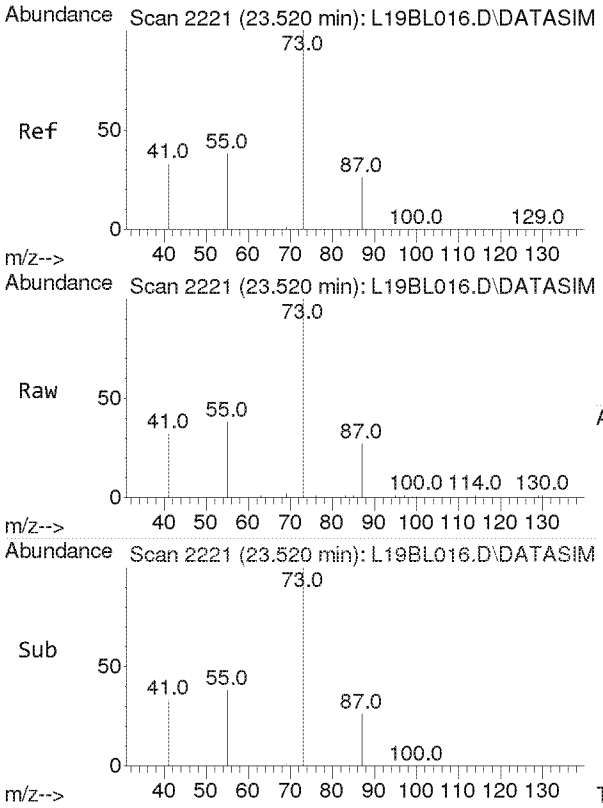


#32
Carbon Tetrachloride
Concen: 2.790 ppbv
RT: 22.768 min Scan# 2184
Delta R.T. 0.000 min
Lab File: L19BL016.D
Acq: 12 Feb 2019 10:49 pm

Tgt Ion:117 Resp: 26280

Ion	Ratio	Lower	Upper
117	100		
119	96.3	77.0	115.6

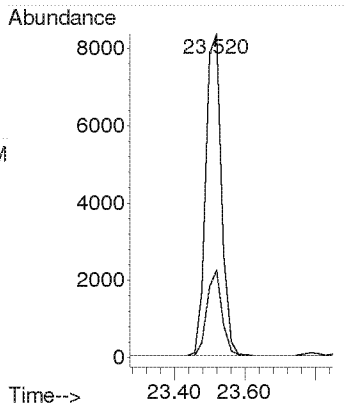


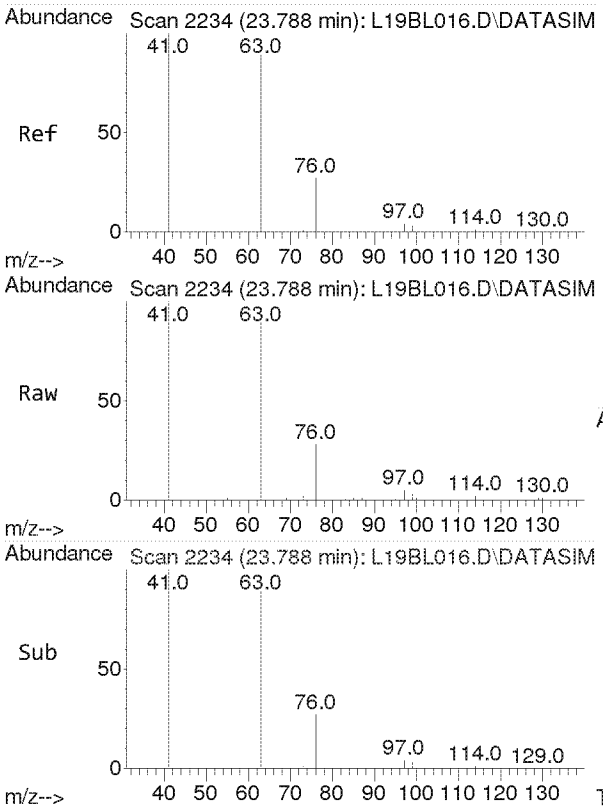


#33
tert-Amyl Methyl Ether
Concen: 2.420 ppbv
RT: 23.520 min Scan# 2221
Delta R.T. 0.000 min
Lab File: L19BL016.D
Acq: 12 Feb 2019 10:49 pm

Tgt Ion: 73 Resp: 25881

Ion	Ratio	Lower	Upper
73	100		
87	25.1	20.1	30.1

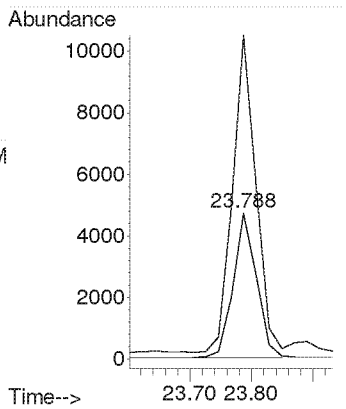


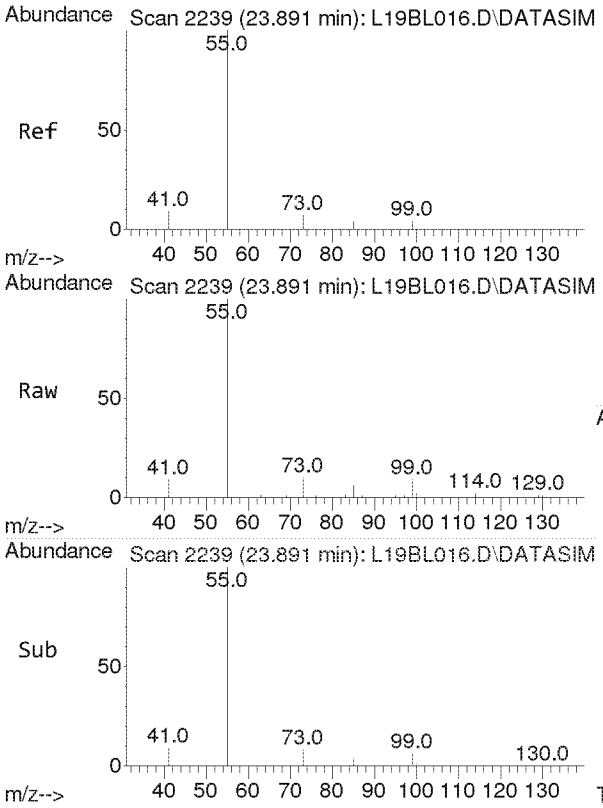


#34
1,2-Dichloropropane
Concen: 2.520 ppbv
RT: 23.788 min Scan# 2234
Delta R.T. 0.000 min
Lab File: L19BL016.D
Acq: 12 Feb 2019 10:49 pm

Tgt Ion: 63 Resp: 12255

Ion	Ratio	Lower	Upper
63	100		
41	219.9	175.9	263.9

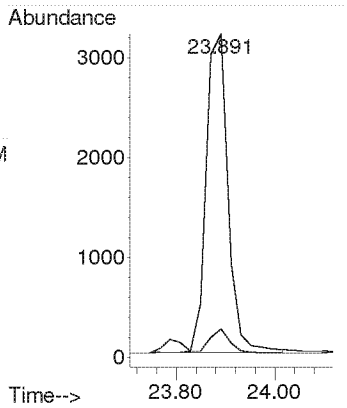


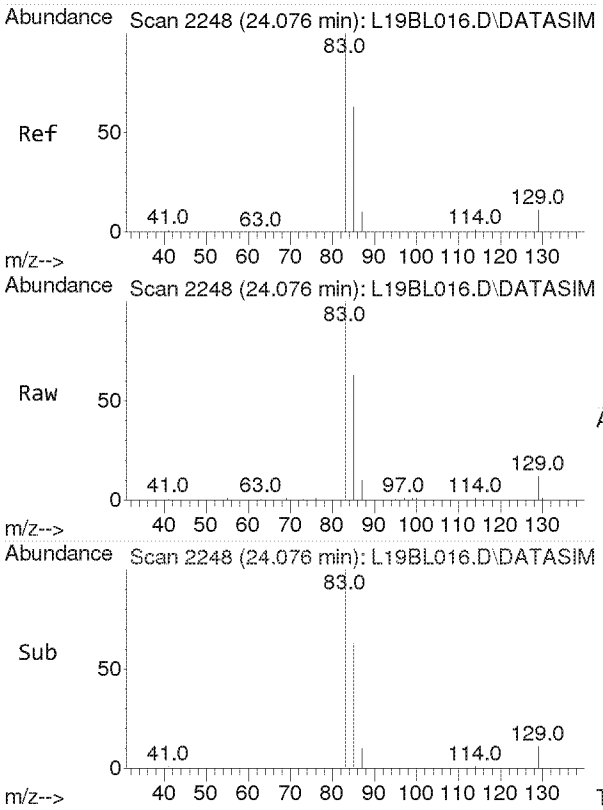


#35
Ethyl Acrylate
Concen: 2.440 ppbv
RT: 23.891 min Scan# 2239
Delta R.T. 0.000 min
Lab File: L19BL016.D
Acq: 12 Feb 2019 10:49 pm

Tgt Ion: 55 Resp: 9759

Ion	Ratio	Lower	Upper
55	100		
99	6.3	5.0	7.6

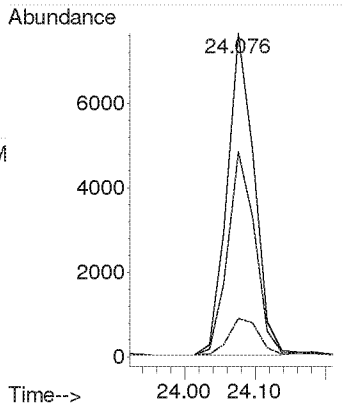


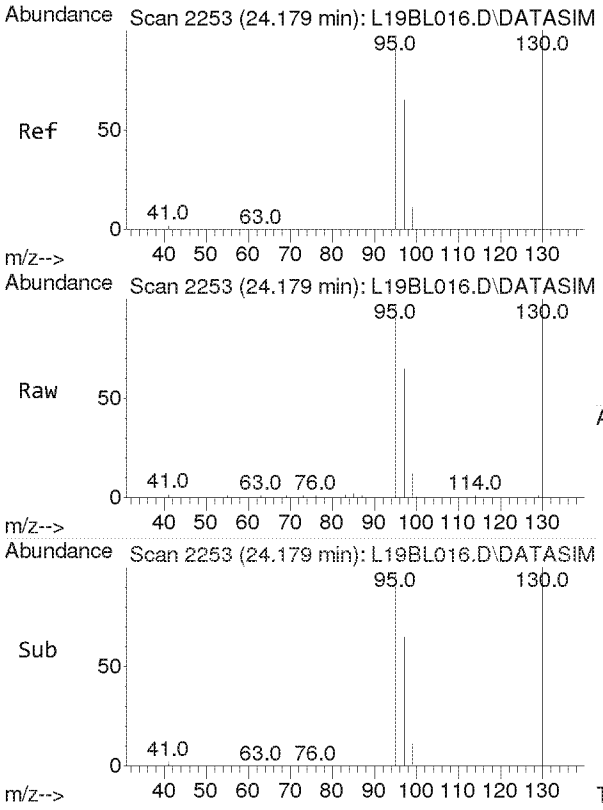


#36
Bromodichloromethane
Concen: 2.400 ppbv
RT: 24.076 min Scan# 2248
Delta R.T. 0.000 min
Lab File: L19BL016.D
Acq: 12 Feb 2019 10:49 pm

Tgt Ion: 83 Resp: 20373

Ion	Ratio	Lower	Upper
83	100		
85	63.7	51.0	76.4
129	12.4	9.9	14.9

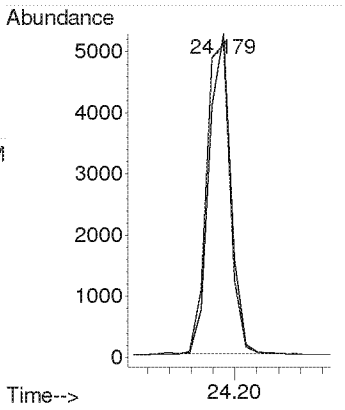


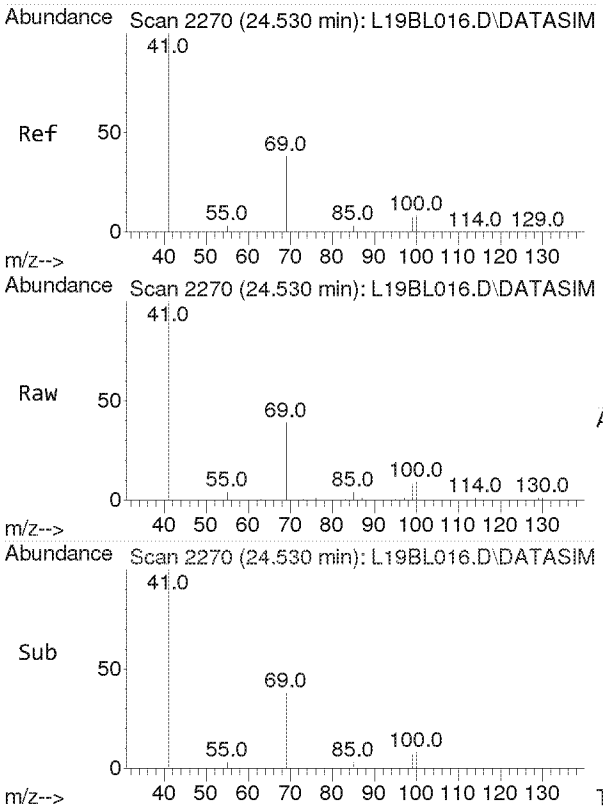


#37
Trichloroethylene
Concen: 2.400 ppbv
RT: 24.179 min Scan# 2253
Delta R.T. 0.000 min
Lab File: L19BL016.D
Acq: 12 Feb 2019 10:49 pm

Tgt Ion:130 Resp: 14511

Ion	Ratio	Lower	Upper
130	100		
95	106.1	84.9	127.3

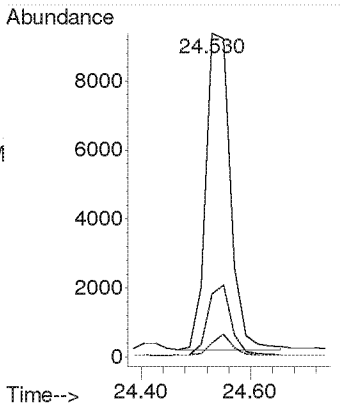


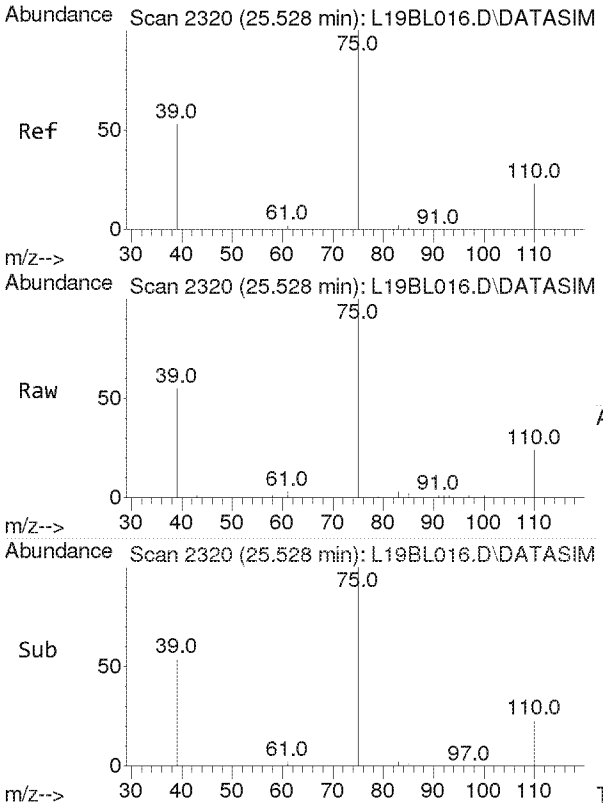


#38
Methyl Methacrylate
Concen: 2.380 ppbv
RT: 24.530 min Scan# 2270
Delta R.T. 0.000 min
Lab File: L19BL016.D
Acq: 12 Feb 2019 10:49 pm

Tgt Ion: 41 Resp: 28669

Ion	Ratio	Lower	Upper
41	100		
69	21.0	16.8	25.2
100	5.6	4.5	6.7

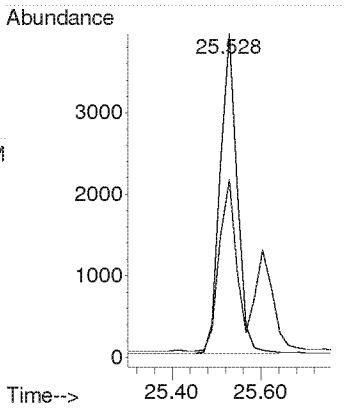


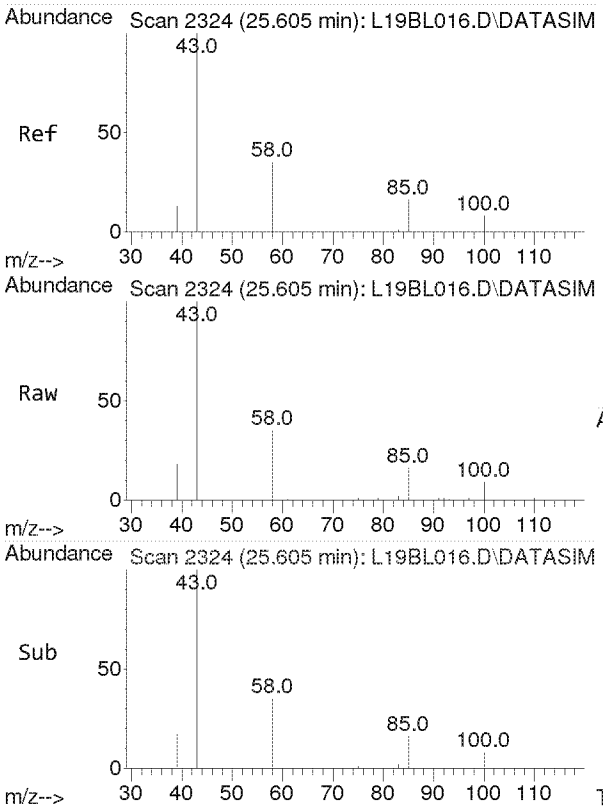


#39
cis-1,3-Dichloropropene
Concen: 2.500 ppbv
RT: 25.528 min Scan# 2320
Delta R.T. 0.000 min
Lab File: L19BL016.D
Acq: 12 Feb 2019 10:49 pm

Tgt Ion: 75 Resp: 10337

Ion	Ratio	Lower	Upper
75	100		
39	54.2	43.4	65.0

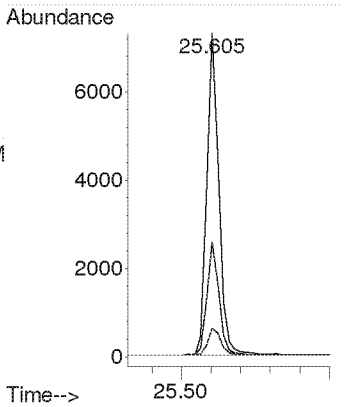


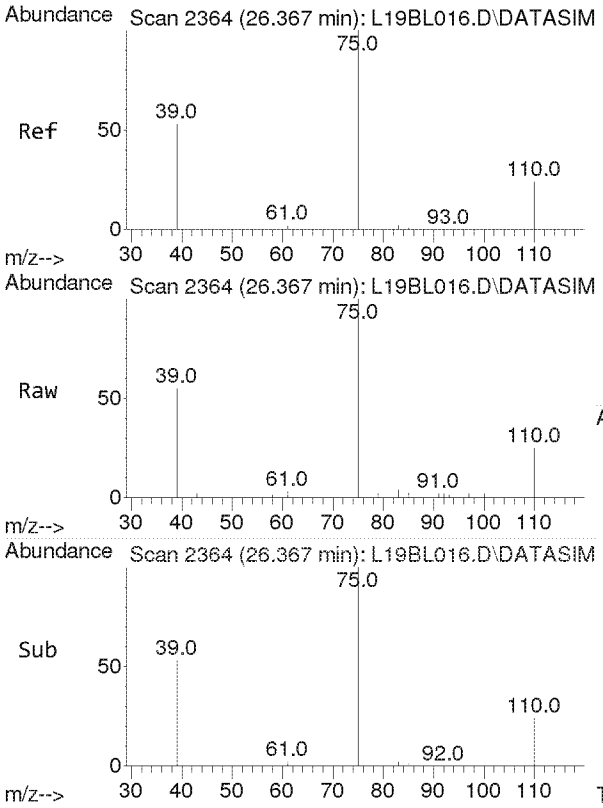


#40
Methyl Isobutyl Ketone
Concen: 2.280 ppbv
RT: 25.605 min Scan# 2324
Delta R.T. 0.000 min
Lab File: L19BL016.D
Acq: 12 Feb 2019 10:49 pm

Tgt Ion: 43 Resp: 20102

Ion	Ratio	Lower	Upper
43	100		
58	35.0	28.0	42.0
100	8.7	7.0	10.4

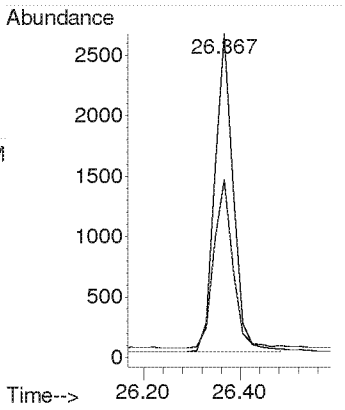


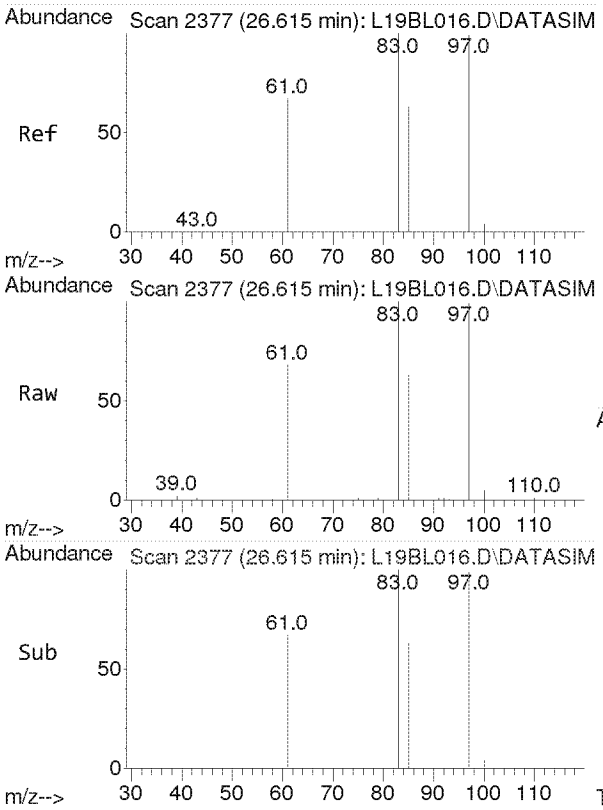


#41
trans-1,3-Dichloropropene
Concen: 2.460 ppbv
RT: 26.367 min Scan# 2364
Delta R.T. 0.000 min
Lab File: L19BL016.D
Acq: 12 Feb 2019 10:49 pm

Tgt Ion: 75 Resp: 6937

Ion	Ratio	Lower	Upper
75	100		
39	53.6	42.9	64.3

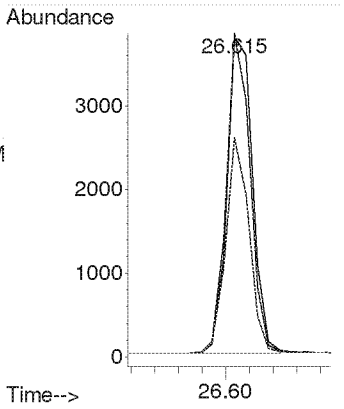


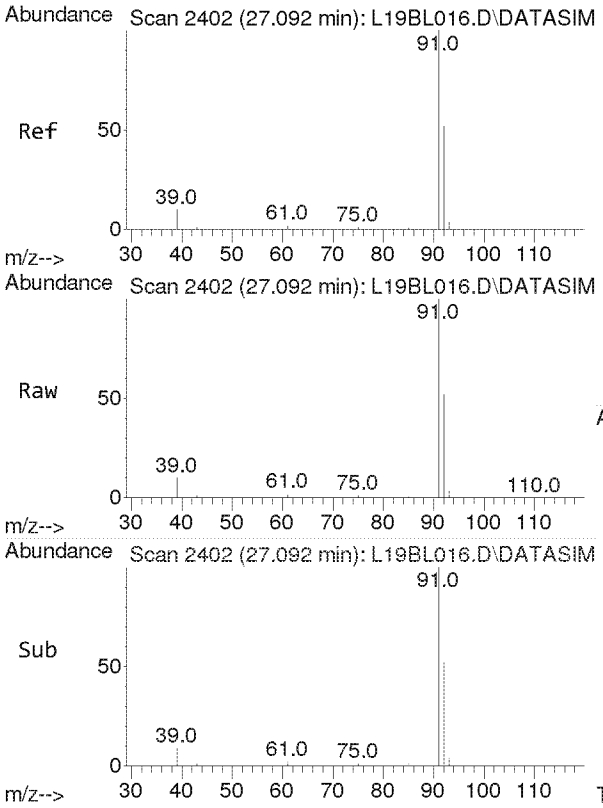


#42
1,1,2-Trichloroethane
Concen: 2.540 ppbv
RT: 26.615 min Scan# 2377
Delta R.T. 0.000 min
Lab File: L19BL016.D
Acq: 12 Feb 2019 10:49 pm

Tgt Ion: 97 Resp: 11217

Ion	Ratio	Lower	Upper
97	100		
83	94.2	75.4	113.0
61	62.2	49.8	74.6

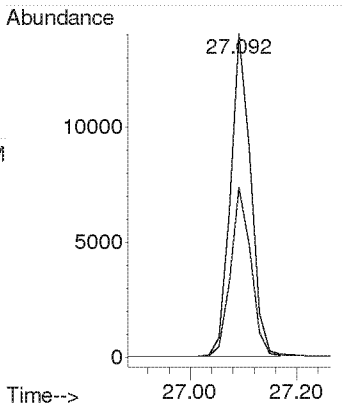


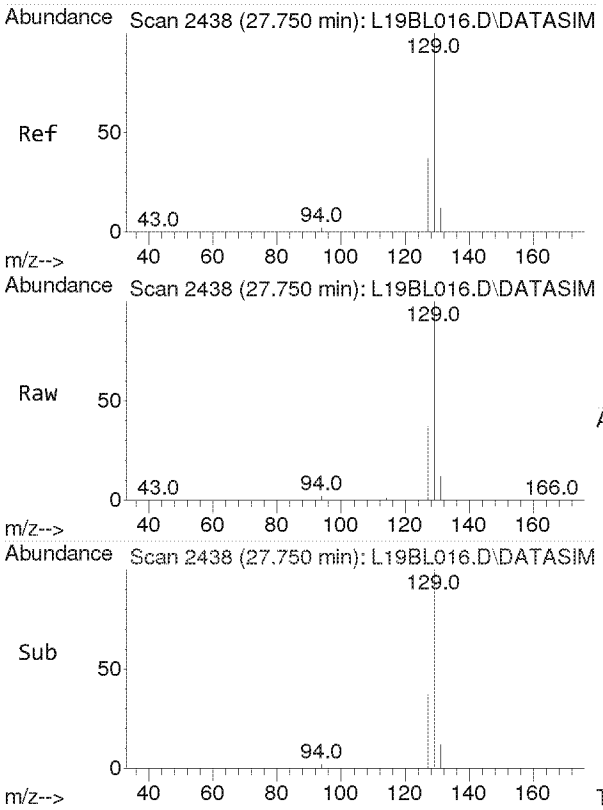


#44
Toluene
Concen: 2.570 ppbv
RT: 27.092 min Scan# 2402
Delta R.T. 0.000 min
Lab File: L19BL016.D
Acq: 12 Feb 2019 10:49 pm

Tgt Ion: 91 Resp: 37013

Ion	Ratio	Lower	Upper
91	100		
92	52.5	42.0	63.0

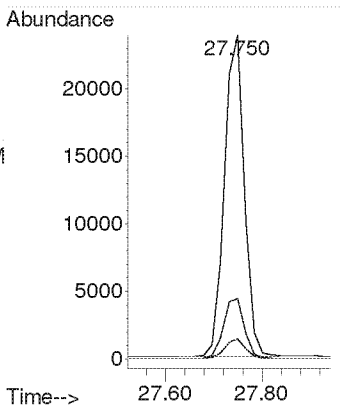


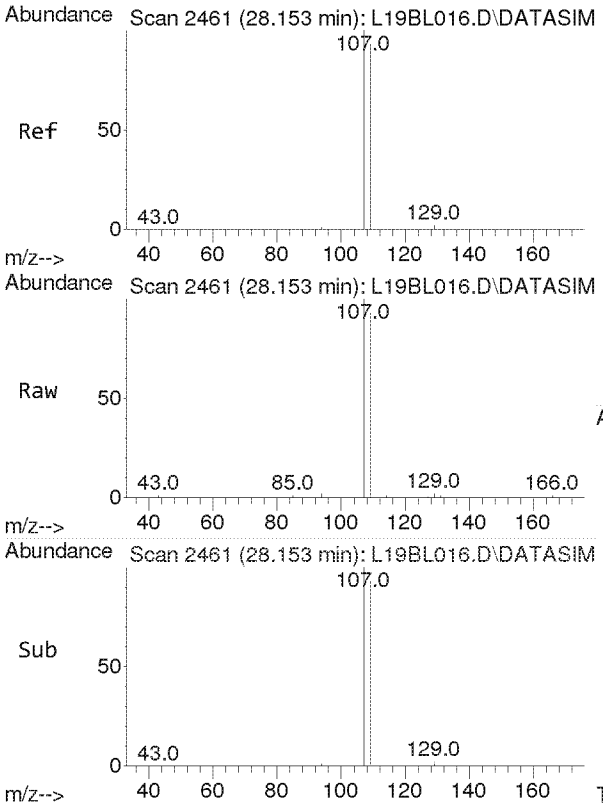


#45
Dibromochloromethane
Concen: 2.400 ppbv
RT: 27.750 min Scan# 2438
Delta R.T. 0.000 min
Lab File: L19BL016.D
Acq: 12 Feb 2019 10:49 pm

Tgt Ion:129 Resp: 67999

Ion	Ratio	Lower	Upper
129	100		
127	19.3	15.4	23.2
131	6.0	4.8	7.2

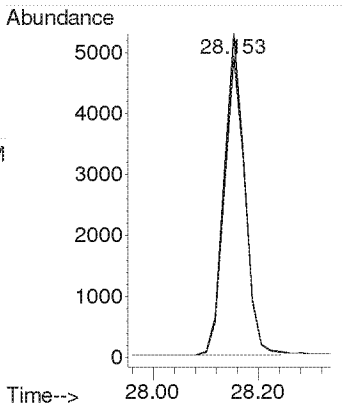


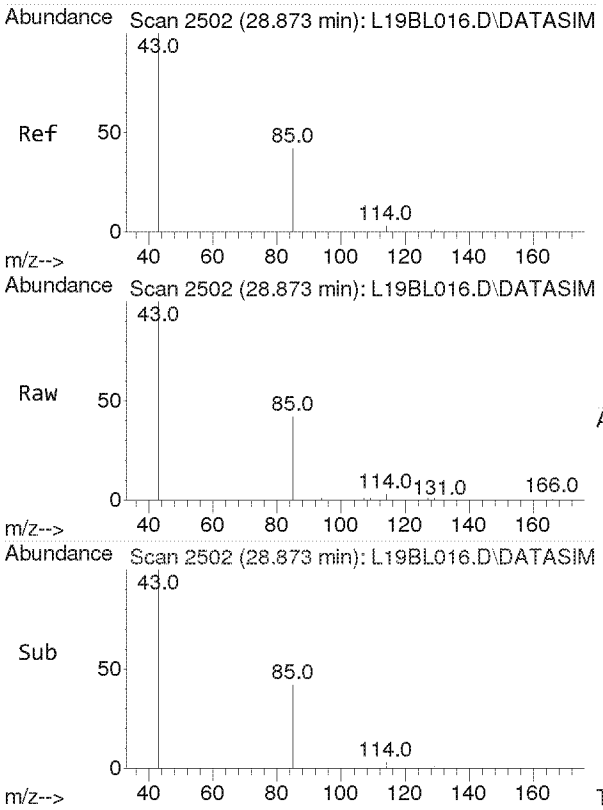


#46
1,2-Dibromoethane
Concen: 2.570 ppbv
RT: 28.153 min Scan# 2461
Delta R.T. 0.000 min
Lab File: L19BL016.D
Acq: 12 Feb 2019 10:49 pm

Tgt Ion:107 Resp: 14119

Ion	Ratio	Lower	Upper
107	100		
109	94.2	75.4	113.0

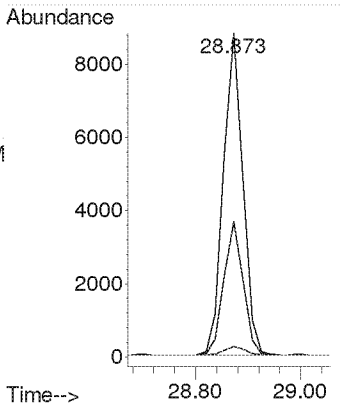


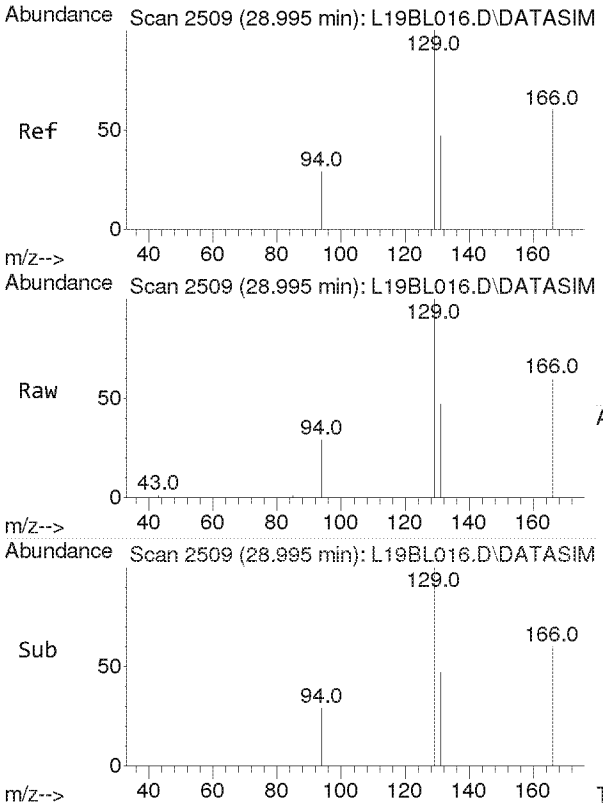


#47
n-Octane
Concen: 2.590 ppbv
RT: 28.873 min Scan# 2502
Delta R.T. 0.000 min
Lab File: L19BL016.D
Acq: 12 Feb 2019 10:49 pm

Tgt Ion: 43 Resp: 22513

Ion	Ratio	Lower	Upper
43	100		
85	41.3	33.0	49.6
114	2.8	2.2	3.4

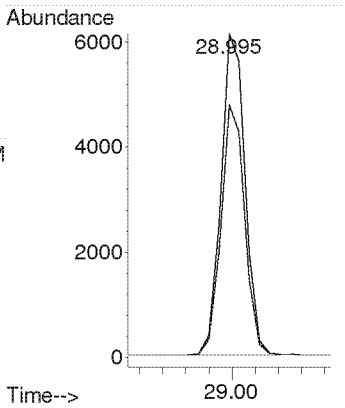


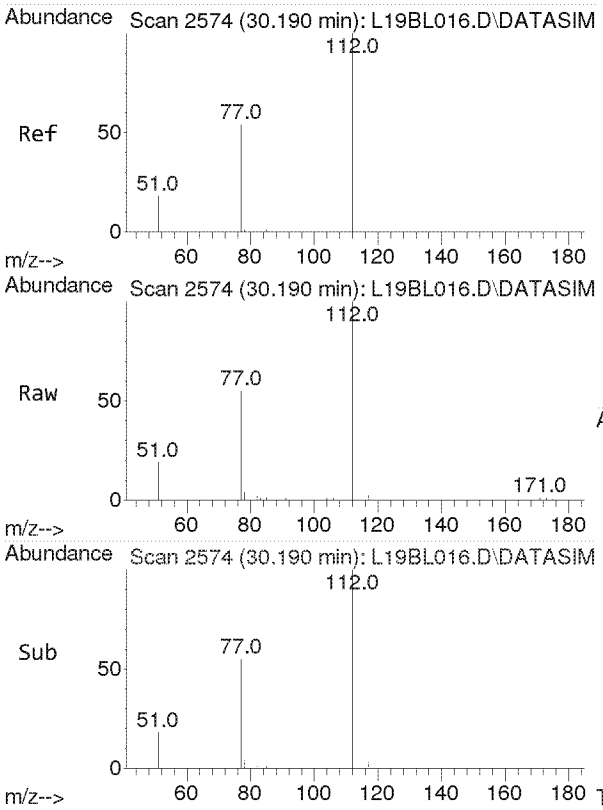


#48
Tetrachloroethylene
Concen: 2.580 ppbv
RT: 28.995 min Scan# 2509
Delta R.T. 0.000 min
Lab File: L19BL016.D
Acq: 12 Feb 2019 10:49 pm

Tgt Ion:166 Resp: 17711

Ion	Ratio	Lower	Upper
166	100		
131	76.9	61.5	92.3

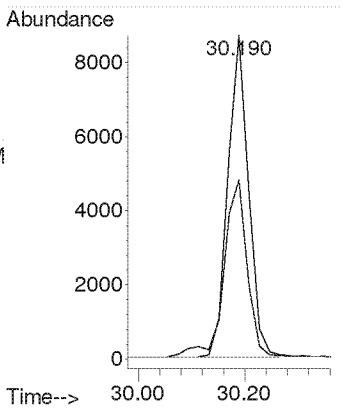


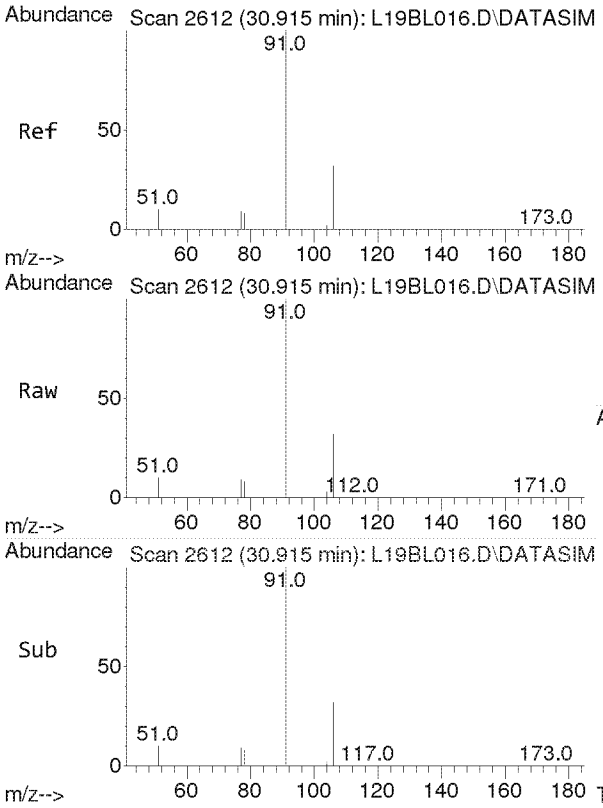


#49
Chlorobenzene
Concen: 2.560 ppbv
RT: 30.190 min Scan# 2574
Delta R.T. 0.000 min
Lab File: L19BL016.D
Acq: 12 Feb 2019 10:49 pm

Tgt Ion:112 Resp: 23670

Ion	Ratio	Lower	Upper
112	100		
77	59.7	47.8	71.6

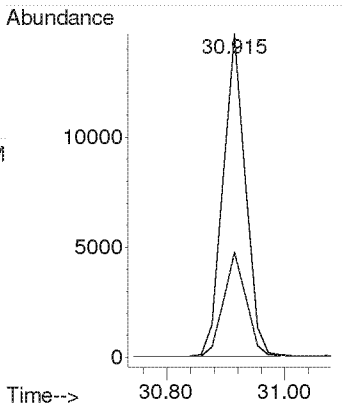


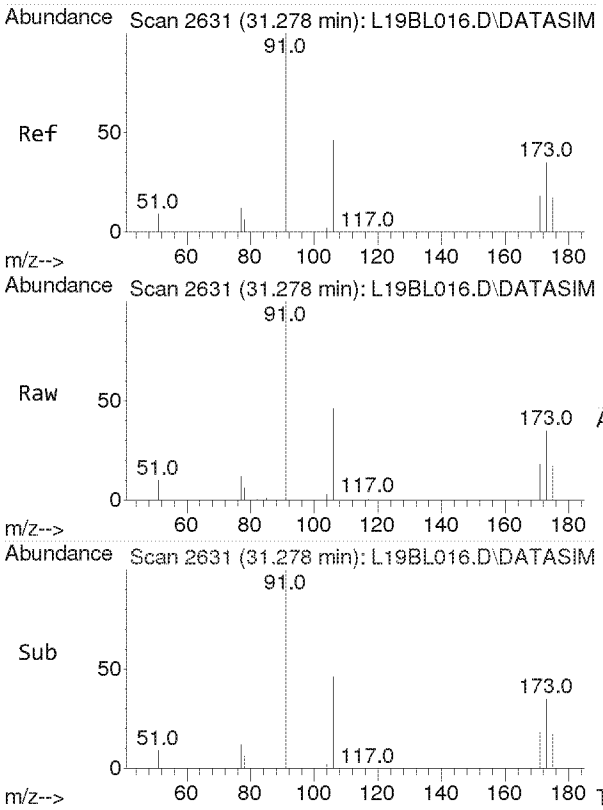


#50
Ethylbenzene
Concen: 2.540 ppbv
RT: 30.915 min Scan# 2612
Delta R.T. 0.000 min
Lab File: L19BL016.D
Acq: 12 Feb 2019 10:49 pm

Tgt Ion: 91 Resp: 38523

Ion	Ratio	Lower	Upper
91	100		
106	32.5	26.0	39.0

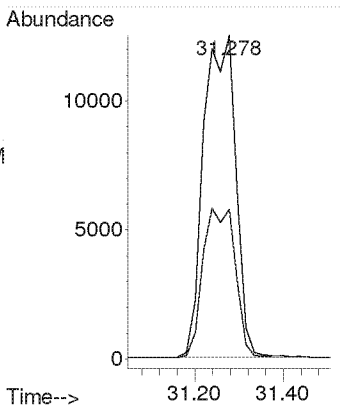


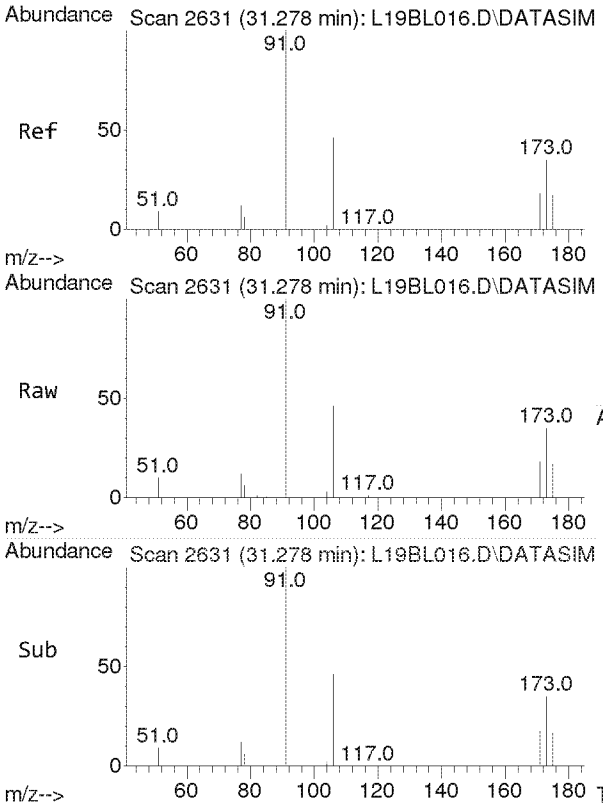


#51
m,p-Xylene
Concen: 4.860 ppbv
RT: 31.278 min Scan# 2631
Delta R.T. 0.000 min
Lab File: L19BL016.D
Acq: 12 Feb 2019 10:49 pm

Tgt Ion: 91 Resp: 62511

Ion	Ratio	Lower	Upper
91	100		
106	46.6	37.3	55.9

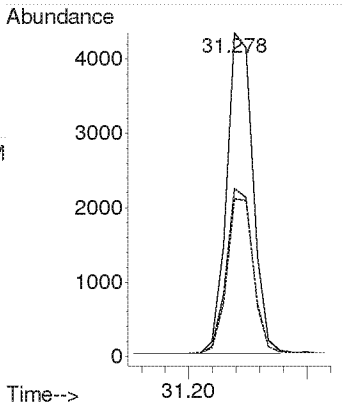


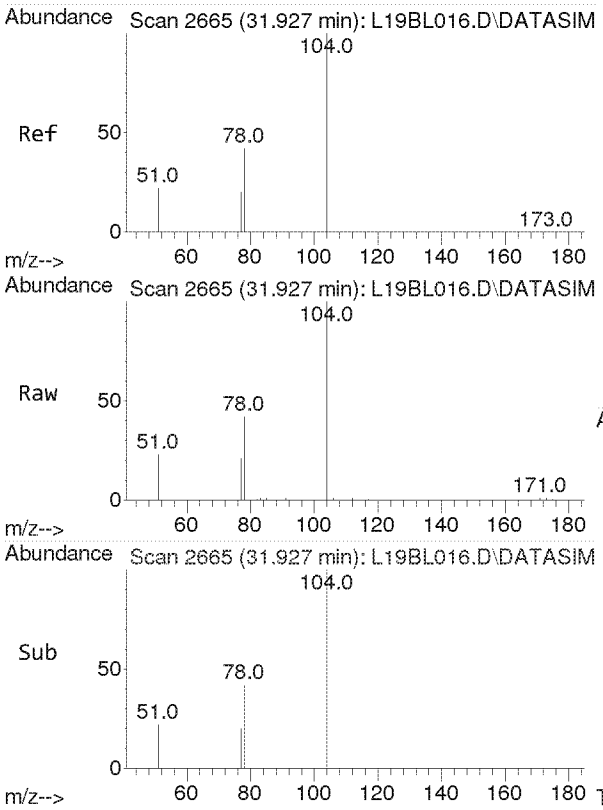


#52
Bromoform
Concen: 2.430 ppbv
RT: 31.278 min Scan# 2631
Delta R.T. 0.000 min
Lab File: L19BL016.D
Acq: 12 Feb 2019 10:49 pm

Tgt Ion:173 Resp: 13187

Ion	Ratio	Lower	Upper
173	100		
171	51.3	41.0	61.6
175	48.9	39.1	58.7

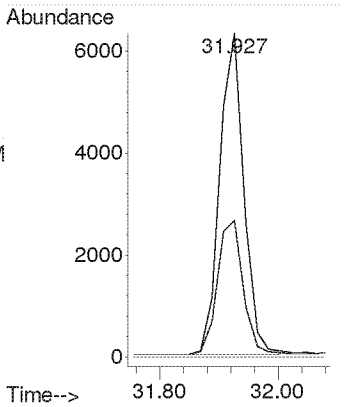


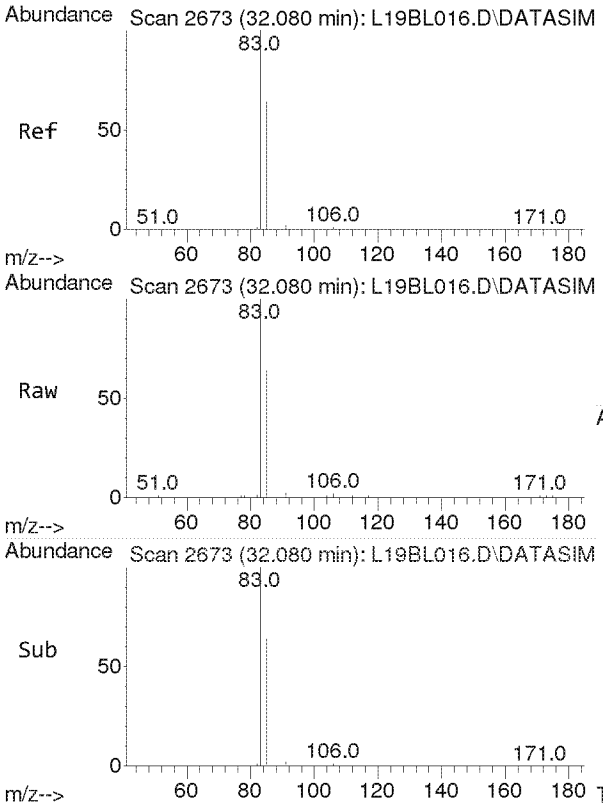


#53
Styrene
Concen: 2.460 ppbv
RT: 31.927 min Scan# 2665
Delta R.T. 0.000 min
Lab File: L19BL016.D
Acq: 12 Feb 2019 10:49 pm

Tgt Ion:104 Resp: 17806

Ion	Ratio	Lower	Upper
104	100		
78	44.3	35.4	53.2
103	0.0	0.0	0.0

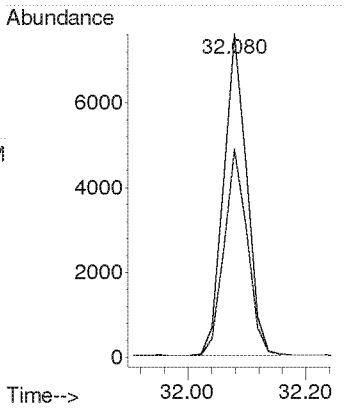


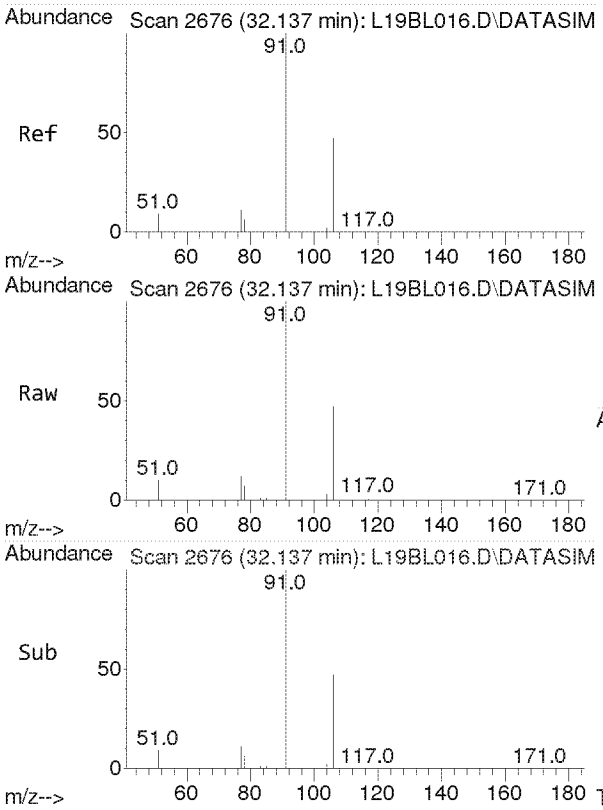


#54
1,1,2,2-Tetrachloroethane
Concen: 2.520 ppbv
RT: 32.080 min Scan# 2673
Delta R.T. 0.000 min
Lab File: L19BL016.D
Acq: 12 Feb 2019 10:49 pm

Tgt Ion: 83 Resp: 20508

Ion	Ratio	Lower	Upper
83	100		
85	64.5	51.6	77.4

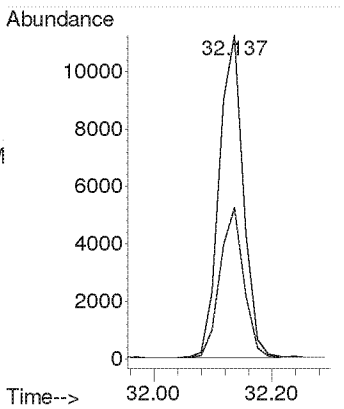


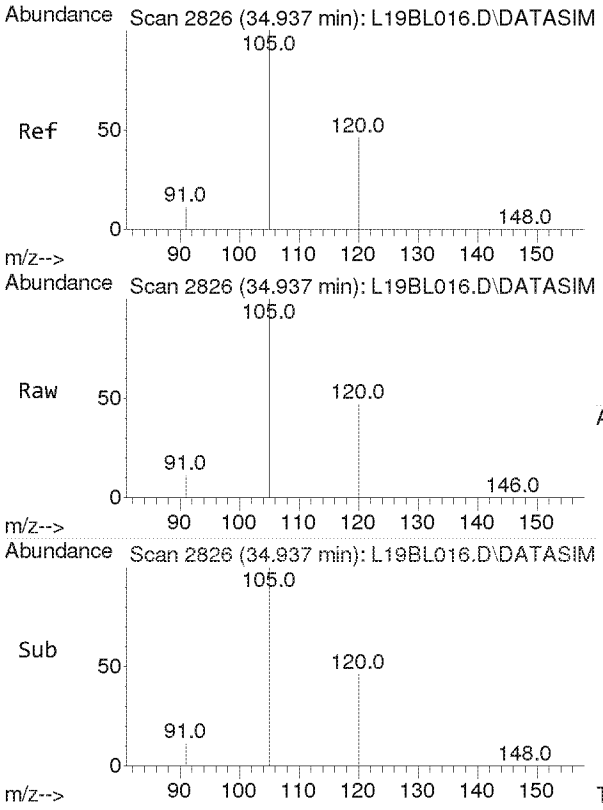


#55
o-Xylene
Concen: 2.520 ppbv
RT: 32.137 min Scan# 2676
Delta R.T. 0.000 min
Lab File: L19BL016.D
Acq: 12 Feb 2019 10:49 pm

Tgt Ion: 91 Resp: 31607

Ion	Ratio	Lower	Upper
91	100		
106	45.8	36.6	55.0

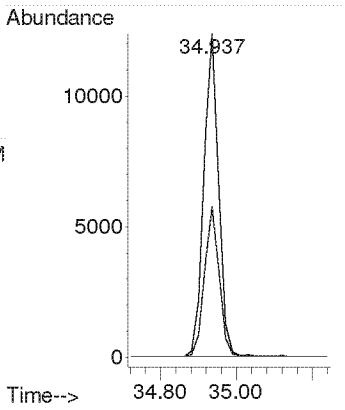


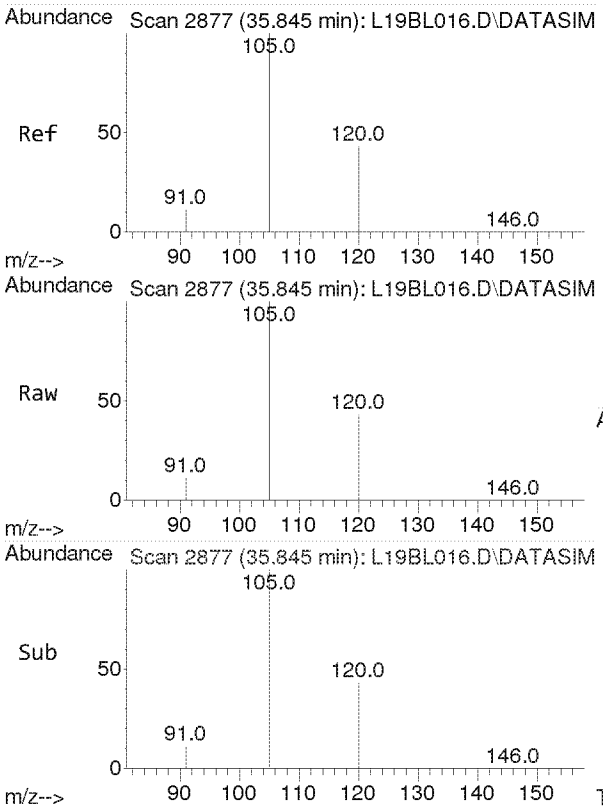


#56
1,3,5-Trimethylbenzene
Concen: 2.480 ppbv
RT: 34.937 min Scan# 2826
Delta R.T. 0.000 min
Lab File: L19BL016.D
Acq: 12 Feb 2019 10:49 pm

Tgt Ion:105 Resp: 33168

Ion	Ratio	Lower	Upper
105	100		
120	46.0	36.8	55.2

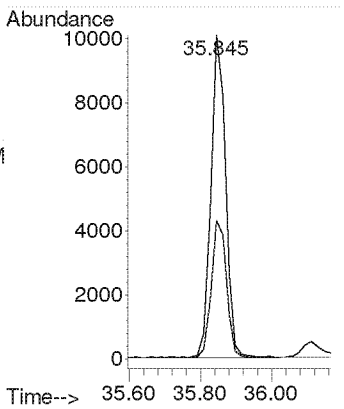


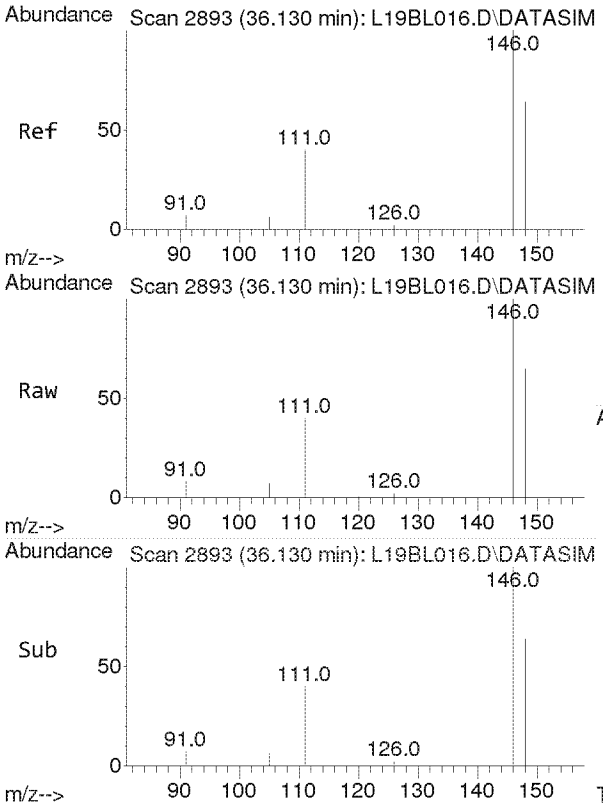


#57
1,2,4-Trimethylbenzene
Concen: 2.450 ppbv
RT: 35.845 min Scan# 2877
Delta R.T. 0.000 min
Lab File: L19BL016.D
Acq: 12 Feb 2019 10:49 pm

Tgt Ion:105 Resp: 28539

Ion	Ratio	Lower	Upper
105	100		
120	44.0	35.2	52.8

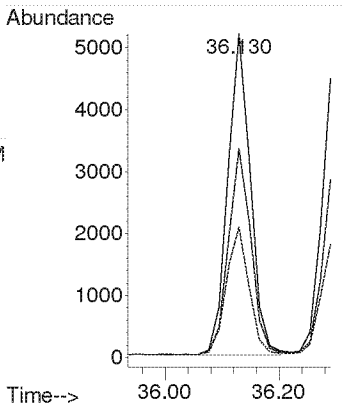


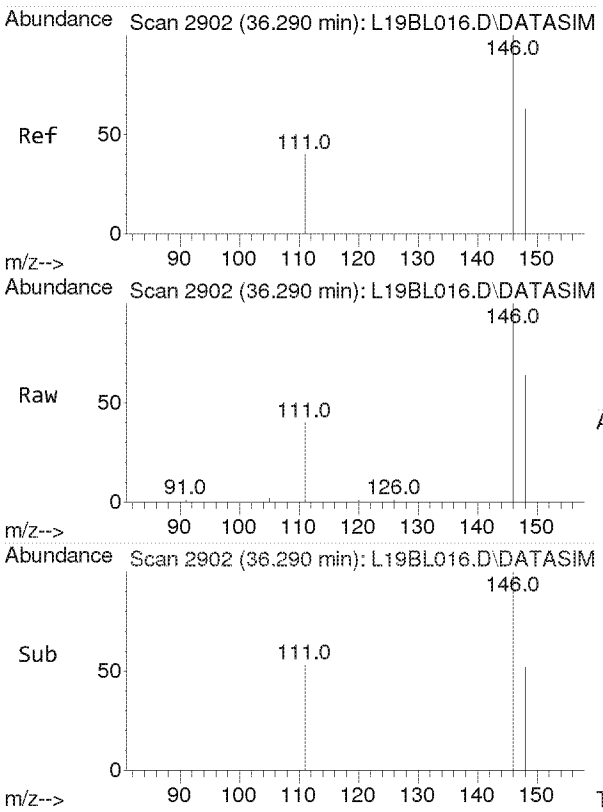


#58
m-Dichlorobenzene
Concen: 2.320 ppbv
RT: 36.130 min Scan# 2893
Delta R.T. 0.000 min
Lab File: L19BL016.D
Acq: 12 Feb 2019 10:49 pm

Tgt Ion:146 Resp: 14317

Ion	Ratio	Lower	Upper
146	100		
148	64.1	51.3	76.9
111	40.1	32.1	48.1

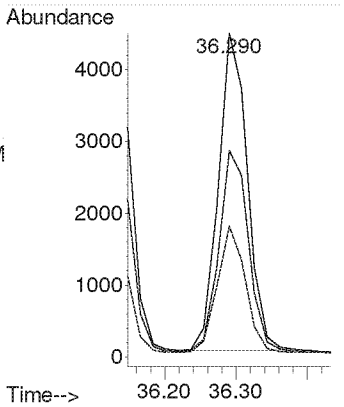


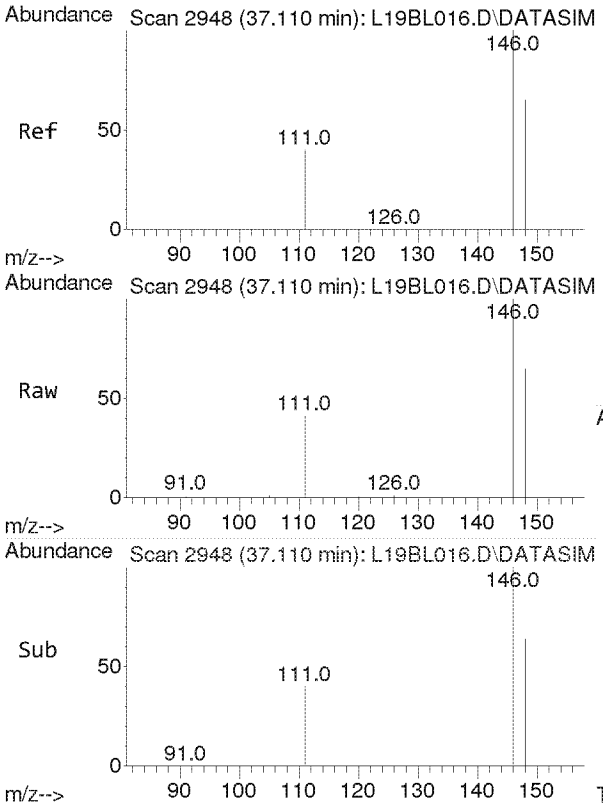


#59
p-Dichlorobenzene
Concen: 2.490 ppbv
RT: 36.290 min Scan# 2902
Delta R.T. 0.000 min
Lab File: L19BL016.D
Acq: 12 Feb 2019 10:49 pm

Tgt Ion:146 Resp: 12543

Ion	Ratio	Lower	Upper
146	100		
148	64.3	51.4	77.2
111	38.7	31.0	46.4

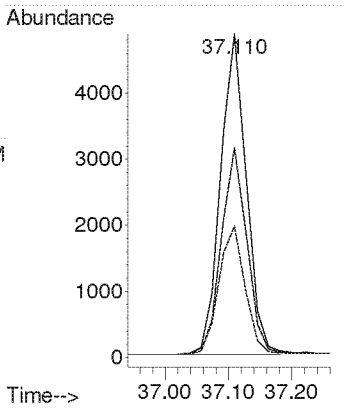


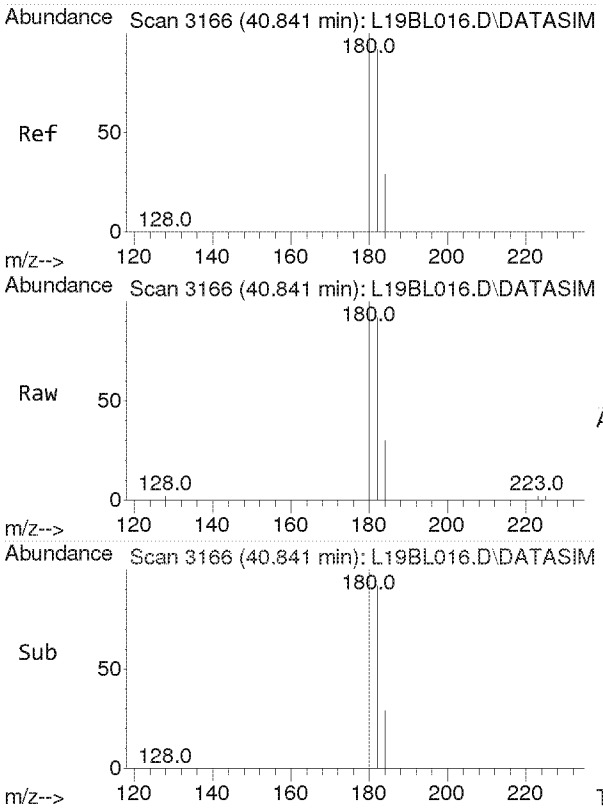


#60
o-Dichlorobenzene
Concen: 2.420 ppbv
RT: 37.110 min Scan# 2948
Delta R.T. 0.000 min
Lab File: L19BL016.D
Acq: 12 Feb 2019 10:49 pm

Tgt Ion:146 Resp: 13612

Ion	Ratio	Lower	Upper
146	100		
148	64.0	51.2	76.8
111	40.8	32.6	49.0

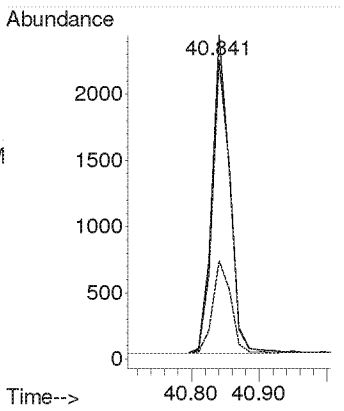


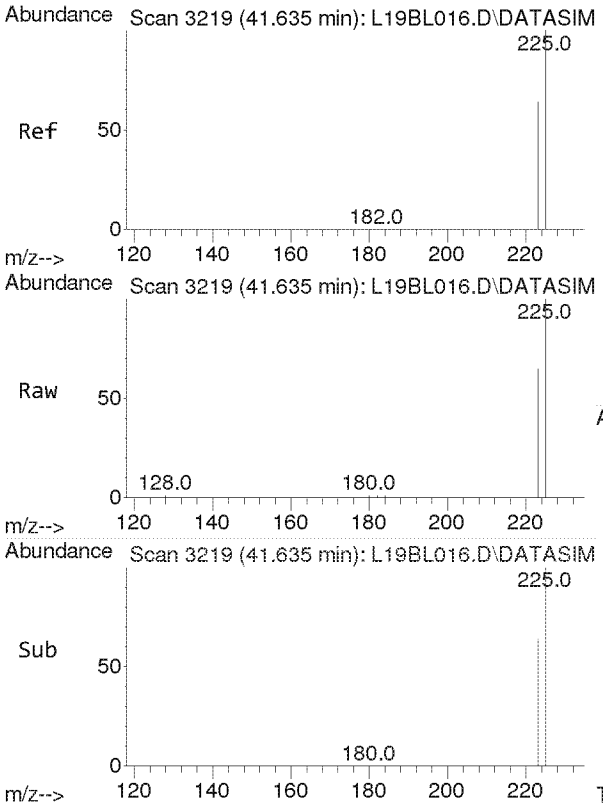


#61
1,2,4-Trichlorobenzene
Concen: 2.380 ppbv
RT: 40.841 min Scan# 3166
Delta R.T. 0.000 min
Lab File: L19BL016.D
Acq: 12 Feb 2019 10:49 pm

Tgt Ion:180 Resp: 4282

Ion	Ratio	Lower	Upper
180	100		
182	94.6	75.7	113.5
184	30.2	24.2	36.2

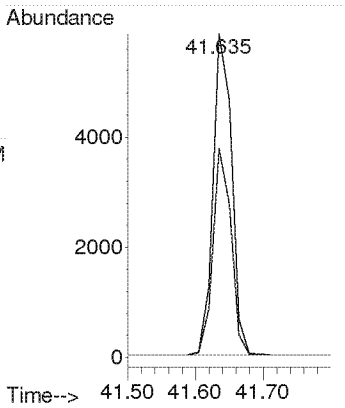




#62
Hexachloro-1,3-butadiene
Concen: 2.400 ppbv
RT: 41.635 min Scan# 3219
Delta R.T. 0.000 min
Lab File: L19BL016.D
Acq: 12 Feb 2019 10:49 pm

Tgt Ion:225 Resp: 11148

Ion	Ratio	Lower	Upper
225	100		
223	62.4	49.9	74.9



Analytical Standard Record
Eastern Research Group
9B12006

Description:	5.0 ppbv ICal	Expires:	03/14/19
Standard Type:	Calibration Stan	Prepared:	02/12/19
Solvent:	Scientific Air	Prepared By:	Mitch Howell
Final Volume (mls):	6000	Department:	Air Toxics
Vials:	1	Last Edit:	02/12/19 08:45 by MH

canister# 3238

Analyte	CAS Number	Concentration	Units
1,1,1-Trichloroethane	71-55-6	0.00491	ppmv
1,1,2,2-Tetrachloroethane	79-34-5	0.00505	ppmv
1,1,2-Trichloroethane	79-00-5	0.00507	ppmv
1,1-Dichloroethane	75-34-3	0.00512	ppmv
1,1-Dichloroethene	75-35-4	0.00544	ppmv
1,2,4-Trichlorobenzene	120-82-1	0.00475	ppmv
1,2,4-Trimethylbenzene	95-63-6	0.0049	ppmv
1,2-Dibromoethane	106-93-4	0.00514	ppmv
1,2-Dichloroethane	107-06-2	0.00517	ppmv
1,2-Dichloropropane	78-87-5	0.00503	ppmv
1,3,5-Trimethylbenzene	108-67-8	0.00496	ppmv
1,3-Butadiene	106-99-0	0.00496	ppmv
Acetonitrile	75-05-8	0.00458	ppmv
Acetylene	74-86-2	0.00456	ppmv
Acrolein	107-02-8	0.004	ppmv
Acrylonitrile	107-13-1	0.00476	ppmv
Benzene	71-43-2	0.00546	ppmv
Bromochloromethane	74-97-5	0.0051	ppmv
Bromodichloromethane	75-27-4	0.0048	ppmv
Bromoform	75-25-2	0.00486	ppmv
Bromomethane	74-83-9	0.00505	ppmv
Carbon Disulfide	75-15-0	0.00505	ppmv
Carbon Tetrachloride	56-23-5	0.00558	ppmv
Chlorobenzene	108-90-7	0.00513	ppmv
Chloroethane	75-00-3	0.00505	ppmv
Chloroform	67-66-3	0.00509	ppmv
Chloromethane	74-87-3	0.00502	ppmv
Chloroprene	126-99-8	0.00515	ppmv
cis-1,2-Dichloroethylene	156-59-2	0.00514	ppmv
cis-1,3-Dichloropropene	10061-01-5	0.005	ppmv

Reviewed By 2-14-19 Date

Analytical Standard Record
Eastern Research Group
9B12006

Dibromochloromethane	124-48-1	0.0048	ppmv
Dichlorodifluoromethane	75-71-8	0.00492	ppmv
Dichloromethane	75-09-2	0.0054	ppmv
Dichlorotetrafluoroethane	76-14-2	0.00555	ppmv
Ethyl Acrylate	140-88-5	0.00489	ppmv
Ethyl tert-Butyl Ether	637-92-3	0.0047	ppmv
Ethylbenzene	100-41-4	0.00507	ppmv
Ethylene oxide	75-21-8	0.00492	ppmv
Hexachloro-1,3-butadiene	87-68-3	0.00481	ppmv
m,p-Xylene	108-38-3, 106-42-3	0.00972	ppmv
m-Dichlorobenzene	541-73-1	0.00463	ppmv
Methyl Isobutyl Ketone	108-10-1	0.00457	ppmv
Methyl Methacrylate	80-62-6	0.00475	ppmv
Methyl tert-Butyl Ether	1634-04-4	0.00475	ppmv
n-Octane	111-65-9	0.00518	ppmv
o-Dichlorobenzene	95-50-1	0.00483	ppmv
o-Xylene	95-47-6	0.00505	ppmv
p-Dichlorobenzene	106-46-7	0.00498	ppmv
Propylene	115-07-1	0.00484	ppmv
Styrene	100-42-5	0.00491	ppmv
tert-Amyl Methyl Ether	994-05-8	0.00483	ppmv
Tetrachloroethylene	127-18-4	0.00515	ppmv
Toluene	108-88-3	0.00514	ppmv
trans-1,2-Dichloroethylene	156-60-5	0.00501	ppmv
trans-1,3-Dichloropropene	10061-02-6	0.00493	ppmv
Trichloroethylene	79-01-6	0.0048	ppmv
Trichlorofluoromethane	75-69-4	0.00466	ppmv
Trichlorotrifluoroethane	76-13-1	0.00518	ppmv
Vinyl chloride	75-01-4	0.00513	ppmv

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
8K20014	TO-15 Primary Primary Stock Stan	11/20/18	Mitch Howell	10/26/19	11/26/18 09:26 by MH	60
8L18003	Ethylene Oxide Stock Standard	12/06/18	** Vendor **	12/06/19	12/18/18 10:28 by MH	30

Reviewed By — Date 1-14-19

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\L19BL\
Data File : L19BL017.D
Acq On : 12 Feb 2019 11:51 pm
Operator : MAH
Sample : 1902030-CAL5
Misc : 80 ML 8L13001,9B12006
ALS Vial : 17 Sample Multiplier: 1

2-14-19

Quant Time: Feb 13 06:40:57 2019
Quant Method : C:\msdchem\1\METHODS\9020003.M
Quant Title : TO-15 by Selective Ion Analysis
QLast Update : Wed Feb 13 06:40:07 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) IS-Hexane-d14	19.991	66	49407	4.7700	ppbv	0.00
29) IS-1,4-Difluorobenzene	23.149	114	119248	4.9900	ppbv	0.00
43) IS-Chlorobenzene-d5	30.114	117	88096	4.7400	ppbv	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Acetylene	5.406	26	18169	4.5876	ppbv	100
3) Propylene	7.823	41	24003	4.9068	ppbv	100
4) Dichlorodifluoromethane	8.685	85	116639	5.0050	ppbv	100
5) Chloromethane	9.740	50	30176	5.0907	ppbv	100
6) Dichlorotetrafluoroethane	10.847	85	115307	5.6477	ppbv	100
7) Vinyl Chloride	11.102	62	35252	5.2086	ppbv	100
8) 1,3-Butadiene	11.783	54	23731	5.1268	ppbv	100
9) Ethylene oxide	12.363	29	14266	4.9839	ppbv	98
10) Bromomethane	12.588	94	32993	5.1236	ppbv	100
11) Chloroethane	13.266	64	14228	5.3419	ppbv	100
12) Acetonitrile	14.309	41	21929	5.0445	ppbv	98
13) Acrolein	14.611	56	9307	4.2420	ppbv	99
14) Trichlorofluoromethane	15.191	101	91858	4.6137	ppbv	100
15) Acrylonitrile	15.910	53	18164	5.1567	ppbv	100
16) 1,1-Dichloroethene	16.420	61	48853	5.6252	ppbv	99
17) Methylene Chloride	16.721	49	33083	5.8362	ppbv	99
18) Carbon Disulfide	16.930	76	91327	5.1820	ppbv	100
19) Trichlorotrifluoroethane	17.278	101	69763	5.2640	ppbv	99
20) trans-1,2-Dichloroethy...	18.313	96	25632	5.3192	ppbv	100
21) 1,1-Dichloroethane	18.630	63	43426	5.3635	ppbv	100
22) Methyl tert-Butyl Ether	18.789	73	67946	5.0909	ppbv	100
23) Chloroprene	19.537	53	35939	5.4222	ppbv	100
24) cis-1,2-Dichloroethylene	19.945	61	34841	5.4923	ppbv	199
25) Bromochloromethane	20.172	128	18717	5.4157	ppbv	199
26) Chloroform	20.399	83	50312	5.3474	ppbv	100
27) Ethyl tert-Butyl Ether	21.182	59	65976	5.1216	ppbv	100
28) 1,2-Dichloroethane	21.476	62	31907	5.5763	ppbv	100
30) 1,1,1-Trichloroethane	21.867	97	45865	5.3221	ppbv	99
31) Benzene	22.533	78	71427	5.7547	ppbv	100
32) Carbon Tetrachloride	22.768	117	54901	5.9228	ppbv	100
33) tert-Amyl Methyl Ether	23.499	73	56087	5.3292	ppbv	100
34) 1,2-Dichloropropane	23.788	63	26012	5.4354	ppbv	99
35) Ethyl Acrylate	23.870	55	23572	5.9889	ppbv	100
36) Bromodichloromethane	24.076	83	43440	5.2001	ppbv	100
37) Trichloroethylene	24.179	130	30310	5.0941	ppbv	100
38) Methyl Methacrylate	24.530	41	66902	5.6438	ppbv	100
39) cis-1,3-Dichloropropene	25.528	75	22807	5.6051	ppbv	99
40) Methyl Isobutyl Ketone	25.605	43	46479	5.3570	ppbv	100
41) trans-1,3-Dichloropropene	26.367	75	15222	5.4853	ppbv	99
42) 1,1,2-Trichloroethane	26.615	97	23880	5.4949	ppbv	100
44) Toluene	27.092	91	79697	5.5420	ppbv	100
45) Dibromochloromethane	27.750	129	146719	5.1861	ppbv	100
46) 1,2-Dibromoethane	28.153	107	29740	5.4215	ppbv	100
47) n-Octane	28.873	43	49622	5.7172	ppbv	100
48) Tetrachloroethylene	28.995	166	36947	5.3902	ppbv	100
49) Chlorobenzene	30.190	112	51329	5.5597	ppbv	98
50) Ethylbenzene	30.915	91	86487	5.7110	ppbv	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\L19BL\
Data File : L19BL017.D
Acq On : 12 Feb 2019 11:51 pm
Operator : MAH
Sample : 1902030-CAL5
Misc : 80 ML 8L13001,9B12006
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Feb 13 06:40:57 2019
Quant Method : C:\msdchem\1\METHODS\9020003.M
Quant Title : TO-15 by Selective Ion Analysis
QLast Update : Wed Feb 13 06:40:07 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
51) m,p-Xylene	31.278	91	141787	11.0398	ppbv		100
52) Bromoform	31.297	173	29403	5.4262	ppbv		100
53) Styrene	31.927	104	41021	5.6757	ppbv	#	99
54) 1,1,2,2-Tetrachloroethane	32.080	83	46023	5.6637	ppbv		100
55) o-Xylene	32.137	91	70984	5.6679	ppbv		99
56) 1,3,5-Trimethylbenzene	34.937	105	75334	5.6412	ppbv		99
57) 1,2,4-Trimethylbenzene	35.845	105	64478	5.5435	ppbv		100
58) m-Dichlorobenzene	36.130	146	31559	5.1216	ppbv		100
59) p-Dichlorobenzene	36.291	146	27370	5.4415	ppbv		100
60) o-Dichlorobenzene	37.110	146	29877	5.3196	ppbv		100
61) 1,2,4-Trichlorobenzene	40.841	180	11979	6.6680	ppbv		100
62) Hexachloro-1,3-butadiene	41.635	225	29016	6.2560	ppbv		100

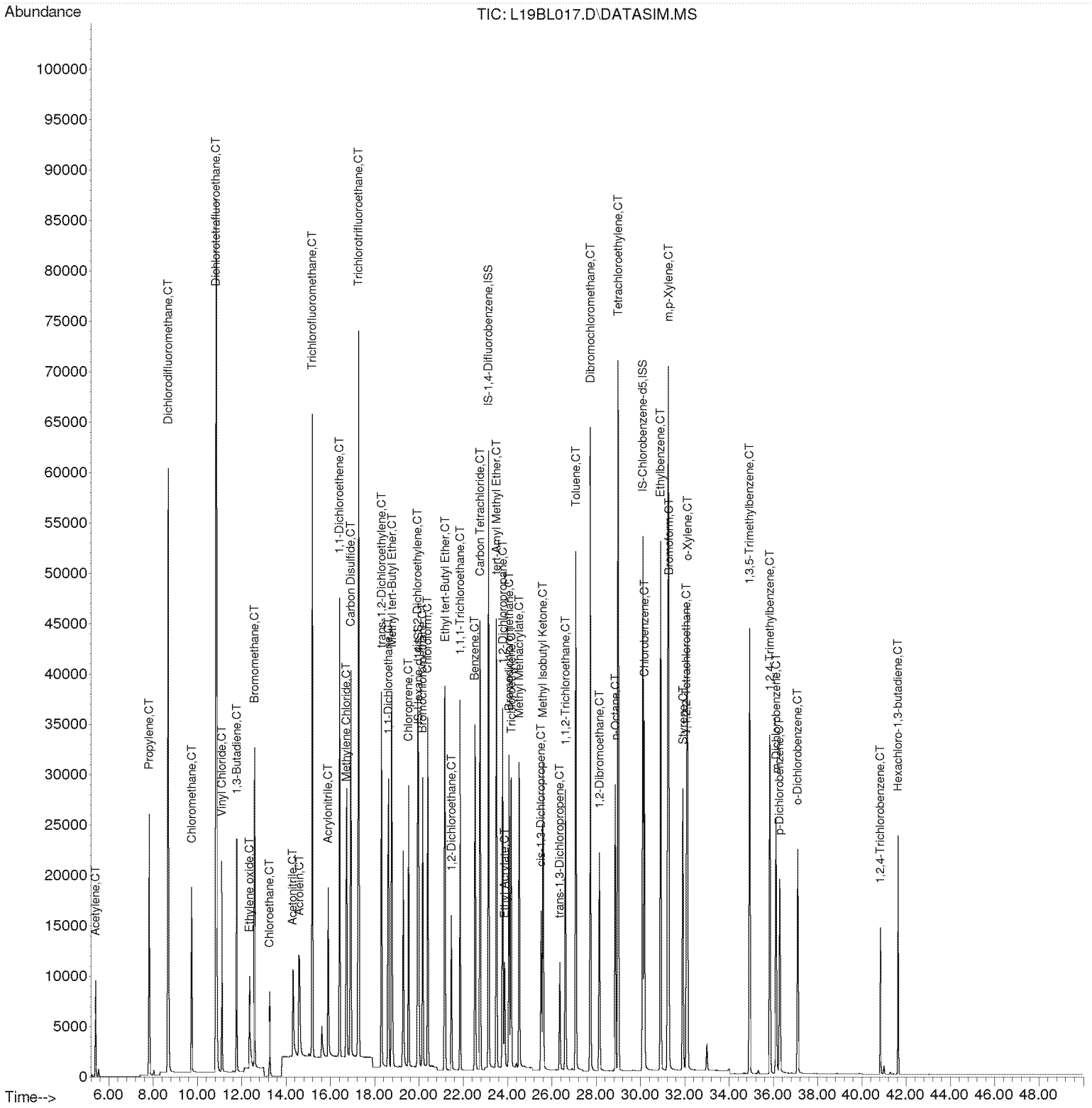
(#) = qualifier out of range (m) = manual integration (+) = signals summed

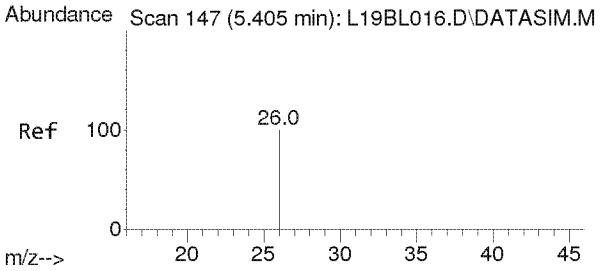
ED_002475_00000354-00191

Quantitation Report (QT Reviewed)

Data Path : Y:\MASS SPEC 1 DATA\L19BL\
Data File : L19BL017.D
Acq On : 12 Feb 2019 11:51 pm
Operator : MAH
Sample : 1902030-CAL5
Misc : 80 ML 8L13001,9B12006
ALS Vial : 17 Sample Multiplier: 1

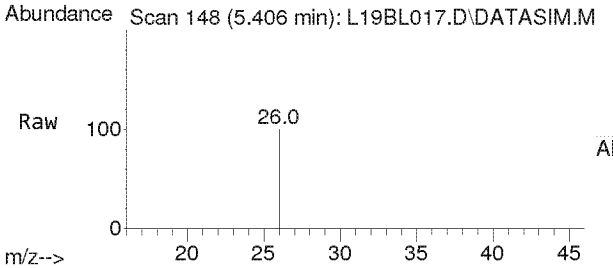
Quant Time: Feb 13 06:40:57 2019
Quant Method : C:\msdchem\1\METHODS\9020003.M
Quant Title : TO-15 by Selective Ion Analysis
QLast Update : Wed Feb 13 06:40:07 2019
Response via : Initial Calibration

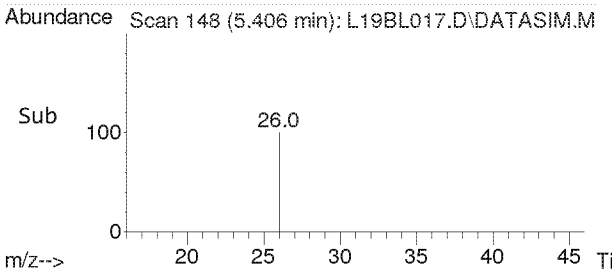


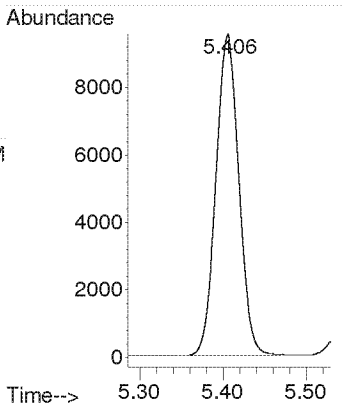


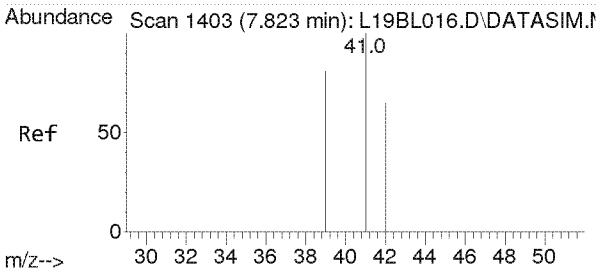
#2
Acetylene
Concen: 4.588 ppbv
RT: 5.406 min Scan# 148
Delta R.T. 0.002 min
Lab File: L19BL017.D
Acq: 12 Feb 2019 11:51 pm

Tgt Ion: 26 Resp: 18169





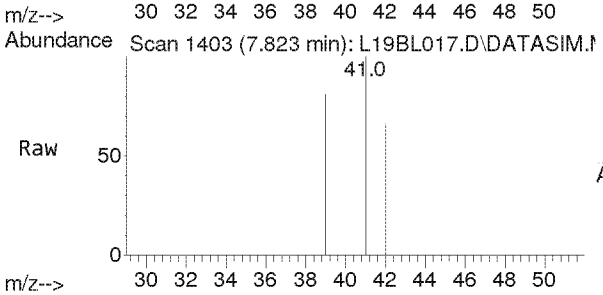


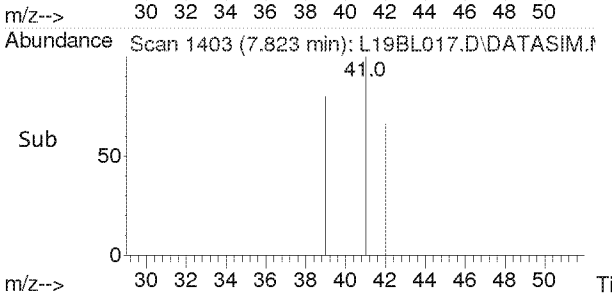


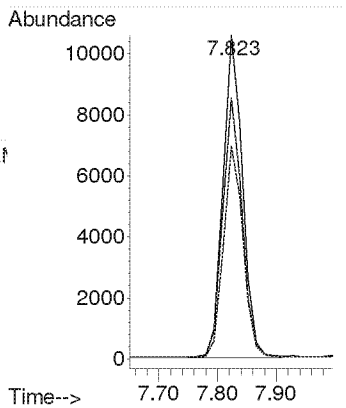
#3
Propylene
Concen: 4.907 ppbv
RT: 7.823 min Scan# 1403
Delta R.T. 0.000 min
Lab File: L19BL017.D
Acq: 12 Feb 2019 11:51 pm

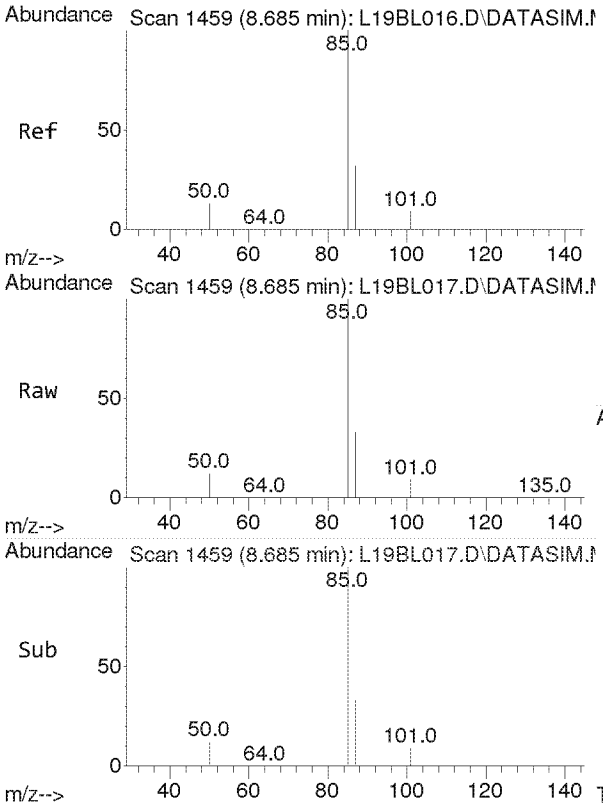
Tgt Ion: 41 Resp: 24003

Ion	Ratio	Lower	Upper
41	100		
39	79.9	64.2	96.2
42	66.2	52.6	79.0





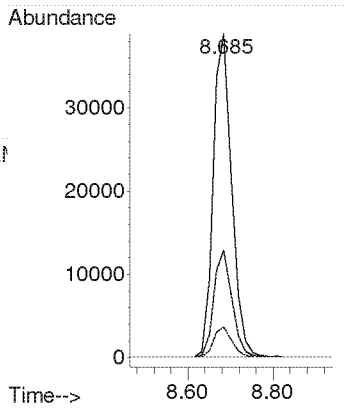


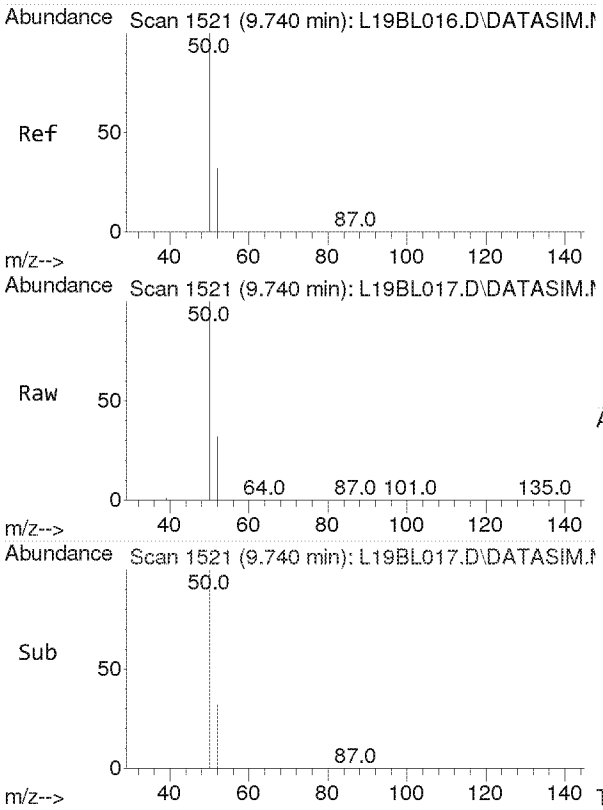


#4
Dichlorodifluoromethane
Concen: 5.005 ppbv
RT: 8.685 min Scan# 1459
Delta R.T. 0.000 min
Lab File: L19BL017.D
Acq: 12 Feb 2019 11:51 pm

Tgt Ion: 85 Resp: 116639

Ion	Ratio	Lower	Upper
85	100		
87	32.4	26.0	39.0
101	9.0	7.3	10.9

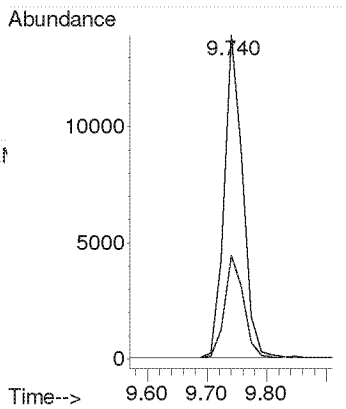


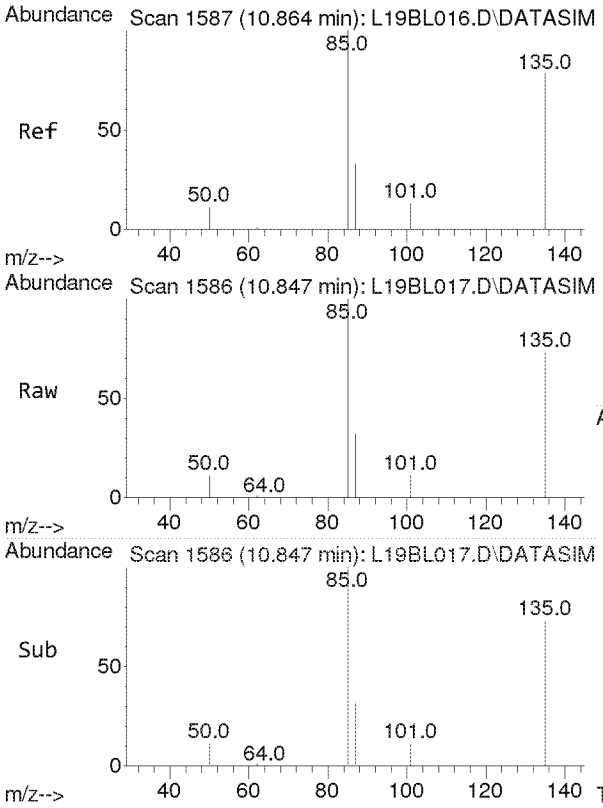


#5
Chloromethane
Concen: 5.091 ppbv
RT: 9.740 min Scan# 1521
Delta R.T. 0.000 min
Lab File: L19BL017.D
Acq: 12 Feb 2019 11:51 pm

Tgt Ion: 50 Resp: 30176

Ion	Ratio	Lower	Upper
50	100		
52	32.4	26.1	39.1

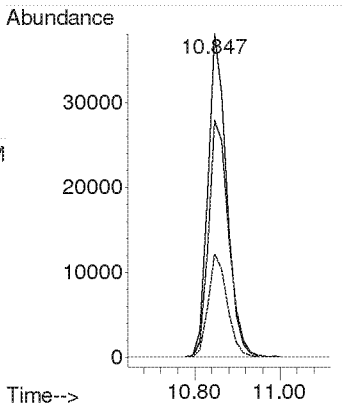


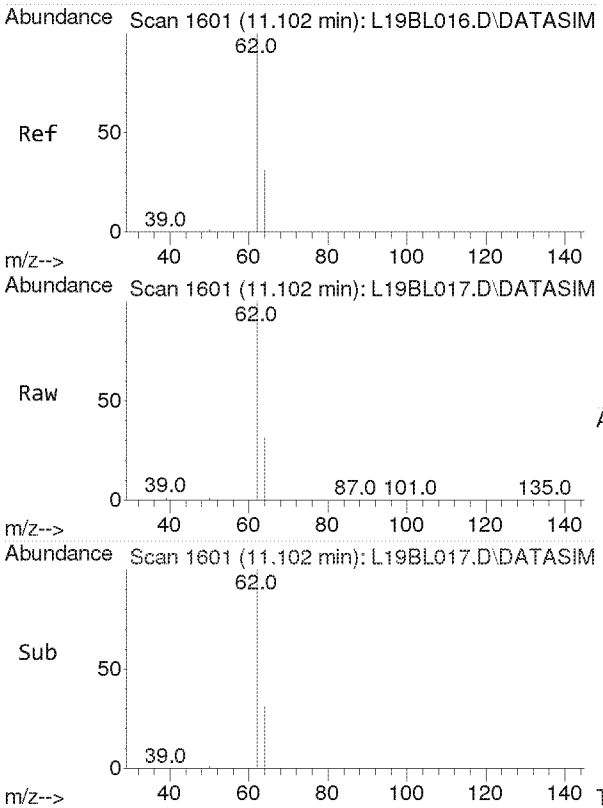


#6
Dichlorotetrafluoroethane
Concen: 5.648 ppbv
RT: 10.847 min Scan# 1586
Delta R.T. -0.017 min
Lab File: L19BL017.D
Acq: 12 Feb 2019 11:51 pm

Tgt Ion: 85 Resp: 115307

Ion	Ratio	Lower	Upper
85	100		
135	79.2	63.2	94.8
87	32.3	25.9	38.9

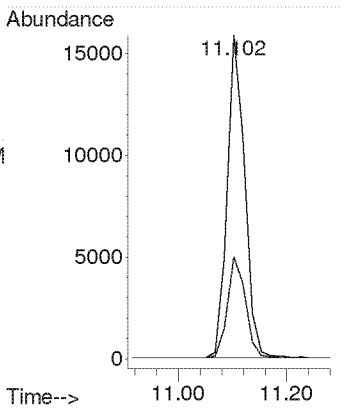


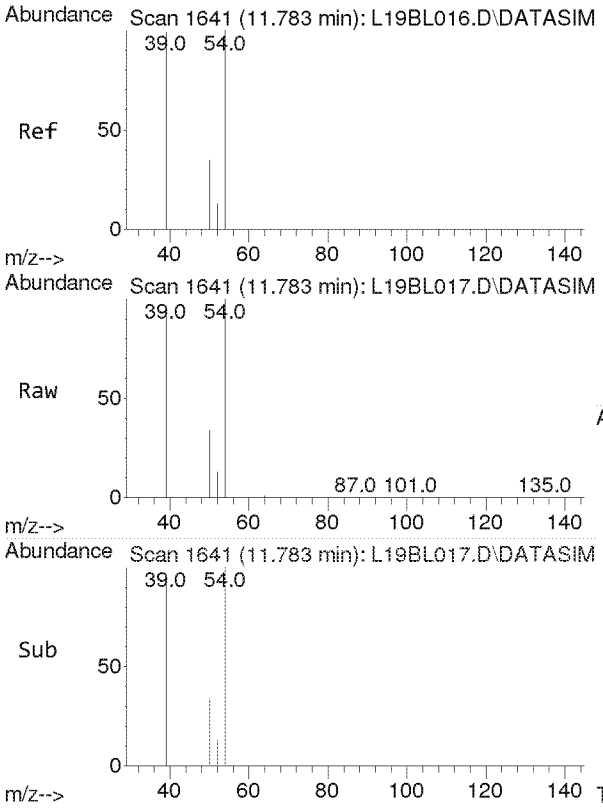


#7
Vinyl Chloride
Concen: 5.209 ppbv
RT: 11.102 min Scan# 1601
Delta R.T. 0.000 min
Lab File: L19BL017.D
Acq: 12 Feb 2019 11:51 pm

Tgt Ion: 62 Resp: 35252

Ion	Ratio	Lower	Upper
62	100		
64	31.9	25.4	38.0

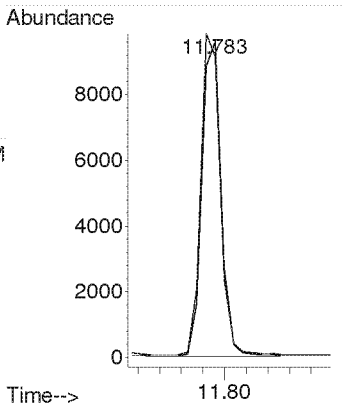


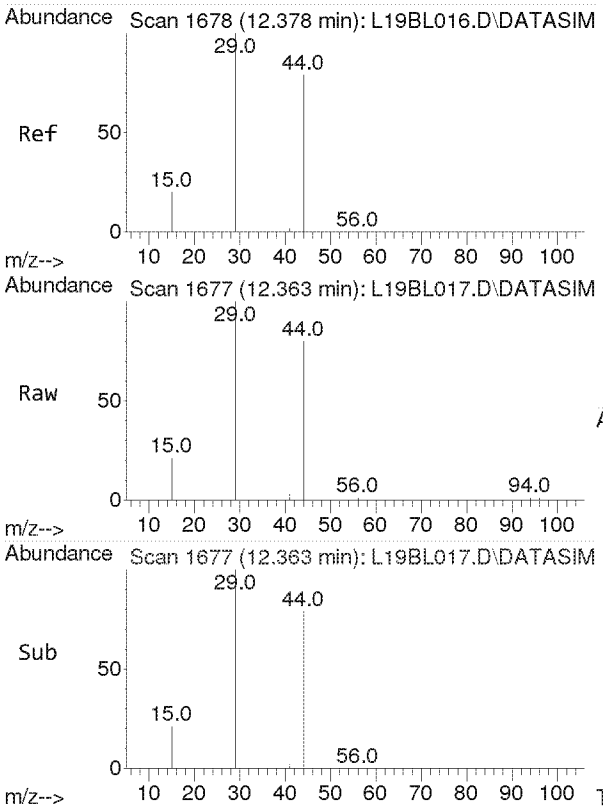


#8
1,3-Butadiene
Concen: 5.127 ppbv
RT: 11.783 min Scan# 1641
Delta R.T. 0.000 min
Lab File: L19BL017.D
Acq: 12 Feb 2019 11:51 pm

Tgt Ion: 54 Resp: 23731

Ion	Ratio	Lower	Upper
54	100		
39	102.5	81.6	122.4

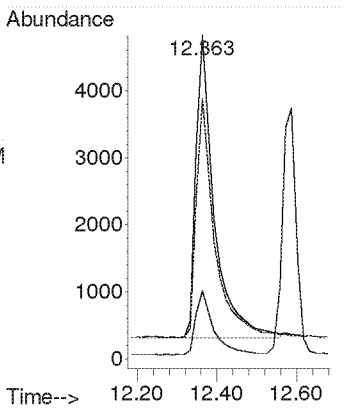


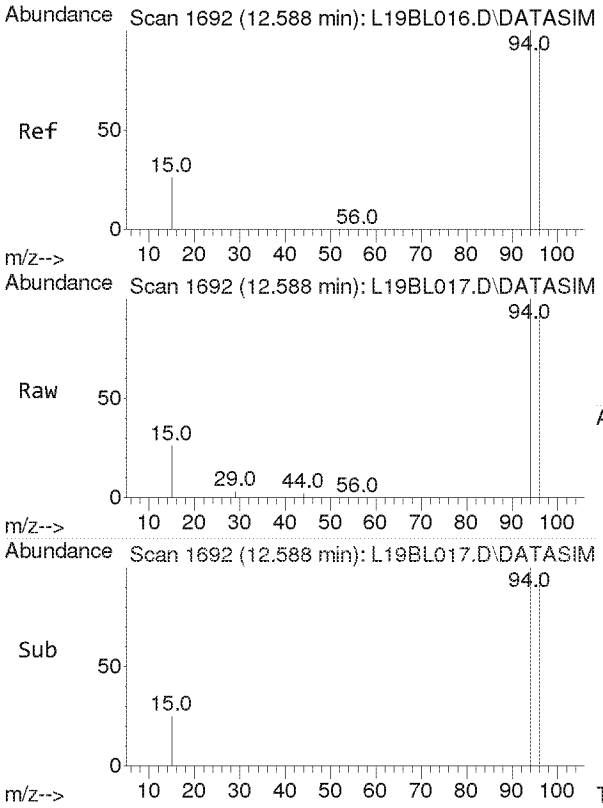


#9
Ethylene oxide
Concen: 4.984 ppbv
RT: 12.363 min Scan# 1677
Delta R.T. -0.015 min
Lab File: L19BL017.D
Acq: 12 Feb 2019 11:51 pm

Tgt Ion: 29 Resp: 14266

Ion	Ratio	Lower	Upper
29	100		
15	20.6	16.0	24.0
44	79.9	65.4	98.2

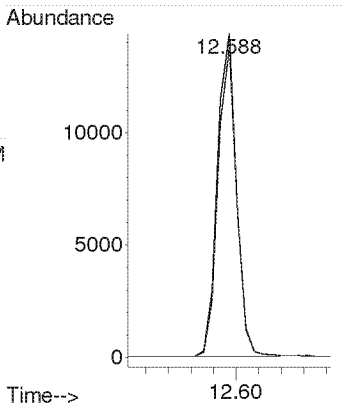


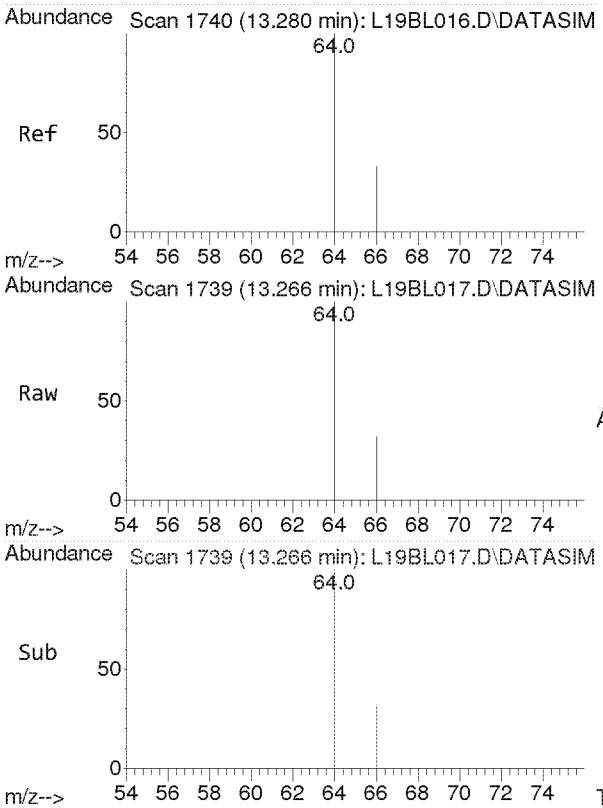


#10
Bromomethane
Concen: 5.124 ppbv
RT: 12.588 min Scan# 1692
Delta R.T. 0.000 min
Lab File: L19BL017.D
Acq: 12 Feb 2019 11:51 pm

Tgt Ion: 94 Resp: 32993

Ion	Ratio	Lower	Upper
94	100		
96	94.6	75.5	113.3

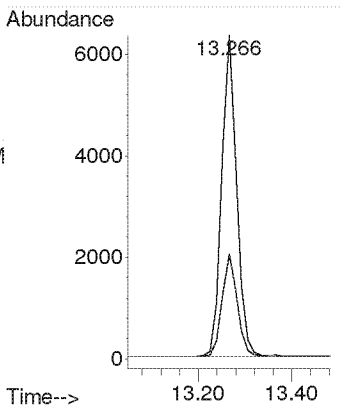


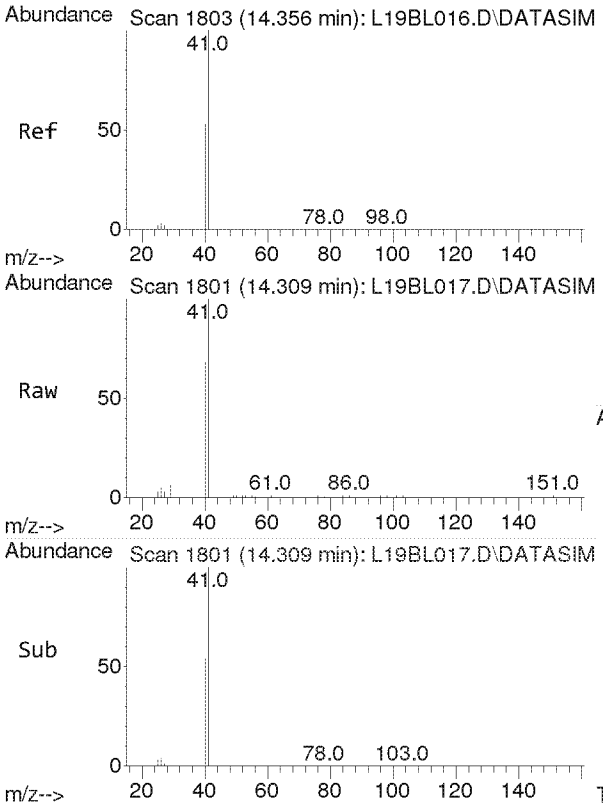


#11
Chloroethane
Concen: 5.342 ppbv
RT: 13.266 min Scan# 1739
Delta R.T. -0.014 min
Lab File: L19BL017.D
Acq: 12 Feb 2019 11:51 pm

Tgt Ion: 64 Resp: 14228

Ion	Ratio	Lower	Upper
64	100		
66	32.0	25.8	38.6

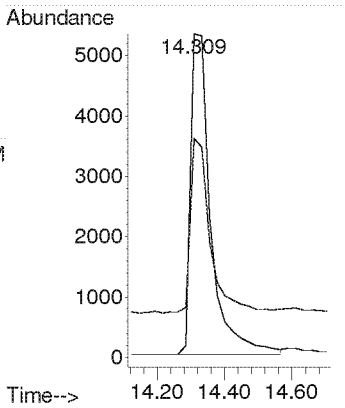


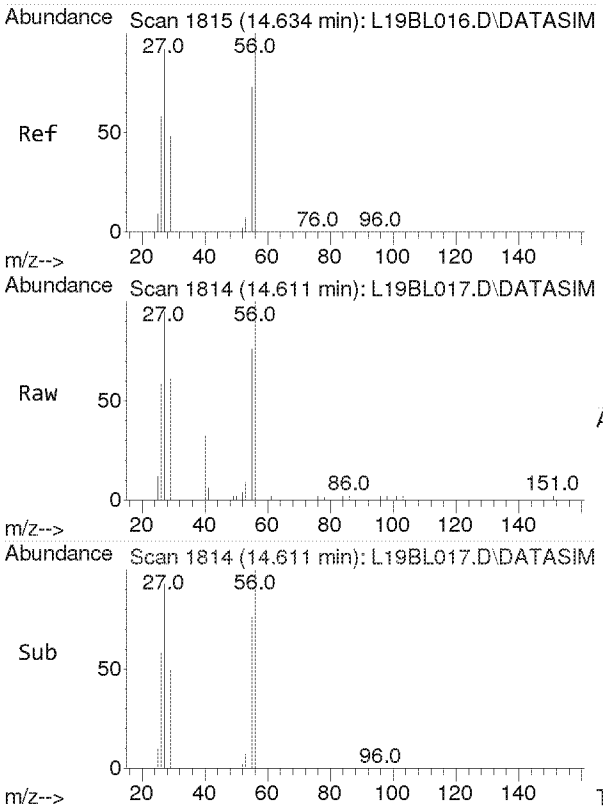


#12
Acetonitrile
Concen: 5.044 ppbv
RT: 14.309 min Scan# 1801
Delta R.T. -0.046 min
Lab File: L19BL017.D
Acq: 12 Feb 2019 11:51 pm

Tgt Ion: 41 Resp: 21929

Ion	Ratio	Lower	Upper
41	100		
40	51.5	42.2	63.4

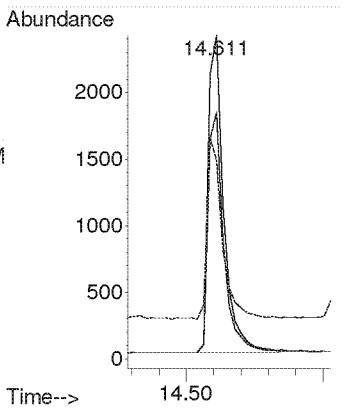


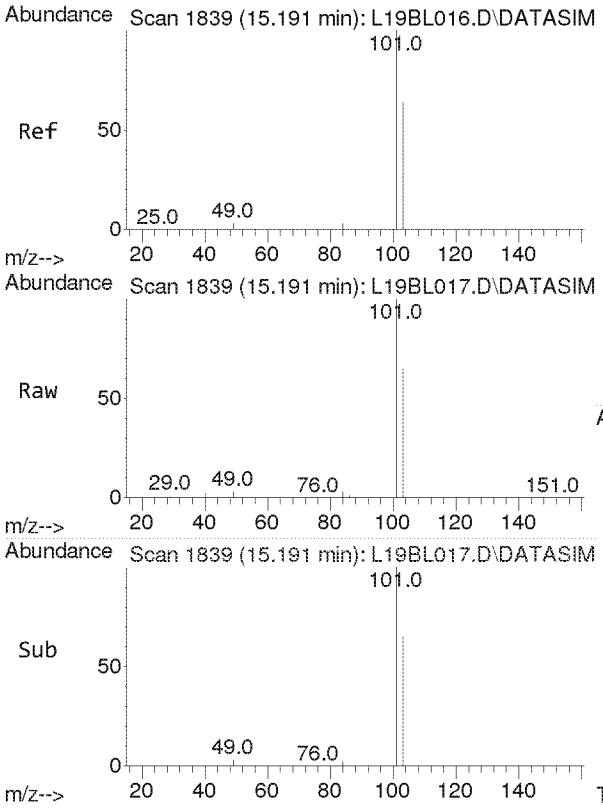


#13
Acrolein
Concen: 4.242 ppbv
RT: 14.611 min Scan# 1814
Delta R.T. -0.023 min
Lab File: L19BL017.D
Acq: 12 Feb 2019 11:51 pm

Tgt Ion: 56 Resp: 9307

Ion	Ratio	Lower	Upper
56	100		
55	76.4	60.8	91.2
29	54.1	43.8	65.6

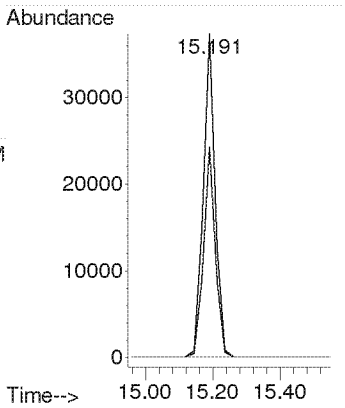


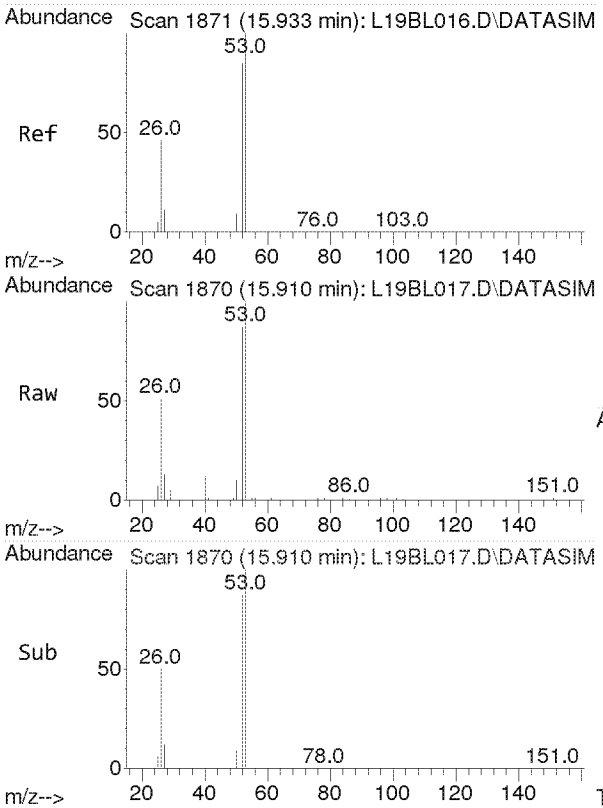


#14
Trichlorofluoromethane
Concen: 4.614 ppbv
RT: 15.191 min Scan# 1839
Delta R.T. 0.000 min
Lab File: L19BL017.D
Acq: 12 Feb 2019 11:51 pm

Tgt Ion:101 Resp: 91858

Ion	Ratio	Lower	Upper
101	100		
103	64.7	51.7	77.5

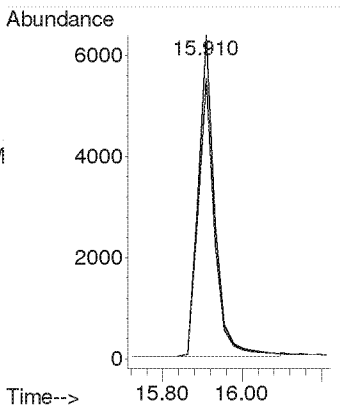


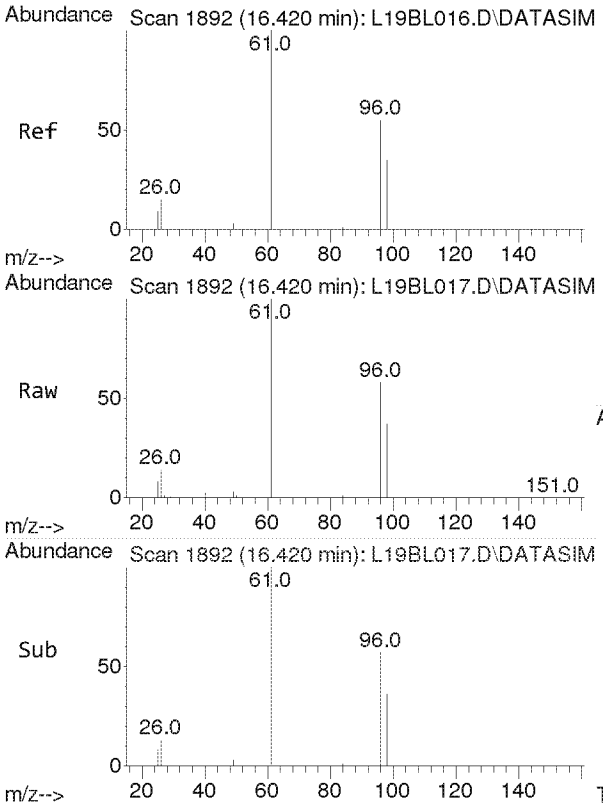


#15
Acrylonitrile
Concen: 5.157 ppbv
RT: 15.910 min Scan# 1870
Delta R.T. -0.023 min
Lab File: L19BL017.D
Acq: 12 Feb 2019 11:51 pm

Tgt Ion: 53 Resp: 18164

Ion	Ratio	Lower	Upper
53	100		
52	87.2	69.5	104.3

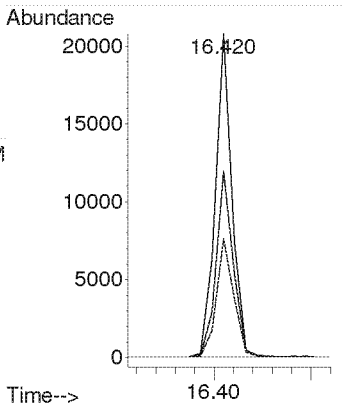


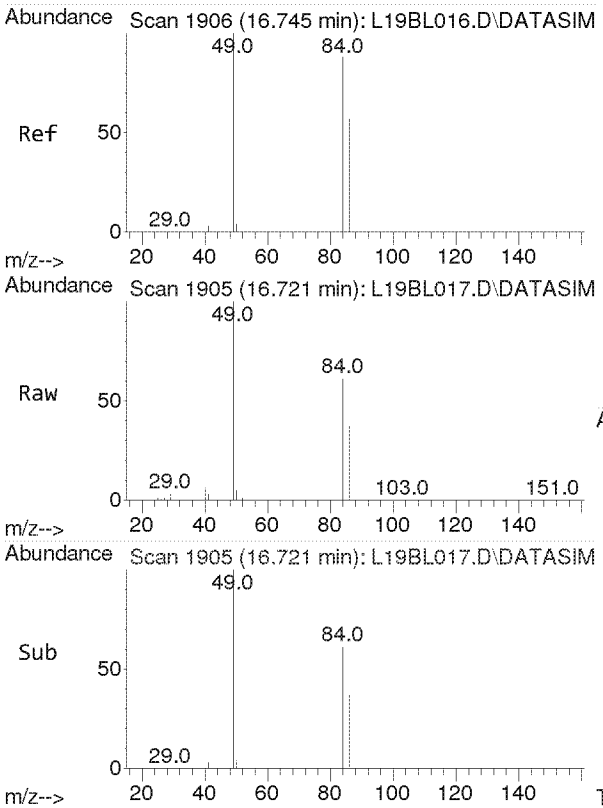


#16
1,1-Dichloroethene
Concen: 5.625 ppbv
RT: 16.420 min Scan# 1892
Delta R.T. 0.000 min
Lab File: L19BL017.D
Acq: 12 Feb 2019 11:51 pm

Tgt Ion: 61 Resp: 48853

Ion	Ratio	Lower	Upper
61	100		
96	58.6	47.3	70.9
98	37.8	30.6	45.8

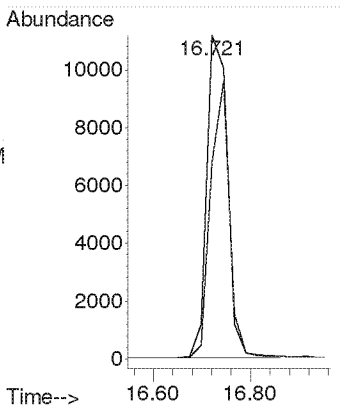


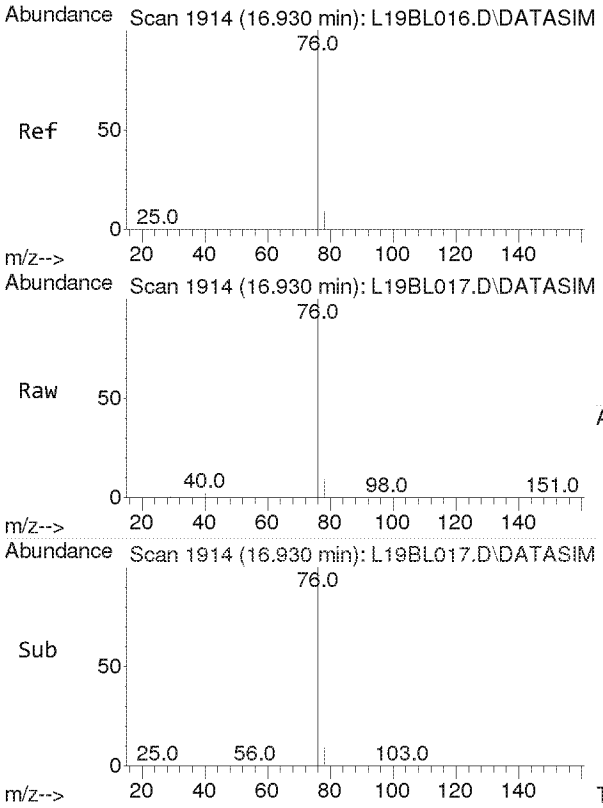


#17
Methylene Chloride
Concen: 5.836 ppbv
RT: 16.721 min Scan# 1905
Delta R.T. -0.023 min
Lab File: L19BL017.D
Acq: 12 Feb 2019 11:51 pm

Tgt Ion: 49 Resp: 33083

Ion	Ratio	Lower	Upper
49	100		
84	77.9	54.0	100.4

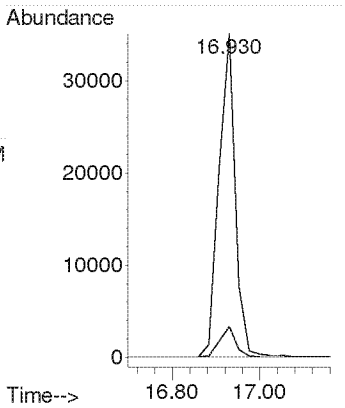


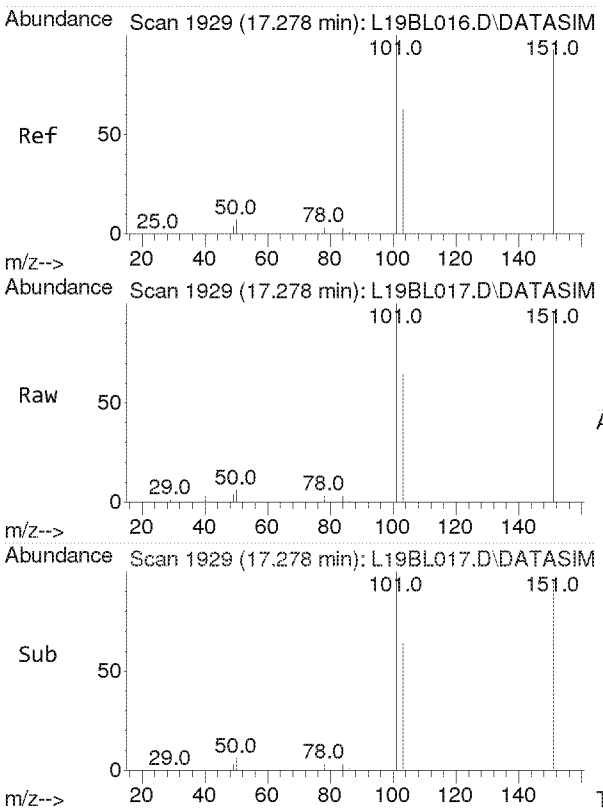


#18
Carbon Disulfide
Concen: 5.182 ppbv
RT: 16.930 min Scan# 1914
Delta R.T. 0.000 min
Lab File: L19BL017.D
Acq: 12 Feb 2019 11:51 pm

Tgt Ion: 76 Resp: 91327

Ion	Ratio	Lower	Upper
76	100		
78	9.1	7.4	11.0

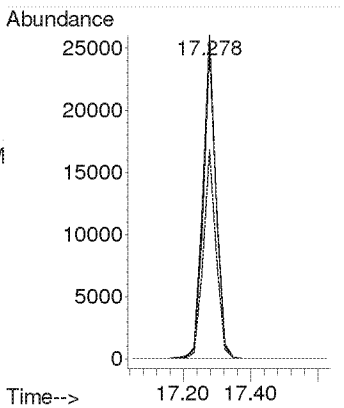


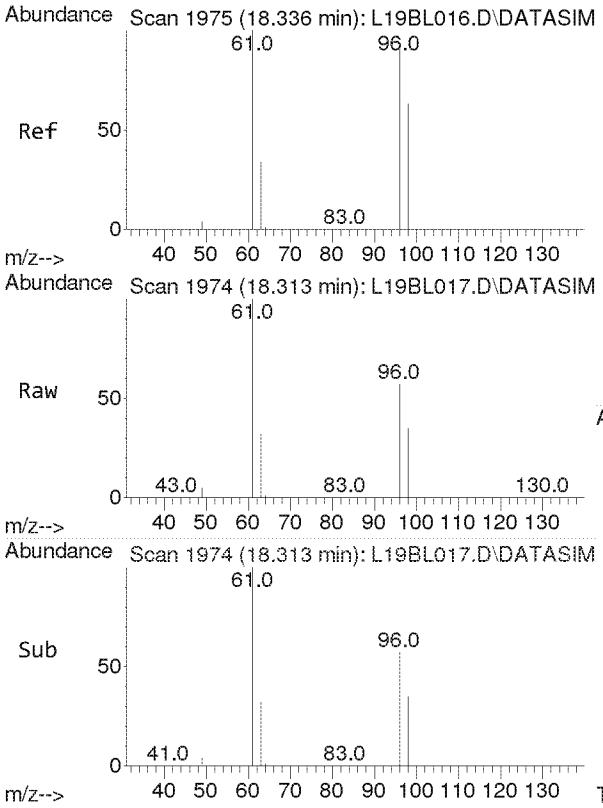


#19
Trichlorotrifluoroethane
Concen: 5.264 ppbv
RT: 17.278 min Scan# 1929
Delta R.T. 0.000 min
Lab File: L19BL017.D
Acq: 12 Feb 2019 11:51 pm

Tgt Ion:101 Resp: 69763

Ion	Ratio	Lower	Upper
101	100		
151	95.7	75.8	113.8
103	64.2	51.1	76.7

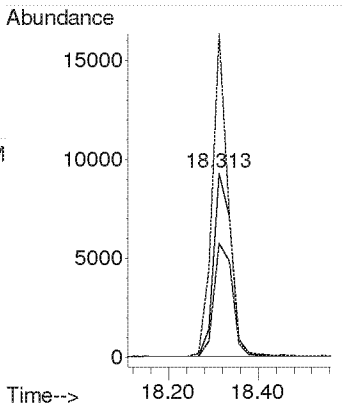


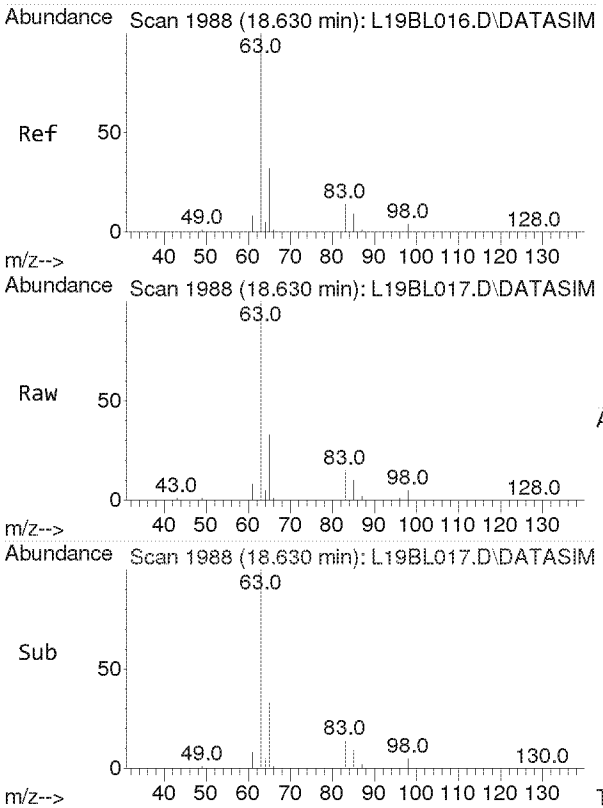


#20
trans-1,2-Dichloroethylene
Concen: 5.319 ppbv
RT: 18.313 min Scan# 1974
Delta R.T. -0.023 min
Lab File: L19BL017.D
Acq: 12 Feb 2019 11:51 pm

Tgt Ion: 96 Resp: 25632

Ion	Ratio	Lower	Upper
96	100		
98	64.2	51.5	77.3
61	153.8	122.9	184.3

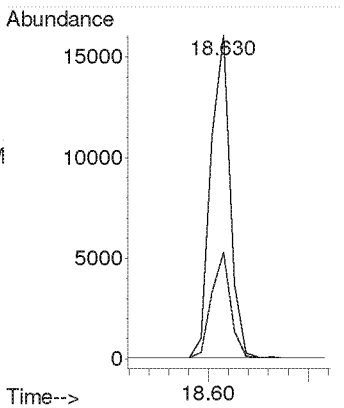


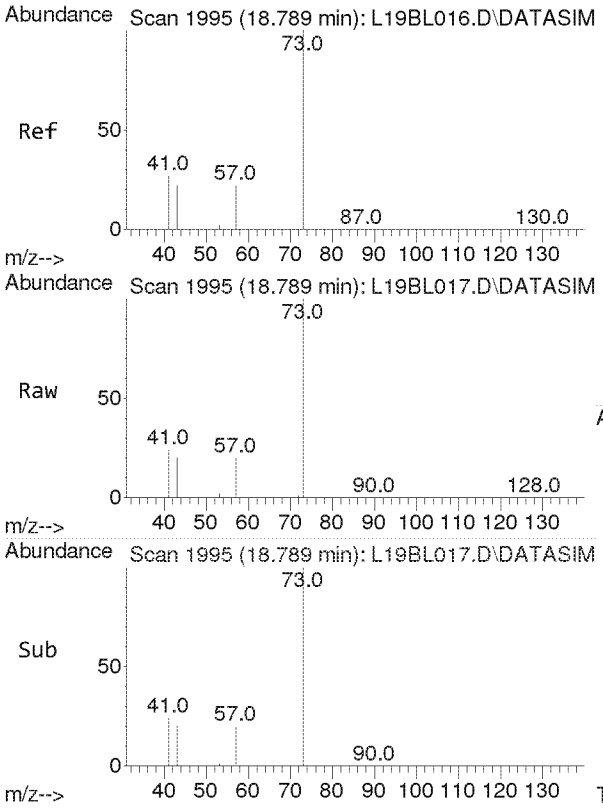


#21
1,1-Dichloroethane
Concen: 5.364 ppbv
RT: 18.630 min Scan# 1988
Delta R.T. 0.000 min
Lab File: L19BL017.D
Acq: 12 Feb 2019 11:51 pm

Tgt Ion: 63 Resp: 43426

Ion	Ratio	Lower	Upper
63	100		
65	31.9	25.4	38.0

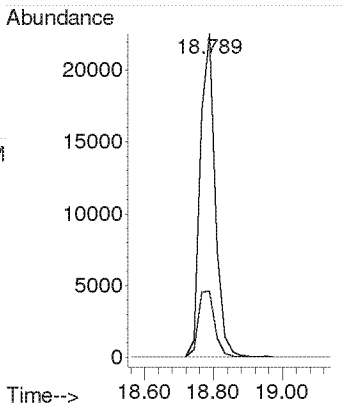


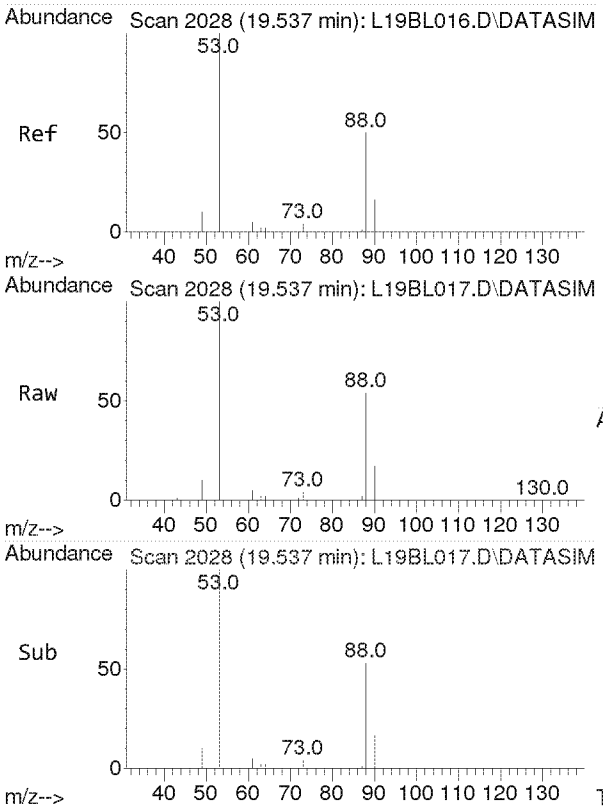


#22
Methyl tert-Butyl Ether
Concen: 5.091 ppbv
RT: 18.789 min Scan# 1995
Delta R.T. 0.000 min
Lab File: L19BL017.D
Acq: 12 Feb 2019 11:51 pm

Tgt Ion: 73 Resp: 67946

Ion	Ratio	Lower	Upper
73	100		
57	22.4	18.0	27.0

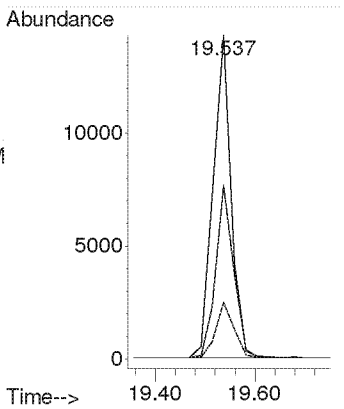


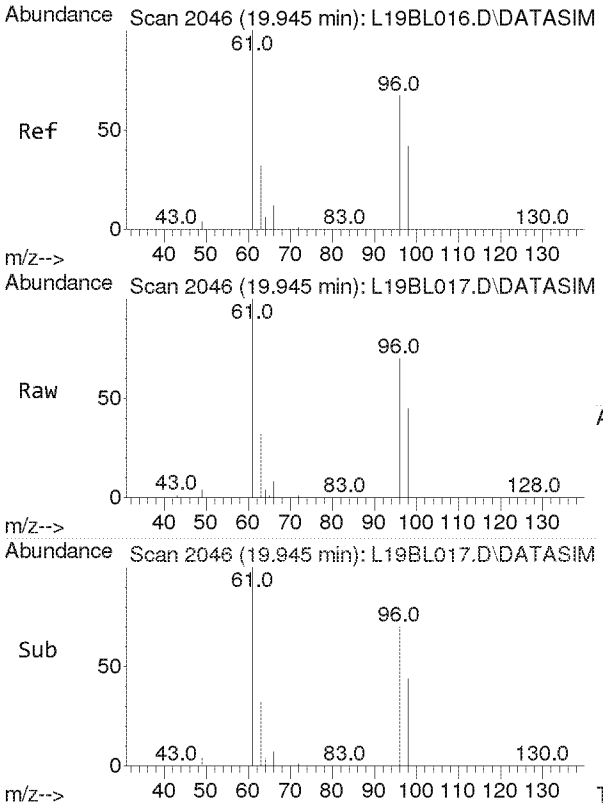


#23
Chloroprene
Concen: 5.422 ppbv
RT: 19.537 min Scan# 2028
Delta R.T. 0.000 min
Lab File: L19BL017.D
Acq: 12 Feb 2019 11:51 pm

Tgt Ion: 53 Resp: 35939

Ion	Ratio	Lower	Upper
53	100		
88	53.2	42.6	64.0
90	17.3	13.9	20.9

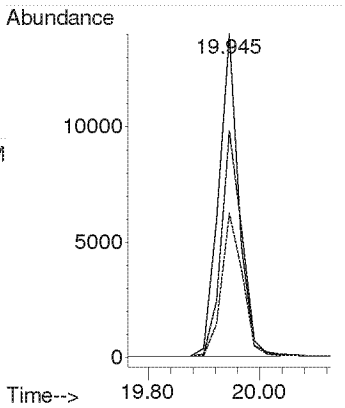


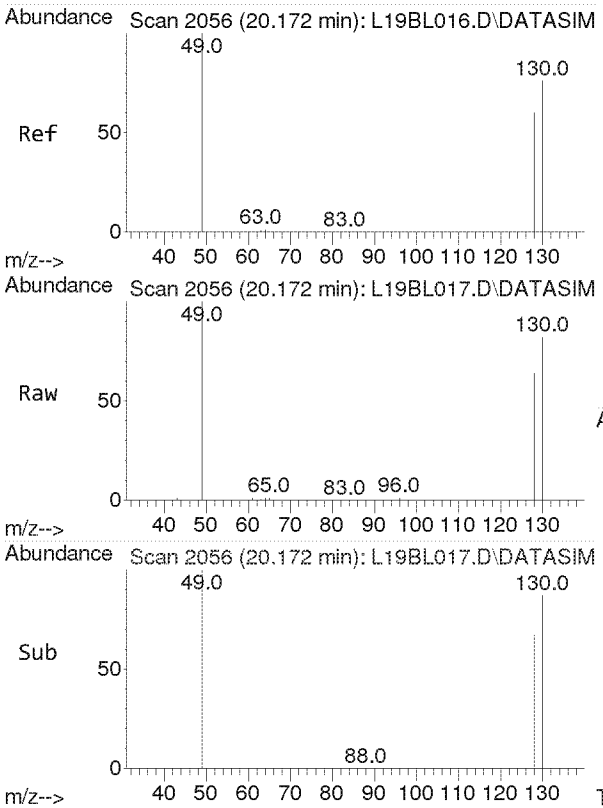


#24
cis-1,2-Dichloroethylene
Concen: 5.492 ppbv
RT: 19.945 min Scan# 2046
Delta R.T. 0.000 min
Lab File: L19BL017.D
Acq: 12 Feb 2019 11:51 pm

Tgt Ion: 61 Resp: 34841

Ion	Ratio	Lower	Upper
61	100		
96	72.9	59.0	88.6
98	46.7	37.6	56.4

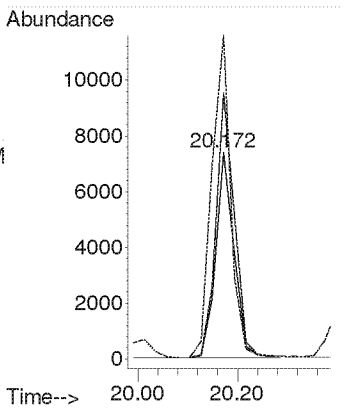


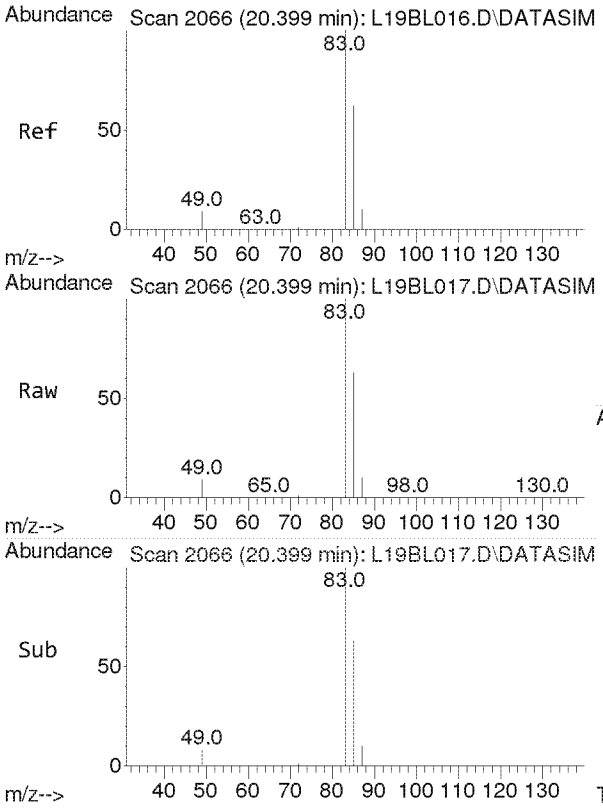


#25
Bromochloromethane
Concen: 5.416 ppbv
RT: 20.172 min Scan# 2056
Delta R.T. 0.000 min
Lab File: L19BL017.D
Acq: 12 Feb 2019 11:51 pm

Tgt Ion:128 Resp: 18717

Ion	Ratio	Lower	Upper
128	100		
130	130.5	103.3	154.9
49	162.4	128.3	192.5

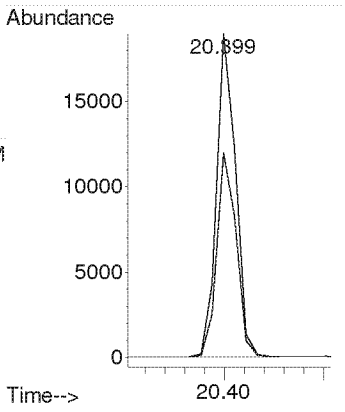


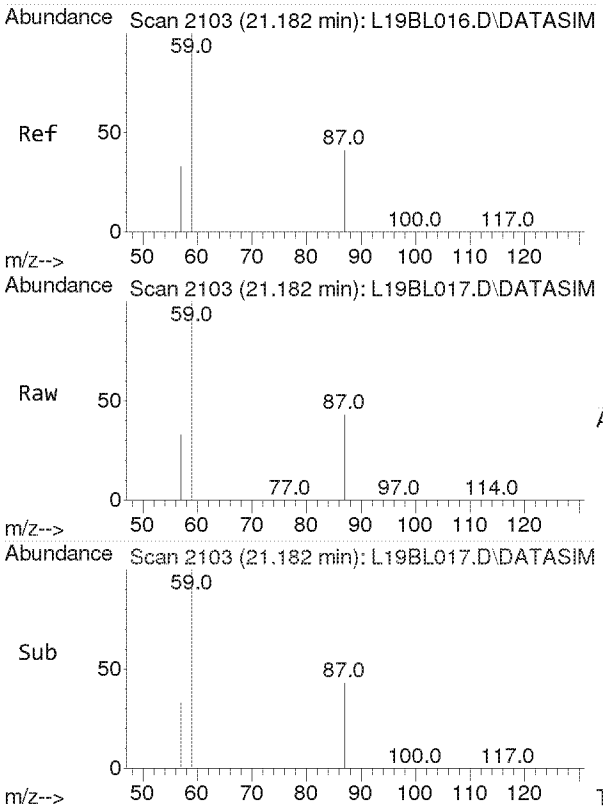


#26
Chloroform
Concen: 5.347 ppbv
RT: 20.399 min Scan# 2066
Delta R.T. 0.000 min
Lab File: L19BL017.D
Acq: 12 Feb 2019 11:51 pm

Tgt Ion: 83 Resp: 50312

Ion	Ratio	Lower	Upper
83	100		
85	64.4	51.5	77.3

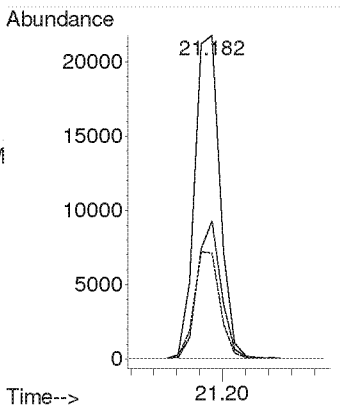


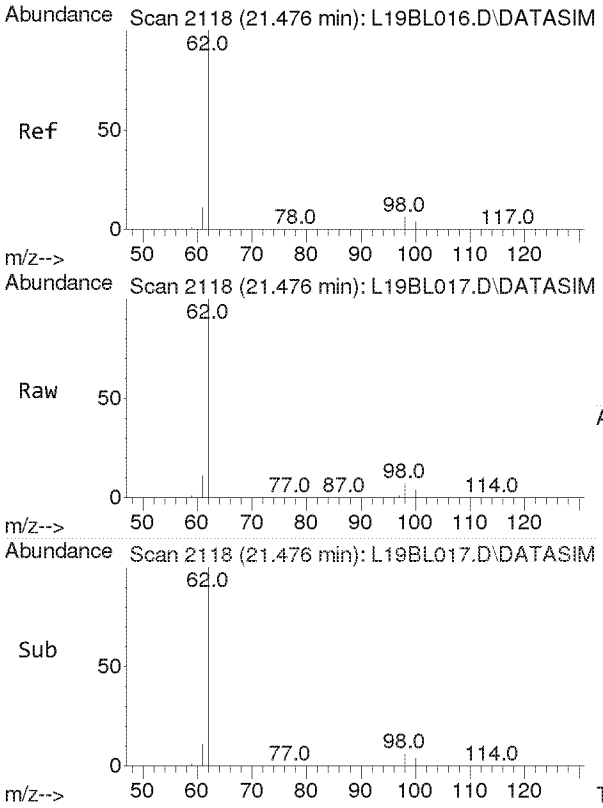


#27
Ethyl tert-Butyl Ether
Concen: 5.122 ppbv
RT: 21.182 min Scan# 2103
Delta R.T. 0.000 min
Lab File: L19BL017.D
Acq: 12 Feb 2019 11:51 pm

Tgt Ion: 59 Resp: 65976

Ion	Ratio	Lower	Upper
59	100		
87	39.6	31.5	47.3
57	33.3	26.6	39.8

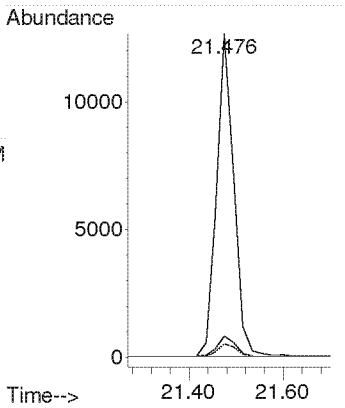


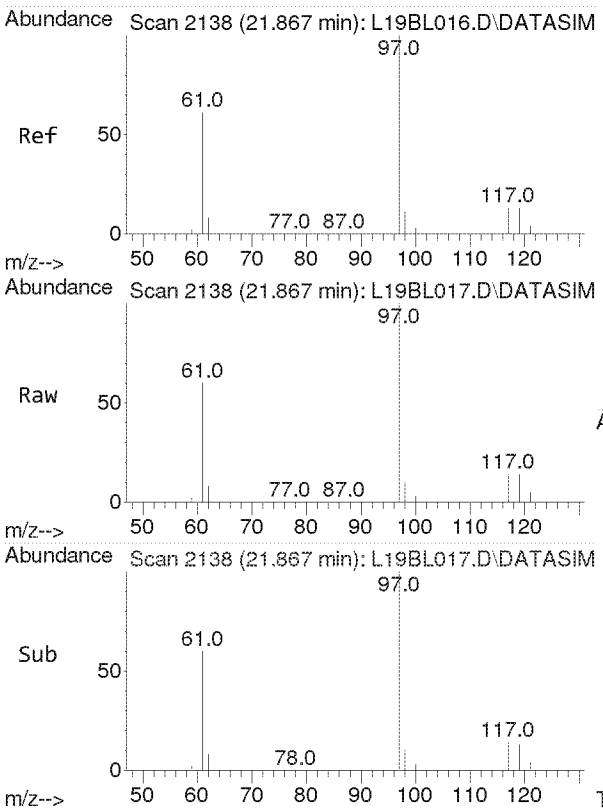


#28
1,2-Dichloroethane
Concen: 5.576 ppbv
RT: 21.476 min Scan# 2118
Delta R.T. 0.000 min
Lab File: L19BL017.D
Acq: 12 Feb 2019 11:51 pm

Tgt Ion: 62 Resp: 31907

Ion	Ratio	Lower	Upper
62	100		
98	6.4	5.0	7.6
100	4.0	3.2	4.8

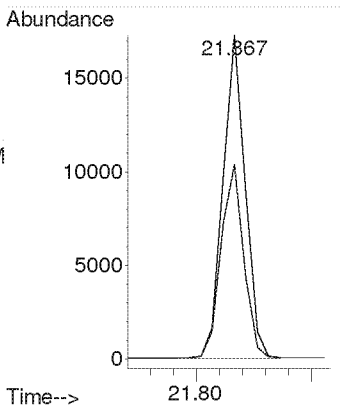


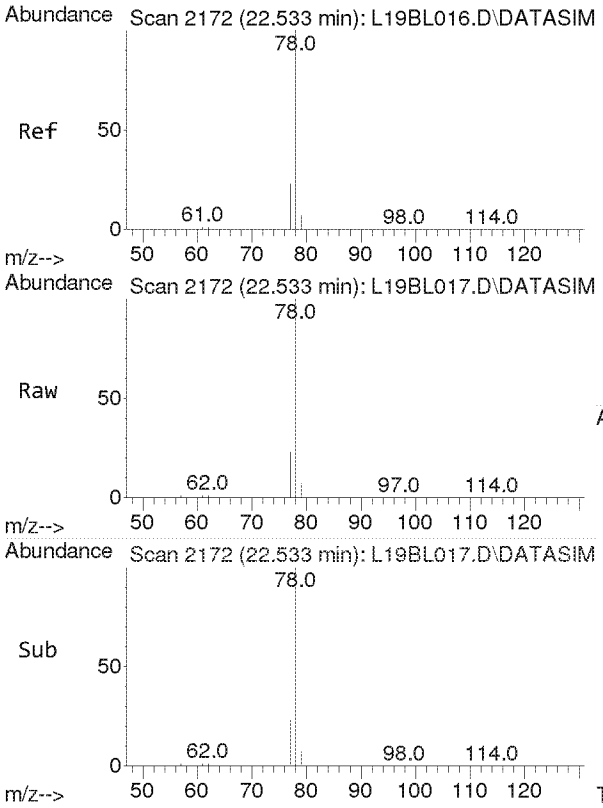


#30
1,1,1-Trichloroethane
Concen: 5.322 ppbv
RT: 21.867 min Scan# 2138
Delta R.T. 0.000 min
Lab File: L19BL017.D
Acq: 12 Feb 2019 11:51 pm

Tgt Ion: 97 Resp: 45865

Ion	Ratio	Lower	Upper
97	100		
61	61.5	49.7	74.5

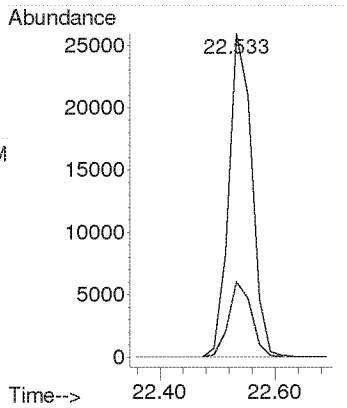


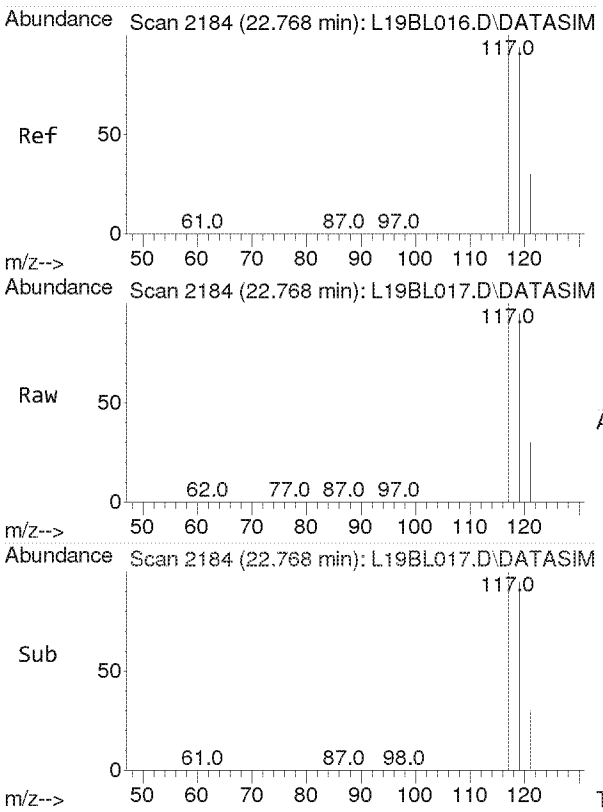


#31
Benzene
Concen: 5.755 ppbv
RT: 22.533 min Scan# 2172
Delta R.T. 0.000 min
Lab File: L19BL017.D
Acq: 12 Feb 2019 11:51 pm

Tgt Ion: 78 Resp: 71427

Ion	Ratio	Lower	Upper
78	100		
77	22.9	18.2	27.4

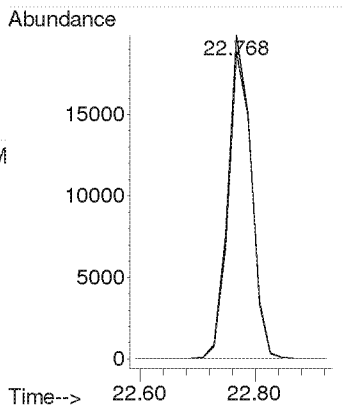


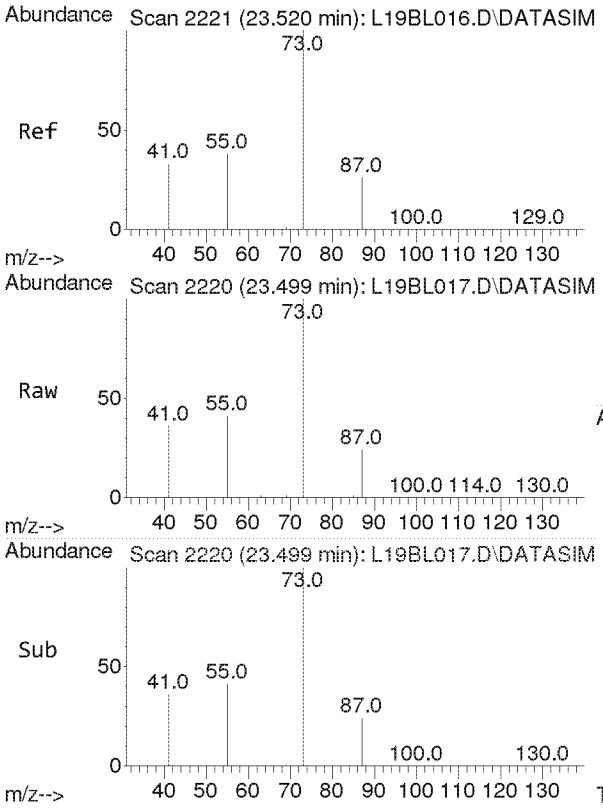


#32
Carbon Tetrachloride
Concen: 5.923 ppbv
RT: 22.768 min Scan# 2184
Delta R.T. 0.000 min
Lab File: L19BL017.D
Acq: 12 Feb 2019 11:51 pm

Tgt Ion:117 Resp: 54901

Ion	Ratio	Lower	Upper
117	100		
119	96.2	77.0	115.6

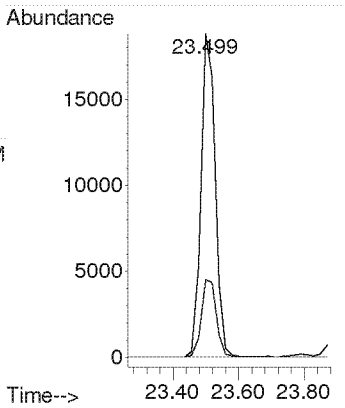


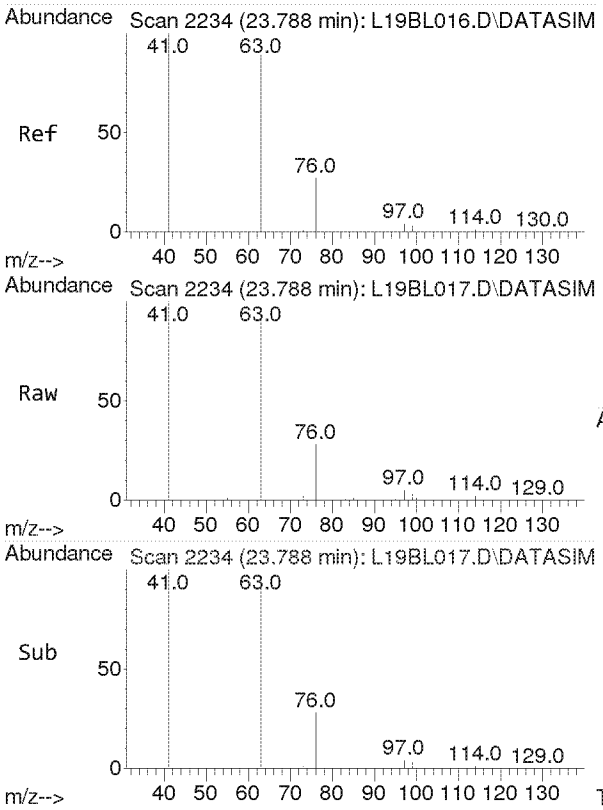


#33
tert-Amyl Methyl Ether
Concen: 5.329 ppbv
RT: 23.499 min Scan# 2220
Delta R.T. -0.021 min
Lab File: L19BL017.D
Acq: 12 Feb 2019 11:51 pm

Tgt Ion: 73 Resp: 56087

Ion	Ratio	Lower	Upper
73	100		
87	25.0	20.1	30.1

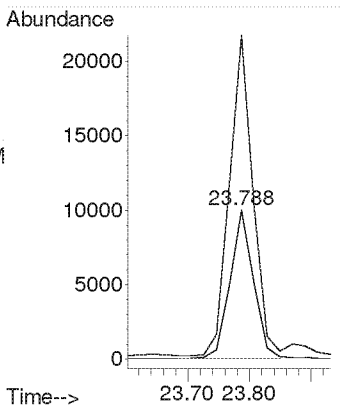


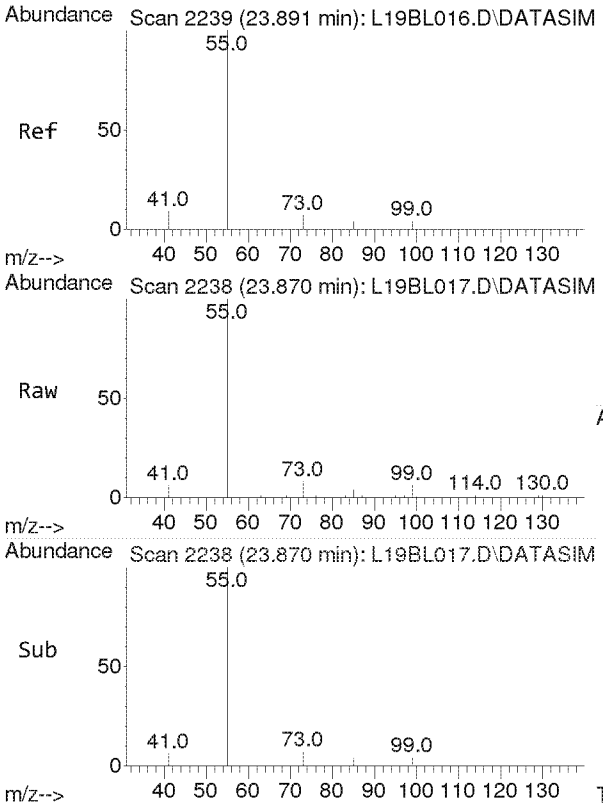


#34
1,2-Dichloropropane
Concen: 5.435 ppbv
RT: 23.788 min Scan# 2234
Delta R.T. 0.000 min
Lab File: L19BL017.D
Acq: 12 Feb 2019 11:51 pm

Tgt Ion: 63 Resp: 26012

Ion	Ratio	Lower	Upper
63	100		
41	217.8	175.9	263.9

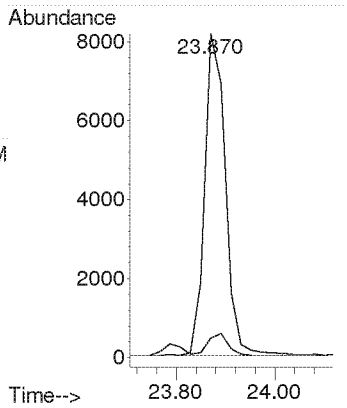


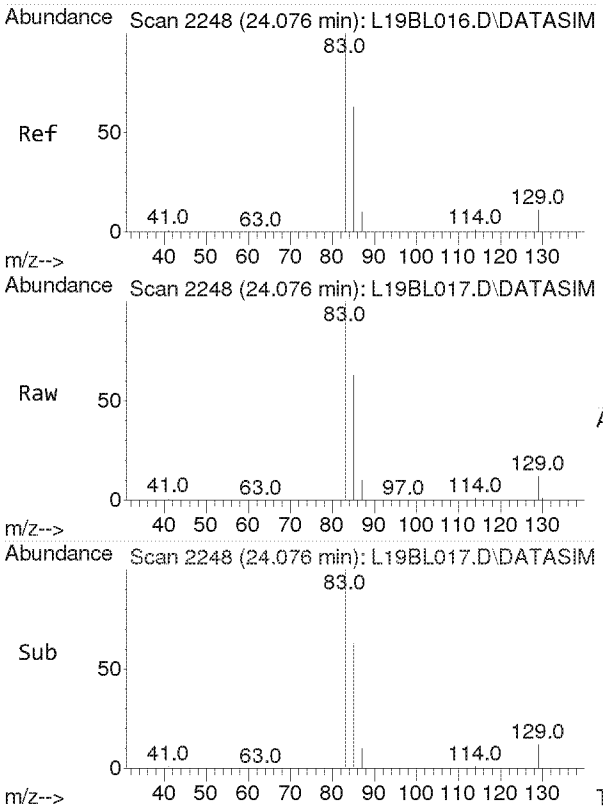


#35
Ethyl Acrylate
Concen: 5.989 ppbv
RT: 23.870 min Scan# 2238
Delta R.T. -0.021 min
Lab File: L19BL017.D
Acq: 12 Feb 2019 11:51 pm

Tgt Ion: 55 Resp: 23572

Ion	Ratio	Lower	Upper
55	100		
99	6.5	5.0	7.6

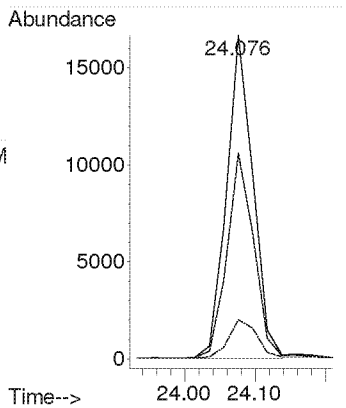


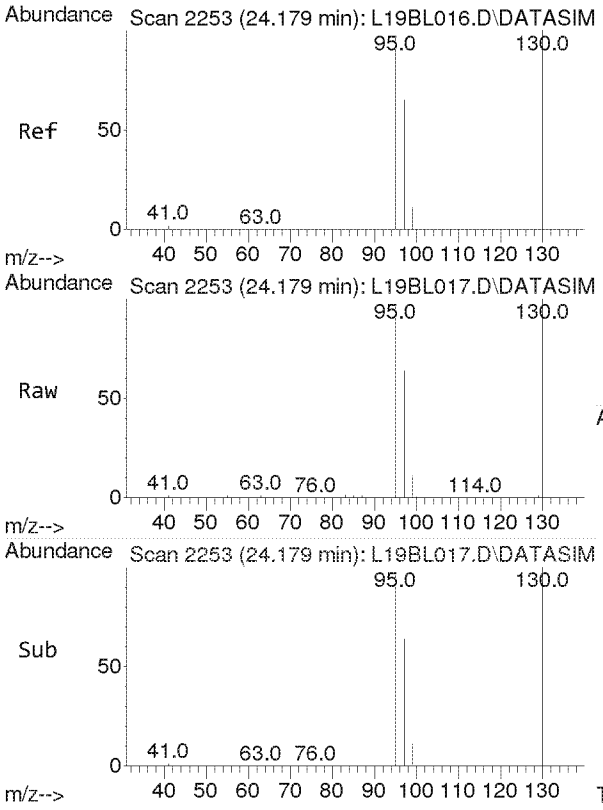


#36
Bromodichloromethane
Concen: 5.200 ppbv
RT: 24.076 min Scan# 2248
Delta R.T. 0.000 min
Lab File: L19BL017.D
Acq: 12 Feb 2019 11:51 pm

Tgt Ion: 83 Resp: 43440

Ion	Ratio	Lower	Upper
83	100		
85	64.0	51.0	76.4
129	12.6	9.9	14.9

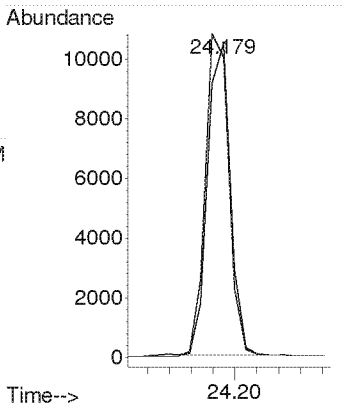


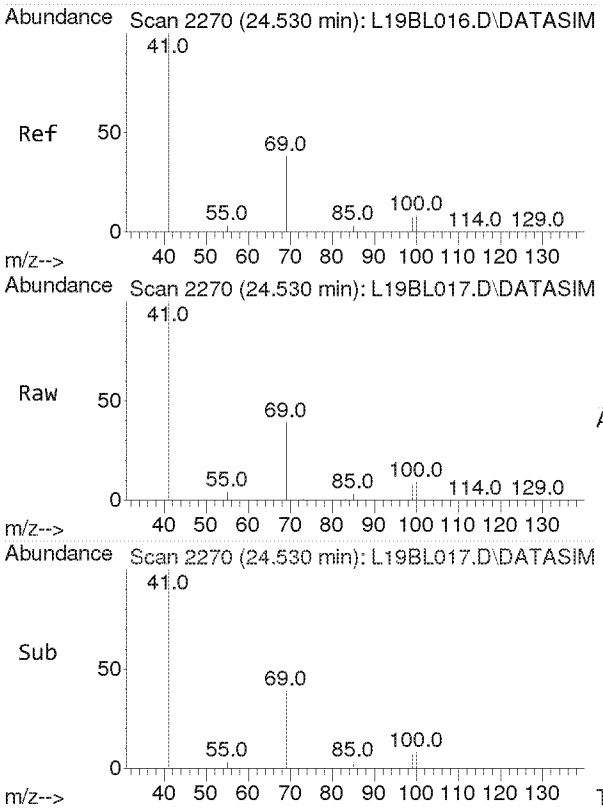


#37
Trichloroethylene
Concen: 5.094 ppbv
RT: 24.179 min Scan# 2253
Delta R.T. 0.000 min
Lab File: L19BL017.D
Acq: 12 Feb 2019 11:51 pm

Tgt Ion:130 Resp: 30310

Ion	Ratio	Lower	Upper
130	100		
95	106.6	84.9	127.3

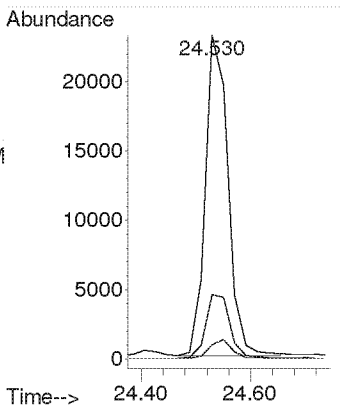


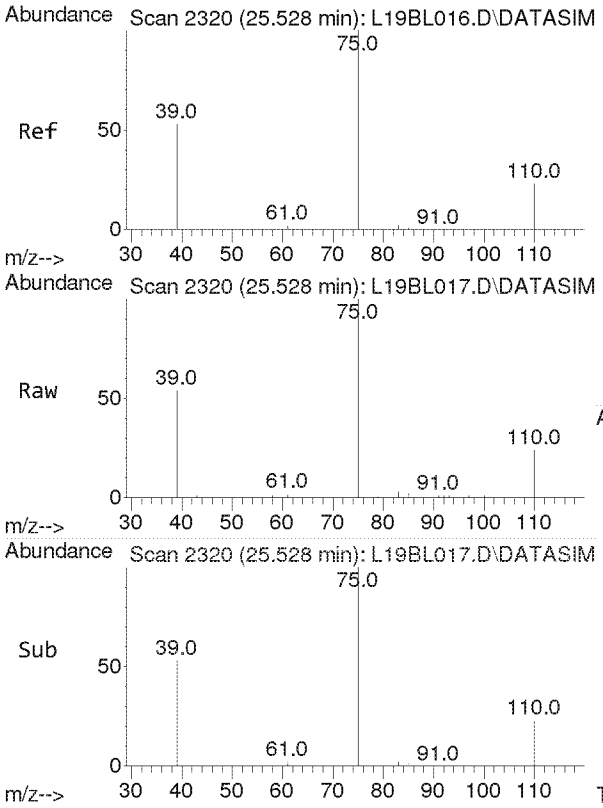


#38
Methyl Methacrylate
Concen: 5.644 ppbv
RT: 24.530 min Scan# 2270
Delta R.T. 0.000 min
Lab File: L19BL017.D
Acq: 12 Feb 2019 11:51 pm

Tgt Ion: 41 Resp: 66902

Ion	Ratio	Lower	Upper
41	100		
69	20.8	16.8	25.2
100	5.5	4.5	6.7

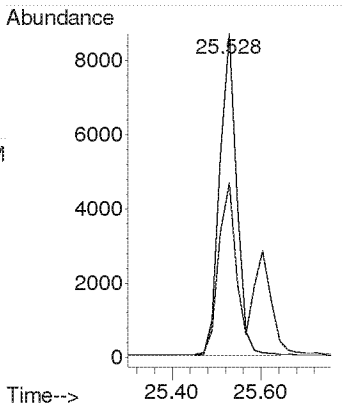


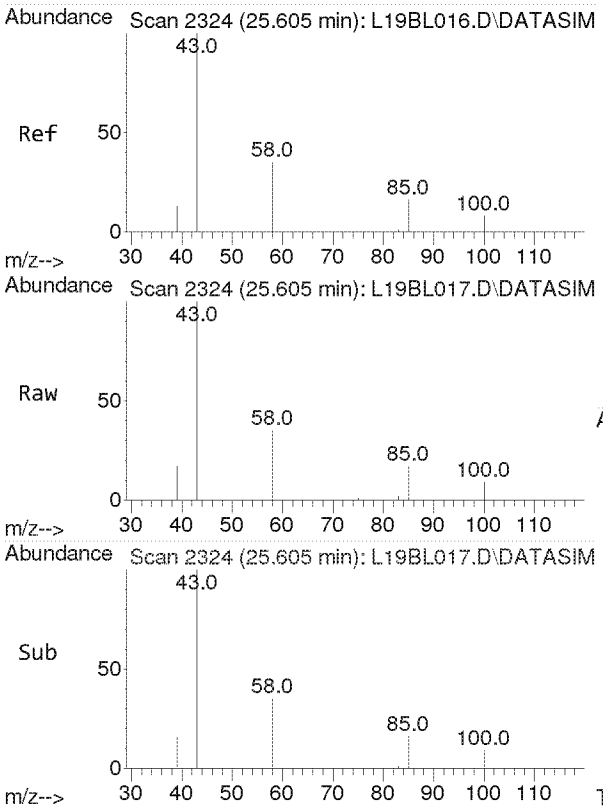


#39
cis-1,3-Dichloropropene
Concen: 5.605 ppbv
RT: 25.528 min Scan# 2320
Delta R.T. 0.000 min
Lab File: L19BL017.D
Acq: 12 Feb 2019 11:51 pm

Tgt Ion: 75 Resp: 22807

Ion	Ratio	Lower	Upper
75	100		
39	55.1	43.4	65.0

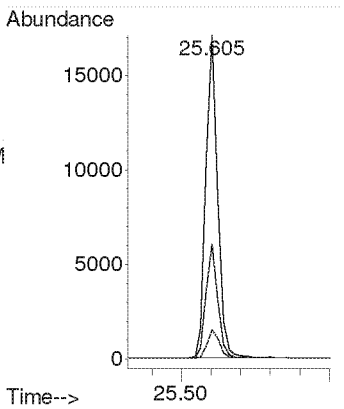


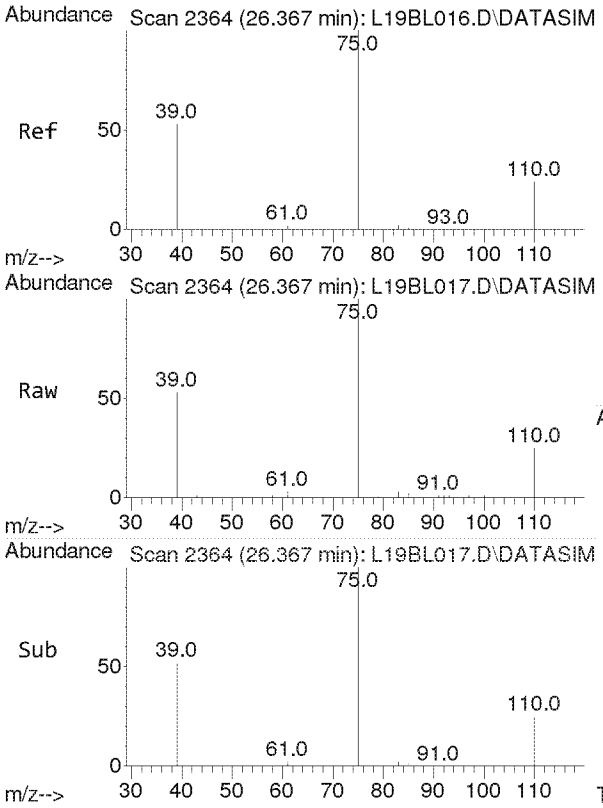


#40
Methyl Isobutyl Ketone
Concen: 5.357 ppbv
RT: 25.605 min Scan# 2324
Delta R.T. 0.000 min
Lab File: L19BL017.D
Acq: 12 Feb 2019 11:51 pm

Tgt Ion: 43 Resp: 46479

Ion	Ratio	Lower	Upper
43	100		
58	35.0	28.0	42.0
100	8.8	7.0	10.4

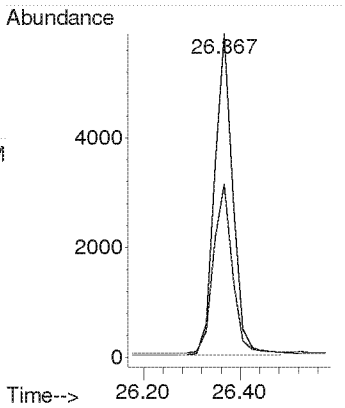


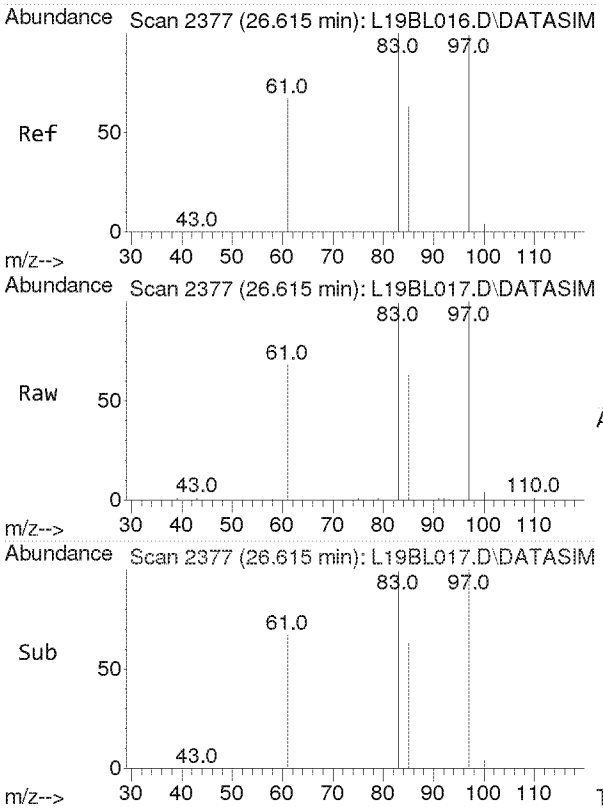


#41
trans-1,3-Dichloropropene
Concen: 5.485 ppbv
RT: 26.367 min Scan# 2364
Delta R.T. 0.000 min
Lab File: L19BL017.D
Acq: 12 Feb 2019 11:51 pm

Tgt Ion: 75 Resp: 15222

Ion	Ratio	Lower	Upper
75	100		
39	54.1	42.9	64.3

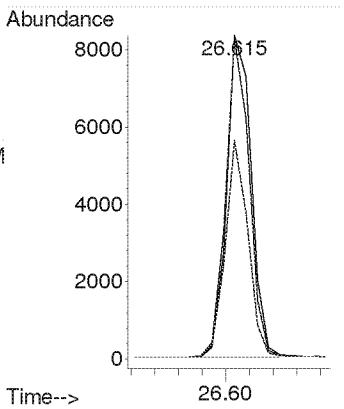


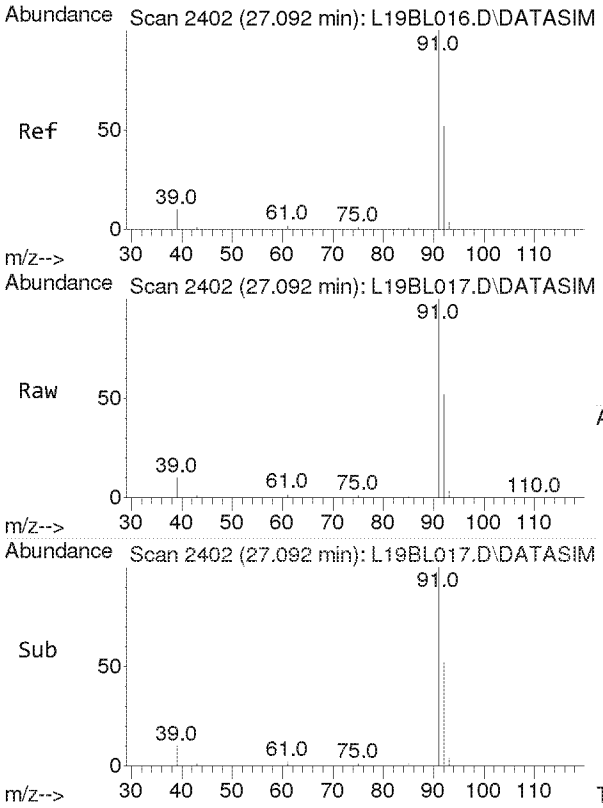


#42
1,1,2-Trichloroethane
Concen: 5.495 ppbv
RT: 26.615 min Scan# 2377
Delta R.T. 0.000 min
Lab File: L19BL017.D
Acq: 12 Feb 2019 11:51 pm

Tgt Ion: 97 Resp: 23880

Ion	Ratio	Lower	Upper
97	100		
83	94.6	75.4	113.0
61	62.1	49.8	74.6

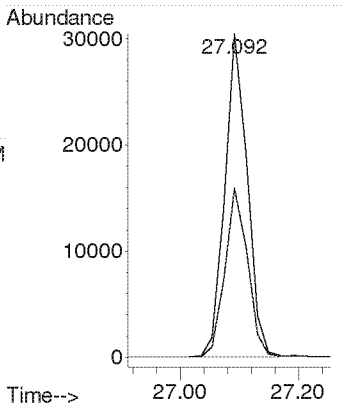


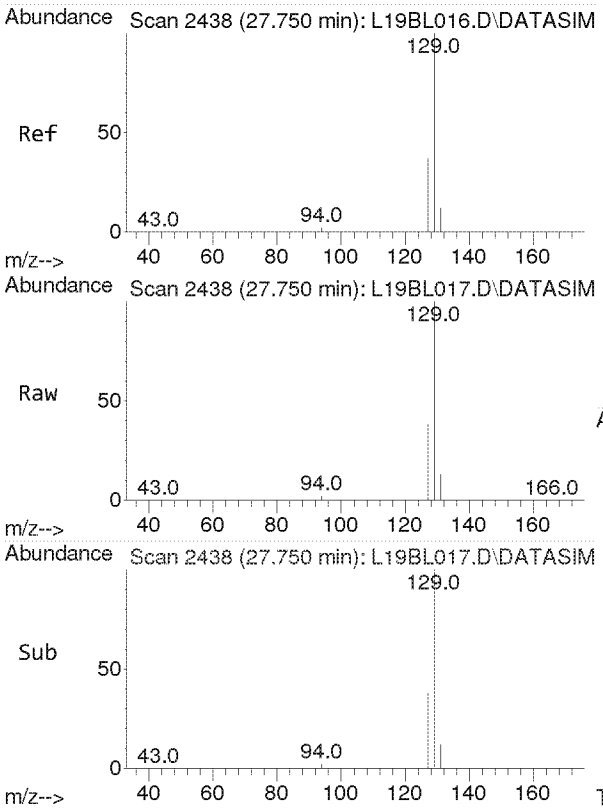


#44
Toluene
Concen: 5.542 ppbv
RT: 27.092 min Scan# 2402
Delta R.T. 0.000 min
Lab File: L19BL017.D
Acq: 12 Feb 2019 11:51 pm

Tgt Ion: 91 Resp: 79697

Ion	Ratio	Lower	Upper
91	100		
92	52.7	42.0	63.0

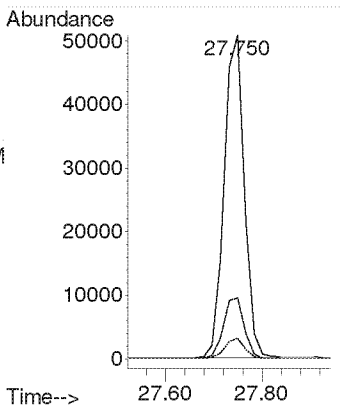


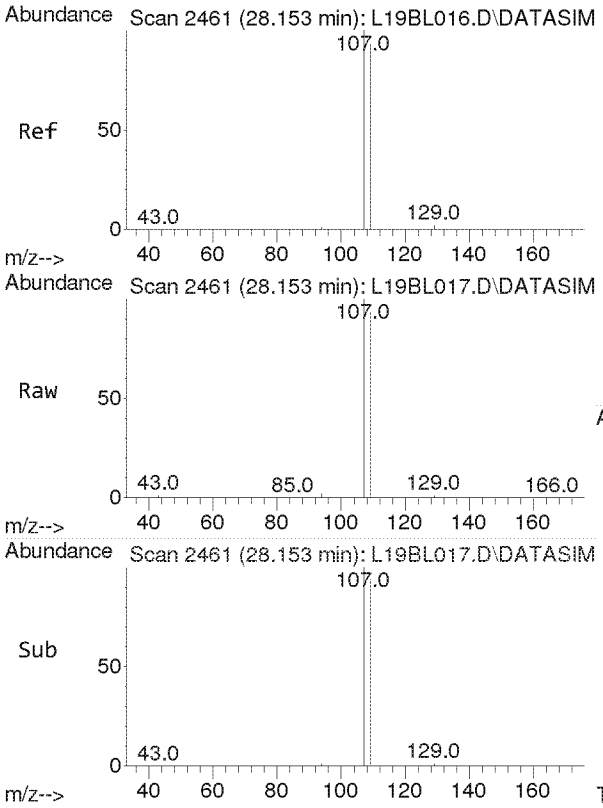


#45
Dibromochloromethane
Concen: 5.186 ppbv
RT: 27.750 min Scan# 2438
Delta R.T. 0.000 min
Lab File: L19BL017.D
Acq: 12 Feb 2019 11:51 pm

Tgt Ion:129 Resp: 146719

Ion	Ratio	Lower	Upper
129	100		
127	19.3	15.4	23.2
131	6.0	4.8	7.2

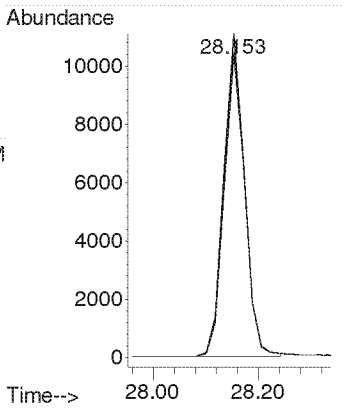


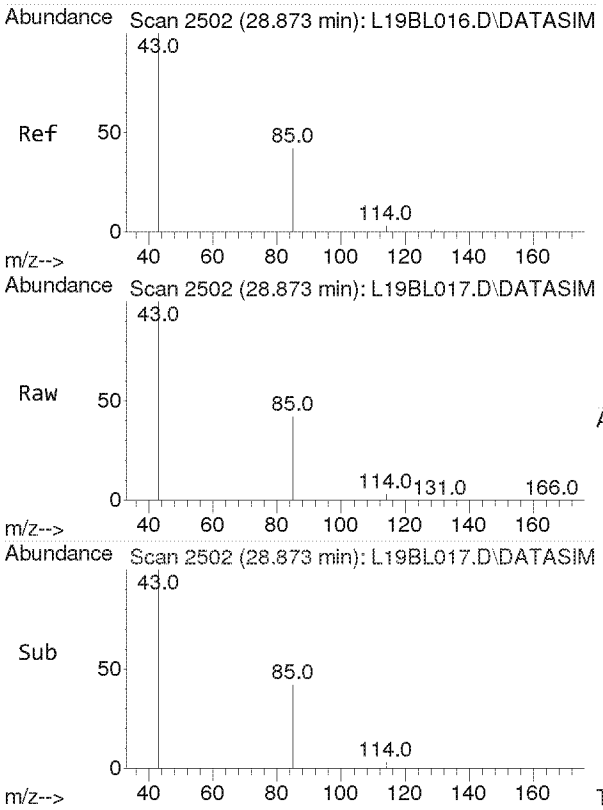


#46
1,2-Dibromoethane
Concen: 5.421 ppbv
RT: 28.153 min Scan# 2461
Delta R.T. 0.000 min
Lab File: L19BL017.D
Acq: 12 Feb 2019 11:51 pm

Tgt Ion:107 Resp: 29740

Ion	Ratio	Lower	Upper
107	100		
109	94.7	75.4	113.0

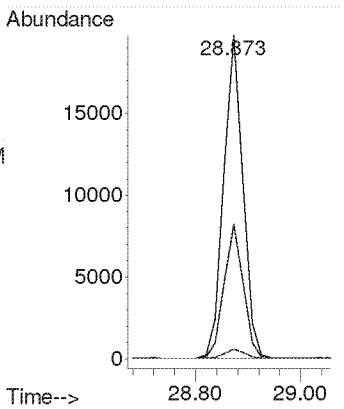


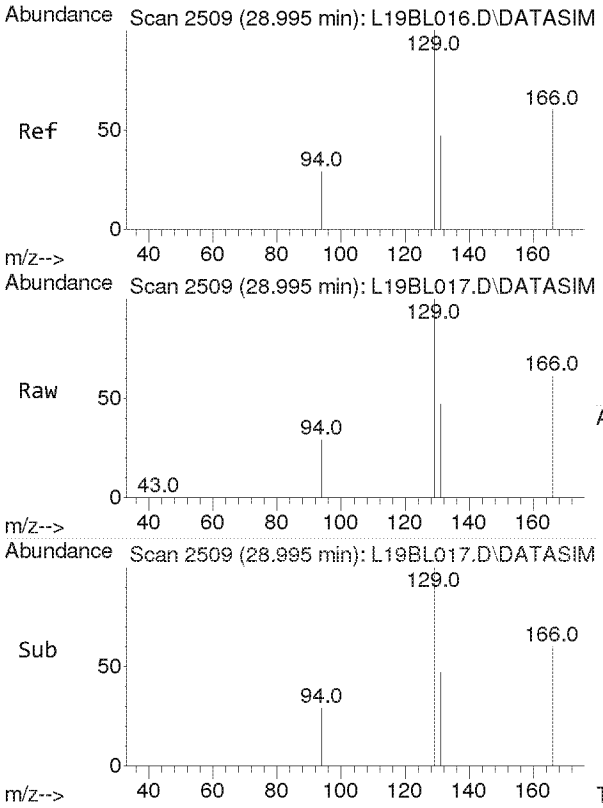


#47
n-Octane
Concen: 5.717 ppbv
RT: 28.873 min Scan# 2502
Delta R.T. 0.000 min
Lab File: L19BL017.D
Acq: 12 Feb 2019 11:51 pm

Tgt Ion: 43 Resp: 49622

Ion	Ratio	Lower	Upper
43	100		
85	41.5	33.0	49.6
114	2.7	2.2	3.4

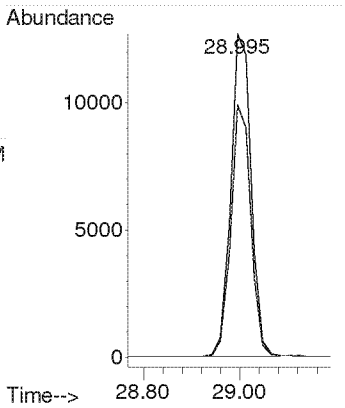


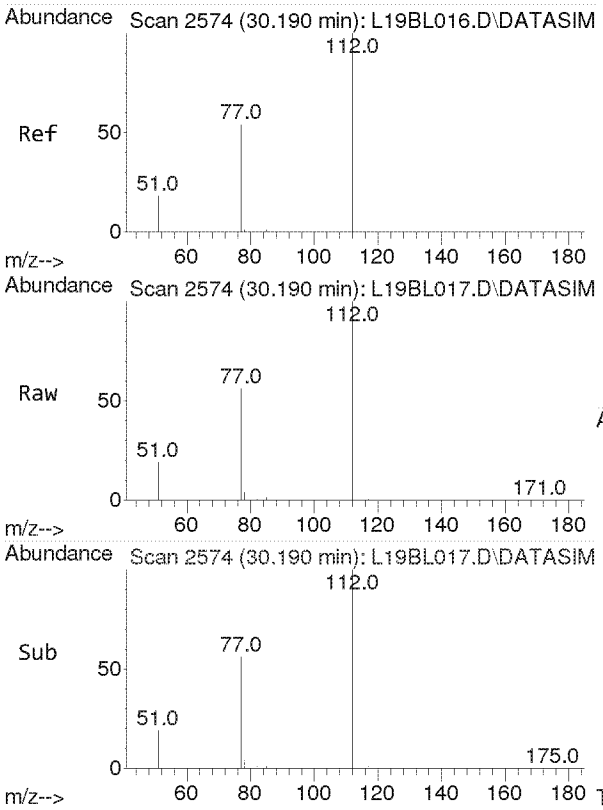


#48
Tetrachloroethylene
Concen: 5.390 ppbv
RT: 28.995 min Scan# 2509
Delta R.T. 0.000 min
Lab File: L19BL017.D
Acq: 12 Feb 2019 11:51 pm

Tgt Ion:166 Resp: 36947

Ion	Ratio	Lower	Upper
166	100		
131	77.1	61.5	92.3

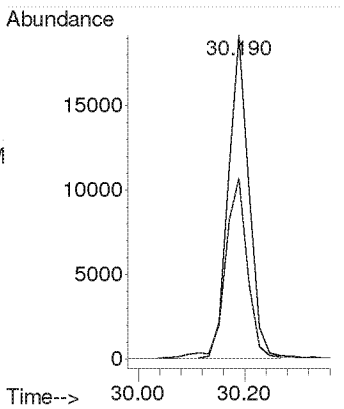


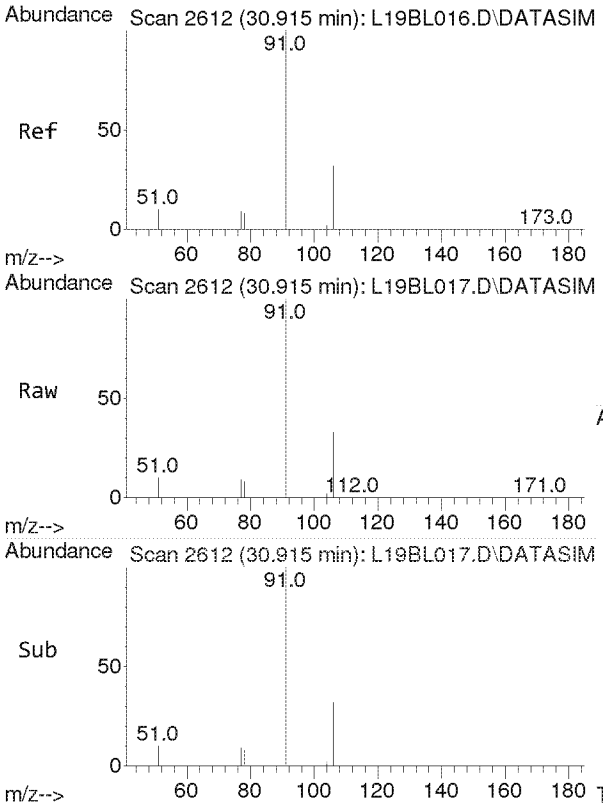


#49
Chlorobenzene
Concen: 5.560 ppbv
RT: 30.190 min Scan# 2574
Delta R.T. 0.000 min
Lab File: L19BL017.D
Acq: 12 Feb 2019 11:51 pm

Tgt Ion:112 Resp: 51329

Ion	Ratio	Lower	Upper
112	100		
77	58.5	47.8	71.6

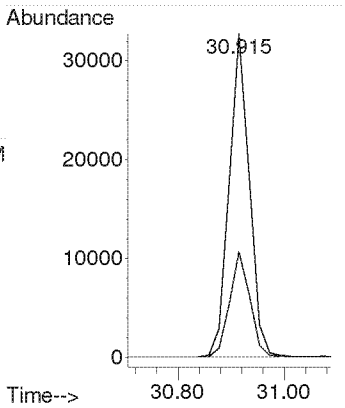


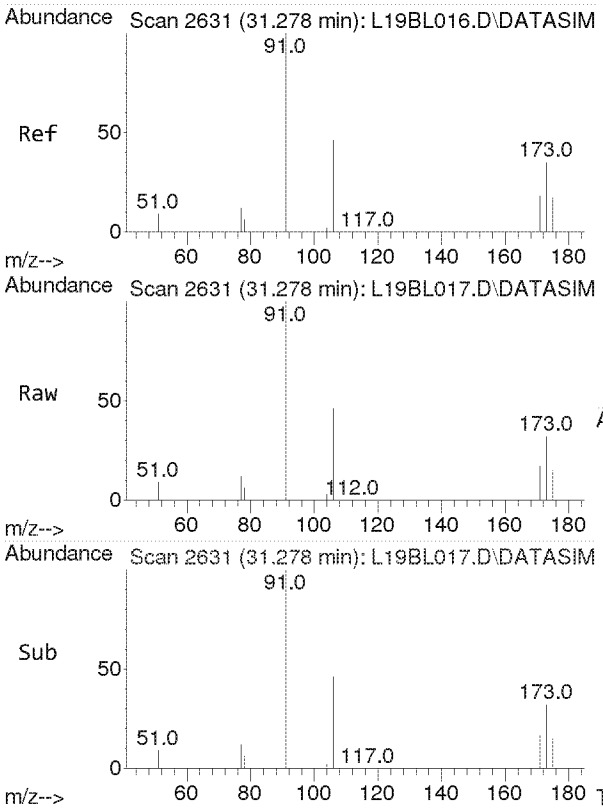


#50
Ethylbenzene
Concen: 5.711 ppbv
RT: 30.915 min Scan# 2612
Delta R.T. 0.000 min
Lab File: L19BL017.D
Acq: 12 Feb 2019 11:51 pm

Tgt Ion: 91 Resp: 86487

Ion	Ratio	Lower	Upper
91	100		
106	32.5	26.0	39.0

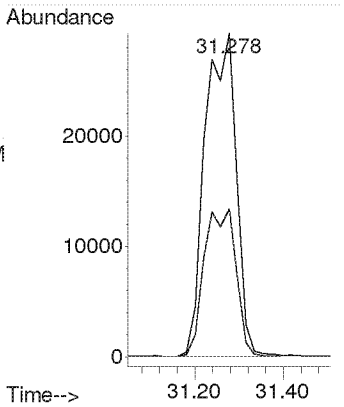


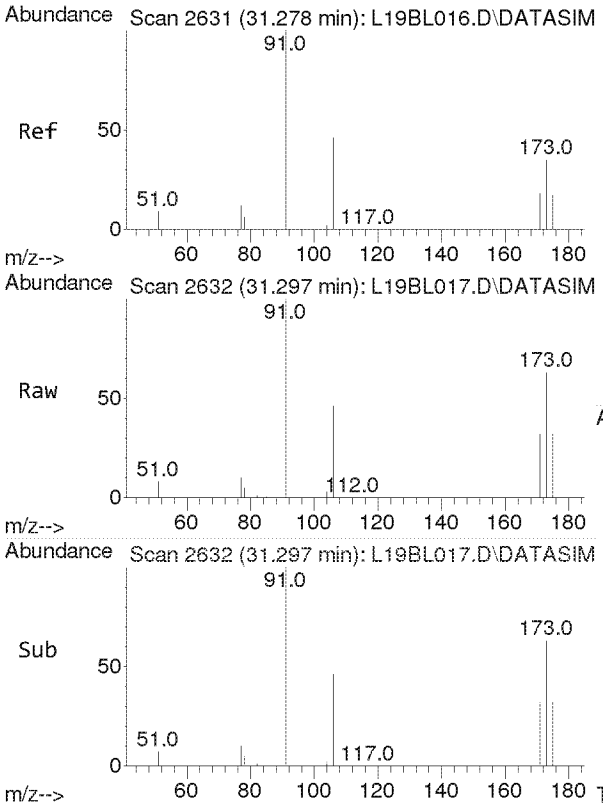


#51
m,p-Xylene
Concen: 11.040 ppbv
RT: 31.278 min Scan# 2631
Delta R.T. 0.000 min
Lab File: L19BL017.D
Acq: 12 Feb 2019 11:51 pm

Tgt Ion: 91 Resp: 141787

Ion	Ratio	Lower	Upper
91	100		
106	46.5	37.3	55.9

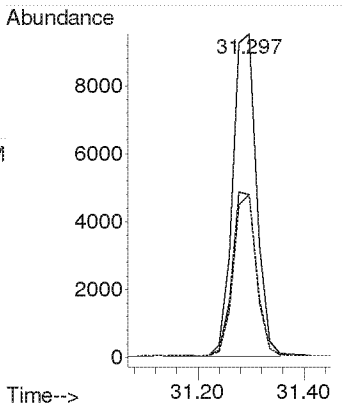


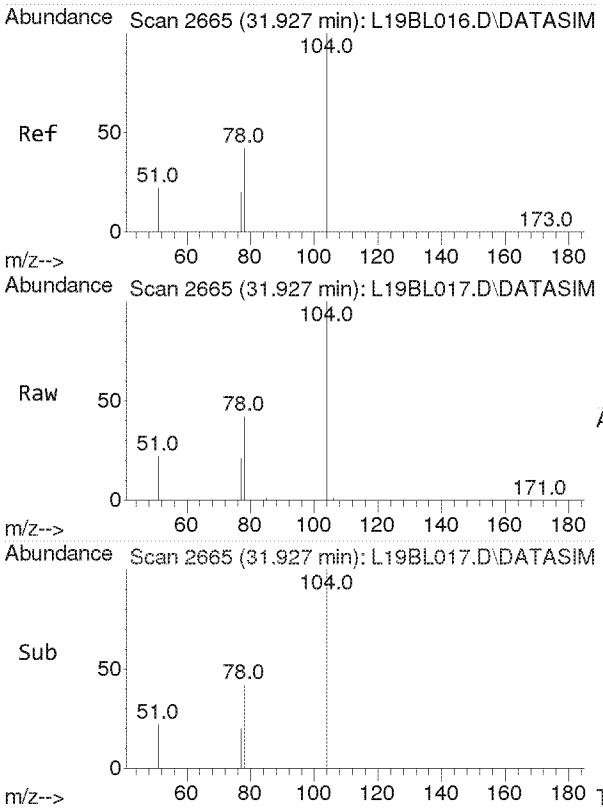


#52
Bromoform
Concen: 5.426 ppbv
RT: 31.297 min Scan# 2632
Delta R.T. 0.019 min
Lab File: L19BL017.D
Acq: 12 Feb 2019 11:51 pm

Tgt Ion:173 Resp: 29403

Ion	Ratio	Lower	Upper
173	100		
171	51.1	41.0	61.6
175	49.1	39.1	58.7

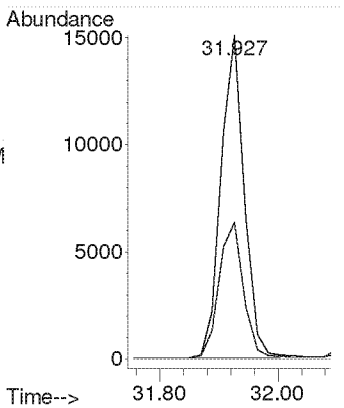


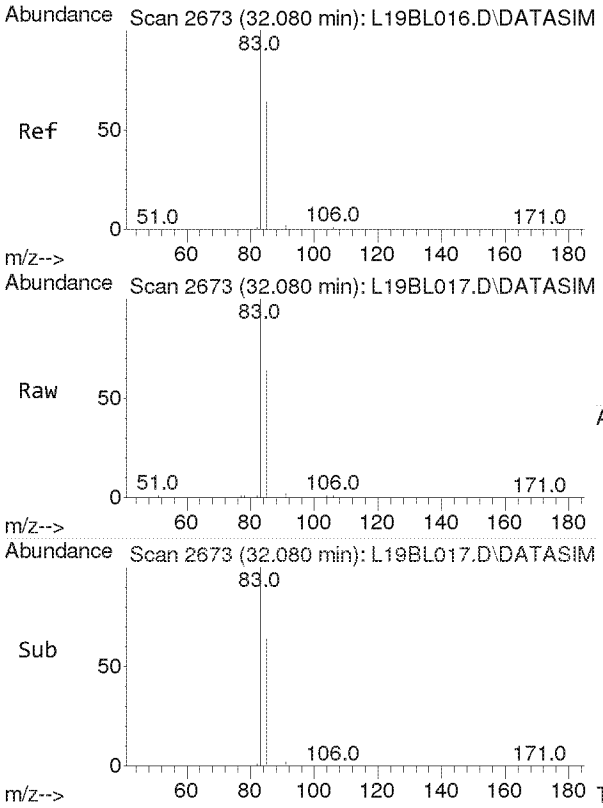


#53
Styrene
Concen: 5.676 ppbv
RT: 31.927 min Scan# 2665
Delta R.T. 0.000 min
Lab File: L19BL017.D
Acq: 12 Feb 2019 11:51 pm

Tgt Ion:104 Resp: 41021

Ion	Ratio	Lower	Upper
104	100		
78	43.9	35.4	53.2
103	0.0	0.0	0.0

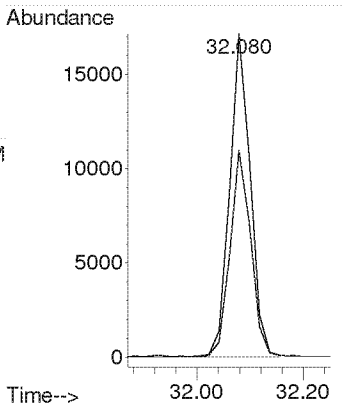


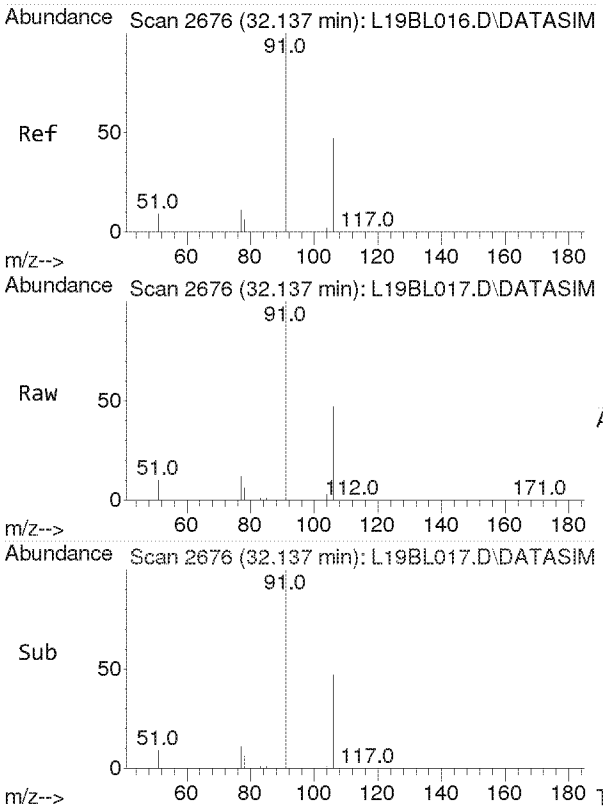


#54
1,1,2,2-Tetrachloroethane
Concen: 5.664 ppbv
RT: 32.080 min Scan# 2673
Delta R.T. 0.000 min
Lab File: L19BL017.D
Acq: 12 Feb 2019 11:51 pm

Tgt Ion: 83 Resp: 46023

Ion	Ratio	Lower	Upper
83	100		
85	64.4	51.6	77.4

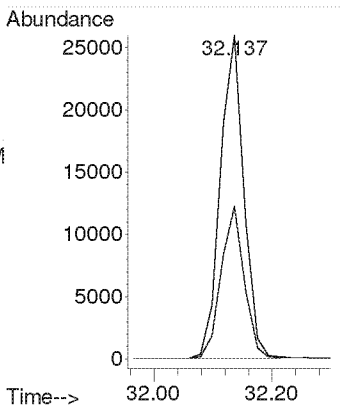


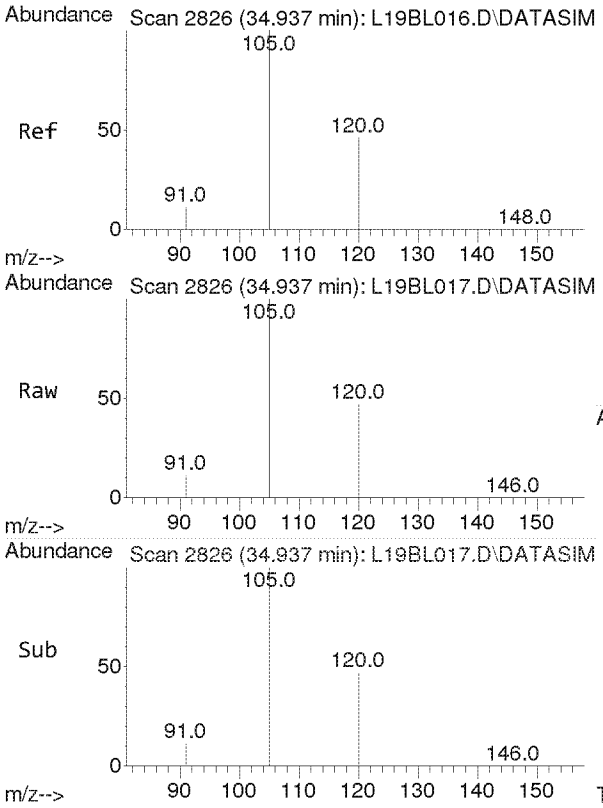


#55
o-Xylene
Concen: 5.668 ppbv
RT: 32.137 min Scan# 2676
Delta R.T. 0.000 min
Lab File: L19BL017.D
Acq: 12 Feb 2019 11:51 pm

Tgt Ion: 91 Resp: 70984

Ion	Ratio	Lower	Upper
91	100		
106	46.2	36.6	55.0

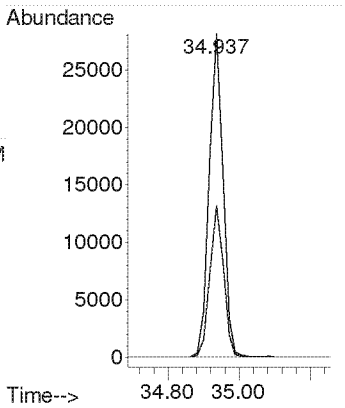


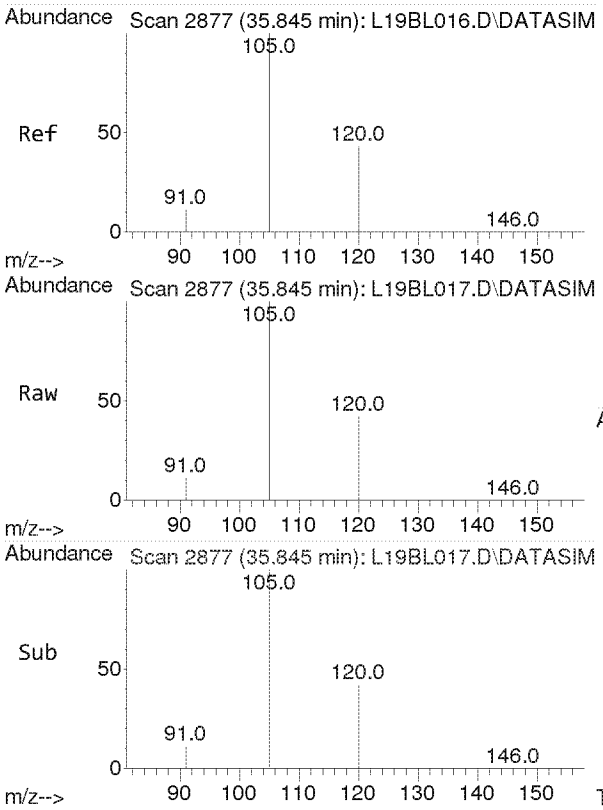


#56
1,3,5-Trimethylbenzene
Concen: 5.641 ppbv
RT: 34.937 min Scan# 2826
Delta R.T. 0.000 min
Lab File: L19BL017.D
Acq: 12 Feb 2019 11:51 pm

Tgt Ion:105 Resp: 75334

Ion	Ratio	Lower	Upper
105	100		
120	46.5	36.8	55.2

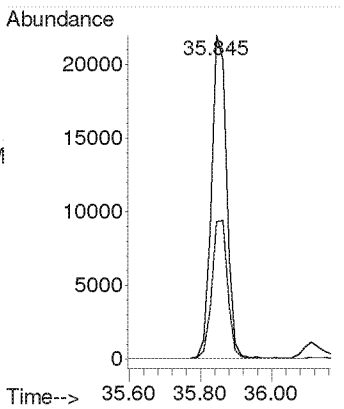


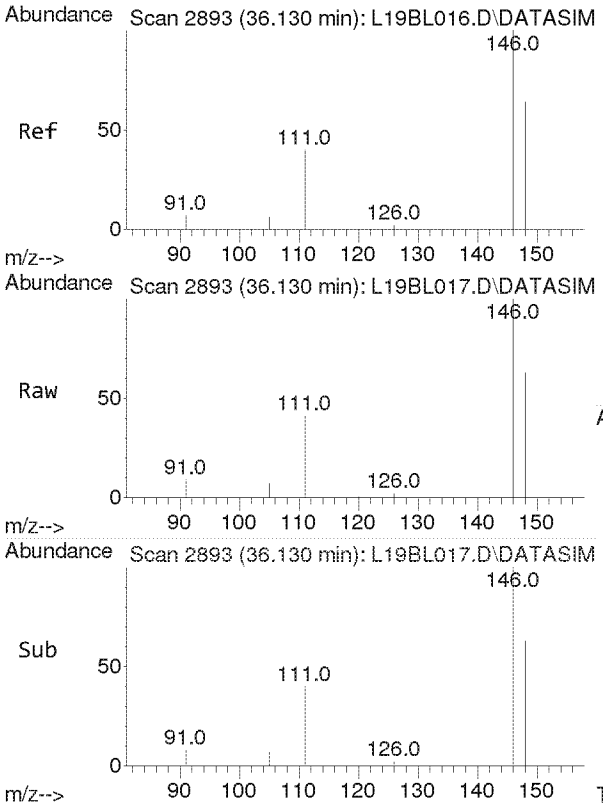


#57
1,2,4-Trimethylbenzene
Concen: 5.544 ppbv
RT: 35.845 min Scan# 2877
Delta R.T. 0.000 min
Lab File: L19BL017.D
Acq: 12 Feb 2019 11:51 pm

Tgt Ion:105 Resp: 64478

Ion	Ratio	Lower	Upper
105	100		
120	44.1	35.2	52.8

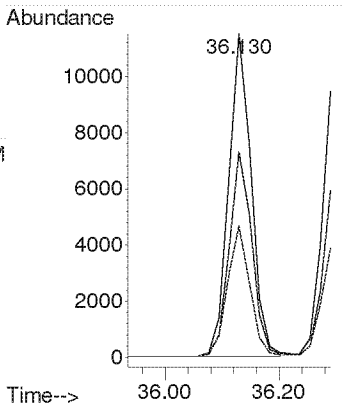


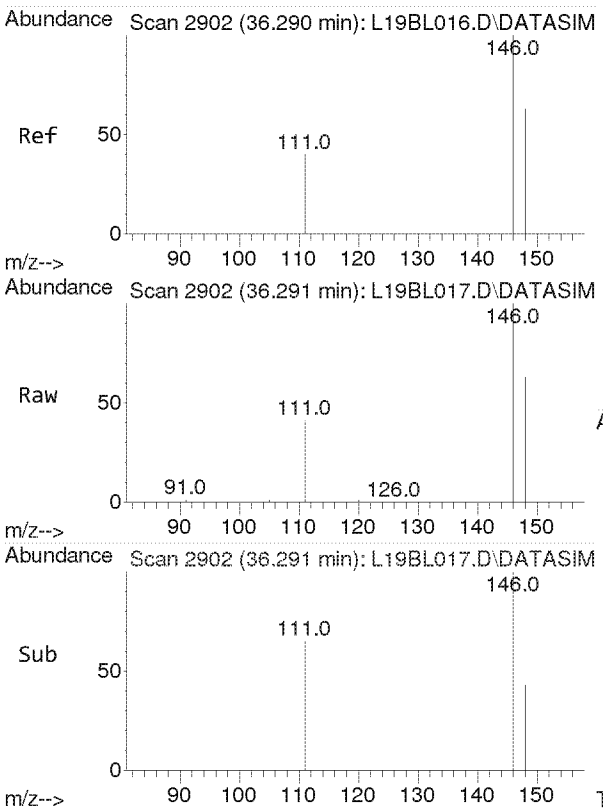


#58
m-Dichlorobenzene
Concen: 5.122 ppbv
RT: 36.130 min Scan# 2893
Delta R.T. 0.000 min
Lab File: L19BL017.D
Acq: 12 Feb 2019 11:51 pm

Tgt Ion:146 Resp: 31559

Ion	Ratio	Lower	Upper
146	100		
148	63.7	51.3	76.9
111	40.1	32.1	48.1

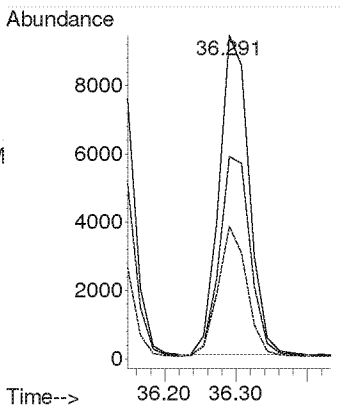


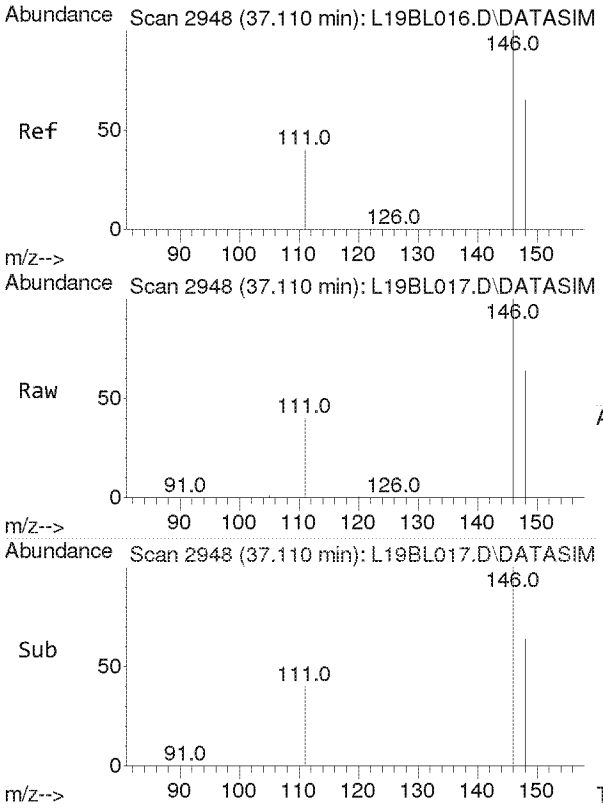


#59
p-Dichlorobenzene
Concen: 5.441 ppbv
RT: 36.291 min Scan# 2902
Delta R.T. 0.000 min
Lab File: L19BL017.D
Acq: 12 Feb 2019 11:51 pm

Tgt Ion:146 Resp: 27370

Ion	Ratio	Lower	Upper
146	100		
148	64.0	51.4	77.2
111	39.1	31.0	46.4

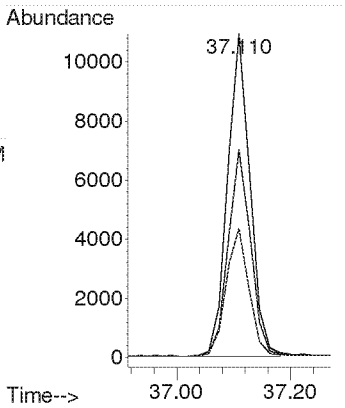


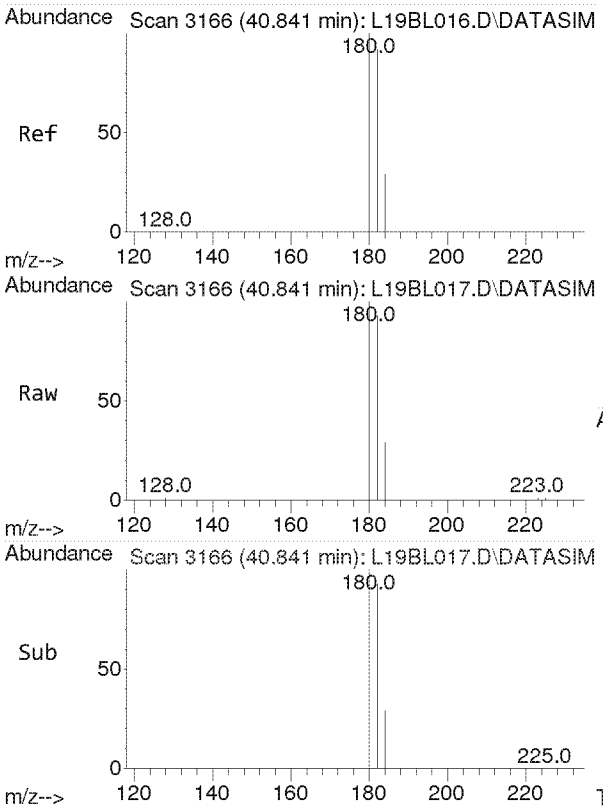


#60
o-Dichlorobenzene
Concen: 5.320 ppbv
RT: 37.110 min Scan# 2948
Delta R.T. 0.000 min
Lab File: L19BL017.D
Acq: 12 Feb 2019 11:51 pm

Tgt Ion:146 Resp: 29877

Ion	Ratio	Lower	Upper
146	100		
148	64.1	51.2	76.8
111	40.5	32.6	49.0

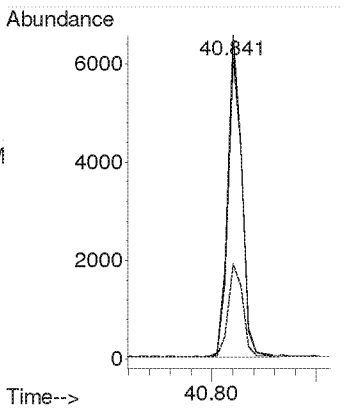


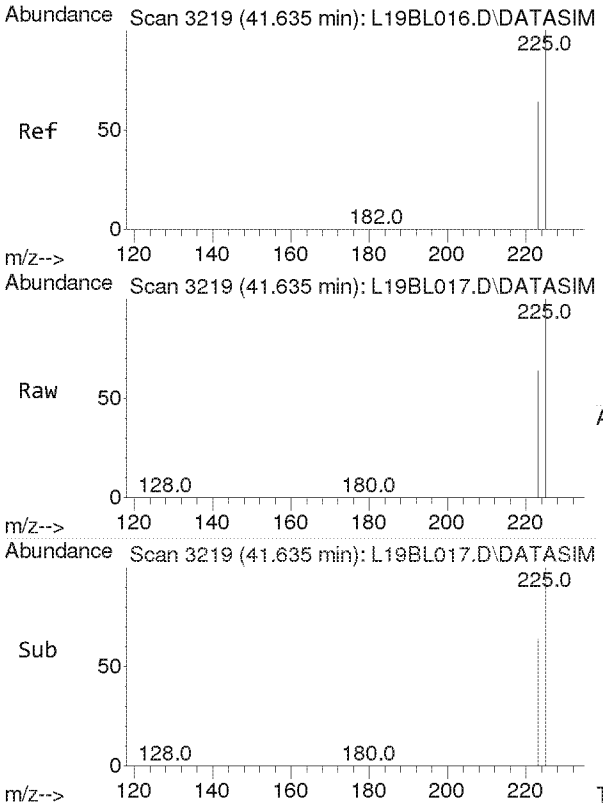


#61
1,2,4-Trichlorobenzene
Concen: 6.668 ppbv
RT: 40.841 min Scan# 3166
Delta R.T. 0.000 min
Lab File: L19BL017.D
Acq: 12 Feb 2019 11:51 pm

Tgt Ion:180 Resp: 11979

Ion	Ratio	Lower	Upper
180	100		
182	95.2	75.7	113.5
184	30.2	24.2	36.2

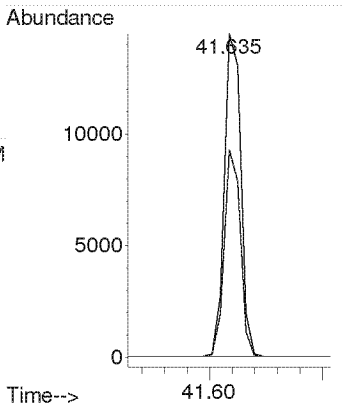




#62
Hexachloro-1,3-butadiene
Concen: 6.256 ppbv
RT: 41.635 min Scan# 3219
Delta R.T. 0.000 min
Lab File: L19BL017.D
Acq: 12 Feb 2019 11:51 pm

Tgt Ion:225 Resp: 29016

Ion	Ratio	Lower	Upper
225	100		
223	62.6	49.9	74.9



Analytical Standard Record

Eastern Research Group

9B12007

Description:	10.0 ppbv ICal	Expires:	03/14/19
Standard Type:	Calibration Stan	Prepared:	02/12/19
Solvent:	Scientific Air	Prepared By:	Mitch Howell
Final Volume (mls):	6000	Department:	Air Toxics
Vials:	1	Last Edit:	02/12/19 08:45 by MH

canister# 3238

Analyte	CAS Number	Concentration	Units
1,1,1-Trichloroethane	71-55-6	0.00982	ppmv
1,1,2,2-Tetrachloroethane	79-34-5	0.0101	ppmv
1,1,2-Trichloroethane	79-00-5	0.0101	ppmv
1,1-Dichloroethane	75-34-3	0.0102	ppmv
1,1-Dichloroethene	75-35-4	0.0109	ppmv
1,2,4-Trichlorobenzene	120-82-1	0.0095	ppmv
1,2,4-Trimethylbenzene	95-63-6	0.0098	ppmv
1,2-Dibromoethane	106-93-4	0.0103	ppmv
1,2-Dichloroethane	107-06-2	0.0103	ppmv
1,2-Dichloropropane	78-87-5	0.0101	ppmv
1,3,5-Trimethylbenzene	108-67-8	0.00992	ppmv
1,3-Butadiene	106-99-0	0.00992	ppmv
Acetonitrile	75-05-8	0.00916	ppmv
Acetylene	74-86-2	0.00912	ppmv
Acrolein	107-02-8	0.008	ppmv
Acrylonitrile	107-13-1	0.00952	ppmv
Benzene	71-43-2	0.0109	ppmv
Bromochloromethane	74-97-5	0.0102	ppmv
Bromodichloromethane	75-27-4	0.0096	ppmv
Bromoform	75-25-2	0.00972	ppmv
Bromomethane	74-83-9	0.0101	ppmv
Carbon Disulfide	75-15-0	0.0101	ppmv
Carbon Tetrachloride	56-23-5	0.0112	ppmv
Chlorobenzene	108-90-7	0.0103	ppmv
Chloroethane	75-00-3	0.0101	ppmv
Chloroform	67-66-3	0.0102	ppmv
Chloromethane	74-87-3	0.01	ppmv
Chloroprene	126-99-8	0.0103	ppmv
cis-1,2-Dichloroethylene	156-59-2	0.0103	ppmv
cis-1,3-Dichloropropene	10061-01-5	0.01	ppmv

Reviewed By 2-14-19 Date

Analytical Standard Record

Eastern Research Group

9B12007

Dibromochloromethane	124-48-1	0.0096	ppmv
Dichlorodifluoromethane	75-71-8	0.00984	ppmv
Dichloromethane	75-09-2	0.0108	ppmv
Dichlorotetrafluoroethane	76-14-2	0.0111	ppmv
Ethyl Acrylate	140-88-5	0.00978	ppmv
Ethyl tert-Butyl Ether	637-92-3	0.0094	ppmv
Ethylbenzene	100-41-4	0.0101	ppmv
Ethylene oxide	75-21-8	0.00984	ppmv
Hexachloro-1,3-butadiene	87-68-3	0.00962	ppmv
m,p-Xylene	108-38-3, 106-42-3	0.0194	ppmv
m-Dichlorobenzene	541-73-1	0.00926	ppmv
Methyl Isobutyl Ketone	108-10-1	0.00914	ppmv
Methyl Methacrylate	80-62-6	0.0095	ppmv
Methyl tert-Butyl Ether	1634-04-4	0.0095	ppmv
n-Octane	111-65-9	0.0104	ppmv
o-Dichlorobenzene	95-50-1	0.00966	ppmv
o-Xylene	95-47-6	0.0101	ppmv
p-Dichlorobenzene	106-46-7	0.00996	ppmv
Propylene	115-07-1	0.00968	ppmv
Styrene	100-42-5	0.00982	ppmv
tert-Amyl Methyl Ether	994-05-8	0.00966	ppmv
Tetrachloroethylene	127-18-4	0.0103	ppmv
Toluene	108-88-3	0.0103	ppmv
trans-1,2-Dichloroethylene	156-60-5	0.01	ppmv
trans-1,3-Dichloropropene	10061-02-6	0.00986	ppmv
Trichloroethylene	79-01-6	0.0096	ppmv
Trichlorofluoromethane	75-69-4	0.00932	ppmv
Trichlorotrifluoroethane	76-13-1	0.0104	ppmv
Vinyl chloride	75-01-4	0.0103	ppmv

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
8K20014	TO-15 Primary Primary Stock Stan	11/20/18	Mitch Howell	10/26/19	11/26/18 09:26 by MH	120
8L18003	Ethylene Oxide Stock Standard	12/06/18	** Vendor **	12/06/19	12/18/18 10:28 by MH	60

Reviewed By 2-14-19 Date

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\L19BL\
Data File : L19BL018.D
Acq On : 13 Feb 2019 12:52 am
Operator : MAH
Sample : 1902030-CAL6
Misc : 80 ML 8L13001,9B12007
ALS Vial : 18 Sample Multiplier: 1

L-14-19

Quant Time: Feb 13 06:41:05 2019
Quant Method : C:\msdchem\1\METHODS\9020003.M
Quant Title : TO-15 by Selective Ion Analysis
QLast Update : Wed Feb 13 06:40:07 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) IS-Hexane-d14	19.990	66	46340	4.7700	ppbv	0.00
29) IS-1,4-Difluorobenzene	23.148	114	113666	4.9900	ppbv	0.00
43) IS-Chlorobenzene-d5	30.113	117	88860	4.7400	ppbv	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Acetylene	5.406	26	37195	10.0132	ppbv	100
3) Propylene	7.823	41	48583	10.5888	ppbv	99
4) Dichlorodifluoromethane	8.667	85	234501	10.7285	ppbv	100
5) Chloromethane	9.740	50	60483	10.8788	ppbv	100
6) Dichlorotetrafluoroethane	10.847	85	232803	12.1573	ppbv	100
7) Vinyl Chloride	11.102	62	71407	11.2489	ppbv	100
8) 1,3-Butadiene	11.766	54	47216	10.8755	ppbv	100
9) Ethylene oxide	12.348	29	✓ 28432	10.5902	ppbv	99
10) Bromomethane	12.588	94	66352	10.9861	ppbv	100
11) Chloroethane	13.266	64	26833	10.7413	ppbv	100
12) Acetonitrile	14.309	41	39856	9.7751	ppbv	100
13) Acrolein	14.587	56	17223	8.3696	ppbv	99
14) Trichlorofluoromethane	15.190	101	186273	9.9751	ppbv	100
15) Acrylonitrile	15.909	53	33455	10.1263	ppbv	100
16) 1,1-Dichloroethene	16.419	61	91679	11.2550	ppbv	100
17) Methylene Chloride	16.721	49	60980	11.4696	ppbv	99
18) Carbon Disulfide	16.930	76	179504	10.8593	ppbv	100
19) Trichlorotrifluoroethane	17.278	101	140228	11.2813	ppbv	99
20) trans-1,2-Dichloroethy...	18.312	96	47659	10.5448	ppbv	100
21) 1,1-Dichloroethane	18.630	63	82591	10.8759	ppbv	100
22) Methyl tert-Butyl Ether	18.789	73	135064	10.7894	ppbv	100
23) Chloroprene	19.537	53	68999	11.0991	ppbv	100
24) cis-1,2-Dichloroethylene	19.945	61	64513	10.8428	ppbv	99
25) Bromochloromethane	20.172	128	35073	10.8199	ppbv	99
26) Chloroform	20.398	83	94563	10.7157	ppbv	99
27) Ethyl tert-Butyl Ether	21.162	59	127218	10.5294	ppbv	100
28) 1,2-Dichloroethane	21.475	62	58652	10.9288	ppbv	100
30) 1,1,1-Trichloroethane	21.867	97	91790	11.1741	ppbv	96
31) Benzene	22.533	78	136786	11.5616	ppbv	100
32) Carbon Tetrachloride	22.768	117	108534	12.2838	ppbv	100
33) tert-Amyl Methyl Ether	23.499	73	108276	10.7933	ppbv	100
34) 1,2-Dichloropropane	23.787	63	49241	10.7945	ppbv	97
35) Ethyl Acrylate	23.870	55	45278	12.0687	ppbv	100
36) Bromodichloromethane	24.076	83	82669	10.3822	ppbv	100
37) Trichloroethylene	24.179	130	56856	10.0249	ppbv	99
38) Methyl Methacrylate	24.530	41	131290	11.6195	ppbv	100
39) cis-1,3-Dichloropropene	25.528	75	44681	11.5201	ppbv	98
40) Methyl Isobutyl Ketone	25.604	43	89785	10.8565	ppbv	100
41) trans-1,3-Dichloropropene	26.367	75	31645	11.9635	ppbv	100
42) 1,1,2-Trichloroethane	26.615	97	44998	10.8628	ppbv	100
44) Toluene	27.092	91	149987	10.3402	ppbv	99
45) Dibromochloromethane	27.733	129	284480	9.9691	ppbv	100
46) 1,2-Dibromoethane	28.154	107	59884	10.8227	ppbv	100
47) n-Octane	28.874	43	92073	10.5170	ppbv	100
48) Tetrachloroethylene	28.997	166	70561	10.2056	ppbv	100
49) Chlorobenzene	30.190	112	96365	10.3480	ppbv	98
50) Ethylbenzene	30.915	91	158747	10.3924	ppbv	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\L19BL\
Data File : L19BL018.D
Acq On : 13 Feb 2019 12:52 am
Operator : MAH
Sample : 1902030-CAL6
Misc : 80 ML 8L13001,9B12007
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Feb 13 06:41:05 2019
Quant Method : C:\msdchem\1\METHODS\9020003.M
Quant Title : TO-15 by Selective Ion Analysis
QLast Update : Wed Feb 13 06:40:07 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
51) m,p-Xylene	31.278	91	260751	20.1280	ppbv	100
52) Bromoform	31.278	173	57080	10.4433	ppbv	100
53) Styrene	31.927	104	76532	10.4980	ppbv #	99
54) 1,1,2,2-Tetrachloroethane	32.079	83	85867	10.4761	ppbv	100
55) o-Xylene	32.137	91	130868	10.3597	ppbv	100
56) 1,3,5-Trimethylbenzene	34.936	105	139814	10.3795	ppbv	99
57) 1,2,4-Trimethylbenzene	35.845	105	124127	10.5801	ppbv	100
58) m-Dichlorobenzene	36.130	146	62988	10.1342	ppbv	100
59) p-Dichlorobenzene	36.290	146	55676	10.9739	ppbv	100
60) o-Dichlorobenzene	37.110	146	60548	10.6878	ppbv	100
61) 1,2,4-Trichlorobenzene	40.840	180	17841	9.8457	ppbv	99
62) Hexachloro-1,3-butadiene	41.634	225	45531	9.7323	ppbv	100

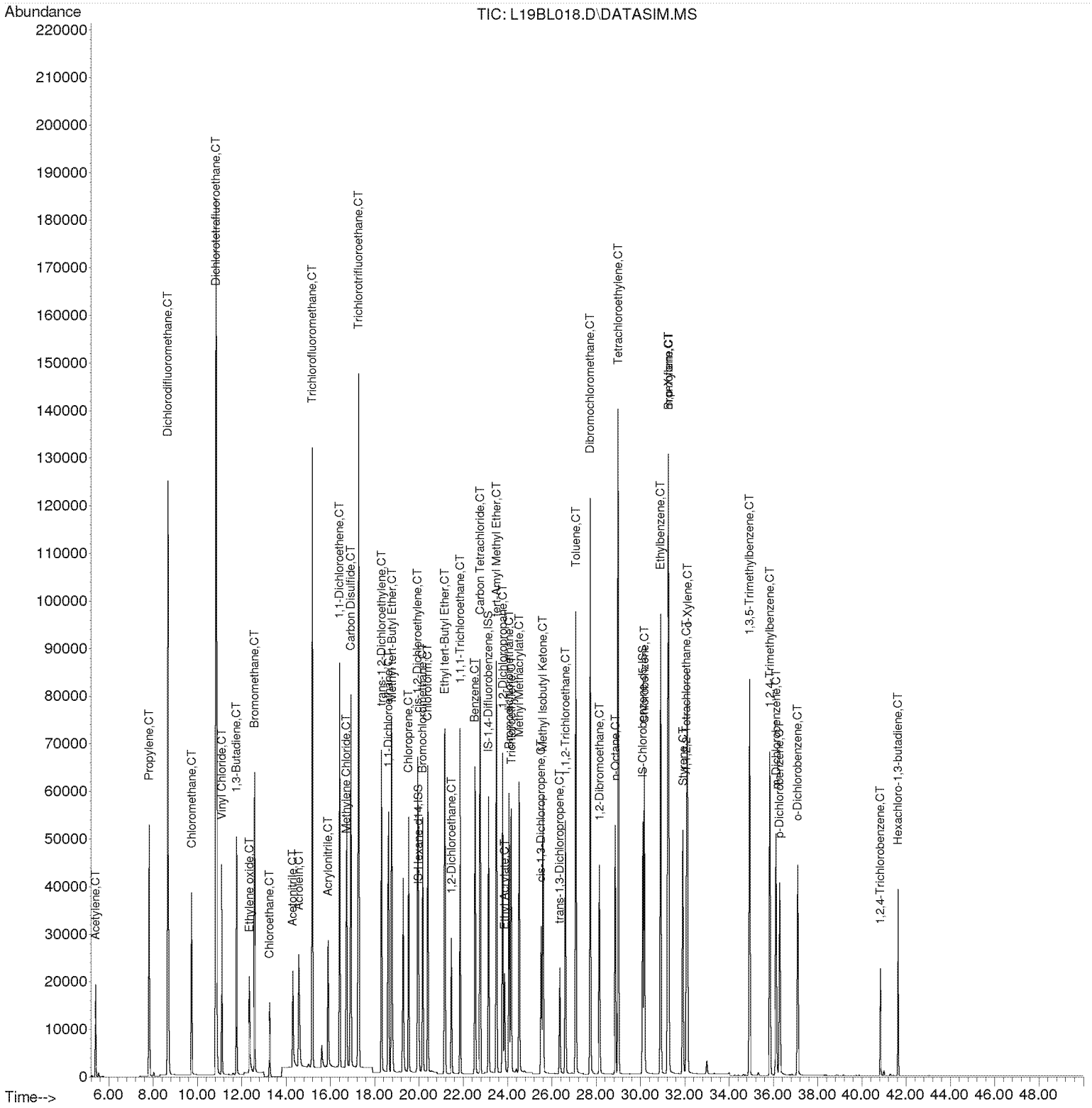
(#) = qualifier out of range (m) = manual integration (+) = signals summed

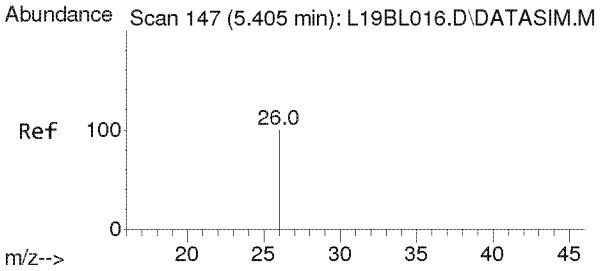
ED_002475_00000354-00226

Quantitation Report (QT Reviewed)

Data Path : Y:\MASS SPEC 1 DATA\L19BL\
Data File : L19BL018.D
Acq On : 13 Feb 2019 12:52 am
Operator : MAH
Sample : 1902030-CAL6
Misc : 80 ML 8L13001,9B12007
ALS Vial : 18 Sample Multiplier: 1

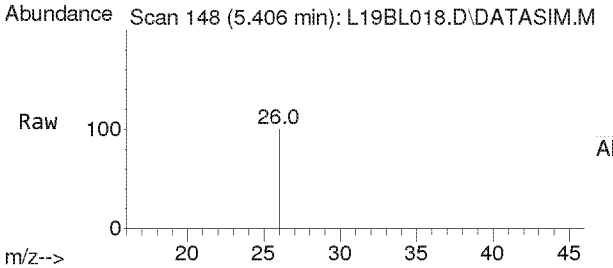
Quant Time: Feb 13 06:41:05 2019
Quant Method : C:\msdchem\1\METHODS\9020003.M
Quant Title : TO-15 by Selective Ion Analysis
QLast Update : Wed Feb 13 06:40:07 2019
Response via : Initial Calibration

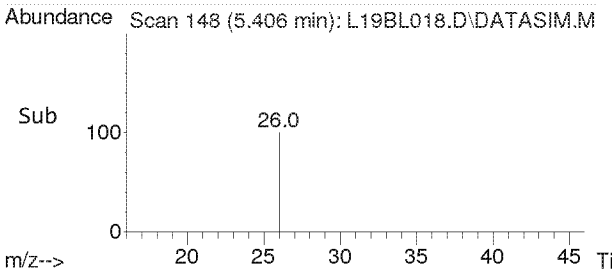


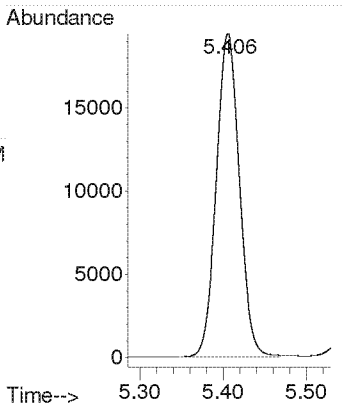


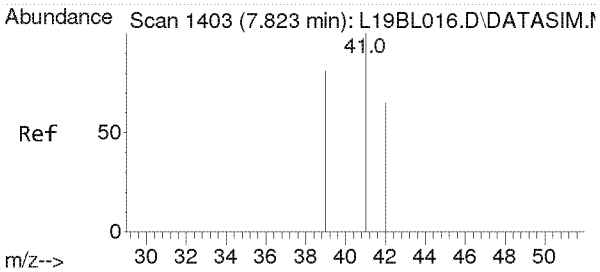
#2
Acetylene
Concen: 10.013 ppbv
RT: 5.406 min Scan# 148
Delta R.T. 0.001 min
Lab File: L19BL018.D
Acq: 13 Feb 2019 12:52 am

Tgt Ion: 26 Resp: 37195





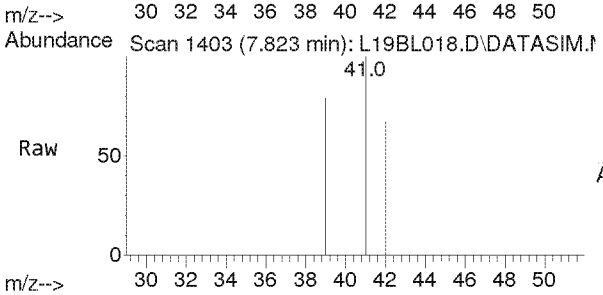


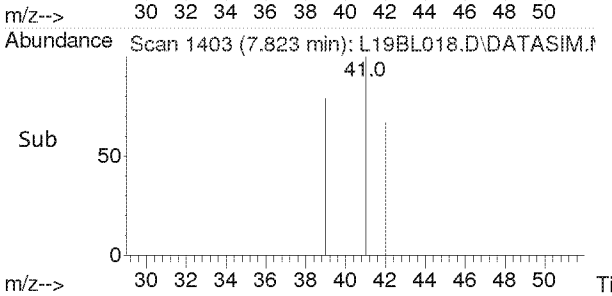


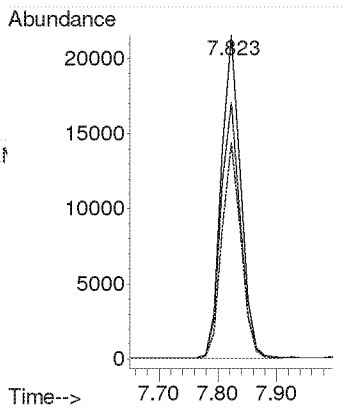
#3
Propylene
Concen: 10.589 ppbv
RT: 7.823 min Scan# 1403
Delta R.T. -0.000 min
Lab File: L19BL018.D
Acq: 13 Feb 2019 12:52 am

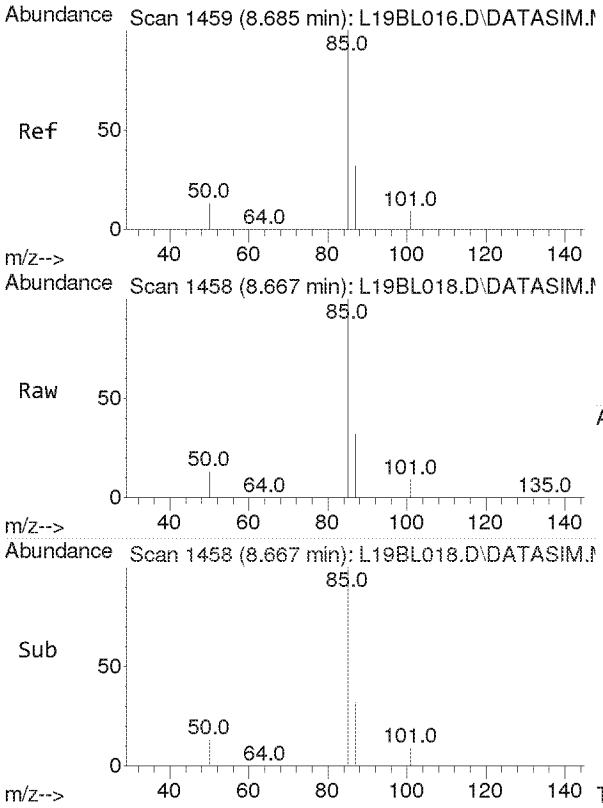
Tgt Ion: 41 Resp: 48583

Ion	Ratio	Lower	Upper
41	100		
39	79.5	64.2	96.2
42	66.1	52.6	79.0





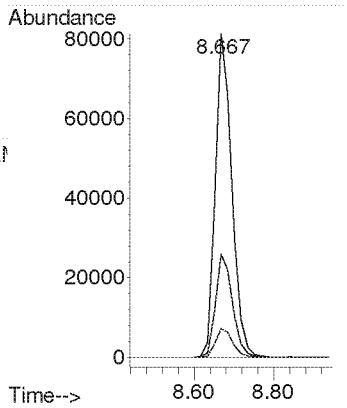


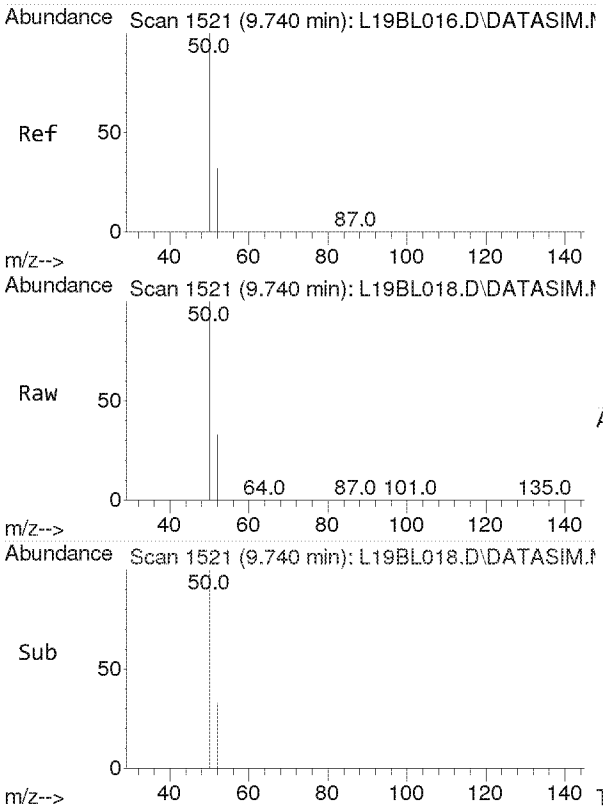


#4
Dichlorodifluoromethane
Concen: 10.729 ppbv
RT: 8.667 min Scan# 1458
Delta R.T. -0.017 min
Lab File: L19BL018.D
Acq: 13 Feb 2019 12:52 am

Tgt Ion: 85 Resp: 234501

Ion	Ratio	Lower	Upper
85	100		
87	32.4	26.0	39.0
101	9.0	7.3	10.9

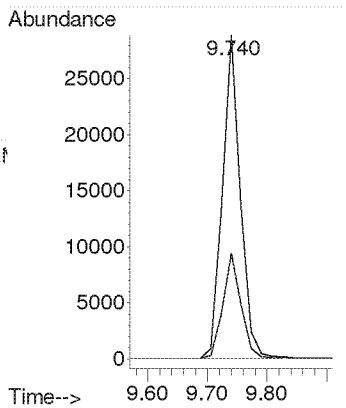


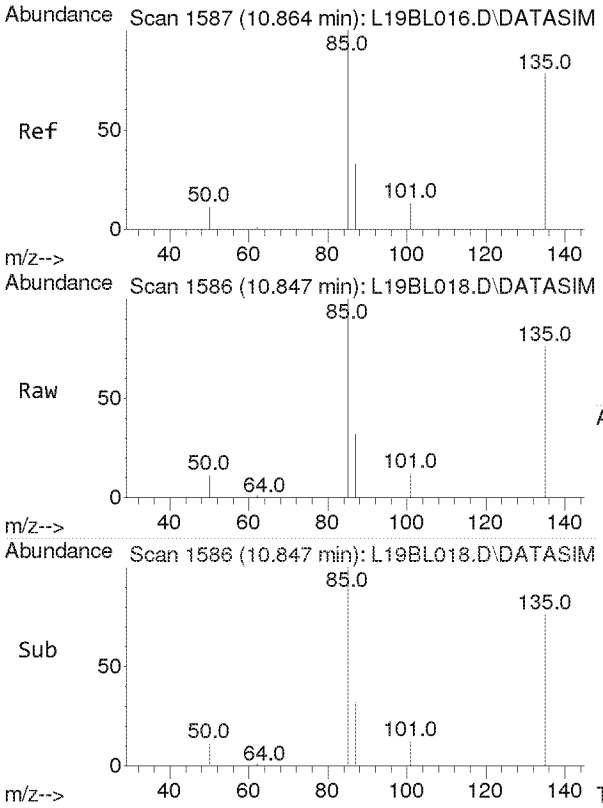


#5
Chloromethane
Concen: 10.879 ppbv
RT: 9.740 min Scan# 1521
Delta R.T. -0.000 min
Lab File: L19BL018.D
Acq: 13 Feb 2019 12:52 am

Tgt Ion: 50 Resp: 60483

Ion	Ratio	Lower	Upper
50	100		
52	32.7	26.1	39.1

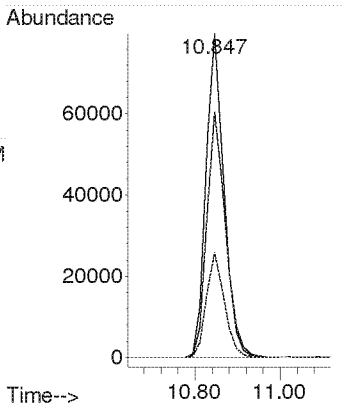


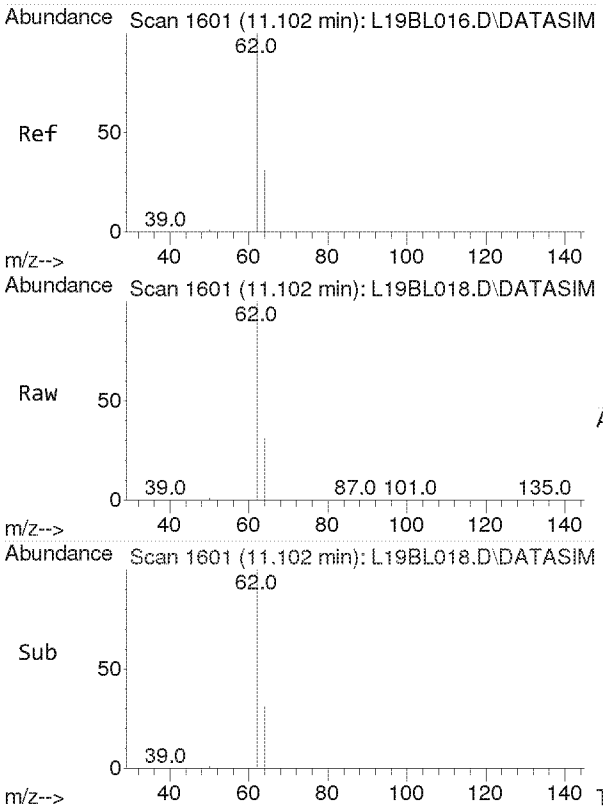


#6
Dichlorotetrafluoroethane
Concen: 12.157 ppbv
RT: 10.847 min Scan# 1586
Delta R.T. -0.017 min
Lab File: L19BL018.D
Acq: 13 Feb 2019 12:52 am

Tgt Ion: 85 Resp: 232803

Ion	Ratio	Lower	Upper
85	100		
135	79.2	63.2	94.8
87	32.2	25.9	38.9

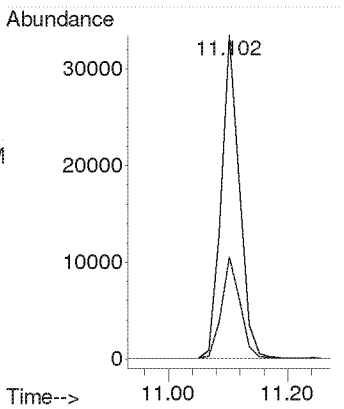


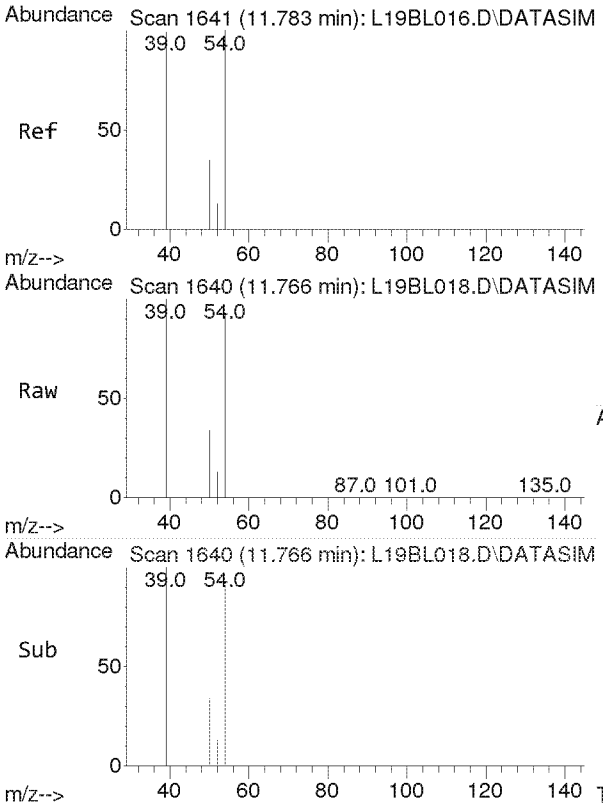


#7
Vinyl Chloride
Concen: 11.249 ppbv
RT: 11.102 min Scan# 1601
Delta R.T. -0.000 min
Lab File: L19BL018.D
Acq: 13 Feb 2019 12:52 am

Tgt Ion: 62 Resp: 71407

Ion	Ratio	Lower	Upper
62	100		
64	31.8	25.4	38.0

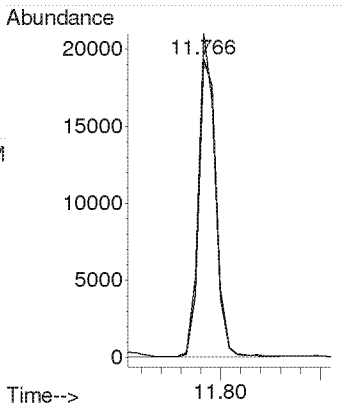


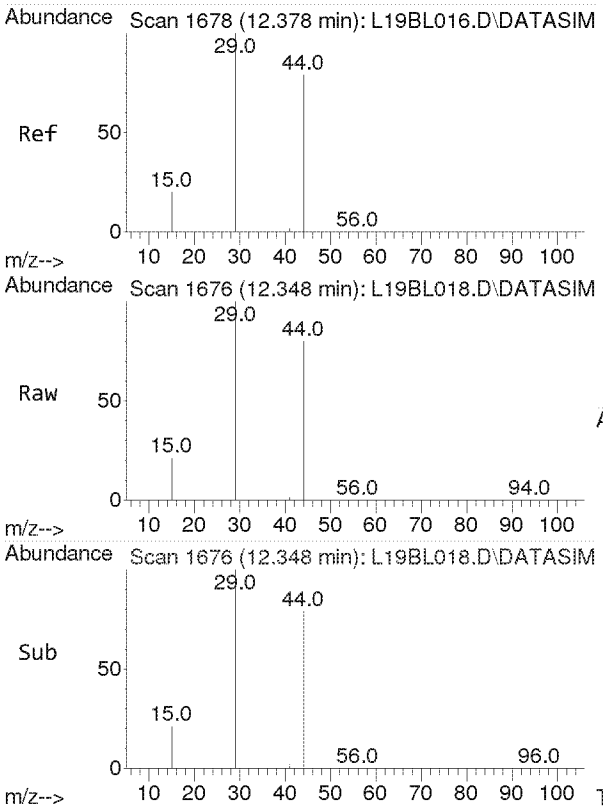


#8
1,3-Butadiene
Concen: 10.875 ppbv
RT: 11.766 min Scan# 1640
Delta R.T. -0.017 min
Lab File: L19BL018.D
Acq: 13 Feb 2019 12:52 am

Tgt Ion: 54 Resp: 47216

Ion	Ratio	Lower	Upper
54	100		
39	102.5	81.6	122.4

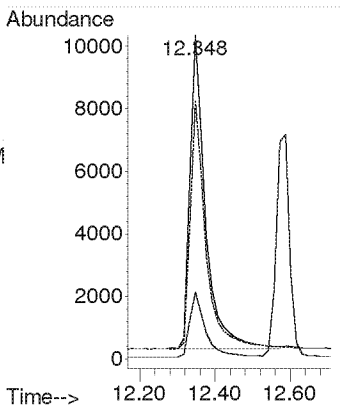


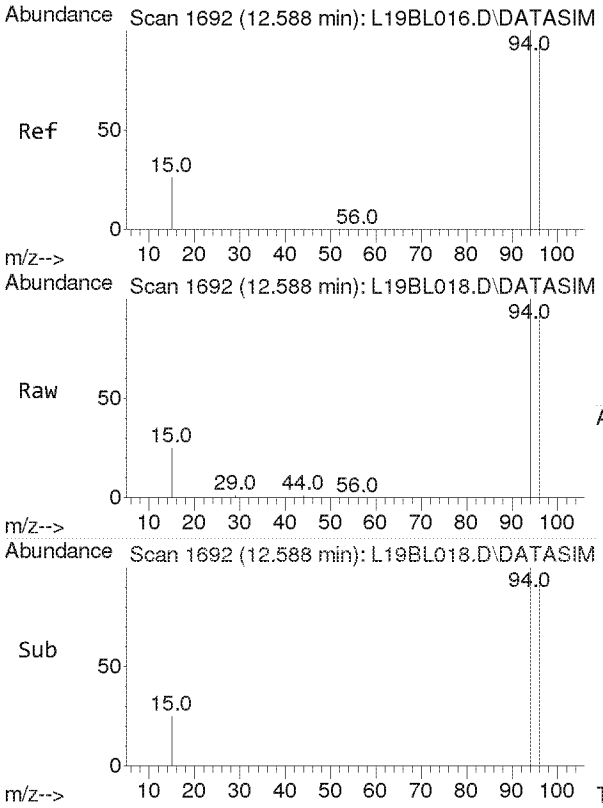


#9
Ethylene oxide
Concen: 10.590 ppbv
RT: 12.348 min Scan# 1676
Delta R.T. -0.030 min
Lab File: L19BL018.D
Acq: 13 Feb 2019 12:52 am

Tgt Ion: 29 Resp: 28432

Ion	Ratio	Lower	Upper
29	100		
15	20.6	16.0	24.0
44	80.6	65.4	98.2

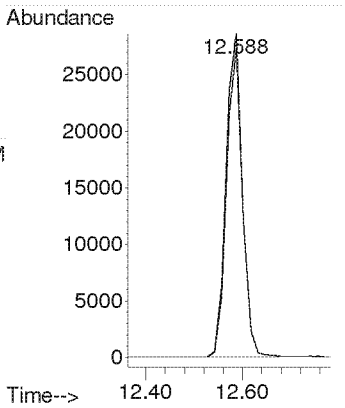


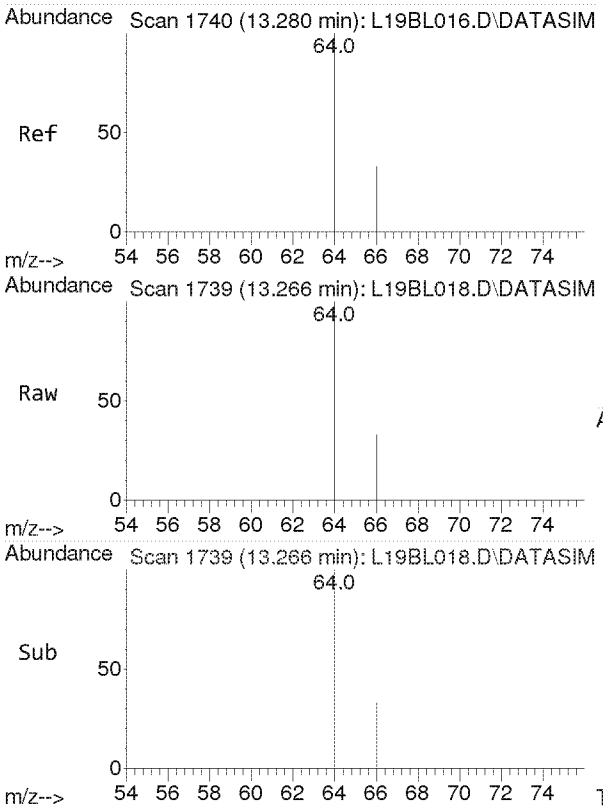


#10
Bromomethane
Concen: 10.986 ppbv
RT: 12.588 min Scan# 1692
Delta R.T. -0.000 min
Lab File: L19BL018.D
Acq: 13 Feb 2019 12:52 am

Tgt Ion: 94 Resp: 66352

Ion	Ratio	Lower	Upper
94	100		
96	94.1	75.5	113.3

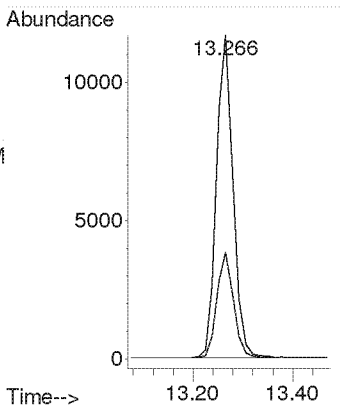


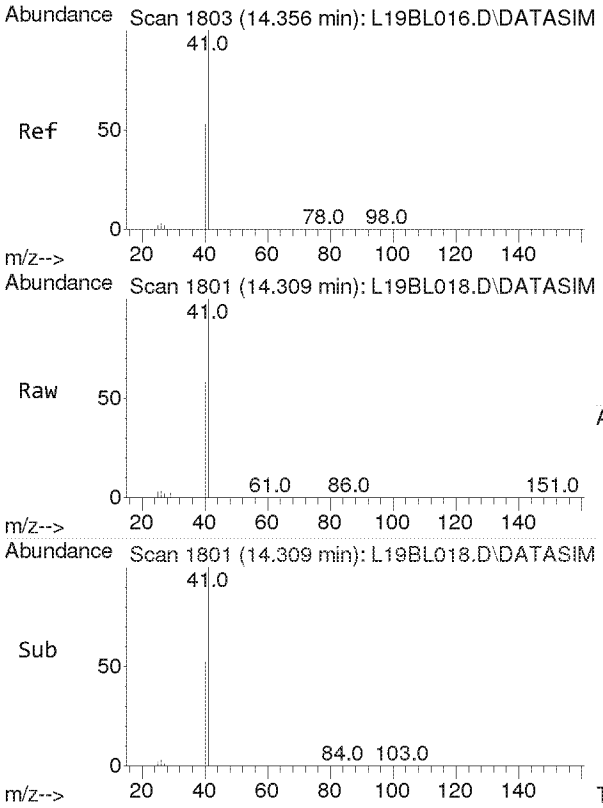


#11
Chloroethane
Concen: 10.741 ppbv
RT: 13.266 min Scan# 1739
Delta R.T. -0.014 min
Lab File: L19BL018.D
Acq: 13 Feb 2019 12:52 am

Tgt Ion: 64 Resp: 26833

Ion	Ratio	Lower	Upper
64	100		
66	32.3	25.8	38.6

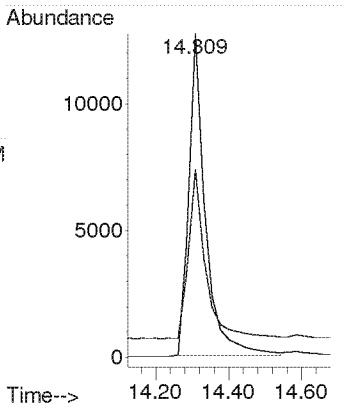


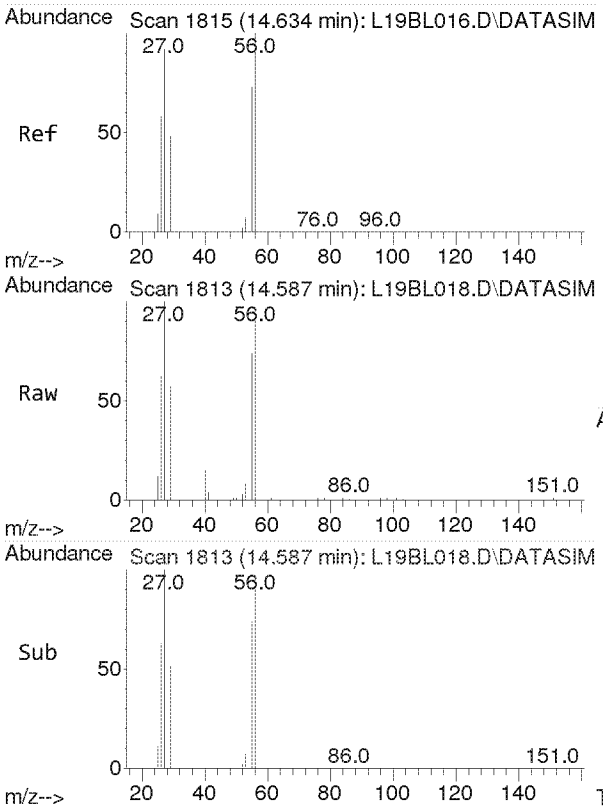


#12
Acetonitrile
Concen: 9.775 ppbv
RT: 14.309 min Scan# 1801
Delta R.T. -0.047 min
Lab File: L19BL018.D
Acq: 13 Feb 2019 12:52 am

Tgt Ion: 41 Resp: 39856

Ion	Ratio	Lower	Upper
41	100		
40	52.9	42.2	63.4

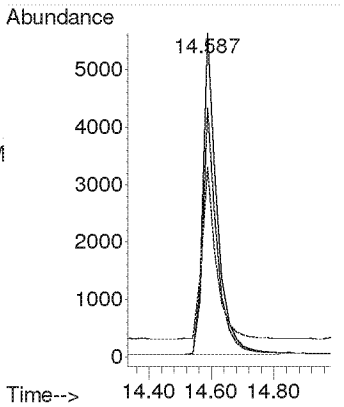


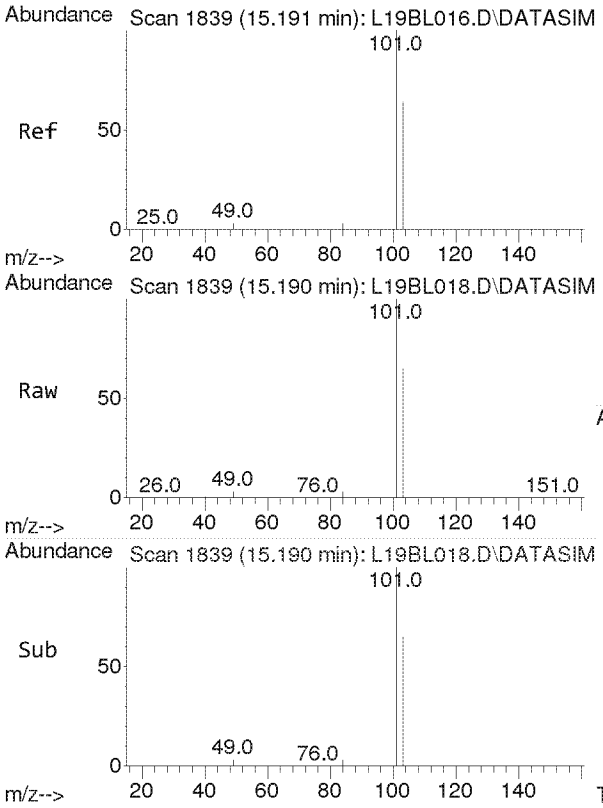


#13
Acrolein
Concen: 8.370 ppbv
RT: 14.587 min Scan# 1813
Delta R.T. -0.047 min
Lab File: L19BL018.D
Acq: 13 Feb 2019 12:52 am

Tgt Ion: 56 Resp: 17223

Ion	Ratio	Lower	Upper
56	100		
55	77.0	60.8	91.2
29	54.2	43.8	65.6

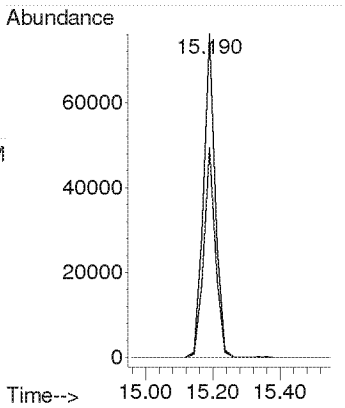


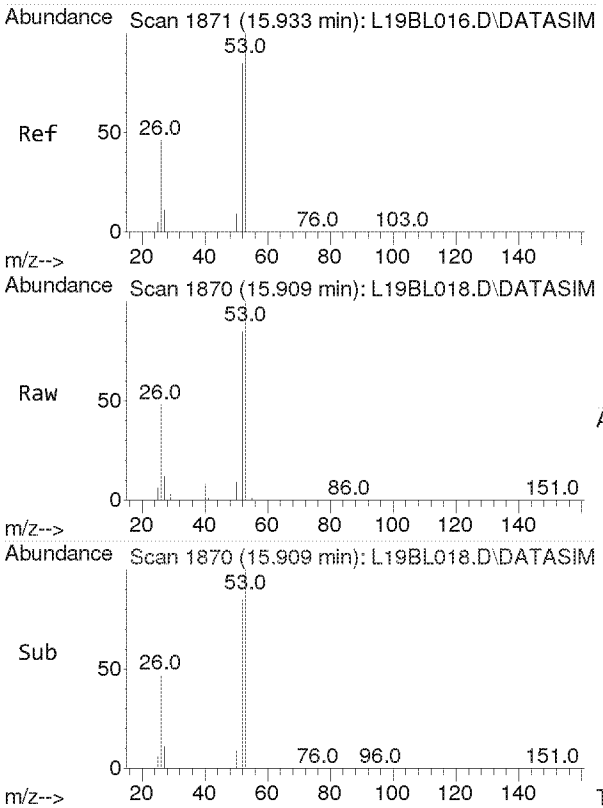


#14
Trichlorofluoromethane
Concen: 9.975 ppbv
RT: 15.190 min Scan# 1839
Delta R.T. -0.000 min
Lab File: L19BL018.D
Acq: 13 Feb 2019 12:52 am

Tgt Ion:101 Resp: 186273

Ion	Ratio	Lower	Upper
101	100		
103	64.7	51.7	77.5

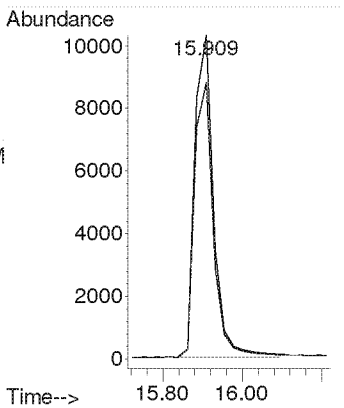


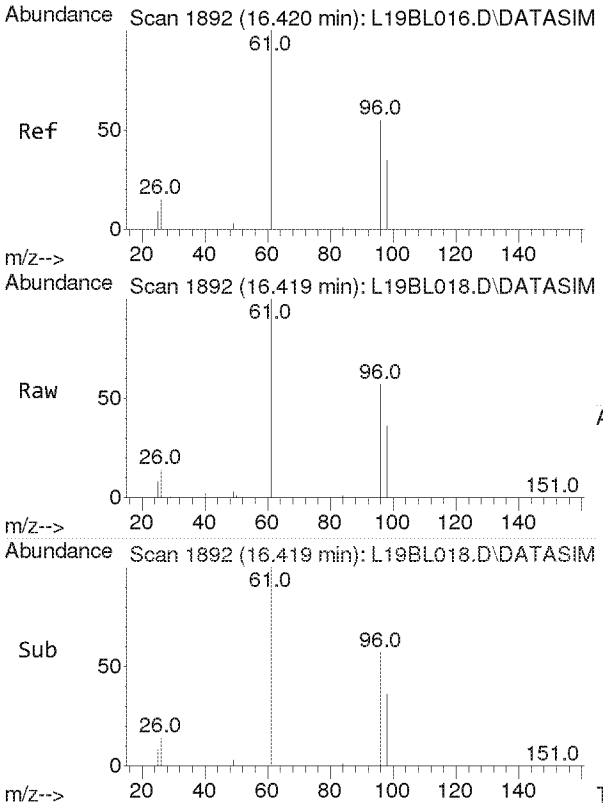


#15
Acrylonitrile
Concen: 10.126 ppbv
RT: 15.909 min Scan# 1870
Delta R.T. -0.024 min
Lab File: L19BL018.D
Acq: 13 Feb 2019 12:52 am

Tgt Ion: 53 Resp: 33455

Ion	Ratio	Lower	Upper
53	100		
52	86.7	69.5	104.3

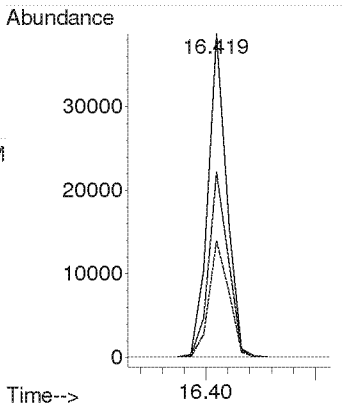


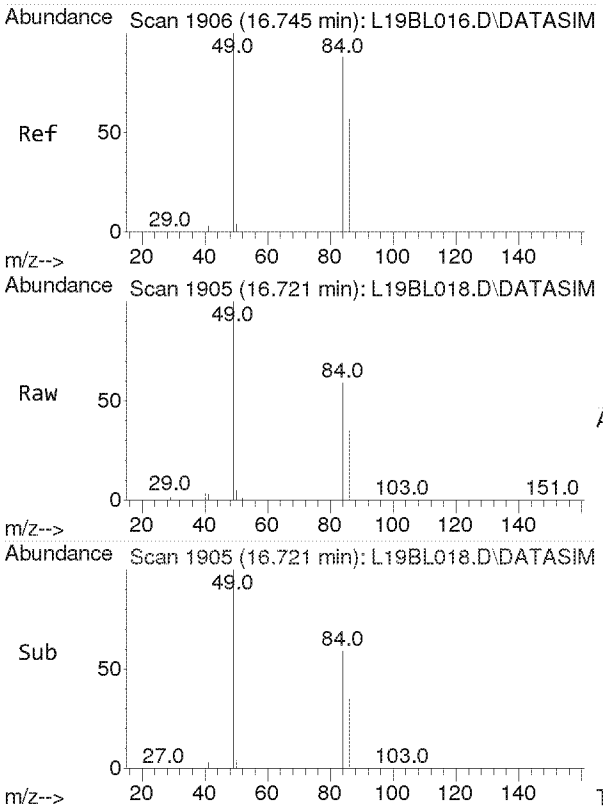


#16
1,1-Dichloroethene
Concen: 11.255 ppbv
RT: 16.419 min Scan# 1892
Delta R.T. -0.000 min
Lab File: L19BL018.D
Acq: 13 Feb 2019 12:52 am

Tgt Ion: 61 Resp: 91679

Ion	Ratio	Lower	Upper
61	100		
96	58.8	47.3	70.9
98	37.8	30.6	45.8

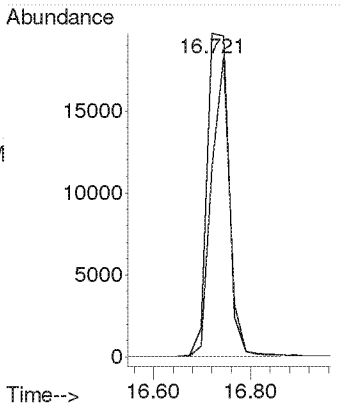


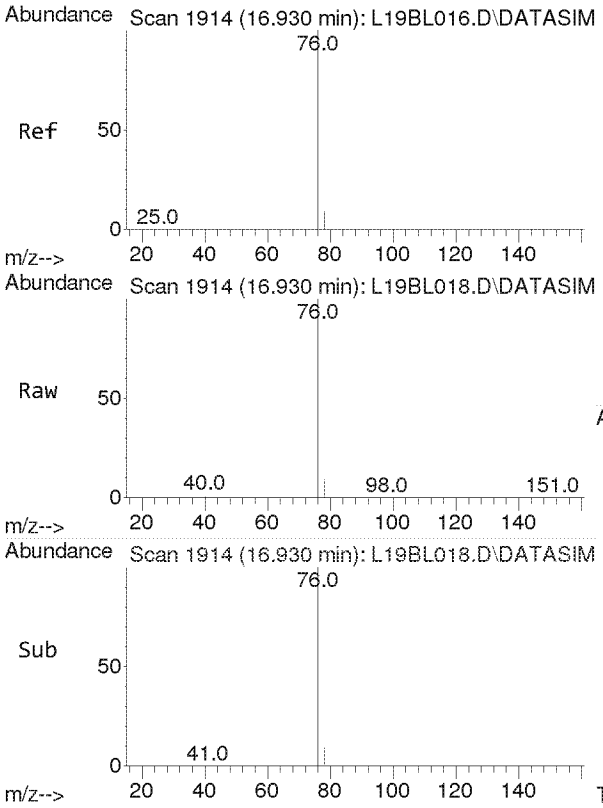


#17
Methylene Chloride
Concen: 11.470 ppbv
RT: 16.721 min Scan# 1905
Delta R.T. -0.024 min
Lab File: L19BL018.D
Acq: 13 Feb 2019 12:52 am

Tgt Ion: 49 Resp: 60980

Ion	Ratio	Lower	Upper
49	100		
84	77.7	54.0	100.4

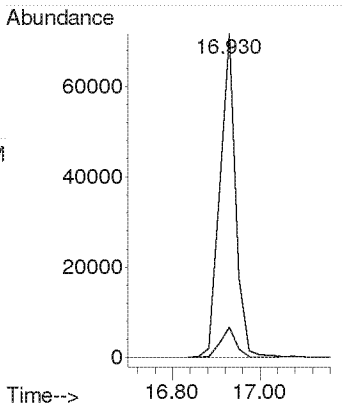


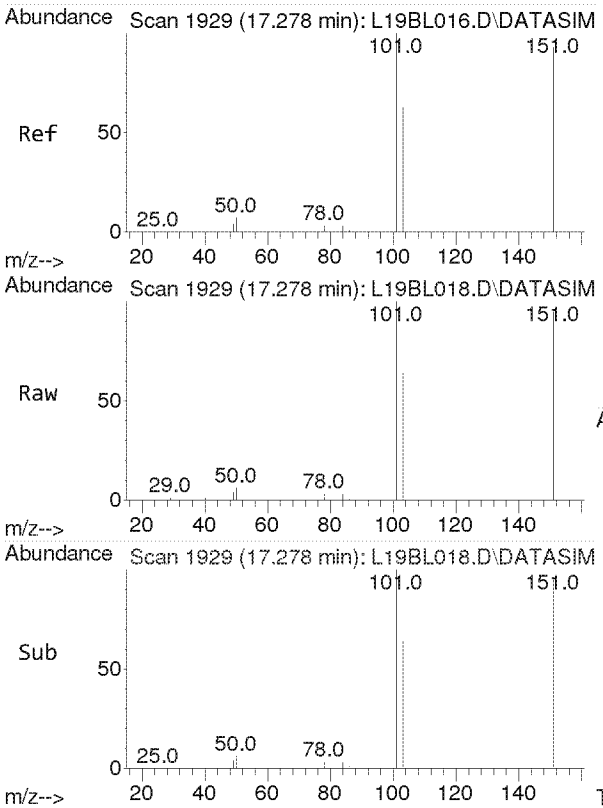


#18
Carbon Disulfide
Concen: 10.859 ppbv
RT: 16.930 min Scan# 1914
Delta R.T. -0.000 min
Lab File: L19BL018.D
Acq: 13 Feb 2019 12:52 am

Tgt Ion: 76 Resp: 179504

Ion	Ratio	Lower	Upper
76	100		
78	9.1	7.4	11.0

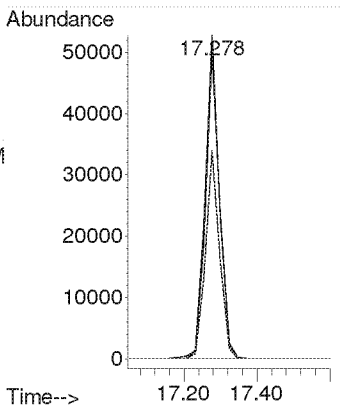


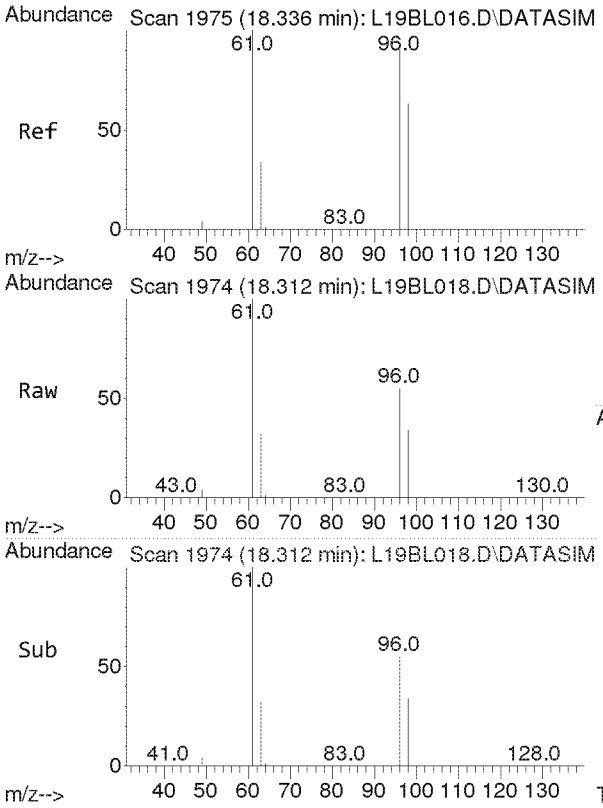


#19
Trichlorotrifluoroethane
Concen: 11.281 ppbv
RT: 17.278 min Scan# 1929
Delta R.T. -0.000 min
Lab File: L19BL018.D
Acq: 13 Feb 2019 12:52 am

Tgt Ion:101 Resp: 140228

Ion	Ratio	Lower	Upper
101	100		
151	95.6	75.8	113.8
103	64.5	51.1	76.7

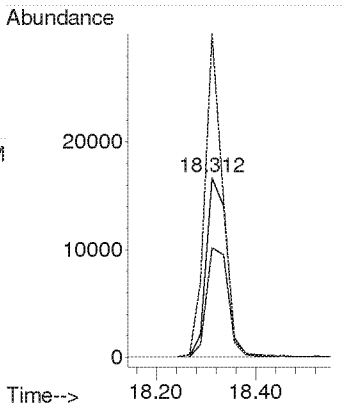


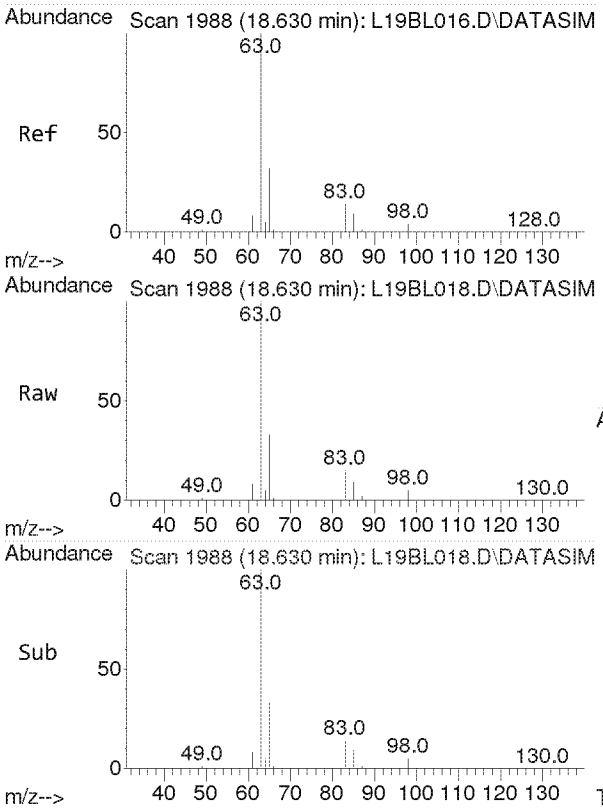


#20
trans-1,2-Dichloroethylene
Concen: 10.545 ppbv
RT: 18.312 min Scan# 1974
Delta R.T. -0.023 min
Lab File: L19BL018.D
Acq: 13 Feb 2019 12:52 am

Tgt Ion: 96 Resp: 47659

Ion	Ratio	Lower	Upper
96	100		
98	63.8	51.5	77.3
61	153.4	122.9	184.3

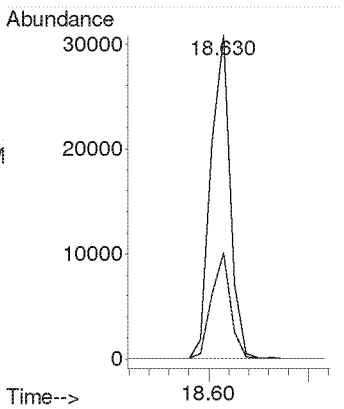


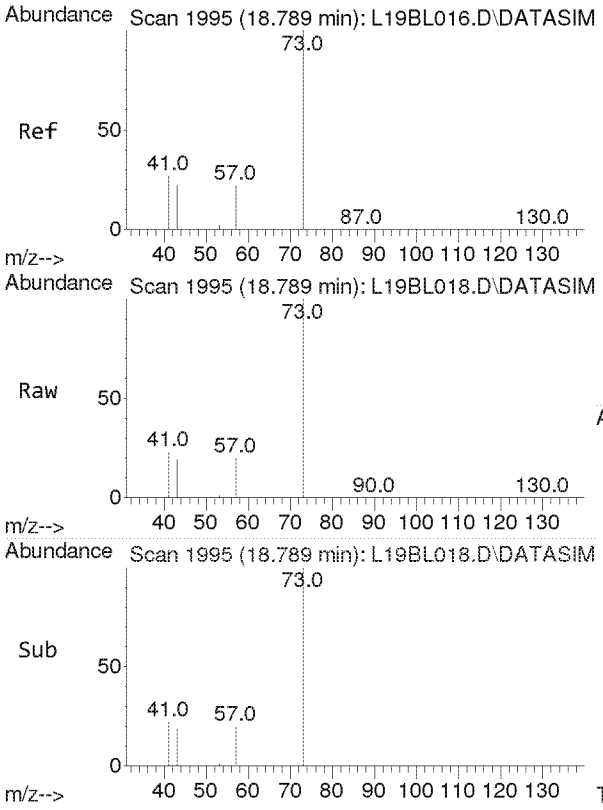


#21
1,1-Dichloroethane
Concen: 10.876 ppbv
RT: 18.630 min Scan# 1988
Delta R.T. -0.000 min
Lab File: L19BL018.D
Acq: 13 Feb 2019 12:52 am

Tgt Ion: 63 Resp: 82591

Ion	Ratio	Lower	Upper
63	100		
65	31.8	25.4	38.0

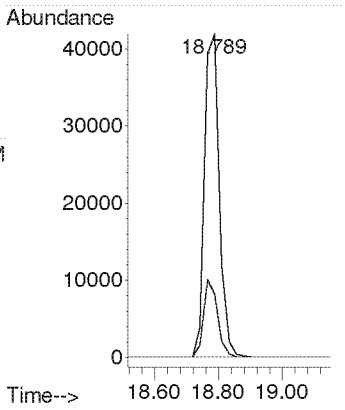


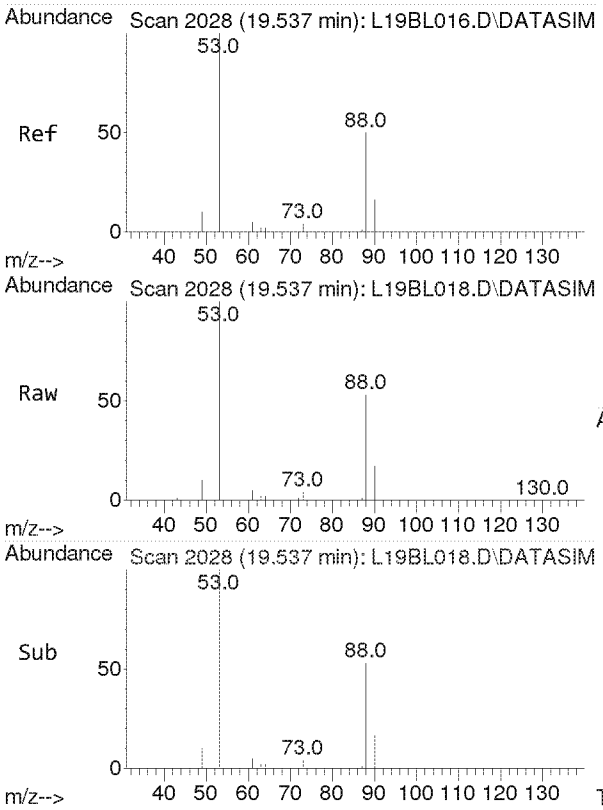


#22
Methyl tert-Butyl Ether
Concen: 10.789 ppbv
RT: 18.789 min Scan# 1995
Delta R.T. -0.000 min
Lab File: L19BL018.D
Acq: 13 Feb 2019 12:52 am

Tgt Ion: 73 Resp: 135064

Ion	Ratio	Lower	Upper
73	100		
57	22.3	18.0	27.0

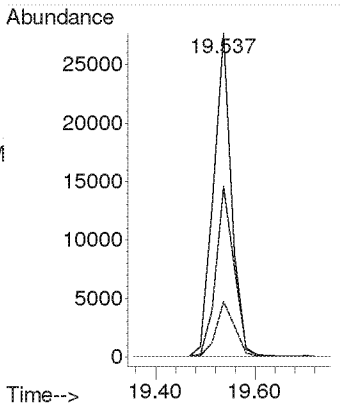


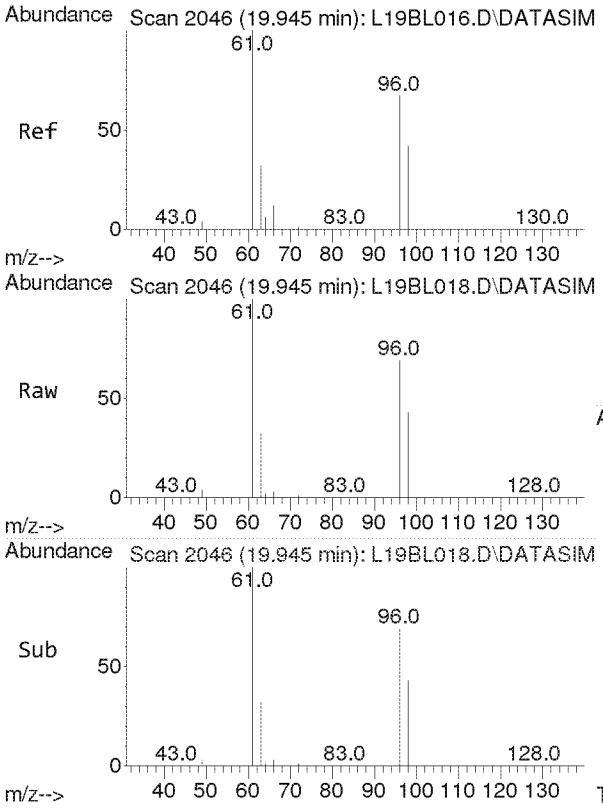


#23
Chloroprene
Concen: 11.099 ppbv
RT: 19.537 min Scan# 2028
Delta R.T. -0.000 min
Lab File: L19BL018.D
Acq: 13 Feb 2019 12:52 am

Tgt Ion: 53 Resp: 68999

Ion	Ratio	Lower	Upper
53	100		
88	53.2	42.6	64.0
90	17.3	13.9	20.9

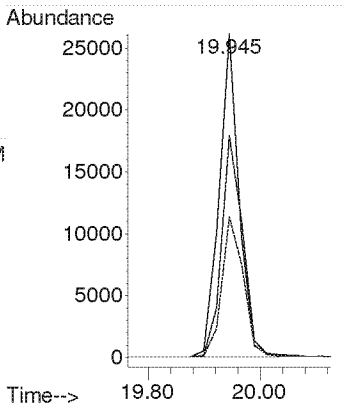


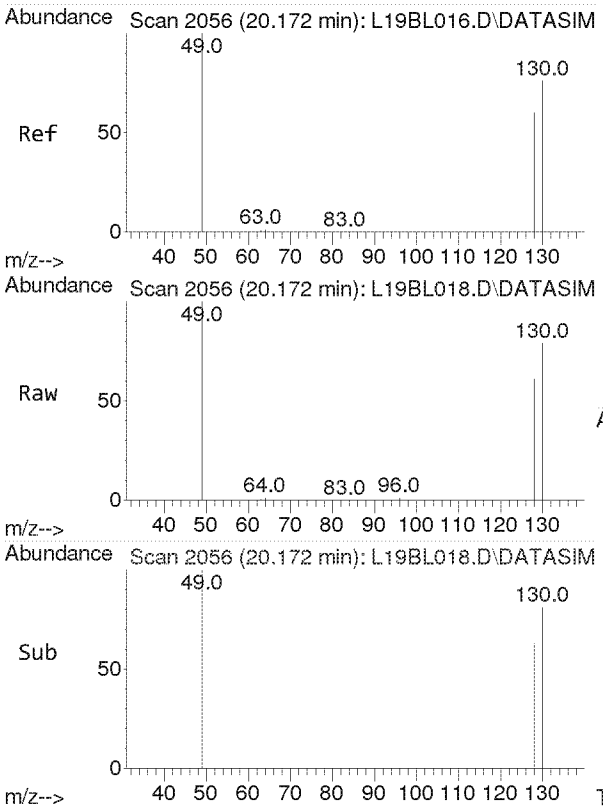


#24
cis-1,2-Dichloroethylene
Concen: 10.843 ppbv
RT: 19.945 min Scan# 2046
Delta R.T. -0.000 min
Lab File: L19BL018.D
Acq: 13 Feb 2019 12:52 am

Tgt Ion: 61 Resp: 64513

Ion	Ratio	Lower	Upper
61	100		
96	72.9	59.0	88.6
98	46.8	37.6	56.4

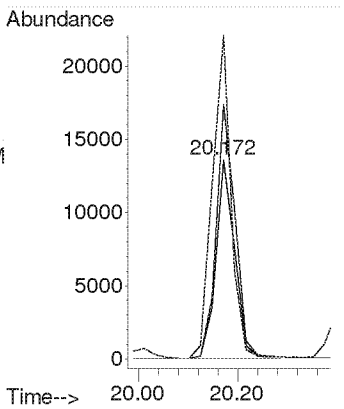


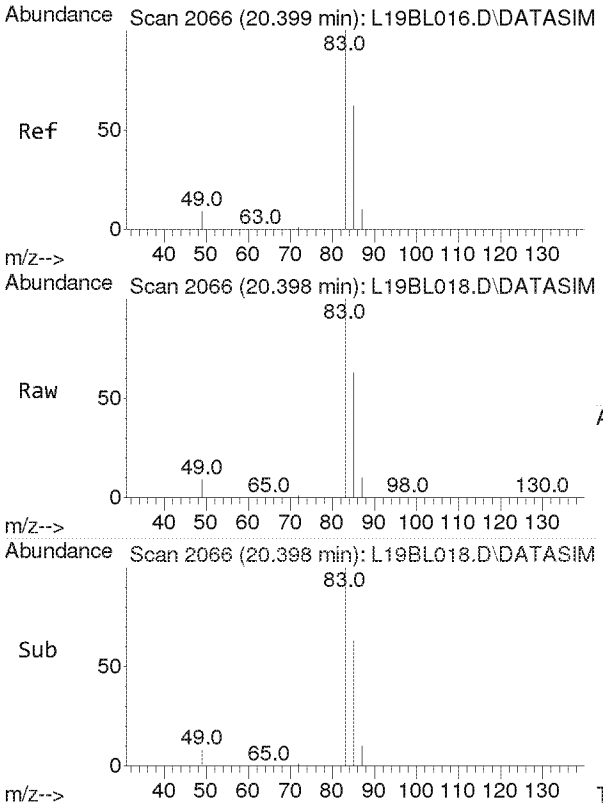


#25
Bromochloromethane
Concen: 10.820 ppbv
RT: 20.172 min Scan# 2056
Delta R.T. -0.000 min
Lab File: L19BL018.D
Acq: 13 Feb 2019 12:52 am

Tgt Ion:128 Resp: 35073

Ion	Ratio	Lower	Upper
128	100		
130	129.4	103.3	154.9
49	161.4	128.3	192.5

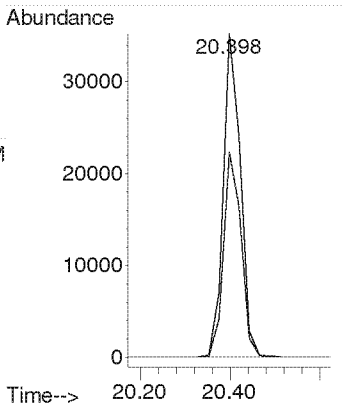


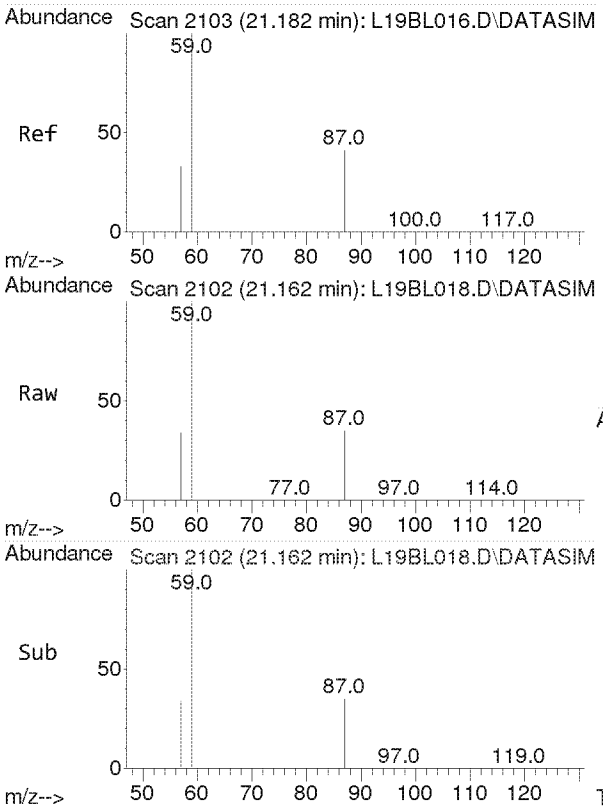


#26
Chloroform
Concen: 10.716 ppbv
RT: 20.398 min Scan# 2066
Delta R.T. -0.000 min
Lab File: L19BL018.D
Acq: 13 Feb 2019 12:52 am

Tgt Ion: 83 Resp: 94563

Ion	Ratio	Lower	Upper
83	100		
85	64.9	51.5	77.3

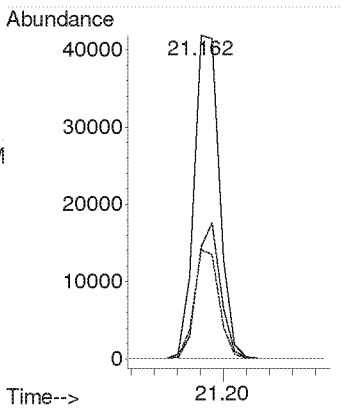


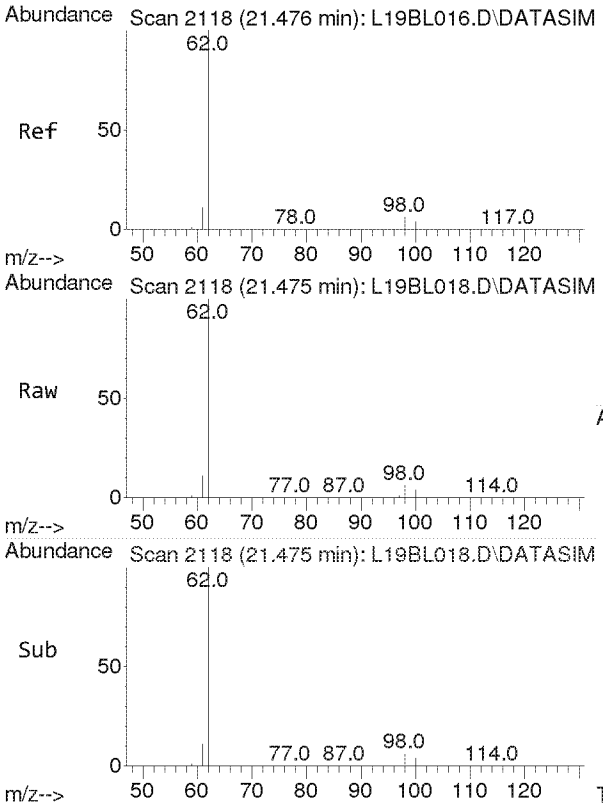


#27
Ethyl tert-Butyl Ether
Concen: 10.529 ppbv
RT: 21.162 min Scan# 2102
Delta R.T. -0.020 min
Lab File: L19BL018.D
Acq: 13 Feb 2019 12:52 am

Tgt Ion: 59 Resp: 127218

Ion	Ratio	Lower	Upper
59	100		
87	39.0	31.5	47.3
57	33.1	26.6	39.8

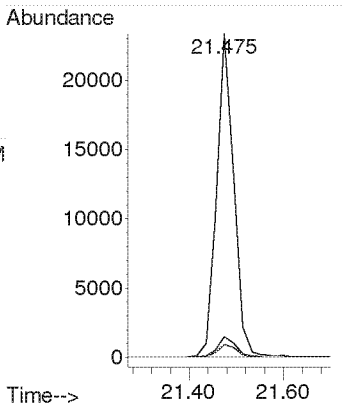


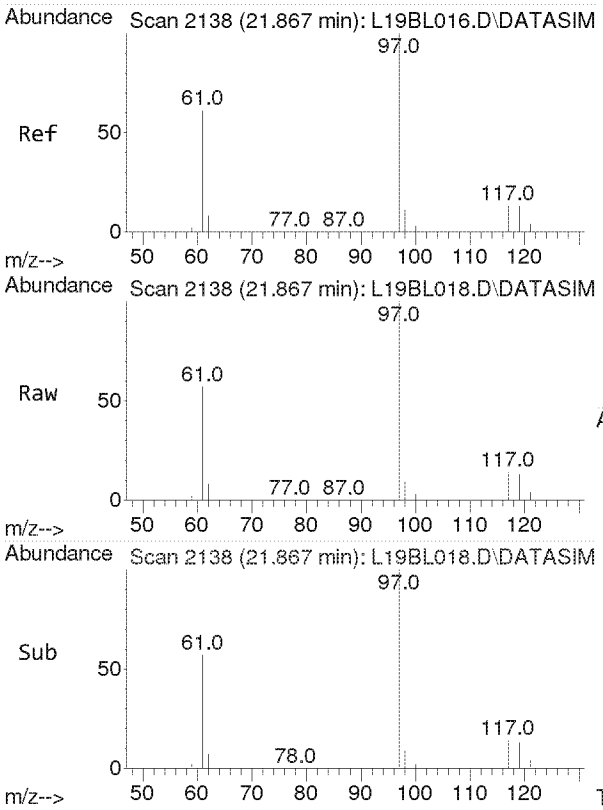


#28
1,2-Dichloroethane
Concen: 10.929 ppbv
RT: 21.475 min Scan# 2118
Delta R.T. -0.000 min
Lab File: L19BL018.D
Acq: 13 Feb 2019 12:52 am

Tgt Ion: 62 Resp: 58652

Ion	Ratio	Lower	Upper
62	100		
98	6.4	5.0	7.6
100	4.0	3.2	4.8

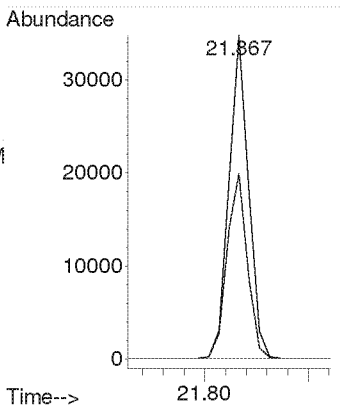


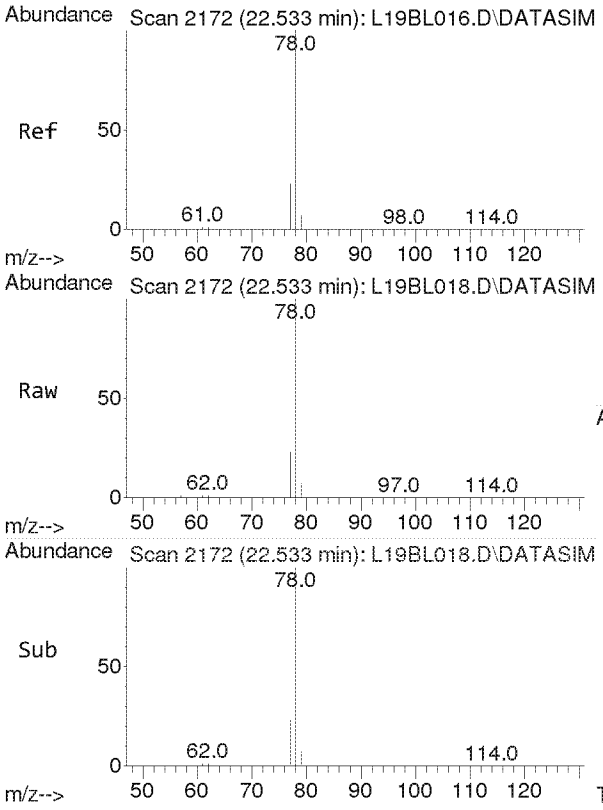


#30
1,1,1-Trichloroethane
Concen: 11.174 ppbv
RT: 21.867 min Scan# 2138
Delta R.T. -0.000 min
Lab File: L19BL018.D
Acq: 13 Feb 2019 12:52 am

Tgt Ion: 97 Resp: 91790

Ion	Ratio	Lower	Upper
97	100		
61	59.4	49.7	74.5

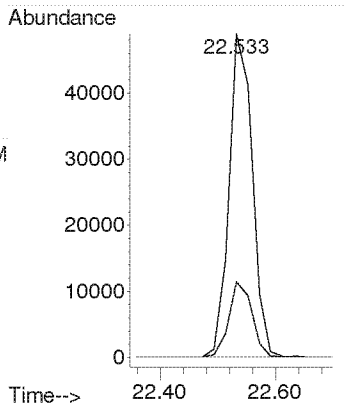


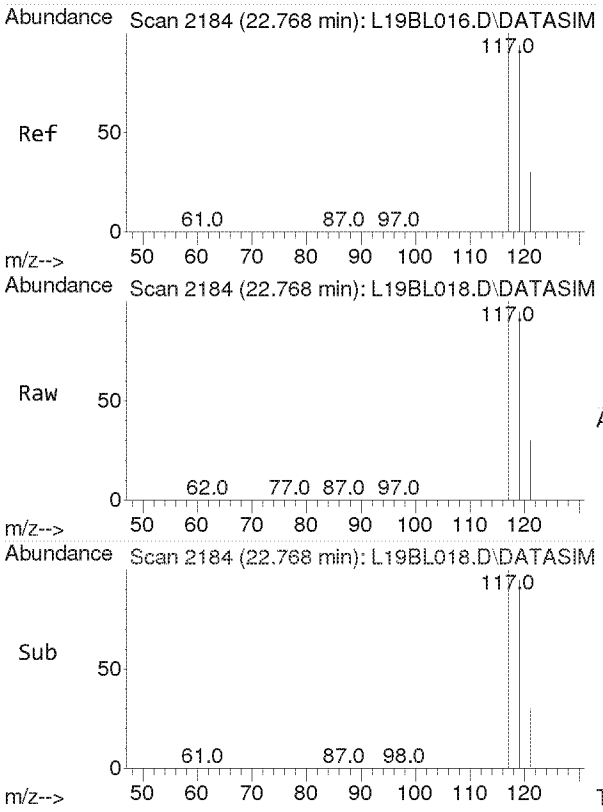


#31
Benzene
Concen: 11.562 ppbv
RT: 22.533 min Scan# 2172
Delta R.T. -0.000 min
Lab File: L19BL018.D
Acq: 13 Feb 2019 12:52 am

Tgt Ion: 78 Resp: 136786

Ion	Ratio	Lower	Upper
78	100		
77	23.0	18.2	27.4

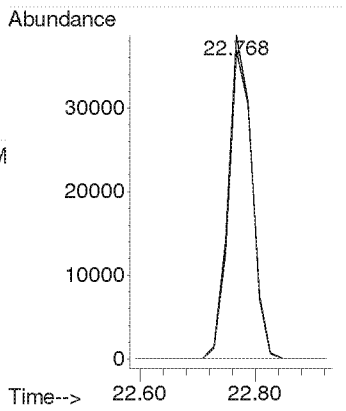


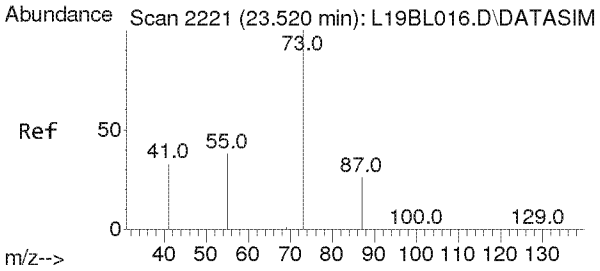


#32
Carbon Tetrachloride
Concen: 12.284 ppbv
RT: 22.768 min Scan# 2184
Delta R.T. -0.000 min
Lab File: L19BL018.D
Acq: 13 Feb 2019 12:52 am

Tgt Ion:117 Resp: 108534

Ion	Ratio	Lower	Upper
117	100		
119	96.5	77.0	115.6

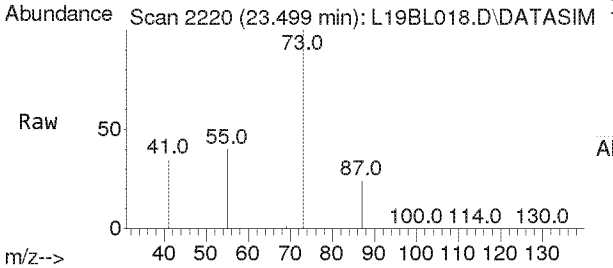


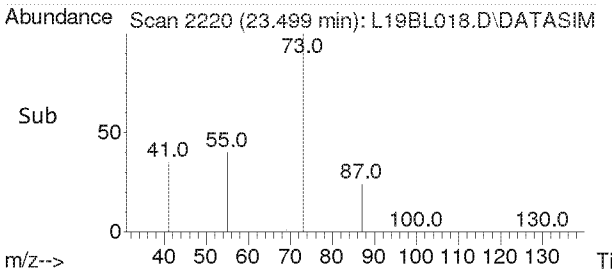


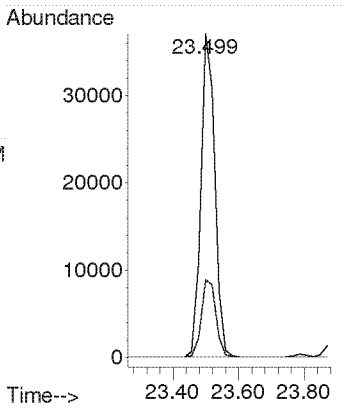
#33
tert-Amyl Methyl Ether
Concen: 10.793 ppbv
RT: 23.499 min Scan# 2220
Delta R.T. -0.021 min
Lab File: L19BL018.D
Acq: 13 Feb 2019 12:52 am

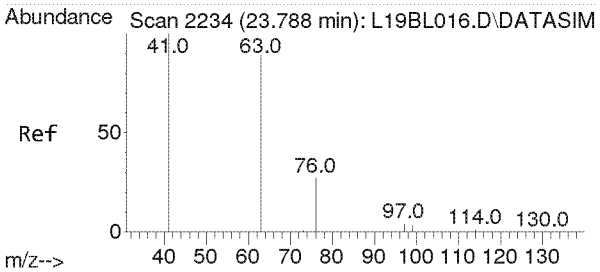
Tgt Ion: 73 Resp: 108276

Ion	Ratio	Lower	Upper
73	100		
87	25.0	20.1	30.1





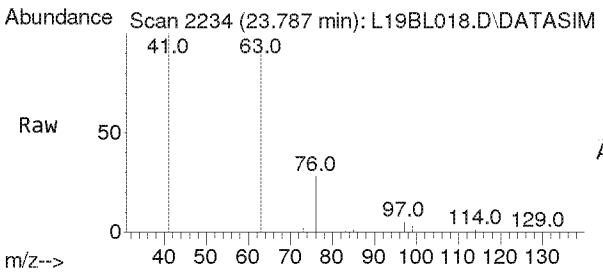


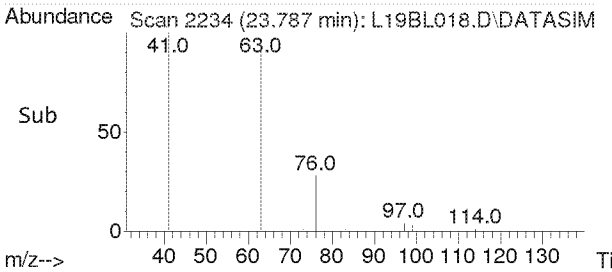


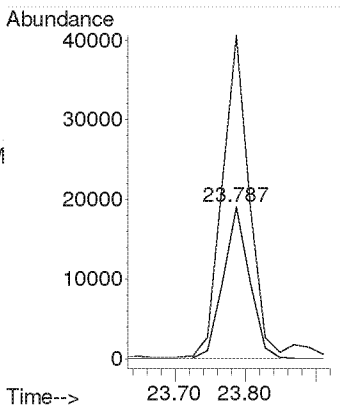
#34
1,2-Dichloropropane
Concen: 10.795 ppbv
RT: 23.787 min Scan# 2234
Delta R.T. -0.000 min
Lab File: L19BL018.D
Acq: 13 Feb 2019 12:52 am

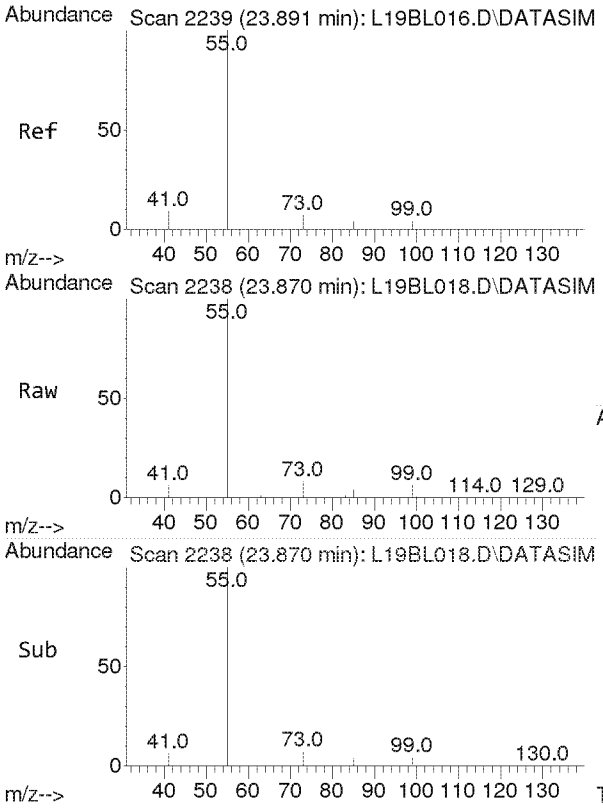
Tgt Ion: 63 Resp: 49241

Ion	Ratio	Lower	Upper
63	100		
41	214.7	175.9	263.9





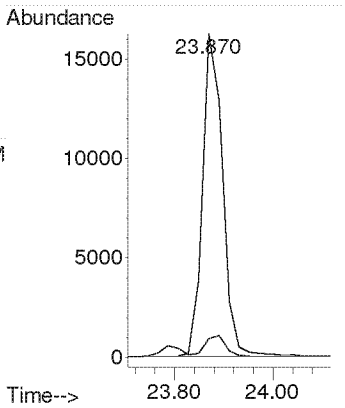


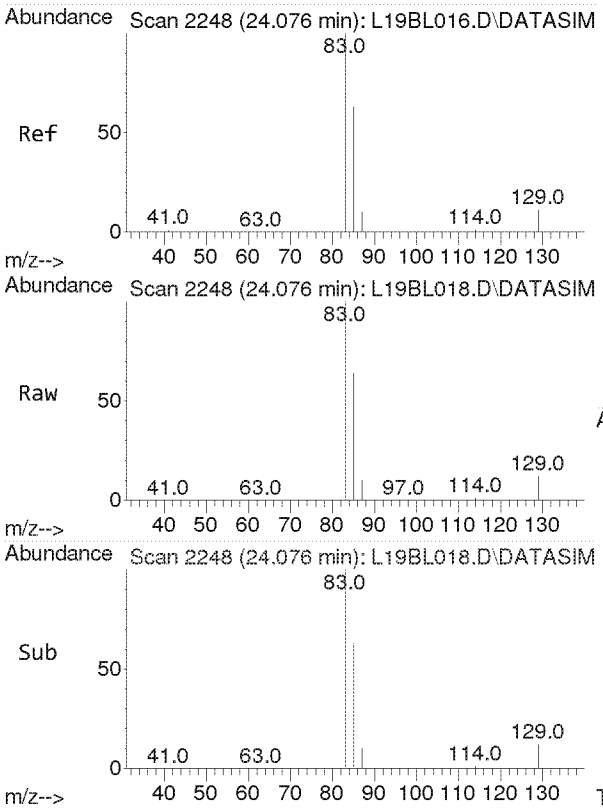


#35
Ethyl Acrylate
Concen: 12.069 ppbv
RT: 23.870 min Scan# 2238
Delta R.T. -0.021 min
Lab File: L19BL018.D
Acq: 13 Feb 2019 12:52 am

Tgt Ion: 55 Resp: 45278

Ion	Ratio	Lower	Upper
55	100		
99	6.5	5.0	7.6

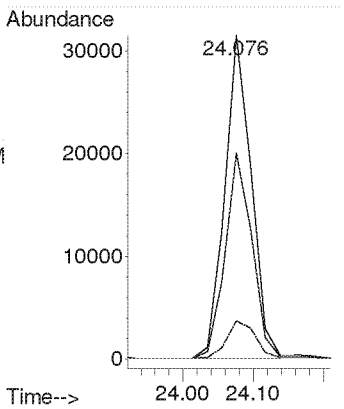


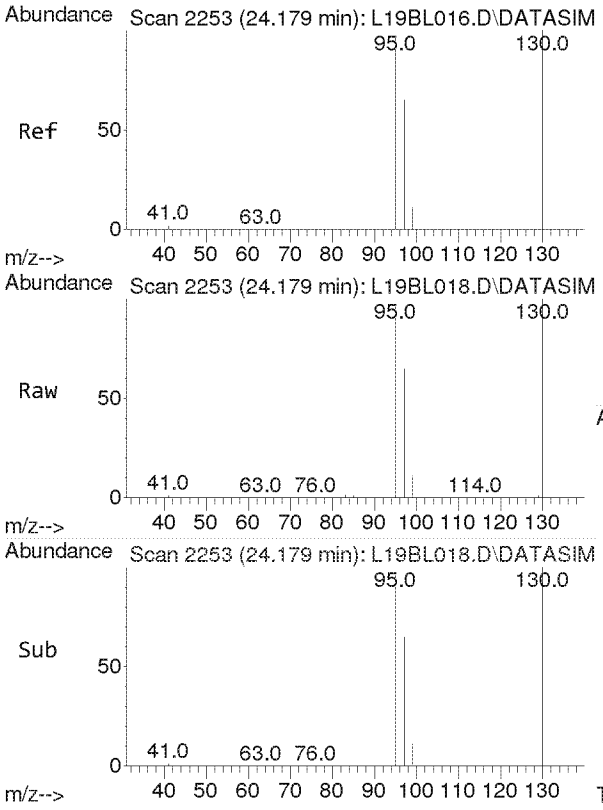


#36
Bromodichloromethane
Concen: 10.382 ppbv
RT: 24.076 min Scan# 2248
Delta R.T. -0.000 min
Lab File: L19BL018.D
Acq: 13 Feb 2019 12:52 am

Tgt Ion: 83 Resp: 82669

Ion	Ratio	Lower	Upper
83	100		
85	64.0	51.0	76.4
129	12.5	9.9	14.9

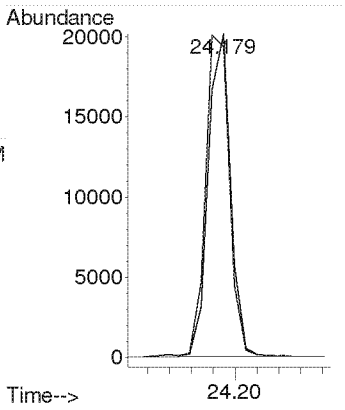


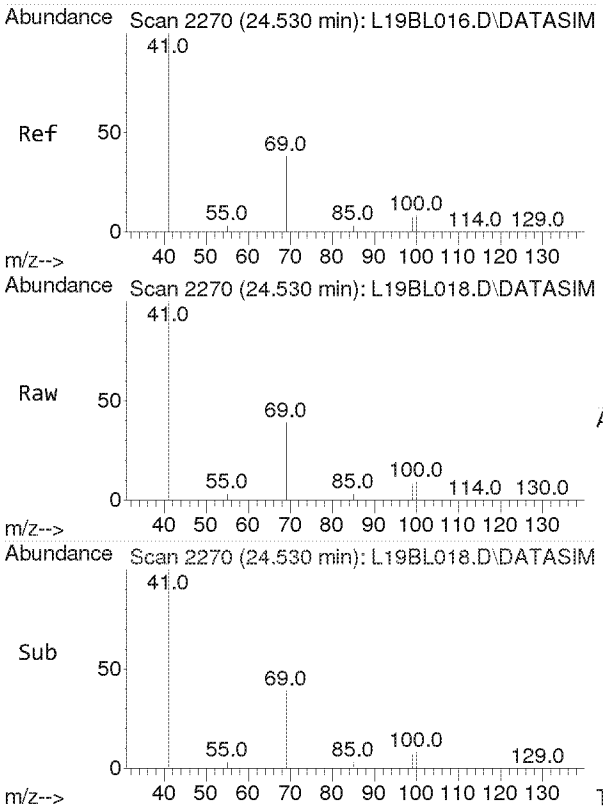


#37
Trichloroethylene
Concen: 10.025 ppbv
RT: 24.179 min Scan# 2253
Delta R.T. -0.000 min
Lab File: L19BL018.D
Acq: 13 Feb 2019 12:52 am

Tgt Ion:130 Resp: 56856

Ion	Ratio	Lower	Upper
130	100		
95	107.3	84.9	127.3

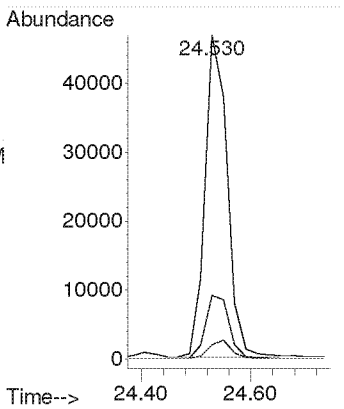


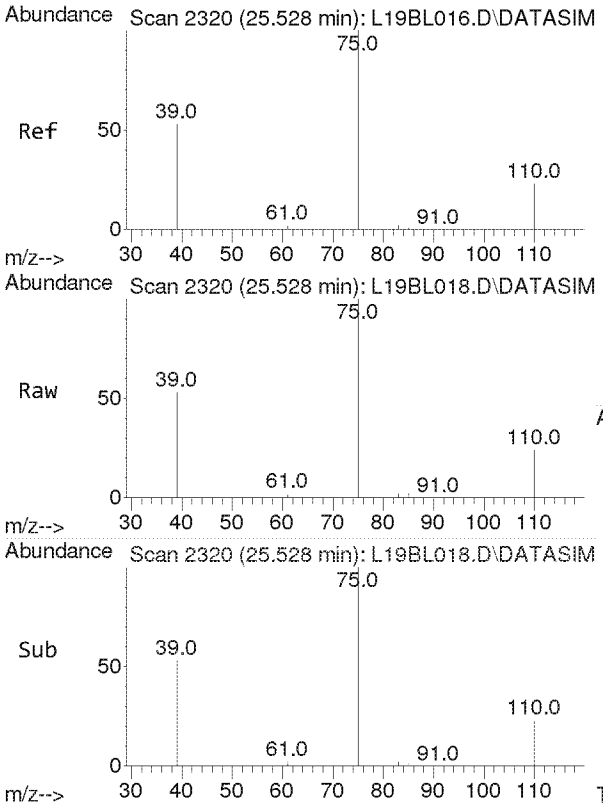


#38
Methyl Methacrylate
Concen: 11.619 ppbv
RT: 24.530 min Scan# 2270
Delta R.T. -0.000 min
Lab File: L19BL018.D
Acq: 13 Feb 2019 12:52 am

Tgt Ion: 41 Resp: 131290

Ion	Ratio	Lower	Upper
41	100		
69	20.8	16.8	25.2
100	5.5	4.5	6.7

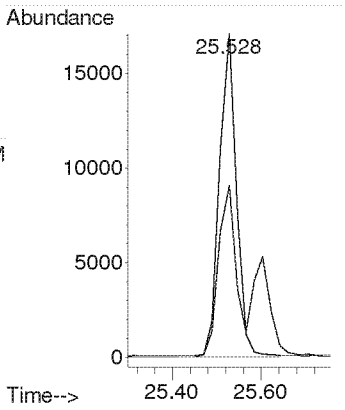


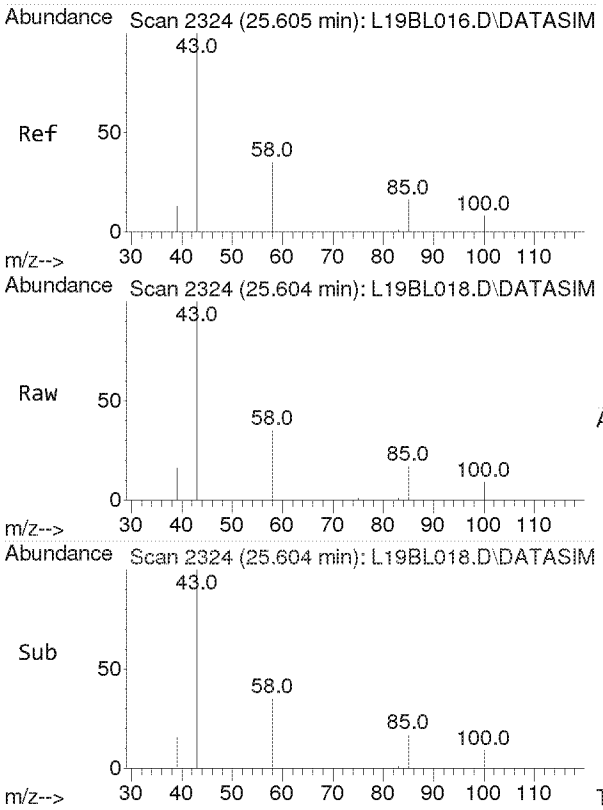


#39
cis-1,3-Dichloropropene
Concen: 11.520 ppbv
RT: 25.528 min Scan# 2320
Delta R.T. -0.000 min
Lab File: L19BL018.D
Acq: 13 Feb 2019 12:52 am

Tgt Ion: 75 Resp: 44681

Ion	Ratio	Lower	Upper
75	100		
39	55.4	43.4	65.0

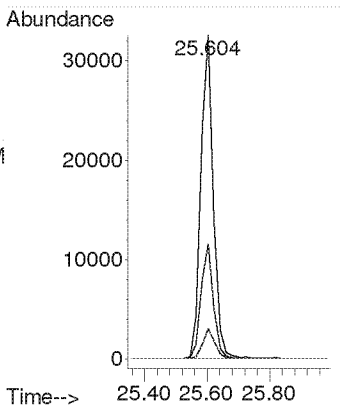


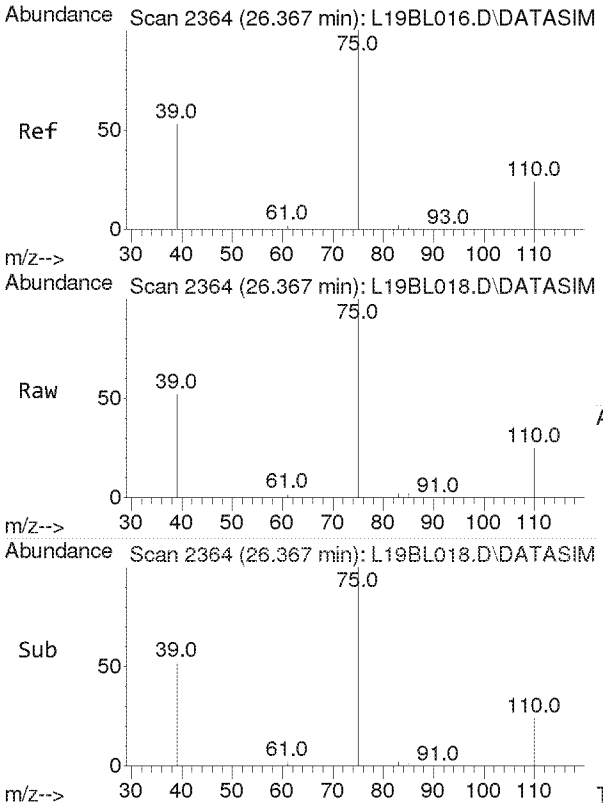


#40
Methyl Isobutyl Ketone
Concen: 10.856 ppbv
RT: 25.604 min Scan# 2324
Delta R.T. -0.000 min
Lab File: L19BL018.D
Acq: 13 Feb 2019 12:52 am

Tgt Ion: 43 Resp: 89785

Ion	Ratio	Lower	Upper
43	100		
58	35.0	28.0	42.0
100	8.7	7.0	10.4

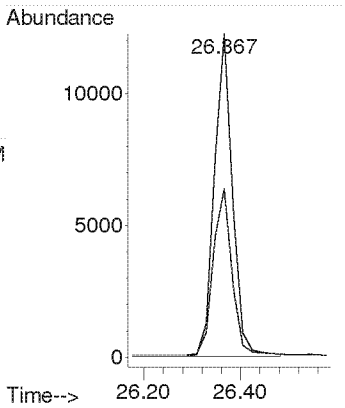


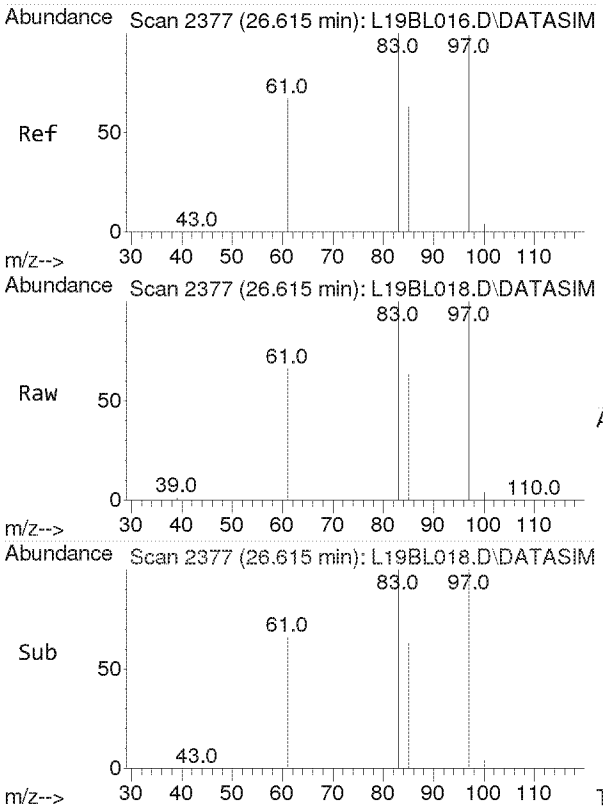


#41
trans-1,3-Dichloropropene
Concen: 11.963 ppbv
RT: 26.367 min Scan# 2364
Delta R.T. -0.000 min
Lab File: L19BL018.D
Acq: 13 Feb 2019 12:52 am

Tgt Ion: 75 Resp: 31645

Ion	Ratio	Lower	Upper
75	100		
39	53.4	42.9	64.3

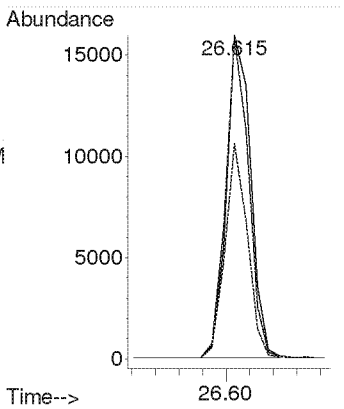


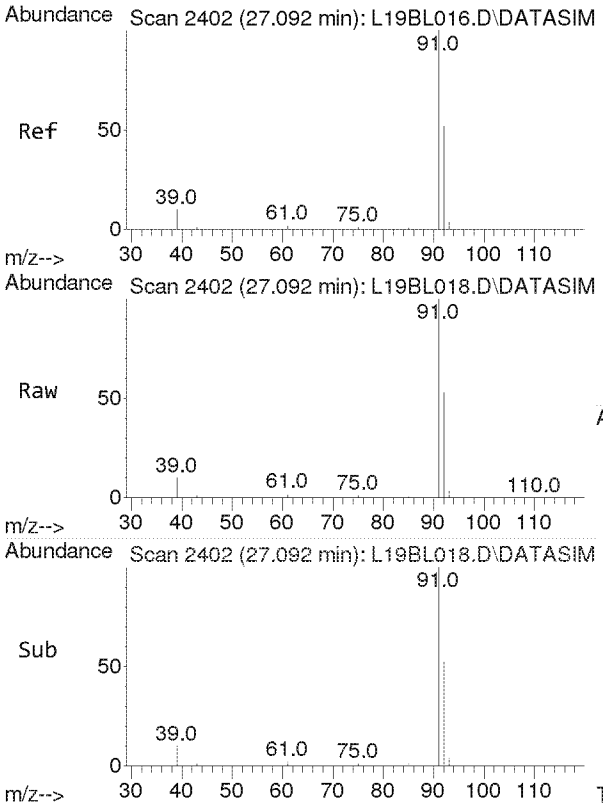


#42
1,1,2-Trichloroethane
Concen: 10.863 ppbv
RT: 26.615 min Scan# 2377
Delta R.T. -0.000 min
Lab File: L19BL018.D
Acq: 13 Feb 2019 12:52 am

Tgt Ion: 97 Resp: 44998

Ion	Ratio	Lower	Upper
97	100		
83	94.3	75.4	113.0
61	61.8	49.8	74.6

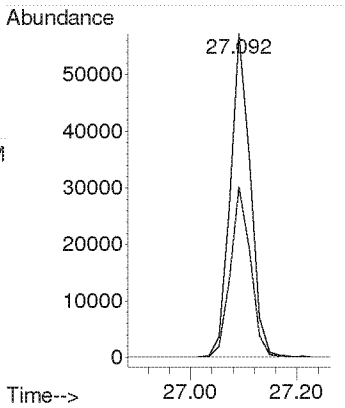


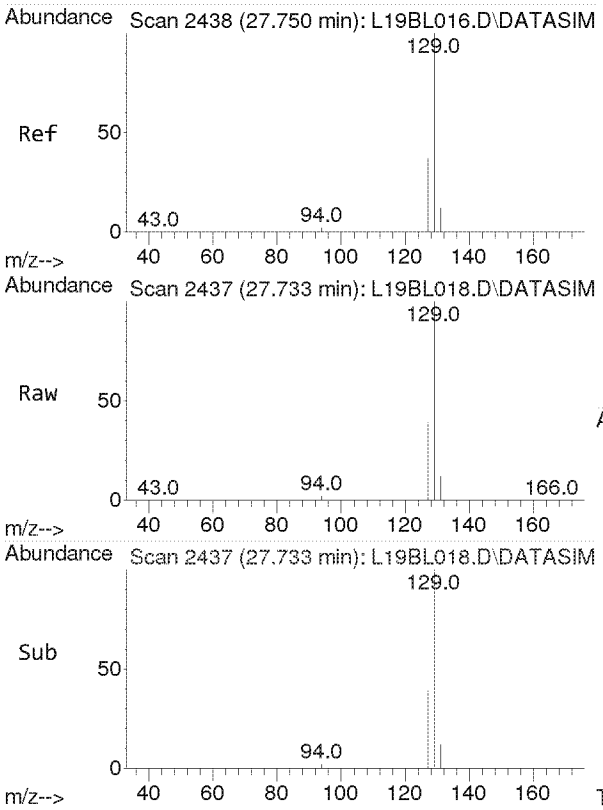


#44
Toluene
Concen: 10.340 ppbv
RT: 27.092 min Scan# 2402
Delta R.T. -0.000 min
Lab File: L19BL018.D
Acq: 13 Feb 2019 12:52 am

Tgt Ion: 91 Resp: 149987

Ion	Ratio	Lower	Upper
91	100		
92	52.9	42.0	63.0

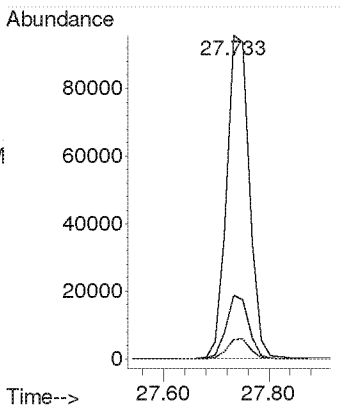


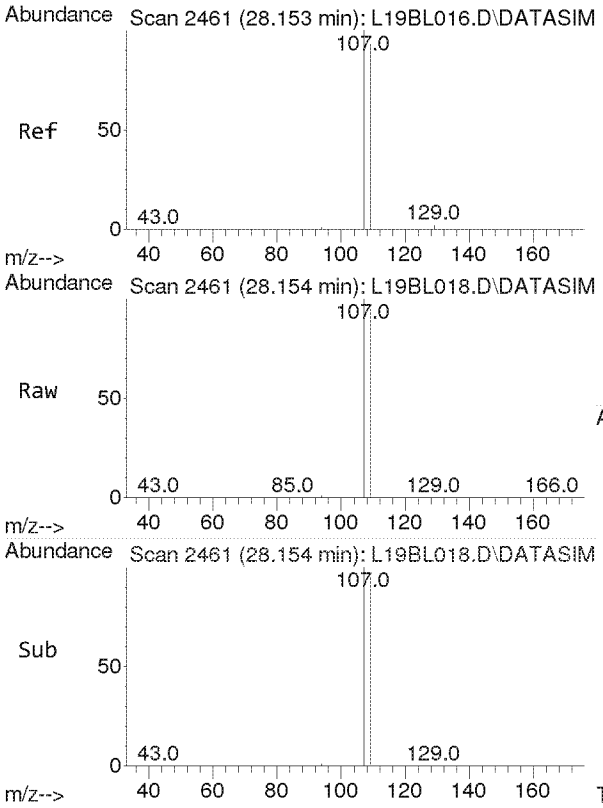


#45
Dibromochloromethane
Concen: 9.969 ppbv
RT: 27.733 min Scan# 2437
Delta R.T. -0.016 min
Lab File: L19BL018.D
Acq: 13 Feb 2019 12:52 am

Tgt Ion:129 Resp: 284480

Ion	Ratio	Lower	Upper
129	100		
127	19.2	15.4	23.2
131	6.0	4.8	7.2

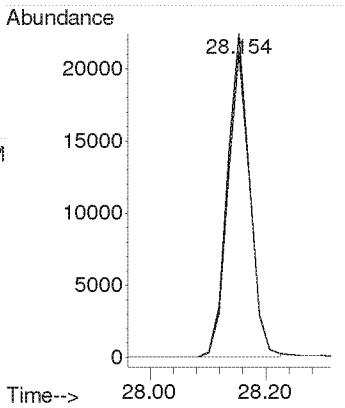


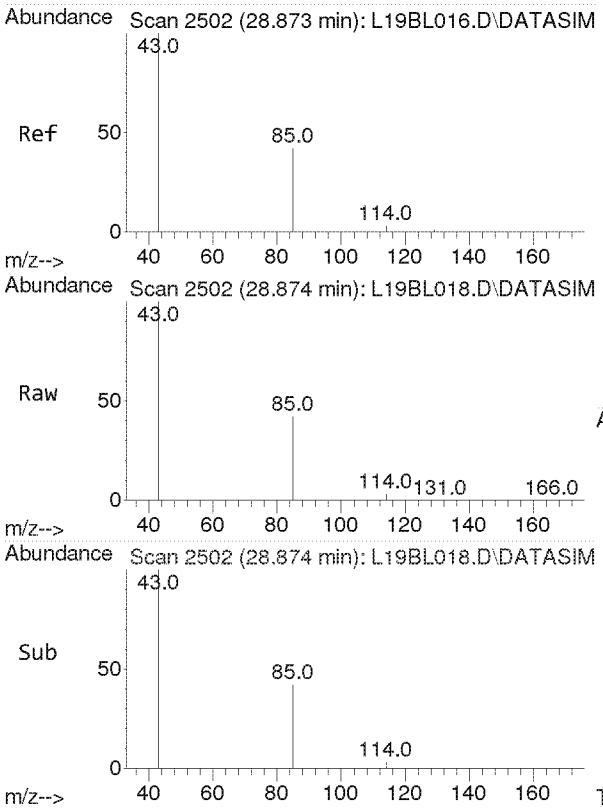


#46
1,2-Dibromoethane
Concen: 10.823 ppbv
RT: 28.154 min Scan# 2461
Delta R.T. 0.001 min
Lab File: L19BL018.D
Acq: 13 Feb 2019 12:52 am

Tgt Ion:107 Resp: 59884

Ion	Ratio	Lower	Upper
107	100		
109	94.4	75.4	113.0

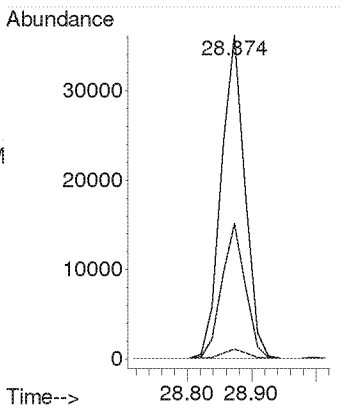


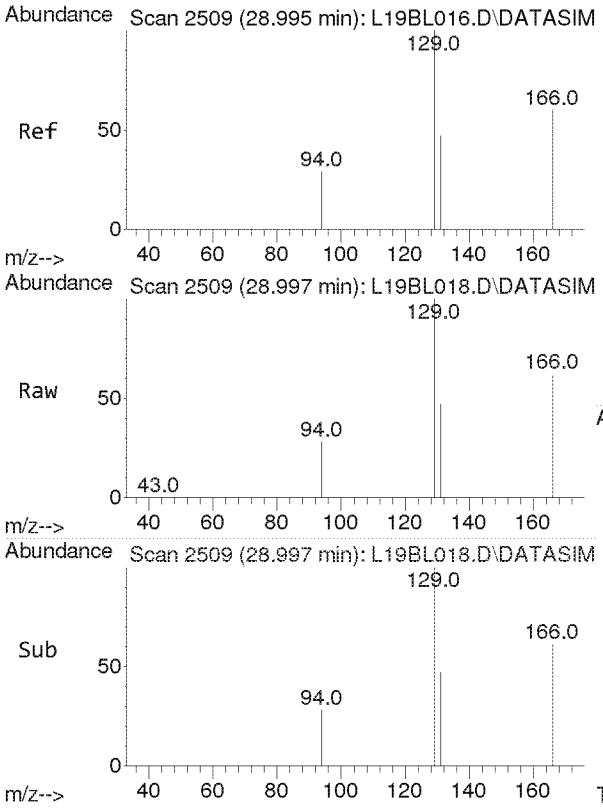


#47
n-Octane
Concen: 10.517 ppbv
RT: 28.874 min Scan# 2502
Delta R.T. 0.001 min
Lab File: L19BL018.D
Acq: 13 Feb 2019 12:52 am

Tgt Ion: 43 Resp: 92073

Ion	Ratio	Lower	Upper
43	100		
85	41.4	33.0	49.6
114	2.7	2.2	3.4

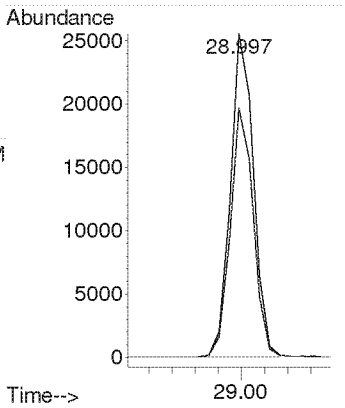


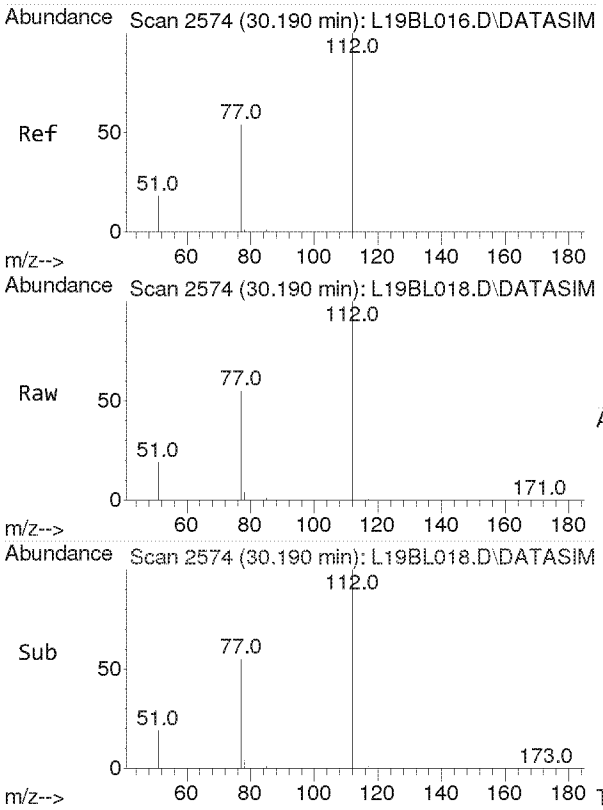


#48
Tetrachloroethylene
Concen: 10.206 ppbv
RT: 28.997 min Scan# 2509
Delta R.T. 0.001 min
Lab File: L19BL018.D
Acq: 13 Feb 2019 12:52 am

Tgt Ion:166 Resp: 70561

Ion	Ratio	Lower	Upper
166	100		
131	76.8	61.5	92.3

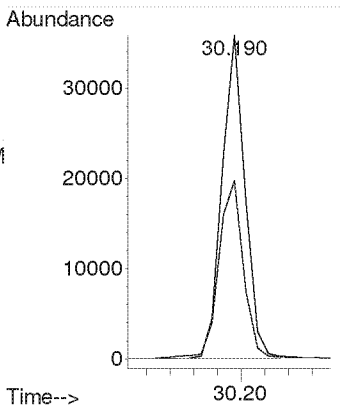


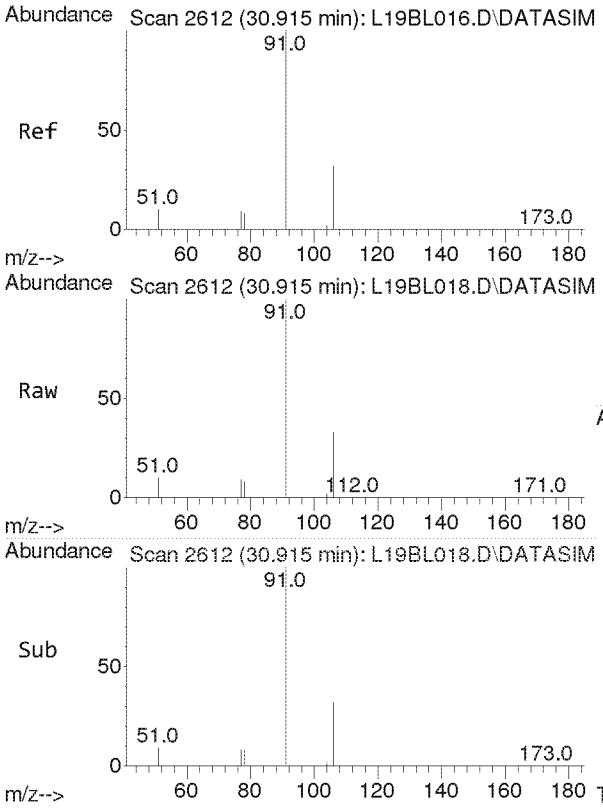


#49
Chlorobenzene
Concen: 10.348 ppbv
RT: 30.190 min Scan# 2574
Delta R.T. -0.000 min
Lab File: L19BL018.D
Acq: 13 Feb 2019 12:52 am

Tgt Ion:112 Resp: 96365

Ion	Ratio	Lower	Upper
112	100		
77	58.0	47.8	71.6

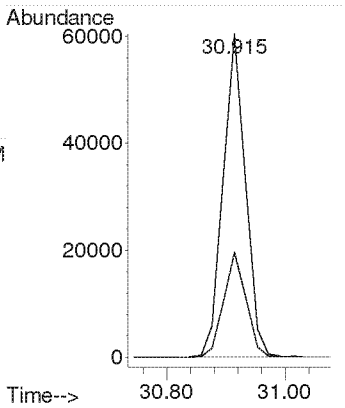


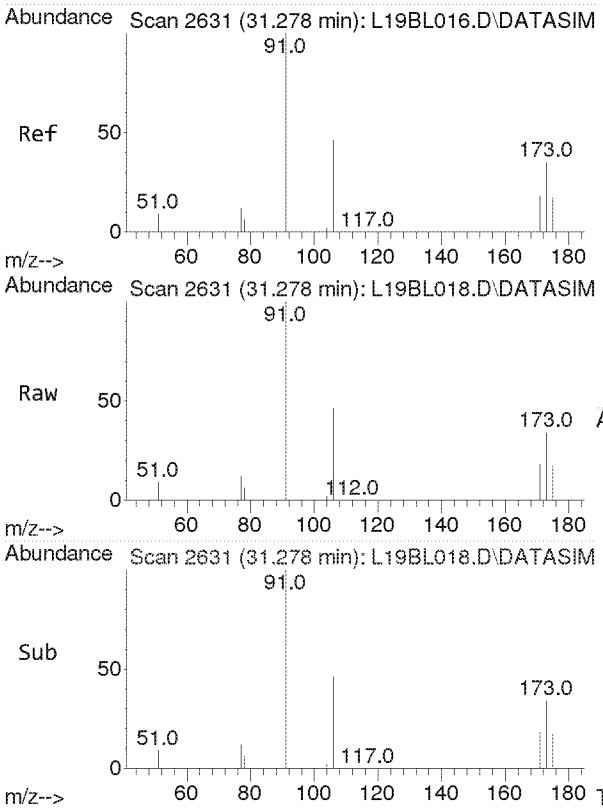


#50
Ethylbenzene
Concen: 10.392 ppbv
RT: 30.915 min Scan# 2612
Delta R.T. -0.000 min
Lab File: L19BL018.D
Acq: 13 Feb 2019 12:52 am

Tgt Ion: 91 Resp: 158747

Ion	Ratio	Lower	Upper
91	100		
106	32.5	26.0	39.0

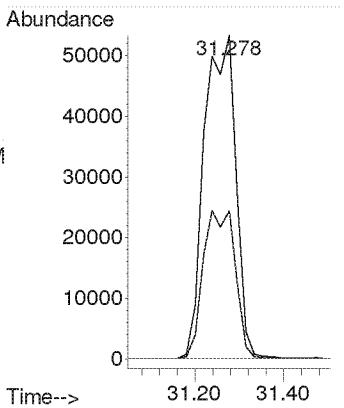


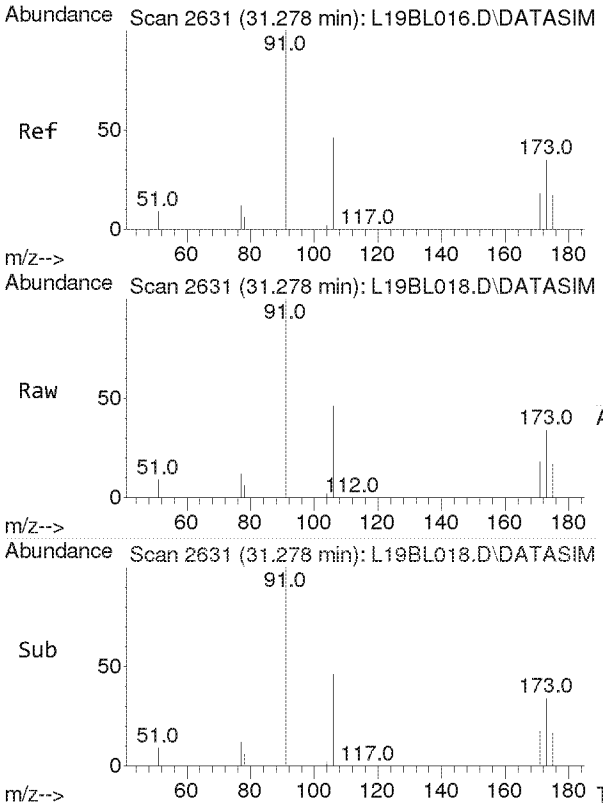


#51
m,p-Xylene
Concen: 20.128 ppbv
RT: 31.278 min Scan# 2631
Delta R.T. -0.000 min
Lab File: L19BL018.D
Acq: 13 Feb 2019 12:52 am

Tgt Ion: 91 Resp: 260751

Ion	Ratio	Lower	Upper
91	100		
106	46.6	37.3	55.9

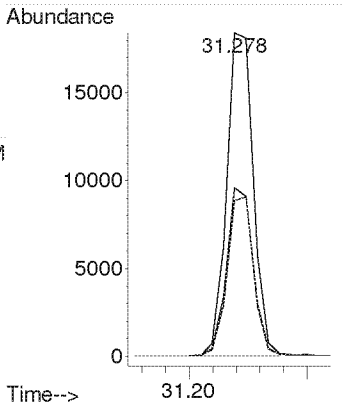


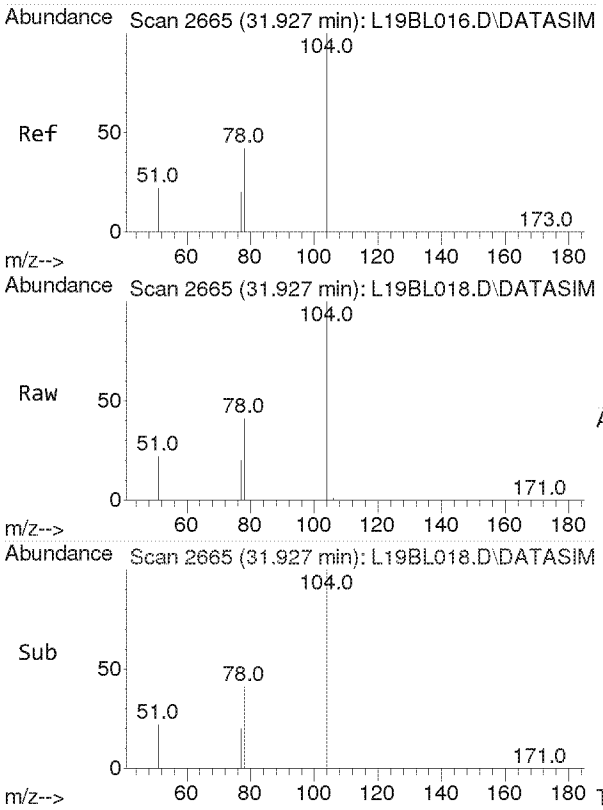


#52
Bromoform
Concen: 10.443 ppbv
RT: 31.278 min Scan# 2631
Delta R.T. -0.000 min
Lab File: L19BL018.D
Acq: 13 Feb 2019 12:52 am

Tgt Ion:173 Resp: 57080

Ion	Ratio	Lower	Upper
173	100		
171	51.2	41.0	61.6
175	49.0	39.1	58.7

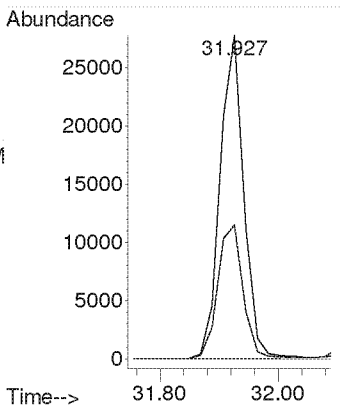


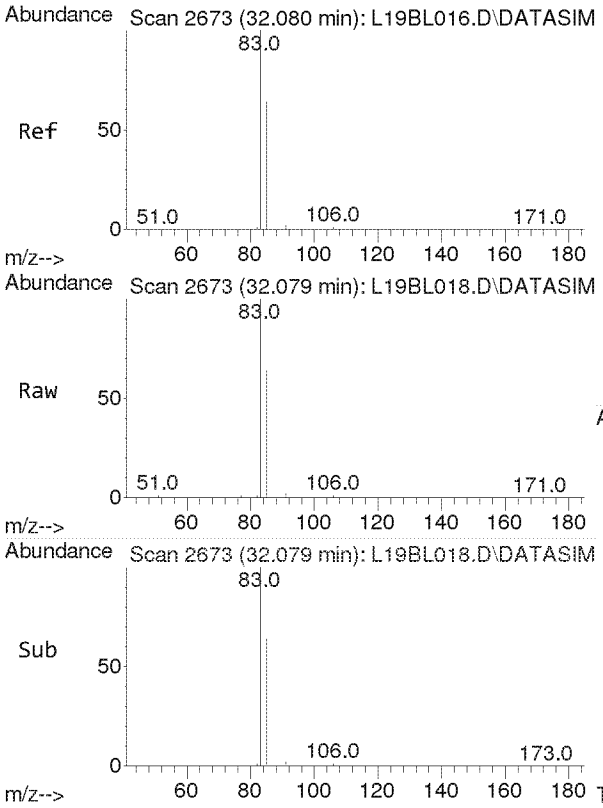


#53
Styrene
Concen: 10.498 ppbv
RT: 31.927 min Scan# 2665
Delta R.T. -0.000 min
Lab File: L19BL018.D
Acq: 13 Feb 2019 12:52 am

Tgt Ion:104 Resp: 76532

Ion	Ratio	Lower	Upper
104	100		
78	43.9	35.4	53.2
103	0.0	0.0	0.0

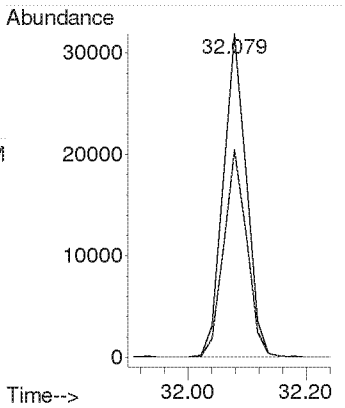


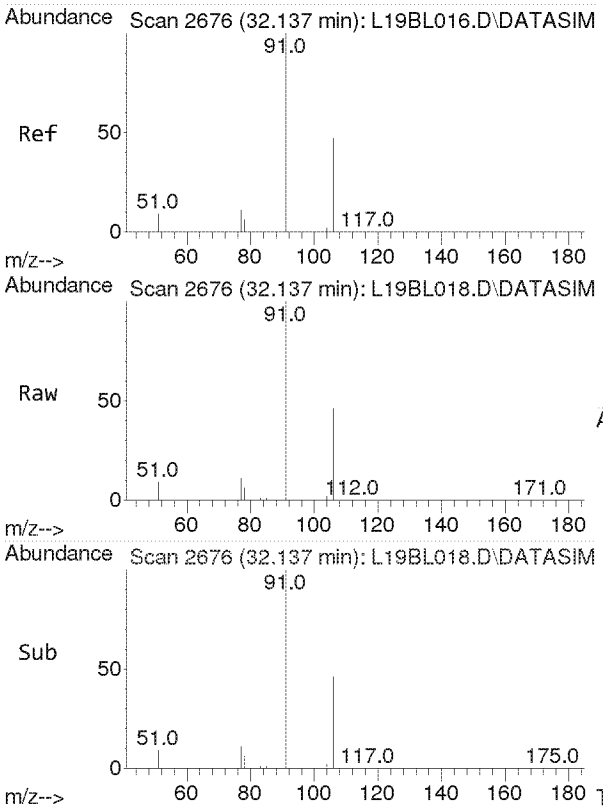


#54
1,1,2,2-Tetrachloroethane
Concen: 10.476 ppbv
RT: 32.079 min Scan# 2673
Delta R.T. -0.000 min
Lab File: L19BL018.D
Acq: 13 Feb 2019 12:52 am

Tgt Ion: 83 Resp: 85867

Ion	Ratio	Lower	Upper
83	100		
85	64.3	51.6	77.4

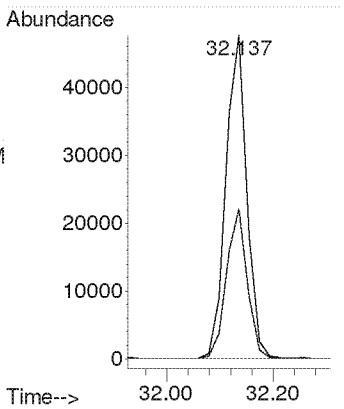


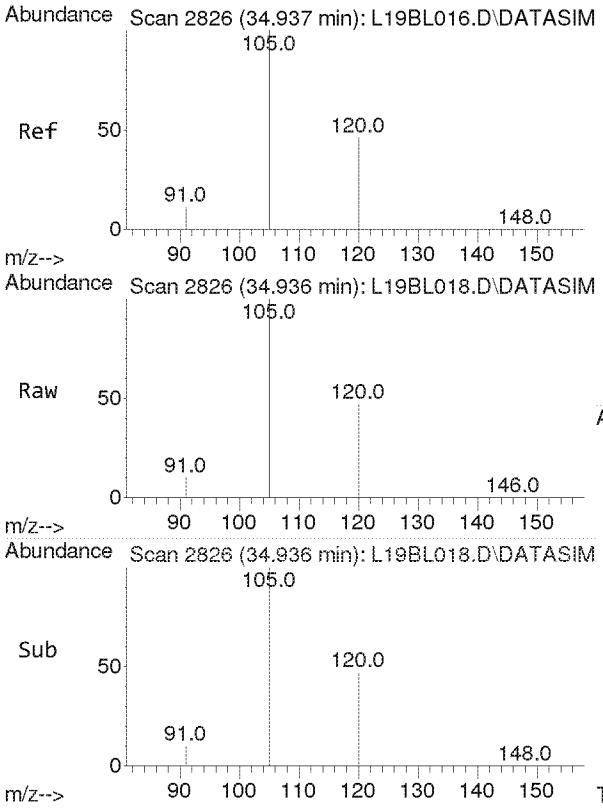


#55
o-Xylene
Concen: 10.360 ppbv
RT: 32.137 min Scan# 2676
Delta R.T. -0.000 min
Lab File: L19BL018.D
Acq: 13 Feb 2019 12:52 am

Tgt Ion: 91 Resp: 130868

Ion	Ratio	Lower	Upper
91	100		
106	45.9	36.6	55.0

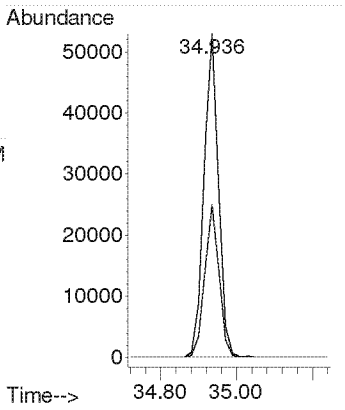


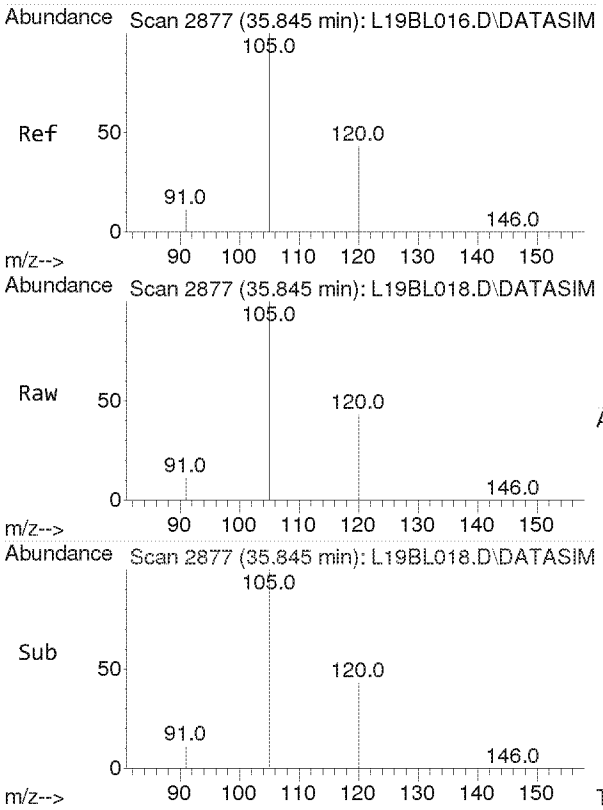


#56
1,3,5-Trimethylbenzene
Concen: 10.380 ppbv
RT: 34.936 min Scan# 2826
Delta R.T. -0.000 min
Lab File: L19BL018.D
Acq: 13 Feb 2019 12:52 am

Tgt Ion:105 Resp: 139814

Ion	Ratio	Lower	Upper
105	100		
120	46.6	36.8	55.2

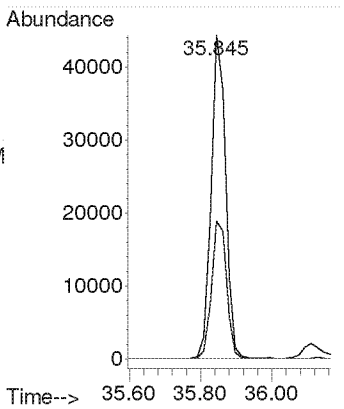


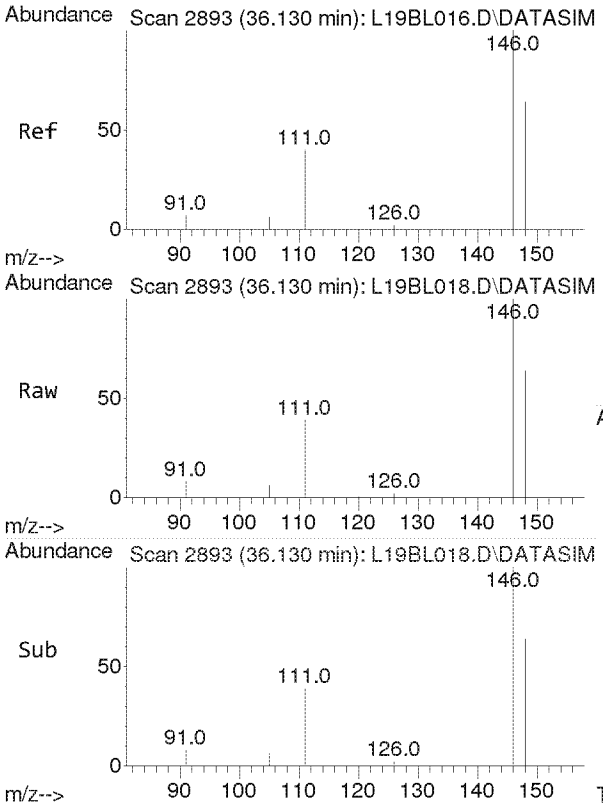


#57
1,2,4-Trimethylbenzene
Concen: 10.580 ppbv
RT: 35.845 min Scan# 2877
Delta R.T. -0.000 min
Lab File: L19BL018.D
Acq: 13 Feb 2019 12:52 am

Tgt Ion:105 Resp: 124127

Ion	Ratio	Lower	Upper
105	100		
120	44.2	35.2	52.8

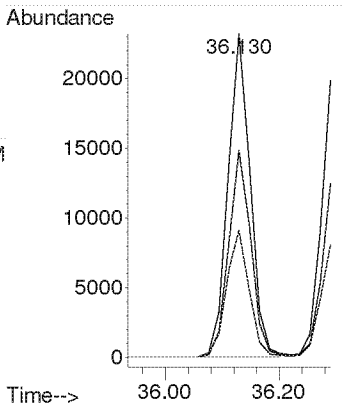


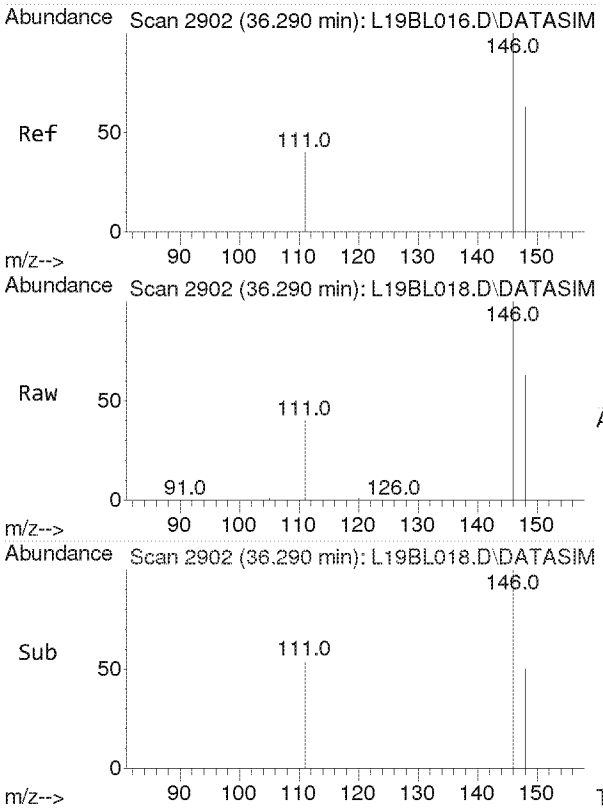


#58
m-Dichlorobenzene
Concen: 10.134 ppbv
RT: 36.130 min Scan# 2893
Delta R.T. -0.000 min
Lab File: L19BL018.D
Acq: 13 Feb 2019 12:52 am

Tgt Ion:146 Resp: 62988

Ion	Ratio	Lower	Upper
146	100		
148	63.9	51.3	76.9
111	39.7	32.1	48.1

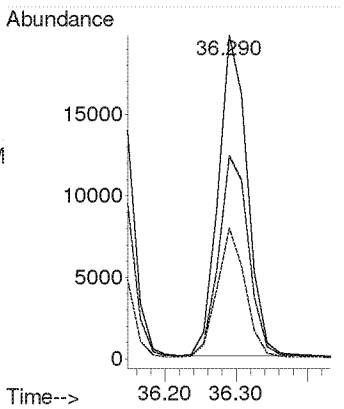


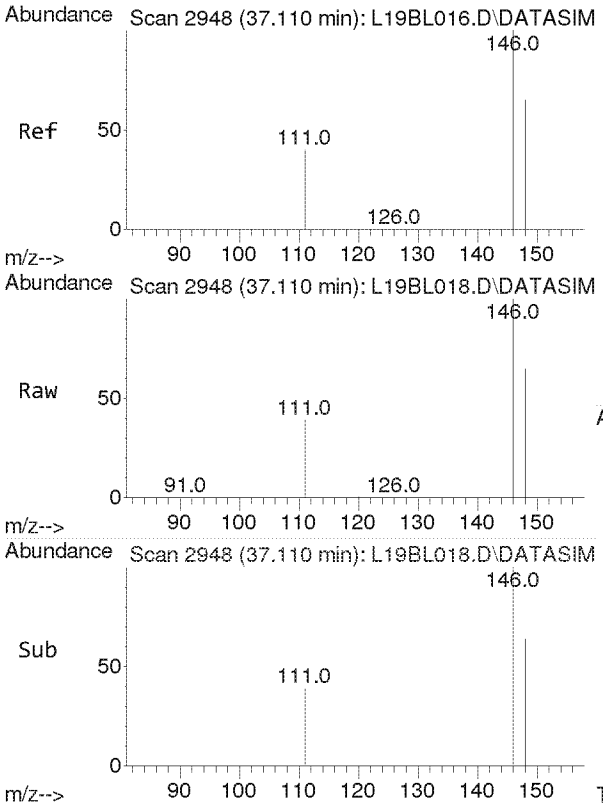


#59
p-Dichlorobenzene
Concen: 10.974 ppbv
RT: 36.290 min Scan# 2902
Delta R.T. -0.000 min
Lab File: L19BL018.D
Acq: 13 Feb 2019 12:52 am

Tgt Ion:146 Resp: 55676

Ion	Ratio	Lower	Upper
146	100		
148	64.3	51.4	77.2
111	39.0	31.0	46.4

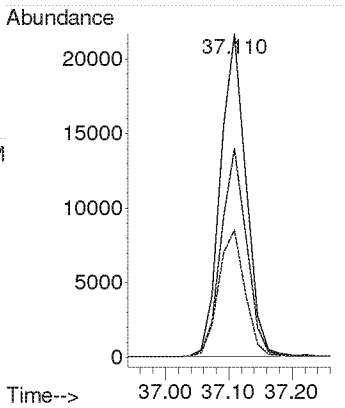


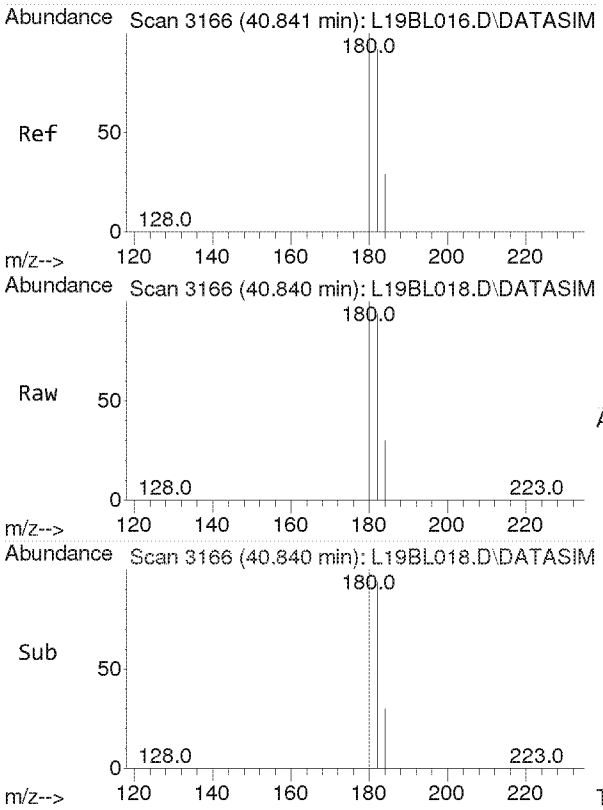


#60
o-Dichlorobenzene
Concen: 10.688 ppbv
RT: 37.110 min Scan# 2948
Delta R.T. -0.000 min
Lab File: L19BL018.D
Acq: 13 Feb 2019 12:52 am

Tgt Ion:146 Resp: 60548

Ion	Ratio	Lower	Upper
146	100		
148	64.0	51.2	76.8
111	40.5	32.6	49.0

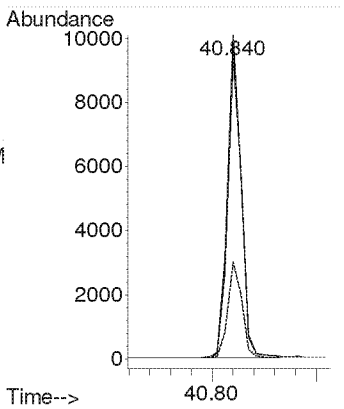


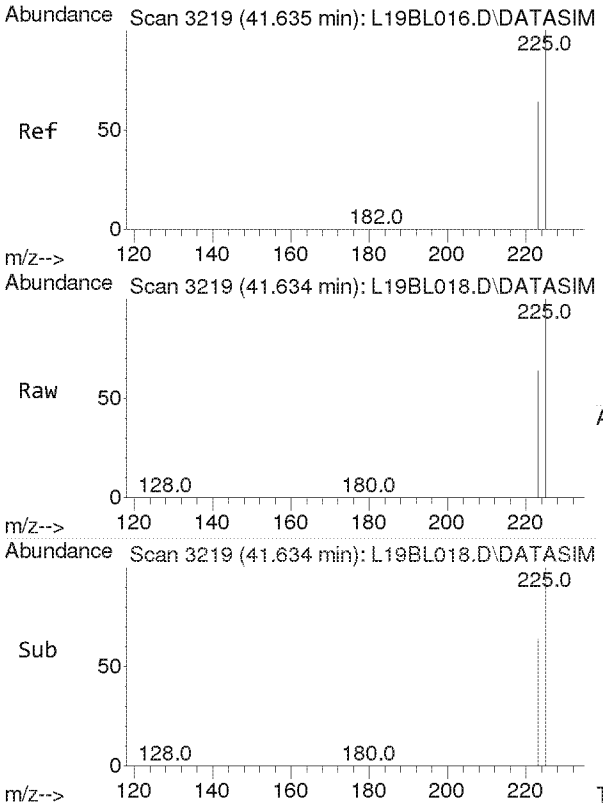


#61
1,2,4-Trichlorobenzene
Concen: 9.846 ppbv
RT: 40.840 min Scan# 3166
Delta R.T. -0.000 min
Lab File: L19BL018.D
Acq: 13 Feb 2019 12:52 am

Tgt Ion:180 Resp: 17841

Ion	Ratio	Lower	Upper
180	100		
182	95.4	75.7	113.5
184	30.7	24.2	36.2

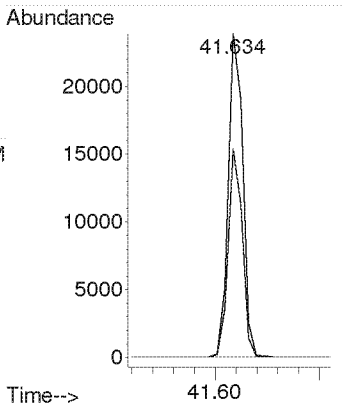




#62
Hexachloro-1,3-butadiene
Concen: 9.732 ppbv
RT: 41.634 min Scan# 3219
Delta R.T. -0.000 min
Lab File: L19BL018.D
Acq: 13 Feb 2019 12:52 am

Tgt Ion:225 Resp: 45531

Ion	Ratio	Lower	Upper
225	100		
223	62.5	49.9	74.9



Analytical Standard Record

Eastern Research Group

9B12008

Description:	2.50 ppbv ICV/CCV	Expires:	03/14/19
Standard Type:	Calibration Stan	Prepared:	02/12/19
Solvent:	Scientific Air	Prepared By:	Mitch Howell
Final Volume (mls):	6000	Department:	Air Toxics
Vials:	1	Last Edit:	02/12/19 08:47 by MH

canister# 3224

Analyte	CAS Number	Concentration	Units
1,1,1-Trichloroethane	71-55-6	0.00247	ppmv
1,1,2,2-Tetrachloroethane	79-34-5	0.00253	ppmv
1,1,2-Trichloroethane	79-00-5	0.00248	ppmv
1,1-Dichloroethane	75-34-3	0.00243	ppmv
1,1-Dichloroethene	75-35-4	0.00244	ppmv
1,2,4-Trichlorobenzene	120-82-1	0.00248	ppmv
1,2,4-Trimethylbenzene	95-63-6	0.00238	ppmv
1,2-Dibromoethane	106-93-4	0.0025	ppmv
1,2-Dichloroethane	107-06-2	0.00249	ppmv
1,2-Dichloropropane	78-87-5	0.00253	ppmv
1,3,5-Trimethylbenzene	108-67-8	0.00252	ppmv
1,3-Butadiene	106-99-0	0.00247	ppmv
Acetonitrile	75-05-8	0.00253	ppmv
Acetylene	74-86-2	0.0024	ppmv
Acrolein	107-02-8	0.00242	ppmv
Acrylonitrile	107-13-1	0.0025	ppmv
Benzene	71-43-2	0.00251	ppmv
Bromochloromethane	74-97-5	0.00247	ppmv
Bromodichloromethane	75-27-4	0.00256	ppmv
Bromoform	75-25-2	0.00254	ppmv
Bromomethane	74-83-9	0.0025	ppmv
Carbon Disulfide	75-15-0	0.00248	ppmv
Carbon Tetrachloride	56-23-5	0.00252	ppmv
Chlorobenzene	108-90-7	0.00246	ppmv
Chloroethane	75-00-3	0.0025	ppmv
Chloroform	67-66-3	0.0025	ppmv
Chloromethane	74-87-3	0.00248	ppmv
Chloroprene	126-99-8	0.00248	ppmv
cis-1,2-Dichloroethylene	156-59-2	0.0025	ppmv
cis-1,3-Dichloropropene	10061-01-5	0.00254	ppmv

Reviewed By — Date: 2-14-19

Analytical Standard Record

Eastern Research Group

9B12008

Dibromochloromethane	124-48-1	0.00254	ppmv
Dichlorodifluoromethane	75-71-8	0.00238	ppmv
Dichloromethane	75-09-2	0.00248	ppmv
Dichlorotetrafluoroethane	76-14-2	0.00244	ppmv
Ethyl Acrylate	140-88-5	0.00254	ppmv
Ethyl tert-Butyl Ether	637-92-3	0.00257	ppmv
Ethylbenzene	100-41-4	0.0025	ppmv
Ethylene oxide	75-21-8	0.0025	ppmv
Hexachloro-1,3-butadiene	87-68-3	0.0025	ppmv
m,p-Xylene	108-38-3, 106-42-3	0.00498	ppmv
m-Dichlorobenzene	541-73-1	0.0024	ppmv
Methyl Isobutyl Ketone	108-10-1	0.00253	ppmv
Methyl Methacrylate	80-62-6	0.00254	ppmv
Methyl tert-Butyl Ether	1634-04-4	0.00254	ppmv
Naphthalene	91-20-3	0.00246	ppmv
n-Hexane	110-54-3	0.0025	ppmv
n-Octane	111-65-9	0.00252	ppmv
o-Dichlorobenzene	95-50-1	0.0025	ppmv
o-Xylene	95-47-6	0.00244	ppmv
p-Dichlorobenzene	106-46-7	0.00261	ppmv
Propylene	115-07-1	0.00245	ppmv
Styrene	100-42-5	0.0025	ppmv
tert-Amyl Methyl Ether	994-05-8	0.0026	ppmv
Tetrachloroethylene	127-18-4	0.00249	ppmv
Toluene	108-88-3	0.00244	ppmv
trans-1,2-Dichloroethylene	156-60-5	0.00246	ppmv
trans-1,3-Dichloropropene	10061-02-6	0.00246	ppmv
Trichloroethylene	79-01-6	0.00252	ppmv
Trichlorofluoromethane	75-69-4	0.0025	ppmv
Trichlorotrifluoroethane	76-13-1	0.00244	ppmv
Vinyl chloride	75-01-4	0.0025	ppmv

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
8J25001	TO-15 Secondary Stock Standard	10/25/18	** Vendor **	10/04/19	11/20/18 11:30 by RMB	30
8K20015	Ethylene Oxide Secondary Stock S	11/12/18	** Vendor **	11/12/19	11/20/18 12:14 by MH	15

Reviewed By Date

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\L19BL\
Data File : L19BL019.D
Acq On : 13 Feb 2019 1:52 am
Operator : MAH
Sample : 1902030-ICV1
Misc : 80 ML 8L13001,9B12008
ALS Vial : 19 Sample Multiplier: 1

2-14-19

Quant Time: Feb 13 06:45:10 2019
Quant Method : C:\msdchem\1\METHODS\9020003.M
Quant Title : TO-15 by Selective Ion Analysis
QLast Update : Wed Feb 13 06:44:42 2019
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 60% Max. R.T. Dev 0.30min
Max. RRF Dev : 30% Max. Rel. Area : 140%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	ISS	IS-Hexane-d14	1.000	1.000	0.0	100	0.00
2	CT	Acetylene	0.391	0.364	6.9	100	0.00
3	CT	Propylene	0.487	0.501	-2.9	100	0.00
4	CT	Dichlorodifluoromethane	2.300	2.244	2.4	100	0.00
5	CT	Chloromethane	0.592	0.558	5.7	100	0.00
6	CT	Dichlorotetrafluoroethane	2.013	2.167	-7.7	100	0.00
7	CT	Vinyl Chloride	0.662	0.640	3.3	100	0.00
8	CT	1,3-Butadiene	0.450	0.437	2.9	100	0.00
9	CT	Ethylene oxide	0.273	0.265	2.9	100	0.00
10	CT	Bromomethane	0.627	0.603	3.8	100	0.00
11	CT	Chloroethane	0.263	0.256	2.7	100	0.00
12	CT	Acetonitrile	0.414	0.384	7.2	100	0.00
13	CT	Acrolein	0.209	0.193	7.7	100	0.00
14	CT	Trichlorofluoromethane	1.944	1.712	11.9	100	0.00
15	CT	Acrylonitrile	0.330	0.314	4.8	100	0.00
16	CT	1,1-Dichloroethene	0.843	0.907	-7.6	100	0.00
17	CT	Methylene Chloride	0.557	0.573	-2.9	100	0.00
18	CT	Carbon Disulfide	1.716	1.667	2.9	100	0.00
19	CT	Trichlorotrifluoroethane	1.307	1.322	-1.1	100	0.00
20	CT	trans-1,2-Dichloroethylene	0.467	0.474	-1.5	100	0.00
21	CT	1,1-Dichloroethane	0.786	0.839	-6.7	100	0.00
22	CT	Methyl tert-Butyl Ether	1.318	1.305	1.0	100	0.00
23	CT	Chloroprene	0.639	0.684	-7.0	100	0.00
24	CT	cis-1,2-Dichloroethylene	0.620	0.625	-0.8	100	0.00
25	CT	Bromochloromethane	0.335	0.328	2.1	100	0.00
26	CT	Chloroform	0.912	0.993	-8.9	100	0.00
27	CT	Ethyl tert-Butyl Ether	1.260	1.293	-2.6	100	0.00
28	CT	1,2-Dichloroethane	0.560	0.591	-5.5	100	0.00
29	ISS	IS-1,4-Difluorobenzene	1.000	1.000	0.0	100	0.00
30	CT	1,1,1-Trichloroethane	0.370	0.371	-0.3	100	0.00
31	CT	Benzene	0.529	0.588	-11.2	100	0.00
32	CT	Carbon Tetrachloride	0.396	0.440	-11.1	100	0.00
33	CT	tert-Amyl Methyl Ether	0.449	0.460	-2.4	100	0.00
34	CT	1,2-Dichloropropane	0.201	0.215	-7.0	100	0.00
35	CT	Ethyl Acrylate	0.171	0.189	-10.5	100	0.00
36	CT	Bromodichloromethane	0.356	0.336	5.6	100	0.00
37	CT	Trichloroethylene	0.252	0.247	2.0	100	0.00
38	CT	Methyl Methacrylate	0.513	0.555	-8.2	100	0.00
39	CT	cis-1,3-Dichloropropene	0.175	0.206	-17.7	100	0.00
40	CT	Methyl Isobutyl Ketone	0.377	0.381	-1.1	100	0.00
41	CT	trans-1,3-Dichloropropene	0.117	0.133	-13.7	100	0.00
42	CT	1,1,2-Trichloroethane	0.184	0.195	-6.0	100	0.00
43	ISS	IS-Chlorobenzene-d5	1.000	1.000	0.0	100	0.00
44	CT	Toluene	0.779	0.866	-11.2	100	0.00
45	CT	Dibromochloromethane	1.529	1.572	-2.8	100	0.00
46	CT	1,2-Dibromoethane	0.292	0.333	-14.0	100	0.00
47	CT	n-Octane	0.469	0.500	-6.6	100	0.00
48	CT	Tetrachloroethylene	0.375	0.408	-8.8	100	0.00

ED_002475_00000354-00260

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\L19BL\
Data File : L19BL019.D
Acq On : 13 Feb 2019 1:52 am
Operator : MAH
Sample : 1902030-ICV1
Misc : 80 ML 8L13001,9B12008
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Feb 13 06:45:10 2019
Quant Method : C:\msdchem\1\METHODS\9020003.M
Quant Title : TO-15 by Selective Ion Analysis
Last Update : Wed Feb 13 06:44:42 2019
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 60% Max. R.T. Dev 0.30min
Max. RRF Dev : 30% Max. Rel. Area : 140%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
49 CT	Chlorobenzene	0.497	0.533	-7.2	100	0.00
50 CT	Ethylbenzene	0.819	0.897	-9.5	100	0.00
51 CT	m,p-Xylene	0.691	0.734	-6.2	100	0.00
52 CT	Bromoform	0.296	0.303	-2.4	100	0.00
53 CT	Styrene	0.392	0.413	-5.4	100	0.00
54 CT	1,1,2,2-Tetrachloroethane	0.446	0.450	-0.9	100	0.00
55 CT	o-Xylene	0.682	0.750	-10.0	100	0.00
56 CT	1,3,5-Trimethylbenzene	0.732	0.746	-1.9	100	0.00
57 CT	1,2,4-Trimethylbenzene	0.633	0.655	-3.5	100	0.00
58 CT	m-Dichlorobenzene	0.333	0.317	4.8	100	0.00
59 CT	p-Dichlorobenzene	0.271	0.278	-2.6	100	0.00
60 CT	o-Dichlorobenzene	0.305	0.311	-2.0	100	0.00
61 CT	1,2,4-Trichlorobenzene	0.103	0.093	9.7	100	0.00
62 CT	Hexachloro-1,3-butadiene	0.264	0.239	9.5	100	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\L19BL\
Data File : L19BL019.D
Acq On : 13 Feb 2019 1:52 am
Operator : MAH
Sample : 1902030-ICV1
Misc : 80 ML 8L13001,9B12008
ALS Vial : 19 Sample Multiplier: 1

2-14-19

Quant Time: Feb 13 06:45:10 2019
Quant Method : C:\msdchem\1\METHODS\9020003.M
Quant Title : TO-15 by Selective Ion Analysis
QLast Update : Wed Feb 13 06:44:42 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) IS-Hexane-d14	19.991	66	49904	4.7700	ppbv	0.00
29) IS-1,4-Difluorobenzene	23.149	114	122171	4.9900	ppbv	0.00
43) IS-Chlorobenzene-d5	30.114	117	89258	4.7400	ppbv	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Acetylene	5.403	26	9152	2.2395	ppbv	100
3) Propylene	7.823	41	12851	2.5209	ppbv	99
4) Dichlorodifluoromethane	8.685	85	55878	2.3218	ppbv	100
5) Chloromethane	9.740	50	14476	2.3361	ppbv	100
6) Dichlorotetrafluoroethane	10.864	85	55325	2.6264	ppbv	99
7) Vinyl Chloride	11.102	62	16741	2.4154	ppbv	100
8) 1,3-Butadiene	11.783	54	11295	2.3973	ppbv	100
9) Ethylene oxide	12.378	29	6934	2.4293	ppbv	95
10) Bromomethane	12.588	94	15779	2.4058	ppbv	100
11) Chloroethane	13.280	64	6689	2.4293	ppbv	99
12) Acetonitrile	14.356	41	10160	2.3458	ppbv	99
13) Acrolein	14.611	56	4897	2.2439	ppbv	100
14) Trichlorofluoromethane	15.191	101	44769	2.2015	ppbv	100
15) Acrylonitrile	15.933	53	8208	2.3752	ppbv	99
16) 1,1-Dichloroethene	16.420	61	23152	2.6242	ppbv	100
17) Methylene Chloride	16.745	49	14856	2.5487	ppbv	99
18) Carbon Disulfide	16.930	76	43260	2.4097	ppbv	100
19) Trichlorotrifluoroethane	17.278	101	33747	2.4675	ppbv	100
20) trans-1,2-Dichloroethy...	18.336	96	12203	2.4954	ppbv	100
21) 1,1-Dichloroethane	18.630	63	21326	2.5944	ppbv	100
22) Methyl tert-Butyl Ether	18.789	73	34680	2.5155	ppbv	99
23) Chloroprene	19.537	53	17748	2.6543	ppbv	99
24) cis-1,2-Dichloroethylene	19.945	61	16347	2.5188	ppbv	100
25) Bromochloromethane	20.172	128	8486	2.4189	ppbv	99
26) Chloroform	20.399	83	25961	2.7220	ppbv	99
27) Ethyl tert-Butyl Ether	21.182	59	34755	2.6359	ppbv	100
28) 1,2-Dichloroethane	21.476	62	15401	2.6308	ppbv	100
30) 1,1,1-Trichloroethane	21.867	97	22414	2.4750	ppbv	98
31) Benzene	22.533	78	36108	2.7881	ppbv	100
32) Carbon Tetrachloride	22.768	117	27155	2.7996	ppbv	100
33) tert-Amyl Methyl Ether	23.520	73	29295	2.6636	ppbv	100
34) 1,2-Dichloropropane	23.788	63	13339	2.7092	ppbv	97
35) Ethyl Acrylate	23.891	55	11750	2.8090	ppbv	100
36) Bromodichloromethane	24.076	83	21041	2.4148	ppbv	99
37) Trichloroethylene	24.180	130	15224	2.4677	ppbv	99
38) Methyl Methacrylate	24.551	41	34515	2.7492	ppbv	100
39) cis-1,3-Dichloropropene	25.528	75	12795	2.9927	ppbv	100
40) Methyl Isobutyl Ketone	25.605	43	23616	2.5588	ppbv	99
41) trans-1,3-Dichloropropene	26.367	75	8029	2.8030	ppbv	99
42) 1,1,2-Trichloroethane	26.634	97	11843	2.6289	ppbv	99
44) Toluene	27.092	91	39791	2.7129	ppbv	100
45) Dibromochloromethane	27.750	129	75190	2.6115	ppbv	100
46) 1,2-Dibromoethane	28.153	107	15656	2.8466	ppbv	100
47) n-Octane	28.873	43	23749	2.6883	ppbv	99
48) Tetrachloroethylene	28.996	166	19144	2.7118	ppbv	100
49) Chlorobenzene	30.190	112	24688	2.6373	ppbv	100
50) Ethylbenzene	30.915	91	42243	2.7393	ppbv	100

ED_002475_00000354-00262

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\L19BL\
Data File : L19BL019.D
Acq On : 13 Feb 2019 1:52 am
Operator : MAH
Sample : 1902030-ICV1
Misc : 80 ML 8L13001,9B12008
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Feb 13 06:45:10 2019
Quant Method : C:\msdchem\1\METHODS\9020003.M
Quant Title : TO-15 by Selective Ion Analysis
Quant Update : Wed Feb 13 06:44:42 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
51) m,p-Xylene	31.240	91	68859	5.2943	ppbv	99
52) Bromoform	31.297	173	14471	2.5994	ppbv	100
53) Styrene	31.927	104	19446	2.6372	ppbv #	100
54) 1,1,2,2-Tetrachloroethane	32.080	83	21433	2.5533	ppbv	99
55) o-Xylene	32.137	91	34477	2.6860	ppbv	100
56) 1,3,5-Trimethylbenzene	34.935	105	35387	2.5661	ppbv	100
57) 1,2,4-Trimethylbenzene	35.844	105	29335	2.4596	ppbv	99
58) m-Dichlorobenzene	36.129	146	14336	2.2863	ppbv	100
59) p-Dichlorobenzene	36.289	146	13687	2.6795	ppbv	100
60) o-Dichlorobenzene	37.109	146	14621	2.5493	ppbv	100
61) 1,2,4-Trichlorobenzene	40.840	180	4324	2.2230	ppbv	99
62) Hexachloro-1,3-butadiene	41.649	225	11267	2.2681	ppbv	100

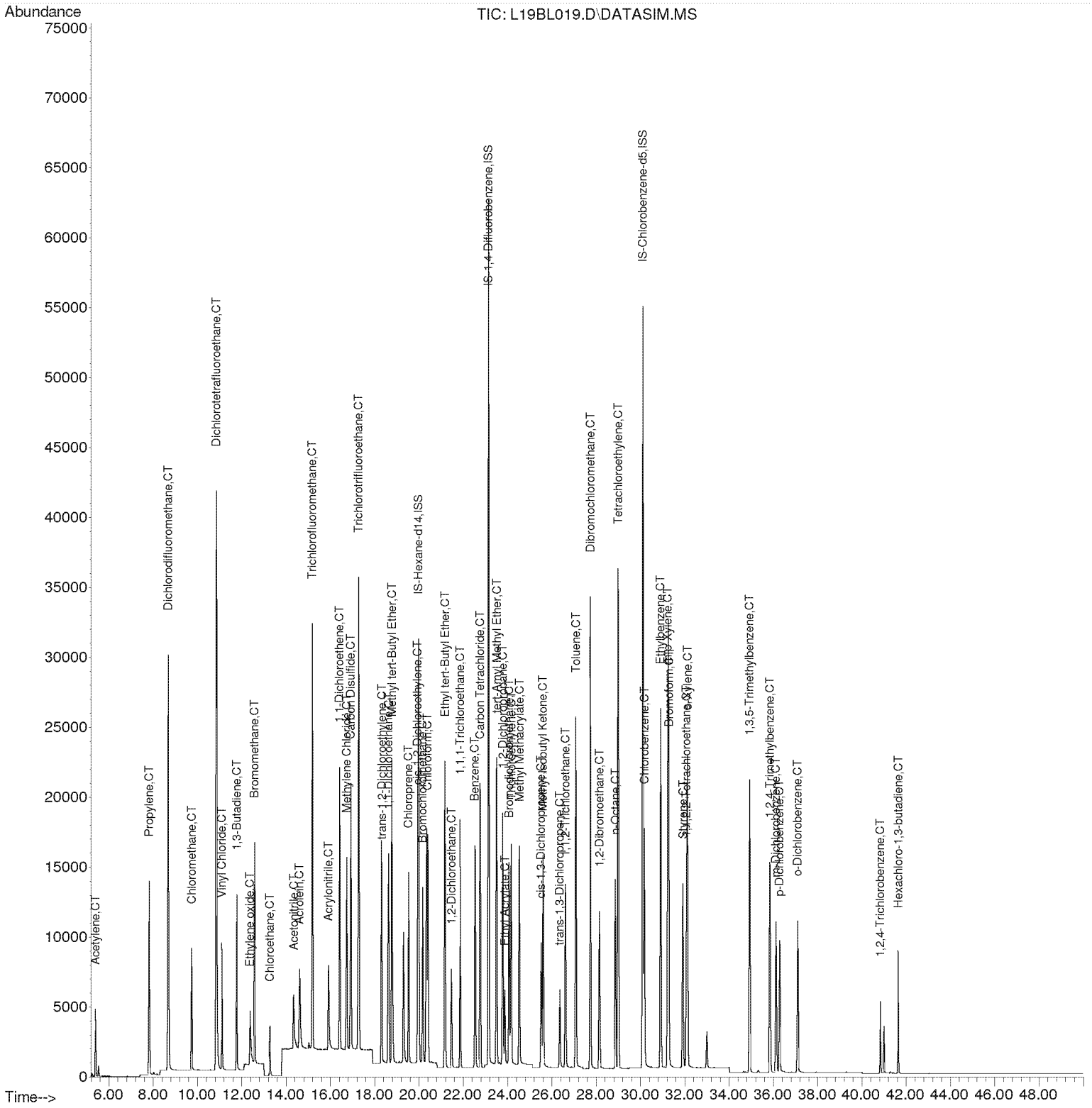
(#) = qualifier out of range (m) = manual integration (+) = signals summed

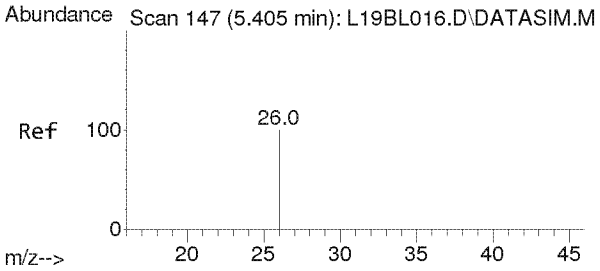
ED_002475_00000354-00263

Quantitation Report (QT Reviewed)

Data Path : Y:\MASS SPEC 1 DATA\L19BL\
Data File : L19BL019.D
Acq On : 13 Feb 2019 1:52 am
Operator : MAH
Sample : 1902030-ICV1
Misc : 80 ML 8L13001,9B12008
ALS Vial : 19 Sample Multiplier: 1

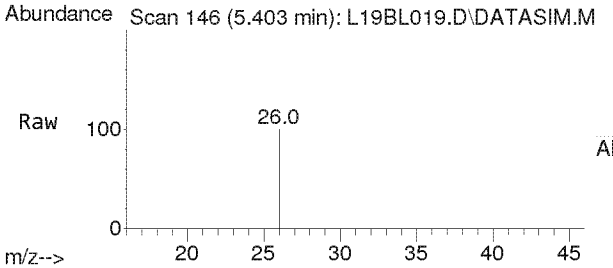
Quant Time: Feb 13 06:45:10 2019
Quant Method : C:\msdchem\1\METHODS\9020003.M
Quant Title : TO-15 by Selective Ion Analysis
QLast Update : Wed Feb 13 06:44:42 2019
Response via : Initial Calibration

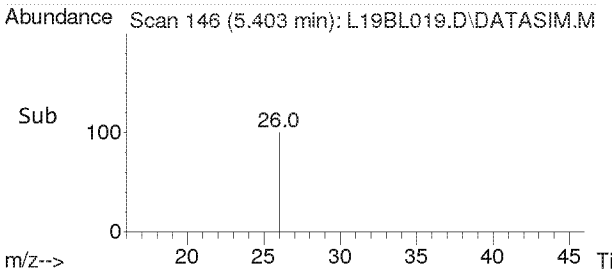


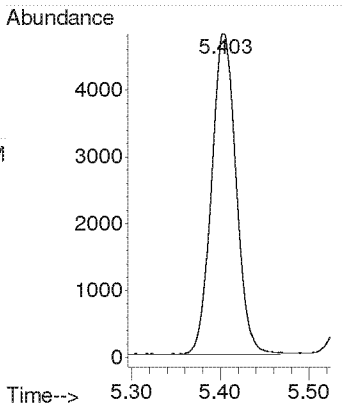


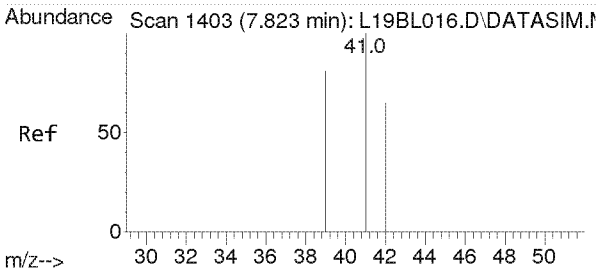
#2
Acetylene
Concen: 2.239 ppbv
RT: 5.403 min Scan# 146
Delta R.T. -0.001 min
Lab File: L19BL019.D
Acq: 13 Feb 2019 1:52 am

Tgt Ion: 26 Resp: 9152





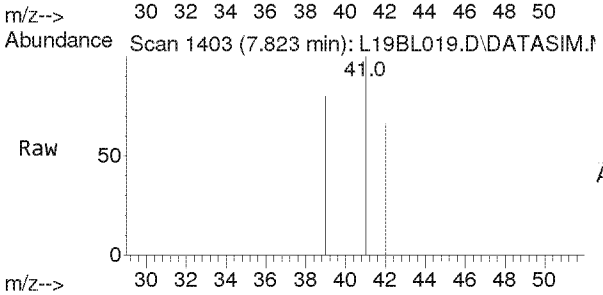


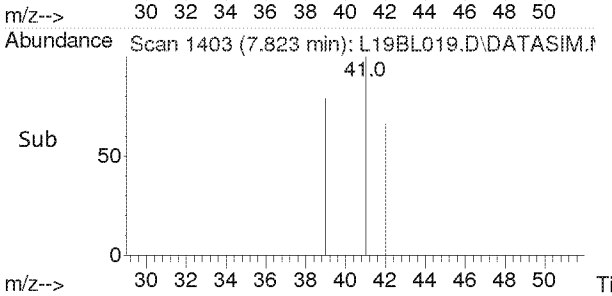


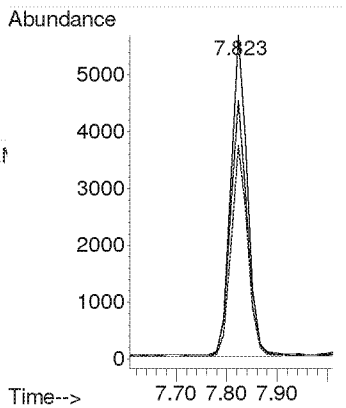
#3
Propylene
Concen: 2.521 ppbv
RT: 7.823 min Scan# 1403
Delta R.T. 0.000 min
Lab File: L19BL019.D
Acq: 13 Feb 2019 1:52 am

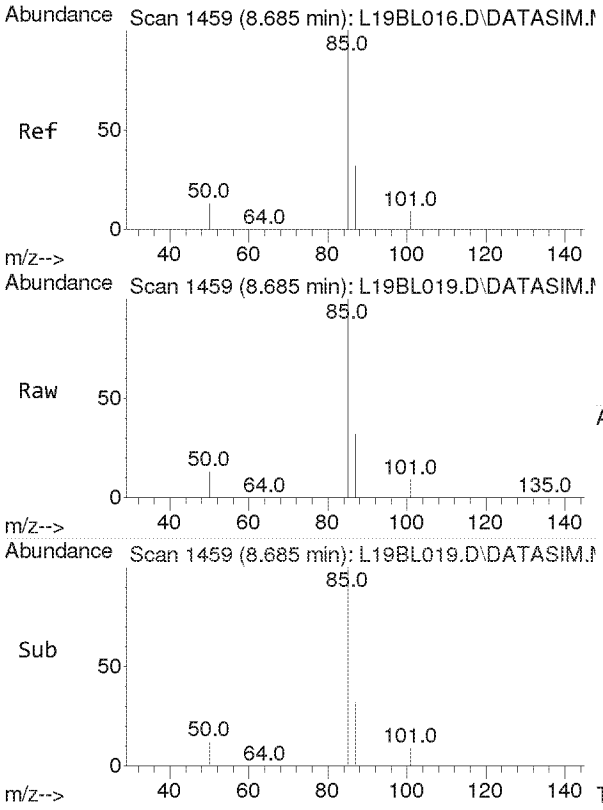
Tgt Ion: 41 Resp: 12851

Ion	Ratio	Lower	Upper
41	100		
39	79.1	64.2	96.2
42	66.1	52.6	79.0





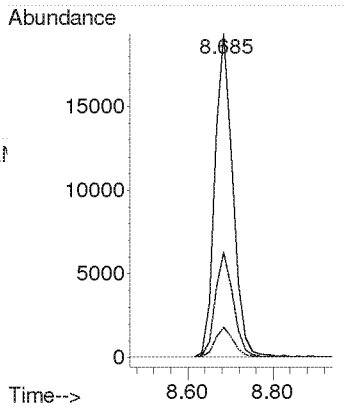


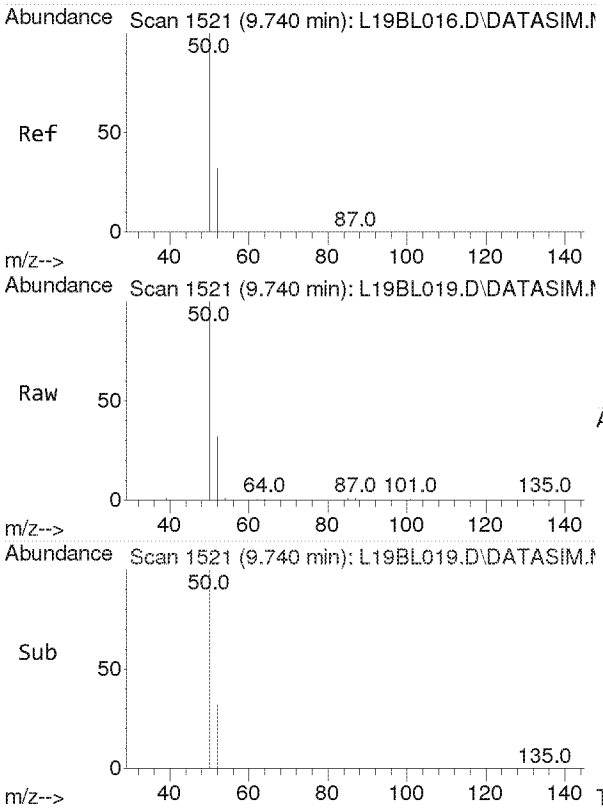


#4
Dichlorodifluoromethane
Concen: 2.322 ppbv
RT: 8.685 min Scan# 1459
Delta R.T. 0.000 min
Lab File: L19BL019.D
Acq: 13 Feb 2019 1:52 am

Tgt Ion: 85 Resp: 55878

Ion	Ratio	Lower	Upper
85	100		
87	32.3	26.0	39.0
101	9.0	7.3	10.9

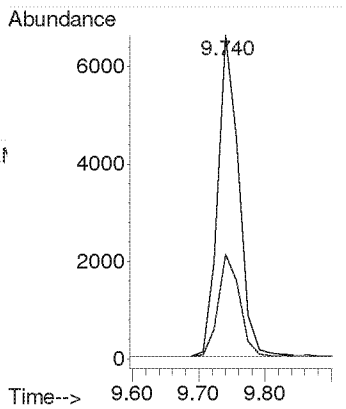


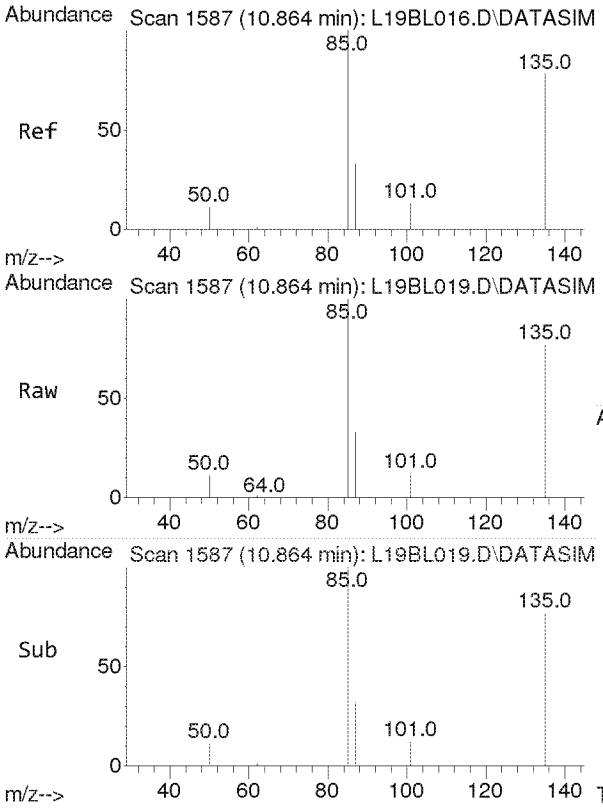


#5
Chloromethane
Concen: 2.336 ppbv
RT: 9.740 min Scan# 1521
Delta R.T. 0.000 min
Lab File: L19BL019.D
Acq: 13 Feb 2019 1:52 am

Tgt Ion: 50 Resp: 14476

Ion	Ratio	Lower	Upper
50	100		
52	32.7	26.1	39.1

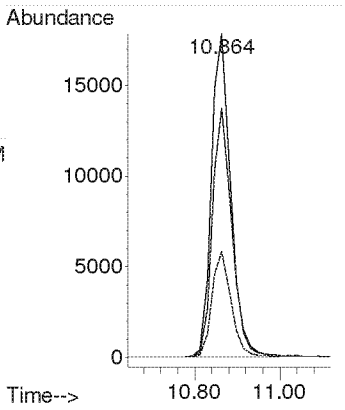


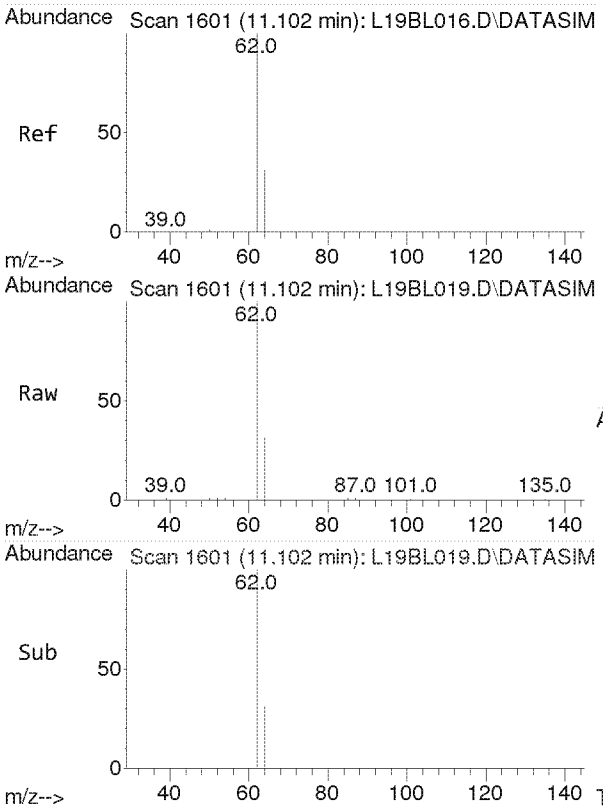


#6
Dichlorotetrafluoroethane
Concen: 2.626 ppbv
RT: 10.864 min Scan# 1587
Delta R.T. 0.000 min
Lab File: L19BL019.D
Acq: 13 Feb 2019 1:52 am

Tgt Ion: 85 Resp: 55325

Ion	Ratio	Lower	Upper
85	100		
135	78.2	63.2	94.8
87	32.2	25.9	38.9

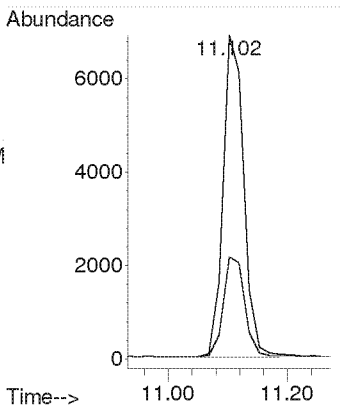


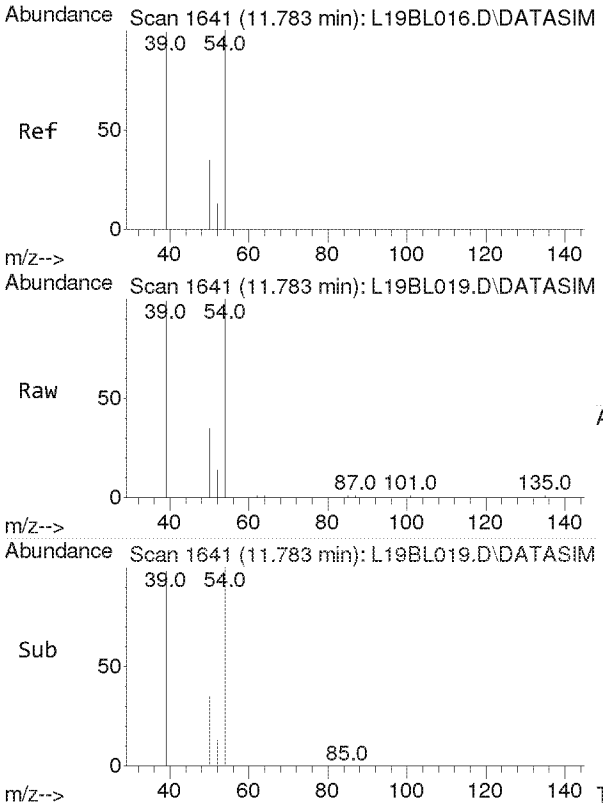


#7
Vinyl Chloride
Concen: 2.415 ppbv
RT: 11.102 min Scan# 1601
Delta R.T. 0.000 min
Lab File: L19BL019.D
Acq: 13 Feb 2019 1:52 am

Tgt Ion: 62 Resp: 16741

Ion	Ratio	Lower	Upper
62	100		
64	31.9	25.4	38.0

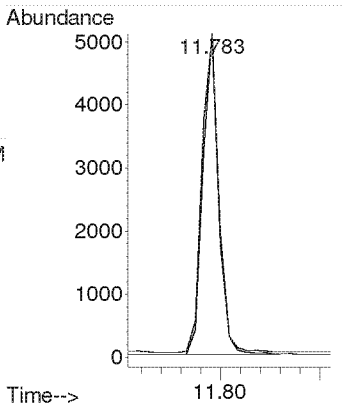


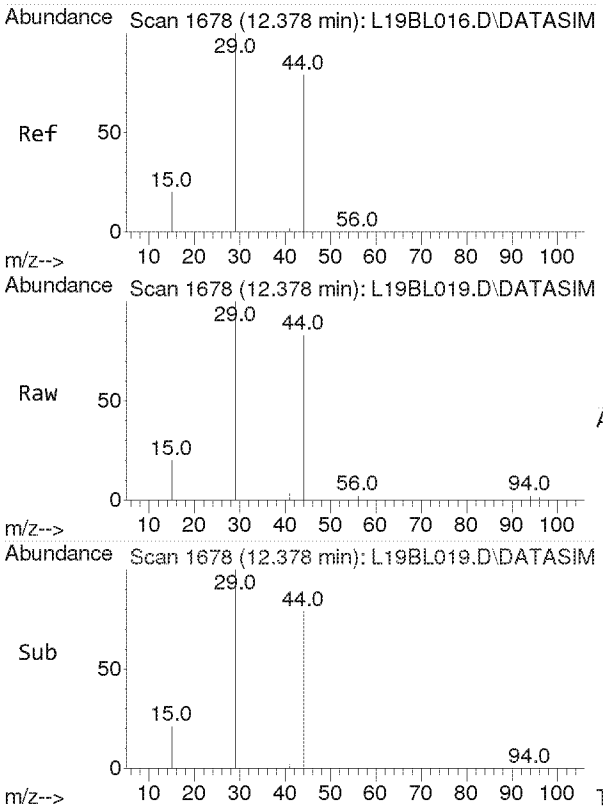


#8
1,3-Butadiene
Concen: 2.397 ppbv
RT: 11.783 min Scan# 1641
Delta R.T. 0.000 min
Lab File: L19BL019.D
Acq: 13 Feb 2019 1:52 am

Tgt Ion: 54 Resp: 11295

Ion	Ratio	Lower	Upper
54	100		
39	102.3	81.6	122.4

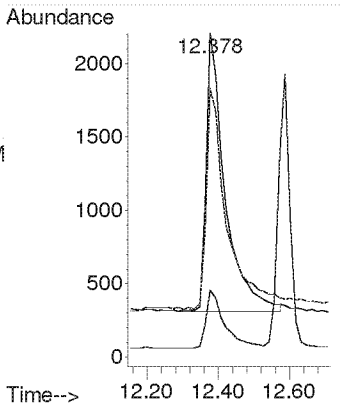


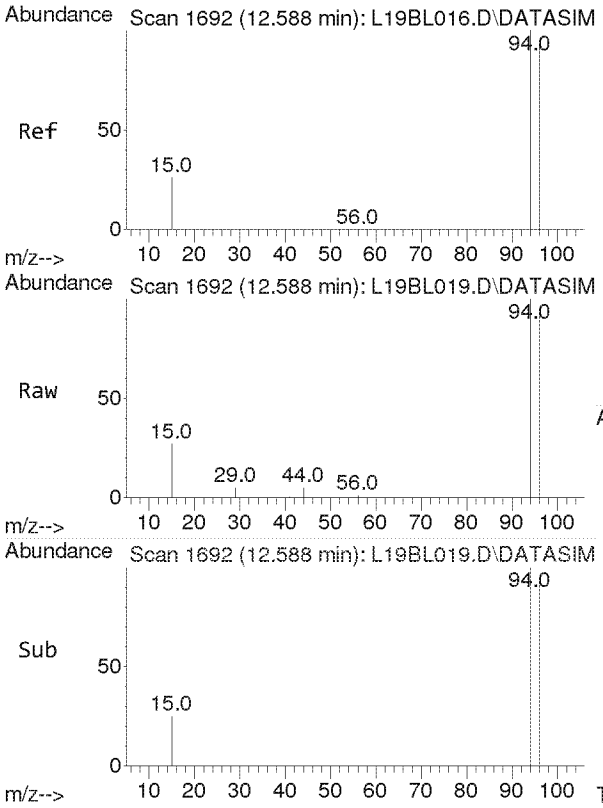


#9
Ethylene oxide
Concen: 2.429 ppbv
RT: 12.378 min Scan# 1678
Delta R.T. 0.000 min
Lab File: L19BL019.D
Acq: 13 Feb 2019 1:52 am

Tgt Ion: 29 Resp: 6934

Ion	Ratio	Lower	Upper
29	100		
15	20.1	16.0	24.0
44	87.0	65.4	98.2

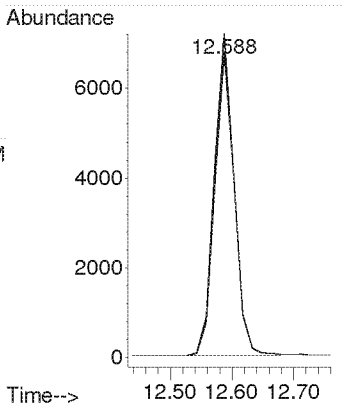


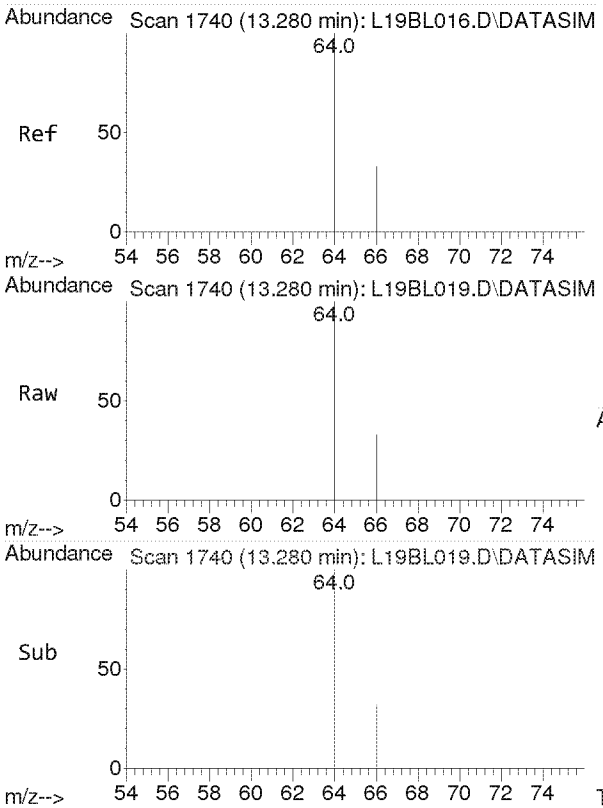


#10
Bromomethane
Concen: 2.406 ppbv
RT: 12.588 min Scan# 1692
Delta R.T. 0.000 min
Lab File: L19BL019.D
Acq: 13 Feb 2019 1:52 am

Tgt Ion: 94 Resp: 15779

Ion	Ratio	Lower	Upper
94	100		
96	94.5	75.5	113.3

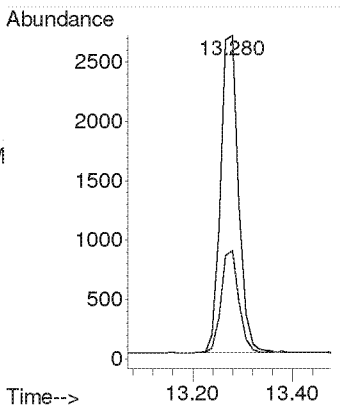


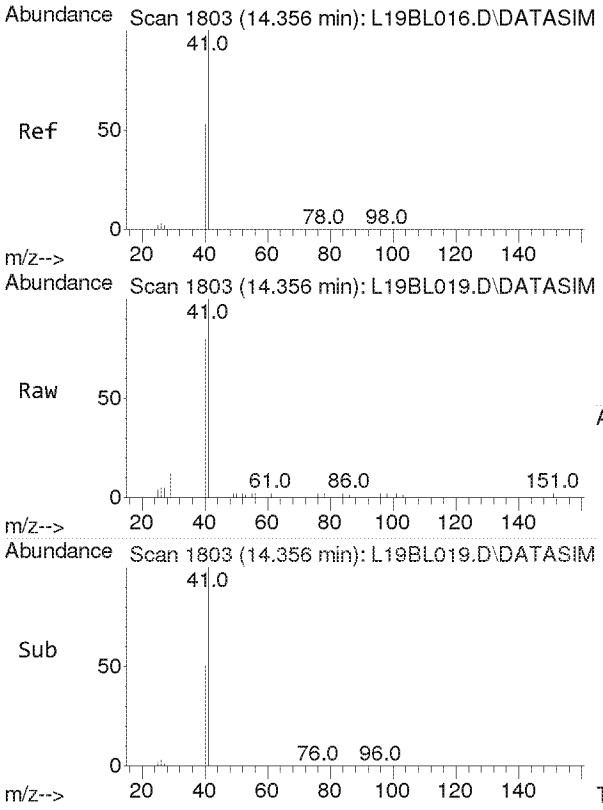


#11
Chloroethane
Concen: 2.429 ppbv
RT: 13.280 min Scan# 1740
Delta R.T. 0.000 min
Lab File: L19BL019.D
Acq: 13 Feb 2019 1:52 am

Tgt Ion: 64 Resp: 6689

Ion	Ratio	Lower	Upper
64	100		
66	31.8	25.8	38.6

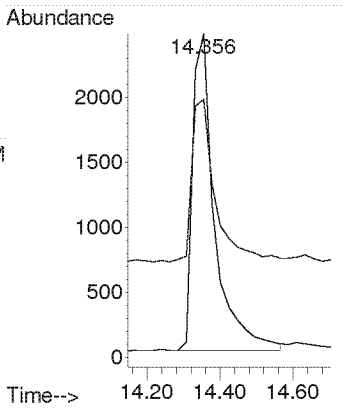


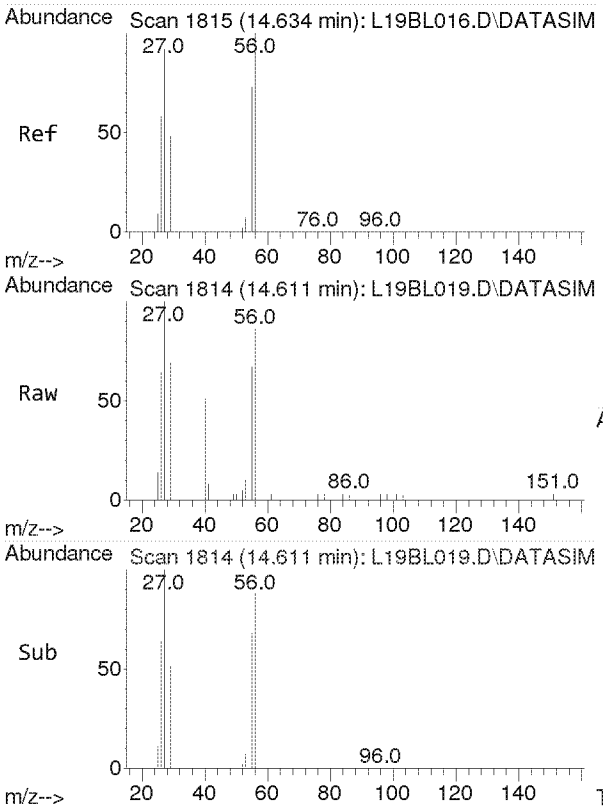


#12
Acetonitrile
Concen: 2.346 ppbv
RT: 14.356 min Scan# 1803
Delta R.T. 0.000 min
Lab File: L19BL019.D
Acq: 13 Feb 2019 1:52 am

Tgt Ion: 41 Resp: 10160

Ion	Ratio	Lower	Upper
41	100		
40	53.6	42.2	63.4

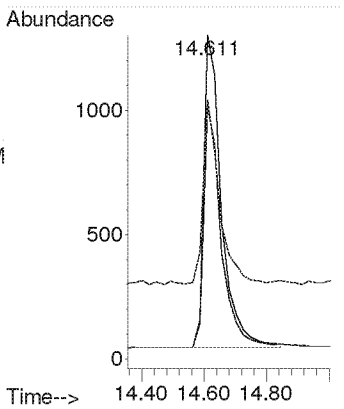


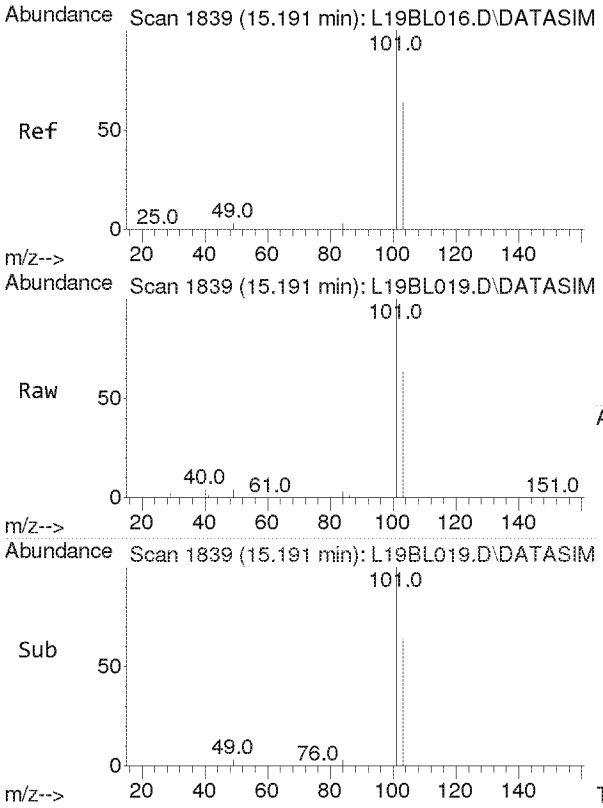


#13
Acrolein
Concen: 2.244 ppbv
RT: 14.611 min Scan# 1814
Delta R.T. -0.023 min
Lab File: L19BL019.D
Acq: 13 Feb 2019 1:52 am

Tgt Ion: 56 Resp: 4897

Ion	Ratio	Lower	Upper
56	100		
55	76.0	60.8	91.2
29	54.4	43.8	65.6

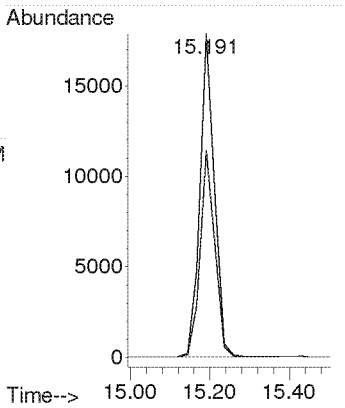


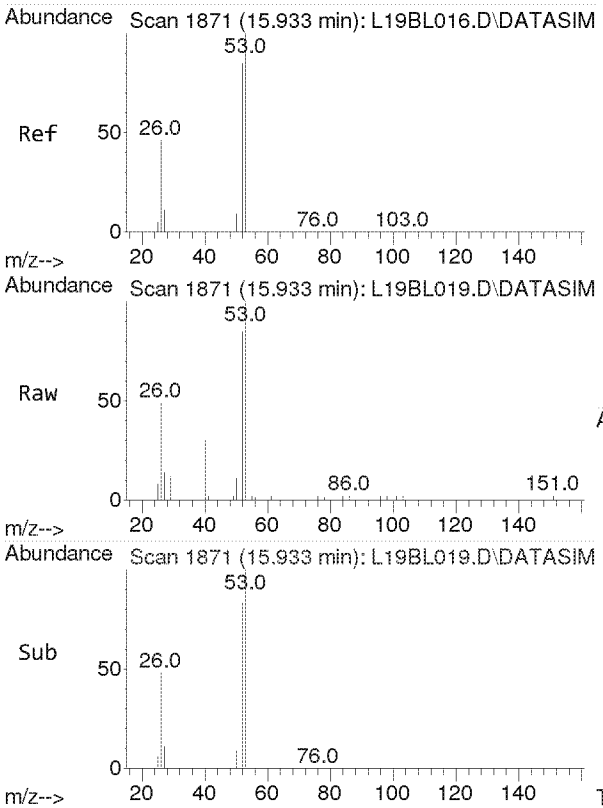


#14
Trichlorofluoromethane
Concen: 2.202 ppbv
RT: 15.191 min Scan# 1839
Delta R.T. 0.000 min
Lab File: L19BL019.D
Acq: 13 Feb 2019 1:52 am

Tgt Ion:101 Resp: 44769

Ion	Ratio	Lower	Upper
101	100		
103	64.9	51.7	77.5

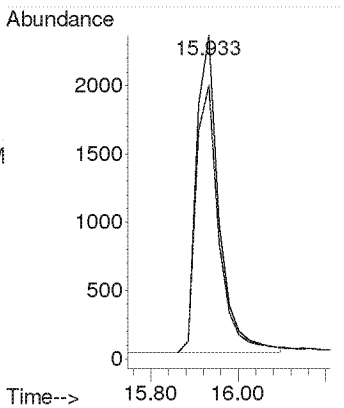


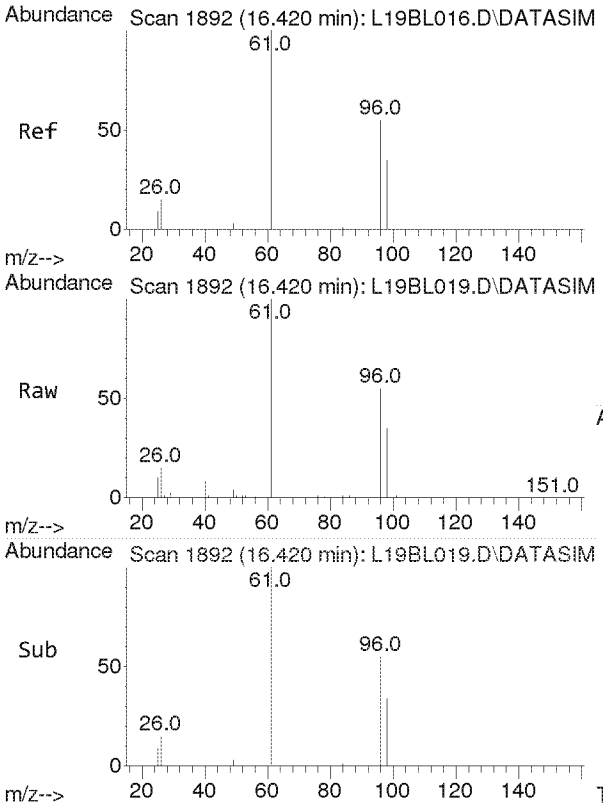


#15
Acrylonitrile
Concen: 2.375 ppbv
RT: 15.933 min Scan# 1871
Delta R.T. 0.000 min
Lab File: L19BL019.D
Acq: 13 Feb 2019 1:52 am

Tgt Ion: 53 Resp: 8208

Ion	Ratio	Lower	Upper
53	100		
52	86.2	69.5	104.3

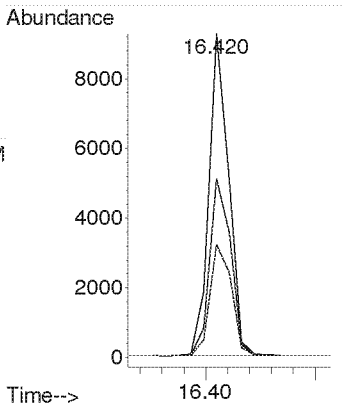


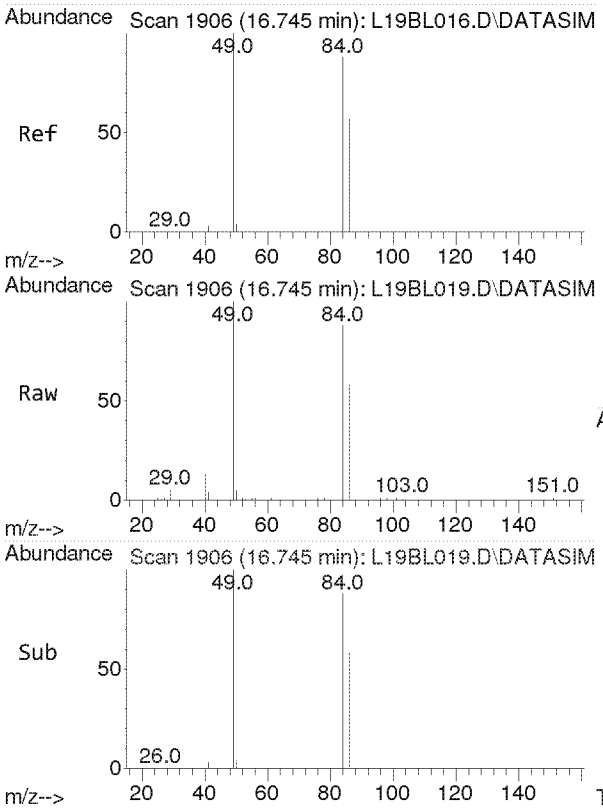


#16
1,1-Dichloroethene
Concen: 2.624 ppbv
RT: 16.420 min Scan# 1892
Delta R.T. 0.000 min
Lab File: L19BL019.D
Acq: 13 Feb 2019 1:52 am

Tgt Ion: 61 Resp: 23152

Ion	Ratio	Lower	Upper
61	100		
96	59.0	47.3	70.9
98	37.8	30.6	45.8

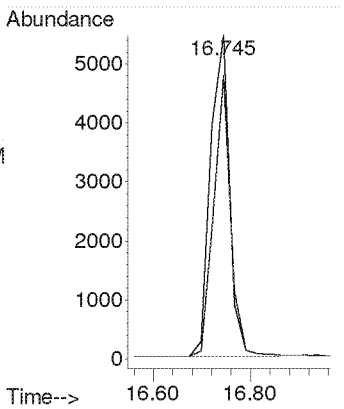


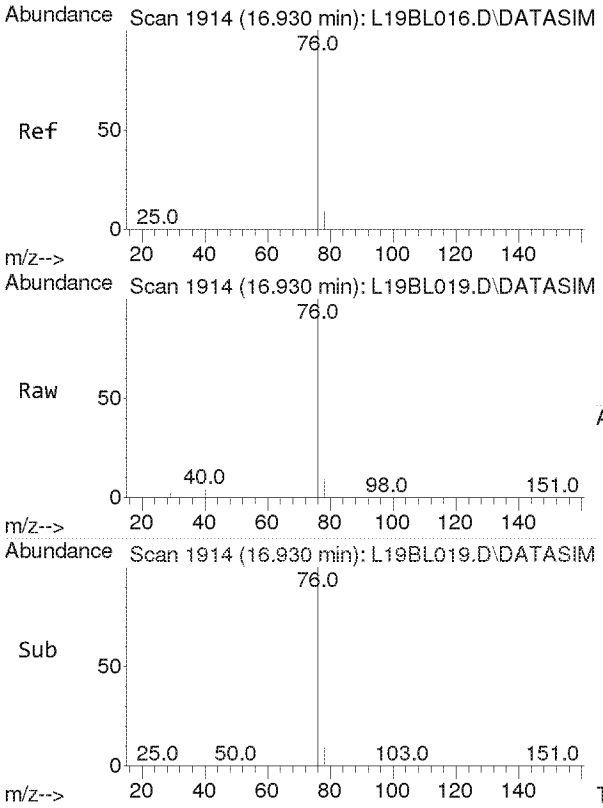


#17
Methylene Chloride
Concen: 2.549 ppbv
RT: 16.745 min Scan# 1906
Delta R.T. 0.000 min
Lab File: L19BL019.D
Acq: 13 Feb 2019 1:52 am

Tgt Ion: 49 Resp: 14856

Ion	Ratio	Lower	Upper
49	100		
84	77.7	54.0	100.4

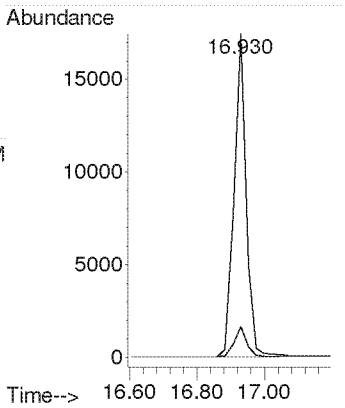


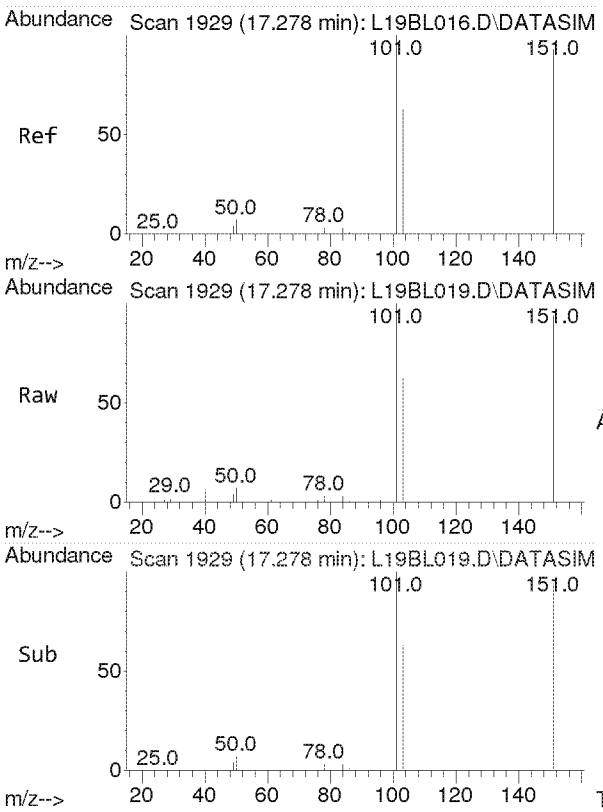


#18
Carbon Disulfide
Concen: 2.410 ppbv
RT: 16.930 min Scan# 1914
Delta R.T. 0.000 min
Lab File: L19BL019.D
Acq: 13 Feb 2019 1:52 am

Tgt Ion: 76 Resp: 43260

Ion	Ratio	Lower	Upper
76	100		
78	9.1	7.4	11.0

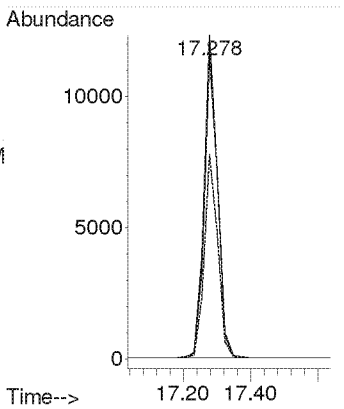


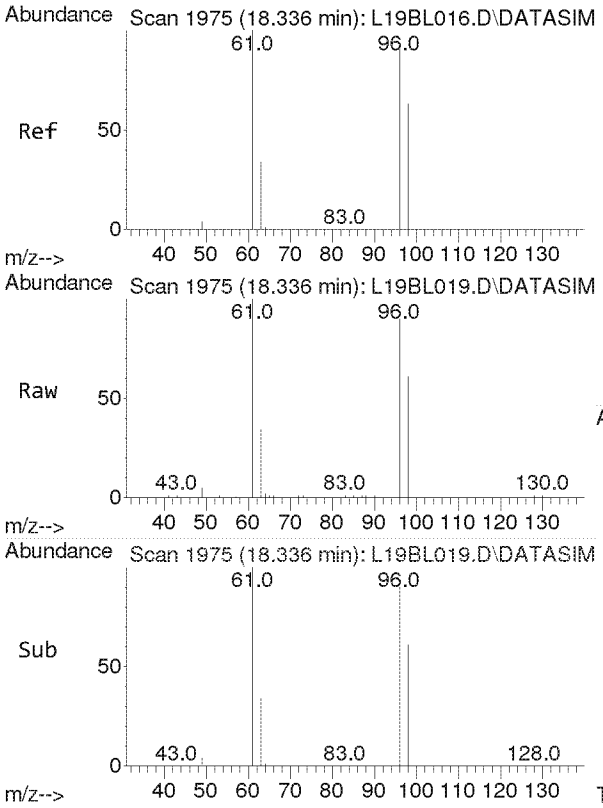


#19
Trichlorotrifluoroethane
Concen: 2.468 ppbv
RT: 17.278 min Scan# 1929
Delta R.T. 0.000 min
Lab File: L19BL019.D
Acq: 13 Feb 2019 1:52 am

Tgt Ion:101 Resp: 33747

Ion	Ratio	Lower	Upper
101	100		
151	95.4	75.8	113.8
103	64.1	51.1	76.7

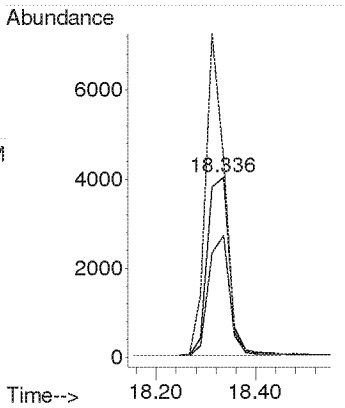


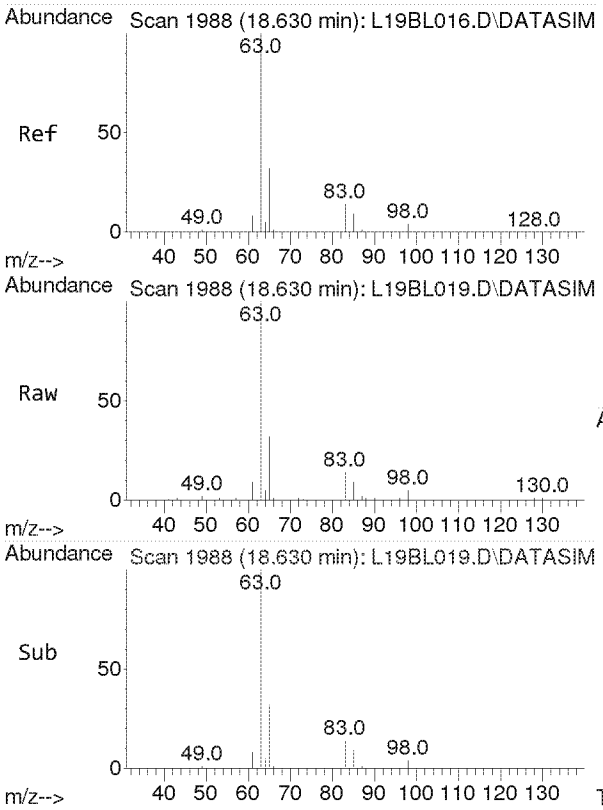


#20
trans-1,2-Dichloroethylene
Concen: 2.495 ppbv
RT: 18.336 min Scan# 1975
Delta R.T. 0.000 min
Lab File: L19BL019.D
Acq: 13 Feb 2019 1:52 am

Tgt Ion: 96 Resp: 12203

Ion	Ratio	Lower	Upper
96	100		
98	64.3	51.5	77.3
61	153.6	122.9	184.3

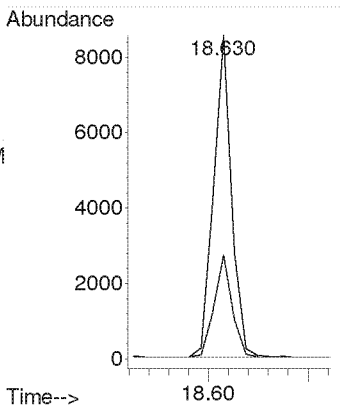


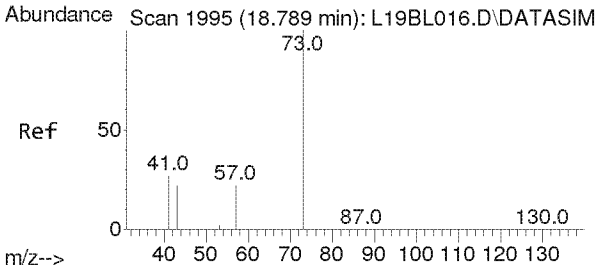


#21
1,1-Dichloroethane
Concen: 2.594 ppbv
RT: 18.630 min Scan# 1988
Delta R.T. 0.000 min
Lab File: L19BL019.D
Acq: 13 Feb 2019 1:52 am

Tgt Ion: 63 Resp: 21326

Ion	Ratio	Lower	Upper
63	100		
65	31.5	25.4	38.0

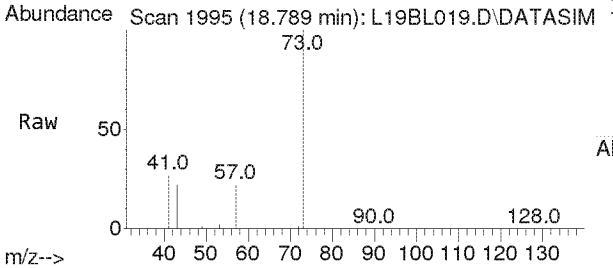


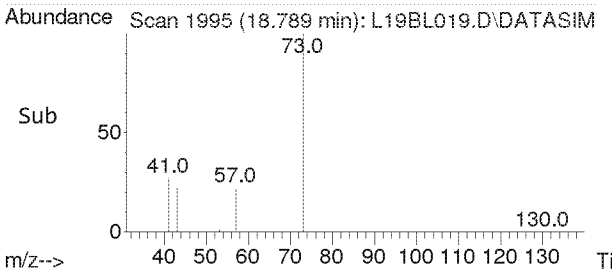


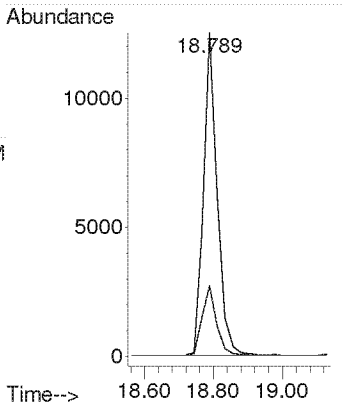
#22
Methyl tert-Butyl Ether
Concen: 2.515 ppbv
RT: 18.789 min Scan# 1995
Delta R.T. 0.000 min
Lab File: L19BL019.D
Acq: 13 Feb 2019 1:52 am

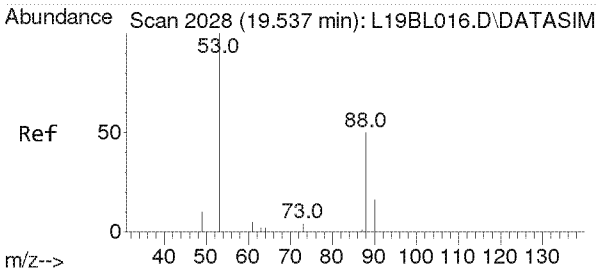
Tgt Ion: 73 Resp: 34680

Ion	Ratio	Lower	Upper
73	100		
57	22.1	18.0	27.0





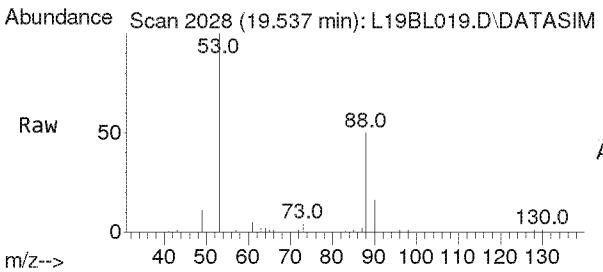


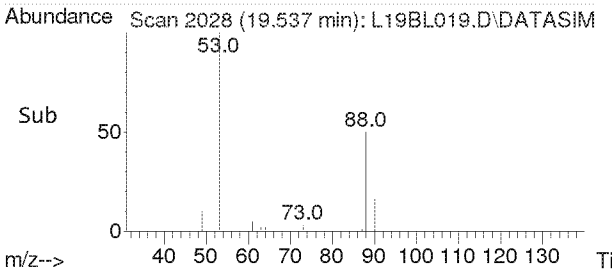


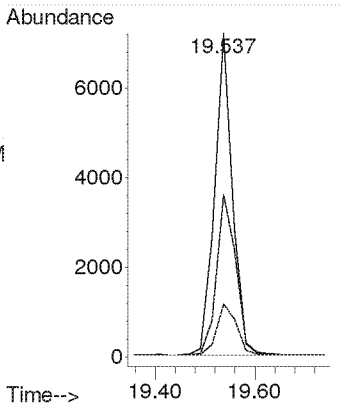
#23
Chloroprene
Concen: 2.654 ppbv
RT: 19.537 min Scan# 2028
Delta R.T. 0.000 min
Lab File: L19BL019.D
Acq: 13 Feb 2019 1:52 am

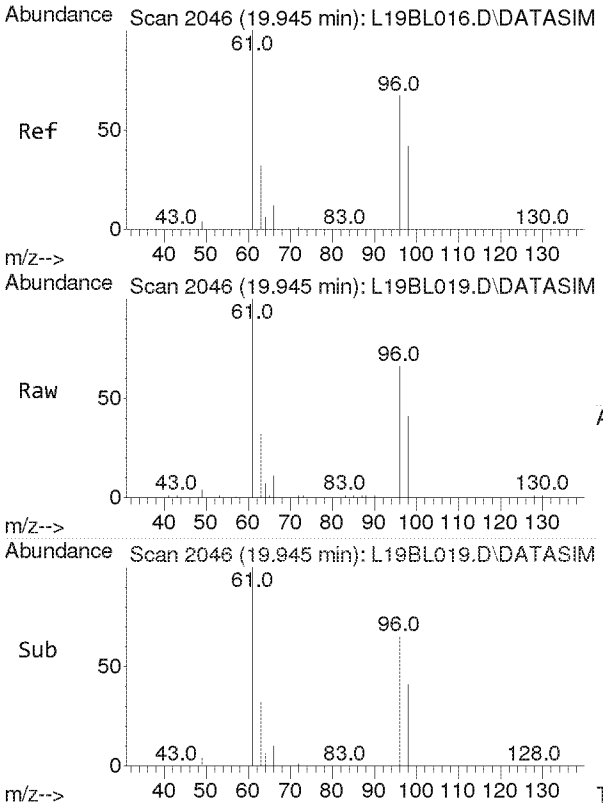
Tgt Ion: 53 Resp: 17748

Ion	Ratio	Lower	Upper
53	100		
88	53.8	42.6	64.0
90	17.3	13.9	20.9





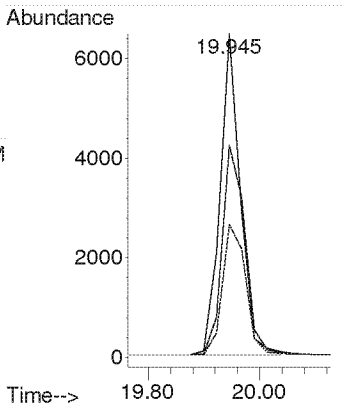


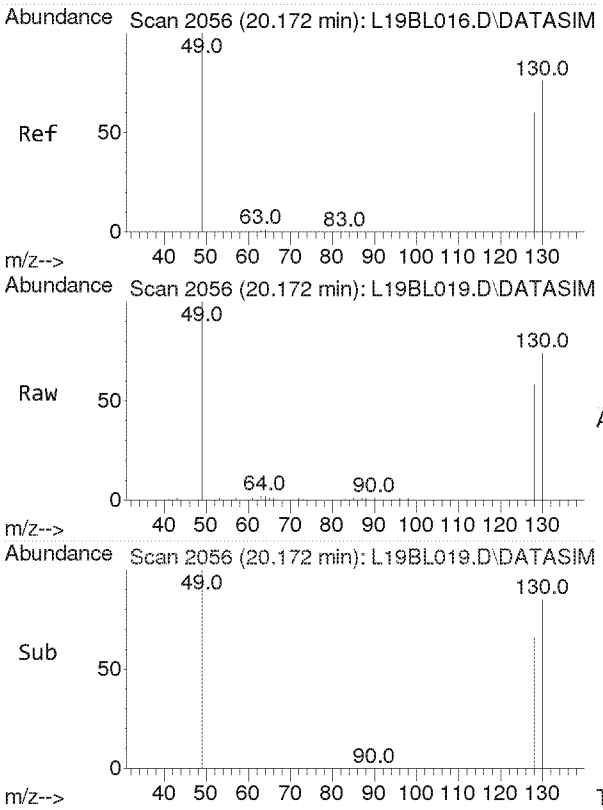


#24
cis-1,2-Dichloroethylene
Concen: 2.519 ppbv
RT: 19.945 min Scan# 2046
Delta R.T. 0.000 min
Lab File: L19BL019.D
Acq: 13 Feb 2019 1:52 am

Tgt Ion: 61 Resp: 16347

Ion	Ratio	Lower	Upper
61	100		
96	73.4	59.0	88.6
98	46.8	37.6	56.4

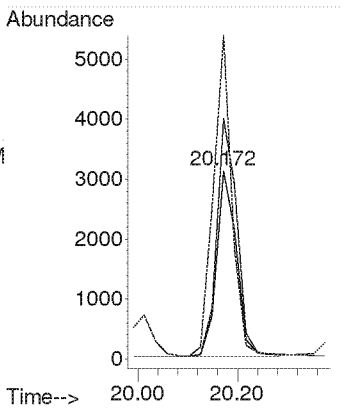


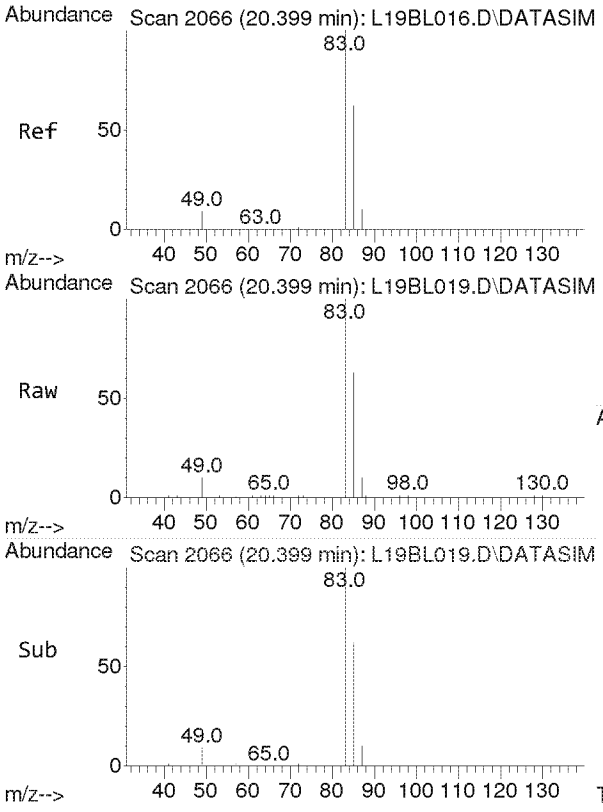


#25
Bromochloromethane
Concen: 2.419 ppbv
RT: 20.172 min Scan# 2056
Delta R.T. 0.000 min
Lab File: L19BL019.D
Acq: 13 Feb 2019 1:52 am

Tgt Ion:128 Resp: 8486

Ion	Ratio	Lower	Upper
128	100		
130	130.4	103.3	154.9
49	160.9	128.3	192.5

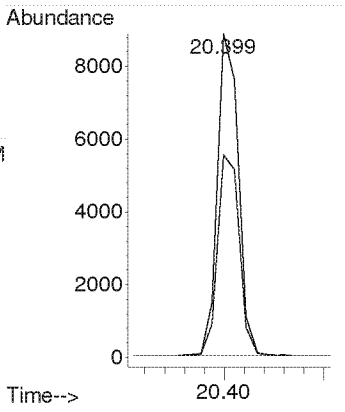


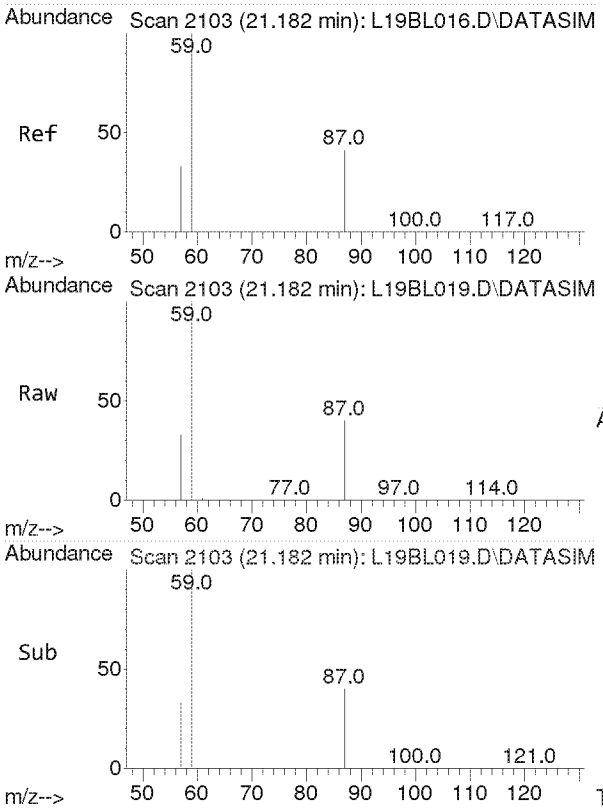


#26
Chloroform
Concen: 2.722 ppbv
RT: 20.399 min Scan# 2066
Delta R.T. 0.000 min
Lab File: L19BL019.D
Acq: 13 Feb 2019 1:52 am

Tgt Ion: 83 Resp: 25961

Ion	Ratio	Lower	Upper
83	100		
85	65.2	51.5	77.3

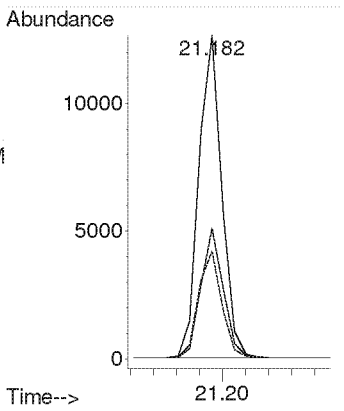


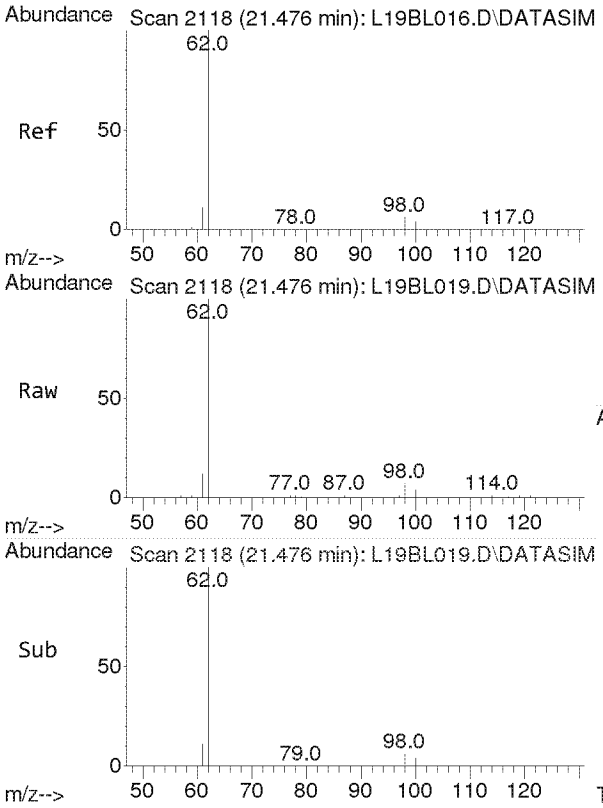


#27
Ethyl tert-Butyl Ether
Concen: 2.636 ppbv
RT: 21.182 min Scan# 2103
Delta R.T. 0.000 min
Lab File: L19BL019.D
Acq: 13 Feb 2019 1:52 am

Tgt Ion: 59 Resp: 34755

Ion	Ratio	Lower	Upper
59	100		
87	39.2	31.5	47.3
57	33.3	26.6	39.8

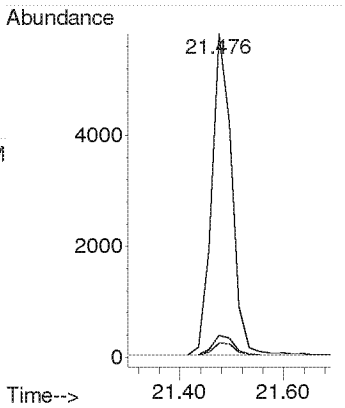


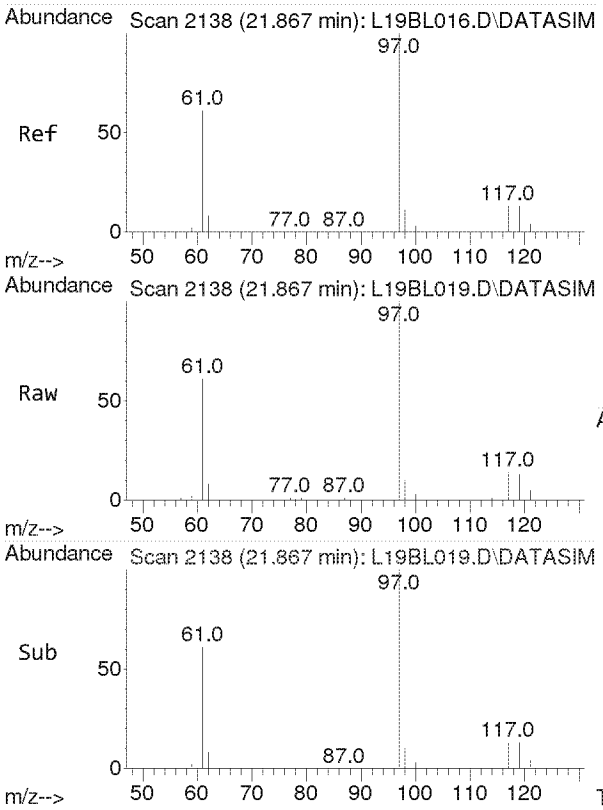


#28
1,2-Dichloroethane
Concen: 2.631 ppbv
RT: 21.476 min Scan# 2118
Delta R.T. 0.000 min
Lab File: L19BL019.D
Acq: 13 Feb 2019 1:52 am

Tgt Ion: 62 Resp: 15401

Ion	Ratio	Lower	Upper
62	100		
98	6.3	5.0	7.6
100	4.1	3.2	4.8

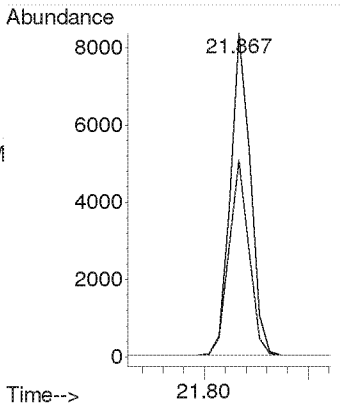


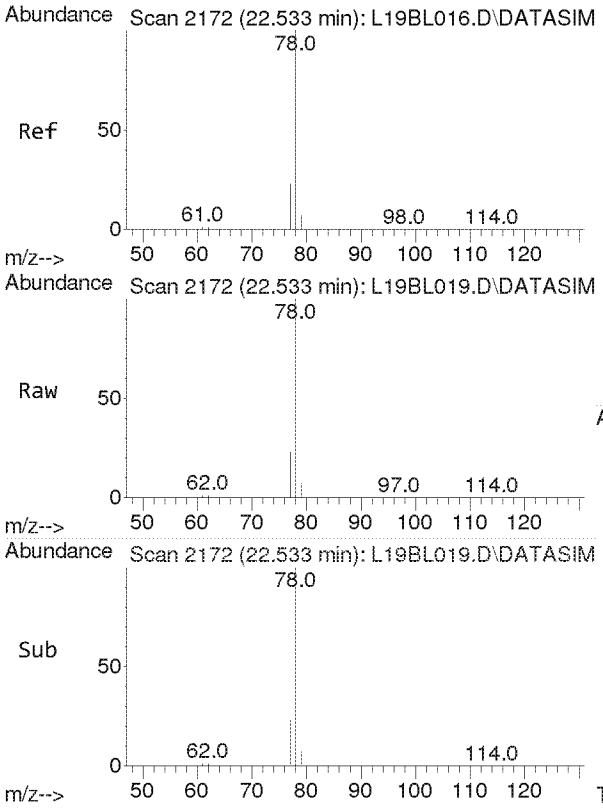


#30
1,1,1-Trichloroethane
Concen: 2.475 ppbv
RT: 21.867 min Scan# 2138
Delta R.T. 0.000 min
Lab File: L19BL019.D
Acq: 13 Feb 2019 1:52 am

Tgt Ion: 97 Resp: 22414

Ion	Ratio	Lower	Upper
97	100		
61	60.2	49.7	74.5

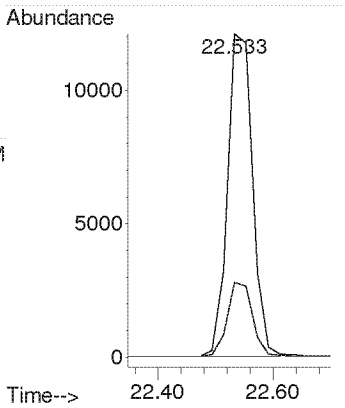


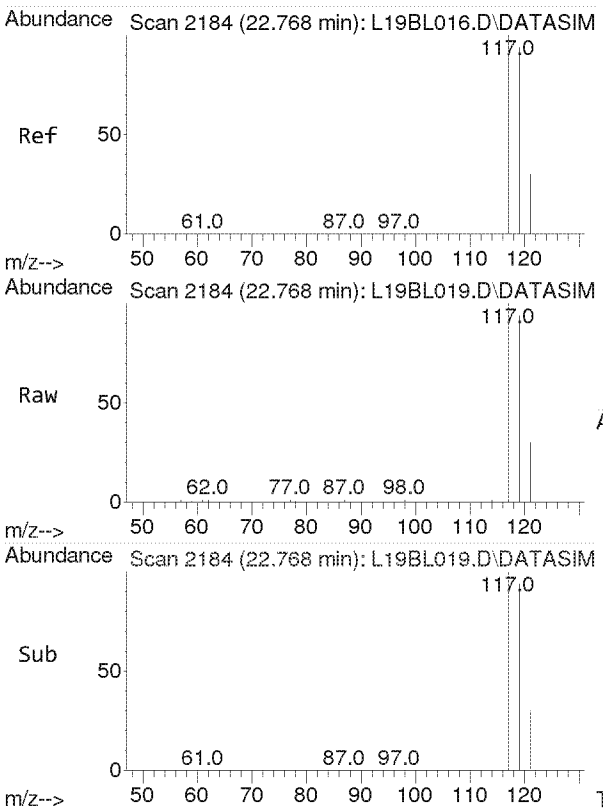


#31
Benzene
Concen: 2.788 ppbv
RT: 22.533 min Scan# 2172
Delta R.T. 0.000 min
Lab File: L19BL019.D
Acq: 13 Feb 2019 1:52 am

Tgt Ion: 78 Resp: 36108

Ion	Ratio	Lower	Upper
78	100		
77	22.8	18.2	27.4

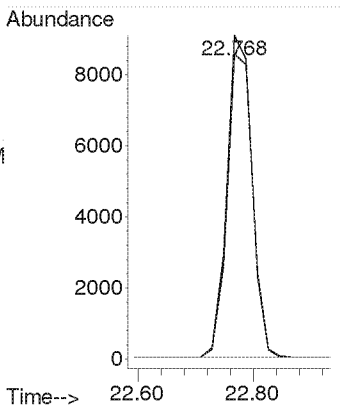


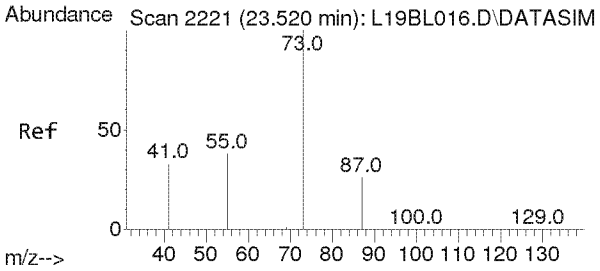


#32
Carbon Tetrachloride
Concen: 2.800 ppbv
RT: 22.768 min Scan# 2184
Delta R.T. 0.000 min
Lab File: L19BL019.D
Acq: 13 Feb 2019 1:52 am

Tgt Ion:117 Resp: 27155

Ion	Ratio	Lower	Upper
117	100		
119	95.9	77.0	115.6

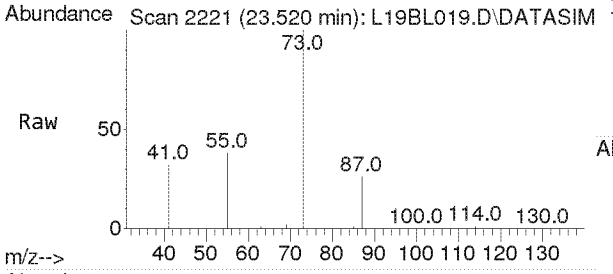


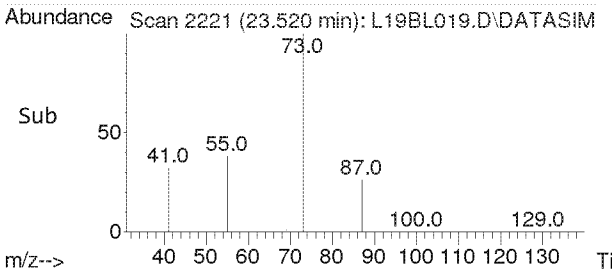


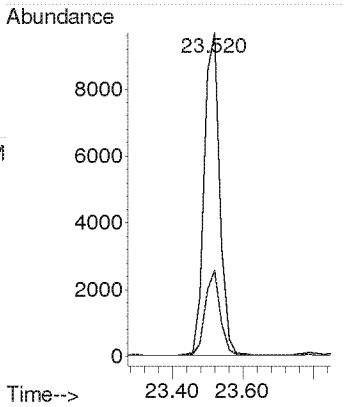
#33
tert-Amyl Methyl Ether
Concen: 2.664 ppbv
RT: 23.520 min Scan# 2221
Delta R.T. 0.000 min
Lab File: L19BL019.D
Acq: 13 Feb 2019 1:52 am

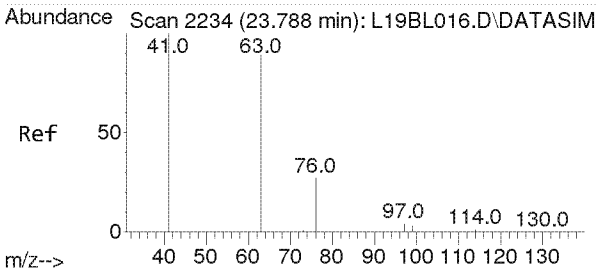
Tgt Ion: 73 Resp: 29295

Ion	Ratio	Lower	Upper
73	100		
87	25.0	20.1	30.1





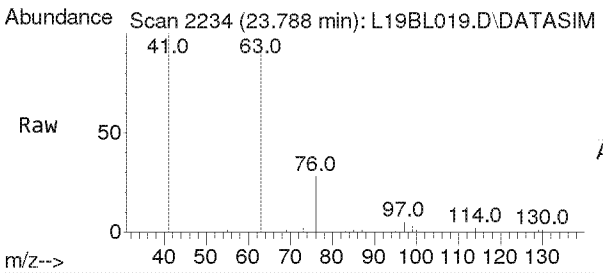


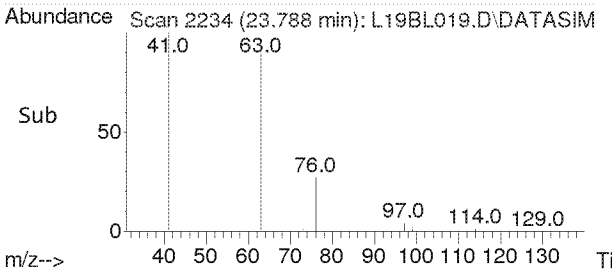


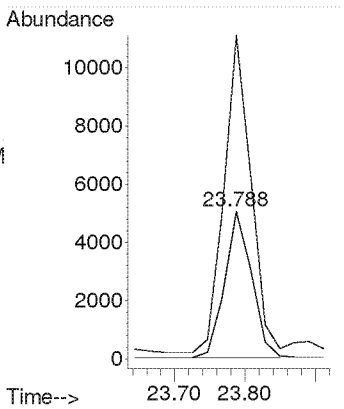
#34
1,2-Dichloropropane
Concen: 2.709 ppbv
RT: 23.788 min Scan# 2234
Delta R.T. 0.000 min
Lab File: L19BL019.D
Acq: 13 Feb 2019 1:52 am

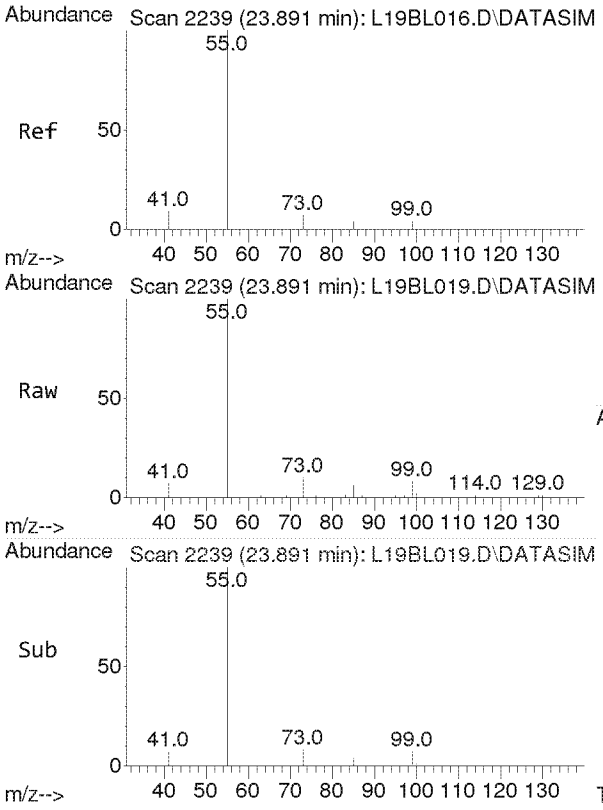
Tgt Ion: 63 Resp: 13339

Ion	Ratio	Lower	Upper
63	100		
41	215.2	175.9	263.9





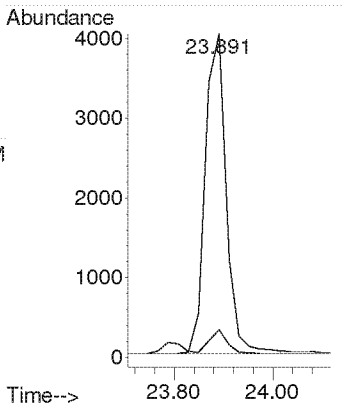


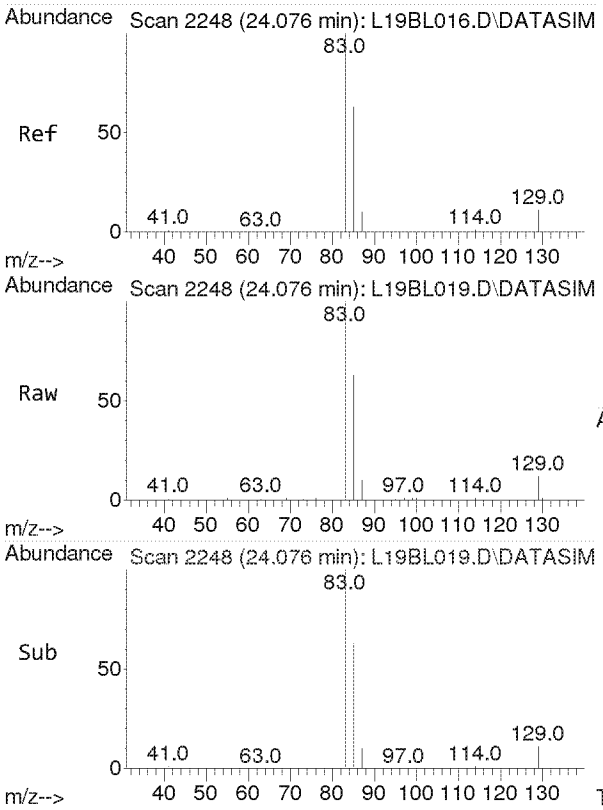


#35
Ethyl Acrylate
Concen: 2.809 ppbv
RT: 23.891 min Scan# 2239
Delta R.T. 0.000 min
Lab File: L19BL019.D
Acq: 13 Feb 2019 1:52 am

Tgt Ion: 55 Resp: 11750

Ion	Ratio	Lower	Upper
55	100		
99	6.3	5.0	7.6

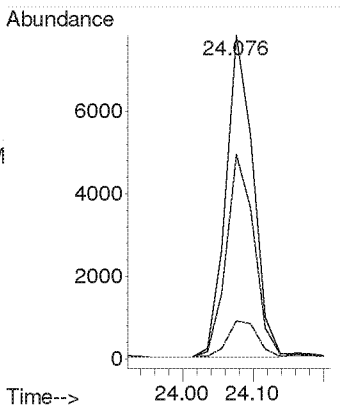


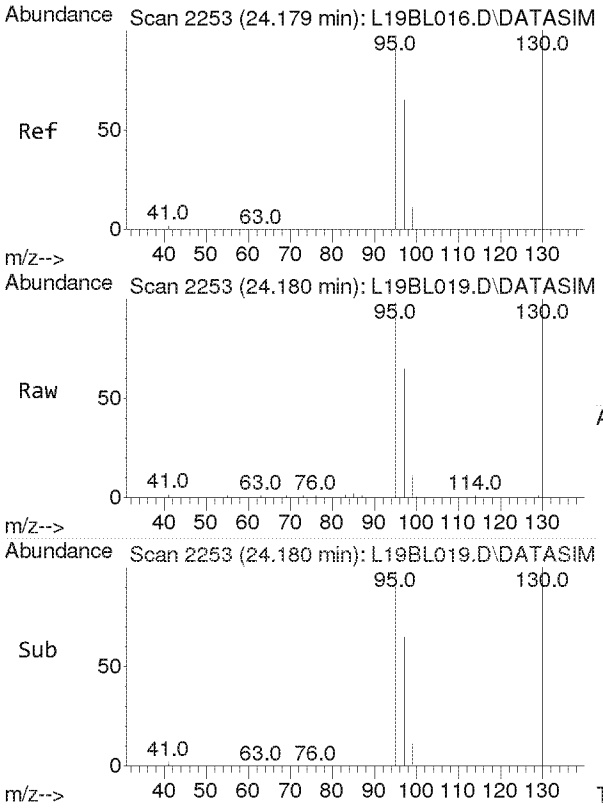


#36
Bromodichloromethane
Concen: 2.415 ppbv
RT: 24.076 min Scan# 2248
Delta R.T. 0.000 min
Lab File: L19BL019.D
Acq: 13 Feb 2019 1:52 am

Tgt Ion: 83 Resp: 21041

Ion	Ratio	Lower	Upper
83	100		
85	64.2	51.0	76.4
129	12.3	9.9	14.9

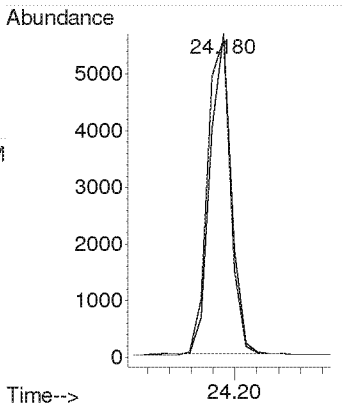


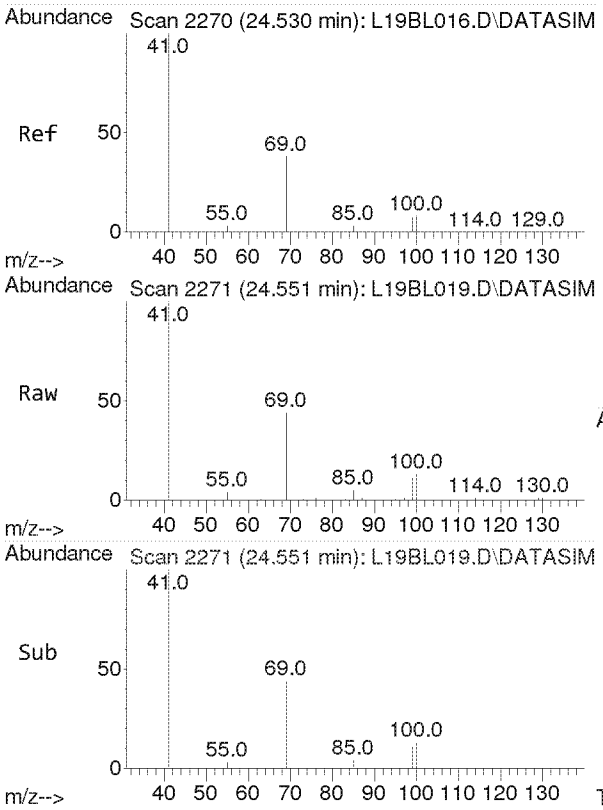


#37
Trichloroethylene
Concen: 2.468 ppbv
RT: 24.180 min Scan# 2253
Delta R.T. 0.000 min
Lab File: L19BL019.D
Acq: 13 Feb 2019 1:52 am

Tgt Ion:130 Resp: 15224

Ion	Ratio	Lower	Upper
130	100		
95	107.4	84.9	127.3

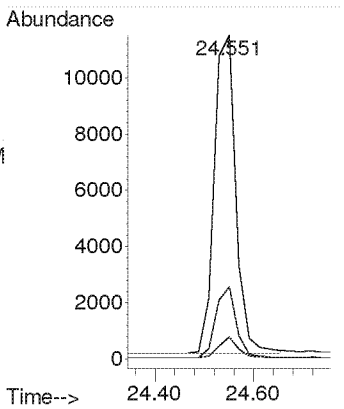


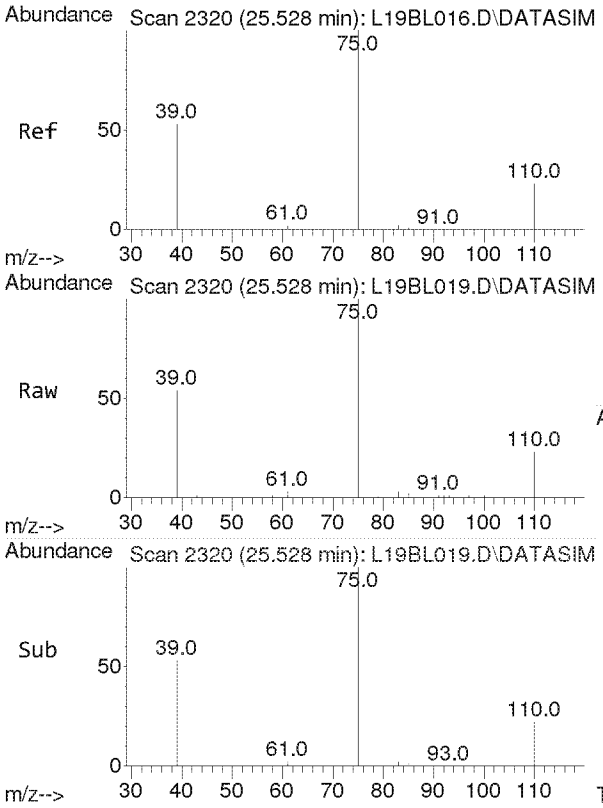


#38
Methyl Methacrylate
Concen: 2.749 ppbv
RT: 24.551 min Scan# 2271
Delta R.T. 0.021 min
Lab File: L19BL019.D
Acq: 13 Feb 2019 1:52 am

Tgt Ion: 41 Resp: 34515

Ion	Ratio	Lower	Upper
41	100		
69	20.9	16.8	25.2
100	5.6	4.5	6.7

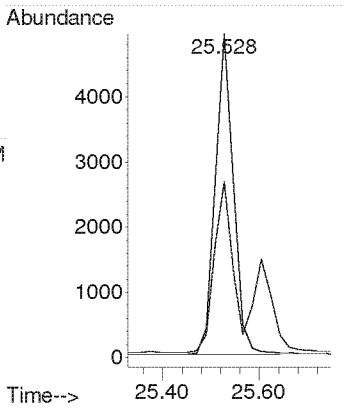


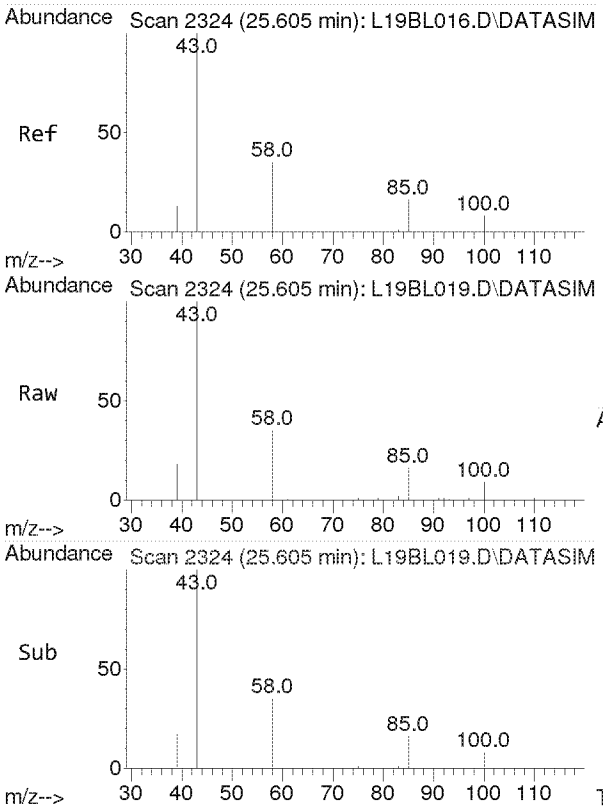


#39
cis-1,3-Dichloropropene
Concen: 2.993 ppbv
RT: 25.528 min Scan# 2320
Delta R.T. 0.000 min
Lab File: L19BL019.D
Acq: 13 Feb 2019 1:52 am

Tgt Ion: 75 Resp: 12795

Ion	Ratio	Lower	Upper
75	100		
39	54.0	43.4	65.0

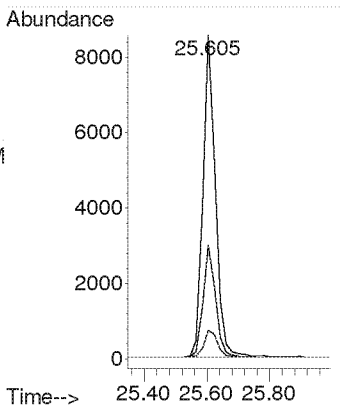


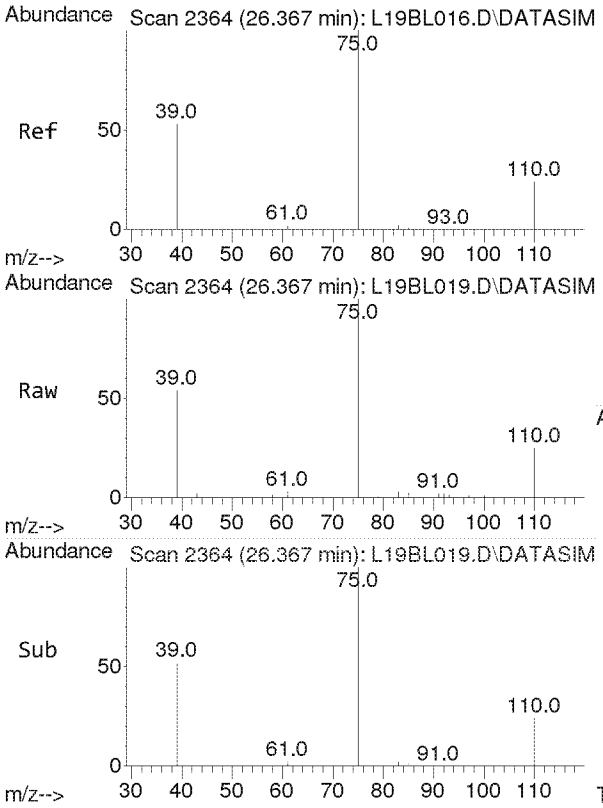


#40
Methyl Isobutyl Ketone
Concen: 2.559 ppbv
RT: 25.605 min Scan# 2324
Delta R.T. 0.000 min
Lab File: L19BL019.D
Acq: 13 Feb 2019 1:52 am

Tgt Ion: 43 Resp: 23616

Ion	Ratio	Lower	Upper
43	100		
58	34.7	28.0	42.0
100	8.8	7.0	10.4

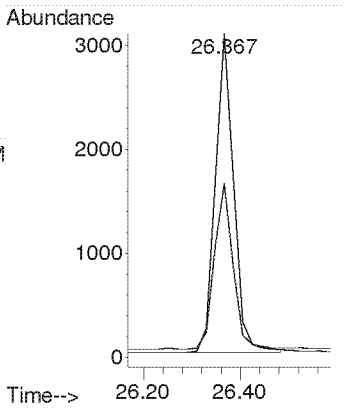


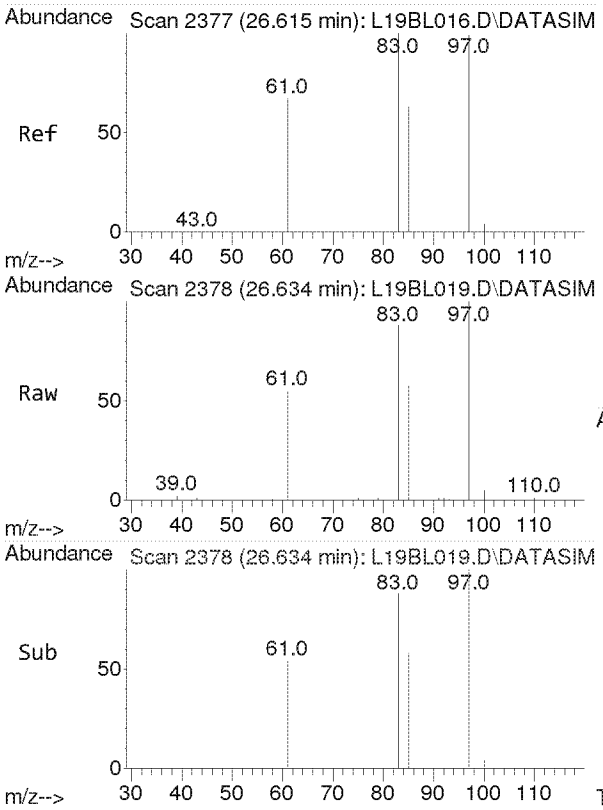


#41
trans-1,3-Dichloropropene
Concen: 2.803 ppbv
RT: 26.367 min Scan# 2364
Delta R.T. 0.000 min
Lab File: L19BL019.D
Acq: 13 Feb 2019 1:52 am

Tgt Ion: 75 Resp: 8029

Ion	Ratio	Lower	Upper
75	100		
39	52.7	42.9	64.3

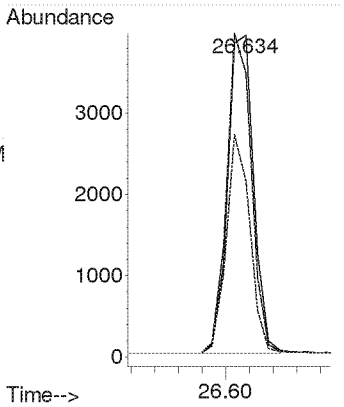


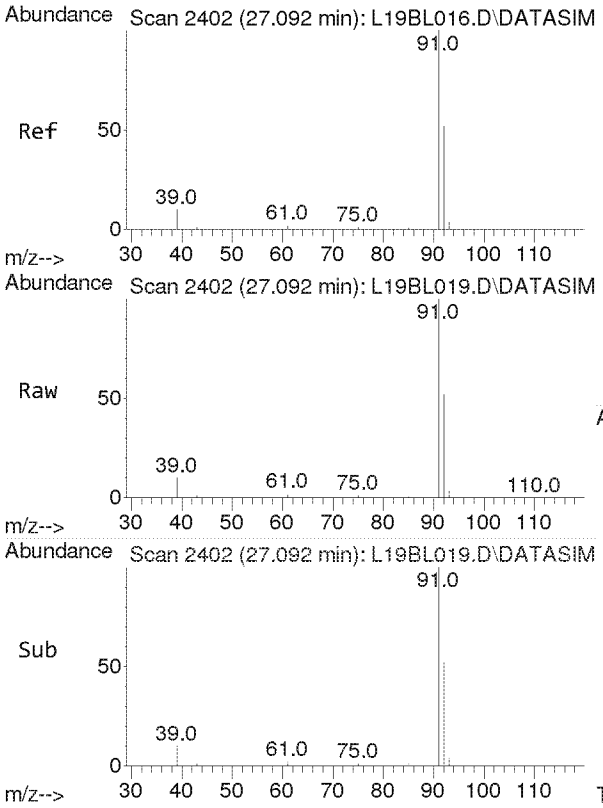


#42
1,1,2-Trichloroethane
Concen: 2.629 ppbv
RT: 26.634 min Scan# 2378
Delta R.T. 0.019 min
Lab File: L19BL019.D
Acq: 13 Feb 2019 1:52 am

Tgt Ion: 97 Resp: 11843

Ion	Ratio	Lower	Upper
97	100		
83	95.5	75.4	113.0
61	62.8	49.8	74.6

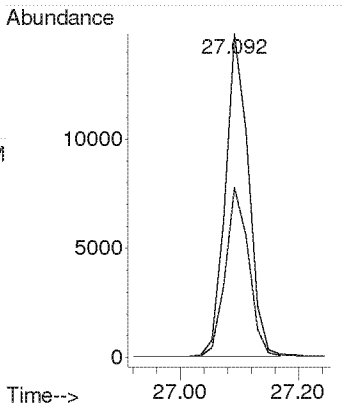


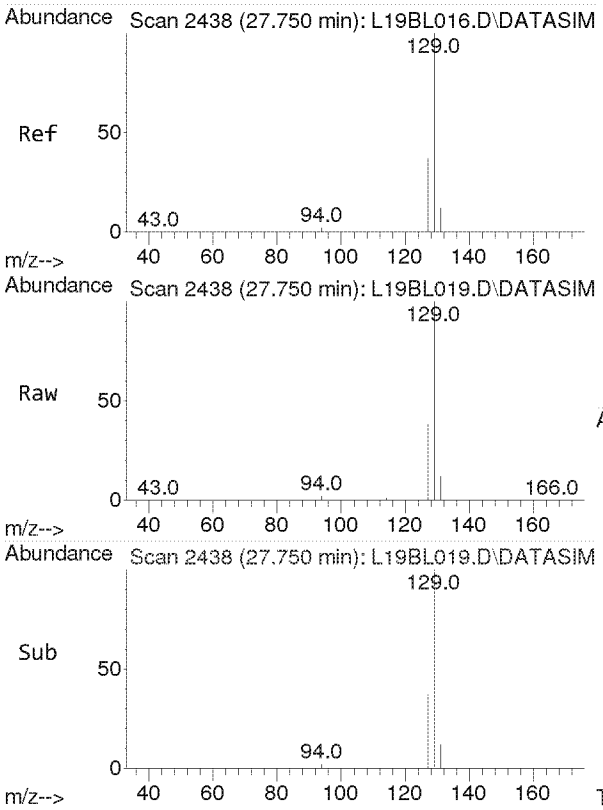


#44
Toluene
Concen: 2.713 ppbv
RT: 27.092 min Scan# 2402
Delta R.T. 0.000 min
Lab File: L19BL019.D
Acq: 13 Feb 2019 1:52 am

Tgt Ion: 91 Resp: 39791

Ion	Ratio	Lower	Upper
91	100		
92	52.6	42.0	63.0

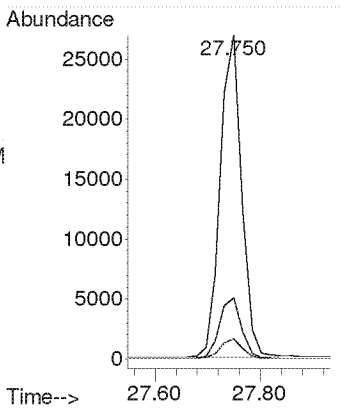


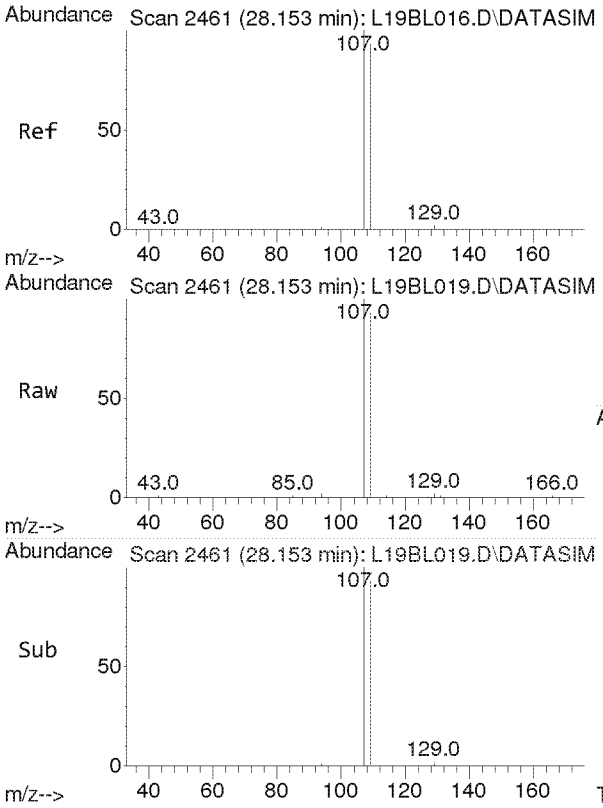


#45
Dibromochloromethane
Concen: 2.611 ppbv
RT: 27.750 min Scan# 2438
Delta R.T. 0.000 min
Lab File: L19BL019.D
Acq: 13 Feb 2019 1:52 am

Tgt Ion:129 Resp: 75190

Ion	Ratio	Lower	Upper
129	100		
127	19.2	15.4	23.2
131	6.0	4.8	7.2

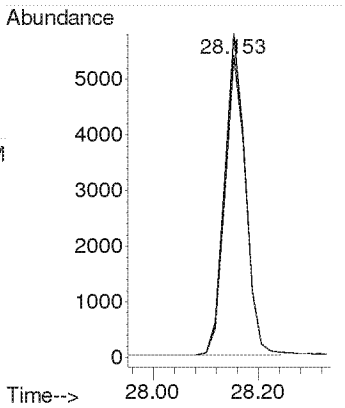


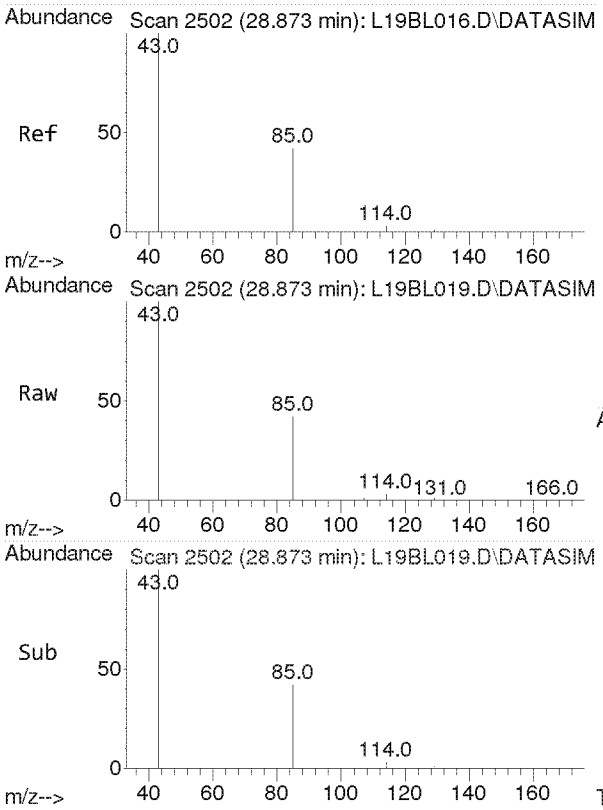


#46
1,2-Dibromoethane
Concen: 2.847 ppbv
RT: 28.153 min Scan# 2461
Delta R.T. 0.000 min
Lab File: L19BL019.D
Acq: 13 Feb 2019 1:52 am

Tgt Ion:107 Resp: 15656

Ion	Ratio	Lower	Upper
107	100		
109	94.2	75.4	113.0

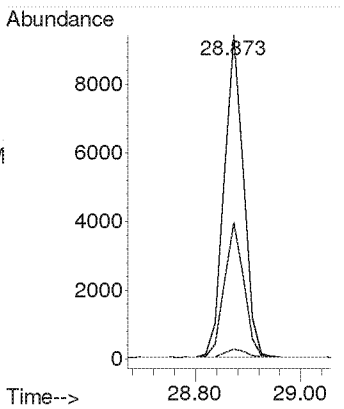


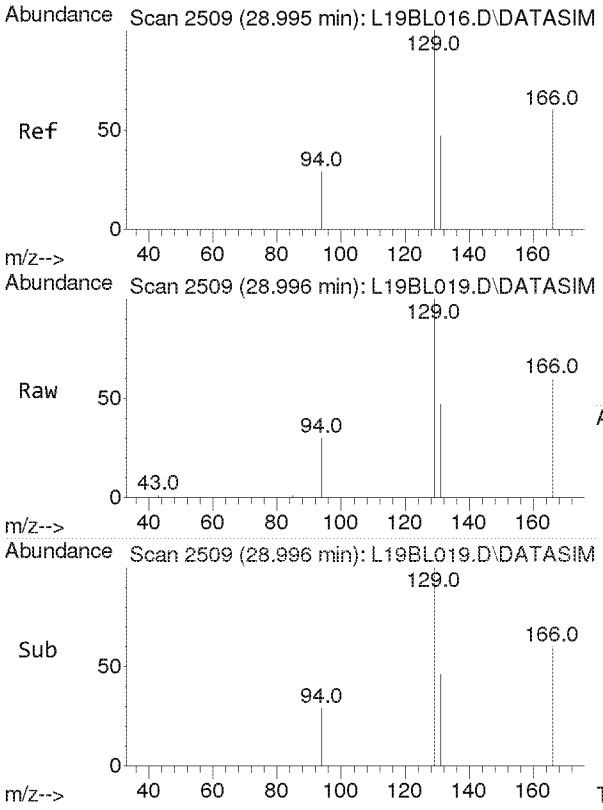


#47
n-Octane
Concen: 2.688 ppbv
RT: 28.873 min Scan# 2502
Delta R.T. 0.000 min
Lab File: L19BL019.D
Acq: 13 Feb 2019 1:52 am

Tgt Ion: 43 Resp: 23749

Ion	Ratio	Lower	Upper
43	100		
85	42.1	33.0	49.6
114	2.6	2.2	3.4

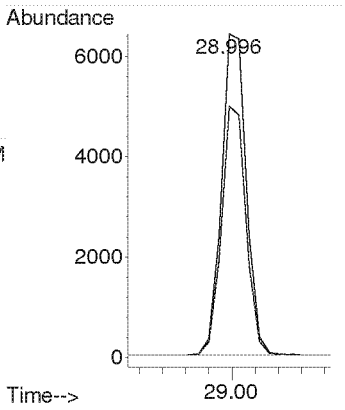


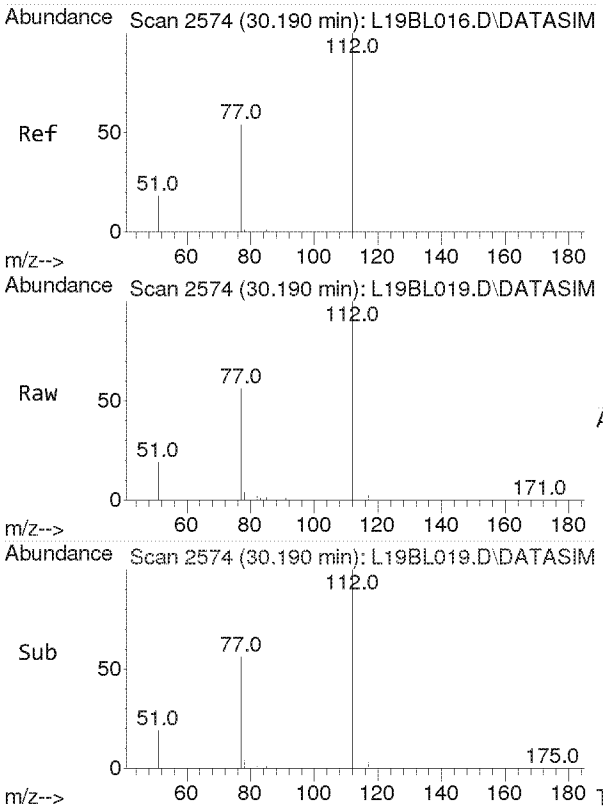


#48
Tetrachloroethylene
Concen: 2.712 ppbv
RT: 28.996 min Scan# 2509
Delta R.T. 0.000 min
Lab File: L19BL019.D
Acq: 13 Feb 2019 1:52 am

Tgt Ion:166 Resp: 19144

Ion	Ratio	Lower	Upper
166	100		
131	77.0	61.5	92.3

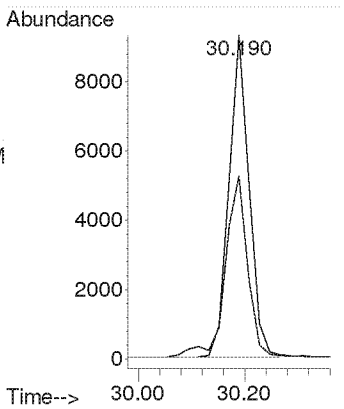


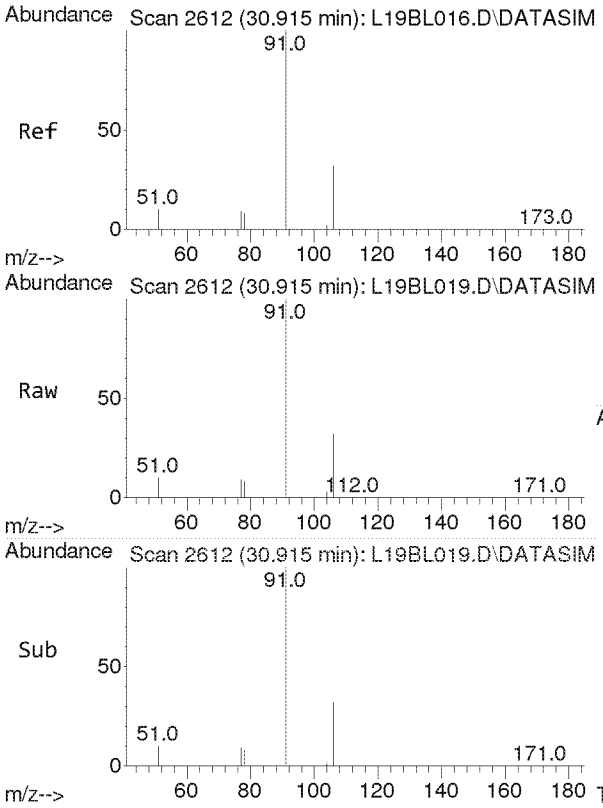


#49
Chlorobenzene
Concen: 2.637 ppbv
RT: 30.190 min Scan# 2574
Delta R.T. 0.000 min
Lab File: L19BL019.D
Acq: 13 Feb 2019 1:52 am

Tgt Ion:112 Resp: 24688

Ion	Ratio	Lower	Upper
112	100		
77	59.7	47.8	71.6

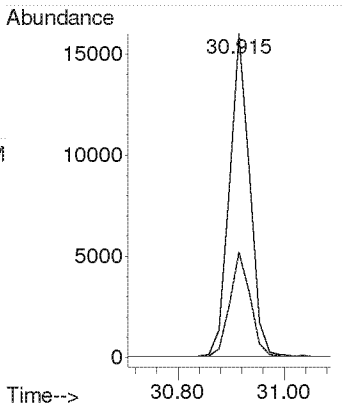


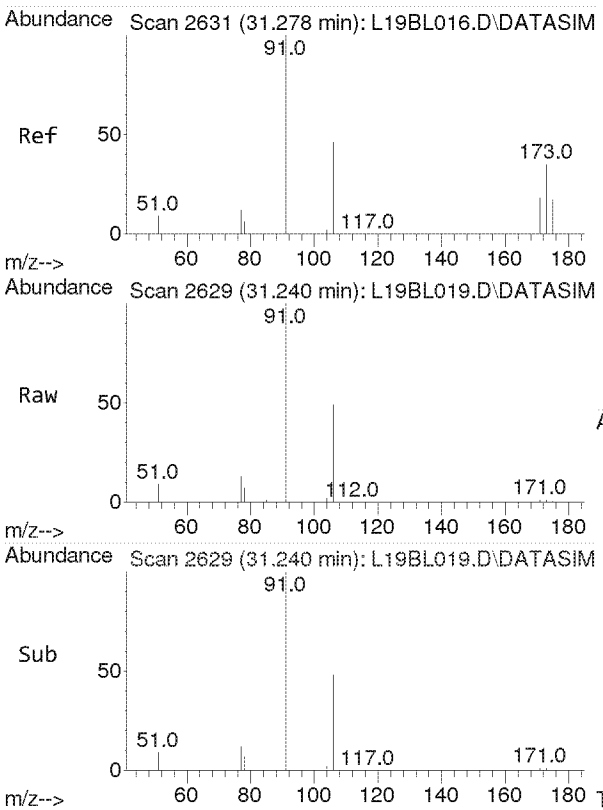


#50
Ethylbenzene
Concen: 2.739 ppbv
RT: 30.915 min Scan# 2612
Delta R.T. 0.000 min
Lab File: L19BL019.D
Acq: 13 Feb 2019 1:52 am

Tgt Ion: 91 Resp: 42243

Ion	Ratio	Lower	Upper
91	100		
106	32.4	26.0	39.0

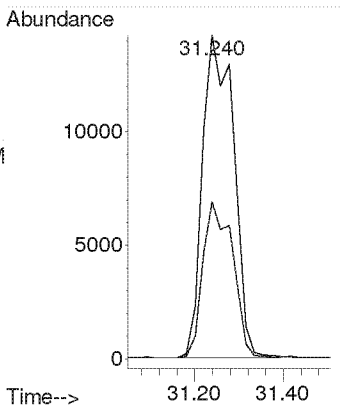


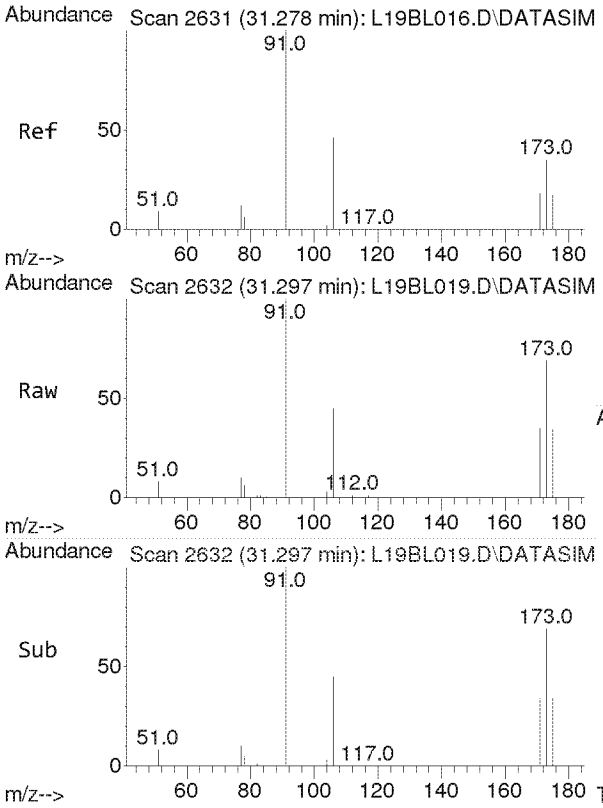


#51
m,p-Xylene
Concen: 5.294 ppbv
RT: 31.240 min Scan# 2629
Delta R.T. -0.038 min
Lab File: L19BL019.D
Acq: 13 Feb 2019 1:52 am

Tgt Ion: 91 Resp: 68859

Ion	Ratio	Lower	Upper
91	100		
106	46.3	37.3	55.9

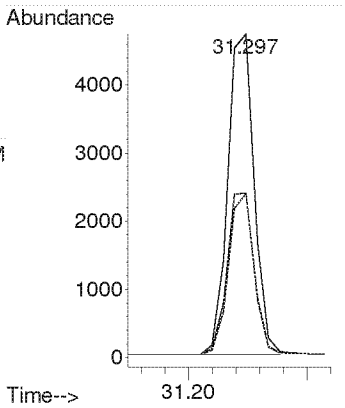


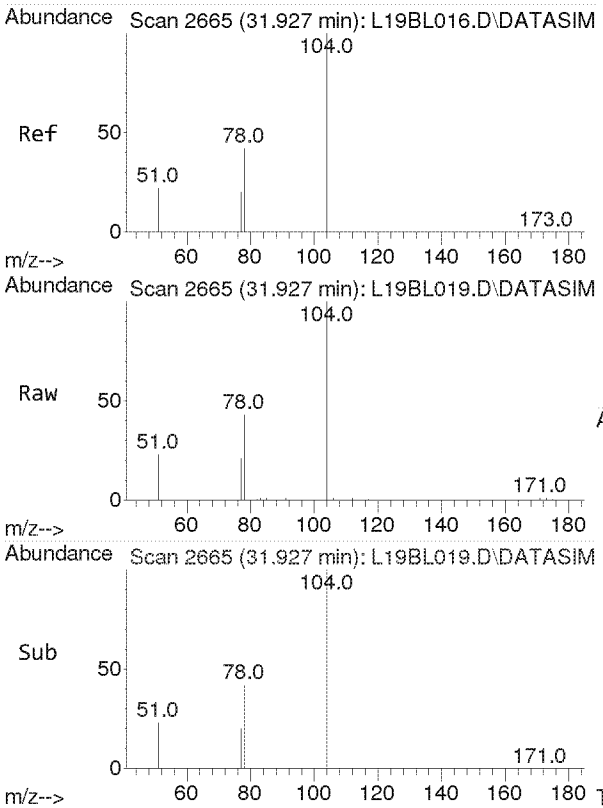


#52
Bromoform
Concen: 2.599 ppbv
RT: 31.297 min Scan# 2632
Delta R.T. 0.019 min
Lab File: L19BL019.D
Acq: 13 Feb 2019 1:52 am

Tgt Ion:173 Resp: 14471

Ion	Ratio	Lower	Upper
173	100		
171	51.3	41.0	61.6
175	48.9	39.1	58.7

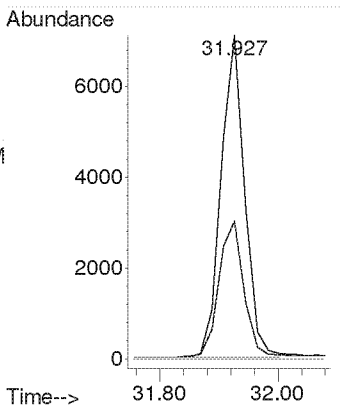


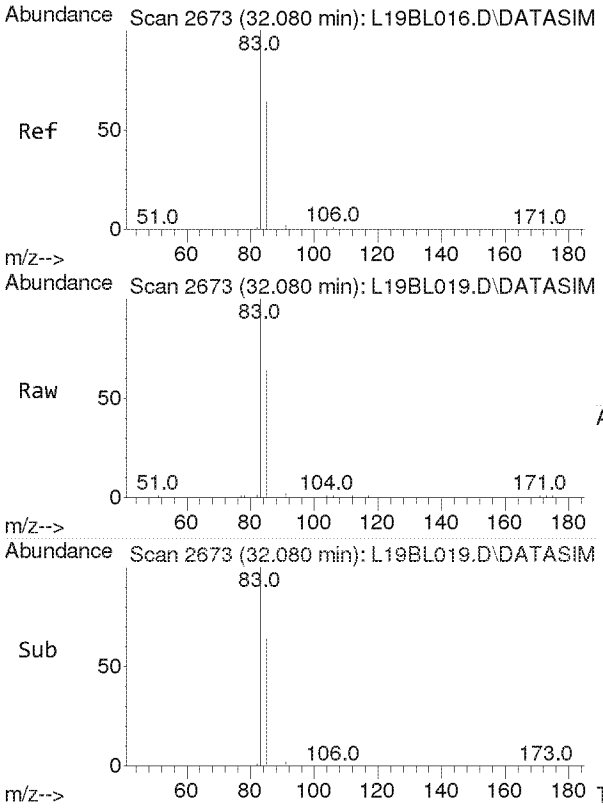


#53
Styrene
Concen: 2.637 ppbv
RT: 31.927 min Scan# 2665
Delta R.T. 0.000 min
Lab File: L19BL019.D
Acq: 13 Feb 2019 1:52 am

Tgt Ion:104 Resp: 19446

Ion	Ratio	Lower	Upper
104	100		
78	44.3	35.4	53.2
103	0.0	0.0	0.0

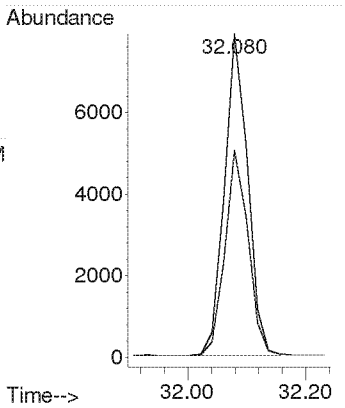


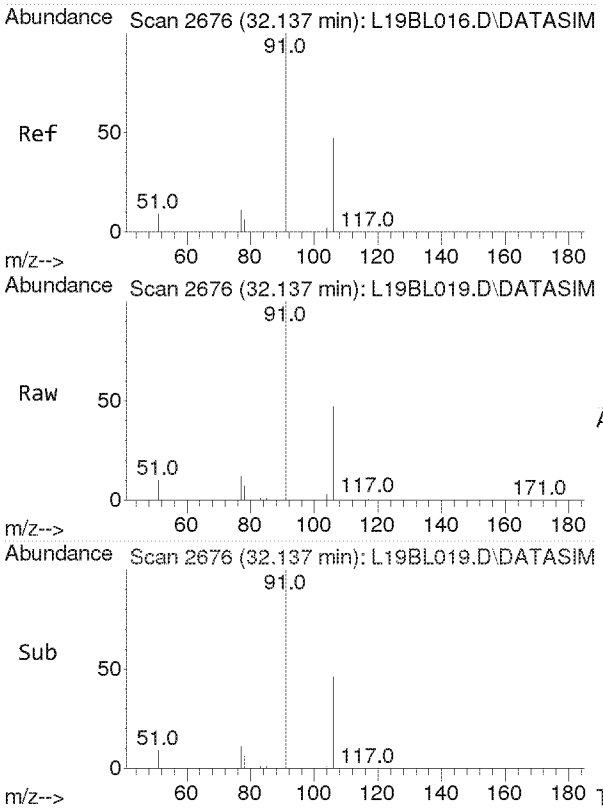


#54
1,1,2,2-Tetrachloroethane
Concen: 2.553 ppbv
RT: 32.080 min Scan# 2673
Delta R.T. 0.000 min
Lab File: L19BL019.D
Acq: 13 Feb 2019 1:52 am

Tgt Ion: 83 Resp: 21433

Ion	Ratio	Lower	Upper
83	100		
85	64.0	51.6	77.4

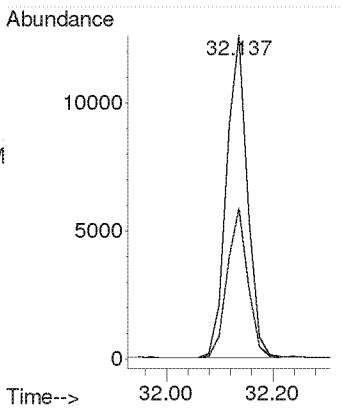


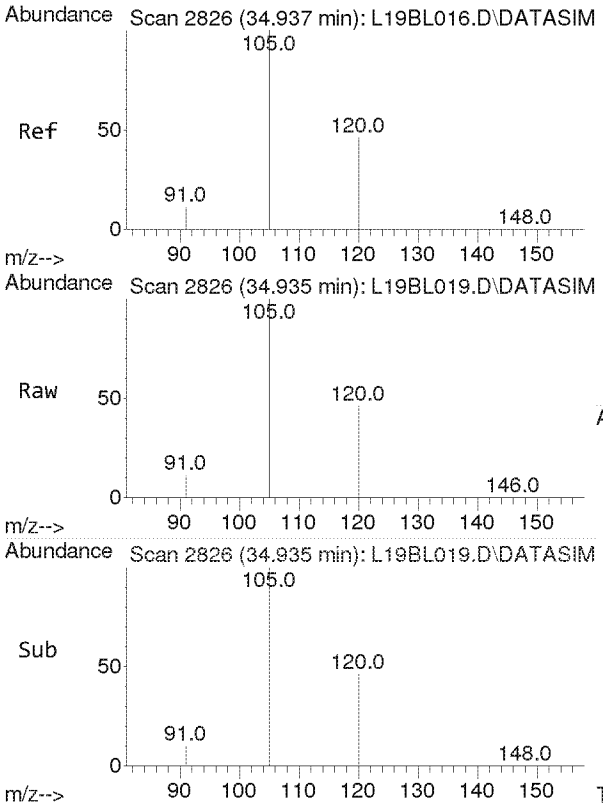


#55
o-Xylene
Concen: 2.686 ppbv
RT: 32.137 min Scan# 2676
Delta R.T. 0.000 min
Lab File: L19BL019.D
Acq: 13 Feb 2019 1:52 am

Tgt Ion: 91 Resp: 34477

Ion	Ratio	Lower	Upper
91	100		
106	45.8	36.6	55.0

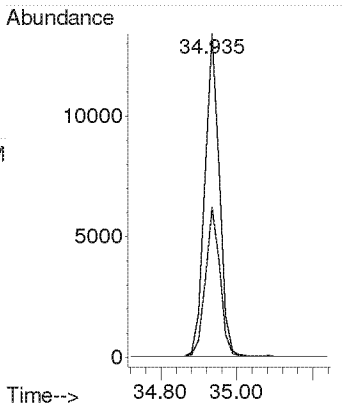


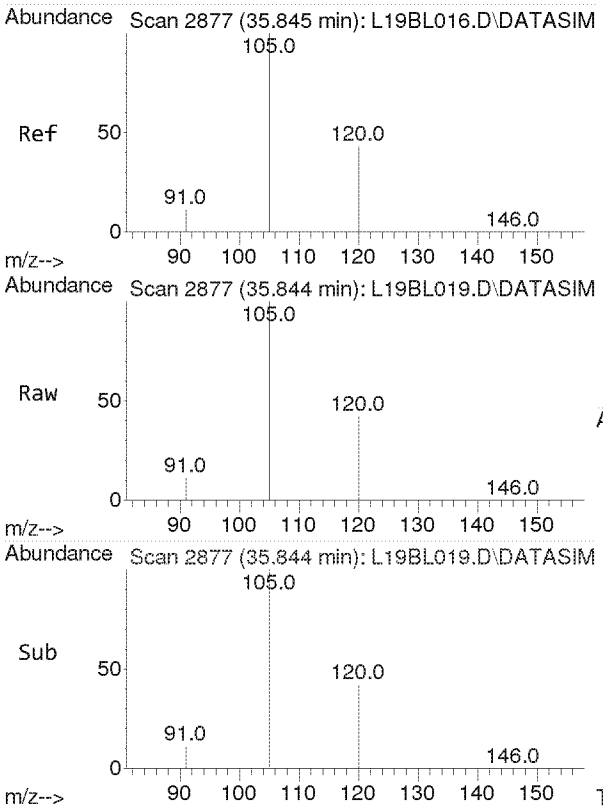


#56
1,3,5-Trimethylbenzene
Concen: 2.566 ppbv
RT: 34.935 min Scan# 2826
Delta R.T. -0.001 min
Lab File: L19BL019.D
Acq: 13 Feb 2019 1:52 am

Tgt Ion:105 Resp: 35387

Ion	Ratio	Lower	Upper
105	100		
120	46.0	36.8	55.2

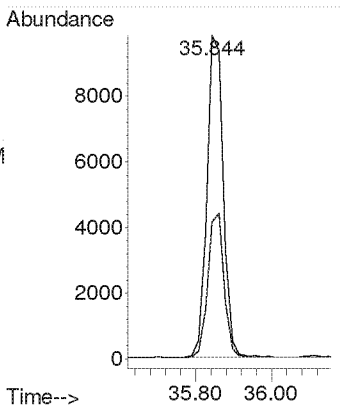


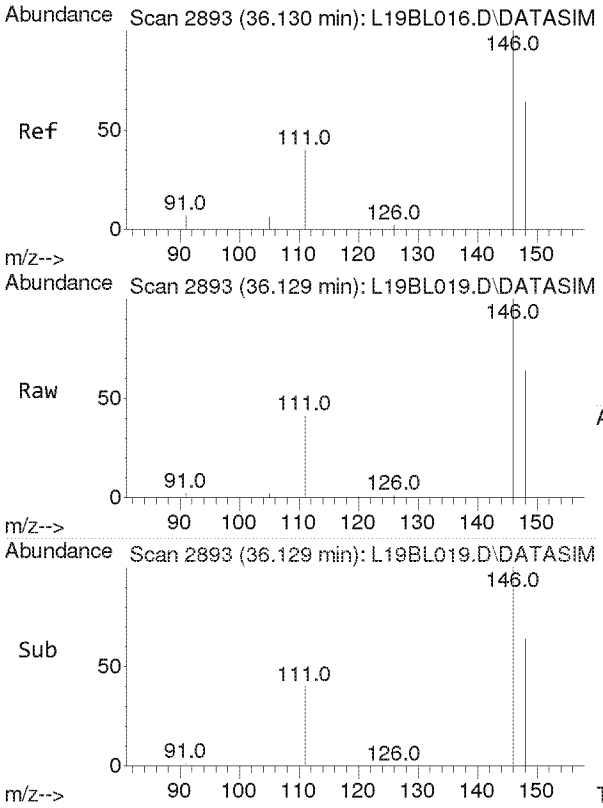


#57
1,2,4-Trimethylbenzene
Concen: 2.460 ppbv
RT: 35.844 min Scan# 2877
Delta R.T. -0.001 min
Lab File: L19BL019.D
Acq: 13 Feb 2019 1:52 am

Tgt Ion:105 Resp: 29335

Ion	Ratio	Lower	Upper
105	100		
120	44.4	35.2	52.8

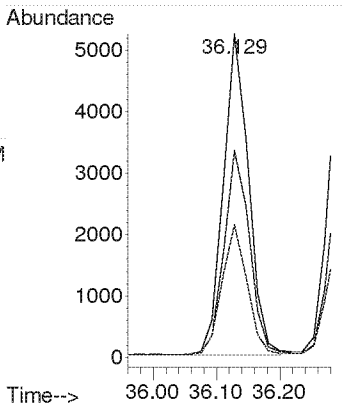


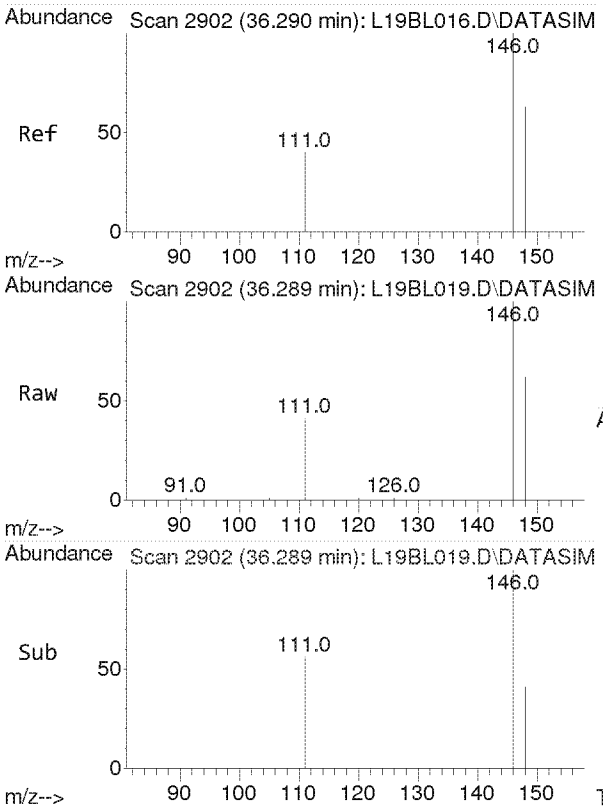


#58
m-Dichlorobenzene
Concen: 2.286 ppbv
RT: 36.129 min Scan# 2893
Delta R.T. -0.001 min
Lab File: L19BL019.D
Acq: 13 Feb 2019 1:52 am

Tgt Ion:146 Resp: 14336

Ion	Ratio	Lower	Upper
146	100		
148	64.2	51.3	76.9
111	40.5	32.1	48.1

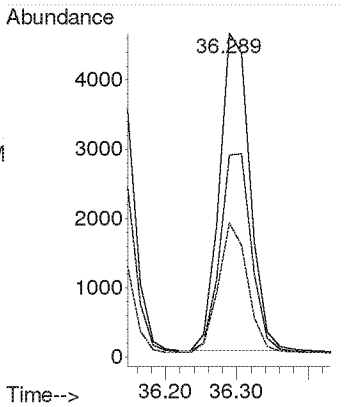


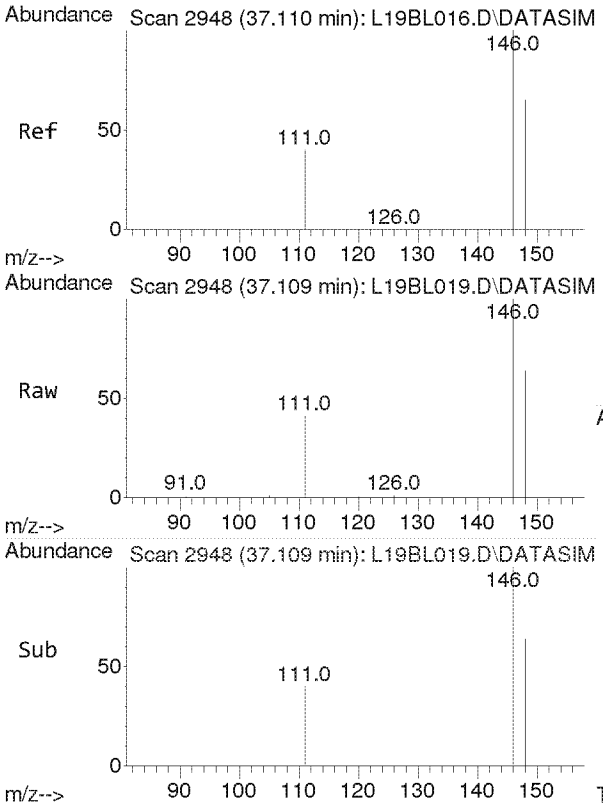


#59
p-Dichlorobenzene
Concen: 2.679 ppbv
RT: 36.289 min Scan# 2902
Delta R.T. -0.001 min
Lab File: L19BL019.D
Acq: 13 Feb 2019 1:52 am

Tgt Ion:146 Resp: 13687

Ion	Ratio	Lower	Upper
146	100		
148	64.3	51.4	77.2
111	39.1	31.0	46.4

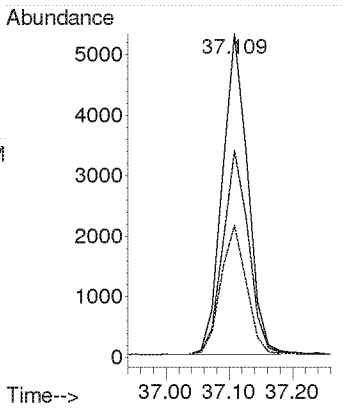


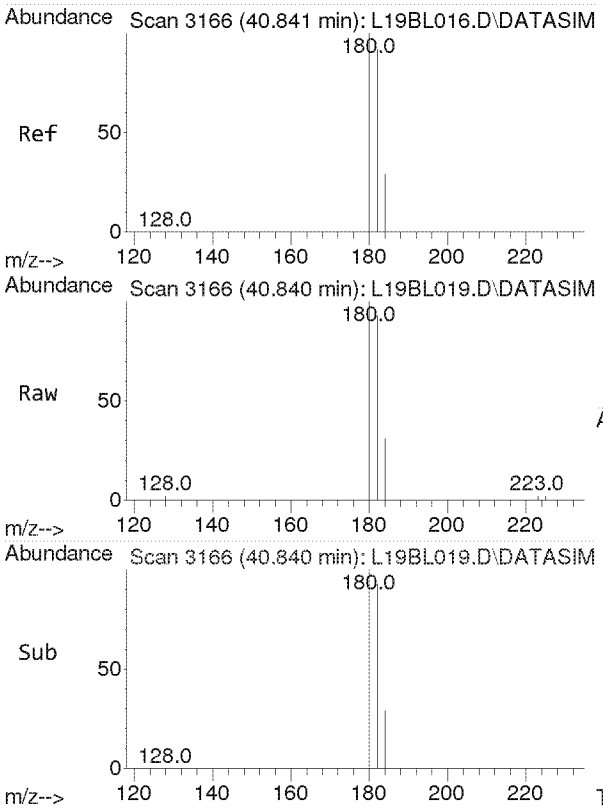


#60
o-Dichlorobenzene
Concen: 2.549 ppbv
RT: 37.109 min Scan# 2948
Delta R.T. -0.001 min
Lab File: L19BL019.D
Acq: 13 Feb 2019 1:52 am

Tgt Ion:146 Resp: 14621

Ion	Ratio	Lower	Upper
146	100		
148	64.3	51.2	76.8
111	40.9	32.6	49.0

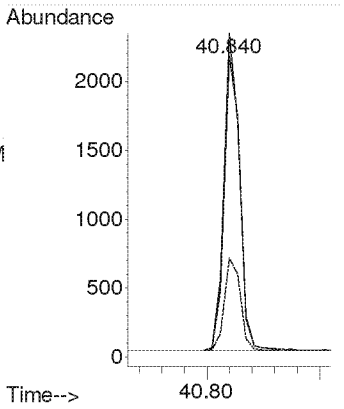


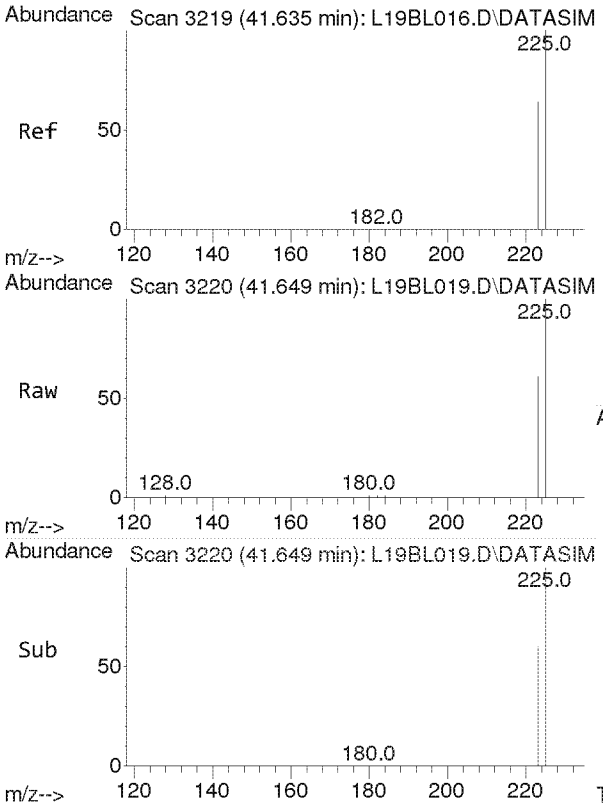


#61
1,2,4-Trichlorobenzene
Concen: 2.223 ppbv
RT: 40.840 min Scan# 3166
Delta R.T. -0.001 min
Lab File: L19BL019.D
Acq: 13 Feb 2019 1:52 am

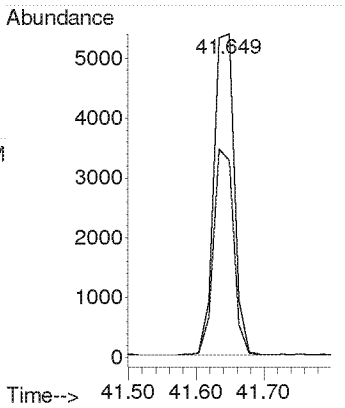
Tgt Ion:180 Resp: 4324

Ion	Ratio	Lower	Upper
180	100		
182	96.2	75.7	113.5
184	30.4	24.2	36.2





#62
Hexachloro-1,3-butadiene
Concen: 2.268 ppbv
RT: 41.649 min Scan# 3220
Delta R.T. 0.014 min
Lab File: L19BL019.D
Acq: 13 Feb 2019 1:52 am

Tgt Ion:225 Resp: 11267

Ion	Ratio	Lower	Upper
225	100		
223	62.6	49.9	74.9