Compounds other than ethylene oxide were not quantitated.

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

Sequence ID:	L19A0, 190101	**Instrument:**	MS1	**Batch:**	B9A3106
Cal Curve (Method):	9010007	**Analyst:**	MAB	**Date Analyzed:**	1-31-19
10% Review Sample IDs:	9012401-10	**Reviewer:**	DST	**Date:**	2/14/19
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	2-6-19	RMB 2/13/19	DST 2/14/19		
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)	2-6-19	RMB 2/13/19	DST 2/14/19		L19A$
ICV(LCS) Second source calibration verification check - immediately following ICAL	The response factor ≤ ±30% DEV from calibration curve average response factor	2-6-19	RMB 2/13/19	DST 2/14/19		L19A$
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	2-6-19	RMB 2/13/19	DST 2/14/19		2nd source
Method Blank Analysis – one per analysis sequence	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	2-6-19	RMB 2/13/19	DST 2/14/19		

Sample 9012401-10 was ND for ethylene oxide. DST 2/14/19

Compounds other than ethylene oxide were not quantitated.

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	✓ 2-6-19	RMB 2/13/19	AST 2/14/19		
Canister Cleaning Certification	<3xMDL or 0.2ppbv per VOC targeted compound, whichever is lower	✓ 2-6-19	RMB 2/13/19	AST 2/14/19		
Preconcentrator Leak Check	≤ ± 0.2 psi/min	✓ 2-6-19	RMB 2/13/19	AST 2/14/19		
Samples/Internal Standard Check	IS area within ±40% and IS RT within ±0.33 min. of most recent initial calibration	✓ 2-6-19	RMB 2/13/19	AST 2/14/19		missing IS check sheet, but passed. AST 2/14/19 fixed AST 2/22/19
COC Included and filled out	Lab receipt acknowledged, LIMS number added to COC	✓ 2-6-19	RMB 2/13/19	AST 2/14/19		
Manual Integration and peak deletion	Conforms with ERG-SOP-097 "Procedure for Manual Integration of Chromatographic Peaks"	✓ 2-6-19	RMB 2/13/19	AST 2/14/19		
Manual Calculation Check	One compound manual check must agree with software generated result		RMB 2/13/19	AST 2/14/19		CCV1 CCRF ratio $\frac{4866\ (4.77\ ppbv)}{42219\ (2.50\ ppbv)}$ = 0.220
Qualifiers Check	Check to make sure LIMS data flags are correct	✓ 2-6-19	RMB 2/13/19	AST 2/14/19		

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

L19A7202 ethylene oxide $\frac{4866 \times 4.77}{42219 \times 0.2810} = 1.96$ ppbv

Compounds other than ethylene oxide were not quantitated.

ANALYSIS SEQUENCE

1901101

Instrument: ERGMS#1

Calibnration ID: 9010007

Printed: 2/1/2019 10:08:21AM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
1901101-CCV1	QC		1		9A29011	8L13002		
B9A3106-BLK1	QC		2			8L13002		
9012401-01	TO-15 2019	A	3			8L13002	U.S. Environmental Protection Agency - OAQ	Ethylene Oxide only
9012401-02	TO-15 2019	A	4			8L13002	U.S. Environmental Protection Agency - OAQ	Ethylene Oxide only
9012401-03	TO-15 2019	A	5			8L13002	U.S. Environmental Protection Agency - OAQ	Ethylene Oxide only
9012401-04	TO-15 2019	A	6			8L13002	U.S. Environmental Protection Agency - OAQ	Ethylene Oxide only
9012401-05	TO-15 2019	A	7			8L13002	U.S. Environmental Protection Agency - OAQ	Ethylene Oxide only
B9A3106-DUP1	QC		8			8L13002		
B9A3106-DUP2	QC		9			8L13002		
9012401-06	TO-15 2019	A	10			8L13002	U.S. Environmental Protection Agency - OAQ	Ethylene Oxide only
9012401-07	TO-15 2019	A	11			8L13002	U.S. Environmental Protection Agency - OAQ	Ethylene Oxide only
9012401-08	TO-15 2019	A	12			8L13002	U.S. Environmental Protection Agency - OAQ	Ethylene Oxide only
9012401-09	TO-15 2019	A	13			8L13002	U.S. Environmental Protection Agency - OAQ	Ethylene Oxide only
9012401-10	TO-15 2019	A	14			8L13002	U.S. Environmental Protection Agency - OAQ	Ethylene Oxide only
9012816-03	TO-15 2019	A	15			8L13002	U.S. Environmental Protection Agency - OAQ	Ethylene Oxide only

Samples Loaded By 1-31-19 Date

Data Processed By 2-6-19 Date

Compounds other than ethylene oxide were not quantitated.

Sequence Name: C:\msdchem\1\sequence\L19A%.s
Comment: ANALYZE 1/31/19,9010007 exp 4/30/19, L19A%
Operator: MAH
Data Path: C:\MSDCHEM\1\DATA\L19A%\
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	L19A%001	BFB	BFB
2)	Sample	2	L19A%002	9010007	1901101-CCV1
3)	Sample	3	L19A%003	9010007	SNMOC-CCV1
4)	Sample	4	L19A%004	9010007	FLUSH
5)	Sample	5	L19A%005	9010007	B9A3106-BLK1
6)	Sample	6	L19A%006	9010007	B-H2-550
7)	Sample	7	L19A%007	9010007	T-H1-551
8)	Sample	8	L19A%008	9010007	T-H2-551
9)	Sample	9	L19A%009	9010007	9012401-01
10)	Sample	10	L19A%010	9010007	9012401-02
11)	Sample	11	L19A%011	9010007	9012401-03
12)	Sample	12	L19A%012	9010007	9012401-04
13)	Sample	13	L19A%013	9010007	9012401-05
14)	Sample	14	L19A%014	9010007	B9A3106-DUP1
15)	Sample	15	L19A%015	9010007	B9A3106-DUP2
16)	Sample	16	L19A%016	9010007	9012401-06
17)	Sample	17	L19A%017	9010007	9012401-07
18)	Sample	18	L19A%018	9010007	9012401-08
19)	Sample	19	L19A%019	9010007	9012401-09
20)	Sample	20	L19A%020	9010007	9012401-10
21)	Sample	21	L19A%021	9010007	9012816-03
22)	Sample	22	L19A%022	9010007	B-H1-552
23)	Sample	23	L19A%023	9010007	B-H1-*552
24)	Sample	100	OFF	FIDOFF	OFF

2-6-19

ED_002475_00000094-00004

Compounds other than ethylene oxide were not quantitated.

Sample	1	BFB	BFB	L19A%001	80 ML 8L13001	1
Sample	2	1901101-CCV1	9010007	L19A%002	80 ML 8L13001,9A29011	1
Sample	3	SNMOC-CCV1	9010007	L19A%003	80 ML 8L13001,9A30040	1
Sample	4	FLUSH	9010007	L19A%004	80 ML 8L13001	1
Sample	5	B9A3106-BLK1	9010007	L19A%005	80 ML 8L13001	1
Sample	6	B-H2-550	9010007	L19A%006	CANISTER 18883 BATCH BLANK	1
Sample	7	T-H1-551	9010007	L19A%007	CANISTER SAT160 BATCH BLANK	1
Sample	8	T-H2-551	9010007	L19A%008	CANISTER SAT097 BATCH BLANK	1
Sample	9	9012401-01	9010007	L19A%009	GOWER 1/23/19	1
Sample	10	9012401-02	9010007	L19A%010	GOWER ES 1/23/19	1
Sample	11	9012401-03	9010007	L19A%011	WILLOW POND PARK 1/23/19	1
Sample	12	9012401-04	9010007	L19A%012	EPA WB WAREHOUSE C1 1/23/19	1
Sample	13	9012401-05	9010007	L19A%013	EPA WB WAREHOUSE C2 1/23/19	1
Sample	14	B9A3106-DUP1	9010007	L19A%014	EPA WB WAREHOUSE R1 1/23/19	1
Sample	15	B9A3106-DUP2	9010007	L19A%015	EPA WB WAREHOUSE R2 1/23/19	1
Sample	16	9012401-06	9010007	L19A%016	WB VILLAGE HALL 1/23/19	1
Sample	17	9012401-07	9010007	L19A%017	HINSDALE HS 1/23/19	1
Sample	18	9012401-08	9010007	L19A%018	WATER TOWER 1/23/19	1
Sample	19	9012401-09	9010007	L19A%019	WEST NEIGHBORHOOD 1/23/19	1
Sample	20	9012401-10	9010007	L19A%020	TRIP BLANK 1/23/19	1
Sample	21	9012816-03	9010007	L19A%021	WEST NEIGHBORHOOD 1/25/19	1
Sample	22	B-H1-552	9010007	L19A%022	CANISTER SAT061 BATCH BLANK	1
Sample	23	B-H1-*552	9010007	L19A%023	CANISTER A21034 BATCH BLANK	1
Sample	100	OFF	FIDOFF	OFF	OFF	1

2-6-19

Compounds other than ethylene oxide were not quantitated.

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

Sequence Name: C:\Smart\L19A%.SEQ
Date: 02-01-2019
Time: 10:09:00
Int. Std Volume: 80 cc

Sample Name	Inlet #	Auto	Samp Pos	Cal Vol.	Std Vol.	Method	Time
BFB	1	1	0	0		C:\Smart\BFB.MPT	12:00
1901101-CCV1	2	1	250		0	C:\Smart\TO-15A_MS1.MPT	12:00
SNMOC-CCV1	1	1	250		0	C:\Smart\TO-15A_MS1.MPT	12:00
FLUSH	1	2	250		0	C:\Smart\TO-15A_MS1.MPT	12:00
B9A3106-BLK1	1	2	250		0	C:\Smart\TO-15A_MS1.MPT	12:00
B-H2-550	1	3	250		0	C:\Smart\TO-15A_MS1.MPT	12:00
T-H1-551	1	4	250		0	C:\Smart\TO-15A_MS1.MPT	12:00
T-H2-551	1	5	250		0	C:\Smart\TO-15A_MS1.MPT	12:00
9012401-01	1	6	250		0	C:\Smart\TO-15A_MS1.MPT	12:00
9012401-02	1	7	250		0	C:\Smart\TO-15A_MS1.MPT	12:00
9012401-03	1	8	250		0	C:\Smart\TO-15A_MS1.MPT	12:00
9012401-04	1	9	250		0	C:\Smart\TO-15A_MS1.MPT	12:00
9012401-05	1	10	250		0	C:\Smart\TO-15A_MS1.MPT	12:00
B9A3106-DUP1	1	9	250		0	C:\Smart\TO-15A_MS1.MPT	12:00
B9A3106-DUP2	1	10	250		0	C:\Smart\TO-15A_MS1.MPT	12:00
9012401-06	1	11	250		0	C:\Smart\TO-15A_MS1.MPT	12:00
9012401-07	1	12	250		0	C:\Smart\TO-15A_MS1.MPT	12:00
9012401-08	1	13	250		0	C:\Smart\TO-15A_MS1.MPT	12:00
9012401-09	1	14	250		0	C:\Smart\TO-15A_MS1.MPT	12:00
9012401-10	1	15	250		0	C:\Smart\TO-15A_MS1.MPT	12:00
9012816-03	1	16	250		0	C:\Smart\TO-15A_MS1.MPT	12:00

Compounds other than ethylene oxide were not quantitated.

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

2/1/2019 9:59:22 AM
Leak Check for C:\Smart\L19A%.SEQ
Report File: C:\Smart\L19A%.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	6	---	---	1.2	1.2	0.00
1	7	---	---	1.2	1.2	0.00
1	8	---	---	1.1	1.2	0.10
1	9	---	---	1.2	1.2	0.00
1	10	---	---	1.1	1.2	0.10
1	11	---	---	1.2	1.2	0.00
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
1	16	---	---	1.2	1.3	0.10

2-6-19

Compounds other than ethylene oxide were not quantitated.

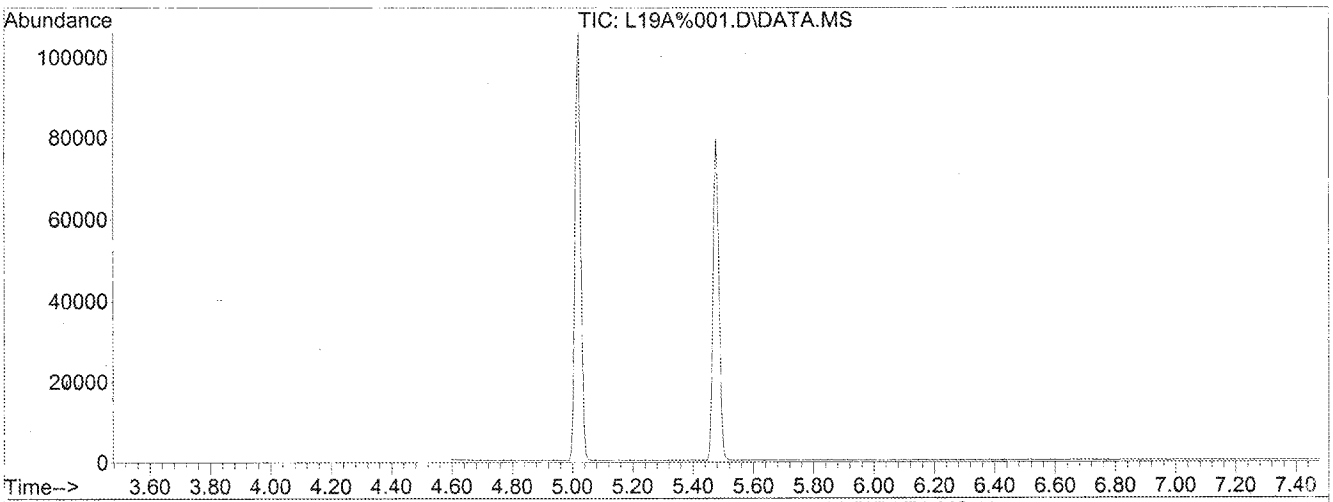
BFB

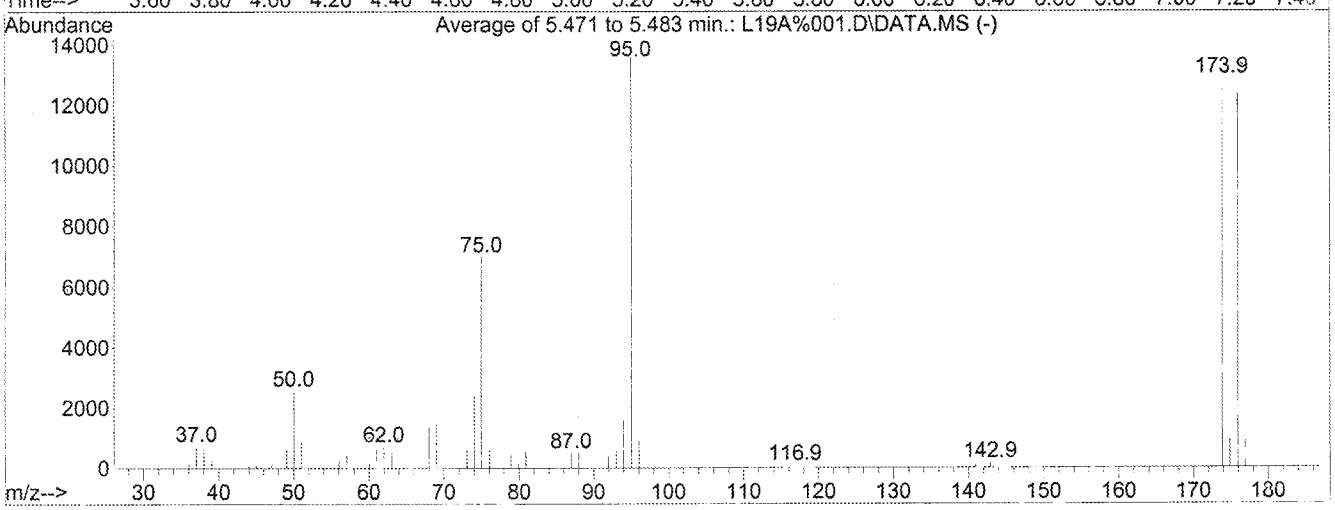
Data Path : C:\msdchem\1\DATA\L19A%\
Data File : L19A%001.D
Acq On : 31 Jan 2019 7:47 am
Operator : MAH
Sample : BFB
Misc : 80 ML 8L13001
ALS Vial : 1 Sample Multiplier: 1

Integration File: RTEINT.P

✓ 2-6-19

Method : C:\msdchem\1\METHODS\9010007.M
Title : TO-15 by Selective Ion Analysis
Last Update : Thu Jan 31 06:35:20 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	18.8	2558	PASS
75	95	30	66	51.4	6979	PASS
95	95	100	100	100.0	13580	PASS
96	95	5	9	6.6	895	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	94.6	12846	PASS
175	174	4	9	7.2	924	PASS
176	174	93	101	96.0	12334	PASS
177	176	5	9	7.1	871	PASS

Compounds other than ethylene oxide were not quantitated.

GC/MS QA-QC Check Report

Tune File : C:\msdchem\1\DATA\L19A%\L19A%001.D
Tune Time : 31 Jan 2019 7:47 am

9010007 IS Avg Area		38847	92245	67064
	+40%	54386	129143	93890
	-40%	23308	55347	40239

File	Sample	Internal Standard Responses		
L19A%002.D	1901101-CCV1	42219	104515	74387
L19A%005.D	B9A3106-BLK1	39780	98502	68242
L19A%006.D	B-H2-550	38152	91188	63731
L19A%007.D	T-H1-551	37658	91876	64644
L19A%008.D	T-H2-551	37782	91152	64272
L19A%009.D	9012401-01	35499	85087	61928
L19A%010.D	9012401-02	37179	91454	63788
L19A%011.D	9012401-03	36323	88849	62430
L19A%012.D	9012401-04	35837	85906	61766
L19A%013.D	9012401-05	35689	86644	62281
L19A%014.D	B9A3106-DU	35926	88451	61598
L19A%015.D	B9A3106-DU	34531	84217	59813
L19A%016.D	9012401-06	36090	88669	62078
L19A%017.D	9012401-07	34605	85106	59826
L19A%018.D	9012401-08	34076	82487	57966
L19A%019.D	9012401-09	33079	78010	57523
L19A%020.D	9012401-10	36055	87600	61129
L19A%021.D	9012816-03	35135	84852	57574
L19A%022.D	B-H1-552	32934	80681	59913
L19A%023.D	B-H1-552	35858	87872	61672

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

Created: Fri Feb 22 13:44:45 2019 MS1

2-22-19

Compounds other than ethylene oxide were not quantitated.

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
	2/1/2019 7:46	L19A%023.D	35858	19.99	87872	23.15	61672	30.09
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	38847		19.99		92245		23.15		67064		30.1	
	1/31/2019 8:34	L19A%002.D	42219	109	19.99	0	104515	113	23.13	-0.02	74387	111	30.10	0
	1/31/2019 12:29	L19A%005.D	39780	102	19.99	0	98502	107	23.13	-0.02	68242	102	30.09	-0.01
	1/31/2019 13:31	L19A%006.D	38152	98	19.97	-0.02	91188	99	23.13	-0.02	63731	95	30.08	-0.02
	1/31/2019 14:33	L19A%007.D	37658	97	19.99	0	91876	100	23.13	-0.02	64644	96	30.10	0
	1/31/2019 15:35	L19A%008.D	37782	97	19.99	0	91152	99	23.15	0	64272	96	30.10	0
	1/31/2019 16:37	L19A%009.D	35499	91	19.99	0	85087	92	23.15	0	61928	92	30.09	-0.01
	1/31/2019 17:36	L19A%010.D	37179	96	19.99	0	91454	99	23.15	0	63788	95	30.10	0
	1/31/2019 18:36	L19A%011.D	36323	94	19.99	0	88849	96	23.15	0	62430	93	30.09	-0.01
	1/31/2019 19:38	L19A%012.D	35837	92	19.99	0	85906	93	23.13	-0.02	61766	92	30.10	0
	1/31/2019 20:38	L19A%013.D	35689	92	19.99	0	86644	94	23.15	0	62281	93	30.09	-0.01
	1/31/2019 21:38	L19A%014.D	35926	92	19.99	0	88451	96	23.15	0	61598	92	30.09	-0.01
	1/31/2019 22:38	L19A%015.D	34531	89	19.99	0	84217	91	23.15	0	59813	89	30.09	-0.01
	1/31/2019 23:38	L19A%016.D	36090	93	19.99	0	88669	96	23.15	0	62078	93	30.10	0
	2/1/2019 12:38	L19A%017.D	34605	89	19.99	0	85106	92	23.15	0	59826	89	30.10	0
	2/1/2019 1:38	L19A%018.D	34076	88	19.97	-0.02	82487	89	23.13	-0.02	57966	86	30.10	0
	2/1/2019 2:40	L19A%019.D	33079	85	19.99	0	78010	85	23.15	0	57523	86	30.10	0
	2/1/2019 3:40	L19A%020.D	36055	93	19.99	0	87600	95	23.15	0	61129	91	30.09	-0.01
	2/1/2019 4:40	L19A%021.D	35135	90	19.99	0	84852	92	23.15	0	57574	86	30.09	-0.01
	2/1/2019 6:52	L19A%022.D	32934	85	19.99	0	80681	87	23.15	0	59913	89	30.10	0
	2/1/2019 7:46	L19A%023.D	35858	92	19.99	0	87872	95	23.15	0	61672	92	30.09	-0.01

2-22-19

Compounds other than ethylene oxide were not quantitated.

Analytical Standard Record
Eastern Research Group
9A29011

Description:	2.50 ppbv ICV/CCV	Expires:	02/28/19
Standard Type:	Calibration Stan	Prepared:	01/29/19
Solvent:	Scientific Air	Prepared By:	Mitch Howell
Final Volume (mls):	6000	Department:	Air Toxics
Vials:	1	Last Edit:	01/29/19 08:00 by MH

canister# 3218

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 2-6-19 Date

Compounds other than ethylene oxide were not quantitated.

Analytical Standard Record
Eastern Research Group
9A29011

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 St	11/12/18	** Vendor **	11/12/19	11/20/18 12:14 by MH	15

r 2-6-19

Reviewed By Date

Compounds other than ethylene oxide were not quantitated.

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\L19A%\
Data File : L19A%002.D
Acq On : 31 Jan 2019 8:34 am
Operator : MAH
Sample : 1901101-CCV1
Misc : 80 ML 8L13001,9A29011
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Feb 01 11:22:32 2019
Quant Method : C:\msdchem\1\METHODS\9010007.M
Quant Title : TO-15 by Selective Ion Analysis
QLast Update : Thu Jan 31 06:35:20 2019
Response via : Initial Calibration

2-6-19

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	0.404	0.381	5.7	100	0.00
3	CT	Propylene	0.489	0.499	-2.0	100	0.00
4	CT	Dichlorodifluoromethane	2.195	2.110	3.9	100	0.00
5	CT	Chloromethane	0.576	0.536	6.9	100	0.00
6	CT	Dichlorotetrafluoroethane	1.914	2.035	-6.3	100	0.00
7	CT	Vinyl Chloride	0.639	0.610	4.5	100	0.00
8	CT	1,3-Butadiene	0.448	0.428	4.5	100	0.00
9	CT	Ethylene oxide	0.281	0.220	21.7	100	0.00
10	CT	Bromomethane	0.598	0.565	5.5	100	0.00
11	CT	Chloroethane	0.258	0.239	7.4	100	0.00
12	CT	Acetonitrile	0.410	0.359	12.4	100	0.00
13	CT	Acrolein	0.201	0.178	11.4	100	0.00
14	CT	Trichlorofluoromethane	1.881	1.645	12.5	100	0.00
15	CT	Acrylonitrile	0.312	0.289	7.4	100	0.00
16	CT	1,1-Dichloroethene	0.833	0.854	-2.5	100	0.00
17	CT	Methylene Chloride	0.545	0.530	2.8	100	0.00
18	CT	Carbon Disulfide	1.605	1.535	4.4	100	0.00
19	CT	Trichlorotrifluoroethane	1.235	1.231	0.3	100	0.00
20	CT	trans-1,2-Dichloroethylene	0.444	0.431	2.9	100	0.00
21	CT	1,1-Dichloroethane	0.729	0.742	-1.8	100	0.00
22	CT	Methyl tert-Butyl Ether	1.206	1.123	6.9	100	0.00
23	CT	Chloroprene	0.646	0.668	-3.4	100	0.00
24	CT	cis-1,2-Dichloroethylene	0.603	0.589	2.3	100	0.00
25	CT	Bromochloromethane	0.311	0.294	5.5	100	0.00
26	CT	Chloroform	0.855	0.892	-4.3	100	0.00
27	CT	Ethyl tert-Butyl Ether	1.137	1.076	5.4	100	0.00
28	CT	1,2-Dichloroethane	0.557	0.565	-1.4	100	0.00
29	ISS	IS-1,4-Difluorobenzene	1.000	1.000	0.0	100	0.00
30	CT	1,1,1-Trichloroethane	0.338	0.302	10.7	100	0.00
31	CT	Benzene	0.505	0.527	-4.4	100	0.00
32	CT	Carbon Tetrachloride	0.325	0.337	-3.7	100	0.00
33	CT	tert-Amyl Methyl Ether	0.387	0.359	7.2	100	0.00
34	CT	1,2-Dichloropropane	0.186	0.185	0.5	100	0.00
35	CT	Ethyl Acrylate	0.099	0.092	7.1	100	0.00
36	CT	Bromodichloromethane	0.326	0.283	13.2	100	0.00
37	CT	Trichloroethylene	0.242	0.220	9.1	100	0.00
38	CT	Methyl Methacrylate	0.327	0.298	8.9	100	0.00
39	CT	cis-1,3-Dichloropropene	0.141	0.154	-9.2	100	0.00
40	CT	Methyl Isobutyl Ketone	0.316	0.288	8.9	100	0.00
41	CT	trans-1,3-Dichloropropene	0.092	0.091	1.1	100	0.00
42	CT	1,1,2-Trichloroethane	0.172	0.170	1.2	100	0.00
43	ISS	IS-Chlorobenzene-d5	1.000	1.000	0.0	100	0.00
44	CT	Toluene	0.764	0.792	-3.7	100	0.00
45	CT	Dibromochloromethane	1.260	1.205	4.4	100	0.00
46	CT	1,2-Dibromoethane	0.261	0.280	-7.3	100	0.00
47	CT	n-Octane	0.502	0.489	2.6	100	0.00
48	CT	Tetrachloroethylene	0.359	0.366	-1.9	100	0.00

Compounds other than ethylene oxide were not quantitated.

Data Path : C:\msdchem\1\DATA\L19A%\
Data File : L19A%002.D
Acq On : 31 Jan 2019 8:34 am
Operator : MAH
Sample : 1901101-CCV1
Misc : 80 ML 8L13001,9A29011
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Feb 01 11:22:32 2019
Quant Method : C:\msdchem\1\METHODS\9010007.M
Quant Title : TO-15 by Selective Ion Analysis
Last Update : Thu Jan 31 06:35:20 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	0.477	0.487	-2.1	100	0.00
50	CT	Ethylbenzene	0.811	0.839	-3.5	100	0.00
51	CT	m,p-Xylene	0.678	0.678	0.0	100	0.00
52	CT	Bromoform	0.221	0.218	1.4	100	0.00
53	CT	Styrene	0.387	0.391	-1.0	100	0.00
54	CT	1,1,2,2-Tetrachloroethane	0.407	0.403	1.0	100	0.00
55	CT	o-Xylene	0.671	0.687	-2.4	100	0.00
56	CT	1,3,5-Trimethylbenzene	0.714	0.682	4.5	100	0.00
57	CT	1,2,4-Trimethylbenzene	0.623	0.606	2.7	100	0.00
58	CT	m-Dichlorobenzene	0.329	0.302	8.2	100	0.00
59	CT	p-Dichlorobenzene	0.268	0.271	-1.1	100	0.00
60	CT	o-Dichlorobenzene	0.295	0.289	2.0	100	0.00
61	CT	1,2,4-Trichlorobenzene	0.118	0.111	5.9	100	0.00
62	CT	Hexachloro-1,3-butadiene	0.306	0.268	12.4	100	0.00

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

Compounds other than ethylene oxide were not quantitated.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\L19A%\
Data File : L19A%002.D
Acq On : 31 Jan 2019 8:34 am
Operator : MAH
Sample : 1901101-CCV1
Misc : 80 ML 8L13001,9A29011
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Feb 01 11:22:32 2019
Quant Method : C:\msdchem\1\METHODS\9010007.M
Quant Title : TO-15 by Selective Ion Analysis
QLast Update : Thu Jan 31 06:35:20 2019
Response via : Initial Calibration

2/4/19

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) IS-Hexane-d14	19.992	66	42219	4.7700	ppbv	0.00
29) IS-1,4-Difluorobenzene	23.130	114	104515	4.9900	ppbv	-0.02
43) IS-Chlorobenzene-d5	30.096	117	74387	4.7400	ppbv	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Acetylene	5.401	26	8086	2.2596	ppbv	100
3) Propylene	7.823	41	10823	2.5025	ppbv	100
4) Dichlorodifluoromethane	8.685	85	44455	2.2877	ppbv	100
5) Chloromethane	9.740	50	11763	2.3079	ppbv	100
6) Dichlorotetrafluoroethane	10.864	85	43955	2.5940	ppbv	99
7) Vinyl Chloride	11.119	62	13490	2.3863	ppbv	100
8) 1,3-Butadiene	11.783	54	9349	2.3556	ppbv	99
9) Ethylene oxide	12.395	29	4866	1.9563	ppbv	96
10) Bromomethane	12.590	94	12506	2.3643	ppbv	100
11) Chloroethane	13.282	64	5297	2.3228	ppbv	99
12) Acetonitrile	14.357	41	8036	2.2139	ppbv	97
13) Acrolein	14.636	56	3807	2.1401	ppbv	97
14) Trichlorofluoromethane	15.192	101	36398	2.1865	ppbv	100
15) Acrylonitrile	15.935	53	6386	2.3144	ppbv	99
16) 1,1-Dichloroethene	16.422	61	18444	2.5006	ppbv	100
17) Methylene Chloride	16.746	49	11638	2.4137	ppbv	99
18) Carbon Disulfide	16.932	76	33685	2.3713	ppbv	100
19) Trichlorotrifluoroethane	17.280	101	26575	2.4304	ppbv	99
20) trans-1,2-Dichloroethy...	18.315	96	9395	2.3888	ppbv	100
21) 1,1-Dichloroethane	18.632	63	15969	2.4748	ppbv	100
22) Methyl tert-Butyl Ether	18.791	73	25256	2.3654	ppbv	100
23) Chloroprene	19.539	53	14654	2.5639	ppbv	100
24) cis-1,2-Dichloroethylene	19.947	61	13042	2.4424	ppbv	99
25) Bromochloromethane	20.174	128	6437	2.3415	ppbv	98
26) Chloroform	20.400	83	19738	2.6085	ppbv	100
27) Ethyl tert-Butyl Ether	21.164	59	24485	2.4325	ppbv	100
28) 1,2-Dichloroethane	21.477	62	12452	2.5240	ppbv	100
30) 1,1,1-Trichloroethane	21.869	97	15635	2.2057	ppbv	99
31) Benzene	22.535	78	27685	2.6160	ppbv	100
32) Carbon Tetrachloride	22.770	117	17813	2.6196	ppbv	100
33) tert-Amyl Methyl Ether	23.501	73	19567	2.4156	ppbv	100
34) 1,2-Dichloropropane	23.769	63	9798	2.5200	ppbv	97
35) Ethyl Acrylate	23.872	55	4917	2.3662	ppbv	99
36) Bromodichloromethane	24.058	83	15161	2.2225	ppbv	100
37) Trichloroethylene	24.161	130	11602	2.2854	ppbv	99
38) Methyl Methacrylate	24.532	41	15830	2.3109	ppbv	100
39) cis-1,3-Dichloropropene	25.511	75	8194	2.7674	ppbv	97
40) Methyl Isobutyl Ketone	25.587	43	15271	2.3073	ppbv	100
41) trans-1,3-Dichloropropene	26.350	75	4696	2.4331	ppbv	100
42) 1,1,2-Trichloroethane	26.598	97	8849	2.4541	ppbv	99
44) Toluene	27.075	91	30312	2.5279	ppbv	99
45) Dibromochloromethane	27.716	129	48045	2.4305	ppbv	100
46) 1,2-Dibromoethane	28.137	107	10980	2.6779	ppbv	100
47) n-Octane	28.857	43	19335	2.4560	ppbv	100
48) Tetrachloroethylene	28.980	166	14296	2.5410	ppbv	100
49) Chlorobenzene	30.173	112	18809	2.5124	ppbv	100
50) Ethylbenzene	30.898	91	32909	2.5861	ppbv	100

Compounds other than ethylene oxide were not quantitated

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\L19A%\
Data File : L19A%002.D
Acq On : 31 Jan 2019 8:34 am
Operator : MAH
Sample : 1901101-CCV1
Misc : 80 ML 8L13001,9A29011
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Feb 01 11:22:32 2019
Quant Method : C:\msdchem\1\METHODS\9010007.M
Quant Title : TO-15 by Selective Ion Analysis
QLast Update : Thu Jan 31 06:35:20 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
51) m,p-Xylene	31.223	91	53009	4.9831 ppbv	100
52) Bromoform	31.261	173	8671	2.4972 ppbv	100
53) Styrene	31.910	104	15352	2.5252 ppbv #	100
54) 1,1,2,2-Tetrachloroethane	32.062	83	16010	2.5071 ppbv	100
55) o-Xylene	32.101	91	26321	2.4990 ppbv	99
56) 1,3,5-Trimethylbenzene	34.919	105	26964	2.4073 ppbv	100
57) 1,2,4-Trimethylbenzene	35.828	105	22641	2.3143 ppbv	99
58) m-Dichlorobenzene	36.113	146	11385	2.2076 ppbv	100
59) p-Dichlorobenzene	36.273	146	11088	2.6366 ppbv	99
60) o-Dichlorobenzene	37.075	146	11339	2.4456 ppbv	100
61) 1,2,4-Trichlorobenzene	40.826	180	4317	2.3243 ppbv	99
62) Hexachloro-1,3-butadiene	41.620	225	10499	2.1885 ppbv	100

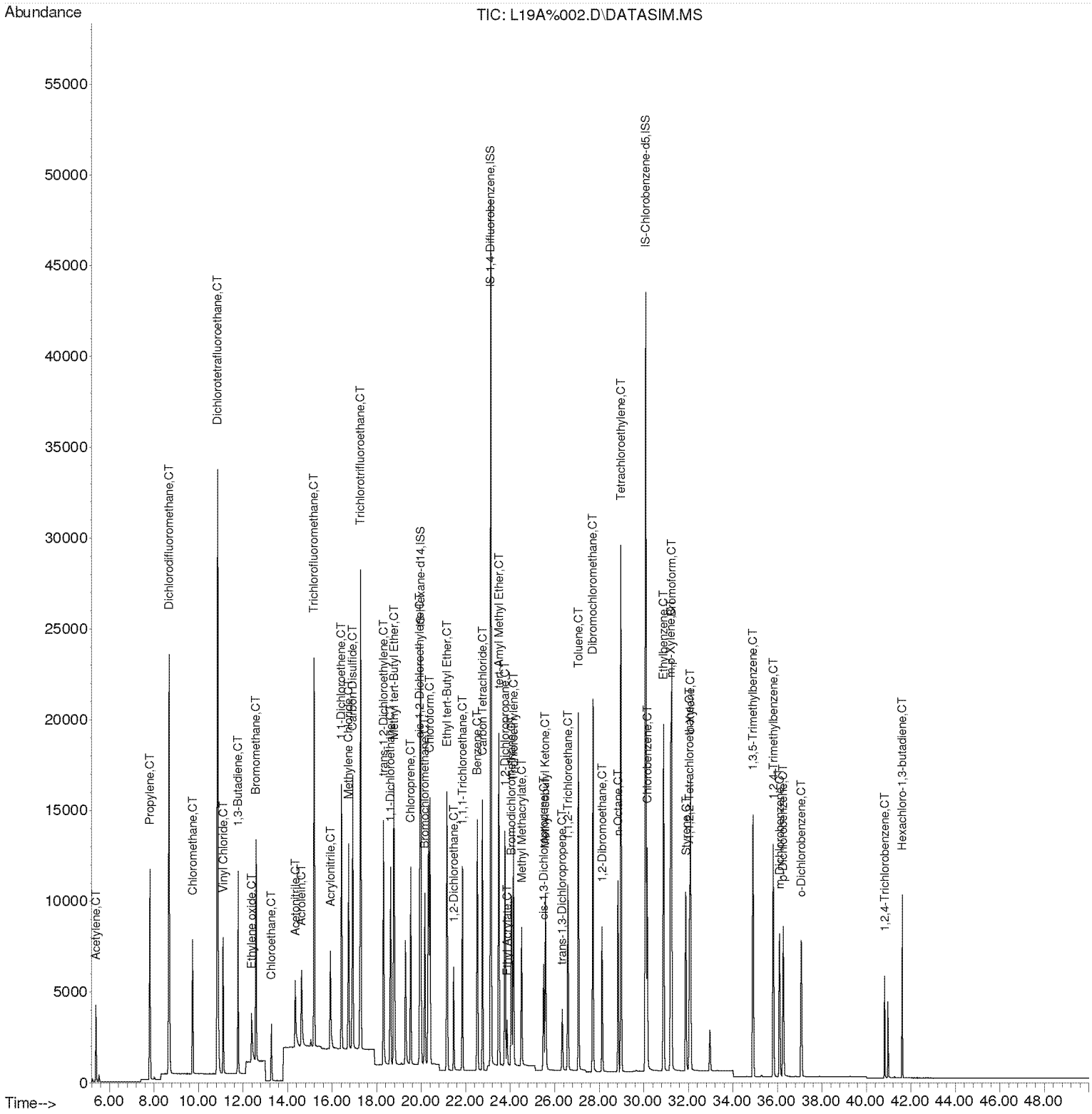
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

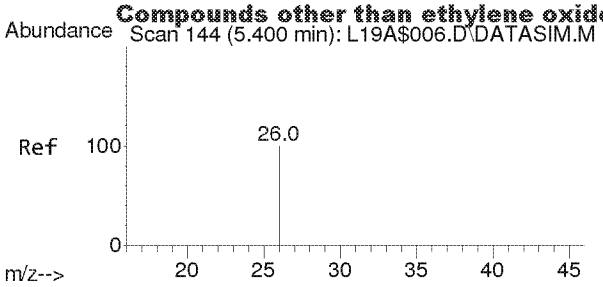
Compounds other than ethylene oxide were not quantitated.

Data Path : Y:\MASS SPEC 1 DATA\L19A%\
Data File : L19A%002.D
Acq On : 31 Jan 2019 8:34 am
Operator : MAH
Sample : 1901101-CCV1
Misc : 80 ML 8L13001,9A29011
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Feb 01 11:22:32 2019
Quant Method : C:\msdchem\1\METHODS\9010007.M
Quant Title : TO-15 by Selective Ion Analysis
QLast Update : Thu Jan 31 06:35:20 2019
Response via : Initial Calibration

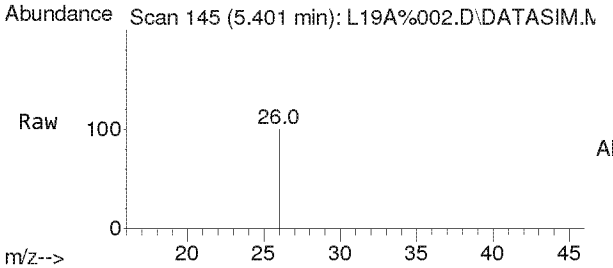


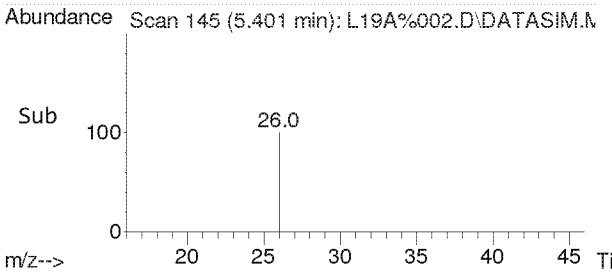
Compounds other than ethylene oxide were not quantitated.

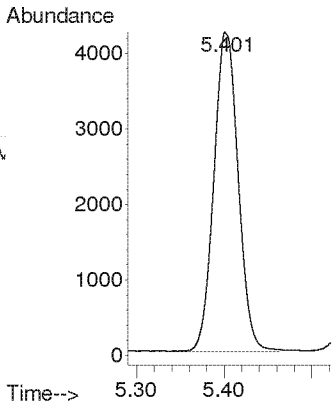


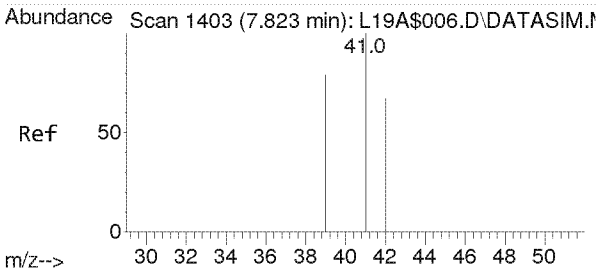
#2
Acetylene
Concen: 2.260 ppbv
RT: 5.401 min Scan# 145
Delta R.T. 0.001 min
Lab File: L19A%002.D
Acq: 31 Jan 2019 8:34 am

Tgt Ion: 26 Resp: 8086





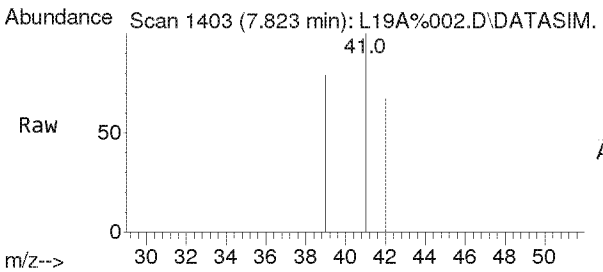


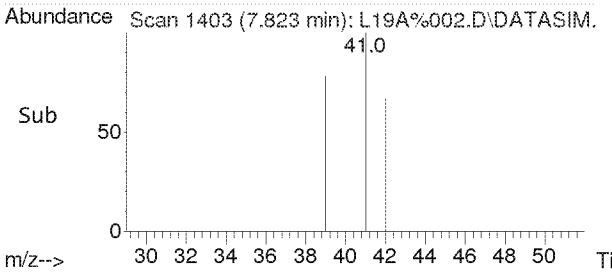


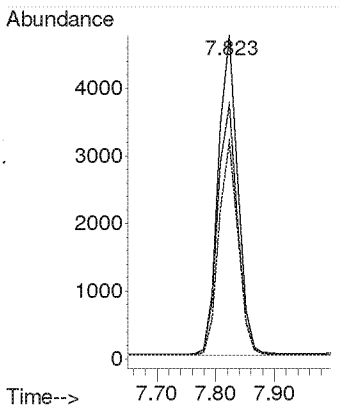
#3
Propylene
Concen: 2.503 ppbv
RT: 7.823 min Scan# 1403
Delta R.T. -0.000 min
Lab File: L19A%002.D
Acq: 31 Jan 2019 8:34 am

Tgt Ion: 41 Resp: 10823

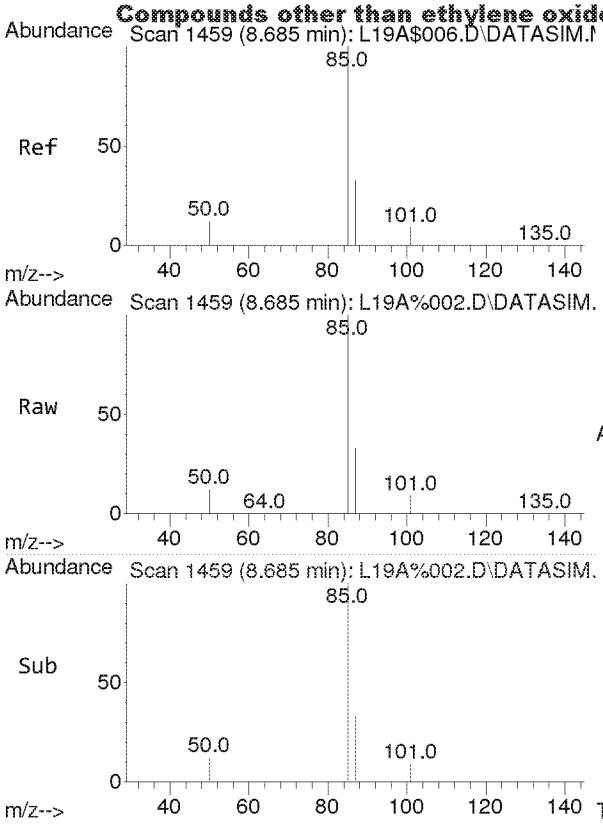
Ion	Ratio	Lower	Upper
41	100		
39	79.2	63.4	95.2
42	66.4	52.9	79.3







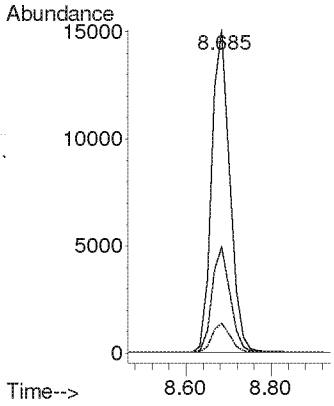
Compounds other than ethylene oxide were not quantitated.

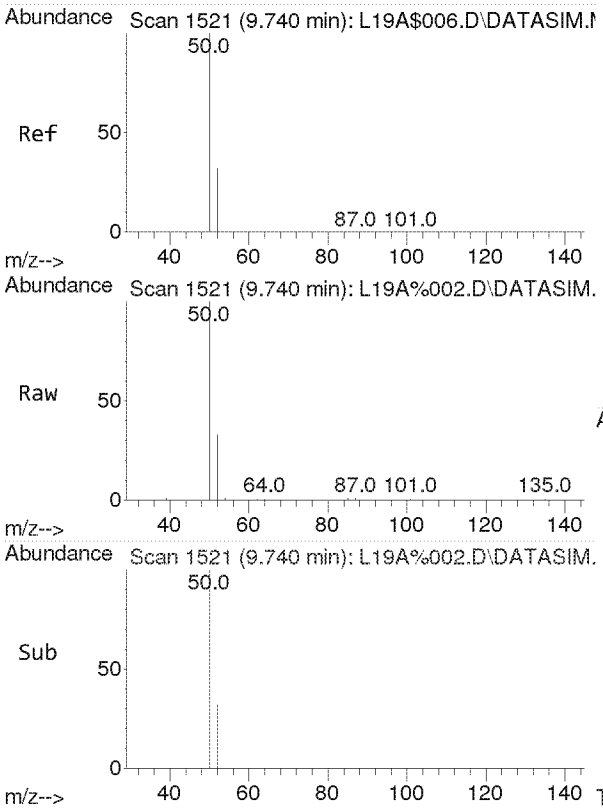


#4
Dichlorodifluoromethane
Concen: 2.288 ppbv
RT: 8.685 min Scan# 1459
Delta R.T. -0.000 min
Lab File: L19A%002.D
Acq: 31 Jan 2019 8:34 am

Tgt Ion: 85 Resp: 44455

Ion	Ratio	Lower	Upper
85	100		
87	32.4	25.9	38.9
101	9.0	7.2	10.8

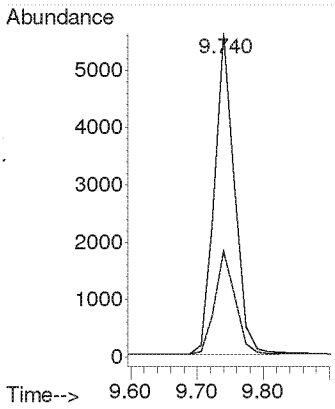




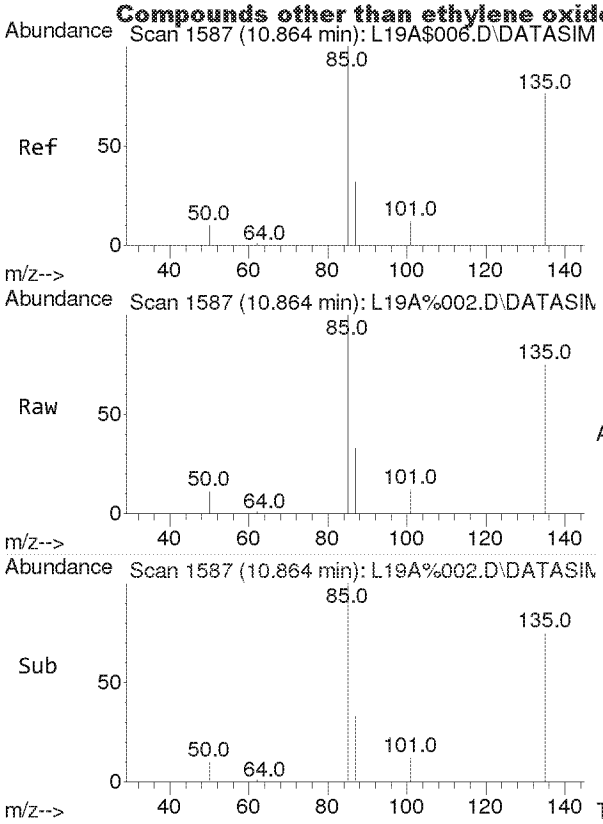
#5
Chloromethane
Concen: 2.308 ppbv
RT: 9.740 min Scan# 1521
Delta R.T. -0.000 min
Lab File: L19A%002.D
Acq: 31 Jan 2019 8:34 am

Tgt Ion: 50 Resp: 11763

Ion	Ratio	Lower	Upper
50	100		
52	32.4	25.9	38.9



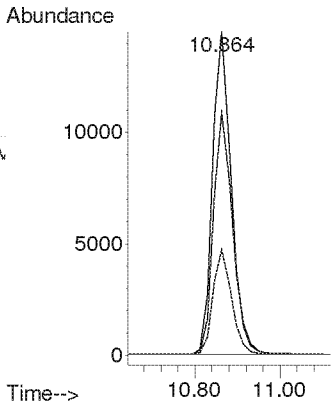
Compounds other than ethylene oxide were not quantitated.

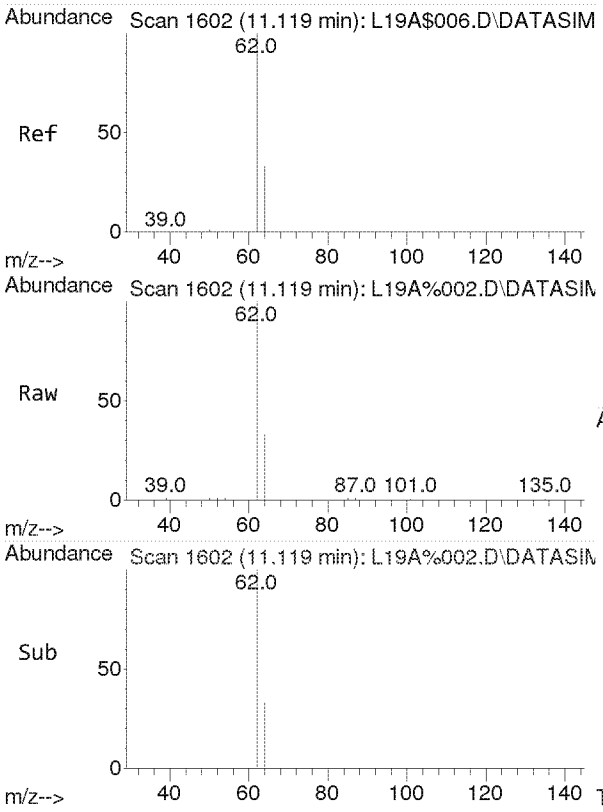


#6
Dichlorotetrafluoroethane
Concen: 2.594 ppbv
RT: 10.864 min Scan# 1587
Delta R.T. -0.000 min
Lab File: L19A%002.D
Acq: 31 Jan 2019 8:34 am

Tgt Ion: 85 Resp: 43955

Ion	Ratio	Lower	Upper
85	100		
135	77.4	62.7	94.1
87	32.3	25.7	38.5

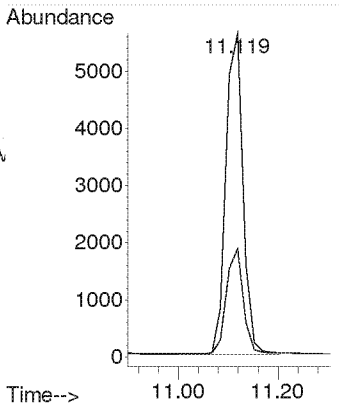




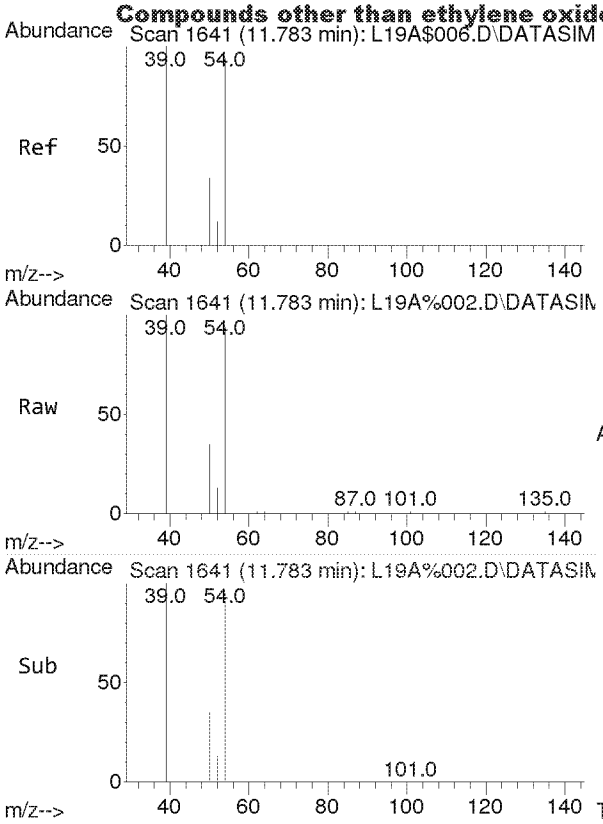
#7
Vinyl Chloride
Concen: 2.386 ppbv
RT: 11.119 min Scan# 1602
Delta R.T. -0.000 min
Lab File: L19A%002.D
Acq: 31 Jan 2019 8:34 am

Tgt Ion: 62 Resp: 13490

Ion	Ratio	Lower	Upper
62	100		
64	31.8	25.5	38.3



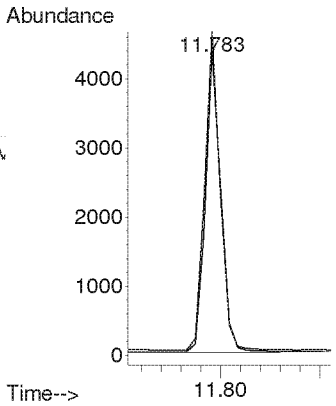
Compounds other than ethylene oxide were not quantitated.

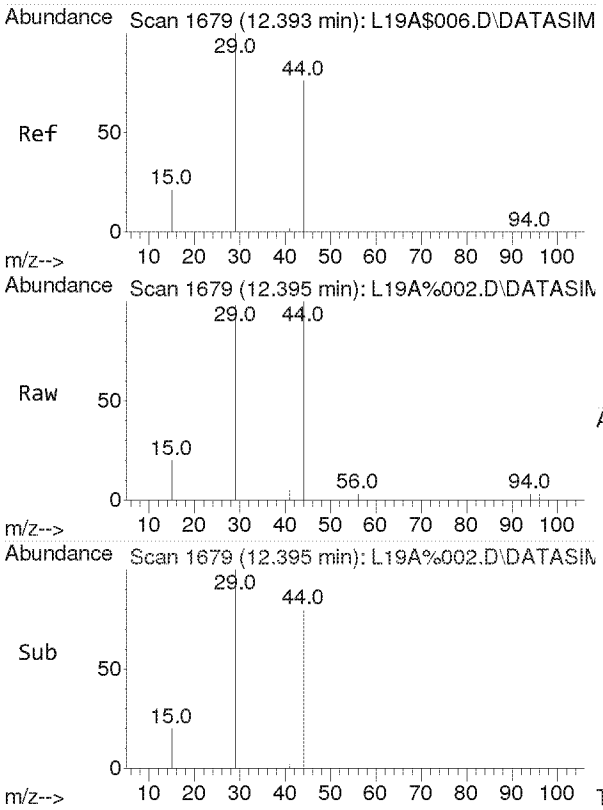


#8
1,3-Butadiene
Concen: 2.356 ppbv
RT: 11.783 min Scan# 1641
Delta R.T. -0.000 min
Lab File: L19A%002.D
Acq: 31 Jan 2019 8:34 am

Tgt Ion: 54 Resp: 9349

Ion	Ratio	Lower	Upper
54	100		
39	105.6	85.6	128.4

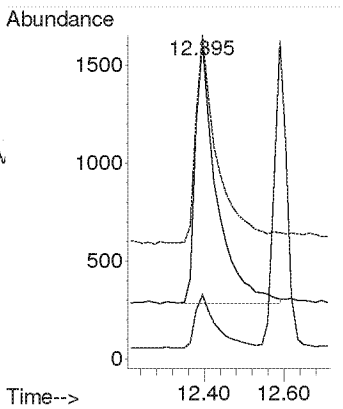




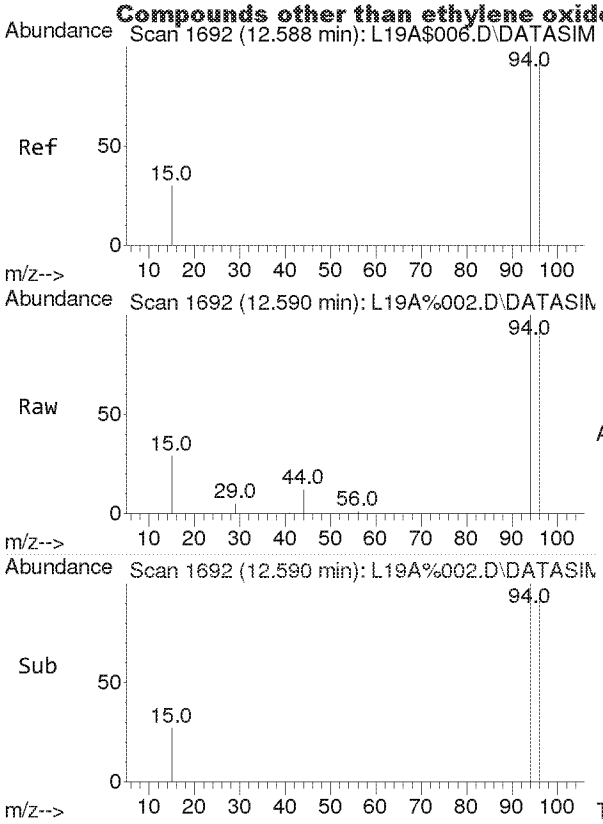
#9
Ethylene oxide
Concen: 1.956 ppbv
RT: 12.395 min Scan# 1679
Delta R.T. 0.000 min
Lab File: L19A%002.D
Acq: 31 Jan 2019 8:34 am

Tgt Ion: 29 Resp: 4866

Ion	Ratio	Lower	Upper
29	100		
15	19.8	16.2	24.4
44	82.4	62.9	94.3



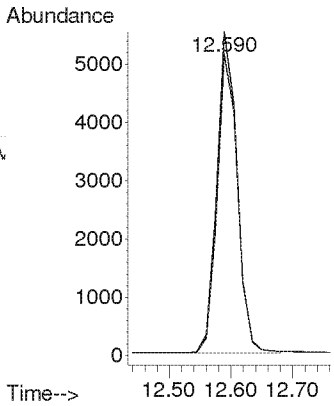
Compounds other than ethylene oxide were not quantitated.

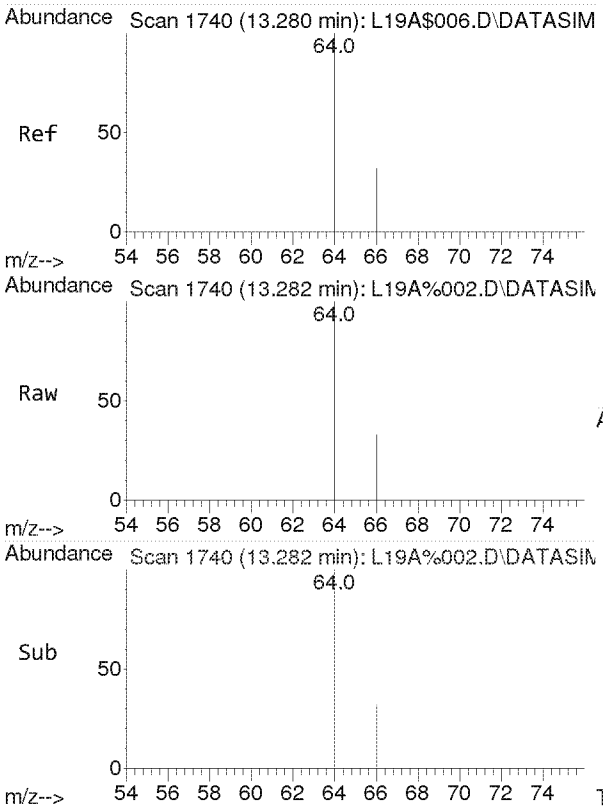


#10
Bromomethane
Concen: 2.364 ppbv
RT: 12.590 min Scan# 1692
Delta R.T. 0.002 min
Lab File: L19A%002.D
Acq: 31 Jan 2019 8:34 am

Tgt Ion: 94 Resp: 12506

Ion	Ratio	Lower	Upper
94	100		
96	94.3	75.7	113.5

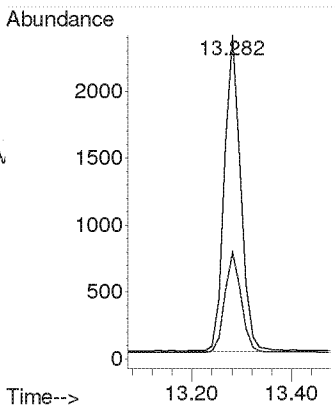




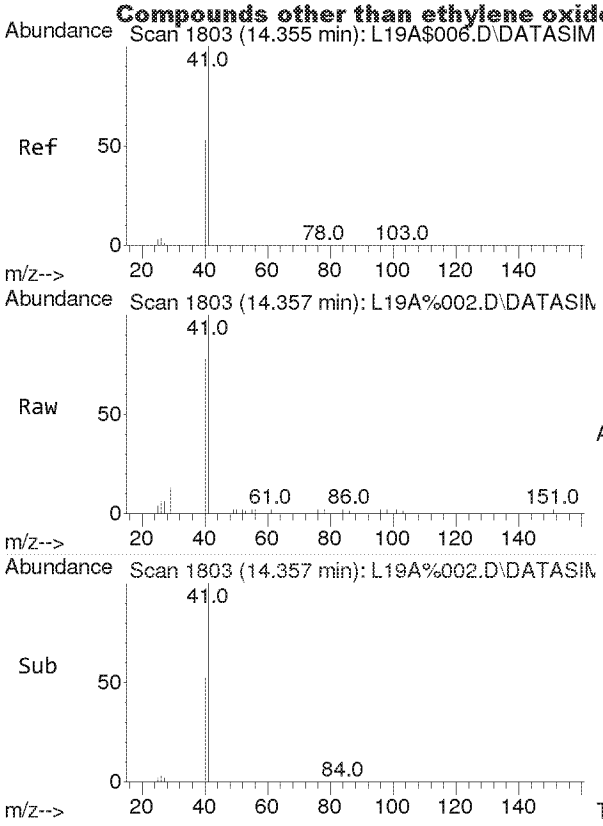
#11
Chloroethane
Concen: 2.323 ppbv
RT: 13.282 min Scan# 1740
Delta R.T. 0.002 min
Lab File: L19A%002.D
Acq: 31 Jan 2019 8:34 am

Tgt Ion: 64 Resp: 5297

Ion	Ratio	Lower	Upper
64	100		
66	31.9	25.8	38.6



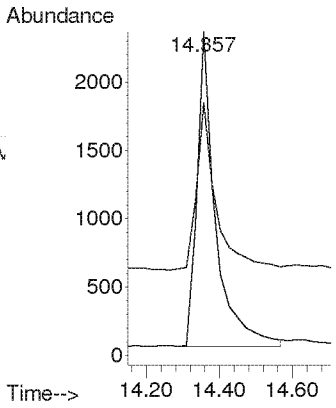
Compounds other than ethylene oxide were not quantitated.

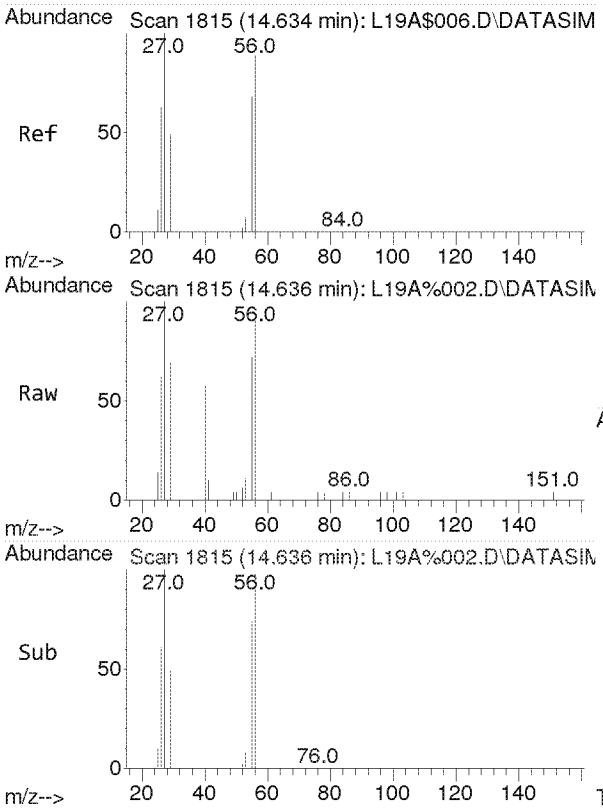


#12
Acetonitrile
Concen: 2.214 ppbv
RT: 14.357 min Scan# 1803
Delta R.T. 0.002 min
Lab File: L19A%002.D
Acq: 31 Jan 2019 8:34 am

Tgt Ion: 41 Resp: 8036

Ion	Ratio	Lower	Upper
41	100		
40	56.1	43.4	65.2

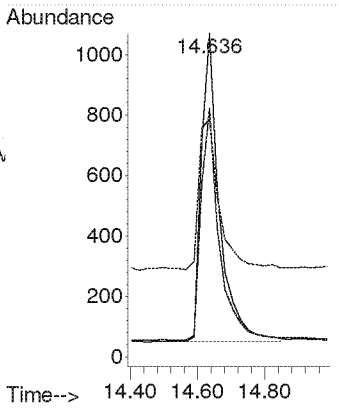




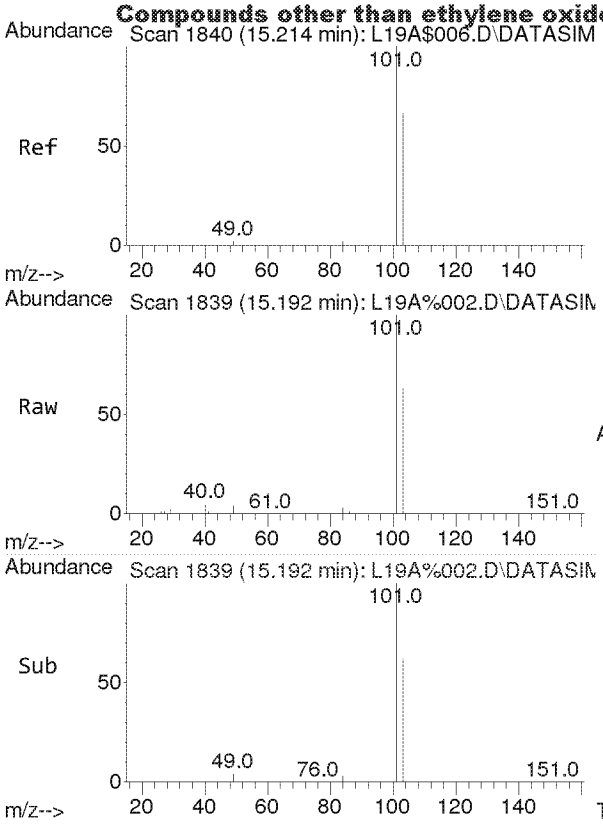
#13
Acrolein
Concen: 2.140 ppbv
RT: 14.636 min Scan# 1815
Delta R.T. 0.002 min
Lab File: L19A%002.D
Acq: 31 Jan 2019 8:34 am

Tgt Ion: 56 Resp: 3807

Ion	Ratio	Lower	Upper
56	100		
55	75.3	61.9	92.9
29	55.1	46.0	69.0



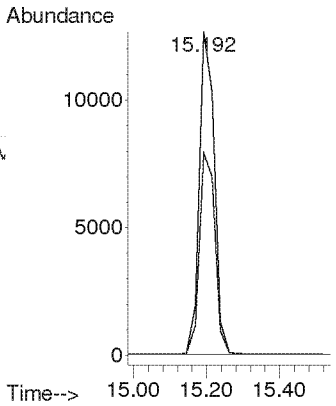
Compounds other than ethylene oxide were not quantitated.

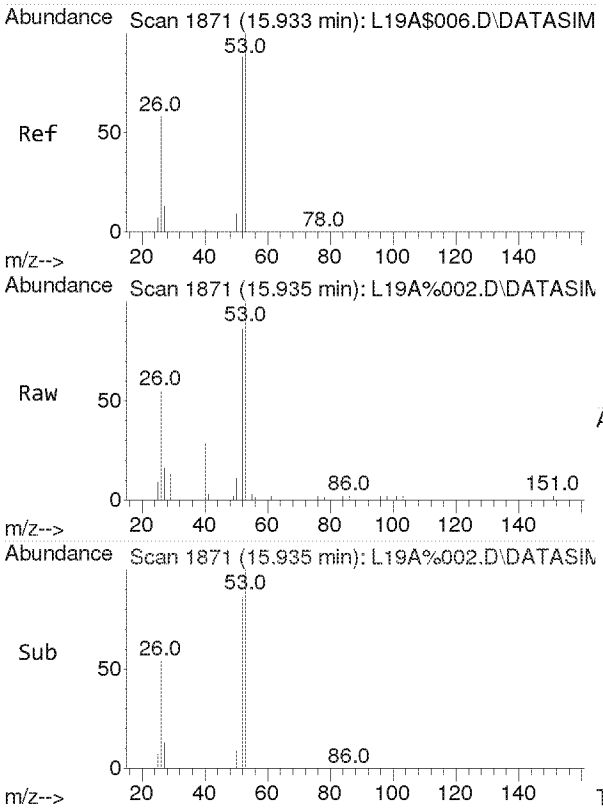


#14
Trichlorofluoromethane
Concen: 2.186 ppbv
RT: 15.192 min Scan# 1839
Delta R.T. -0.021 min
Lab File: L19A%002.D
Acq: 31 Jan 2019 8:34 am

Tgt Ion:101 Resp: 36398

Ion	Ratio	Lower	Upper
101	100		
103	64.6	51.6	77.4

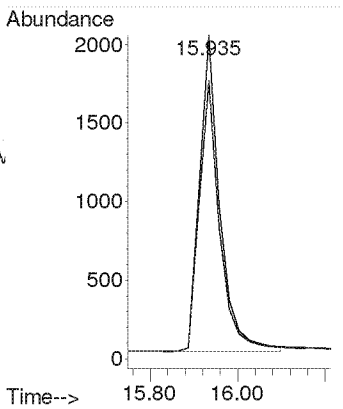




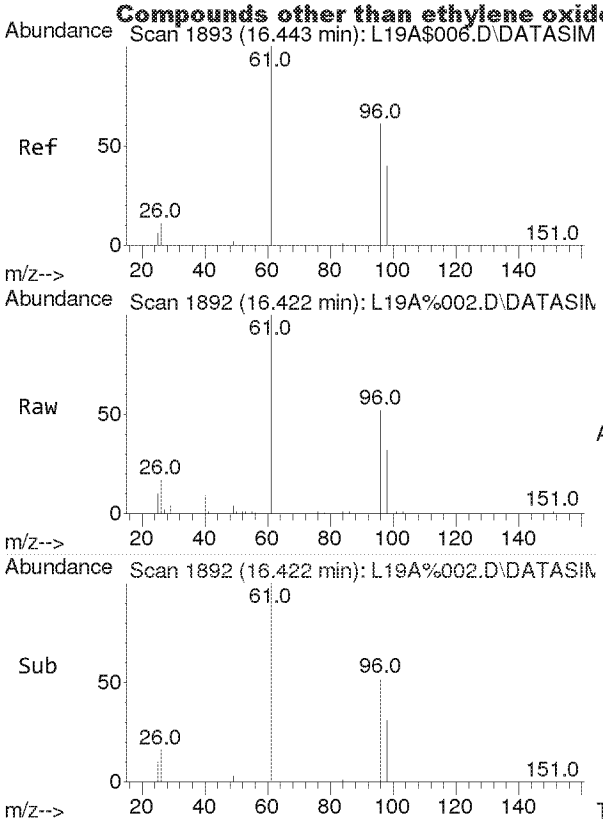
#15
Acrylonitrile
Concen: 2.314 ppbv
RT: 15.935 min Scan# 1871
Delta R.T. 0.002 min
Lab File: L19A%002.D
Acq: 31 Jan 2019 8:34 am

Tgt Ion: 53 Resp: 6386

Ion	Ratio	Lower	Upper
53	100		
52	86.8	70.3	105.5



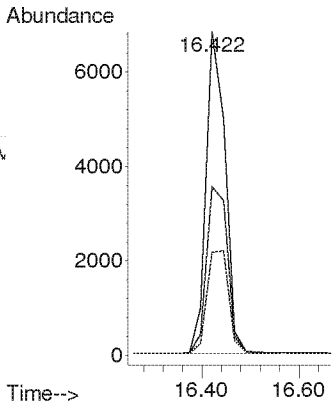
Compounds other than ethylene oxide were not quantitated.

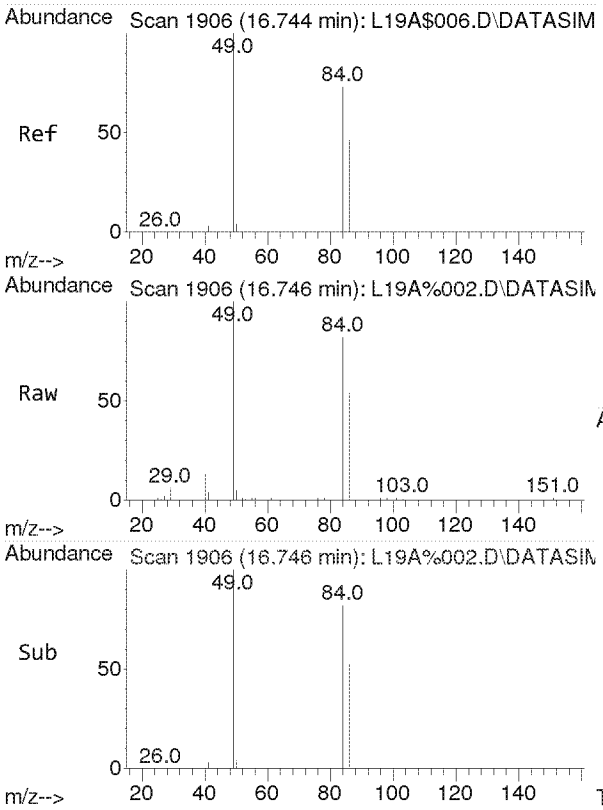


#16
1,1-Dichloroethene
Concen: 2.501 ppbv
RT: 16.422 min Scan# 1892
Delta R.T. -0.021 min
Lab File: L19A%002.D
Acq: 31 Jan 2019 8:34 am

Tgt Ion: 61 Resp: 18444

Ion	Ratio	Lower	Upper
61	100		
96	57.1	45.3	67.9
98	36.4	29.2	43.8

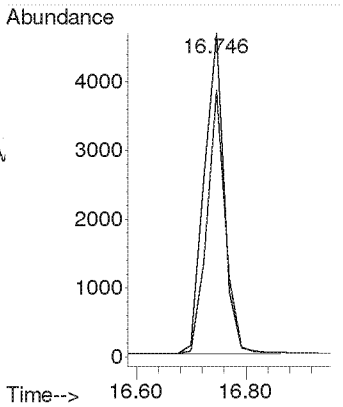




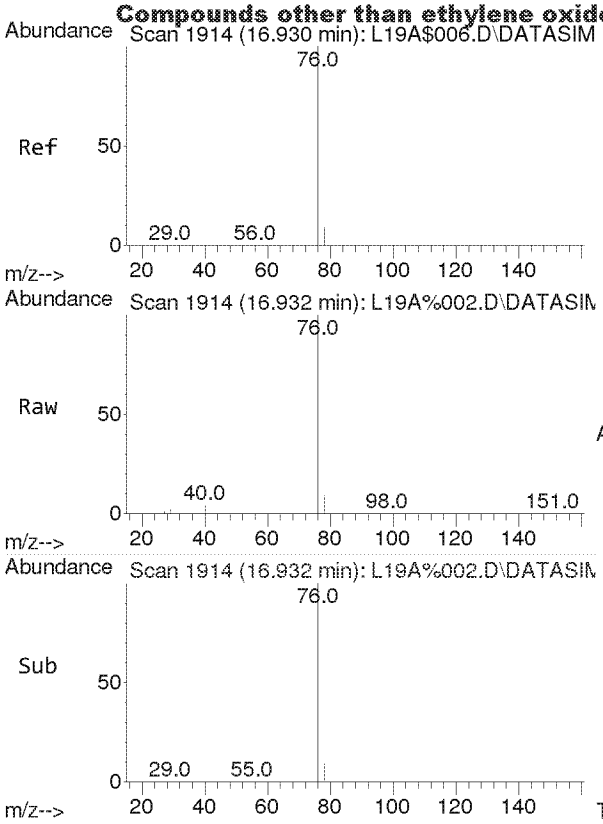
#17
Methylene Chloride
Concen: 2.414 ppbv
RT: 16.746 min Scan# 1906
Delta R.T. 0.002 min
Lab File: L19A%002.D
Acq: 31 Jan 2019 8:34 am

Tgt Ion: 49 Resp: 11638

Ion	Ratio	Lower	Upper
49	100		
84	76.9	53.5	99.3



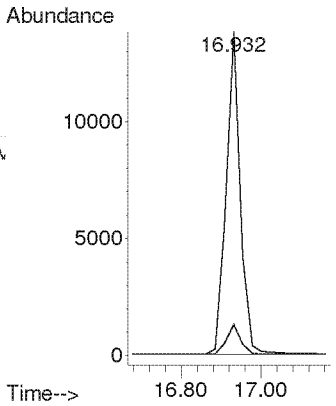
Compounds other than ethylene oxide were not quantitated.

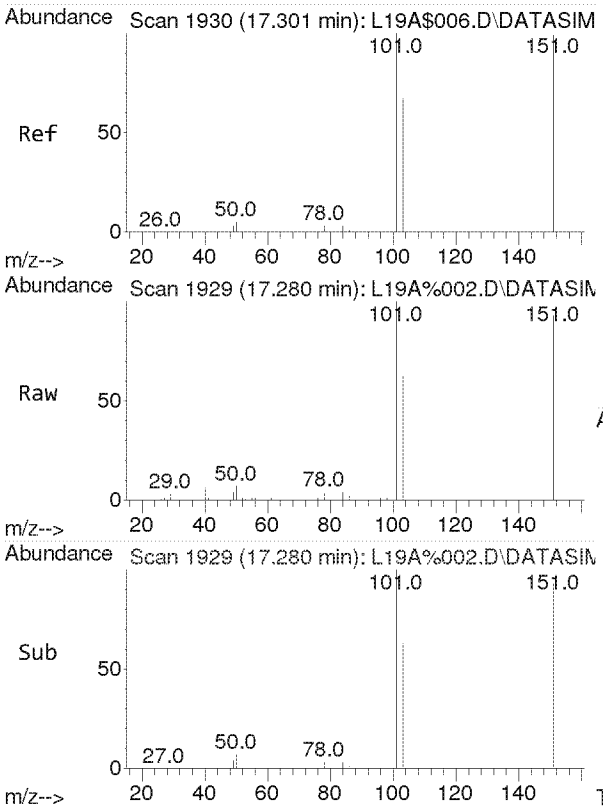


#18
Carbon Disulfide
Concen: 2.371 ppbv
RT: 16.932 min Scan# 1914
Delta R.T. 0.002 min
Lab File: L19A%002.D
Acq: 31 Jan 2019 8:34 am

Tgt Ion: 76 Resp: 33685

Ion	Ratio	Lower	Upper
76	100		
78	9.1	7.3	10.9

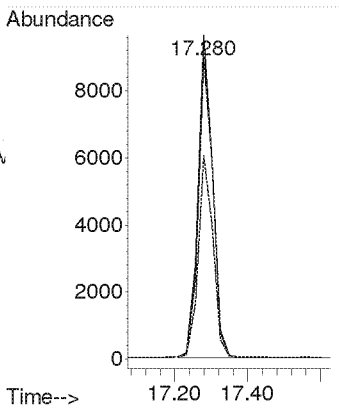




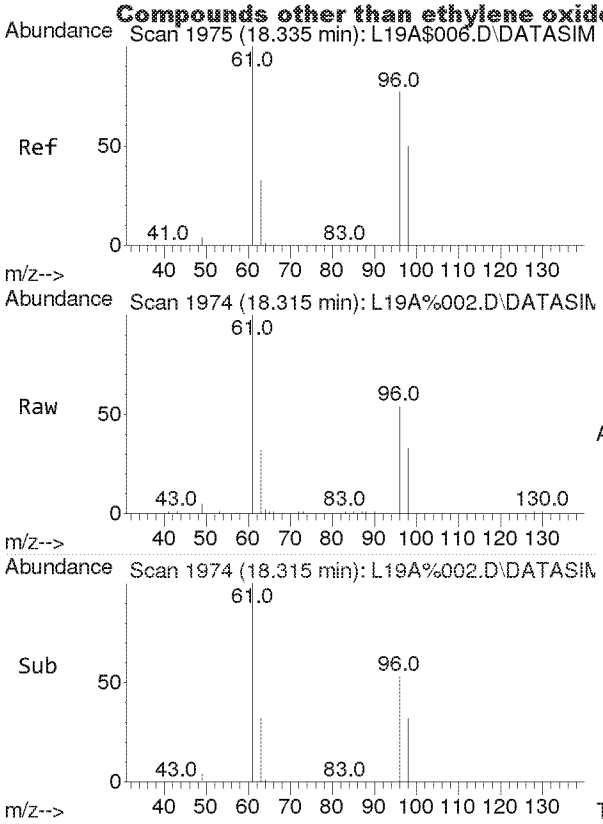
#19
Trichlorotrifluoroethane
Concen: 2.430 ppbv
RT: 17.280 min Scan# 1929
Delta R.T. -0.021 min
Lab File: L19A%002.D
Acq: 31 Jan 2019 8:34 am

Tgt Ion:101 Resp: 26575

Ion	Ratio	Lower	Upper
101	100		
151	94.8	76.2	114.2
103	63.9	51.5	77.3



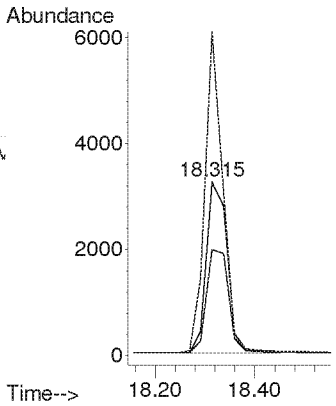
Compounds other than ethylene oxide were not quantitated.

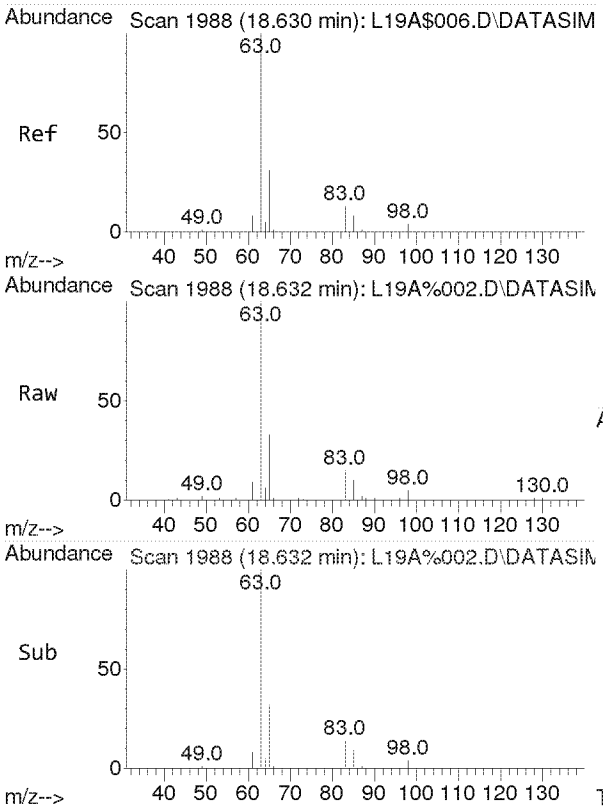


#20
trans-1,2-Dichloroethylene
Concen: 2.389 ppbv
RT: 18.315 min Scan# 1974
Delta R.T. -0.021 min
Lab File: L19A%002.D
Acq: 31 Jan 2019 8:34 am

Tgt Ion: 96 Resp: 9395

Ion	Ratio	Lower	Upper
96	100		
98	64.0	51.2	76.8
61	159.7	128.1	192.1

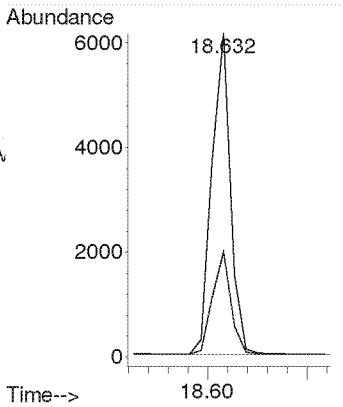




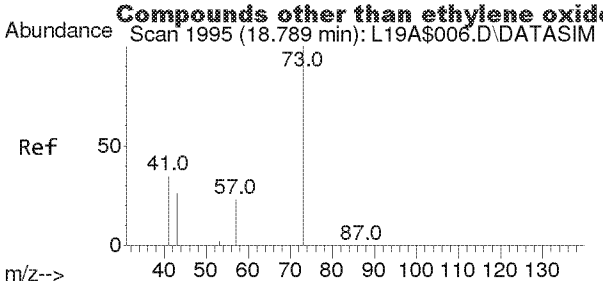
#21
1,1-Dichloroethane
Concen: 2.475 ppbv
RT: 18.632 min Scan# 1988
Delta R.T. 0.002 min
Lab File: L19A%002.D
Acq: 31 Jan 2019 8:34 am

Tgt Ion: 63 Resp: 15969

Ion	Ratio	Lower	Upper
63	100		
65	31.6	25.4	38.0



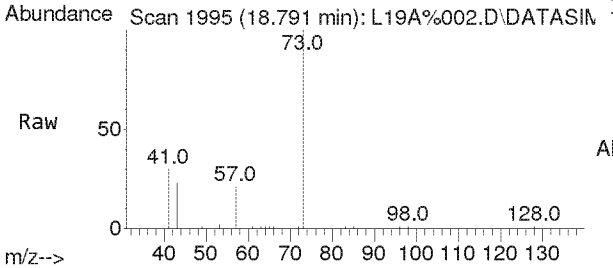
Compounds other than ethylene oxide were not quantitated.

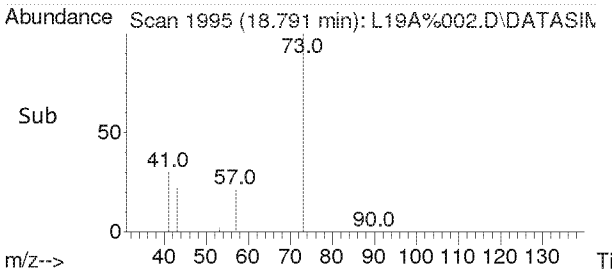


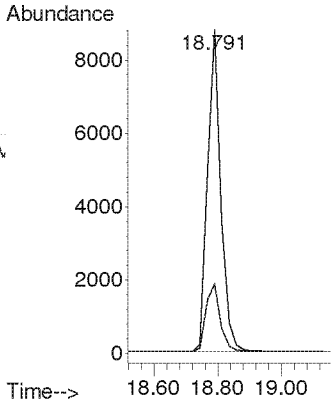
#22
Methyl tert-Butyl Ether
Concen: 2.365 ppbv
RT: 18.791 min Scan# 1995
Delta R.T. 0.002 min
Lab File: L19A%002.D
Acq: 31 Jan 2019 8:34 am

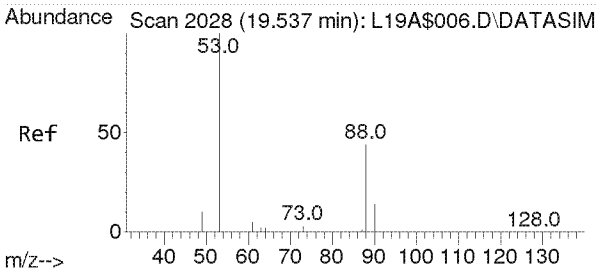
Tgt Ion: 73 Resp: 25256

Ion	Ratio	Lower	Upper
73	100		
57	22.5	18.1	27.1





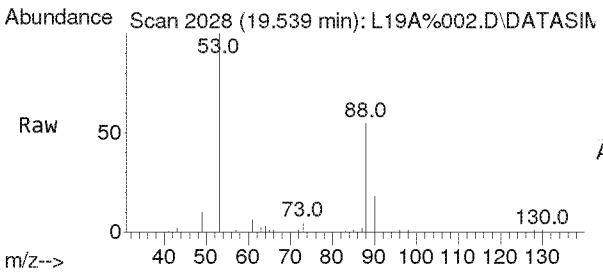


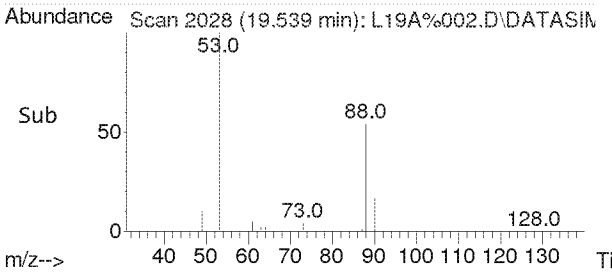


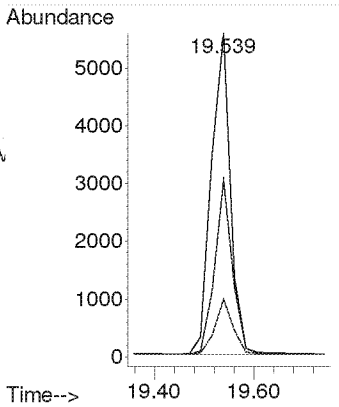
#23
Chloroprene
Concen: 2.564 ppbv
RT: 19.539 min Scan# 2028
Delta R.T. 0.002 min
Lab File: L19A%002.D
Acq: 31 Jan 2019 8:34 am

Tgt Ion: 53 Resp: 14654

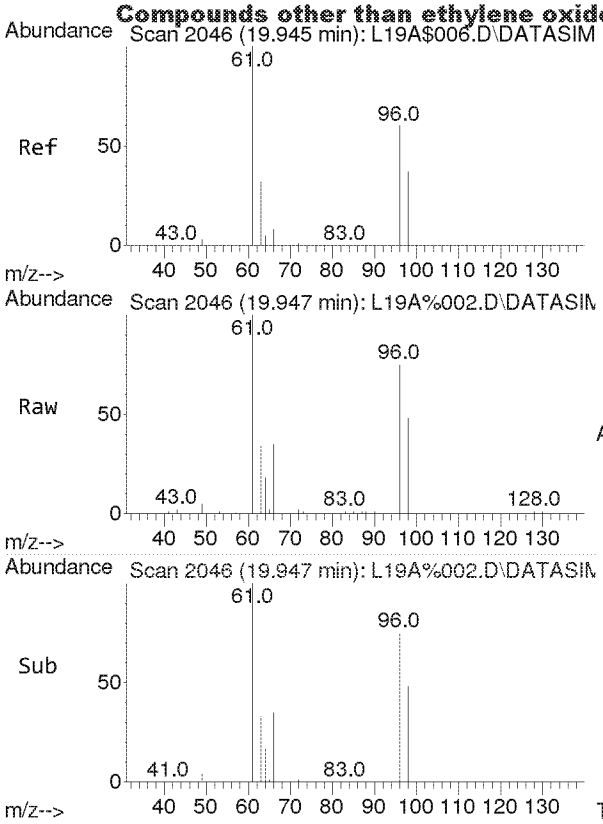
Ion	Ratio	Lower	Upper
53	100		
88	50.6	40.3	60.5
90	16.2	12.9	19.3







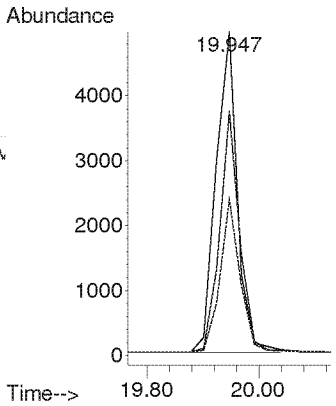
Compounds other than ethylene oxide were not quantitated.

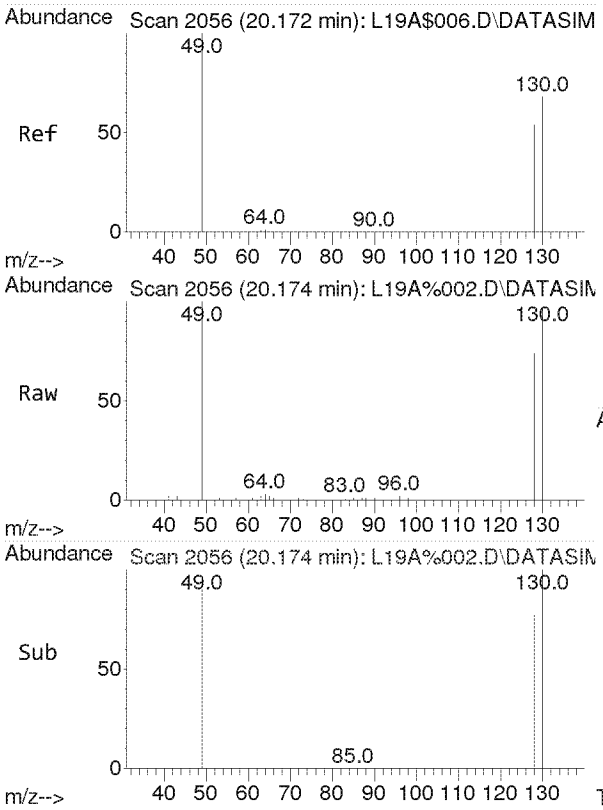


#24
cis-1,2-Dichloroethylene
Concen: 2.442 ppbv
RT: 19.947 min Scan# 2046
Delta R.T. 0.002 min
Lab File: L19A%002.D
Acq: 31 Jan 2019 8:34 am

Tgt Ion: 61 Resp: 13042

Ion	Ratio	Lower	Upper
61	100		
96	70.9	56.0	84.0
98	45.4	36.1	54.1

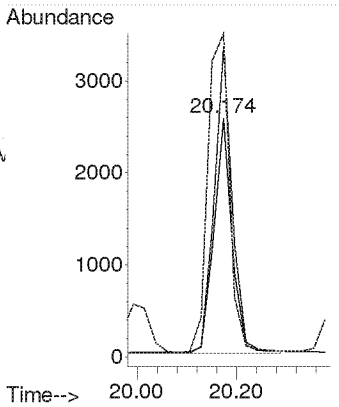




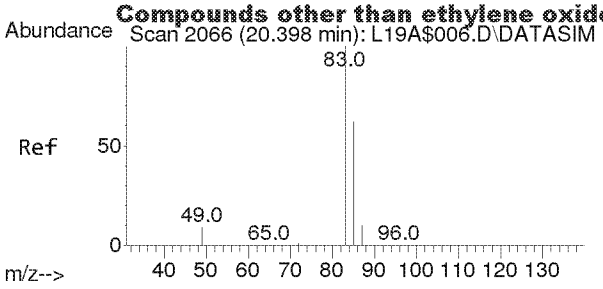
#25
Bromochloromethane
Concen: 2.342 ppbv
RT: 20.174 min Scan# 2056
Delta R.T. 0.002 min
Lab File: L19A%002.D
Acq: 31 Jan 2019 8:34 am

Tgt Ion:128 Resp: 6437

Ion	Ratio	Lower	Upper
128	100		
130	128.8	103.5	155.3
49	164.4	132.6	198.8



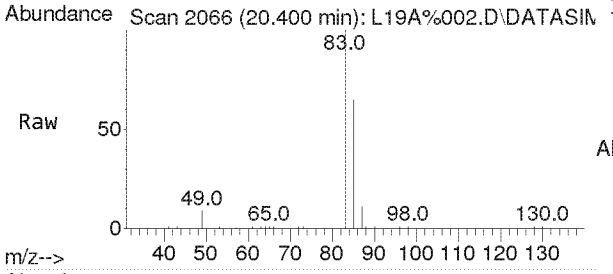
Compounds other than ethylene oxide were not quantitated.

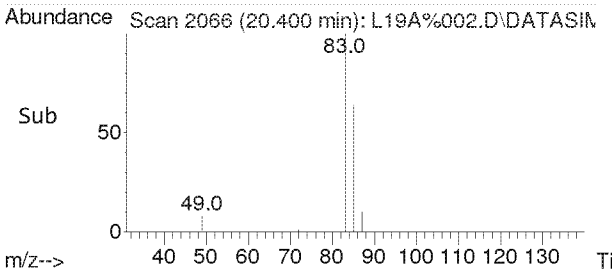


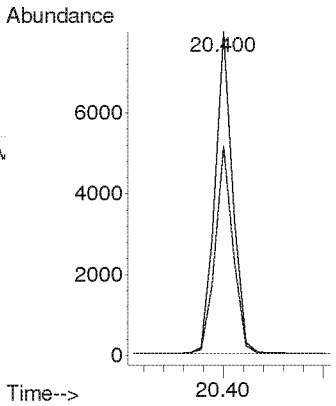
#26
Chloroform
Concen: 2.608 ppbv
RT: 20.400 min Scan# 2066
Delta R.T. 0.002 min
Lab File: L19A%002.D
Acq: 31 Jan 2019 8:34 am

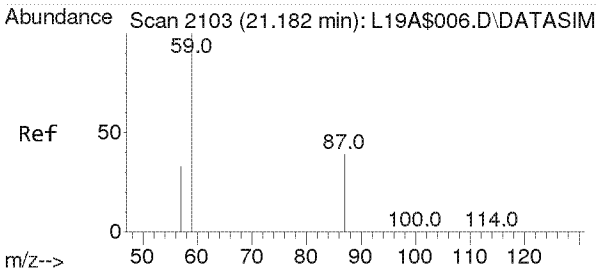
Tgt Ion: 83 Resp: 19738

Ion	Ratio	Lower	Upper
83	100		
85	64.9	51.8	77.6





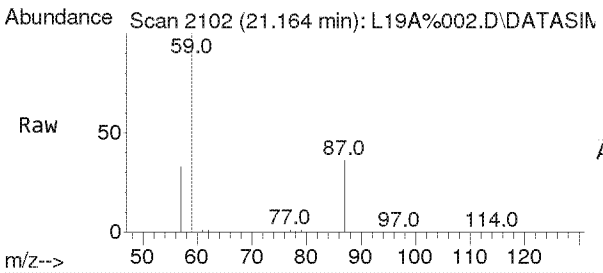


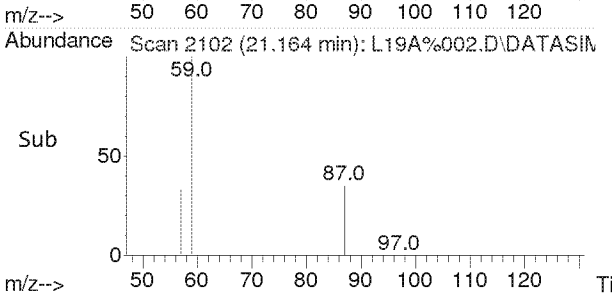


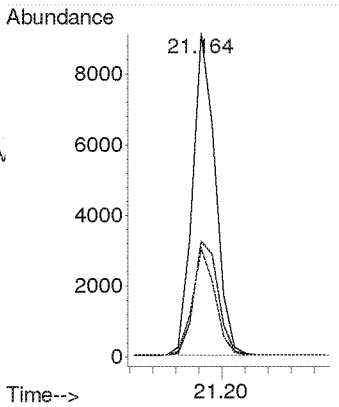
#27
Ethyl tert-Butyl Ether
Concen: 2.432 ppbv
RT: 21.164 min Scan# 2102
Delta R.T. -0.018 min
Lab File: L19A%002.D
Acq: 31 Jan 2019 8:34 am

Tgt Ion: 59 Resp: 24485

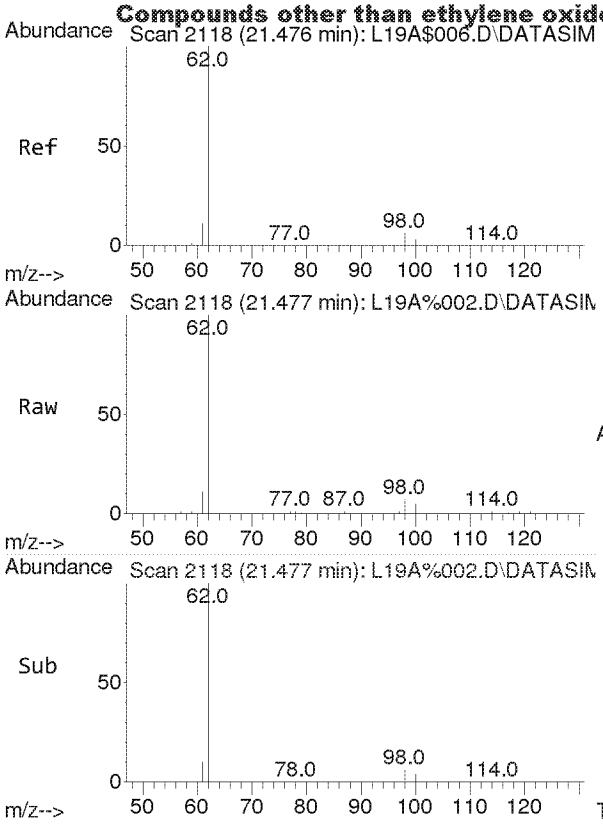
Ion	Ratio	Lower	Upper
59	100		
87	38.2	30.4	45.6
57	32.7	26.2	39.4







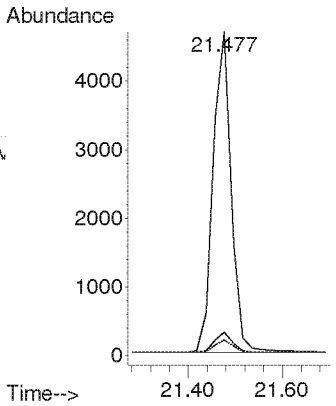
Compounds other than ethylene oxide were not quantitated.

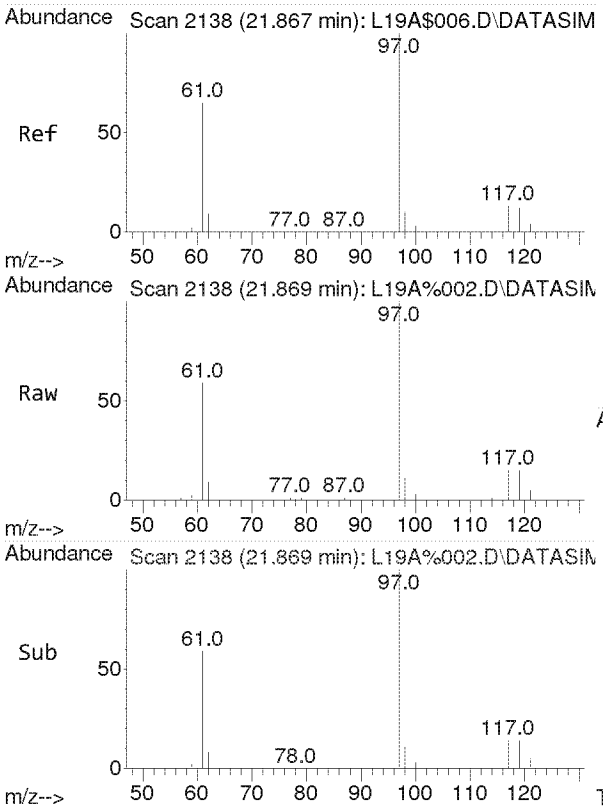


#28
1,2-Dichloroethane
Concen: 2.524 ppbv
RT: 21.477 min Scan# 2118
Delta R.T. 0.002 min
Lab File: L19A%002.D
Acq: 31 Jan 2019 8:34 am

Tgt Ion: 62 Resp: 12452

Ion	Ratio	Lower	Upper
62	100		
98	6.0	4.7	7.1
100	3.8	3.1	4.7

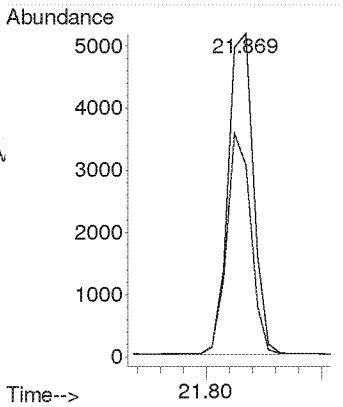




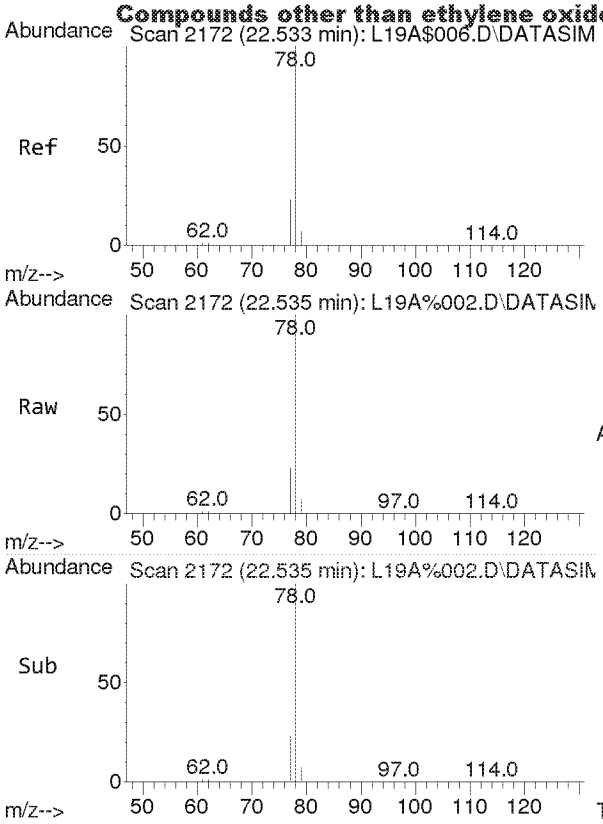
#30
1,1,1-Trichloroethane
Concen: 2.206 ppbv
RT: 21.869 min Scan# 2138
Delta R.T. 0.002 min
Lab File: L19A%002.D
Acq: 31 Jan 2019 8:34 am

Tgt Ion: 97 Resp: 15635

Ion	Ratio	Lower	Upper
97	100		
61	65.8	52.2	78.4



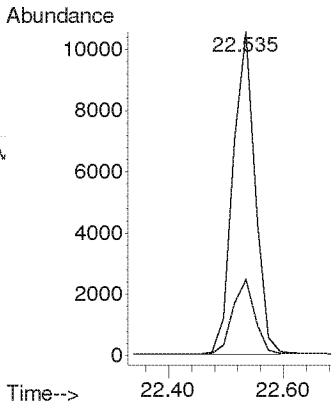
Compounds other than ethylene oxide were not quantitated.

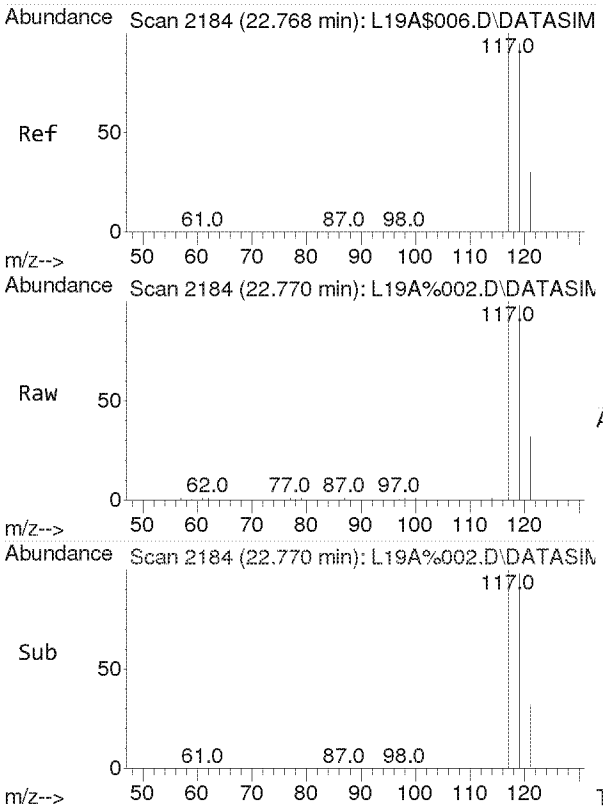


#31
Benzene
Concen: 2.616 ppbv
RT: 22.535 min Scan# 2172
Delta R.T. 0.002 min
Lab File: L19A%002.D
Acq: 31 Jan 2019 8:34 am

Tgt Ion: 78 Resp: 27685

Ion	Ratio	Lower	Upper
78	100		
77	23.1	18.3	27.5

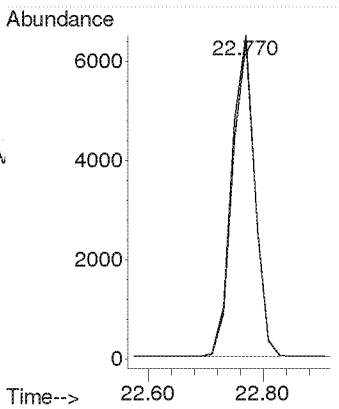




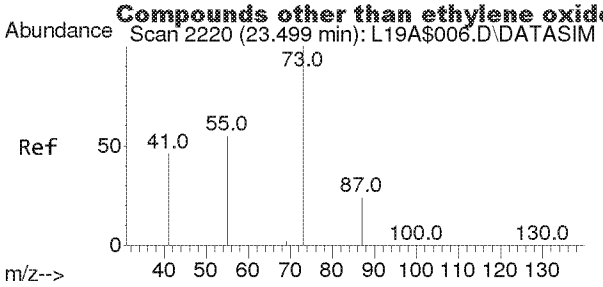
#32
Carbon Tetrachloride
Concen: 2.620 ppbv
RT: 22.770 min Scan# 2184
Delta R.T. 0.002 min
Lab File: L19A%002.D
Acq: 31 Jan 2019 8:34 am

Tgt Ion:117 Resp: 17813

Ion	Ratio	Lower	Upper
117	100		
119	96.0	76.9	115.3



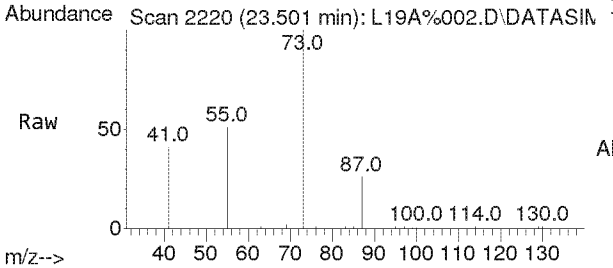
Compounds other than ethylene oxide were not quantitated.

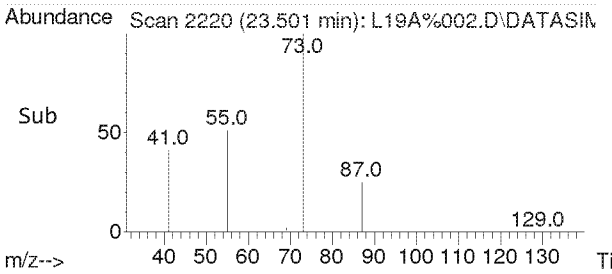


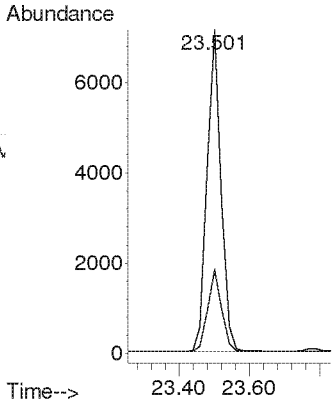
#33
tert-Amyl Methyl Ether
Concen: 2.416 ppbv
RT: 23.501 min Scan# 2220
Delta R.T. 0.002 min
Lab File: L19A%002.D
Acq: 31 Jan 2019 8:34 am

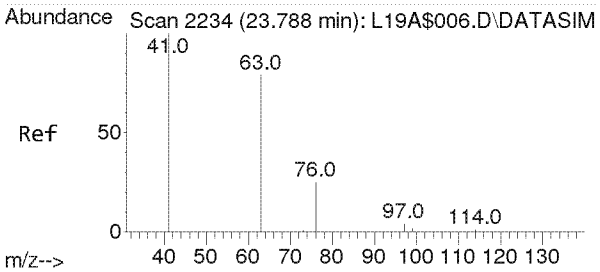
Tgt Ion: 73 Resp: 19567

Ion	Ratio	Lower	Upper
73	100		
87	25.1	20.2	30.2





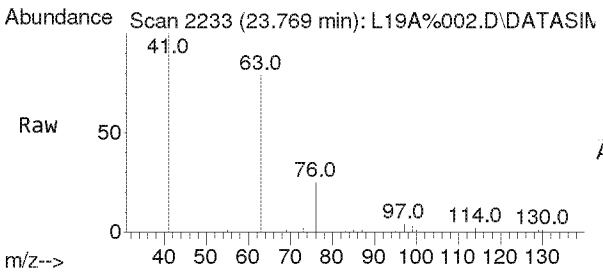


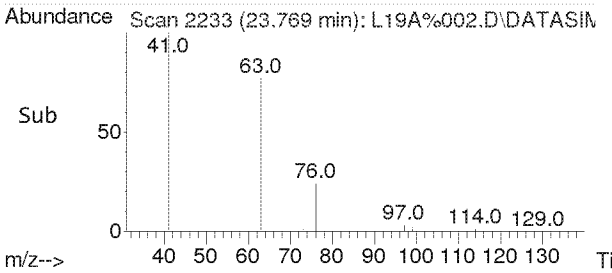


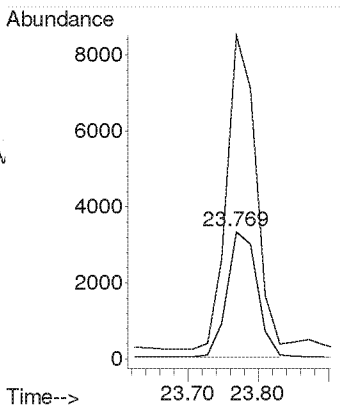
#34
1,2-Dichloropropane
Concen: 2.520 ppbv
RT: 23.769 min Scan# 2233
Delta R.T. -0.019 min
Lab File: L19A%002.D
Acq: 31 Jan 2019 8:34 am

Tgt Ion: 63 Resp: 9798

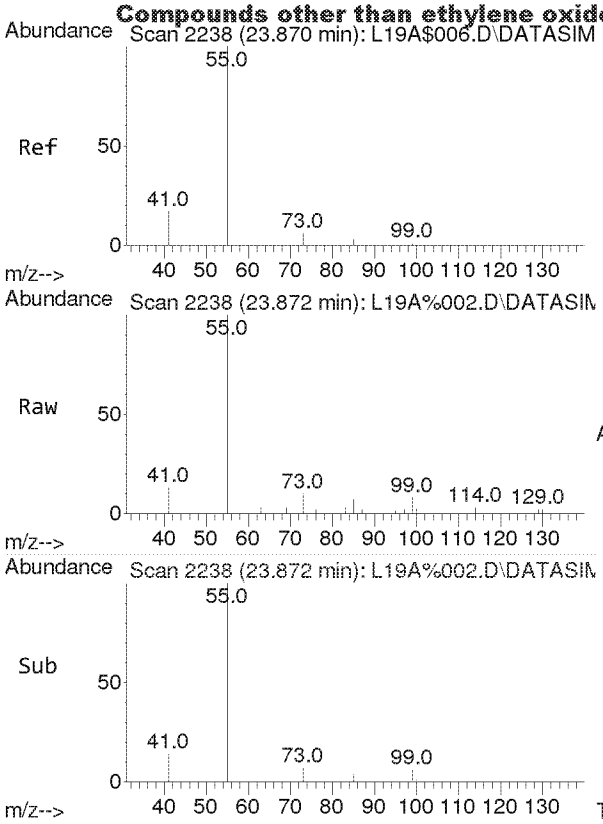
Ion	Ratio	Lower	Upper
63	100		
41	242.3	198.6	297.8







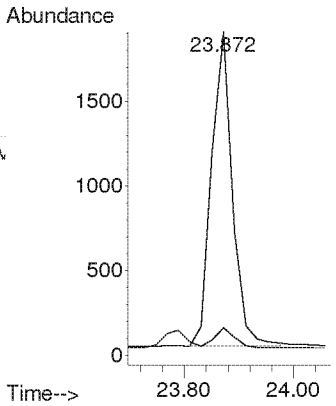
Compounds other than ethylene oxide were not quantitated.

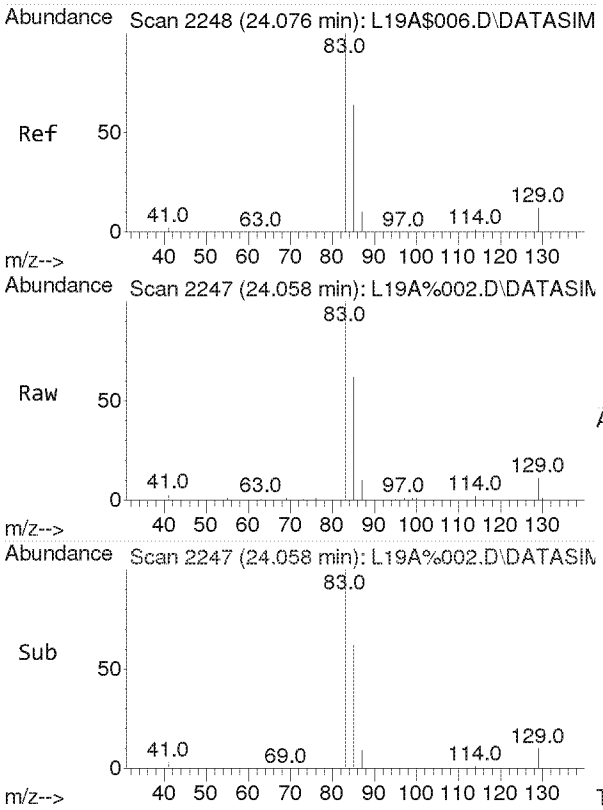


#35
Ethyl Acrylate
Concen: 2.366 ppbv
RT: 23.872 min Scan# 2238
Delta R.T. 0.002 min
Lab File: L19A%002.D
Acq: 31 Jan 2019 8:34 am

Tgt Ion: 55 Resp: 4917

Ion	Ratio	Lower	Upper
55	100		
99	5.9	5.0	7.6

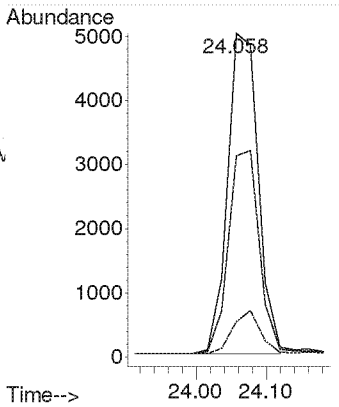




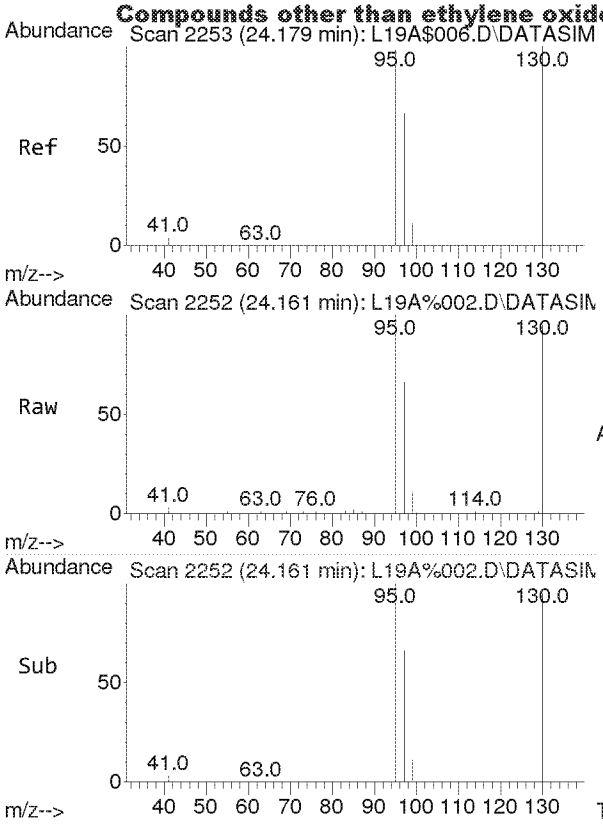
#36
Bromodichloromethane
Concen: 2.223 ppbv
RT: 24.058 min Scan# 2247
Delta R.T. -0.019 min
Lab File: L19A%002.D
Acq: 31 Jan 2019 8:34 am

Tgt Ion: 83 Resp: 15161

Ion	Ratio	Lower	Upper
83	100		
85	63.7	51.0	76.4
129	12.2	9.8	14.8



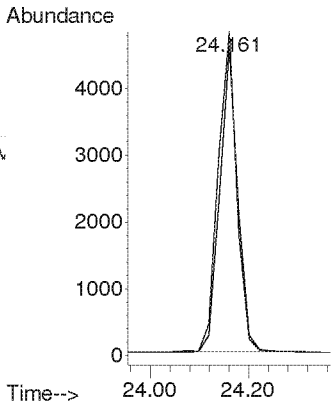
Compounds other than ethylene oxide were not quantitated.

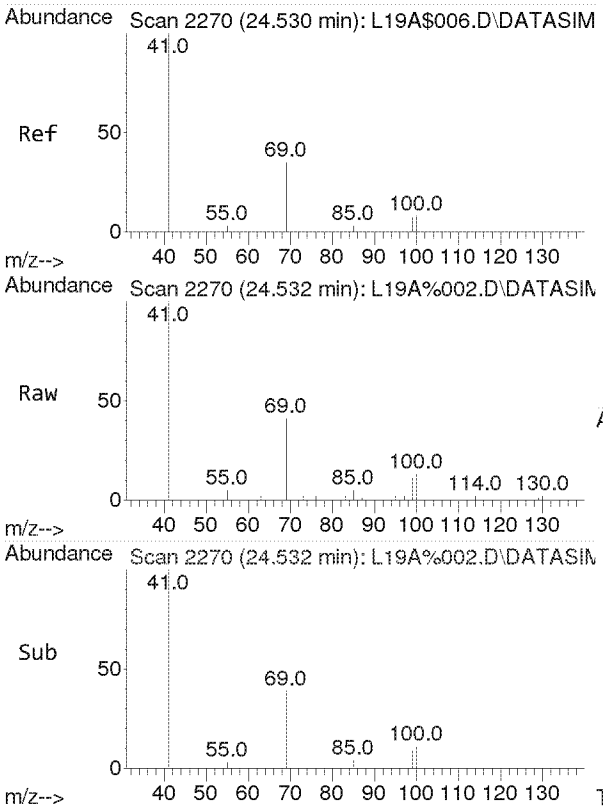


#37
Trichloroethylene
Concen: 2.285 ppbv
RT: 24.161 min Scan# 2252
Delta R.T. -0.019 min
Lab File: L19A%002.D
Acq: 31 Jan 2019 8:34 am

Tgt Ion:130 Resp: 11602

Ion	Ratio	Lower	Upper
130	100		
95	109.2	87.9	131.9

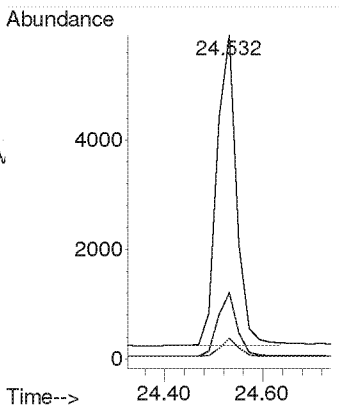




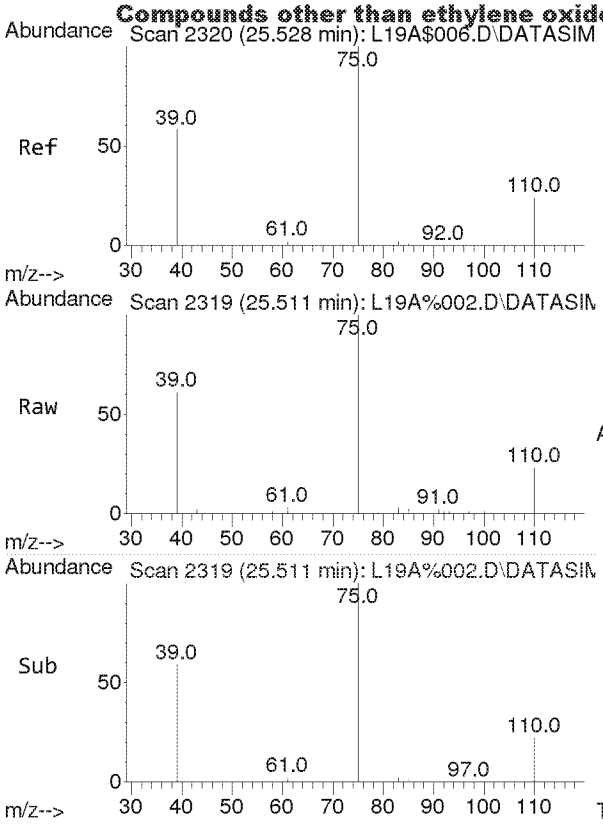
#38
Methyl Methacrylate
Concen: 2.311 ppbv
RT: 24.532 min Scan# 2270
Delta R.T. 0.002 min
Lab File: L19A%002.D
Acq: 31 Jan 2019 8:34 am

Tgt Ion: 41 Resp: 15830

Ion	Ratio	Lower	Upper
41	100		
69	19.9	15.7	23.5
100	5.3	4.2	6.4



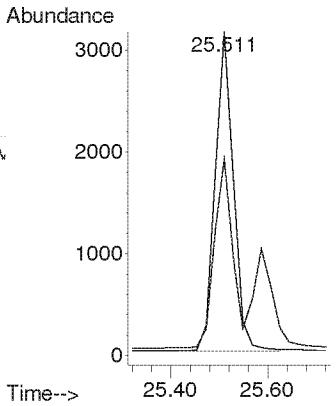
Compounds other than ethylene oxide were not quantitated.

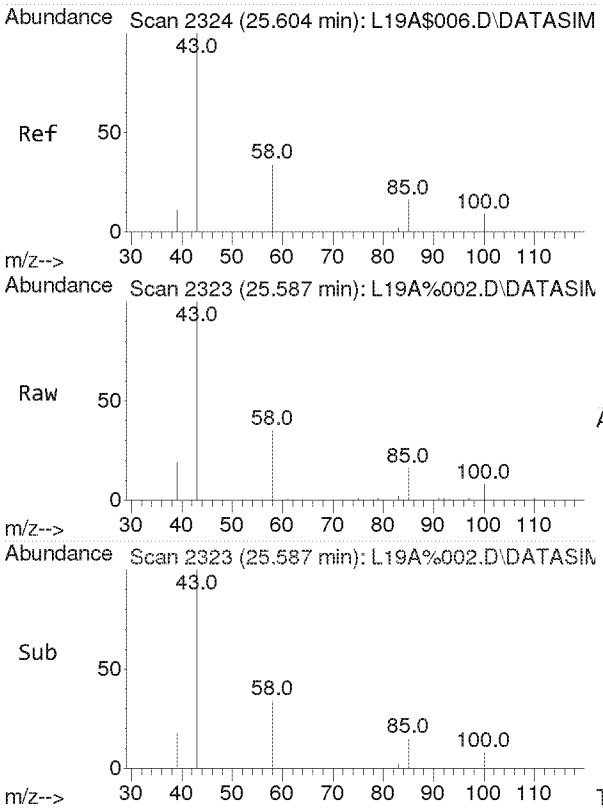


#39
cis-1,3-Dichloropropene
Concen: 2.767 ppbv
RT: 25.511 min Scan# 2319
Delta R.T. -0.017 min
Lab File: L19A%002.D
Acq: 31 Jan 2019 8:34 am

Tgt Ion: 75 Resp: 8194

Ion	Ratio	Lower	Upper
75	100		
39	59.2	49.4	74.2

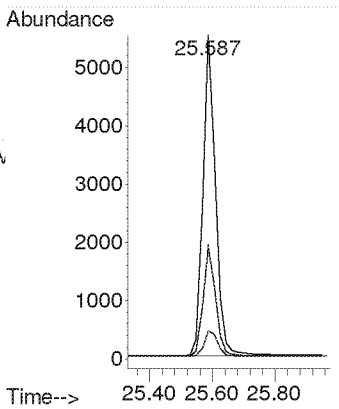




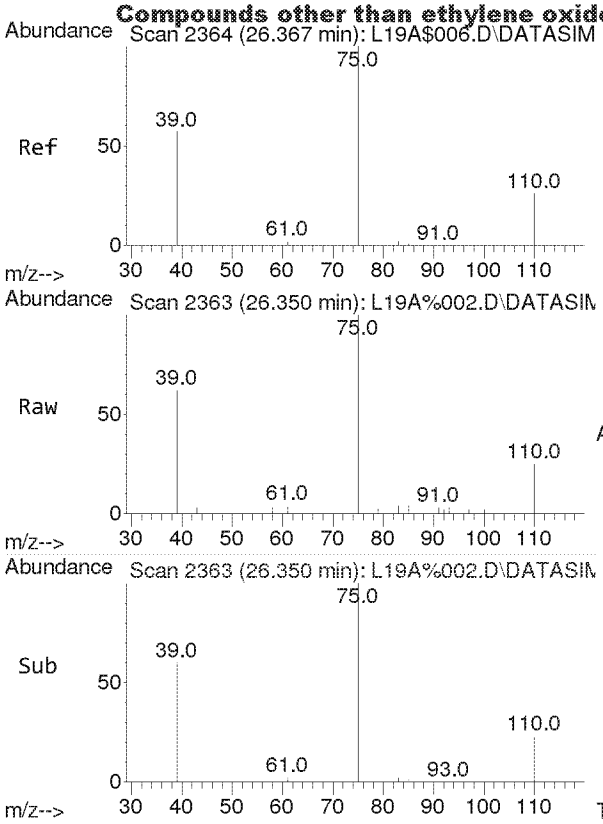
#40
Methyl Isobutyl Ketone
Concen: 2.307 ppbv
RT: 25.587 min Scan# 2323
Delta R.T. -0.017 min
Lab File: L19A%002.D
Acq: 31 Jan 2019 8:34 am

Tgt Ion: 43 Resp: 15271

Ion	Ratio	Lower	Upper
43	100		
58	34.2	27.1	40.7
100	8.5	6.8	10.2



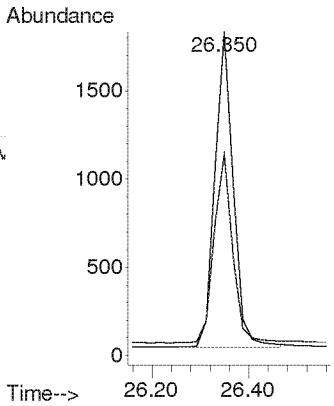
Compounds other than ethylene oxide were not quantitated.

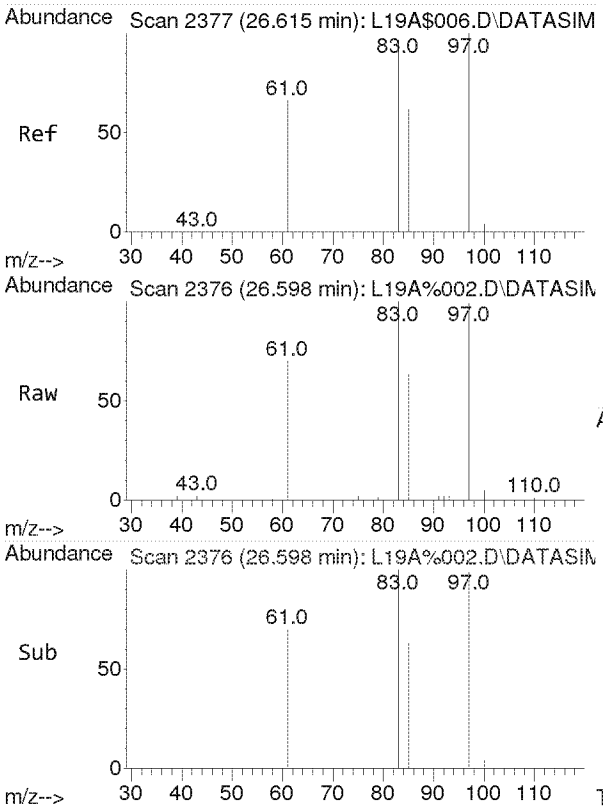


#41
trans-1,3-Dichloropropene
Concen: 2.433 ppbv
RT: 26.350 min Scan# 2363
Delta R.T. -0.017 min
Lab File: L19A%002.D
Acq: 31 Jan 2019 8:34 am

Tgt Ion: 75 Resp: 4696

Ion	Ratio	Lower	Upper
75	100		
39	60.8	48.6	72.8

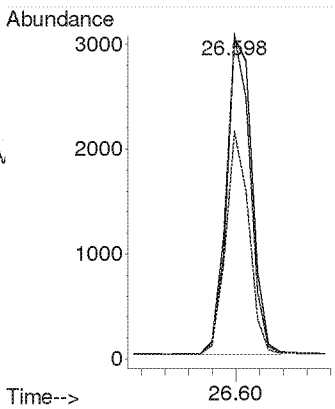




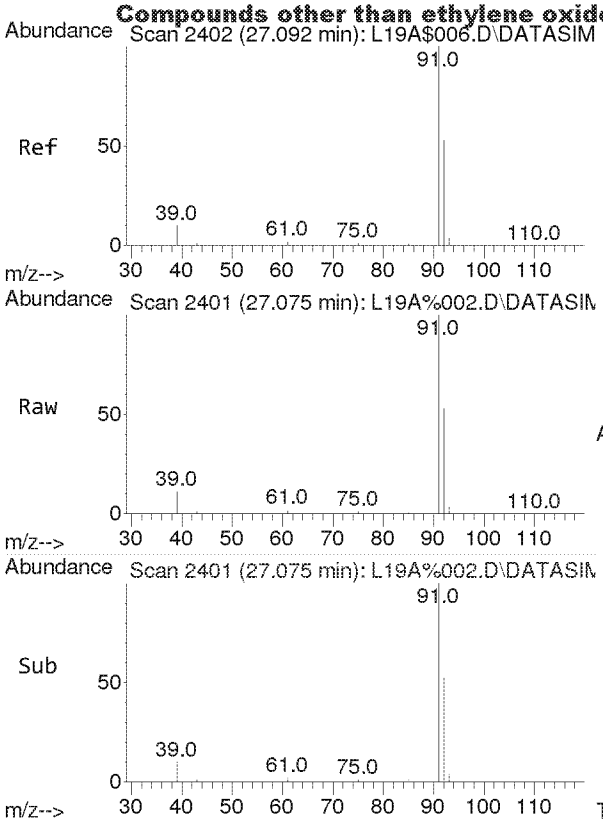
#42
1,1,2-Trichloroethane
Concen: 2.454 ppbv
RT: 26.598 min Scan# 2376
Delta R.T. -0.017 min
Lab File: L19A%002.D
Acq: 31 Jan 2019 8:34 am

Tgt Ion: 97 Resp: 8849

Ion	Ratio	Lower	Upper
97	100		
83	95.5	75.7	113.5
61	64.9	52.5	78.7



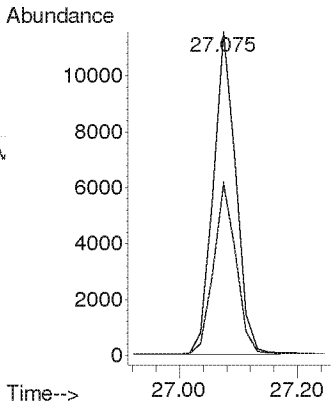
Compounds other than ethylene oxide were not quantitated.

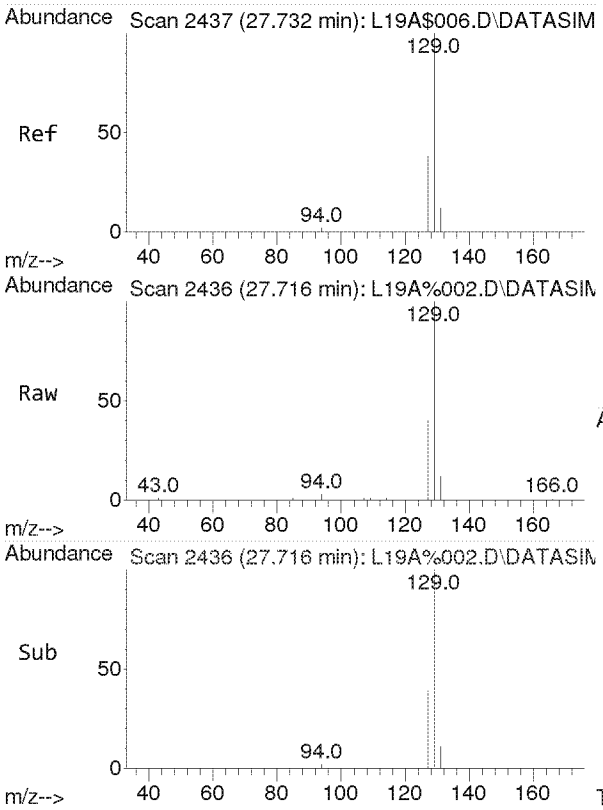


#44
Toluene
Concen: 2.528 ppbv
RT: 27.075 min Scan# 2401
Delta R.T. -0.017 min
Lab File: L19A%002.D
Acq: 31 Jan 2019 8:34 am

Tgt Ion: 91 Resp: 30312

Ion	Ratio	Lower	Upper
91	100		
92	53.0	42.1	63.1

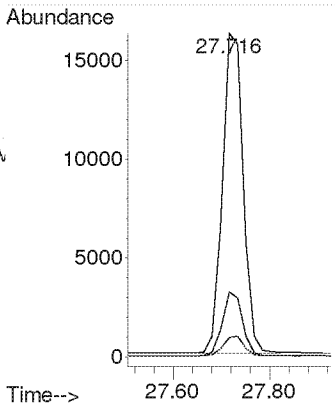




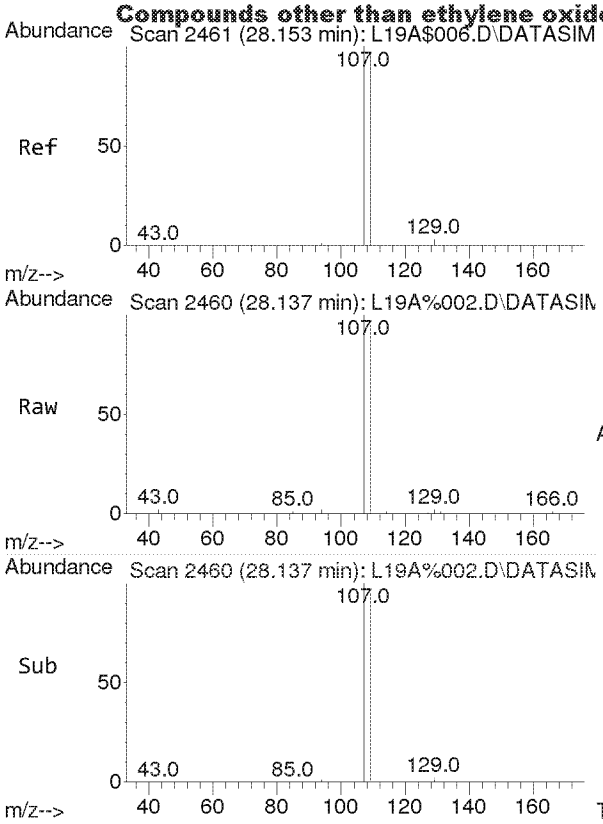
#45
Dibromochloromethane
Concen: 2.430 ppbv
RT: 27.716 min Scan# 2436
Delta R.T. -0.016 min
Lab File: L19A%002.D
Acq: 31 Jan 2019 8:34 am

Tgt Ion:129 Resp: 48045

Ion	Ratio	Lower	Upper
129	100		
127	19.3	15.4	23.0
131	6.0	4.8	7.2



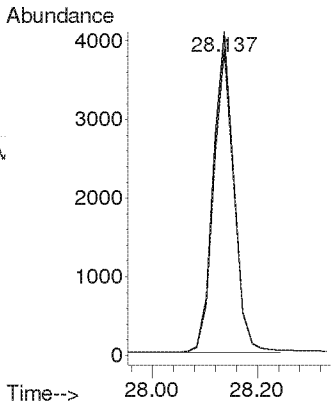
Compounds other than ethylene oxide were not quantitated.

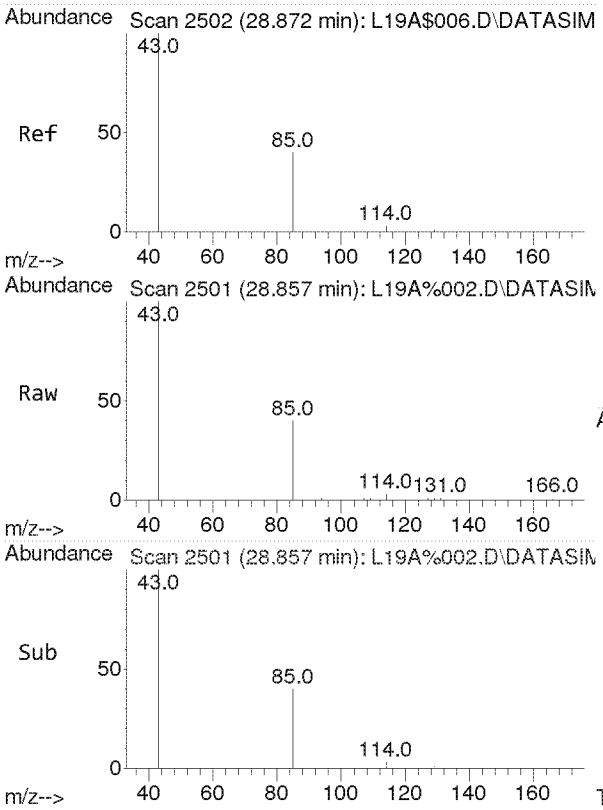


#46
1,2-Dibromoethane
Concen: 2.678 ppbv
RT: 28.137 min Scan# 2460
Delta R.T. -0.016 min
Lab File: L19A%002.D
Acq: 31 Jan 2019 8:34 am

Tgt Ion:107 Resp: 10980

Ion	Ratio	Lower	Upper
107	100		
109	94.5	75.6	113.4

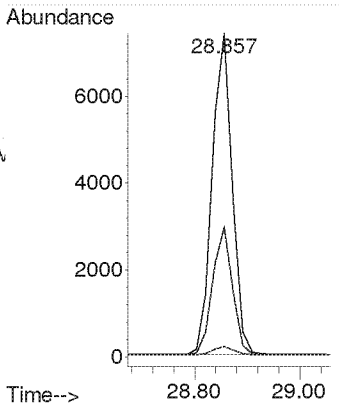




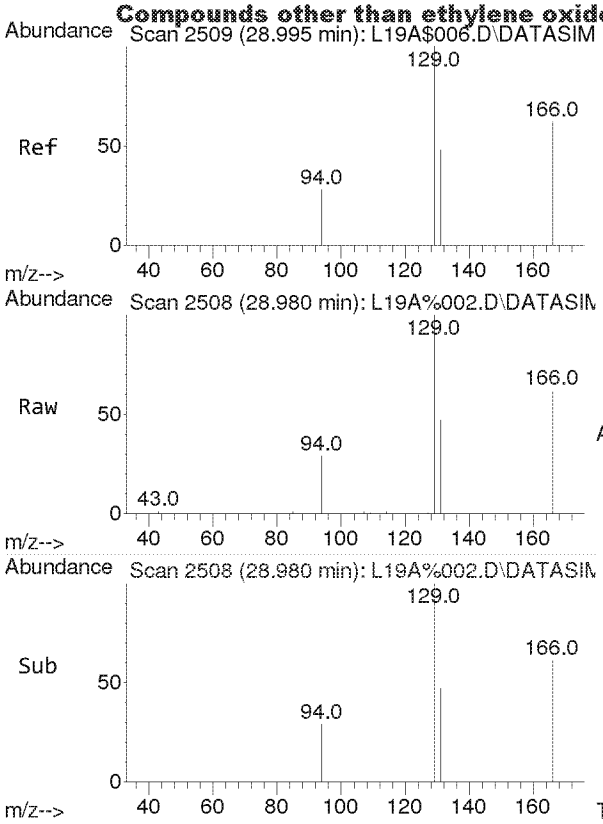
#47
n-Octane
Concen: 2.456 ppbv
RT: 28.857 min Scan# 2501
Delta R.T. -0.016 min
Lab File: L19A%002.D
Acq: 31 Jan 2019 8:34 am

Tgt Ion: 43 Resp: 19335

Ion	Ratio	Lower	Upper
43	100		
85	39.5	31.6	47.4
114	2.6	2.0	3.0



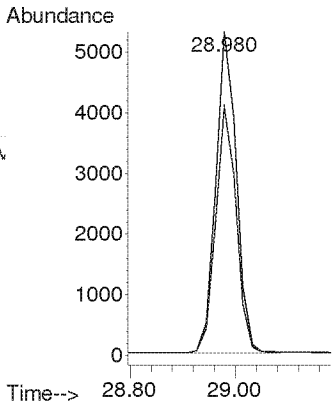
Compounds other than ethylene oxide were not quantitated.

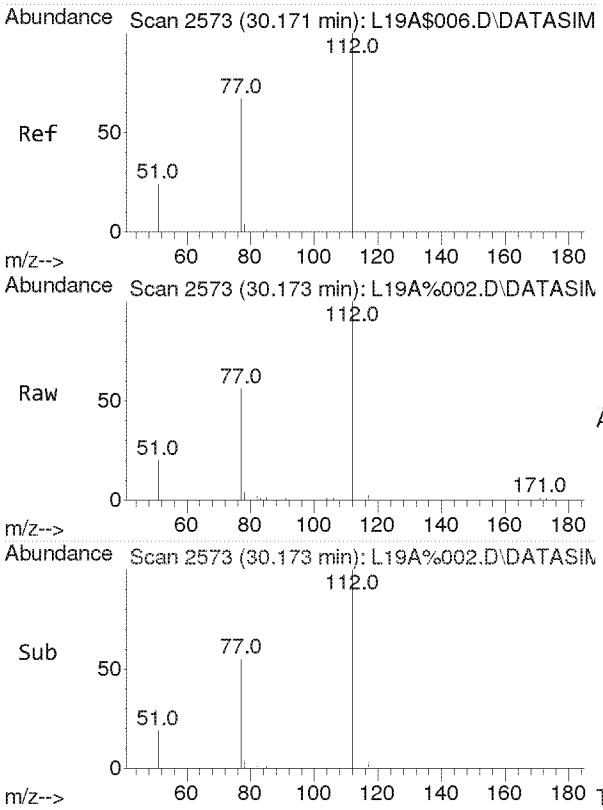


#48
Tetrachloroethylene
Concen: 2.541 ppbv
RT: 28.980 min Scan# 2508
Delta R.T. -0.016 min
Lab File: L19A%002.D
Acq: 31 Jan 2019 8:34 am

Tgt Ion:166 Resp: 14296

Ion	Ratio	Lower	Upper
166	100		
131	76.9	61.6	92.4

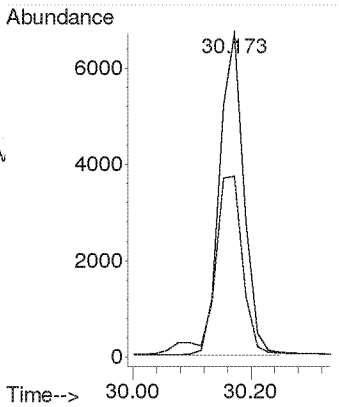




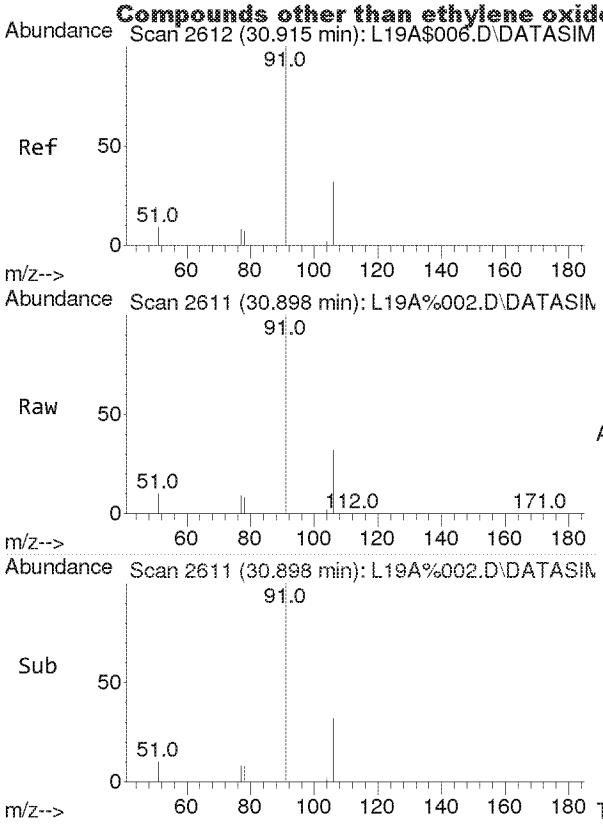
#49
Chlorobenzene
Concen: 2.512 ppbv
RT: 30.173 min Scan# 2573
Delta R.T. 0.002 min
Lab File: L19A%002.D
Acq: 31 Jan 2019 8:34 am

Tgt Ion:112 Resp: 18809

Ion	Ratio	Lower	Upper
112	100		
77	62.7	51.4	77.0



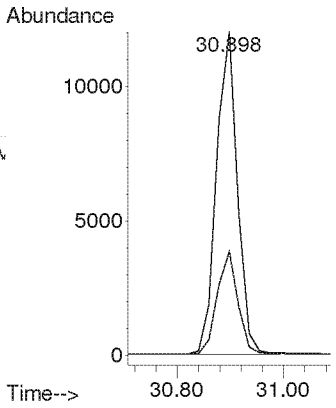
Compounds other than ethylene oxide were not quantitated.

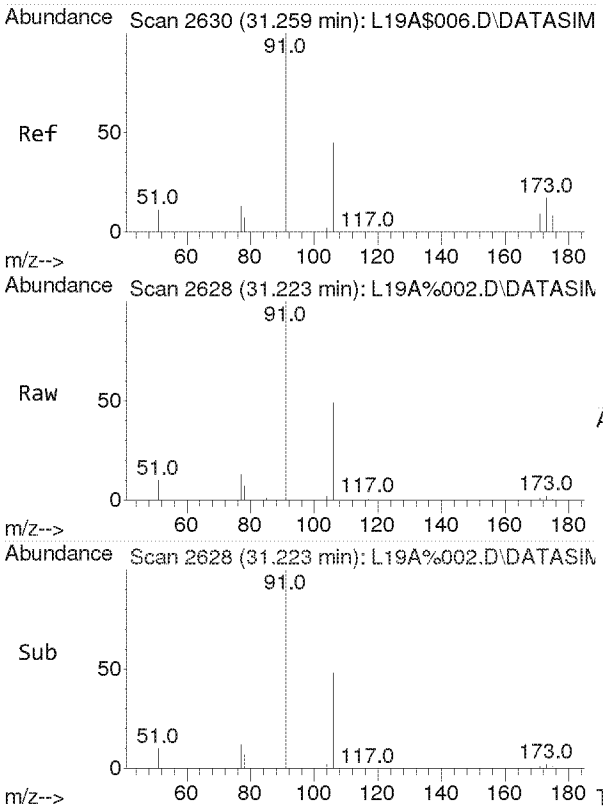


#50
Ethylbenzene
Concen: 2.586 ppbv
RT: 30.898 min Scan# 2611
Delta R.T. -0.017 min
Lab File: L19A%002.D
Acq: 31 Jan 2019 8:34 am

Tgt Ion: 91 Resp: 32909

Ion	Ratio	Lower	Upper
91	100		
106	31.4	25.1	37.7

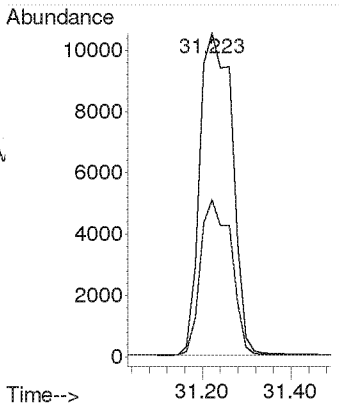




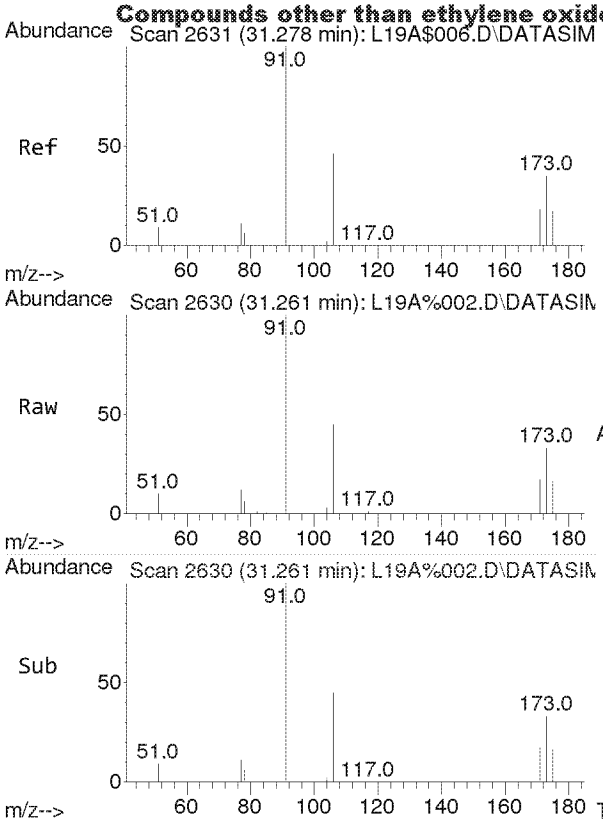
#51
m,p-Xylene
Concen: 4.983 ppbv
RT: 31.223 min Scan# 2628
Delta R.T. -0.036 min
Lab File: L19A%002.D
Acq: 31 Jan 2019 8:34 am

Tgt Ion: 91 Resp: 53009

Ion	Ratio	Lower	Upper
91	100		
106	45.9	36.6	55.0



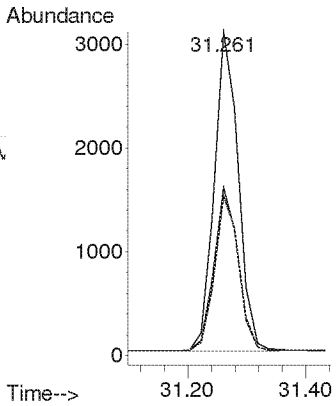
Compounds other than ethylene oxide were not quantitated.

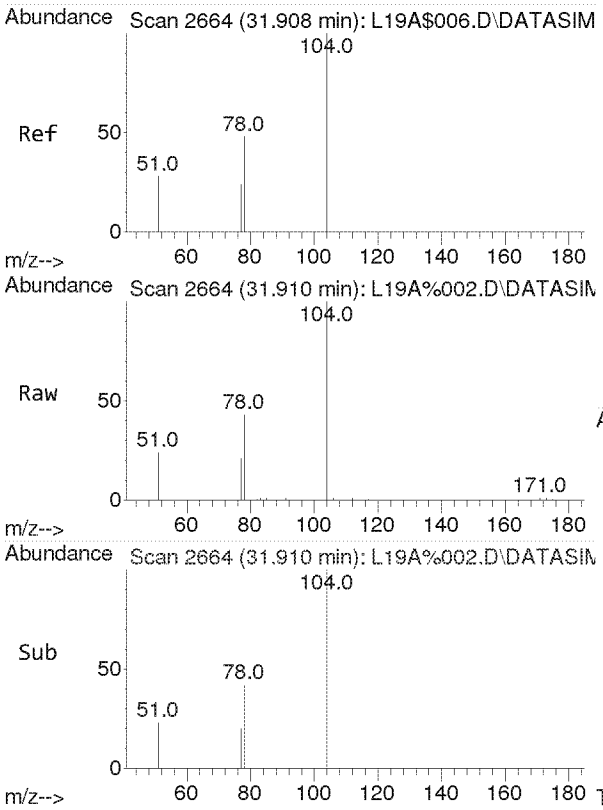


#52
Bromoform
Concen: 2.497 ppbv
RT: 31.261 min Scan# 2630
Delta R.T. -0.017 min
Lab File: L19A%002.D
Acq: 31 Jan 2019 8:34 am

Tgt Ion:173 Resp: 8671

Ion	Ratio	Lower	Upper
173	100		
171	51.0	40.9	61.3
175	49.1	39.0	58.6

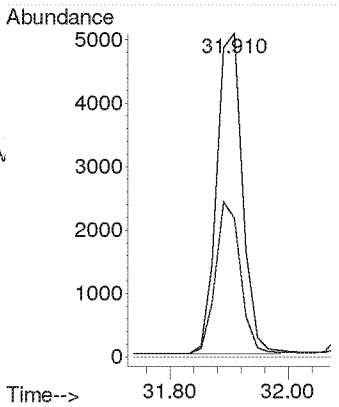




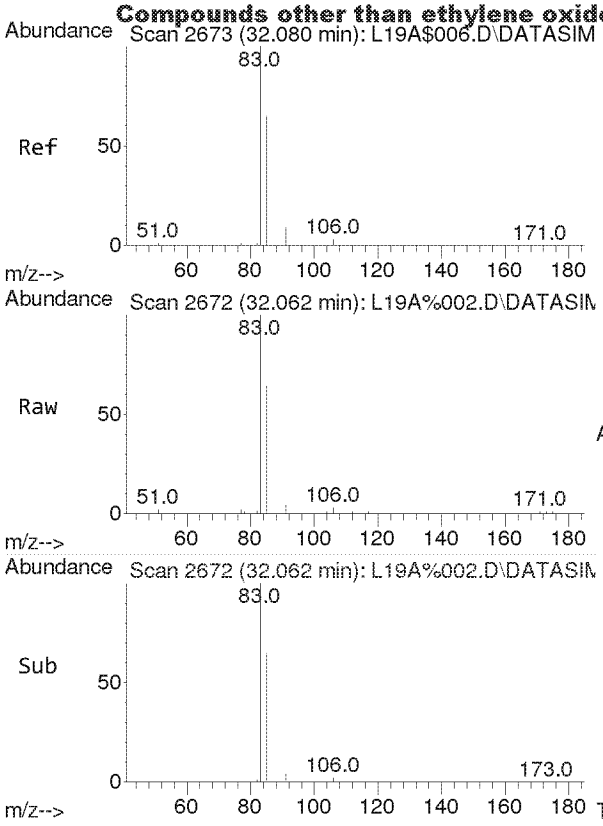
#53
Styrene
Concen: 2.525 ppbv
RT: 31.910 min Scan# 2664
Delta R.T. 0.002 min
Lab File: L19A%002.D
Acq: 31 Jan 2019 8:34 am

Tgt Ion:104 Resp: 15352

Ion	Ratio	Lower	Upper
104	100		
78	45.8	36.7	55.1
103	0.0	0.0	0.0



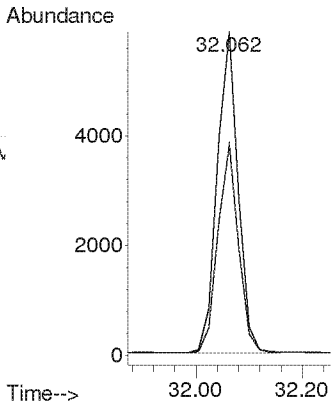
Compounds other than ethylene oxide were not quantitated.

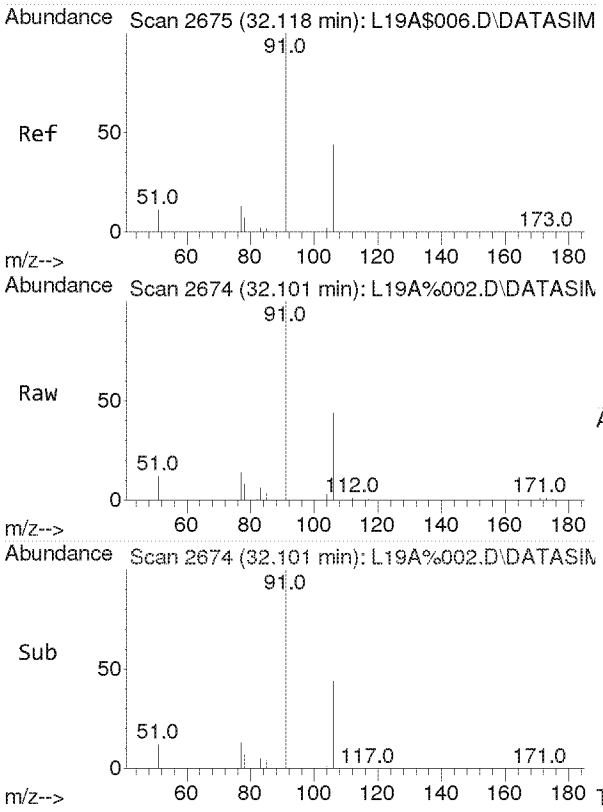


#54
1,1,2,2-Tetrachloroethane
Concen: 2.507 ppbv
RT: 32.062 min Scan# 2672
Delta R.T. -0.017 min
Lab File: L19A%002.D
Acq: 31 Jan 2019 8:34 am

Tgt Ion: 83 Resp: 16010

Ion	Ratio	Lower	Upper
83	100		
85	64.4	51.5	77.3

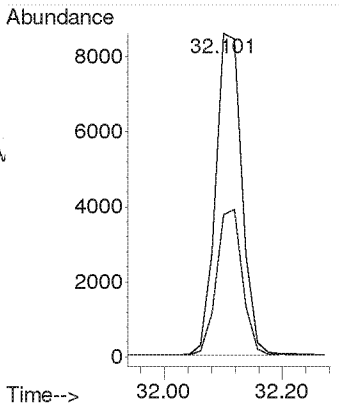




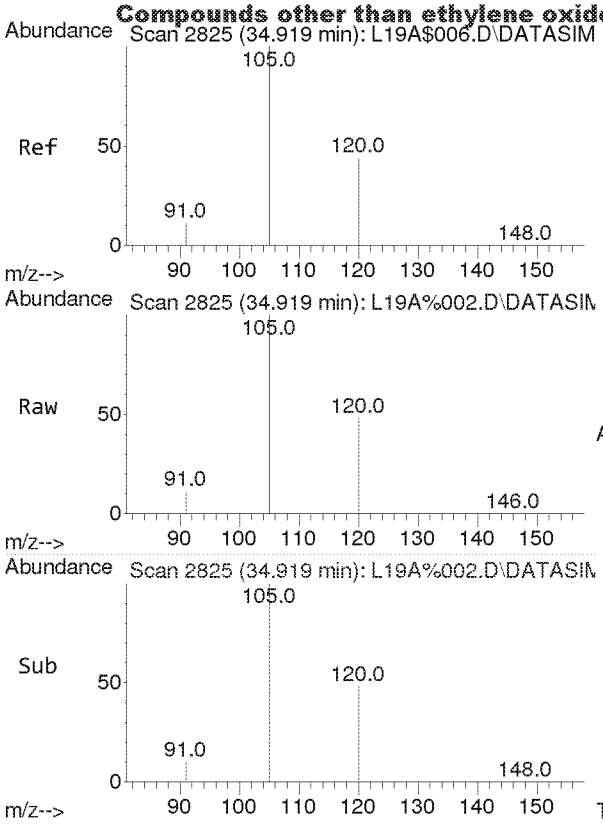
#55
o-Xylene
Concen: 2.499 ppbv
RT: 32.101 min Scan# 2674
Delta R.T. -0.017 min
Lab File: L19A%002.D
Acq: 31 Jan 2019 8:34 am

Tgt Ion: 91 Resp: 26321

Ion	Ratio	Lower	Upper
91	100		
106	44.8	35.4	53.2



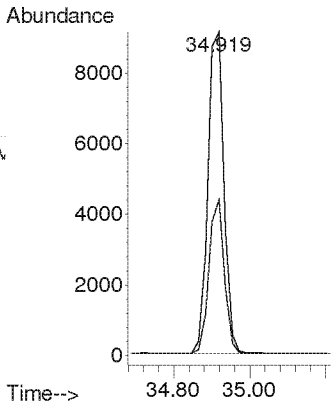
Compounds other than ethylene oxide were not quantitated.

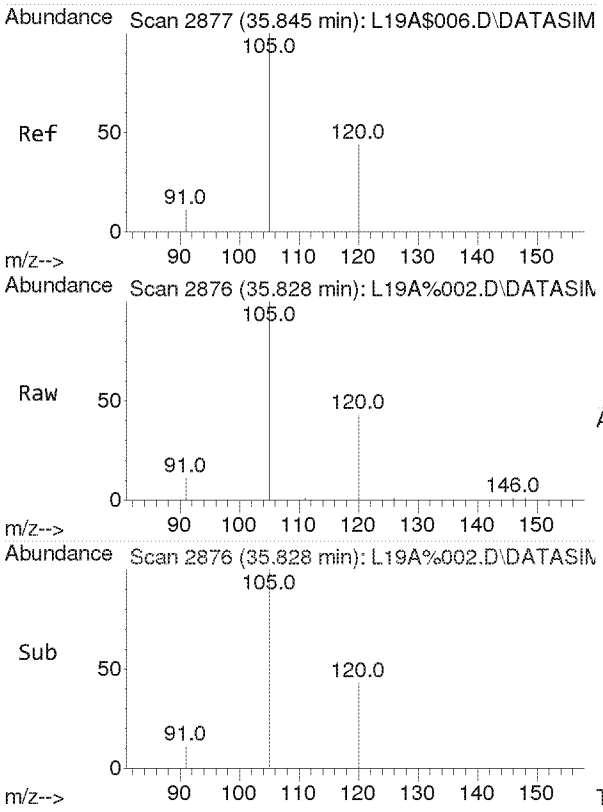


#56
1,3,5-Trimethylbenzene
Concen: 2.407 ppbv
RT: 34.919 min Scan# 2825
Delta R.T. 0.001 min
Lab File: L19A%002.D
Acq: 31 Jan 2019 8:34 am

Tgt Ion:105 Resp: 26964

Ion	Ratio	Lower	Upper
105	100		
120	45.9	36.6	54.8

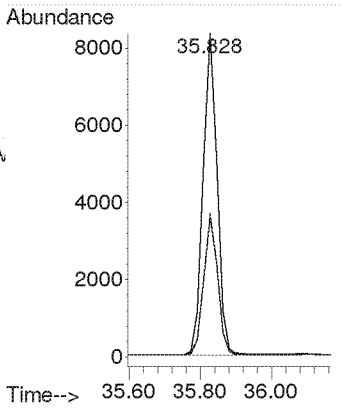




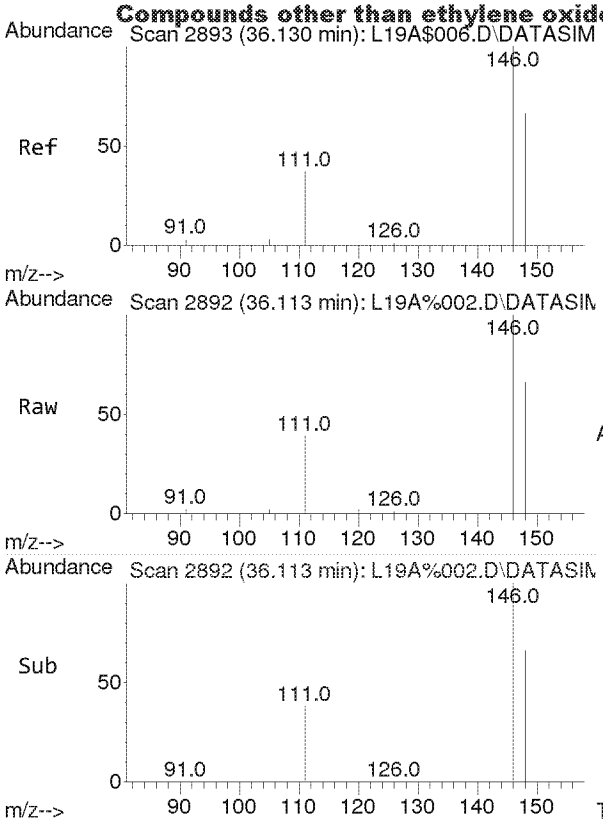
#57
1,2,4-Trimethylbenzene
Concen: 2.314 ppbv
RT: 35.828 min Scan# 2876
Delta R.T. -0.017 min
Lab File: L19A%002.D
Acq: 31 Jan 2019 8:34 am

Tgt Ion:105 Resp: 22641

Ion	Ratio	Lower	Upper
105	100		
120	43.2	34.9	52.3



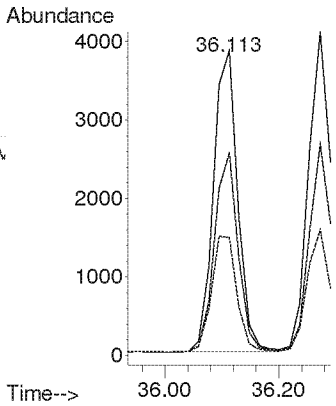
Compounds other than ethylene oxide were not quantitated.

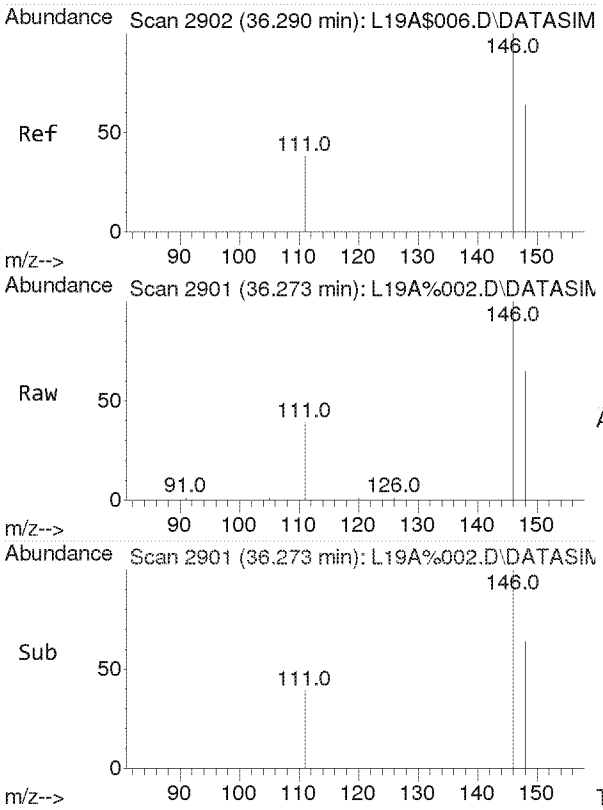


#58
m-Dichlorobenzene
Concen: 2.208 ppbv
RT: 36.113 min Scan# 2892
Delta R.T. -0.017 min
Lab File: L19A%002.D
Acq: 31 Jan 2019 8:34 am

Tgt Ion:146 Resp: 11385

Ion	Ratio	Lower	Upper
146	100		
148	64.4	51.2	76.8
111	40.2	32.4	48.6

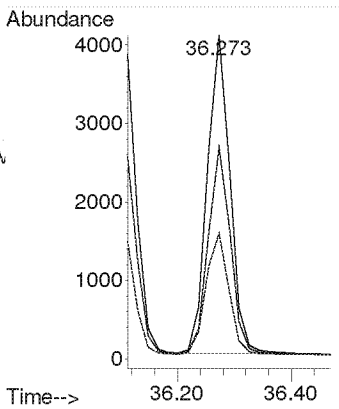




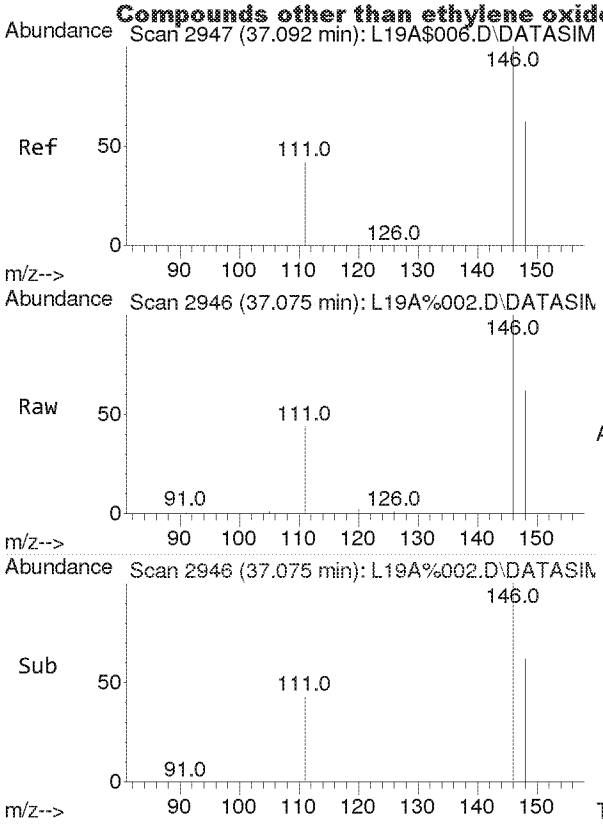
#59
p-Dichlorobenzene
Concen: 2.637 ppbv
RT: 36.273 min Scan# 2901
Delta R.T. -0.017 min
Lab File: L19A%002.D
Acq: 31 Jan 2019 8:34 am

Tgt Ion:146 Resp: 11088

Ion	Ratio	Lower	Upper
146	100		
148	64.1	51.3	76.9
111	38.5	31.5	47.3



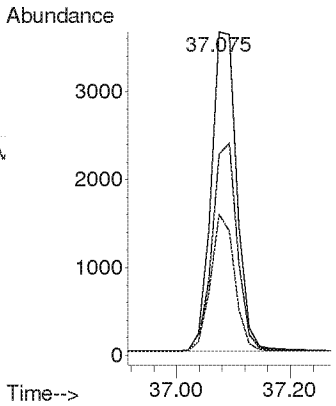
Compounds other than ethylene oxide were not quantitated.

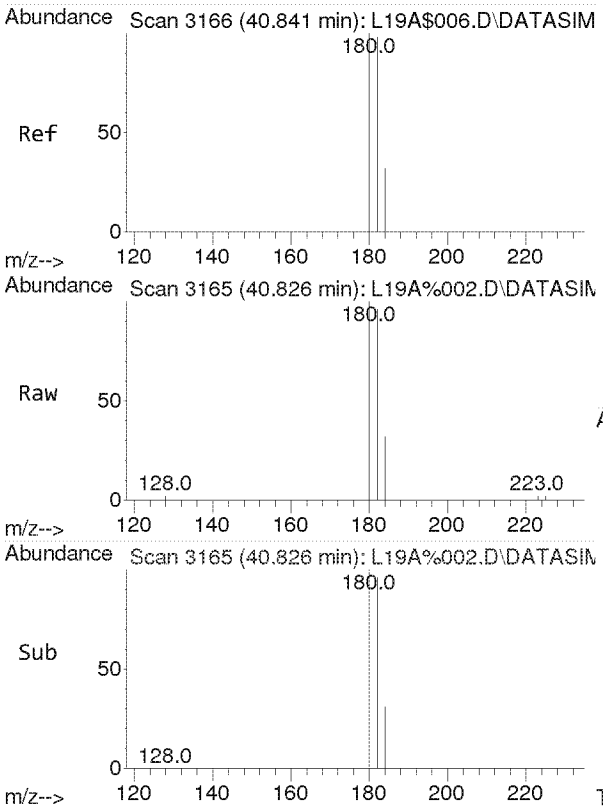


#60
o-Dichlorobenzene
Concen: 2.446 ppbv
RT: 37.075 min Scan# 2946
Delta R.T. -0.017 min
Lab File: L19A%002.D
Acq: 31 Jan 2019 8:34 am

Tgt Ion:146 Resp: 11339

Ion	Ratio	Lower	Upper
146	100		
148	63.9	51.2	76.8
111	40.6	32.7	49.1

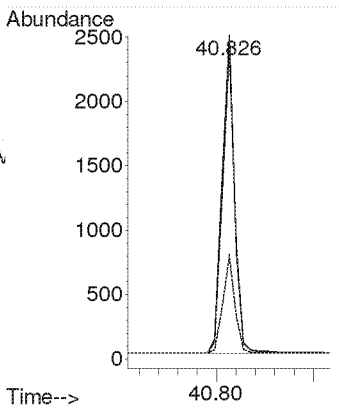




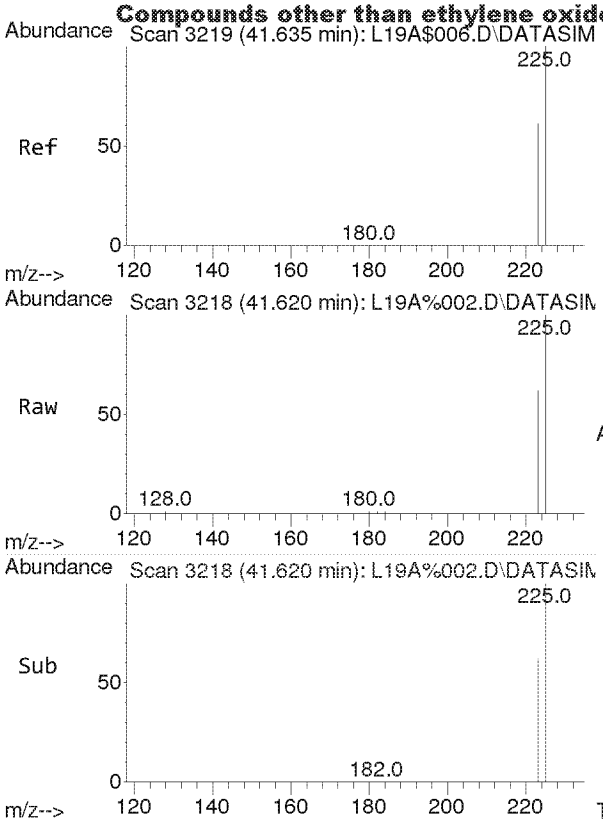
#61
1,2,4-Trichlorobenzene
Concen: 2.324 ppbv
RT: 40.826 min Scan# 3165
Delta R.T. -0.014 min
Lab File: L19A%002.D
Acq: 31 Jan 2019 8:34 am

Tgt Ion:180 Resp: 4317

Ion	Ratio	Lower	Upper
180	100		
182	95.6	76.9	115.3
184	30.2	24.6	37.0



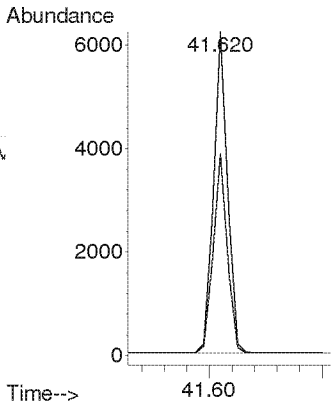
Compounds other than ethylene oxide were not quantitated.



#62
Hexachloro-1,3-butadiene
Concen: 2.189 ppbv
RT: 41.620 min Scan# 3218
Delta R.T. -0.014 min
Lab File: L19A%002.D
Acq: 31 Jan 2019 8:34 am

Tgt Ion:225 Resp: 10499

Ion	Ratio	Lower	Upper
225	100		
223	62.3	49.6	74.4



Compounds other than ethylene oxide were not quantitated.

TO-15 Method Blank and
Annual Canister Certification Blank

Analyst: [illegible] Date: 2-6-19
Reviewer: RMB Date: 2/13/19

Data File Name	L19A%005.D
Operator	MAH
Acq. Method File	9010007.M
Sample Name	B9A3106-BLK1
Misc Info	80 ML 8L13001

#	Name	Target Response	Amount (ppbv)	PASS*		Blank Criteria
1)	IS-Hexane-d14	39780		NA		NA
2)	Acetylene	0	0.000	Y		0.118
3)	Propylene	57	0.014	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	217	0.016	Y	MAX	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	98502		NA		NA
29)	1,1,1-Trichloroethane	0	0.000	Y		0.041
30)	Benzene	61	0.006	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	0	0.000	Y		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	68242		NA		NA
43)	Toluene	48	0.004	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		0.044
48)	Chlorobenzene	0	0.000	Y		0.058
49)	Ethylbenzene	82	0.007	Y		0.077
50)	m,p-Xylene	47	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	90	0.009	Y		0.080
55)	1,3,5-Trimethylbenzene	0	0.000	Y		0.102
56)	1,2,4-Trimethylbenzene	0	0.000	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

Compounds other than ethylene oxide were not quantitated.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\L19A%\
Data File : L19A%005.D
Acq On : 31 Jan 2019 12:29 pm (#1); 31-Jan-19, 12:24:12 (#2)
Operator : MAH
Sample : B9A3106-BLK1 (Sig #1); -BLK1 (Sig #2)
Misc : 80 ML 8L13001
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 01 11:25:11 2019
Quant Method : C:\msdchem\1\METHODS\9010007.M
Quant Title : TO-15 by Selective Ion Analysis
QLast Update : Thu Jan 31 06:35:20 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) IS-Hexane-d14	19.990	66	39780	4.7700 ppbv	0.00
29) IS-1,4-Difluorobenzene	23.128	114	98502	4.9900 ppbv	-0.02
43) IS-Chlorobenzene-d5	30.094	117	68242	4.7400 ppbv	0.00

System Monitoring Compounds

Target Compounds					Qvalue
2) Acetylene	0.000	26	0	N.D.	
3) Propylene	7.823	41	57	0.0140 ppbv	95
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.	
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	217	0.0162 ppbv #	75
19) Trichlorotrifluoroethane	0.000	101	0	N.D. 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	95
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	61	0.0061 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	0.000	41	0	N.D.	
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	27.073	91	48	0.0044 ppbv #	26
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	30.896	91	82	0.0070 ppbv #	43

Compounds other than ethylene oxide were not quantitated.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\L19A%\
Data File : L19A%005.D
Acq On : 31 Jan 2019 12:29 pm (#1); 31-Jan-19, 12:24:12 (#2)
Operator : MAH
Sample : B9A3106-BLK1 (Sig #1); -BLK1 (Sig #2)
Misc : 80 ML 8L13001
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 01 11:25:11 2019
Quant Method : C:\msdchem\1\METHODS\9010007.M
Quant Title : TO-15 by Selective Ion Analysis
QLast Update : Thu Jan 31 06:35:20 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
51) m,p-Xylene	31.221	91	47	0.0048 ppbv #	31
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	32.118	91	90	0.0093 ppbv	96
56) 1,3,5-Trimethylbenzene	0.000	105	0	N.D.	
57) 1,2,4-Trimethylbenzene	0.000	105	0	N.D.	
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.	

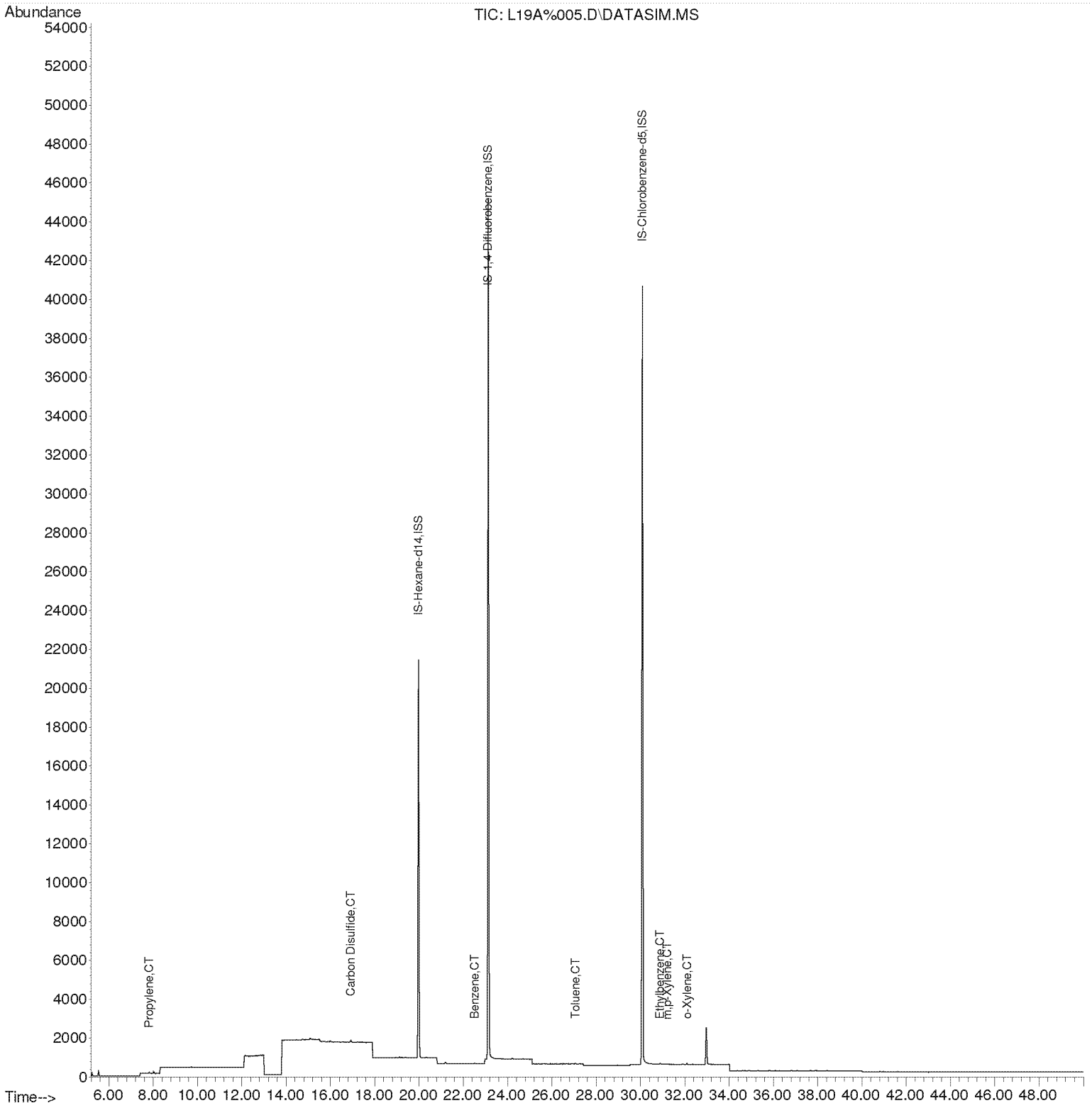
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

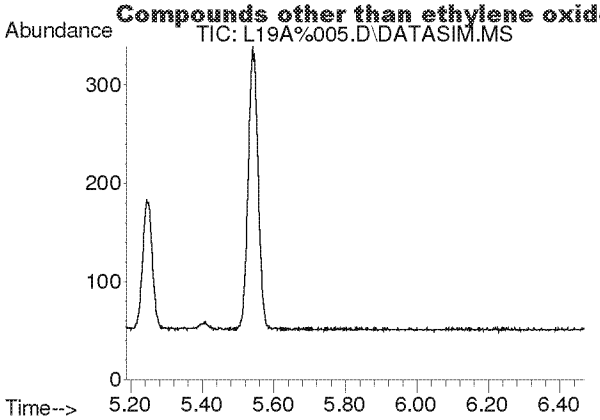
Compounds other than ethylene oxide were not quantitated.

Data Path : Y:\MASS SPEC 1 DATA\L19A%\
Data File : L19A%005.D
Acq On : 31 Jan 2019 12:29 pm
Operator : MAH
Sample : B9A3106-BLK1
Misc : 80 ML 8L13001
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 01 11:25:04 2019
Quant Method : C:\msdchem\1\METHODS\9010007.M
Quant Title : TO-15 by Selective Ion Analysis
QLast Update : Thu Jan 31 06:35:20 2019
Response via : Initial Calibration



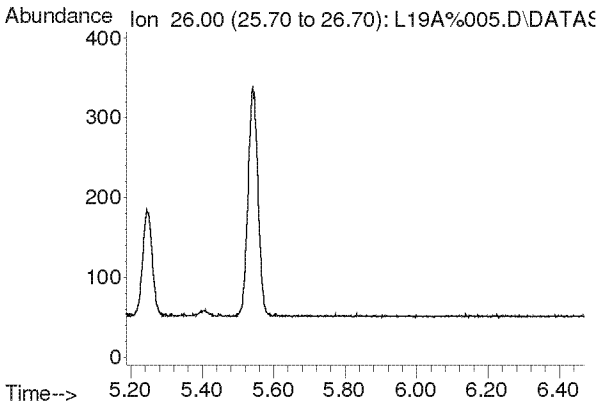
Compounds other than ethylene oxide were not quantitated.

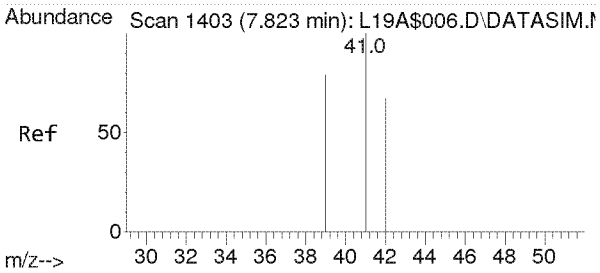


#2
Acetylene
Concen: N.D.
Expected RT: 5.40 min

Lab File: L19A%005.D
Acq: 31 Jan 2019 12:29 pm

Tgt Ion: 26

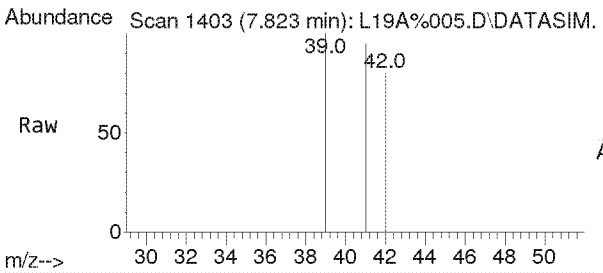


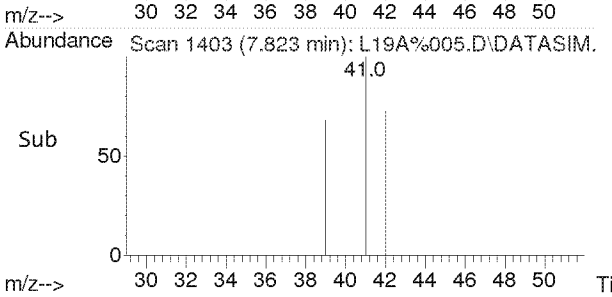


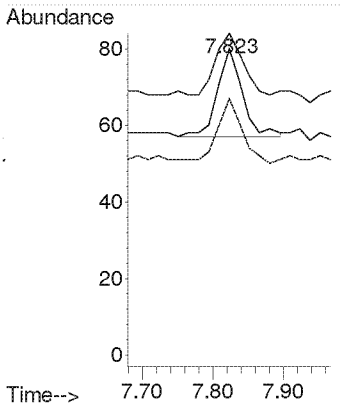
#3
Propylene
Concen: 0.014 ppbv
RT: 7.823 min Scan# 1403
Delta R.T. -0.000 min
Lab File: L19A%005.D
Acq: 31 Jan 2019 12:29 pm

Tgt Ion: 41 Resp: 57

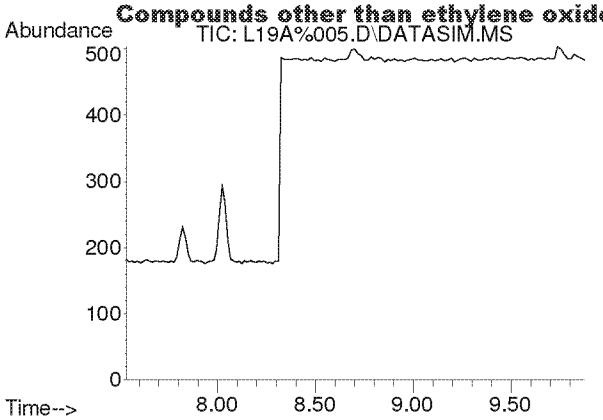
Ion	Ratio	Lower	Upper
41	100		
39	77.2	63.4	95.2
42	71.9	52.9	79.3







Compounds other than ethylene oxide were not quantitated.

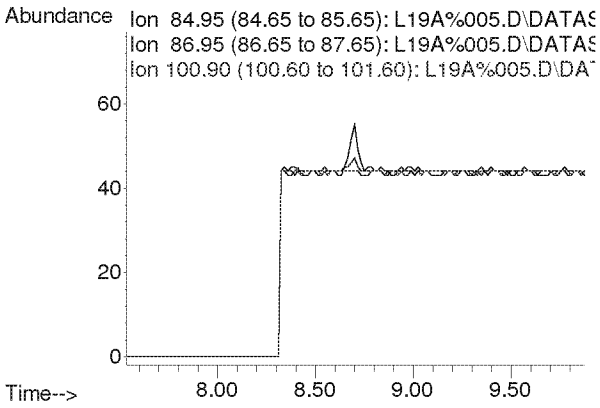


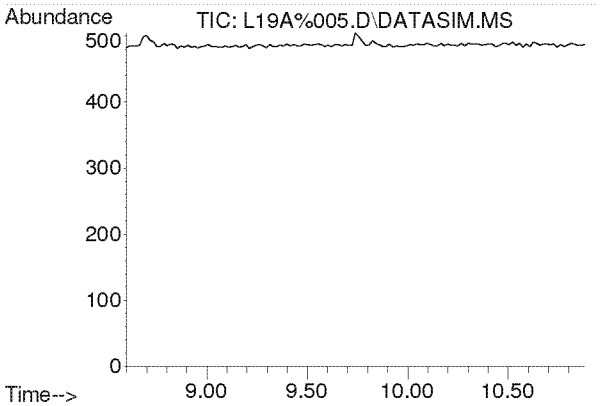
#4
Dichlorodifluoromethane
Concen: N.D.
Expected RT: 8.68 min

Lab File: L19A%005.D
Acq: 31 Jan 2019 12:29 pm

Tgt Ion: 85

Sig	Exp Ratio
85	100
87	32.4
101	9.0



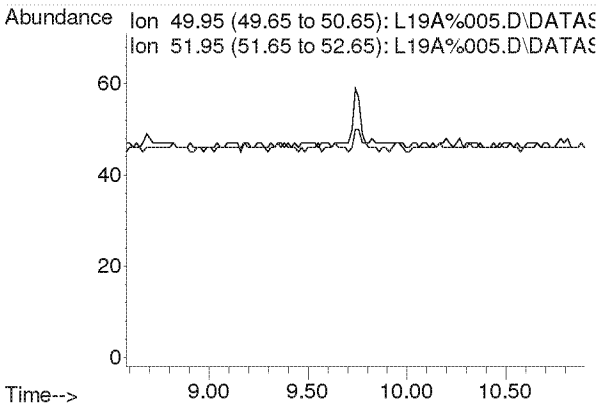


#5
Chloromethane
Concen: N.D.
Expected RT: 9.74 min

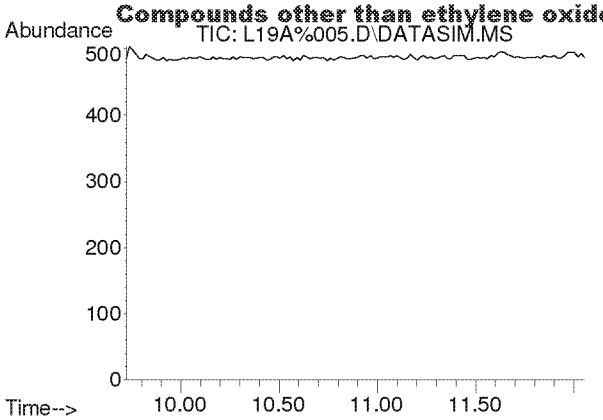
Lab File: L19A%005.D
Acq: 31 Jan 2019 12:29 pm

Tgt Ion: 50

Sig	Exp Ratio
50	100
52	32.4



Compounds other than ethylene oxide were not quantitated.

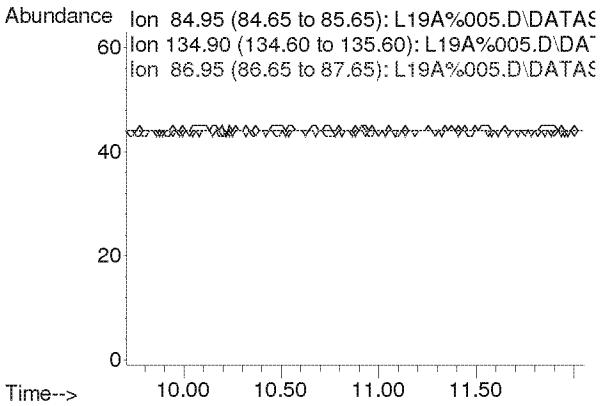


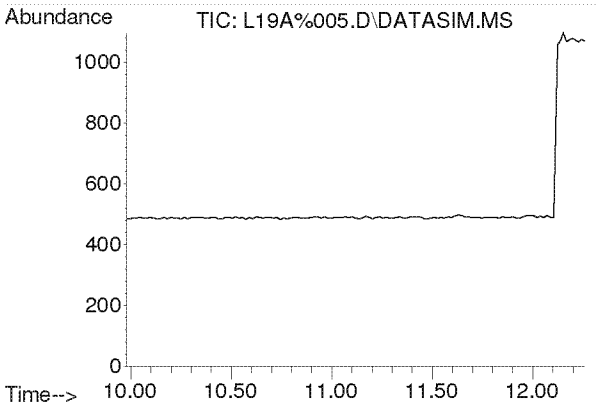
#6
Dichlorotetrafluoroethane
Concen: N.D.
Expected RT: 10.86 min

Lab File: L19A%005.D
Acq: 31 Jan 2019 12:29 pm

Tgt Ion: 85

Sig	Exp Ratio
85	100
135	78.4
87	32.1



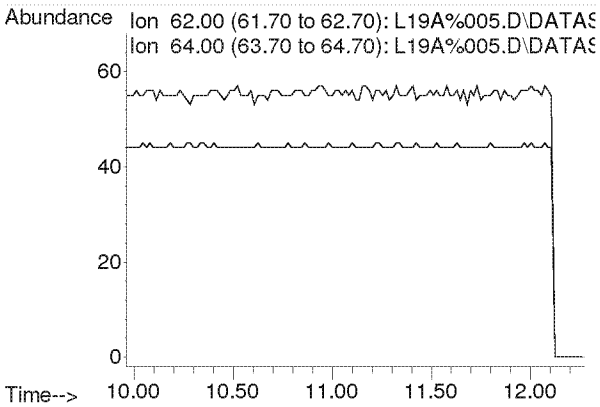


#7
Vinyl Chloride
Concen: N.D.
Expected RT: 11.12 min

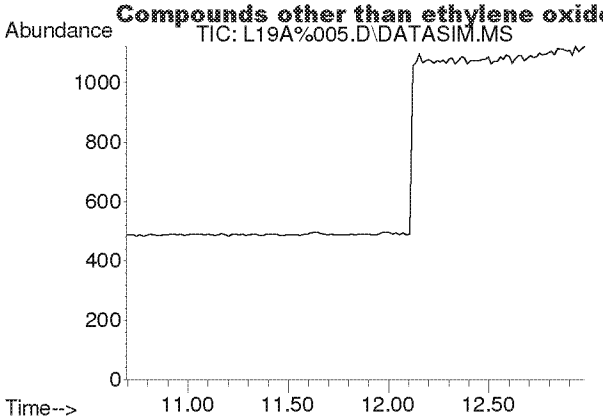
Lab File: L19A%005.D
Acq: 31 Jan 2019 12:29 pm

Tgt Ion: 62

Sig	Exp Ratio
62	100
64	31.9



Compounds other than ethylene oxide were not quantitated.

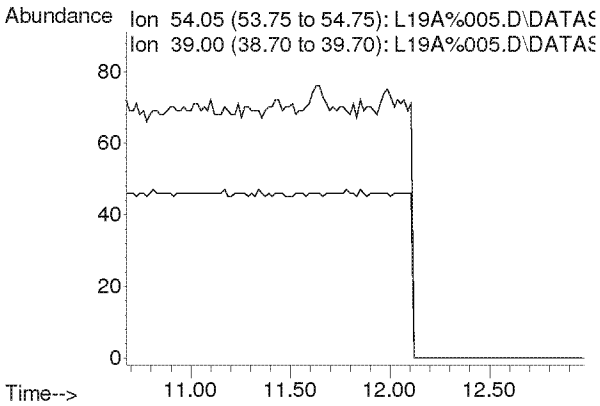


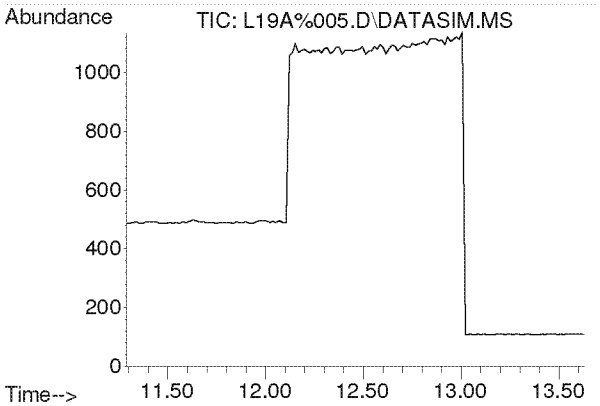
#8
1,3-Butadiene
Concen: N.D.
Expected RT: 11.78 min

Lab File: L19A%005.D
Acq: 31 Jan 2019 12:29 pm

Tgt Ion: 54

Sig	Exp Ratio
54	100
39	107.0



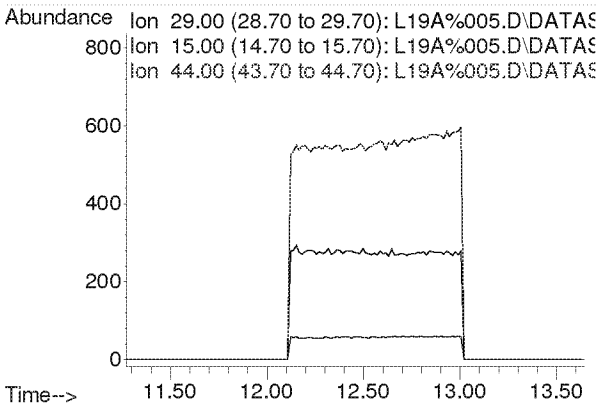


#9
Ethylene oxide
Concen: N.D.
Expected RT: 12.39 min

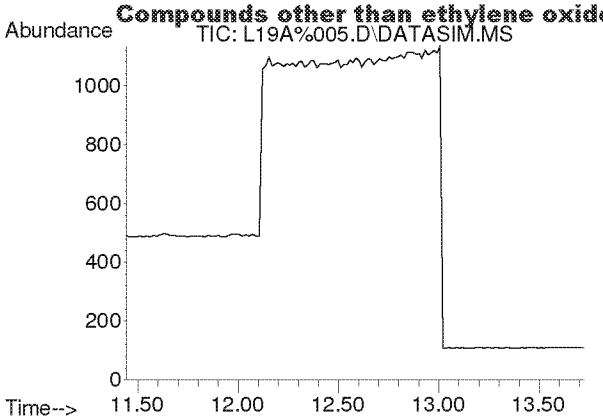
Lab File: L19A%005.D
Acq: 31 Jan 2019 12:29 pm

Tgt Ion: 29

Sig	Exp Ratio
29	100
15	20.3
44	78.6



Compounds other than ethylene oxide were not quantitated.

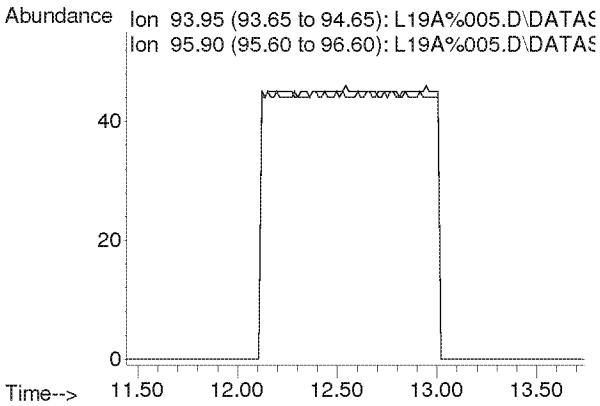


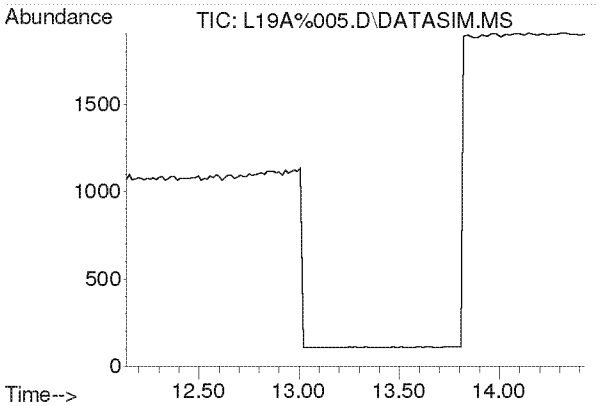
#10
Bromomethane
Concen: N.D.
Expected RT: 12.59 min

Lab File: L19A%005.D
Acq: 31 Jan 2019 12:29 pm

Tgt Ion: 94

Sig	Exp Ratio
94	100
96	94.6



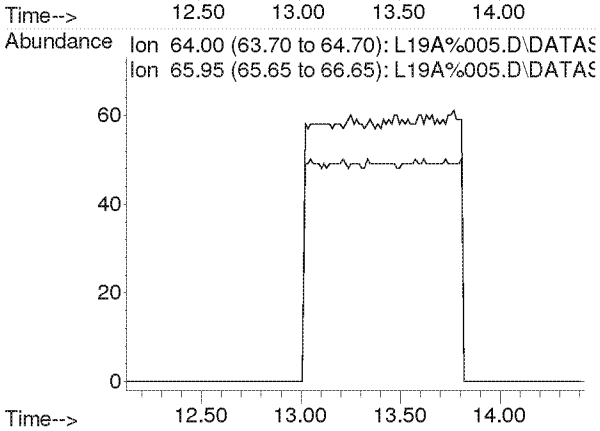


#11
Chloroethane
Concen: N.D.
Expected RT: 13.28 min

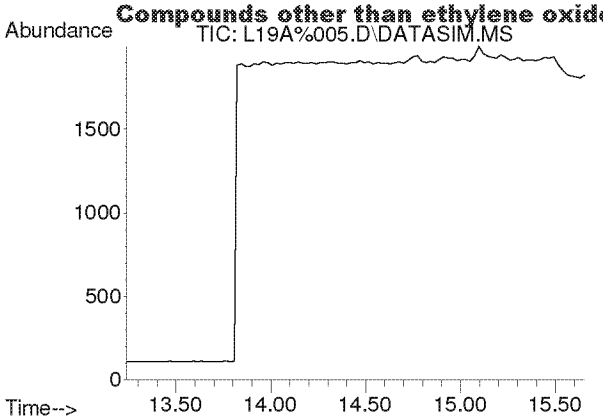
Lab File: L19A%005.D
Acq: 31 Jan 2019 12:29 pm

Tgt Ion: 64

Sig	Exp Ratio
64	100
66	32.2



Compounds other than ethylene oxide were not quantitated.

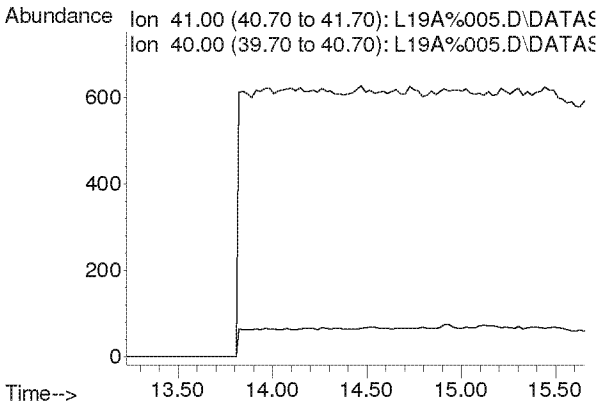


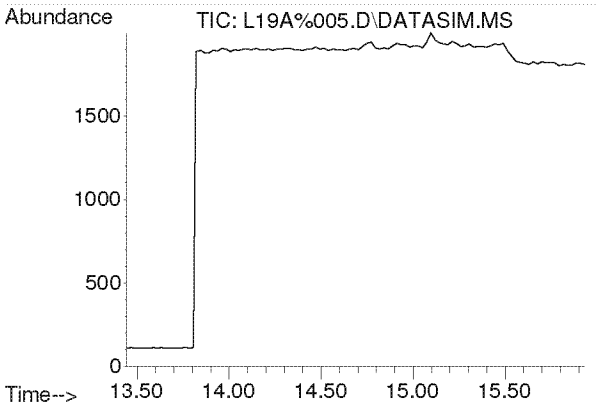
#12
Acetonitrile
Concen: N.D.
Expected RT: 14.36 min

Lab File: L19A%005.D
Acq: 31 Jan 2019 12:29 pm

Tgt Ion: 41

Sig	Exp Ratio
41	100
40	54.3



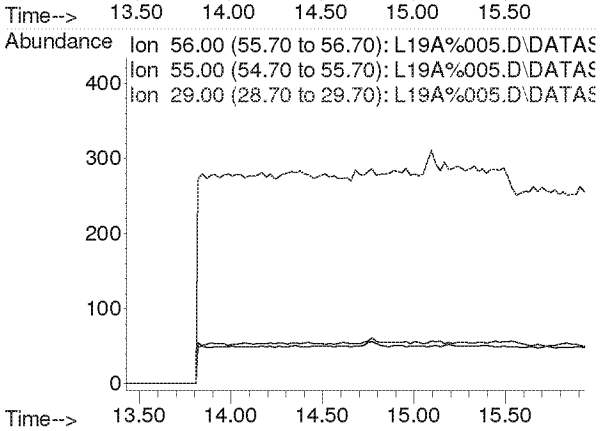


#13
Acrolein
Concen: N.D.
Expected RT: 14.63 min

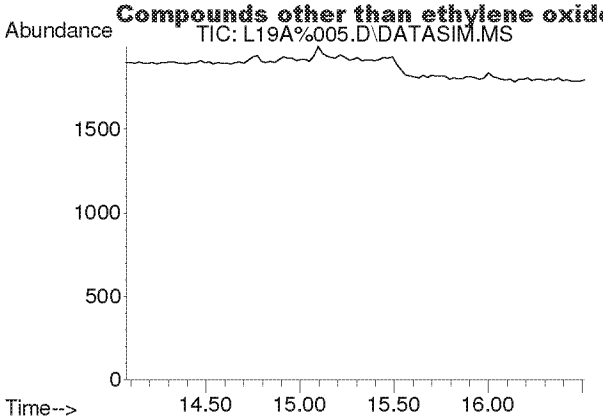
Lab File: L19A%005.D
Acq: 31 Jan 2019 12:29 pm

Tgt Ion: 56

Sig	Exp Ratio
56	100
55	77.4
29	57.5



Compounds other than ethylene oxide were not quantitated.

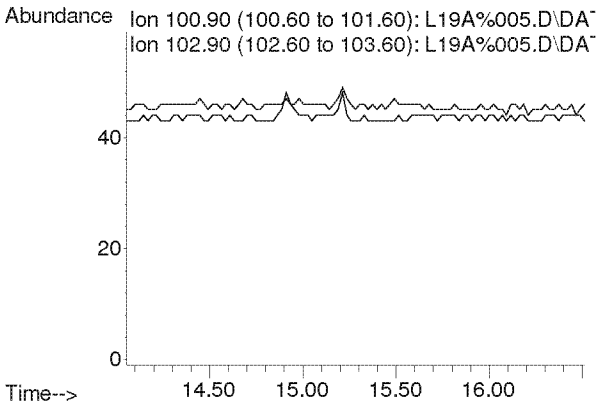


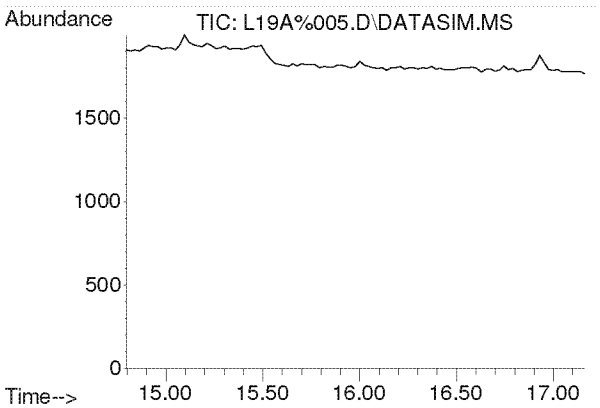
#14
Trichlorofluoromethane
Concen: N.D.
Expected RT: 15.21 min

Lab File: L19A%005.D
Acq: 31 Jan 2019 12:29 pm

Tgt Ion: 101

Sig	Exp Ratio
101	100
103	64.5



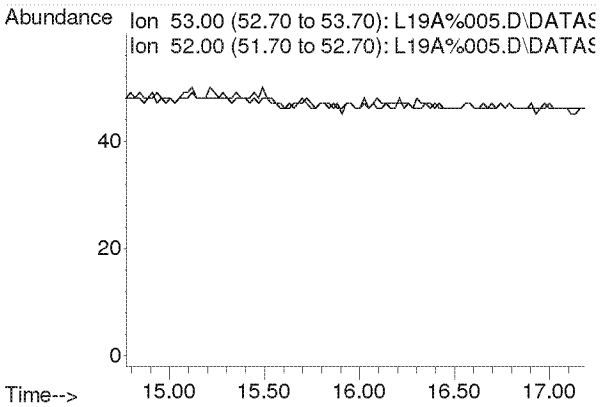


#15
Acrylonitrile
Concen: N.D.
Expected RT: 15.93 min

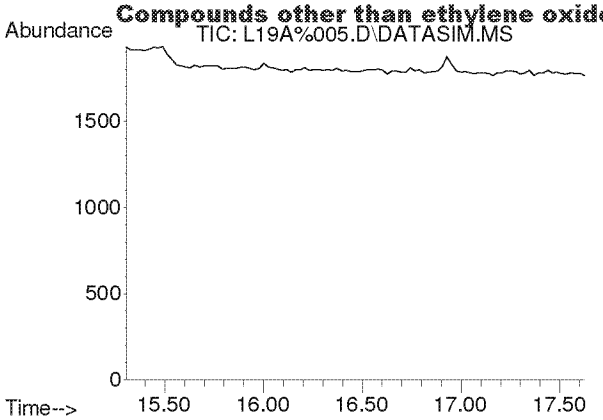
Lab File: L19A%005.D
Acq: 31 Jan 2019 12:29 pm

Tgt Ion: 53

Sig	Exp Ratio
53	100
52	87.9



Compounds other than ethylene oxide were not quantitated.

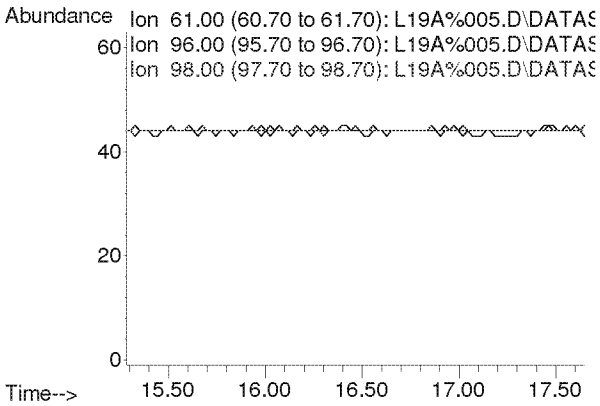


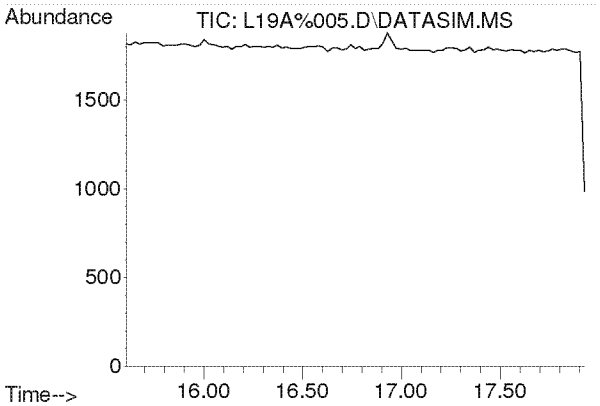
#16
1,1-Dichloroethene
Concen: N.D.
Expected RT: 16.44 min

Lab File: L19A%005.D
Acq: 31 Jan 2019 12:29 pm

Tgt Ion: 61

Sig	Exp Ratio
61	100
96	56.6
98	36.5



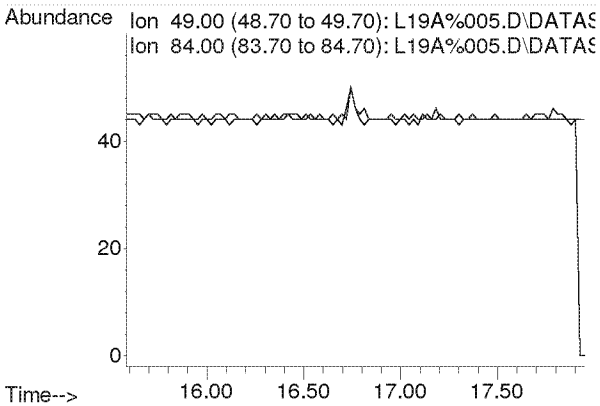


#17
Methylene Chloride
Concen: N.D.
Expected RT: 16.74 min

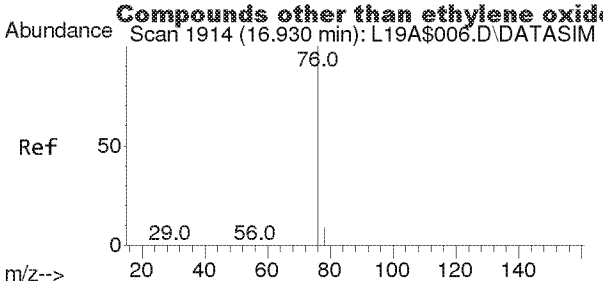
Lab File: L19A%005.D
Acq: 31 Jan 2019 12:29 pm

Tgt Ion: 49

Sig	Exp Ratio
49	100
84	76.4



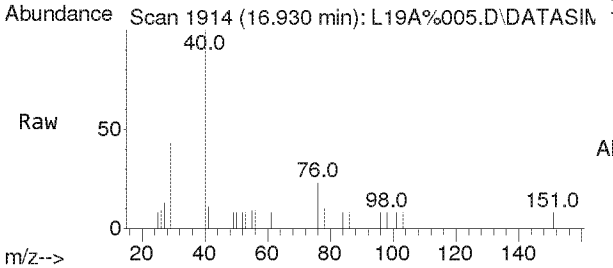
Compounds other than ethylene oxide were not quantitated.

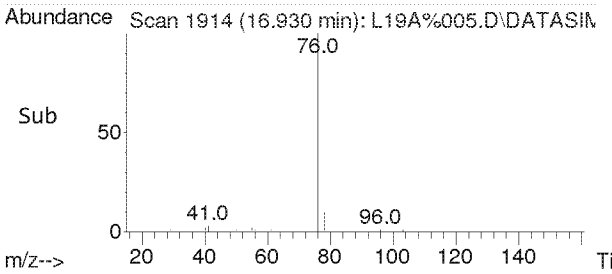


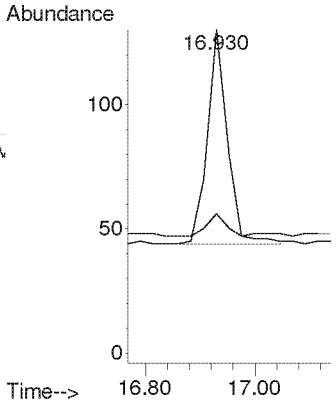
#18
Carbon Disulfide
Concen: 0.016 ppbv
RT: 16.930 min Scan# 1914
Delta R.T. 0.000 min
Lab File: L19A%005.D
Acq: 31 Jan 2019 12:29 pm

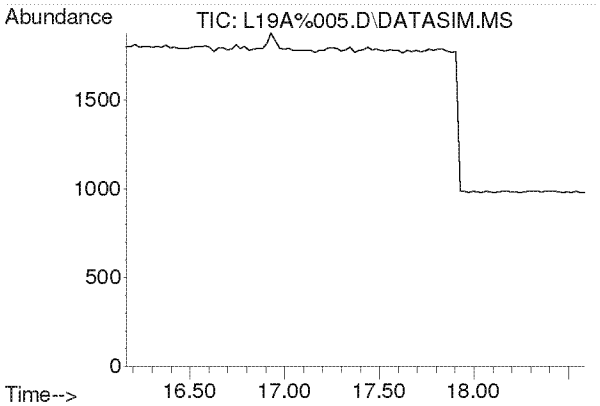
Tgt Ion: 76 Resp: 217

Ion	Ratio	Lower	Upper
76	100		
78	0.0	7.3	10.9#







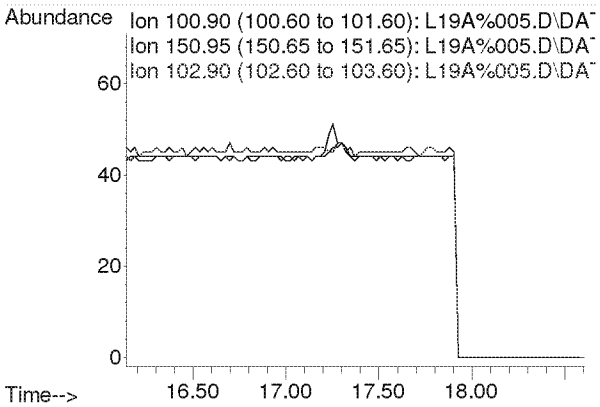


#19
Trichlorotrifluoroethane
Concen: N.D.
Expected RT: 17.30 min

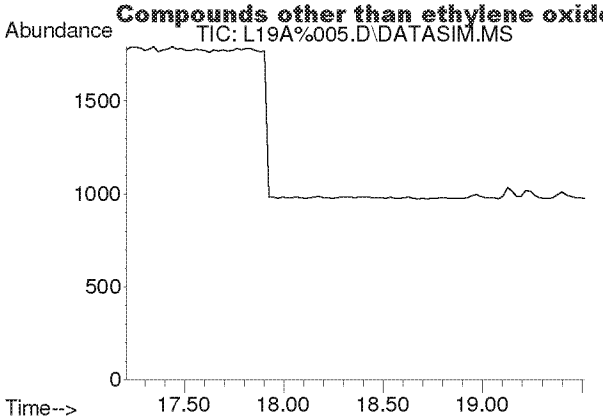
Lab File: L19A%005.D
Acq: 31 Jan 2019 12:29 pm

Tgt Ion: 101

Sig	Exp Ratio
101	100
151	95.2
103	64.4



Compounds other than ethylene oxide were not quantitated.

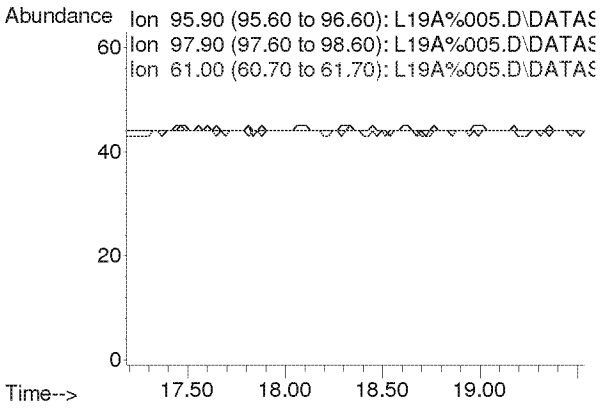


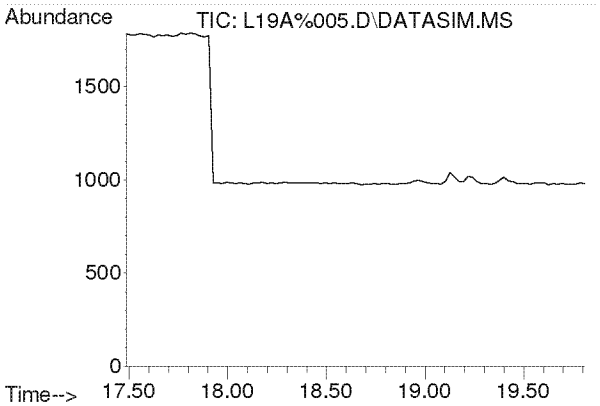
#20
trans-1,2-Dichloroethylene
Concen: N.D.
Expected RT: 18.34 min

Lab File: L19A%005.D
Acq: 31 Jan 2019 12:29 pm

Tgt Ion: 96

Sig	Exp Ratio
96	100
98	64.0
61	160.1



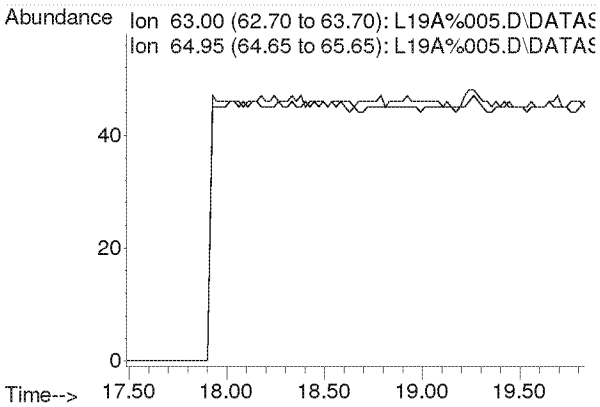


#21
1,1-Dichloroethane
Concen: N.D.
Expected RT: 18.63 min

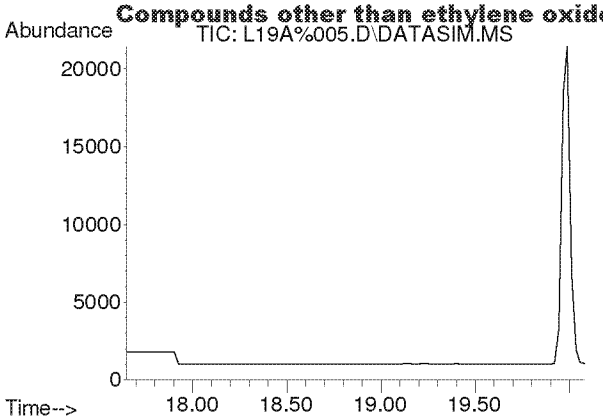
Lab File: L19A%005.D
Acq: 31 Jan 2019 12:29 pm

Tgt Ion: 63

Sig	Exp Ratio
63	100
65	31.7



Compounds other than ethylene oxide were not quantitated.

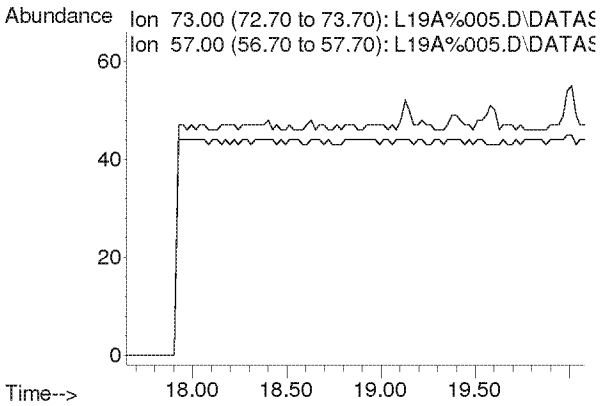


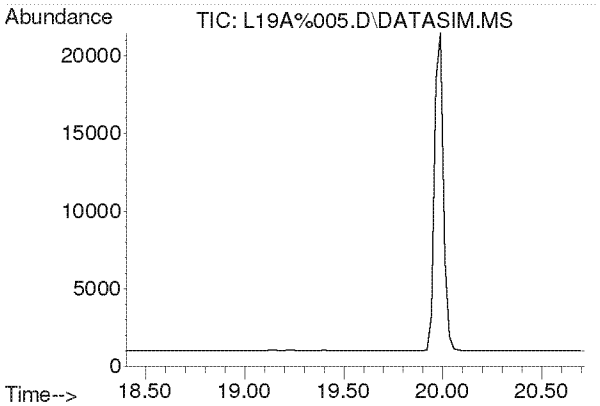
#22
Methyl tert-Butyl Ether
Concen: N.D.
Expected RT: 18.79 min

Lab File: L19A%005.D
Acq: 31 Jan 2019 12:29 pm

Tgt Ion: 73

Sig	Exp Ratio
73	100
57	22.6



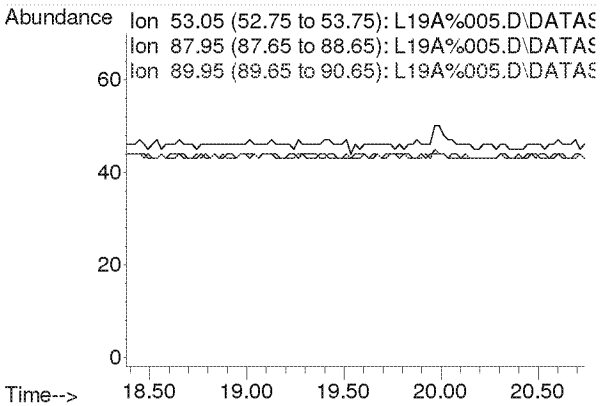


#23
Chloroprene
Concen: N.D.
Expected RT: 19.54 min

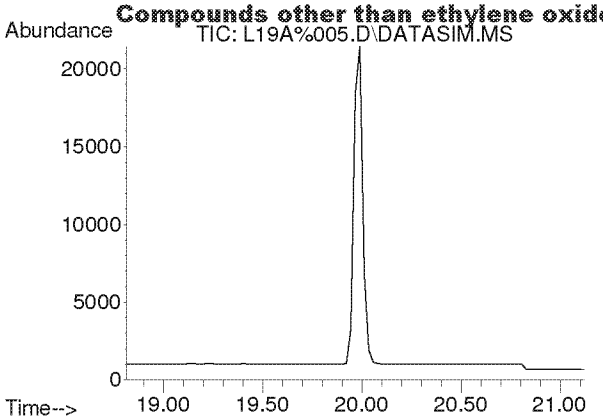
Lab File: L19A%005.D
Acq: 31 Jan 2019 12:29 pm

Tgt Ion: 53

Sig	Exp Ratio
53	100
88	50.4
90	16.1



Compounds other than ethylene oxide were not quantitated.

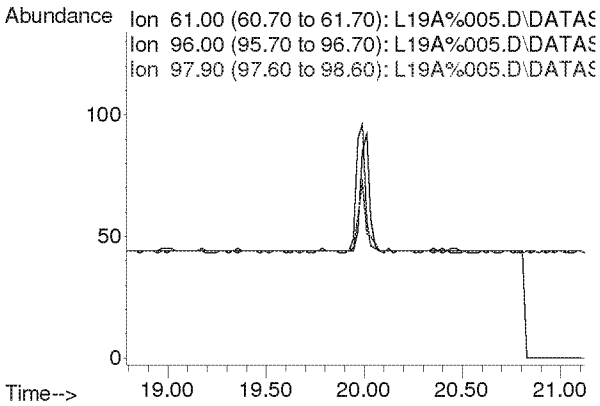


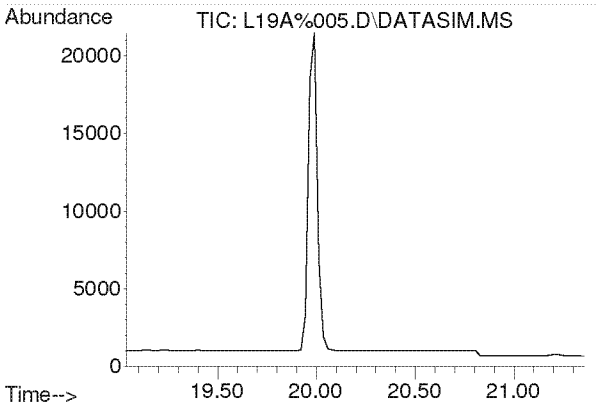
#24
cis-1,2-Dichloroethylene
Concen: N.D.
Expected RT: 19.95 min

Lab File: L19A%005.D
Acq: 31 Jan 2019 12:29 pm

Tgt Ion: 61

Sig	Exp Ratio
61	100
96	70.0
98	45.1



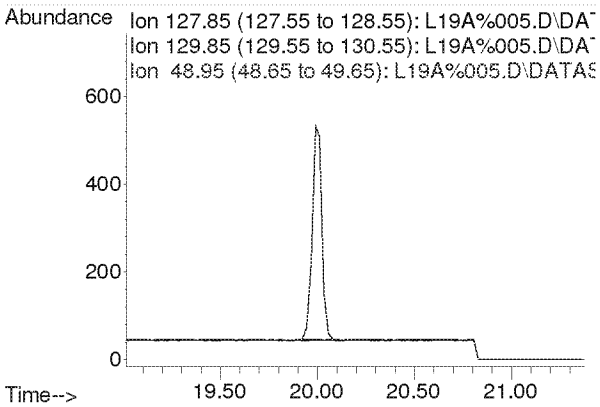


#25
Bromochloromethane
Concen: N.D.
Expected RT: 20.17 min

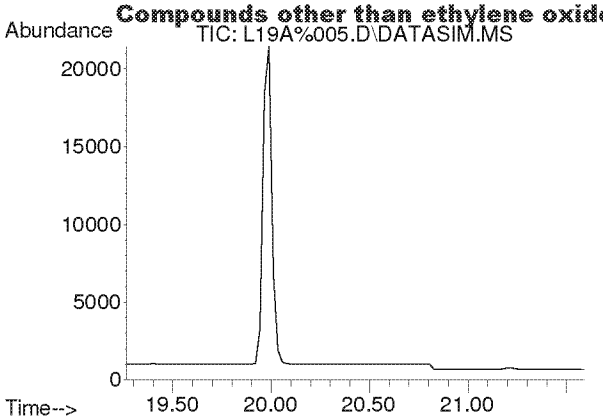
Lab File: L19A%005.D
Acq: 31 Jan 2019 12:29 pm

Tgt Ion: 128

Sig	Exp Ratio
128	100
130	129.4
49	165.7



Compounds other than ethylene oxide were not quantitated.

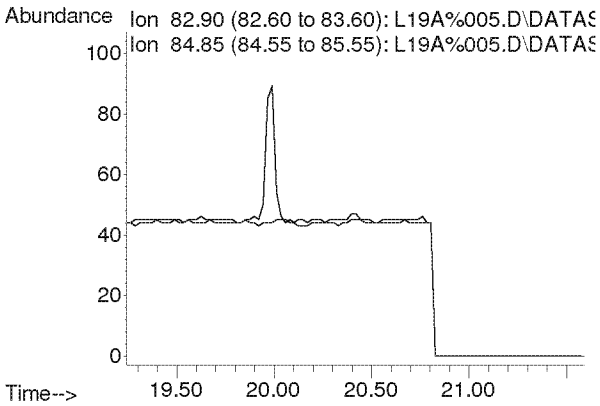


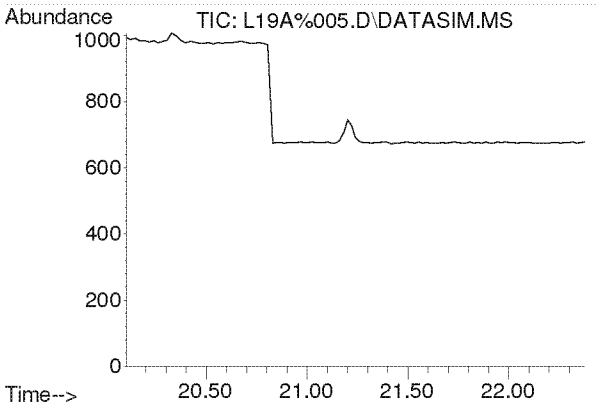
#26
Chloroform
Concen: N.D.
Expected RT: 20.40 min

Lab File: L19A%005.D
Acq: 31 Jan 2019 12:29 pm

Tgt Ion: 83

Sig	Exp Ratio
83	100
85	64.7



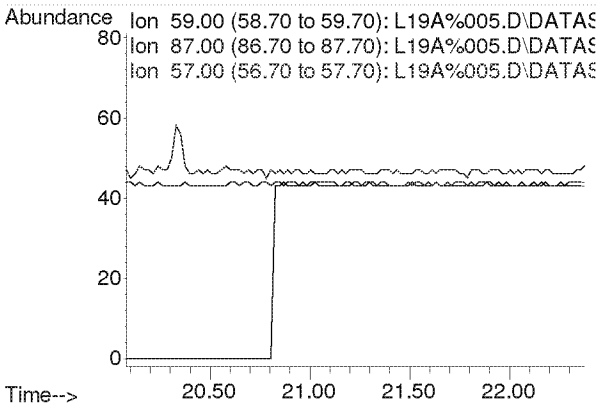


#27
Ethyl tert-Butyl Ether
Concen: N.D.
Expected RT: 21.18 min

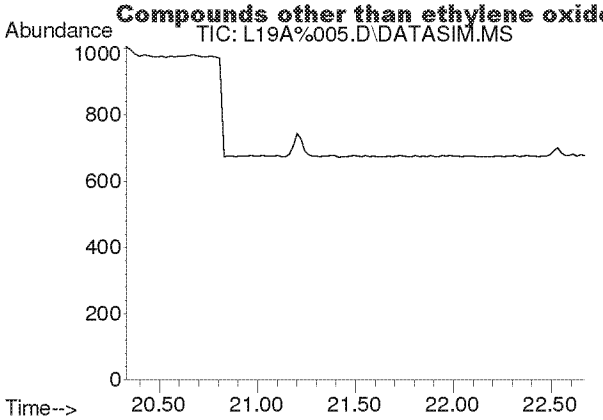
Lab File: L19A%005.D
Acq: 31 Jan 2019 12:29 pm

Tgt Ion: 59

Sig	Exp Ratio
59	100
87	38.0
57	32.8



Compounds other than ethylene oxide were not quantitated.

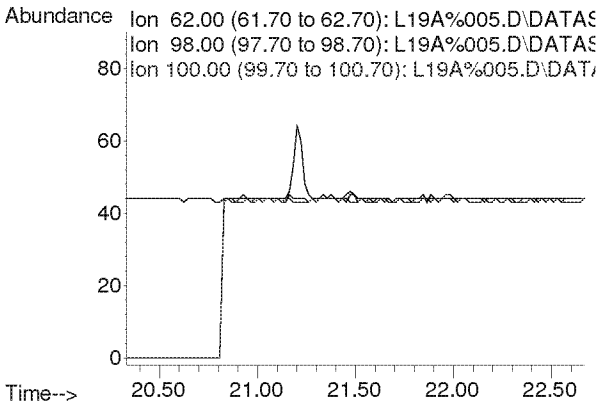


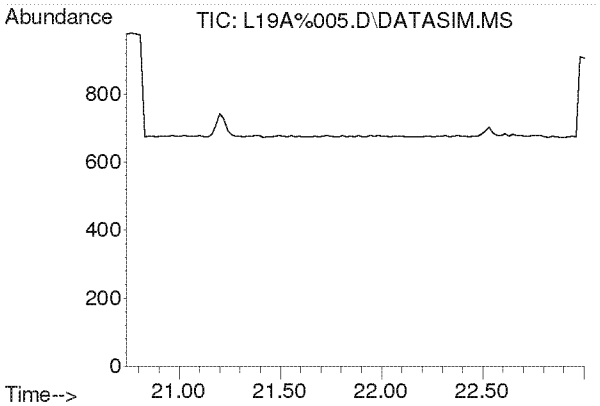
#28
1,2-Dichloroethane
Concen: N.D.
Expected RT: 21.48 min

Lab File: L19A%005.D
Acq: 31 Jan 2019 12:29 pm

Tgt Ion: 62

Sig	Exp Ratio
62	100
98	5.9
100	3.9



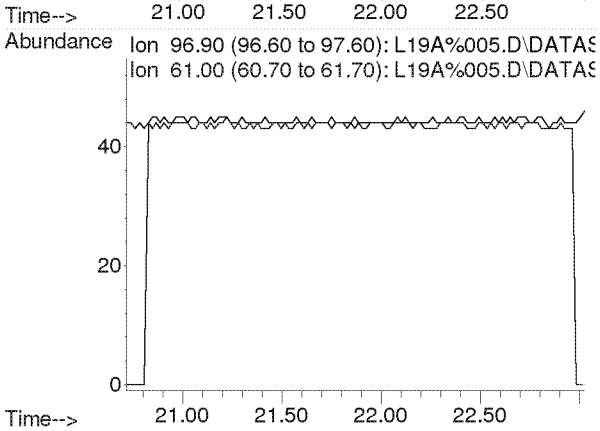


#30
1,1,1-Trichloroethane
Concen: N.D.
Expected RT: 21.87 min

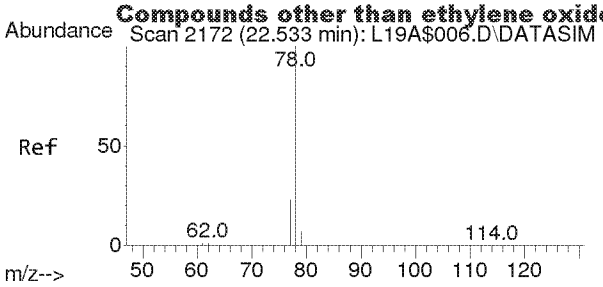
Lab File: L19A%005.D
Acq: 31 Jan 2019 12:29 pm

Tgt Ion: 97

Sig	Exp Ratio
97	100
61	65.3



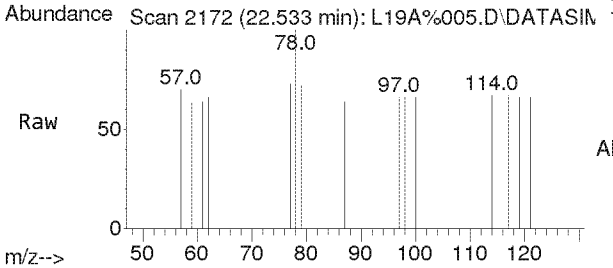
Compounds other than ethylene oxide were not quantitated.

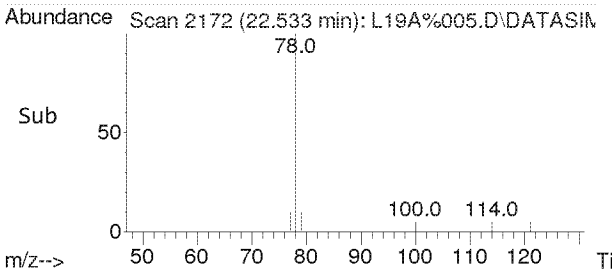


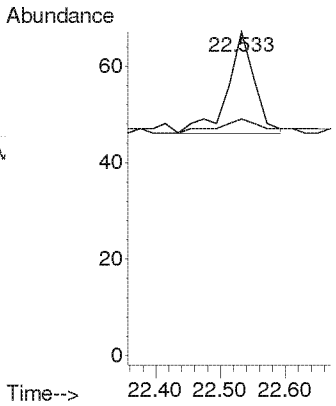
#31
Benzene
Concen: 0.006 ppbv
RT: 22.533 min Scan# 2172
Delta R.T. -0.000 min
Lab File: L19A%005.D
Acq: 31 Jan 2019 12:29 pm

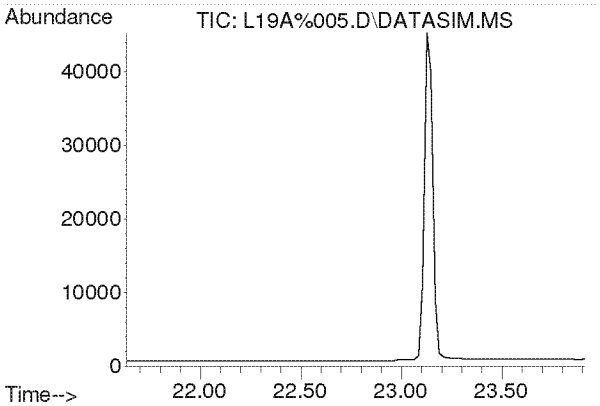
Tgt Ion: 78 Resp: 61

Ion	Ratio	Lower	Upper
78	100		
77	0.0	18.3	27.5#







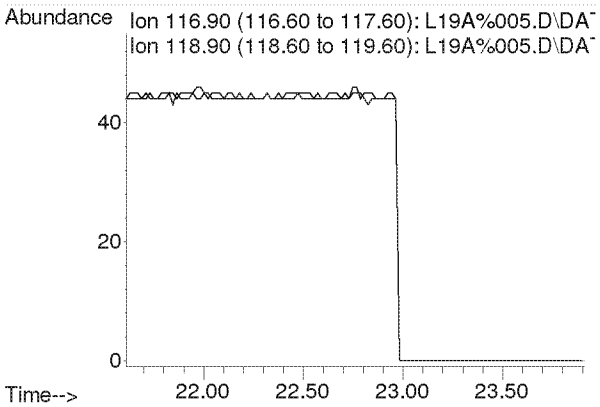


#32
Carbon Tetrachloride
Concen: N.D.
Expected RT: 22.77 min

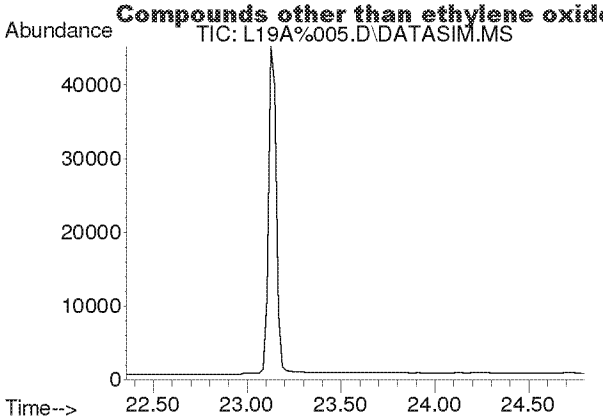
Lab File: L19A%005.D
Acq: 31 Jan 2019 12:29 pm

Tgt Ion: 117

Sig	Exp Ratio
117	100
119	96.1



Compounds other than ethylene oxide were not quantitated.

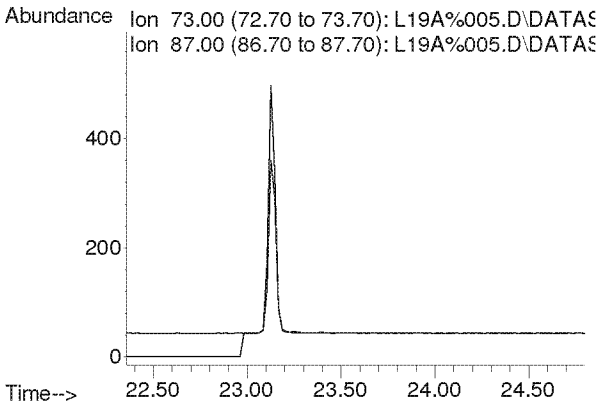


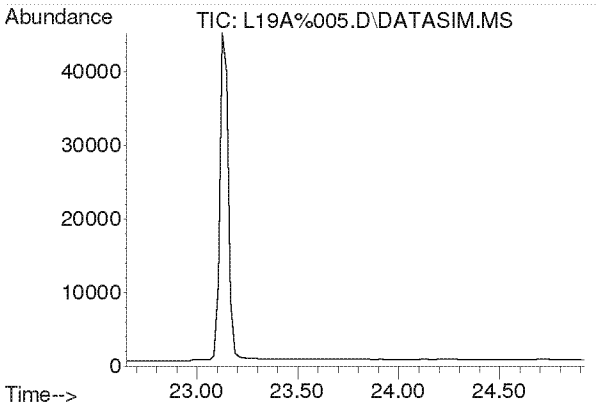
#33
tert-Amyl Methyl Ether
Concen: N.D.
Expected RT: 23.50 min

Lab File: L19A%005.D
Acq: 31 Jan 2019 12:29 pm

Tgt Ion: 73

Sig	Exp Ratio
73	100
87	25.2



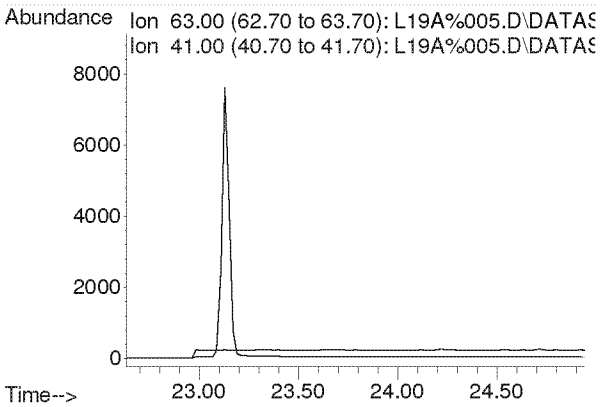


#34
1,2-Dichloropropane
Concen: N.D.
Expected RT: 23.79 min

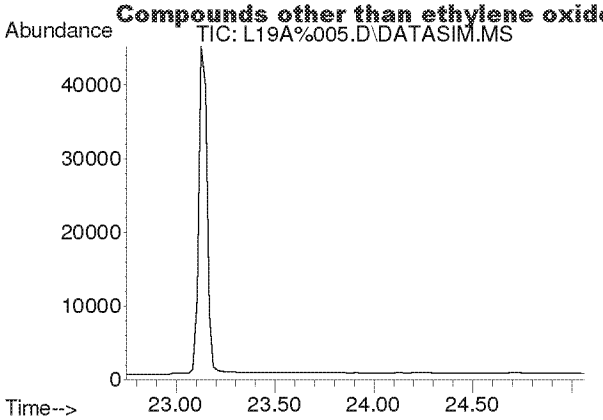
Lab File: L19A%005.D
Acq: 31 Jan 2019 12:29 pm

Tgt Ion: 63

Sig	Exp Ratio
63	100
41	248.2



Compounds other than ethylene oxide were not quantitated.

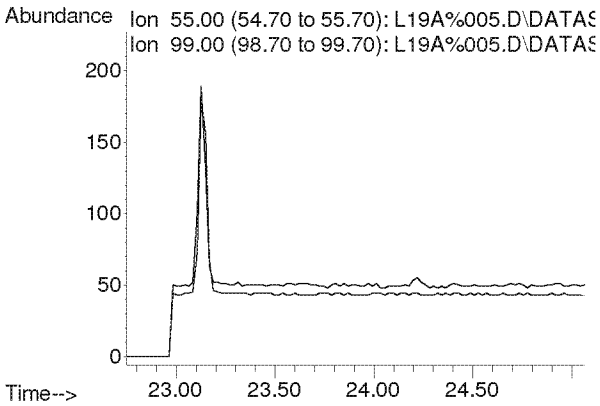


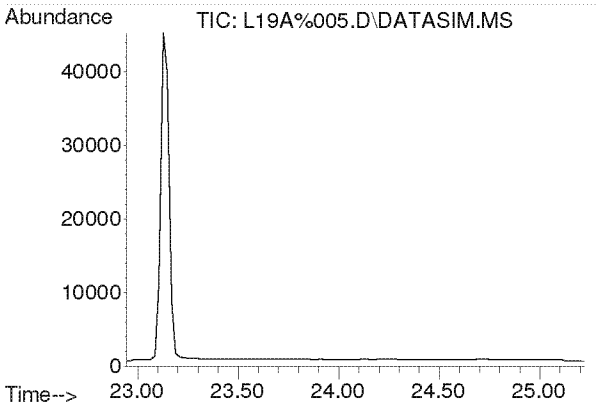
#35
Ethyl Acrylate
Concen: N.D.
Expected RT: 23.87 min

Lab File: L19A%005.D
Acq: 31 Jan 2019 12:29 pm

Tgt Ion: 55

Sig	Exp Ratio
55	100
99	6.3



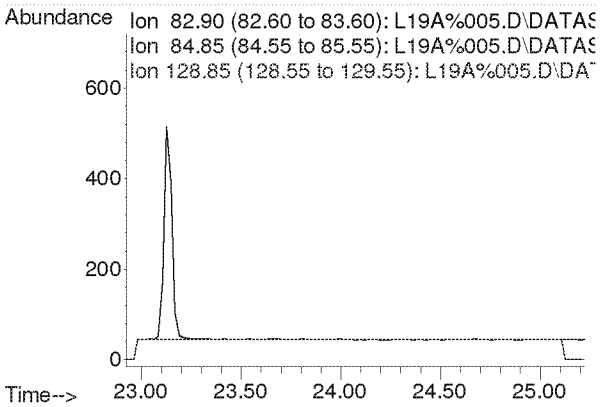


#36
Bromodichloromethane
Concen: N.D.
Expected RT: 24.08 min

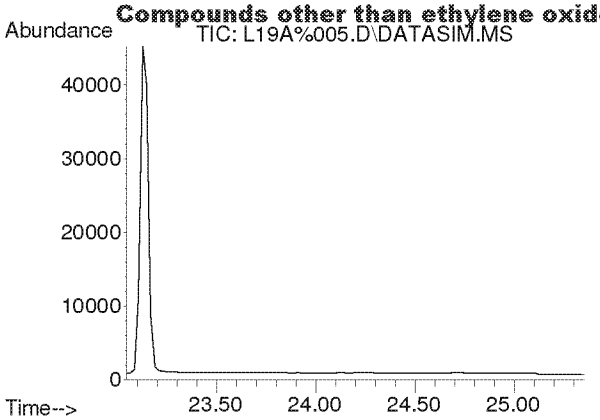
Lab File: L19A%005.D
Acq: 31 Jan 2019 12:29 pm

Tgt Ion: 83

Sig	Exp Ratio
83	100
85	63.7
129	12.3



Compounds other than ethylene oxide were not quantitated.

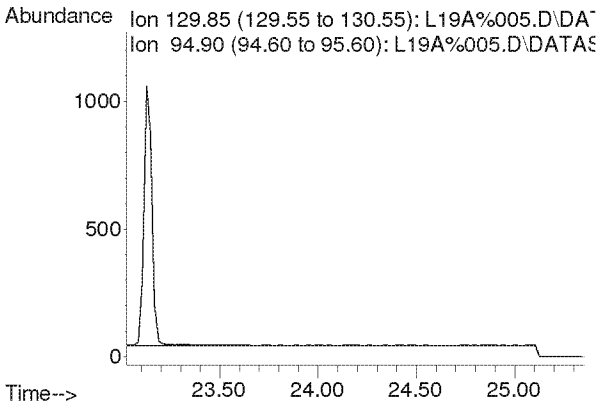


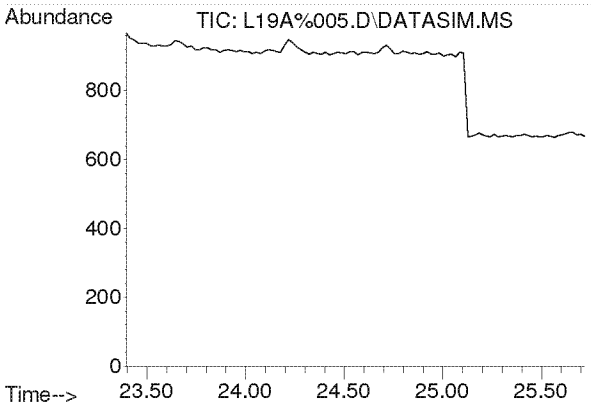
#37
Trichloroethylene
Concen: N.D.
Expected RT: 24.18 min

Lab File: L19A%005.D
Acq: 31 Jan 2019 12:29 pm

Tgt Ion: 130

Sig	Exp Ratio
130	100
95	109.9



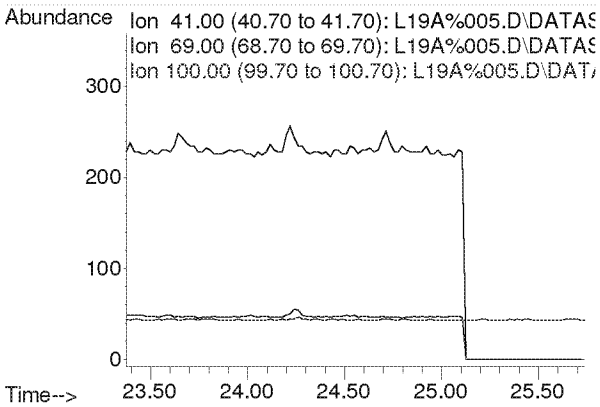


#38
Methyl Methacrylate
Concen: N.D.
Expected RT: 24.53 min

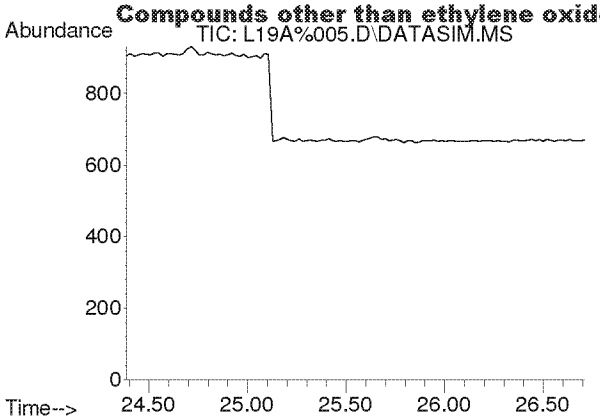
Lab File: L19A%005.D
Acq: 31 Jan 2019 12:29 pm

Tgt Ion: 41

Sig	Exp Ratio
41	100
69	19.6
100	5.3



Compounds other than ethylene oxide were not quantitated.

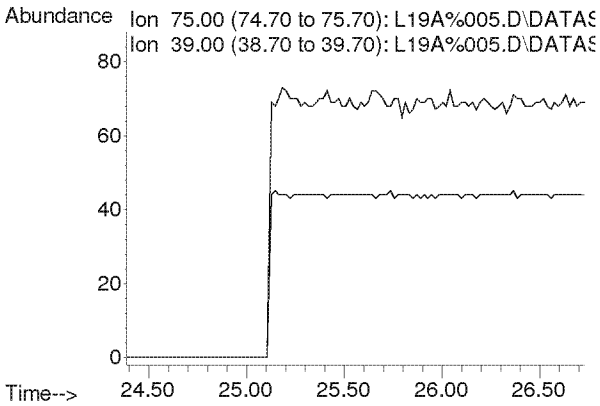


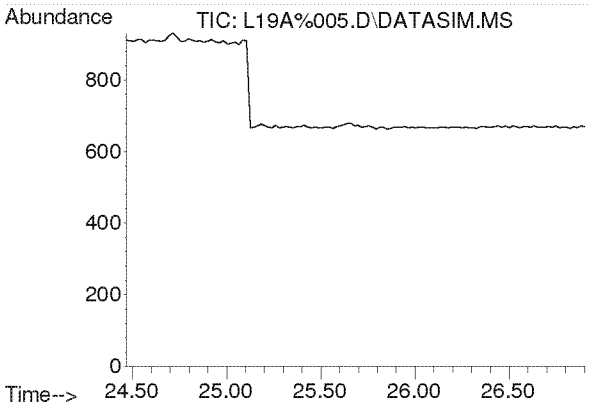
#39
cis-1,3-Dichloropropene
Concen: N.D.
Expected RT: 25.53 min

Lab File: L19A%005.D
Acq: 31 Jan 2019 12:29 pm

Tgt Ion: 75

Sig	Exp Ratio
75	100
39	61.8



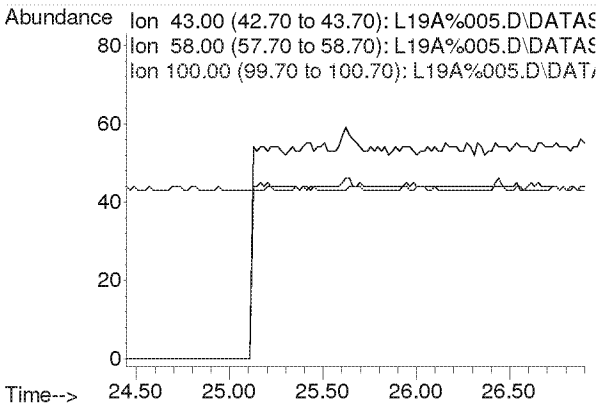


#40
Methyl Isobutyl Ketone
Concen: N.D.
Expected RT: 25.60 min

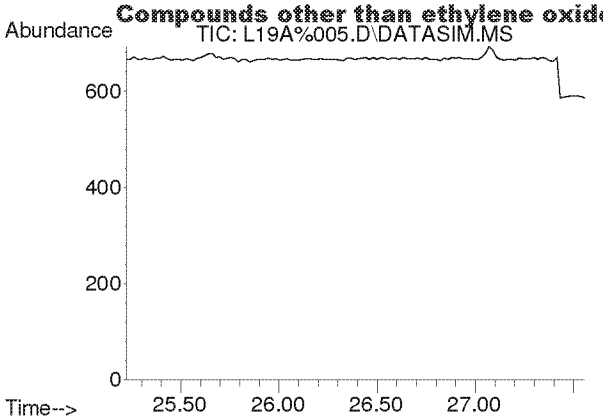
Lab File: L19A%005.D
Acq: 31 Jan 2019 12:29 pm

Tgt Ion: 43

Sig	Exp Ratio
43	100
58	33.9
100	8.5



Compounds other than ethylene oxide were not quantitated.

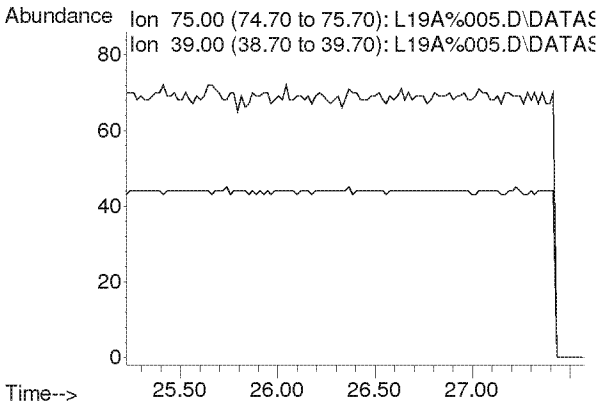


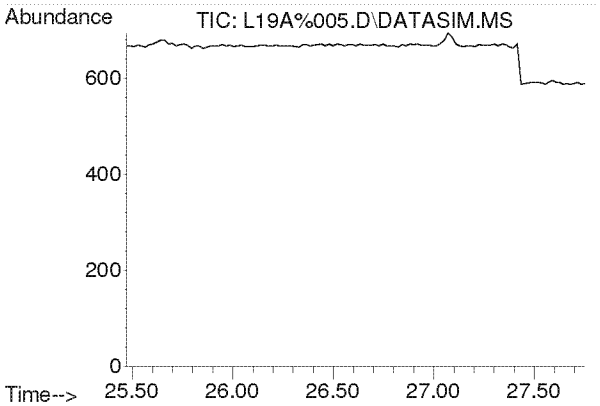
#41
trans-1,3-Dichloropropene
Concen: N.D.
Expected RT: 26.37 min

Lab File: L19A%005.D
Acq: 31 Jan 2019 12:29 pm

Tgt Ion: 75

Sig	Exp Ratio
75	100
39	60.7



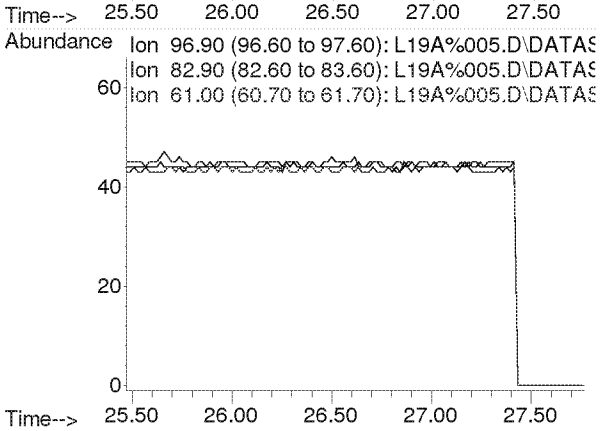


#42
1,1,2-Trichloroethane
Concen: N.D.
Expected RT: 26.62 min

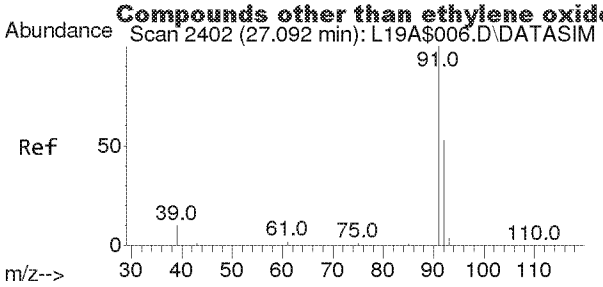
Lab File: L19A%005.D
Acq: 31 Jan 2019 12:29 pm

Tgt Ion: 97

Sig	Exp Ratio
97	100
83	94.6
61	65.6



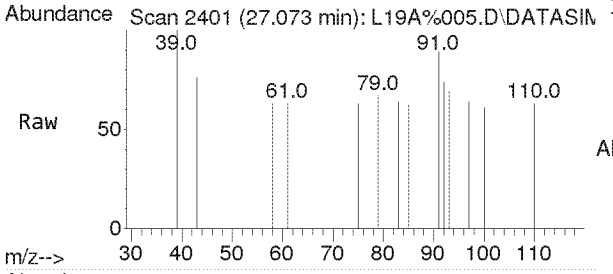
Compounds other than ethylene oxide were not quantitated.

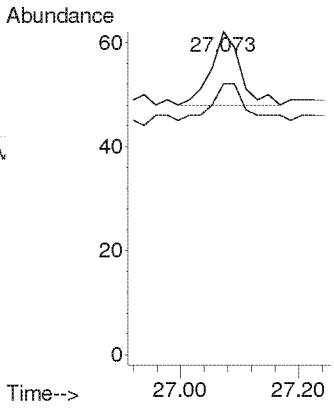


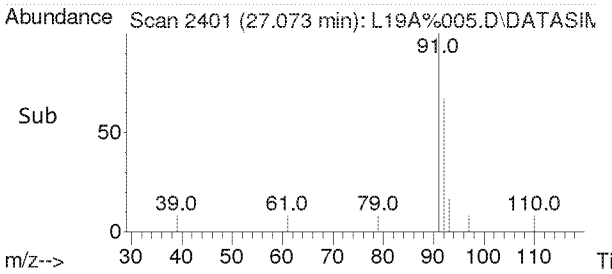
#44
Toluene
Concen: 0.004 ppbv
RT: 27.073 min Scan# 2401
Delta R.T. -0.019 min
Lab File: L19A%005.D
Acq: 31 Jan 2019 12:29 pm

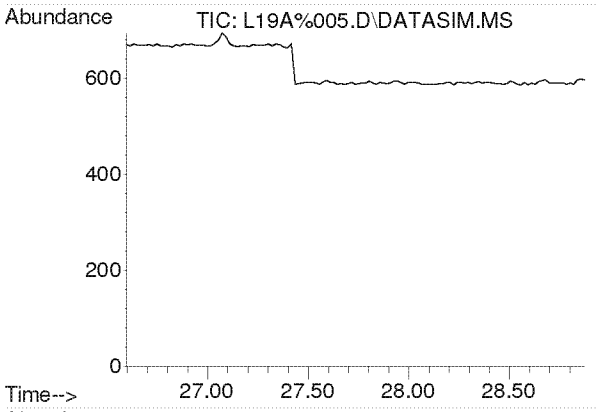
Tgt Ion: 91 Resp: 48

Ion	Ratio	Lower	Upper
91	100		
92	0.0	42.1	63.1#







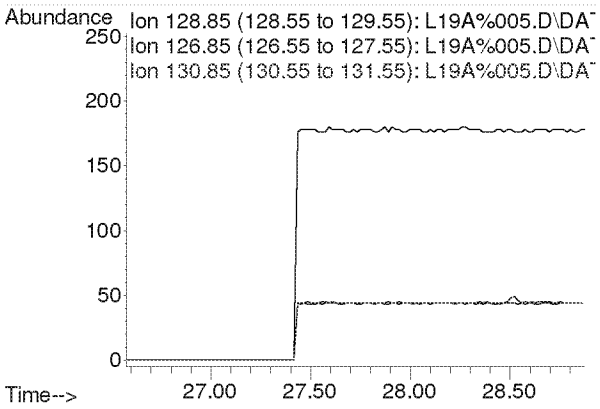


#45
Dibromochloromethane
Concen: N.D.
Expected RT: 27.73 min

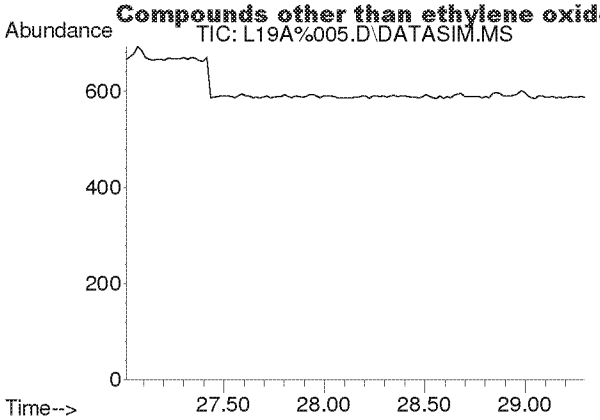
Lab File: L19A%005.D
Acq: 31 Jan 2019 12:29 pm

Tgt Ion: 129

Sig	Exp Ratio
129	100
127	19.2
131	6.0



Compounds other than ethylene oxide were not quantitated.

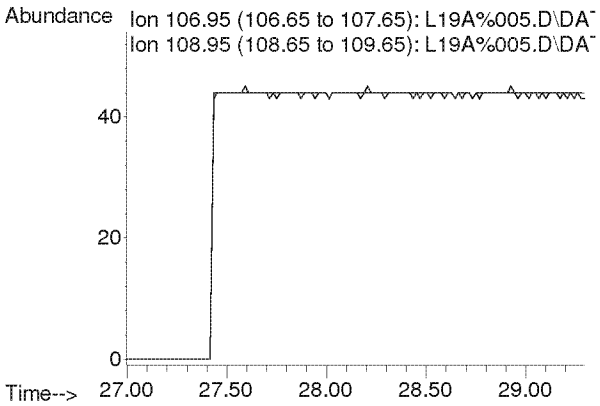


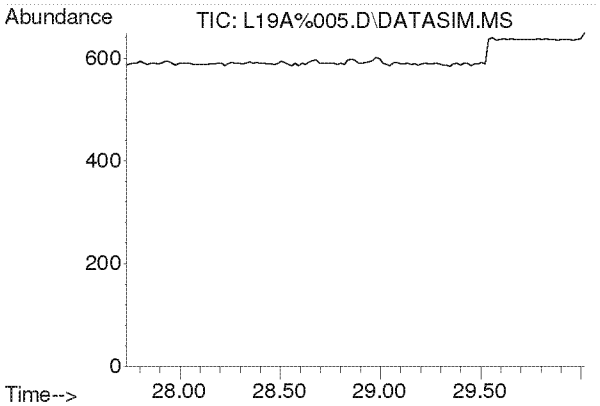
#46
1,2-Dibromoethane
Concen: N.D.
Expected RT: 28.15 min

Lab File: L19A%005.D
Acq: 31 Jan 2019 12:29 pm

Tgt Ion: 107

Sig	Exp Ratio
107	100
109	94.5



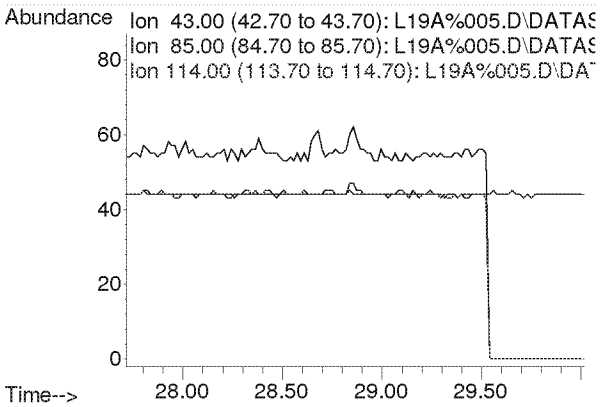


#47
n-Octane
Concen: N.D.
Expected RT: 28.87 min

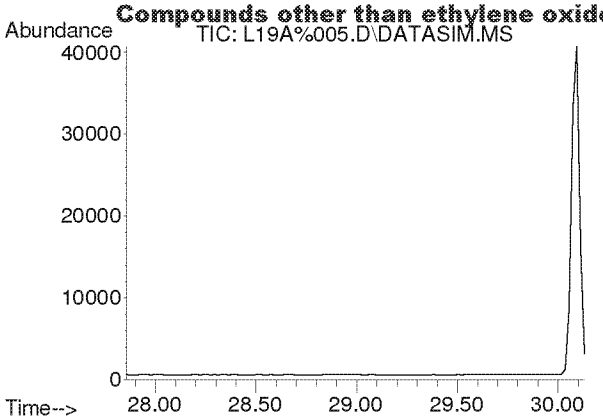
Lab File: L19A%005.D
Acq: 31 Jan 2019 12:29 pm

Tgt Ion: 43

Sig	Exp Ratio
43	100
85	39.5
114	2.5



Compounds other than ethylene oxide were not quantitated.

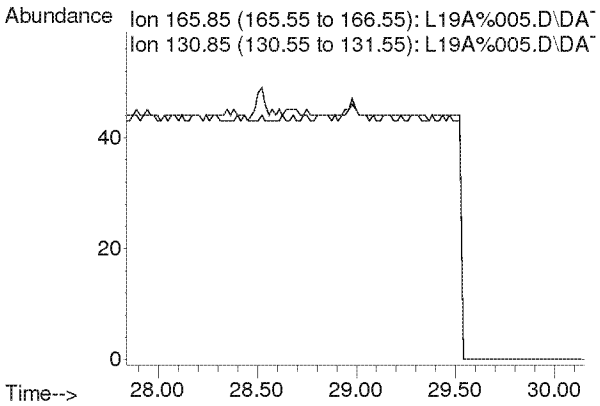


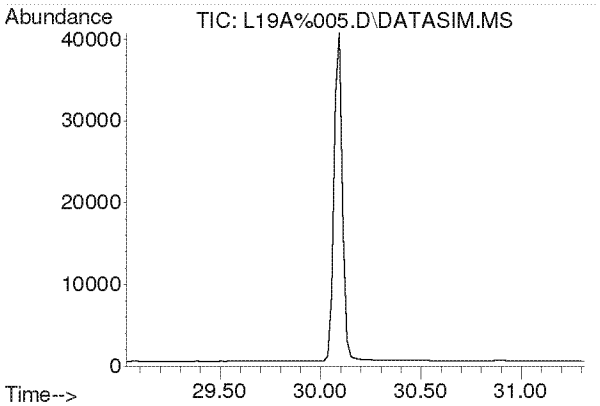
#48
Tetrachloroethylene
Concen: N.D.
Expected RT: 29.00 min

Lab File: L19A%005.D
Acq: 31 Jan 2019 12:29 pm

Tgt Ion: 166

Sig	Exp Ratio
166	100
131	77.0



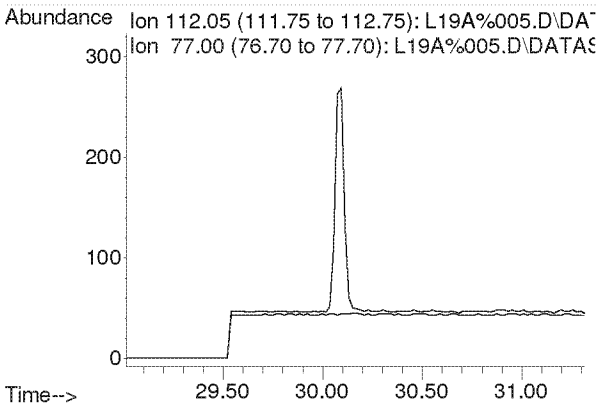


#49
Chlorobenzene
Concen: N.D.
Expected RT: 30.17 min

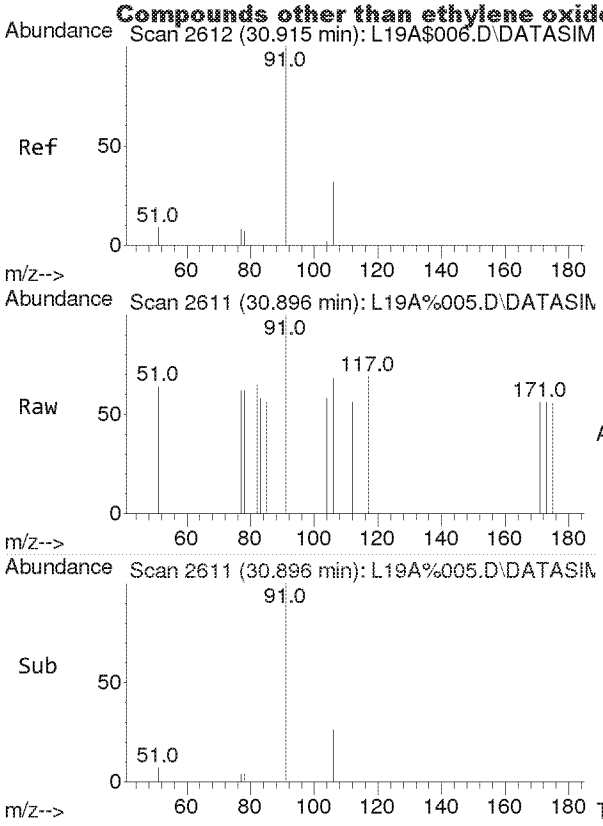
Lab File: L19A%005.D
Acq: 31 Jan 2019 12:29 pm

Tgt Ion: 112

Sig	Exp Ratio
112	100
77	64.2



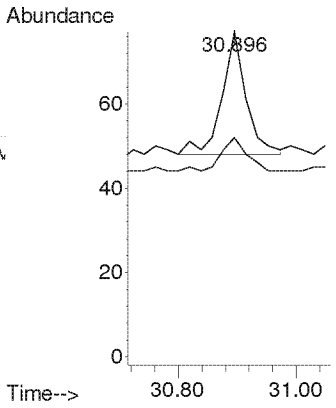
Compounds other than ethylene oxide were not quantitated.

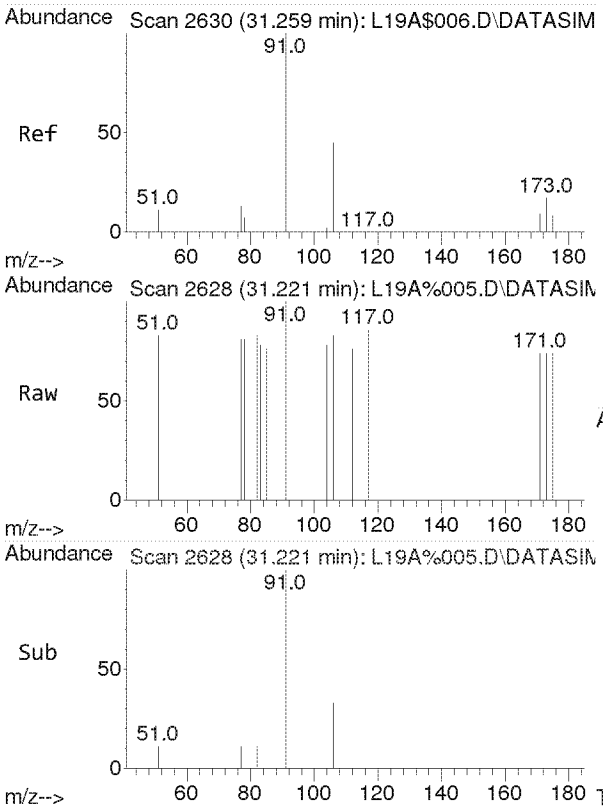


#50
Ethylbenzene
Concen: 0.007 ppbv
RT: 30.896 min Scan# 2611
Delta R.T. -0.019 min
Lab File: L19A%005.D
Acq: 31 Jan 2019 12:29 pm

Tgt Ion: 91 Resp: 82

Ion	Ratio	Lower	Upper
91	100		
106	0.0	25.1	37.7#

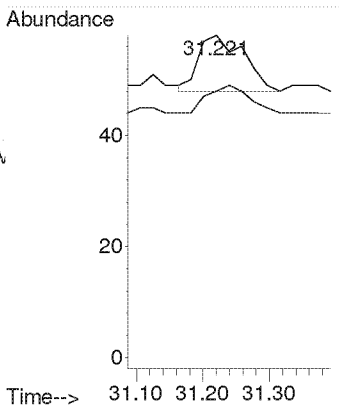




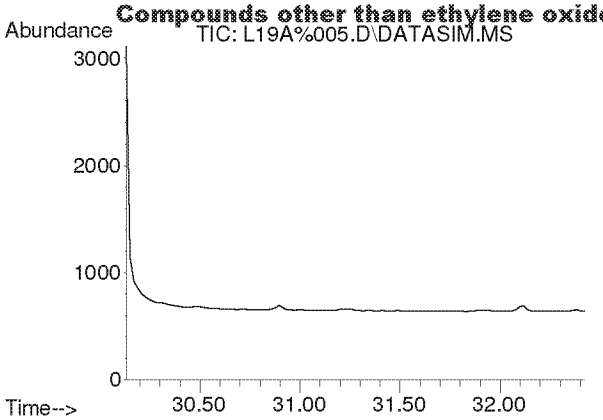
#51
m,p-Xylene
Concen: 0.005 ppbv
RT: 31.221 min Scan# 2628
Delta R.T. -0.038 min
Lab File: L19A%005.D
Acq: 31 Jan 2019 12:29 pm

Tgt Ion: 91 Resp: 47

Ion	Ratio	Lower	Upper
91	100		
106	0.0	36.6	55.0#



Compounds other than ethylene oxide were not quantitated.

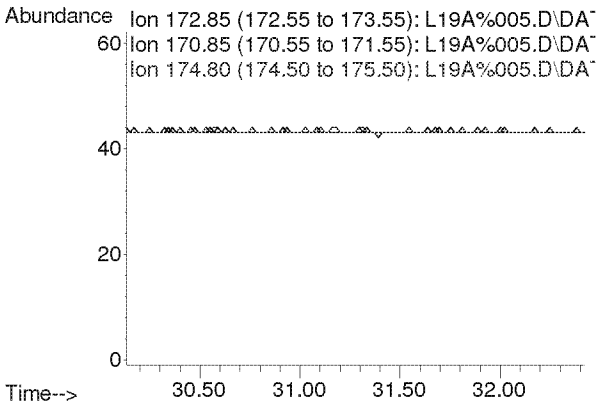


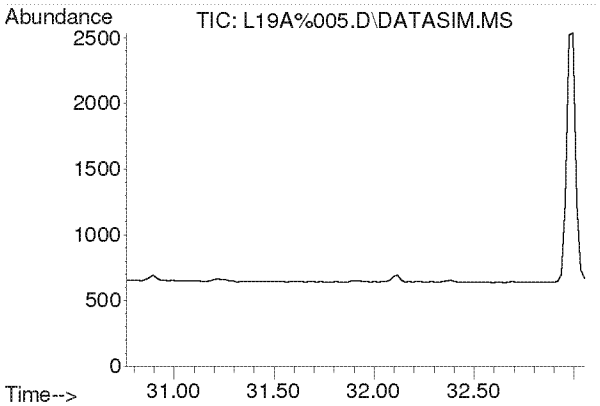
#52
Bromoform
Concen: N.D.
Expected RT: 31.28 min

Lab File: L19A%005.D
Acq: 31 Jan 2019 12:29 pm

Tgt Ion: 173

Sig	Exp Ratio
173	100
171	51.1
175	48.8



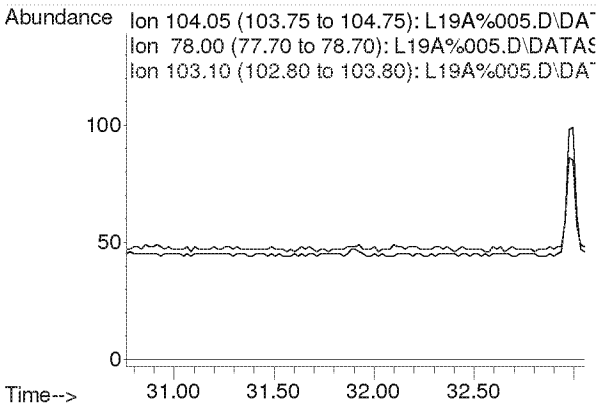


#53
Styrene
Concen: N.D.
Expected RT: 31.91 min

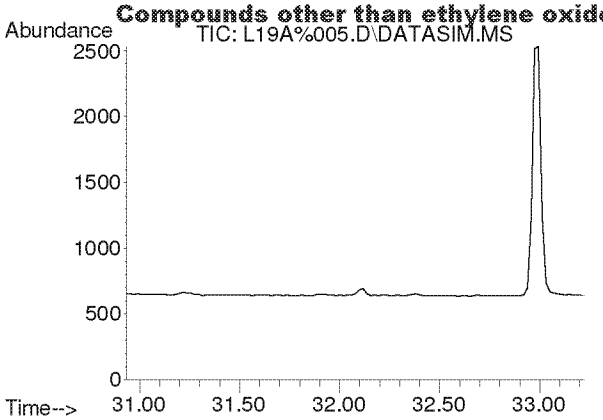
Lab File: L19A%005.D
Acq: 31 Jan 2019 12:29 pm

Tgt Ion: 104

Sig	Exp Ratio
104	100
78	45.9
103	0.0



Compounds other than ethylene oxide were not quantitated.

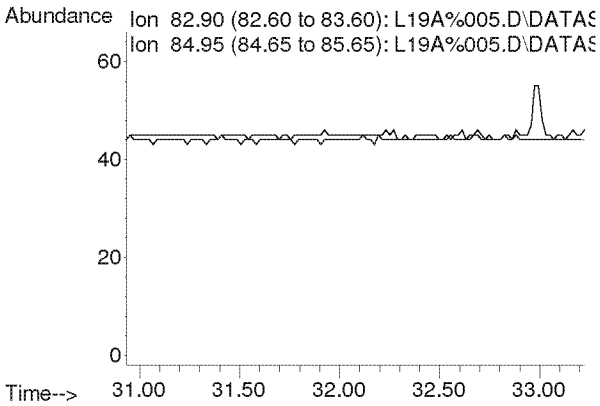


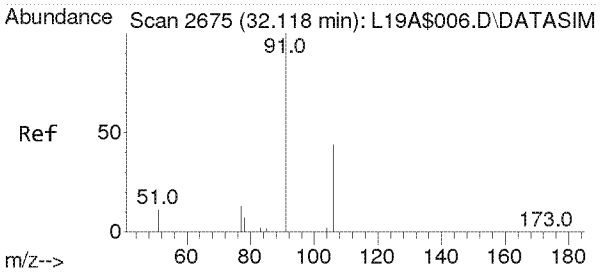
#54
1,1,2,2-Tetrachloroethane
Concen: N.D.
Expected RT: 32.08 min

Lab File: L19A%005.D
Acq: 31 Jan 2019 12:29 pm

Tgt Ion: 83

Sig	Exp Ratio
83	100
85	64.4

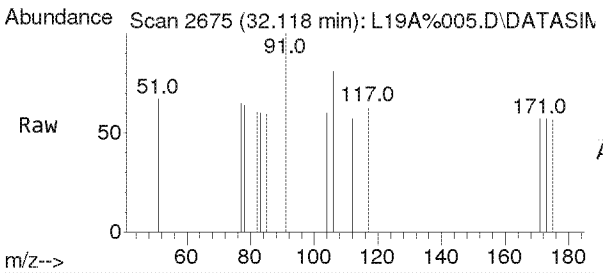


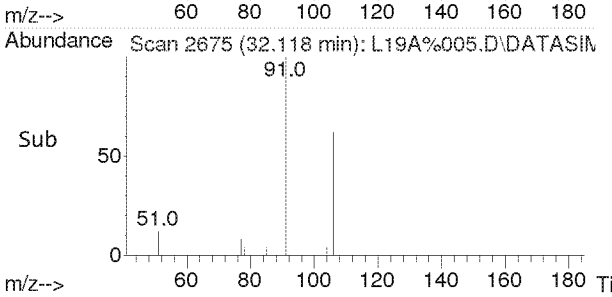


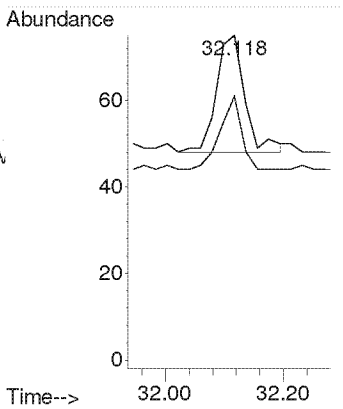
#55
o-Xylene
Concen: 0.009 ppbv
RT: 32.118 min Scan# 2675
Delta R.T. -0.000 min
Lab File: L19A%005.D
Acq: 31 Jan 2019 12:29 pm

Tgt Ion: 91 Resp: 90

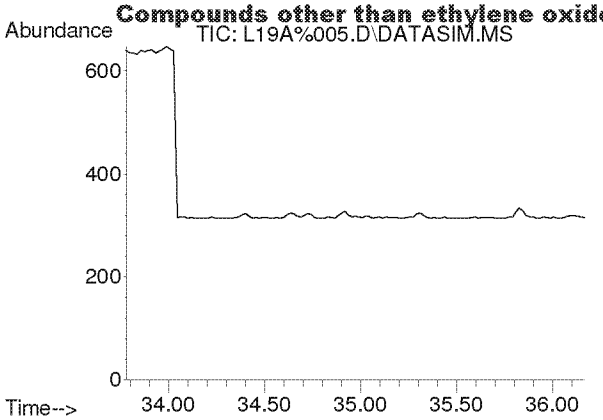
Ion	Ratio	Lower	Upper
91	100		
106	46.7	35.4	53.2







Compounds other than ethylene oxide were not quantitated.

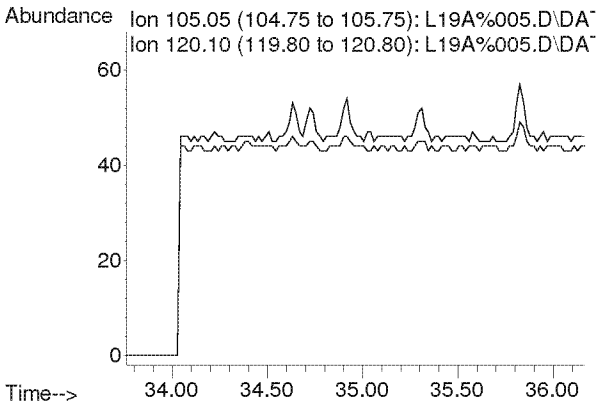


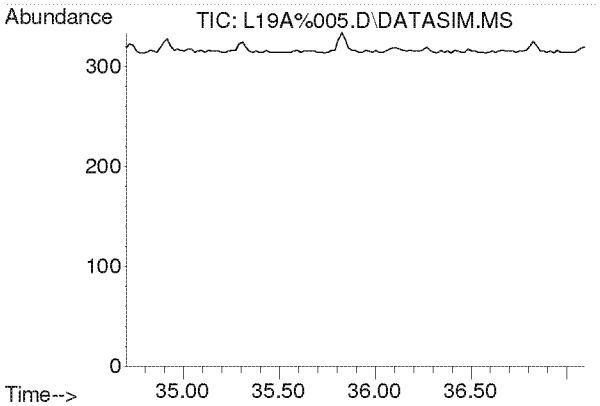
#56
1,3,5-Trimethylbenzene
Concen: N.D.
Expected RT: 34.92 min

Lab File: L19A%005.D
Acq: 31 Jan 2019 12:29 pm

Tgt Ion: 105

Sig	Exp Ratio
105	100
120	45.7



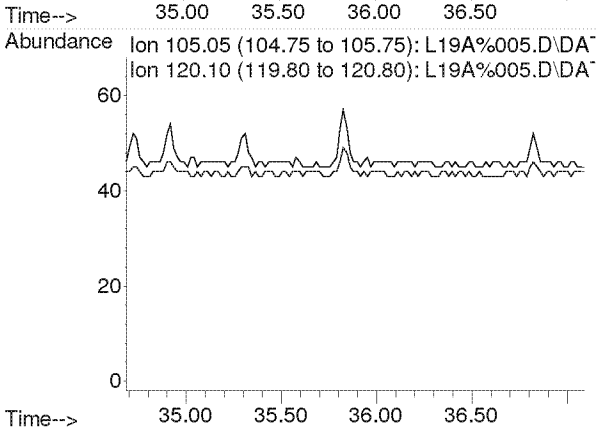


#57
1,2,4-Trimethylbenzene
Concen: N.D.
Expected RT: 35.84 min

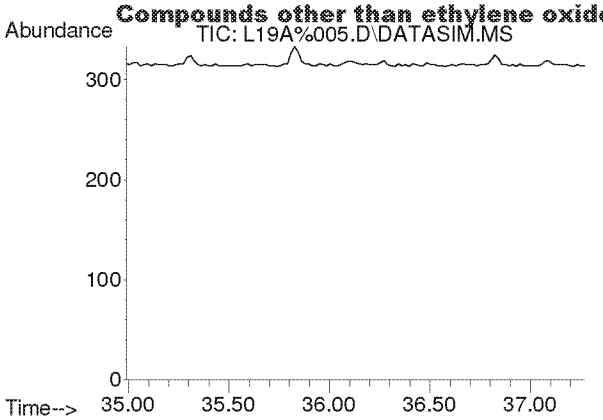
Lab File: L19A%005.D
Acq: 31 Jan 2019 12:29 pm

Tgt Ion: 105

Sig	Exp Ratio
105	100
120	43.6



Compounds other than ethylene oxide were not quantitated.

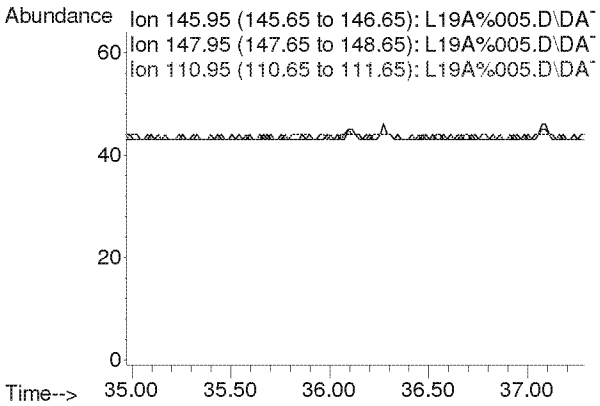


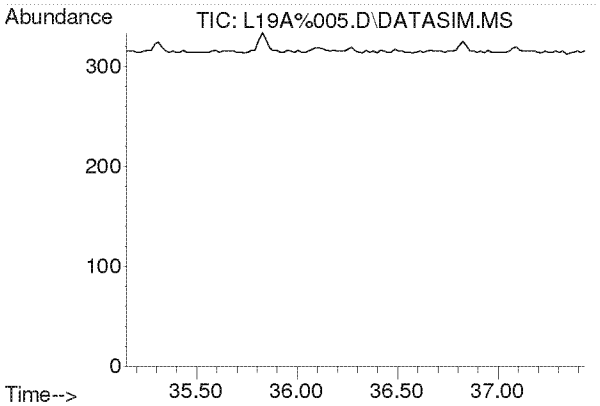
#58
m-Dichlorobenzene
Concen: N.D.
Expected RT: 36.13 min

Lab File: L19A%005.D
Acq: 31 Jan 2019 12:29 pm

Tgt Ion: 146

Sig	Exp Ratio
146	100
148	64.0
111	40.5



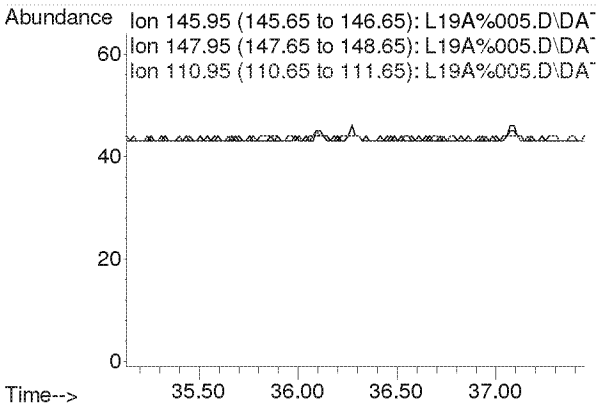


#59
p-Dichlorobenzene
Concen: N.D.
Expected RT: 36.29 min

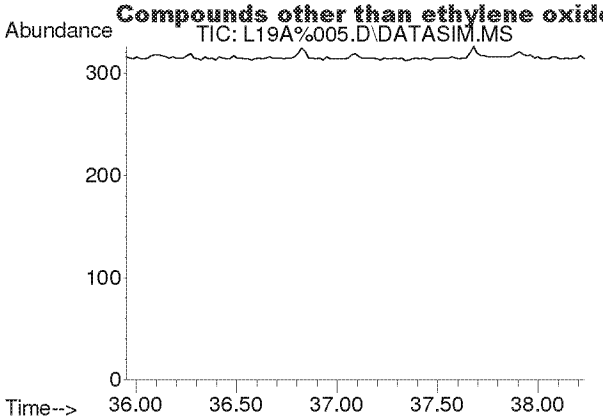
Lab File: L19A%005.D
Acq: 31 Jan 2019 12:29 pm

Tgt Ion: 146

Sig	Exp Ratio
146	100
148	64.1
111	39.4



Compounds other than ethylene oxide were not quantitated.

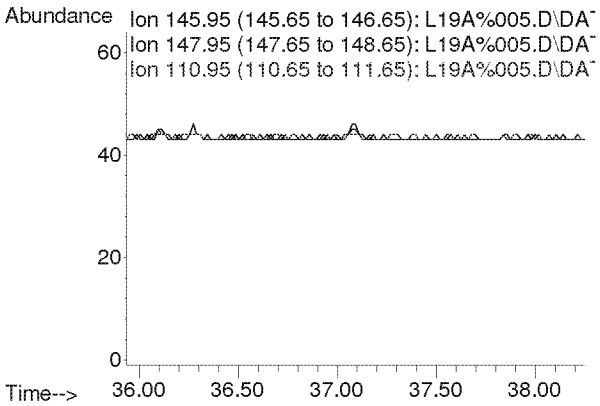


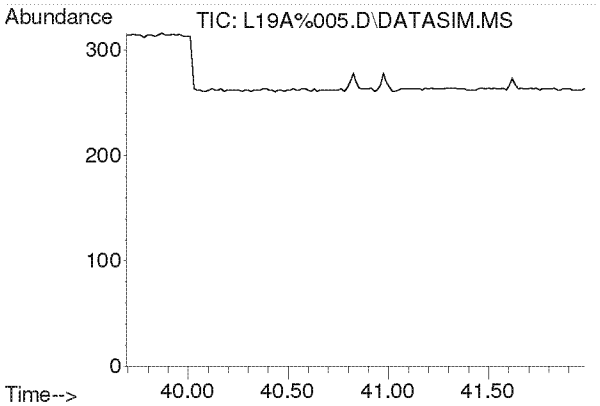
#60
o-Dichlorobenzene
Concen: N.D.
Expected RT: 37.09 min

Lab File: L19A%005.D
Acq: 31 Jan 2019 12:29 pm

Tgt Ion: 146

Sig	Exp Ratio
146	100
148	64.0
111	40.9



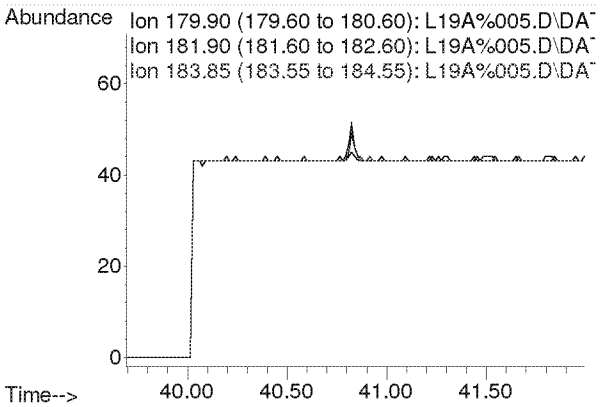


#61
1,2,4-Trichlorobenzene
Concen: N.D.
Expected RT: 40.84 min

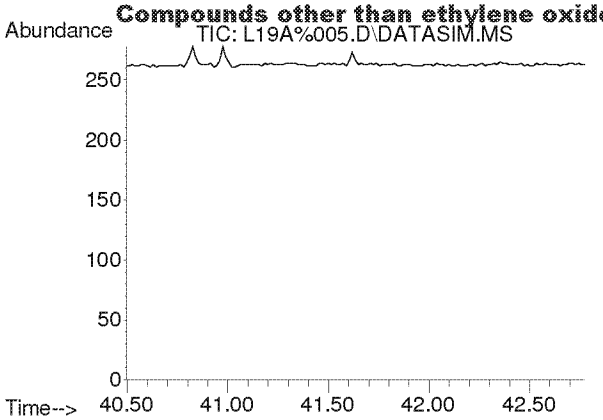
Lab File: L19A%005.D
Acq: 31 Jan 2019 12:29 pm

Tgt Ion: 180

Sig	Exp Ratio
180	100
182	96.1
184	30.8



Compounds other than ethylene oxide were not quantitated.

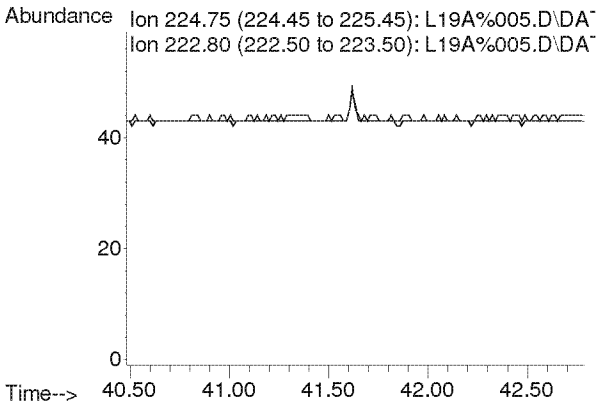


#62
Hexachloro-1,3-butadiene
Concen: N.D.
Expected RT: 41.63 min

Lab File: L19A%005.D
Acq: 31 Jan 2019 12:29 pm

Tgt Ion: 225

Sig	Exp Ratio
225	100
223	62.0



Compounds other than ethylene oxide were not quantitated.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\L19A%\
Data File : L19A%021.D
Acq On : 1 Feb 2019 4:40 am (#1); 01-Feb-19, 04:34:54 (#2)
Operator : MAH
Sample : 9012816-03
Misc : WEST NEIGHBORHOOD 1/25/19 (Sig #1); (Sig #2)
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Feb 01 11:20:56 2019
Quant Method : C:\msdchem\1\METHODS\9010007.M
Quant Title : TO-15 by Selective Ion Analysis
QLast Update : Thu Jan 31 06:35:20 2019
Response via : Initial Calibration

d-MK

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) IS-Hexane-d14	19.990	66	35135	4.7700 ppbv	0.00
29) IS-1,4-Difluorobenzene	23.149	114	84852	4.9900 ppbv	0.00
43) IS-Chlorobenzene-d5	30.094	117	57574	4.7400 ppbv	0.00

System Monitoring Compounds

Target Compounds					Qvalue
2) Acetylene	0.000	26	0	N.D. d	
3) Propylene	0.000	41	0	N.D. d	
4) Dichlorodifluoromethane	0.000	85	0	N.D. d	
5) Chloromethane	0.000	50	0	N.D. d	
6) Dichlorotetrafluoroethane	0.000	85	0	N.D. d	
7) Vinyl Chloride	0.000	62	0	N.D.	
8) 1,3-Butadiene	0.000	54	0	N.D.	
9) Ethylene oxide	12.498	29	69m	0.0333 ppbv	LMDL
10) Bromomethane	0.000	94	0	N.D.	
11) Chloroethane	0.000	64	0	N.D.	
12) Acetonitrile	0.000	41	0	N.D. d	
13) Acrolein	0.000	56	0	N.D. d	
14) Trichlorofluoromethane	0.000	101	0	N.D. d	
15) Acrylonitrile	0.000	53	0	N.D. d	
16) 1,1-Dichloroethene	0.000	61	0	N.D.	
17) Methylene Chloride	0.000	49	0	N.D. d	
18) Carbon Disulfide	0.000	76	0	N.D. d	
19) Trichlorotrifluoroethane	0.000	101	0	N.D. 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. d	
27) Ethyl tert-Butyl Ether	0.000	59	0	N.D.	
28) 1,2-Dichloroethane	0.000	62	0	N.D. d	
30) 1,1,1-Trichloroethane	0.000	97	0	N.D.	
31) Benzene	0.000	78	0	N.D. d	
32) Carbon Tetrachloride	0.000	117	0	N.D. 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	0.000	41	0	N.D.	
39) cis-1,3-Dichloropropene	0.000	75	0	N.D.	
40) Methyl Isobutyl Ketone	0.000	43	0	N.D. 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. 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. d	
48) Tetrachloroethylene	0.000	166	0	N.D.	
49) Chlorobenzene	0.000	112	0	N.D.	
50) Ethylbenzene	0.000	91	0	N.D. d	

Compounds other than ethylene oxide were not quantitated (Reviewed)

Data Path : C:\msdchem\1\DATA\L19A%\
Data File : L19A%021.D
Acq On : 1 Feb 2019 4:40 am (#1); 01-Feb-19, 04:34:54 (#2)
Operator : MAH
Sample : 9012816-03
Misc : WEST NEIGHBORHOOD 1/25/19 (Sig #1); (Sig #2)
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Feb 01 11:20:56 2019
Quant Method : C:\msdchem\1\METHODS\9010007.M
Quant Title : TO-15 by Selective Ion Analysis
Quant Update : Thu Jan 31 06:35:20 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
51) m,p-Xylene	0.000	91	0	N.D. d	
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	0.000	91	0	N.D. d	
56) 1,3,5-Trimethylbenzene	0.000	105	0	N.D. d	
57) 1,2,4-Trimethylbenzene	0.000	105	0	N.D. d	
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.	

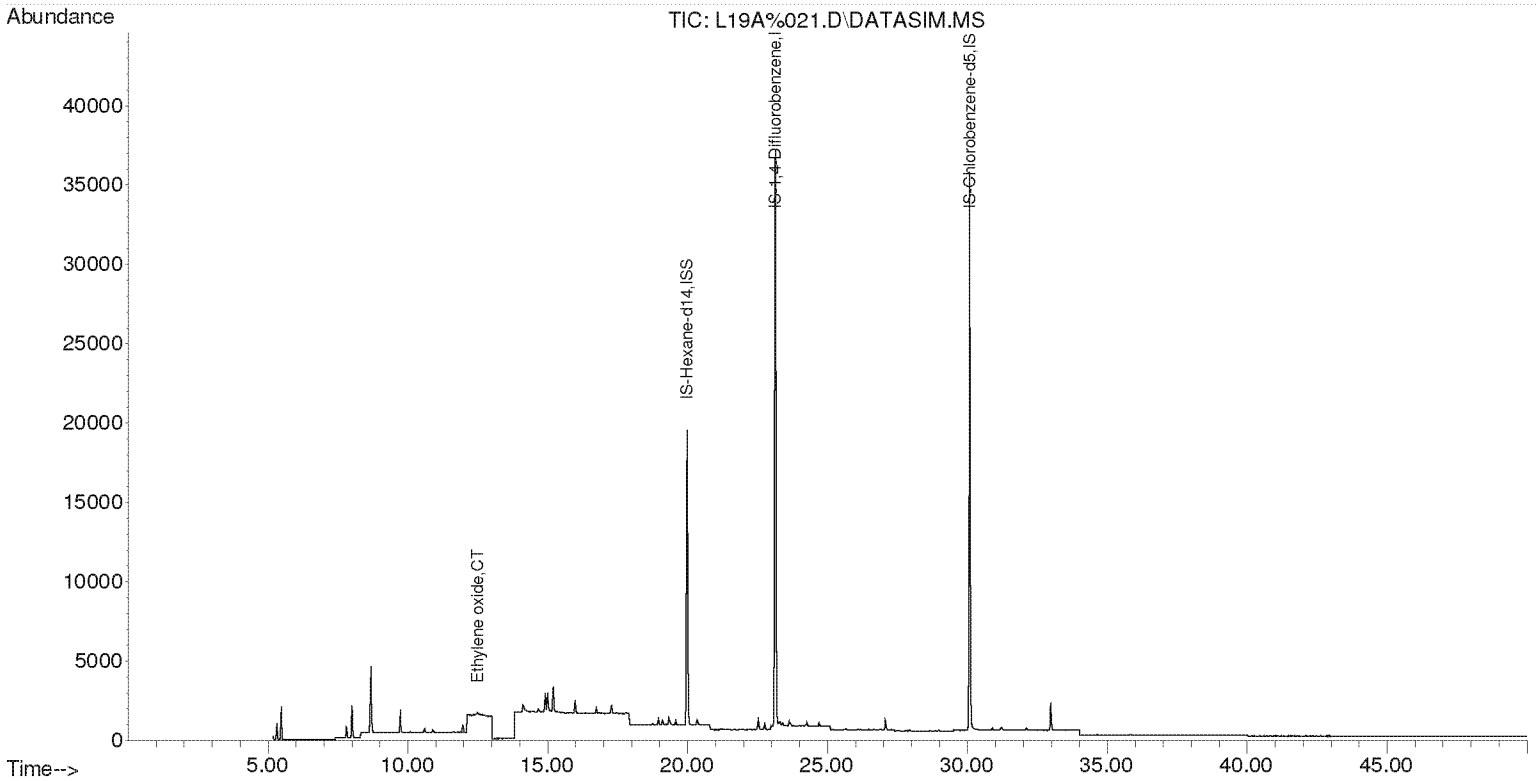
(#) = qualifier out of range (m) = manual integration (+) = signals summed

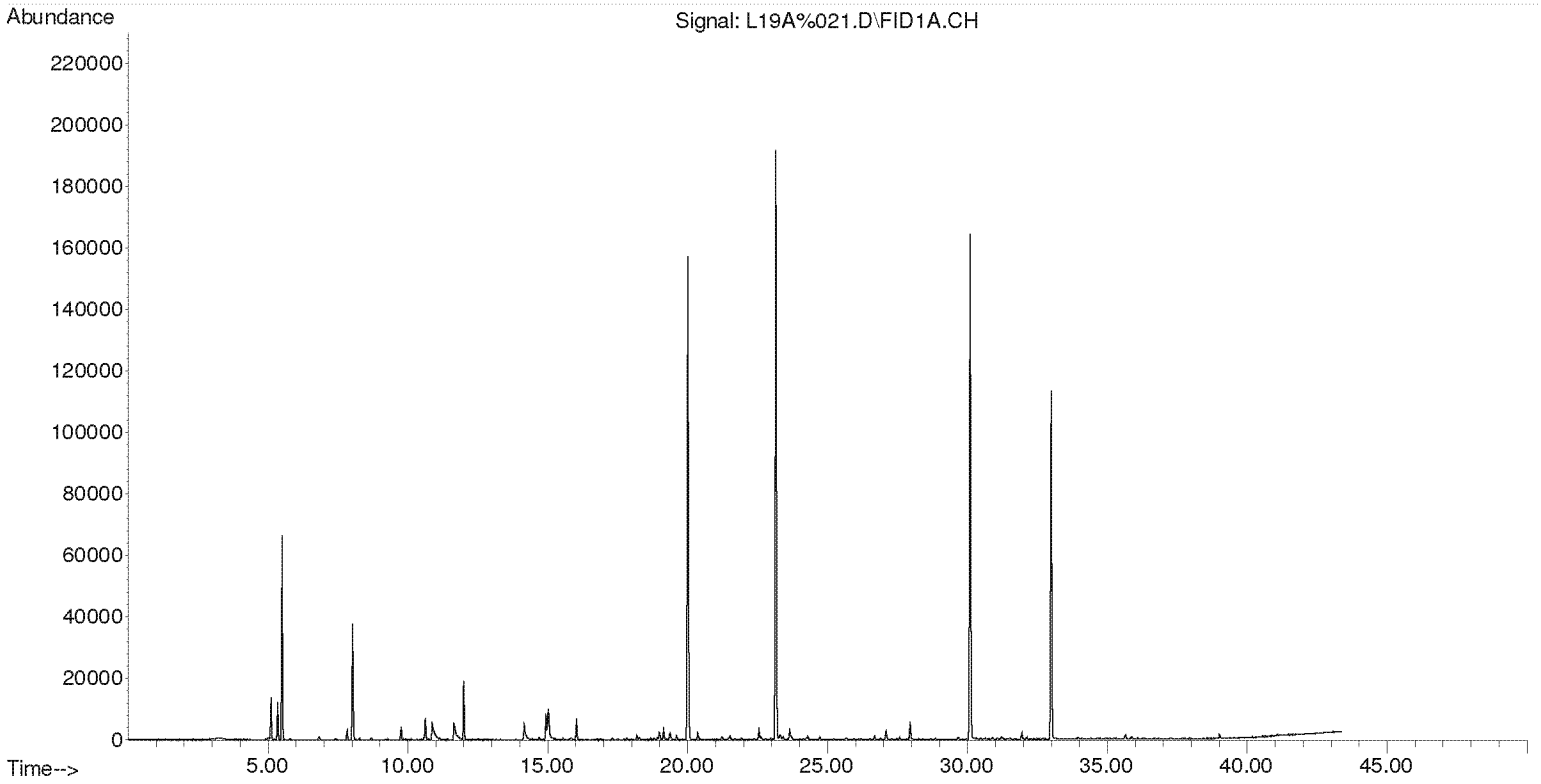
ED_002475_00000094-00083

Compounds other than ethylene oxide were not quantitated.

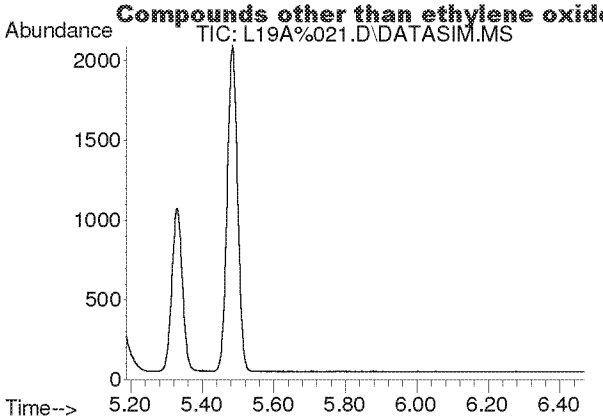
Data Path : Y:\MASS SPEC 1 DATA\L19A%\
Data File : L19A%021.D
Acq On : 1 Feb 2019 4:40 am (#1); 01 Feb 2019 4:34 am (#2)
Operator : MAH
Sample : 9012816-03
Misc : WEST NEIGHBORHOOD 1/25/19 (Sig #1); (Sig #2)
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Feb 01 11:20:09 2019
Quant Method : C:\msdchem\1\METHODS\9010007.M
Quant Title : TO-15 by Selective Ion Analysis
QLast Update : Thu Jan 31 06:35:20 2019
Response via : Initial Calibration





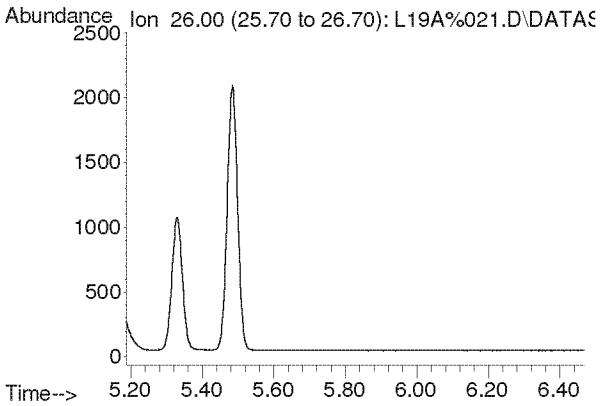
Compounds other than ethylene oxide were not quantitated.

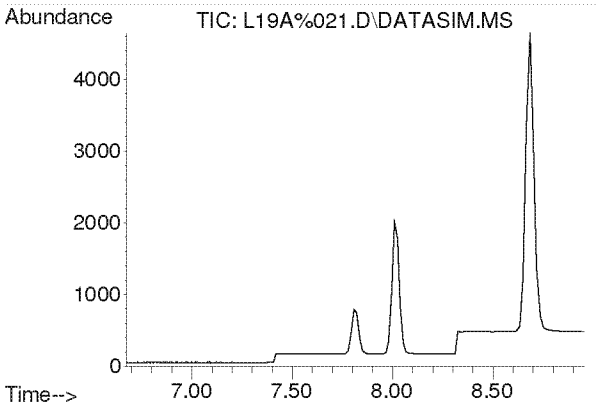


#2
Acetylene
Concen: N.D.
Expected RT: 5.40 min

Lab File: L19A%021.D
Acq: 1 Feb 2019 4:40 am

Tgt Ion: 26



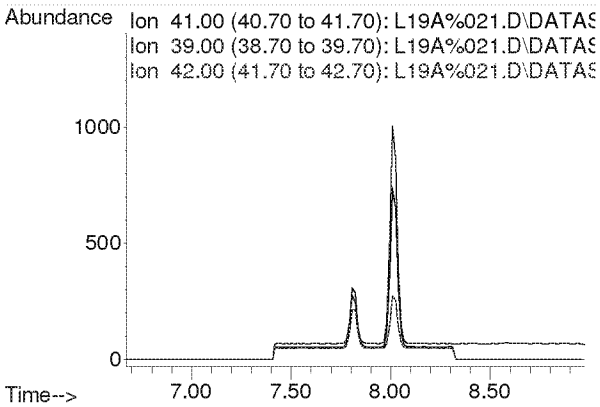


#3
Propylene
Concen: N.D.
Expected RT: 7.82 min

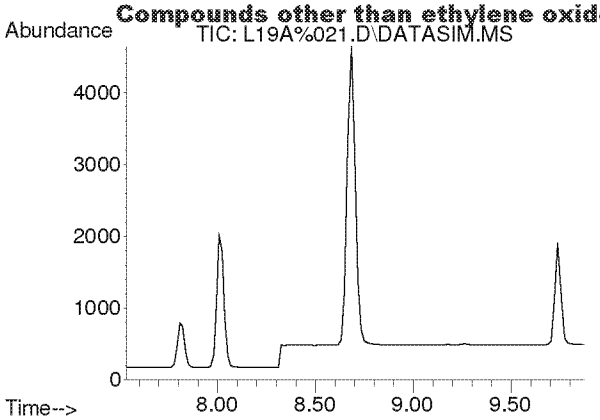
Lab File: L19A%021.D
Acq: 1 Feb 2019 4:40 am

Tgt Ion: 41

Sig	Exp Ratio
41	100
39	79.3
42	66.1



Compounds other than ethylene oxide were not quantitated.

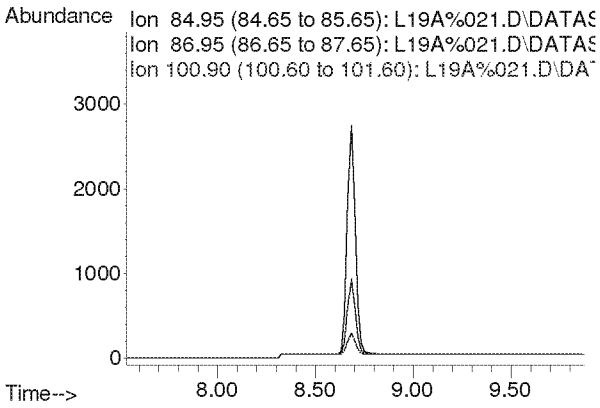


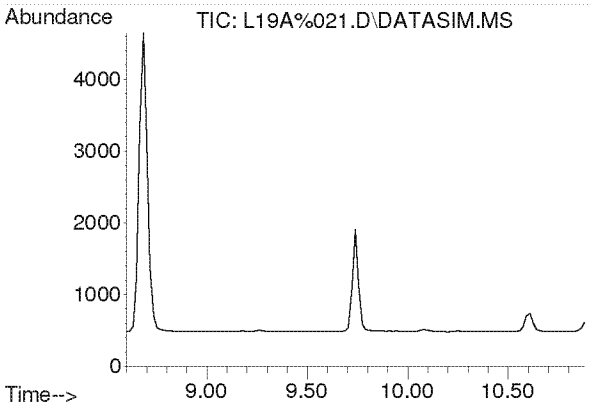
#4
Dichlorodifluoromethane
Concen: N.D.
Expected RT: 8.68 min

Lab File: L19A%021.D
Acq: 1 Feb 2019 4:40 am

Tgt Ion: 85

Sig	Exp Ratio
85	100
87	32.4
101	9.0



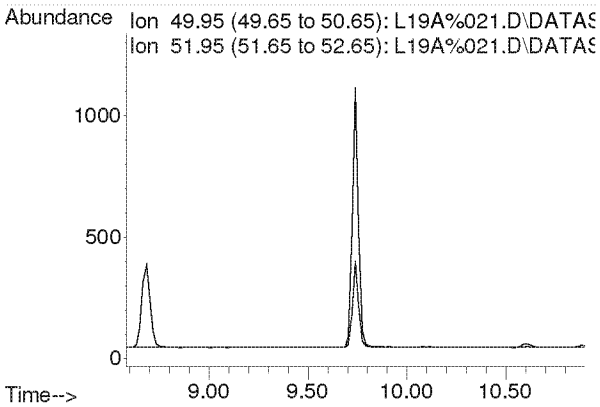


#5
Chloromethane
Concen: N.D.
Expected RT: 9.74 min

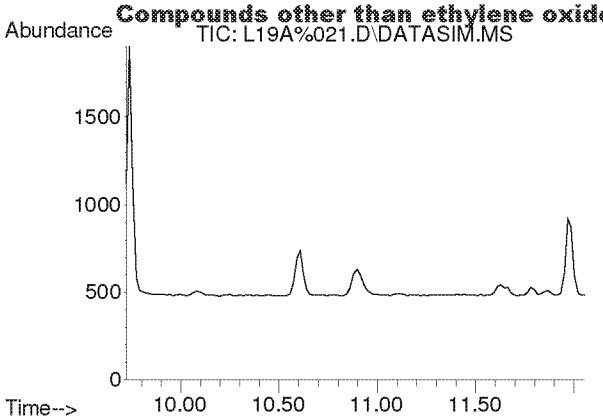
Lab File: L19A%021.D
Acq: 1 Feb 2019 4:40 am

Tgt Ion: 50

Sig	Exp Ratio
50	100
52	32.4



Compounds other than ethylene oxide were not quantitated.

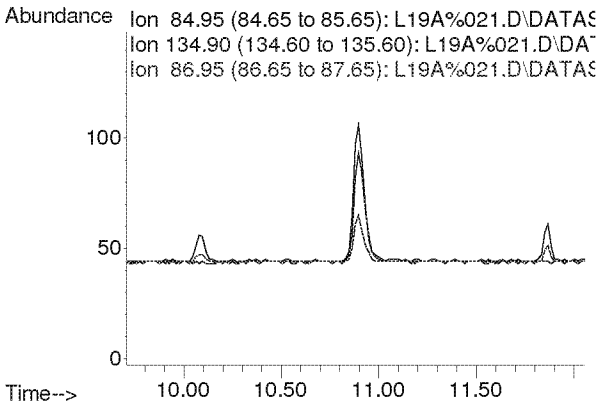


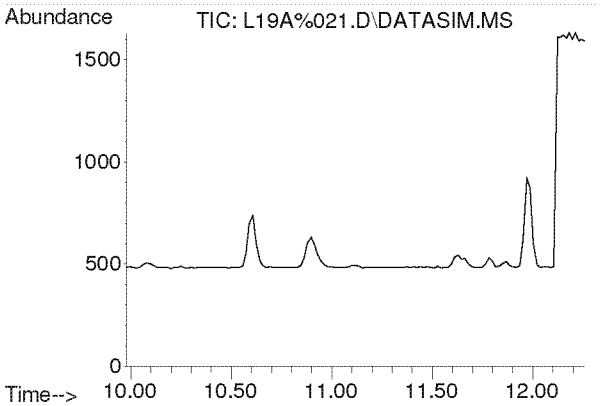
#6
Dichlorotetrafluoroethane
Concen: N.D.
Expected RT: 10.86 min

Lab File: L19A%021.D
Acq: 1 Feb 2019 4:40 am

Tgt Ion: 85

Sig	Exp Ratio
85	100
135	78.4
87	32.1



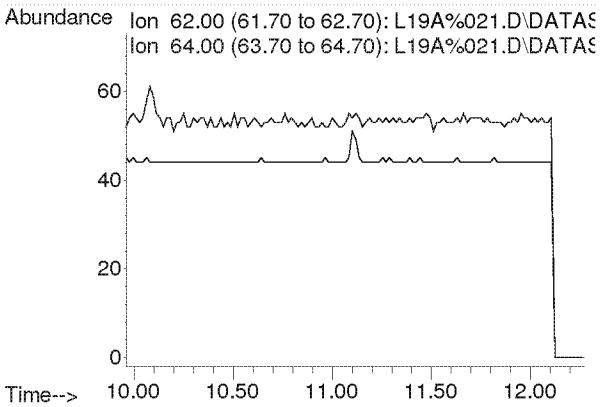


#7
Vinyl Chloride
Concen: N.D.
Expected RT: 11.12 min

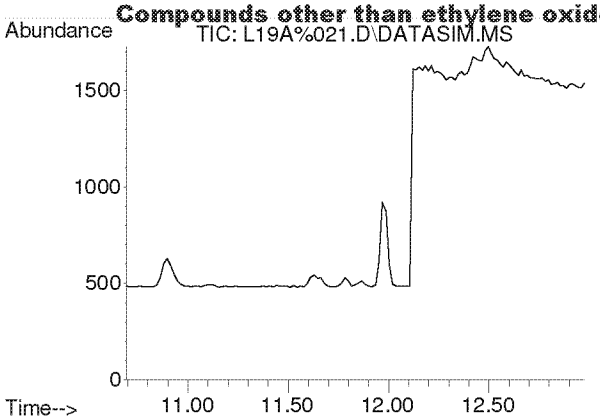
Lab File: L19A%021.D
Acq: 1 Feb 2019 4:40 am

Tgt Ion: 62

Sig	Exp Ratio
62	100
64	31.9



Compounds other than ethylene oxide were not quantitated.

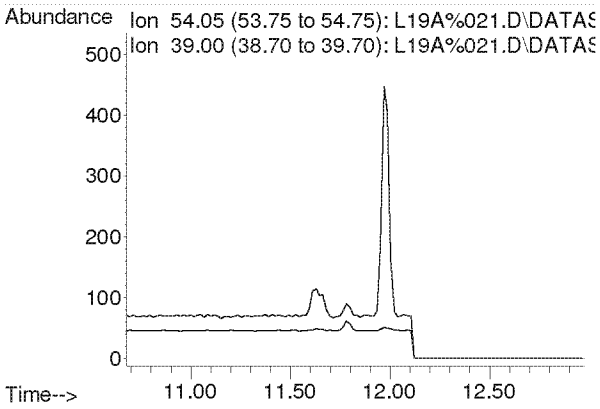


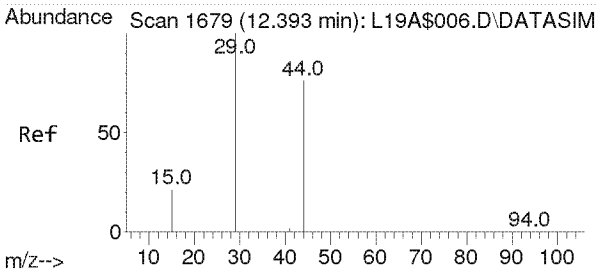
#8
1,3-Butadiene
Concen: N.D.
Expected RT: 11.78 min

Lab File: L19A%021.D
Acq: 1 Feb 2019 4:40 am

Tgt Ion: 54

Sig	Exp Ratio
54	100
39	107.0

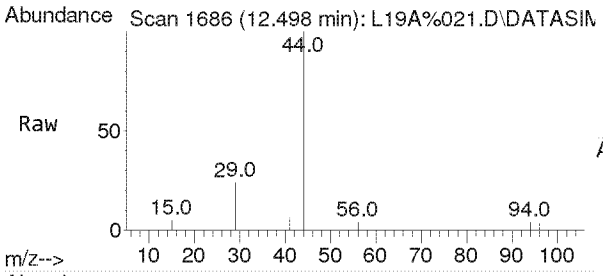


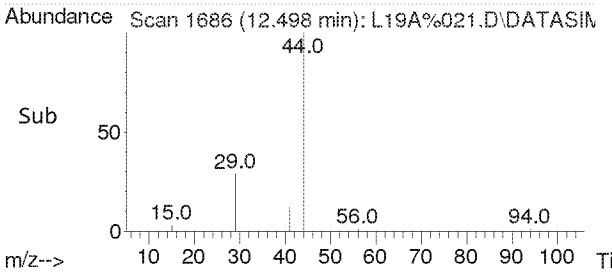


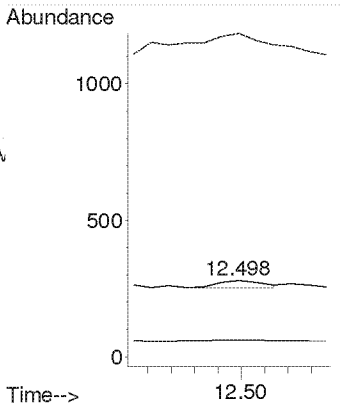
#9
Ethylene oxide
Concen: 0.033 ppbv m
RT: 12.498 min Scan# 1686
Delta R.T. 0.008 min
Lab File: L19A%021.D
Acq: 1 Feb 2019 4:40 am

Tgt Ion: 29 Resp: 69

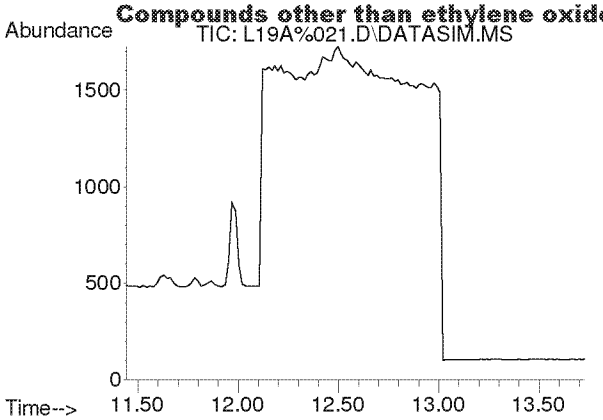
Ion	Ratio	Lower	Upper
29	100		
15	0.0	16.2	24.4#
44	1323.2	62.9	94.3#







Compounds other than ethylene oxide were not quantitated.

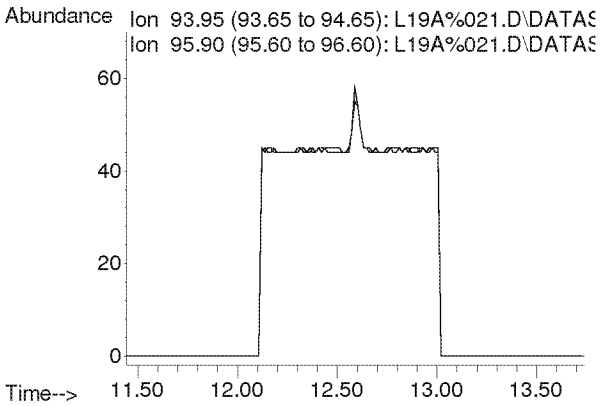


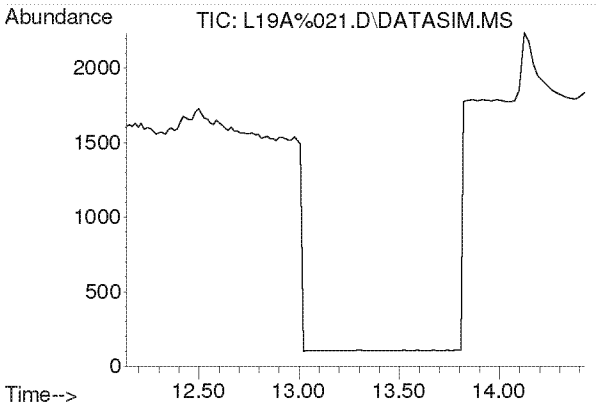
#10
Bromomethane
Concen: N.D.
Expected RT: 12.59 min

Lab File: L19A%021.D
Acq: 1 Feb 2019 4:40 am

Tgt Ion: 94

Sig	Exp Ratio
94	100
96	94.6



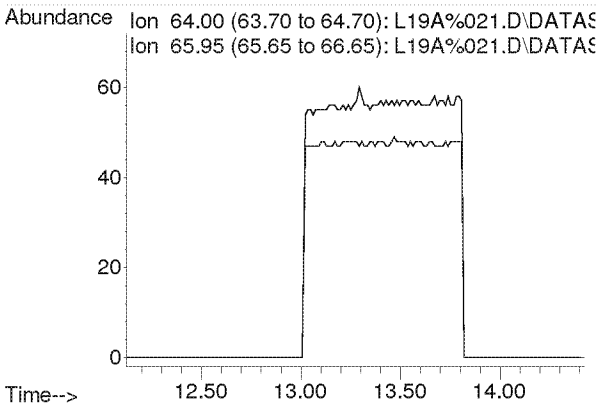


#11
Chloroethane
Concen: N.D.
Expected RT: 13.28 min

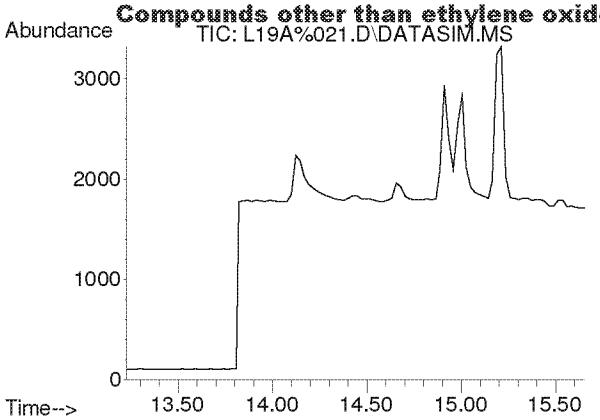
Lab File: L19A%021.D
Acq: 1 Feb 2019 4:40 am

Tgt Ion: 64

Sig	Exp Ratio
64	100
66	32.2



Compounds other than ethylene oxide were not quantitated.

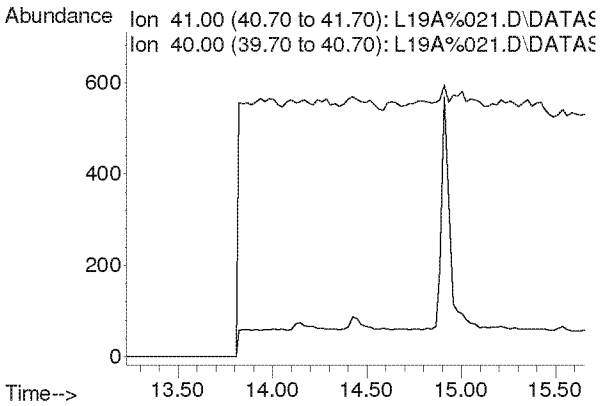


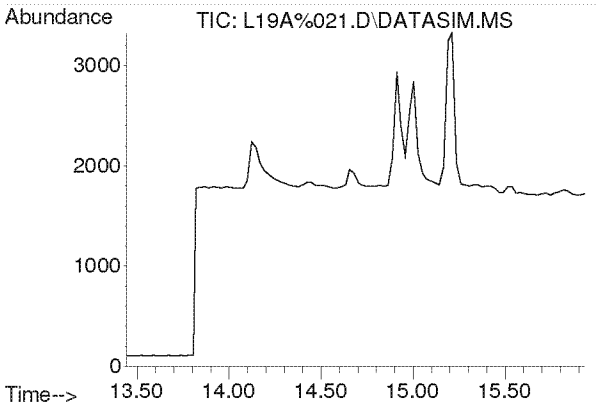
#12
Acetonitrile
Concen: N.D.
Expected RT: 14.36 min

Lab File: L19A%021.D
Acq: 1 Feb 2019 4:40 am

Tgt Ion: 41

Sig	Exp Ratio
41	100
40	54.3



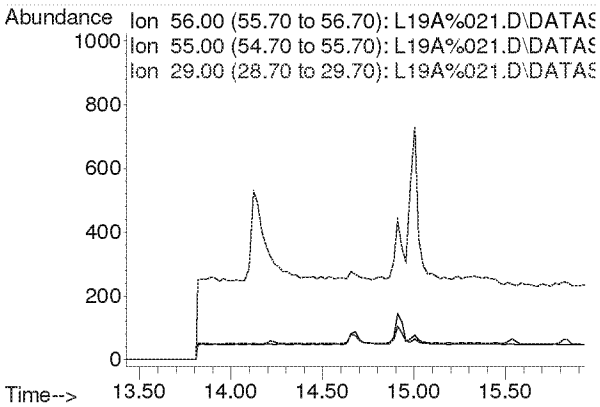


#13
Acrolein
Concen: N.D.
Expected RT: 14.63 min

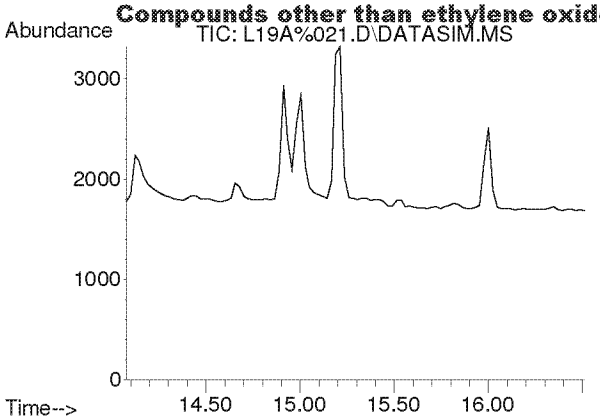
Lab File: L19A%021.D
Acq: 1 Feb 2019 4:40 am

Tgt Ion: 56

Sig	Exp Ratio
56	100
55	77.4
29	57.5



Compounds other than ethylene oxide were not quantitated.

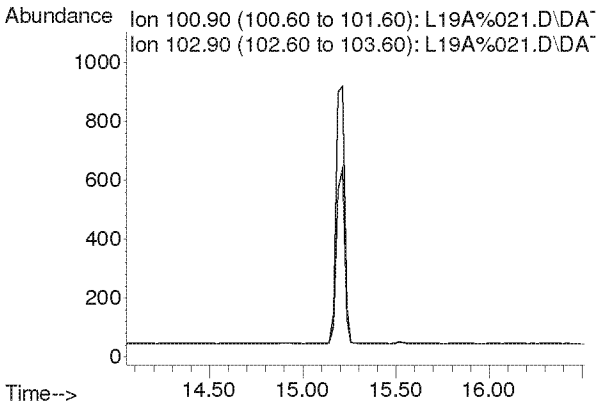


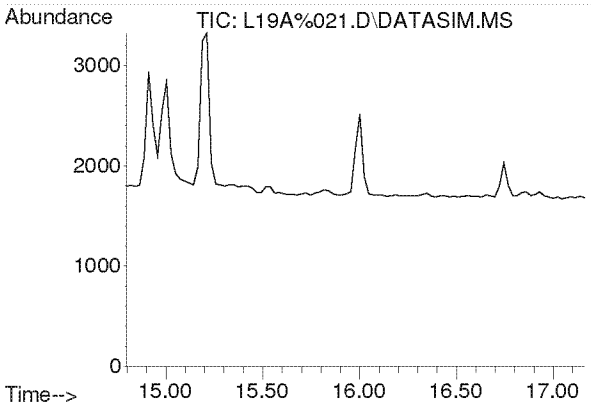
#14
Trichlorofluoromethane
Concen: N.D.
Expected RT: 15.21 min

Lab File: L19A%021.D
Acq: 1 Feb 2019 4:40 am

Tgt Ion: 101

Sig	Exp Ratio
101	100
103	64.5



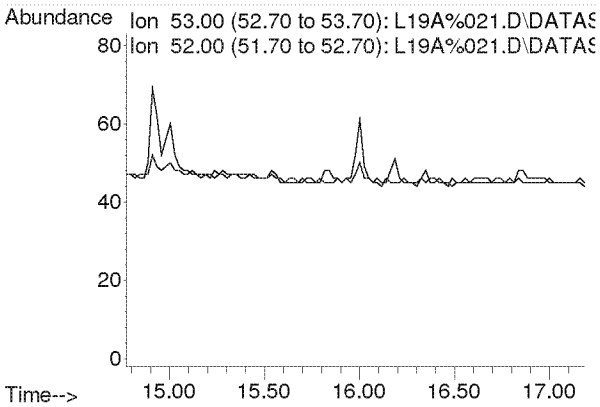


#15
Acrylonitrile
Concen: N.D.
Expected RT: 15.93 min

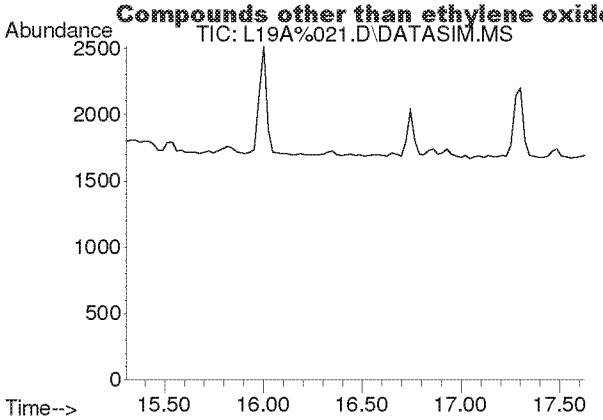
Lab File: L19A%021.D
Acq: 1 Feb 2019 4:40 am

Tgt Ion: 53

Sig	Exp Ratio
53	100
52	87.9



Compounds other than ethylene oxide were not quantitated.

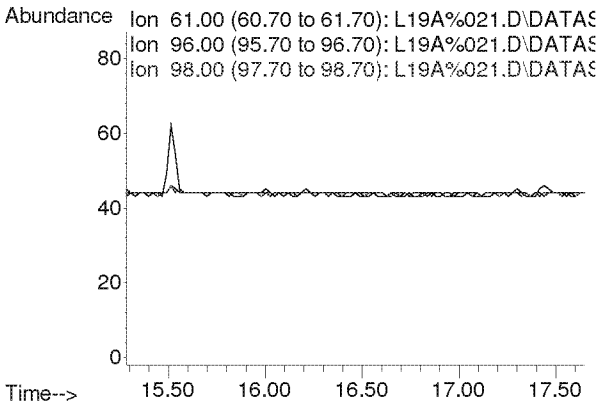


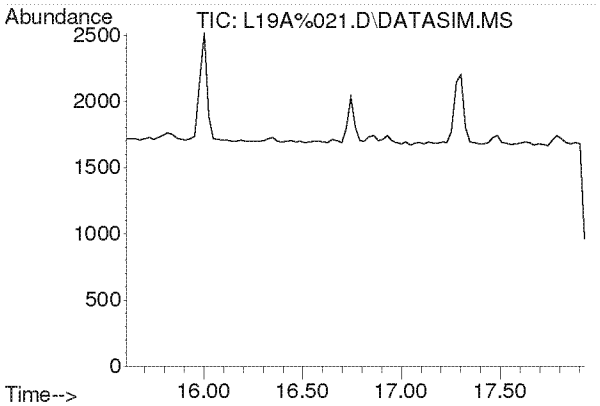
#16
1,1-Dichloroethene
Concen: N.D.
Expected RT: 16.44 min

Lab File: L19A%021.D
Acq: 1 Feb 2019 4:40 am

Tgt Ion: 61

Sig	Exp Ratio
61	100
96	56.6
98	36.5



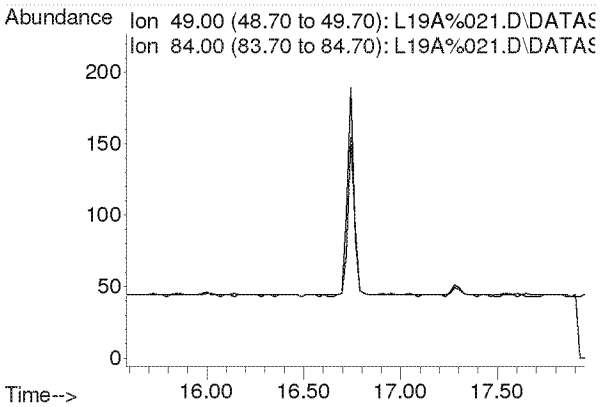


#17
Methylene Chloride
Concen: N.D.
Expected RT: 16.74 min

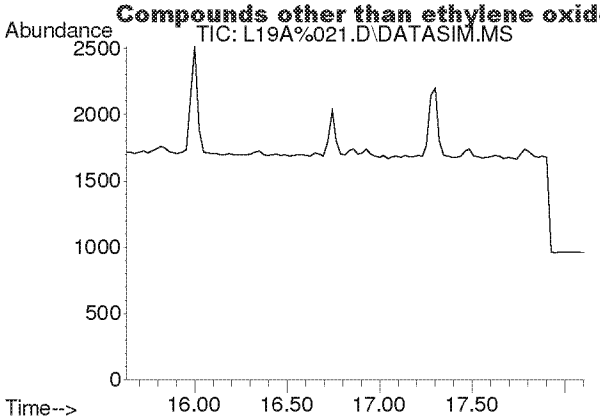
Lab File: L19A%021.D
Acq: 1 Feb 2019 4:40 am

Tgt Ion: 49

Sig	Exp Ratio
49	100
84	76.4



Compounds other than ethylene oxide were not quantitated.

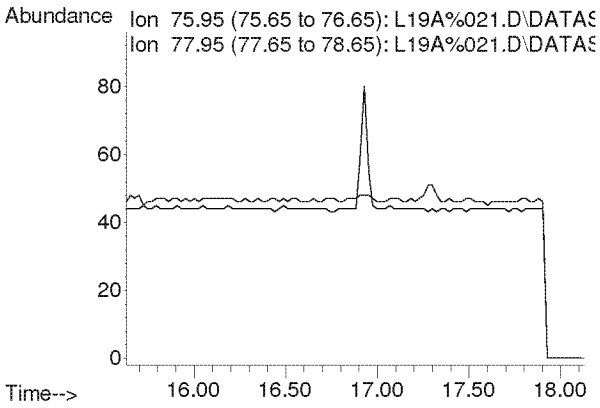


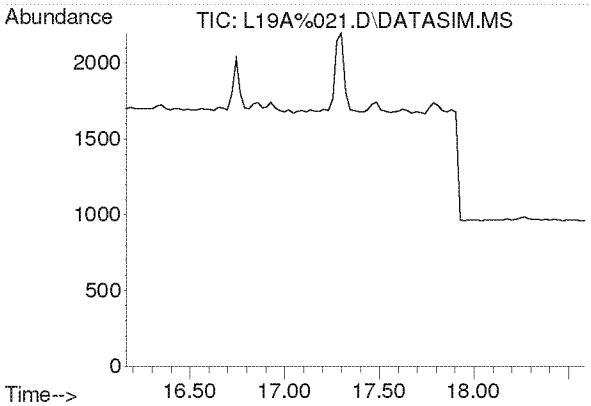
#18
Carbon Disulfide
Concen: N.D.
Expected RT: 16.93 min

Lab File: L19A%021.D
Acq: 1 Feb 2019 4:40 am

Tgt Ion: 76

Sig	Exp Ratio
76	100
78	9.1



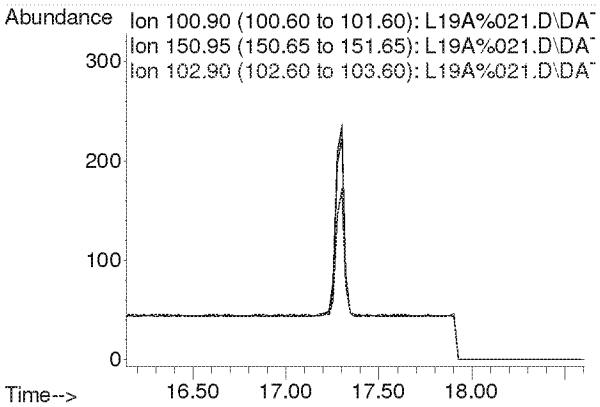


#19
Trichlorotrifluoroethane
Concen: N.D.
Expected RT: 17.30 min

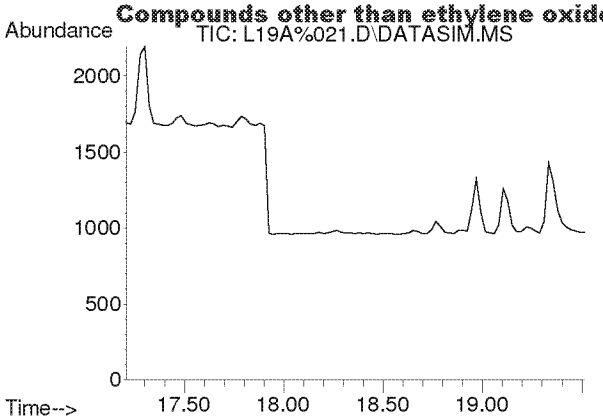
Lab File: L19A%021.D
Acq: 1 Feb 2019 4:40 am

Tgt Ion: 101

Sig	Exp Ratio
101	100
151	95.2
103	64.4



Compounds other than ethylene oxide were not quantitated.

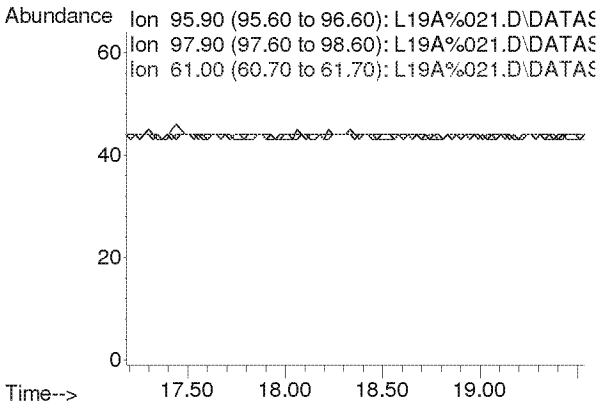


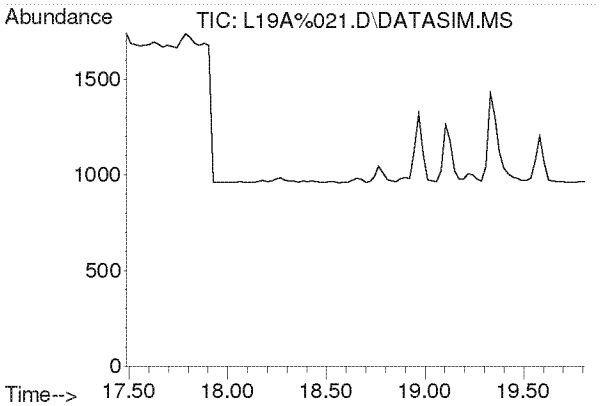
#20
trans-1,2-Dichloroethylene
Concen: N.D.
Expected RT: 18.34 min

Lab File: L19A%021.D
Acq: 1 Feb 2019 4:40 am

Tgt Ion: 96

Sig	Exp Ratio
96	100
98	64.0
61	160.1



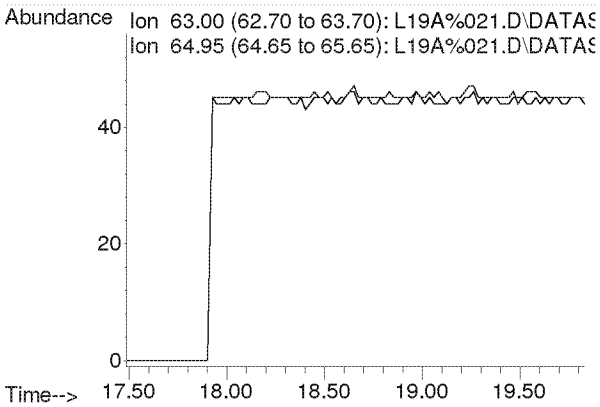


#21
1,1-Dichloroethane
Concen: N.D.
Expected RT: 18.63 min

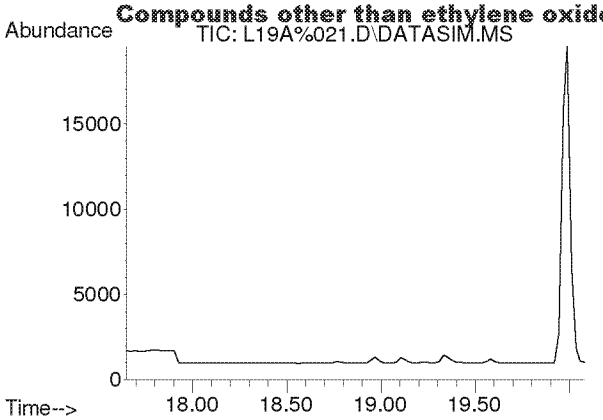
Lab File: L19A%021.D
Acq: 1 Feb 2019 4:40 am

Tgt Ion: 63

Sig	Exp Ratio
63	100
65	31.7



Compounds other than ethylene oxide were not quantitated.

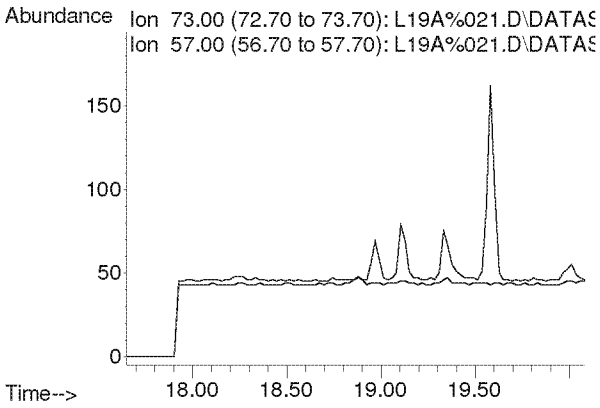


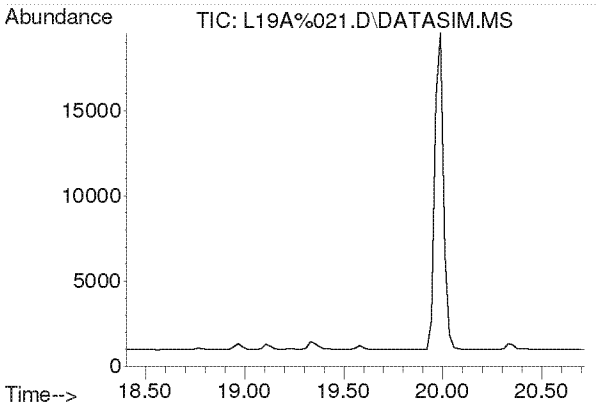
#22
Methyl tert-Butyl Ether
Concen: N.D.
Expected RT: 18.79 min

Lab File: L19A%021.D
Acq: 1 Feb 2019 4:40 am

Tgt Ion: 73

Sig	Exp Ratio
73	100
57	22.6



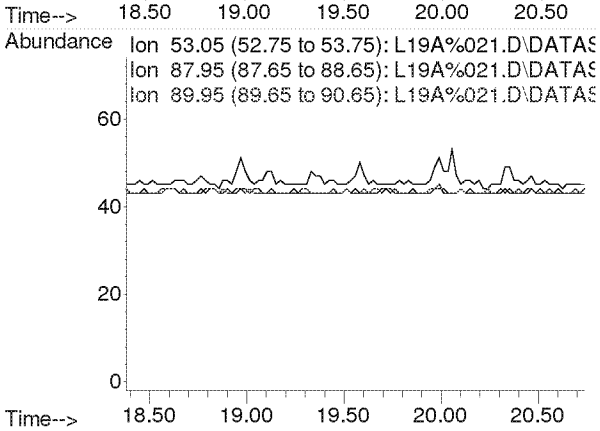


#23
Chloroprene
Concen: N.D.
Expected RT: 19.54 min

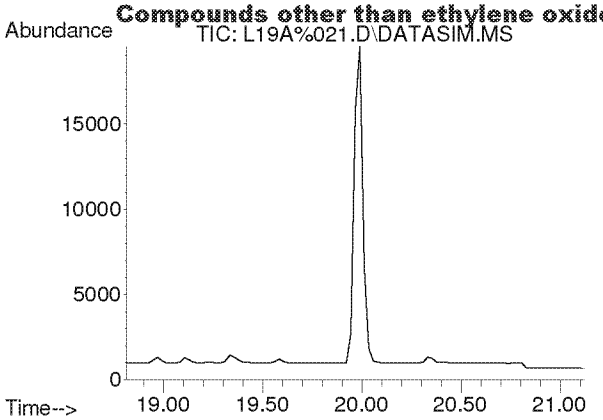
Lab File: L19A%021.D
Acq: 1 Feb 2019 4:40 am

Tgt Ion: 53

Sig	Exp Ratio
53	100
88	50.4
90	16.1



Compounds other than ethylene oxide were not quantitated.

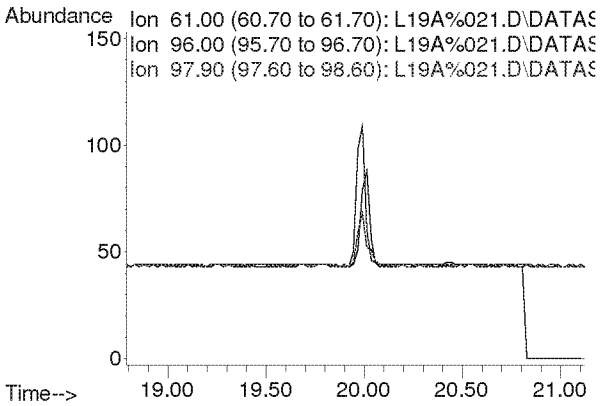


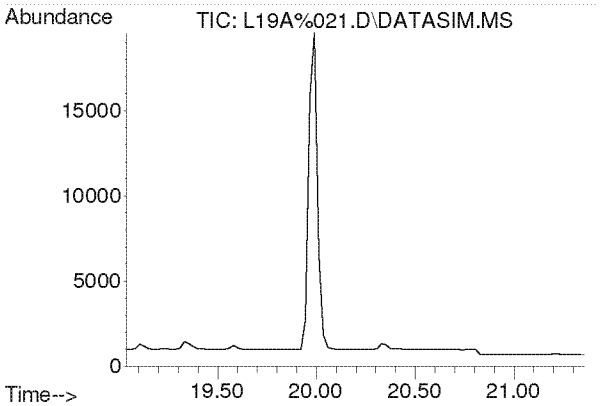
#24
cis-1,2-Dichloroethylene
Concen: N.D.
Expected RT: 19.95 min

Lab File: L19A%021.D
Acq: 1 Feb 2019 4:40 am

Tgt Ion: 61

Sig	Exp Ratio
61	100
96	70.0
98	45.1



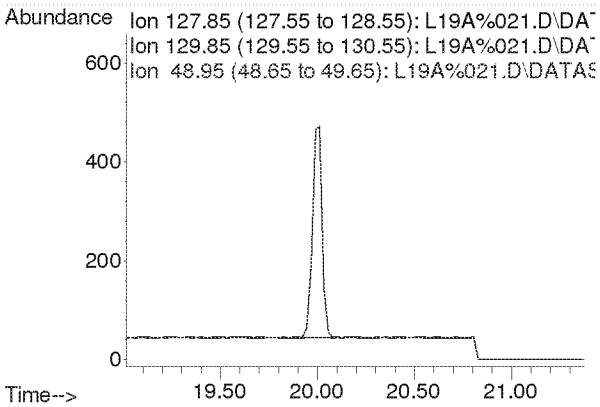


#25
Bromochloromethane
Concen: N.D.
Expected RT: 20.17 min

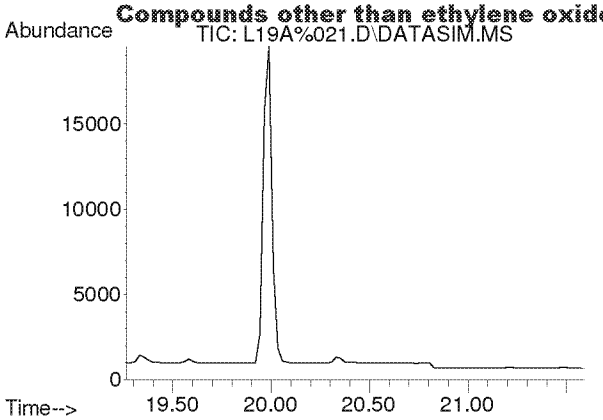
Lab File: L19A%021.D
Acq: 1 Feb 2019 4:40 am

Tgt Ion: 128

Sig	Exp Ratio
128	100
130	129.4
49	165.7



Compounds other than ethylene oxide were not quantitated.

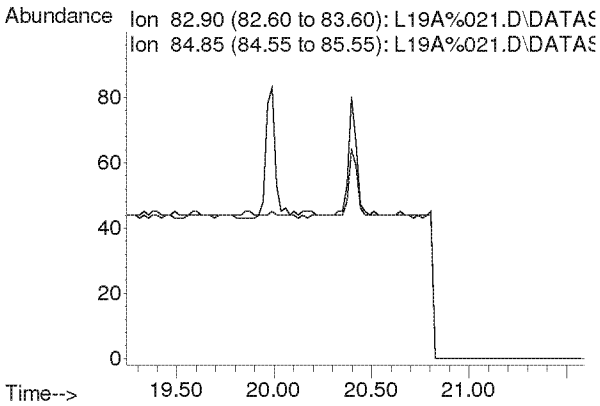


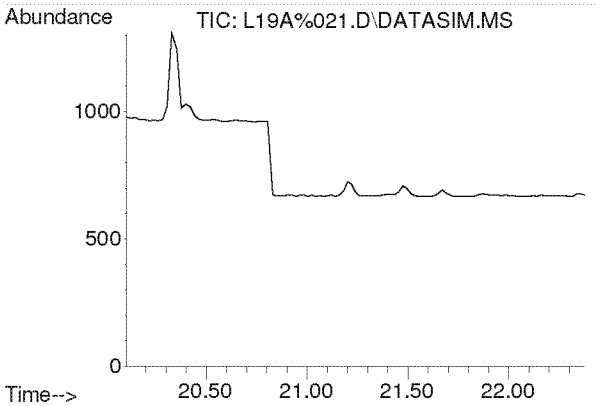
#26
Chloroform
Concen: N.D.
Expected RT: 20.40 min

Lab File: L19A%021.D
Acq: 1 Feb 2019 4:40 am

Tgt Ion: 83

Sig	Exp Ratio
83	100
85	64.7



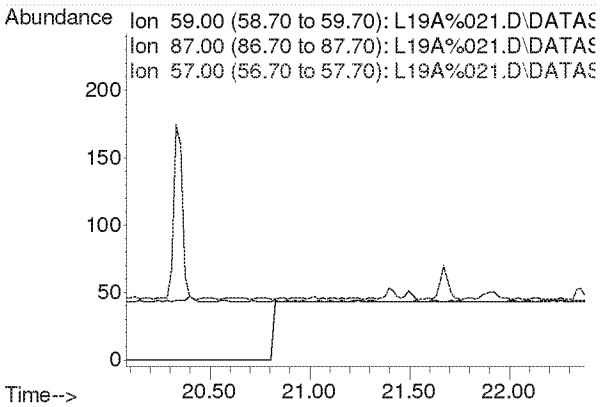


#27
Ethyl tert-Butyl Ether
Concen: N.D.
Expected RT: 21.18 min

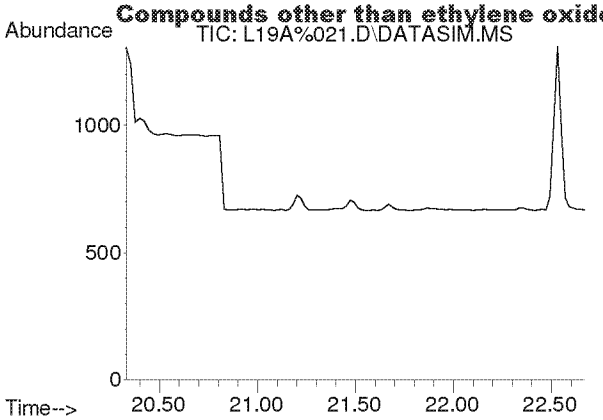
Lab File: L19A%021.D
Acq: 1 Feb 2019 4:40 am

Tgt Ion: 59

Sig	Exp Ratio
59	100
87	38.0
57	32.8



Compounds other than ethylene oxide were not quantitated.

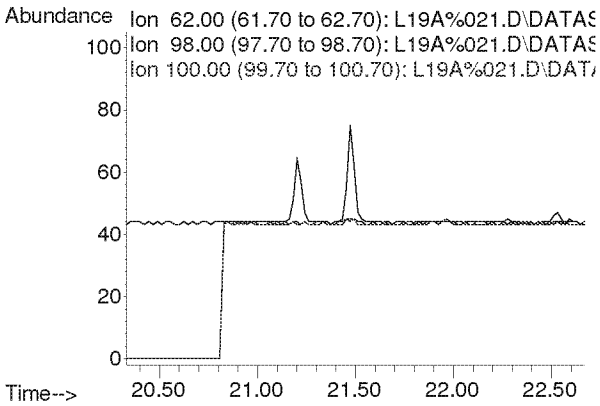


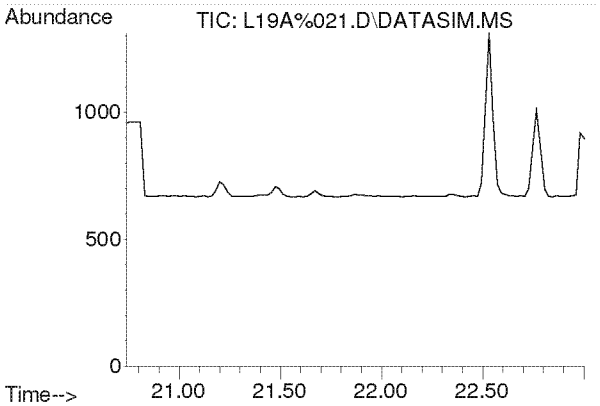
#28
1,2-Dichloroethane
Concen: N.D.
Expected RT: 21.48 min

Lab File: L19A%021.D
Acq: 1 Feb 2019 4:40 am

Tgt Ion: 62

Sig	Exp Ratio
62	100
98	5.9
100	3.9



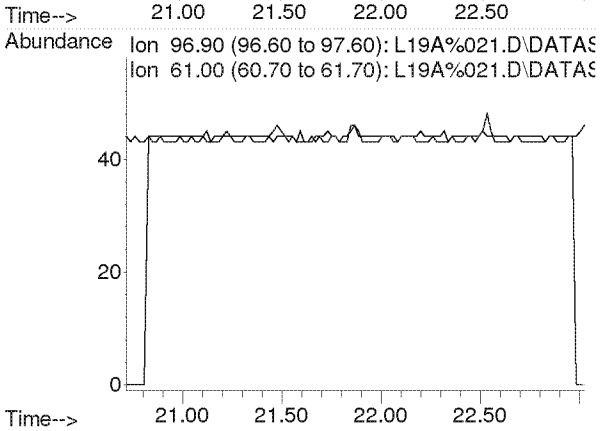


#30
1,1,1-Trichloroethane
Concen: N.D.
Expected RT: 21.87 min

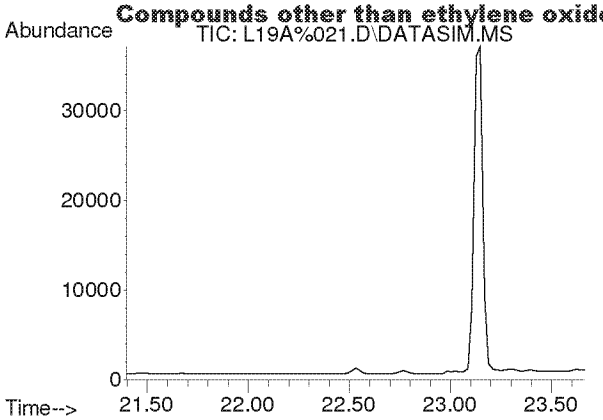
Lab File: L19A%021.D
Acq: 1 Feb 2019 4:40 am

Tgt Ion: 97

Sig	Exp Ratio
97	100
61	65.3



Compounds other than ethylene oxide were not quantitated.

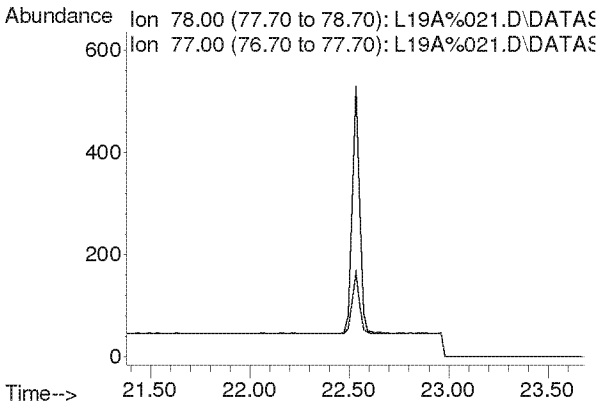


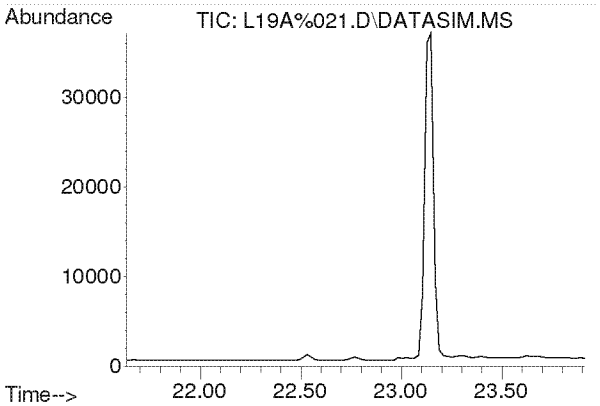
#31
Benzene
Concen: N.D.
Expected RT: 22.53 min

Lab File: L19A%021.D
Acq: 1 Feb 2019 4:40 am

Tgt Ion: 78

Sig	Exp Ratio
78	100
77	22.9



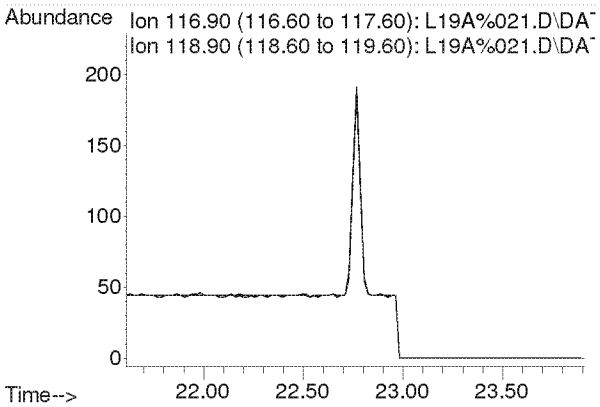


#32
Carbon Tetrachloride
Concen: N.D.
Expected RT: 22.77 min

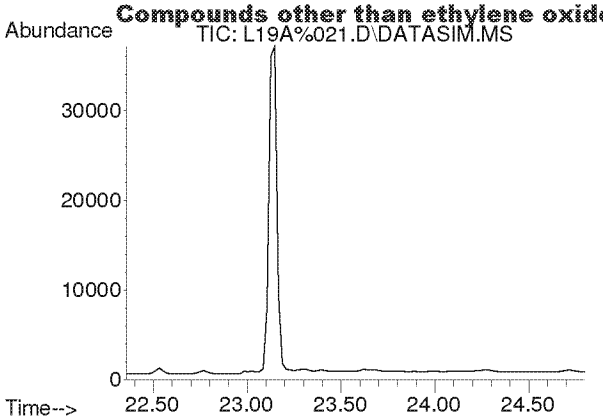
Lab File: L19A%021.D
Acq: 1 Feb 2019 4:40 am

Tgt Ion: 117

Sig	Exp Ratio
117	100
119	96.1



Compounds other than ethylene oxide were not quantitated.

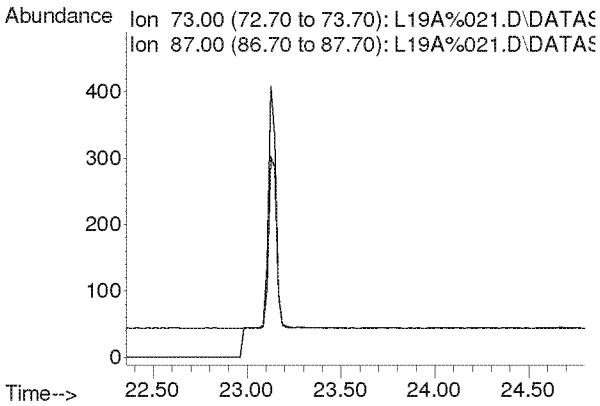


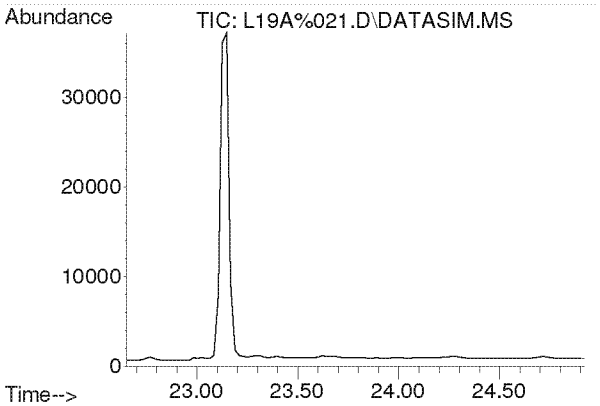
#33
tert-Amyl Methyl Ether
Concen: N.D.
Expected RT: 23.50 min

Lab File: L19A%021.D
Acq: 1 Feb 2019 4:40 am

Tgt Ion: 73

Sig	Exp Ratio
73	100
87	25.2



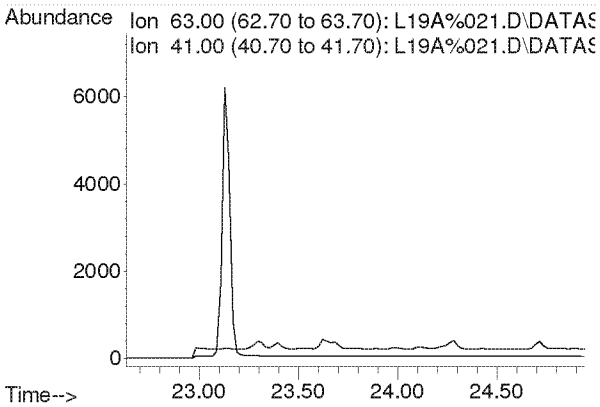


#34
1,2-Dichloropropane
Concen: N.D.
Expected RT: 23.79 min

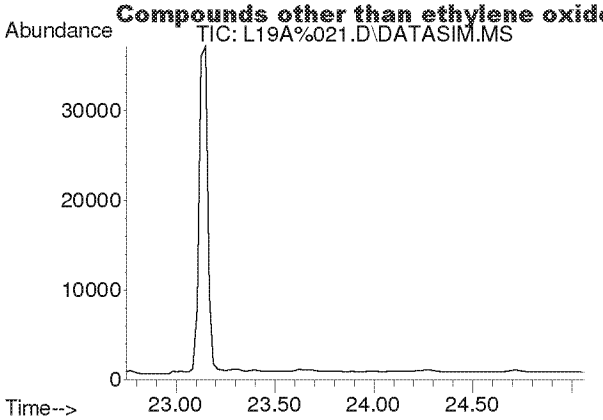
Lab File: L19A%021.D
Acq: 1 Feb 2019 4:40 am

Tgt Ion: 63

Sig	Exp Ratio
63	100
41	248.2



Compounds other than ethylene oxide were not quantitated.

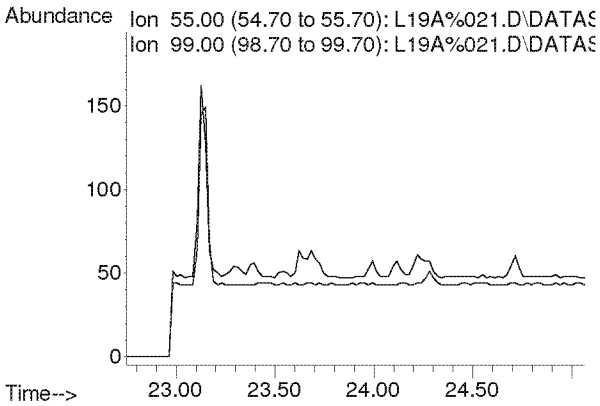


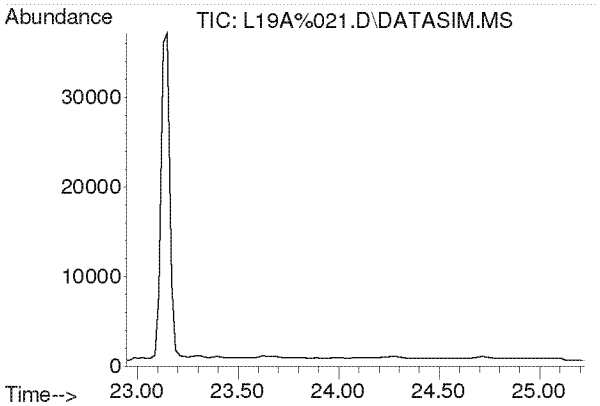
#35
Ethyl Acrylate
Concen: N.D.
Expected RT: 23.87 min

Lab File: L19A%021.D
Acq: 1 Feb 2019 4:40 am

Tgt Ion: 55

Sig	Exp Ratio
55	100
99	6.3



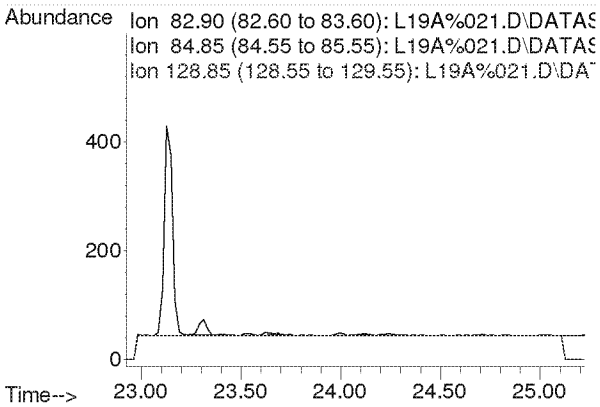


#36
Bromodichloromethane
Concen: N.D.
Expected RT: 24.08 min

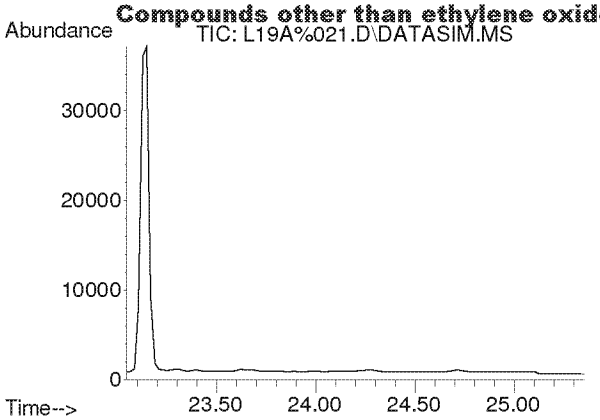
Lab File: L19A%021.D
Acq: 1 Feb 2019 4:40 am

Tgt Ion: 83

Sig	Exp Ratio
83	100
85	63.7
129	12.3



Compounds other than ethylene oxide were not quantitated.

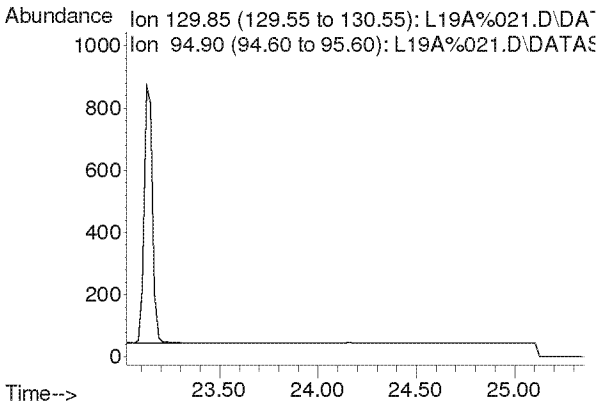


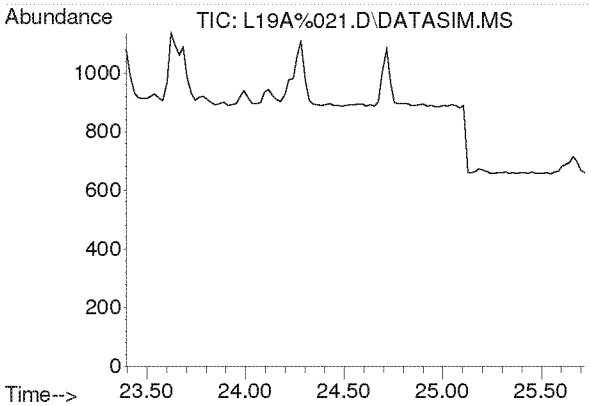
#37
Trichloroethylene
Concen: N.D.
Expected RT: 24.18 min

Lab File: L19A%021.D
Acq: 1 Feb 2019 4:40 am

Tgt Ion: 130

Sig	Exp Ratio
130	100
95	109.9



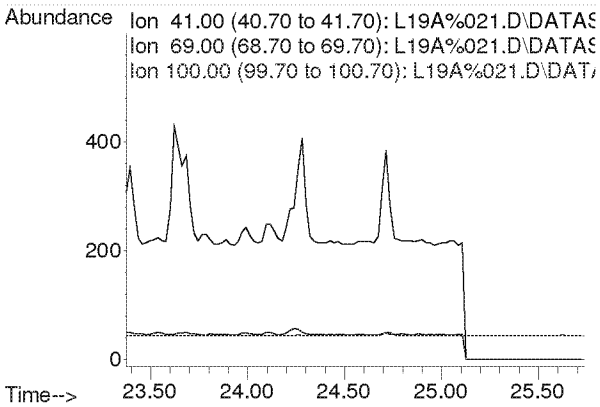


#38
Methyl Methacrylate
Concen: N.D.
Expected RT: 24.53 min

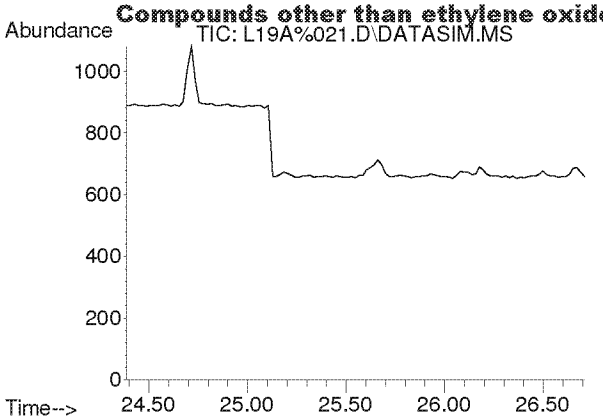
Lab File: L19A%021.D
Acq: 1 Feb 2019 4:40 am

Tgt Ion: 41

Sig	Exp Ratio
41	100
69	19.6
100	5.3



Compounds other than ethylene oxide were not quantitated.

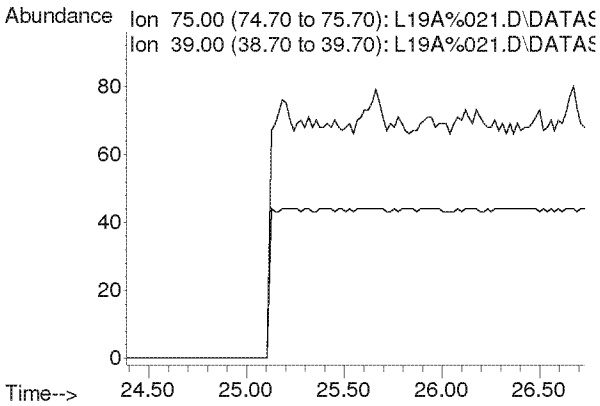


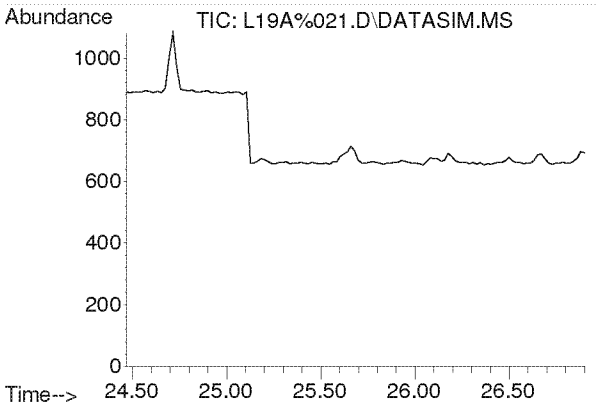
#39
cis-1,3-Dichloropropene
Concen: N.D.
Expected RT: 25.53 min

Lab File: L19A%021.D
Acq: 1 Feb 2019 4:40 am

Tgt Ion: 75

Sig	Exp Ratio
75	100
39	61.8



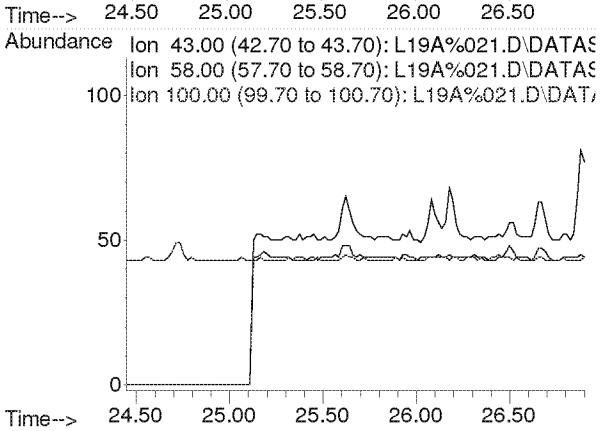


#40
Methyl Isobutyl Ketone
Concen: N.D.
Expected RT: 25.60 min

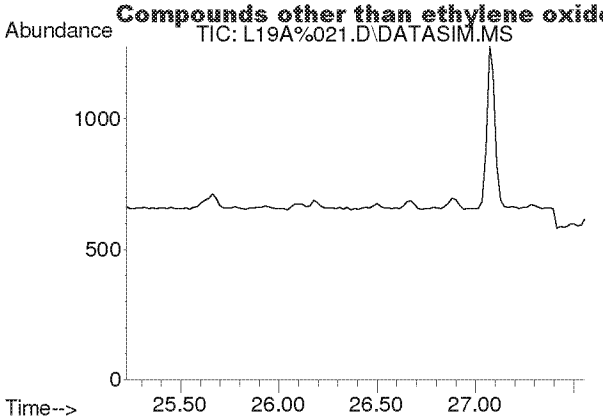
Lab File: L19A%021.D
Acq: 1 Feb 2019 4:40 am

Tgt Ion: 43

Sig	Exp Ratio
43	100
58	33.9
100	8.5



Compounds other than ethylene oxide were not quantitated.

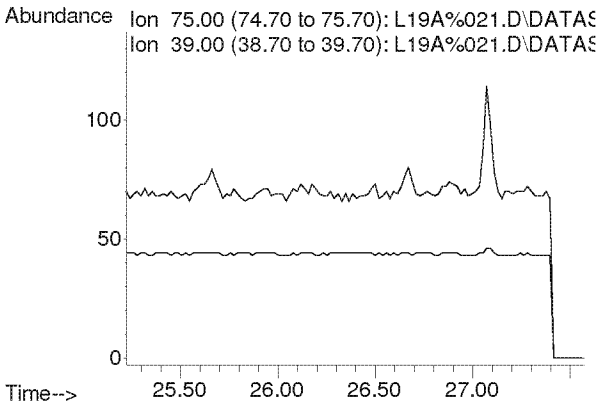


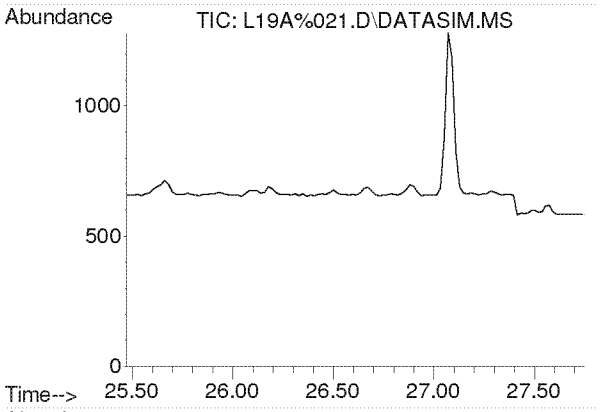
#41
trans-1,3-Dichloropropene
Concen: N.D.
Expected RT: 26.37 min

Lab File: L19A%021.D
Acq: 1 Feb 2019 4:40 am

Tgt Ion: 75

Sig	Exp Ratio
75	100
39	60.7



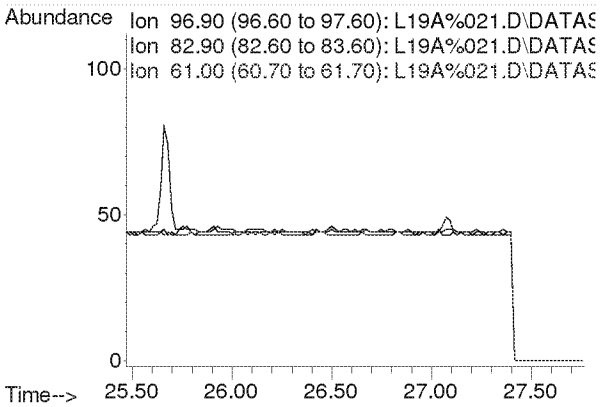


#42
1,1,2-Trichloroethane
Concen: N.D.
Expected RT: 26.62 min

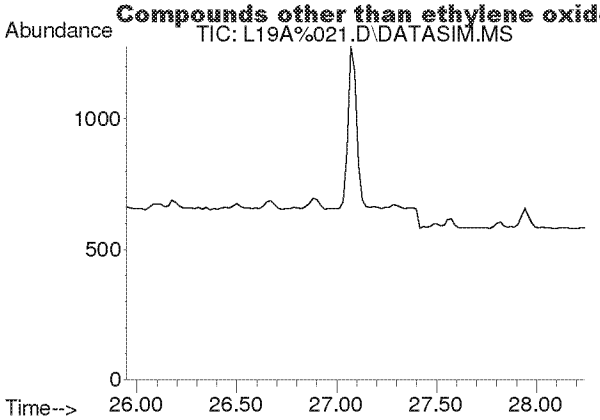
Lab File: L19A%021.D
Acq: 1 Feb 2019 4:40 am

Tgt Ion: 97

Sig	Exp Ratio
97	100
83	94.6
61	65.6



Compounds other than ethylene oxide were not quantitated.

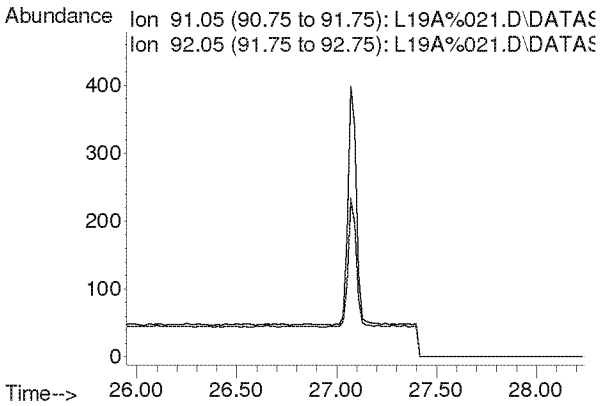


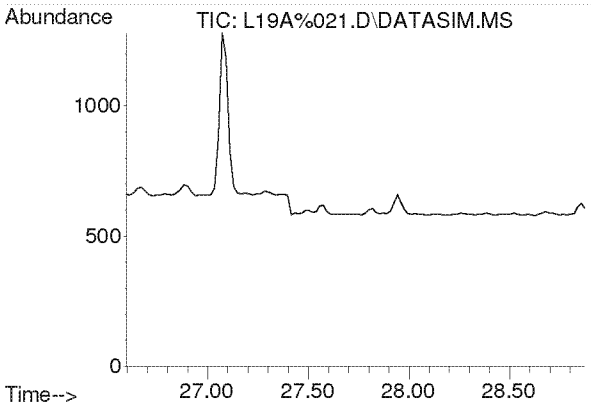
#44
Toluene
Concen: N.D.
Expected RT: 27.09 min

Lab File: L19A%021.D
Acq: 1 Feb 2019 4:40 am

Tgt Ion: 91

Sig	Exp Ratio
91	100
92	52.6



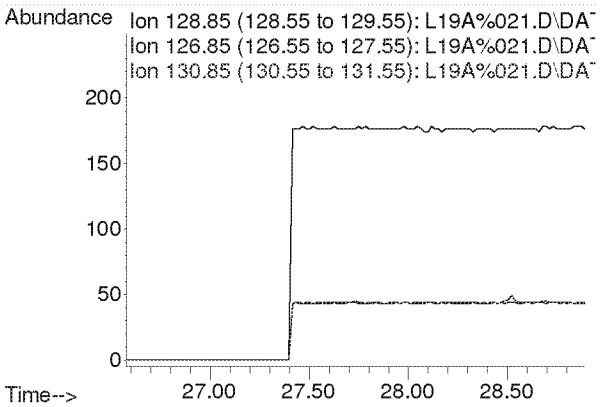


#45
Dibromochloromethane
Concen: N.D.
Expected RT: 27.73 min

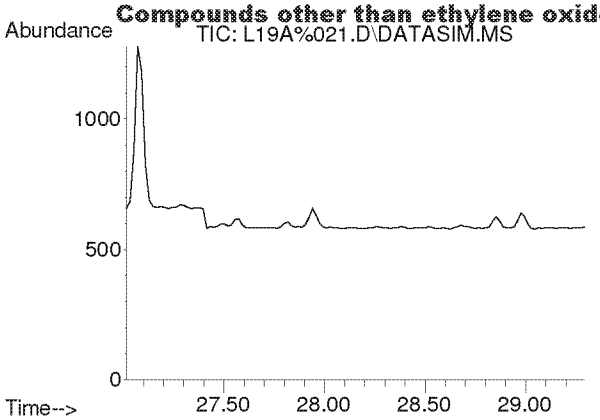
Lab File: L19A%021.D
Acq: 1 Feb 2019 4:40 am

Tgt Ion: 129

Sig	Exp Ratio
129	100
127	19.2
131	6.0



Compounds other than ethylene oxide were not quantitated.

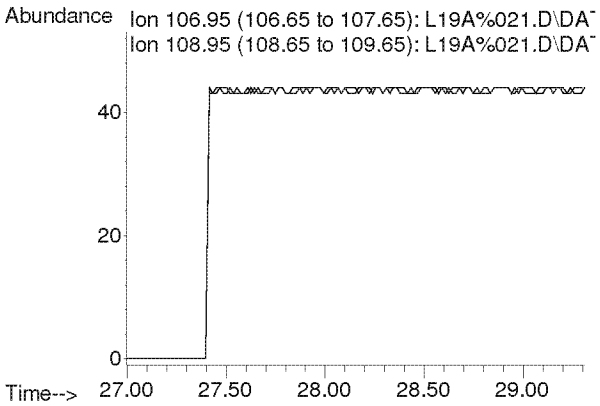


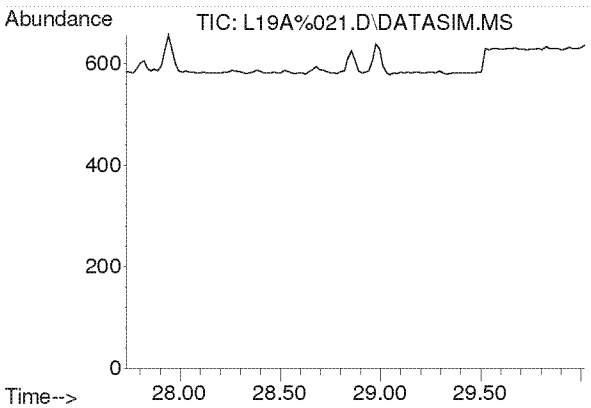
#46
1,2-Dibromoethane
Concen: N.D.
Expected RT: 28.15 min

Lab File: L19A%021.D
Acq: 1 Feb 2019 4:40 am

Tgt Ion: 107

Sig	Exp Ratio
107	100
109	94.5



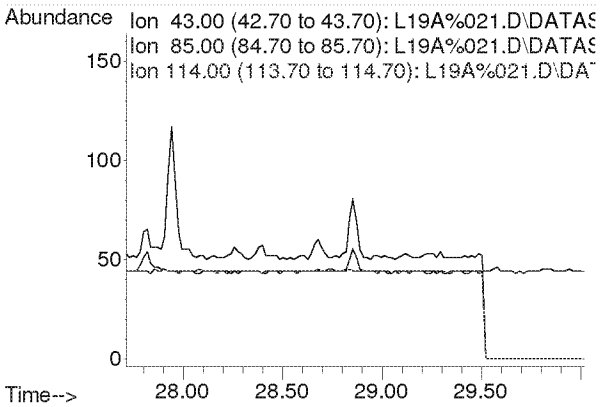


#47
n-Octane
Concen: N.D.
Expected RT: 28.87 min

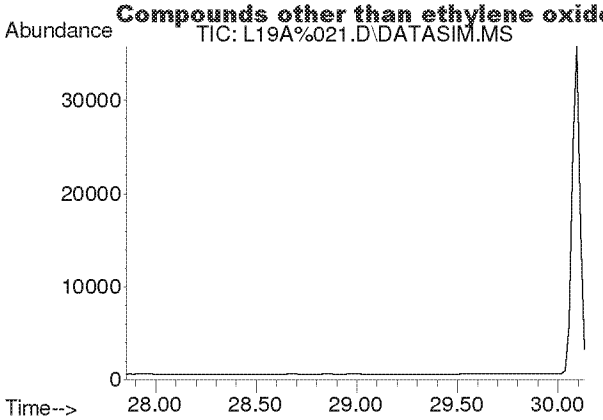
Lab File: L19A%021.D
Acq: 1 Feb 2019 4:40 am

Tgt Ion: 43

Sig	Exp Ratio
43	100
85	39.5
114	2.5



Compounds other than ethylene oxide were not quantitated.

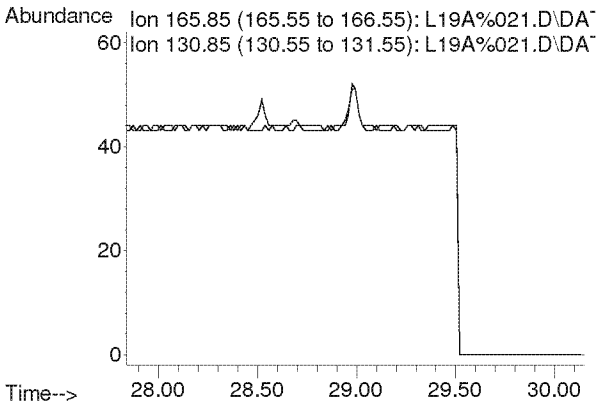


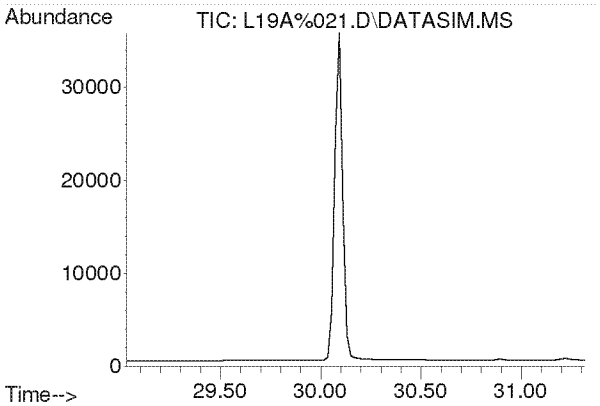
#48
Tetrachloroethylene
Concen: N.D.
Expected RT: 29.00 min

Lab File: L19A%021.D
Acq: 1 Feb 2019 4:40 am

Tgt Ion: 166

Sig	Exp Ratio
166	100
131	77.0



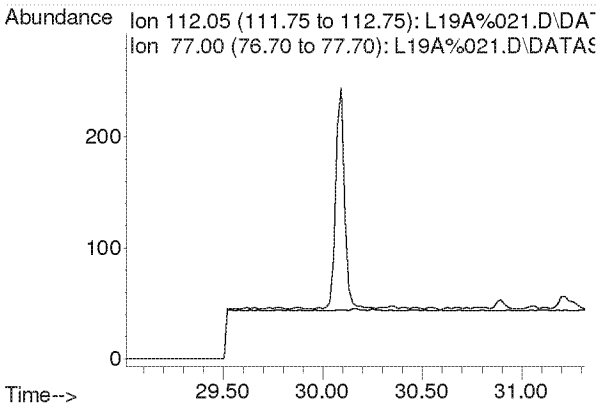


#49
Chlorobenzene
Concen: N.D.
Expected RT: 30.17 min

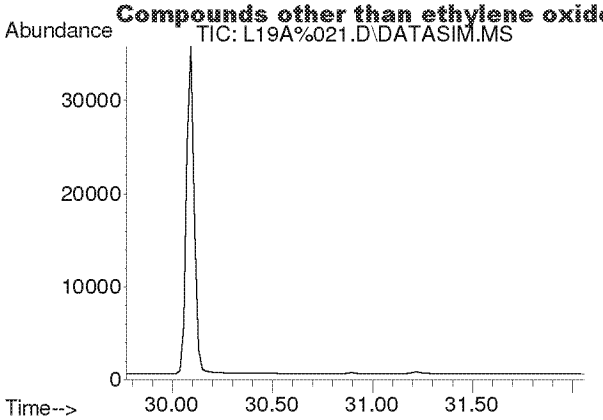
Lab File: L19A%021.D
Acq: 1 Feb 2019 4:40 am

Tgt Ion: 112

Sig	Exp Ratio
112	100
77	64.2



Compounds other than ethylene oxide were not quantitated.

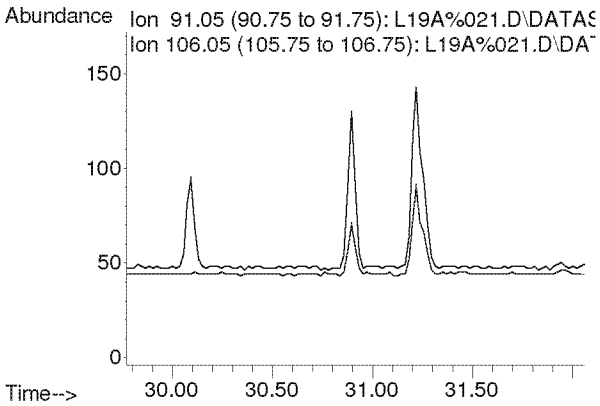


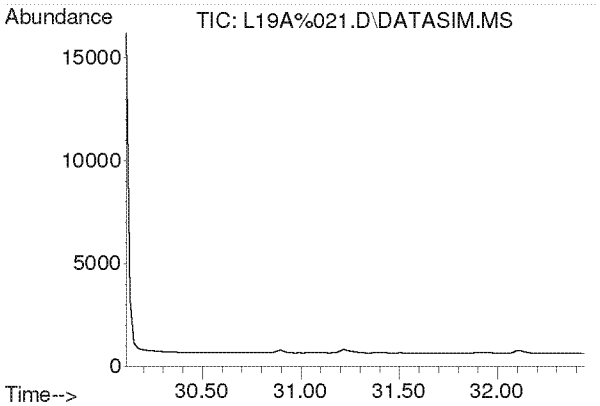
#50
Ethylbenzene
Concen: N.D.
Expected RT: 30.92 min

Lab File: L19A%021.D
Acq: 1 Feb 2019 4:40 am

Tgt Ion: 91

Sig	Exp Ratio
91	100
106	31.4



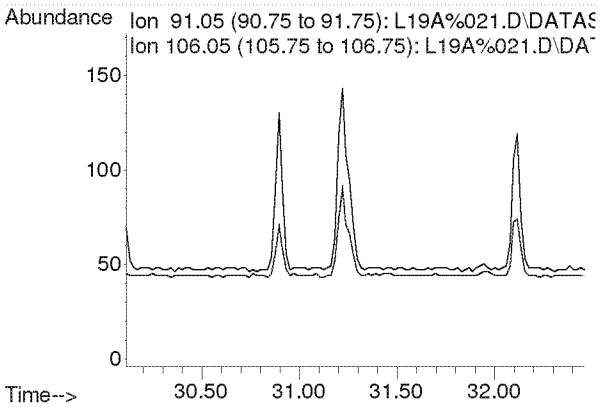


#51
m,p-Xylene
Concen: N.D.
Expected RT: 31.26 min

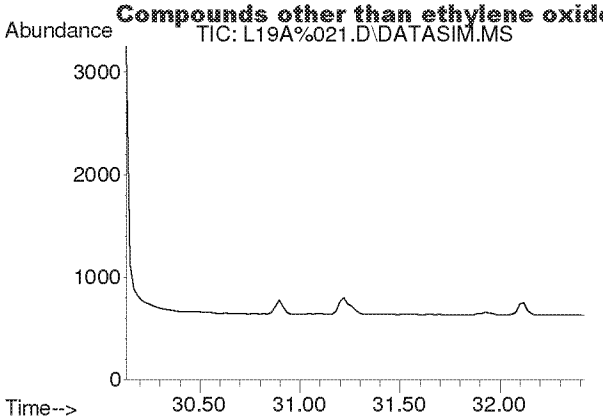
Lab File: L19A%021.D
Acq: 1 Feb 2019 4:40 am

Tgt Ion: 91

Sig	Exp Ratio
91	100
106	45.8



Compounds other than ethylene oxide were not quantitated.

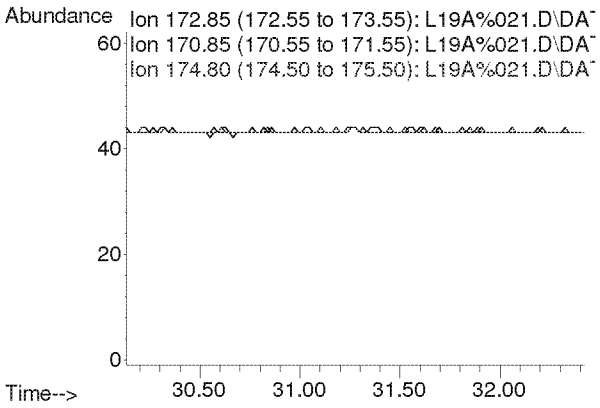


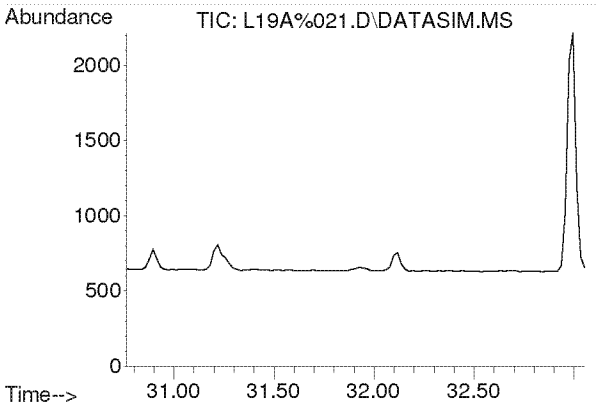
#52
Bromoform
Concen: N.D.
Expected RT: 31.28 min

Lab File: L19A%021.D
Acq: 1 Feb 2019 4:40 am

Tgt Ion: 173

Sig	Exp Ratio
173	100
171	51.1
175	48.8



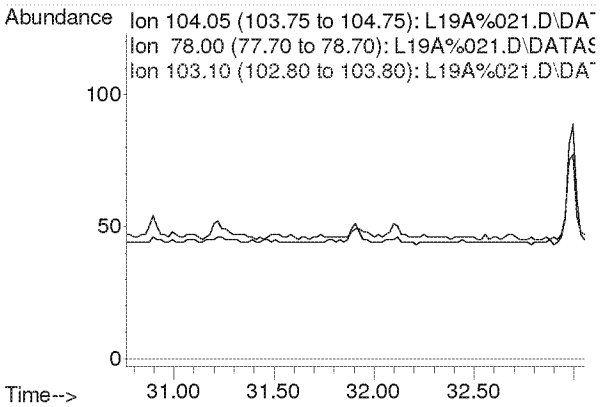


#53
Styrene
Concen: N.D.
Expected RT: 31.91 min

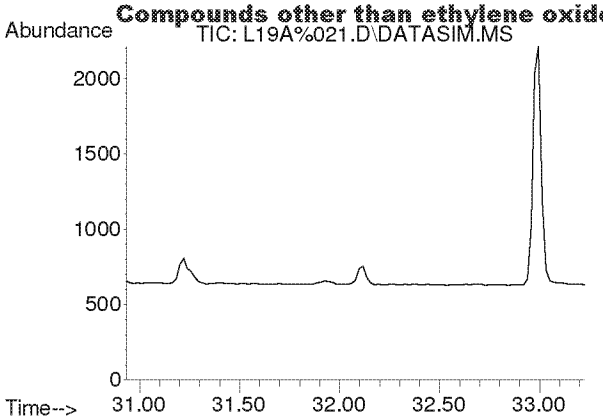
Lab File: L19A%021.D
Acq: 1 Feb 2019 4:40 am

Tgt Ion: 104

Sig	Exp Ratio
104	100
78	45.9
103	0.0



Compounds other than ethylene oxide were not quantitated.

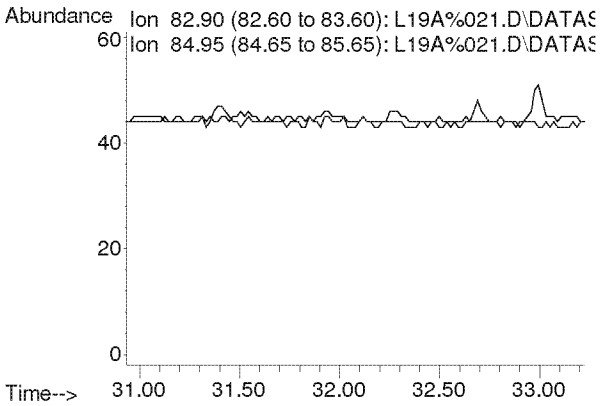


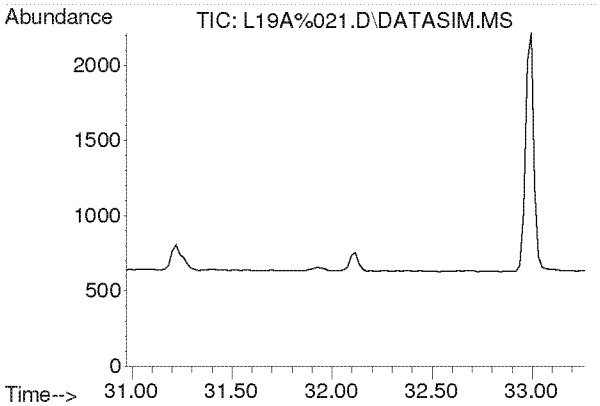
#54
1,1,2,2-Tetrachloroethane
Concen: N.D.
Expected RT: 32.08 min

Lab File: L19A%021.D
Acq: 1 Feb 2019 4:40 am

Tgt Ion: 83

Sig	Exp Ratio
83	100
85	64.4



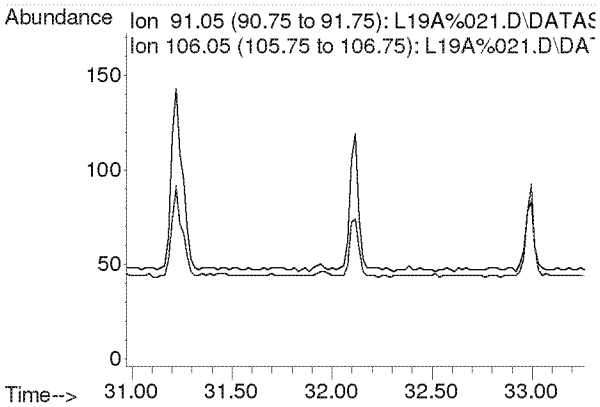


#55
o-Xylene
Concen: N.D.
Expected RT: 32.12 min

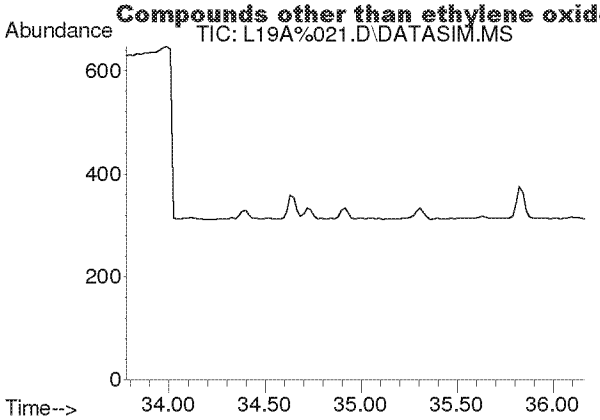
Lab File: L19A%021.D
Acq: 1 Feb 2019 4:40 am

Tgt Ion: 91

Sig	Exp Ratio
91	100
106	44.3



Compounds other than ethylene oxide were not quantitated.

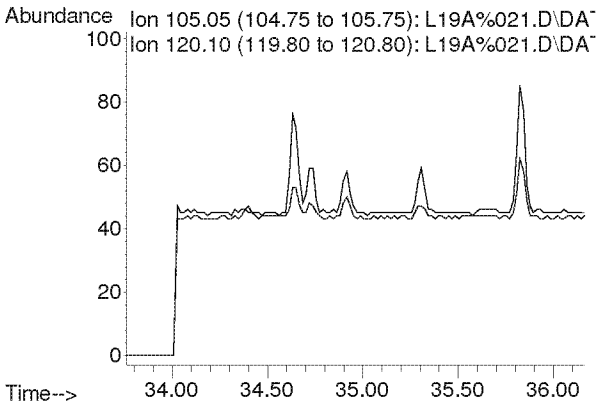


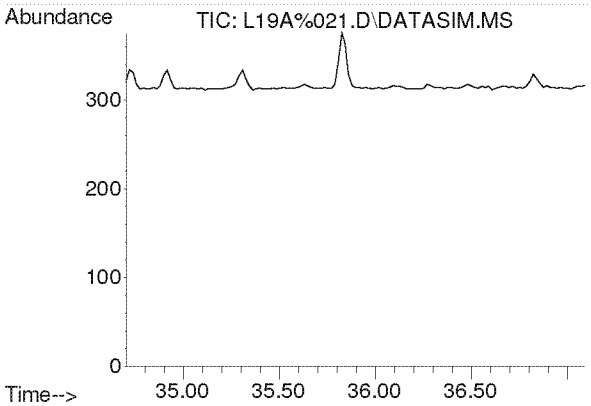
#56
1,3,5-Trimethylbenzene
Concen: N.D.
Expected RT: 34.92 min

Lab File: L19A%021.D
Acq: 1 Feb 2019 4:40 am

Tgt Ion: 105

Sig	Exp Ratio
105	100
120	45.7



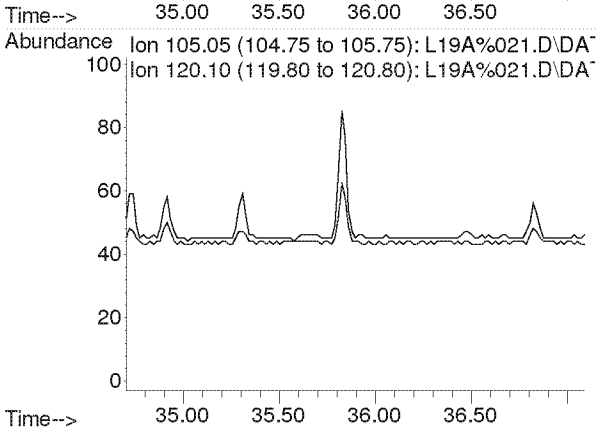


#57
1,2,4-Trimethylbenzene
Concen: N.D.
Expected RT: 35.84 min

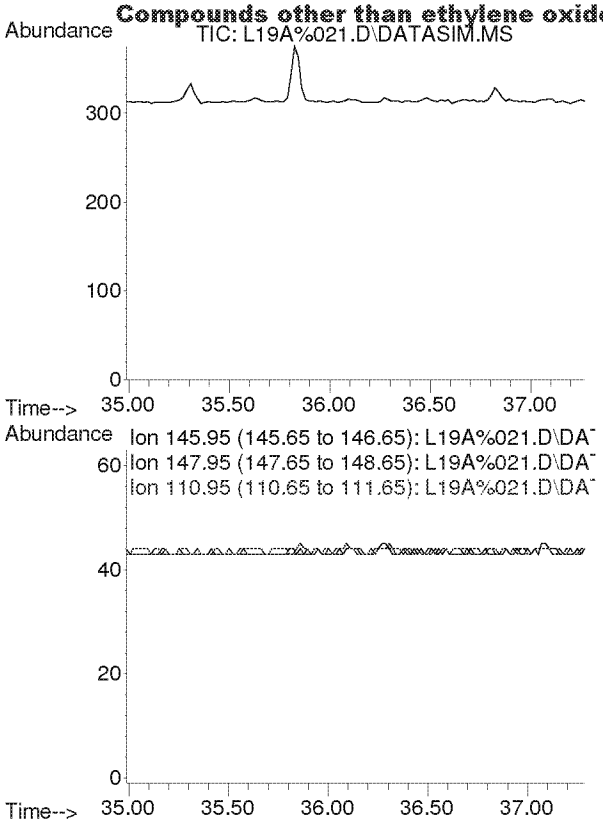
Lab File: L19A%021.D
Acq: 1 Feb 2019 4:40 am

Tgt Ion: 105

Sig	Exp Ratio
105	100
120	43.6



Compounds other than ethylene oxide were not quantitated.

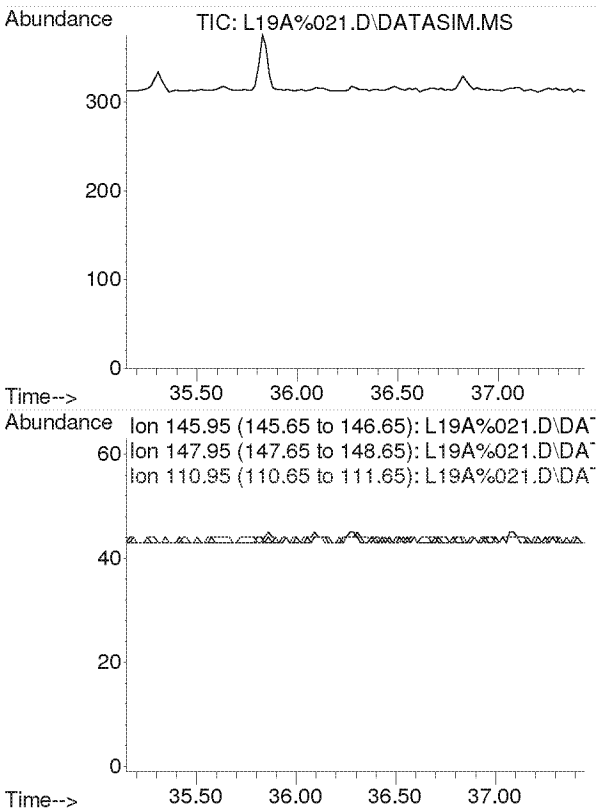


#58
m-Dichlorobenzene
Concen: N.D.
Expected RT: 36.13 min

Lab File: L19A%021.D
Acq: 1 Feb 2019 4:40 am

Tgt Ion: 146

Sig	Exp Ratio
146	100
148	64.0
111	40.5



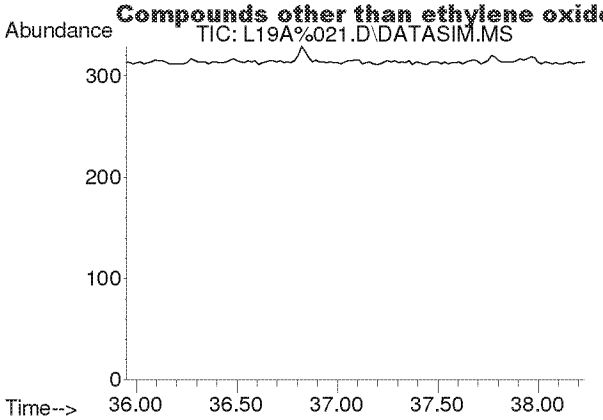
#59
p-Dichlorobenzene
Concen: N.D.
Expected RT: 36.29 min

Lab File: L19A%021.D
Acq: 1 Feb 2019 4:40 am

Tgt Ion: 146

Sig	Exp Ratio
146	100
148	64.1
111	39.4

Compounds other than ethylene oxide were not quantitated.

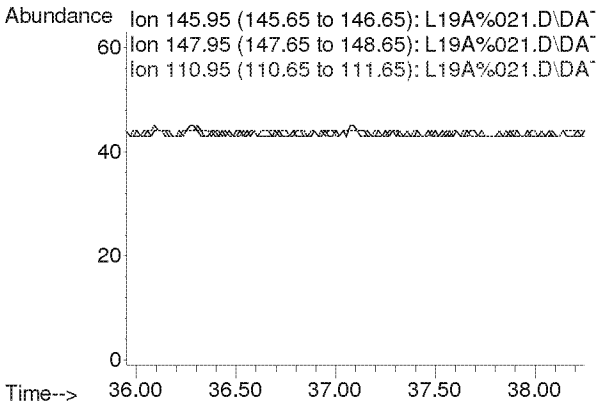


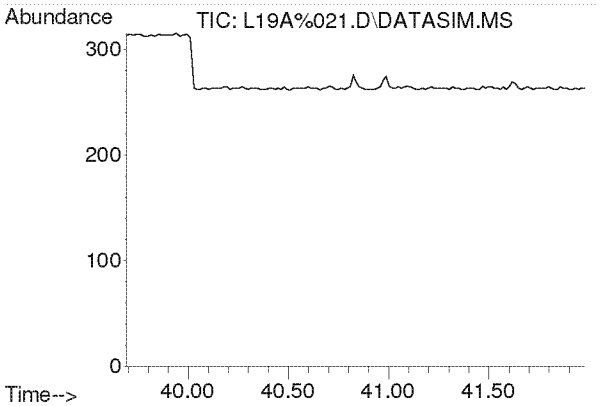
#60
o-Dichlorobenzene
Concen: N.D.
Expected RT: 37.09 min

Lab File: L19A%021.D
Acq: 1 Feb 2019 4:40 am

Tgt Ion: 146

Sig	Exp Ratio
146	100
148	64.0
111	40.9



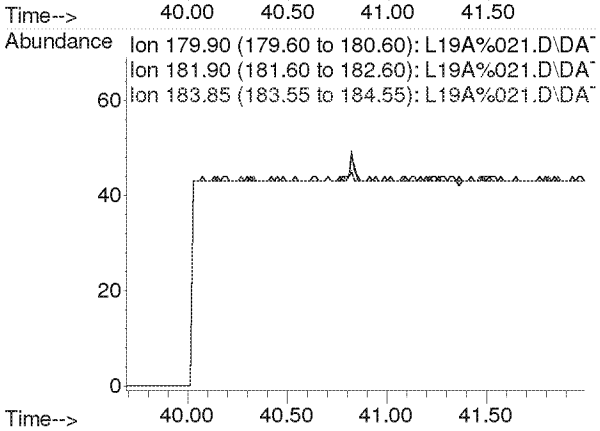


#61
1,2,4-Trichlorobenzene
Concen: N.D.
Expected RT: 40.84 min

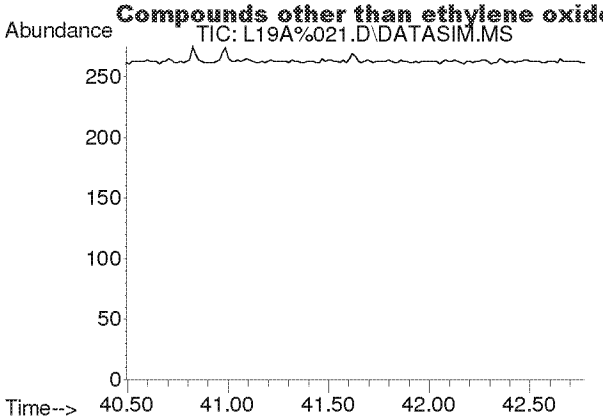
Lab File: L19A%021.D
Acq: 1 Feb 2019 4:40 am

Tgt Ion: 180

Sig	Exp Ratio
180	100
182	96.1
184	30.8



Compounds other than ethylene oxide were not quantitated.

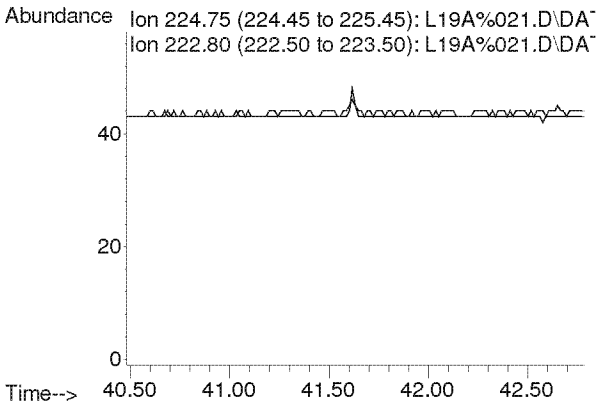


#62
Hexachloro-1,3-butadiene
Concen: N.D.
Expected RT: 41.63 min

Lab File: L19A%021.D
Acq: 1 Feb 2019 4:40 am

Tgt Ion: 225

Sig	Exp Ratio
225	100
223	62.0



Compounds other than ethylene oxide were not quantitated.

PREPARATION SHEET

B9A3106

Eastern Research Group

Matrix: Air **Prepared using: Air Toxics - Summa Canister Prep** **Printed: 1/31/2019 2:22:39PM**

Lab Number	Prepared	Initial (ml)	Final (ml)	Spike ID	Source ID	ul Spike	Comments	
9012401-01 *TO-15 2019*	01/23/19 10:21	250	250	U.S. Environmental Protection Agency - OAQPS			Ethylene Oxide only	Ethylene Oxide only
9012401-02 *TO-15 2019*	01/23/19 10:40	250	250	U.S. Environmental Protection Agency - OAQPS			Ethylene Oxide only	Ethylene Oxide only
9012401-03 *TO-15 2019*	01/23/19 10:31	250	250	U.S. Environmental Protection Agency - OAQPS			Ethylene Oxide only	Ethylene Oxide only
9012401-04 *TO-15 2019*	01/23/19 09:43	250	250	U.S. Environmental Protection Agency - OAQPS			Ethylene Oxide only	Ethylene Oxide only
9012401-05 *TO-15 2019*	01/23/19 09:43	250	250	U.S. Environmental Protection Agency - OAQPS			Ethylene Oxide only	Ethylene Oxide only
9012401-06 *TO-15 2019*	01/23/19 10:17	250	250	U.S. Environmental Protection Agency - OAQPS			Ethylene Oxide only	Ethylene Oxide only
9012401-07 *TO-15 2019*	01/23/19 10:35	250	250	U.S. Environmental Protection Agency - OAQPS			Ethylene Oxide only	Ethylene Oxide only
9012401-08 *TO-15 2019*	01/23/19 10:26	250	250	U.S. Environmental Protection Agency - OAQPS			Ethylene Oxide only	Ethylene Oxide only
9012401-09 *TO-15 2019*	01/23/19 10:44	250	250	U.S. Environmental Protection Agency - OAQPS			Ethylene Oxide only	Ethylene Oxide only
9012401-10 *TO-15 2019*	01/23/19 00:00	250	250	U.S. Environmental Protection Agency - OAQPS			Ethylene Oxide only	Ethylene Oxide only
9012816-03 *TO-15 2019*	01/25/19 10:34	250	250	U.S. Environmental Protection Agency - OAQPS			Ethylene Oxide only	Ethylene Oxide only
B9A3106-BLK1	01/25/19 08:00	250	250				b-h2-547	
B9A3106-DUP1	01/23/19 09:43	250	250		9012401-04			
B9A3106-DUP2	01/23/19 09:43	250	250		9012401-05			

Spiking Witnessed By Date

Preparation Reviewed By 2-6-19 Date

Extracts Received By Date

Compounds other than ethylene oxide were not quantitated.

ERG Lab ID # 9012816-03

ERG
Eastern Research Group, Inc.
601 Keystone Park Drive, Suite 700, Morrisville, NC 27560

AIR TOXICS SAMPLE CHAIN OF CUSTODY

Lab Pre-Sampling

Site Code: West Neighborhood
Canister Number: SAT024
City/State: Williamsburg, KY
Lab Initial Can. Press. ("Hg): 29.9
AQS Code:
Cleaning Batch # : 42-541
Collection Date: 1/24/19
Date Can. Cleaned: 1/14/19
Options:
SNMOC (Y/N):
Duplicate Event (Y/N): N
TOXICS (Y/N): Y
Duplicate Can # :
METHANE (Y/N):
Relinquished by: RMB
Date: 1/17/19

Field Setup

Received by: C. Cummings
Date: 1/24/19
Operator: C. Cummings
MFC Setting:
System #: 10310
Elapsed Timer Reset (Y/N):
Setup Date: 1/24/19
Canister Valve Opened (Y/N): Y @ 10:52am
Field Initial Can. Press.: -28.2 psig psia "Hg (Circle one)

Field Recovery

Recovery Date: 1/25/19
Sample Duration (3 or 24 hr): 24
Operator: C. Cummings
Elapsed Time:
Field Final Can. Press.: -4.5 psig psia "Hg (Circle one)
Status: VALID VOID (Circle one)
Canister Valve Closed (Y/N): Y @ 10:34
Relinquished by: C. Cummings
Date: 1/25/19

Lab Recovery

Received by: KB
Date: 1/28/19
Lab Final Can. Press.: 2.5 psig "Hg (Circle one)
Converted to psia:
Status: VALID VOID (Circle one)
Gauge: 1 2 (Circle one)
If void, why: Heiss gauge

Samples stored in Air Tox Lab (Room 130)

5-2016

Comments: Leak Check: -28 "Hg @ 10:45am, -29.5 "Hg @ 10:47am, -28.5 "Hg @ 10:52am
Field Setup: 13°F
Field Recovery: -1°F
1/25/19

White: Sample Traveler
Canary: Lab Copy
Pink: Field Copy