

Data Path : Z:\voasrv\HPCHEM1\MSVOA\_L\Data\VL032725\  
 Data File : VL042198.D  
 Acq On : 28 Mar 2025 01:57  
 Operator : SY/MD  
 Sample : Q1669-07  
 Misc : 400mL/MSVOA\_L  
 ALS Vial : 6 Sample Multiplier: 1

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 SSSG-B16-1-3262025

Integration Parameters: RTEINT.P

Integrator: RTE

Smoothing : ON

Sampling : 3

Start Thrs: 0.001

Stop Thrs : 0

Filtering: 5

Min Area: 3 % of largest Peak

Max Peaks: 100

Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >

Peak separation: 0

Method : Z:\voasrv\HPCHEM1\MSVOA\_L\methods\VL032725AIR.M

Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Fri Aug 26 06:05:16 2022

Signal : TIC: VL042198.D\data.ms

| peak<br># | R.T.<br>min | first<br>scan | max<br>scan | last<br>scan | PK<br>TY | peak<br>height | corr.<br>area | corr.<br>% max. | % of<br>total |
|-----------|-------------|---------------|-------------|--------------|----------|----------------|---------------|-----------------|---------------|
| 1         | 1.266       | 353           | 364         | 377          | rBV      | 86737          | 118205        | 5.83%           | 0.689%        |
| 2         | 1.431       | 413           | 415         | 417          | rBV      | 491523         | 691781        | 34.10%          | 4.034%        |
| 3         | 1.440       | 417           | 418         | 422          | rVB      | 3829715        | 1415554       | 69.78%          | 8.254%        |
| 4         | 1.557       | 449           | 454         | 460          | rBV      | 655064         | 377050        | 18.59%          | 2.199%        |
| 5         | 1.599       | 463           | 467         | 470          | rBV      | 291337         | 157978        | 7.79%           | 0.921%        |
| 6         | 1.618       | 470           | 473         | 478          | rVB      | 136817         | 82740         | 4.08%           | 0.482%        |
| 7         | 1.722       | 499           | 505         | 510          | rBV      | 521266         | 304401        | 15.01%          | 1.775%        |
| 8         | 1.835       | 536           | 540         | 549          | rBV      | 2094350        | 1433034       | 70.64%          | 8.356%        |
| 9         | 1.887       | 549           | 556         | 559          | rBV2     | 41298          | 40930         | 2.02%           | 0.239%        |
| 10        | 1.965       | 575           | 580         | 585          | rVB      | 91142          | 69665         | 3.43%           | 0.406%        |
| 11        | 2.042       | 599           | 604         | 607          | rBV2     | 49441          | 43259         | 2.13%           | 0.252%        |
| 12        | 2.065       | 607           | 611         | 614          | rVB2     | 88968          | 60799         | 3.00%           | 0.355%        |
| 13        | 2.382       | 708           | 709         | 715          | rVB      | 50749          | 41272         | 2.03%           | 0.241%        |
| 14        | 2.476       | 733           | 738         | 745          | rVB3     | 90689          | 89977         | 4.44%           | 0.525%        |
| 15        | 2.560       | 759           | 764         | 777          | rVV      | 142208         | 139338        | 6.87%           | 0.812%        |
| 16        | 2.628       | 777           | 785         | 793          | rVB4     | 53941          | 63008         | 3.11%           | 0.367%        |
| 17        | 2.790       | 827           | 835         | 842          | rBV      | 679161         | 696443        | 34.33%          | 4.061%        |
| 18        | 2.829       | 842           | 847         | 860          | rVB3     | 114249         | 139785        | 6.89%           | 0.815%        |
| 19        | 3.065       | 913           | 920         | 930          | rBV3     | 29608          | 38284         | 1.89%           | 0.223%        |
| 20        | 3.234       | 962           | 972         | 980          | rBV3     | 40437          | 59306         | 2.92%           | 0.346%        |
| 21        | 3.661       | 1091          | 1104        | 1110         | rBV3     | 39950          | 64369         | 3.17%           | 0.375%        |
| 22        | 3.696       | 1110          | 1115        | 1127         | rVB2     | 33824          | 53384         | 2.63%           | 0.311%        |
| 23        | 3.962       | 1185          | 1197        | 1212         | rBV      | 854224         | 1340536       | 66.08%          | 7.817%        |
| 24        | 4.059       | 1214          | 1227        | 1236         | rBV5     | 33869          | 65261         | 3.22%           | 0.381%        |
| 25        | 4.266       | 1279          | 1291        | 1303         | rBV5     | 40644          | 83504         | 4.12%           | 0.487%        |
| 26        | 4.641       | 1400          | 1407        | 1421         | rVB4     | 25428          | 55814         | 2.75%           | 0.325%        |
| 27        | 4.985       | 1501          | 1513        | 1525         | rBV7     | 22558          | 46681         | 2.30%           | 0.272%        |
| 28        | 5.667       | 1706          | 1724        | 1736         | rBV6     | 29841          | 75477         | 3.72%           | 0.440%        |
| 29        | 5.765       | 1740          | 1754        | 1775         | rBV4     | 102342         | 264083        | 13.02%          | 1.540%        |
| 30        | 6.742       | 2042          | 2056        | 2071         | rBV5     | 57384          | 133446        | 6.58%           | 0.778%        |
| 31        | 6.933       | 2100          | 2115        | 2135         | rVB      | 491647         | 988773        | 48.74%          | 5.766%        |
| 32        | 7.376       | 2242          | 2252        | 2259         | rBV5     | 21626          | 39401         | 1.94%           | 0.230%        |
| 33        | 7.609       | 2319          | 2324        | 2339         | rVB5     | 23708          | 53551         | 2.64%           | 0.312%        |
| 34        | 7.694       | 2339          | 2350        | 2360         | rVB7     | 34079          | 64929         | 3.20%           | 0.379%        |
| 35        | 8.302       | 2523          | 2538        | 2555         | rVB9     | 59814          | 137443        | 6.78%           | 0.801%        |
| 36        | 8.881       | 2704          | 2717        | 2728         | rBV      | 1115388        | 1657967       | 81.73%          | 9.668%        |

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 Misc : 400mL/MSVOA\_L  
 ALS Vial : 6 Sample Multiplier: 1

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 SSSG-B16-1-3262025

Integration Parameters: RTEINT.P

Integrator: RTE

Smoothing : ON

Sampling : 3

Start Thrs: 0.001

Stop Thrs : 0

Filtering: 5

Min Area: 3 % of largest Peak

Max Peaks: 100

Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >

Peak separation: 0

Method : Z:\voasrv\HPCHEM1\MSVOA\_L\methods\VL032725AIR.M

Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Fri Aug 26 06:05:16 2022

|    |        |      |      |      |       |         |         |         |         |
|----|--------|------|------|------|-------|---------|---------|---------|---------|
| 37 | 8.982  | 2740 | 2748 | 2762 | rVB10 | 44997   | 90947   | 4.48%   | 0.530%  |
| 38 | 9.098  | 2776 | 2784 | 2791 | rBV5  | 27538   | 40374   | 1.99%   | 0.235%  |
| 39 | 9.147  | 2791 | 2799 | 2811 | rVB2  | 96817   | 144695  | 7.13%   | 0.844%  |
| 40 | 9.354  | 2852 | 2863 | 2868 | rBV2  | 82714   | 115145  | 5.68%   | 0.671%  |
| 41 | 9.390  | 2868 | 2874 | 2892 | rVB   | 112383  | 198198  | 9.77%   | 1.156%  |
| 42 | 9.532  | 2908 | 2918 | 2935 | rVB   | 206951  | 400972  | 19.77%  | 2.338%  |
| 43 | 9.636  | 2941 | 2950 | 2964 | rBV3  | 55516   | 94403   | 4.65%   | 0.550%  |
| 44 | 9.726  | 2966 | 2978 | 2989 | rVB6  | 45795   | 109182  | 5.38%   | 0.637%  |
| 45 | 9.794  | 2992 | 2999 | 3008 | rBV3  | 34575   | 48148   | 2.37%   | 0.281%  |
| 46 | 9.865  | 3008 | 3021 | 3032 | rBV6  | 107174  | 170168  | 8.39%   | 0.992%  |
| 47 | 9.966  | 3040 | 3052 | 3071 | rVB   | 130142  | 244162  | 12.04%  | 1.424%  |
| 48 | 10.079 | 3071 | 3087 | 3088 | rBV5  | 28183   | 49397   | 2.44%   | 0.288%  |
| 49 | 10.102 | 3088 | 3094 | 3101 | rVV5  | 39369   | 57736   | 2.85%   | 0.337%  |
| 50 | 10.147 | 3101 | 3108 | 3122 | rVV5  | 25390   | 47484   | 2.34%   | 0.277%  |
| 51 | 10.377 | 3156 | 3179 | 3189 | rBV   | 1508793 | 2028557 | 100.00% | 11.829% |
| 52 | 10.429 | 3189 | 3195 | 3204 | rVB4  | 44857   | 57333   | 2.83%   | 0.334%  |
| 53 | 10.775 | 3290 | 3302 | 3304 | rBV7  | 28447   | 45375   | 2.24%   | 0.265%  |
| 54 | 10.804 | 3304 | 3311 | 3321 | rVB4  | 57640   | 97149   | 4.79%   | 0.566%  |
| 55 | 10.901 | 3333 | 3341 | 3354 | rBV4  | 75095   | 107887  | 5.32%   | 0.629%  |
| 56 | 11.011 | 3369 | 3375 | 3383 | rVB2  | 77684   | 105860  | 5.22%   | 0.617%  |
| 57 | 11.095 | 3393 | 3401 | 3407 | rBV2  | 94687   | 112168  | 5.53%   | 0.654%  |
| 58 | 11.124 | 3407 | 3410 | 3423 | rVB2  | 50097   | 64444   | 3.18%   | 0.376%  |
| 59 | 11.202 | 3423 | 3434 | 3442 | rBV5  | 89156   | 122125  | 6.02%   | 0.712%  |
| 60 | 11.536 | 3527 | 3537 | 3552 | rBV2  | 112405  | 156140  | 7.70%   | 0.910%  |
| 61 | 11.756 | 3599 | 3605 | 3608 | rBV3  | 45956   | 56215   | 2.77%   | 0.328%  |
| 62 | 11.775 | 3608 | 3611 | 3618 | rVB2  | 51331   | 49026   | 2.42%   | 0.286%  |
| 63 | 12.083 | 3700 | 3706 | 3715 | rVB3  | 64812   | 76436   | 3.77%   | 0.446%  |
| 64 | 12.228 | 3743 | 3751 | 3758 | rBV2  | 146131  | 164495  | 8.11%   | 0.959%  |
| 65 | 12.364 | 3785 | 3793 | 3798 | rBV3  | 87152   | 101578  | 5.01%   | 0.592%  |
| 66 | 12.439 | 3811 | 3816 | 3821 | rBV   | 91782   | 88162   | 4.35%   | 0.514%  |
| 67 | 12.513 | 3829 | 3839 | 3844 | rBV   | 85804   | 95131   | 4.69%   | 0.555%  |
| 68 | 12.652 | 3875 | 3882 | 3894 | rBV4  | 57771   | 102223  | 5.04%   | 0.596%  |
| 69 | 13.002 | 3985 | 3990 | 4002 | rBV2  | 84240   | 89290   | 4.40%   | 0.521%  |
| 70 | 13.306 | 4076 | 4084 | 4085 | rBV4  | 39013   | 41299   | 2.04%   | 0.241%  |
| 71 | 13.387 | 4103 | 4109 | 4117 | rBV   | 35039   | 38078   | 1.88%   | 0.222%  |
| 72 | 13.474 | 4126 | 4136 | 4140 | rBV6  | 41198   | 57506   | 2.83%   | 0.335%  |
| 73 | 13.901 | 4258 | 4268 | 4274 | rBV3  | 109551  | 127117  | 6.27%   | 0.741%  |
| 74 | 13.989 | 4286 | 4295 | 4299 | rBV4  | 34570   | 42778   | 2.11%   | 0.249%  |
| 75 | 14.170 | 4344 | 4351 | 4358 | rVB3  | 51316   | 56528   | 2.79%   | 0.330%  |
| 76 | 14.238 | 4360 | 4372 | 4378 | rBV10 | 44142   | 68023   | 3.35%   | 0.397%  |

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Misc : 400mL/MSVOA\_L  
ALS Vial : 6 Sample Multiplier: 1

Instrument :  
MSVOA\_L  
ClientSampleId :  
SSSG-B16-1-3262025

Integration Parameters: RTEINT.P  
Integrator: RTE  
Smoothing : ON Filtering: 5  
Sampling : 3 Min Area: 3 % of largest Peak  
Start Thrs: 0.001 Max Peaks: 100  
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >  
Peak separation: 0

Method : Z:\voasrv\HPCHEM1\MSVOA\_L\methods\VL032725AIR.M  
Title : AIR ANALYSIS BY METHOD T0-15 Instrument: MSVOA\_L Fri Aug 26 06:05:16 2022

Sum of corrected areas: 17149362

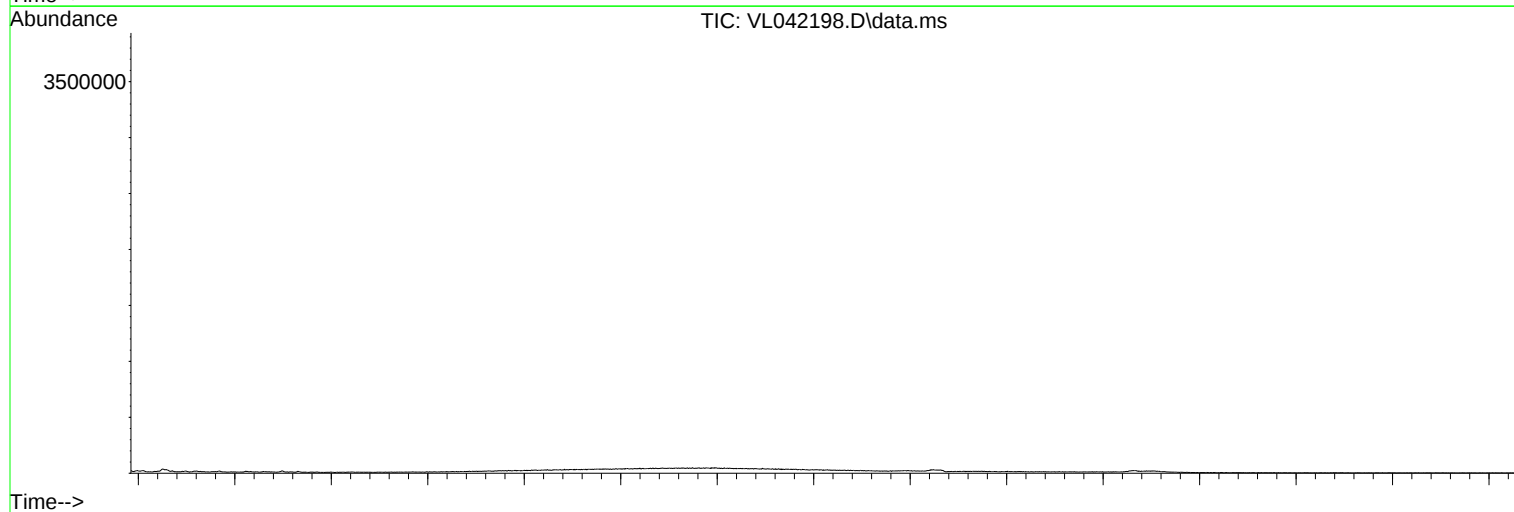
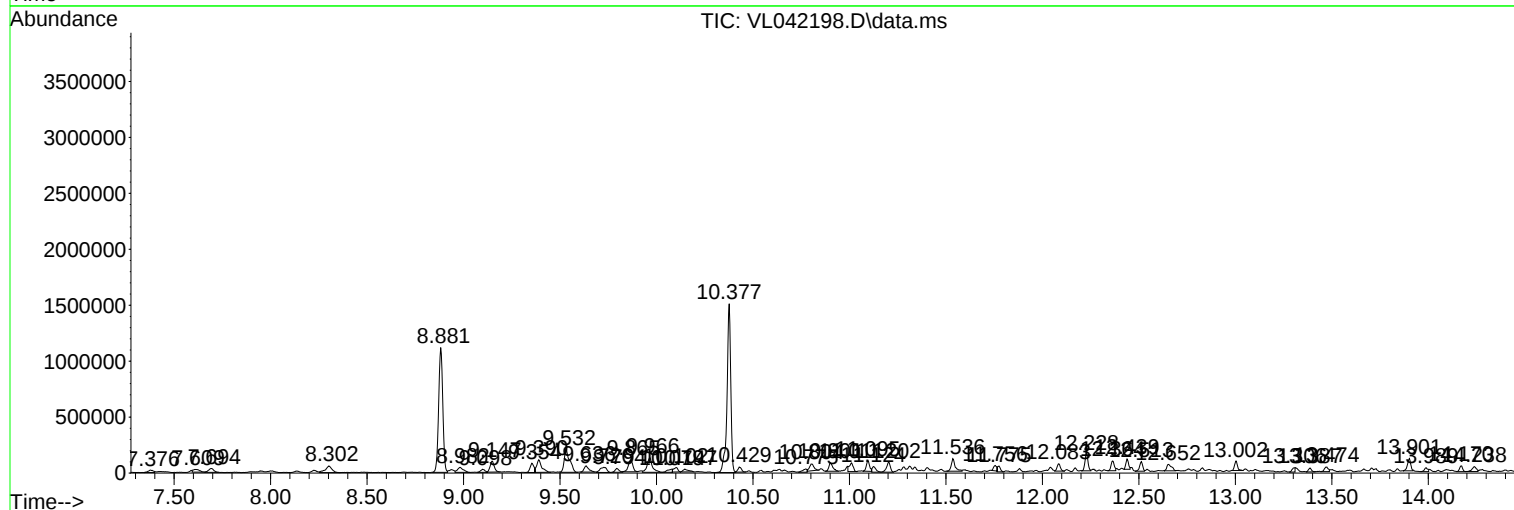
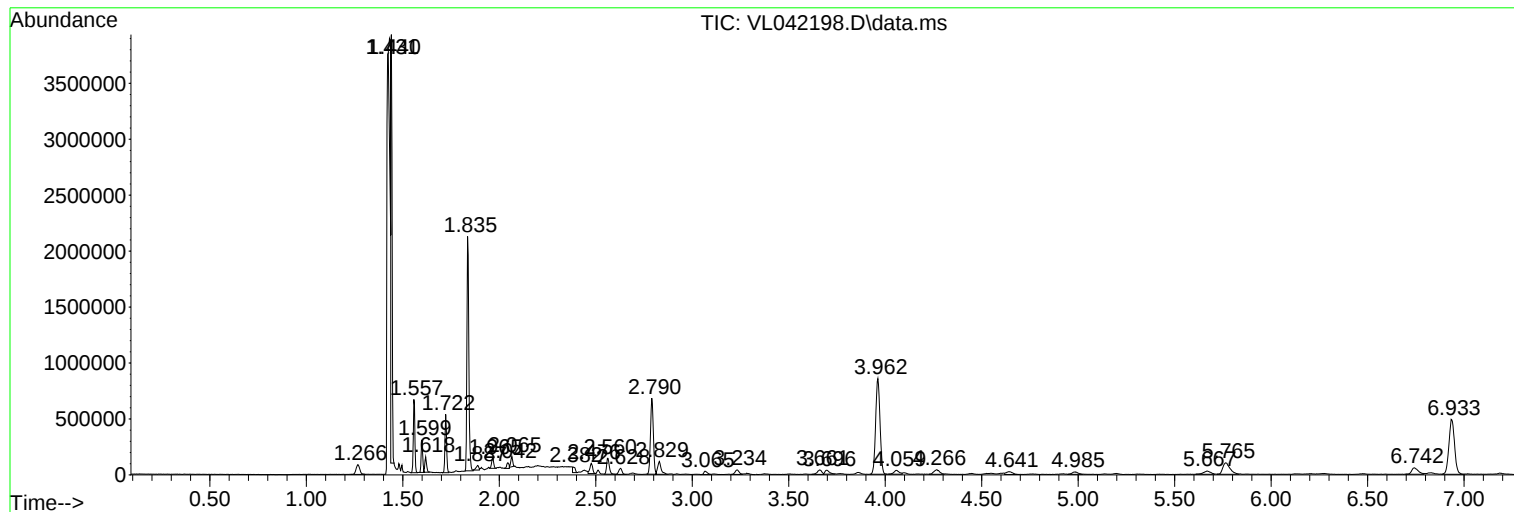
Data Path : Z:\voasrv\HPCHEM1\MSVOA\_L\Data\VL032725\  
Data File : VL042198.D  
Acq On : 28 Mar 2025 01:57  
Operator : SY/MD  
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Instrument :  
MSVOA\_L  
ClientSampleId :  
SSSG-B16-1-3262025

Quant Method : Z:\voasrv\HPCHEM1\MSVOA\_L\methods\VL032725AIR.M  
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Fri Aug 26 06:05:16 2022

TIC Library : C:\Database\NIST20.L

TIC Integration Parameters: LSCINT.P



Data Path : Z:\voasrv\HPCHEM1\MSVOA\_L\Data\VL032725\  
Data File : VL042198.D  
Acq On : 28 Mar 2025 01:57  
Operator : SY/MD  
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Misc : 400mL/MSVOA\_L  
ALS Vial : 6 Sample Multiplier: 1

Instrument :  
MSVOA\_L  
ClientSampleId :  
SSSG-B16-1-3262025

Quant Method : Z:\voasrv\HPCHEM1\MSVOA\_L\methods\VL032725AIR.M  
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Fri Aug 26 06:05:16 2022

TIC Library : C:\Database\NIST20.L

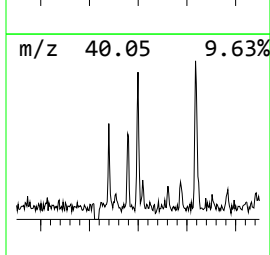
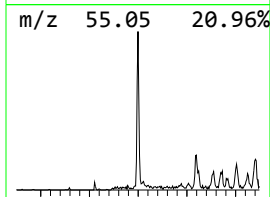
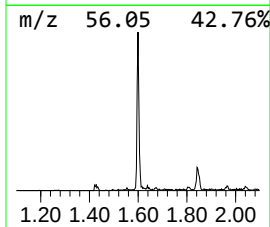
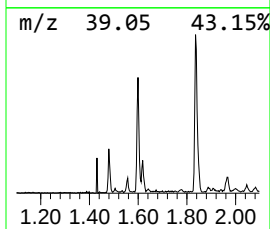
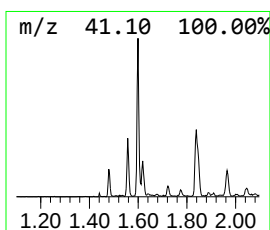
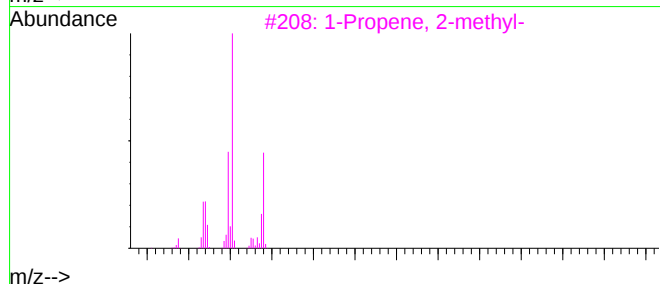
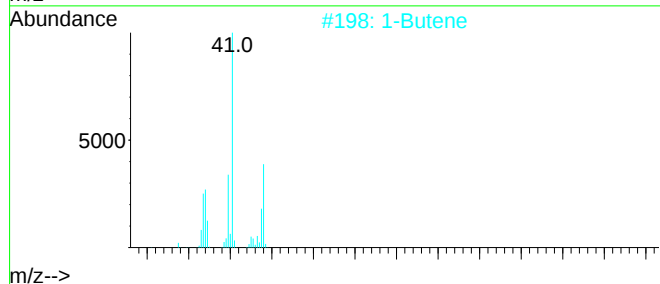
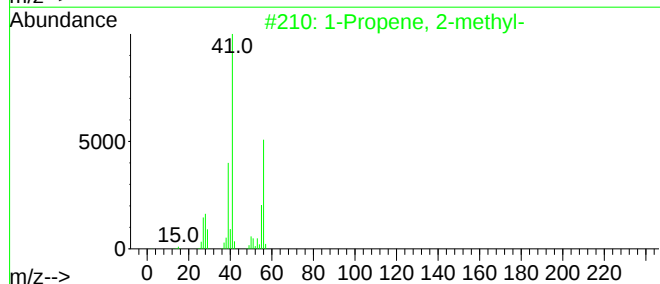
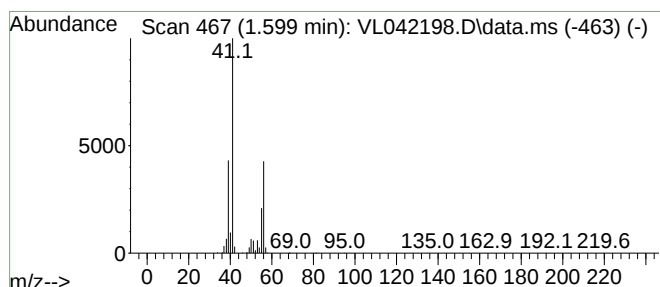
TIC Integration Parameters: LSCINT.P

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Peak Number 2 1-Propene, 2-methyl- Concentration Rank 1

| R.T.  | EstConc   | Area   | Relative to ISTD   | R.T.  |
|-------|-----------|--------|--------------------|-------|
| 1.599 | 2.27 ppbv | 157978 | Bromochloromethane | 2.790 |

| Hit# of 5 | Tentative ID         | MW | MolForm | CAS#        | Qual |
|-----------|----------------------|----|---------|-------------|------|
| 1         | 1-Propene, 2-methyl- | 56 | C4H8    | 000115-11-7 | 87   |
| 2         | 1-Butene             | 56 | C4H8    | 000106-98-9 | 83   |
| 3         | 1-Propene, 2-methyl- | 56 | C4H8    | 000115-11-7 | 80   |
| 4         | 2-Butene, (Z)-       | 56 | C4H8    | 000590-18-1 | 80   |
| 5         | 2-Butene, (E)-       | 56 | C4H8    | 000624-64-6 | 80   |



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ALS Vial : 6 Sample Multiplier: 1

Instrument :  
MSVOA\_L  
ClientSampleId :  
SSSG-B16-1-3262025

Quant Method : Z:\voasrv\HPCHEM1\MSVOA\_L\methods\VL032725AIR.M  
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Fri Aug 26 06:05:16 2022

TIC Library : C:\Database\NIST20.L

TIC Integration Parameters: LSCINT.P

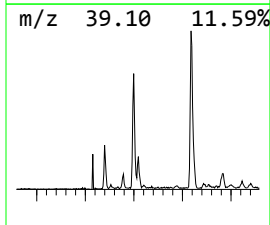
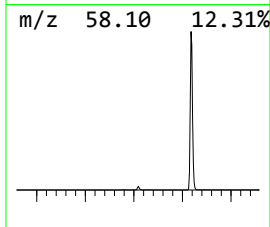
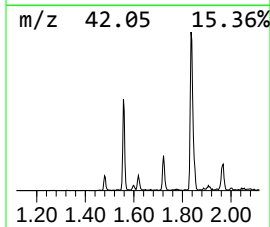
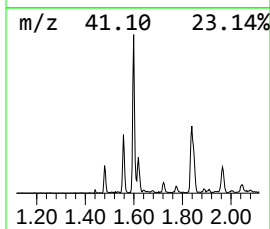
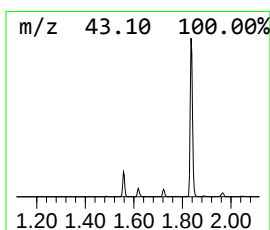
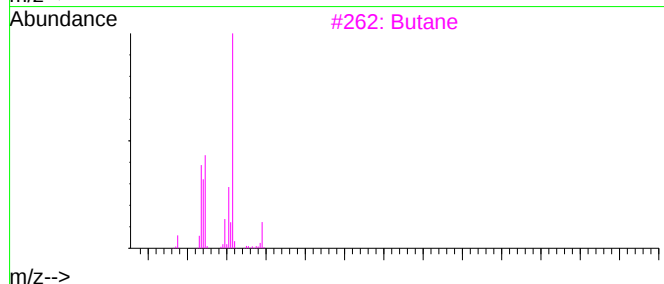
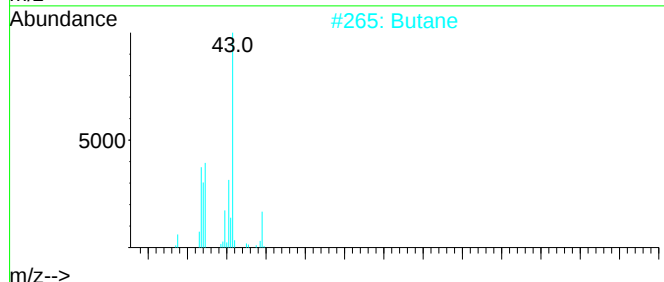
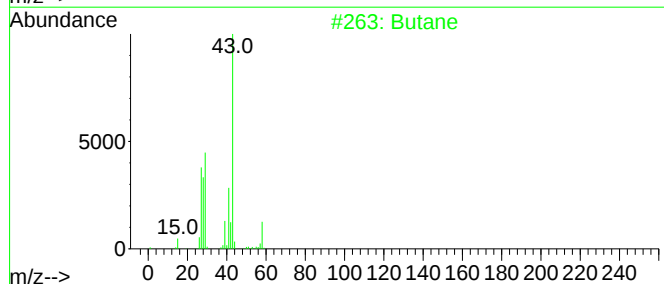
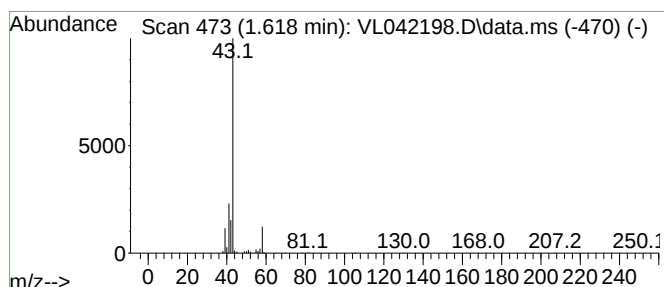
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Peak Number 3 Butane Concentration Rank 4

| R.T.  | EstConc   | Area  | Relative to ISTD   | R.T.  |
|-------|-----------|-------|--------------------|-------|
| 1.618 | 1.19 ppbv | 82740 | Bromochloromethane | 2.790 |

| Hit# of 5 | Tentative ID       | MW | MolForm | CAS#        | Qual |
|-----------|--------------------|----|---------|-------------|------|
| 1         | Butane             | 58 | C4H10   | 000106-97-8 | 64   |
| 2         | Butane             | 58 | C4H10   | 000106-97-8 | 50   |
| 3         | Butane             | 58 | C4H10   | 000106-97-8 | 50   |
| 4         | Butane             | 58 | C4H10   | 000106-97-8 | 45   |
| 5         | Diazene, dimethyl- | 58 | C2H6N2  | 000503-28-6 | 5    |



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Instrument :  
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SSSG-B16-1-3262025

Quant Method : Z:\voasrv\HPCHEM1\MSVOA\_L\methods\VL032725AIR.M  
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Fri Aug 26 06:05:16 2022

TIC Library : C:\Database\NIST20.L

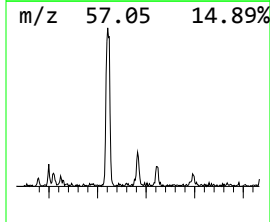
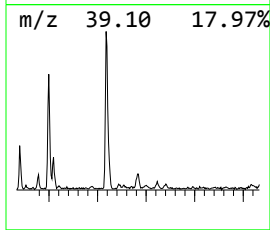
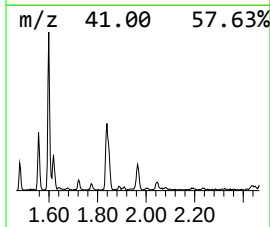
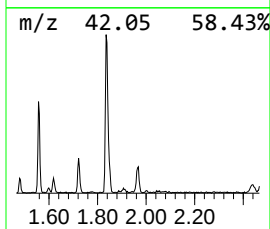
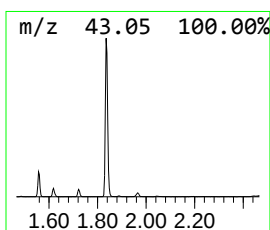
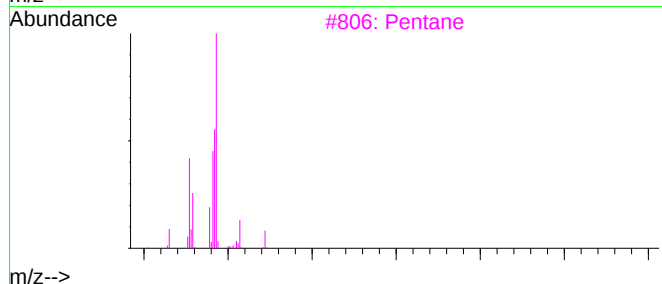
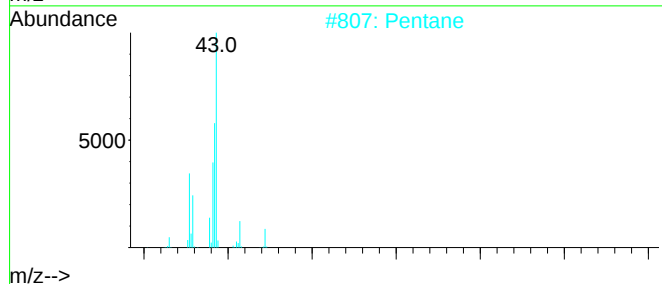
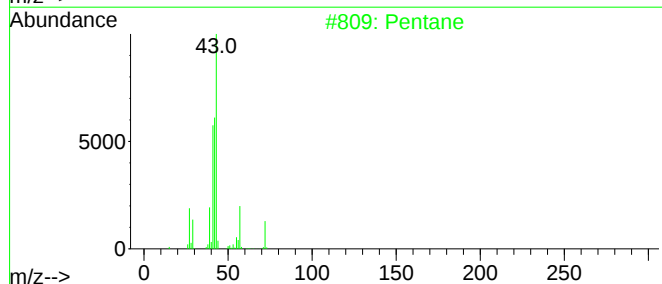
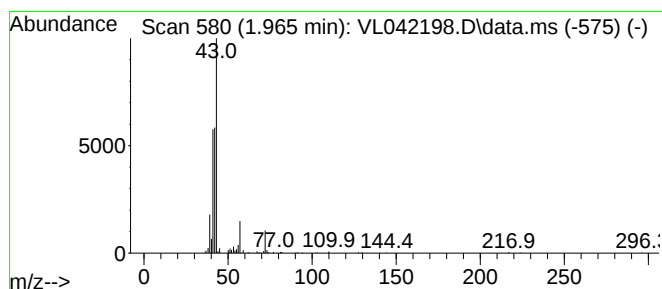
TIC Integration Parameters: LSCINT.P

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Peak Number 4 Pentane Concentration Rank 5

| R.T.  | EstConc   | Area  | Relative to ISTD   | R.T.  |
|-------|-----------|-------|--------------------|-------|
| 1.965 | 1.00 ppbv | 69665 | Bromochloromethane | 2.790 |

| Hit# of 5 | Tentative ID        | MW | MolForm | CAS#        | Qual |
|-----------|---------------------|----|---------|-------------|------|
| 1         | Pentane             | 72 | C5H12   | 000109-66-0 | 86   |
| 2         | Pentane             | 72 | C5H12   | 000109-66-0 | 72   |
| 3         | Pentane             | 72 | C5H12   | 000109-66-0 | 72   |
| 4         | Pentane             | 72 | C5H12   | 000109-66-0 | 72   |
| 5         | Isobutylene epoxide | 72 | C4H8O   | 000558-30-5 | 53   |



Data Path : Z:\voasrv\HPCHEM1\MSVOA\_L\Data\VL032725\  
Data File : VL042198.D  
Acq On : 28 Mar 2025 01:57  
Operator : SY/MD  
Sample : Q1669-07  
Misc : 400mL/MSVOA\_L  
ALS Vial : 6 Sample Multiplier: 1

Instrument :  
MSVOA\_L  
ClientSampleId :  
SSSG-B16-1-3262025

Quant Method : Z:\voasrv\HPCHEM1\MSVOA\_L\methods\VL032725AIR.M  
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Fri Aug 26 06:05:16 2022

TIC Library : C:\Database\NIST20.L

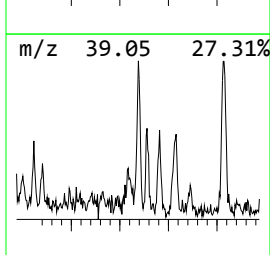
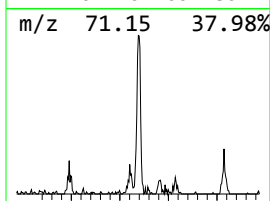
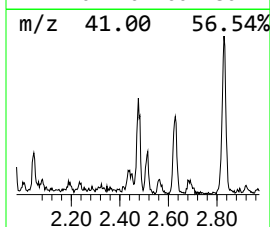
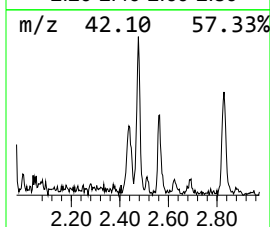
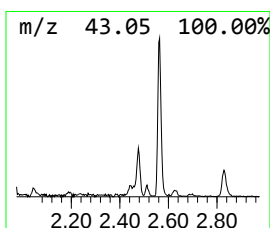
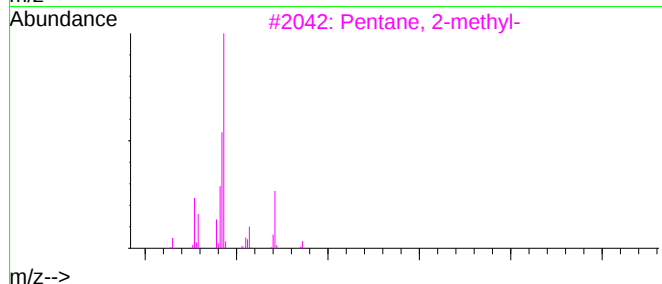
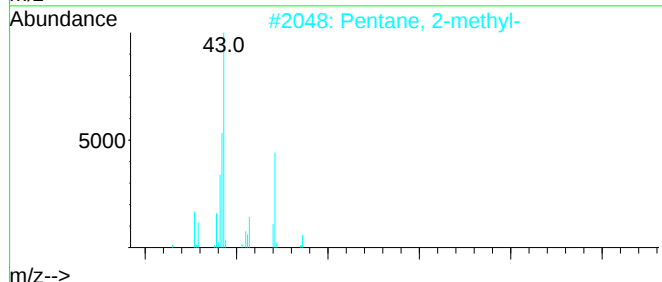
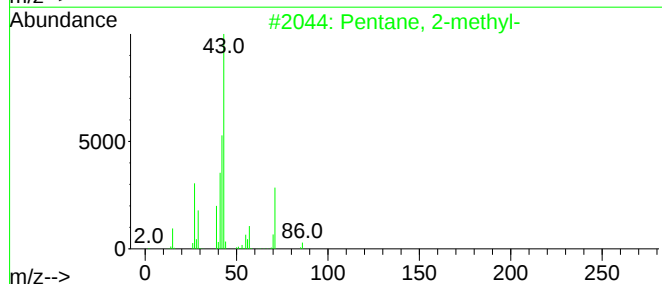
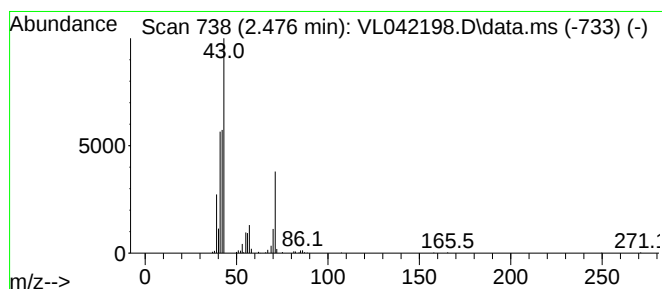
TIC Integration Parameters: LSCINT.P

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Peak Number 5 Pentane, 2-methyl- Concentration Rank 3

| R.T.  | EstConc   | Area  | Relative to ISTD   | R.T.  |
|-------|-----------|-------|--------------------|-------|
| 2.476 | 1.29 ppbv | 89977 | Bromochloromethane | 2.790 |

| Hit# of 5 | Tentative ID       | MW  | MolForm | CAS#        | Qual |
|-----------|--------------------|-----|---------|-------------|------|
| 1         | Pentane, 2-methyl- | 86  | C6H14   | 000107-83-5 | 78   |
| 2         | Pentane, 2-methyl- | 86  | C6H14   | 000107-83-5 | 78   |
| 3         | Pentane, 2-methyl- | 86  | C6H14   | 000107-83-5 | 72   |
| 4         | Pentane, 2-methyl- | 86  | C6H14   | 000107-83-5 | 56   |
| 5         | Pentane, 2-bromo-  | 150 | C5H11Br | 000107-81-3 | 53   |



Data Path : Z:\voasrv\HPCHEM1\MSVOA\_L\Data\VL032725\  
Data File : VL042198.D  
Acq On : 28 Mar 2025 01:57  
Operator : SY/MD  
Sample : Q1669-07  
Misc : 400mL/MSVOA\_L  
ALS Vial : 6 Sample Multiplier: 1

Instrument :  
MSVOA\_L  
ClientSampleId :  
SSSG-B16-1-3262025

Quant Method : Z:\voasrv\HPCHEM1\MSVOA\_L\methods\VL032725AIR.M  
Quant Title : AIR ANALYSIS BY METHOD T0-15 Instrument: MSVOA\_L Fri Aug 26 06:05:16 2022

TIC Library : C:\Database\NIST20.L  
TIC Integration Parameters: LSCINT.P

| TIC Top Hit name   | RT    | EstConc | Units | Response | --Internal Standard-- |       |        |      |
|--------------------|-------|---------|-------|----------|-----------------------|-------|--------|------|
|                    |       |         |       |          | #                     | RT    | Resp   | Conc |
| 1-Propene, 2-me... | 1.599 | 2.3     | ppbv  | 157978   | 1                     | 2.790 | 696443 | 10.0 |
| Butane             | 1.618 | 1.2     | ppbv  | 82740    | 1                     | 2.790 | 696443 | 10.0 |
| Pentane            | 1.965 | 1.0     | ppbv  | 69665    | 1                     | 2.790 | 696443 | 10.0 |
| Pentane, 2-methyl- | 2.476 | 1.3     | ppbv  | 89977    | 1                     | 2.790 | 696443 | 10.0 |