

## Quantitative Analysis Sample Based Report

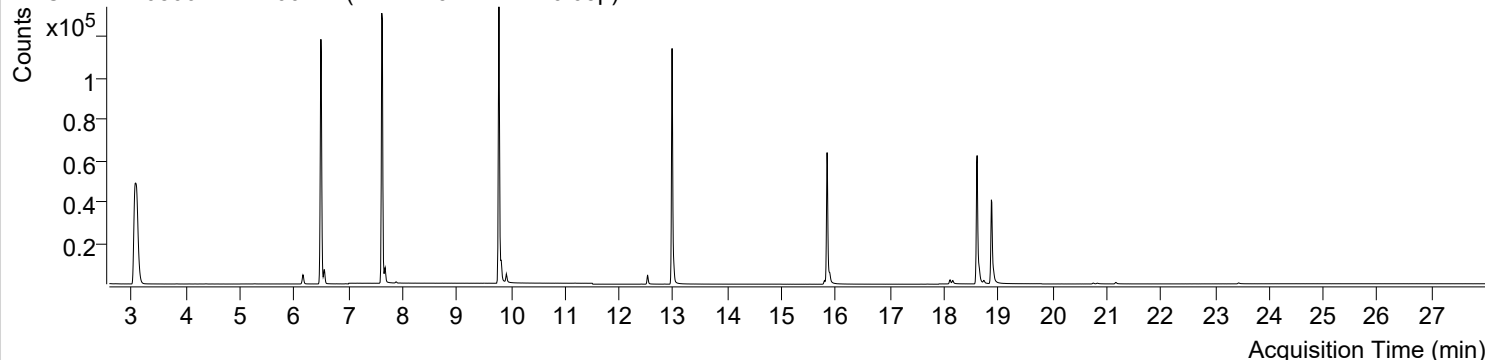


Trusted Answers

|                           |                                                                                            |                       |                        |
|---------------------------|--------------------------------------------------------------------------------------------|-----------------------|------------------------|
| Batch Data Path File Name | D:\MassHunter\GCMS\1\data\PAHs\220806-PAHs-Sample\QuantResults\220806-PAHs-Quant.batch.bin |                       |                        |
| Analysis Time Stamp       | 2022-10-10 오전 10:12:04                                                                     | Analyst Name          | DESKTOP-86B7UPG\5975MS |
| Report Generation Time    | 2022-10-10 오전 10:12:12                                                                     | Report Generator Name | DESKTOP-86B7UPG\5975MS |
| Calibration Last Update   | 2022-12-15 오후 3:30:46                                                                      | Batch State           | Processed              |
| Analyze Quant Version     | 10.2                                                                                       | Report Quant Version  | 10.2                   |
| Acq. Date-Time            | 2022-08-06 오후 12:04:05                                                                     | Data File             | 220806-PAHs-004.D      |
| Type                      | Sample                                                                                     | Name                  | PAHs-19mix-STD-0.05p   |
| Dil.                      | 1                                                                                          | Acq. Method File      | PAHs 19mix-Method      |

## Sample Chromatogram

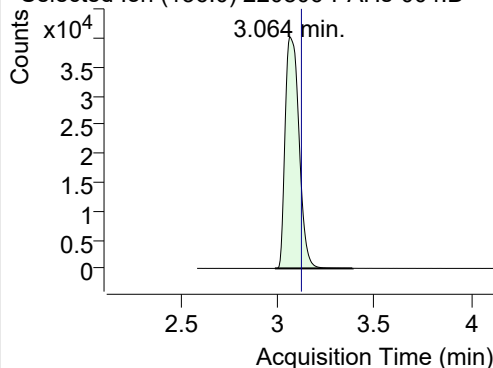
+ TIC SIM 220806-PAHs-004.D (PAHs-19mix-STD-0.05p)



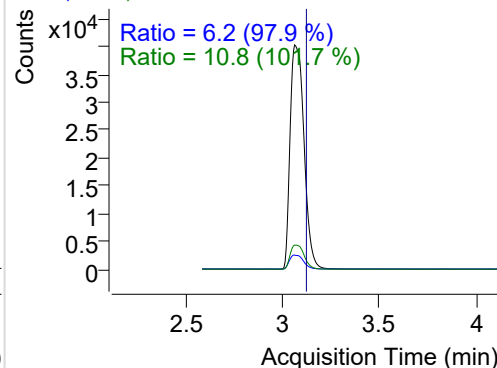
| Name                    | RT     | Transition | Resp.  | Height   | Final Conc. Units | Ratio |
|-------------------------|--------|------------|--------|----------|-------------------|-------|
| IS-D8-Naphthalene       | 3.064  | 136.0      | 200143 | 40226.39 | ND ng/ml          | 10.8  |
| Naphthalene             | 3.096  | 128.0      | 11320  | 2280.39  | ND ng/ml          | 12.6  |
| Acenaphthylene          | 6.161  | 152.0      | 6755   | 3318.07  | ND ng/ml          | 19.5  |
| IS-D10-Acenaphthene     | 6.493  | 164.0      | 105589 | 56603.34 | ND ng/ml          | 94.8  |
| Acenaphthene            | 6.558  | 154.0      | 4509   | 2350.52  | ND ng/ml          | 106.4 |
| LSS-D10-Fluorene        | 7.627  | 176.0      | 107509 | 59271.43 | ND ng/ml          | 93.0  |
| Fluorene                | 7.680  | 166.0      | 5498   | 3087.18  | ND ng/ml          | 94.1  |
| IS-D10-Phenanthrene     | 9.780  | 188.0      | 173985 | 107131.9 | ND ng/ml          | 14.9  |
| Phenanthrene            | 9.822  | 178.0      | 8524   | 4970.62  | ND ng/ml          | 19.1  |
| Anthracene              | 9.917  | 178.0      | 5261   | 2724.37  | ND ng/ml          | 18.2  |
| Fluoranthene            | 12.526 | 202.0      | 5708   | 3203.51  | ND ng/ml          | 17.2  |
| LSS-D10-Pyrene          | 12.976 | 212.0      | 131227 | 84158.97 | ND ng/ml          | 18.5  |
| Pyrene                  | 13.009 | 202.0      | 8366   | 4825.41  | ND ng/ml          | 21.6  |
| Benz(a)anthracene       | 15.789 | 228.0      | 2126   | 1195.00  | ND ng/ml          | 29.0  |
| IS-D12-Chrysene         | 15.838 | 240.0      | 85586  | 47452.22 | ND ng/ml          | 18.8  |
| Chrysene                | 15.887 | 228.0      | 4558   | 2210.45  | ND ng/ml          | 28.7  |
| Benzo(b)fluoranthene    | 18.110 | 252.0      | 2083   | 1143.44  | ND ng/ml          | 23.5  |
| Benzo(k)fluoranthene    | 18.160 | 252.0      | 2290   | 936.69   | ND ng/ml          | 21.2  |
| SS-D12-Benzo(e)pyrene   | 18.609 | 264.0      | 81507  | 41918.68 | ND ng/ml          | 25.8  |
| Benzo(e)pyrene          | 18.651 | 252.0      | 4939   | 2162.62  | ND ng/ml          | 22.4  |
| Benzo(a)pyrene          | 18.737 | 252.0      | 1358   | 682.36   | ND ng/ml          | 24.9  |
| IS-D12-Perylene         | 18.872 | 264.0      | 58349  | 27572.53 | ND ng/ml          | 24.1  |
| Perylene                | 18.915 | 252.0      | 3183   | 1405.50  | ND ng/ml          | 23.2  |
| Indeno(1,2,3-c,d)pyrene | 20.751 | 276.0      | 734    | 331.82   | ND ng/ml          | 19.6  |
| Dibenz(a,h)anthracene   | 20.828 | 278.0      | 616    | 186.70   | ND ng/ml          | 22.5  |
| Benzo(g,h,i)perylene    | 21.171 | 276.0      | 1390   | 556.76   | ND ng/ml          | 22.1  |
| Coronene                | 23.439 | 300.0      | 860    | 295.23   | ND ng/ml          | 24.0  |

## IS-D8-Naphthalene

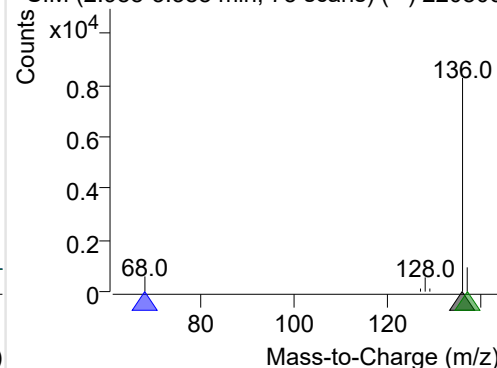
+ Selected Ion (136.0) 220806-PAHs-004.D



136.0, 68.0, 137.0

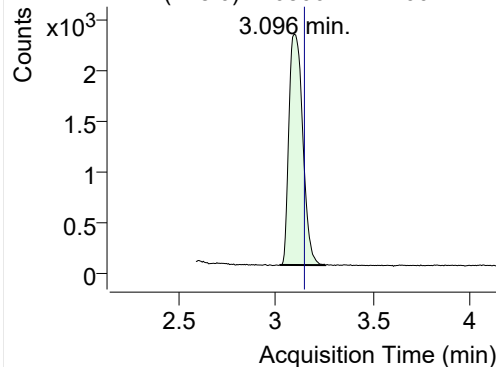


+ SIM (2.988-3.388 min, 75 scans) (\*\*) 220806

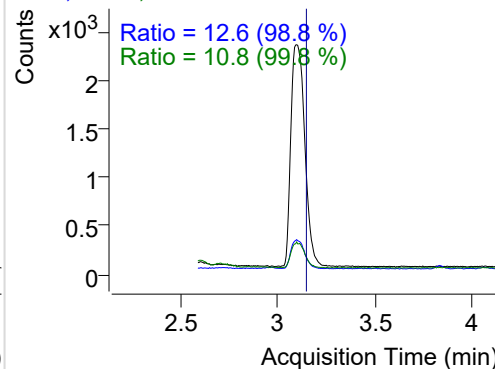


**Naphthalene**

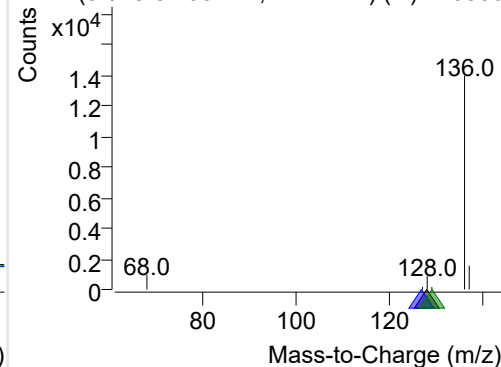
+ Selected Ion (128.0) 220806-PAHs-004.D



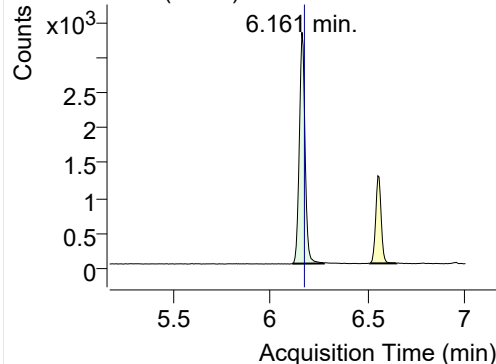
128.0, 127.0, 129.0



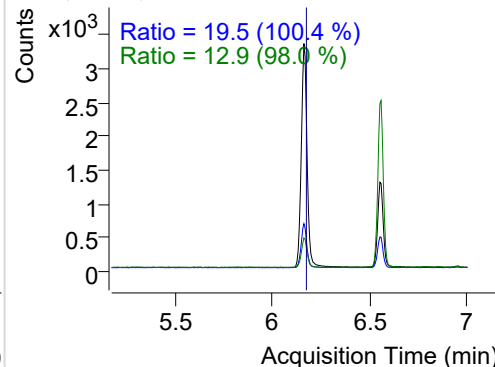
+ SIM (3.018-3.253 min, 44 scans) (\*\*) 220806

**Acenaphthylene**

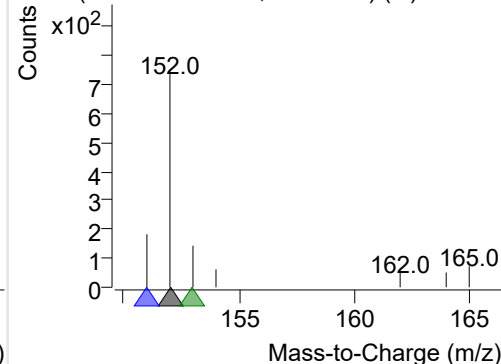
+ Selected Ion (152.0) 220806-PAHs-004.D



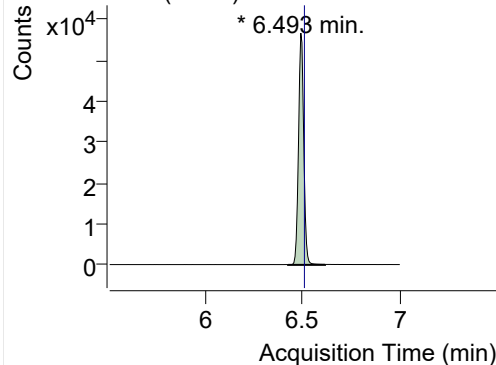
152.0, 151.0, 153.0



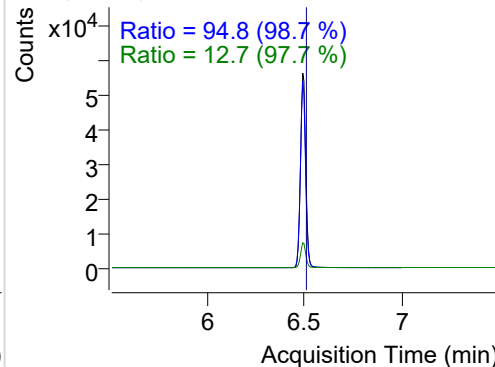
+ SIM (6.112-6.274 min, 28 scans) (\*\*) 220806

**IS-D10-Acenaphthene**

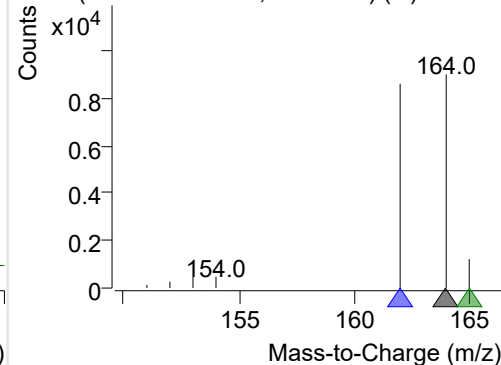
+ Selected Ion (164.0) 220806-PAHs-004.D



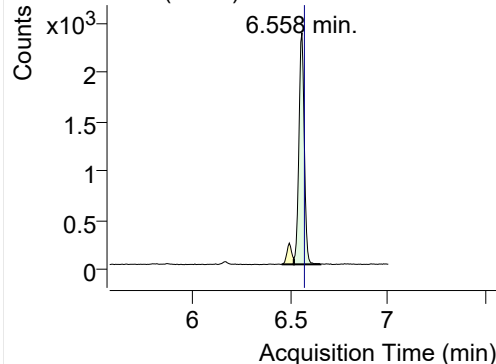
164.0, 162.0, 165.0



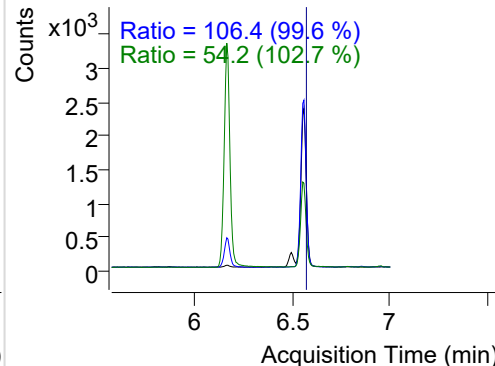
+ SIM (6.428-6.617 min, 33 scans) (\*\*) 220806

**Acenaphthene**

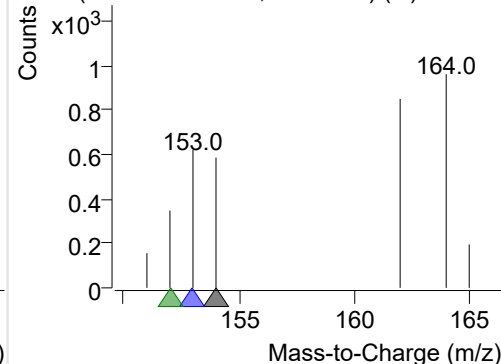
+ Selected Ion (154.0) 220806-PAHs-004.D



154.0, 153.0, 152.0

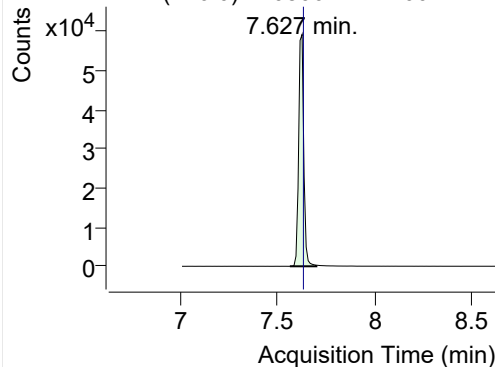


+ SIM (6.516-6.653 min, 24 scans) (\*\*) 220806

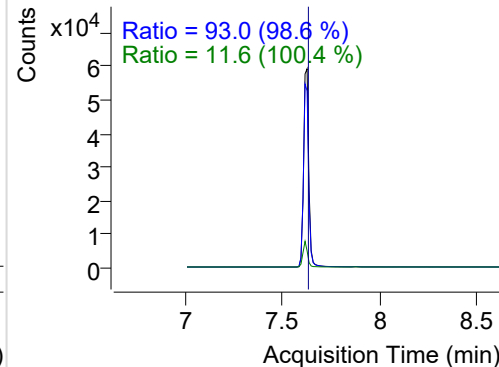


## LSS-D10-Fluorene

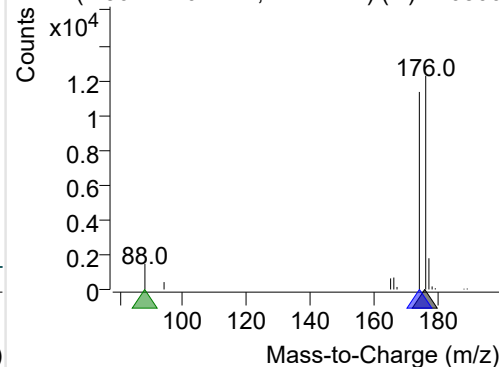
+ Selected Ion (176.0) 220806-PAHs-004.D



176.0, 174.0, 88.0

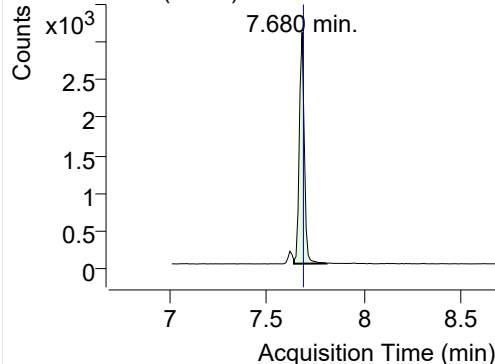


+ SIM (7.564-7.701 min, 14 scans) (\*\*) 220806

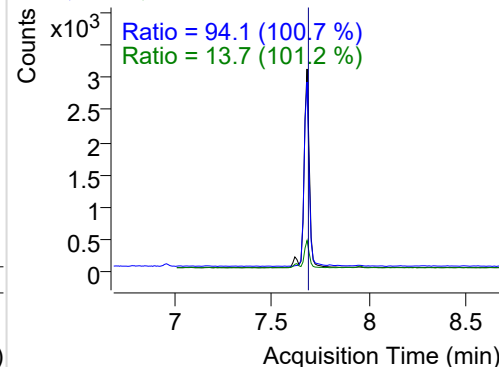


## Fluorene

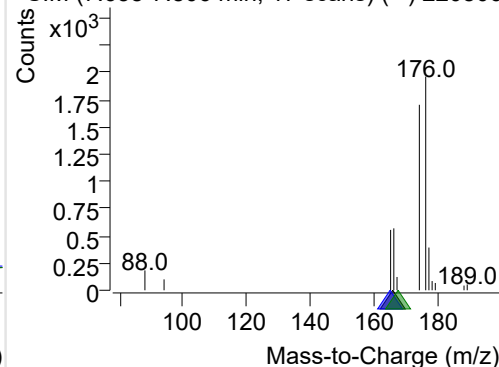
+ Selected Ion (166.0) 220806-PAHs-004.D



166.0, 165.0, 167.0

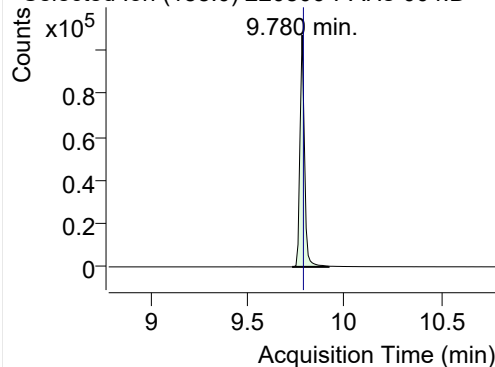


+ SIM (7.638-7.806 min, 17 scans) (\*\*) 220806

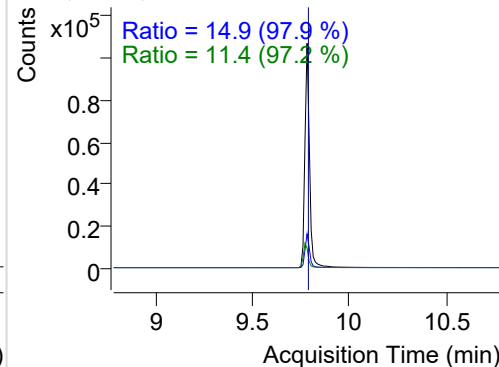


## IS-D10-Phenanthrene

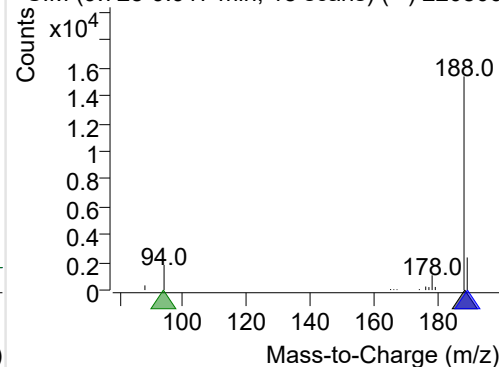
+ Selected Ion (188.0) 220806-PAHs-004.D



188.0, 189.0, 94.0

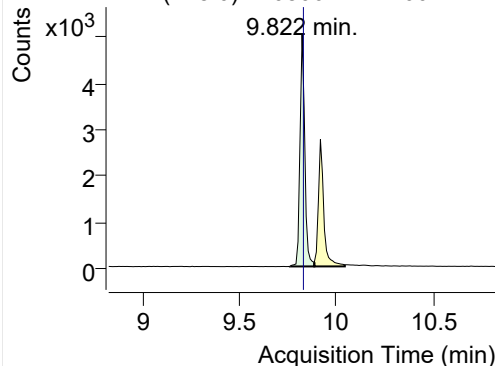


+ SIM (9.728-9.917 min, 18 scans) (\*\*) 220806

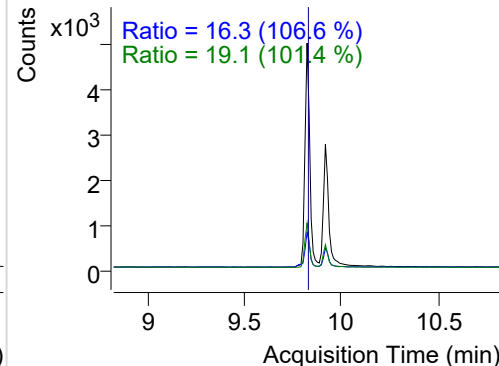


## Phenanthrene

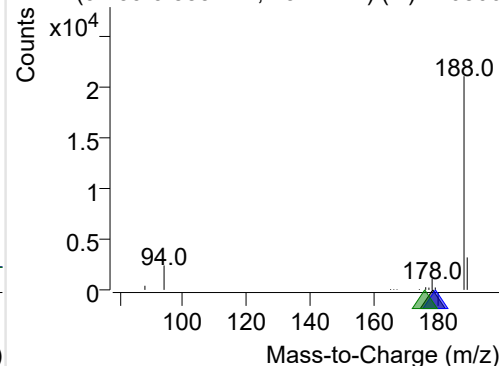
+ Selected Ion (178.0) 220806-PAHs-004.D



178.0, 179.0, 176.0

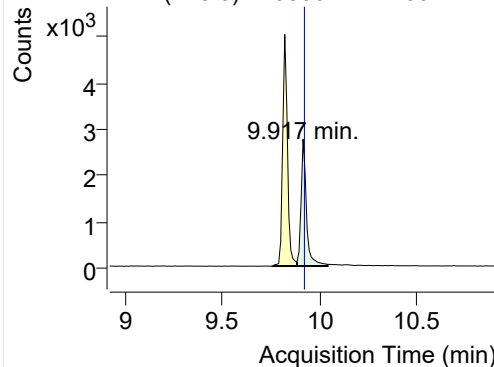


+ SIM (9.759-9.885 min, 13 scans) (\*\*) 220806

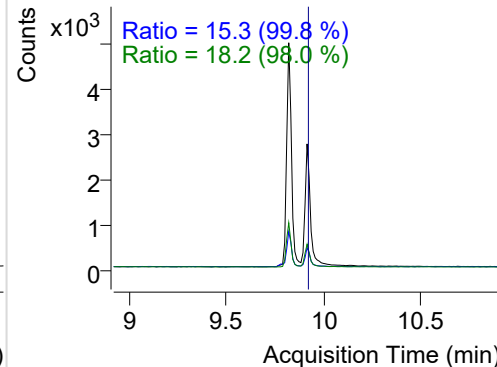


**Anthracene**

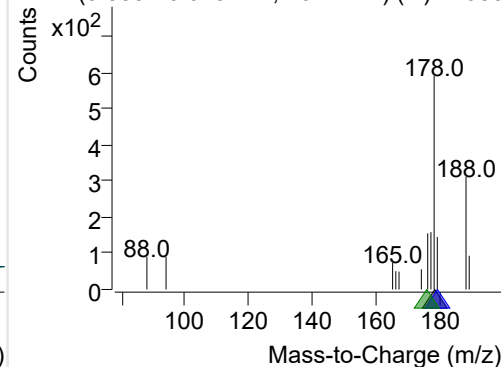
+ Selected Ion (178.0) 220806-PAHs-004.D



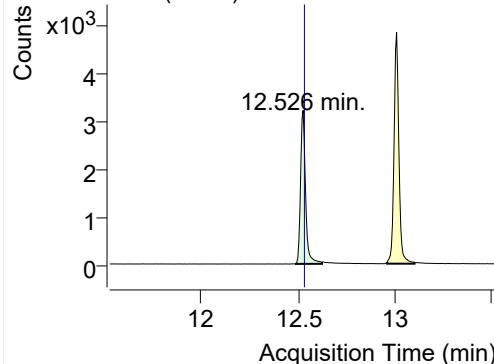
178.0, 179.0, 176.0



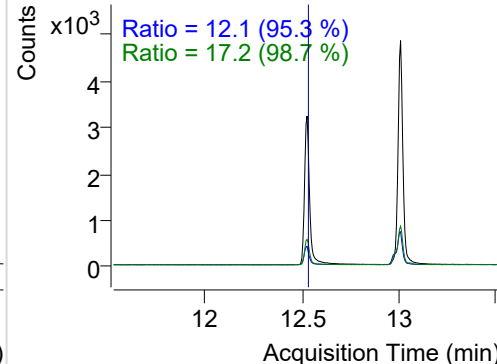
+ SIM (9.885-10.043 min, 16 scans) (\*\*) 22080

**Fluoranthene**

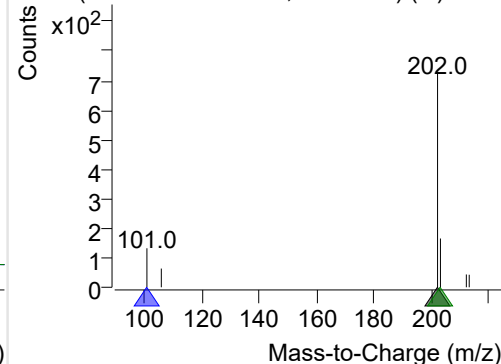
+ Selected Ion (202.0) 220806-PAHs-004.D



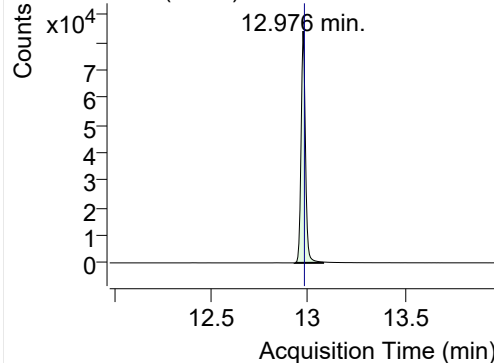
202.0, 101.0, 203.0



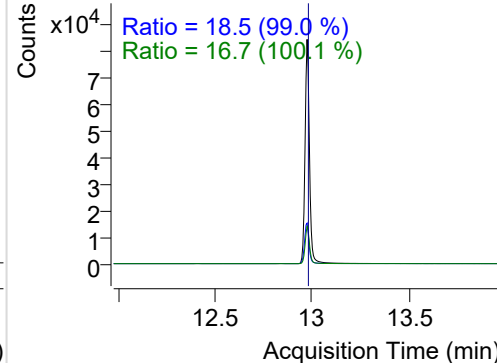
+ SIM (12.485-12.624 min, 26 scans) (\*\*) 2208

**LSS-D10-Pyrene**

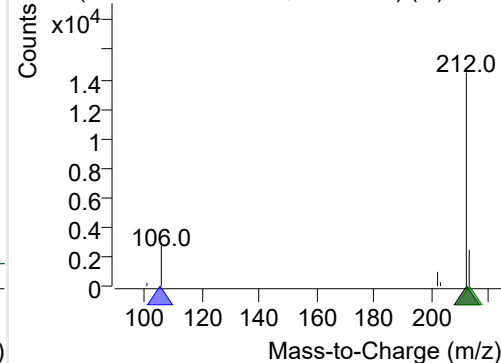
+ Selected Ion (212.0) 220806-PAHs-004.D



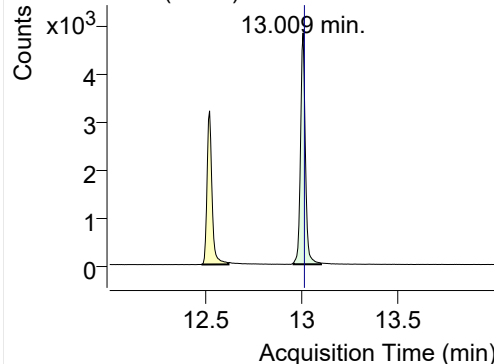
212.0, 106.0, 213.0



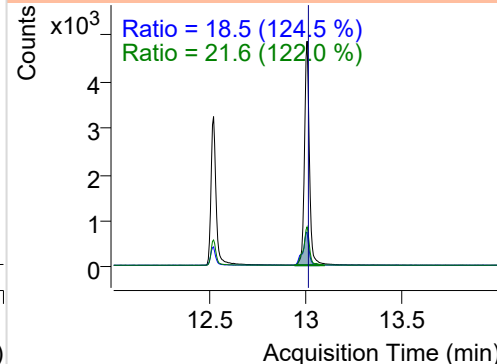
+ SIM (12.933-13.079 min, 28 scans) (\*\*) 2208

**Pyrene**

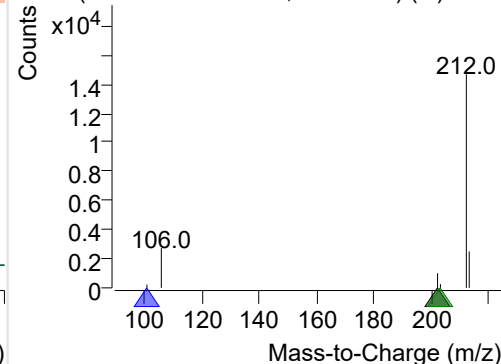
+ Selected Ion (202.0) 220806-PAHs-004.D



202.0, 101.0, 203.0

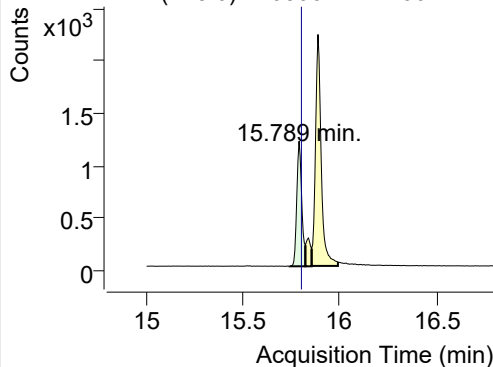


+ SIM (12.960-13.101 min, 27 scans) (\*\*) 2208

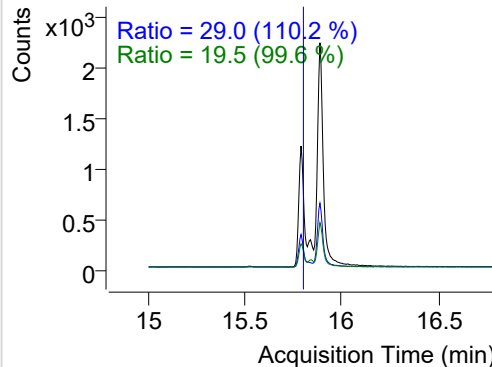


**Benz(a)anthracene**

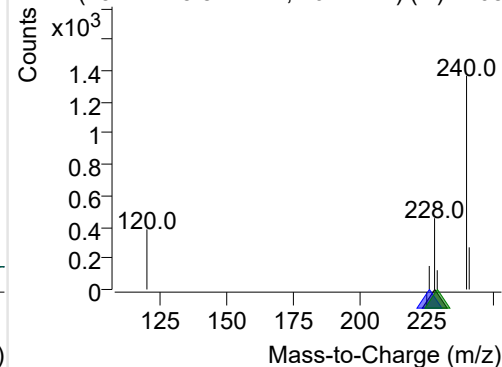
+ Selected Ion (228.0) 220806-PAHs-004.D



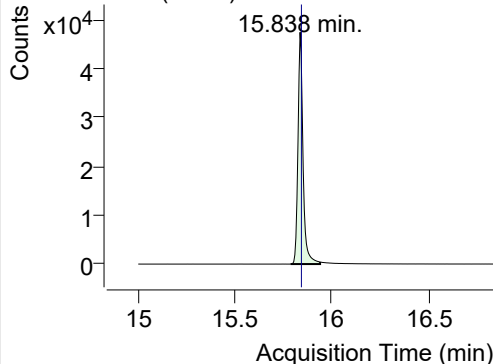
228.0, 226.0, 229.0



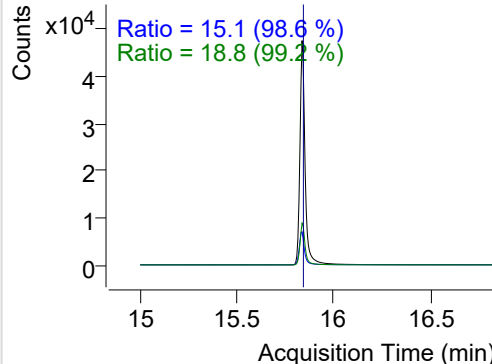
+ SIM (15.741-15.822 min, 16 scans) (\*\*) 2208

**IS-D12-Chrysene**

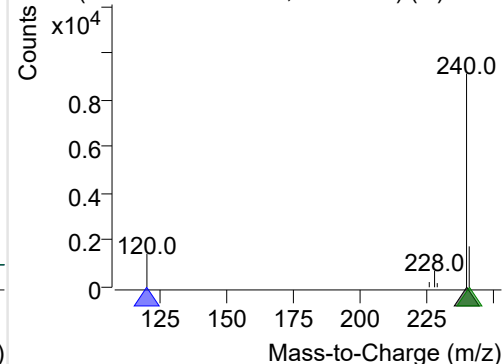
+ Selected Ion (240.0) 220806-PAHs-004.D



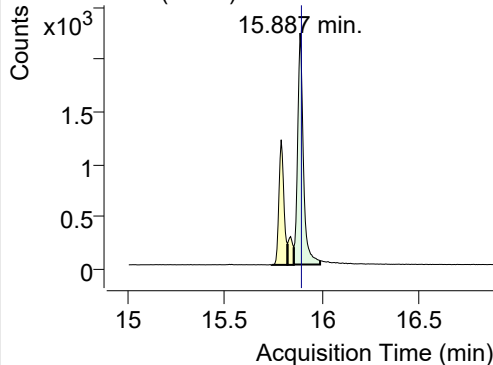
240.0, 120.0, 241.0



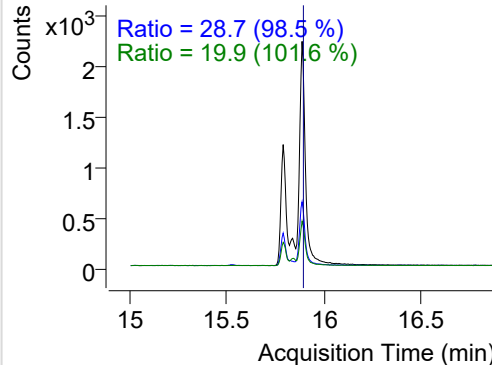
+ SIM (15.789-15.941 min, 29 scans) (\*\*) 2208

**Chrysene**

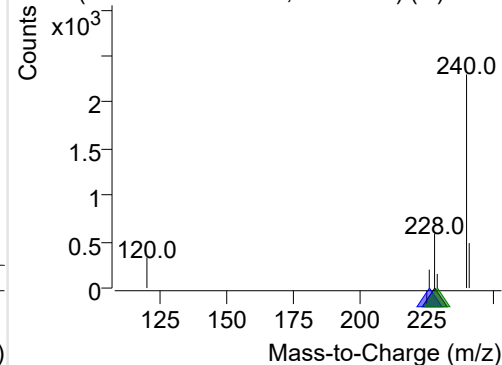
+ Selected Ion (228.0) 220806-PAHs-004.D



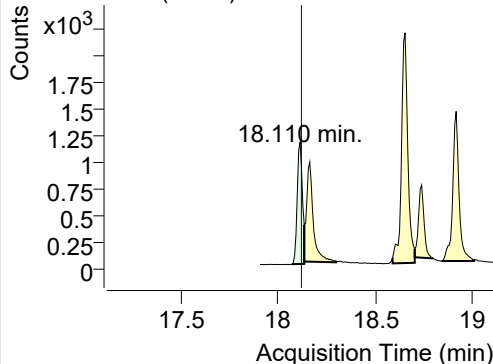
228.0, 226.0, 229.0



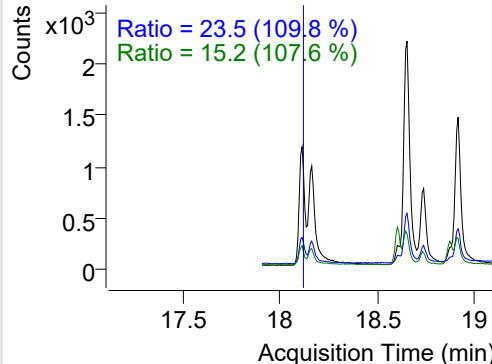
+ SIM (15.854-15.990 min, 26 scans) (\*\*) 2208

**Benzo(b)fluoranthene**

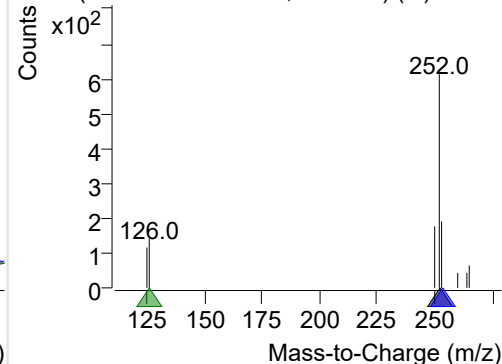
+ Selected Ion (252.0) 220806-PAHs-004.D



252.0, 253.0, 126.0

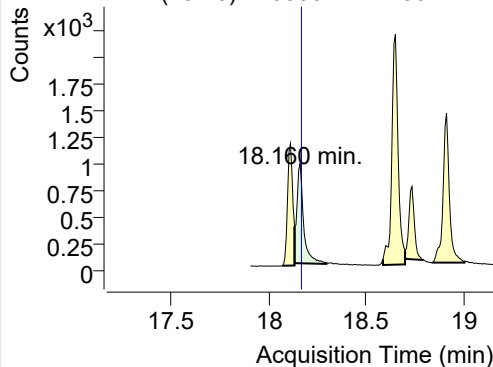


+ SIM (18.068-18.132 min, 9 scans) (\*\*) 22080

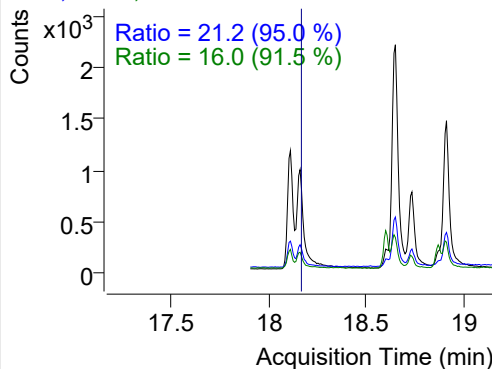


**Benzo(k)fluoranthene**

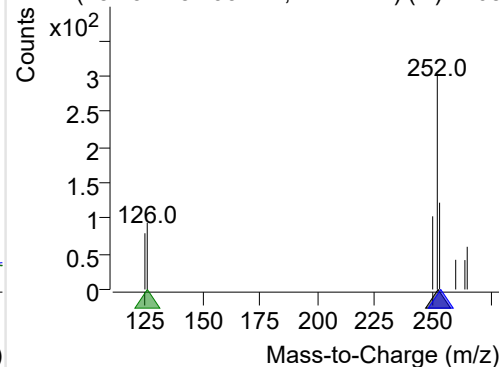
+ Selected Ion (252.0) 220806-PAHs-004.D



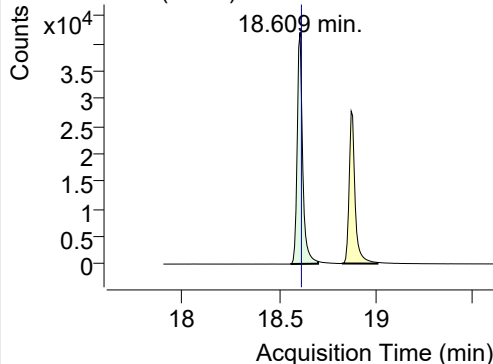
252.0, 253.0, 126.0



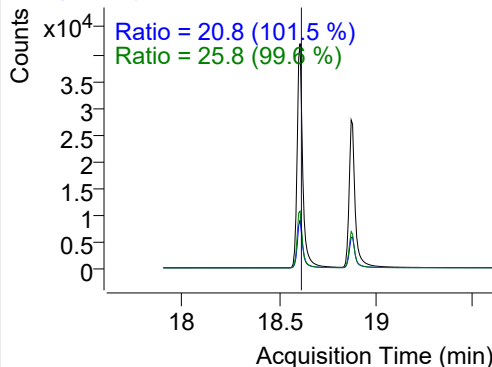
+ SIM (18.132-18.295 min, 24 scans) (\*\*) 2208

**SS-D12-Benzo(e)pyrene**

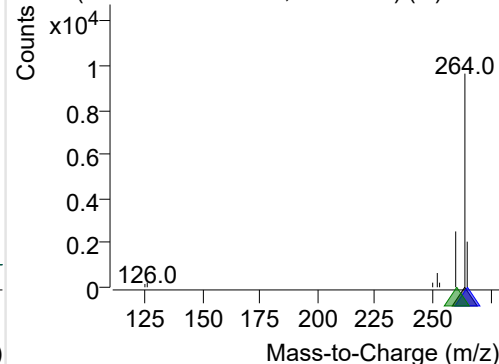
+ Selected Ion (264.0) 220806-PAHs-004.D



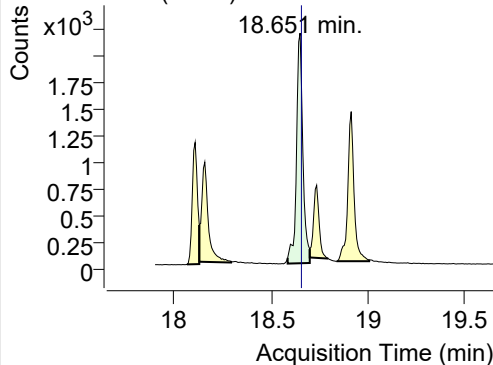
264.0, 265.0, 260.0



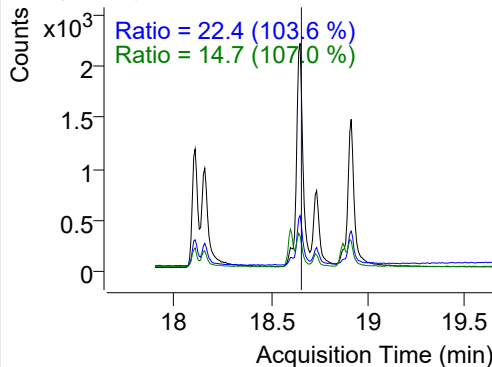
+ SIM (18.559-18.701 min, 20 scans) (\*\*) 2208

**Benzo(e)pyrene**

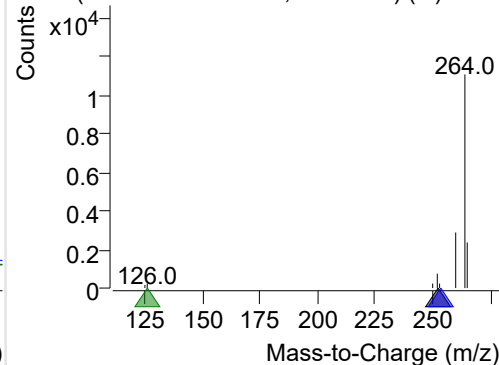
+ Selected Ion (252.0) 220806-PAHs-004.D



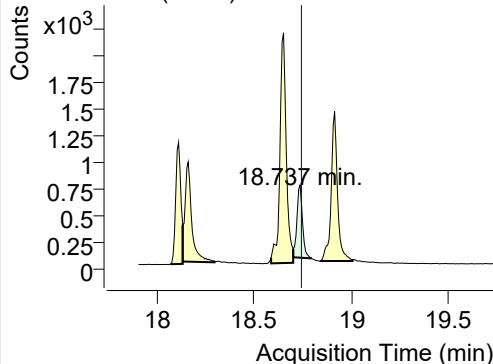
252.0, 253.0, 126.0



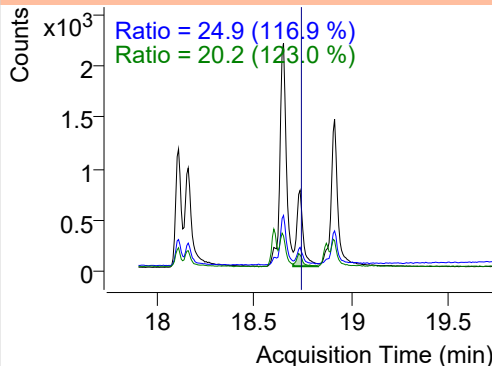
+ SIM (18.587-18.701 min, 17 scans) (\*\*) 2208

**Benzo(a)pyrene**

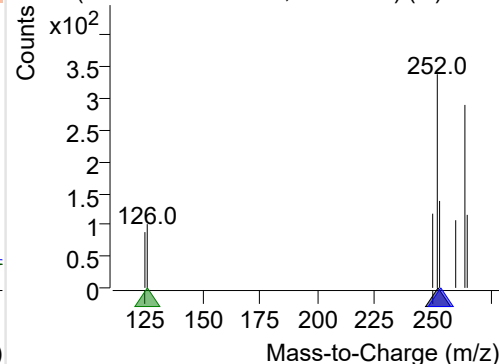
+ Selected Ion (252.0) 220806-PAHs-004.D



252.0, 253.0, 126.0

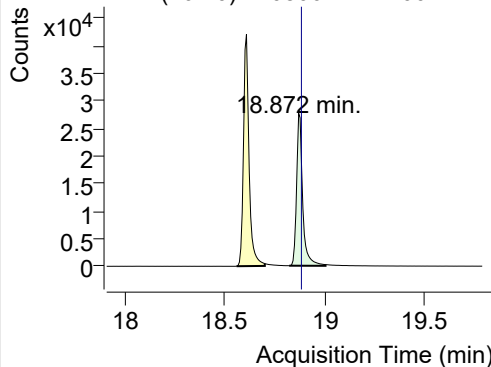


+ SIM (18.701-18.796 min, 14 scans) (\*\*) 2208

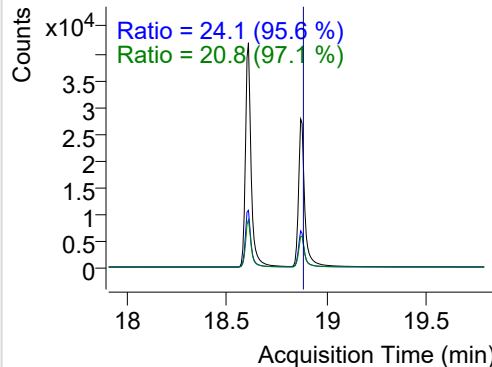


## IS-D12-Perylene

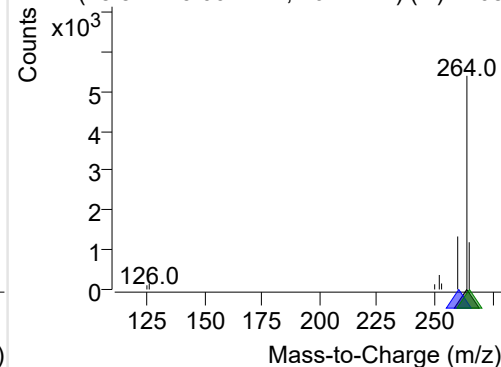
+ Selected Ion (264.0) 220806-PAHs-004.D



264.0, 260.0, 265.0

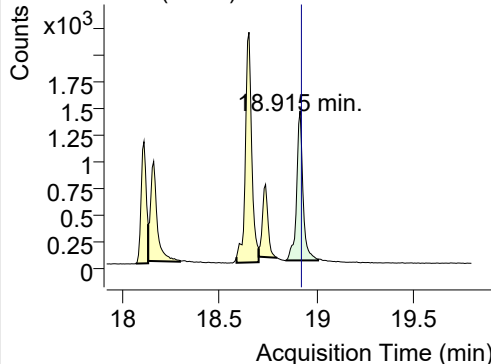


+ SIM (18.824-19.007 min, 26 scans) (\*\*) 2208

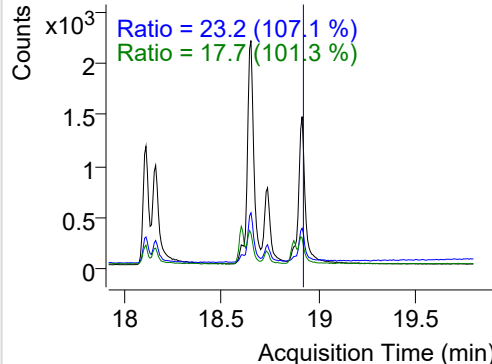


## Perylene

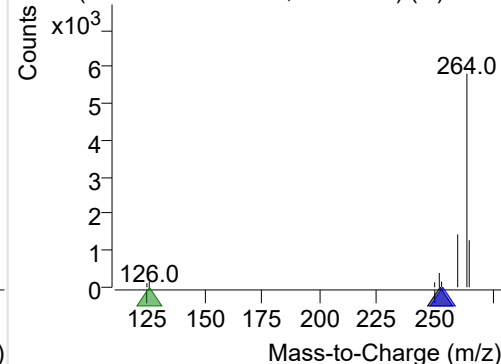
+ Selected Ion (252.0) 220806-PAHs-004.D



252.0, 253.0, 126.0

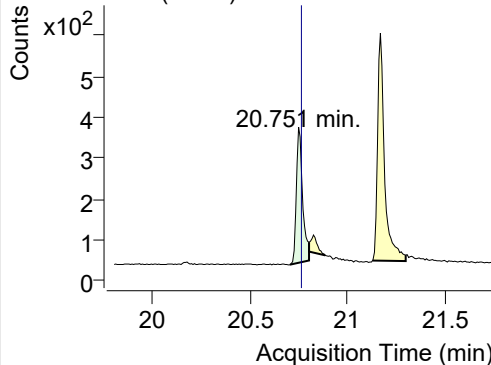


+ SIM (18.843-19.007 min, 24 scans) (\*\*) 2208

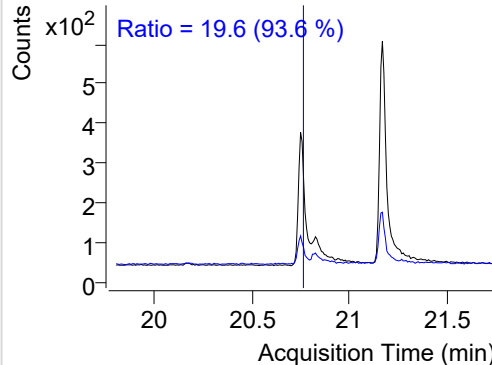


## Indeno(1,2,3-c,d)pyrene

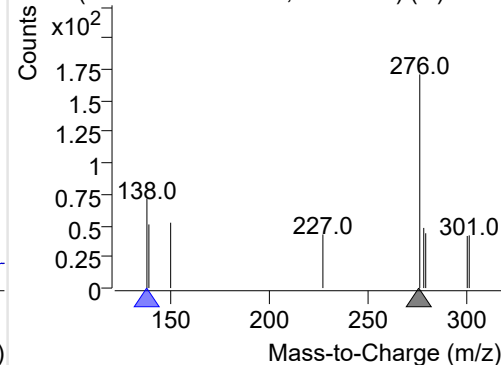
+ Selected Ion (276.0) 220806-PAHs-004.D



276.0, 138.0

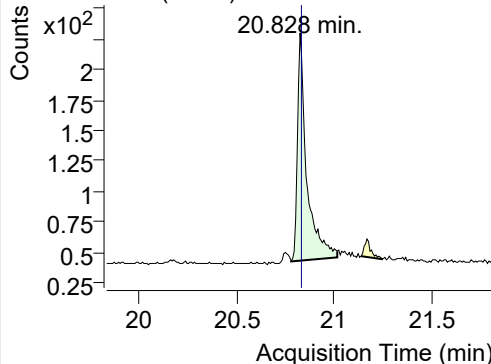


+ SIM (20.707-20.805 min, 13 scans) (\*\*) 2208

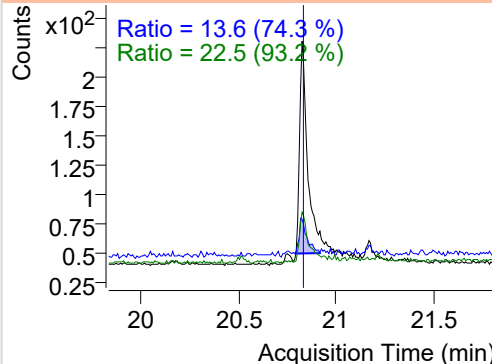


## Dibenz(a,h)anthracene

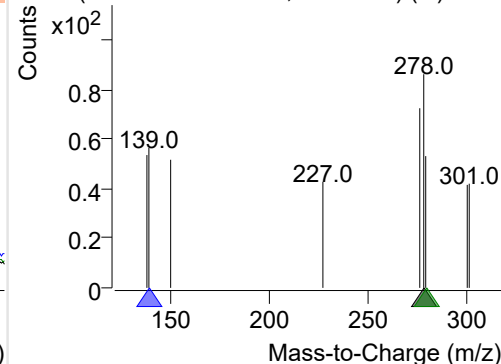
+ Selected Ion (278.0) 220806-PAHs-004.D



278.0, 139.0, 279.0

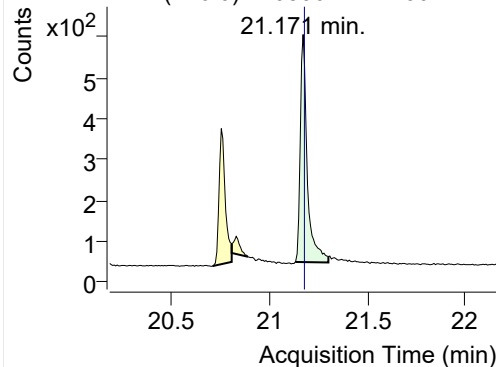


+ SIM (20.782-21.019 min, 32 scans) (\*\*) 2208

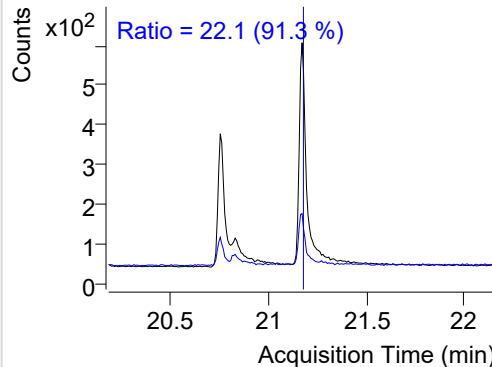


**Benzo(g,h,i)perylene**

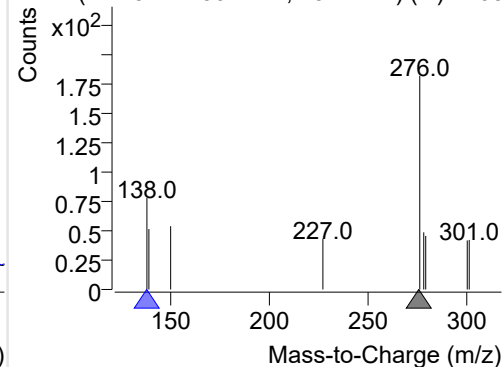
+ Selected Ion (276.0) 220806-PAHs-004.D



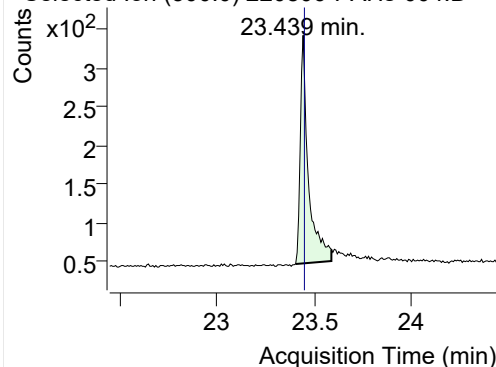
276.0, 138.0



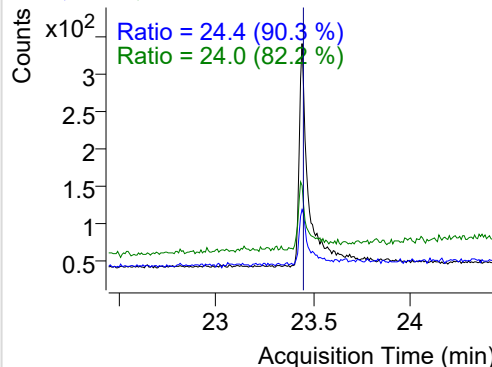
+ SIM (21.131-21.301 min, 23 scans) (\*\*) 2208

**Coronene**

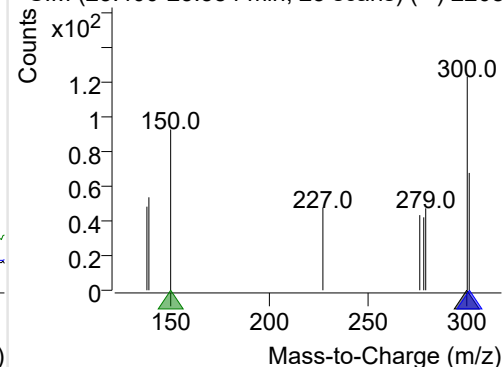
+ Selected Ion (300.0) 220806-PAHs-004.D



300.0, 301.0, 150.0



+ SIM (23.400-23.584 min, 25 scans) (\*\*) 2208





## Quantitative Analysis Sample Based Report

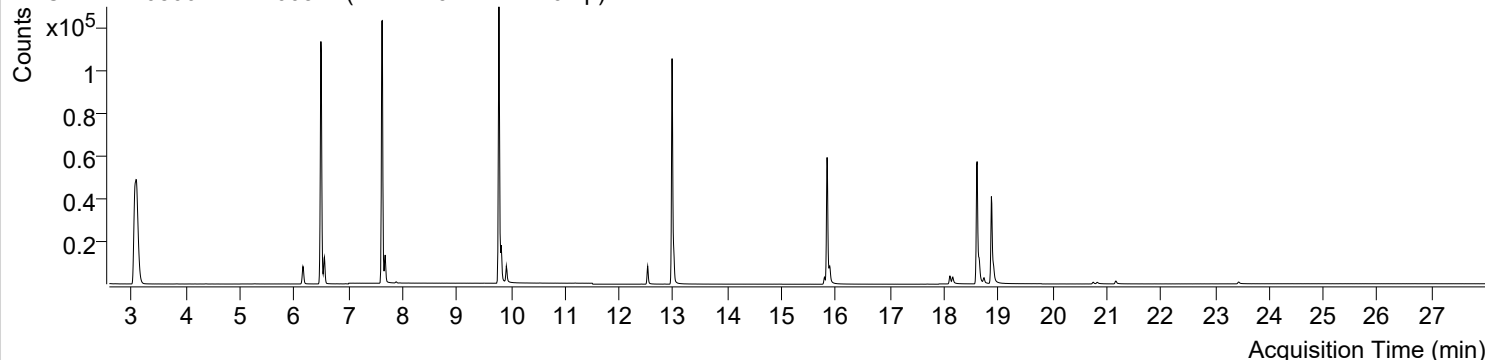


Trusted Answers

|                           |                                                                                            |                       |                        |
|---------------------------|--------------------------------------------------------------------------------------------|-----------------------|------------------------|
| Batch Data Path File Name | D:\MassHunter\GCMS\1\data\PAHs\220806-PAHs-Sample\QuantResults\220806-PAHs-Quant.batch.bin |                       |                        |
| Analysis Time Stamp       | 2022-10-10 오전 10:12:04                                                                     | Analyst Name          | DESKTOP-86B7UPG\5975MS |
| Report Generation Time    | 2022-10-10 오전 10:12:12                                                                     | Report Generator Name | DESKTOP-86B7UPG\5975MS |
| Calibration Last Update   | 2022-12-15 오후 3:30:46                                                                      | Batch State           | Processed              |
| Analyze Quant Version     | 10.2                                                                                       | Report Quant Version  | 10.2                   |
| Acq. Date-Time            | 2022-08-06 오후 12:35:10                                                                     | Data File             | 220806-PAHs-005.D      |
| Type                      | Sample                                                                                     | Name                  | PAHs-19mix-STD-0.1p    |
| Dil.                      | 1                                                                                          | Acq. Method File      | PAHs 19mix-Method      |

## Sample Chromatogram

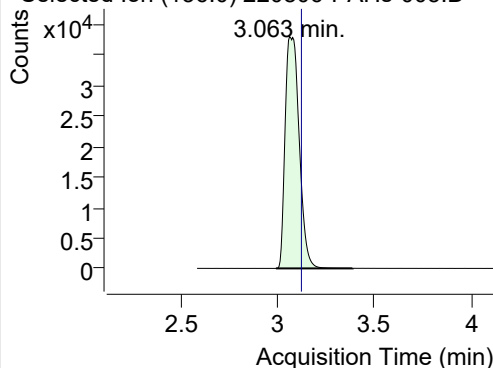
+ TIC SIM 220806-PAHs-005.D (PAHs-19mix-STD-0.1p)



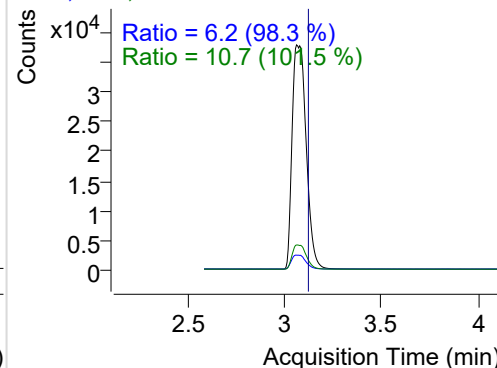
| Name                    | RT     | Transition | Resp.  | Height   | Final Conc. Units | Ratio |
|-------------------------|--------|------------|--------|----------|-------------------|-------|
| IS-D8-Naphthalene       | 3.063  | 136.0      | 191715 | 38018.47 | ND ng/ml          | 10.7  |
| Naphthalene             | 3.096  | 128.0      | 20604  | 4179.31  | ND ng/ml          | 12.5  |
| Acenaphthylene          | 6.161  | 152.0      | 12710  | 6145.68  | ND ng/ml          | 19.4  |
| IS-D10-Acenaphthene     | 6.493  | 164.0      | 100956 | 54323.41 | ND ng/ml          | 94.7  |
| Acenaphthene            | 6.558  | 154.0      | 8296   | 4389.47  | ND ng/ml          | 106.5 |
| LSS-D10-Fluorene        | 7.627  | 176.0      | 101791 | 57374.01 | ND ng/ml          | 93.1  |
| Fluorene                | 7.680  | 166.0      | 10220  | 5907.43  | ND ng/ml          | 92.9  |
| IS-D10-Phenanthrene     | 9.780  | 188.0      | 165729 | 103700.9 | ND ng/ml          | 14.9  |
| Phenanthrene            | 9.822  | 178.0      | 15852  | 9553.93  | ND ng/ml          | 18.6  |
| Anthracene              | 9.916  | 178.0      | 9368   | 5071.02  | ND ng/ml          | 19.7  |
| Fluoranthene            | 12.526 | 202.0      | 11066  | 6493.65  | ND ng/ml          | 17.1  |
| LSS-D10-Pyrene          | 12.976 | 212.0      | 124672 | 77686.11 | ND ng/ml          | 18.5  |
| Pyrene                  | 13.009 | 202.0      | 15337  | 8906.44  | ND ng/ml          | 19.7  |
| Benz(a)anthracene       | 15.789 | 228.0      | 4006   | 2263.89  | ND ng/ml          | 29.2  |
| IS-D12-Chrysene         | 15.838 | 240.0      | 83732  | 44150.01 | ND ng/ml          | 18.8  |
| Chrysene                | 15.887 | 228.0      | 8634   | 4170.74  | ND ng/ml          | 29.0  |
| Benzo(b)fluoranthene    | 18.110 | 252.0      | 4037   | 2143.77  | ND ng/ml          | 21.6  |
| Benzo(k)fluoranthene    | 18.160 | 252.0      | 4398   | 1825.67  | ND ng/ml          | 23.8  |
| SS-D12-Benzo(e)pyrene   | 18.608 | 264.0      | 78955  | 38702.58 | ND ng/ml          | 26.1  |
| Benzo(e)pyrene          | 18.644 | 252.0      | 8928   | 4060.72  | ND ng/ml          | 22.0  |
| Benzo(a)pyrene          | 18.737 | 252.0      | 2654   | 1357.62  | ND ng/ml          | 22.1  |
| IS-D12-Perylene         | 18.872 | 264.0      | 55747  | 27683.50 | ND ng/ml          | 24.0  |
| Perylene                | 18.915 | 252.0      | 5681   | 2531.07  | ND ng/ml          | 23.0  |
| Indeno(1,2,3-c,d)pyrene | 20.751 | 276.0      | 1381   | 650.95   | ND ng/ml          | 21.0  |
| Dibenz(a,h)anthracene   | 20.828 | 278.0      | 1174   | 379.92   | ND ng/ml          | 22.8  |
| Benzo(g,h,i)perylene    | 21.171 | 276.0      | 2646   | 1050.39  | ND ng/ml          | 24.6  |
| Coronene                | 23.439 | 300.0      | 1745   | 562.05   | ND ng/ml          | 26.8  |

## IS-D8-Naphthalene

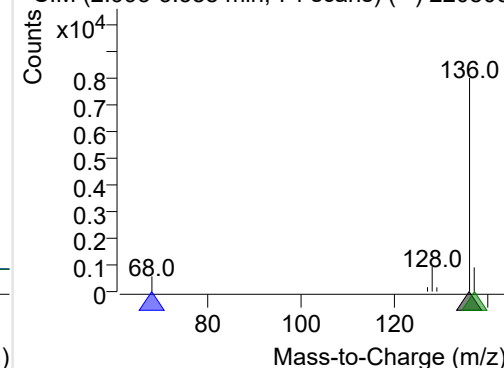
+ Selected Ion (136.0) 220806-PAHs-005.D



136.0, 68.0, 137.0

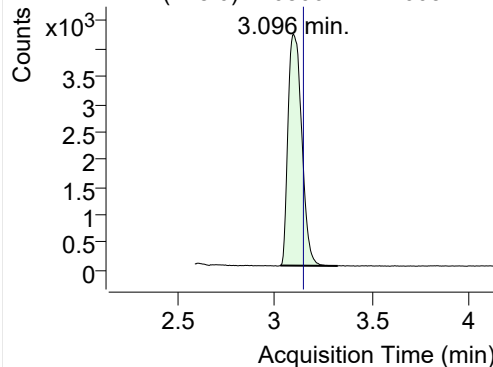


+ SIM (2.993-3.388 min, 74 scans) (\*\*) 220806

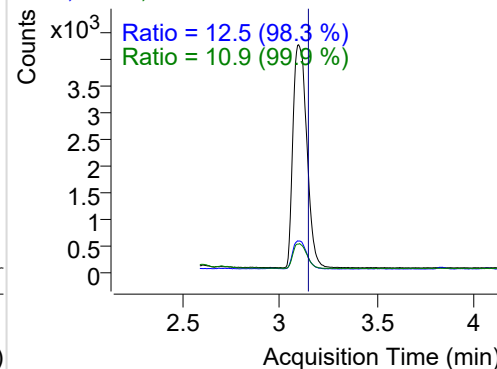


**Naphthalene**

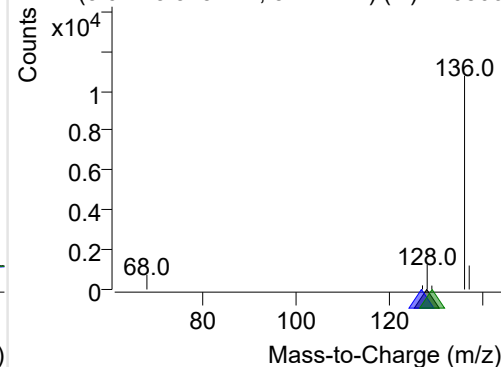
+ Selected Ion (128.0) 220806-PAHs-005.D



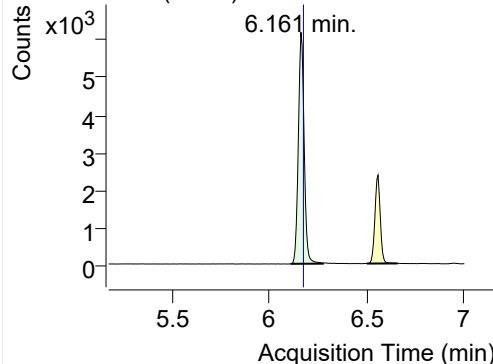
128.0, 127.0, 129.0



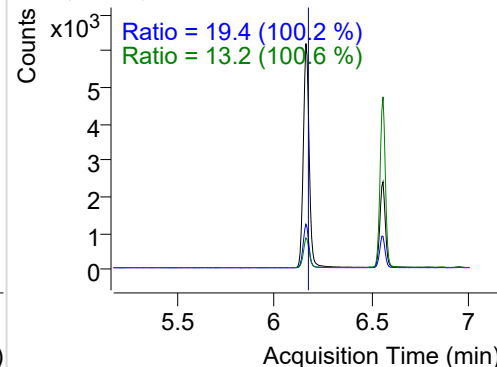
+ SIM (3.027-3.323 min, 54 scans) (\*\*) 220806

**Acenaphthylene**

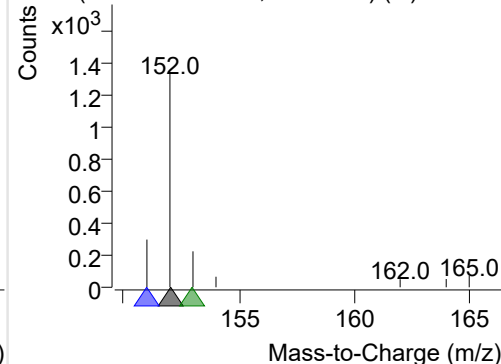
+ Selected Ion (152.0) 220806-PAHs-005.D



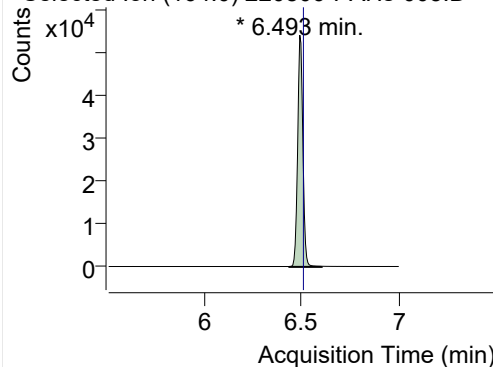
152.0, 151.0, 153.0



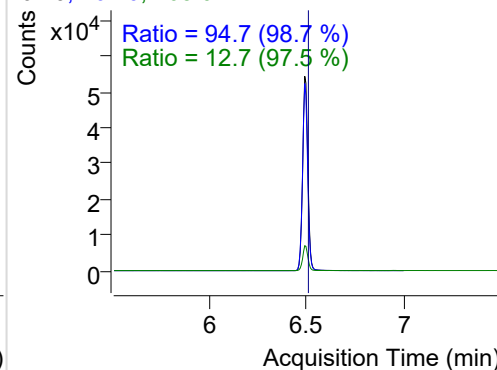
+ SIM (6.108-6.274 min, 28 scans) (\*\*) 220806

**IS-D10-Acenaphthene**

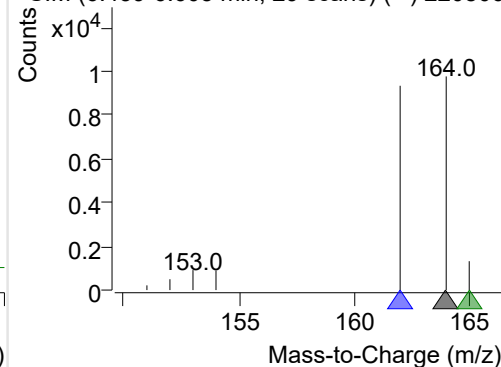
+ Selected Ion (164.0) 220806-PAHs-005.D



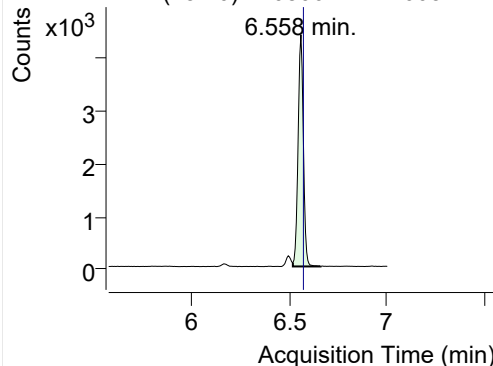
164.0, 162.0, 165.0



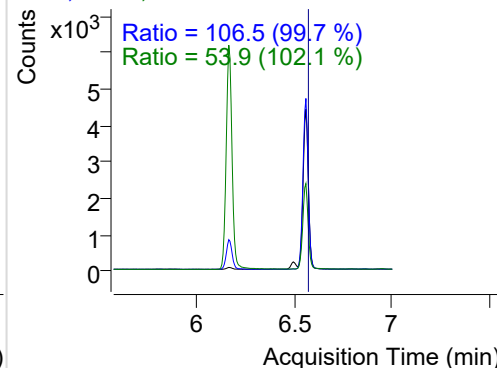
+ SIM (6.439-6.605 min, 29 scans) (\*\*) 220806

**Acenaphthene**

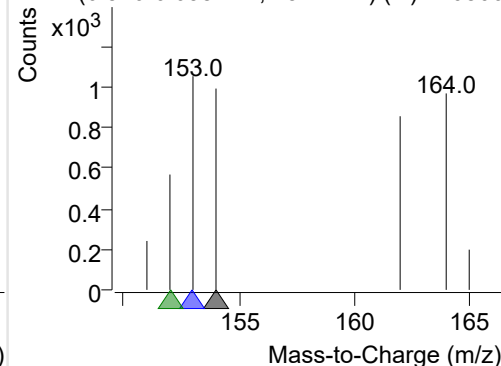
+ Selected Ion (154.0) 220806-PAHs-005.D



154.0, 153.0, 152.0

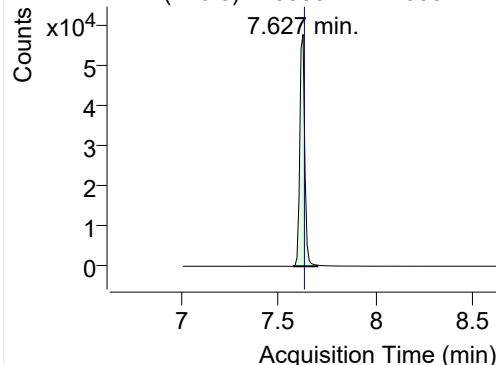


+ SIM (6.516-6.658 min, 25 scans) (\*\*) 220806

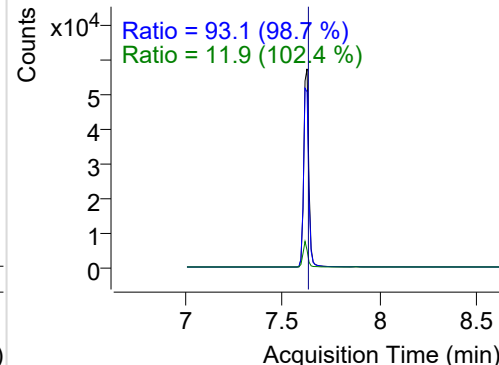


## LSS-D10-Fluorene

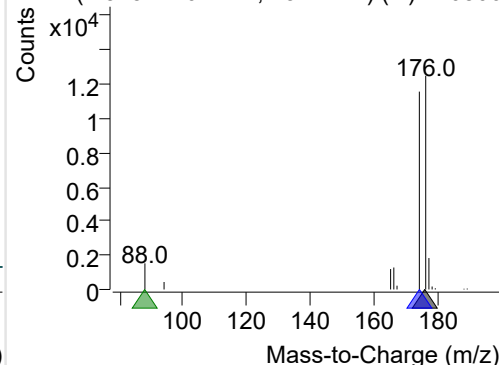
+ Selected Ion (176.0) 220806-PAHs-005.D



176.0, 174.0, 88.0

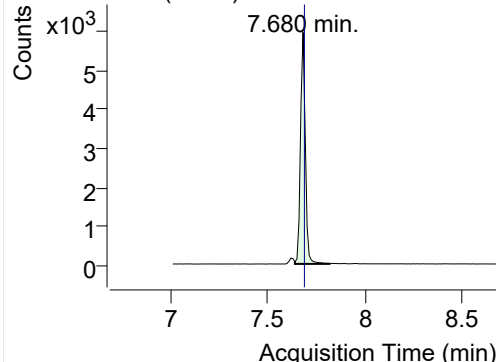


+ SIM (7.575-7.701 min, 13 scans) (\*\*) 220806

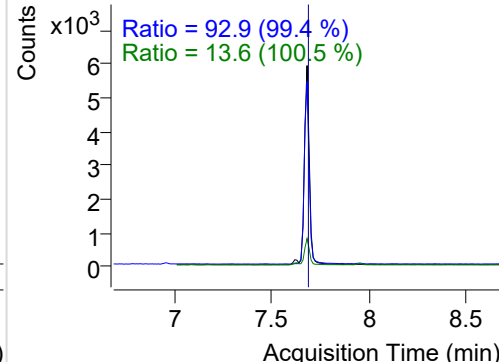


## Fluorene

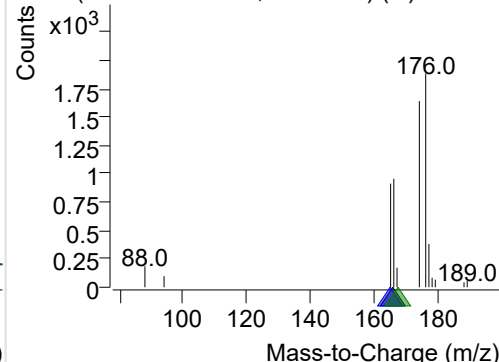
+ Selected Ion (166.0) 220806-PAHs-005.D



166.0, 165.0, 167.0

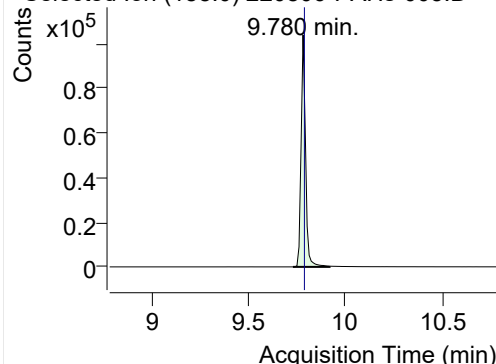


+ SIM (7.638-7.816 min, 18 scans) (\*\*) 220806

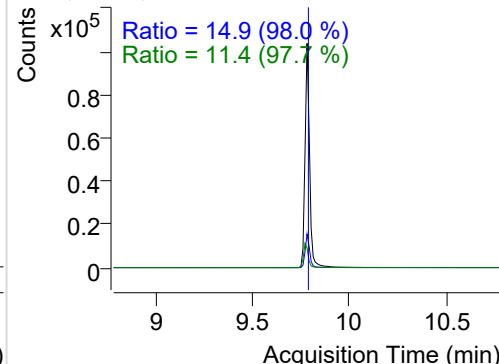


## IS-D10-Phenanthrene

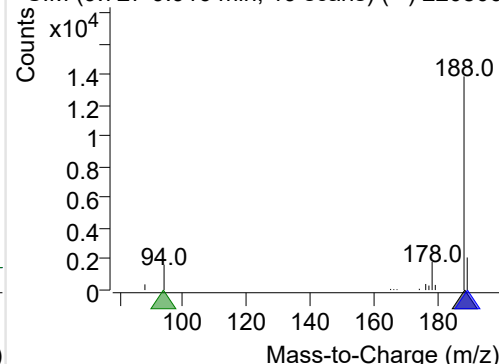
+ Selected Ion (188.0) 220806-PAHs-005.D



188.0, 189.0, 94.0

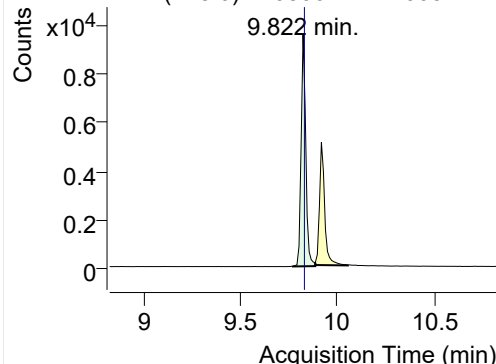


+ SIM (9.727-9.916 min, 19 scans) (\*\*) 220806

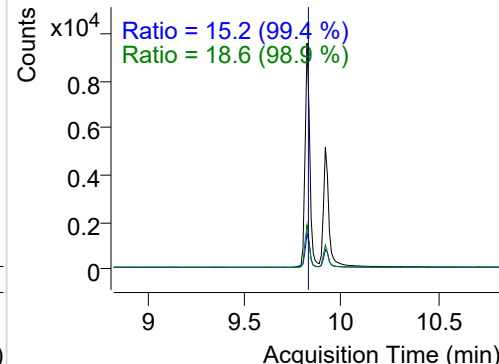


## Phenanthrene

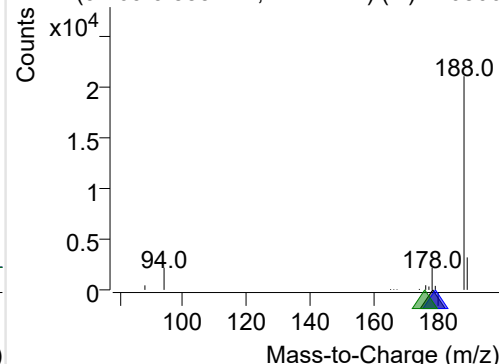
+ Selected Ion (178.0) 220806-PAHs-005.D



178.0, 179.0, 176.0

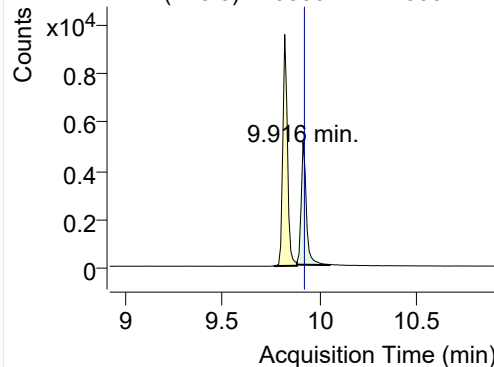


+ SIM (9.769-9.885 min, 12 scans) (\*\*) 220806

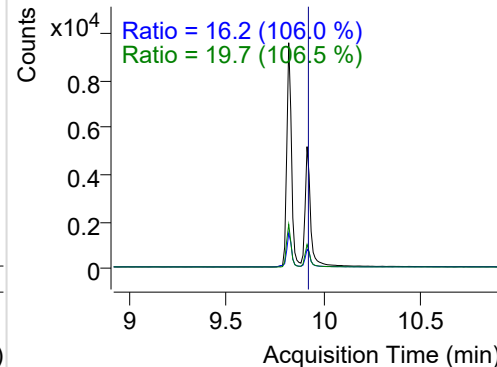


**Anthracene**

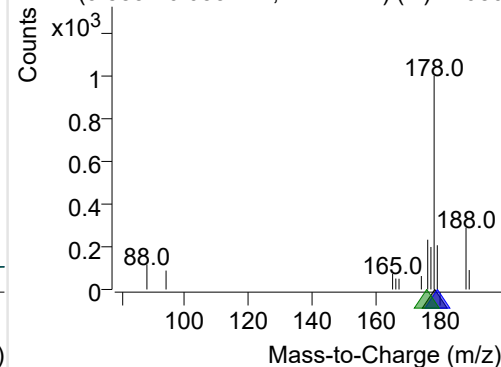
+ Selected Ion (178.0) 220806-PAHs-005.D



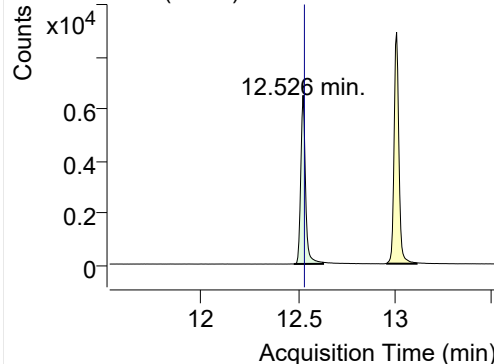
178.0, 179.0, 176.0



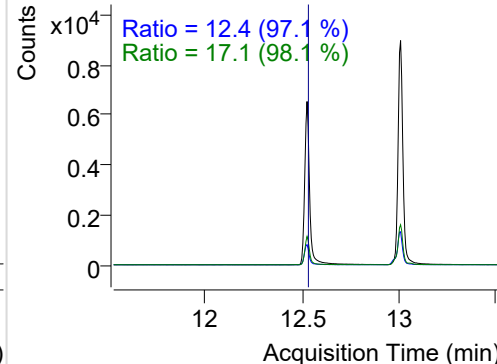
+ SIM (9.885-10.053 min, 17 scans) (\*\*) 22080

**Fluoranthene**

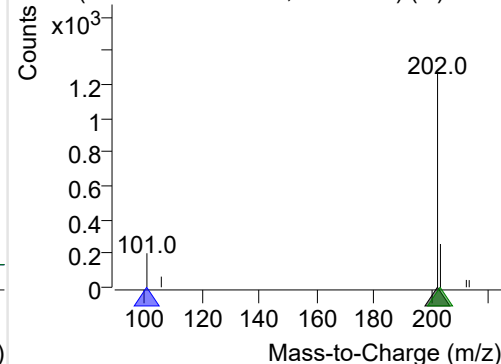
+ Selected Ion (202.0) 220806-PAHs-005.D



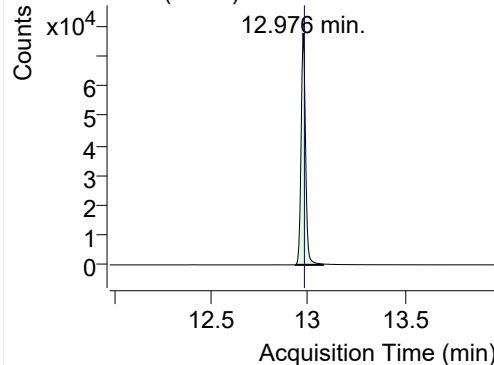
202.0, 101.0, 203.0



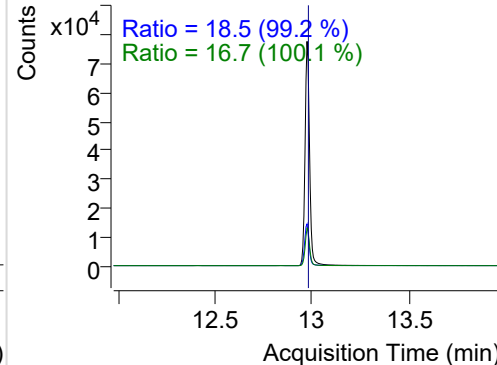
+ SIM (12.478-12.629 min, 28 scans) (\*\*) 2208

**LSS-D10-Pyrene**

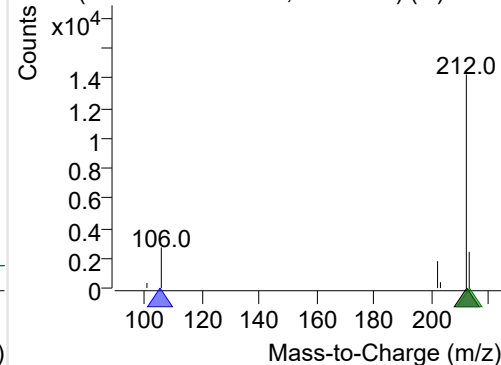
+ Selected Ion (212.0) 220806-PAHs-005.D



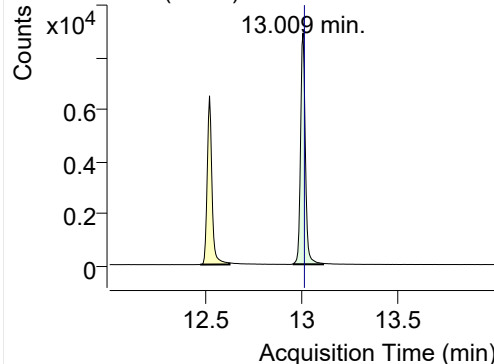
212.0, 106.0, 213.0



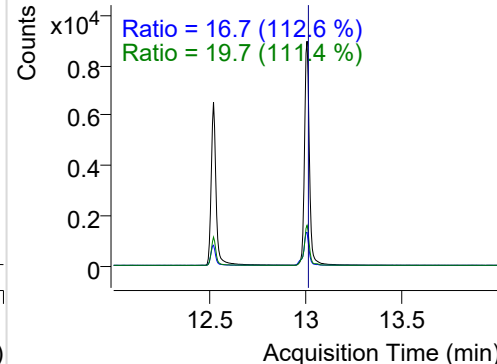
+ SIM (12.938-13.079 min, 27 scans) (\*\*) 2208

**Pyrene**

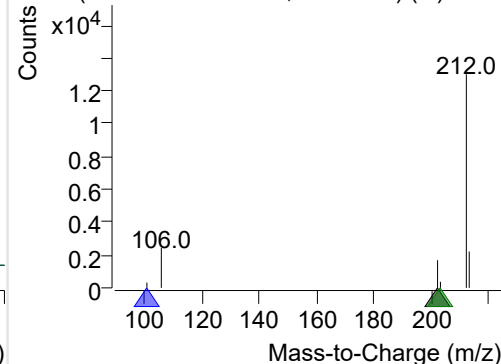
+ Selected Ion (202.0) 220806-PAHs-005.D



202.0, 101.0, 203.0

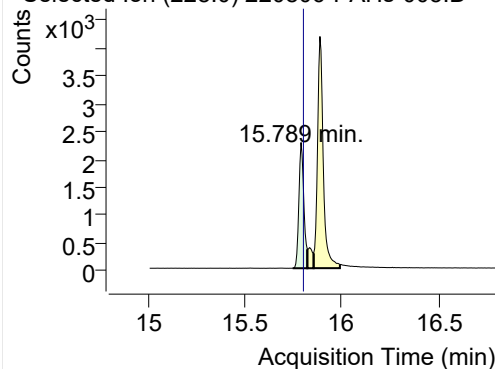


+ SIM (12.960-13.112 min, 29 scans) (\*\*) 2208

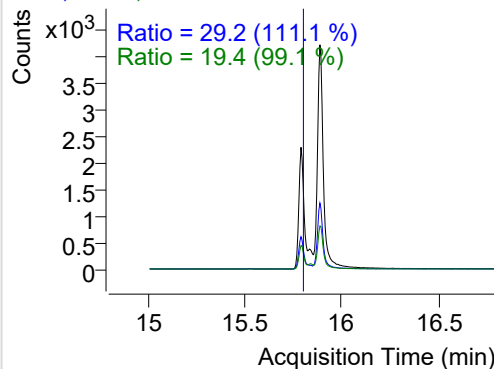


**Benz(a)anthracene**

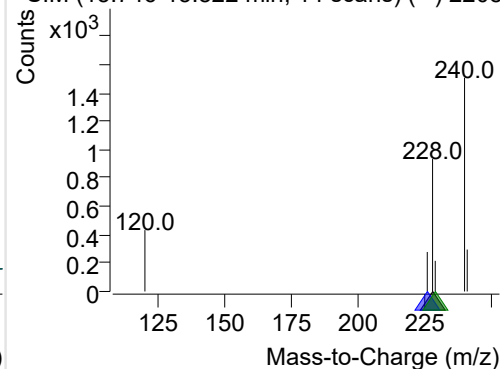
+ Selected Ion (228.0) 220806-PAHs-005.D



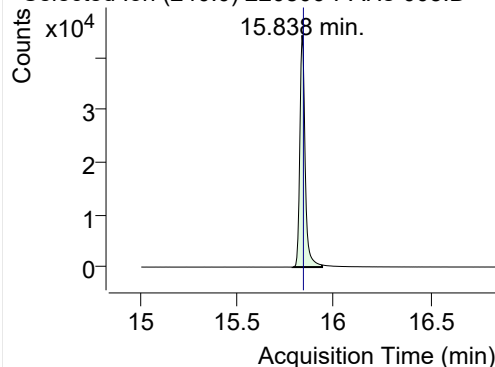
228.0, 226.0, 229.0



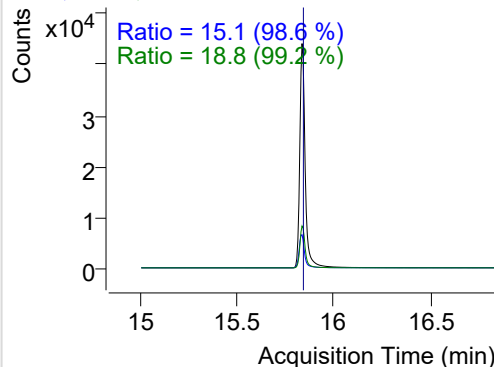
+ SIM (15.746-15.822 min, 14 scans) (\*\*) 2208

**IS-D12-Chrysene**

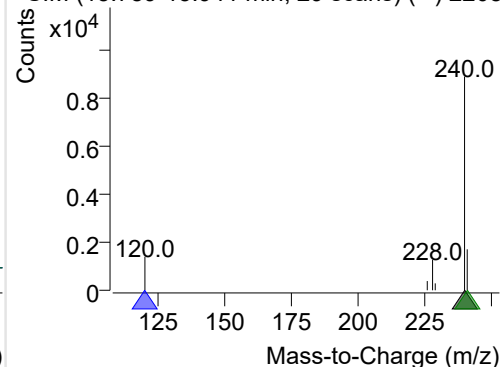
+ Selected Ion (240.0) 220806-PAHs-005.D



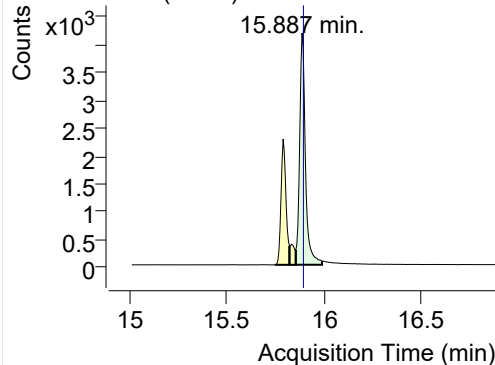
240.0, 120.0, 241.0



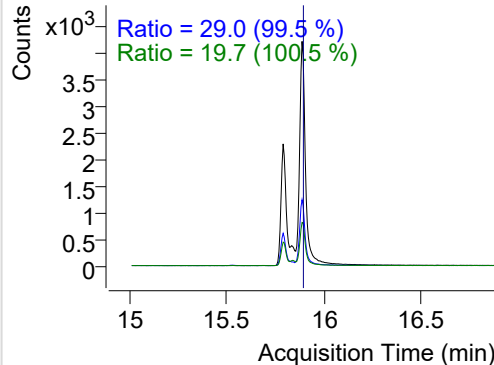
+ SIM (15.789-15.941 min, 29 scans) (\*\*) 2208

**Chrysene**

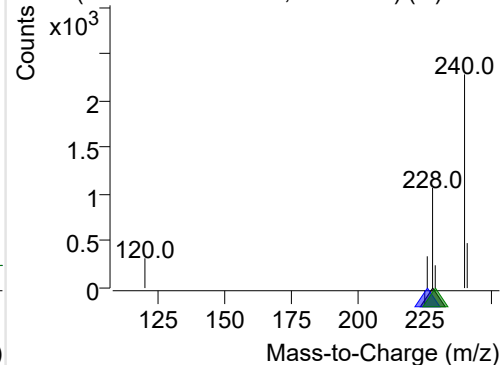
+ Selected Ion (228.0) 220806-PAHs-005.D



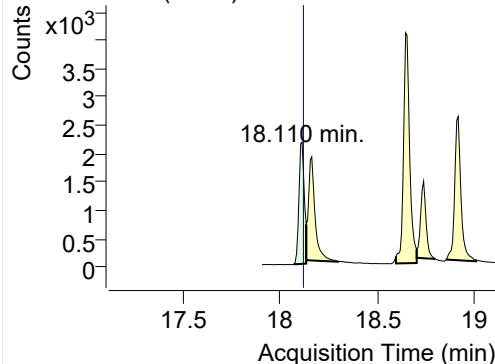
228.0, 226.0, 229.0



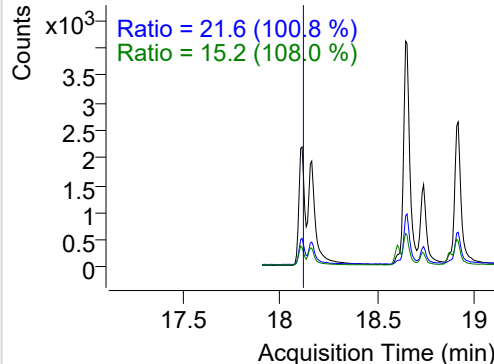
+ SIM (15.854-15.990 min, 26 scans) (\*\*) 2208

**Benzo(b)fluoranthene**

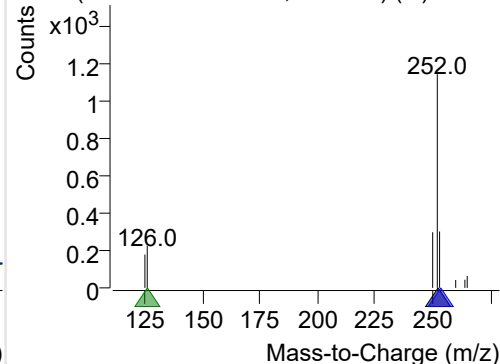
+ Selected Ion (252.0) 220806-PAHs-005.D



252.0, 253.0, 126.0



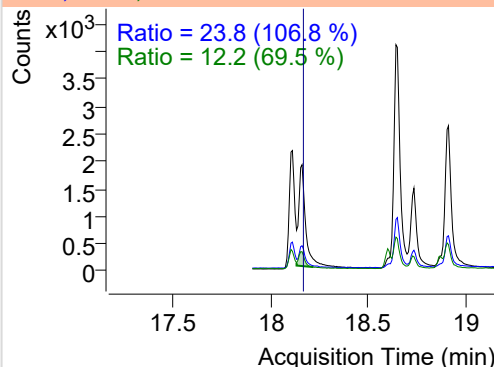
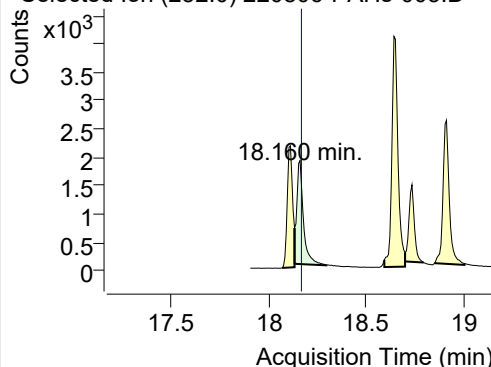
+ SIM (18.067-18.132 min, 9 scans) (\*\*) 22080



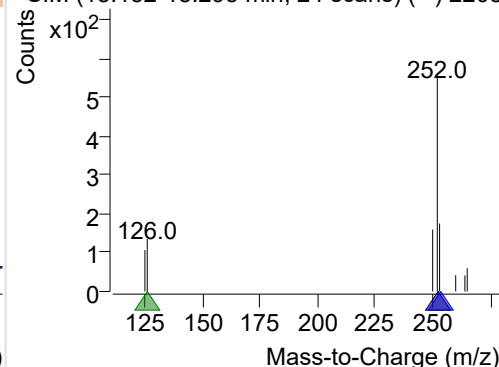
**Benzo(k)fluoranthene**

+ Selected Ion (252.0) 220806-PAHs-005.D

252.0, 253.0, 126.0

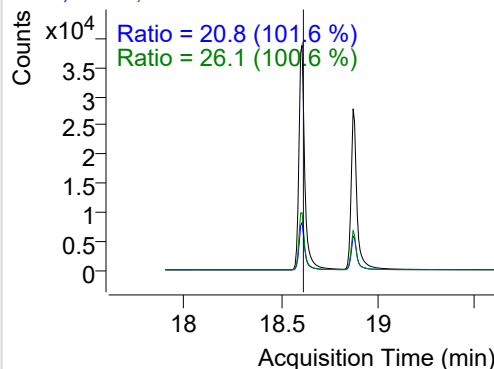
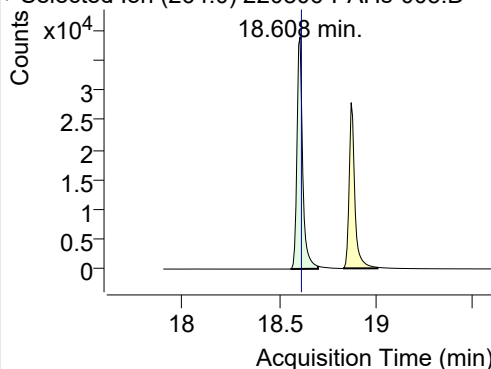


+ SIM (18.132-18.295 min, 24 scans) (\*\*) 2208

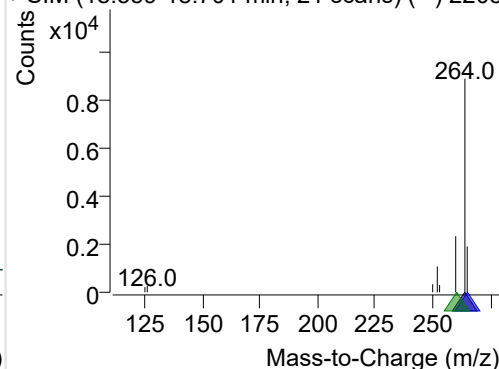
**SS-D12-Benzo(e)pyrene**

+ Selected Ion (264.0) 220806-PAHs-005.D

264.0, 265.0, 260.0

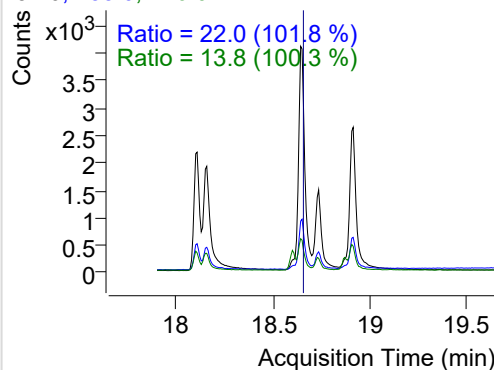
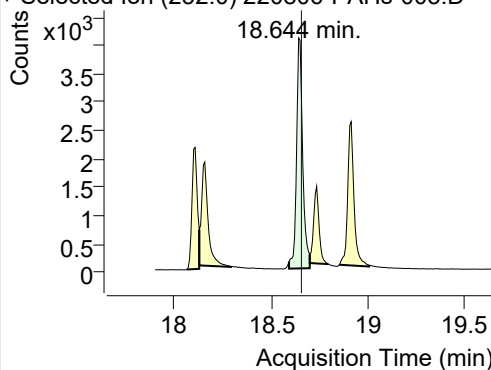


+ SIM (18.559-18.701 min, 21 scans) (\*\*) 2208

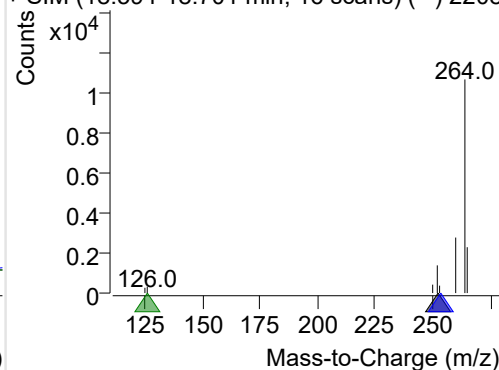
**Benzo(e)pyrene**

+ Selected Ion (252.0) 220806-PAHs-005.D

252.0, 253.0, 126.0

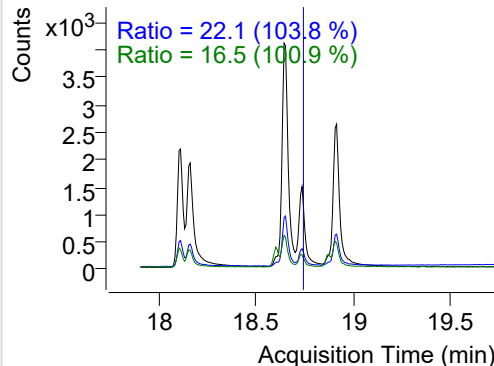
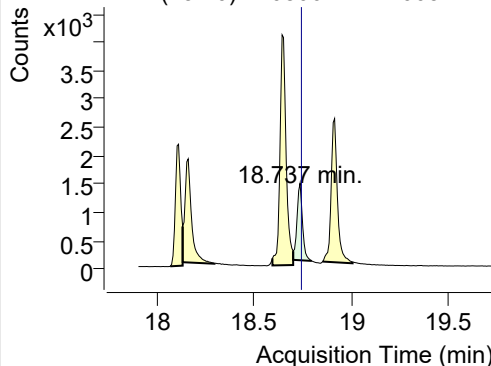


+ SIM (18.594-18.701 min, 16 scans) (\*\*) 2208

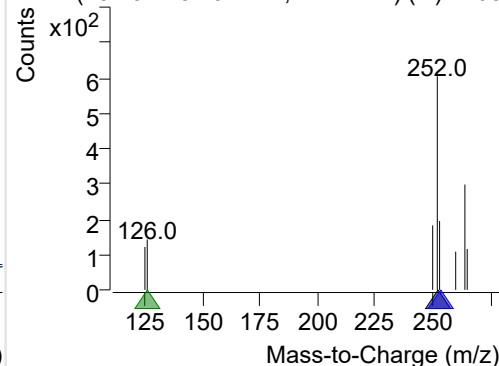
**Benzo(a)pyrene**

+ Selected Ion (252.0) 220806-PAHs-005.D

252.0, 253.0, 126.0

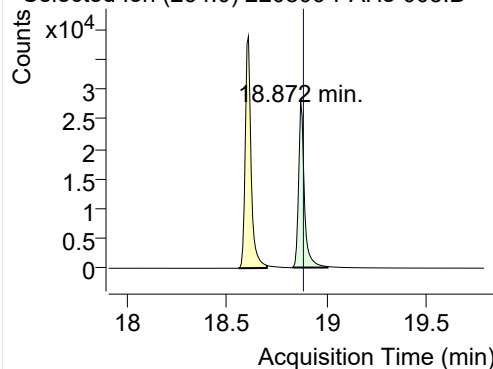


+ SIM (18.701-18.797 min, 14 scans) (\*\*) 2208

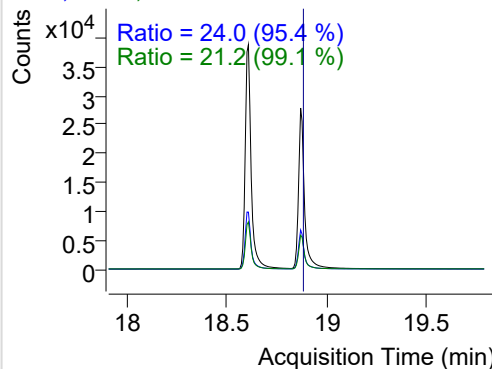


## IS-D12-Perylene

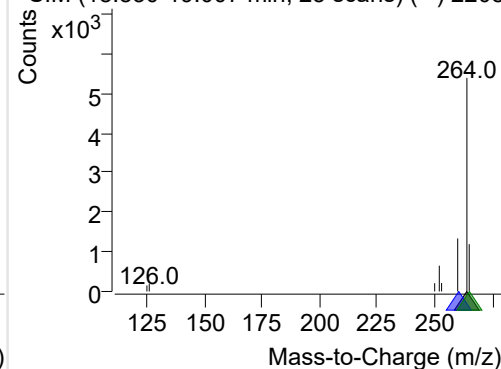
+ Selected Ion (264.0) 220806-PAHs-005.D



264.0, 260.0, 265.0

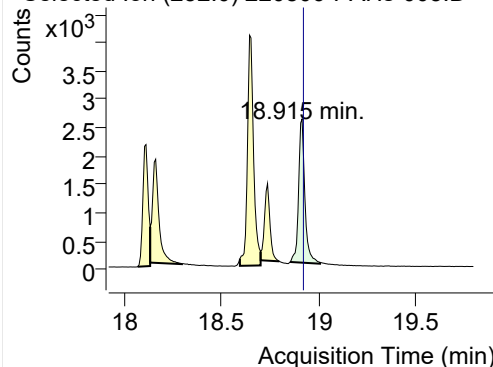


+ SIM (18.830-19.007 min, 25 scans) (\*\*) 2208

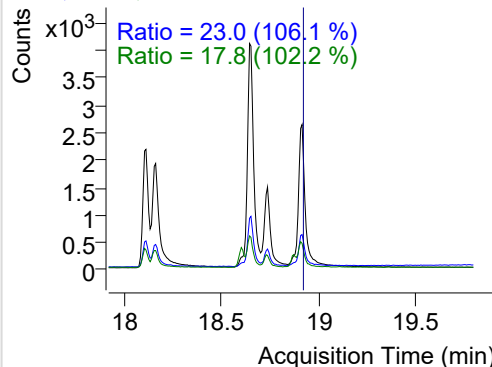


## Perylene

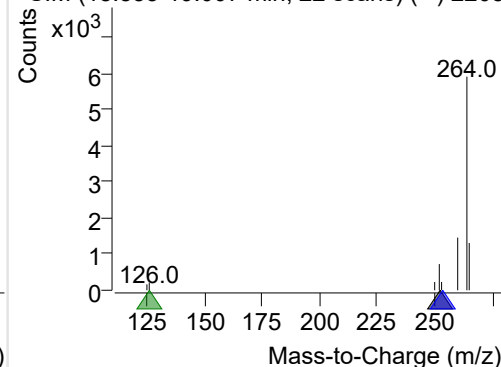
+ Selected Ion (252.0) 220806-PAHs-005.D



252.0, 253.0, 126.0

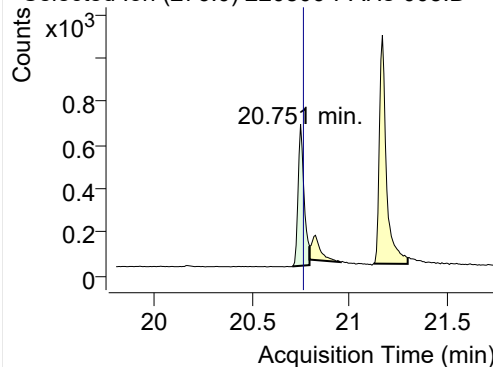


+ SIM (18.853-19.007 min, 22 scans) (\*\*) 2208

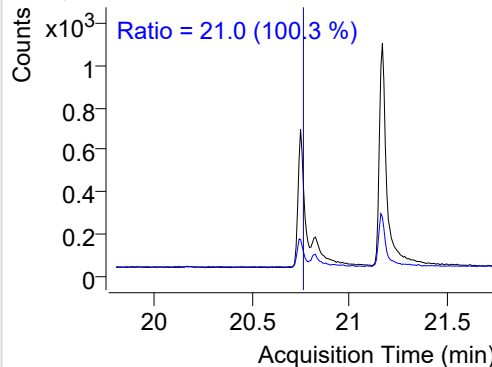


## Indeno(1,2,3-c,d)pyrene

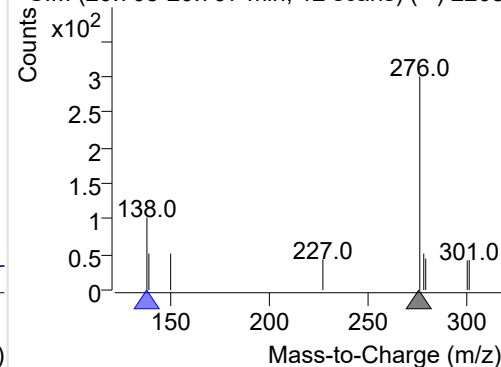
+ Selected Ion (276.0) 220806-PAHs-005.D



276.0, 138.0

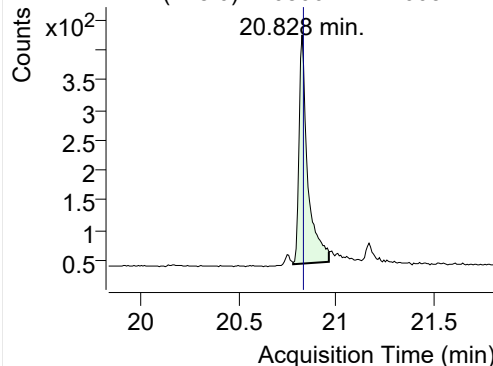


+ SIM (20.708-20.797 min, 12 scans) (\*\*) 2208

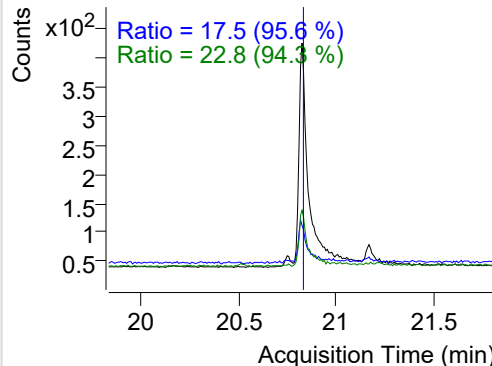


## Dibenz(a,h)anthracene

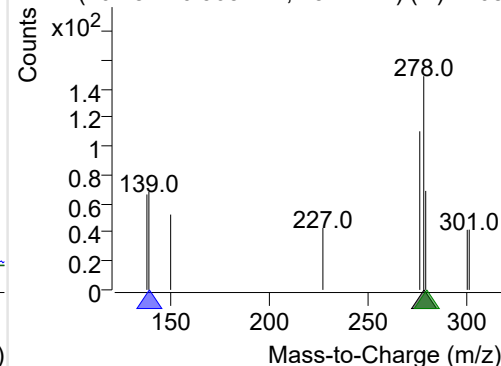
+ Selected Ion (278.0) 220806-PAHs-005.D



278.0, 139.0, 279.0

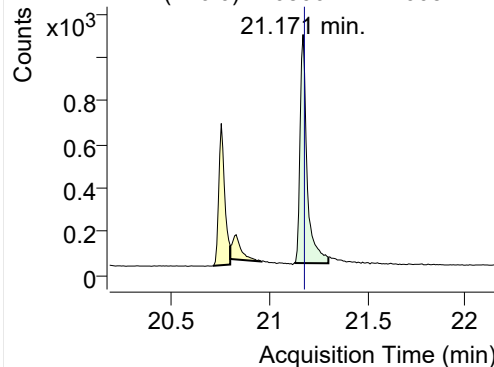


+ SIM (20.782-20.965 min, 25 scans) (\*\*) 2208

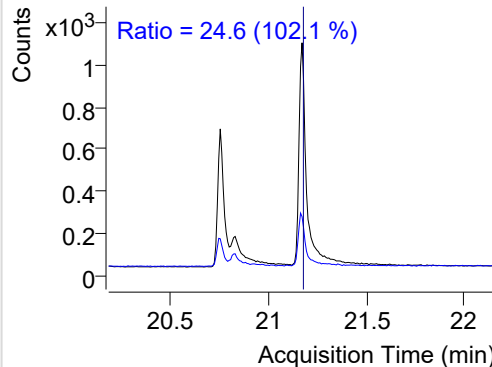


**Benzo(g,h,i)perylene**

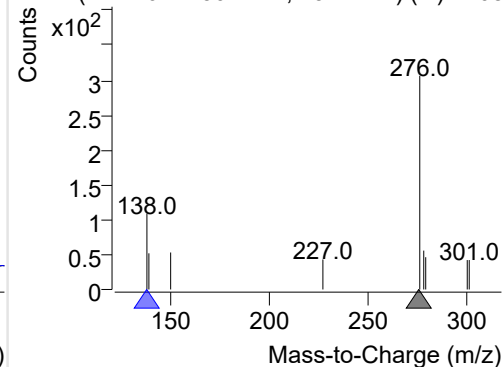
+ Selected Ion (276.0) 220806-PAHs-005.D



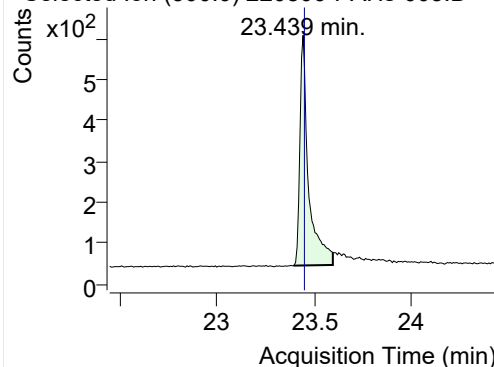
276.0, 138.0



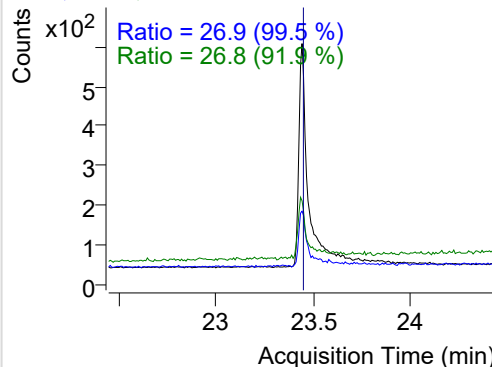
+ SIM (21.126-21.301 min, 23 scans) (\*\*) 2208

**Coronene**

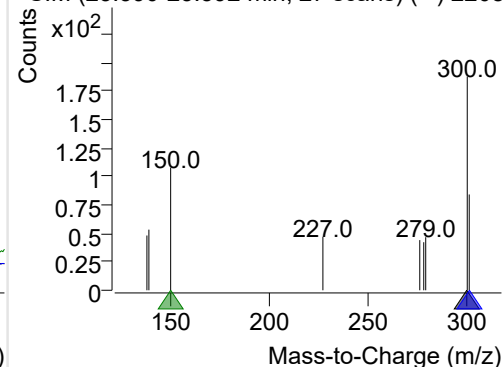
+ Selected Ion (300.0) 220806-PAHs-005.D



300.0, 301.0, 150.0



+ SIM (23.390-23.592 min, 27 scans) (\*\*) 2208





## Quantitative Analysis Sample Based Report

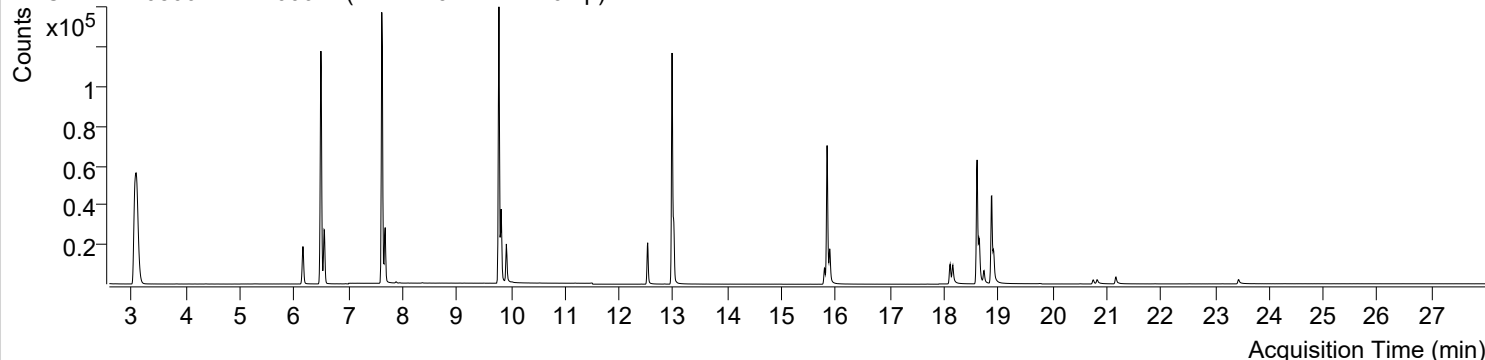


Trusted Answers

|                           |                                                                                            |                       |                        |
|---------------------------|--------------------------------------------------------------------------------------------|-----------------------|------------------------|
| Batch Data Path File Name | D:\MassHunter\GCMS\1\data\PAHs\220806-PAHs-Sample\QuantResults\220806-PAHs-Quant.batch.bin |                       |                        |
| Analysis Time Stamp       | 2022-10-10 오전 10:12:04                                                                     | Analyst Name          | DESKTOP-86B7UPG\5975MS |
| Report Generation Time    | 2022-10-10 오전 10:12:12                                                                     | Report Generator Name | DESKTOP-86B7UPG\5975MS |
| Calibration Last Update   | 2022-12-15 오후 3:30:46                                                                      | Batch State           | Processed              |
| Analyze Quant Version     | 10.2                                                                                       | Report Quant Version  | 10.2                   |
| Acq. Date-Time            | 2022-08-06 오후 1:06:33                                                                      | Data File             | 220806-PAHs-006.D      |
| Type                      | Sample                                                                                     | Name                  | PAHs-19mix-STD-0.2p    |
| Dil.                      | 1                                                                                          | Acq. Method File      | PAHs 19mix-Method      |

## Sample Chromatogram

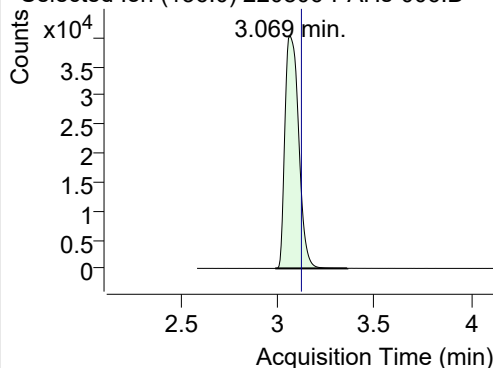
+ TIC SIM 220806-PAHs-006.D (PAHs-19mix-STD-0.2p)



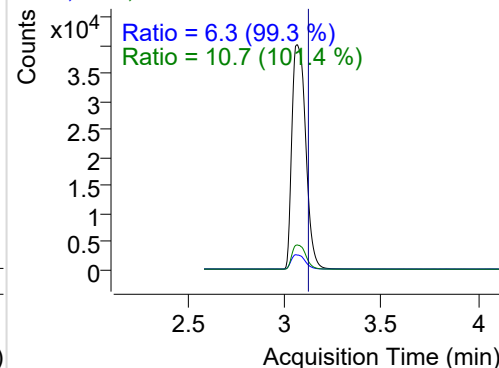
| Name                    | RT     | Transition | Resp.  | Height   | Final Conc. Units | Ratio |
|-------------------------|--------|------------|--------|----------|-------------------|-------|
| IS-D8-Naphthalene       | 3.069  | 136.0      | 198674 | 40089.70 | ND ng/ml          | 10.7  |
| Naphthalene             | 3.090  | 128.0      | 44341  | 9010.65  | ND ng/ml          | 12.7  |
| Acenaphthylene          | 6.161  | 152.0      | 28691  | 14225.75 | ND ng/ml          | 19.3  |
| IS-D10-Acenaphthene     | 6.492  | 164.0      | 104807 | 56135.98 | ND ng/ml          | 95.2  |
| Acenaphthene            | 6.558  | 154.0      | 18431  | 9721.07  | ND ng/ml          | 106.7 |
| LSS-D10-Fluorene        | 7.617  | 176.0      | 108713 | 60652.10 | ND ng/ml          | 92.6  |
| Fluorene                | 7.680  | 166.0      | 23130  | 13212.74 | ND ng/ml          | 91.6  |
| IS-D10-Phenanthrene     | 9.780  | 188.0      | 177712 | 112355.5 | ND ng/ml          | 14.9  |
| Phenanthrene            | 9.822  | 178.0      | 36110  | 22453.13 | ND ng/ml          | 18.2  |
| Anthracene              | 9.916  | 178.0      | 23733  | 12871.94 | ND ng/ml          | 16.6  |
| Fluoranthene            | 12.526 | 202.0      | 27469  | 16088.54 | ND ng/ml          | 17.0  |
| LSS-D10-Pyrene          | 12.976 | 212.0      | 135845 | 85581.50 | ND ng/ml          | 18.7  |
| Pyrene                  | 13.008 | 202.0      | 35324  | 20584.03 | ND ng/ml          | 18.4  |
| Benz(a)anthracene       | 15.789 | 228.0      | 11567  | 5593.80  | ND ng/ml          | 25.6  |
| IS-D12-Chrysene         | 15.838 | 240.0      | 94203  | 51604.70 | ND ng/ml          | 18.8  |
| Chrysene                | 15.887 | 228.0      | 20601  | 10256.51 | ND ng/ml          | 28.9  |
| Benzo(b)fluoranthene    | 18.110 | 252.0      | 10758  | 5765.92  | ND ng/ml          | 21.3  |
| Benzo(k)fluoranthene    | 18.160 | 252.0      | 13995  | 5506.17  | ND ng/ml          | 20.8  |
| SS-D12-Benzo(e)pyrene   | 18.608 | 264.0      | 84805  | 42166.83 | ND ng/ml          | 25.7  |
| Benzo(e)pyrene          | 18.651 | 252.0      | 21102  | 9966.34  | ND ng/ml          | 21.4  |
| Benzo(a)pyrene          | 18.736 | 252.0      | 7664   | 3520.71  | ND ng/ml          | 19.8  |
| IS-D12-Perylene         | 18.879 | 264.0      | 63635  | 29835.32 | ND ng/ml          | 24.4  |
| Perylene                | 18.914 | 252.0      | 14598  | 6574.27  | ND ng/ml          | 21.5  |
| Indeno(1,2,3-c,d)pyrene | 20.751 | 276.0      | 3603   | 1606.25  | ND ng/ml          | 21.1  |
| Dibenz(a,h)anthracene   | 20.827 | 278.0      | 3224   | 1094.31  | ND ng/ml          | 23.0  |
| Benzo(g,h,i)perylene    | 21.171 | 276.0      | 6846   | 2709.11  | ND ng/ml          | 23.3  |
| Coronene                | 23.439 | 300.0      | 4291   | 1402.45  | ND ng/ml          | 27.9  |

## IS-D8-Naphthalene

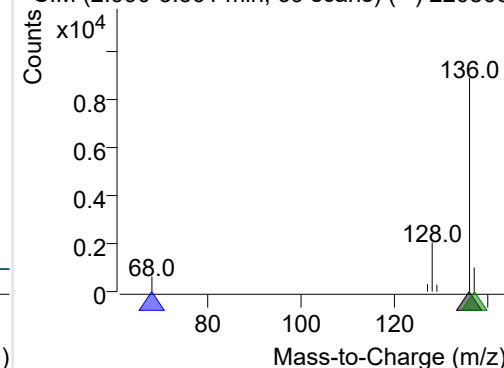
+ Selected Ion (136.0) 220806-PAHs-006.D



136.0, 68.0, 137.0

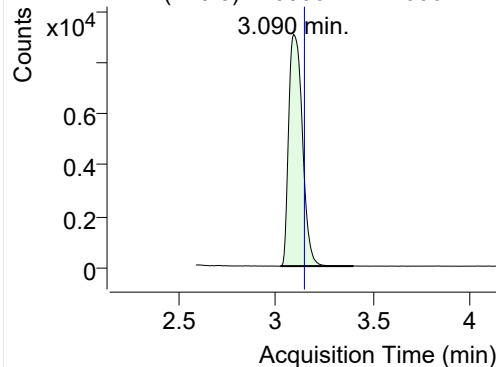


+ SIM (2.990-3.361 min, 69 scans) (\*\*) 220806

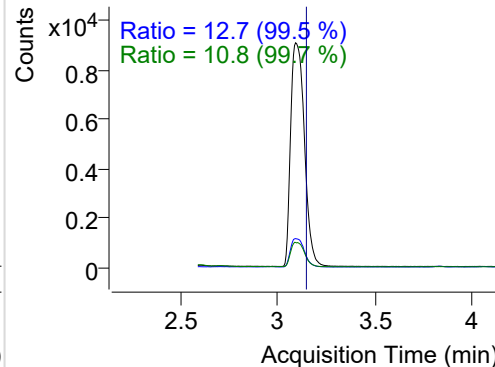


**Naphthalene**

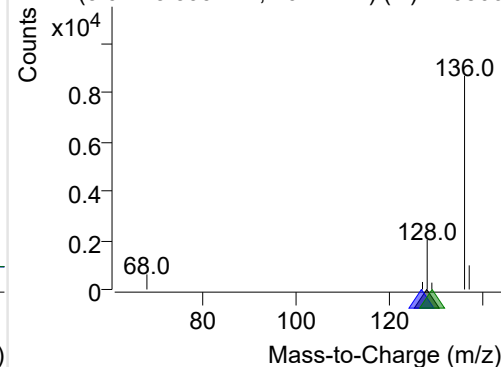
+ Selected Ion (128.0) 220806-PAHs-006.D



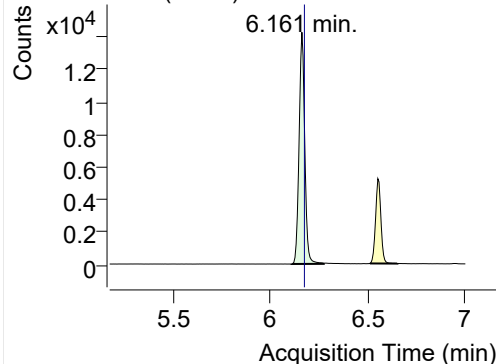
128.0, 127.0, 129.0



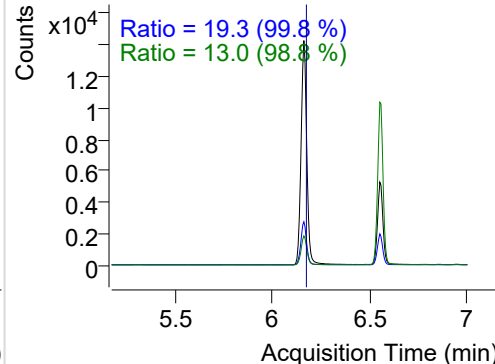
+ SIM (3.022-3.399 min, 70 scans) (\*\*) 220806

**Acenaphthylene**

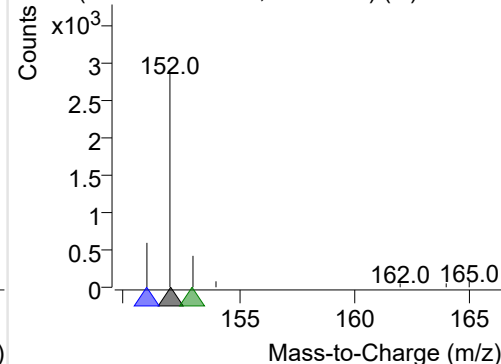
+ Selected Ion (152.0) 220806-PAHs-006.D



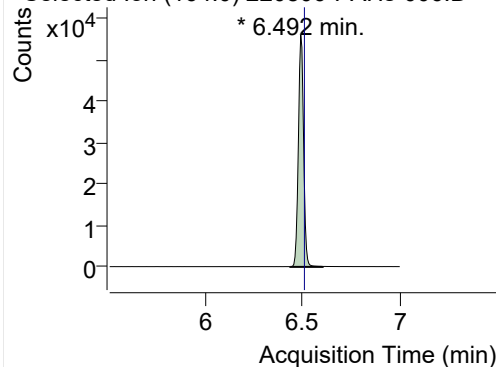
152.0, 151.0, 153.0



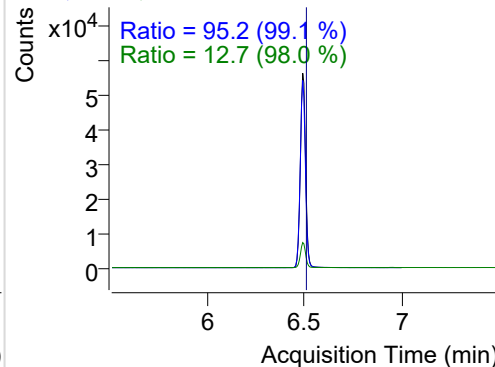
+ SIM (6.108-6.273 min, 29 scans) (\*\*) 220806

**IS-D10-Acenaphthene**

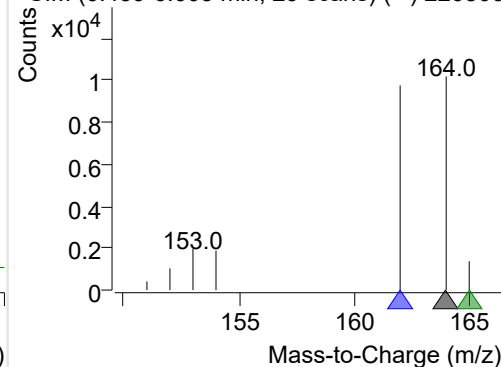
+ Selected Ion (164.0) 220806-PAHs-006.D



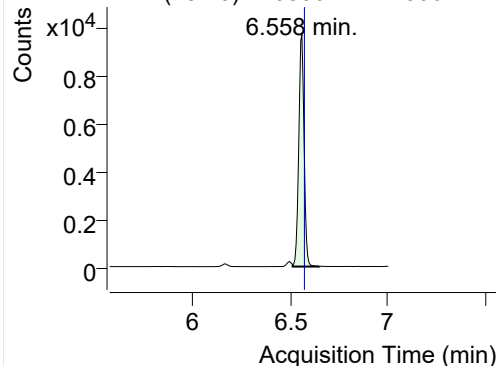
164.0, 162.0, 165.0



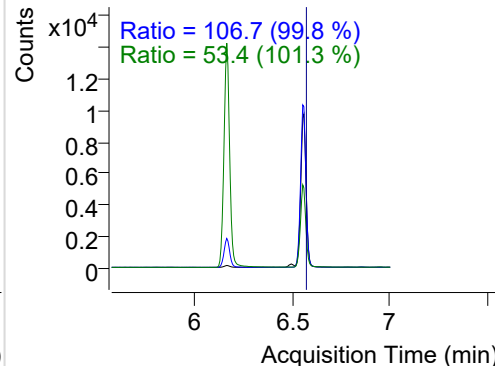
+ SIM (6.439-6.605 min, 29 scans) (\*\*) 220806

**Acenaphthene**

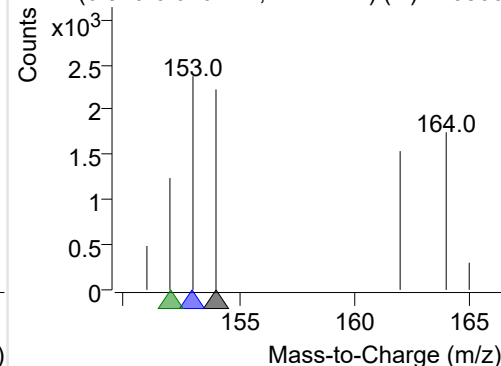
+ Selected Ion (154.0) 220806-PAHs-006.D



154.0, 153.0, 152.0

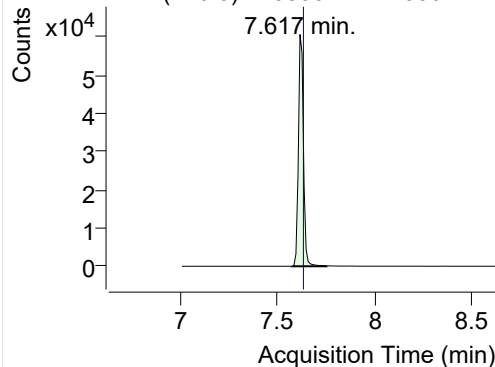


+ SIM (6.510-6.646 min, 24 scans) (\*\*) 220806

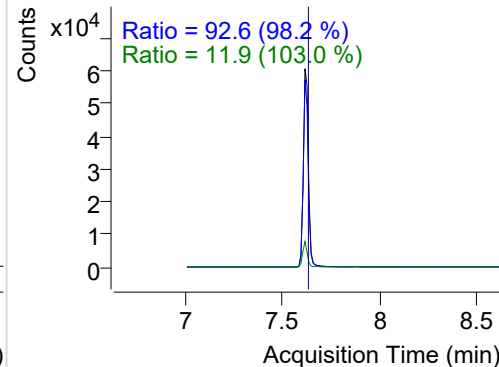


## LSS-D10-Fluorene

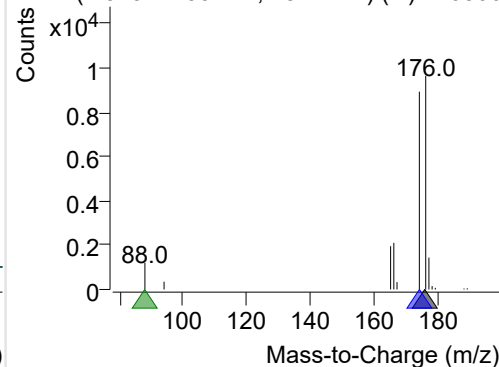
+ Selected Ion (176.0) 220806-PAHs-006.D



176.0, 174.0, 88.0

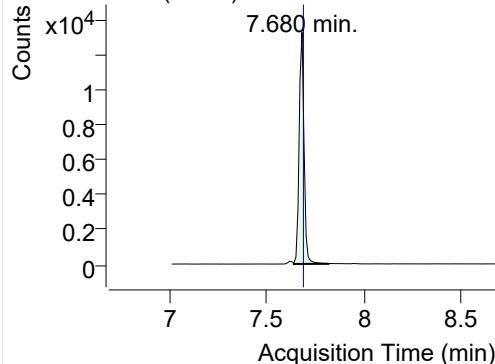


+ SIM (7.575-7.753 min, 18 scans) (\*\*) 220806

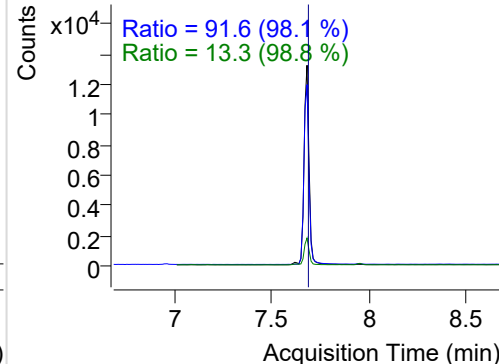


## Fluorene

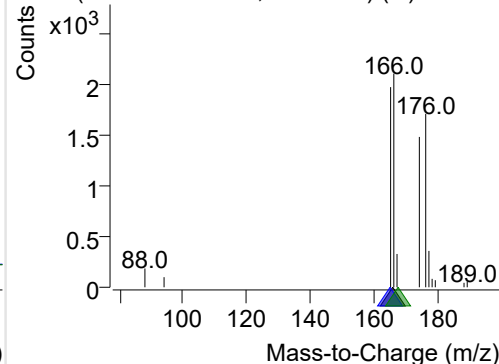
+ Selected Ion (166.0) 220806-PAHs-006.D



166.0, 165.0, 167.0

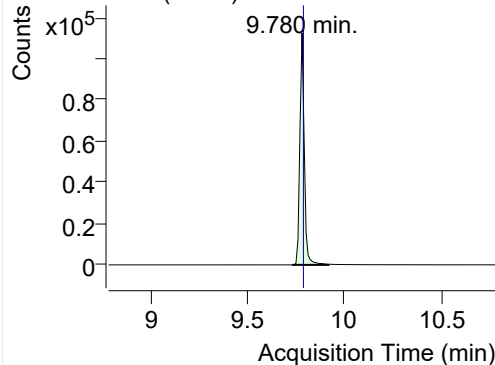


+ SIM (7.638-7.816 min, 18 scans) (\*\*) 220806

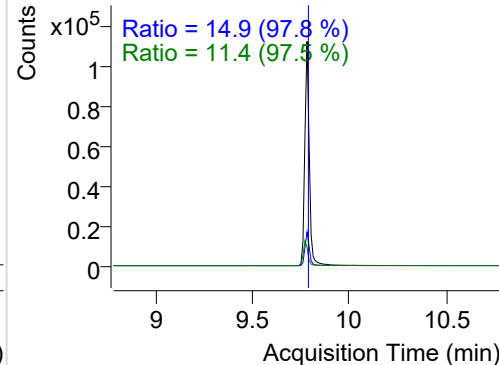


## IS-D10-Phenanthrene

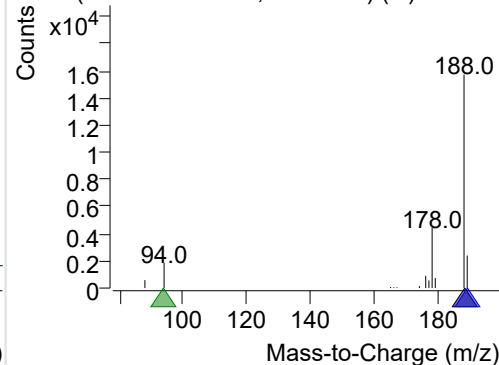
+ Selected Ion (188.0) 220806-PAHs-006.D



188.0, 189.0, 94.0

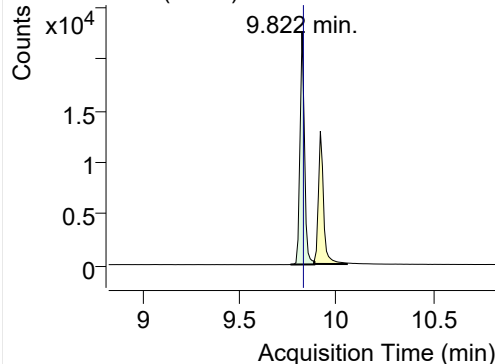


+ SIM (9.727-9.916 min, 18 scans) (\*\*) 220806

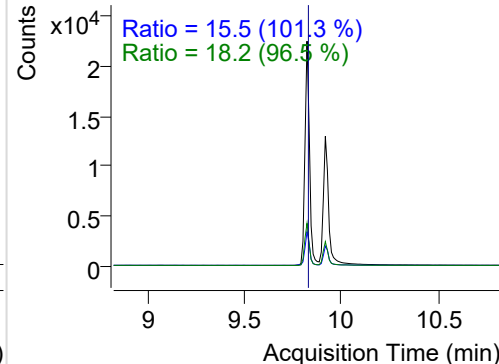


## Phenanthrene

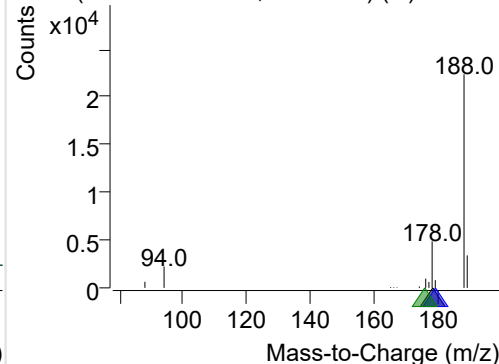
+ Selected Ion (178.0) 220806-PAHs-006.D



178.0, 179.0, 176.0

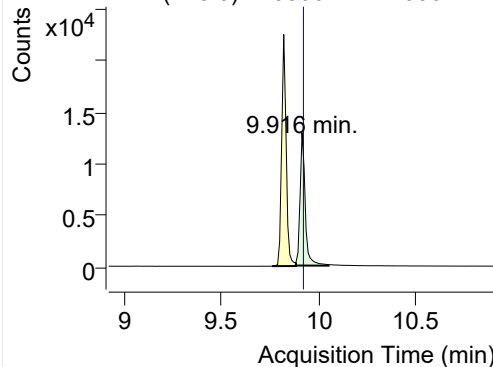


+ SIM (9.762-9.885 min, 12 scans) (\*\*) 220806

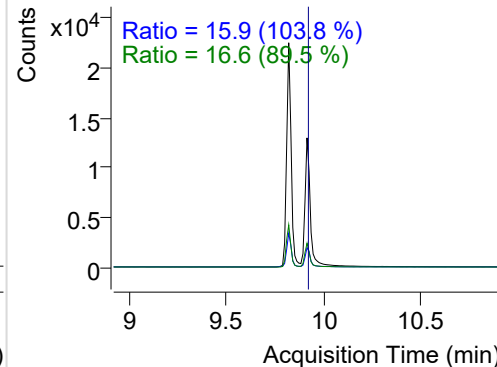


**Anthracene**

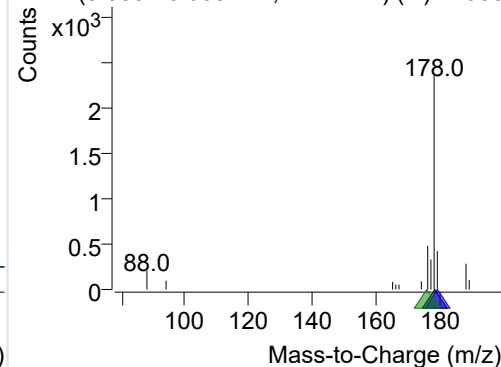
+ Selected Ion (178.0) 220806-PAHs-006.D



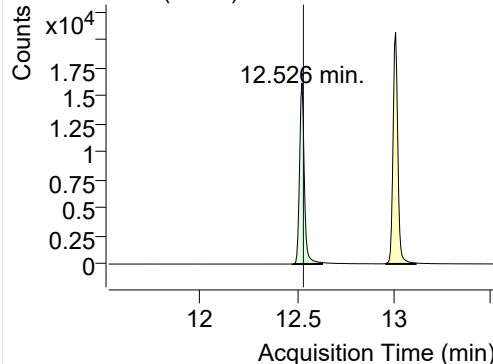
178.0, 179.0, 176.0



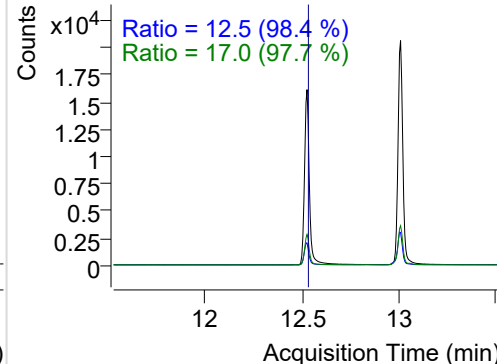
+ SIM (9.885-10.053 min, 17 scans) (\*\*) 22080

**Fluoranthene**

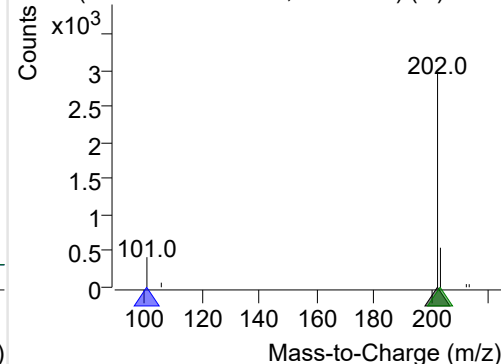
+ Selected Ion (202.0) 220806-PAHs-006.D



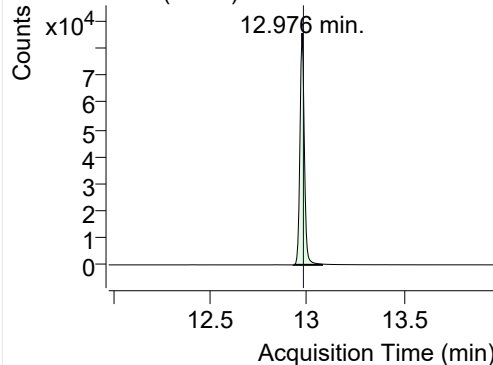
202.0, 101.0, 203.0



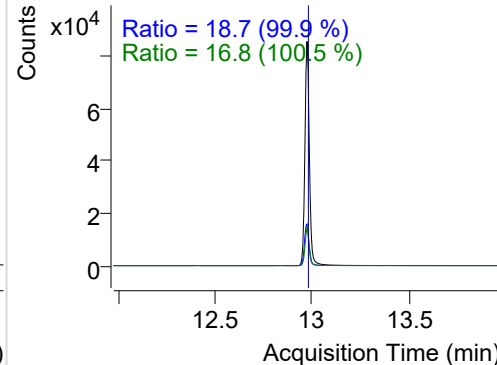
+ SIM (12.477-12.629 min, 29 scans) (\*\*) 2208

**LSS-D10-Pyrene**

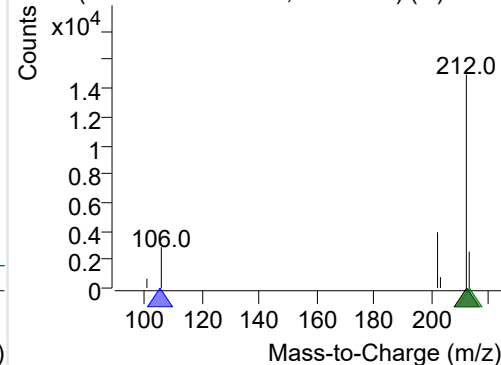
+ Selected Ion (212.0) 220806-PAHs-006.D



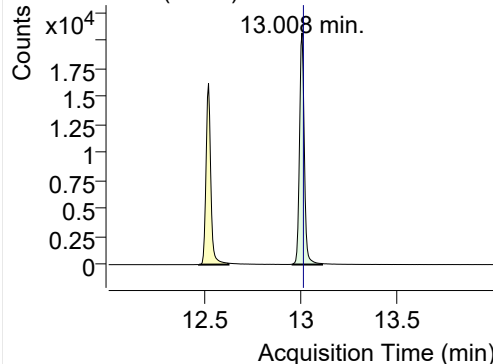
212.0, 106.0, 213.0



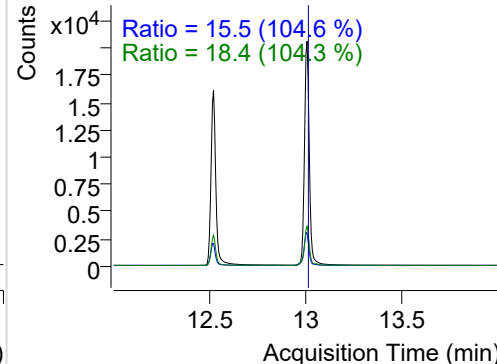
+ SIM (12.933-13.079 min, 28 scans) (\*\*) 2208

**Pyrene**

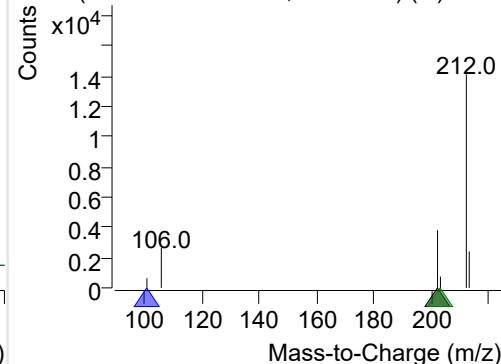
+ Selected Ion (202.0) 220806-PAHs-006.D



202.0, 101.0, 203.0

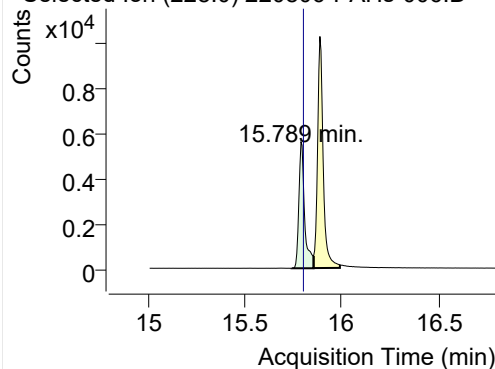


+ SIM (12.960-13.111 min, 29 scans) (\*\*) 2208

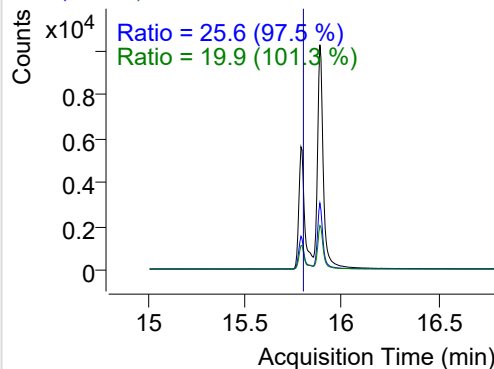


**Benz(a)anthracene**

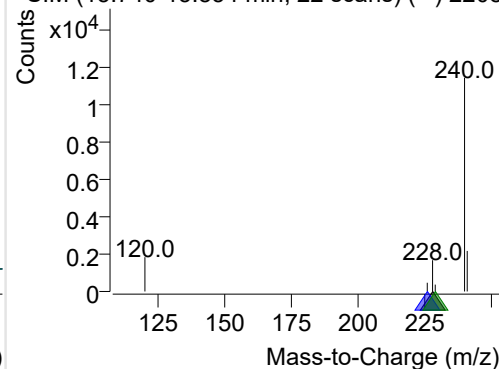
+ Selected Ion (228.0) 220806-PAHs-006.D



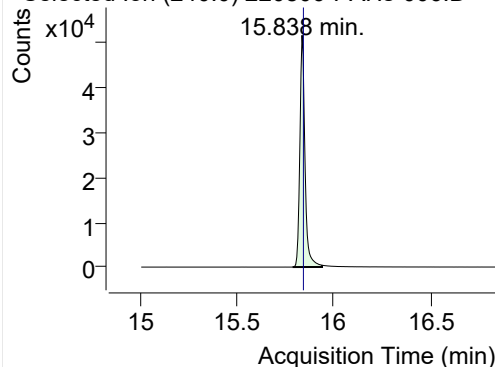
228.0, 226.0, 229.0



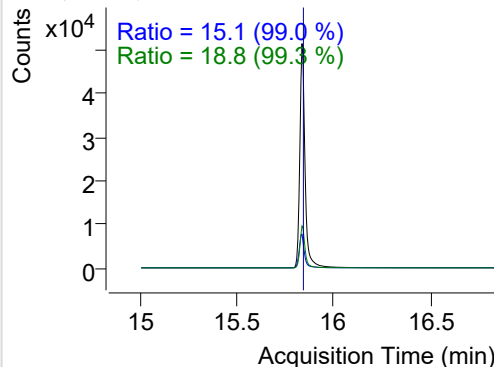
+ SIM (15.740-15.854 min, 22 scans) (\*\*) 2208

**IS-D12-Chrysene**

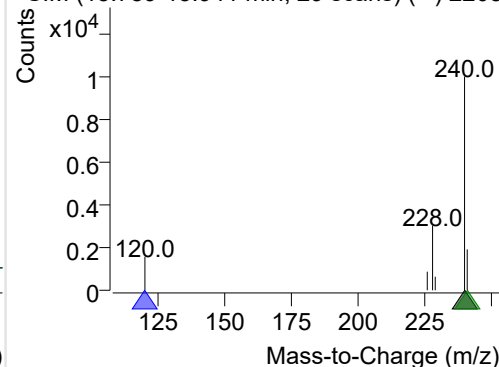
+ Selected Ion (240.0) 220806-PAHs-006.D



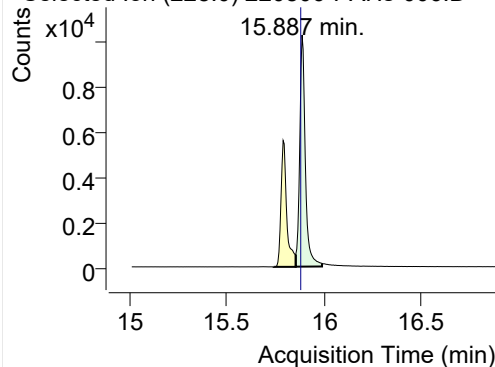
240.0, 120.0, 241.0



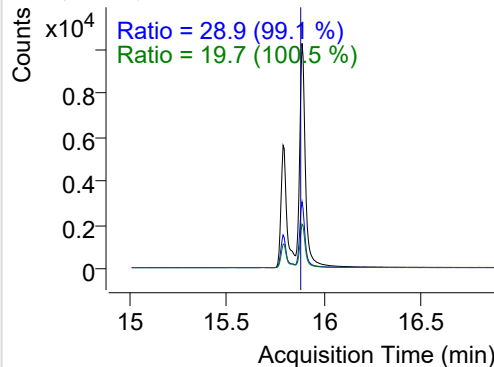
+ SIM (15.789-15.941 min, 29 scans) (\*\*) 2208

**Chrysene**

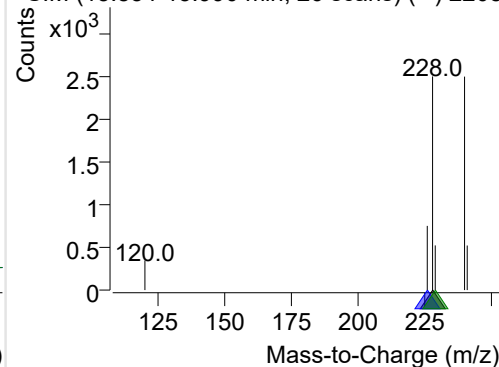
+ Selected Ion (228.0) 220806-PAHs-006.D



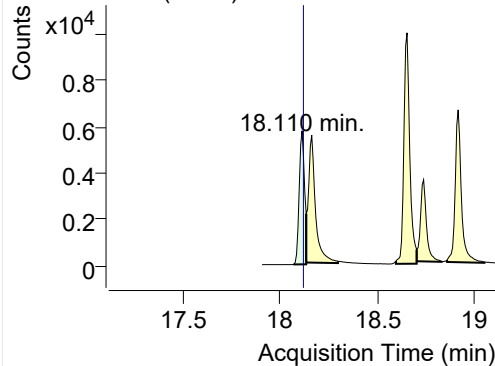
228.0, 226.0, 229.0



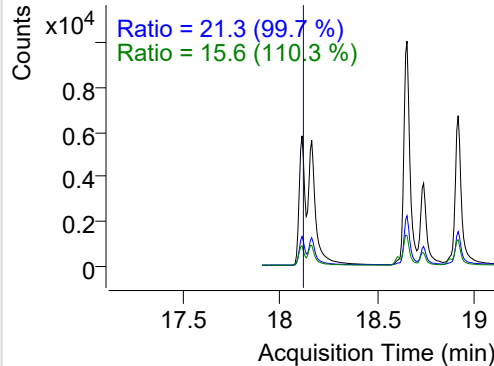
+ SIM (15.854-15.990 min, 26 scans) (\*\*) 2208

**Benzo(b)fluoranthene**

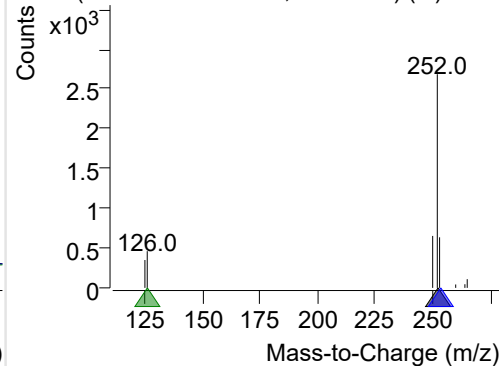
+ Selected Ion (252.0) 220806-PAHs-006.D



252.0, 253.0, 126.0

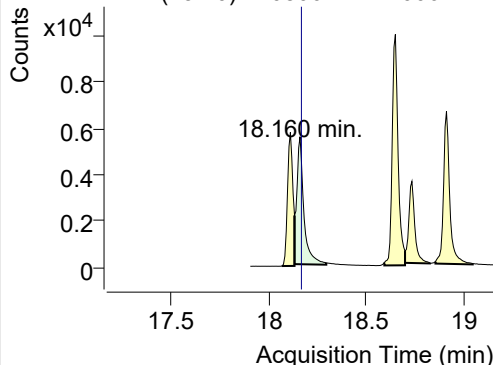


+ SIM (18.066-18.131 min, 10 scans) (\*\*) 2208

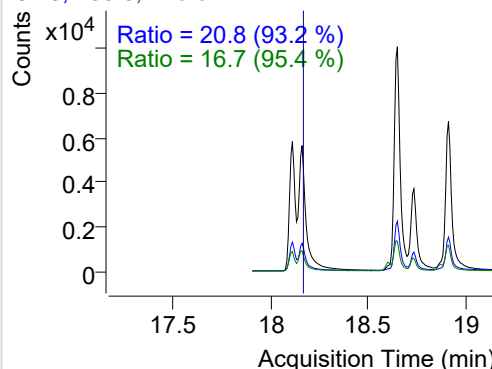


**Benzo(k)fluoranthene**

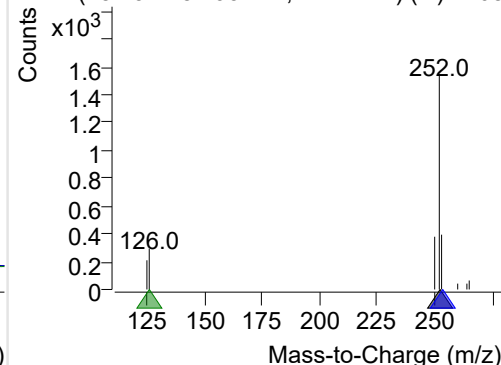
+ Selected Ion (252.0) 220806-PAHs-006.D



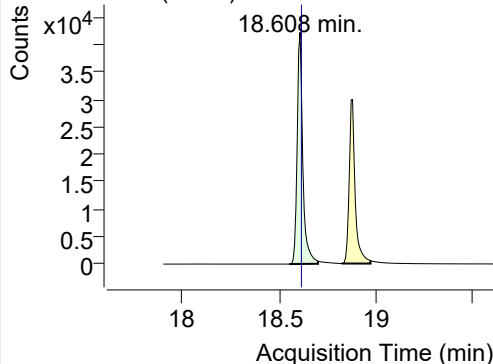
252.0, 253.0, 126.0



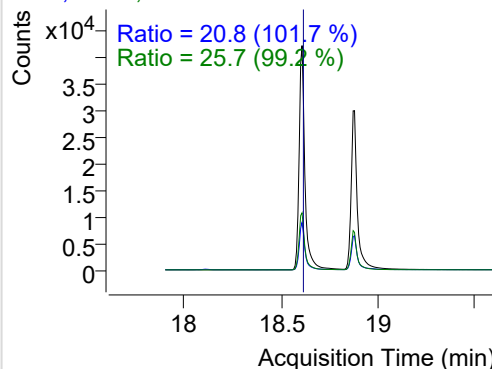
+ SIM (18.131-18.295 min, 24 scans) (\*\*) 2208

**SS-D12-Benzo(e)pyrene**

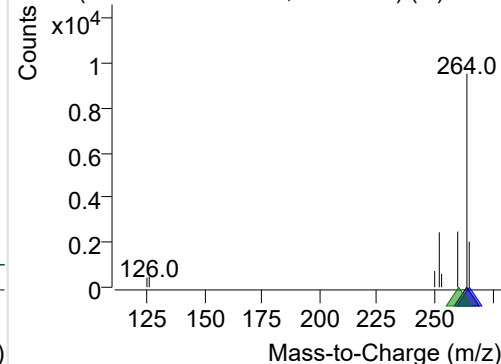
+ Selected Ion (264.0) 220806-PAHs-006.D



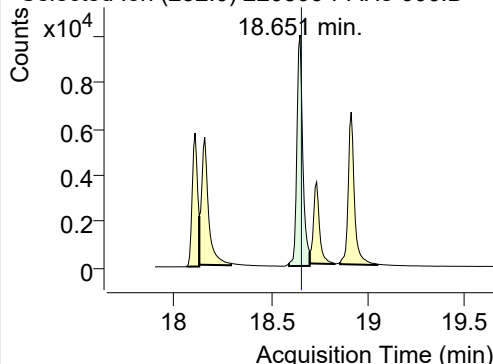
264.0, 265.0, 260.0



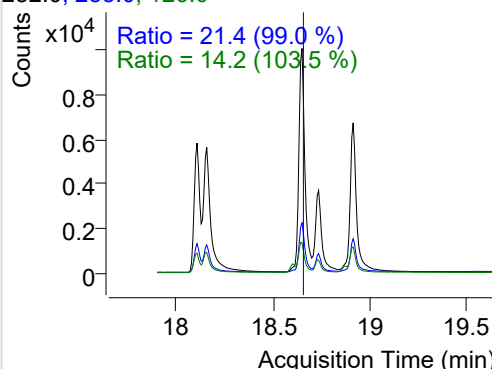
+ SIM (18.553-18.701 min, 21 scans) (\*\*) 2208

**Benzo(e)pyrene**

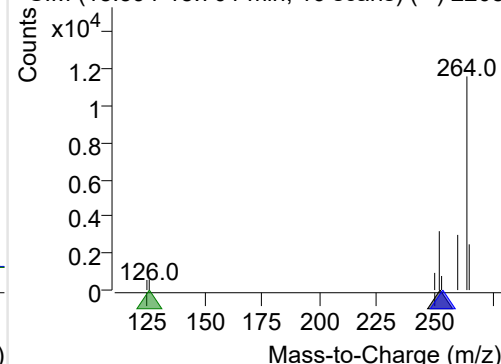
+ Selected Ion (252.0) 220806-PAHs-006.D



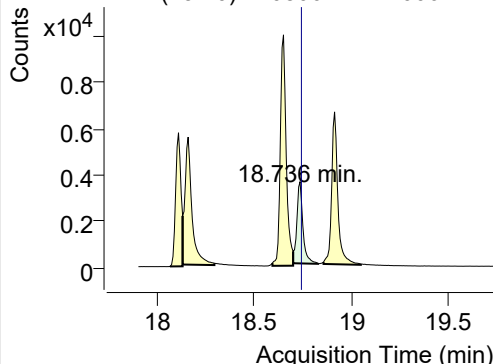
252.0, 253.0, 126.0



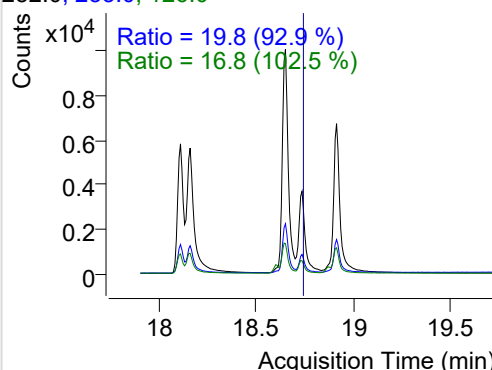
+ SIM (18.594-18.701 min, 16 scans) (\*\*) 2208

**Benzo(a)pyrene**

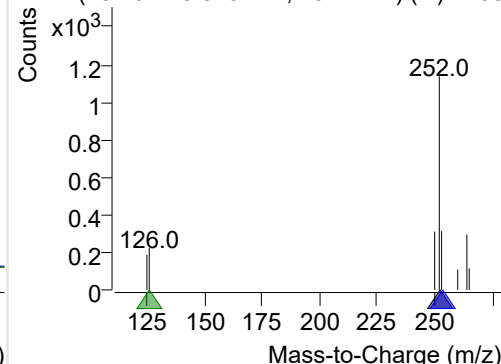
+ Selected Ion (252.0) 220806-PAHs-006.D



252.0, 253.0, 126.0

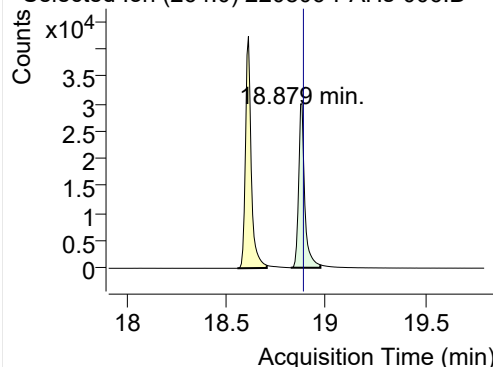


+ SIM (18.701-18.829 min, 19 scans) (\*\*) 2208

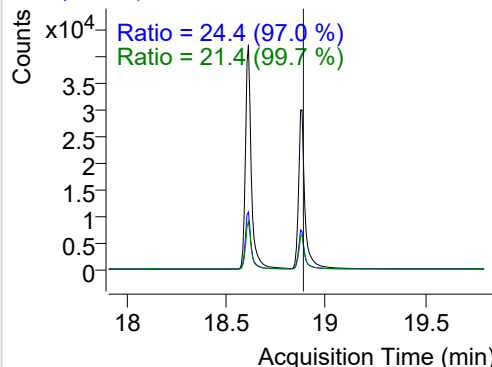


## IS-D12-Perylene

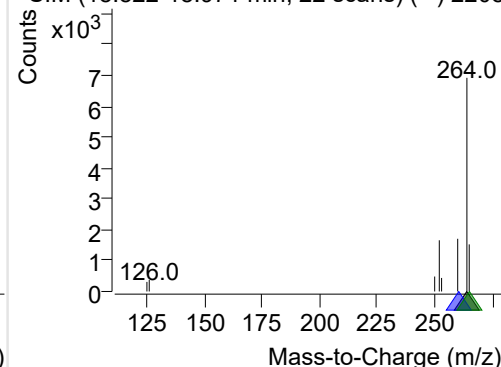
+ Selected Ion (264.0) 220806-PAHs-006.D



264.0, 260.0, 265.0

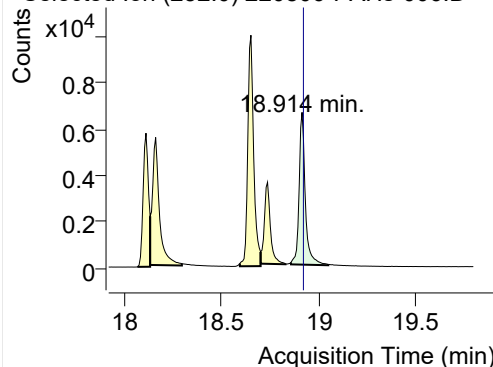


+ SIM (18.822-18.971 min, 22 scans) (\*\*) 2208

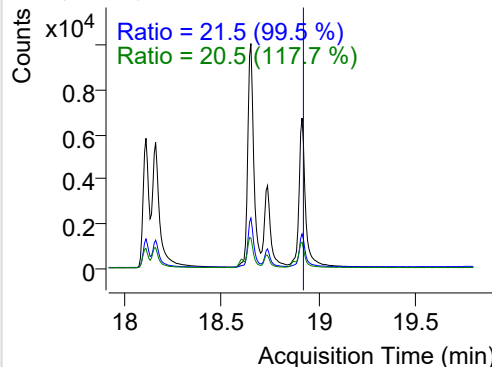


## Perylene

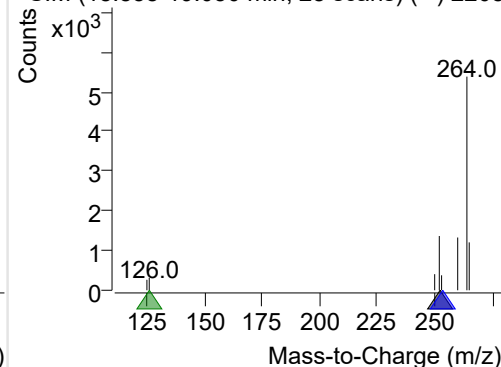
+ Selected Ion (252.0) 220806-PAHs-006.D



252.0, 253.0, 126.0

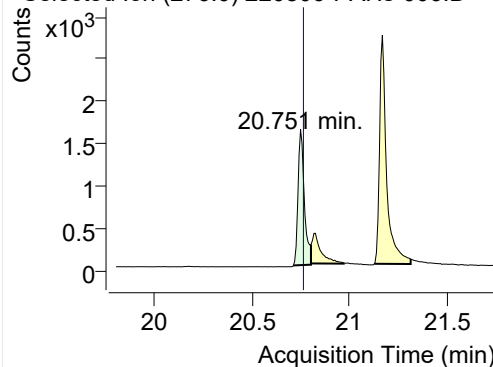


+ SIM (18.858-19.050 min, 28 scans) (\*\*) 2208

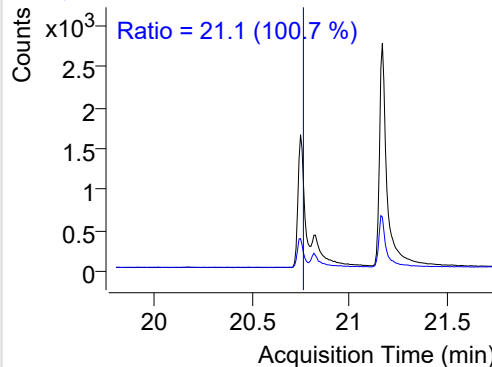


## Indeno(1,2,3-c,d)pyrene

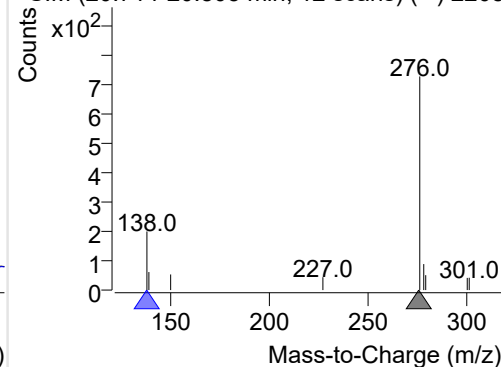
+ Selected Ion (276.0) 220806-PAHs-006.D



276.0, 138.0

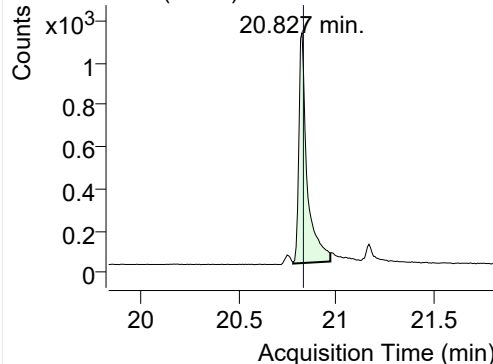


+ SIM (20.714-20.805 min, 12 scans) (\*\*) 2208

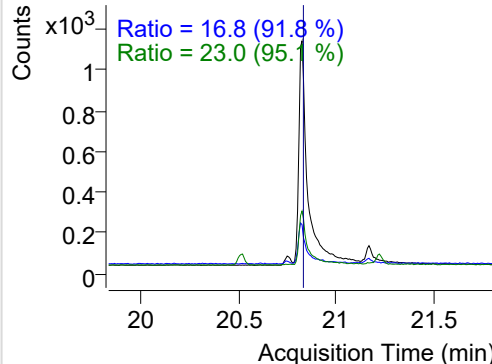


## Dibenz(a,h)anthracene

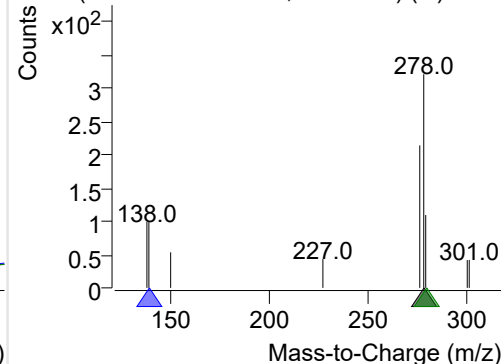
+ Selected Ion (278.0) 220806-PAHs-006.D



278.0, 139.0, 279.0

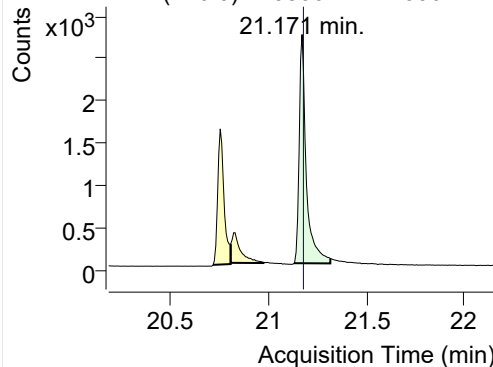


+ SIM (20.782-20.973 min, 26 scans) (\*\*) 2208

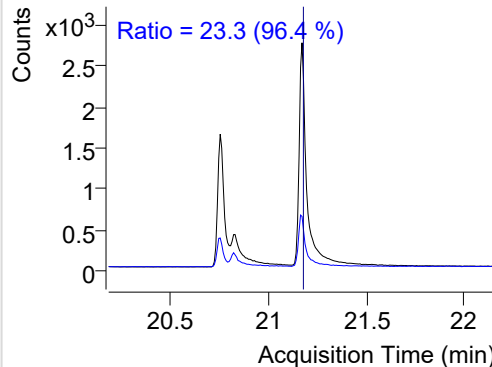


**Benzo(g,h,i)perylene**

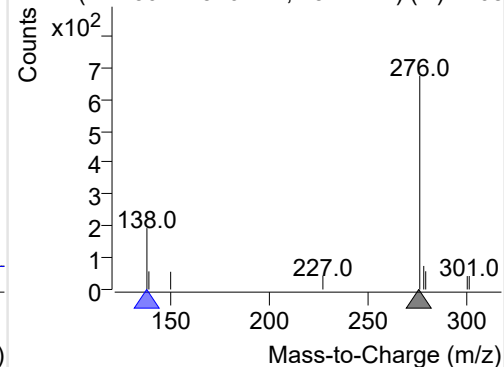
+ Selected Ion (276.0) 220806-PAHs-006.D



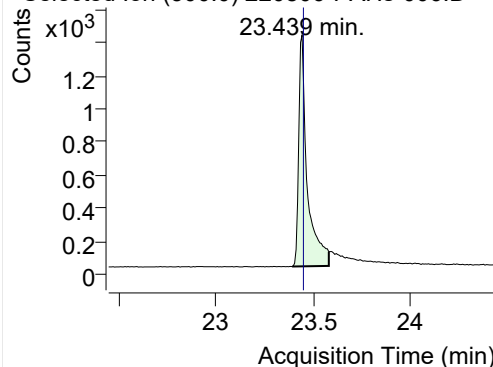
276.0, 138.0



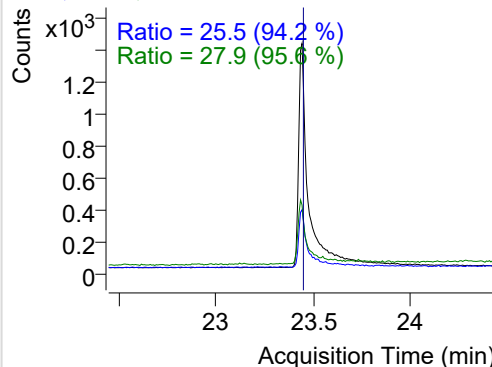
+ SIM (21.130-21.316 min, 25 scans) (\*\*) 2208

**Coronene**

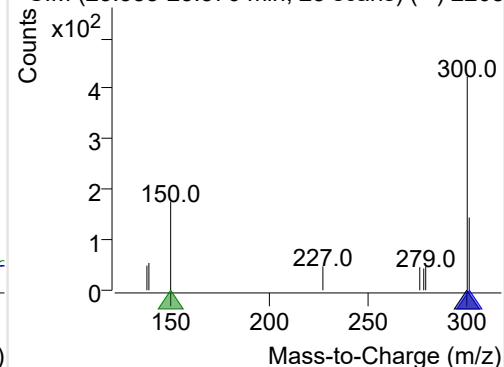
+ Selected Ion (300.0) 220806-PAHs-006.D



300.0, 301.0, 150.0



+ SIM (23.388-23.576 min, 25 scans) (\*\*) 2208





## Quantitative Analysis Sample Based Report

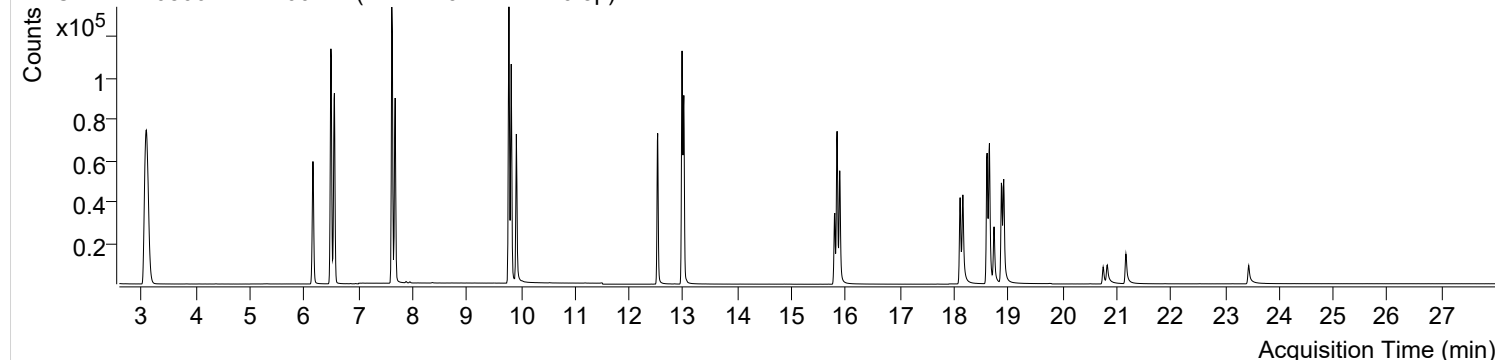


Trusted Answers

|                           |                                                                                            |                       |                        |
|---------------------------|--------------------------------------------------------------------------------------------|-----------------------|------------------------|
| Batch Data Path File Name | D:\MassHunter\GCMS\1\data\PAHs\220806-PAHs-Sample\QuantResults\220806-PAHs-Quant.batch.bin |                       |                        |
| Analysis Time Stamp       | 2022-10-10 오전 10:12:04                                                                     | Analyst Name          | DESKTOP-86B7UPG\5975MS |
| Report Generation Time    | 2022-10-10 오전 10:12:12                                                                     | Report Generator Name | DESKTOP-86B7UPG\5975MS |
| Calibration Last Update   | 2022-12-15 오후 3:30:46                                                                      | Batch State           | Processed              |
| Analyze Quant Version     | 10.2                                                                                       | Report Quant Version  | 10.2                   |
| Acq. Date-Time            | 2022-08-06 오후 1:37:39                                                                      | Data File             | 220806-PAHs-007.D      |
| Type                      | Sample                                                                                     | Name                  | PAHs-19mix-STD-0.5p    |
| Dil.                      | 1                                                                                          | Acq. Method File      | PAHs 19mix-Method      |

## Sample Chromatogram

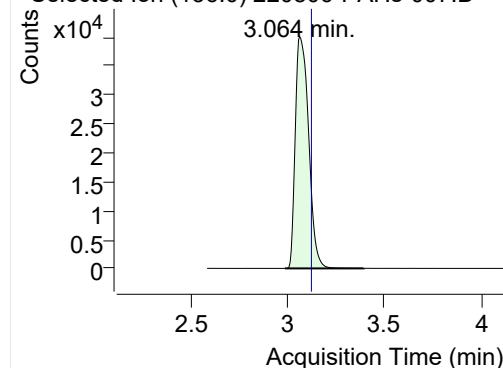
+ TIC SIM 220806-PAHs-007.D (PAHs-19mix-STD-0.5p)



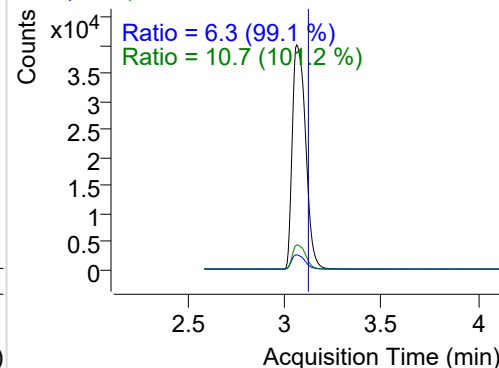
| Name                    | RT     | Transition | Resp.  | Height    | Final Conc. Units | Ratio |
|-------------------------|--------|------------|--------|-----------|-------------------|-------|
| IS-D8-Naphthalene       | 3.064  | 136.0      | 191277 | 40041.38  | ND ng/ml          | 10.7  |
| Naphthalene             | 3.091  | 128.0      | 123969 | 25898.61  | ND ng/ml          | 12.6  |
| Acenaphthylene          | 6.161  | 152.0      | 87110  | 44512.06  | ND ng/ml          | 19.3  |
| IS-D10-Acenaphthene     | 6.493  | 164.0      | 99090  | 54048.54  | ND ng/ml          | 96.6  |
| Acenaphthene            | 6.558  | 154.0      | 61337  | 33160.49  | ND ng/ml          | 106.6 |
| LSS-D10-Fluorene        | 7.617  | 176.0      | 105241 | 59071.71  | ND ng/ml          | 92.5  |
| Fluorene                | 7.680  | 166.0      | 73271  | 43142.74  | ND ng/ml          | 91.7  |
| IS-D10-Phenanthrene     | 9.780  | 188.0      | 171678 | 107195.35 | ND ng/ml          | 15.0  |
| Phenanthrene            | 9.822  | 178.0      | 107006 | 67583.82  | ND ng/ml          | 18.9  |
| Anthracene              | 9.917  | 178.0      | 79885  | 47496.77  | ND ng/ml          | 19.0  |
| Fluoranthene            | 12.526 | 202.0      | 91276  | 56329.78  | ND ng/ml          | 17.3  |
| LSS-D10-Pyrene          | 12.976 | 212.0      | 132221 | 82392.00  | ND ng/ml          | 18.6  |
| Pyrene                  | 13.009 | 202.0      | 109245 | 66265.50  | ND ng/ml          | 17.9  |
| Benz(a)anthracene       | 15.795 | 228.0      | 44960  | 23549.52  | ND ng/ml          | 26.2  |
| IS-D12-Chrysene         | 15.838 | 240.0      | 100779 | 53285.54  | ND ng/ml          | 18.8  |
| Chrysene                | 15.887 | 228.0      | 68773  | 35073.41  | ND ng/ml          | 28.8  |
| Benzo(b)fluoranthene    | 18.110 | 252.0      | 43248  | 24554.00  | ND ng/ml          | 23.6  |
| Benzo(k)fluoranthene    | 18.160 | 252.0      | 63530  | 25155.42  | ND ng/ml          | 20.5  |
| SS-D12-Benzo(e)pyrene   | 18.609 | 264.0      | 87355  | 42467.94  | ND ng/ml          | 25.8  |
| Benzo(e)pyrene          | 18.651 | 252.0      | 70207  | 35013.85  | ND ng/ml          | 21.8  |
| Benzo(a)pyrene          | 18.737 | 252.0      | 33820  | 15342.59  | ND ng/ml          | 19.4  |
| IS-D12-Perylene         | 18.872 | 264.0      | 70651  | 32127.50  | ND ng/ml          | 24.3  |
| Perylene                | 18.915 | 252.0      | 52982  | 24184.04  | ND ng/ml          | 21.1  |
| Indeno(1,2,3-c,d)pyrene | 20.751 | 276.0      | 14659  | 6532.38   | ND ng/ml          | 20.4  |
| Dibenz(a,h)anthracene   | 20.828 | 278.0      | 14446  | 4752.71   | ND ng/ml          | 23.6  |
| Benzo(g,h,i)perylene    | 21.171 | 276.0      | 30324  | 11212.34  | ND ng/ml          | 23.5  |
| Coronene                | 23.439 | 300.0      | 18280  | 5766.01   | ND ng/ml          | 29.6  |

## IS-D8-Naphthalene

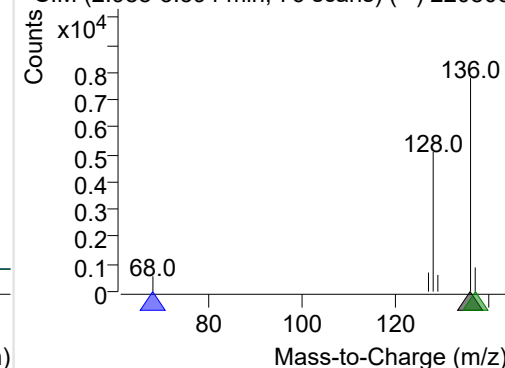
+ Selected Ion (136.0) 220806-PAHs-007.D



136.0, 68.0, 137.0

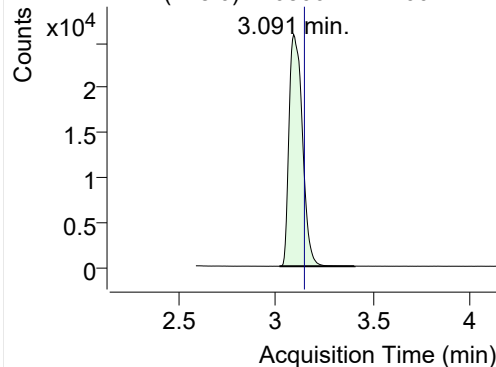


+ SIM (2.988-3.394 min, 76 scans) (\*\*) 220806

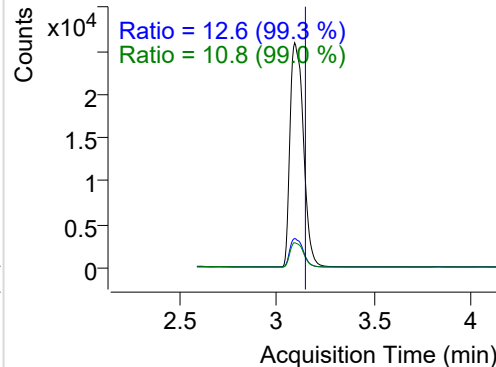


**Naphthalene**

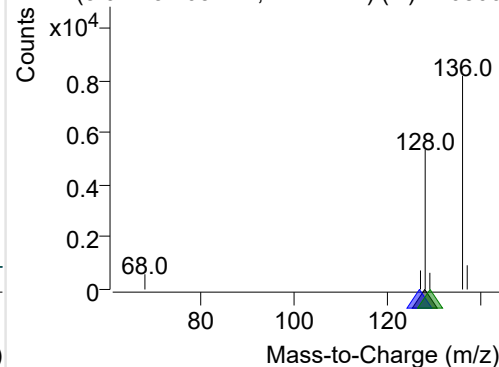
+ Selected Ion (128.0) 220806-PAHs-007.D



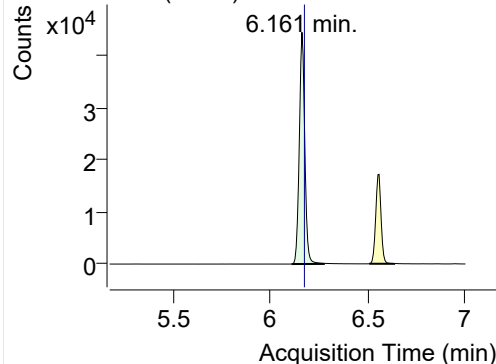
128.0, 127.0, 129.0



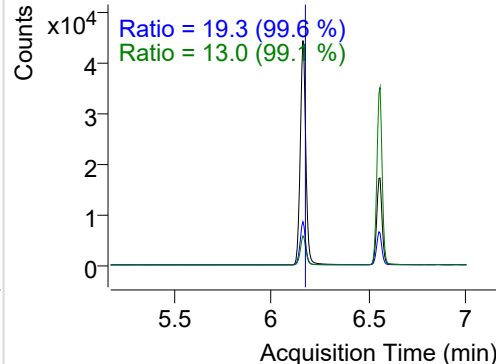
+ SIM (3.017-3.405 min, 72 scans) (\*\*) 220806

**Acenaphthylene**

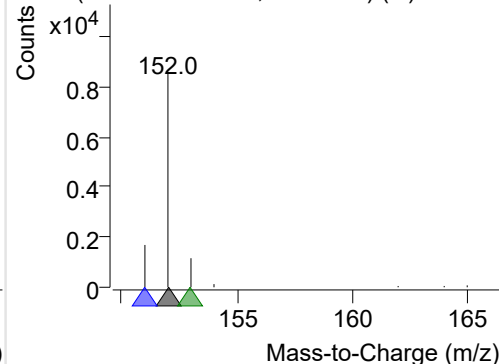
+ Selected Ion (152.0) 220806-PAHs-007.D



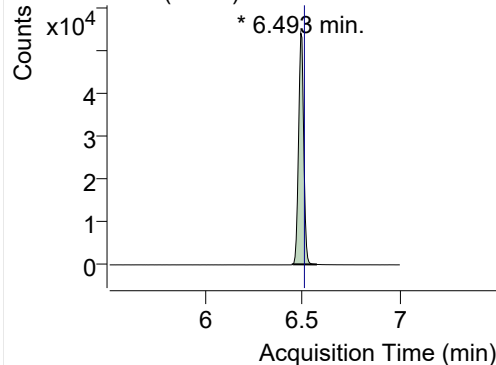
152.0, 151.0, 153.0



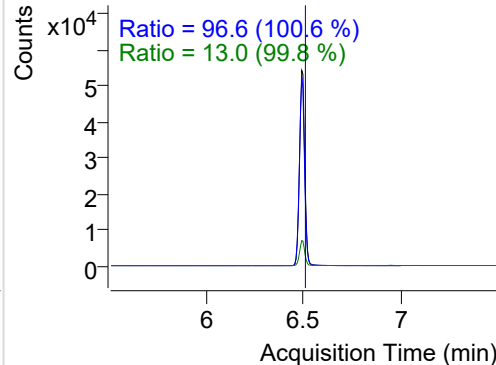
+ SIM (6.108-6.274 min, 29 scans) (\*\*) 220806

**IS-D10-Acenaphthene**

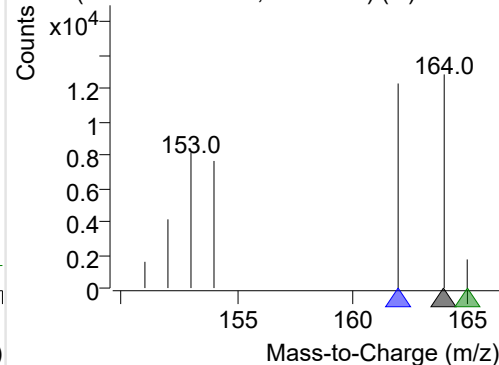
+ Selected Ion (164.0) 220806-PAHs-007.D



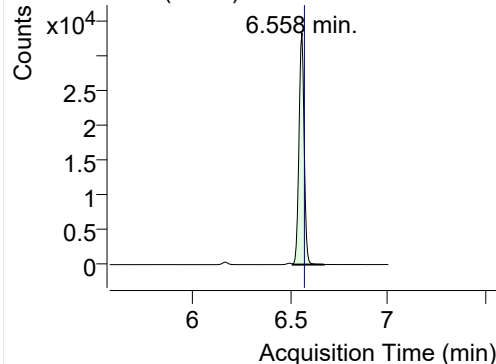
164.0, 162.0, 165.0



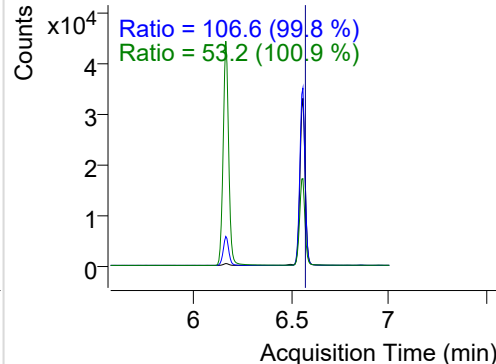
+ SIM (6.451-6.576 min, 22 scans) (\*\*) 220806

**Acenaphthene**

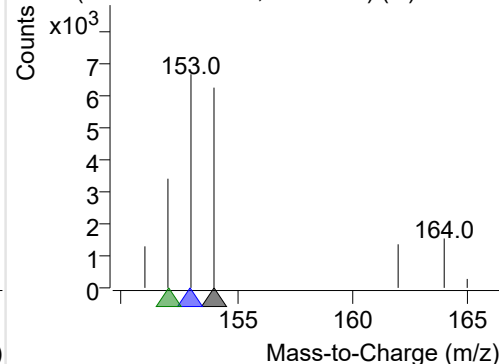
+ Selected Ion (154.0) 220806-PAHs-007.D



154.0, 153.0, 152.0

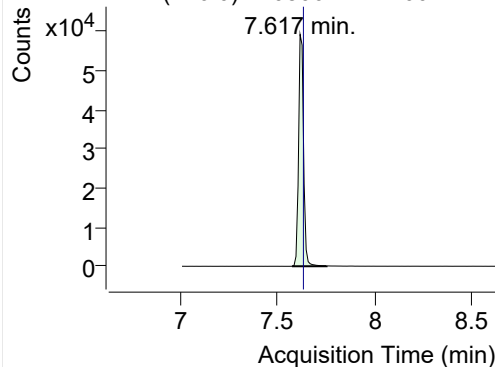


+ SIM (6.510-6.670 min, 28 scans) (\*\*) 220806

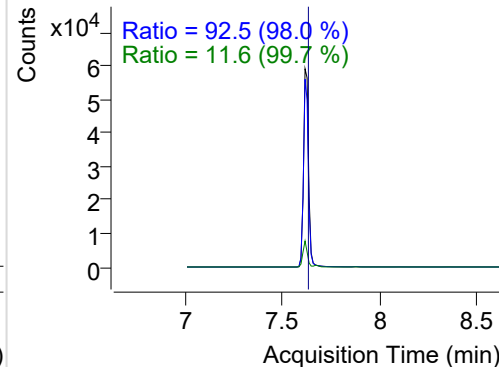


## LSS-D10-Fluorene

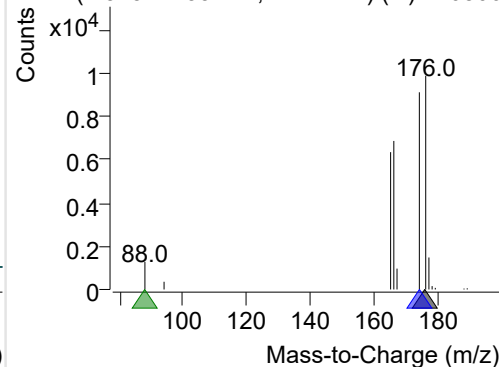
+ Selected Ion (176.0) 220806-PAHs-007.D



176.0, 174.0, 88.0

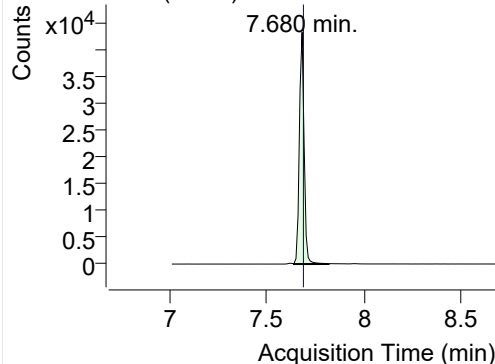


+ SIM (7.575-7.753 min, 17 scans) (\*\*) 220806

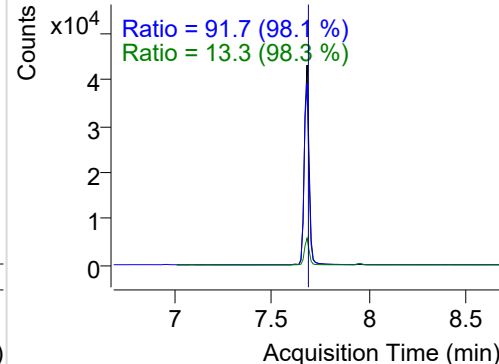


## Fluorene

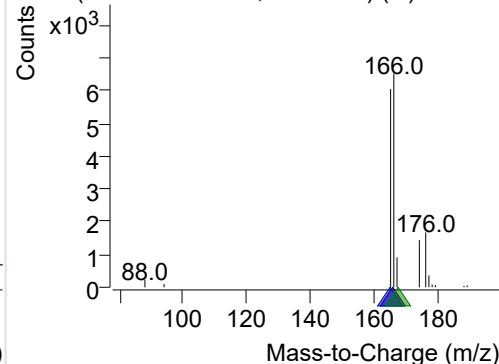
+ Selected Ion (166.0) 220806-PAHs-007.D



166.0, 165.0, 167.0

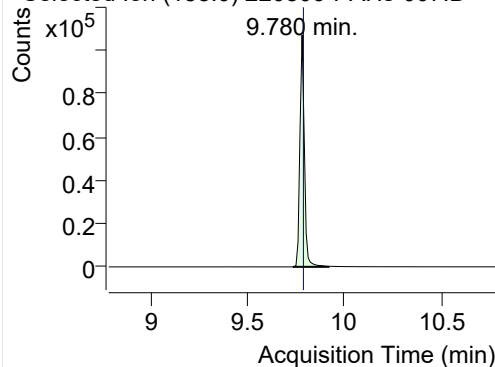


+ SIM (7.638-7.816 min, 18 scans) (\*\*) 220806

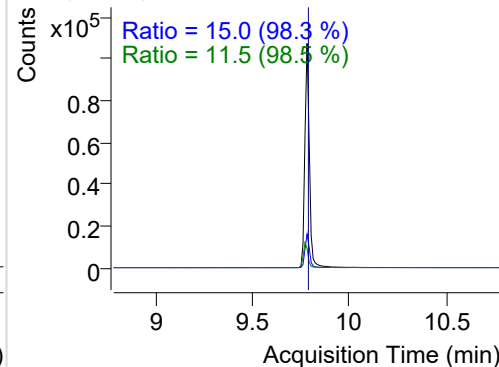


## IS-D10-Phenanthrene

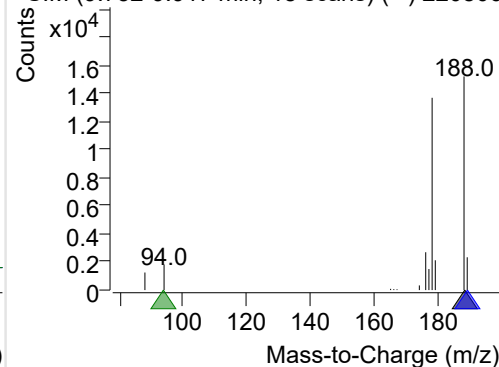
+ Selected Ion (188.0) 220806-PAHs-007.D



188.0, 189.0, 94.0

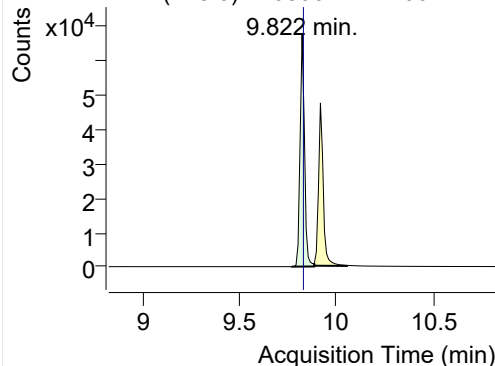


+ SIM (9.732-9.917 min, 18 scans) (\*\*) 220806

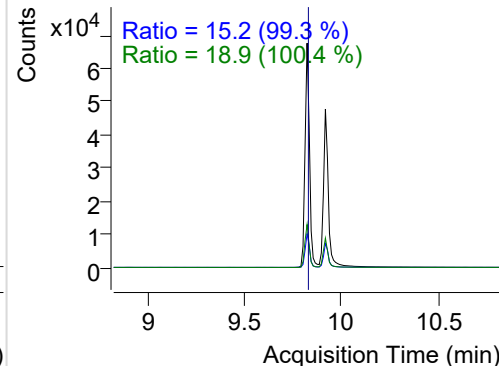


## Phenanthrene

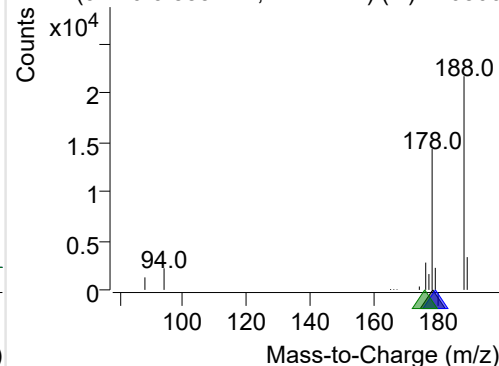
+ Selected Ion (178.0) 220806-PAHs-007.D



178.0, 179.0, 176.0

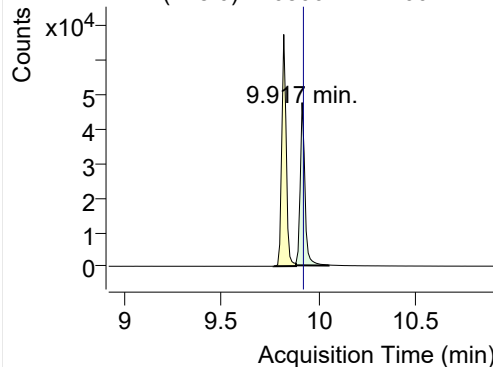


+ SIM (9.770-9.885 min, 12 scans) (\*\*) 220806

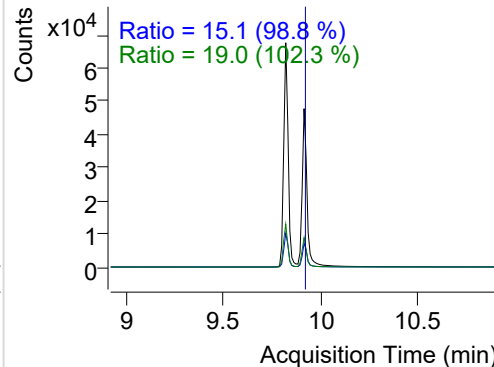


**Anthracene**

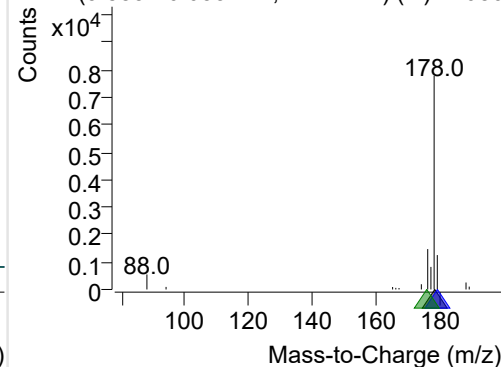
+ Selected Ion (178.0) 220806-PAHs-007.D



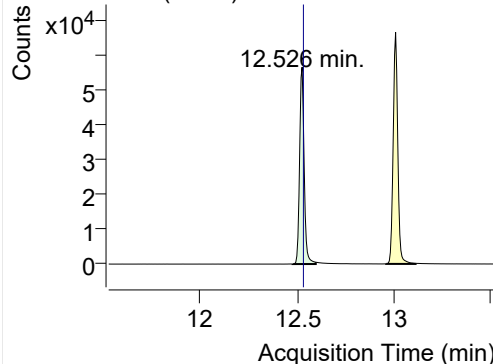
178.0, 179.0, 176.0



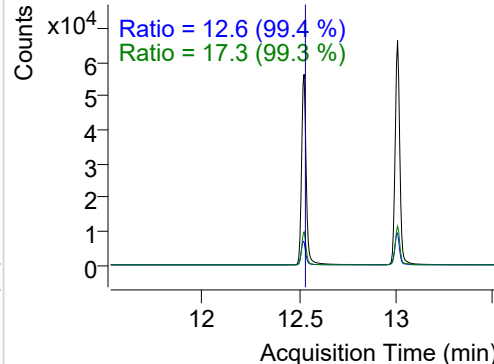
+ SIM (9.885-10.053 min, 17 scans) (\*\*) 22080

**Fluoranthene**

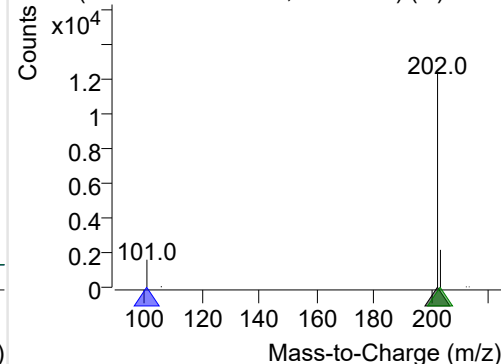
+ Selected Ion (202.0) 220806-PAHs-007.D



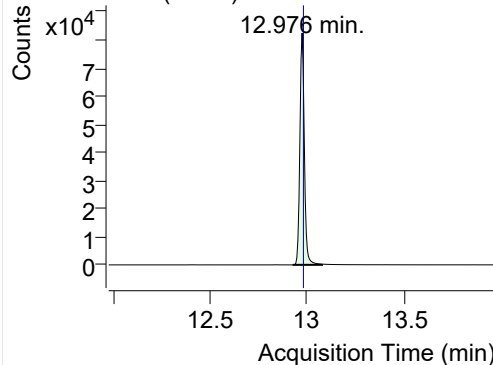
202.0, 101.0, 203.0



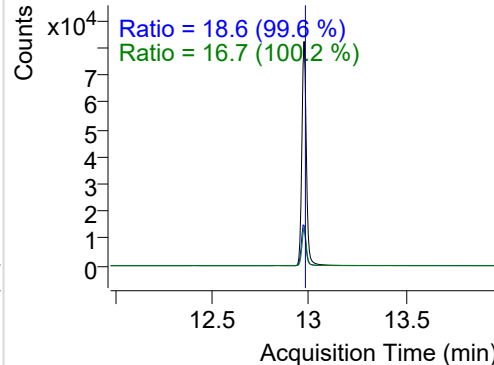
+ SIM (12.478-12.597 min, 23 scans) (\*\*) 2208

**LSS-D10-Pyrene**

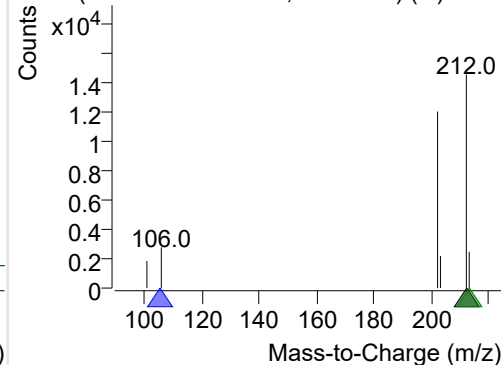
+ Selected Ion (212.0) 220806-PAHs-007.D



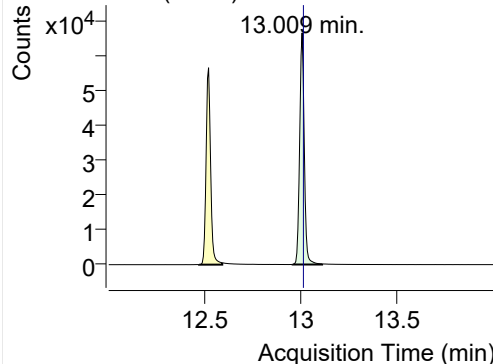
212.0, 106.0, 213.0



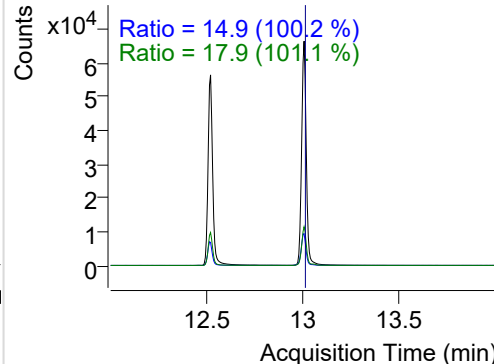
+ SIM (12.928-13.079 min, 28 scans) (\*\*) 2208

**Pyrene**

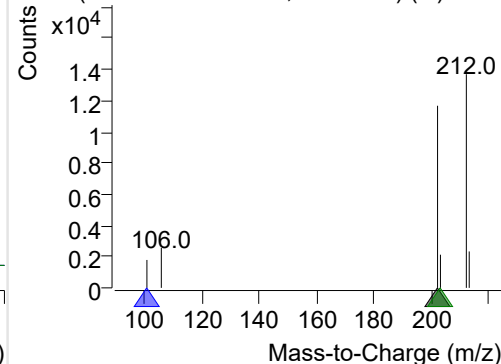
+ Selected Ion (202.0) 220806-PAHs-007.D



202.0, 101.0, 203.0

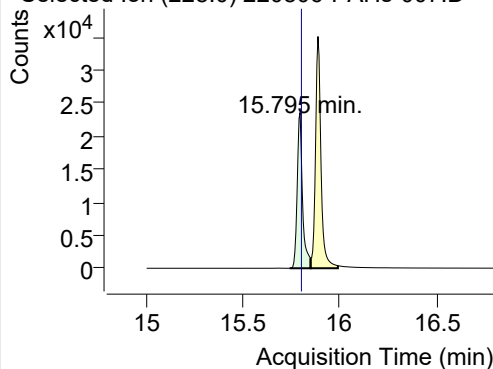


+ SIM (12.960-13.112 min, 29 scans) (\*\*) 2208

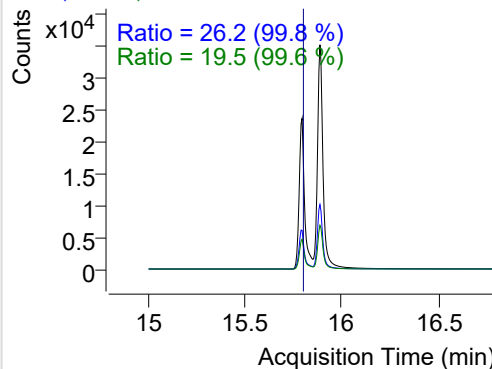


**Benz(a)anthracene**

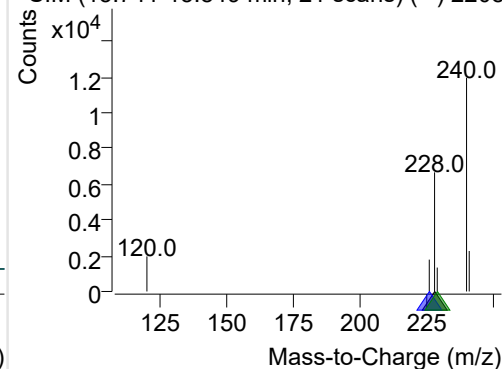
+ Selected Ion (228.0) 220806-PAHs-007.D



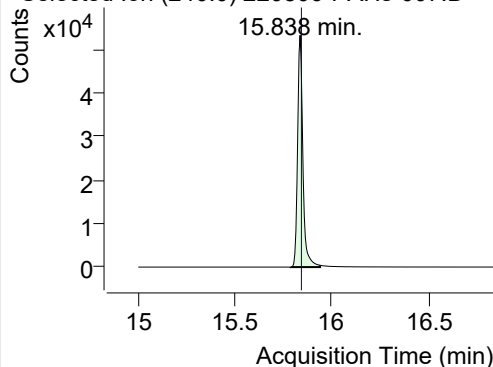
228.0, 226.0, 229.0



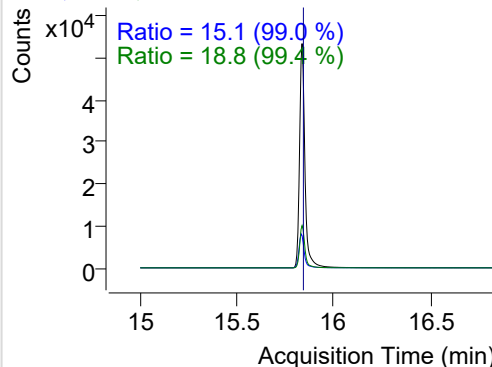
+ SIM (15.741-15.849 min, 21 scans) (\*\*) 2208

**IS-D12-Chrysene**

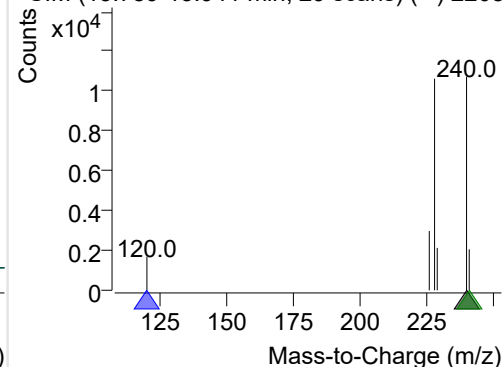
+ Selected Ion (240.0) 220806-PAHs-007.D



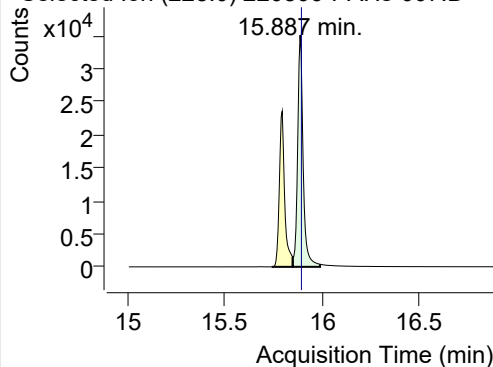
240.0, 120.0, 241.0



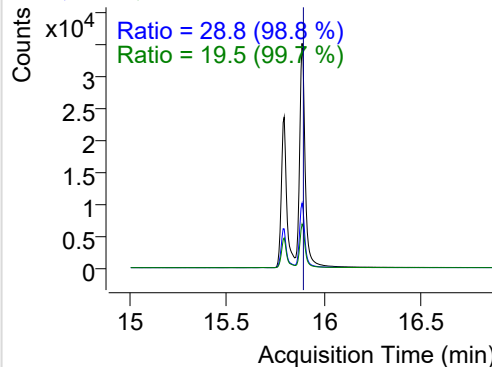
+ SIM (15.789-15.941 min, 29 scans) (\*\*) 2208

**Chrysene**

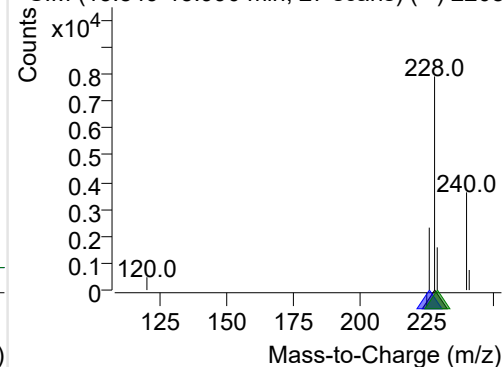
+ Selected Ion (228.0) 220806-PAHs-007.D



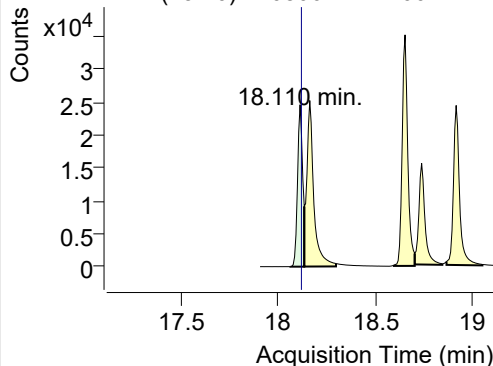
228.0, 226.0, 229.0



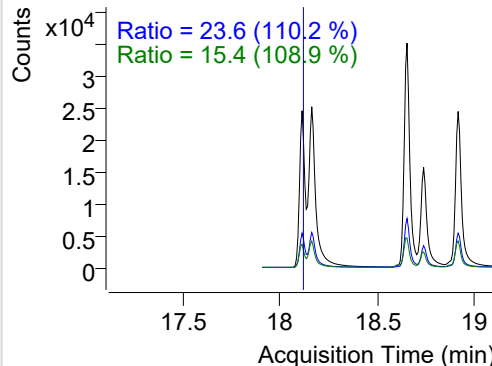
+ SIM (15.849-15.990 min, 27 scans) (\*\*) 2208

**Benzo(b)fluoranthene**

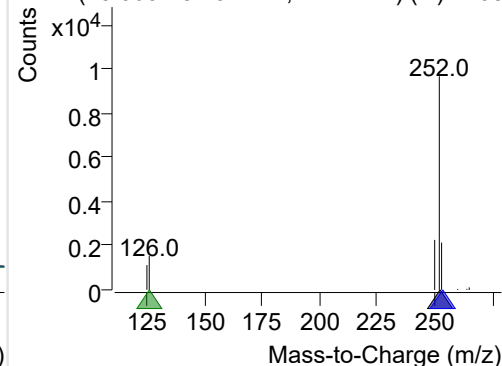
+ Selected Ion (252.0) 220806-PAHs-007.D



252.0, 253.0, 126.0

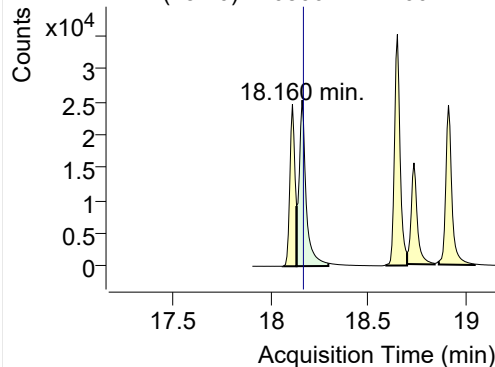


+ SIM (18.060-18.132 min, 11 scans) (\*\*) 2208

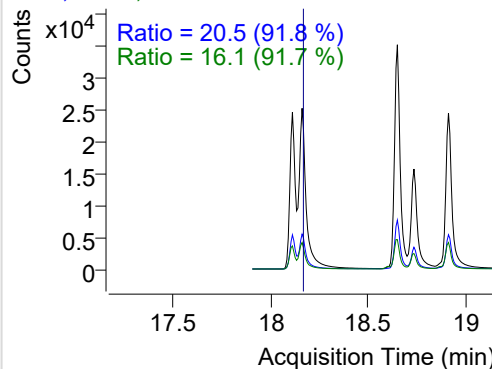


**Benzo(k)fluoranthene**

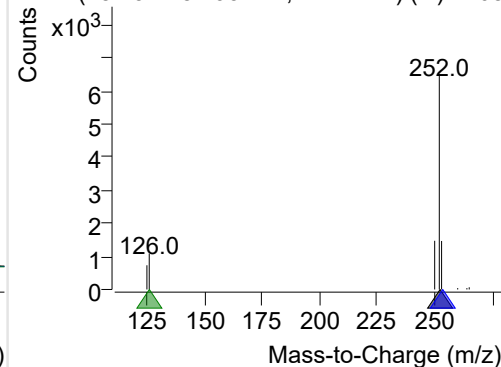
+ Selected Ion (252.0) 220806-PAHs-007.D



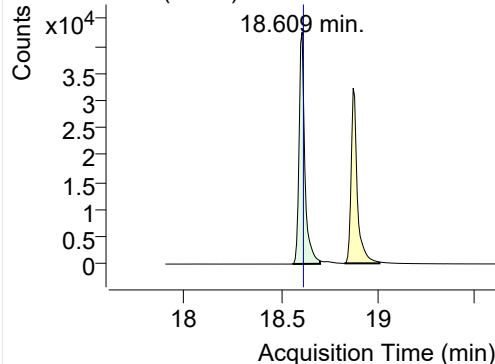
252.0, 253.0, 126.0



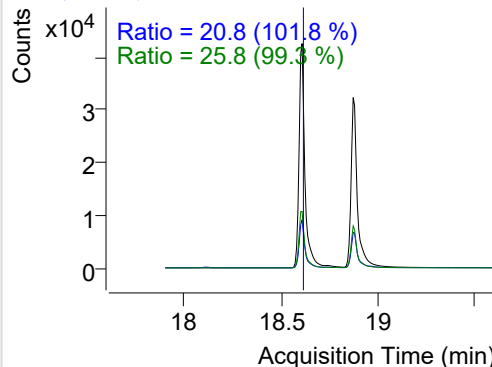
+ SIM (18.132-18.295 min, 24 scans) (\*\*) 2208

**SS-D12-Benzo(e)pyrene**

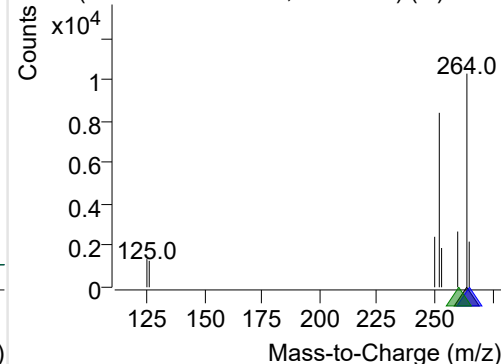
+ Selected Ion (264.0) 220806-PAHs-007.D



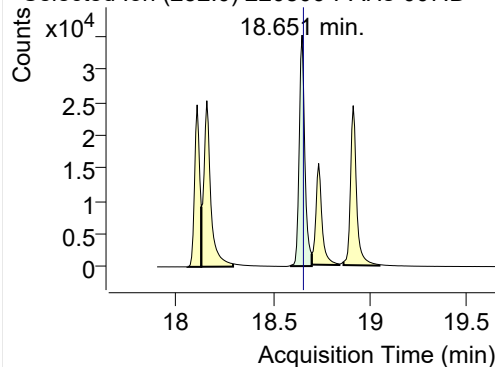
264.0, 265.0, 260.0



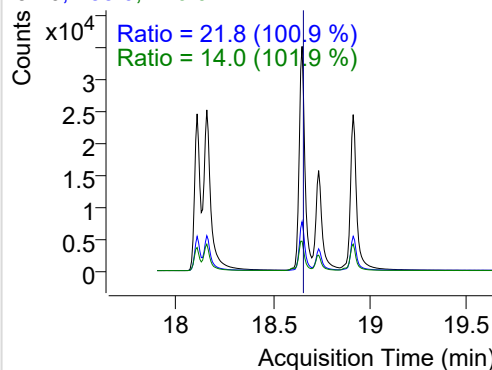
+ SIM (18.559-18.701 min, 20 scans) (\*\*) 2208

**Benzo(e)pyrene**

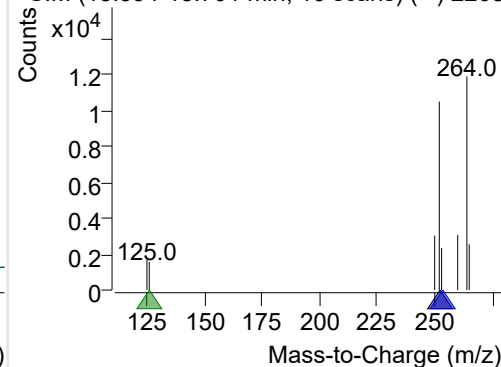
+ Selected Ion (252.0) 220806-PAHs-007.D



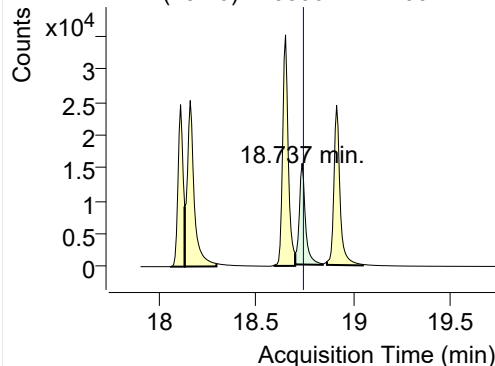
252.0, 253.0, 126.0



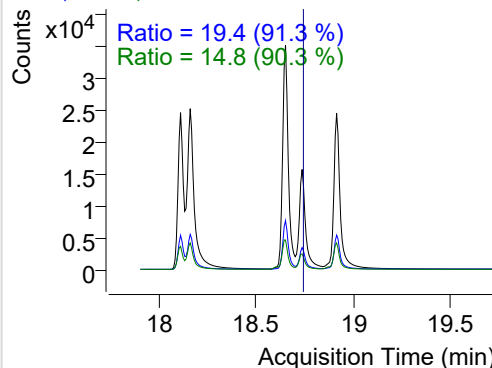
+ SIM (18.594-18.701 min, 16 scans) (\*\*) 2208

**Benzo(a)pyrene**

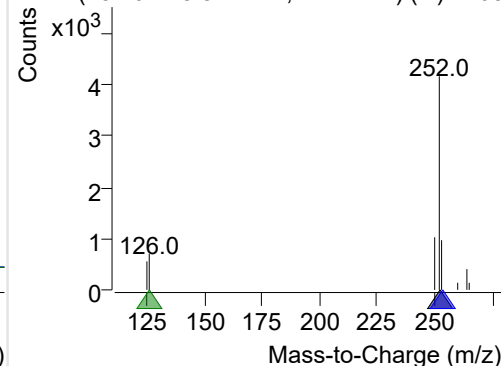
+ Selected Ion (252.0) 220806-PAHs-007.D



252.0, 253.0, 126.0

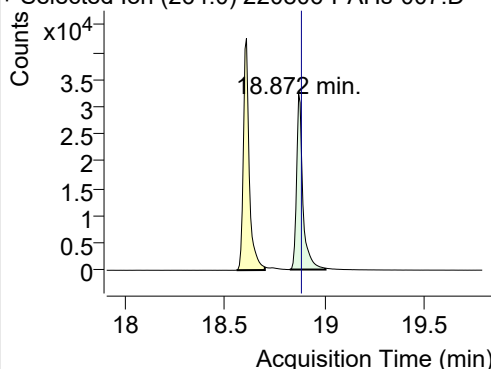


+ SIM (18.701-18.844 min, 21 scans) (\*\*) 2208

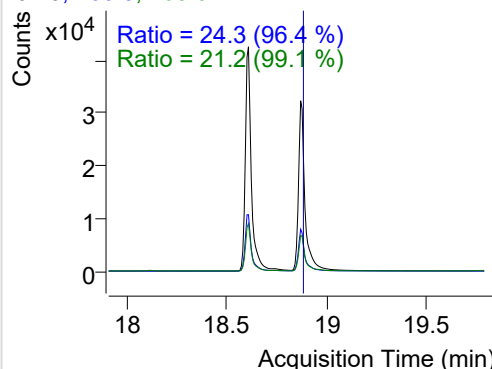


## IS-D12-Perylene

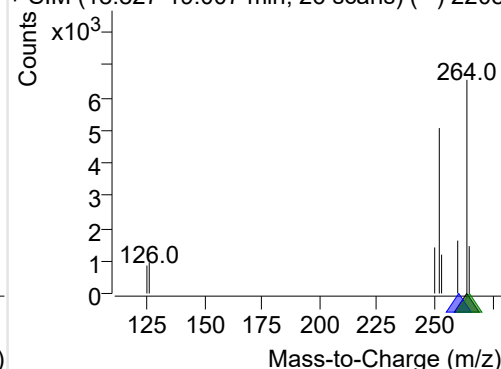
+ Selected Ion (264.0) 220806-PAHs-007.D



264.0, 260.0, 265.0

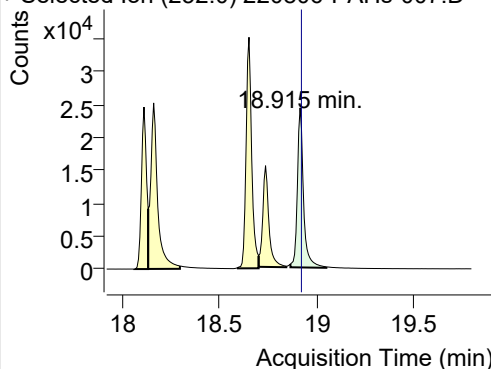


+ SIM (18.827-19.007 min, 26 scans) (\*\*) 2208

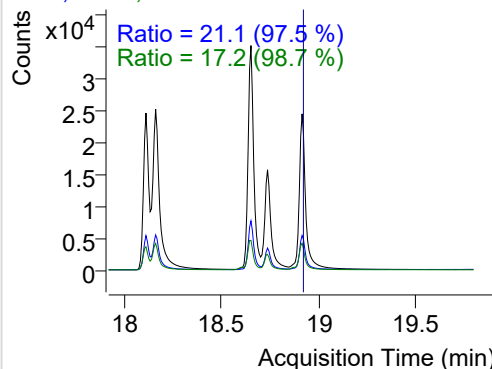


## Perylene

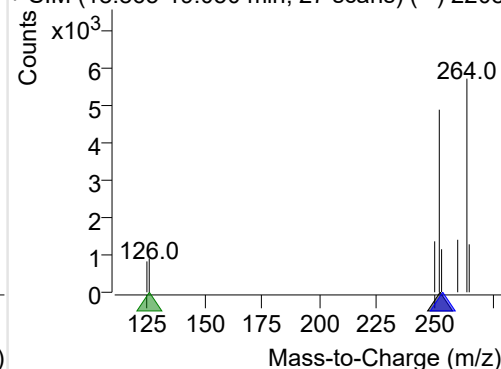
+ Selected Ion (252.0) 220806-PAHs-007.D



252.0, 253.0, 126.0

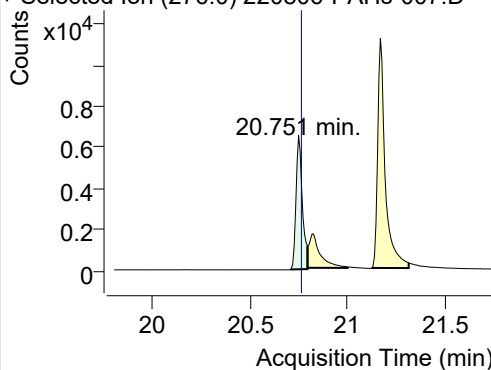


+ SIM (18.865-19.050 min, 27 scans) (\*\*) 2208

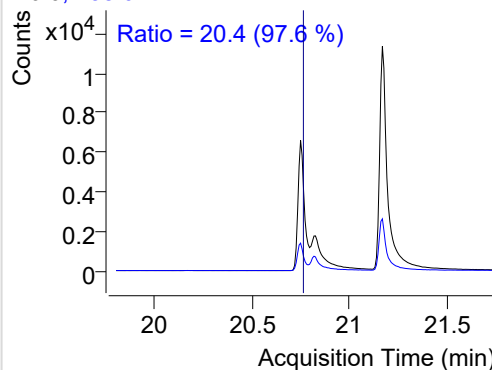


## Indeno(1,2,3-c,d)pyrene

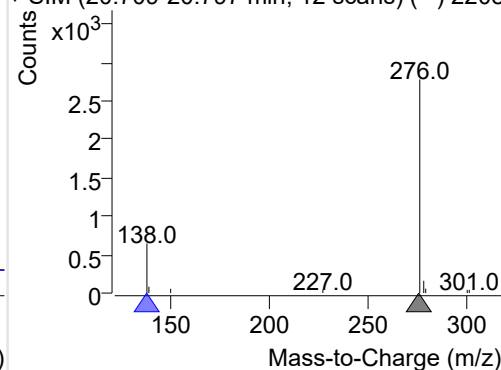
+ Selected Ion (276.0) 220806-PAHs-007.D



276.0, 138.0

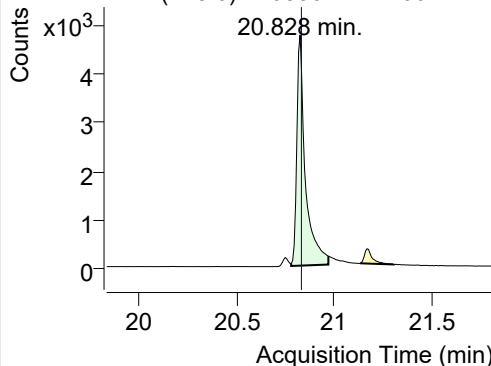


+ SIM (20.709-20.797 min, 12 scans) (\*\*) 2208

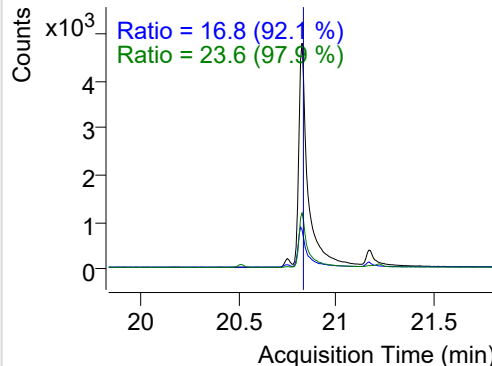


## Dibenz(a,h)anthracene

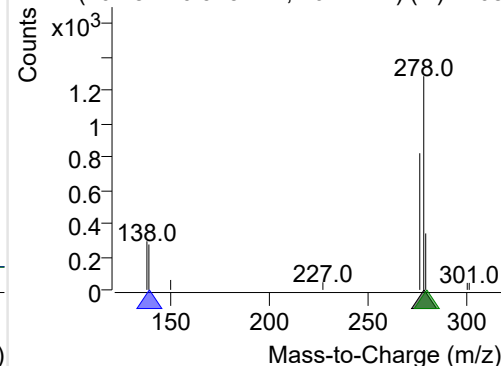
+ Selected Ion (278.0) 220806-PAHs-007.D



278.0, 139.0, 279.0

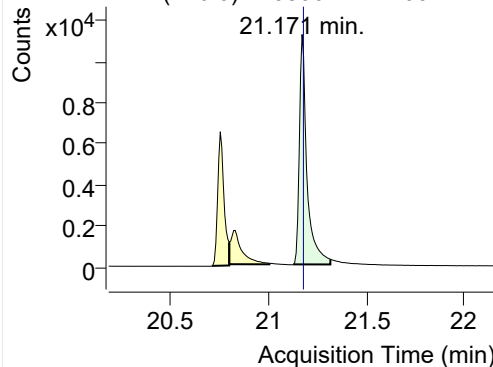


+ SIM (20.782-20.973 min, 26 scans) (\*\*) 2208

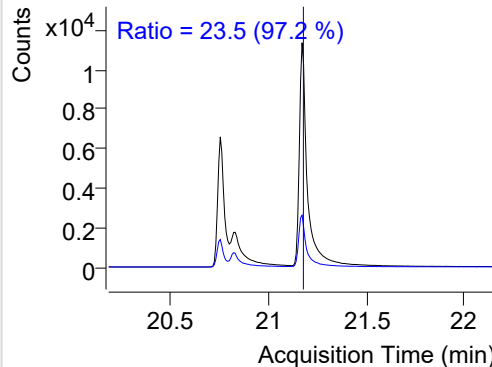


**Benzo(g,h,i)perylene**

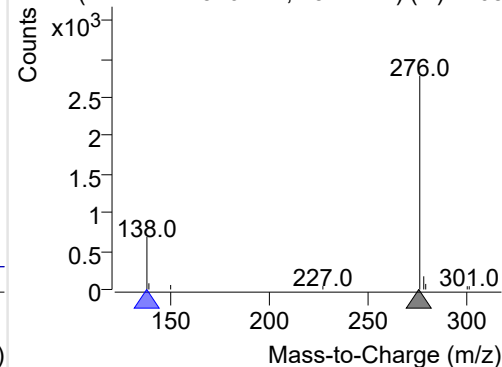
+ Selected Ion (276.0) 220806-PAHs-007.D



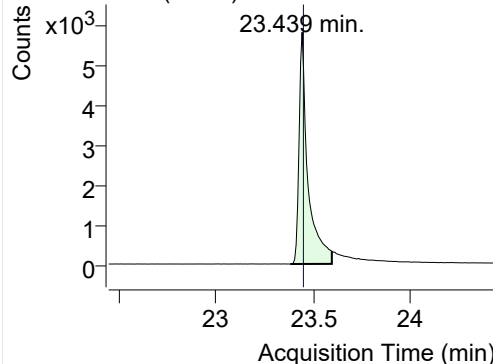
276.0, 138.0



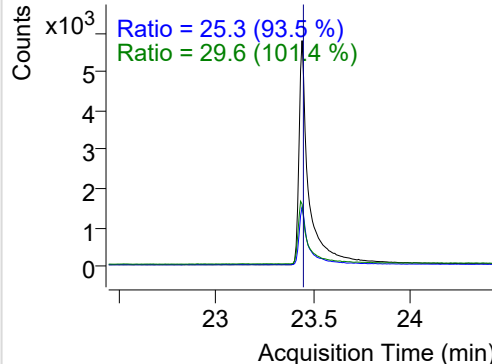
+ SIM (21.127-21.316 min, 25 scans) (\*\*) 2208

**Coronene**

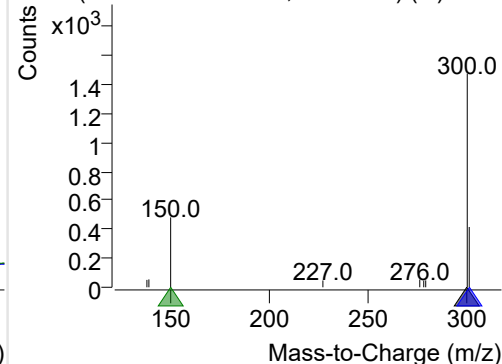
+ Selected Ion (300.0) 220806-PAHs-007.D



300.0, 301.0, 150.0



+ SIM (23.378-23.592 min, 28 scans) (\*\*) 2208





## Quantitative Analysis Sample Based Report

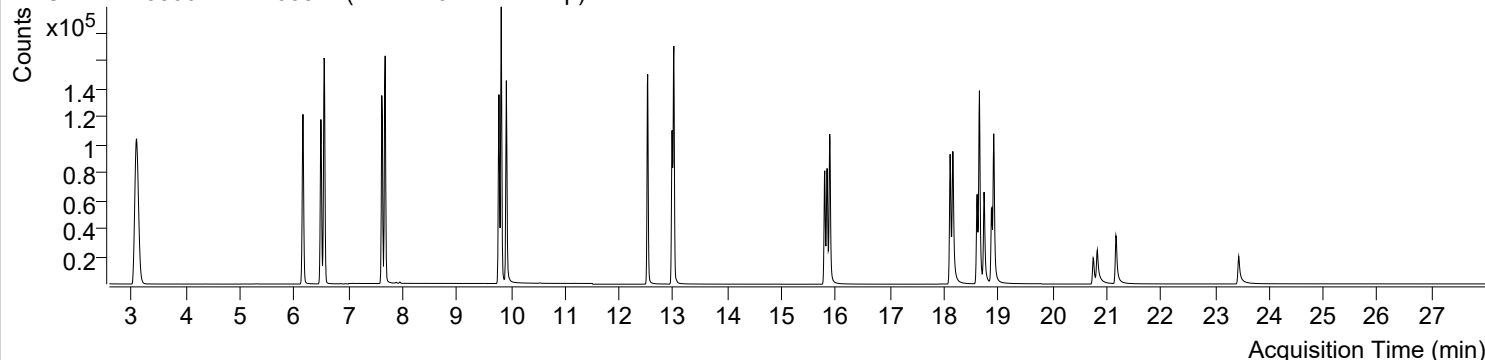


Trusted Answers

|                           |                                                                                            |                       |                        |
|---------------------------|--------------------------------------------------------------------------------------------|-----------------------|------------------------|
| Batch Data Path File Name | D:\MassHunter\GCMS\1\data\PAHs\220806-PAHs-Sample\QuantResults\220806-PAHs-Quant.batch.bin |                       |                        |
| Analysis Time Stamp       | 2022-10-10 오전 10:12:04                                                                     | Analyst Name          | DESKTOP-86B7UPG\5975MS |
| Report Generation Time    | 2022-10-10 오전 10:12:12                                                                     | Report Generator Name | DESKTOP-86B7UPG\5975MS |
| Calibration Last Update   | 2022-12-15 오후 3:30:46                                                                      | Batch State           | Processed              |
| Analyze Quant Version     | 10.2                                                                                       | Report Quant Version  | 10.2                   |
| Acq. Date-Time            | 2022-08-06 오후 2:08:50                                                                      | Data File             | 220806-PAHs-008.D      |
| Type                      | Sample                                                                                     | Name                  | PAHs-19mix-STD-1p      |
| Dil.                      | 1                                                                                          | Acq. Method File      | PAHs 19mix-Method      |

## Sample Chromatogram

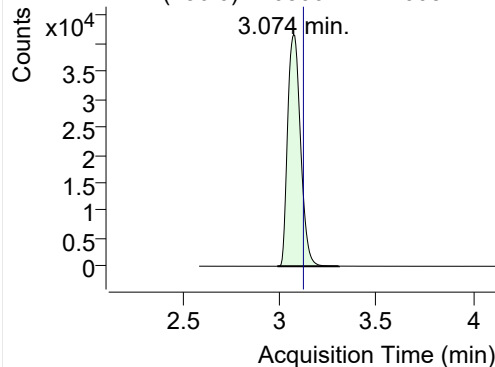
+ TIC SIM 220806-PAHs-008.D (PAHs-19mix-STD-1p)



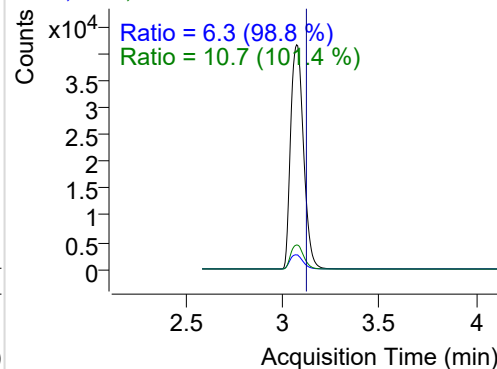
| Name                    | RT     | Transition | Resp.  | Height   | Final Conc. Units | Ratio |
|-------------------------|--------|------------|--------|----------|-------------------|-------|
| IS-D8-Naphthalene       | 3.074  | 136.0      | 191429 | 41485.98 | ND ng/ml          | 10.7  |
| Naphthalene             | 3.096  | 128.0      | 226453 | 49480.05 | ND ng/ml          | 12.6  |
| Acenaphthylene          | 6.161  | 152.0      | 174939 | 91140.38 | ND ng/ml          | 19.3  |
| IS-D10-Acenaphthene     | 6.493  | 164.0      | 99587  | 55957.56 | ND ng/ml          | 96.8  |
| Acenaphthene            | 6.558  | 154.0      | 108501 | 57901.29 | ND ng/ml          | 106.8 |
| LSS-D10-Fluorene        | 7.617  | 176.0      | 103898 | 59423.90 | ND ng/ml          | 92.4  |
| Fluorene                | 7.680  | 166.0      | 133398 | 79067.12 | ND ng/ml          | 91.9  |
| IS-D10-Phenanthrene     | 9.780  | 188.0      | 169685 | 108221.9 | ND ng/ml          | 15.0  |
| Phenanthrene            | 9.822  | 178.0      | 196944 | 128401.0 | ND ng/ml          | 18.9  |
| Anthracene              | 9.916  | 178.0      | 159582 | 96522.50 | ND ng/ml          | 18.1  |
| Fluoranthene            | 12.526 | 202.0      | 180650 | 115725.6 | ND ng/ml          | 17.2  |
| LSS-D10-Pyrene          | 12.976 | 212.0      | 129027 | 79693.85 | ND ng/ml          | 18.6  |
| Pyrene                  | 13.009 | 202.0      | 201599 | 125771.2 | ND ng/ml          | 17.7  |
| Benz(a)anthracene       | 15.795 | 228.0      | 100199 | 55541.36 | ND ng/ml          | 26.3  |
| IS-D12-Chrysene         | 15.838 | 240.0      | 108101 | 57955.47 | ND ng/ml          | 18.9  |
| Chrysene                | 15.887 | 228.0      | 135630 | 70063.65 | ND ng/ml          | 28.8  |
| Benzo(b)fluoranthene    | 18.110 | 252.0      | 100724 | 54385.26 | ND ng/ml          | 21.5  |
| Benzo(k)fluoranthene    | 18.160 | 252.0      | 129964 | 55293.10 | ND ng/ml          | 21.8  |
| SS-D12-Benzo(e)pyrene   | 18.609 | 264.0      | 88723  | 42898.69 | ND ng/ml          | 25.7  |
| Benzo(e)pyrene          | 18.651 | 252.0      | 138080 | 73474.97 | ND ng/ml          | 21.6  |
| Benzo(a)pyrene          | 18.737 | 252.0      | 83159  | 37204.43 | ND ng/ml          | 20.6  |
| IS-D12-Perylene         | 18.879 | 264.0      | 77777  | 34747.47 | ND ng/ml          | 24.3  |
| Perylene                | 18.915 | 252.0      | 115561 | 54328.15 | ND ng/ml          | 21.1  |
| Indeno(1,2,3-c,d)pyrene | 20.751 | 276.0      | 34315  | 14675.49 | ND ng/ml          | 21.3  |
| Dibenz(a,h)anthracene   | 20.828 | 278.0      | 37708  | 12381.18 | ND ng/ml          | 23.7  |
| Benzo(g,h,i)perylene    | 21.171 | 276.0      | 71633  | 26649.93 | ND ng/ml          | 24.2  |
| Coronene                | 23.439 | 300.0      | 41219  | 12766.74 | ND ng/ml          | 28.9  |

## IS-D8-Naphthalene

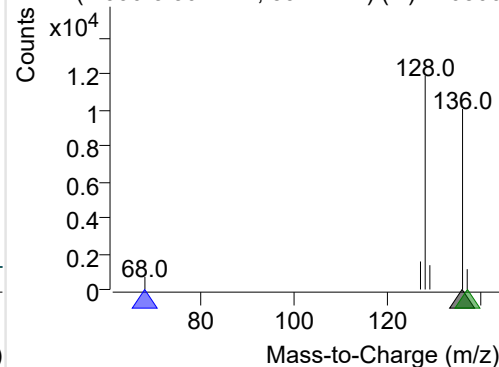
+ Selected Ion (136.0) 220806-PAHs-008.D



136.0, 68.0, 137.0

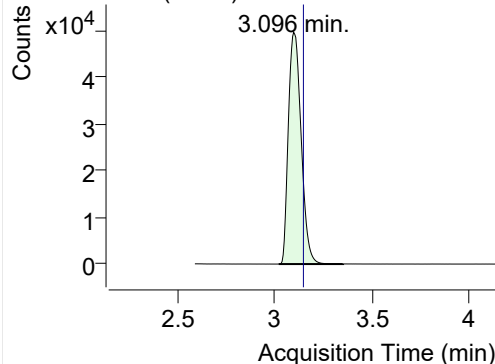


+ SIM (2.990-3.307 min, 59 scans) (\*\*) 220806

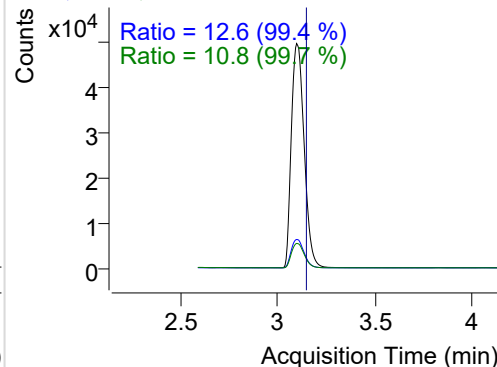


## Naphthalene

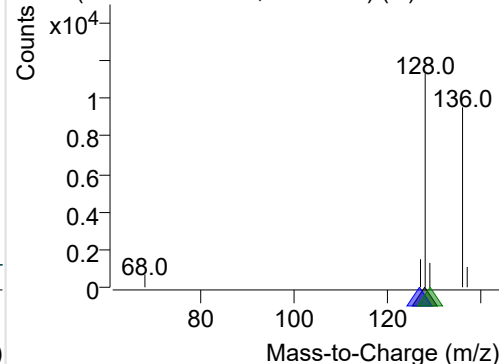
+ Selected Ion (128.0) 220806-PAHs-008.D



128.0, 127.0, 129.0

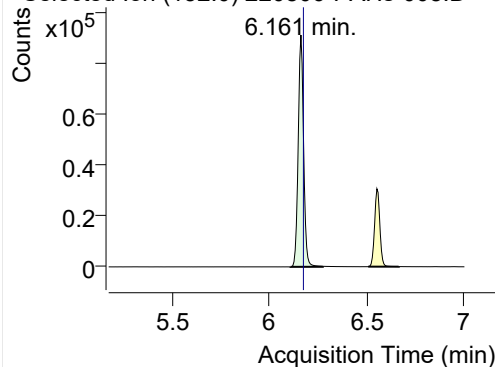


+ SIM (3.019-3.350 min, 62 scans) (\*\*) 220806

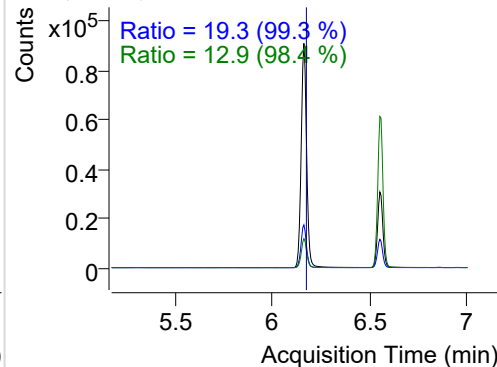


## Acenaphthylene

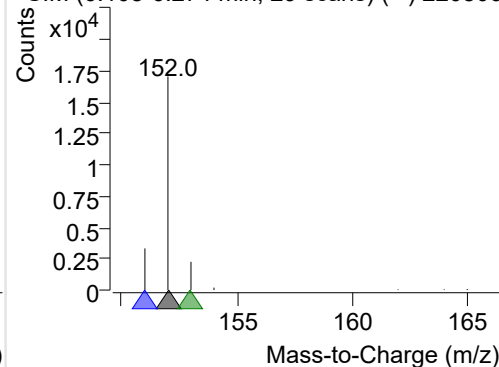
+ Selected Ion (152.0) 220806-PAHs-008.D



152.0, 151.0, 153.0

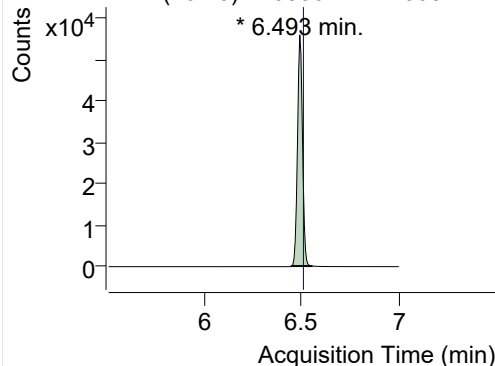


+ SIM (6.108-6.274 min, 29 scans) (\*\*) 220806

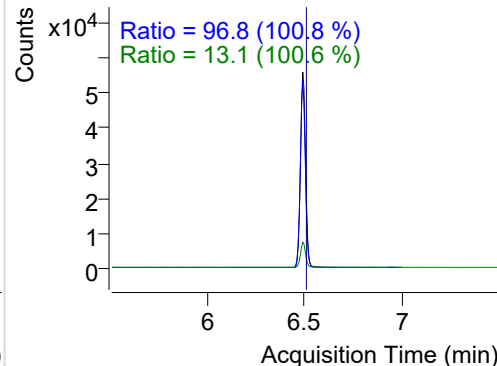


## IS-D10-Acenaphthene

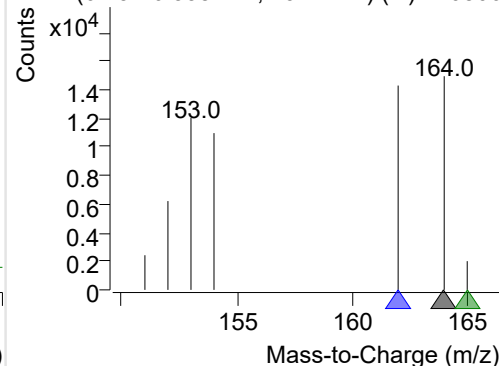
+ Selected Ion (164.0) 220806-PAHs-008.D



164.0, 162.0, 165.0

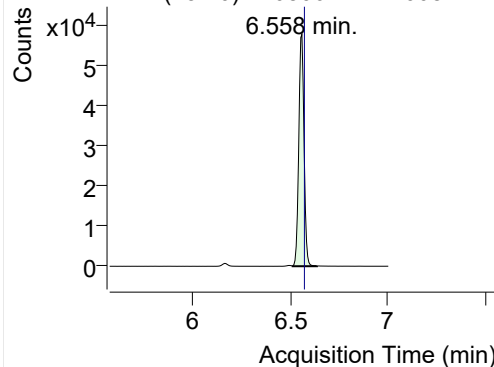


+ SIM (6.451-6.558 min, 19 scans) (\*\*) 220806

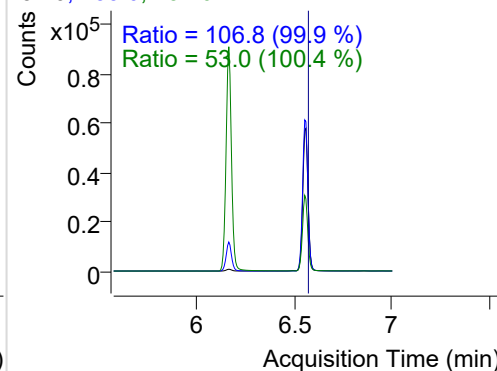


**Acenaphthene**

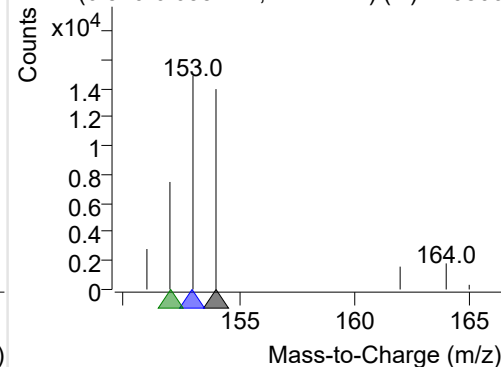
+ Selected Ion (154.0) 220806-PAHs-008.D



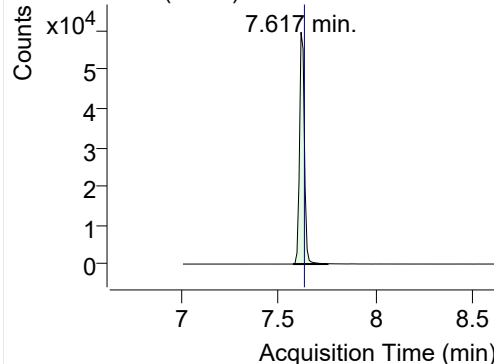
154.0, 153.0, 152.0



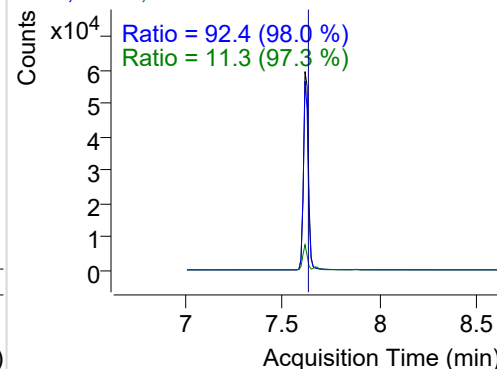
+ SIM (6.510-6.635 min, 22 scans) (\*\*) 220806

**LSS-D10-Fluorene**

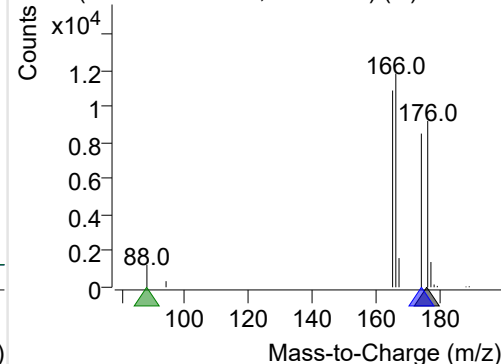
+ Selected Ion (176.0) 220806-PAHs-008.D



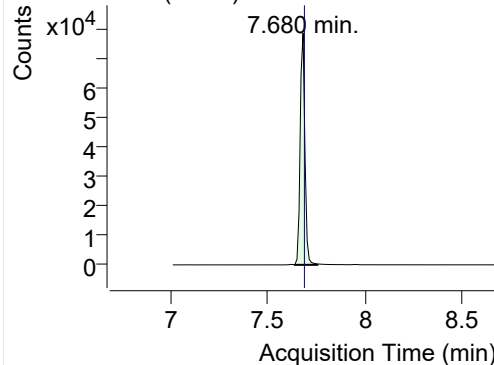
176.0, 174.0, 88.0



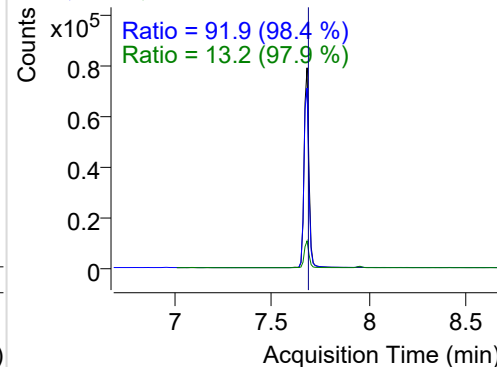
+ SIM (7.575-7.753 min, 18 scans) (\*\*) 220806

**Fluorene**

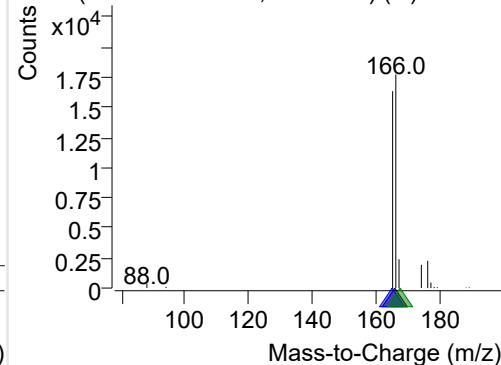
+ Selected Ion (166.0) 220806-PAHs-008.D



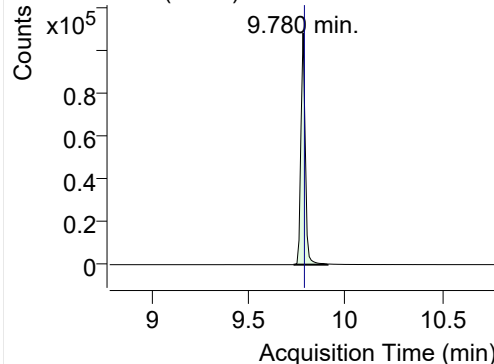
166.0, 165.0, 167.0



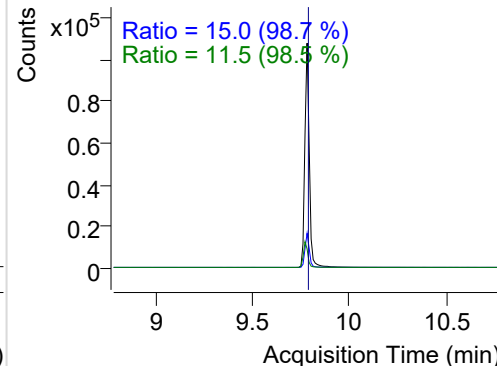
+ SIM (7.638-7.753 min, 12 scans) (\*\*) 220806

**IS-D10-Phenanthrene**

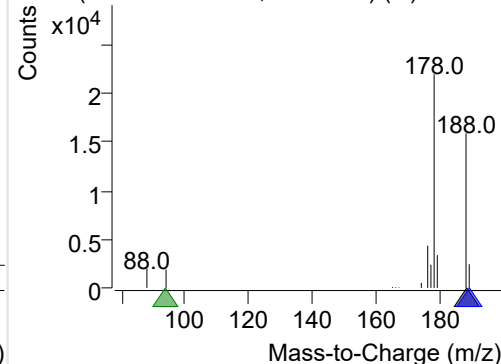
+ Selected Ion (188.0) 220806-PAHs-008.D



188.0, 189.0, 94.0

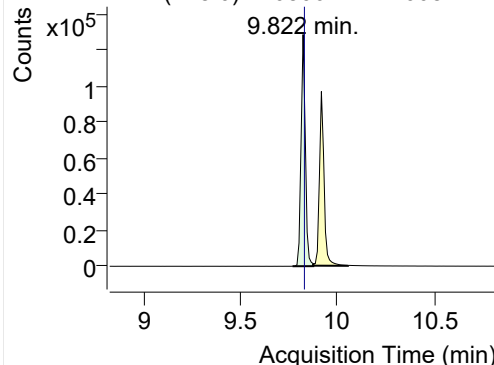


+ SIM (9.731-9.906 min, 17 scans) (\*\*) 220806

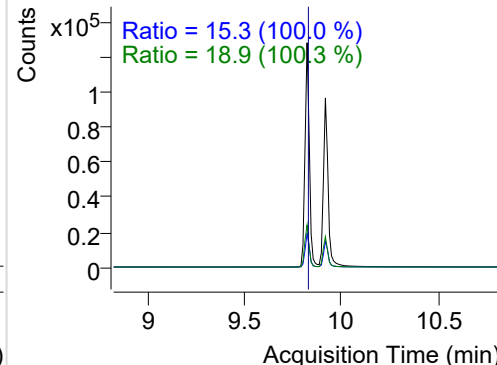


**Phenanthrene**

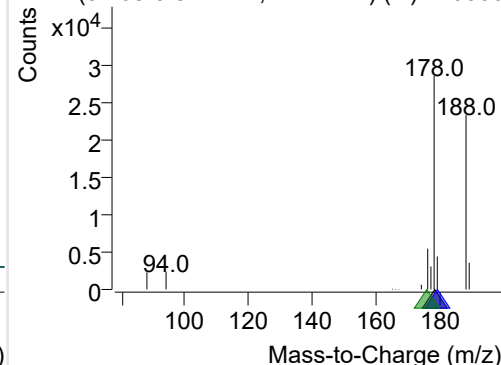
+ Selected Ion (178.0) 220806-PAHs-008.D



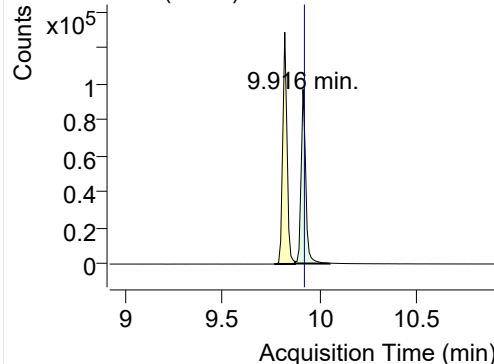
178.0, 179.0, 176.0



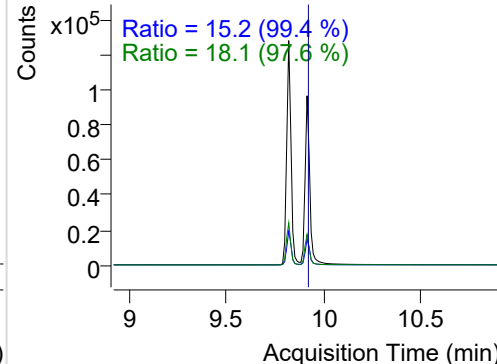
+ SIM (9.768-9.874 min, 11 scans) (\*\*) 220806

**Anthracene**

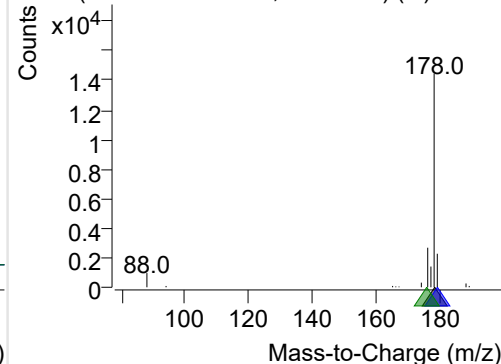
+ Selected Ion (178.0) 220806-PAHs-008.D



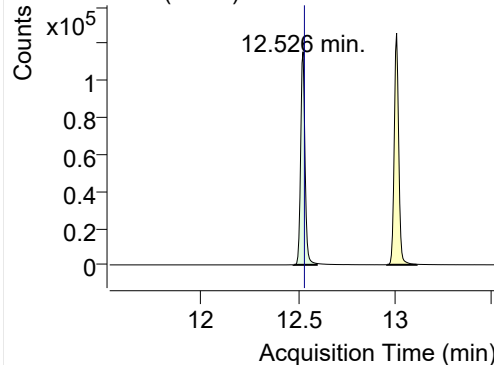
178.0, 179.0, 176.0



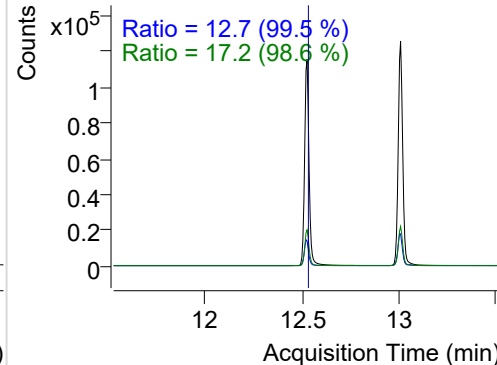
+ SIM (9.874-10.053 min, 18 scans) (\*\*) 220806

**Fluoranthene**

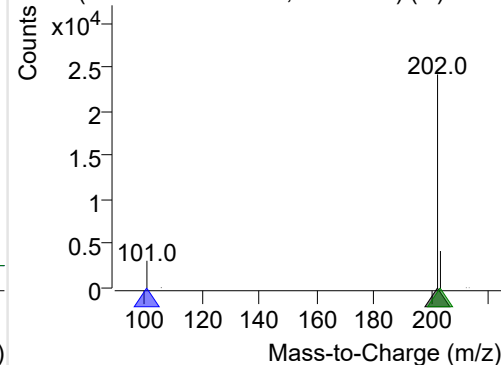
+ Selected Ion (202.0) 220806-PAHs-008.D



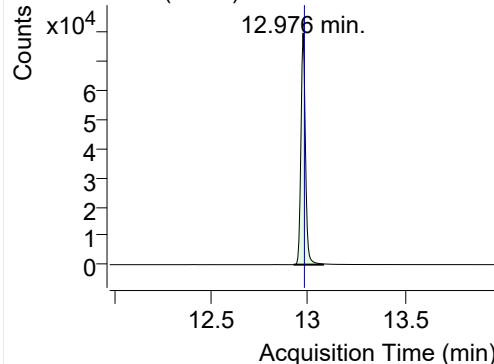
202.0, 101.0, 203.0



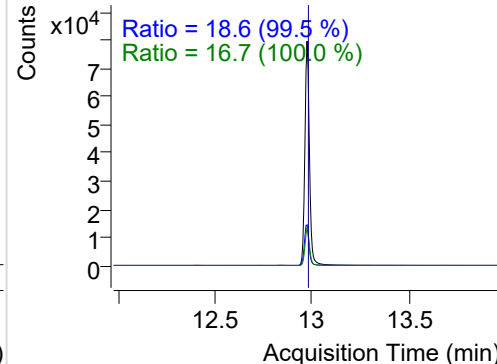
+ SIM (12.477-12.597 min, 23 scans) (\*\*) 220806

**LSS-D10-Pyrene**

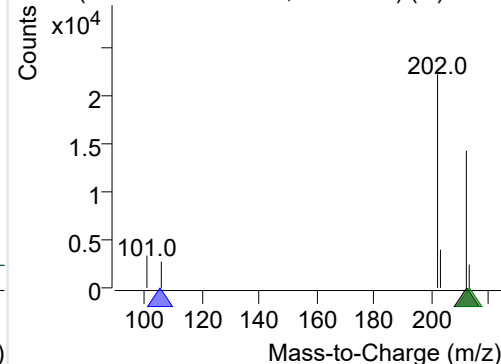
+ Selected Ion (212.0) 220806-PAHs-008.D



212.0, 106.0, 213.0

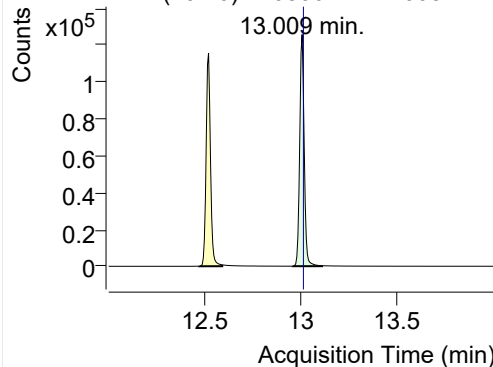


+ SIM (12.928-13.079 min, 28 scans) (\*\*) 220806

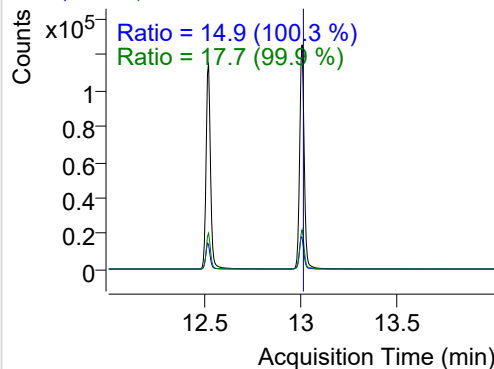


**Pyrene**

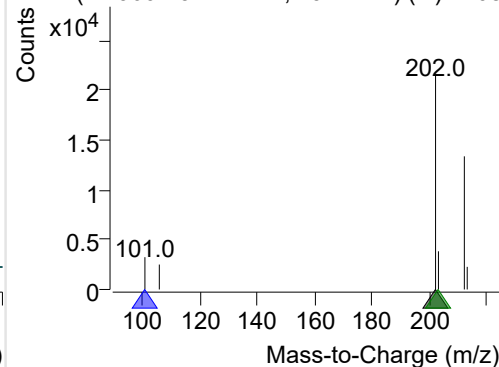
+ Selected Ion (202.0) 220806-PAHs-008.D



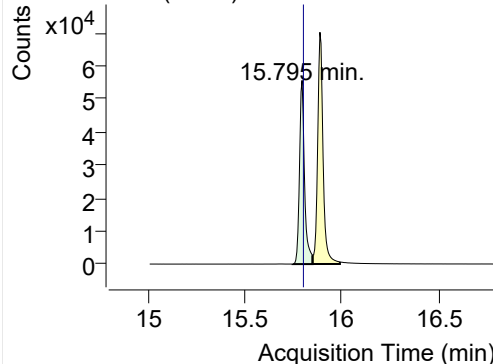
202.0, 101.0, 203.0



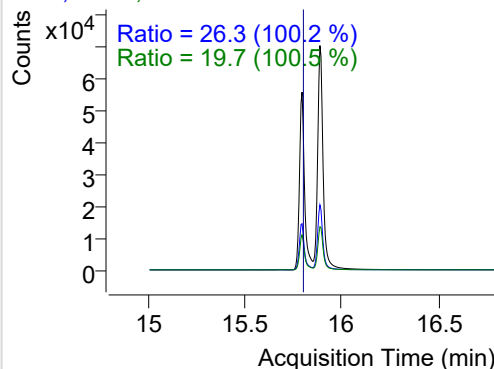
+ SIM (12.960-13.112 min, 29 scans) (\*\*) 2208

**Benz(a)anthracene**

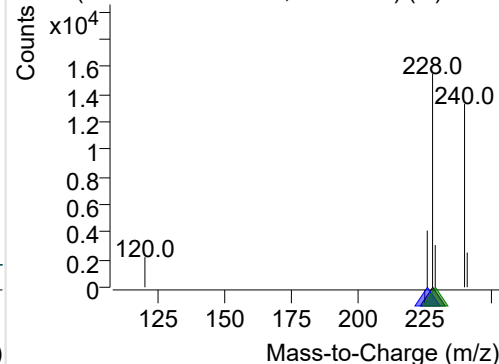
+ Selected Ion (228.0) 220806-PAHs-008.D



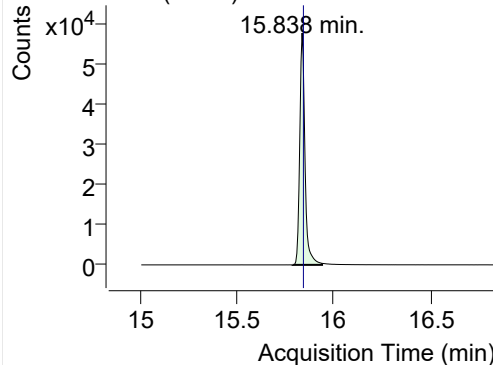
228.0, 226.0, 229.0



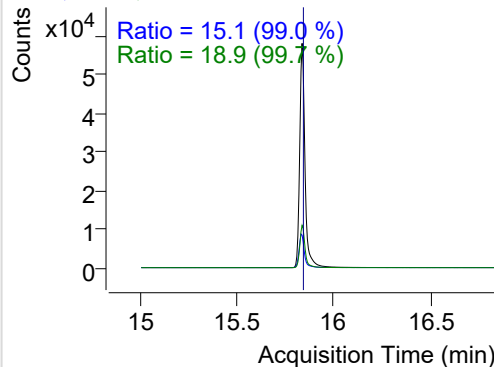
+ SIM (15.746-15.849 min, 20 scans) (\*\*) 2208

**IS-D12-Chrysene**

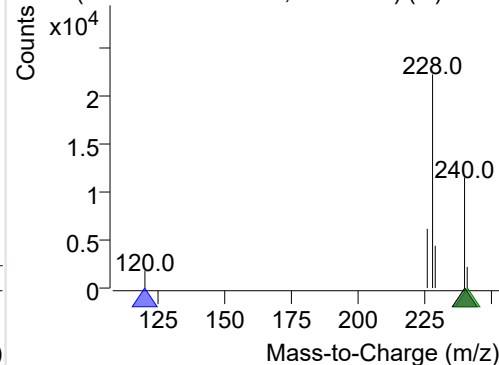
+ Selected Ion (240.0) 220806-PAHs-008.D



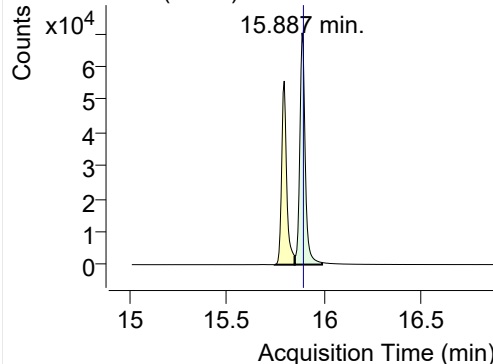
240.0, 120.0, 241.0



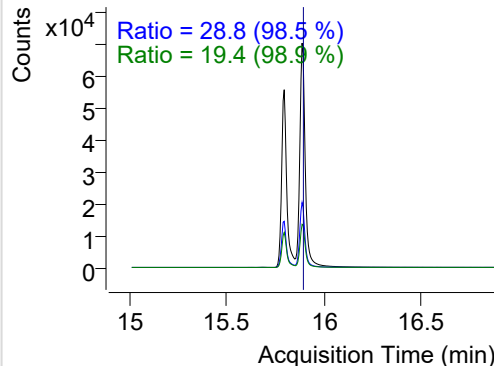
+ SIM (15.789-15.941 min, 29 scans) (\*\*) 2208

**Chrysene**

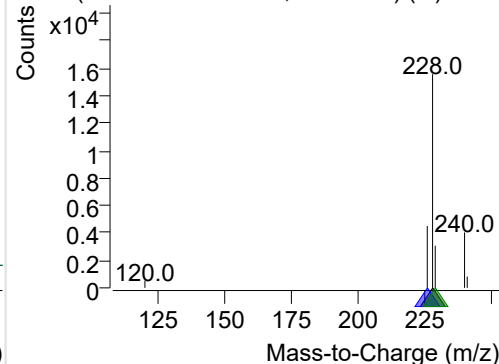
+ Selected Ion (228.0) 220806-PAHs-008.D



228.0, 226.0, 229.0

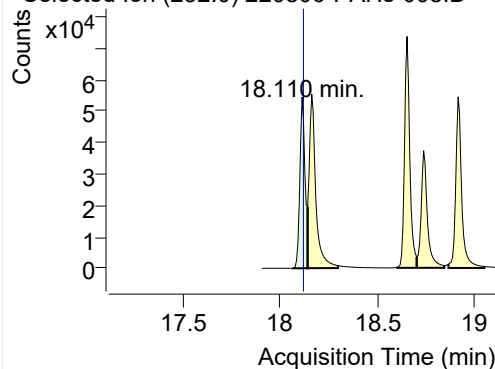


+ SIM (15.849-15.990 min, 27 scans) (\*\*) 2208

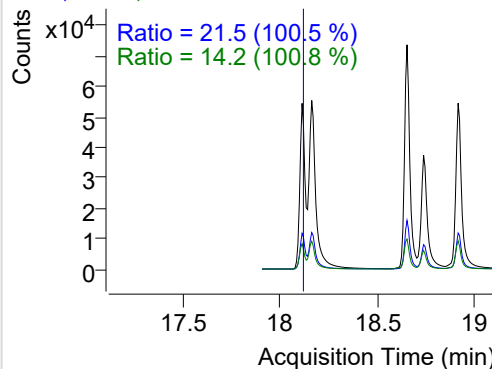


**Benzo(b)fluoranthene**

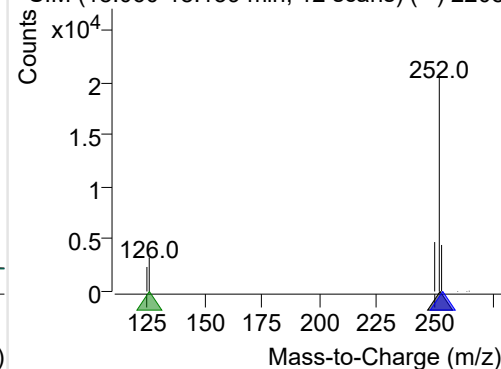
+ Selected Ion (252.0) 220806-PAHs-008.D



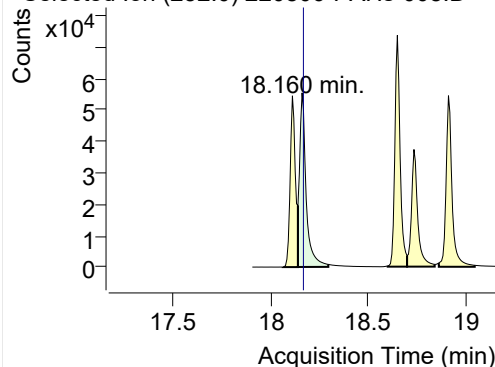
252.0, 253.0, 126.0



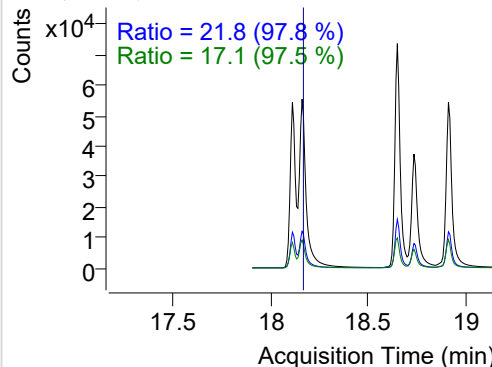
+ SIM (18.060-18.139 min, 12 scans) (\*\*) 2208

**Benzo(k)fluoranthene**

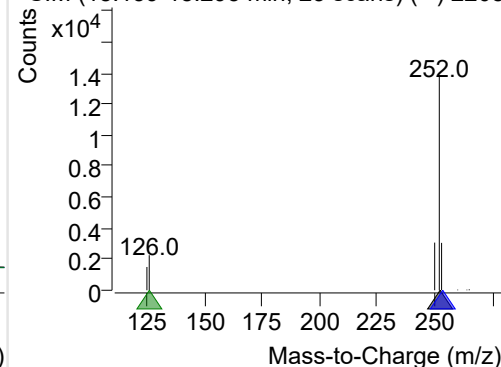
+ Selected Ion (252.0) 220806-PAHs-008.D



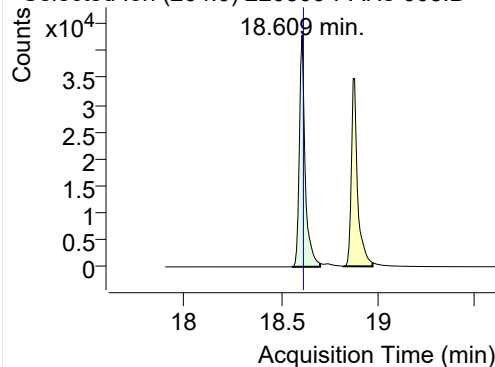
252.0, 253.0, 126.0



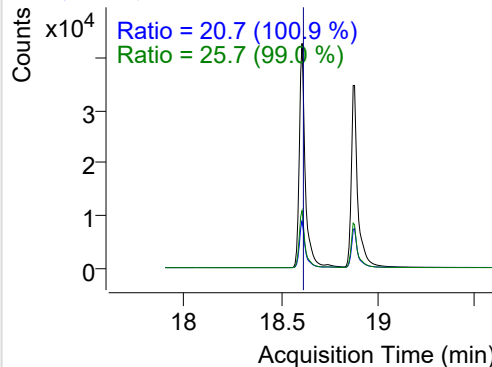
+ SIM (18.139-18.295 min, 23 scans) (\*\*) 2208

**SS-D12-Benzo(e)pyrene**

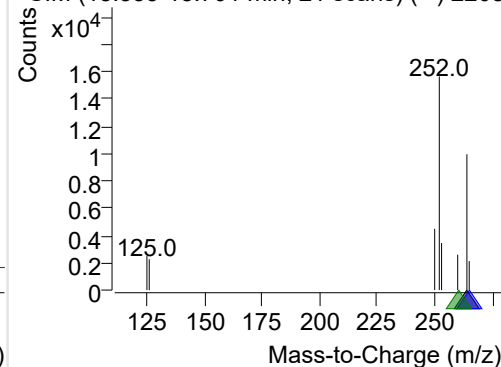
+ Selected Ion (264.0) 220806-PAHs-008.D



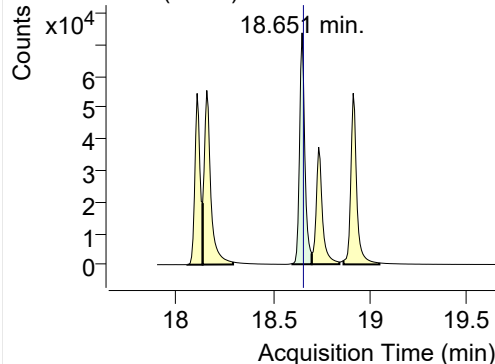
264.0, 265.0, 260.0



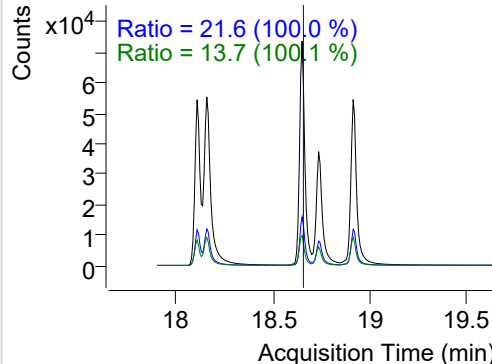
+ SIM (18.555-18.701 min, 21 scans) (\*\*) 2208

**Benzo(e)pyrene**

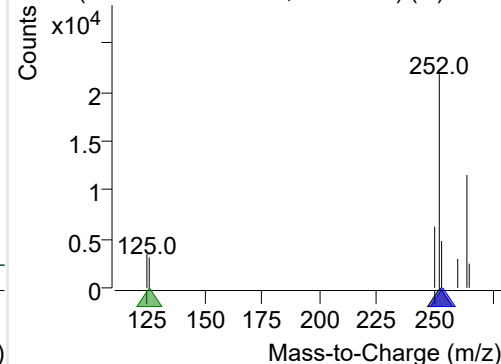
+ Selected Ion (252.0) 220806-PAHs-008.D



252.0, 253.0, 126.0

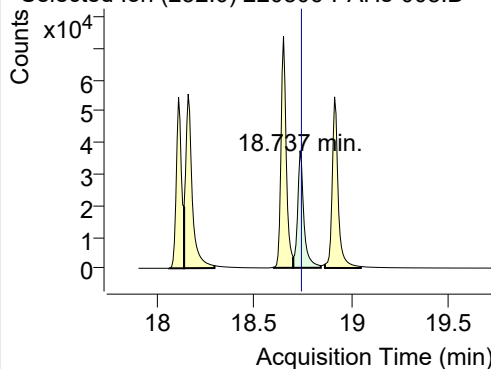


+ SIM (18.601-18.701 min, 15 scans) (\*\*) 2208

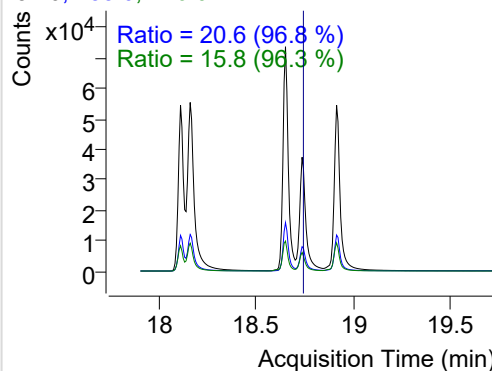


**Benzo(a)pyrene**

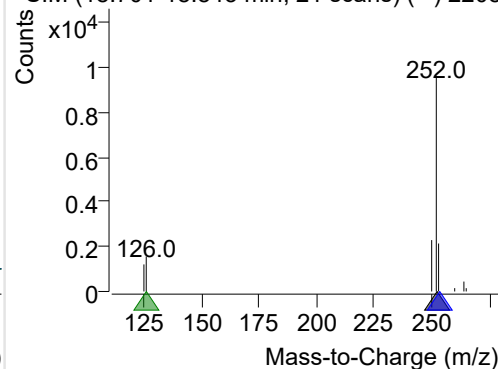
+ Selected Ion (252.0) 220806-PAHs-008.D



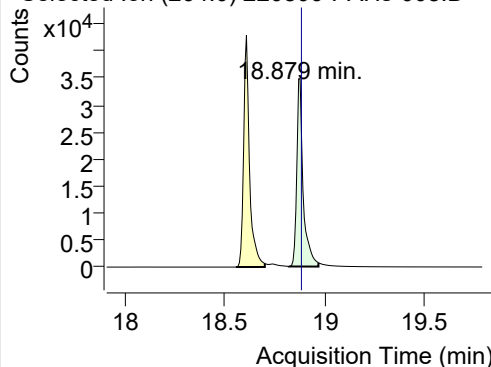
252.0, 253.0, 126.0



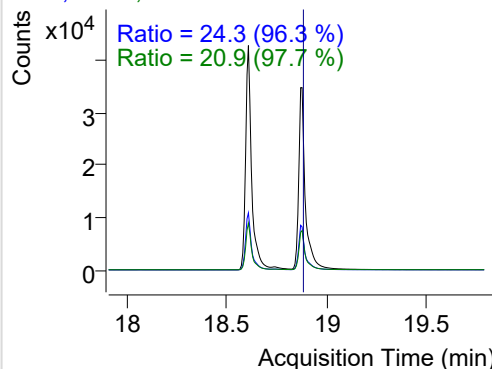
+ SIM (18.701-18.843 min, 21 scans) (\*\*) 2208

**IS-D12-Perylene**

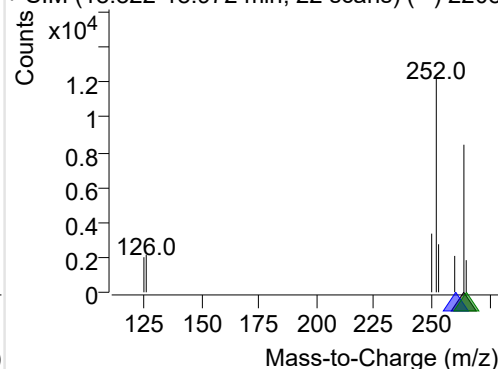
+ Selected Ion (264.0) 220806-PAHs-008.D



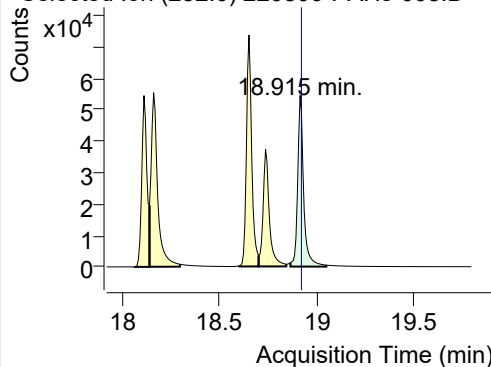
264.0, 260.0, 265.0



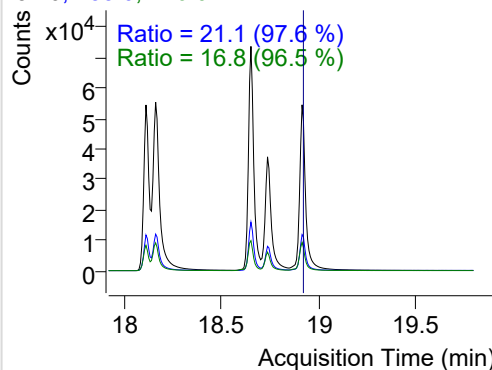
+ SIM (18.822-18.972 min, 22 scans) (\*\*) 2208

**Perylene**

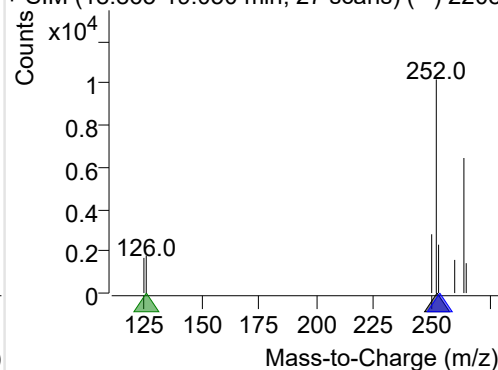
+ Selected Ion (252.0) 220806-PAHs-008.D



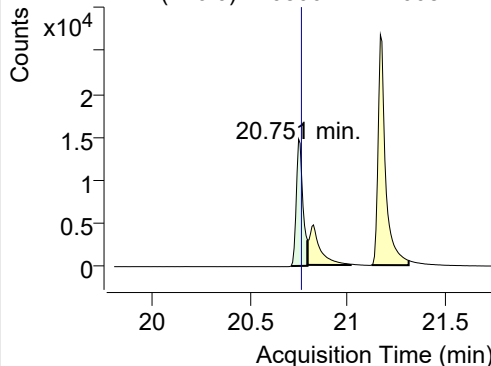
252.0, 253.0, 126.0



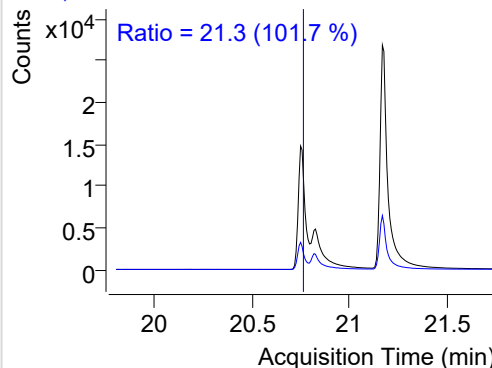
+ SIM (18.865-19.050 min, 27 scans) (\*\*) 2208

**Indeno(1,2,3-c,d)pyrene**

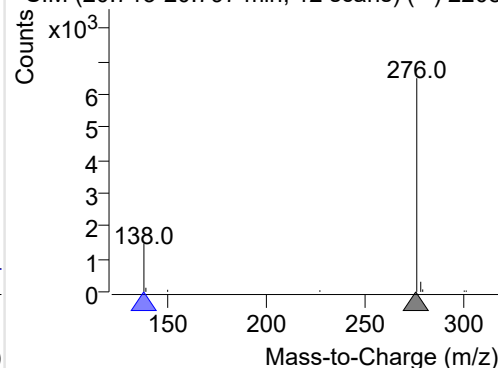
+ Selected Ion (276.0) 220806-PAHs-008.D



276.0, 138.0

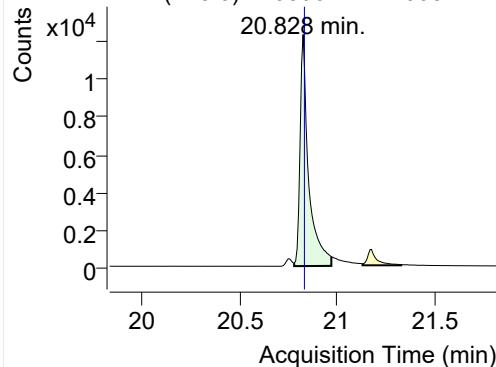


+ SIM (20.713-20.797 min, 12 scans) (\*\*) 2208

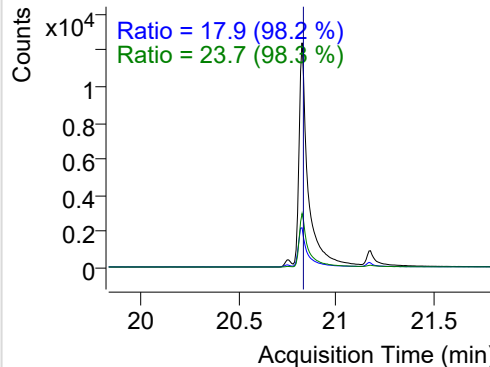


**Dibenz(a,h)anthracene**

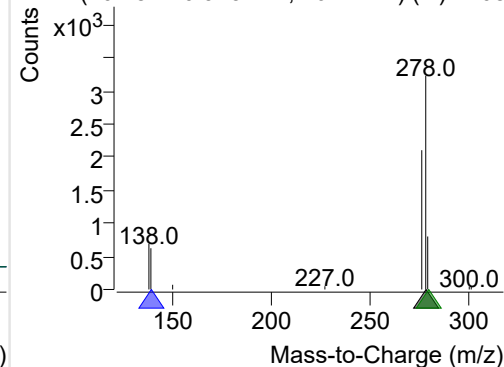
+ Selected Ion (278.0) 220806-PAHs-008.D



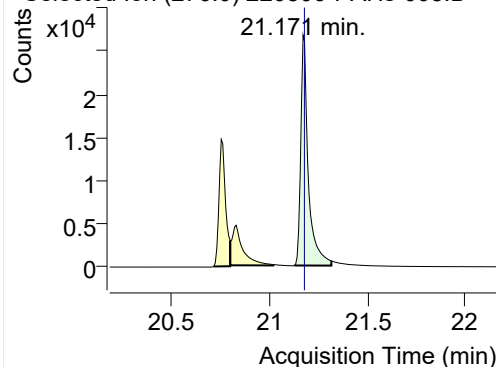
278.0, 139.0, 279.0



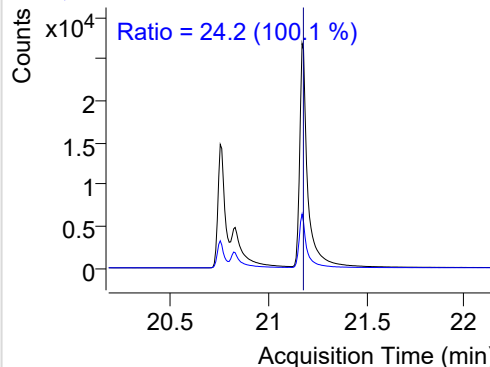
+ SIM (20.782-20.973 min, 26 scans) (\*\*) 2208

**Benzo(g,h,i)perylene**

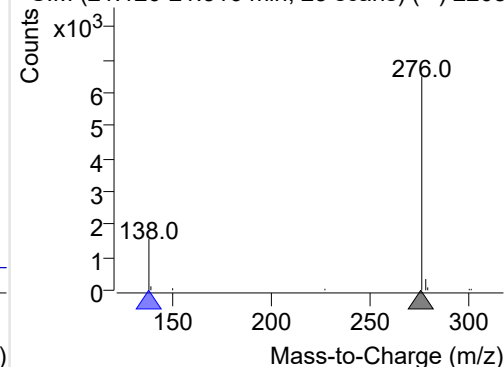
+ Selected Ion (276.0) 220806-PAHs-008.D



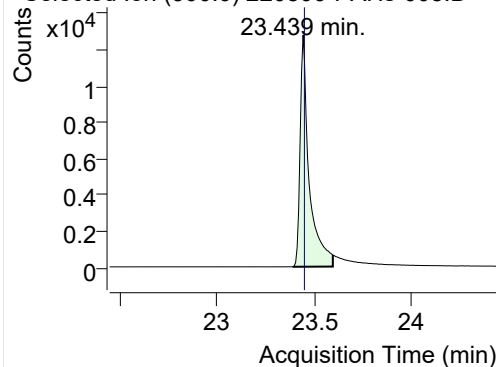
276.0, 138.0



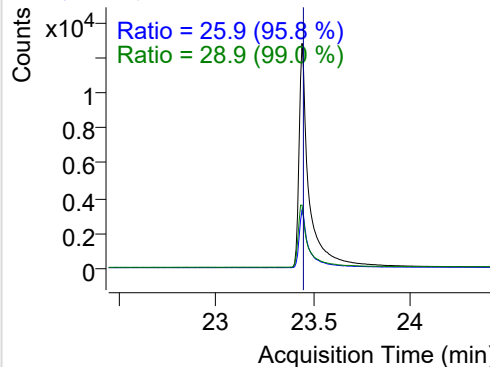
+ SIM (21.126-21.316 min, 25 scans) (\*\*) 2208

**Coronene**

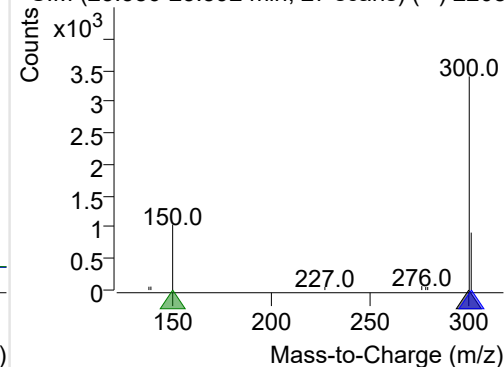
+ Selected Ion (300.0) 220806-PAHs-008.D



300.0, 301.0, 150.0



+ SIM (23.386-23.592 min, 27 scans) (\*\*) 2208





## Quantitative Analysis Sample Based Report

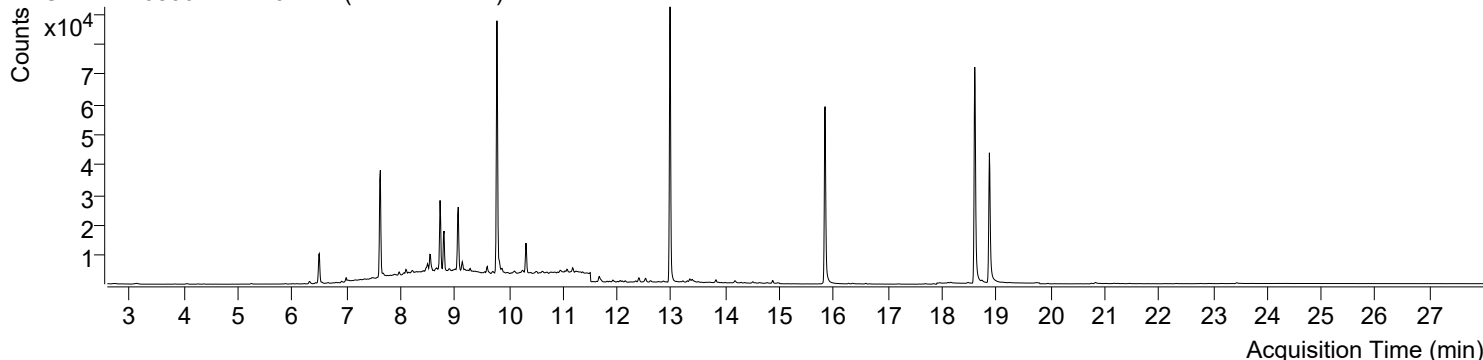


Trusted Answers

|                           |                                                                                            |                       |                        |
|---------------------------|--------------------------------------------------------------------------------------------|-----------------------|------------------------|
| Batch Data Path File Name | D:\MassHunter\GCMS\1\data\PAHs\220806-PAHs-Sample\QuantResults\220806-PAHs-Quant.batch.bin |                       |                        |
| Analysis Time Stamp       | 2022-10-10 오전 10:12:04                                                                     | Analyst Name          | DESKTOP-86B7UPG\5975MS |
| Report Generation Time    | 2022-10-10 오전 10:12:12                                                                     | Report Generator Name | DESKTOP-86B7UPG\5975MS |
| Calibration Last Update   | 2022-12-15 오후 3:30:46                                                                      | Batch State           | Processed              |
| Analyze Quant Version     | 10.2                                                                                       | Report Quant Version  | 10.2                   |
| Acq. Date-Time            | 2022-08-06 오후 3:42:12                                                                      | Data File             | 220806-PAHs-011.D      |
| Type                      | Sample                                                                                     | Name                  | Method blank           |
| Dil.                      | 1                                                                                          | Acq. Method File      | PAHs 19mix-Method      |

## Sample Chromatogram

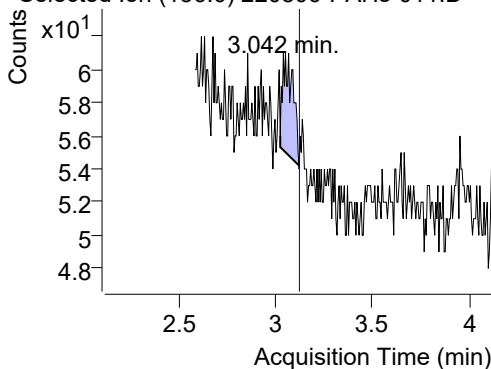
+ TIC SIM 220806-PAHs-011.D (Method blank)



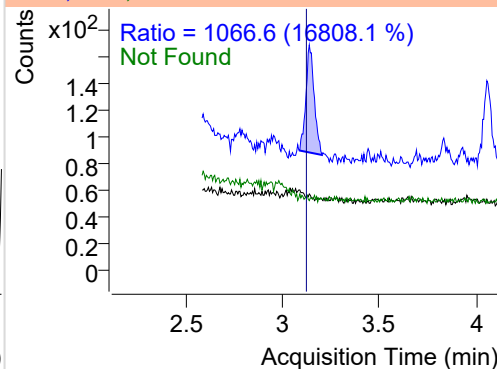
| Name                    | RT     | Transition | Resp.  | Height   | Final Conc. Units | Ratio |
|-------------------------|--------|------------|--------|----------|-------------------|-------|
| IS-D8-Naphthalene       | 3.042  | 136.0      | 22     | 5.86     | ND ng/ml          |       |
| Naphthalene             | 3.118  | 128.0      | 733    | 153.98   | ND ng/ml          | 8.8   |
| Acenaphthylene          | 6.161  | 152.0      | 14     | 10.36    | ND ng/ml          |       |
| IS-D10-Acenaphthene     | 6.499  | 164.0      | 9026   | 4758.62  | ND ng/ml          | 94.2  |
| Acenaphthene            | 6.546  | 154.0      | 745    | 262.44   | ND ng/ml          | 6.2   |
| LSS-D10-Fluorene        | 7.627  | 176.0      | 28442  | 16302.63 | ND ng/ml          | 93.1  |
| Fluorene                | 7.680  | 166.0      | 691    | 264.82   | ND ng/ml          | 174.6 |
| IS-D10-Phenanthrene     | 9.780  | 188.0      | 109528 | 66842.98 | ND ng/ml          | 15.7  |
| Phenanthrene            | 9.822  | 178.0      | 2879   | 1447.78  | ND ng/ml          | 24.4  |
| Anthracene              | 9.822  | 178.0      | 2879   | 1447.78  | ND ng/ml          | 24.4  |
| Fluoranthene            | 12.526 | 202.0      | 1244   | 717.02   | ND ng/ml          | 51.1  |
| LSS-D10-Pyrene          | 12.976 | 212.0      | 109649 | 67677.01 | ND ng/ml          | 17.9  |
| Pyrene                  | 13.009 | 202.0      | 1282   | 618.42   | ND ng/ml          | 9.2   |
| Benz(a)anthracene       | 15.795 | 228.0      | 266    | 152.50   | ND ng/ml          | 42.6  |
| IS-D12-Chrysene         | 15.838 | 240.0      | 82995  | 44357.40 | ND ng/ml          | 18.8  |
| Chrysene                | 15.887 | 228.0      | 575    | 207.43   | ND ng/ml          | 24.8  |
| Benzo(b)fluoranthene    | 18.110 | 252.0      | 249    | 130.24   | ND ng/ml          |       |
| Benzo(k)fluoranthene    | 18.160 | 252.0      | 662    | 170.34   | ND ng/ml          | 24.6  |
| SS-D12-Benzo(e)pyrene   | 18.601 | 264.0      | 98455  | 48617.97 | ND ng/ml          | 24.6  |
| Benzo(e)pyrene          | 18.644 | 252.0      | 268    | 112.58   | ND ng/ml          |       |
| Benzo(a)pyrene          | 18.744 | 252.0      | 394    | 142.10   | ND ng/ml          | 27.5  |
| IS-D12-Perylene         | 18.872 | 264.0      | 59993  | 29255.00 | ND ng/ml          | 24.6  |
| Perylene                | 18.915 | 252.0      | 299    | 119.98   | ND ng/ml          | 9.5   |
| Indeno(1,2,3-c,d)pyrene | 20.759 | 276.0      | 362    | 158.87   | ND ng/ml          | 15.9  |
| Dibenz(a,h)anthracene   | 20.835 | 278.0      | 1000   | 217.29   | ND ng/ml          | 22.4  |
| Benzo(g,h,i)perylene    | 21.171 | 276.0      | 375    | 109.91   | ND ng/ml          | 16.0  |
| Coronene                | 23.439 | 300.0      | 781    | 177.11   | ND ng/ml          | 17.5  |

## IS-D8-Naphthalene

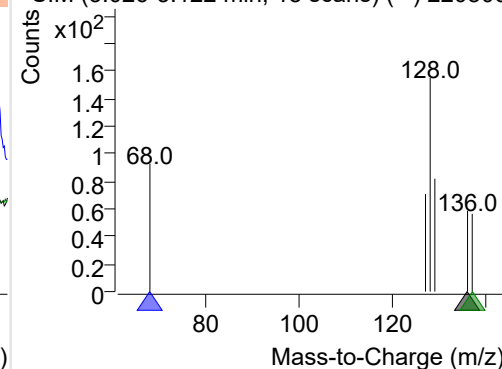
+ Selected Ion (136.0) 220806-PAHs-011.D



136.0, 68.0, 137.0

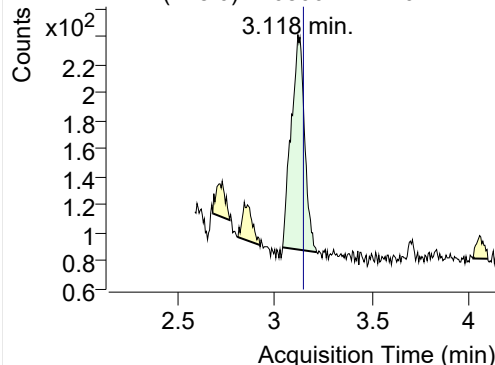


+ SIM (3.026-3.122 min, 18 scans) (\*\*) 220806

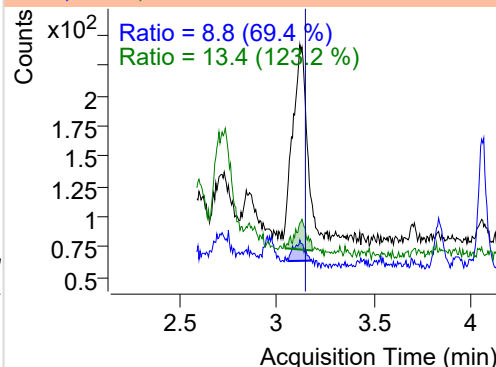


**Naphthalene**

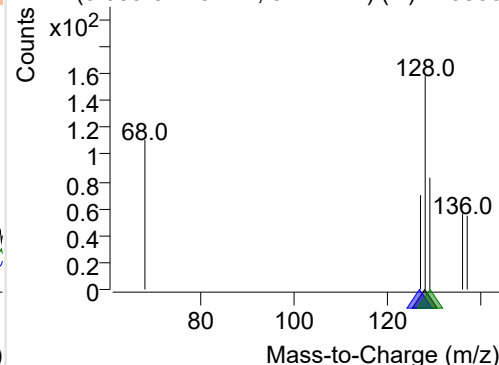
+ Selected Ion (128.0) 220806-PAHs-011.D



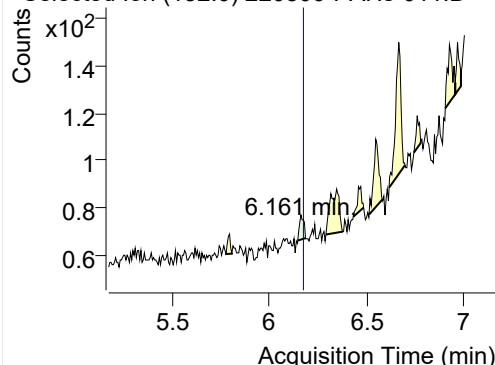
128.0, 127.0, 129.0



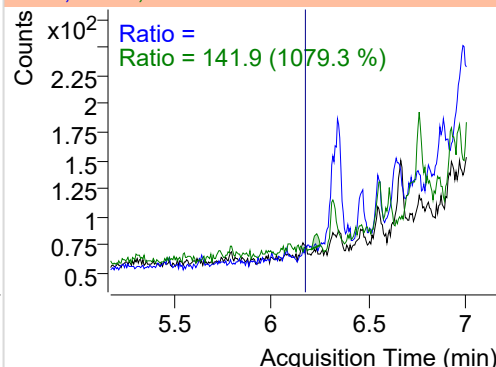
+ SIM (3.039-3.215 min, 32 scans) (\*\*) 220806

**Acenaphthylene**

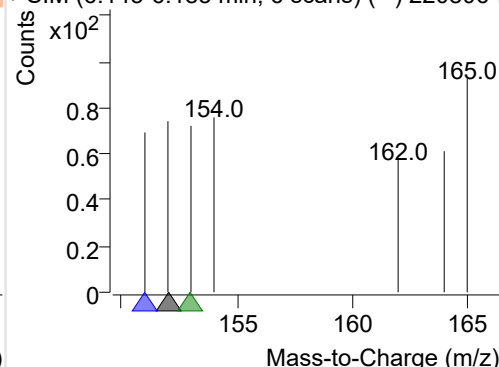
+ Selected Ion (152.0) 220806-PAHs-011.D



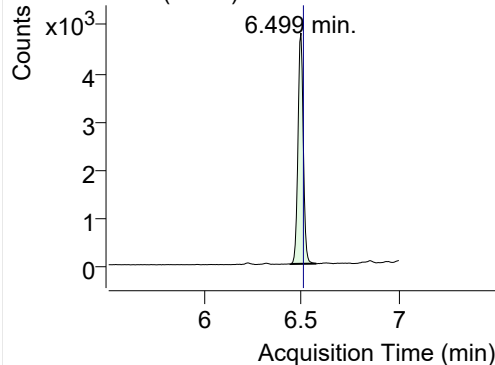
152.0, 151.0, 153.0



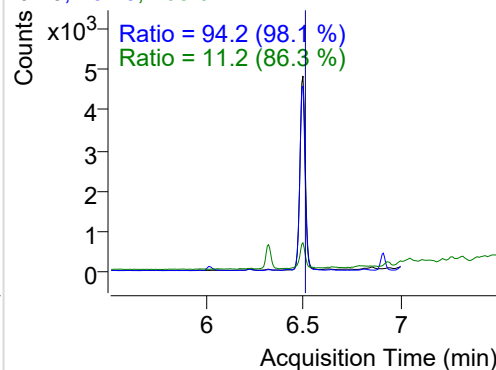
+ SIM (6.145-6.185 min, 6 scans) (\*\*) 220806-I

**IS-D10-Acenaphthene**

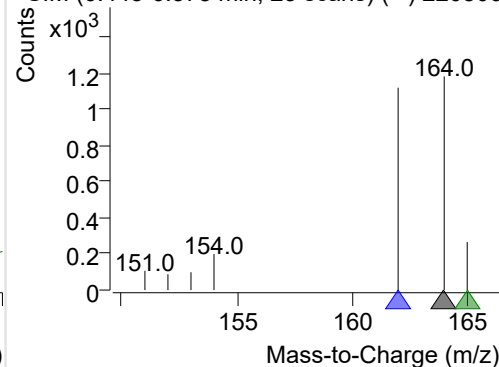
+ Selected Ion (164.0) 220806-PAHs-011.D



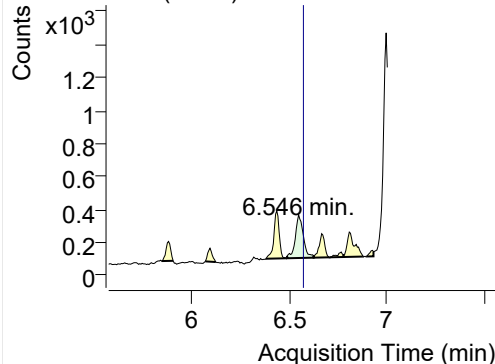
164.0, 162.0, 165.0



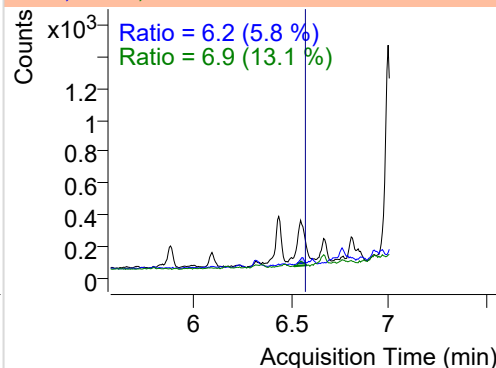
+ SIM (6.445-6.578 min, 23 scans) (\*\*) 220806

**Acenaphthene**

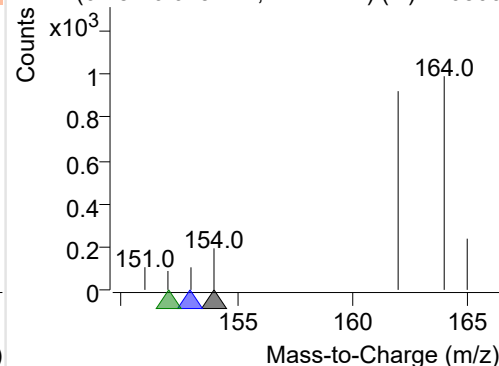
+ Selected Ion (154.0) 220806-PAHs-011.D



154.0, 153.0, 152.0

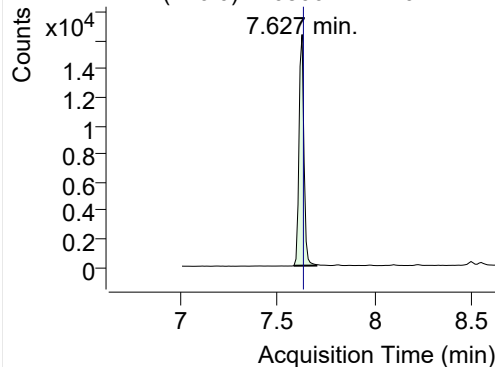


+ SIM (6.487-6.623 min, 24 scans) (\*\*) 220806

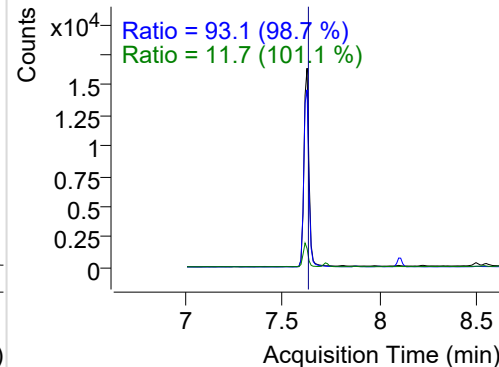


## LSS-D10-Fluorene

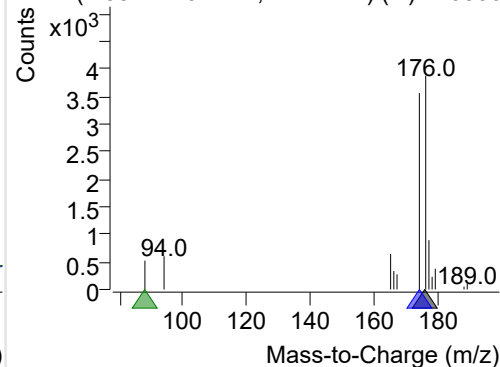
+ Selected Ion (176.0) 220806-PAHs-011.D



176.0, 174.0, 88.0

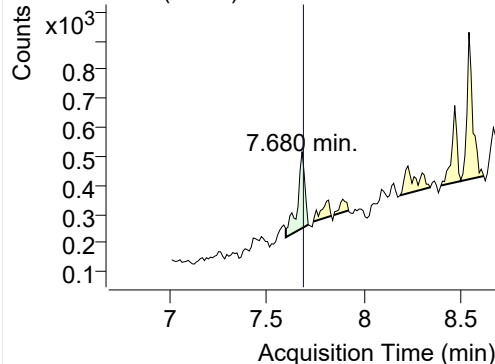


+ SIM (7.584-7.701 min, 12 scans) (\*\*) 220806

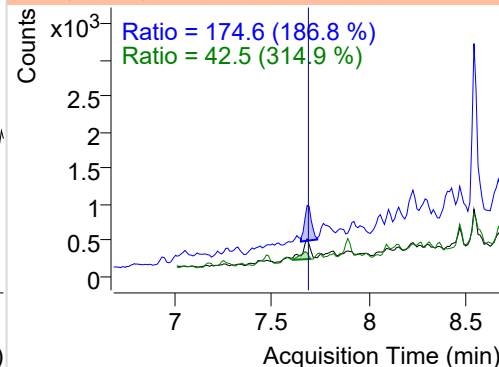


## Fluorene

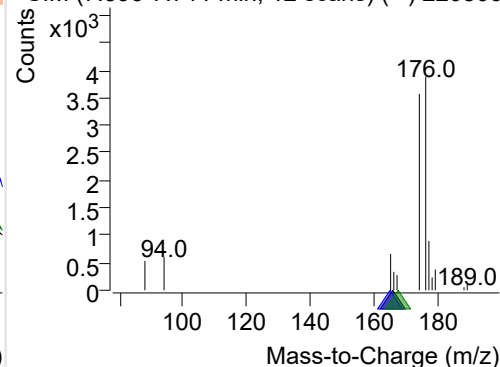
+ Selected Ion (166.0) 220806-PAHs-011.D



166.0, 165.0, 167.0

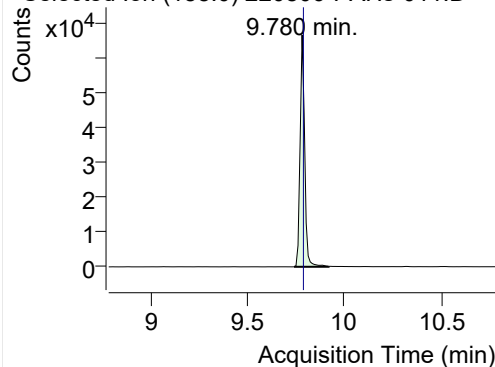


+ SIM (7.596-7.711 min, 12 scans) (\*\*) 220806

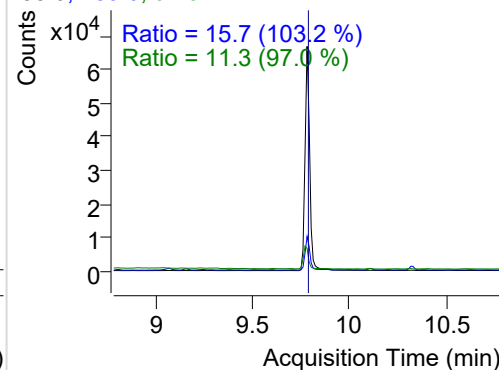


## IS-D10-Phenanthrene

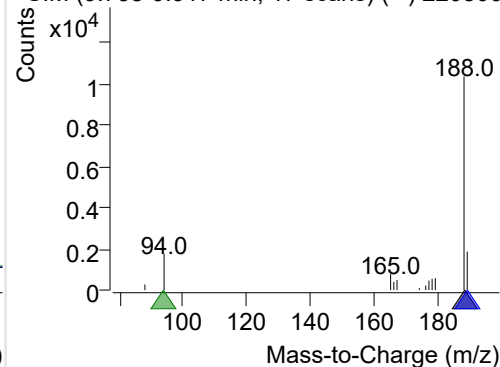
+ Selected Ion (188.0) 220806-PAHs-011.D



188.0, 189.0, 94.0

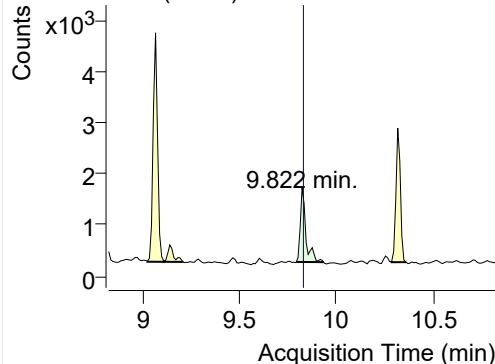


+ SIM (9.738-9.917 min, 17 scans) (\*\*) 220806

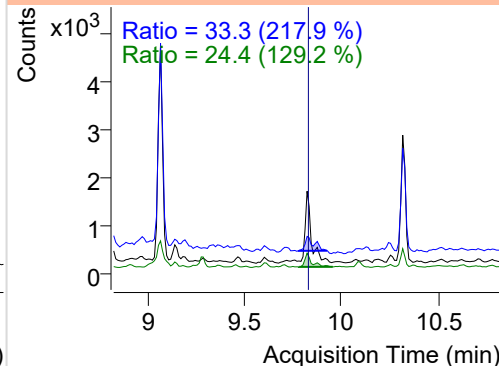


## Phenanthrene

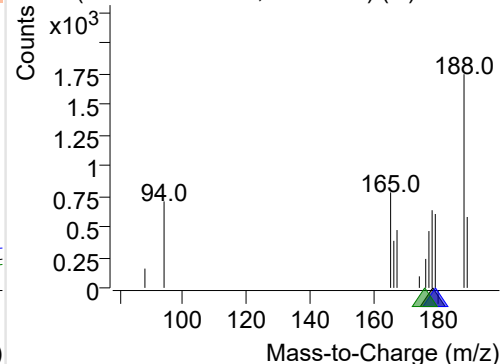
+ Selected Ion (178.0) 220806-PAHs-011.D



178.0, 179.0, 176.0

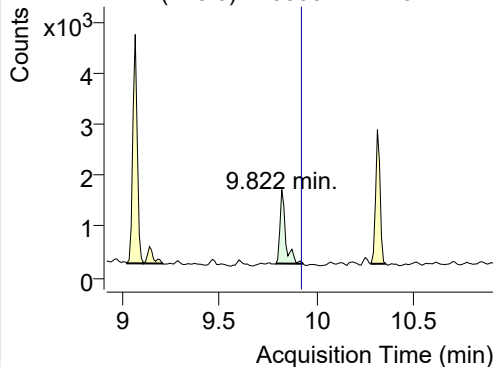


+ SIM (9.792-9.933 min, 13 scans) (\*\*) 220806

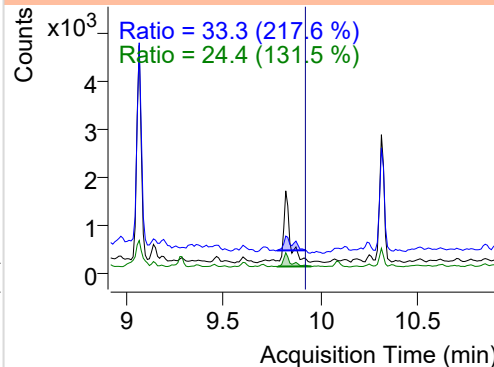


**Anthracene**

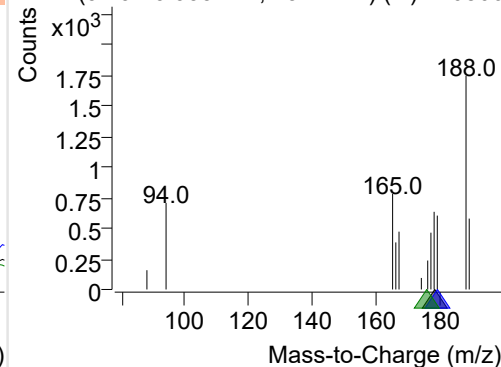
+ Selected Ion (178.0) 220806-PAHs-011.D



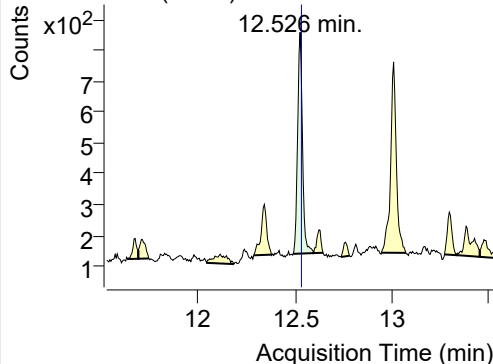
178.0, 179.0, 176.0



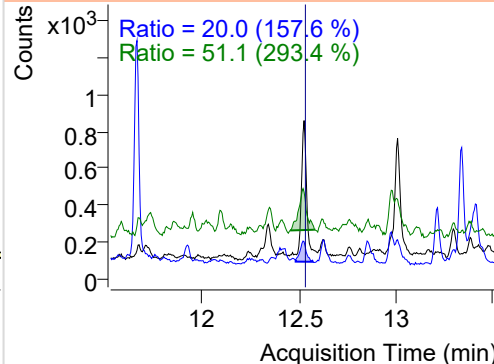
+ SIM (9.792-9.933 min, 13 scans) (\*\*) 220806

**Fluoranthene**

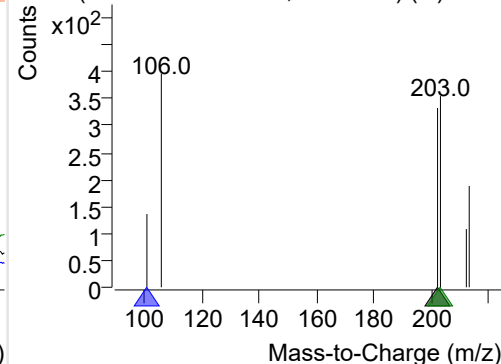
+ Selected Ion (202.0) 220806-PAHs-011.D



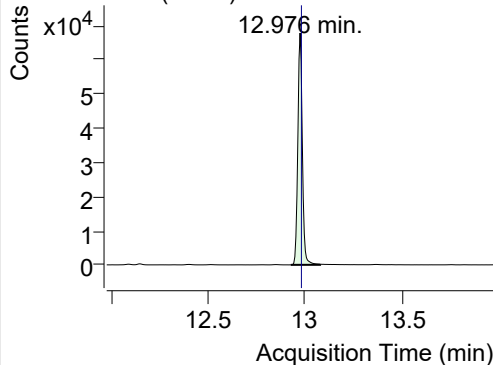
202.0, 101.0, 203.0



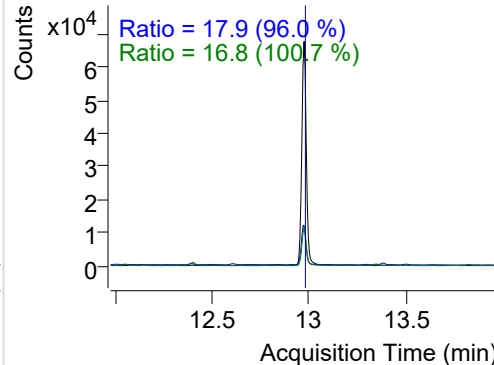
+ SIM (12.490-12.597 min, 20 scans) (\*\*) 2208

**LSS-D10-Pyrene**

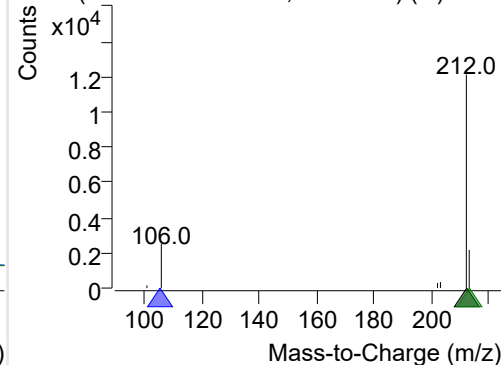
+ Selected Ion (212.0) 220806-PAHs-011.D



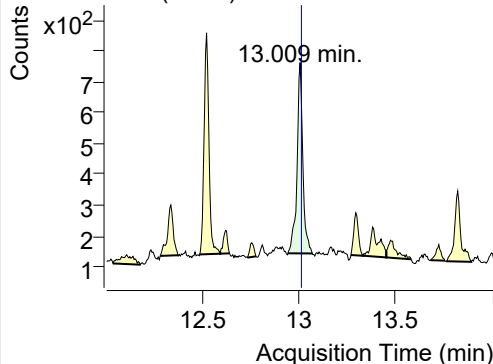
212.0, 106.0, 213.0



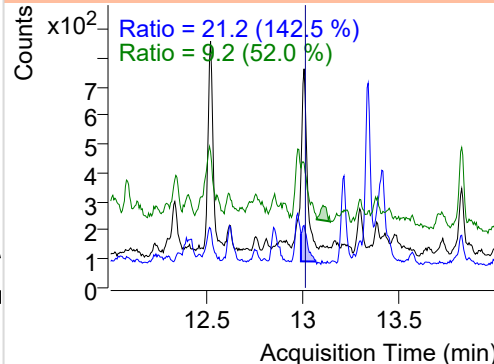
+ SIM (12.928-13.079 min, 28 scans) (\*\*) 2208

**Pyrene**

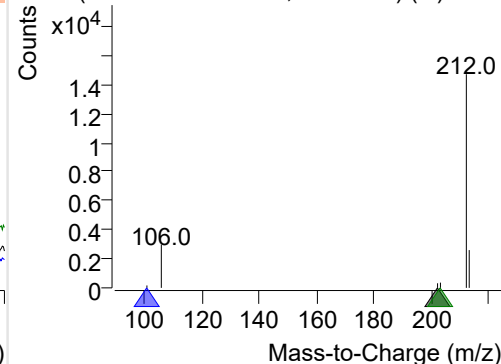
+ Selected Ion (202.0) 220806-PAHs-011.D



202.0, 101.0, 203.0



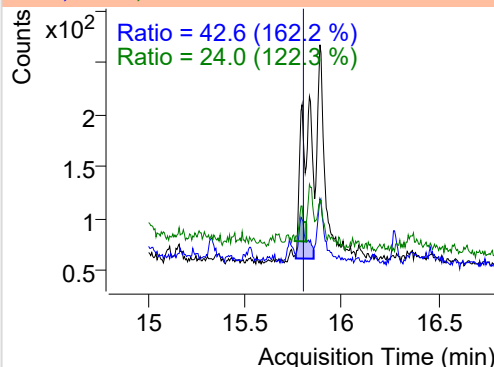
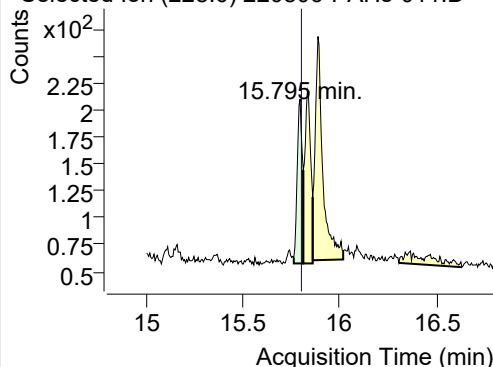
+ SIM (12.946-13.072 min, 23 scans) (\*\*) 2208



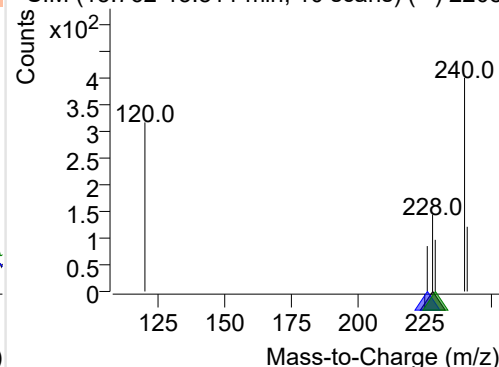
**Benz(a)anthracene**

+ Selected Ion (228.0) 220806-PAHs-011.D

228.0, 226.0, 229.0

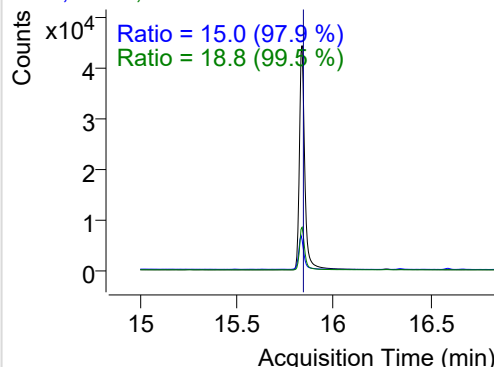
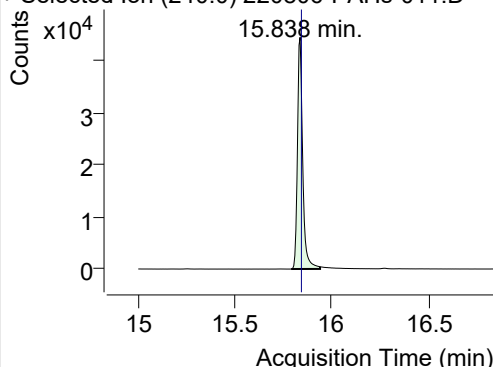


+ SIM (15.762-15.811 min, 10 scans) (\*\*) 2208

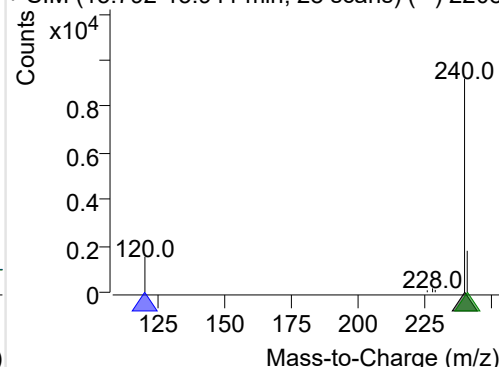
**IS-D12-Chrysene**

+ Selected Ion (240.0) 220806-PAHs-011.D

240.0, 120.0, 241.0

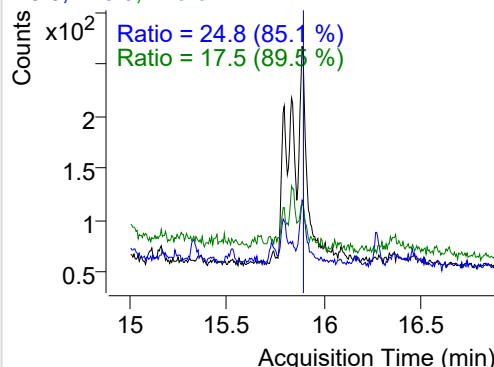
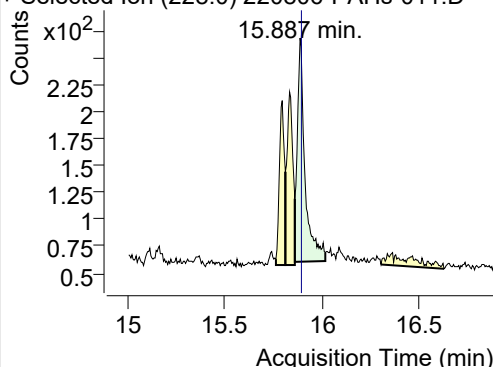


+ SIM (15.792-15.941 min, 28 scans) (\*\*) 2208

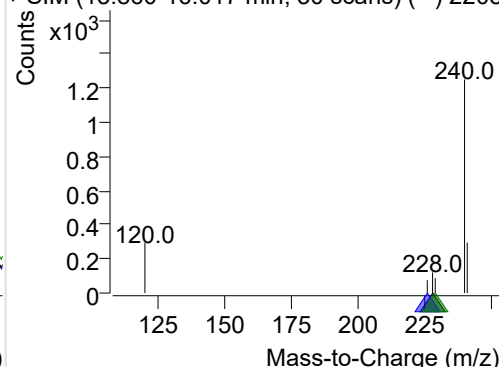
**Chrysene**

+ Selected Ion (228.0) 220806-PAHs-011.D

228.0, 226.0, 229.0

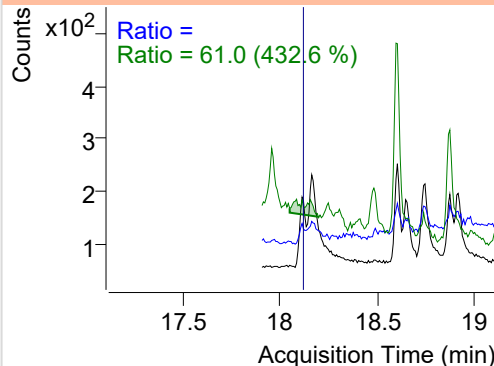
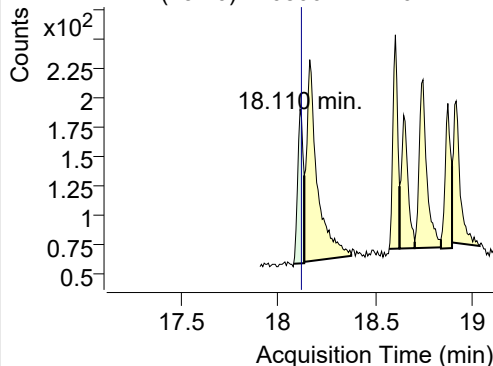


+ SIM (15.860-16.017 min, 30 scans) (\*\*) 2208

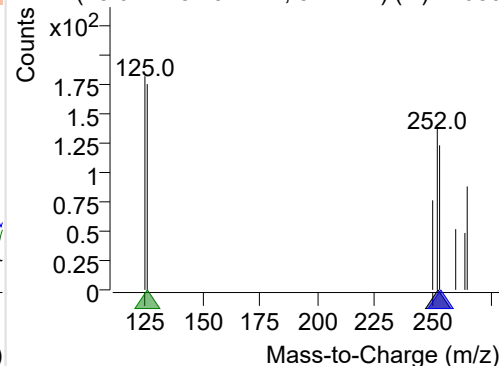
**Benzo(b)fluoranthene**

+ Selected Ion (252.0) 220806-PAHs-011.D

252.0, 253.0, 126.0



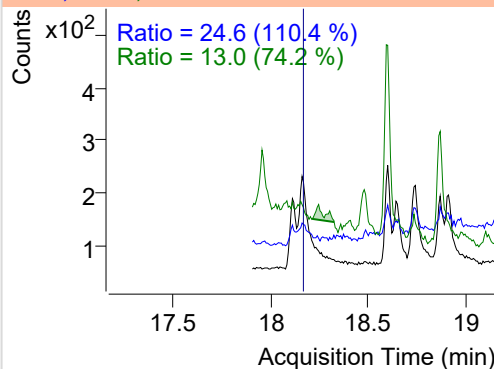
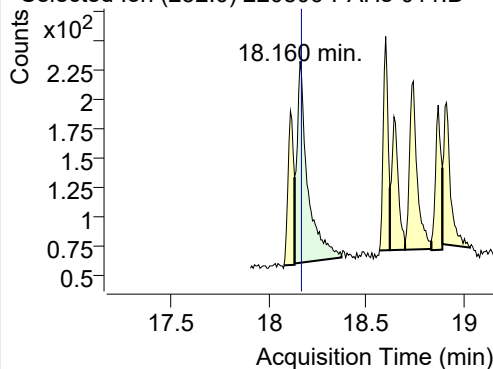
+ SIM (18.077-18.132 min, 8 scans) (\*\*) 22080



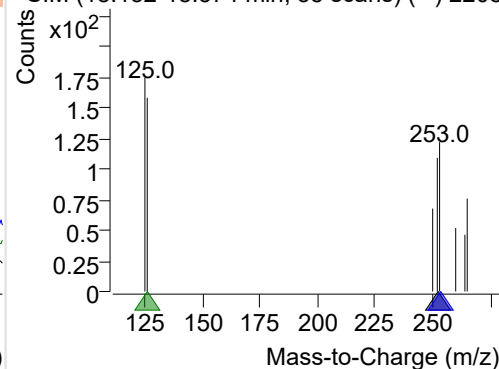
**Benzo(k)fluoranthene**

+ Selected Ion (252.0) 220806-PAHs-011.D

252.0, 253.0, 126.0

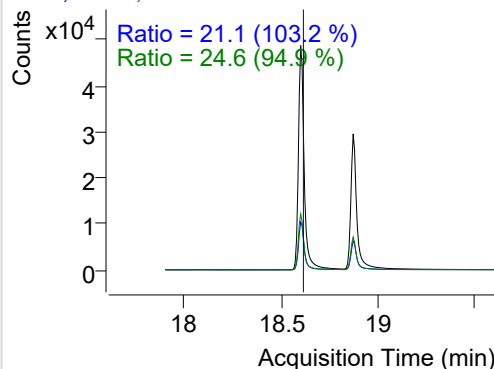
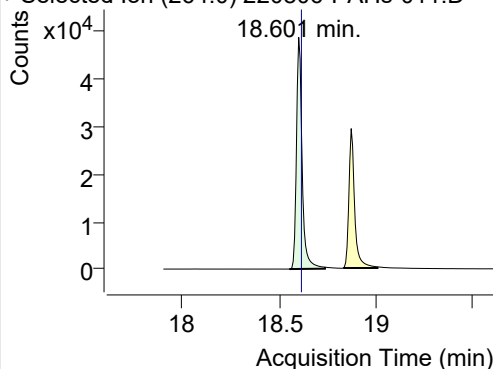


+ SIM (18.132-18.374 min, 35 scans) (\*\*) 2208

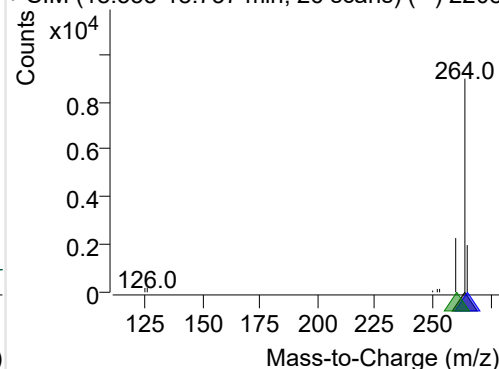
**SS-D12-Benzo(e)pyrene**

+ Selected Ion (264.0) 220806-PAHs-011.D

264.0, 265.0, 260.0

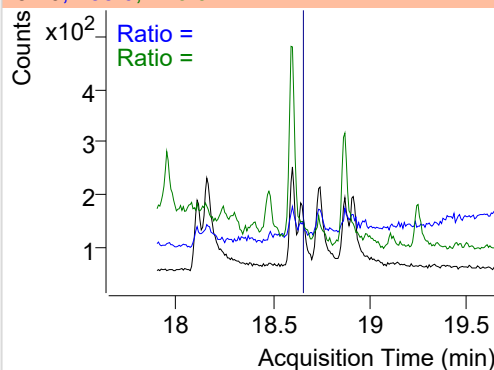
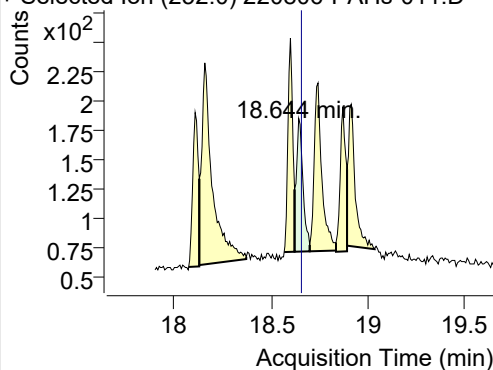


+ SIM (18.553-18.737 min, 26 scans) (\*\*) 2208

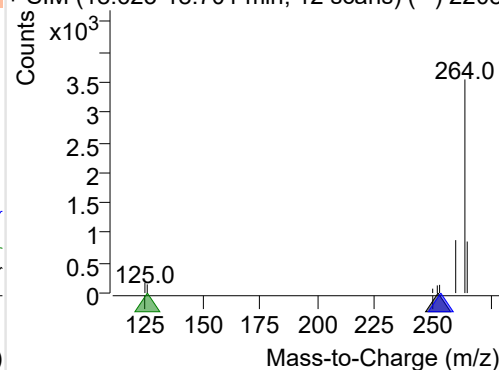
**Benzo(e)pyrene**

+ Selected Ion (252.0) 220806-PAHs-011.D

252.0, 253.0, 126.0

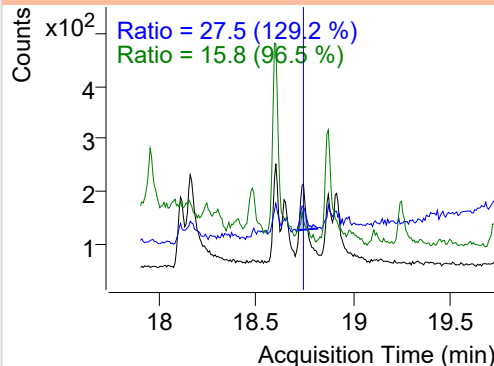
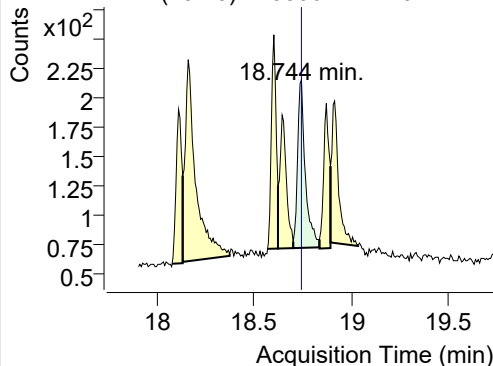


+ SIM (18.623-18.701 min, 12 scans) (\*\*) 2208

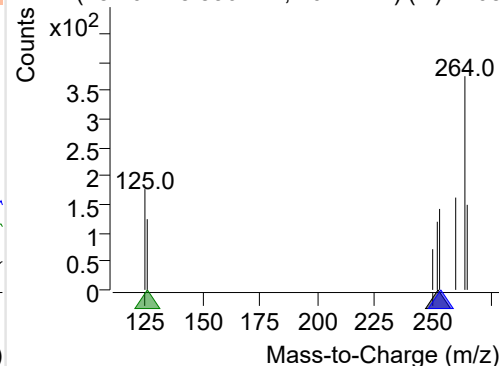
**Benzo(a)pyrene**

+ Selected Ion (252.0) 220806-PAHs-011.D

252.0, 253.0, 126.0

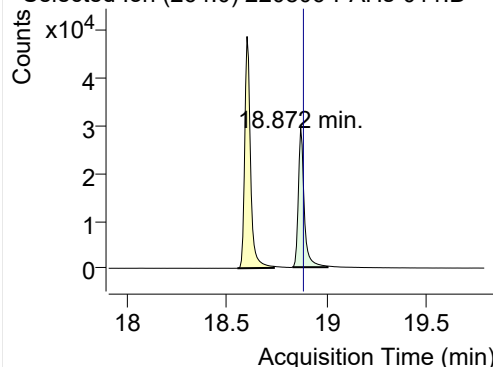


+ SIM (18.701-18.836 min, 20 scans) (\*\*) 2208

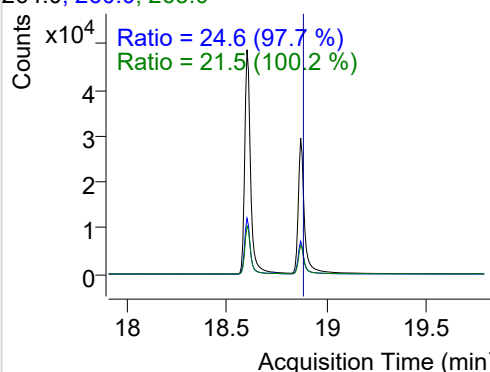


## IS-D12-Perylene

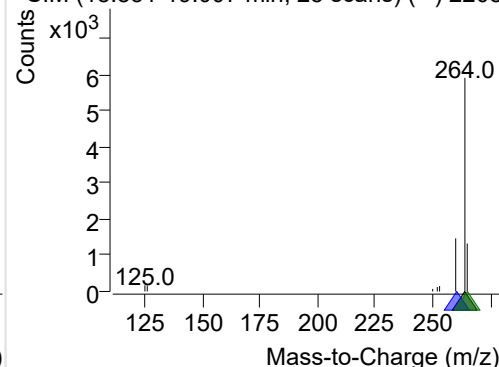
+ Selected Ion (264.0) 220806-PAHs-011.D



264.0, 260.0, 265.0

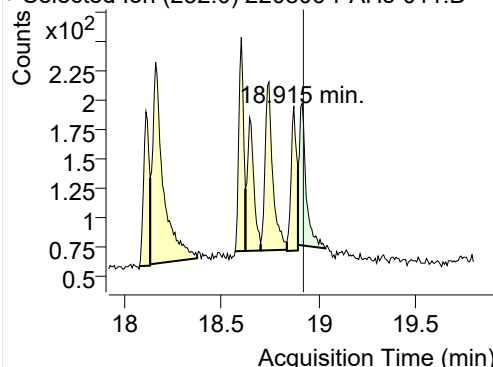


+ SIM (18.831-19.007 min, 25 scans) (\*\*) 2208

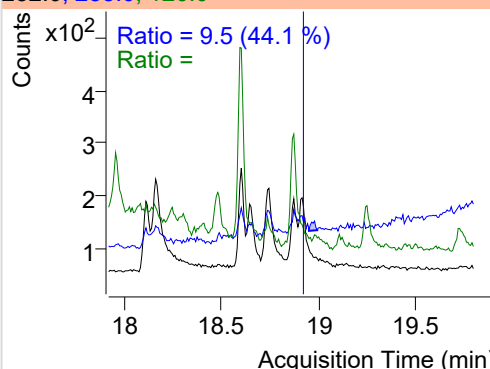


## Perylene

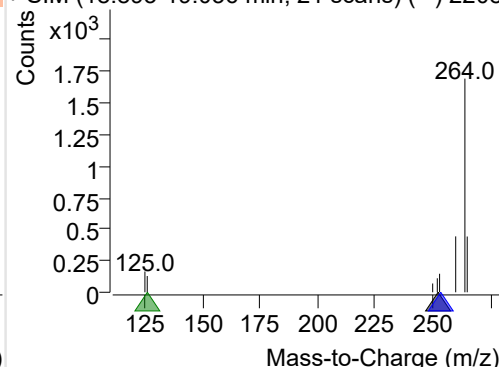
+ Selected Ion (252.0) 220806-PAHs-011.D



252.0, 253.0, 126.0

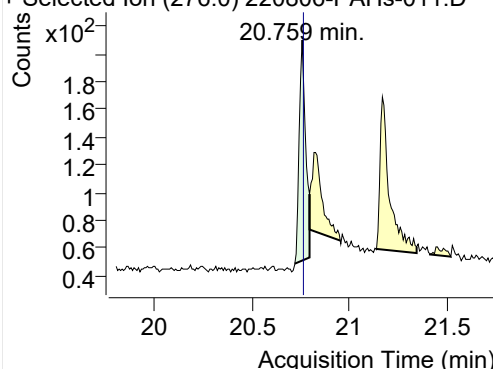


+ SIM (18.893-19.036 min, 21 scans) (\*\*) 2208

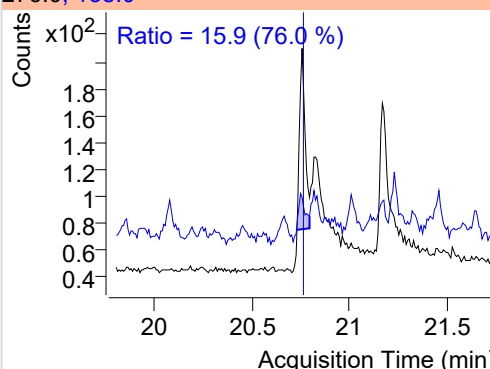


## Indeno(1,2,3-c,d)pyrene

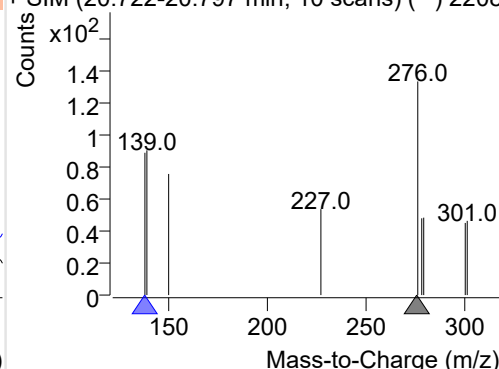
+ Selected Ion (276.0) 220806-PAHs-011.D



276.0, 138.0

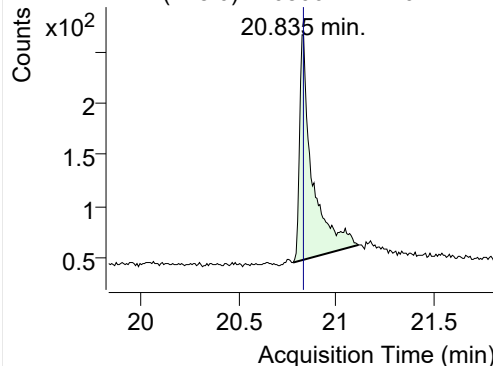


+ SIM (20.722-20.797 min, 10 scans) (\*\*) 2208

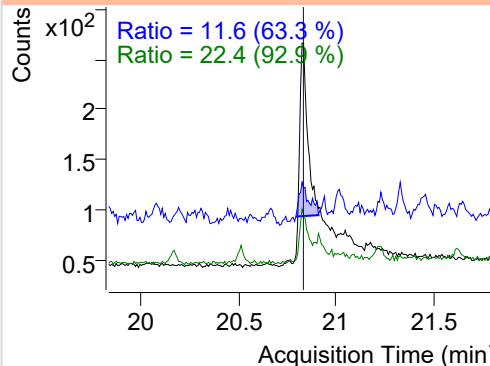


## Dibenz(a,h)anthracene

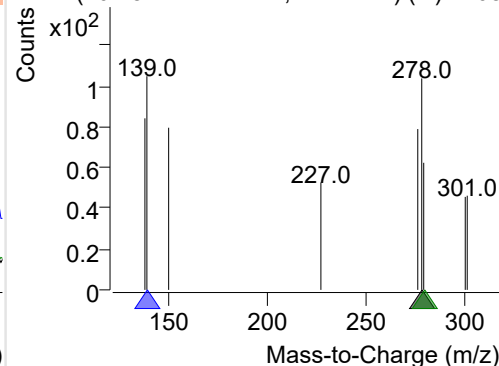
+ Selected Ion (278.0) 220806-PAHs-011.D



278.0, 139.0, 279.0

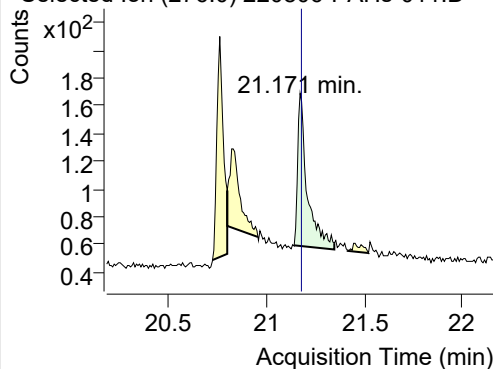


+ SIM (20.782-21.117 min, 44 scans) (\*\*) 2208

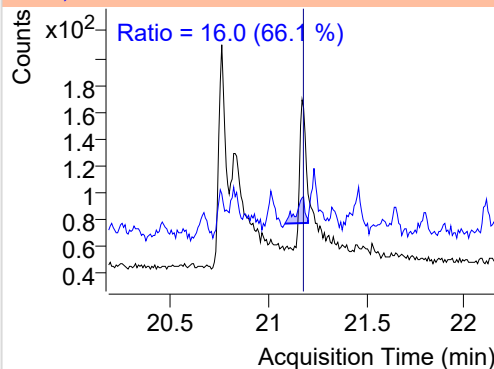


**Benzo(g,h,i)perylene**

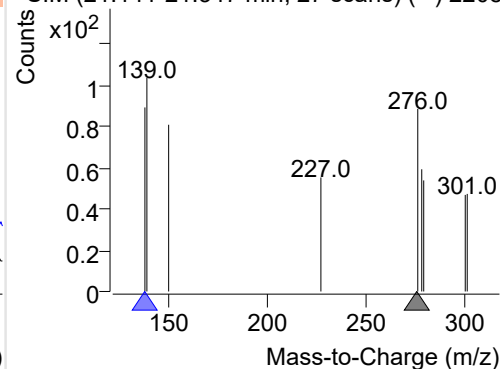
+ Selected Ion (276.0) 220806-PAHs-011.D



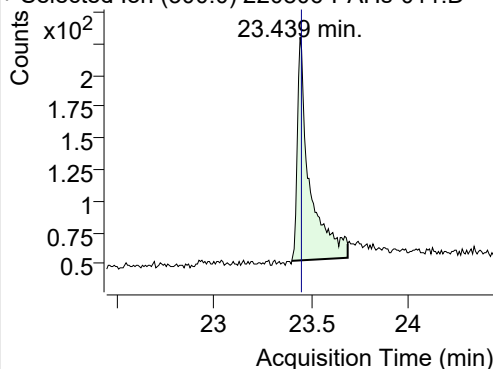
276.0, 138.0



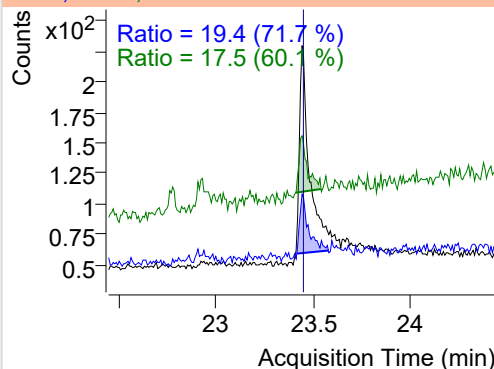
+ SIM (21.141-21.347 min, 27 scans) (\*\*) 2208

**Coronene**

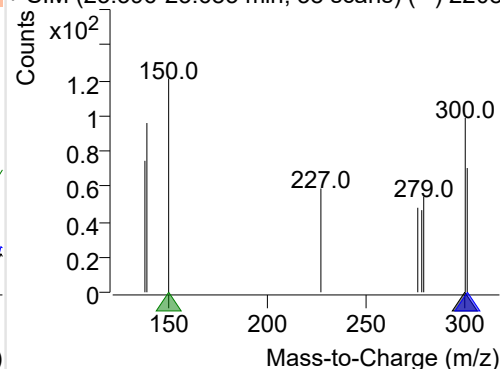
+ Selected Ion (300.0) 220806-PAHs-011.D



300.0, 301.0, 150.0



+ SIM (23.396-23.683 min, 38 scans) (\*\*) 2208





## Quantitative Analysis Sample Based Report

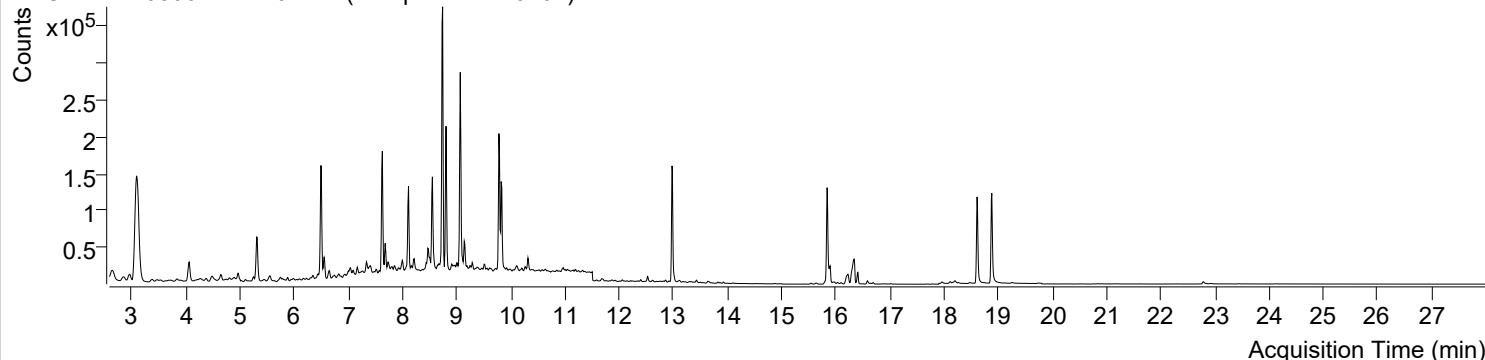


Trusted Answers

|                           |                                                                                            |                       |                        |
|---------------------------|--------------------------------------------------------------------------------------------|-----------------------|------------------------|
| Batch Data Path File Name | D:\MassHunter\GCMS\1\data\PAHs\220806-PAHs-Sample\QuantResults\220806-PAHs-Quant.batch.bin |                       |                        |
| Analysis Time Stamp       | 2022-10-10 오전 10:12:04                                                                     | Analyst Name          | DESKTOP-86B7UPG\5975MS |
| Report Generation Time    | 2022-10-10 오전 10:12:12                                                                     | Report Generator Name | DESKTOP-86B7UPG\5975MS |
| Calibration Last Update   | 2022-12-15 오후 3:30:46                                                                      | Batch State           | Processed              |
| Analyze Quant Version     | 10.2                                                                                       | Report Quant Version  | 10.2                   |
| Acq. Date-Time            | 2022-08-06 오후 4:13:25                                                                      | Data File             | 220806-PAHs-012.D      |
| Type                      | Sample                                                                                     | Name                  | Sample-PM-220704       |
| Dil.                      | 1                                                                                          | Acq. Method File      | PAHs 19mix-Method      |

## Sample Chromatogram

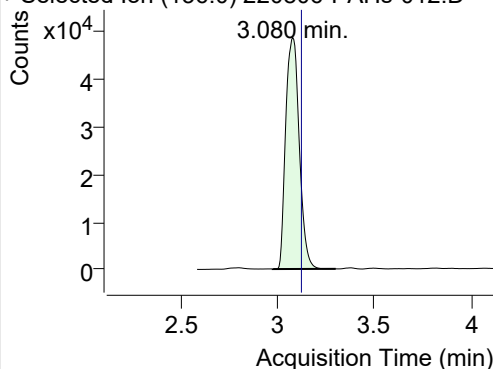
+ TIC SIM 220806-PAHs-012.D (Sample-PM-220704)



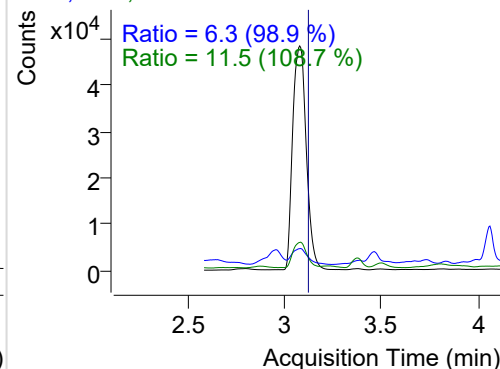
| Name                    | RT     | Transition | Resp.  | Height   | Final Conc. Units | Ratio |
|-------------------------|--------|------------|--------|----------|-------------------|-------|
| IS-D8-Naphthalene       | 3.080  | 136.0      | 234785 | 48262.46 | ND ng/ml          | 11.5  |
| Naphthalene             | 3.107  | 128.0      | 364737 | 75088.00 | ND ng/ml          | 13.8  |
| Acenaphthylene          | 6.167  | 152.0      | 2261   | 1199.63  | ND ng/ml          | 57.2  |
| IS-D10-Acenaphthene     | 6.499  | 164.0      | 144226 | 73025.52 | ND ng/ml          | 95.0  |
| Acenaphthene            | 6.558  | 154.0      | 16541  | 8191.03  | ND ng/ml          | 104.9 |
| LSS-D10-Fluorene        | 7.627  | 176.0      | 125914 | 74357.40 | ND ng/ml          | 92.9  |
| Fluorene                | 7.680  | 166.0      | 31850  | 17327.45 | ND ng/ml          | 100.5 |
| IS-D10-Phenanthrene     | 9.780  | 188.0      | 250109 | 145027.2 | ND ng/ml          | 17.6  |
| Phenanthrene            | 9.822  | 178.0      | 133537 | 74680.15 | ND ng/ml          | 18.7  |
| Anthracene              | 9.822  | 178.0      | 133537 | 74680.15 | ND ng/ml          | 18.7  |
| Fluoranthene            | 12.526 | 202.0      | 6635   | 4113.37  | ND ng/ml          | 73.9  |
| LSS-D10-Pyrene          | 12.976 | 212.0      | 189086 | 115679.0 | ND ng/ml          | 18.0  |
| Pyrene                  | 13.009 | 202.0      | 9146   | 5032.81  | ND ng/ml          | 16.0  |
| Benz(a)anthracene       | 15.795 | 228.0      | 387    | 236.34   | ND ng/ml          | 71.9  |
| IS-D12-Chrysene         | 15.838 | 240.0      | 180374 | 96605.40 | ND ng/ml          | 19.2  |
| Chrysene                | 15.892 | 228.0      | 1560   | 659.21   | ND ng/ml          | 33.6  |
| Benzo(b)fluoranthene    | 18.117 | 252.0      | 294    | 164.00   | ND ng/ml          | 38.1  |
| Benzo(k)fluoranthene    | 18.167 | 252.0      | 507    | 179.30   | ND ng/ml          | 66.9  |
| SS-D12-Benzo(e)pyrene   | 18.608 | 264.0      | 149298 | 79259.69 | ND ng/ml          | 25.2  |
| Benzo(e)pyrene          | 18.651 | 252.0      | 219    | 112.96   | ND ng/ml          |       |
| Benzo(a)pyrene          | 18.744 | 252.0      | 433    | 149.96   | ND ng/ml          | 9.7   |
| IS-D12-Perylene         | 18.879 | 264.0      | 164270 | 83175.33 | ND ng/ml          | 24.0  |
| Perylene                | 18.922 | 252.0      | 336    | 128.87   | ND ng/ml          |       |
| Indeno(1,2,3-c,d)pyrene | 20.759 | 276.0      | 381    | 146.00   | ND ng/ml          | 24.1  |
| Dibenz(a,h)anthracene   | 20.835 | 278.0      | 608    | 205.17   | ND ng/ml          | 24.4  |
| Benzo(g,h,i)perylene    | 21.179 | 276.0      | 372    | 116.58   | ND ng/ml          | 24.4  |
| Coronene                | 23.439 | 300.0      | 700    | 162.34   | ND ng/ml          | 16.4  |

## IS-D8-Naphthalene

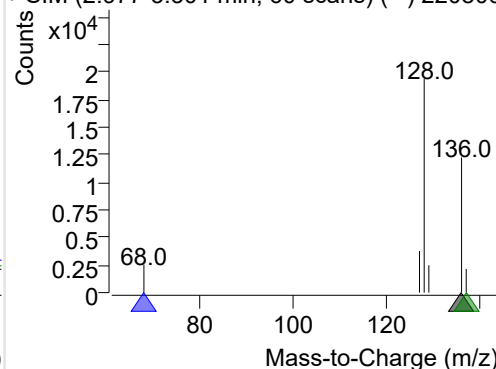
+ Selected Ion (136.0) 220806-PAHs-012.D



136.0, 68.0, 137.0

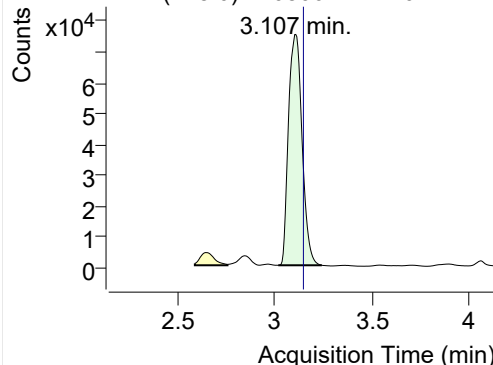


+ SIM (2.977-3.301 min, 60 scans) (\*\*) 220806

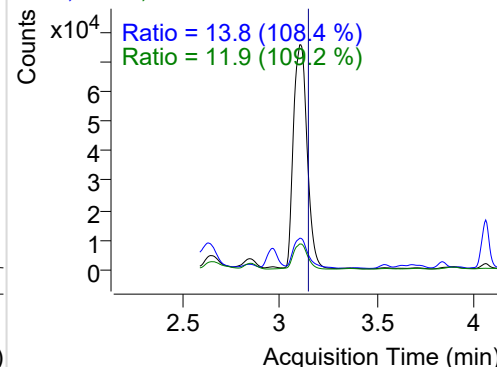


**Naphthalene**

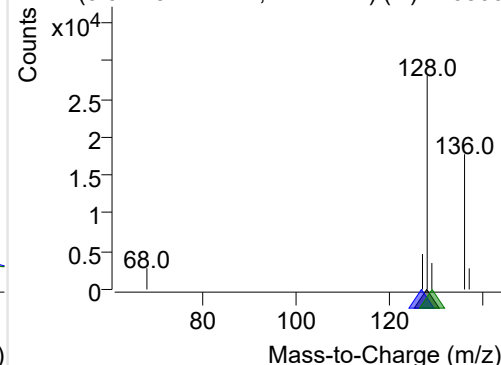
+ Selected Ion (128.0) 220806-PAHs-012.D



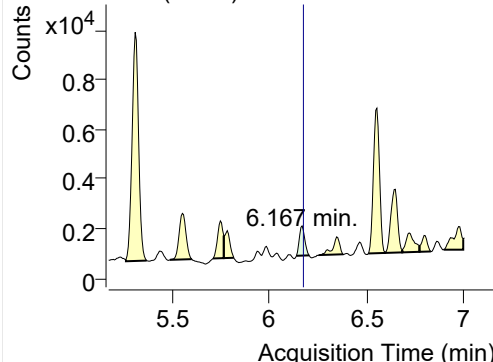
128.0, 127.0, 129.0



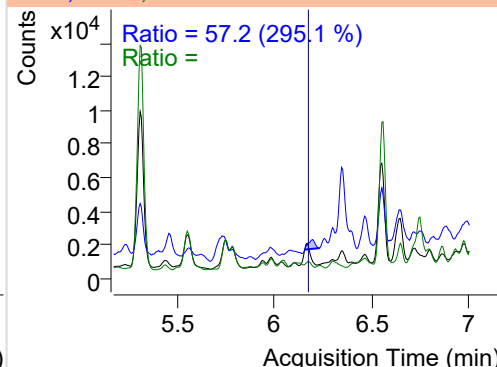
+ SIM (3.017-3.241 min, 41 scans) (\*\*) 220806

**Acenaphthylene**

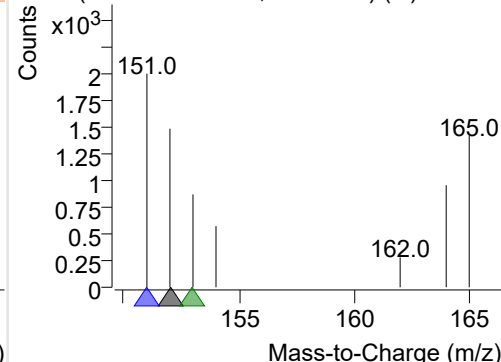
+ Selected Ion (152.0) 220806-PAHs-012.D



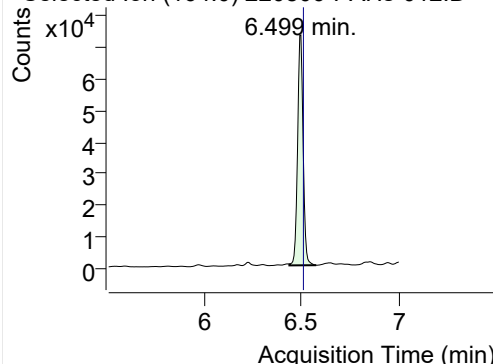
152.0, 151.0, 153.0



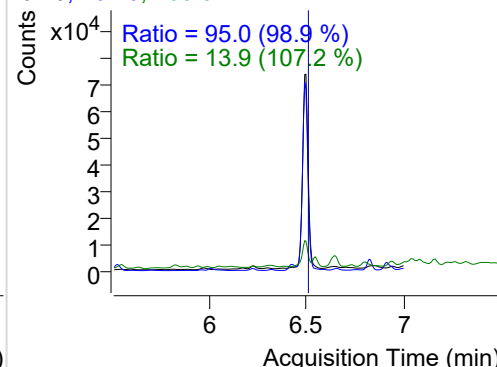
+ SIM (6.138-6.203 min, 11 scans) (\*\*) 220806

**IS-D10-Acenaphthene**

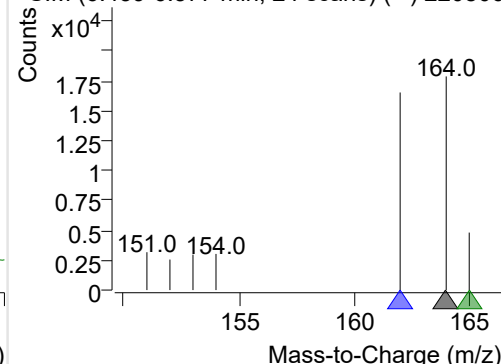
+ Selected Ion (164.0) 220806-PAHs-012.D



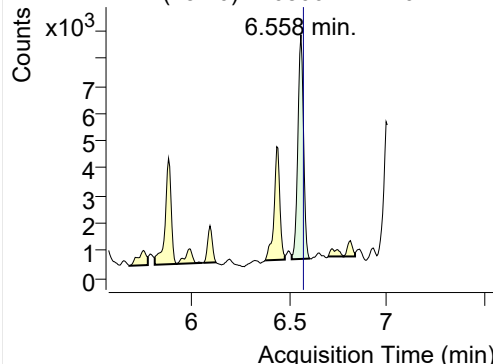
164.0, 162.0, 165.0



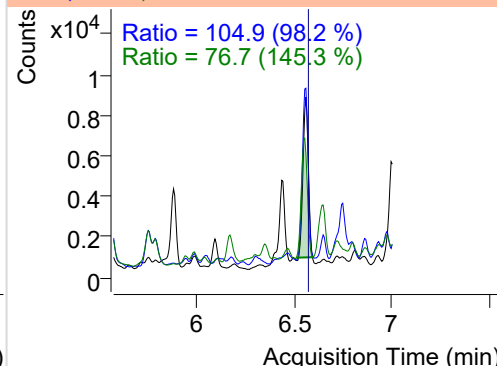
+ SIM (6.439-6.577 min, 24 scans) (\*\*) 220806

**Acenaphthene**

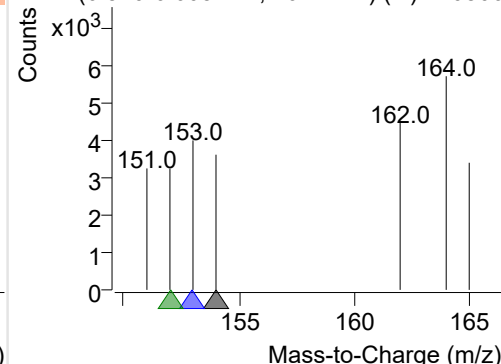
+ Selected Ion (154.0) 220806-PAHs-012.D



154.0, 153.0, 152.0

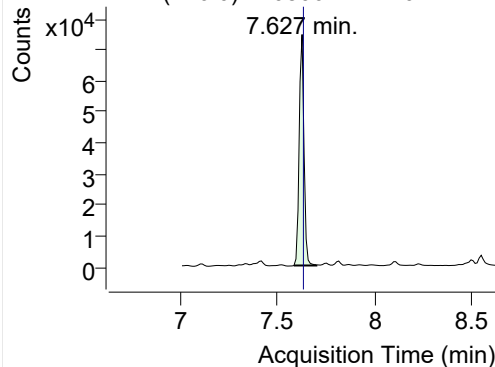


+ SIM (6.510-6.605 min, 16 scans) (\*\*) 220806

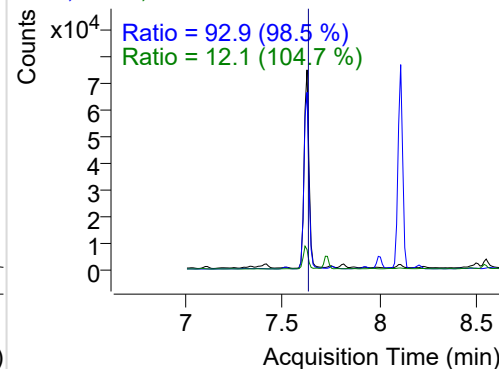


## LSS-D10-Fluorene

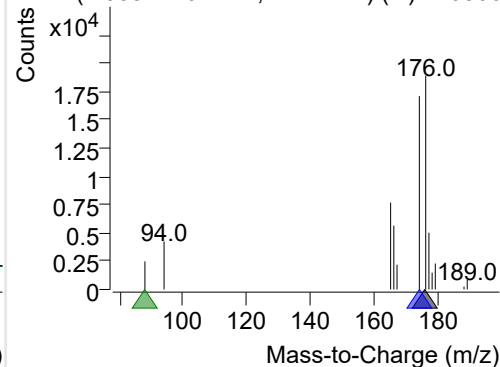
+ Selected Ion (176.0) 220806-PAHs-012.D



176.0, 174.0, 88.0

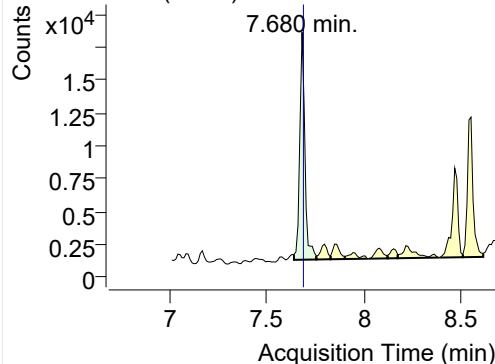


+ SIM (7.585-7.701 min, 11 scans) (\*\*) 220806

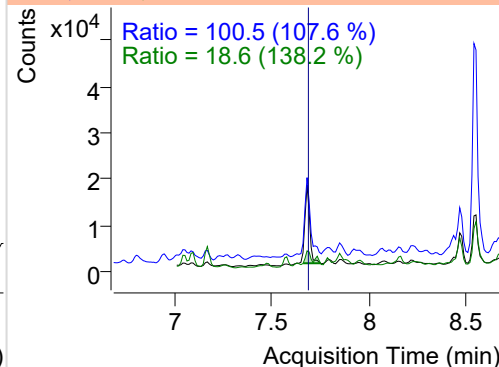


## Fluorene

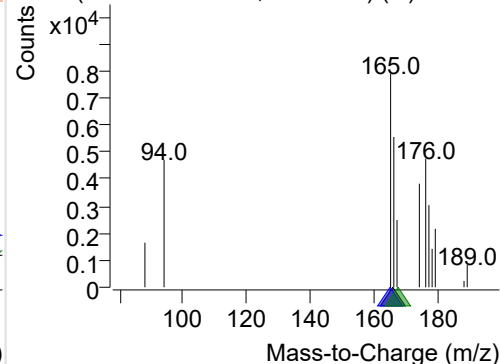
+ Selected Ion (166.0) 220806-PAHs-012.D



166.0, 165.0, 167.0

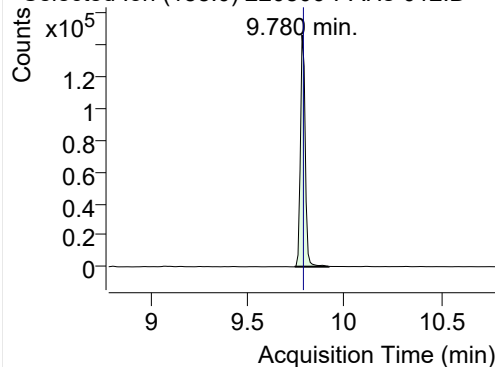


+ SIM (7.638-7.753 min, 12 scans) (\*\*) 220806

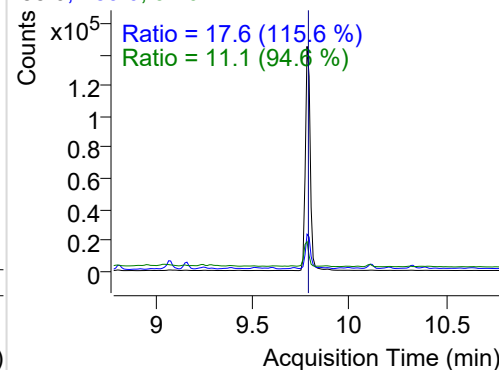


## IS-D10-Phenanthrene

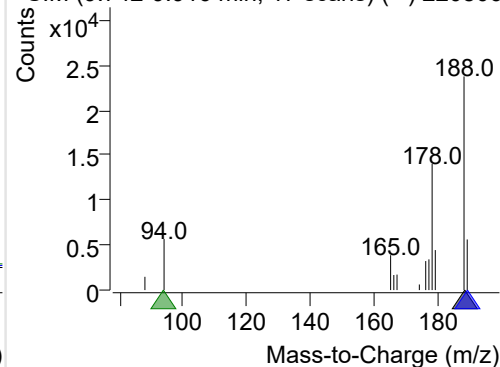
+ Selected Ion (188.0) 220806-PAHs-012.D



188.0, 189.0, 94.0

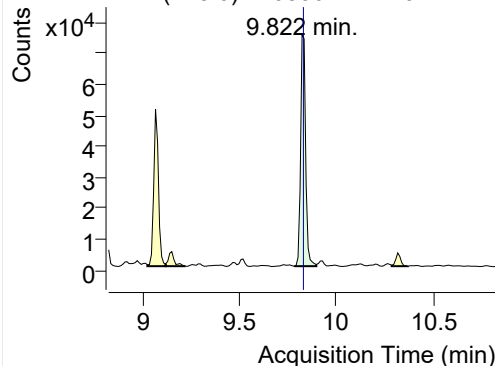


+ SIM (9.742-9.916 min, 17 scans) (\*\*) 220806

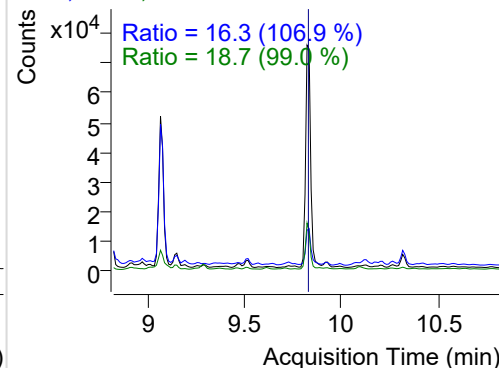


## Phenanthrene

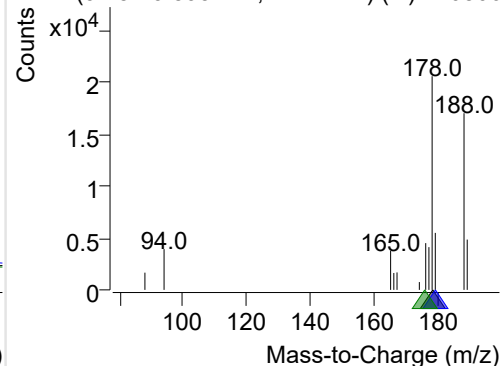
+ Selected Ion (178.0) 220806-PAHs-012.D



178.0, 179.0, 176.0

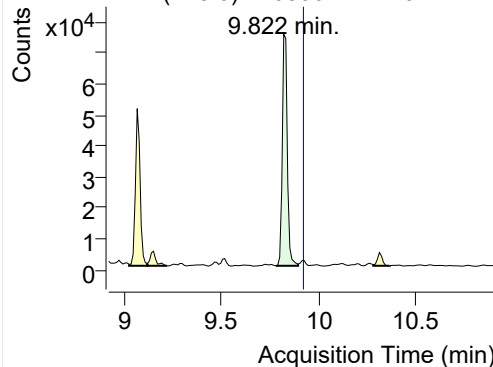


+ SIM (9.781-9.895 min, 11 scans) (\*\*) 220806

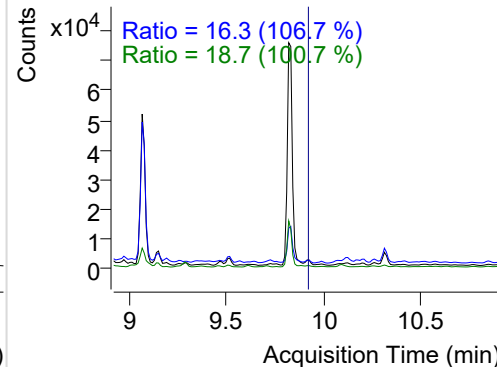


**Anthracene**

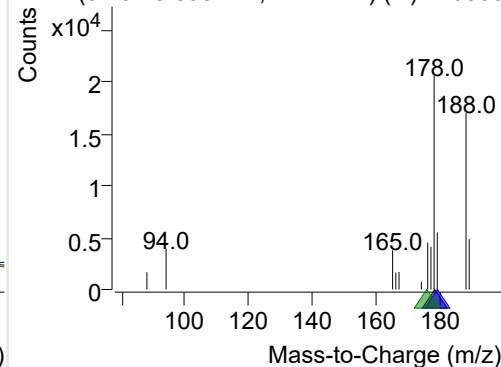
+ Selected Ion (178.0) 220806-PAHs-012.D



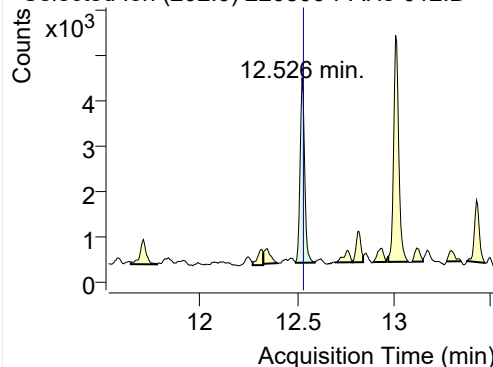
178.0, 179.0, 176.0



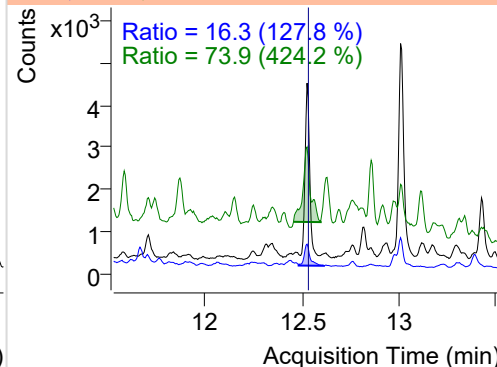
+ SIM (9.781-9.895 min, 11 scans) (\*\*) 220806

**Fluoranthene**

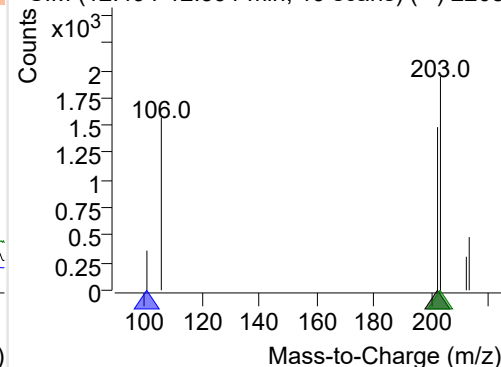
+ Selected Ion (202.0) 220806-PAHs-012.D



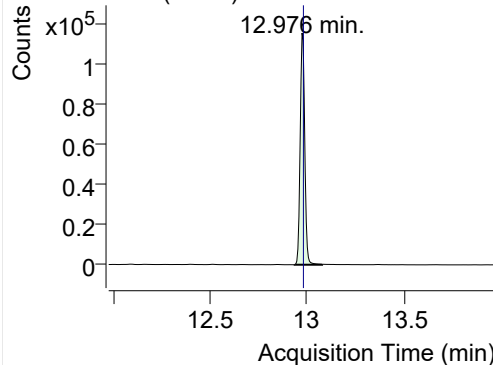
202.0, 101.0, 203.0



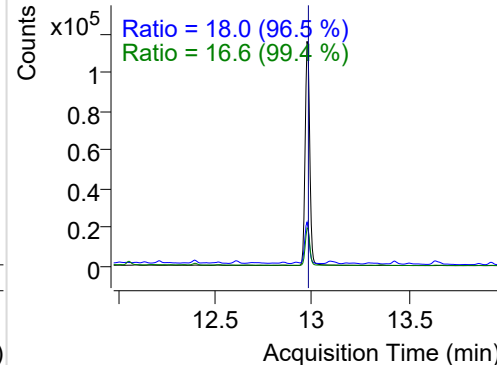
+ SIM (12.494-12.591 min, 19 scans) (\*\*) 2208

**LSS-D10-Pyrene**

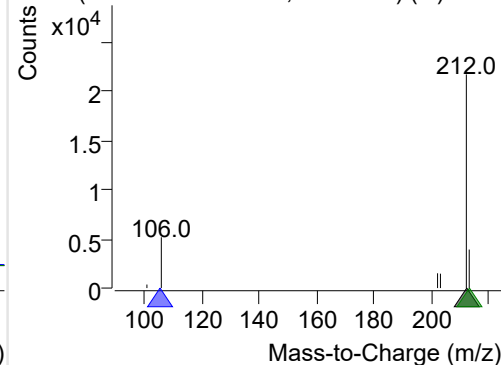
+ Selected Ion (212.0) 220806-PAHs-012.D



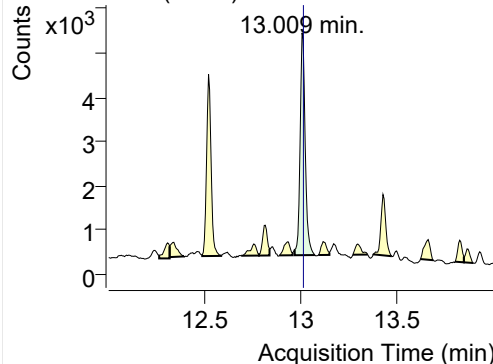
212.0, 106.0, 213.0



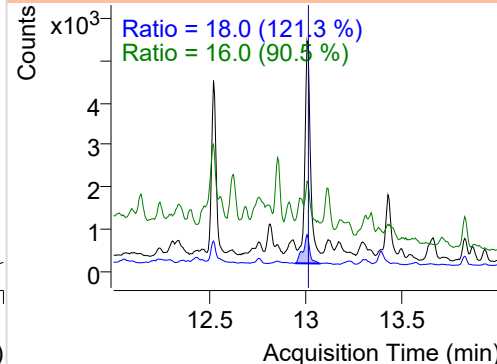
+ SIM (12.938-13.079 min, 27 scans) (\*\*) 2208

**Pyrene**

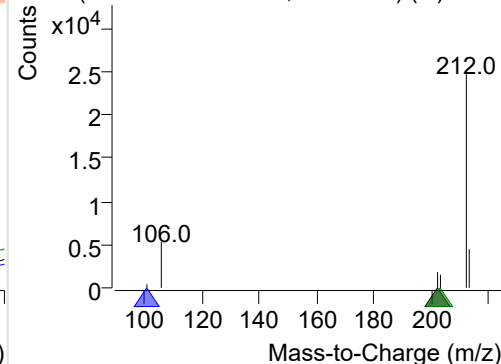
+ Selected Ion (202.0) 220806-PAHs-012.D



202.0, 101.0, 203.0



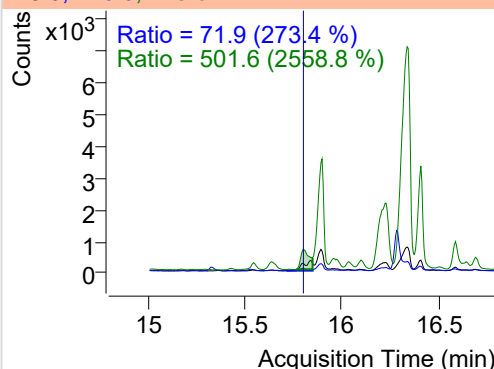
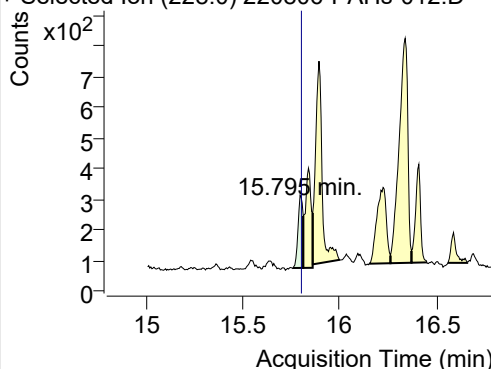
+ SIM (12.971-13.075 min, 20 scans) (\*\*) 2208



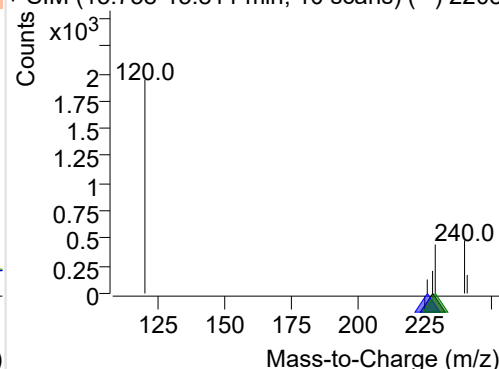
**Benz(a)anthracene**

+ Selected Ion (228.0) 220806-PAHs-012.D

228.0, 226.0, 229.0

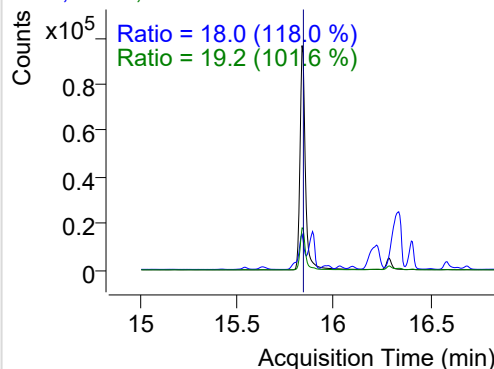
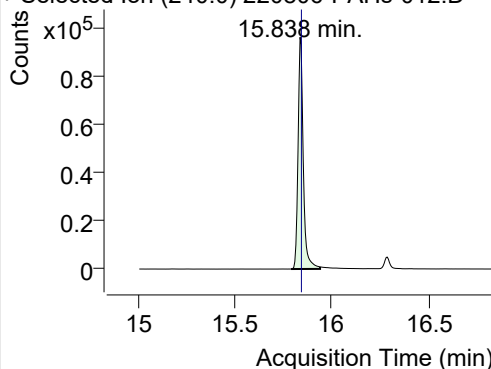


+ SIM (15.758-15.811 min, 10 scans) (\*\*) 2208

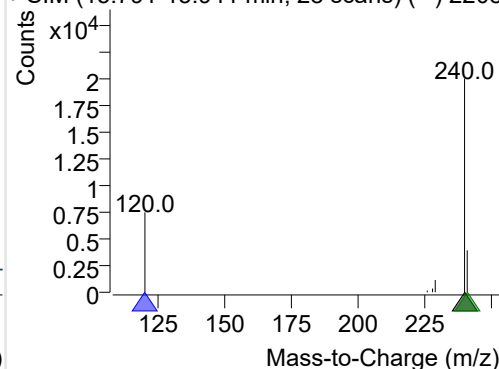
**IS-D12-Chrysene**

+ Selected Ion (240.0) 220806-PAHs-012.D

240.0, 120.0, 241.0

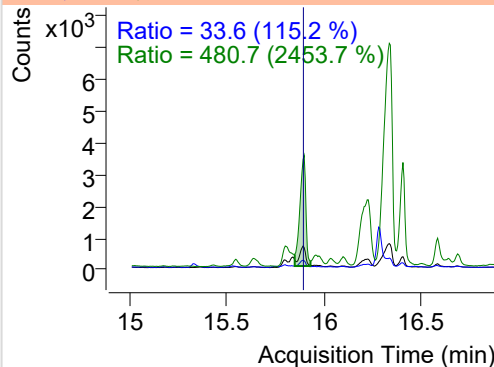
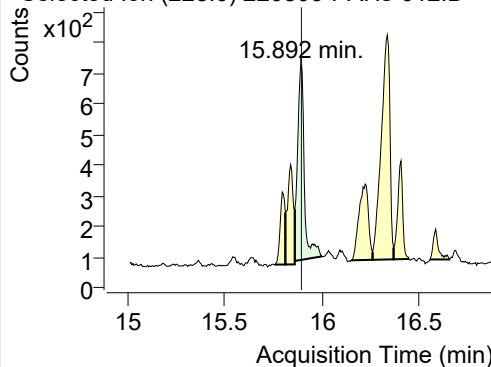


+ SIM (15.791-15.941 min, 28 scans) (\*\*) 2208

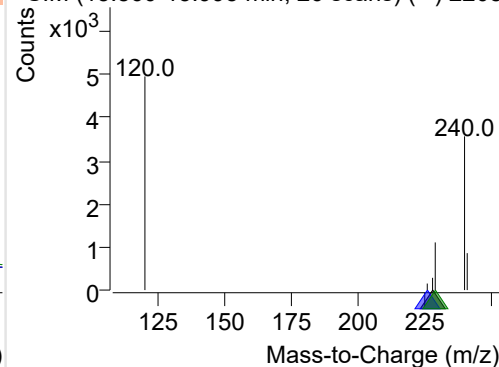
**Chrysene**

+ Selected Ion (228.0) 220806-PAHs-012.D

228.0, 226.0, 229.0

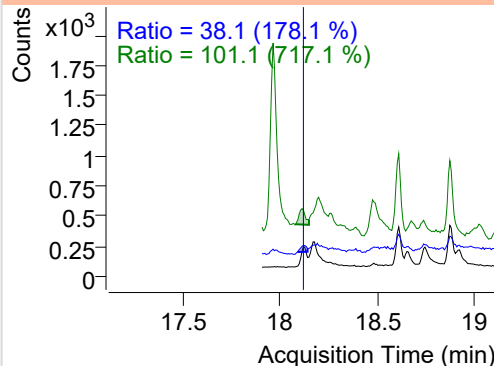
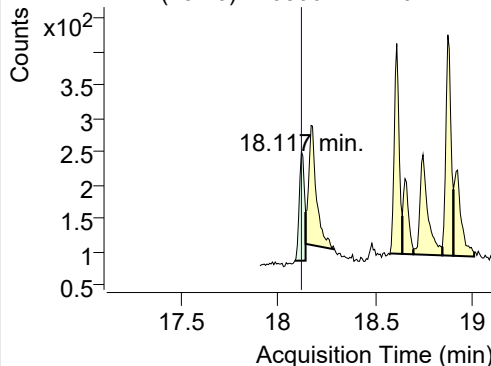


+ SIM (15.860-15.995 min, 26 scans) (\*\*) 2208

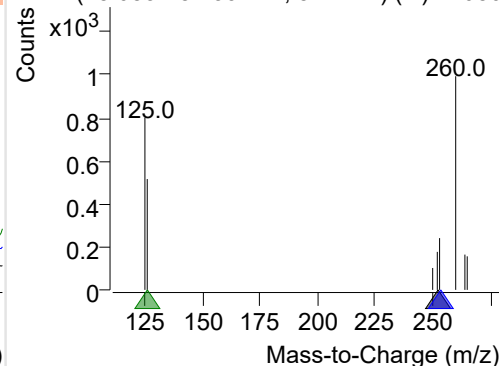
**Benzo(b)fluoranthene**

+ Selected Ion (252.0) 220806-PAHs-012.D

252.0, 253.0, 126.0



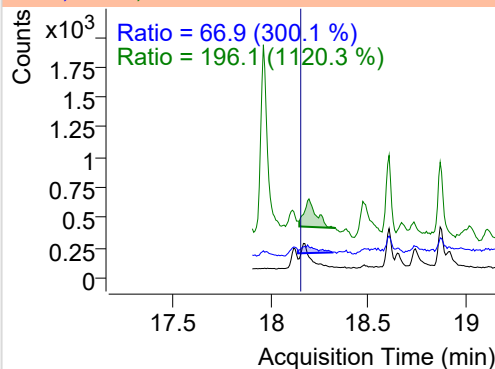
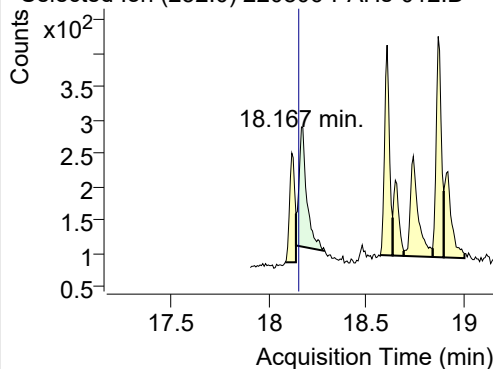
+ SIM (18.083-18.139 min, 8 scans) (\*\*) 22080



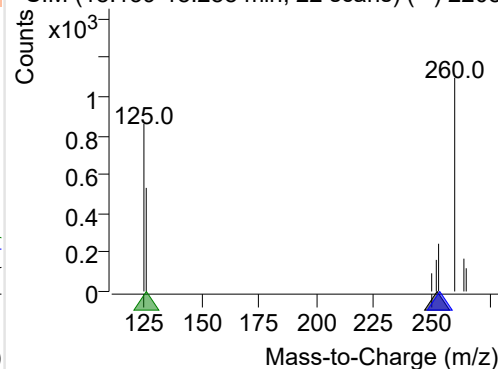
**Benzo(k)fluoranthene**

+ Selected Ion (252.0) 220806-PAHs-012.D

252.0, 253.0, 126.0

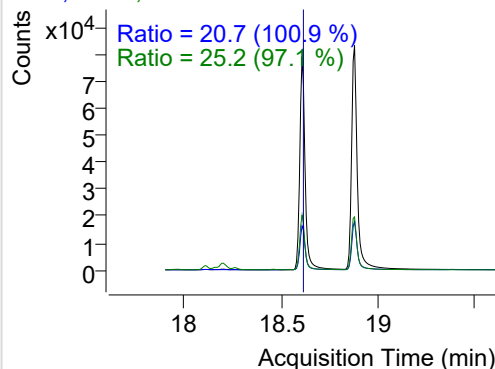
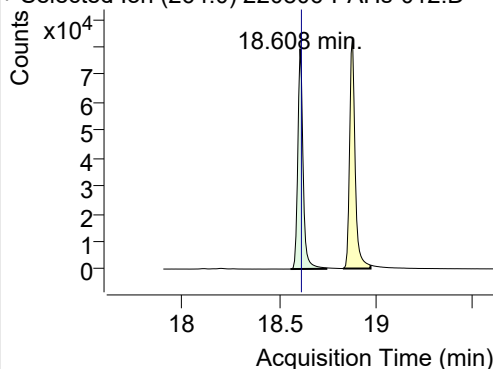


+ SIM (18.139-18.288 min, 22 scans) (\*\*) 2208

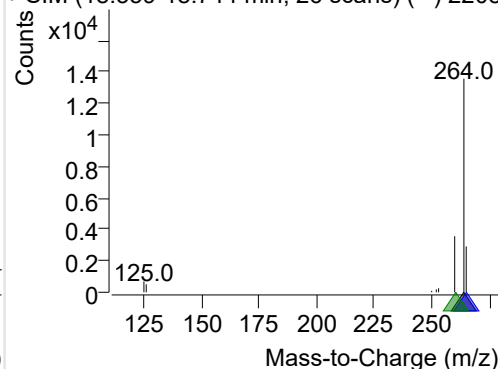
**SS-D12-Benzo(e)pyrene**

+ Selected Ion (264.0) 220806-PAHs-012.D

264.0, 265.0, 260.0

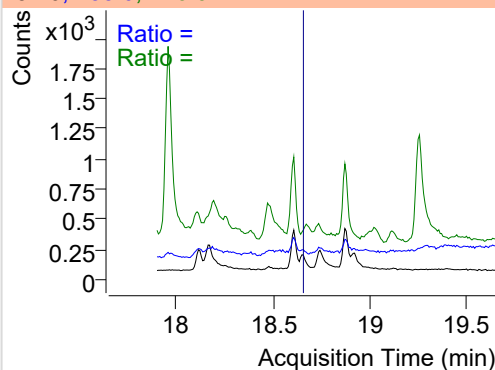
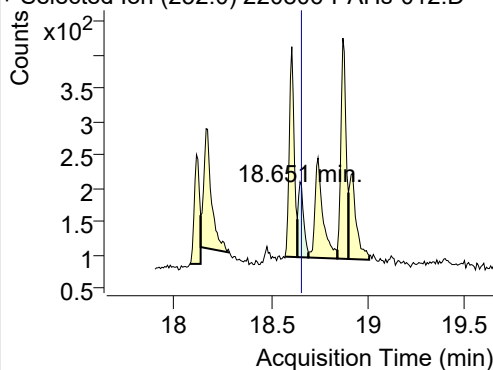


+ SIM (18.559-18.744 min, 26 scans) (\*\*) 2208

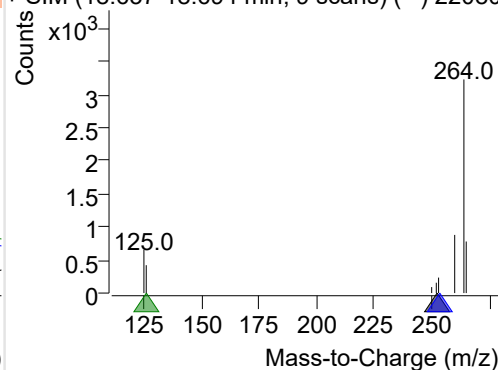
**Benzo(e)pyrene**

+ Selected Ion (252.0) 220806-PAHs-012.D

252.0, 253.0, 126.0

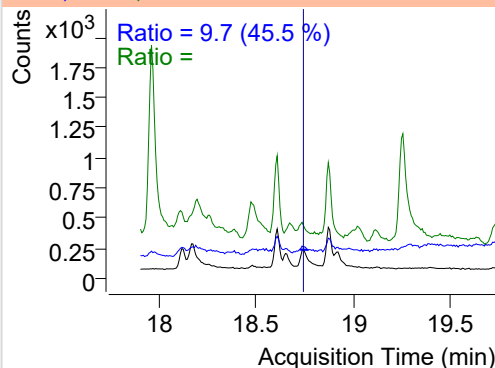
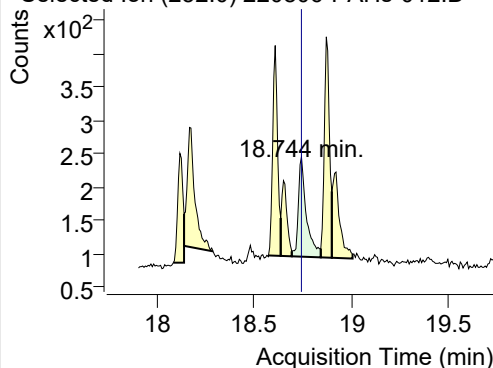


+ SIM (18.637-18.694 min, 9 scans) (\*\*) 22080

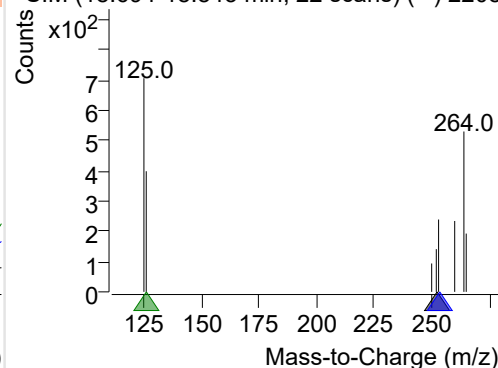
**Benzo(a)pyrene**

+ Selected Ion (252.0) 220806-PAHs-012.D

252.0, 253.0, 126.0

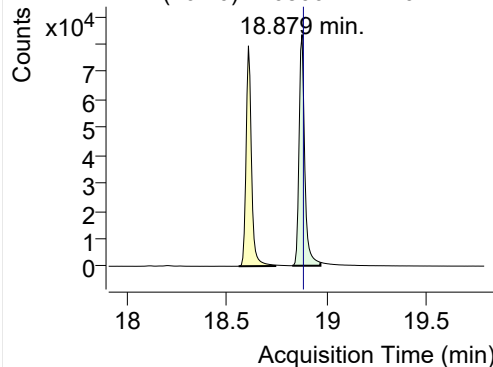


+ SIM (18.694-18.843 min, 22 scans) (\*\*) 2208

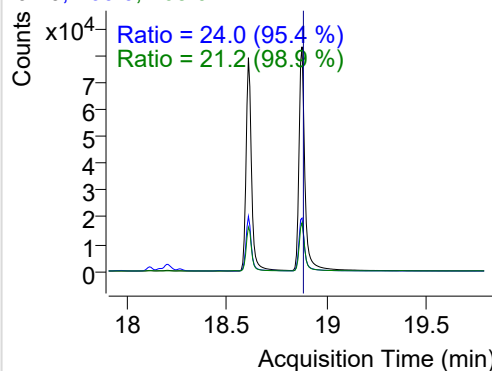


## IS-D12-Perylene

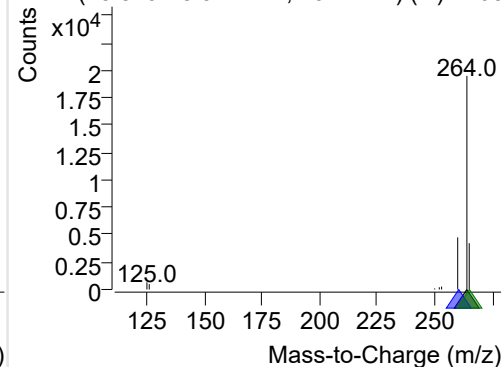
+ Selected Ion (264.0) 220806-PAHs-012.D



264.0, 260.0, 265.0

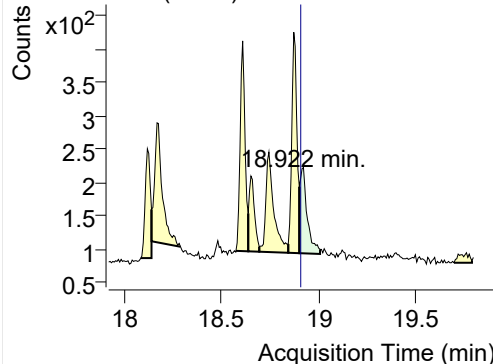


+ SIM (18.829-18.972 min, 20 scans) (\*\*) 2208

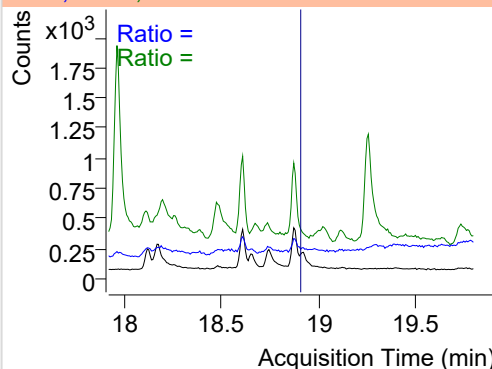


## Perylene

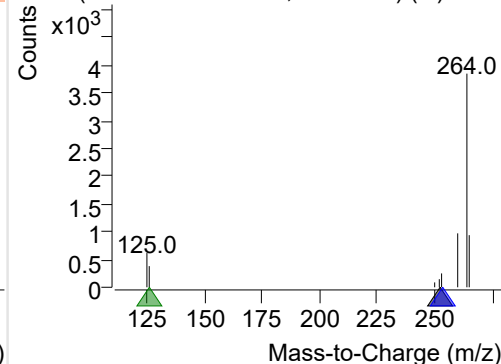
+ Selected Ion (252.0) 220806-PAHs-012.D



252.0, 253.0, 126.0

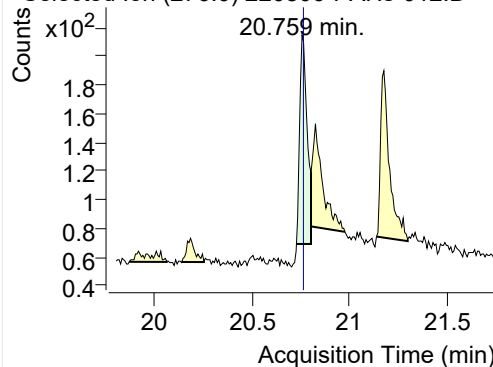


+ SIM (18.900-19.007 min, 16 scans) (\*\*) 2208

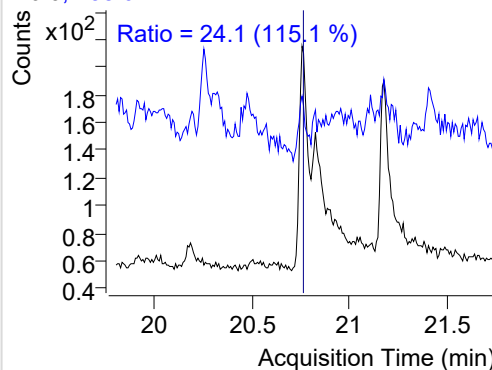


## Indeno(1,2,3-c,d)pyrene

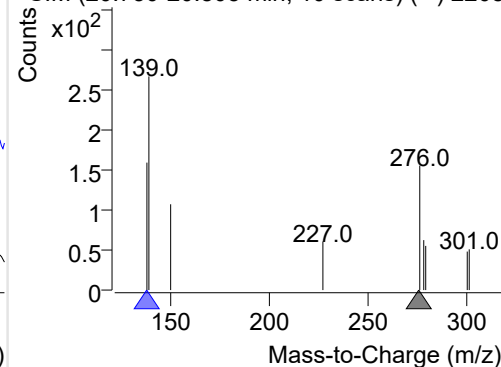
+ Selected Ion (276.0) 220806-PAHs-012.D



276.0, 138.0

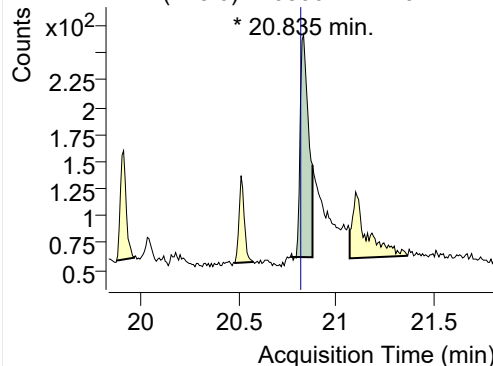


+ SIM (20.730-20.805 min, 10 scans) (\*\*) 2208

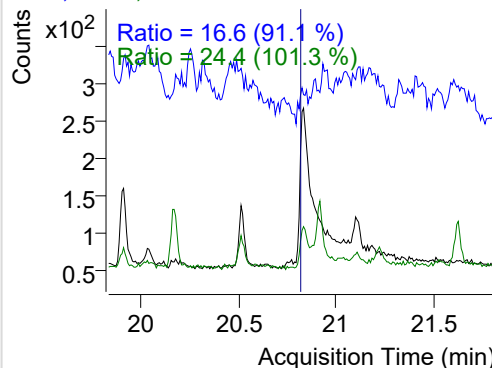


## Dibenz(a,h)anthracene

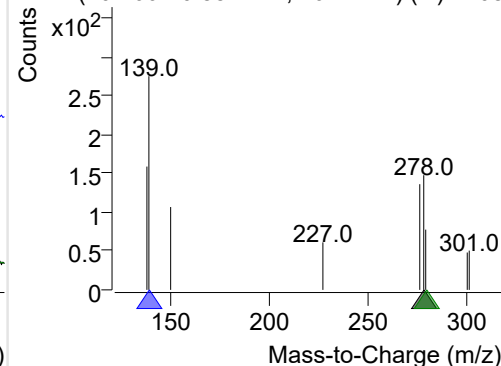
+ Selected Ion (278.0) 220806-PAHs-012.D



278.0, 139.0, 279.0

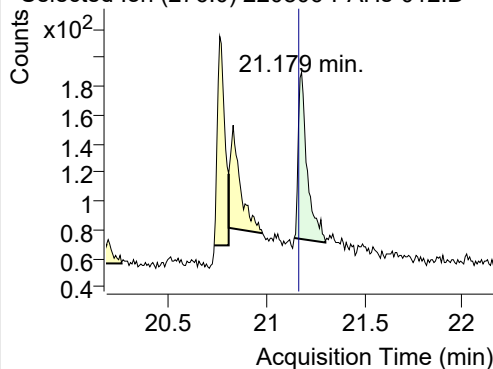


+ SIM (20.766-20.881 min, 16 scans) (\*\*) 2208

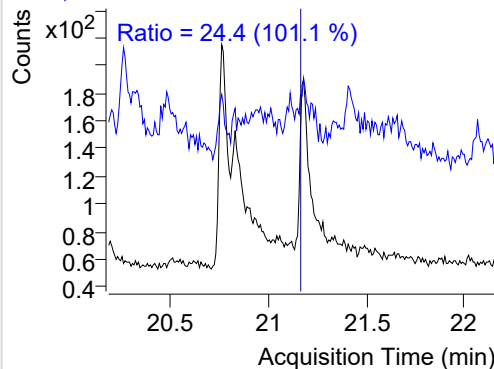


**Benzo(g,h,i)perylene**

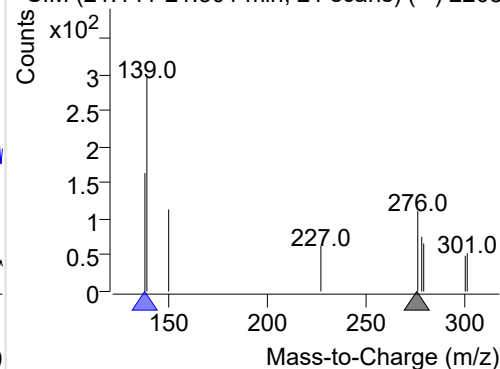
+ Selected Ion (276.0) 220806-PAHs-012.D



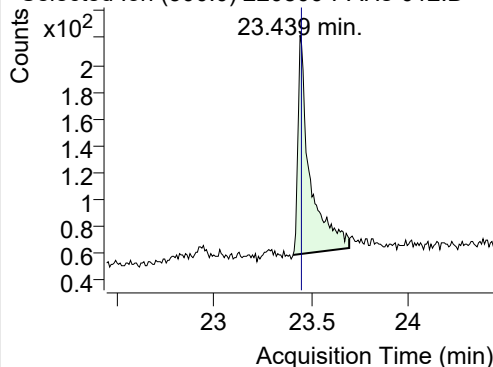
276.0, 138.0



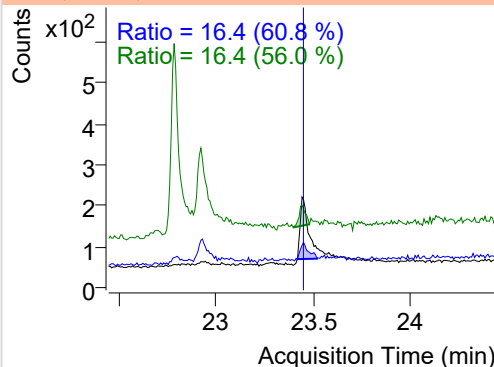
+ SIM (21.141-21.301 min, 21 scans) (\*\*) 2208

**Coronene**

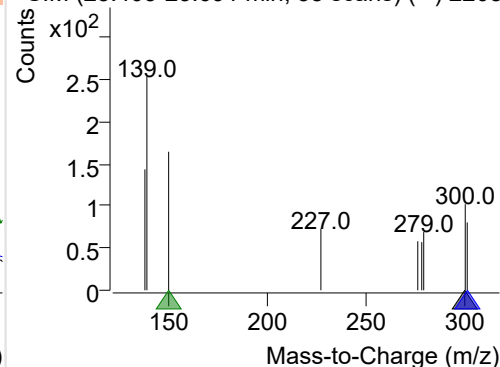
+ Selected Ion (300.0) 220806-PAHs-012.D



300.0, 301.0, 150.0



+ SIM (23.403-23.691 min, 38 scans) (\*\*) 2208





## Quantitative Analysis Sample Based Report

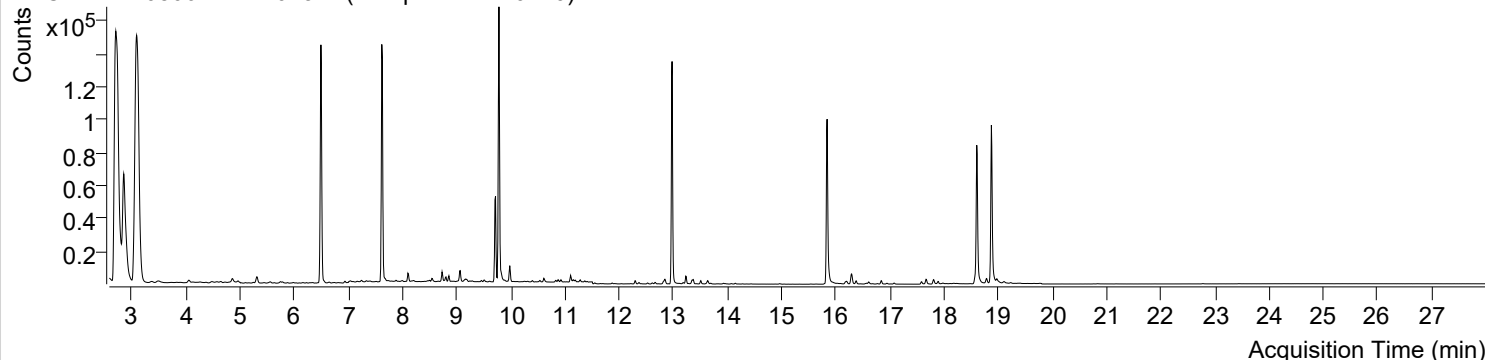


Trusted Answers

|                           |                                                                                            |                       |                        |
|---------------------------|--------------------------------------------------------------------------------------------|-----------------------|------------------------|
| Batch Data Path File Name | D:\MassHunter\GCMS\1\data\PAHs\220806-PAHs-Sample\QuantResults\220806-PAHs-Quant.batch.bin |                       |                        |
| Analysis Time Stamp       | 2022-10-10 오전 10:12:04                                                                     | Analyst Name          | DESKTOP-86B7UPG\5975MS |
| Report Generation Time    | 2022-10-10 오전 10:12:12                                                                     | Report Generator Name | DESKTOP-86B7UPG\5975MS |
| Calibration Last Update   | 2022-12-15 오후 3:30:46                                                                      | Batch State           | Processed              |
| Analyze Quant Version     | 10.2                                                                                       | Report Quant Version  | 10.2                   |
| Acq. Date-Time            | 2022-08-06 오후 4:44:32                                                                      | Data File             | 220806-PAHs-013.D      |
| Type                      | Sample                                                                                     | Name                  | Sample-PM-220710       |
| Dil.                      | 1                                                                                          | Acq. Method File      | PAHs 19mix-Method      |

## Sample Chromatogram

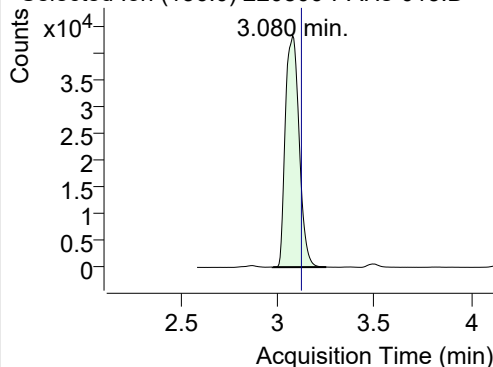
+ TIC SIM 220806-PAHs-013.D (Sample-PM-220710)



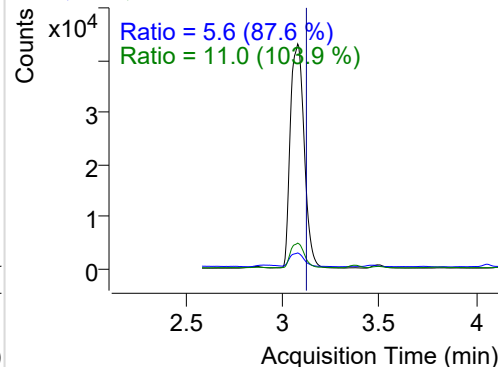
| Name                    | RT     | Transition | Resp.  | Height    | Final Conc. Units | Ratio |
|-------------------------|--------|------------|--------|-----------|-------------------|-------|
| IS-D8-Naphthalene       | 3.080  | 136.0      | 212392 | 42996.94  | ND ng/ml          | 11.0  |
| Naphthalene             | 3.107  | 128.0      | 431320 | 85910.00  | ND ng/ml          | 12.7  |
| Acenaphthylene          | 6.179  | 152.0      | 141    | 55.68     | ND ng/ml          | 62.2  |
| IS-D10-Acenaphthene     | 6.492  | 164.0      | 127288 | 69404.73  | ND ng/ml          | 95.5  |
| Acenaphthene            | 6.558  | 154.0      | 395    | 187.84    | ND ng/ml          | 116.2 |
| LSS-D10-Fluorene        | 7.617  | 176.0      | 116547 | 63661.36  | ND ng/ml          | 92.1  |
| Fluorene                | 7.680  | 166.0      | 849    | 413.99    | ND ng/ml          | 100.6 |
| IS-D10-Phenanthrene     | 9.780  | 188.0      | 214972 | 134198.76 | ND ng/ml          | 15.1  |
| Phenanthrene            | 9.822  | 178.0      | 2740   | 1540.25   | ND ng/ml          | 19.6  |
| Anthracene              | 9.979  | 178.0      | 4138   | 2620.25   | ND ng/ml          | 28.3  |
| Fluoranthene            | 12.526 | 202.0      | 643    | 395.03    | ND ng/ml          |       |
| LSS-D10-Pyrene          | 12.976 | 212.0      | 159349 | 100356.84 | ND ng/ml          | 17.8  |
| Pyrene                  | 13.008 | 202.0      | 1467   | 646.28    | ND ng/ml          | 50.2  |
| Benz(a)anthracene       | 15.795 | 228.0      | 114    | 82.33     | ND ng/ml          | 68.5  |
| IS-D12-Chrysene         | 15.838 | 240.0      | 140918 | 75212.17  | ND ng/ml          | 18.9  |
| Chrysene                | 15.881 | 228.0      | 394    | 135.48    | ND ng/ml          | 26.6  |
| Benzo(b)fluoranthene    | 18.110 | 252.0      | 109    | 58.96     | ND ng/ml          |       |
| Benzo(k)fluoranthene    | 18.167 | 252.0      | 183    | 71.45     | ND ng/ml          | 154.7 |
| SS-D12-Benzo(e)pyrene   | 18.601 | 264.0      | 112247 | 56728.00  | ND ng/ml          | 25.0  |
| Benzo(e)pyrene          | 18.658 | 252.0      | 664    | 346.69    | ND ng/ml          | 17.5  |
| Benzo(a)pyrene          | 18.779 | 252.0      | 926    | 367.12    | ND ng/ml          | 17.1  |
| IS-D12-Perylene         | 18.872 | 264.0      | 126869 | 65461.14  | ND ng/ml          | 23.5  |
| Perylene                | 18.865 | 252.0      | 1226   | 375.55    | ND ng/ml          | 22.2  |
| Indeno(1,2,3-c,d)pyrene | 20.759 | 276.0      | 130    | 50.36     | ND ng/ml          | 24.1  |
| Dibenz(a,h)anthracene   | 20.835 | 278.0      | 293    | 72.81     | ND ng/ml          | 14.1  |
| Benzo(g,h,i)perylene    | 21.179 | 276.0      | 125    | 36.96     | ND ng/ml          | 19.6  |
| Coronene                | 23.446 | 300.0      | 217    | 49.97     | ND ng/ml          | 18.0  |

## IS-D8-Naphthalene

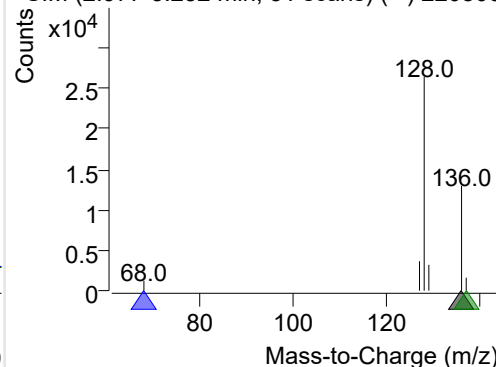
+ Selected Ion (136.0) 220806-PAHs-013.D



136.0, 68.0, 137.0

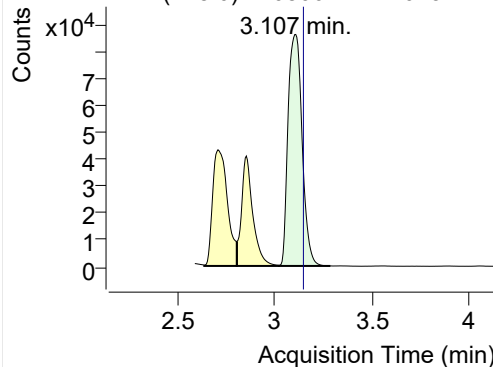


+ SIM (2.977-3.252 min, 51 scans) (\*\*) 220806

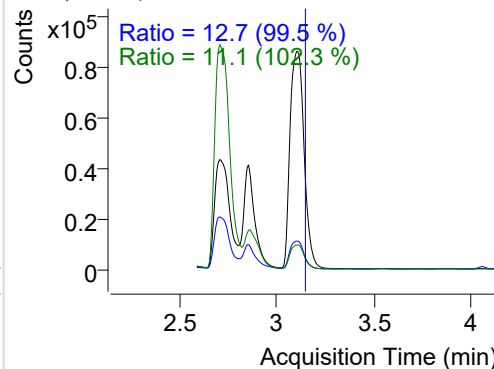


**Naphthalene**

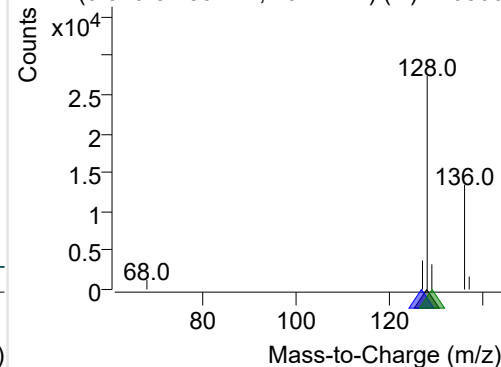
+ Selected Ion (128.0) 220806-PAHs-013.D



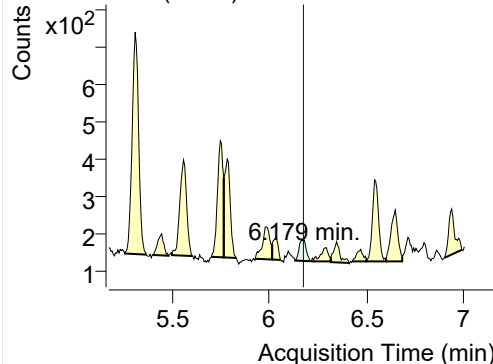
128.0, 127.0, 129.0



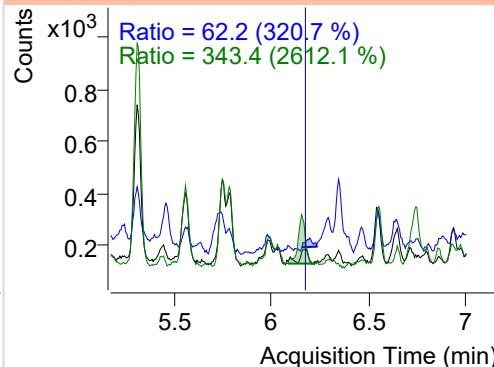
+ SIM (3.020-3.285 min, 49 scans) (\*\*) 220806

**Acenaphthylene**

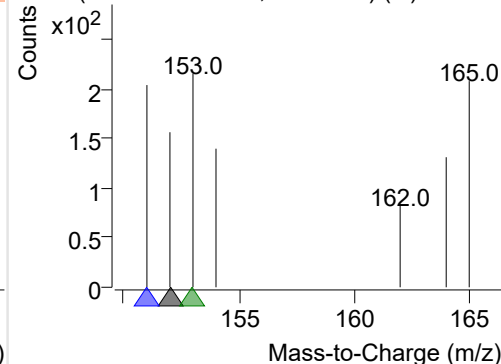
+ Selected Ion (152.0) 220806-PAHs-013.D



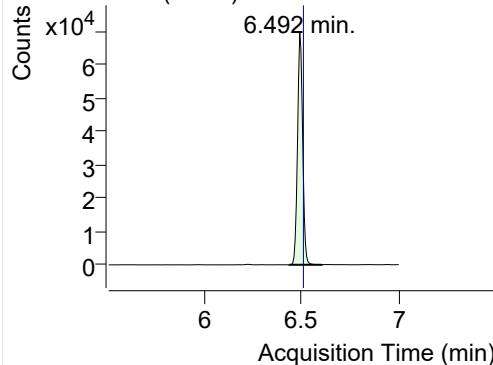
152.0, 151.0, 153.0



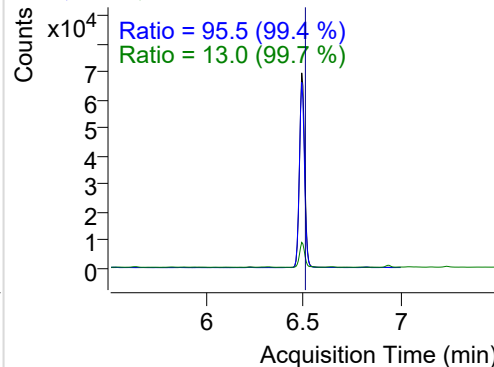
+ SIM (6.131-6.211 min, 14 scans) (\*\*) 220806

**IS-D10-Acenaphthene**

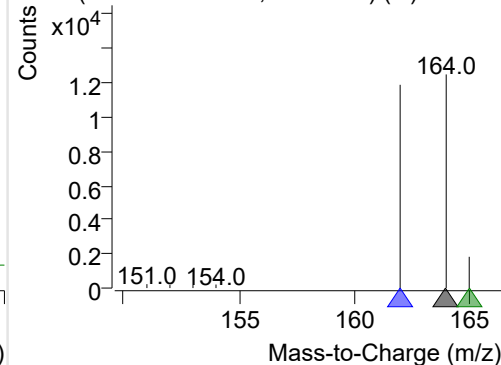
+ Selected Ion (164.0) 220806-PAHs-013.D



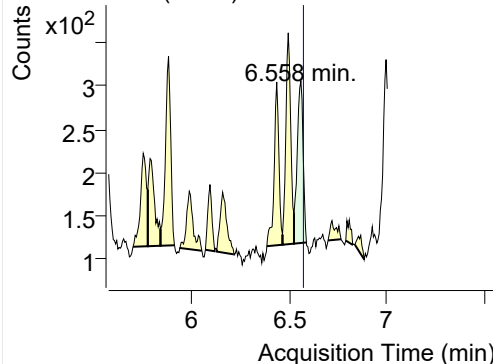
164.0, 162.0, 165.0



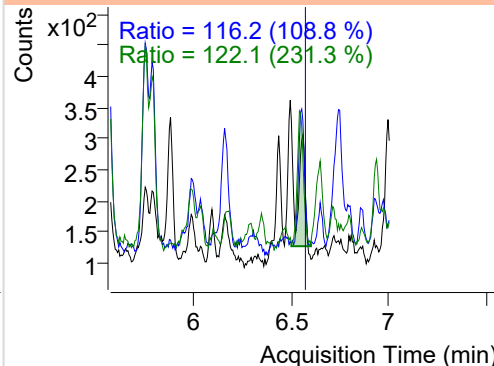
+ SIM (6.439-6.605 min, 29 scans) (\*\*) 220806

**Acenaphthene**

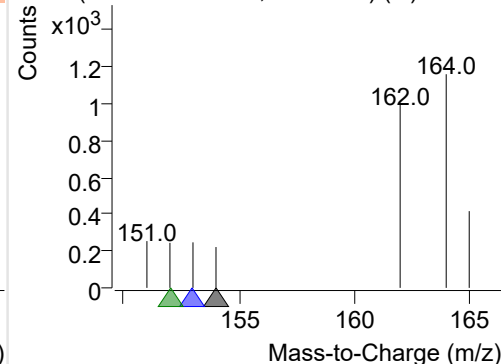
+ Selected Ion (154.0) 220806-PAHs-013.D



154.0, 153.0, 152.0

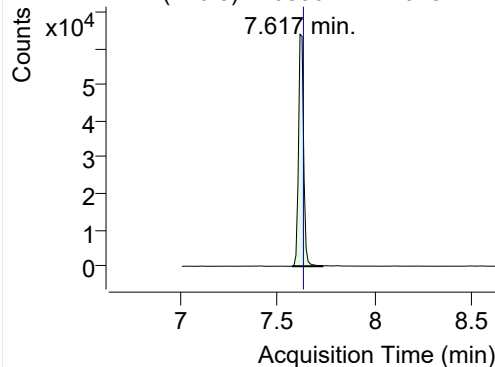


+ SIM (6.522-6.586 min, 11 scans) (\*\*) 220806

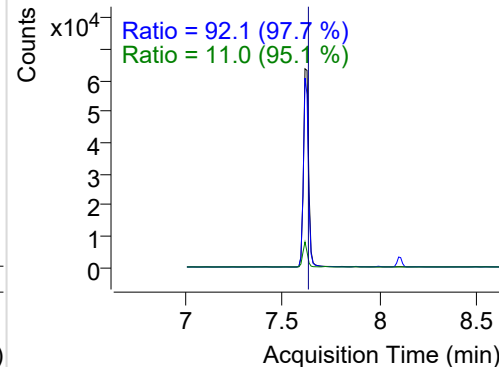


## LSS-D10-Fluorene

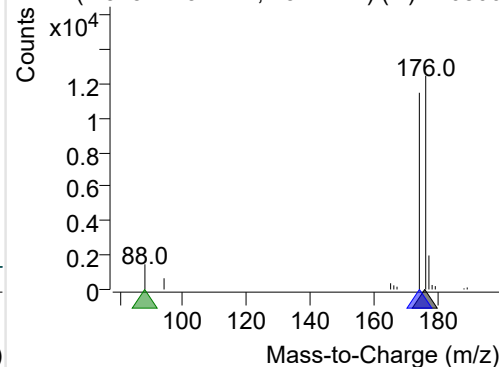
+ Selected Ion (176.0) 220806-PAHs-013.D



176.0, 174.0, 88.0

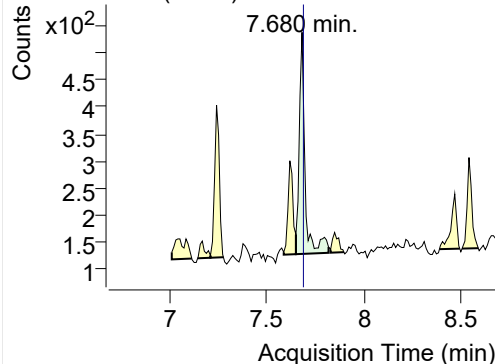


+ SIM (7.575-7.732 min, 15 scans) (\*\*) 220806

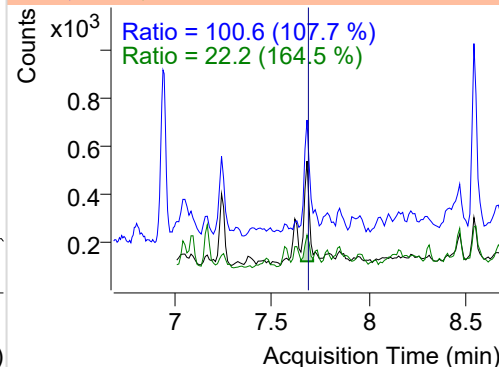


## Fluorene

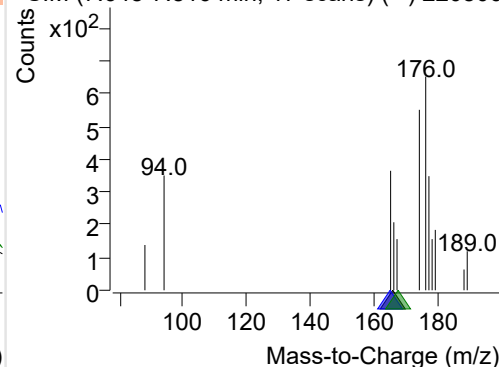
+ Selected Ion (166.0) 220806-PAHs-013.D



166.0, 165.0, 167.0

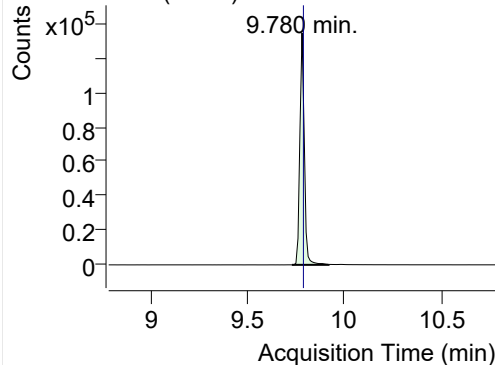


+ SIM (7.648-7.816 min, 17 scans) (\*\*) 220806

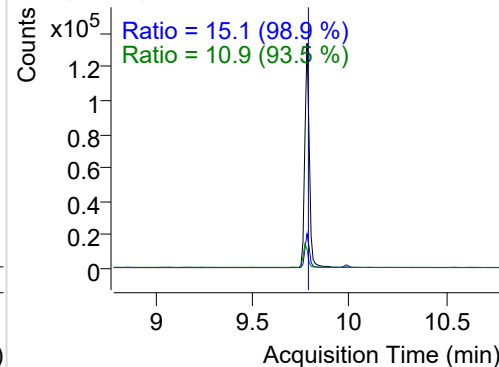


## IS-D10-Phenanthrene

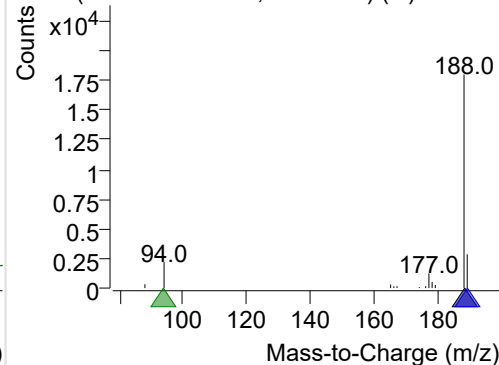
+ Selected Ion (188.0) 220806-PAHs-013.D



188.0, 189.0, 94.0

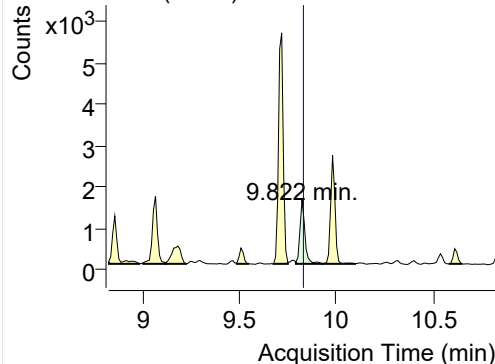


+ SIM (9.727-9.916 min, 19 scans) (\*\*) 220806

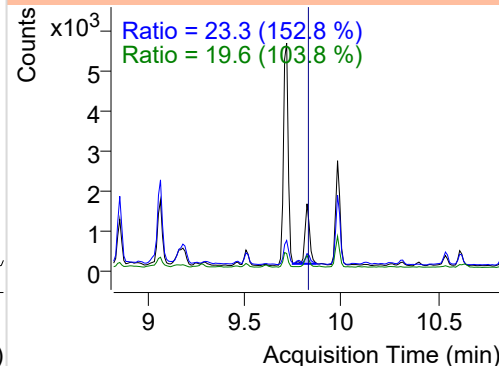


## Phenanthrene

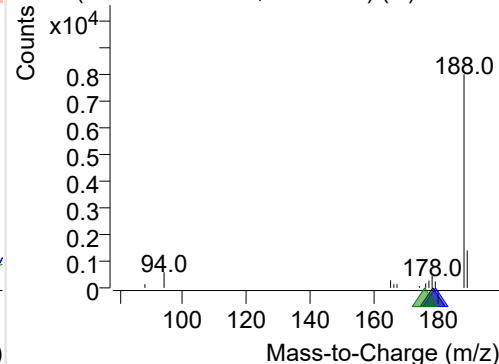
+ Selected Ion (178.0) 220806-PAHs-013.D



178.0, 179.0, 176.0

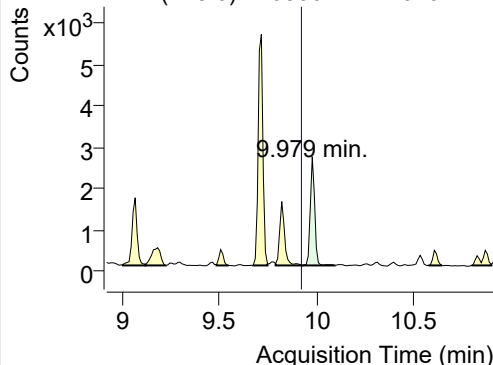


+ SIM (9.790-9.927 min, 14 scans) (\*\*) 220806

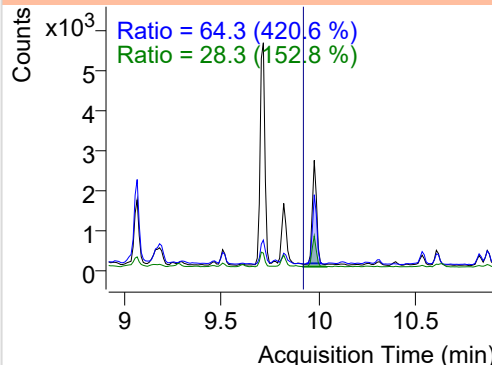


**Anthracene**

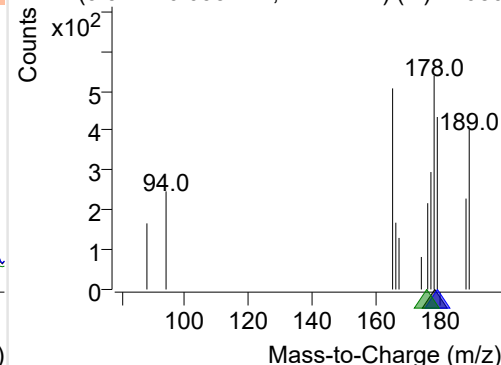
+ Selected Ion (178.0) 220806-PAHs-013.D



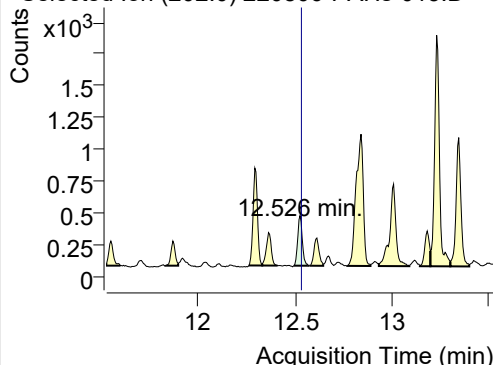
178.0, 179.0, 176.0



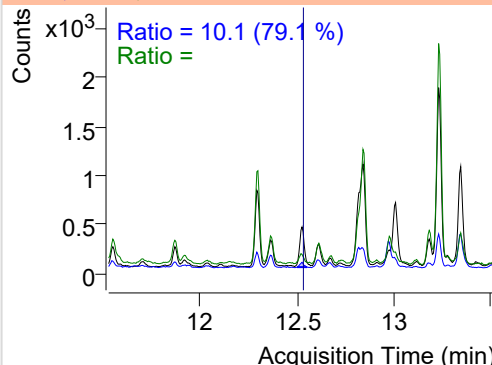
+ SIM (9.927-10.095 min, 17 scans) (\*\*) 22080

**Fluoranthene**

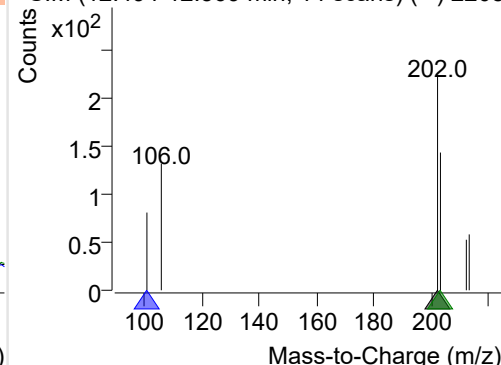
+ Selected Ion (202.0) 220806-PAHs-013.D



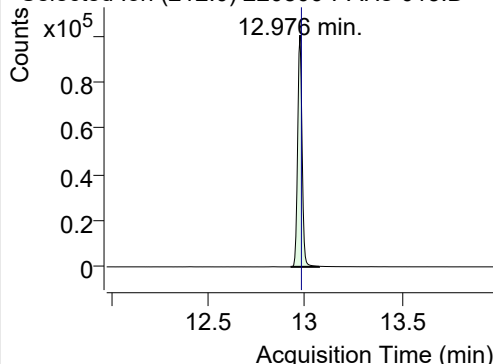
202.0, 101.0, 203.0



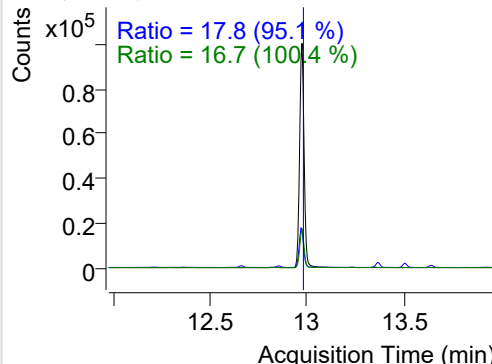
+ SIM (12.494-12.569 min, 14 scans) (\*\*) 2208

**LSS-D10-Pyrene**

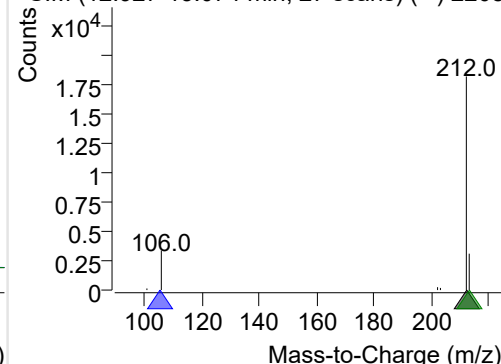
+ Selected Ion (212.0) 220806-PAHs-013.D



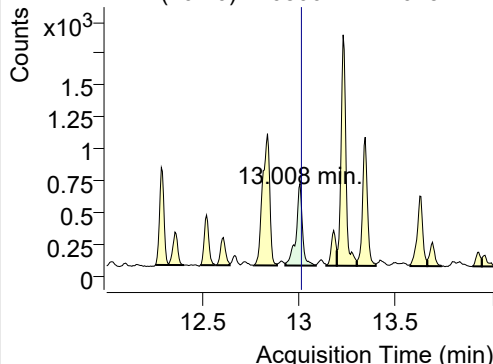
212.0, 106.0, 213.0



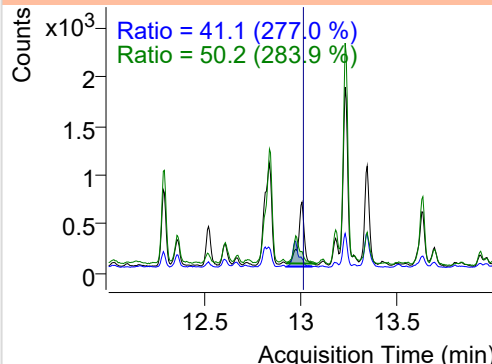
+ SIM (12.927-13.074 min, 27 scans) (\*\*) 2208

**Pyrene**

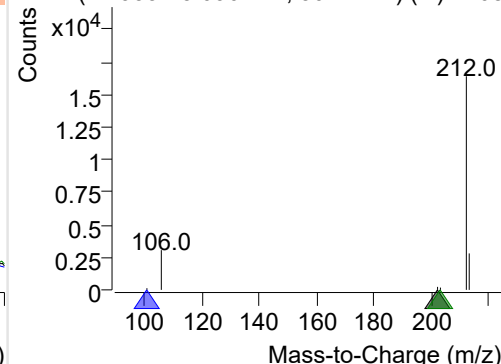
+ Selected Ion (202.0) 220806-PAHs-013.D



202.0, 101.0, 203.0



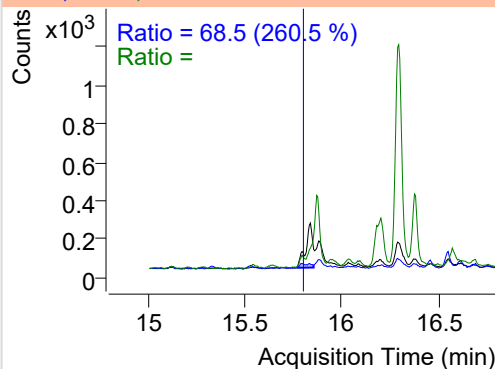
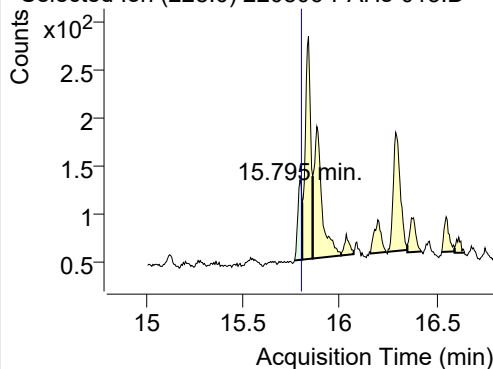
+ SIM (12.933-13.090 min, 30 scans) (\*\*) 2208



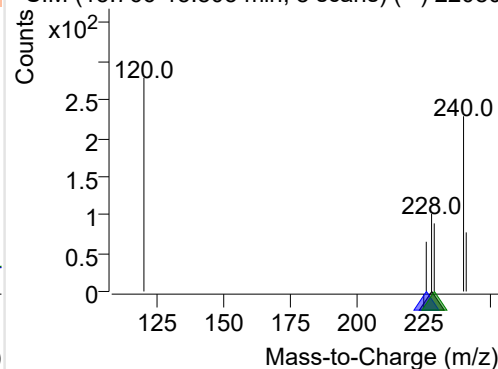
**Benz(a)anthracene**

+ Selected Ion (228.0) 220806-PAHs-013.D

228.0, 226.0, 229.0

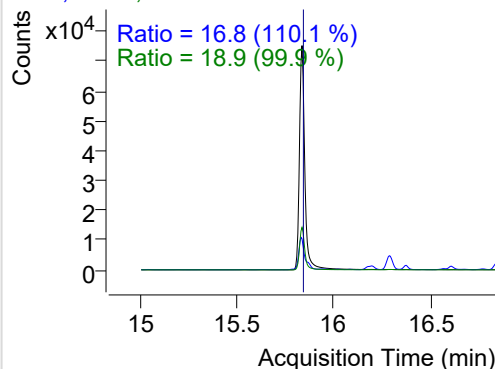
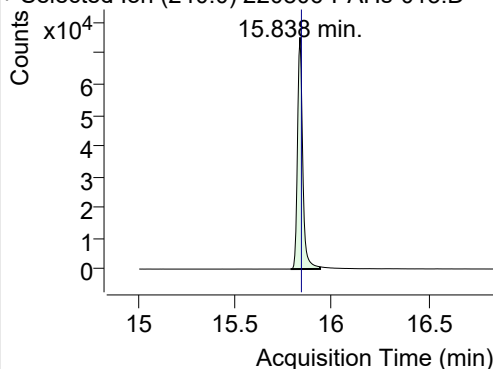


+ SIM (15.766-15.805 min, 8 scans) (\*\*) 22080

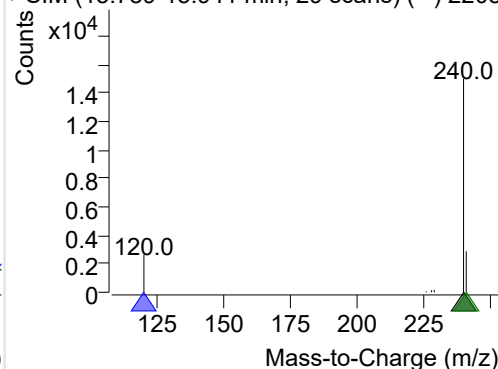
**IS-D12-Chrysene**

+ Selected Ion (240.0) 220806-PAHs-013.D

240.0, 120.0, 241.0

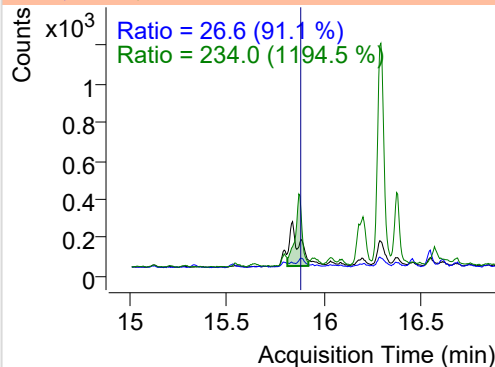
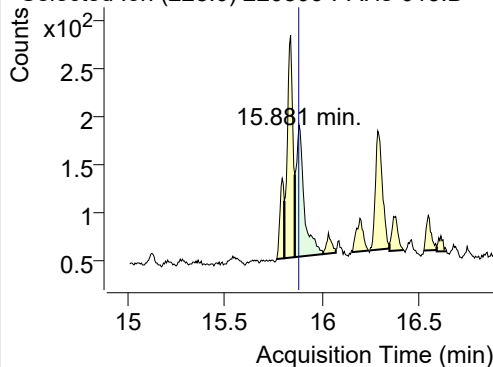


+ SIM (15.789-15.941 min, 29 scans) (\*\*) 2208

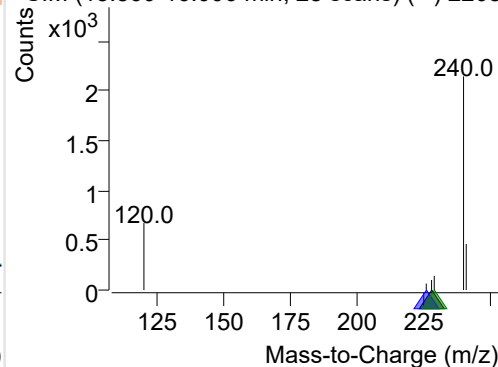
**Chrysene**

+ Selected Ion (228.0) 220806-PAHs-013.D

228.0, 226.0, 229.0

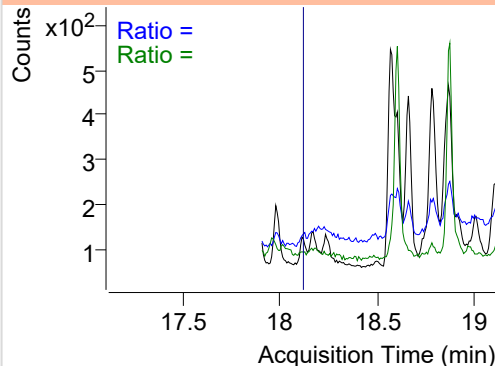
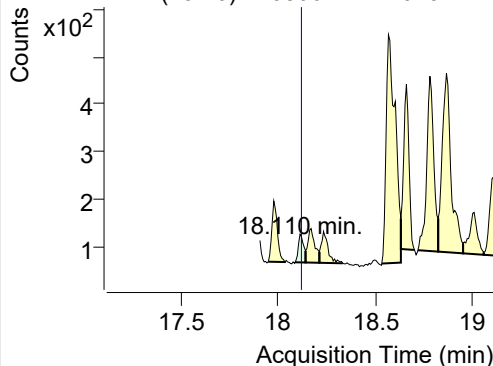


+ SIM (15.860-16.006 min, 28 scans) (\*\*) 2208

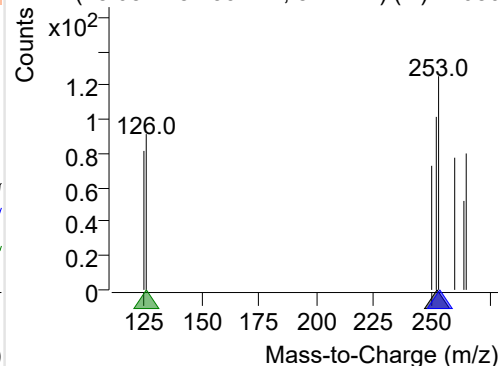
**Benzo(b)fluoranthene**

+ Selected Ion (252.0) 220806-PAHs-013.D

252.0, 253.0, 126.0



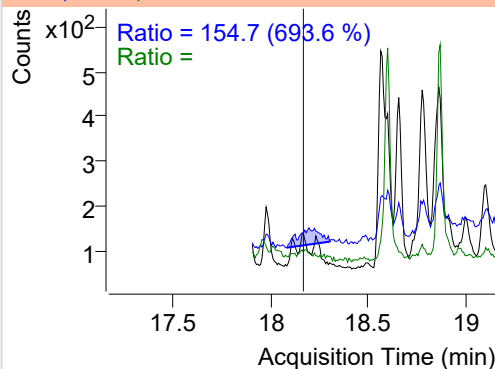
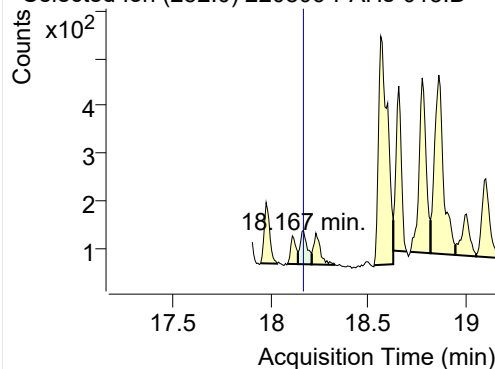
+ SIM (18.084-18.139 min, 8 scans) (\*\*) 22080



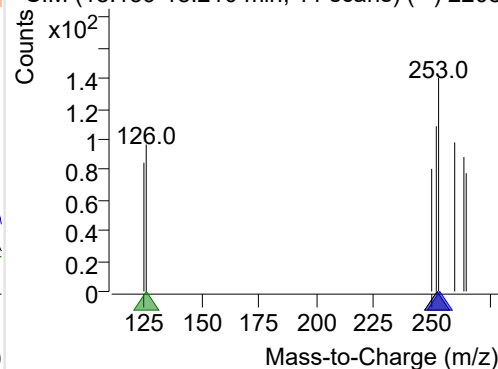
**Benzo(k)fluoranthene**

+ Selected Ion (252.0) 220806-PAHs-013.D

252.0, 253.0, 126.0

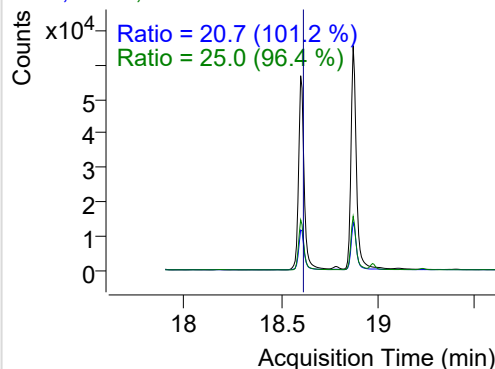
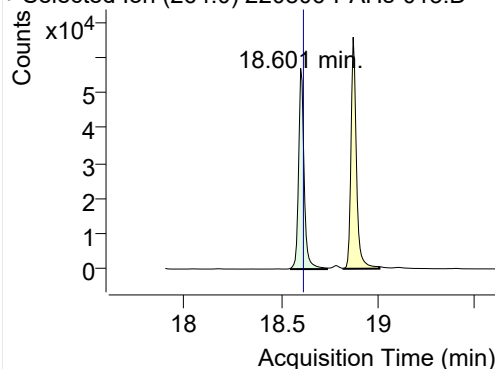


+ SIM (18.139-18.210 min, 11 scans) (\*\*) 2208

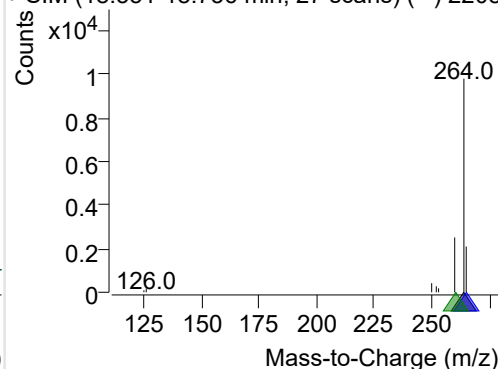
**SS-D12-Benzo(e)pyrene**

+ Selected Ion (264.0) 220806-PAHs-013.D

264.0, 265.0, 260.0

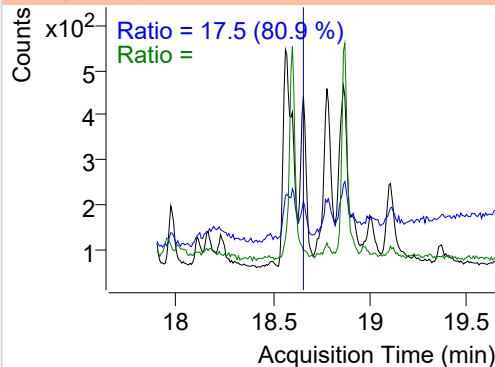
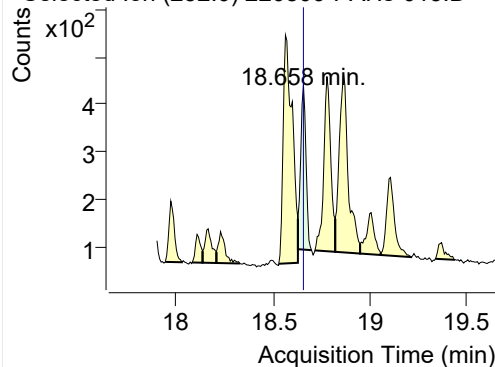


+ SIM (18.551-18.736 min, 27 scans) (\*\*) 2208

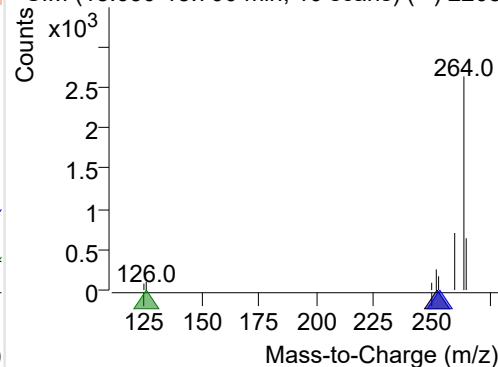
**Benzo(e)pyrene**

+ Selected Ion (252.0) 220806-PAHs-013.D

252.0, 253.0, 126.0

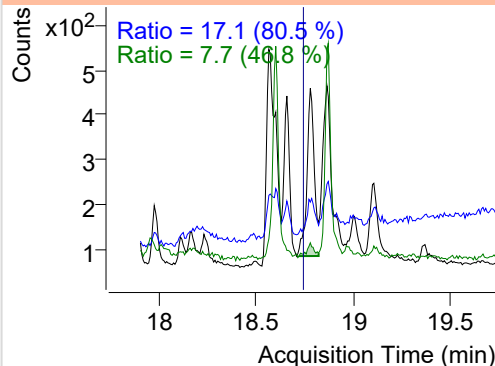
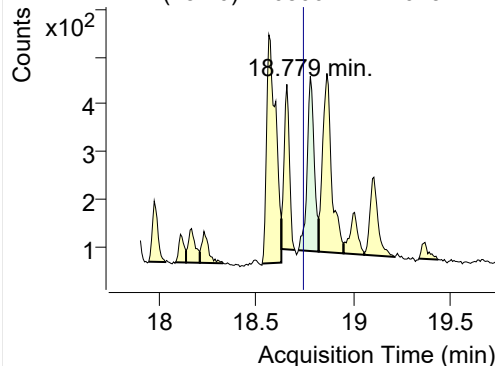


+ SIM (18.630-18.700 min, 10 scans) (\*\*) 2208

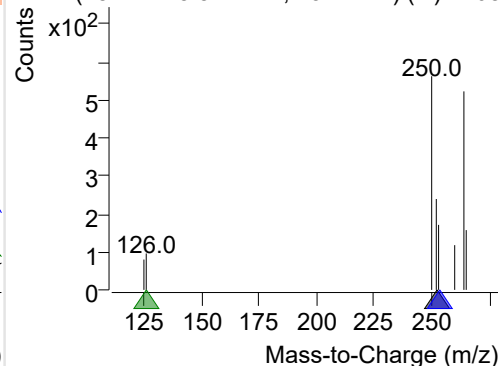
**Benzo(a)pyrene**

+ Selected Ion (252.0) 220806-PAHs-013.D

252.0, 253.0, 126.0

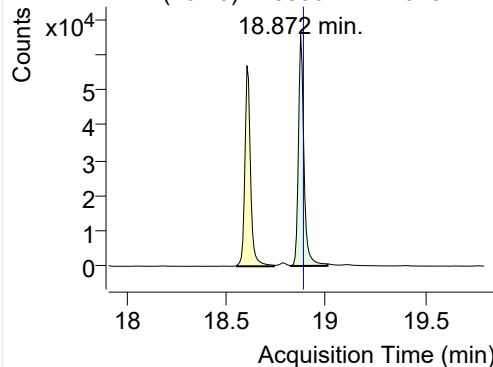


+ SIM (18.717-18.822 min, 15 scans) (\*\*) 2208

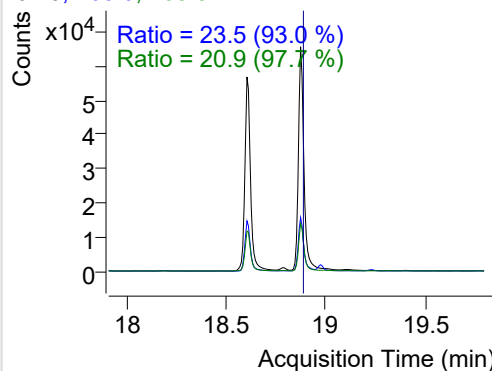


## IS-D12-Perylene

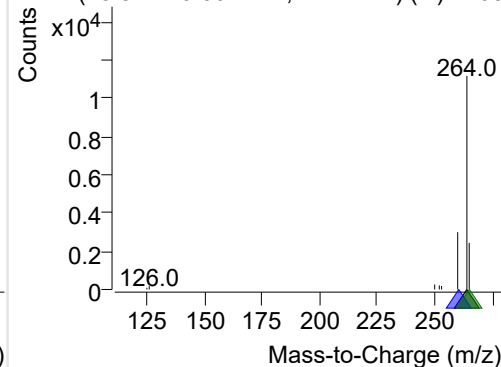
+ Selected Ion (264.0) 220806-PAHs-013.D



264.0, 260.0, 265.0

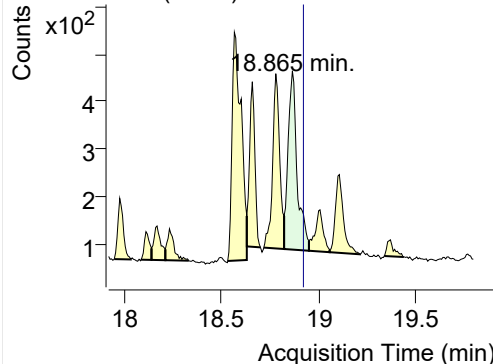


+ SIM (18.822-19.007 min, 27 scans) (\*\*) 2208

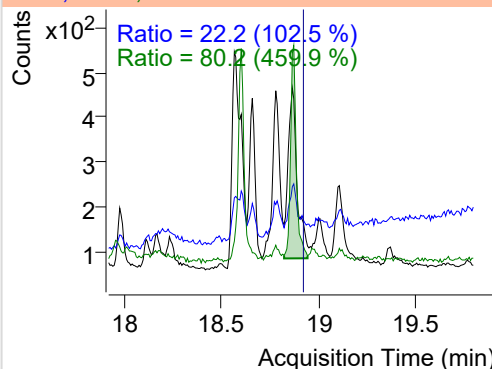


## Perylene

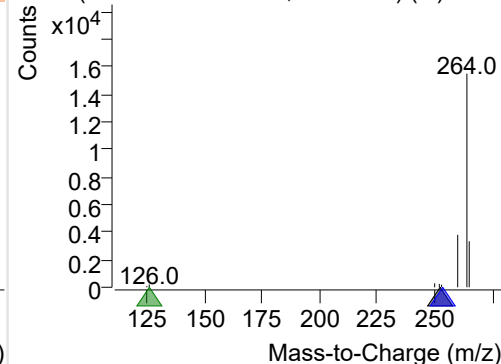
+ Selected Ion (252.0) 220806-PAHs-013.D



252.0, 253.0, 126.0

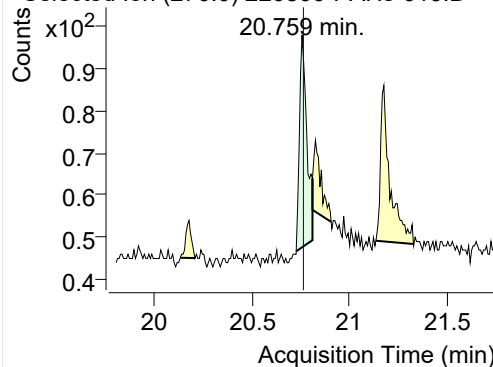


+ SIM (18.822-18.950 min, 19 scans) (\*\*) 2208

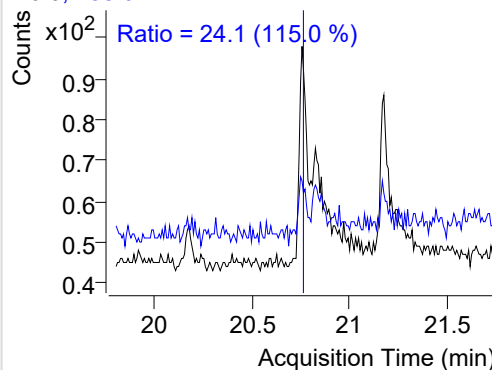


## Indeno(1,2,3-c,d)pyrene

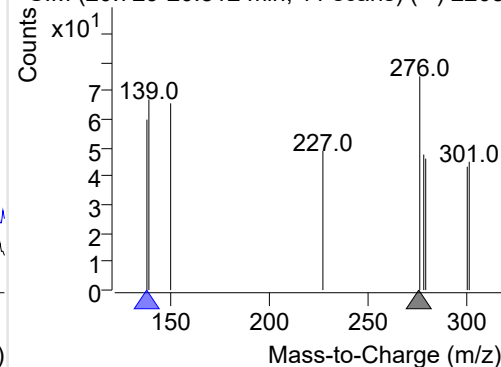
+ Selected Ion (276.0) 220806-PAHs-013.D



276.0, 138.0

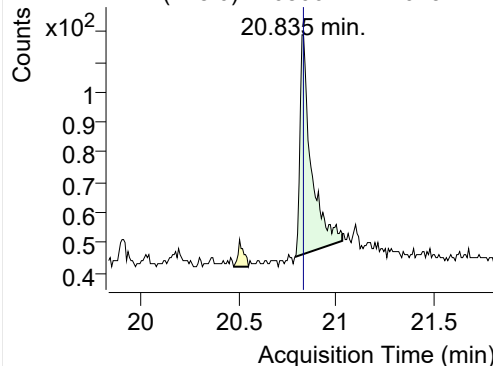


+ SIM (20.729-20.812 min, 11 scans) (\*\*) 2208

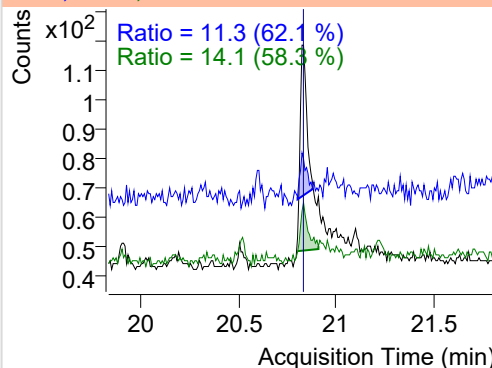


## Dibenz(a,h)anthracene

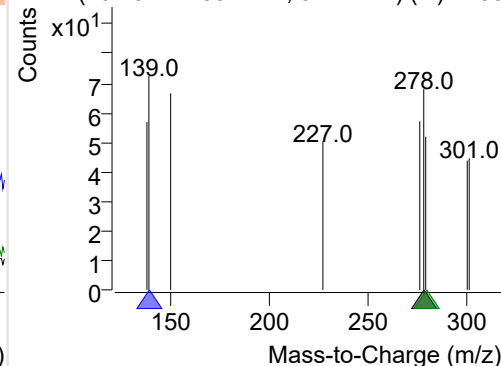
+ Selected Ion (278.0) 220806-PAHs-013.D



278.0, 139.0, 279.0

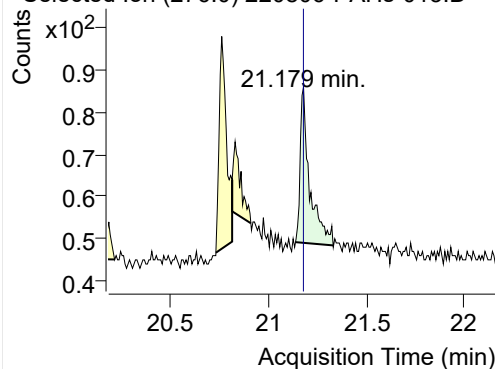


+ SIM (20.791-21.034 min, 32 scans) (\*\*) 2208

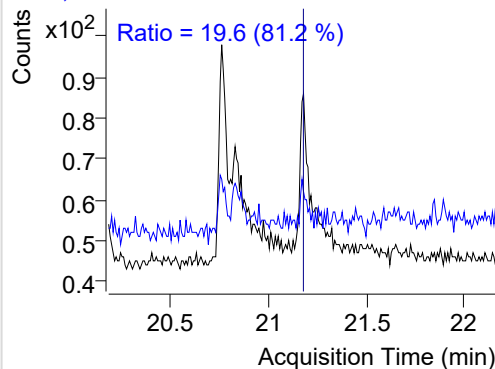


**Benzo(g,h,i)perylene**

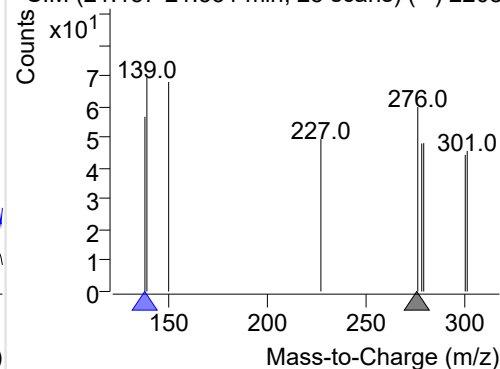
+ Selected Ion (276.0) 220806-PAHs-013.D



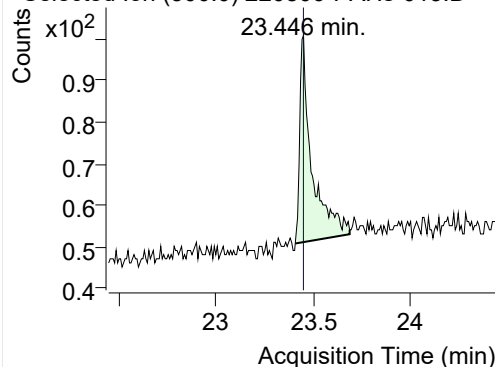
276.0, 138.0



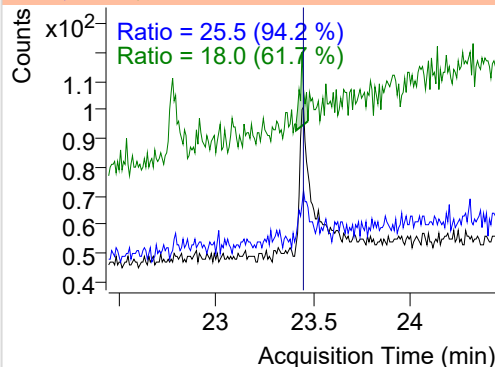
+ SIM (21.137-21.331 min, 25 scans) (\*\*) 2208

**Coronene**

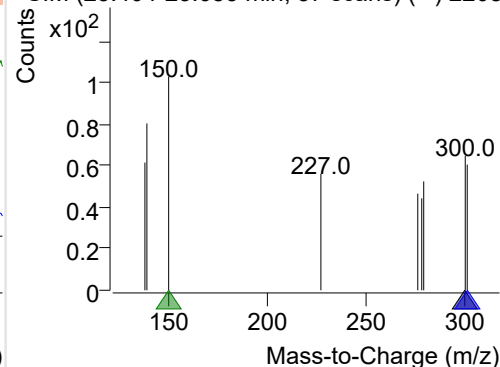
+ Selected Ion (300.0) 220806-PAHs-013.D



300.0, 301.0, 150.0



+ SIM (23.404-23.683 min, 37 scans) (\*\*) 2208





## Quantitative Analysis Sample Based Report

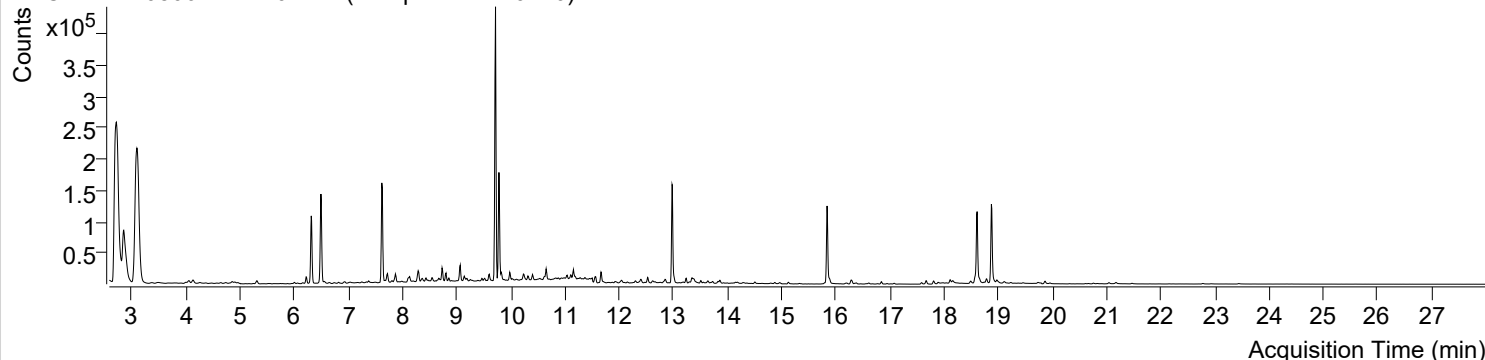


Trusted Answers

|                           |                                                                                            |                       |                        |
|---------------------------|--------------------------------------------------------------------------------------------|-----------------------|------------------------|
| Batch Data Path File Name | D:\MassHunter\GCMS\1\data\PAHs\220806-PAHs-Sample\QuantResults\220806-PAHs-Quant.batch.bin |                       |                        |
| Analysis Time Stamp       | 2022-10-10 오전 10:12:04                                                                     | Analyst Name          | DESKTOP-86B7UPG\5975MS |
| Report Generation Time    | 2022-10-10 오전 10:12:12                                                                     | Report Generator Name | DESKTOP-86B7UPG\5975MS |
| Calibration Last Update   | 2022-12-15 오후 3:30:46                                                                      | Batch State           | Processed              |
| Analyze Quant Version     | 10.2                                                                                       | Report Quant Version  | 10.2                   |
| Acq. Date-Time            | 2022-08-06 오후 5:15:44                                                                      | Data File             | 220806-PAHs-014.D      |
| Type                      | Sample                                                                                     | Name                  | Sample-PM-220716       |
| Dil.                      | 1                                                                                          | Acq. Method File      | PAHs 19mix-Method      |

## Sample Chromatogram

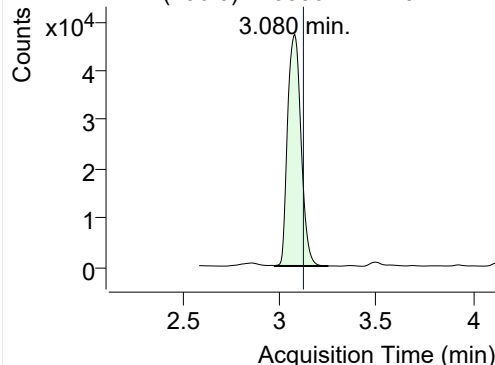
+ TIC SIM 220806-PAHs-014.D (Sample-PM-220716)



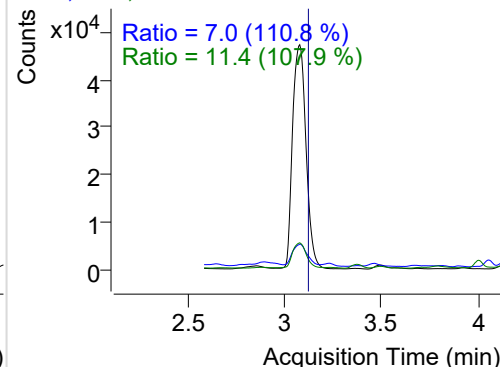
| Name                    | RT     | Transition | Resp.  | Height    | Final Conc. Units | Ratio |
|-------------------------|--------|------------|--------|-----------|-------------------|-------|
| IS-D8-Naphthalene       | 3.080  | 136.0      | 227475 | 47183.37  | ND ng/ml          | 11.4  |
| Naphthalene             | 3.107  | 128.0      | 666598 | 137661.33 | ND ng/ml          | 13.0  |
| Acenaphthylene          | 6.161  | 152.0      | 275    | 155.85    | ND ng/ml          |       |
| IS-D10-Acenaphthene     | 6.493  | 164.0      | 126434 | 67963.86  | ND ng/ml          | 96.2  |
| Acenaphthene            | 6.558  | 154.0      | 1670   | 655.62    | ND ng/ml          | 141.4 |
| LSS-D10-Fluorene        | 7.617  | 176.0      | 129164 | 70038.71  | ND ng/ml          | 91.5  |
| Fluorene                | 7.680  | 166.0      | 1976   | 1027.91   | ND ng/ml          | 112.3 |
| IS-D10-Phenanthrene     | 9.780  | 188.0      | 220865 | 137030.62 | ND ng/ml          | 15.0  |
| Phenanthrene            | 9.822  | 178.0      | 10925  | 6476.51   | ND ng/ml          | 19.8  |
| Anthracene              | 9.980  | 178.0      | 5373   | 3358.39   | ND ng/ml          | 25.4  |
| Fluoranthene            | 12.526 | 202.0      | 9588   | 6100.12   | ND ng/ml          | 28.8  |
| LSS-D10-Pyrene          | 12.982 | 212.0      | 185598 | 115568.48 | ND ng/ml          | 18.4  |
| Pyrene                  | 13.009 | 202.0      | 9725   | 5714.31   | ND ng/ml          | 36.2  |
| Benz(a)anthracene       | 15.795 | 228.0      | 1651   | 900.67    | ND ng/ml          | 44.8  |
| IS-D12-Chrysene         | 15.838 | 240.0      | 159354 | 93106.78  | ND ng/ml          | 18.9  |
| Chrysene                | 15.887 | 228.0      | 6582   | 3159.06   | ND ng/ml          | 29.7  |
| Benzo(b)fluoranthene    | 18.110 | 252.0      | 5965   | 3095.92   | ND ng/ml          | 21.2  |
| Benzo(k)fluoranthene    | 18.160 | 252.0      | 4841   | 1915.88   | ND ng/ml          | 23.7  |
| SS-D12-Benzo(e)pyrene   | 18.609 | 264.0      | 148016 | 76533.08  | ND ng/ml          | 24.6  |
| Benzo(e)pyrene          | 18.651 | 252.0      | 6060   | 2909.29   | ND ng/ml          | 23.1  |
| Benzo(a)pyrene          | 18.737 | 252.0      | 1610   | 732.92    | ND ng/ml          | 8.8   |
| IS-D12-Perylene         | 18.872 | 264.0      | 164512 | 85399.50  | ND ng/ml          | 23.8  |
| Perylene                | 18.865 | 252.0      | 1755   | 506.92    | ND ng/ml          | 12.4  |
| Indeno(1,2,3-c,d)pyrene | 20.759 | 276.0      | 2270   | 895.85    | ND ng/ml          | 17.6  |
| Dibenz(a,h)anthracene   | 20.828 | 278.0      | 876    | 297.25    | ND ng/ml          | 25.6  |
| Benzo(g,h,i)perylene    | 21.171 | 276.0      | 4056   | 1543.07   | ND ng/ml          | 24.4  |
| Coronene                | 23.439 | 300.0      | 1620   | 436.63    | ND ng/ml          | 25.5  |

## IS-D8-Naphthalene

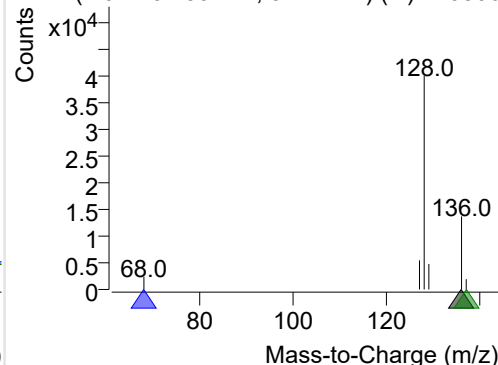
+ Selected Ion (136.0) 220806-PAHs-014.D



136.0, 68.0, 137.0

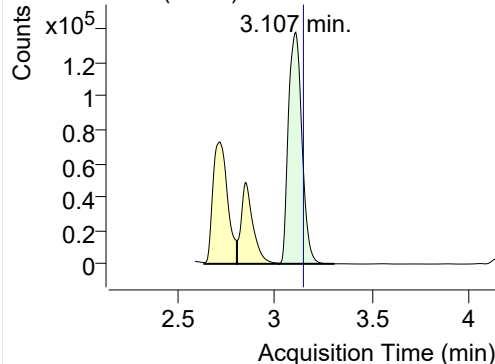


+ SIM (2.977-3.253 min, 52 scans) (\*\*) 220806

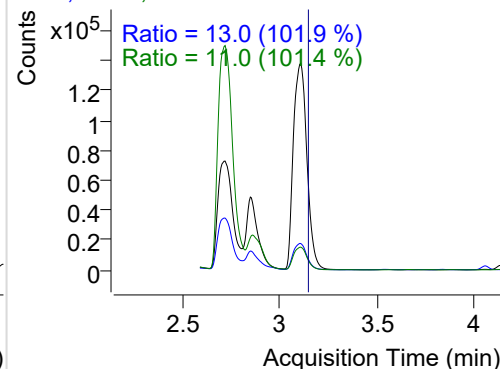


## Naphthalene

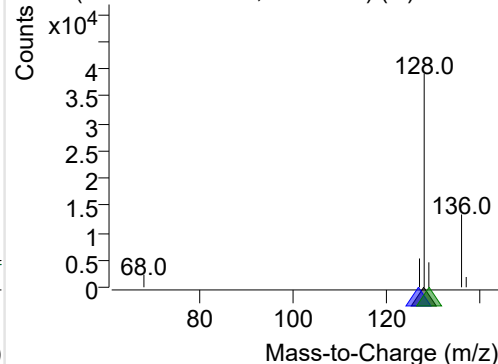
+ Selected Ion (128.0) 220806-PAHs-014.D



128.0, 127.0, 129.0

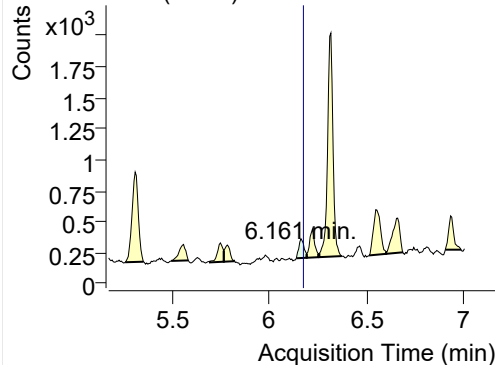


+ SIM (3.020-3.306 min, 53 scans) (\*\*) 220806

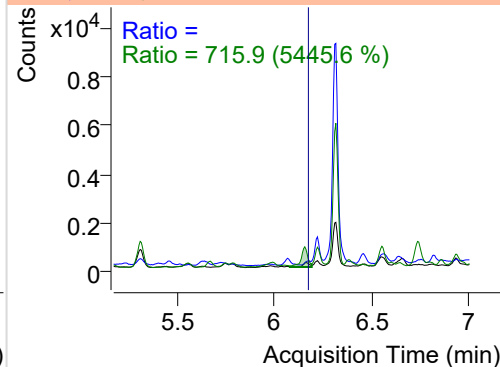


## Acenaphthylene

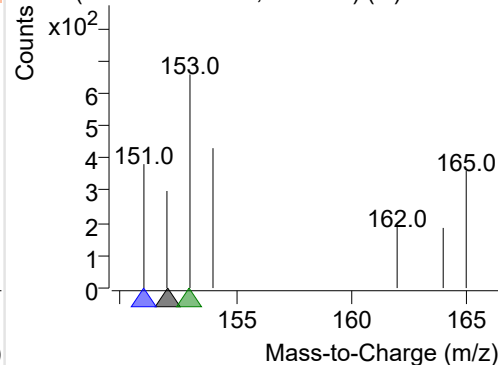
+ Selected Ion (152.0) 220806-PAHs-014.D



152.0, 151.0, 153.0

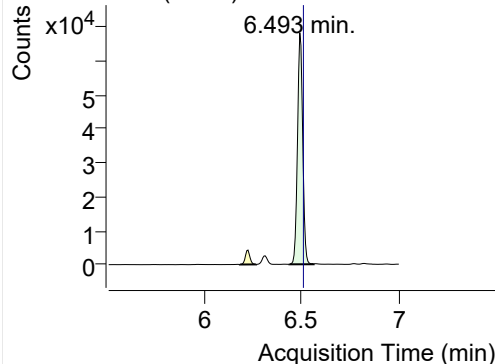


+ SIM (6.138-6.191 min, 9 scans) (\*\*) 220806

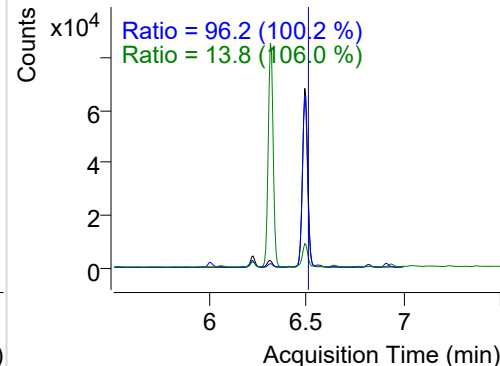


## IS-D10-Acenaphthene

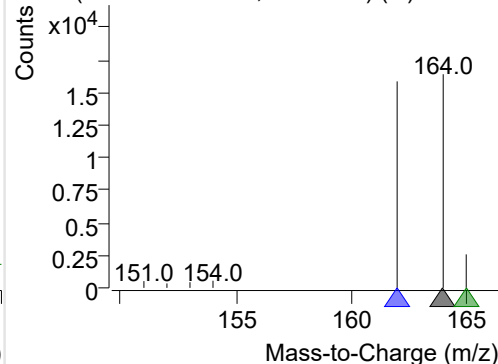
+ Selected Ion (164.0) 220806-PAHs-014.D



164.0, 162.0, 165.0

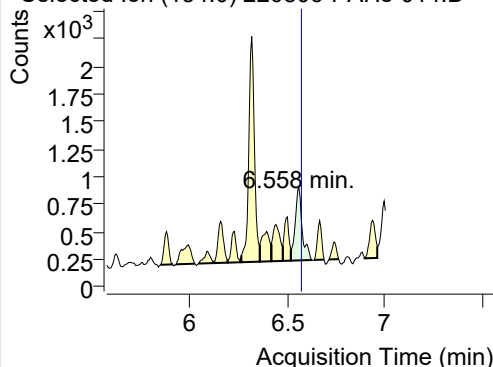


+ SIM (6.439-6.564 min, 22 scans) (\*\*) 220806

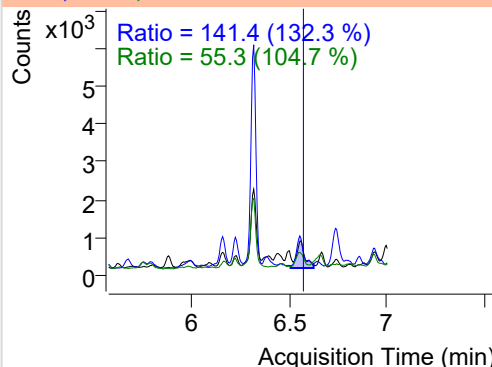


**Acenaphthene**

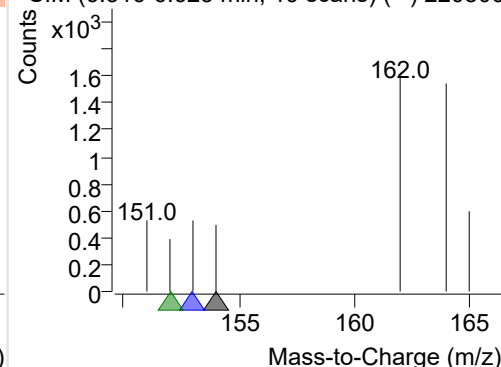
+ Selected Ion (154.0) 220806-PAHs-014.D



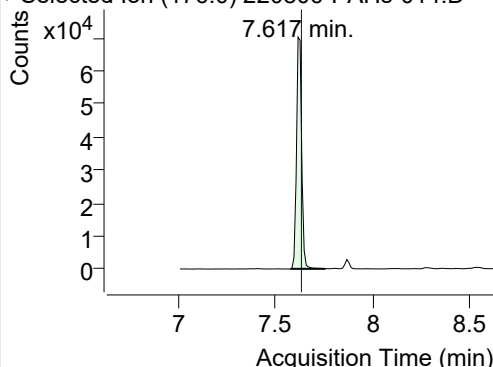
154.0, 153.0, 152.0



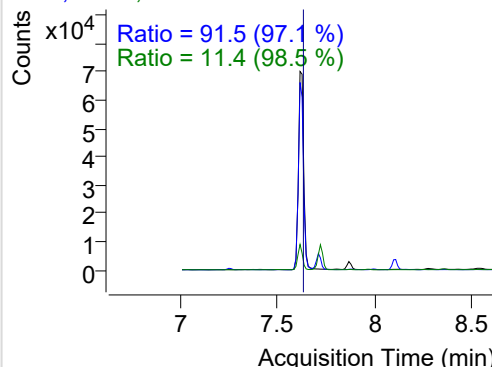
+ SIM (6.516-6.625 min, 19 scans) (\*\*) 220806

**LSS-D10-Fluorene**

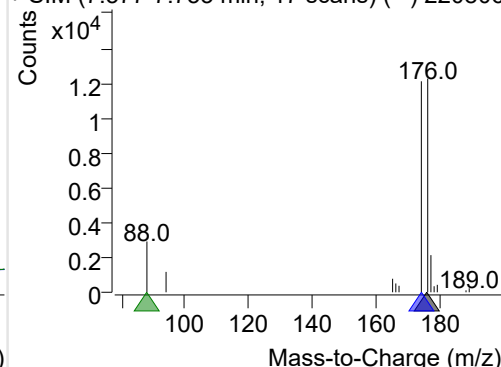
+ Selected Ion (176.0) 220806-PAHs-014.D



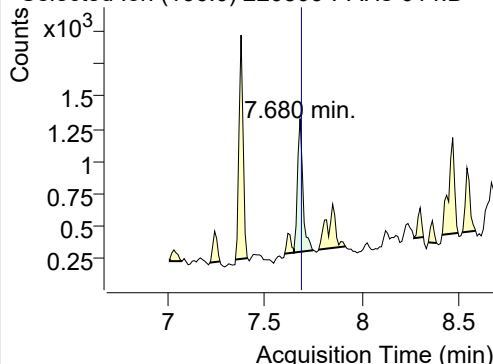
176.0, 174.0, 88.0



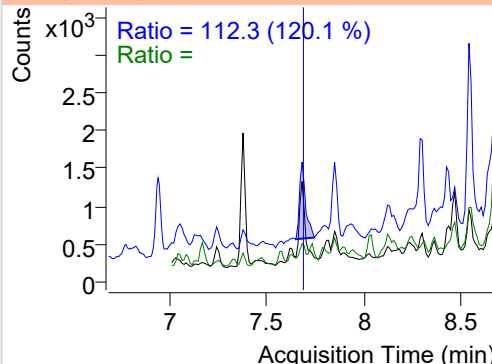
+ SIM (7.577-7.753 min, 17 scans) (\*\*) 220806

**Fluorene**

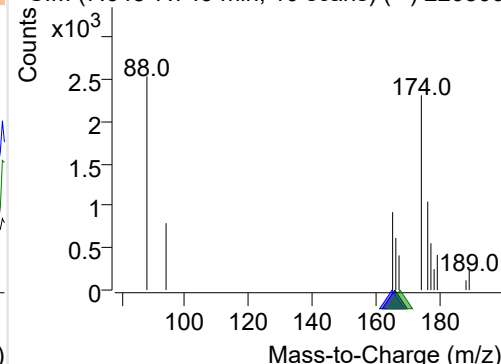
+ Selected Ion (166.0) 220806-PAHs-014.D



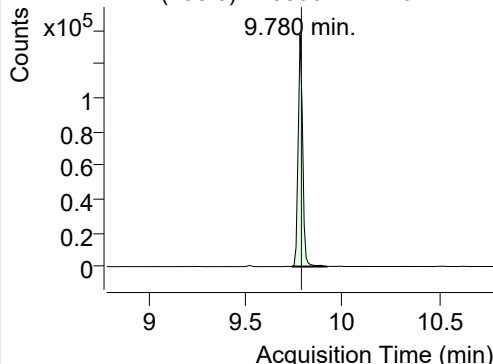
166.0, 165.0, 167.0



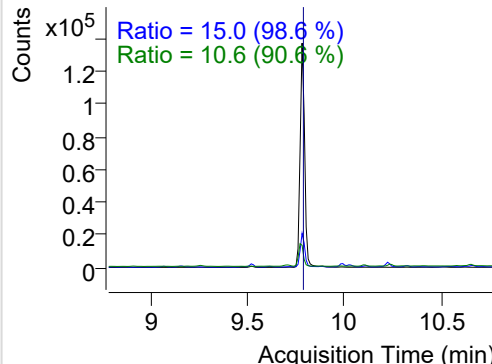
+ SIM (7.648-7.749 min, 10 scans) (\*\*) 220806

**IS-D10-Phenanthrene**

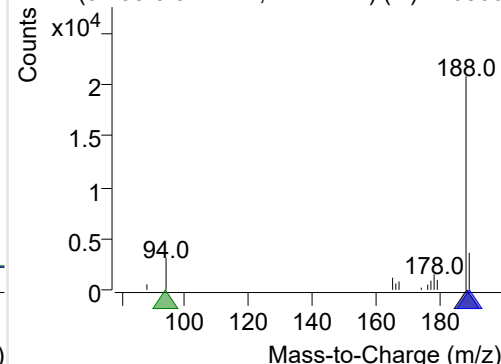
+ Selected Ion (188.0) 220806-PAHs-014.D



188.0, 189.0, 94.0

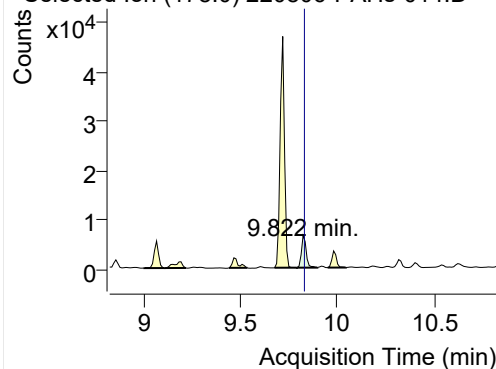


+ SIM (9.738-9.917 min, 17 scans) (\*\*) 220806

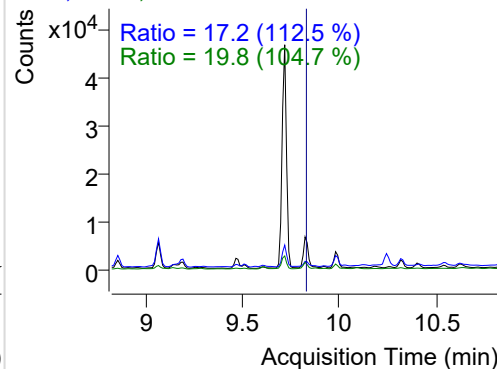


## Phenanthrene

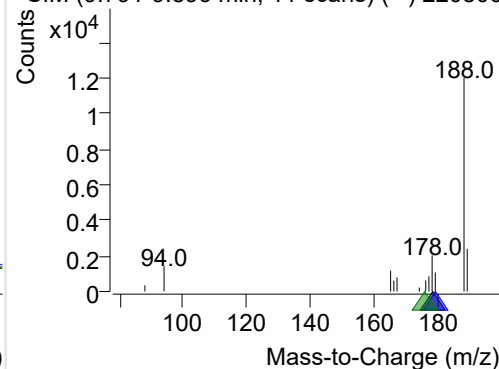
+ Selected Ion (178.0) 220806-PAHs-014.D



178.0, 179.0, 176.0

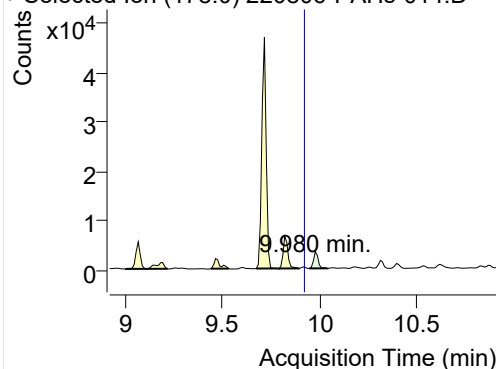


+ SIM (9.791-9.896 min, 11 scans) (\*\*) 220806

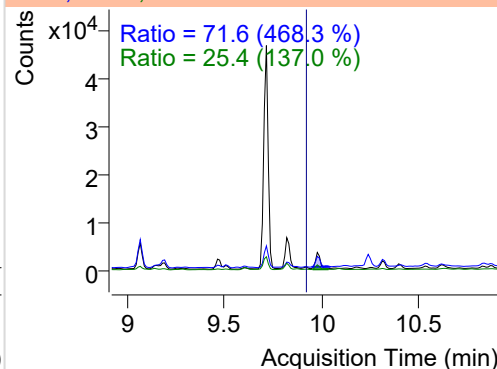


## Anthracene

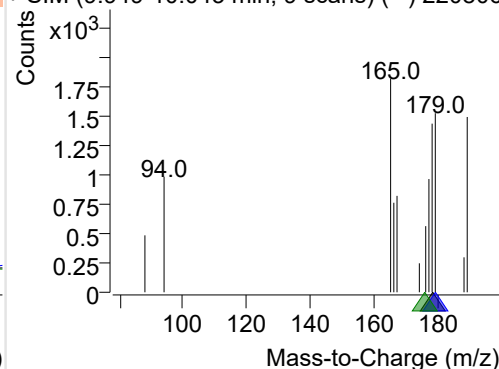
+ Selected Ion (178.0) 220806-PAHs-014.D



178.0, 179.0, 176.0

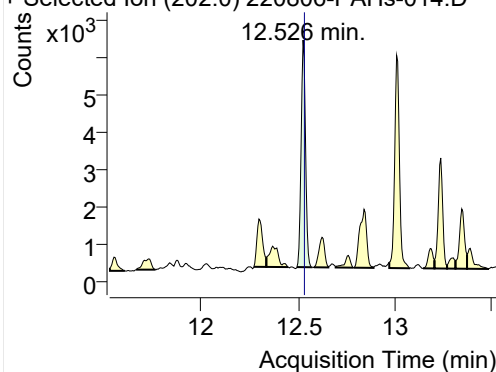


+ SIM (9.949-10.043 min, 9 scans) (\*\*) 220806

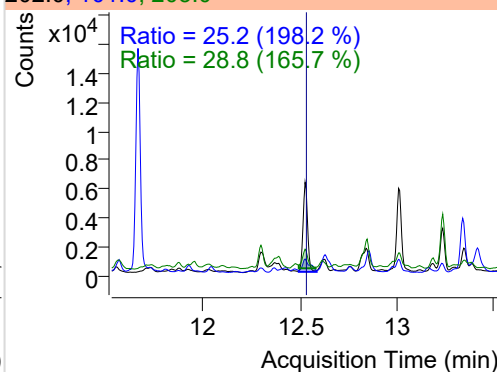


## Fluoranthene

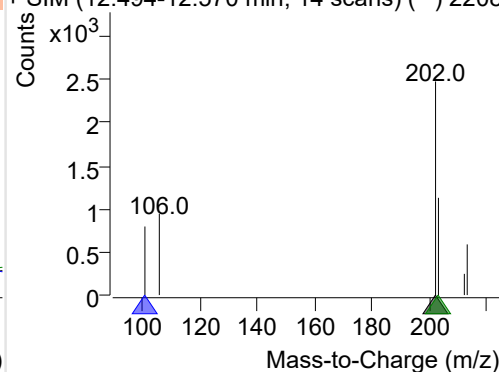
+ Selected Ion (202.0) 220806-PAHs-014.D



202.0, 101.0, 203.0

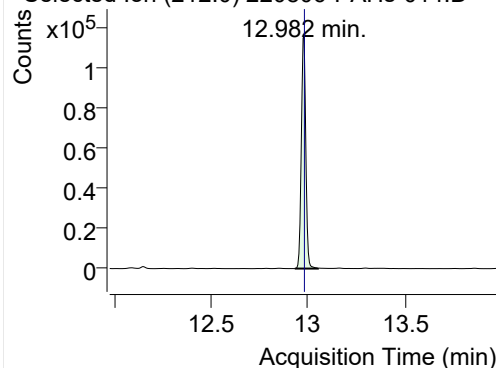


+ SIM (12.494-12.570 min, 14 scans) (\*\*) 2208

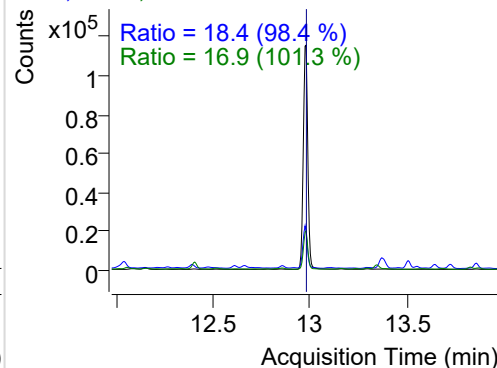


## LSS-D10-Pyrene

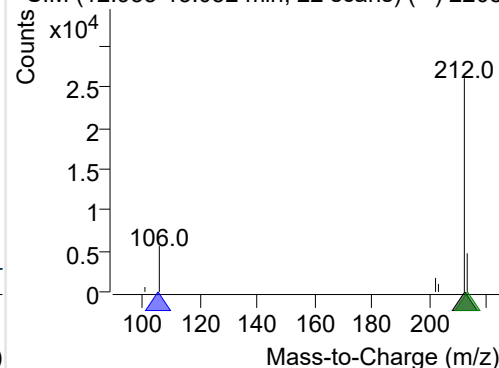
+ Selected Ion (212.0) 220806-PAHs-014.D



212.0, 106.0, 213.0

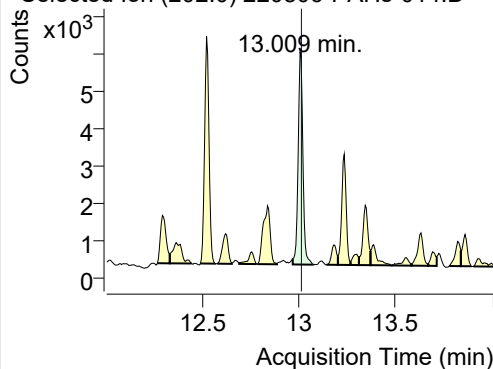


+ SIM (12.933-13.052 min, 22 scans) (\*\*) 2208

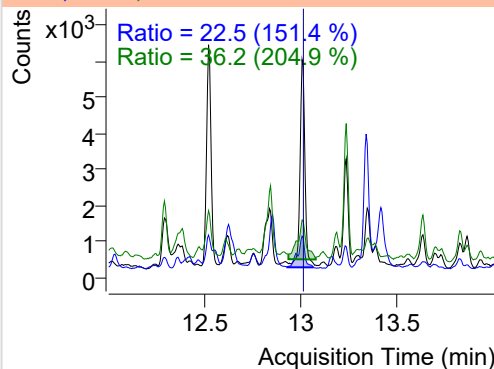


**Pyrene**

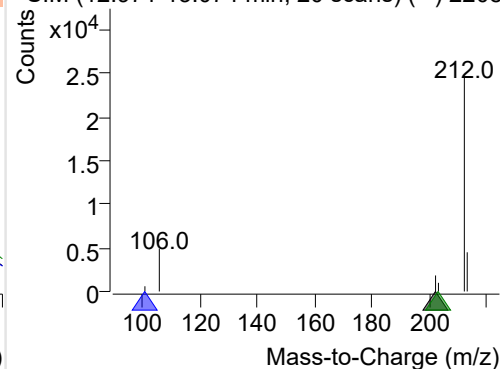
+ Selected Ion (202.0) 220806-PAHs-014.D



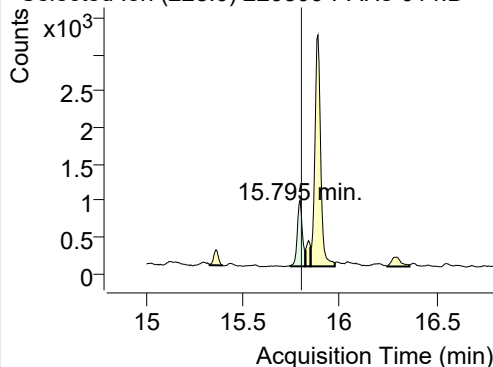
202.0, 101.0, 203.0



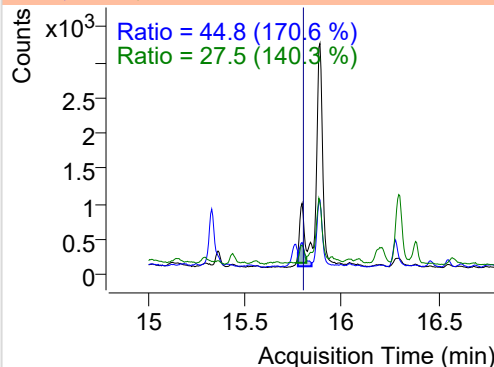
+ SIM (12.971-13.074 min, 20 scans) (\*\*) 2208

**Benz(a)anthracene**

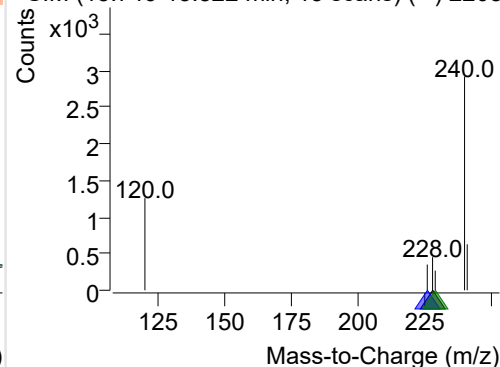
+ Selected Ion (228.0) 220806-PAHs-014.D



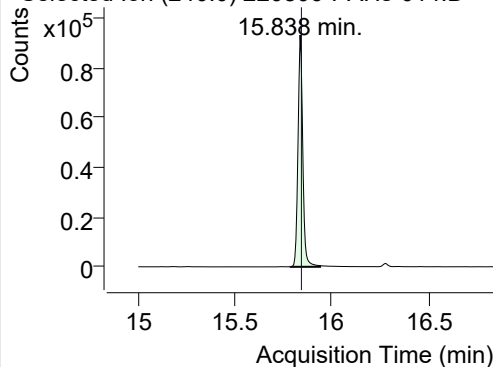
228.0, 226.0, 229.0



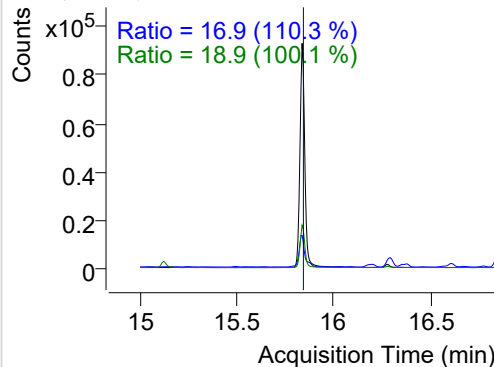
+ SIM (15.746-15.822 min, 15 scans) (\*\*) 2208

**IS-D12-Chrysene**

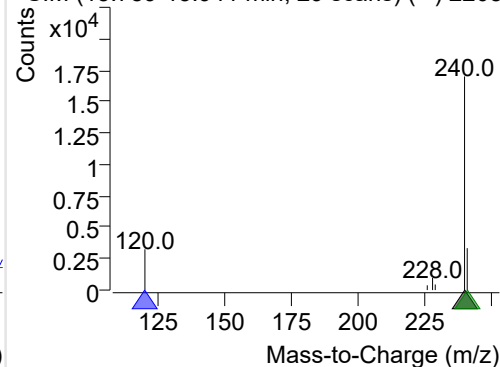
+ Selected Ion (240.0) 220806-PAHs-014.D



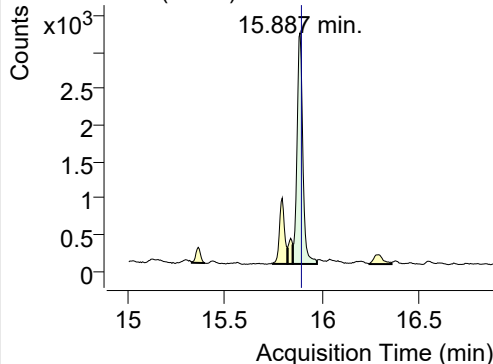
240.0, 120.0, 241.0



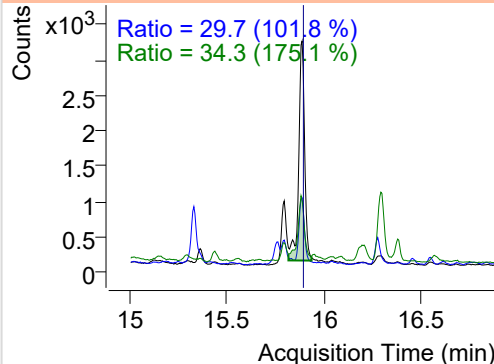
+ SIM (15.789-15.941 min, 29 scans) (\*\*) 2208

**Chrysene**

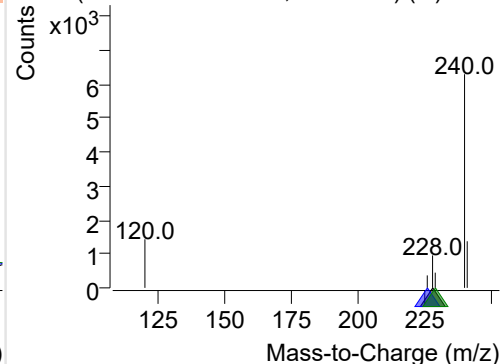
+ Selected Ion (228.0) 220806-PAHs-014.D



228.0, 226.0, 229.0

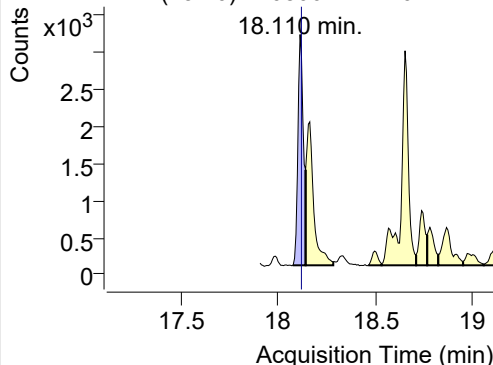


+ SIM (15.849-15.974 min, 24 scans) (\*\*) 2208

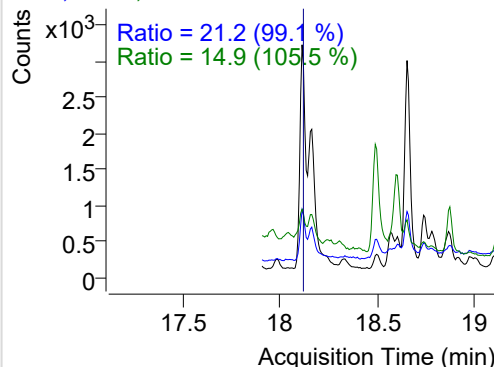


**Benzo(b)fluoranthene**

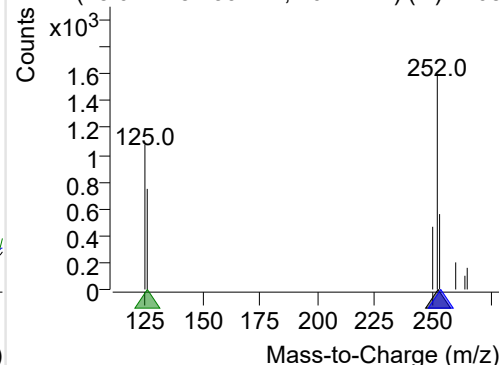
+ Selected Ion (252.0) 220806-PAHs-014.D



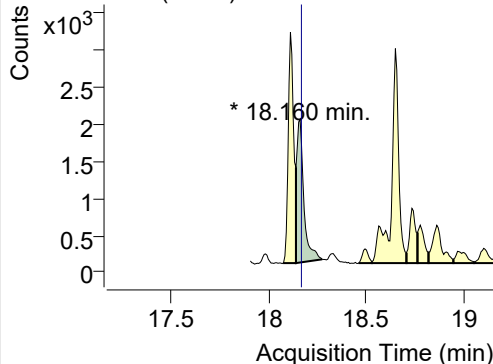
252.0, 253.0, 126.0



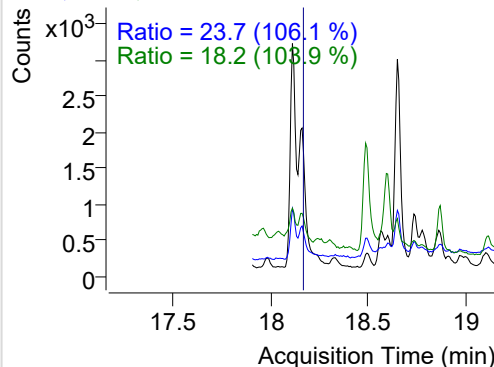
+ SIM (18.072-18.139 min, 10 scans) (\*\*) 2208

**Benzo(k)fluoranthene**

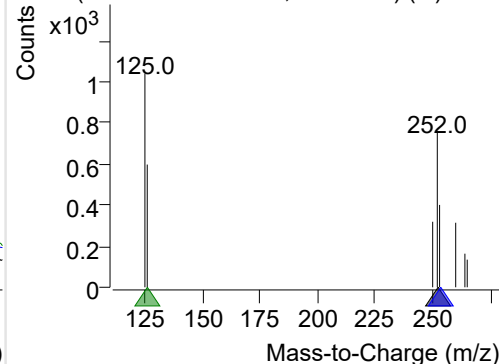
+ Selected Ion (252.0) 220806-PAHs-014.D



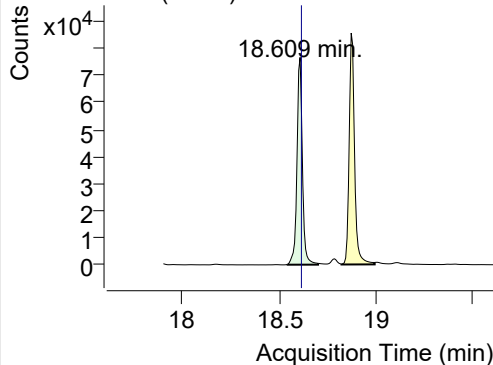
252.0, 253.0, 126.0



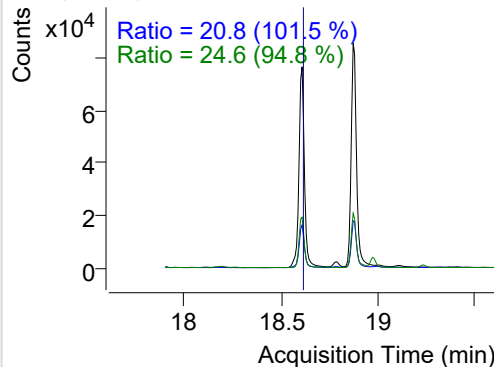
+ SIM (18.139-18.274 min, 20 scans) (\*\*) 2208

**SS-D12-Benzo(e)pyrene**

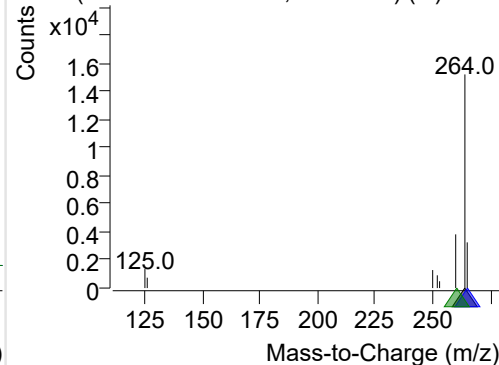
+ Selected Ion (264.0) 220806-PAHs-014.D



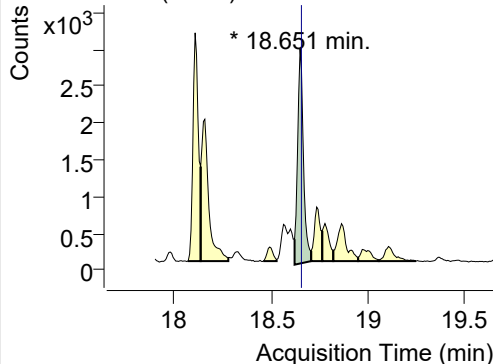
264.0, 265.0, 260.0



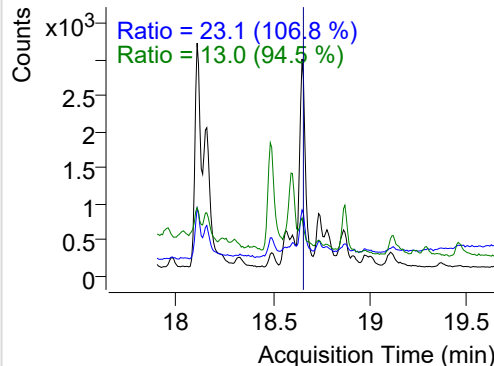
+ SIM (18.545-18.701 min, 23 scans) (\*\*) 2208

**Benzo(e)pyrene**

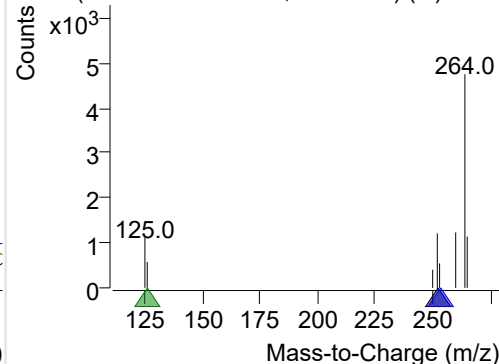
+ Selected Ion (252.0) 220806-PAHs-014.D



252.0, 253.0, 126.0



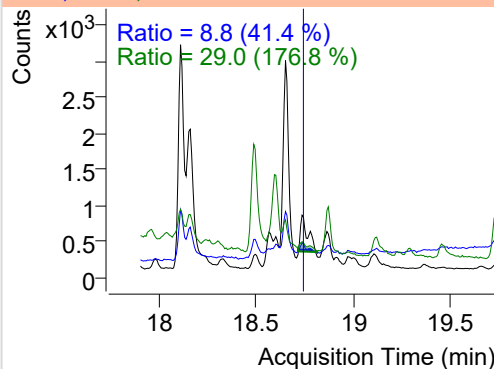
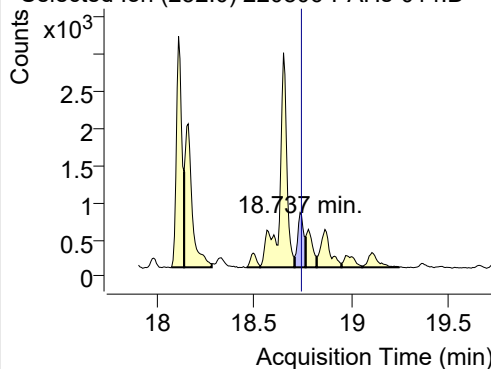
+ SIM (18.623-18.708 min, 13 scans) (\*\*) 2208



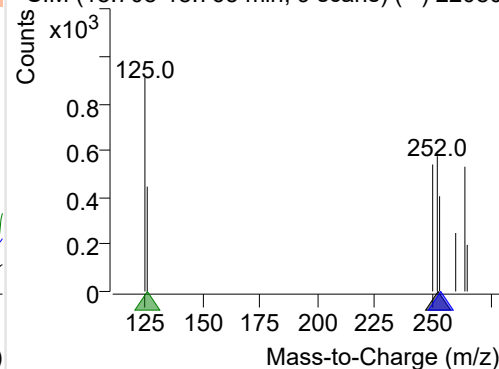
**Benzo(a)pyrene**

+ Selected Ion (252.0) 220806-PAHs-014.D

252.0, 253.0, 126.0

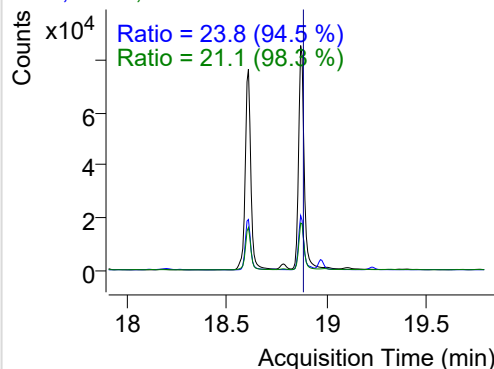
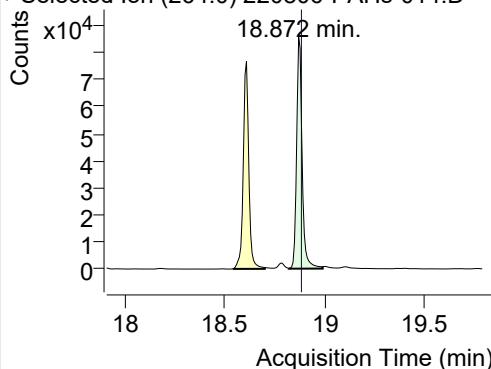


+ SIM (18.708-18.765 min, 9 scans) (\*\*) 22080

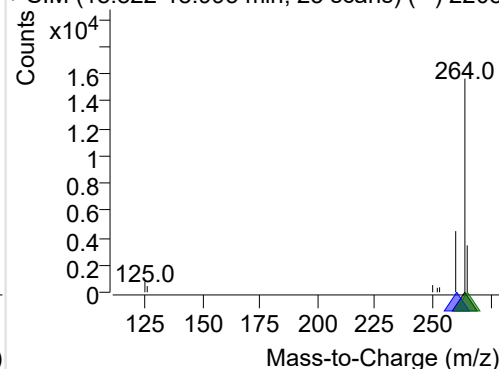
**IS-D12-Perylene**

+ Selected Ion (264.0) 220806-PAHs-014.D

264.0, 260.0, 265.0

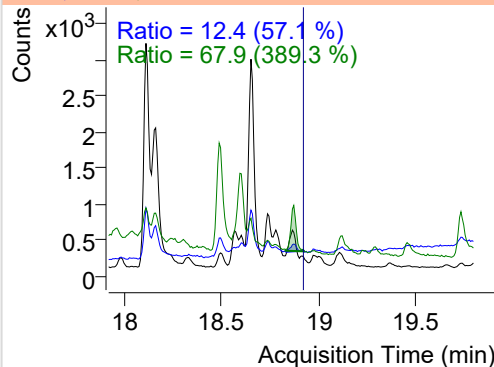
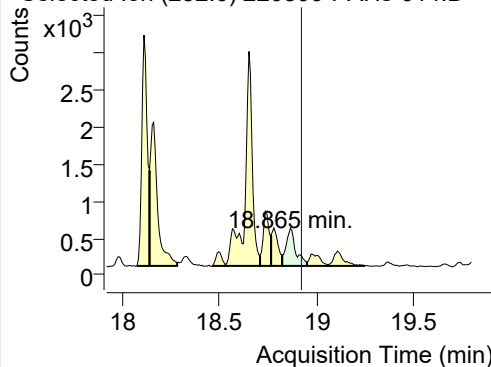


+ SIM (18.822-18.993 min, 25 scans) (\*\*) 2208

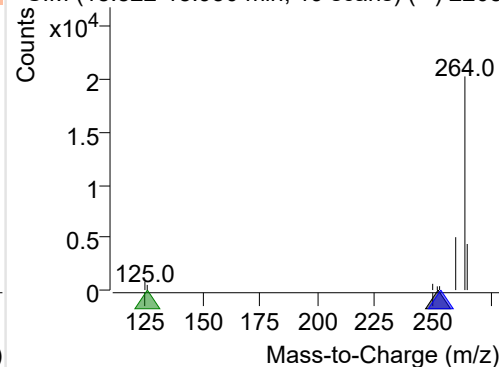
**Perylene**

+ Selected Ion (252.0) 220806-PAHs-014.D

252.0, 253.0, 126.0

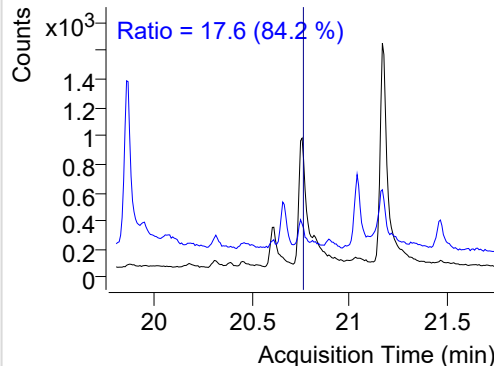
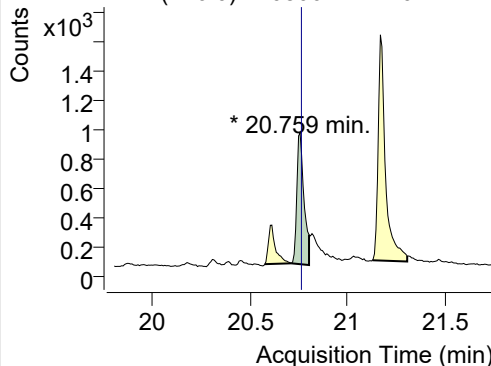


+ SIM (18.822-18.950 min, 19 scans) (\*\*) 2208

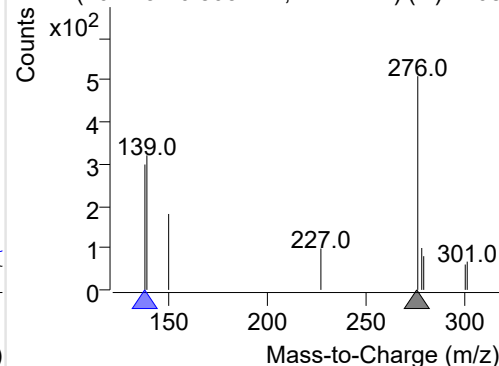
**Indeno(1,2,3-c,d)pyrene**

+ Selected Ion (276.0) 220806-PAHs-014.D

276.0, 138.0



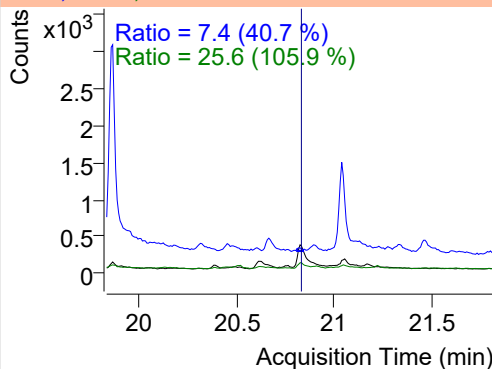
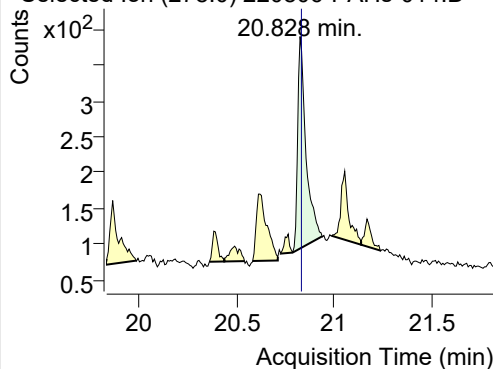
+ SIM (20.713-20.805 min, 12 scans) (\*\*) 2208



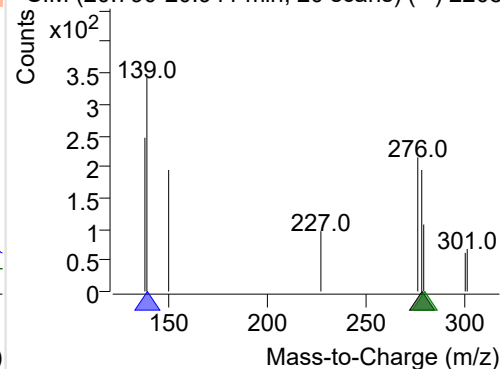
**Dibenz(a,h)anthracene**

+ Selected Ion (278.0) 220806-PAHs-014.D

278.0, 139.0, 279.0

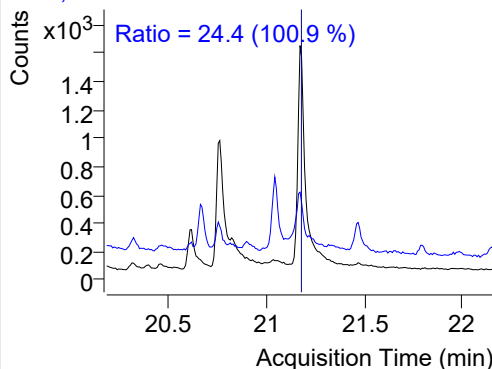
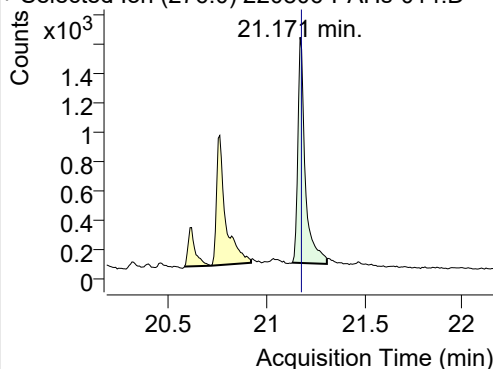


+ SIM (20.790-20.941 min, 20 scans) (\*\*) 2208

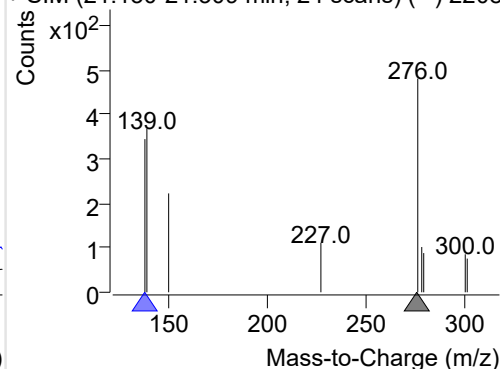
**Benzo(g,h,i)perylene**

+ Selected Ion (276.0) 220806-PAHs-014.D

276.0, 138.0

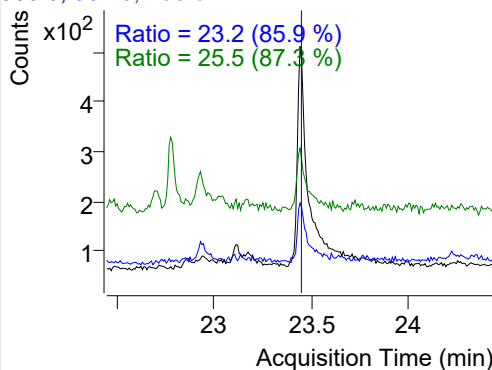
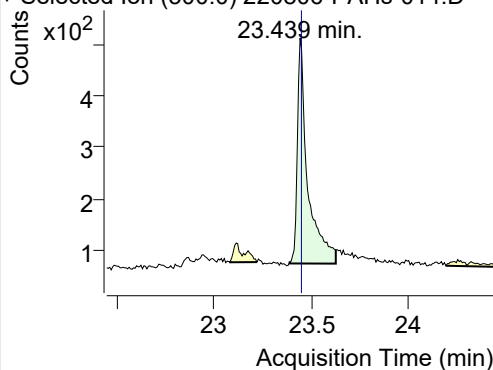


+ SIM (21.130-21.309 min, 24 scans) (\*\*) 2208

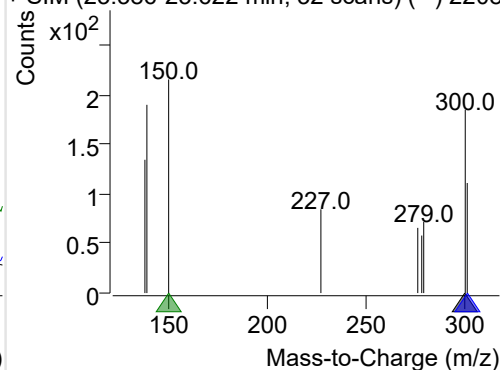
**Coronene**

+ Selected Ion (300.0) 220806-PAHs-014.D

300.0, 301.0, 150.0



+ SIM (23.386-23.622 min, 32 scans) (\*\*) 2208





## Quantitative Analysis Sample Based Report

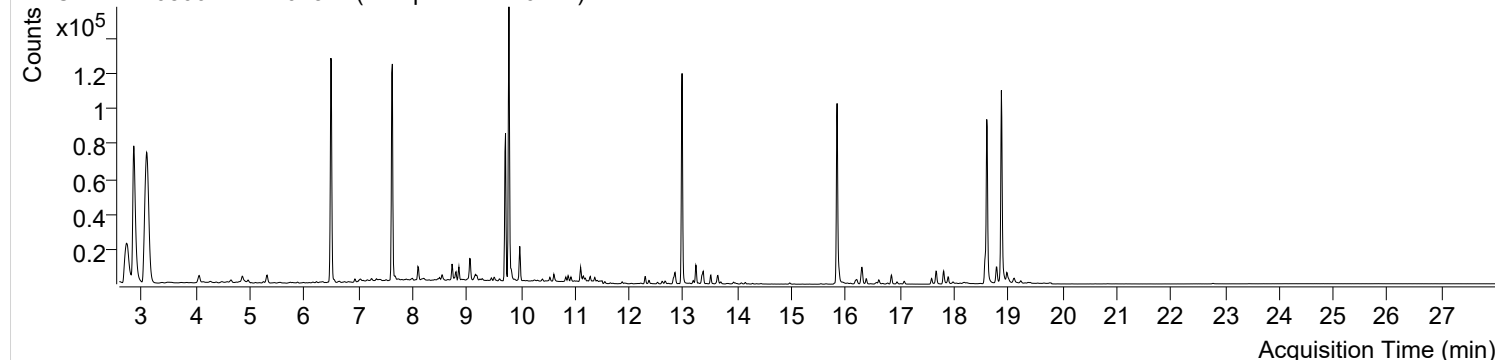


Trusted Answers

|                           |                                                                                            |                       |                        |
|---------------------------|--------------------------------------------------------------------------------------------|-----------------------|------------------------|
| Batch Data Path File Name | D:\MassHunter\GCMS\1\data\PAHs\220806-PAHs-Sample\QuantResults\220806-PAHs-Quant.batch.bin |                       |                        |
| Analysis Time Stamp       | 2022-10-10 오전 10:12:04                                                                     | Analyst Name          | DESKTOP-86B7UPG\5975MS |
| Report Generation Time    | 2022-10-10 오전 10:12:12                                                                     | Report Generator Name | DESKTOP-86B7UPG\5975MS |
| Calibration Last Update   | 2022-12-15 오후 3:30:46                                                                      | Batch State           | Processed              |
| Analyze Quant Version     | 10.2                                                                                       | Report Quant Version  | 10.2                   |
| Acq. Date-Time            | 2022-08-06 오후 5:46:48                                                                      | Data File             | 220806-PAHs-015.D      |
| Type                      | Sample                                                                                     | Name                  | Sample-PM-220722       |
| Dil.                      | 1                                                                                          | Acq. Method File      | PAHs 19mix-Method      |

## Sample Chromatogram

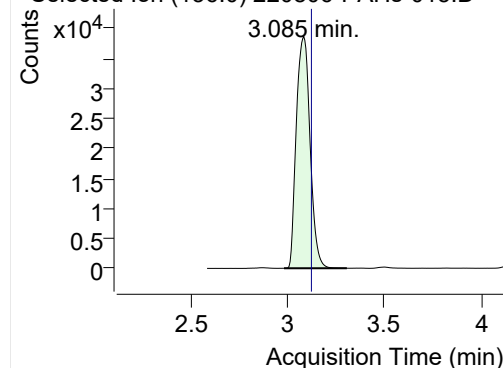
+ TIC SIM 220806-PAHs-015.D (Sample-PM-220722)



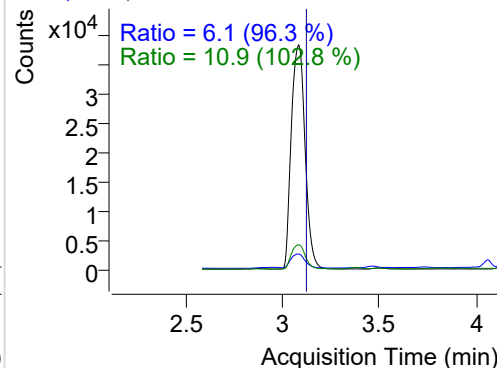
| Name                    | RT     | Transition | Resp.  | Height   | Final Conc. Units | Ratio |
|-------------------------|--------|------------|--------|----------|-------------------|-------|
| IS-D8-Naphthalene       | 3.085  | 136.0      | 189638 | 38521.85 | ND ng/ml          | 10.9  |
| Naphthalene             | 3.112  | 128.0      | 130635 | 26610.52 | ND ng/ml          | 12.8  |
| Acenaphthylene          | 6.285  | 152.0      | 125    | 54.25    | ND ng/ml          | 490.4 |
| IS-D10-Acenaphthene     | 6.499  | 164.0      | 112846 | 60822.99 | ND ng/ml          | 96.4  |
| Acenaphthene            | 6.558  | 154.0      | 872    | 383.87   | ND ng/ml          | 79.5  |
| LSS-D10-Fluorene        | 7.627  | 176.0      | 99306  | 57131.37 | ND ng/ml          | 92.7  |
| Fluorene                | 7.680  | 166.0      | 1246   | 699.78   | ND ng/ml          | 138.7 |
| IS-D10-Phenanthrene     | 9.780  | 188.0      | 197902 | 125065.8 | ND ng/ml          | 15.1  |
| Phenanthrene            | 9.822  | 178.0      | 4251   | 2527.55  | ND ng/ml          | 19.2  |
| Anthracene              | 9.979  | 178.0      | 8112   | 5281.55  | ND ng/ml          | 27.6  |
| Fluoranthene            | 12.526 | 202.0      | 966    | 586.56   | ND ng/ml          |       |
| LSS-D10-Pyrene          | 12.976 | 212.0      | 141985 | 88463.00 | ND ng/ml          | 18.6  |
| Pyrene                  | 13.009 | 202.0      | 2090   | 934.22   | ND ng/ml          | 34.8  |
| Benz(a)anthracene       | 15.838 | 228.0      | 519    | 223.35   | ND ng/ml          | 5.5   |
| IS-D12-Chrysene         | 15.838 | 240.0      | 138209 | 76750.21 | ND ng/ml          | 18.9  |
| Chrysene                | 15.876 | 228.0      | 396    | 151.77   | ND ng/ml          | 23.3  |
| Benzo(b)fluoranthene    | 18.238 | 252.0      | 143    | 78.21    | ND ng/ml          | 131.0 |
| Benzo(k)fluoranthene    | 18.238 | 252.0      | 143    | 78.21    | ND ng/ml          | 131.0 |
| SS-D12-Benzo(e)pyrene   | 18.601 | 264.0      | 126918 | 62612.14 | ND ng/ml          | 23.6  |
| Benzo(e)pyrene          | 18.566 | 252.0      | 2240   | 648.47   | ND ng/ml          | 21.8  |
| Benzo(a)pyrene          | 18.779 | 252.0      | 1325   | 504.34   | ND ng/ml          | 19.5  |
| IS-D12-Perylene         | 18.872 | 264.0      | 141533 | 74249.31 | ND ng/ml          | 23.4  |
| Perylene                | 18.865 | 252.0      | 1660   | 507.93   | ND ng/ml          | 23.7  |
| Indeno(1,2,3-c,d)pyrene | 20.759 | 276.0      | 102    | 38.62    | ND ng/ml          | 17.0  |
| Dibenz(a,h)anthracene   | 20.835 | 278.0      | 196    | 55.08    | ND ng/ml          | 24.4  |
| Benzo(g,h,i)perylene    | 21.179 | 276.0      | 90     | 34.49    | ND ng/ml          | 26.4  |
| Coronene                | 23.439 | 300.0      | 112    | 34.37    | ND ng/ml          |       |

## IS-D8-Naphthalene

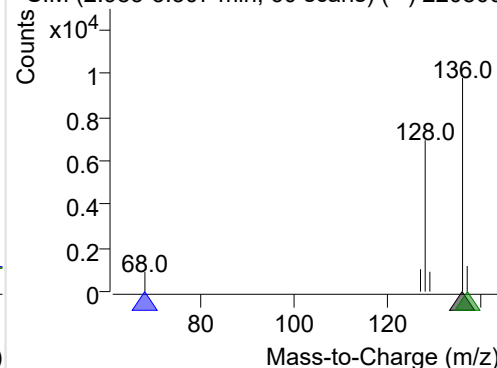
+ Selected Ion (136.0) 220806-PAHs-015.D



136.0, 68.0, 137.0

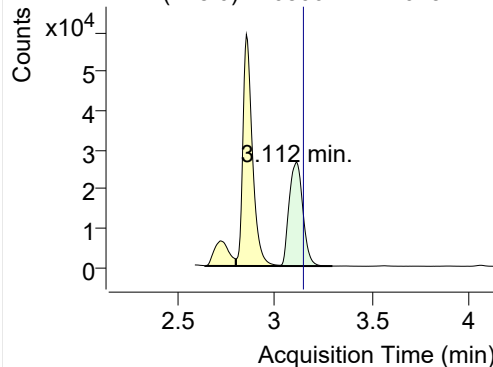


+ SIM (2.983-3.307 min, 60 scans) (\*\*) 220806

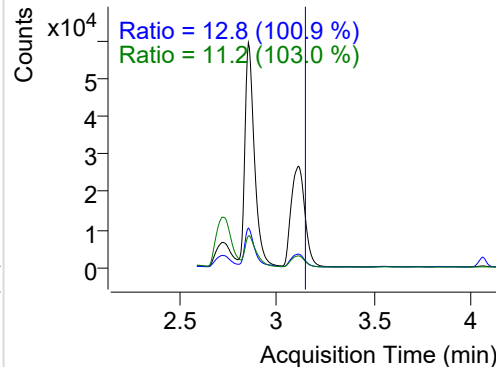


**Naphthalene**

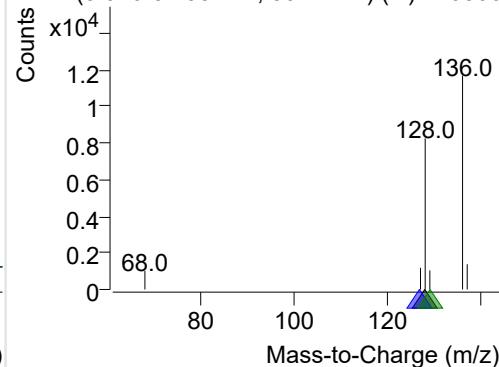
+ Selected Ion (128.0) 220806-PAHs-015.D



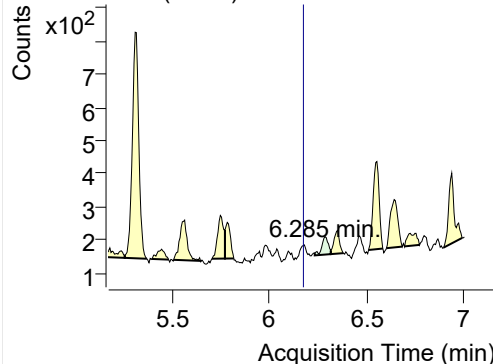
128.0, 127.0, 129.0



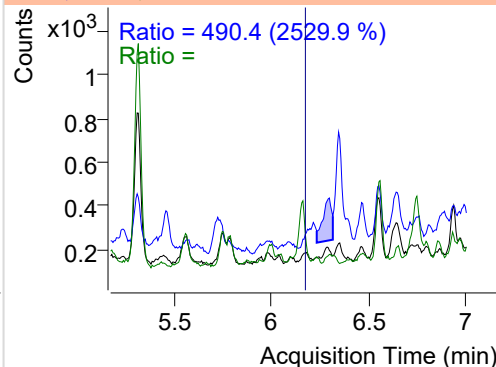
+ SIM (3.026-3.295 min, 50 scans) (\*\*) 220806

**Acenaphthylene**

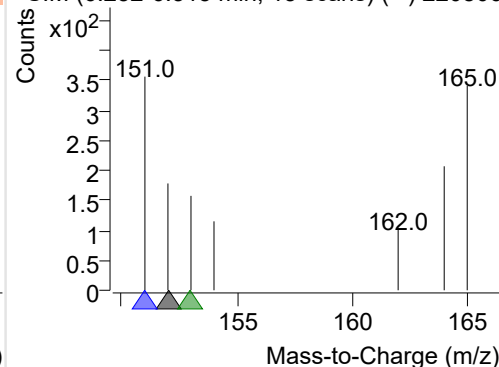
+ Selected Ion (152.0) 220806-PAHs-015.D



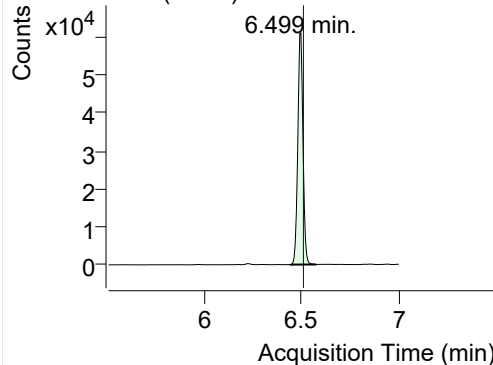
152.0, 151.0, 153.0



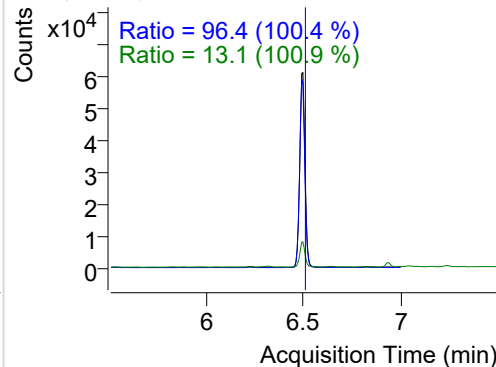
+ SIM (6.232-6.315 min, 15 scans) (\*\*) 220806

**IS-D10-Acenaphthene**

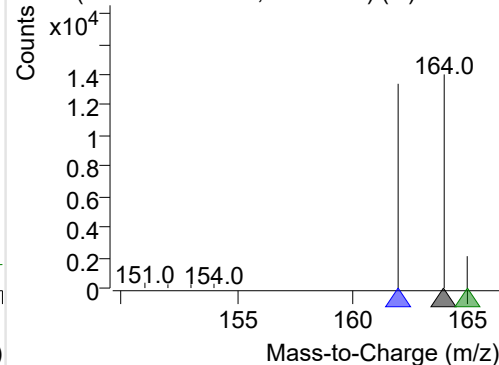
+ Selected Ion (164.0) 220806-PAHs-015.D



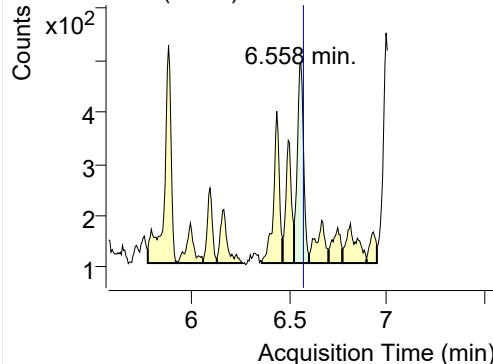
164.0, 162.0, 165.0



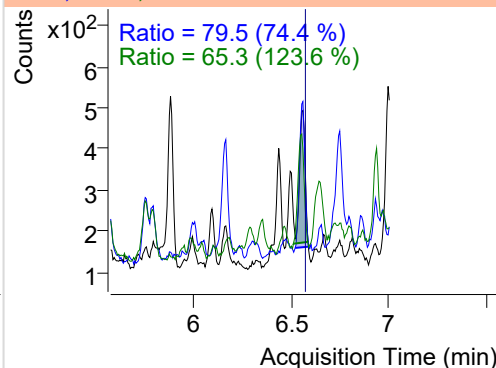
+ SIM (6.445-6.575 min, 23 scans) (\*\*) 220806

**Acenaphthene**

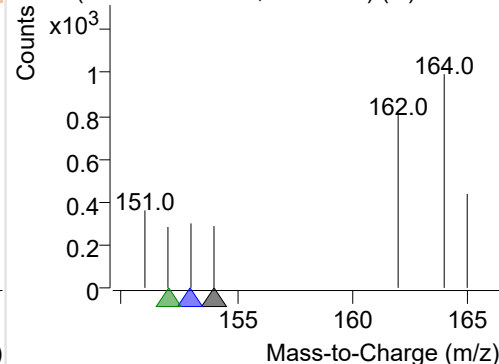
+ Selected Ion (154.0) 220806-PAHs-015.D



154.0, 153.0, 152.0

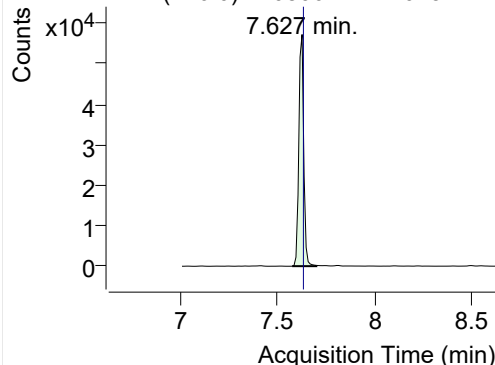


+ SIM (6.522-6.599 min, 14 scans) (\*\*) 220806

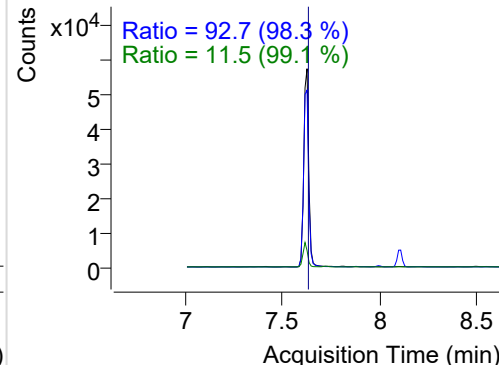


## LSS-D10-Fluorene

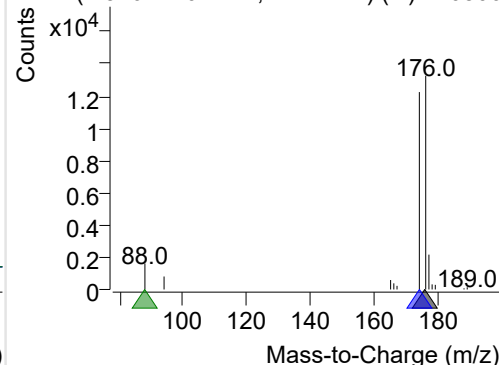
+ Selected Ion (176.0) 220806-PAHs-015.D



176.0, 174.0, 88.0

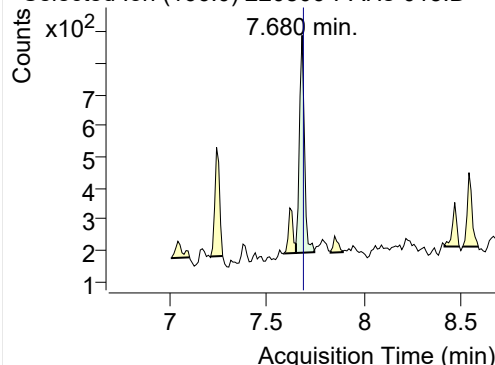


+ SIM (7.576-7.701 min, 12 scans) (\*\*) 220806

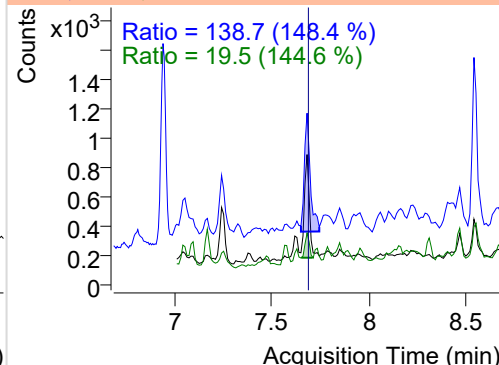


## Fluorene

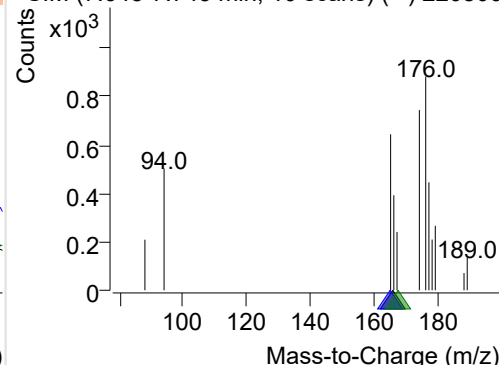
+ Selected Ion (166.0) 220806-PAHs-015.D



166.0, 165.0, 167.0

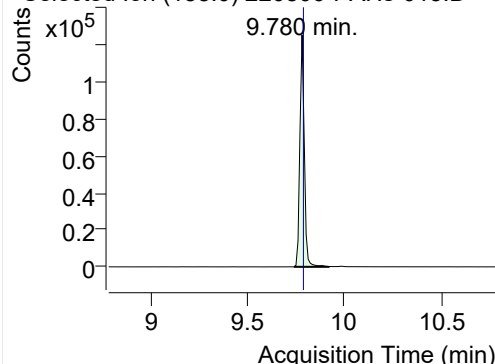


+ SIM (7.648-7.743 min, 10 scans) (\*\*) 220806

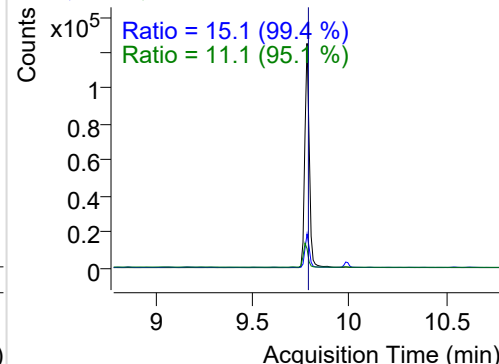


## IS-D10-Phenanthrene

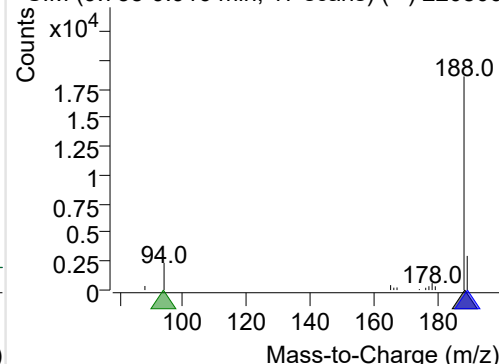
+ Selected Ion (188.0) 220806-PAHs-015.D



188.0, 189.0, 94.0

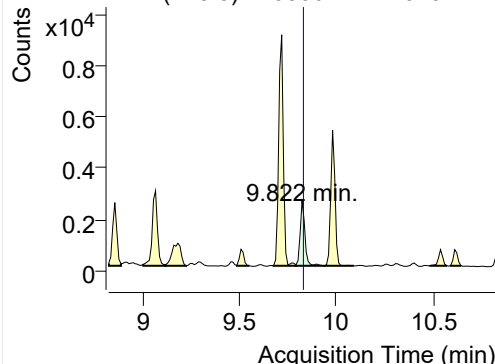


+ SIM (9.738-9.916 min, 17 scans) (\*\*) 220806

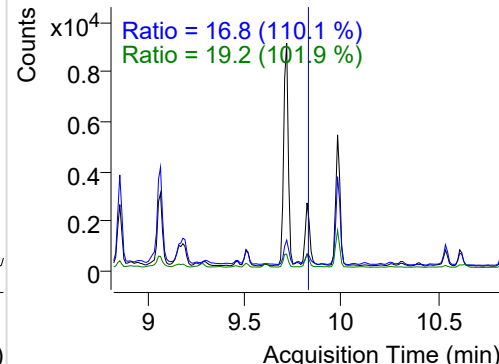


## Phenanthrene

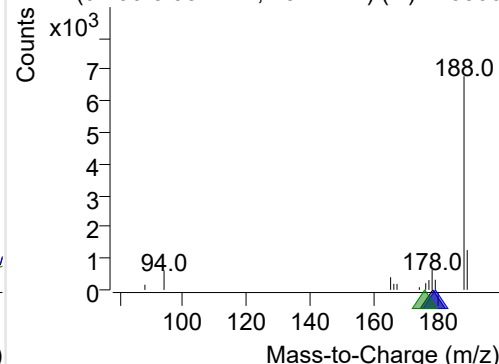
+ Selected Ion (178.0) 220806-PAHs-015.D



178.0, 179.0, 176.0

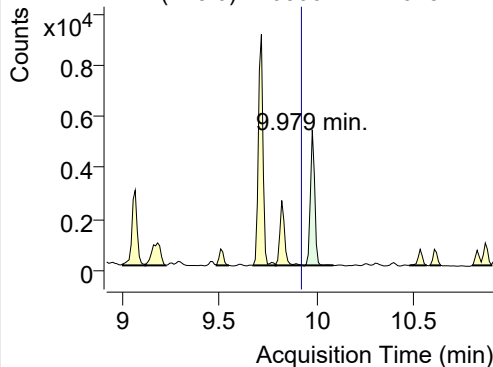


+ SIM (9.790-9.937 min, 15 scans) (\*\*) 220806

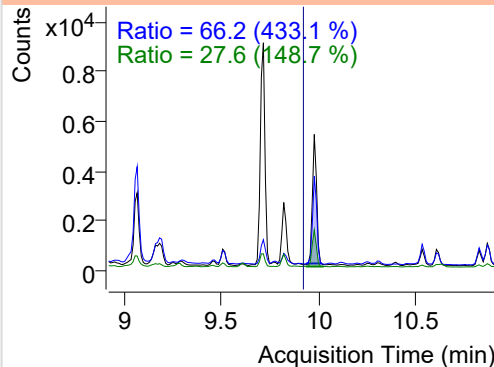


**Anthracene**

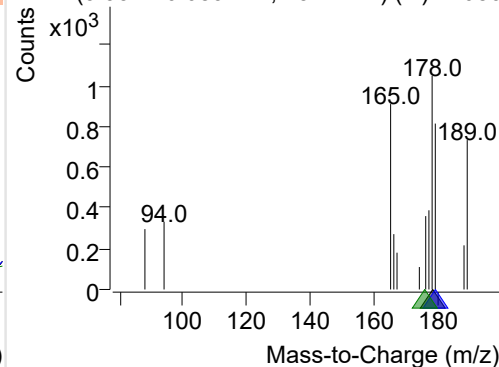
+ Selected Ion (178.0) 220806-PAHs-015.D



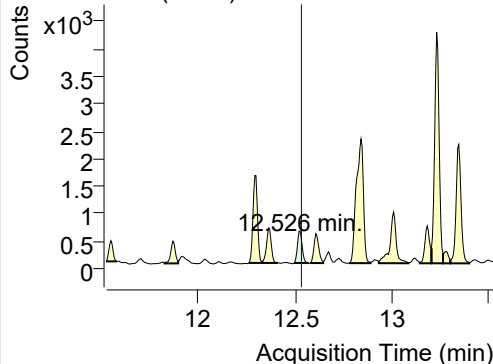
178.0, 179.0, 176.0



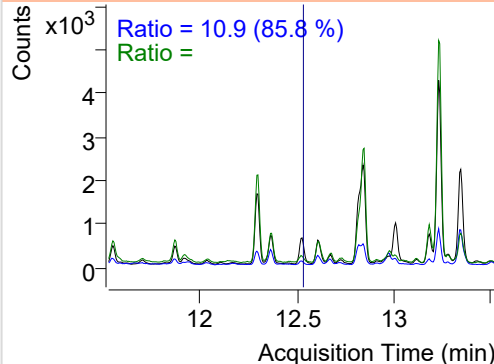
+ SIM (9.937-10.089 min, 15 scans) (\*\*) 22080

**Fluoranthene**

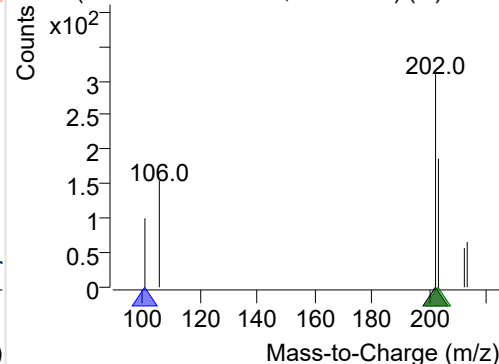
+ Selected Ion (202.0) 220806-PAHs-015.D



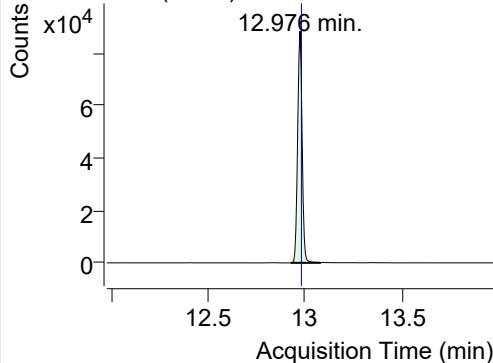
202.0, 101.0, 203.0



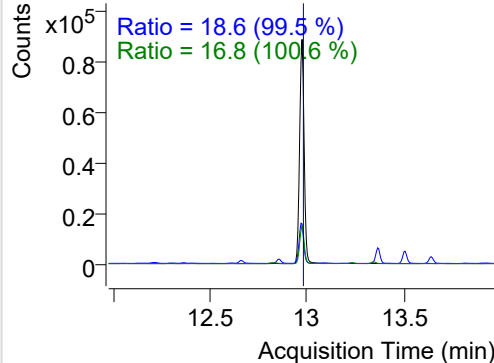
+ SIM (12.495-12.571 min, 14 scans) (\*\*) 2208

**LSS-D10-Pyrene**

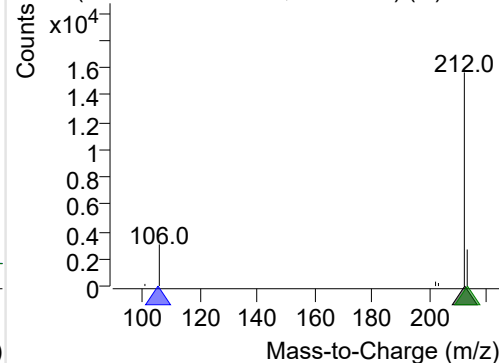
+ Selected Ion (212.0) 220806-PAHs-015.D



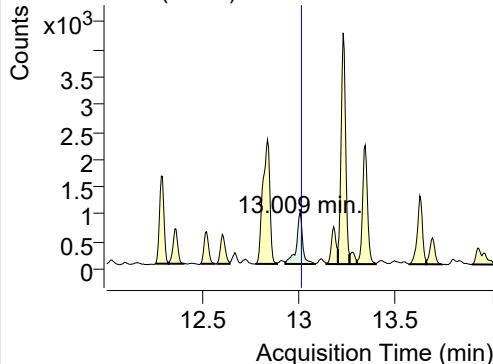
212.0, 106.0, 213.0



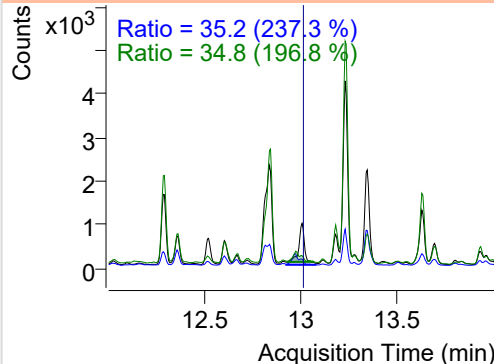
+ SIM (12.928-13.079 min, 28 scans) (\*\*) 2208

**Pyrene**

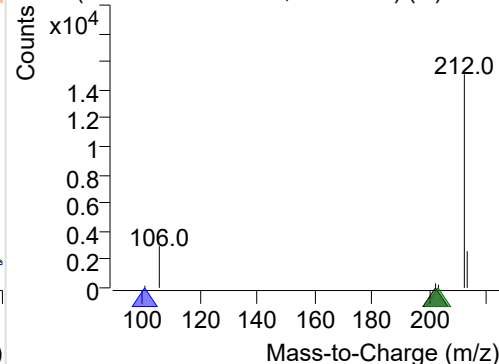
+ Selected Ion (202.0) 220806-PAHs-015.D



202.0, 101.0, 203.0



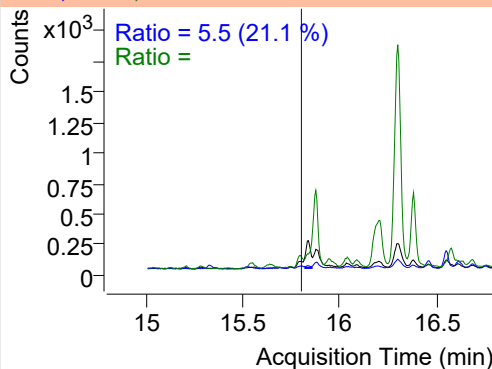
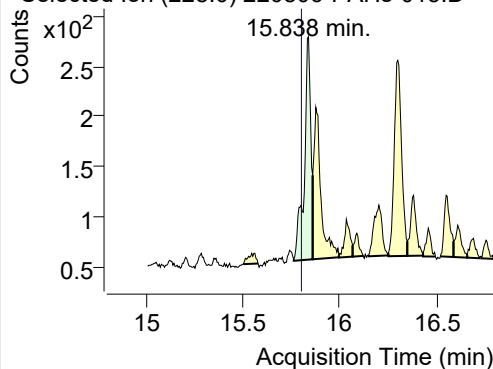
+ SIM (12.933-13.084 min, 29 scans) (\*\*) 2208



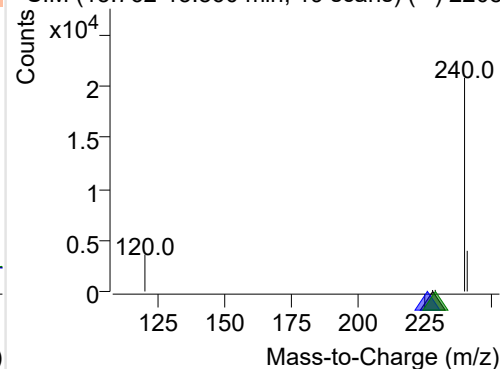
**Benz(a)anthracene**

+ Selected Ion (228.0) 220806-PAHs-015.D

228.0, 226.0, 229.0

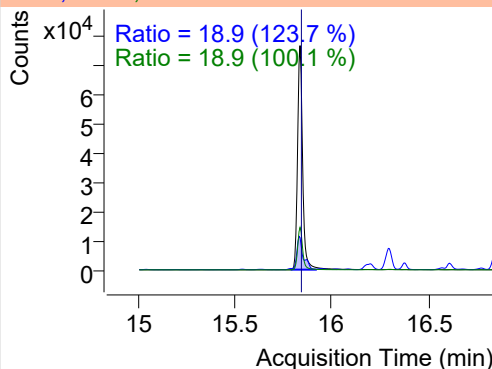
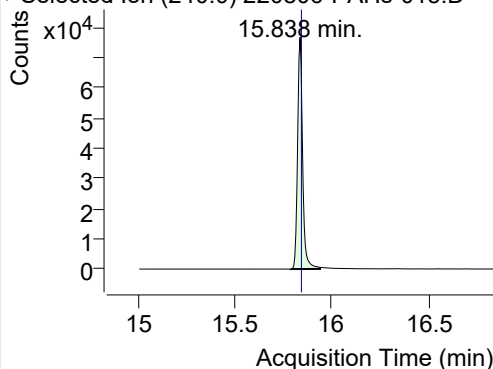


+ SIM (15.762-15.860 min, 19 scans) (\*\*) 2208

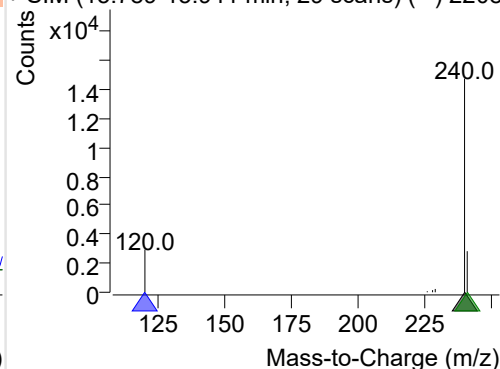
**IS-D12-Chrysene**

+ Selected Ion (240.0) 220806-PAHs-015.D

240.0, 120.0, 241.0

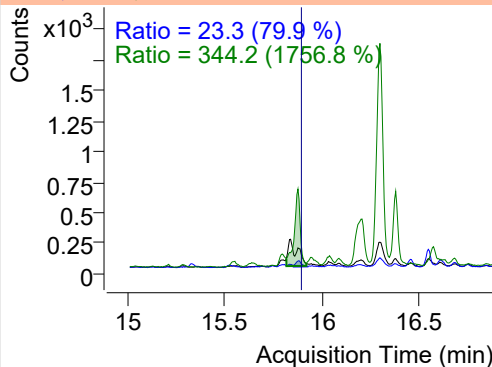
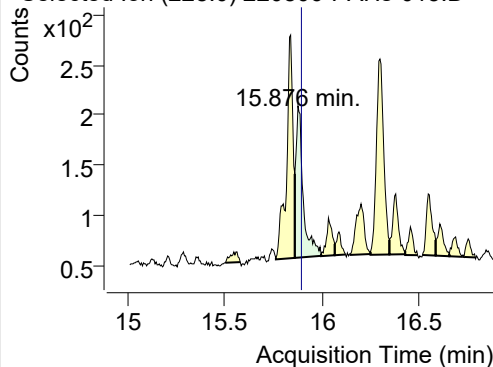


+ SIM (15.789-15.941 min, 29 scans) (\*\*) 2208

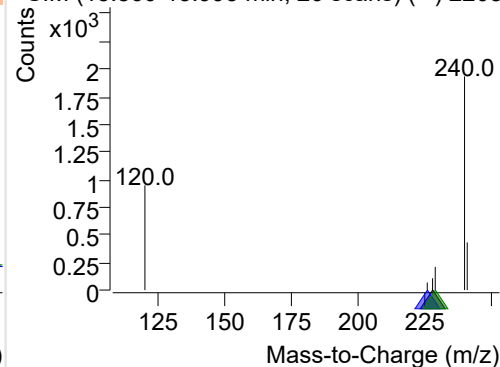
**Chrysene**

+ Selected Ion (228.0) 220806-PAHs-015.D

228.0, 226.0, 229.0

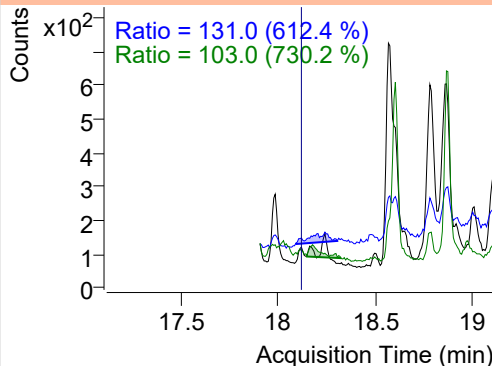
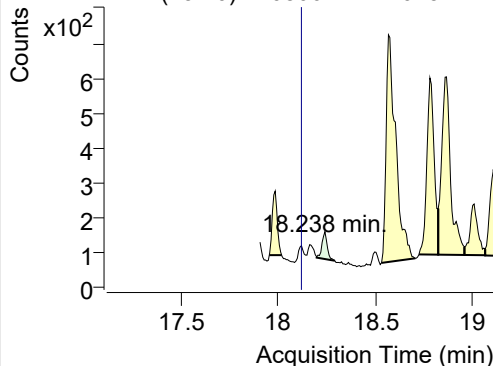


+ SIM (15.860-15.995 min, 26 scans) (\*\*) 2208

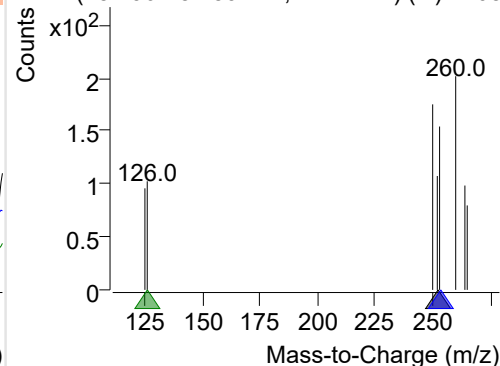
**Benzo(b)fluoranthene**

+ Selected Ion (252.0) 220806-PAHs-015.D

252.0, 253.0, 126.0



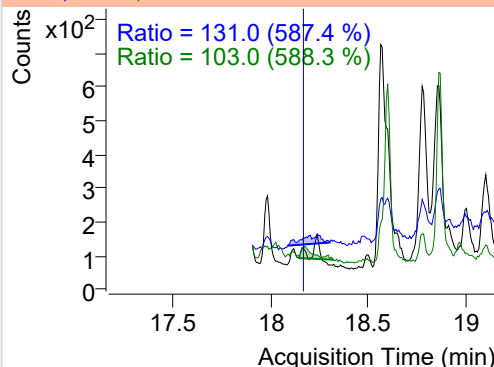
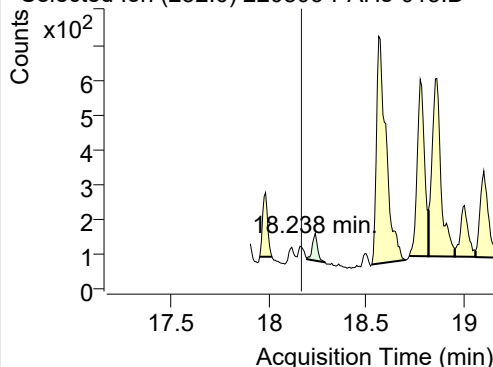
+ SIM (18.196-18.289 min, 14 scans) (\*\*) 2208



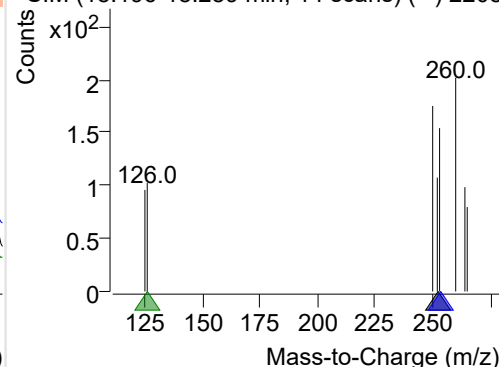
**Benzo(k)fluoranthene**

+ Selected Ion (252.0) 220806-PAHs-015.D

252.0, 253.0, 126.0

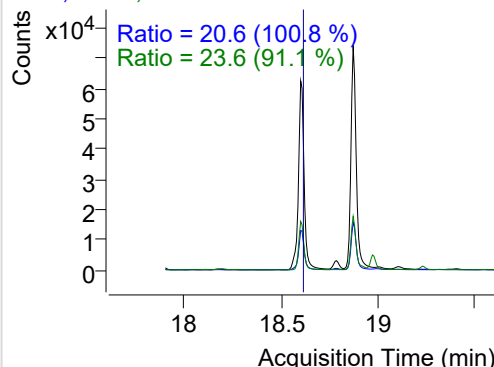
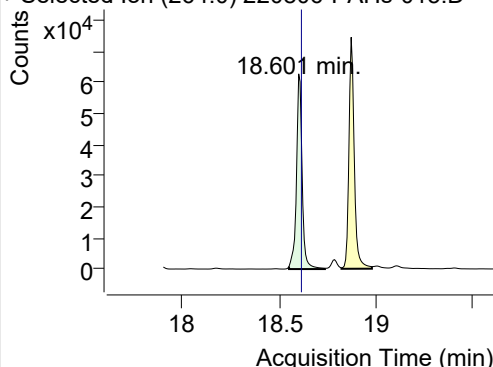


+ SIM (18.196-18.289 min, 14 scans) (\*\*) 2208

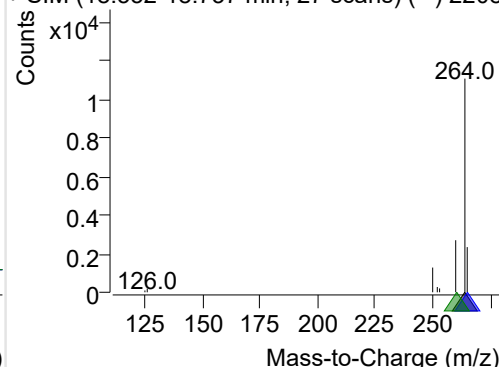
**SS-D12-Benzo(e)pyrene**

+ Selected Ion (264.0) 220806-PAHs-015.D

264.0, 265.0, 260.0

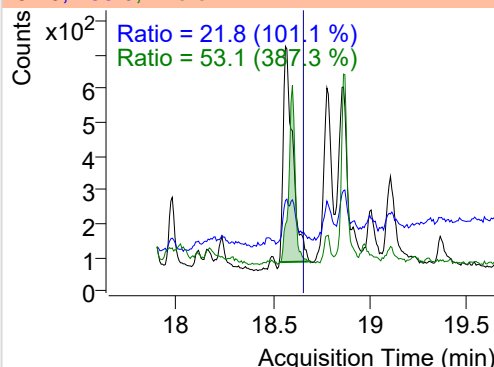
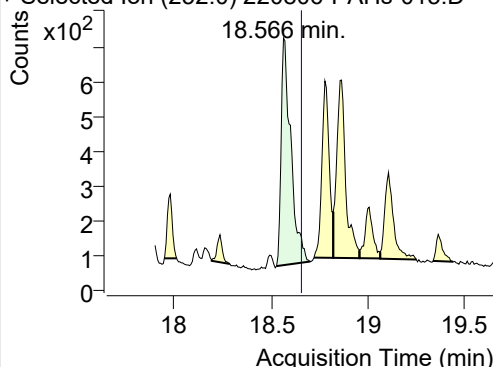


+ SIM (18.552-18.737 min, 27 scans) (\*\*) 2208

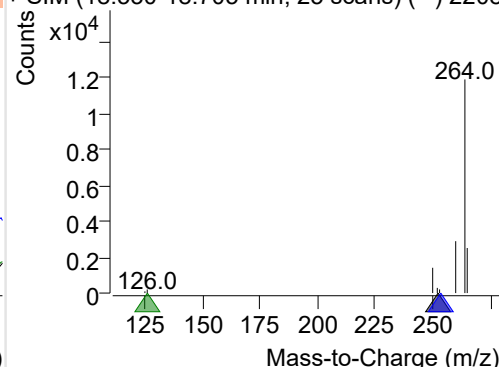
**Benzo(e)pyrene**

+ Selected Ion (252.0) 220806-PAHs-015.D

252.0, 253.0, 126.0

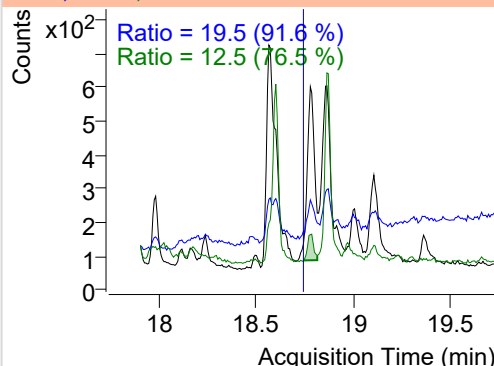
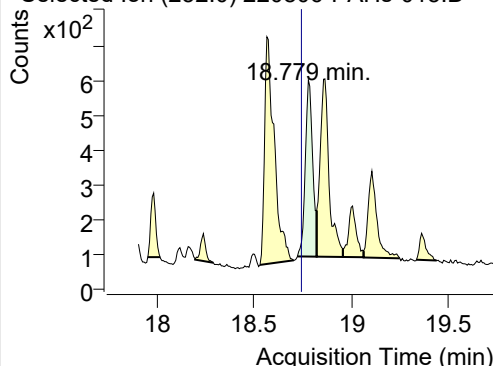


+ SIM (18.530-18.705 min, 25 scans) (\*\*) 2208

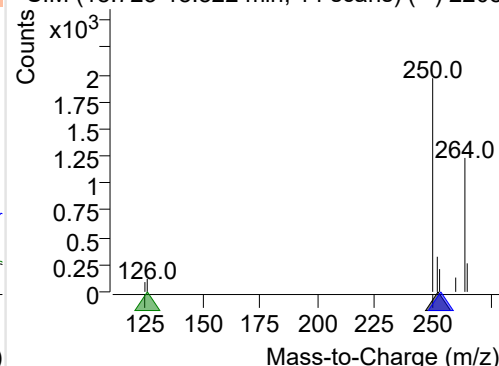
**Benzo(a)pyrene**

+ Selected Ion (252.0) 220806-PAHs-015.D

252.0, 253.0, 126.0

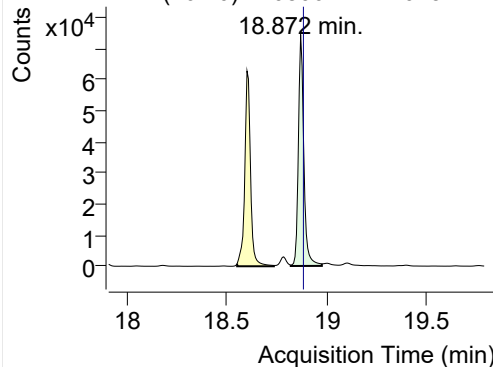


+ SIM (18.723-18.822 min, 14 scans) (\*\*) 2208

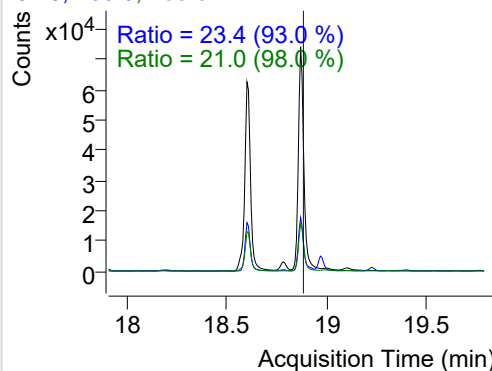


## IS-D12-Perylene

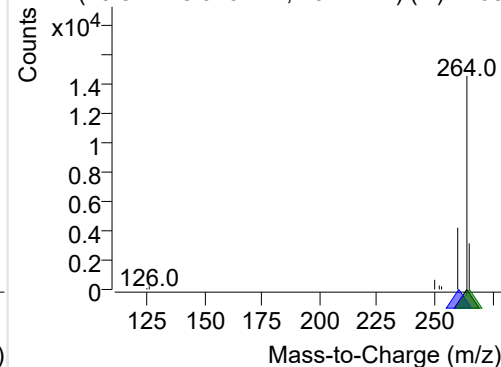
+ Selected Ion (264.0) 220806-PAHs-015.D



264.0, 260.0, 265.0

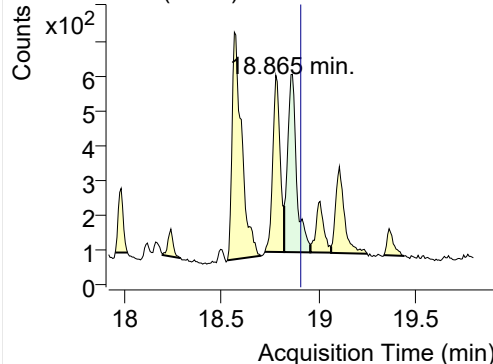


+ SIM (18.822-18.979 min, 23 scans) (\*\*) 2208

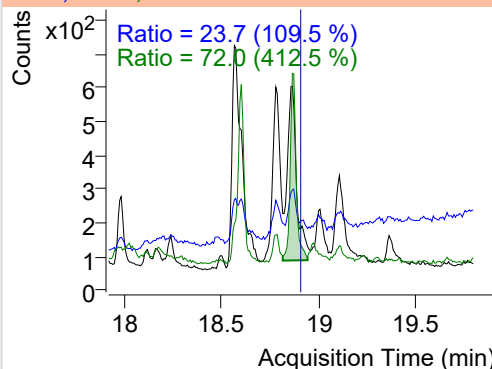


## Perylene

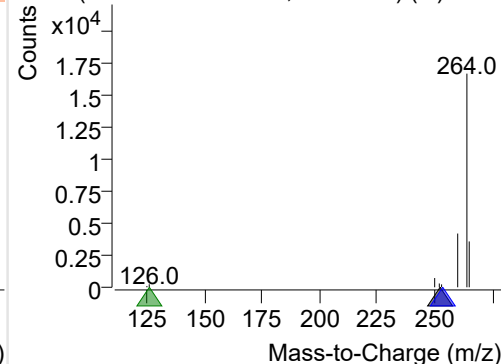
+ Selected Ion (252.0) 220806-PAHs-015.D



252.0, 253.0, 126.0

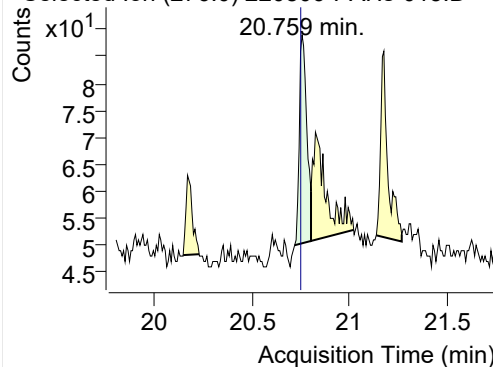


+ SIM (18.822-18.957 min, 20 scans) (\*\*) 2208

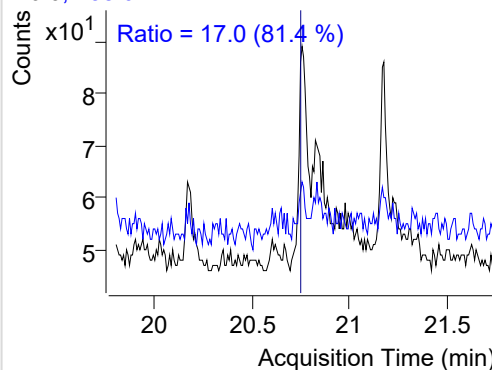


## Indeno(1,2,3-c,d)pyrene

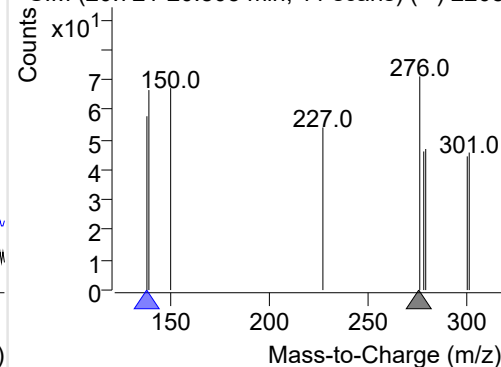
+ Selected Ion (276.0) 220806-PAHs-015.D



276.0, 138.0

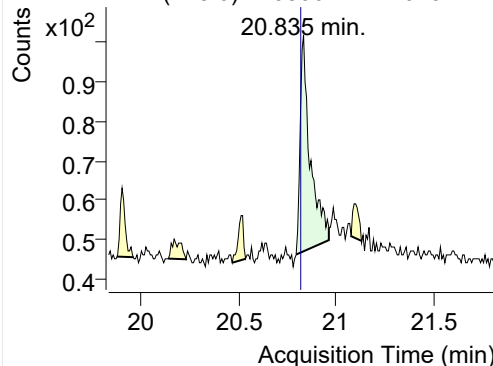


+ SIM (20.721-20.805 min, 11 scans) (\*\*) 2208

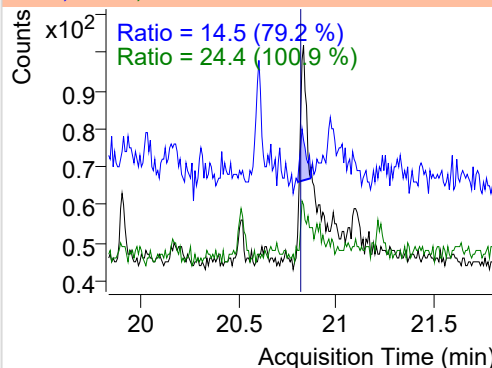


## Dibenz(a,h)anthracene

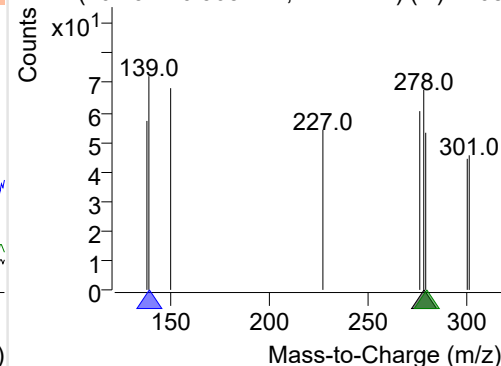
+ Selected Ion (278.0) 220806-PAHs-015.D



278.0, 139.0, 279.0

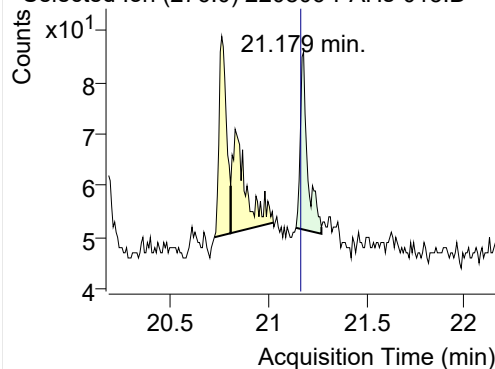


+ SIM (20.797-20.965 min, 22 scans) (\*\*) 2208

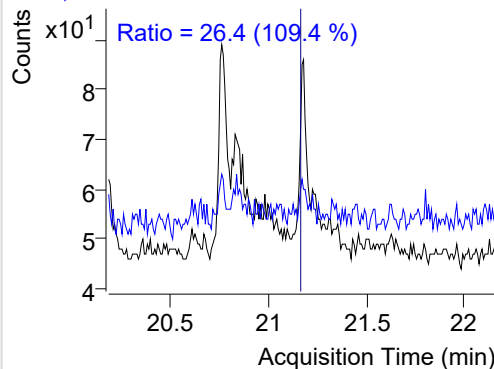


**Benzo(g,h,i)perylene**

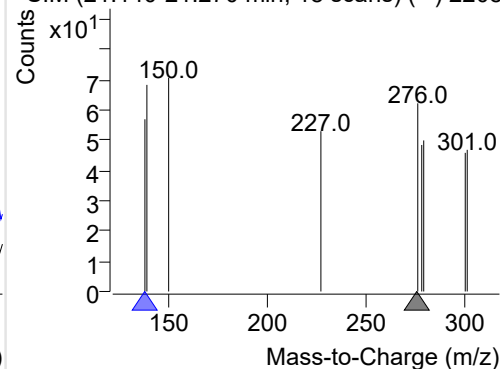
+ Selected Ion (276.0) 220806-PAHs-015.D



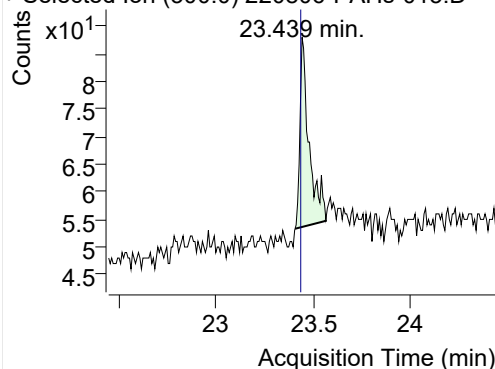
276.0, 138.0



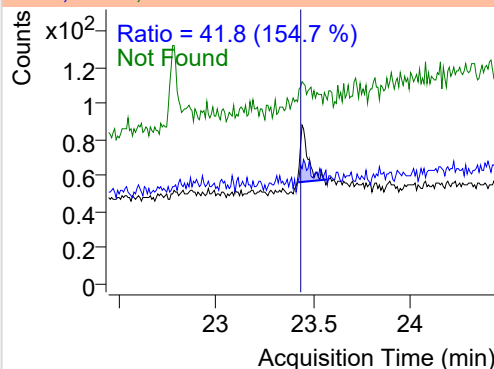
+ SIM (21.140-21.270 min, 18 scans) (\*\*) 2208

**Coronene**

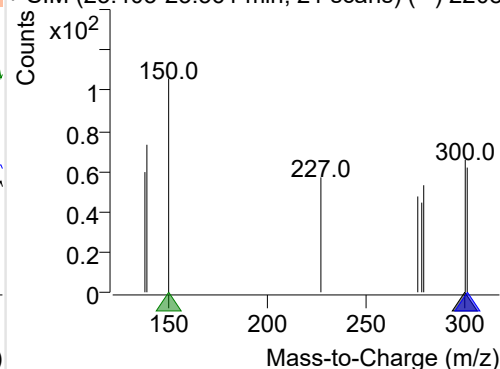
+ Selected Ion (300.0) 220806-PAHs-015.D



300.0, 301.0, 150.0



+ SIM (23.403-23.561 min, 21 scans) (\*\*) 2208





## Quantitative Analysis Sample Based Report

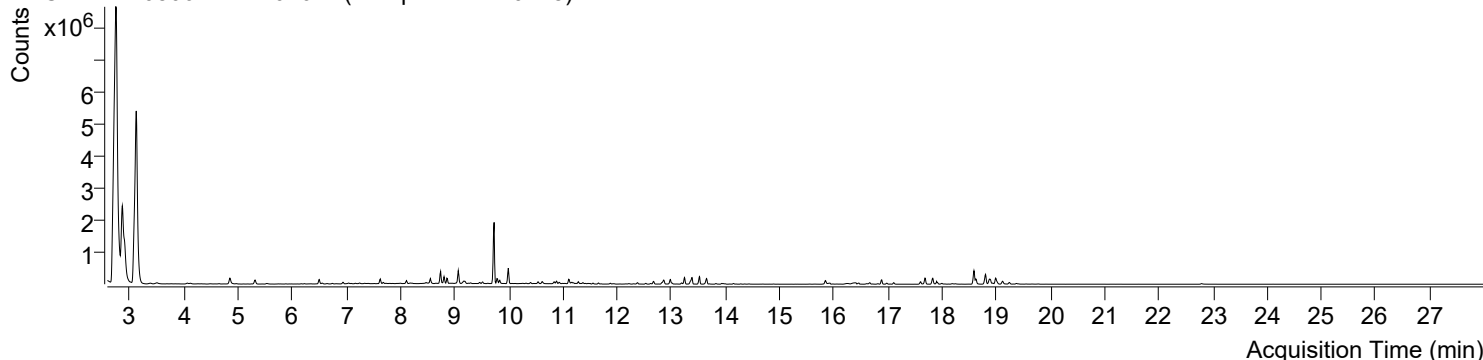


Trusted Answers

|                           |                                                                                            |                       |                        |
|---------------------------|--------------------------------------------------------------------------------------------|-----------------------|------------------------|
| Batch Data Path File Name | D:\MassHunter\GCMS\1\data\PAHs\220806-PAHs-Sample\QuantResults\220806-PAHs-Quant.batch.bin |                       |                        |
| Analysis Time Stamp       | 2022-10-10 오전 10:12:04                                                                     | Analyst Name          | DESKTOP-86B7UPG\5975MS |
| Report Generation Time    | 2022-10-10 오전 10:12:12                                                                     | Report Generator Name | DESKTOP-86B7UPG\5975MS |
| Calibration Last Update   | 2022-12-15 오후 3:30:46                                                                      | Batch State           | Processed              |
| Analyze Quant Version     | 10.2                                                                                       | Report Quant Version  | 10.2                   |
| Acq. Date-Time            | 2022-08-06 오후 6:17:56                                                                      | Data File             | 220806-PAHs-016.D      |
| Type                      | Sample                                                                                     | Name                  | Sample-PM-220728       |
| Dil.                      | 1                                                                                          | Acq. Method File      | PAHs 19mix-Method      |

## Sample Chromatogram

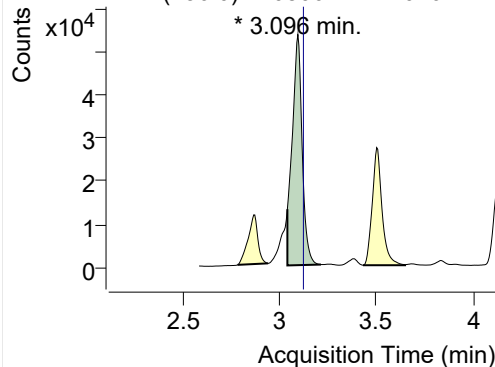
+ TIC SIM 220806-PAHs-016.D (Sample-PM-220728)



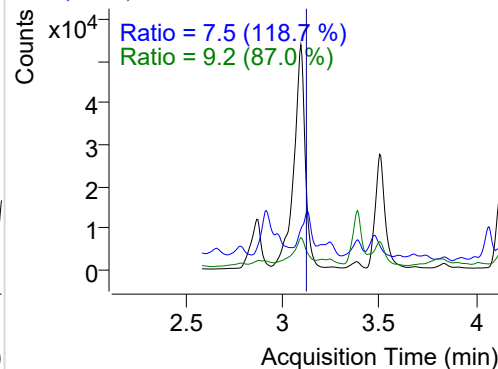
| Name                    | RT     | Transition | Resp.    | Height     | Final Conc. Units | Ratio |
|-------------------------|--------|------------|----------|------------|-------------------|-------|
| IS-D8-Naphthalene       | 3.096  | 136.0      | 190587   | 53542.37   | ND ng/ml          | 9.2   |
| Naphthalene             | 3.123  | 128.0      | 15450380 | 4294051.22 | ND ng/ml          | 13.0  |
| Acenaphthylene          | 6.167  | 152.0      | 10283    | 5232.50    | ND ng/ml          | 16.8  |
| IS-D10-Acenaphthene     | 6.499  | 164.0      | 118976   | 66882.91   | ND ng/ml          | 96.7  |
| Acenaphthene            | 6.558  | 154.0      | 15302    | 7382.56    | ND ng/ml          | 109.8 |
| LSS-D10-Fluorene        | 7.627  | 176.0      | 108341   | 66415.26   | ND ng/ml          | 92.7  |
| Fluorene                | 7.680  | 166.0      | 26924    | 15993.68   | ND ng/ml          | 94.3  |
| IS-D10-Phenanthrene     | 9.790  | 188.0      | 202024   | 117892.24  | ND ng/ml          | 16.1  |
| Phenanthrene            | 9.832  | 178.0      | 105895   | 61757.47   | ND ng/ml          | 18.1  |
| Anthracene              | 9.990  | 178.0      | 206911   | 133341.47  | ND ng/ml          | 26.2  |
| Fluoranthene            | 12.526 | 202.0      | 26934    | 16798.03   | ND ng/ml          |       |
| LSS-D10-Pyrene          | 12.981 | 212.0      | 161194   | 100497.64  | ND ng/ml          | 29.1  |
| Pyrene                  | 13.014 | 202.0      | 40953    | 23726.03   | ND ng/ml          | 20.9  |
| Benz(a)anthracene       | 15.800 | 228.0      | 2320     | 736.16     | ND ng/ml          | 21.9  |
| IS-D12-Chrysene         | 15.844 | 240.0      | 165207   | 81666.08   | ND ng/ml          | 18.9  |
| Chrysene                | 15.892 | 228.0      | 5438     | 1763.68    | ND ng/ml          | 26.3  |
| Benzo(b)fluoranthene    | 17.996 | 252.0      | 6062     | 3434.50    | ND ng/ml          | 4.9   |
| Benzo(k)fluoranthene    | 18.245 | 252.0      | 1798     | 916.84     | ND ng/ml          |       |
| SS-D12-Benzo(e)pyrene   | 18.623 | 264.0      | 186945   | 106402.21  | ND ng/ml          | 27.5  |
| Benzo(e)pyrene          | 18.623 | 252.0      | 1469     | 965.36     | ND ng/ml          | 20.6  |
| Benzo(a)pyrene          | 18.801 | 252.0      | 11443    | 5270.00    | ND ng/ml          | 11.0  |
| IS-D12-Perylene         | 18.886 | 264.0      | 200750   | 89245.03   | ND ng/ml          | 20.4  |
| Perylene                | 18.872 | 252.0      | 10169    | 5419.59    | ND ng/ml          | 14.1  |
| Indeno(1,2,3-c,d)pyrene | 20.759 | 276.0      | 211      | 82.95      | ND ng/ml          |       |
| Dibenz(a,h)anthracene   | 20.828 | 278.0      | 518      | 121.58     | ND ng/ml          | 28.6  |
| Benzo(g,h,i)perylene    | 21.179 | 276.0      | 397      | 134.75     | ND ng/ml          | 16.0  |
| Coronene                | 23.439 | 300.0      | 293      | 62.93      | ND ng/ml          |       |

**IS-D8-Naphthalene**

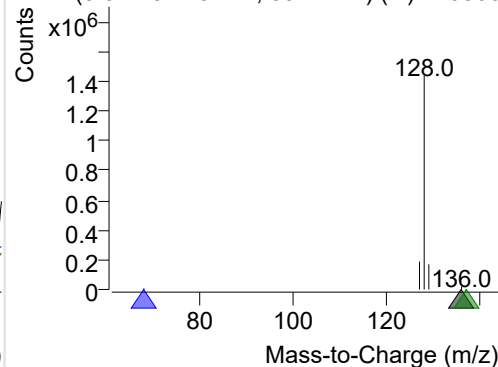
+ Selected Ion (136.0) 220806-PAHs-016.D



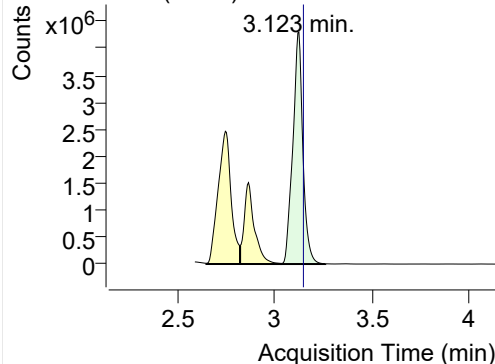
136.0, 68.0, 137.0



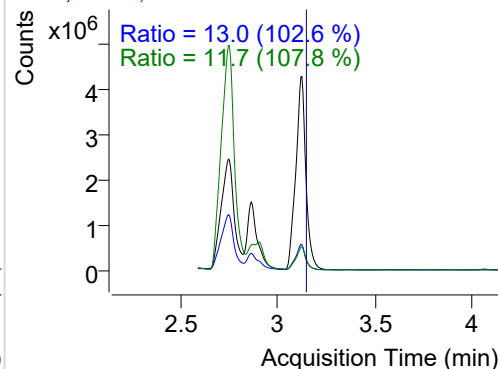
+ SIM (3.042-3.215 min, 33 scans) (\*\*) 220806

**Naphthalene**

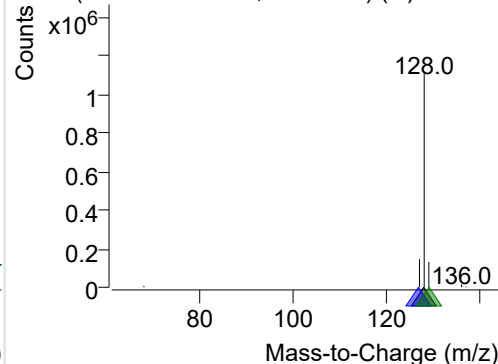
+ Selected Ion (128.0) 220806-PAHs-016.D



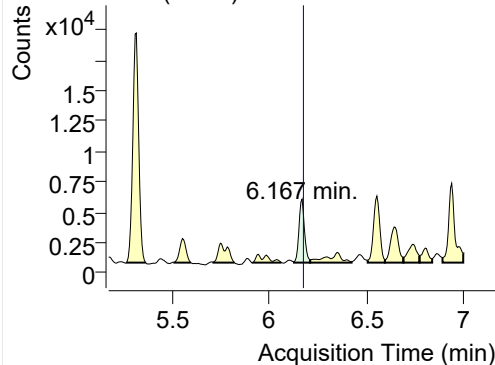
128.0, 127.0, 129.0



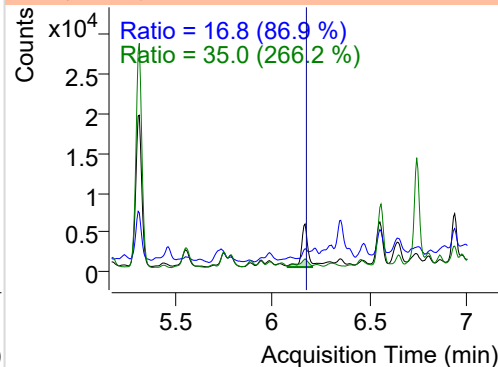
+ SIM (3.031-3.258 min, 43 scans) (\*\*) 220806

**Acenaphthylene**

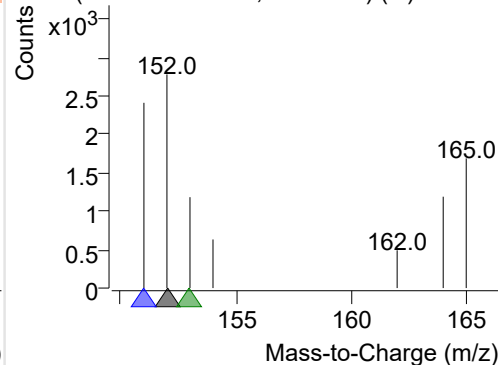
+ Selected Ion (152.0) 220806-PAHs-016.D



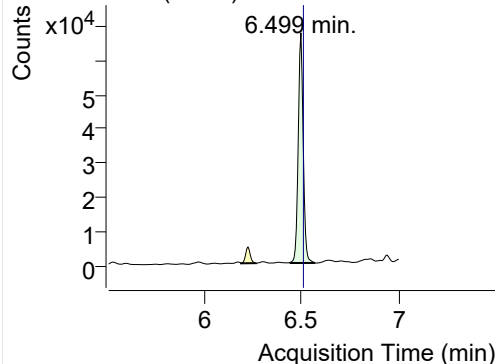
152.0, 151.0, 153.0



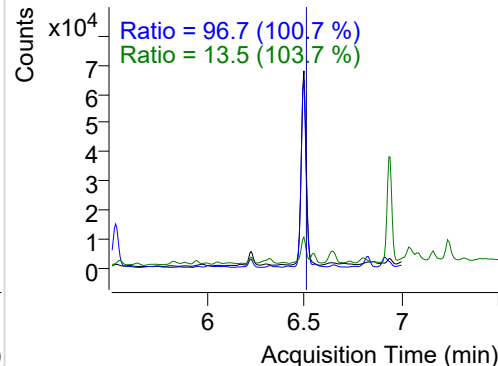
+ SIM (6.126-6.208 min, 15 scans) (\*\*) 220806

**IS-D10-Acenaphthene**

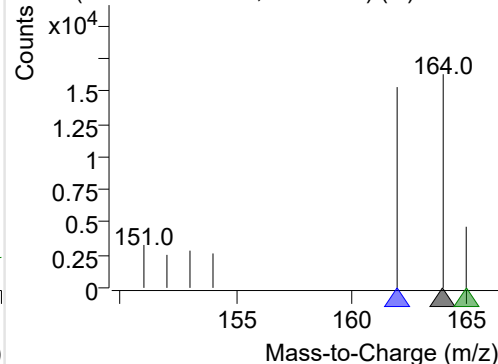
+ Selected Ion (164.0) 220806-PAHs-016.D



164.0, 162.0, 165.0

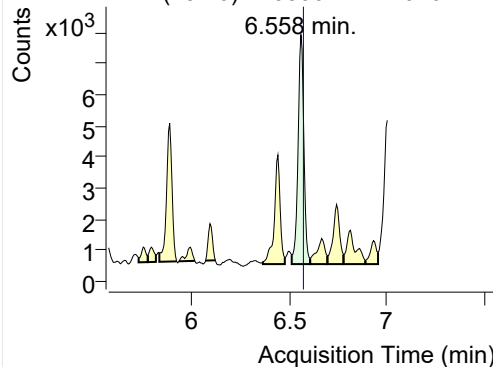


+ SIM (6.445-6.572 min, 22 scans) (\*\*) 220806

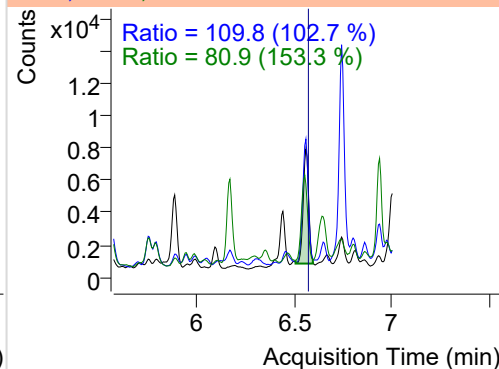


**Acenaphthene**

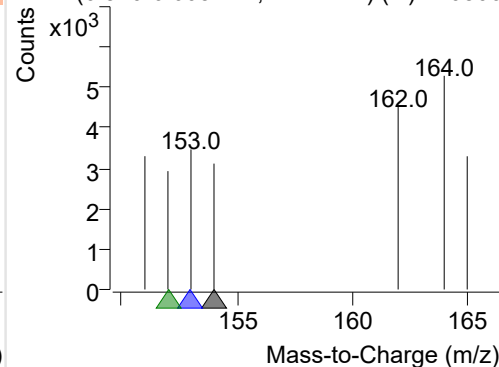
+ Selected Ion (154.0) 220806-PAHs-016.D



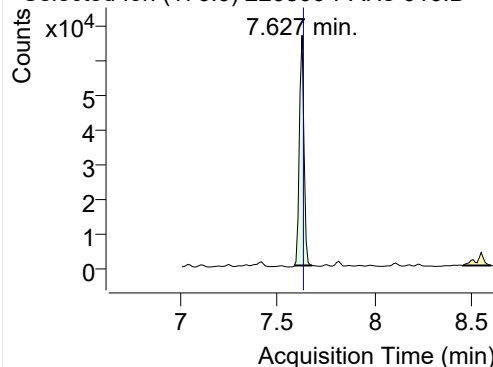
154.0, 153.0, 152.0



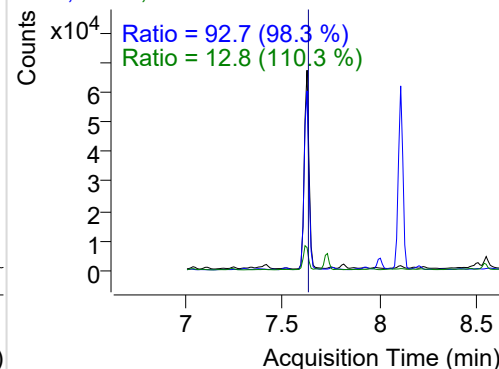
+ SIM (6.510-6.605 min, 17 scans) (\*\*) 220806

**LSS-D10-Fluorene**

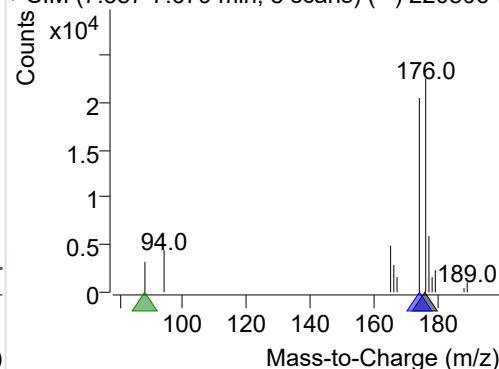
+ Selected Ion (176.0) 220806-PAHs-016.D



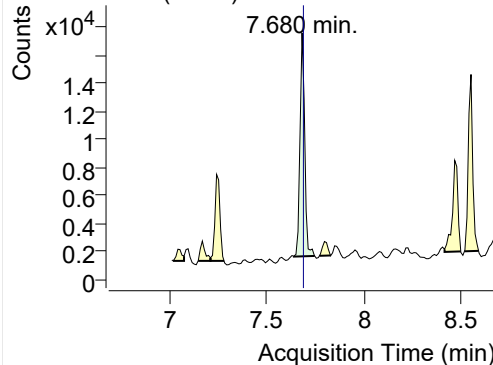
176.0, 174.0, 88.0



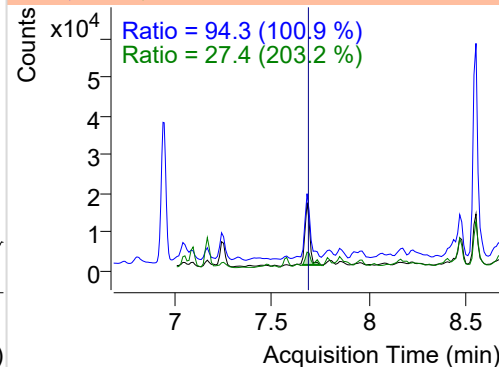
+ SIM (7.587-7.679 min, 8 scans) (\*\*) 220806-I

**Fluorene**

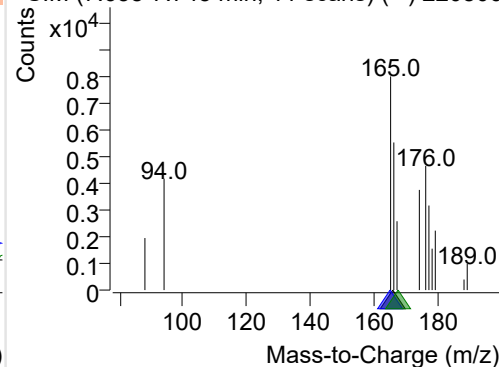
+ Selected Ion (166.0) 220806-PAHs-016.D



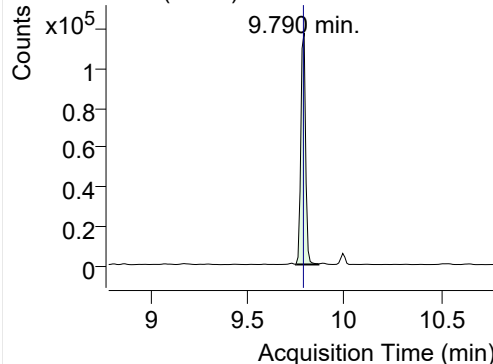
166.0, 165.0, 167.0



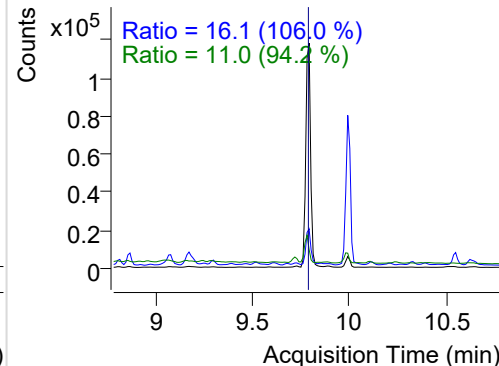
+ SIM (7.638-7.745 min, 11 scans) (\*\*) 220806

**IS-D10-Phenanthrene**

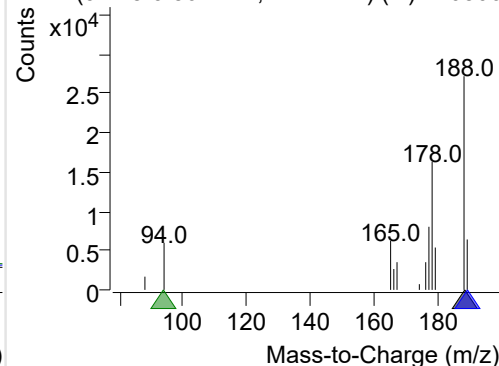
+ Selected Ion (188.0) 220806-PAHs-016.D



188.0, 189.0, 94.0

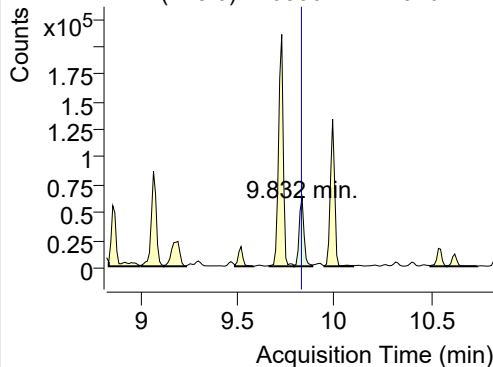


+ SIM (9.748-9.864 min, 12 scans) (\*\*) 220806

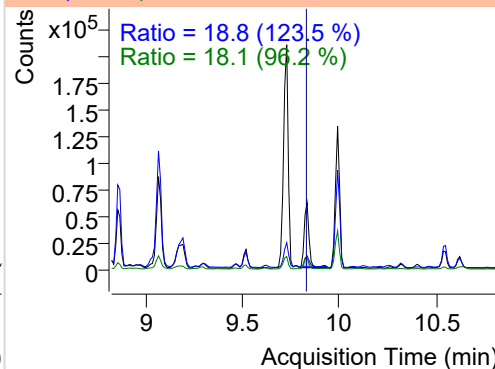


**Phenanthrene**

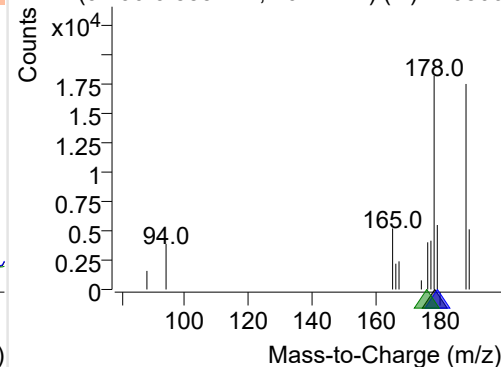
+ Selected Ion (178.0) 220806-PAHs-016.D



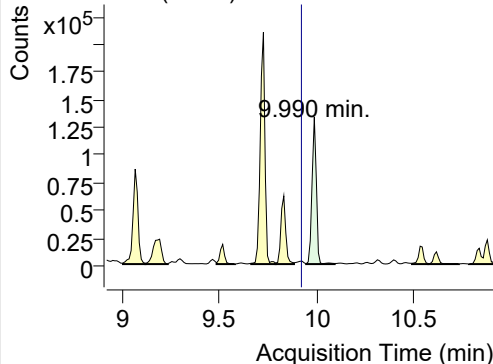
178.0, 179.0, 176.0



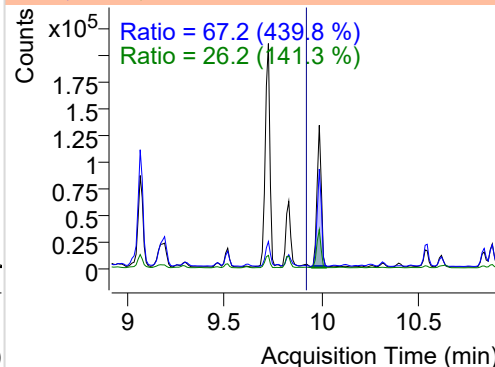
+ SIM (9.790-9.885 min, 10 scans) (\*\*) 220806

**Anthracene**

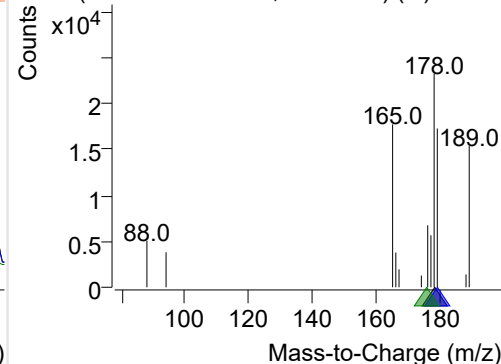
+ Selected Ion (178.0) 220806-PAHs-016.D



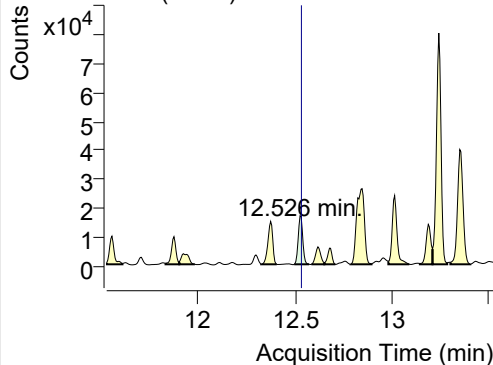
178.0, 179.0, 176.0



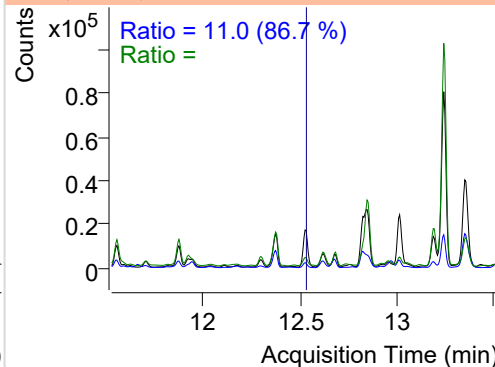
+ SIM (9.948-10.095 min, 15 scans) (\*\*) 220806

**Fluoranthene**

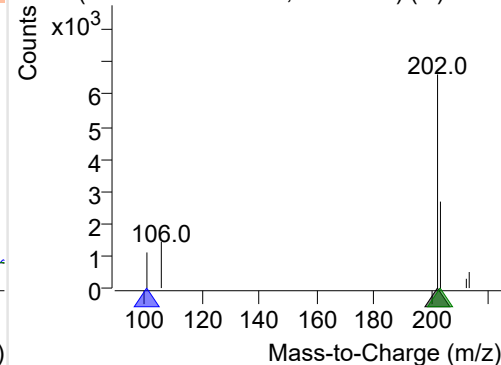
+ Selected Ion (202.0) 220806-PAHs-016.D



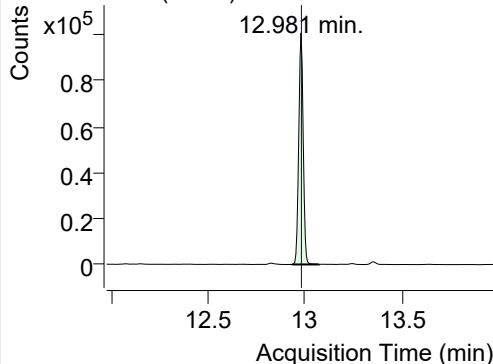
202.0, 101.0, 203.0



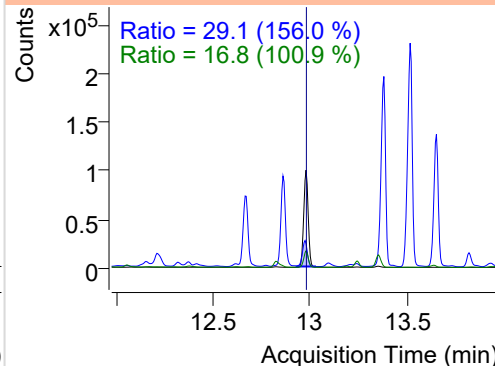
+ SIM (12.496-12.573 min, 14 scans) (\*\*) 220806

**LSS-D10-Pyrene**

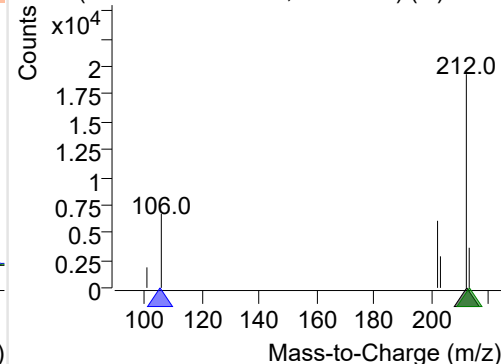
+ Selected Ion (212.0) 220806-PAHs-016.D



212.0, 106.0, 213.0

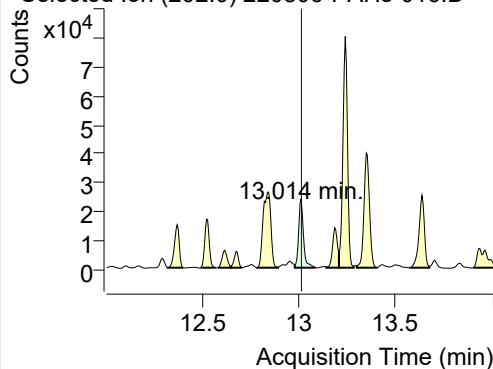


+ SIM (12.933-13.074 min, 26 scans) (\*\*) 220806

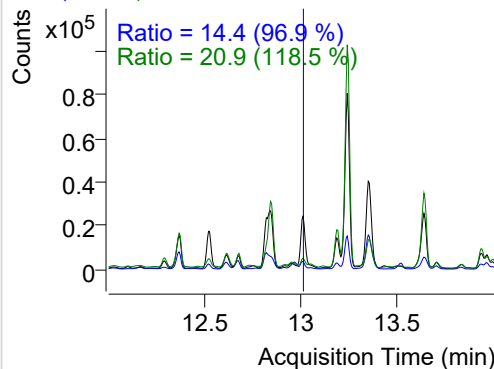


**Pyrene**

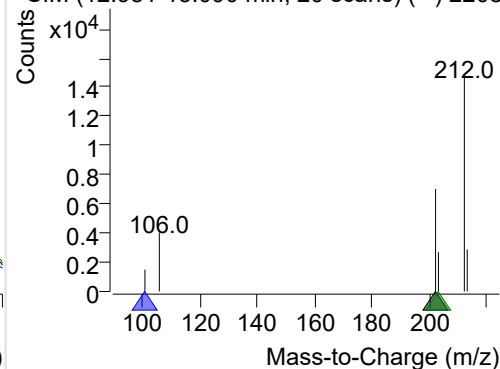
+ Selected Ion (202.0) 220806-PAHs-016.D



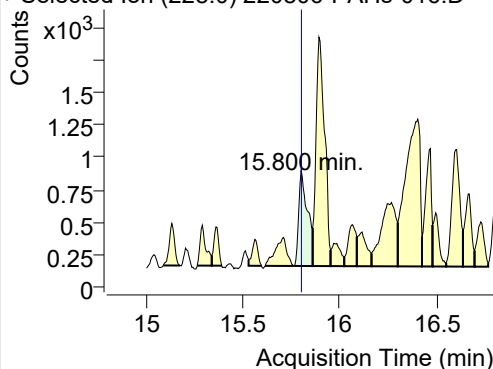
202.0, 101.0, 203.0



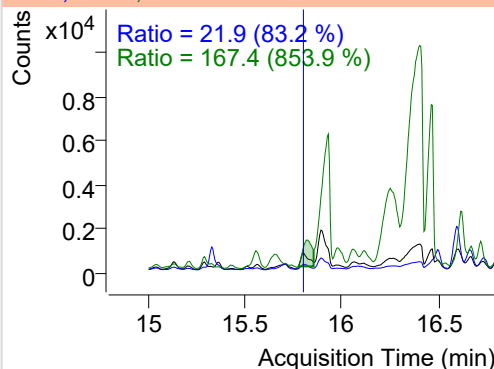
+ SIM (12.981-13.090 min, 20 scans) (\*\*) 2208

**Benz(a)anthracene**

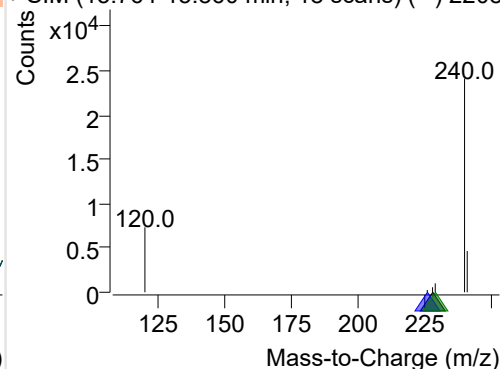
+ Selected Ion (228.0) 220806-PAHs-016.D



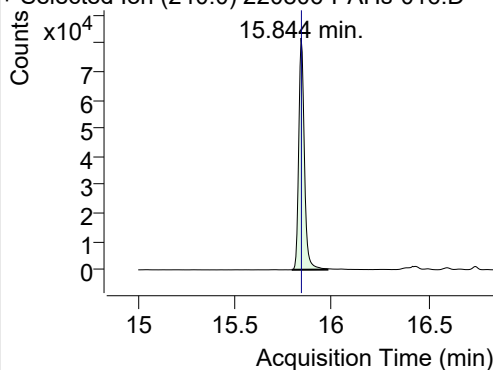
228.0, 226.0, 229.0



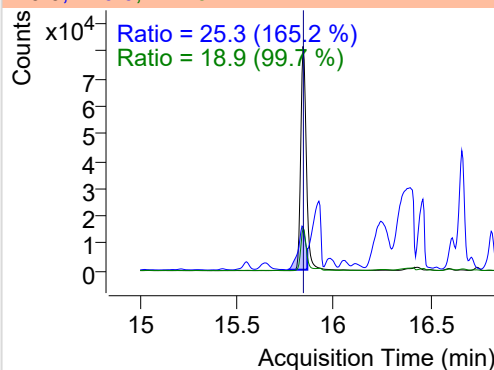
+ SIM (15.764-15.860 min, 18 scans) (\*\*) 2208

**IS-D12-Chrysene**

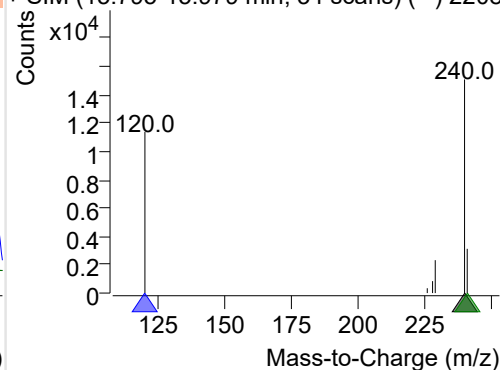
+ Selected Ion (240.0) 220806-PAHs-016.D



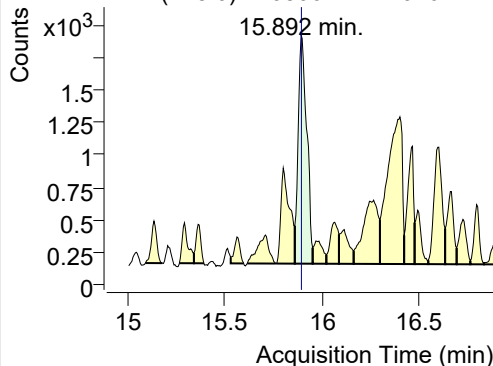
240.0, 120.0, 241.0



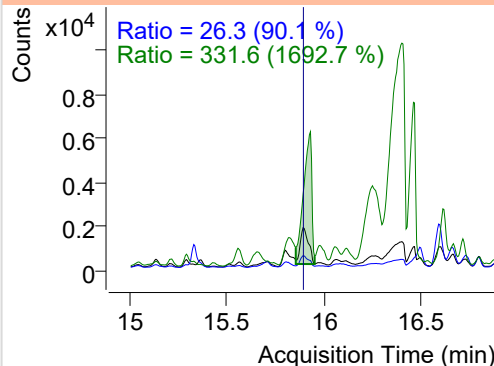
+ SIM (15.795-15.979 min, 34 scans) (\*\*) 2208

**Chrysene**

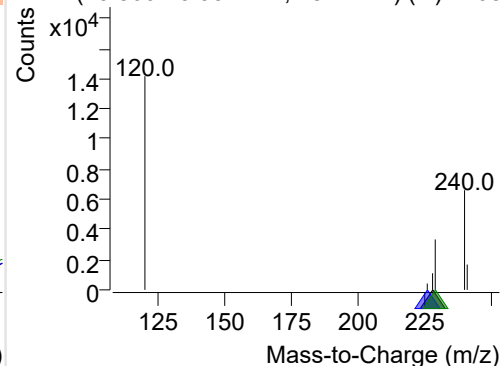
+ Selected Ion (228.0) 220806-PAHs-016.D



228.0, 226.0, 229.0



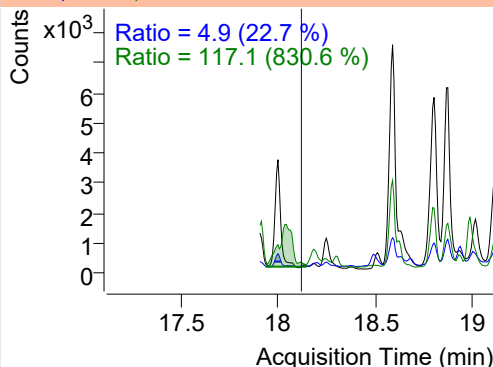
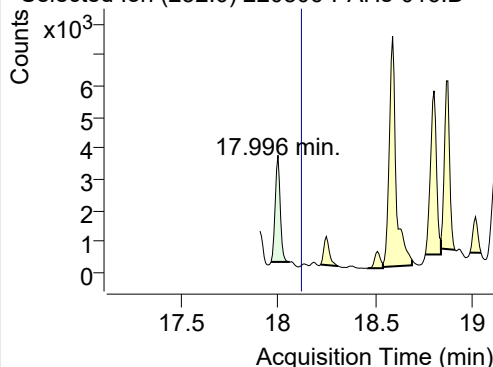
+ SIM (15.860-15.952 min, 18 scans) (\*\*) 2208



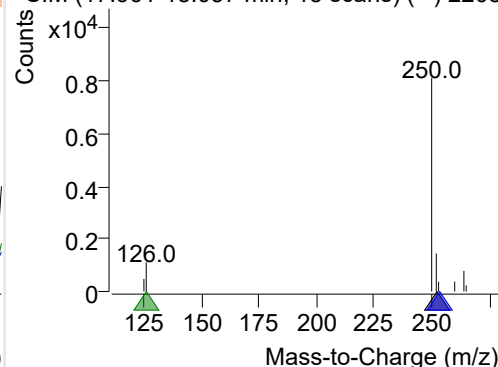
**Benzo(b)fluoranthene**

+ Selected Ion (252.0) 220806-PAHs-016.D

252.0, 253.0, 126.0

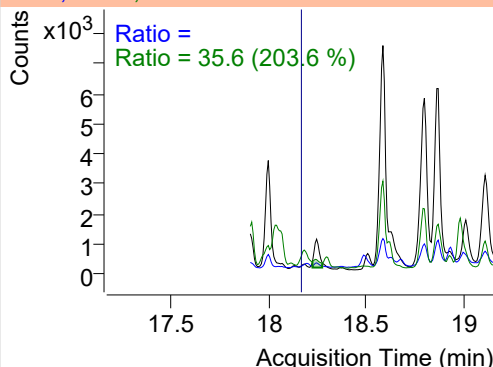
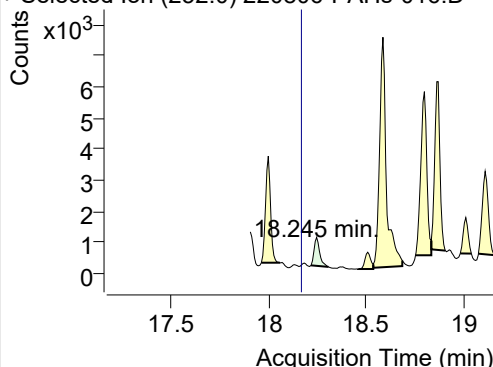


+ SIM (17.961-18.057 min, 13 scans) (\*\*) 2208

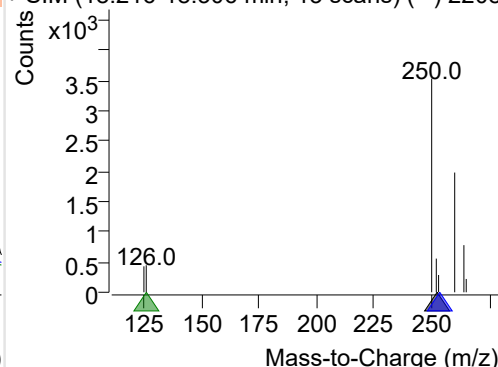
**Benzo(k)fluoranthene**

+ Selected Ion (252.0) 220806-PAHs-016.D

252.0, 253.0, 126.0

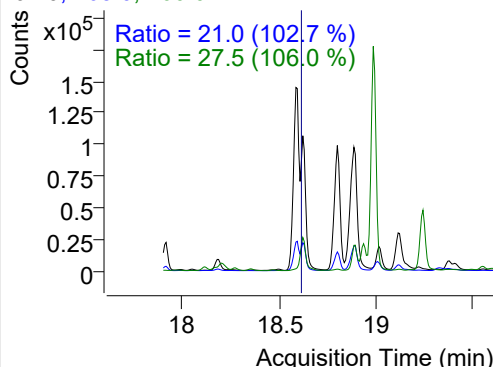
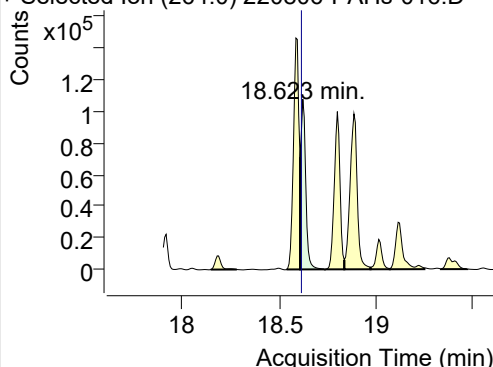


+ SIM (18.216-18.306 min, 13 scans) (\*\*) 2208

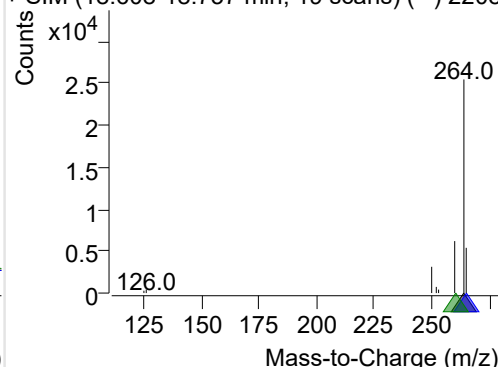
**SS-D12-Benzo(e)pyrene**

+ Selected Ion (264.0) 220806-PAHs-016.D

264.0, 265.0, 260.0

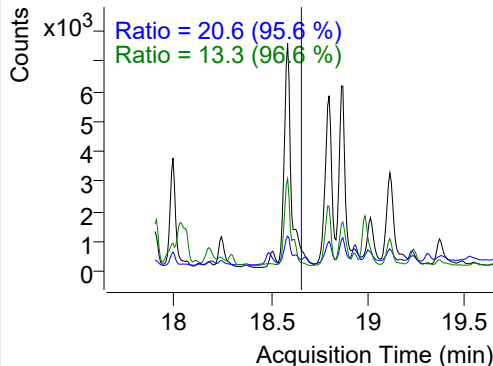
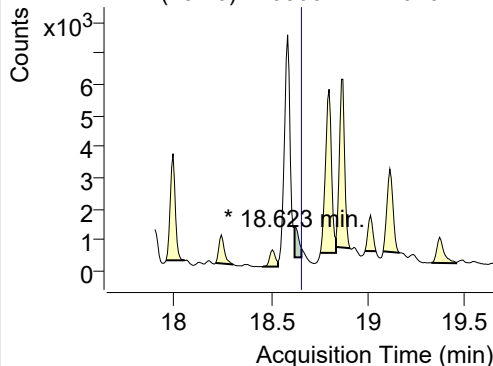


+ SIM (18.608-18.737 min, 19 scans) (\*\*) 2208

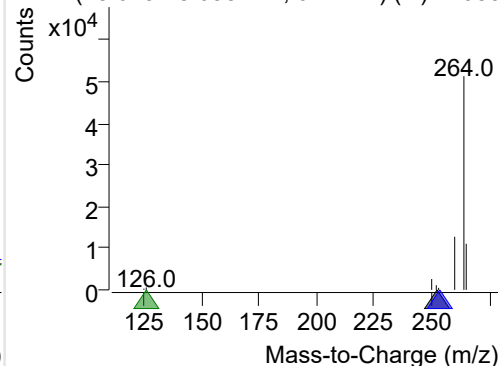
**Benzo(e)pyrene**

+ Selected Ion (252.0) 220806-PAHs-016.D

252.0, 253.0, 126.0



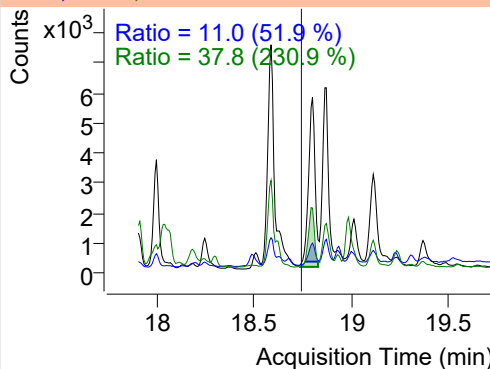
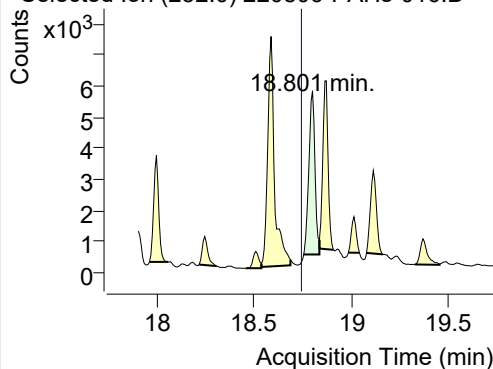
+ SIM (18.623-18.658 min, 6 scans) (\*\*) 22080



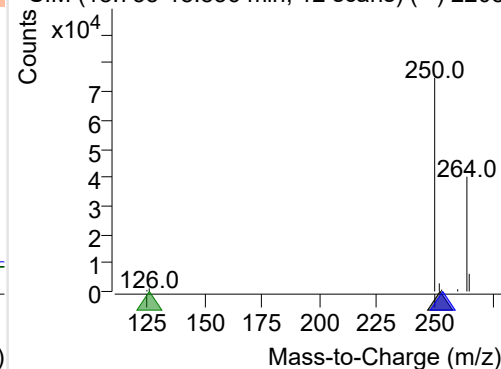
**Benzo(a)pyrene**

+ Selected Ion (252.0) 220806-PAHs-016.D

252.0, 253.0, 126.0

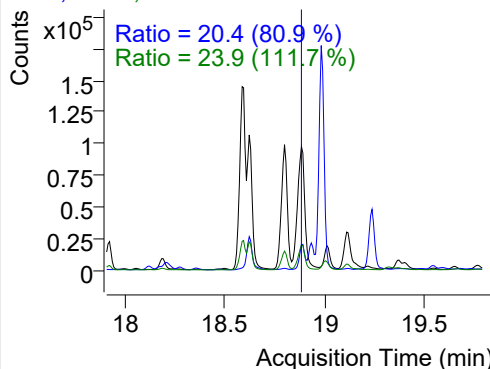
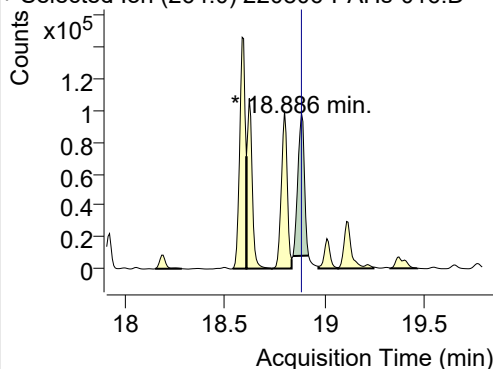


+ SIM (18.755-18.836 min, 12 scans) (\*\*) 2208

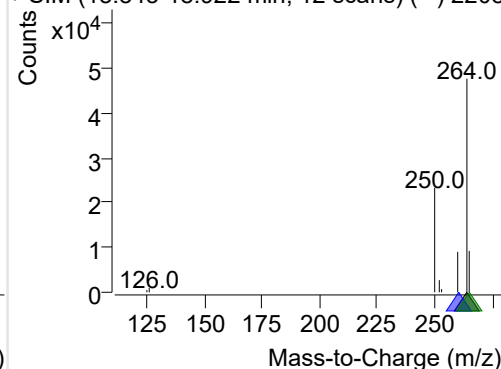
**IS-D12-Perylene**

+ Selected Ion (264.0) 220806-PAHs-016.D

264.0, 260.0, 265.0

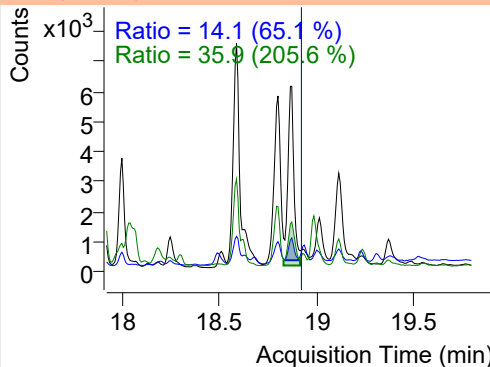
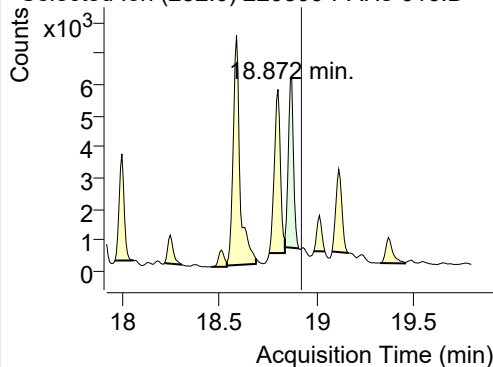


+ SIM (18.843-18.922 min, 12 scans) (\*\*) 2208

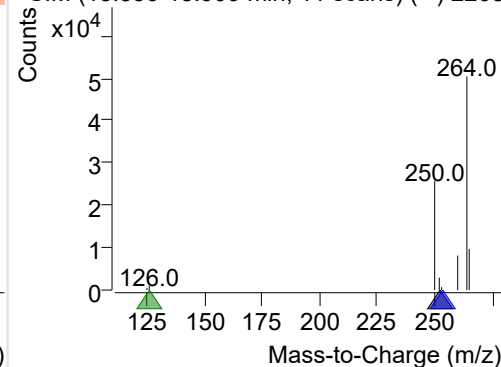
**Perylene**

+ Selected Ion (252.0) 220806-PAHs-016.D

252.0, 253.0, 126.0

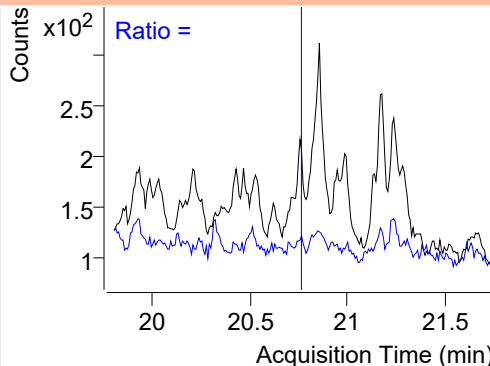
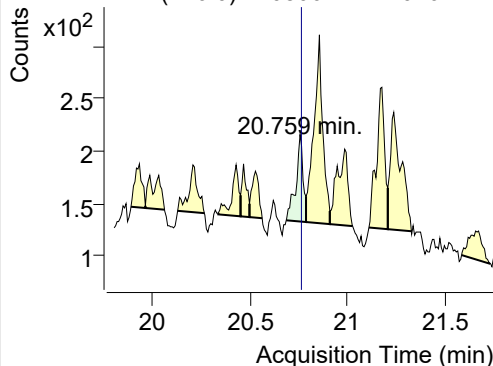


+ SIM (18.836-18.909 min, 11 scans) (\*\*) 2208

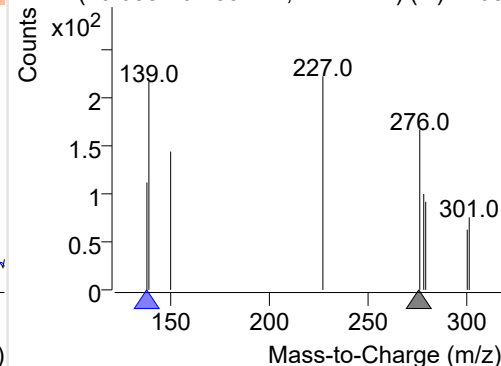
**Indeno(1,2,3-c,d)pyrene**

+ Selected Ion (276.0) 220806-PAHs-016.D

276.0, 138.0



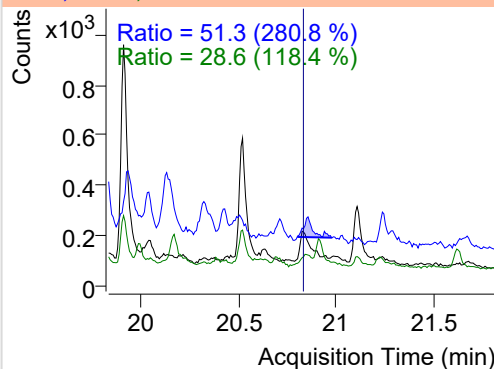
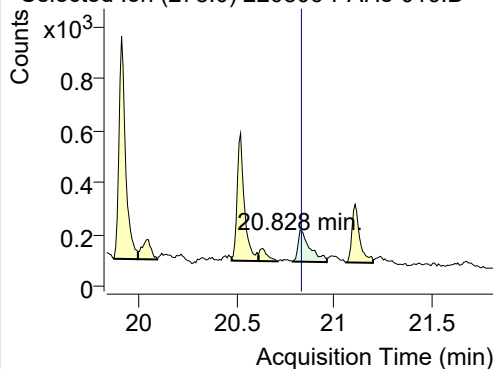
+ SIM (20.688-20.789 min, 14 scans) (\*\*) 2208



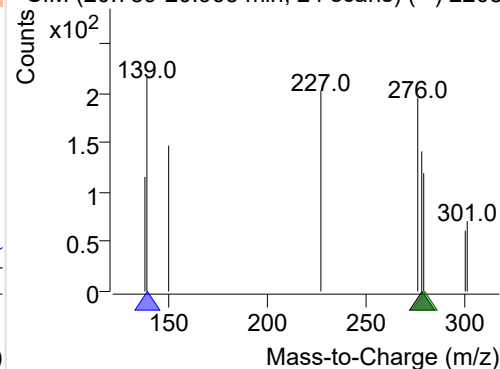
**Dibenz(a,h)anthracene**

+ Selected Ion (278.0) 220806-PAHs-016.D

278.0, 139.0, 279.0

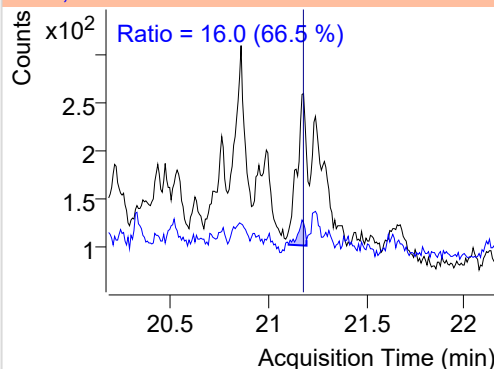
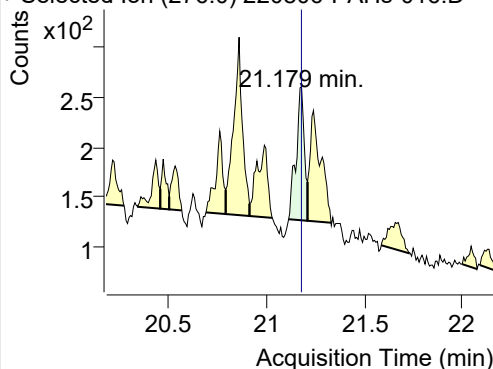


+ SIM (20.789-20.965 min, 24 scans) (\*\*) 2208

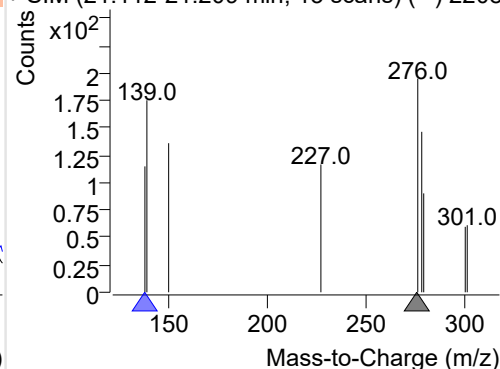
**Benzo(g,h,i)perylene**

+ Selected Ion (276.0) 220806-PAHs-016.D

276.0, 138.0

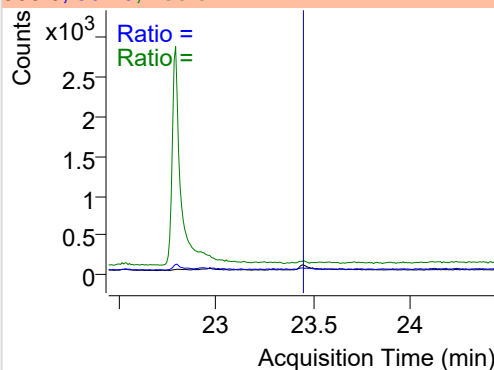
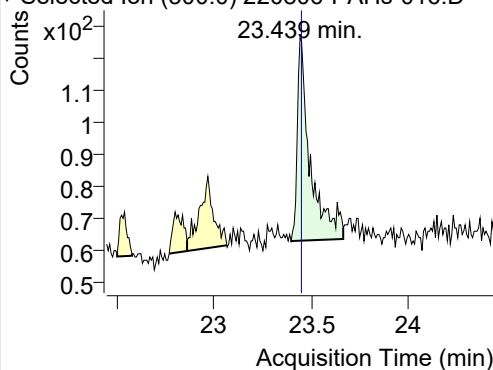


+ SIM (21.112-21.209 min, 13 scans) (\*\*) 2208

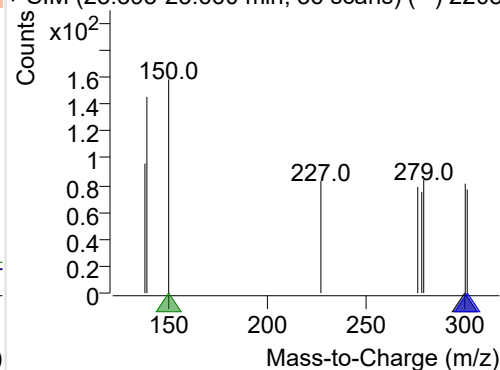
**Coronene**

+ Selected Ion (300.0) 220806-PAHs-016.D

300.0, 301.0, 150.0



+ SIM (23.393-23.660 min, 36 scans) (\*\*) 2208





## Quantitative Analysis Sample Based Report

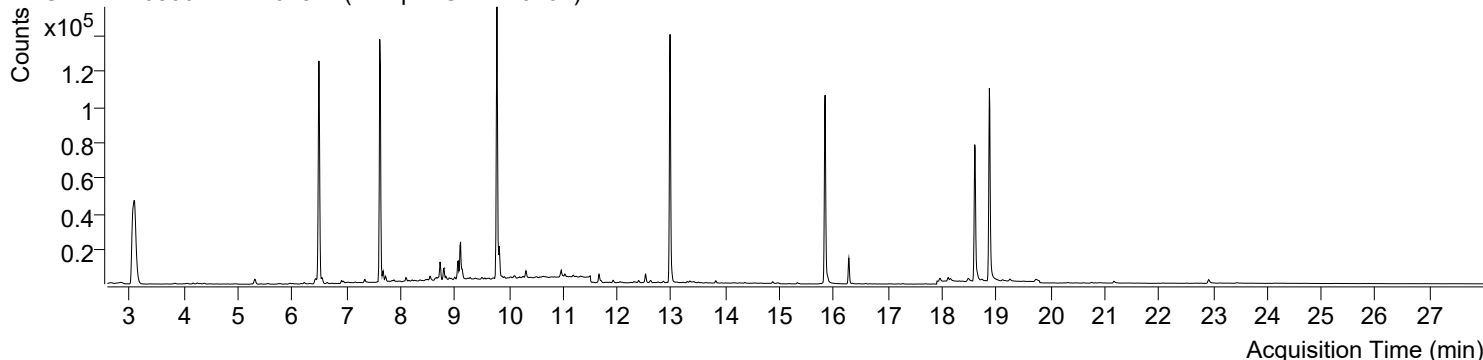


Trusted Answers

|                           |                                                                                            |                       |                        |
|---------------------------|--------------------------------------------------------------------------------------------|-----------------------|------------------------|
| Batch Data Path File Name | D:\MassHunter\GCMS\1\data\PAHs\220806-PAHs-Sample\QuantResults\220806-PAHs-Quant.batch.bin |                       |                        |
| Analysis Time Stamp       | 2022-10-10 오전 10:12:04                                                                     | Analyst Name          | DESKTOP-86B7UPG\5975MS |
| Report Generation Time    | 2022-10-10 오전 10:12:12                                                                     | Report Generator Name | DESKTOP-86B7UPG\5975MS |
| Calibration Last Update   | 2022-12-15 오후 3:30:46                                                                      | Batch State           | Processed              |
| Analyze Quant Version     | 10.2                                                                                       | Report Quant Version  | 10.2                   |
| Acq. Date-Time            | 2022-08-06 오후 7:20:08                                                                      | Data File             | 220806-PAHs-018.D      |
| Type                      | Sample                                                                                     | Name                  | Sample-Gas-220704      |
| Dil.                      | 1                                                                                          | Acq. Method File      | PAHs 19mix-Method      |

## Sample Chromatogram

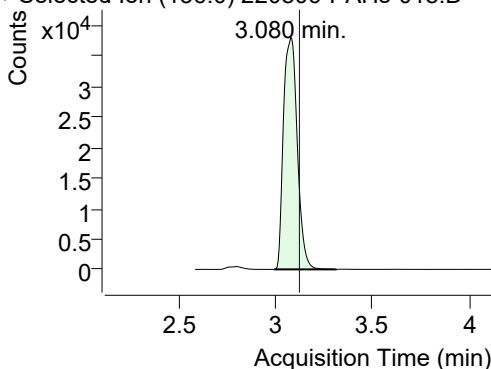
+ TIC SIM 220806-PAHs-018.D (Sample-Gas-220704)



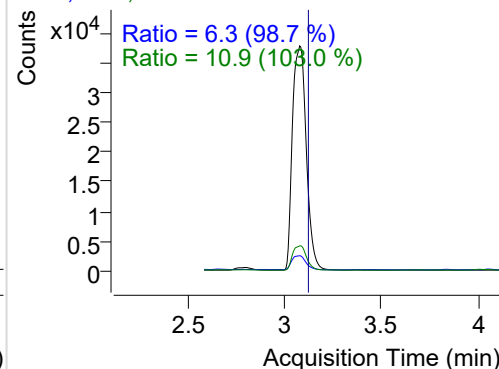
| Name                    | RT     | Transition | Resp.  | Height   | Final Conc. Units | Ratio |
|-------------------------|--------|------------|--------|----------|-------------------|-------|
| IS-D8-Naphthalene       | 3.080  | 136.0      | 187546 | 37883.37 | ND ng/ml          | 10.9  |
| Naphthalene             | 3.107  | 128.0      | 11794  | 2421.12  | ND ng/ml          | 12.5  |
| Acenaphthylene          | 6.161  | 152.0      | 421    | 223.83   | ND ng/ml          | 12.2  |
| IS-D10-Acenaphthene     | 6.493  | 164.0      | 110201 | 59828.39 | ND ng/ml          | 97.8  |
| Acenaphthene            | 6.558  | 154.0      | 1589   | 814.32   | ND ng/ml          | 119.4 |
| LSS-D10-Fluorene        | 7.617  | 176.0      | 107219 | 60500.80 | ND ng/ml          | 92.3  |
| Fluorene                | 7.680  | 166.0      | 4445   | 2562.75  | ND ng/ml          | 99.8  |
| IS-D10-Phenanthrene     | 9.780  | 188.0      | 195144 | 122475.2 | ND ng/ml          | 15.2  |
| Phenanthrene            | 9.822  | 178.0      | 16880  | 10460.48 | ND ng/ml          | 19.2  |
| Anthracene              | 9.822  | 178.0      | 16880  | 10460.48 | ND ng/ml          | 19.2  |
| Fluoranthene            | 12.526 | 202.0      | 5843   | 3553.42  | ND ng/ml          | 26.5  |
| LSS-D10-Pyrene          | 12.976 | 212.0      | 163293 | 103321.8 | ND ng/ml          | 18.7  |
| Pyrene                  | 13.009 | 202.0      | 5786   | 3412.66  | ND ng/ml          | 27.2  |
| Benz(a)anthracene       | 15.789 | 228.0      | 663    | 363.21   | ND ng/ml          | 28.4  |
| IS-D12-Chrysene         | 15.838 | 240.0      | 140341 | 79801.08 | ND ng/ml          | 18.8  |
| Chrysene                | 15.887 | 228.0      | 2596   | 1269.90  | ND ng/ml          | 30.0  |
| Benzo(b)fluoranthene    | 18.110 | 252.0      | 2242   | 1225.24  | ND ng/ml          | 19.8  |
| Benzo(k)fluoranthene    | 18.153 | 252.0      | 2679   | 895.61   | ND ng/ml          | 18.5  |
| SS-D12-Benzo(e)pyrene   | 18.601 | 264.0      | 101645 | 51784.85 | ND ng/ml          | 25.1  |
| Benzo(e)pyrene          | 18.651 | 252.0      | 2331   | 1127.11  | ND ng/ml          | 20.0  |
| Benzo(a)pyrene          | 18.737 | 252.0      | 763    | 316.90   | ND ng/ml          | 19.4  |
| IS-D12-Perylene         | 18.872 | 264.0      | 144237 | 74113.84 | ND ng/ml          | 23.5  |
| Perylene                | 18.872 | 252.0      | 679    | 282.92   | ND ng/ml          | 24.3  |
| Indeno(1,2,3-c,d)pyrene | 20.759 | 276.0      | 1391   | 349.31   | ND ng/ml          | 10.8  |
| Dibenz(a,h)anthracene   | 20.835 | 278.0      | 299    | 79.08    | ND ng/ml          | 15.6  |
| Benzo(g,h,i)perylene    | 21.171 | 276.0      | 2296   | 800.35   | ND ng/ml          | 25.7  |
| Coronene                | 23.439 | 300.0      | 844    | 211.33   | ND ng/ml          | 18.1  |

## IS-D8-Naphthalene

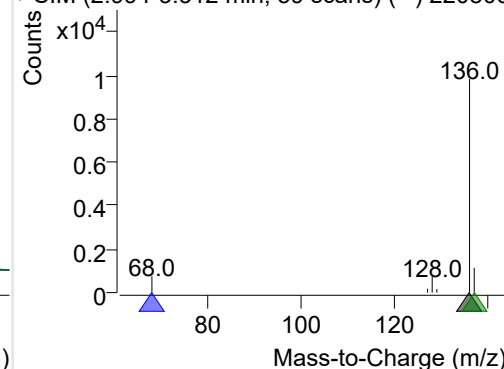
+ Selected Ion (136.0) 220806-PAHs-018.D



136.0, 68.0, 137.0

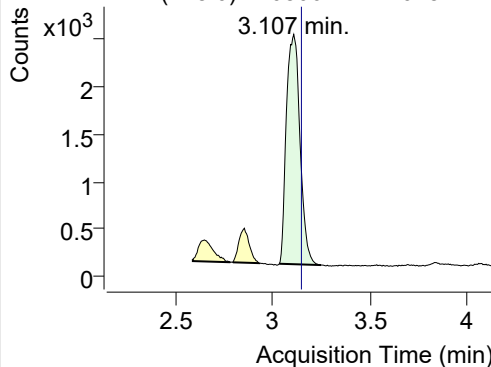


+ SIM (2.994-3.312 min, 59 scans) (\*\*) 220806

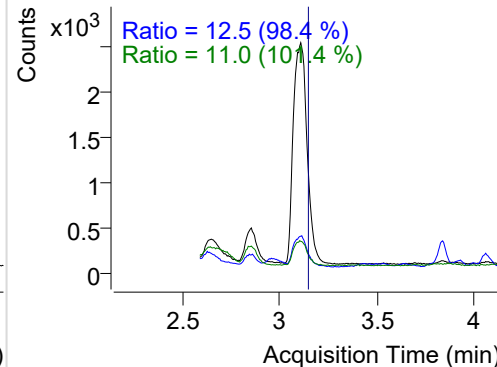


**Naphthalene**

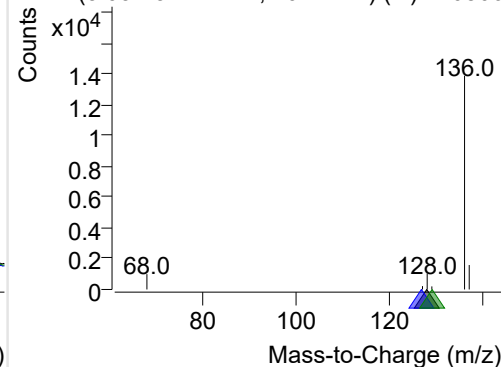
+ Selected Ion (128.0) 220806-PAHs-018.D



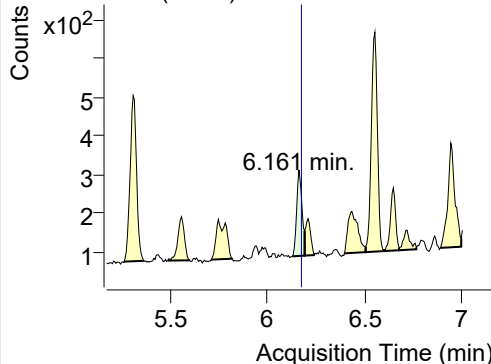
128.0, 127.0, 129.0



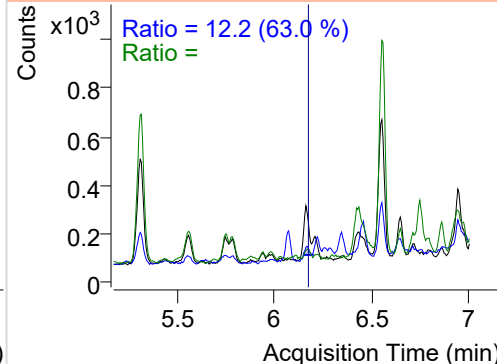
+ SIM (3.032-3.247 min, 40 scans) (\*\*) 220806

**Acenaphthylene**

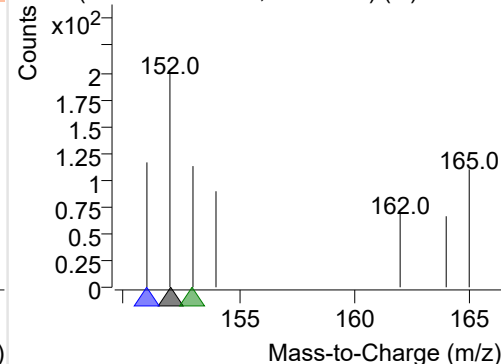
+ Selected Ion (152.0) 220806-PAHs-018.D



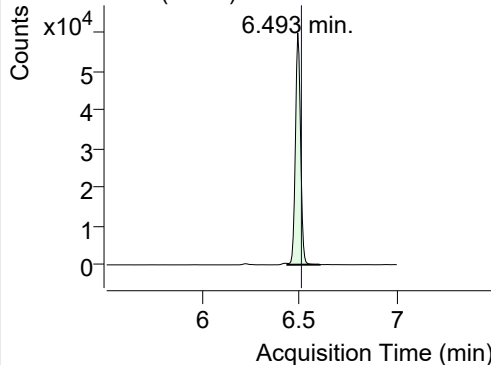
152.0, 151.0, 153.0



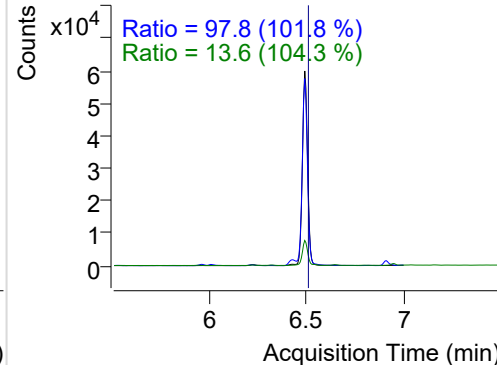
+ SIM (6.127-6.191 min, 11 scans) (\*\*) 220806

**IS-D10-Acenaphthene**

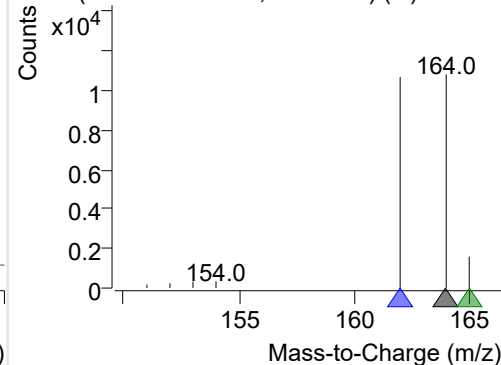
+ Selected Ion (164.0) 220806-PAHs-018.D



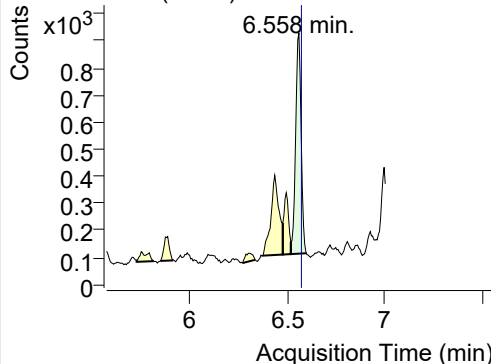
164.0, 162.0, 165.0



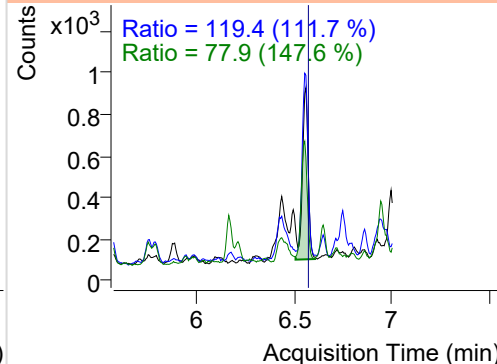
+ SIM (6.439-6.605 min, 29 scans) (\*\*) 220806

**Acenaphthene**

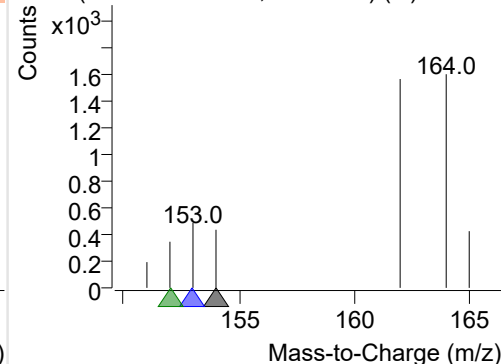
+ Selected Ion (154.0) 220806-PAHs-018.D



154.0, 153.0, 152.0

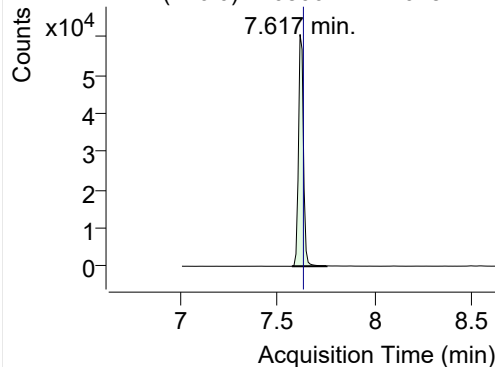


+ SIM (6.516-6.596 min, 14 scans) (\*\*) 220806

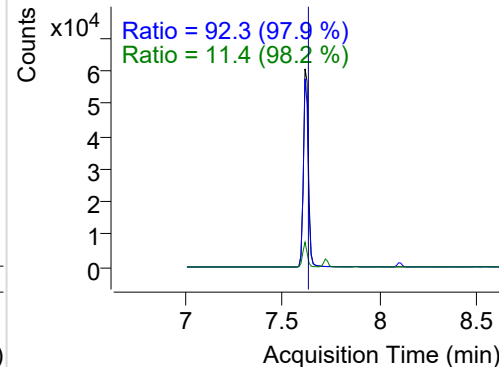


## LSS-D10-Fluorene

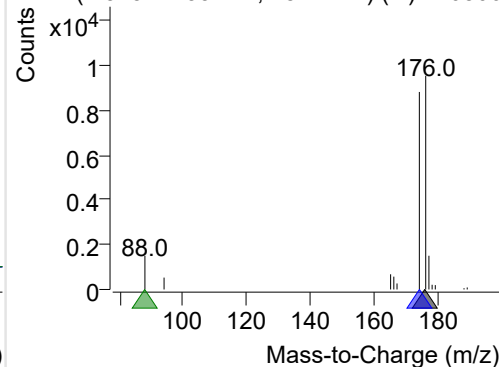
+ Selected Ion (176.0) 220806-PAHs-018.D



176.0, 174.0, 88.0

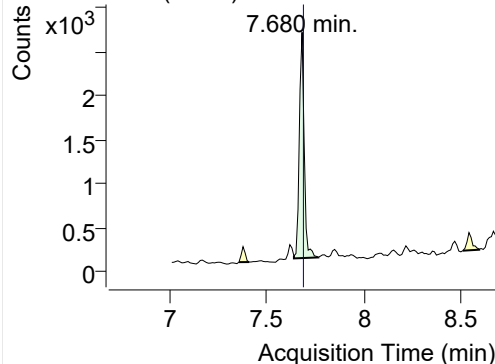


+ SIM (7.575-7.753 min, 18 scans) (\*\*) 220806

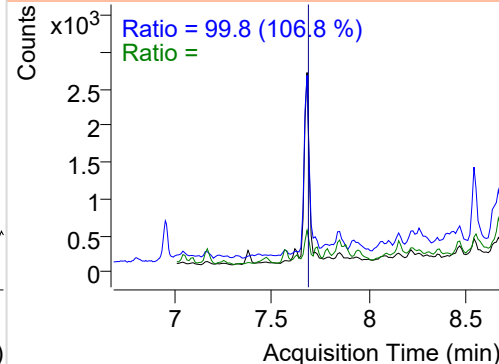


## Fluorene

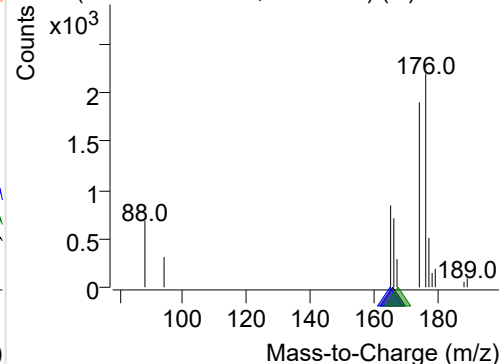
+ Selected Ion (166.0) 220806-PAHs-018.D



166.0, 165.0, 167.0

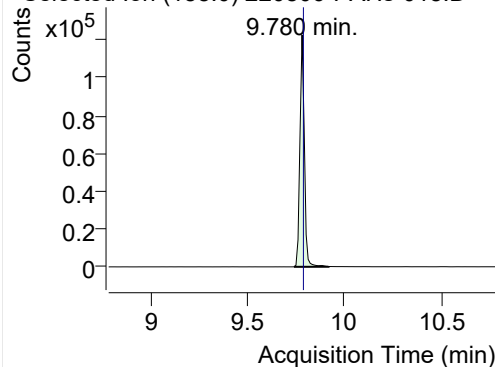


+ SIM (7.638-7.764 min, 13 scans) (\*\*) 220806

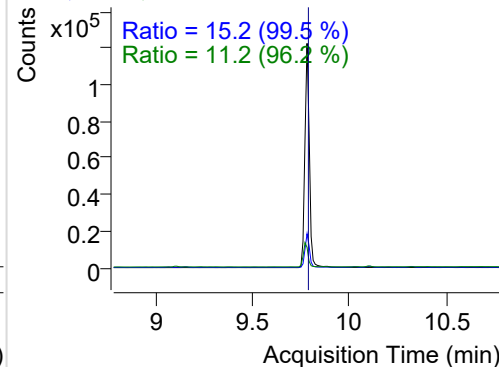


## IS-D10-Phenanthrene

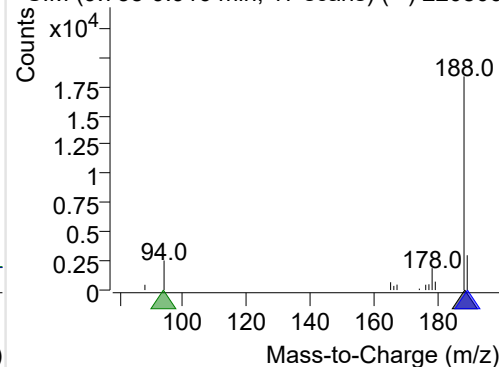
+ Selected Ion (188.0) 220806-PAHs-018.D



188.0, 189.0, 94.0

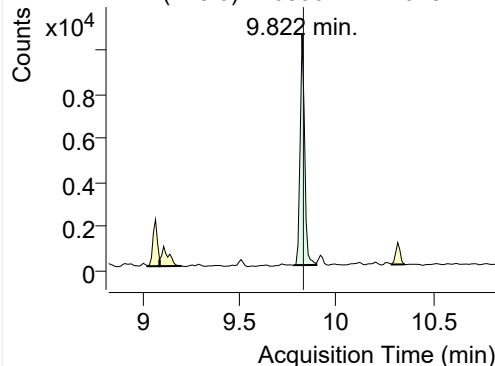


+ SIM (9.738-9.916 min, 17 scans) (\*\*) 220806

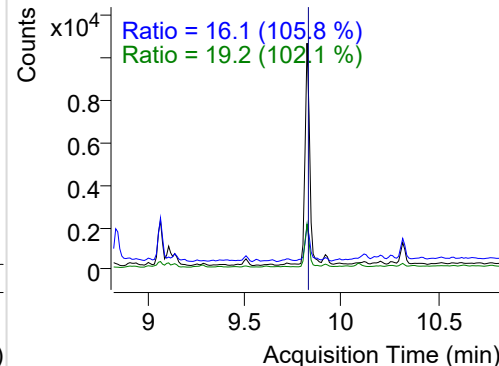


## Phenanthrene

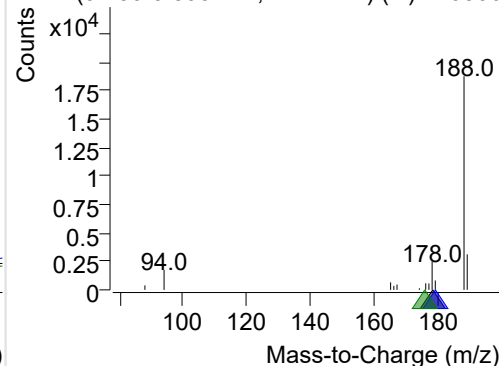
+ Selected Ion (178.0) 220806-PAHs-018.D



178.0, 179.0, 176.0

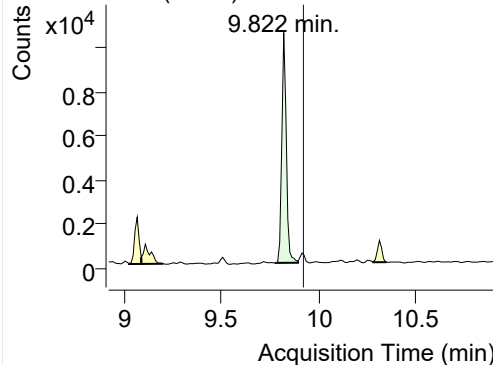


+ SIM (9.780-9.895 min, 12 scans) (\*\*) 220806

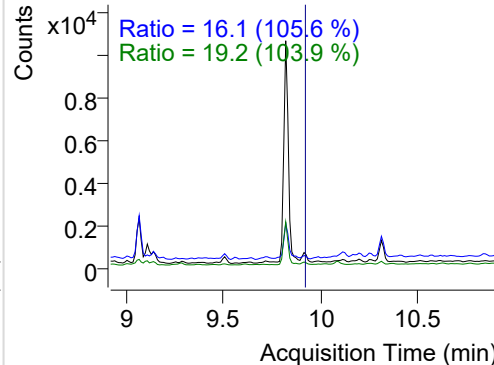


**Anthracene**

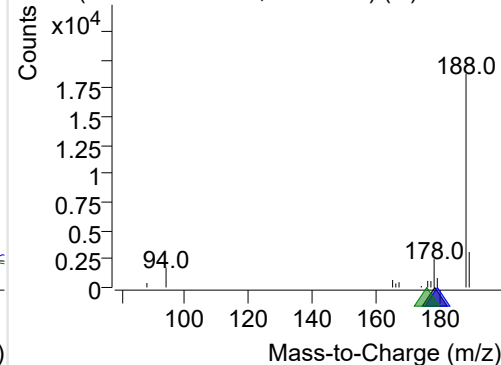
+ Selected Ion (178.0) 220806-PAHs-018.D



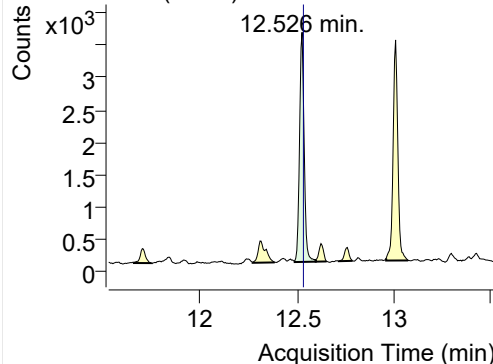
178.0, 179.0, 176.0



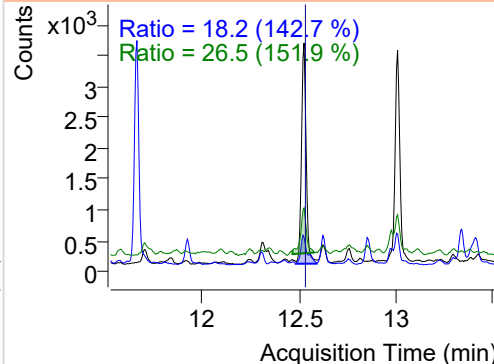
+ SIM (9.780-9.895 min, 12 scans) (\*\*) 220806

**Fluoranthene**

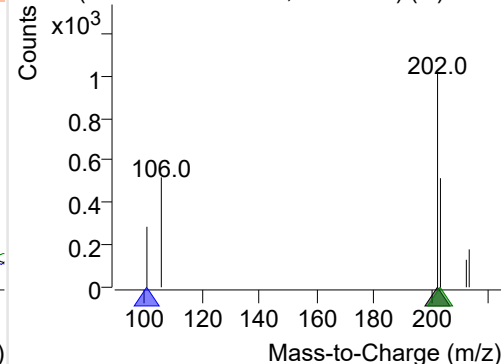
+ Selected Ion (202.0) 220806-PAHs-018.D



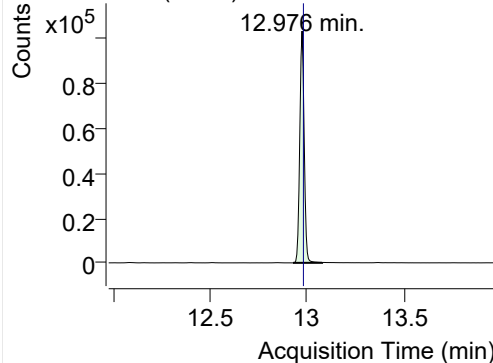
202.0, 101.0, 203.0



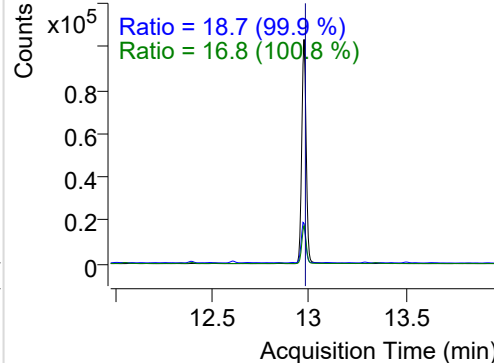
+ SIM (12.488-12.597 min, 21 scans) (\*\*) 2208

**LSS-D10-Pyrene**

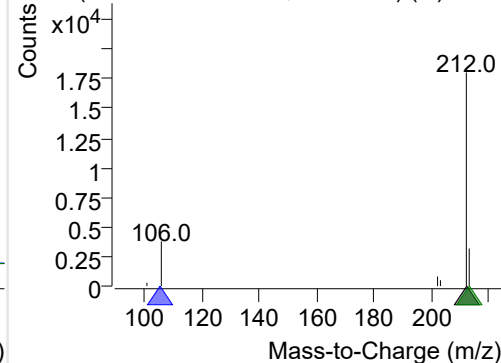
+ Selected Ion (212.0) 220806-PAHs-018.D



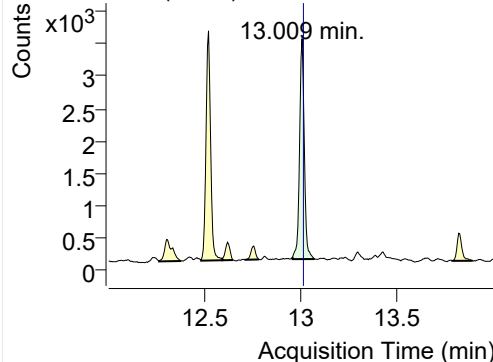
212.0, 106.0, 213.0



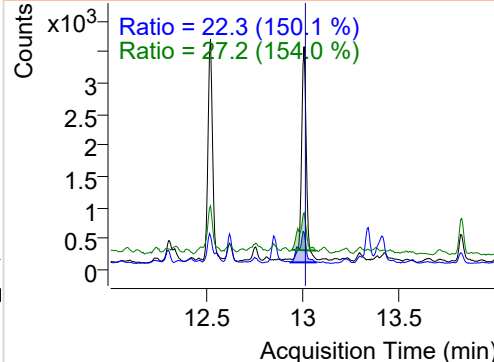
+ SIM (12.929-13.079 min, 28 scans) (\*\*) 2208

**Pyrene**

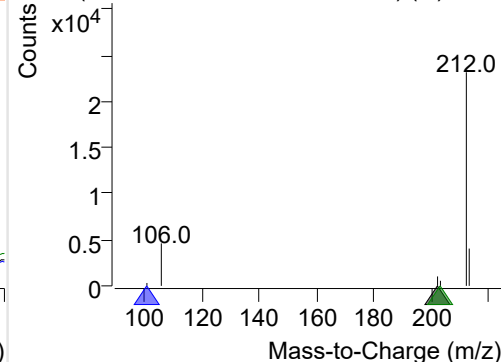
+ Selected Ion (202.0) 220806-PAHs-018.D



202.0, 101.0, 203.0

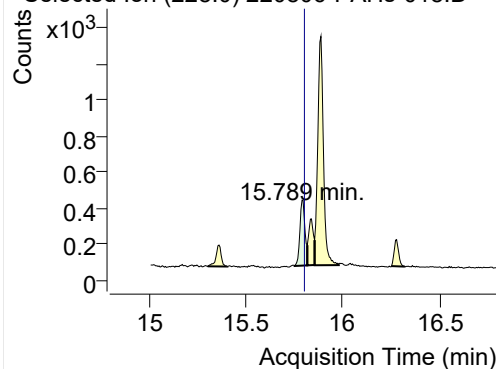


+ SIM (12.960-13.074 min, 21 scans) (\*\*) 2208

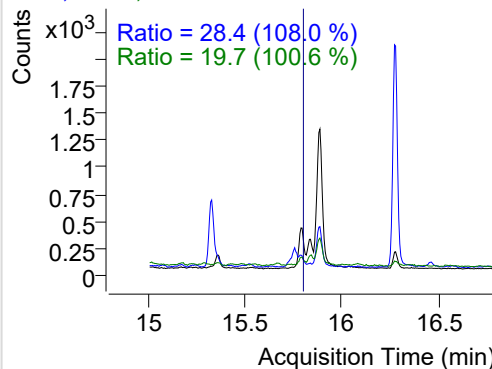


**Benz(a)anthracene**

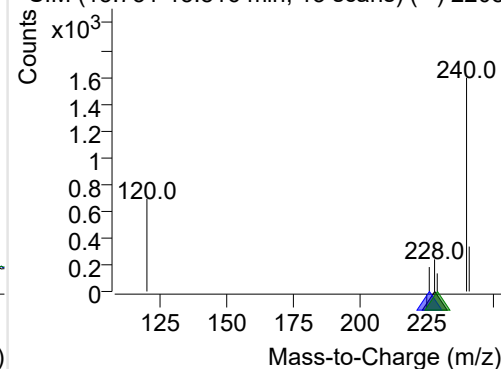
+ Selected Ion (228.0) 220806-PAHs-018.D



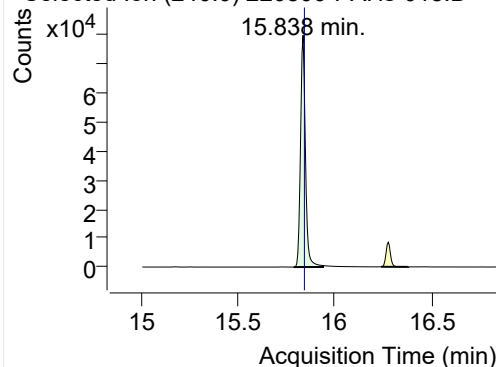
228.0, 226.0, 229.0



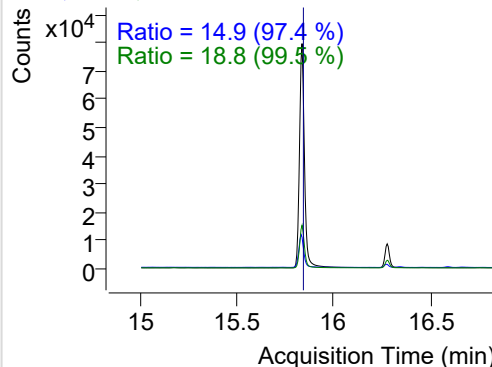
+ SIM (15.751-15.816 min, 13 scans) (\*\*) 2208

**IS-D12-Chrysene**

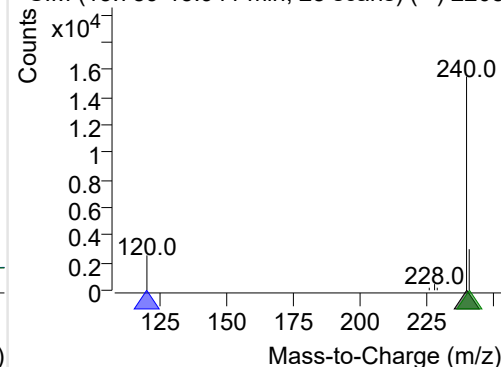
+ Selected Ion (240.0) 220806-PAHs-018.D



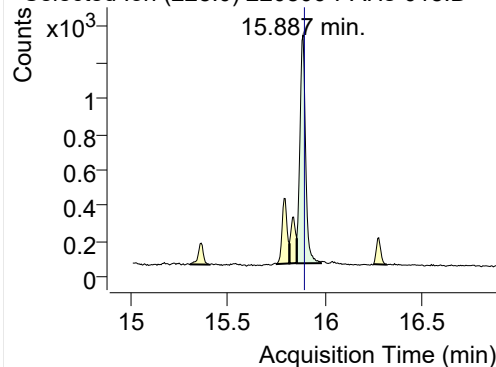
240.0, 120.0, 241.0



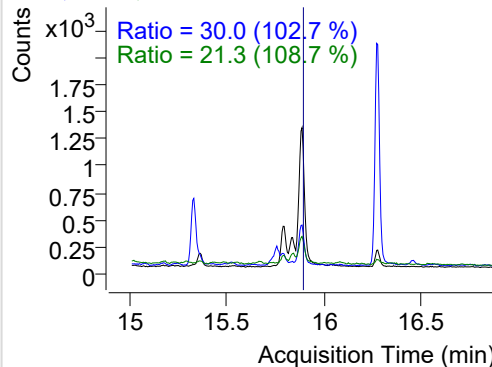
+ SIM (15.789-15.941 min, 28 scans) (\*\*) 2208

**Chrysene**

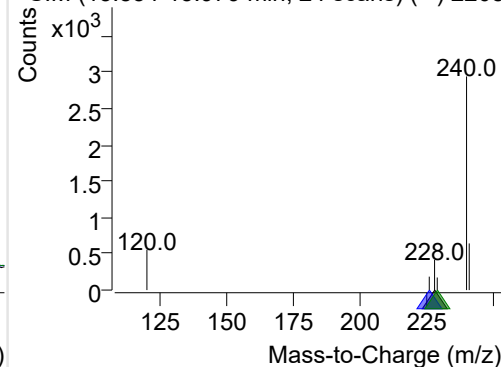
+ Selected Ion (228.0) 220806-PAHs-018.D



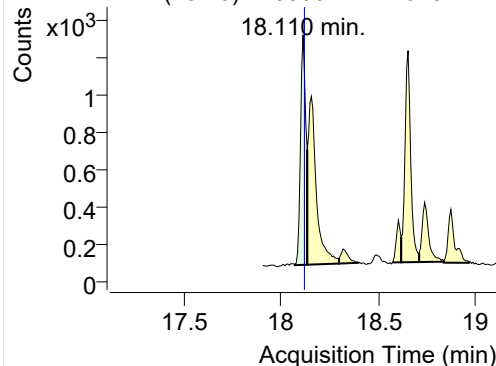
228.0, 226.0, 229.0



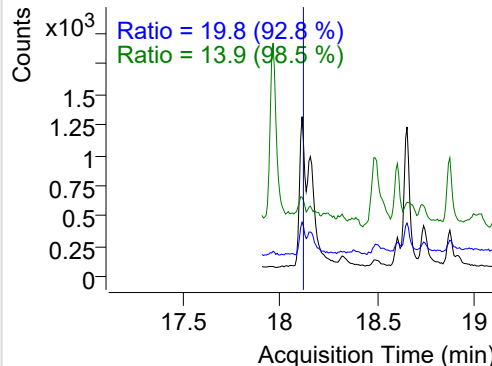
+ SIM (15.854-15.979 min, 24 scans) (\*\*) 2208

**Benzo(b)fluoranthene**

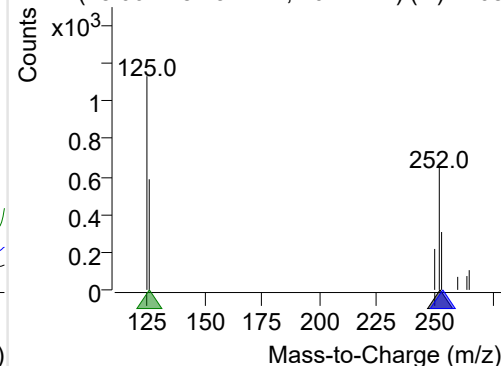
+ Selected Ion (252.0) 220806-PAHs-018.D



252.0, 253.0, 126.0



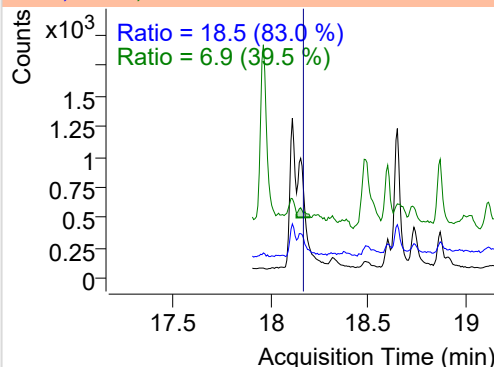
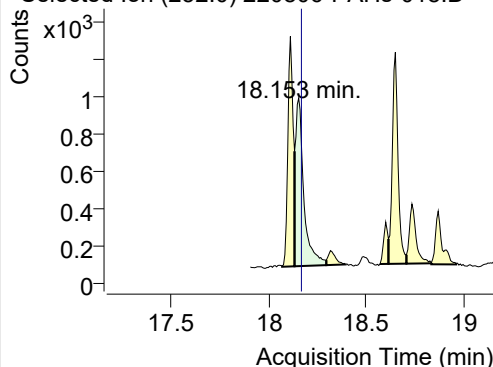
+ SIM (18.067-18.131 min, 10 scans) (\*\*) 2208



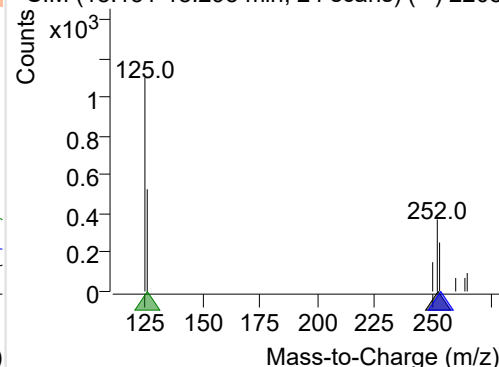
**Benzo(k)fluoranthene**

+ Selected Ion (252.0) 220806-PAHs-018.D

252.0, 253.0, 126.0

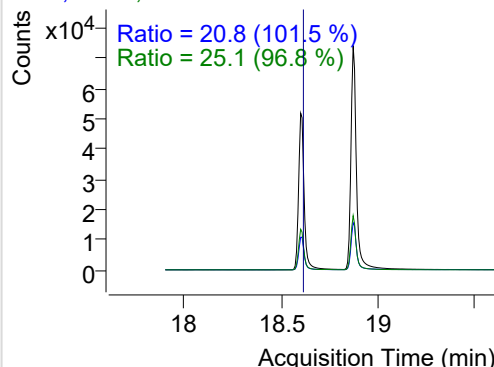
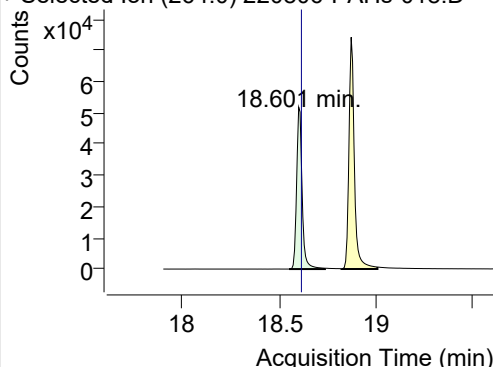


+ SIM (18.131-18.295 min, 24 scans) (\*\*) 2208

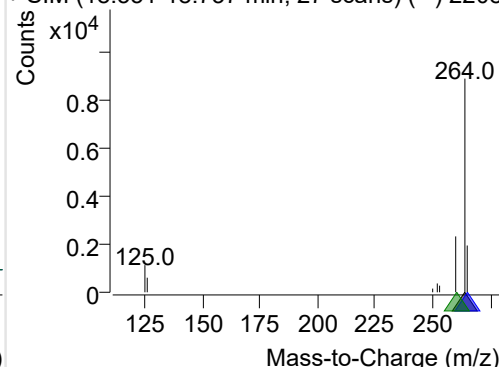
**SS-D12-Benzo(e)pyrene**

+ Selected Ion (264.0) 220806-PAHs-018.D

264.0, 265.0, 260.0

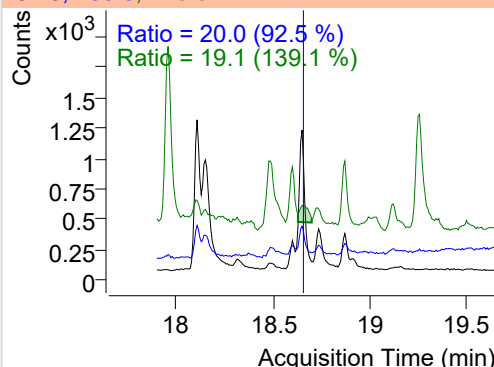
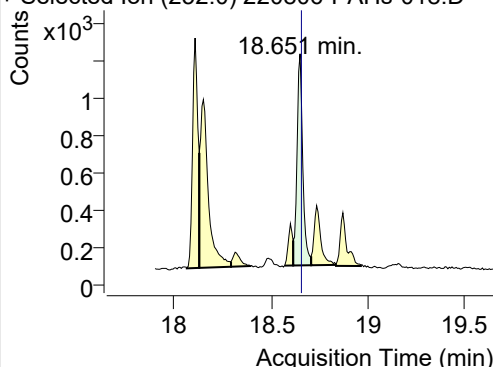


+ SIM (18.551-18.737 min, 27 scans) (\*\*) 2208

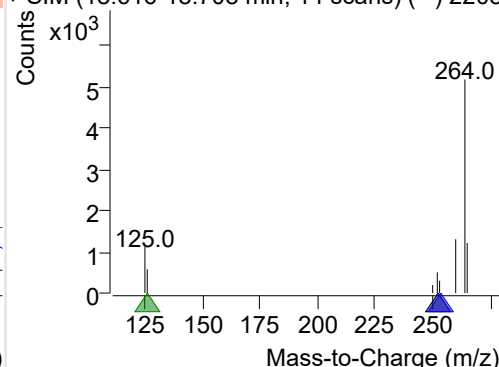
**Benzo(e)pyrene**

+ Selected Ion (252.0) 220806-PAHs-018.D

252.0, 253.0, 126.0

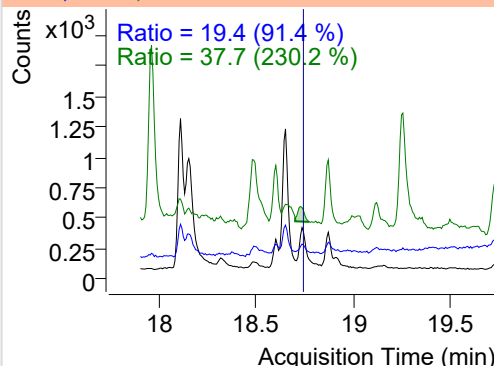
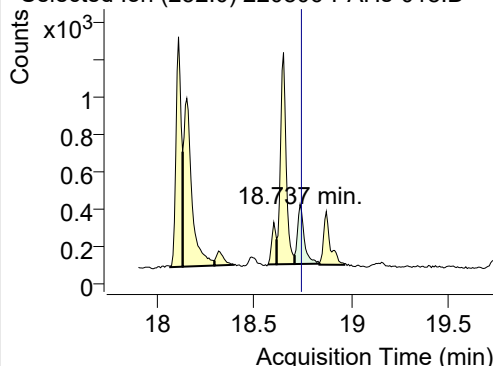


+ SIM (18.616-18.708 min, 14 scans) (\*\*) 2208

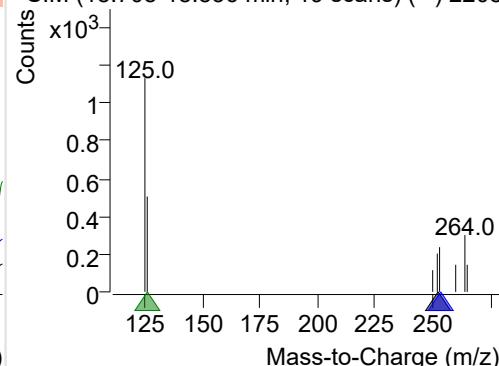
**Benzo(a)pyrene**

+ Selected Ion (252.0) 220806-PAHs-018.D

252.0, 253.0, 126.0

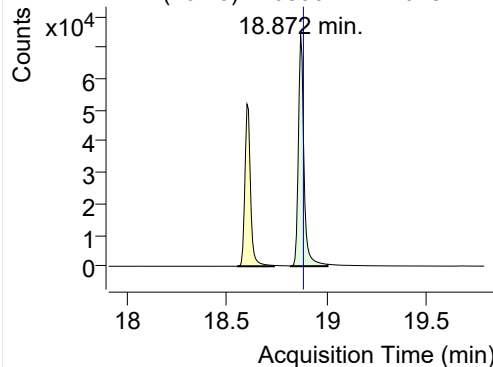


+ SIM (18.708-18.836 min, 19 scans) (\*\*) 2208

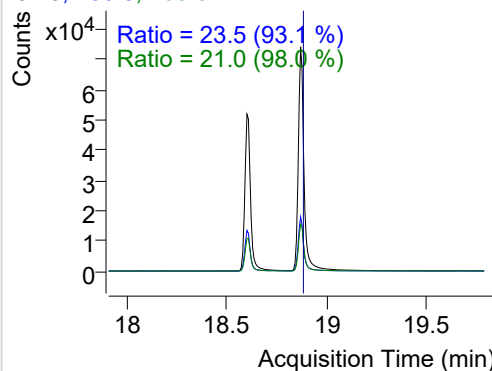


## IS-D12-Perylene

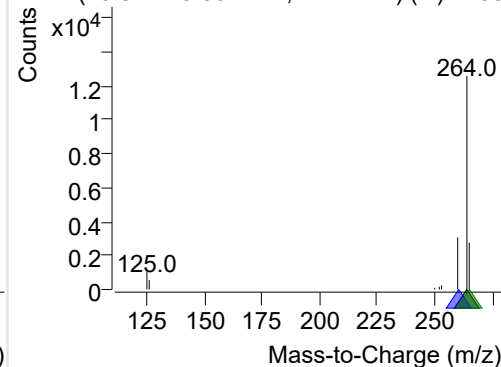
+ Selected Ion (264.0) 220806-PAHs-018.D



264.0, 260.0, 265.0

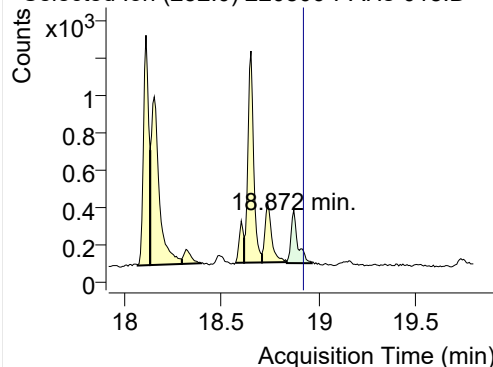


+ SIM (18.822-19.007 min, 27 scans) (\*\*) 2208

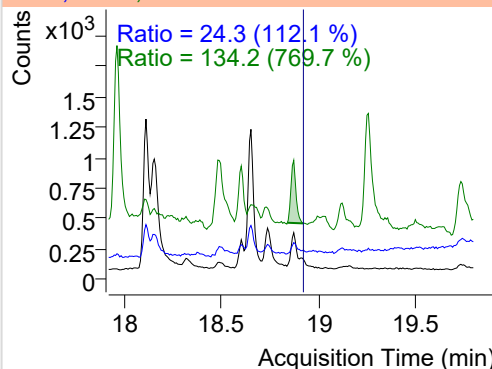


## Perylene

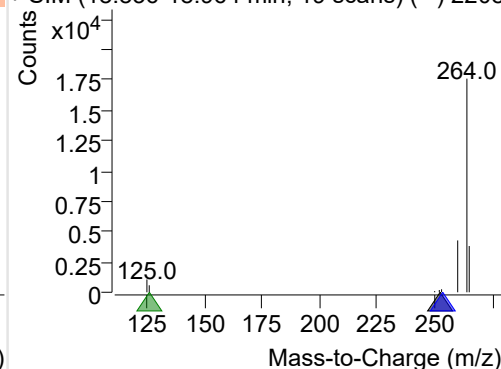
+ Selected Ion (252.0) 220806-PAHs-018.D



252.0, 253.0, 126.0

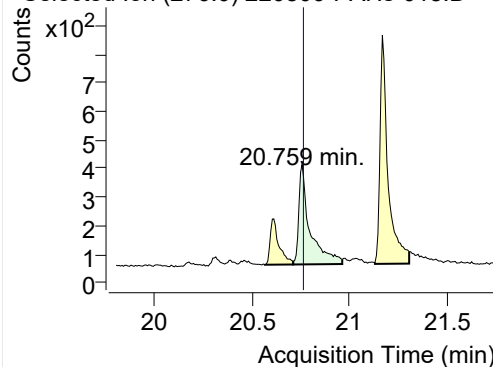


+ SIM (18.836-18.964 min, 19 scans) (\*\*) 2208

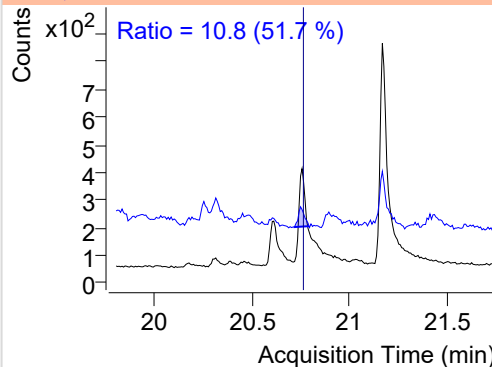


## Indeno(1,2,3-c,d)pyrene

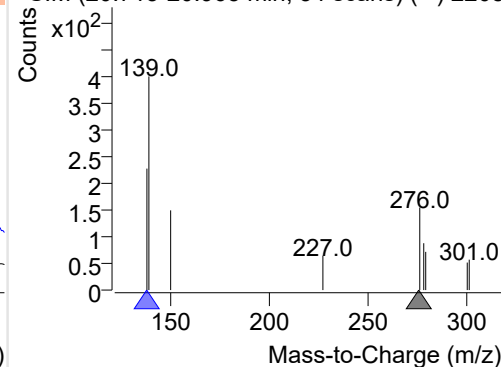
+ Selected Ion (276.0) 220806-PAHs-018.D



276.0, 138.0

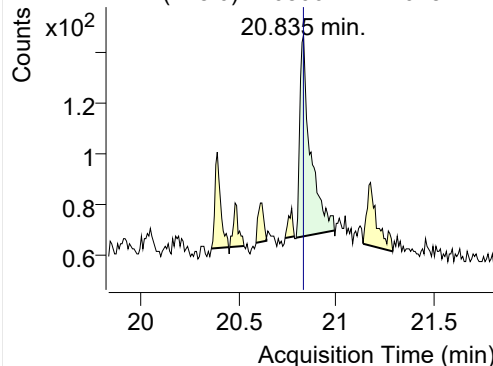


+ SIM (20.713-20.965 min, 34 scans) (\*\*) 2208

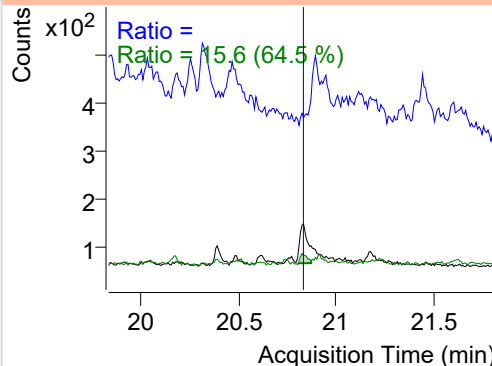


## Dibenz(a,h)anthracene

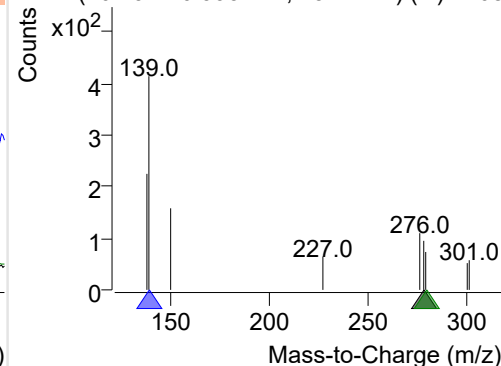
+ Selected Ion (278.0) 220806-PAHs-018.D



278.0, 139.0, 279.0

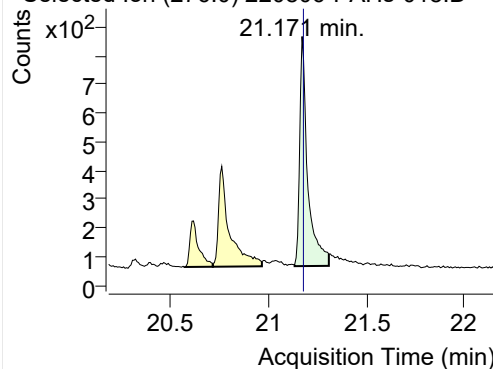


+ SIM (20.797-20.993 min, 25 scans) (\*\*) 2208

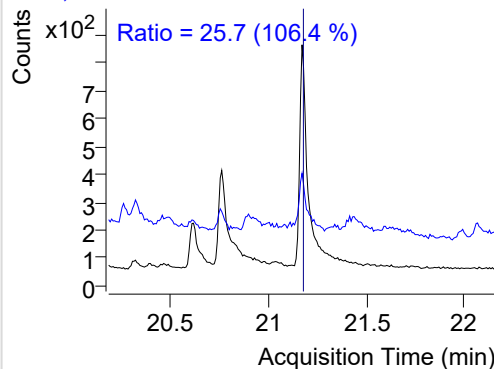


**Benzo(g,h,i)perylene**

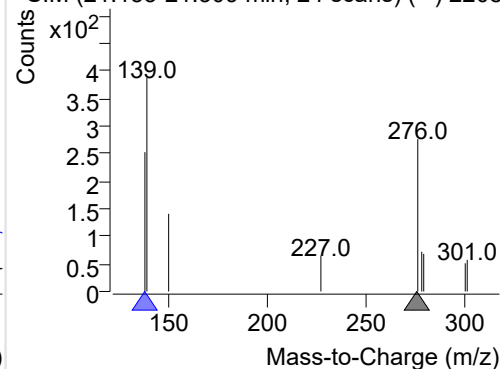
+ Selected Ion (276.0) 220806-PAHs-018.D



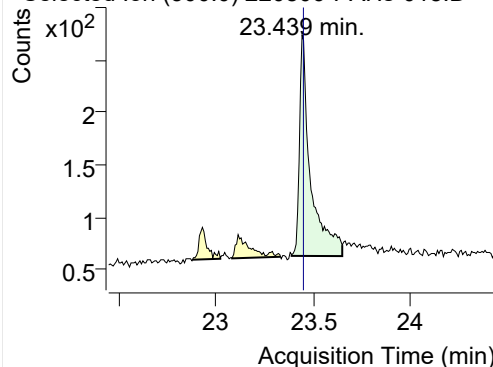
276.0, 138.0



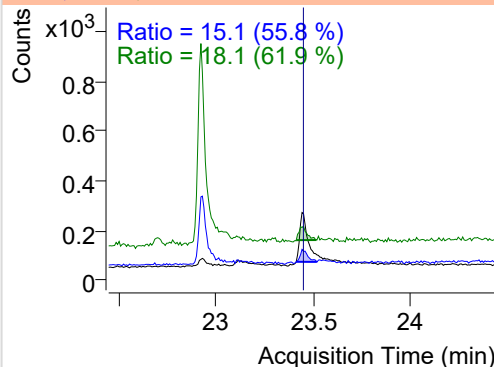
+ SIM (21.133-21.309 min, 24 scans) (\*\*) 2208

**Coronene**

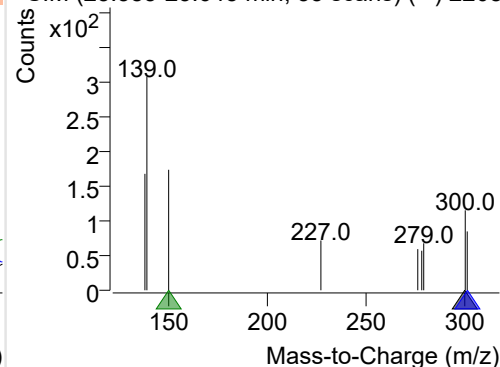
+ Selected Ion (300.0) 220806-PAHs-018.D



300.0, 301.0, 150.0



+ SIM (23.385-23.645 min, 35 scans) (\*\*) 2208





## Quantitative Analysis Sample Based Report

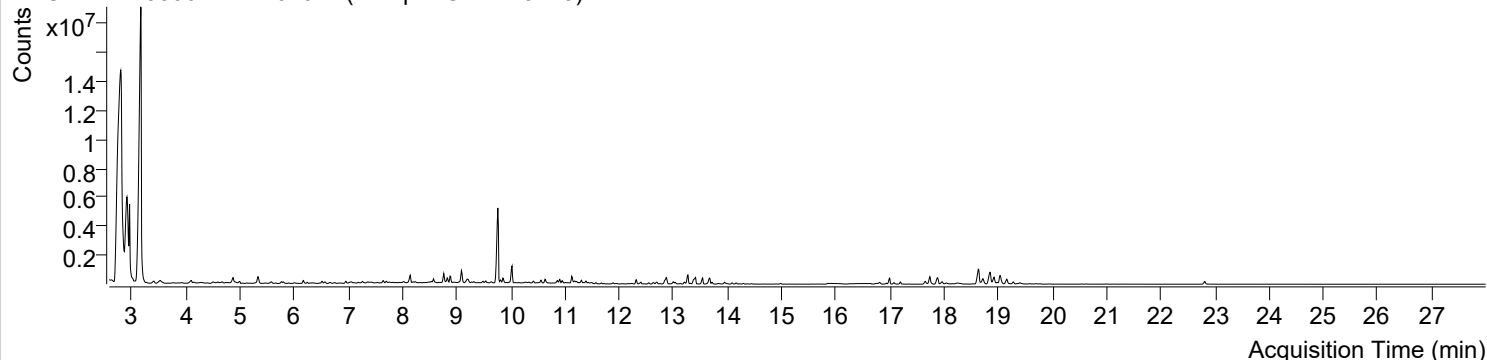


Trusted Answers

|                           |                                                                                            |                       |                        |
|---------------------------|--------------------------------------------------------------------------------------------|-----------------------|------------------------|
| Batch Data Path File Name | D:\MassHunter\GCMS\1\data\PAHs\220806-PAHs-Sample\QuantResults\220806-PAHs-Quant.batch.bin |                       |                        |
| Analysis Time Stamp       | 2022-10-10 오전 10:12:04                                                                     | Analyst Name          | DESKTOP-86B7UPG\5975MS |
| Report Generation Time    | 2022-10-10 오전 10:12:12                                                                     | Report Generator Name | DESKTOP-86B7UPG\5975MS |
| Calibration Last Update   | 2022-12-15 오후 3:30:46                                                                      | Batch State           | Processed              |
| Analyze Quant Version     | 10.2                                                                                       | Report Quant Version  | 10.2                   |
| Acq. Date-Time            | 2022-08-06 오후 7:51:10                                                                      | Data File             | 220806-PAHs-019.D      |
| Type                      | Sample                                                                                     | Name                  | Sample-Gas-220710      |
| Dil.                      | 1                                                                                          | Acq. Method File      | PAHs 19mix-Method      |

## Sample Chromatogram

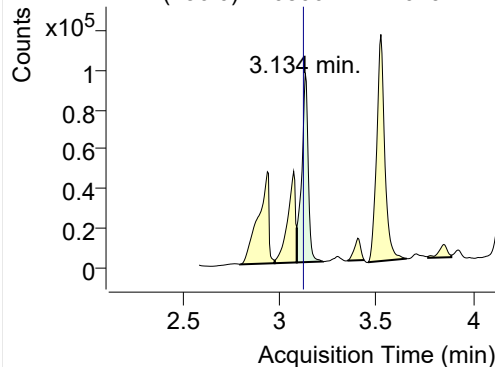
+ TIC SIM 220806-PAHs-019.D (Sample-Gas-220710)



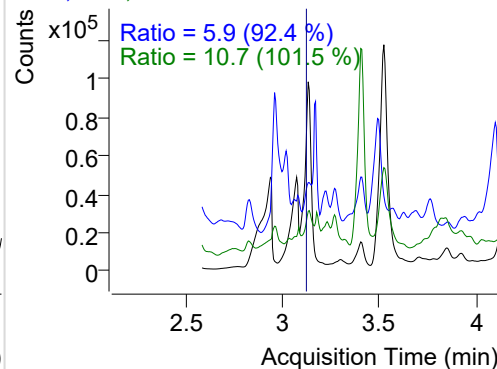
| Name                    | RT     | Transition | Resp.    | Height     | Final Conc. Units | Ratio |
|-------------------------|--------|------------|----------|------------|-------------------|-------|
| IS-D8-Naphthalene       | 3.134  | 136.0      | 220406   | 95537.55   | ND ng/ml          | 10.7  |
| Naphthalene             | 3.155  | 128.0      | 34917797 | 8380364.11 | ND ng/ml          | 20.4  |
| Acenaphthylene          | 6.185  | 152.0      | 15664    | 6289.10    | ND ng/ml          | 159.6 |
| IS-D10-Acenaphthene     | 6.510  | 164.0      | 127583   | 66135.33   | ND ng/ml          | 105.7 |
| Acenaphthene            | 6.575  | 154.0      | 45990    | 23865.78   | ND ng/ml          | 117.9 |
| LSS-D10-Fluorene        | 7.648  | 176.0      | 112157   | 61277.65   | ND ng/ml          | 92.6  |
| Fluorene                | 7.701  | 166.0      | 87330    | 48060.47   | ND ng/ml          | 113.4 |
| IS-D10-Phenanthrene     | 9.811  | 188.0      | 224275   | 138857.17  | ND ng/ml          | 23.6  |
| Phenanthrene            | 9.853  | 178.0      | 327439   | 188694.39  | ND ng/ml          | 19.1  |
| Anthracene              | 9.853  | 178.0      | 327439   | 188694.39  | ND ng/ml          | 19.1  |
| Fluoranthene            | 12.542 | 202.0      | 92193    | 57605.47   | ND ng/ml          |       |
| LSS-D10-Pyrene          | 13.003 | 212.0      | 162968   | 95236.04   | ND ng/ml          | 36.8  |
| Pyrene                  | 13.036 | 202.0      | 153720   | 86277.47   | ND ng/ml          | 22.7  |
| Benz(a)anthracene       | 15.909 | 228.0      | 12520    | 1327.98    | ND ng/ml          | 6.7   |
| IS-D12-Chrysene         | 15.854 | 240.0      | 176174   | 35204.07   | ND ng/ml          | 22.7  |
| Chrysene                | 15.909 | 228.0      | 12520    | 1327.98    | ND ng/ml          | 6.7   |
| Benzo(b)fluoranthene    | 18.630 | 252.0      | 47493    | 15588.10   | ND ng/ml          |       |
| Benzo(k)fluoranthene    | 18.630 | 252.0      | 47493    | 15588.10   | ND ng/ml          |       |
| SS-D12-Benzo(e)pyrene   | 18.637 | 264.0      | 869407   | 350672.60  | ND ng/ml          | 28.6  |
| Benzo(e)pyrene          | 18.630 | 252.0      | 47493    | 15588.10   | ND ng/ml          |       |
| Benzo(a)pyrene          | 18.715 | 252.0      | 739423   | 292530.06  | ND ng/ml          | 19.1  |
| IS-D12-Perylene         | 18.922 | 264.0      | 621924   | 204156.34  | ND ng/ml          |       |
| Perylene                | 18.915 | 252.0      | 39044    | 17847.98   | ND ng/ml          |       |
| Indeno(1,2,3-c,d)pyrene | 20.873 | 276.0      | 2041     | 586.41     | ND ng/ml          |       |
| Dibenz(a,h)anthracene   | 20.537 | 278.0      | 15339    | 5888.05    | ND ng/ml          | 28.8  |
| Benzo(g,h,i)perylene    | 21.164 | 276.0      | 1815     | 402.33     | ND ng/ml          | 12.1  |
| Coronene                | 23.462 | 300.0      | 463      | 117.99     | ND ng/ml          |       |

## IS-D8-Naphthalene

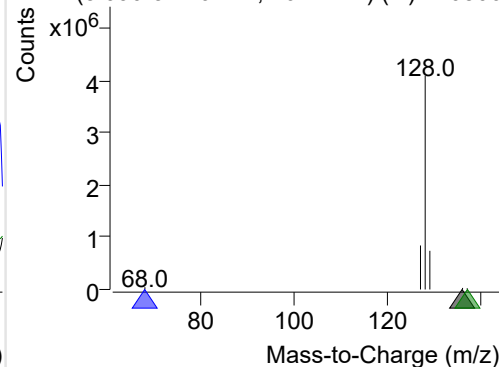
+ Selected Ion (136.0) 220806-PAHs-019.D



136.0, 68.0, 137.0

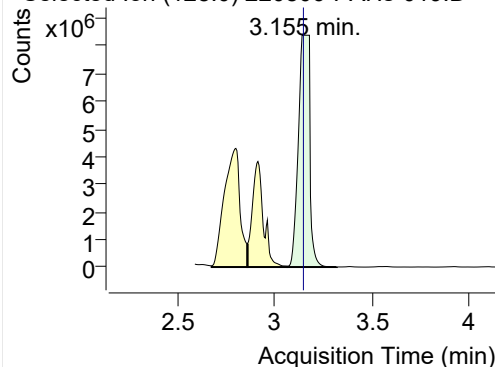


+ SIM (3.090-3.226 min, 26 scans) (\*\*) 220806

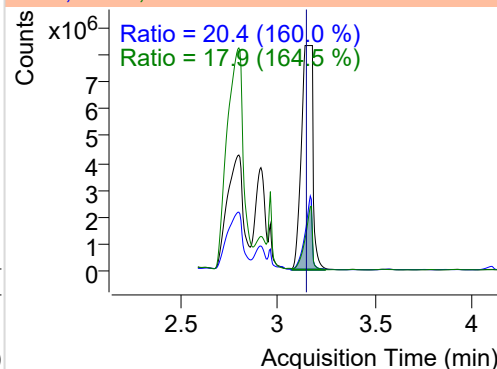


## Naphthalene

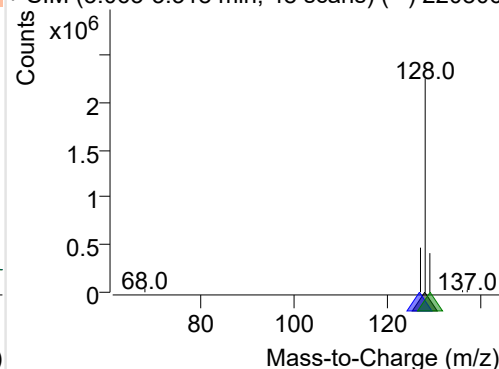
+ Selected Ion (128.0) 220806-PAHs-019.D



128.0, 127.0, 129.0

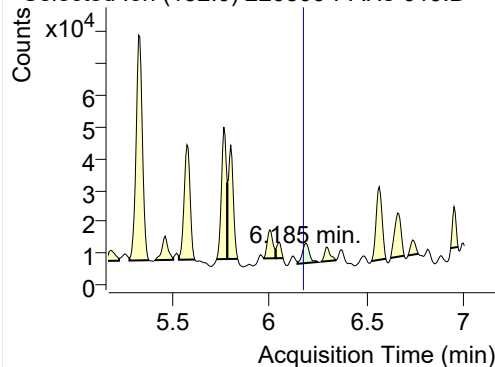


+ SIM (3.063-3.318 min, 48 scans) (\*\*) 220806

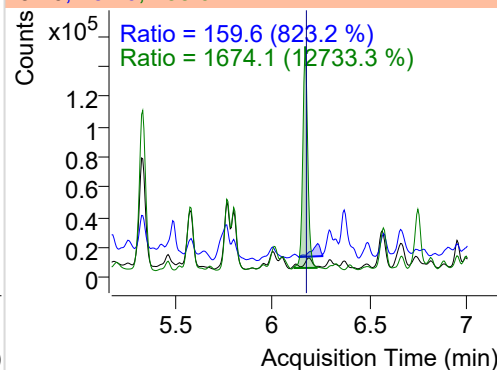


## Acenaphthylene

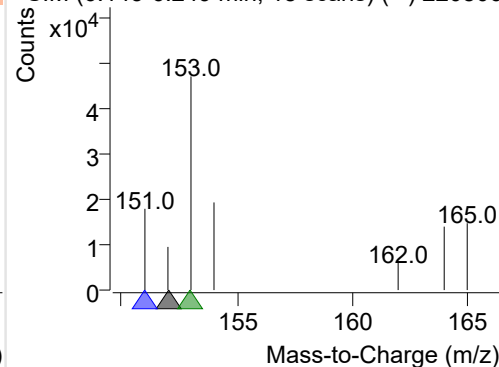
+ Selected Ion (152.0) 220806-PAHs-019.D



152.0, 151.0, 153.0

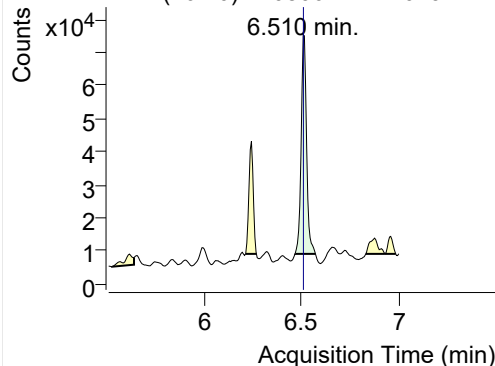


+ SIM (6.143-6.249 min, 18 scans) (\*\*) 220806

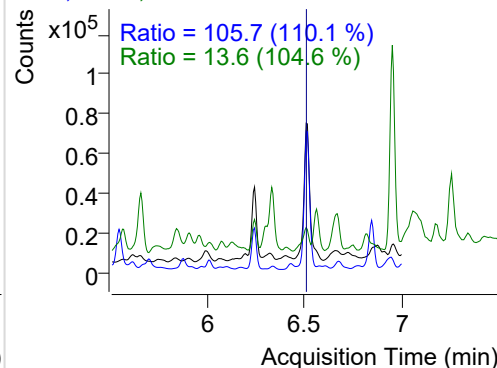


## IS-D10-Acenaphthene

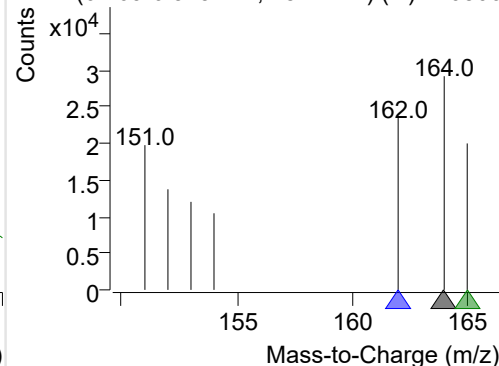
+ Selected Ion (164.0) 220806-PAHs-019.D



164.0, 162.0, 165.0

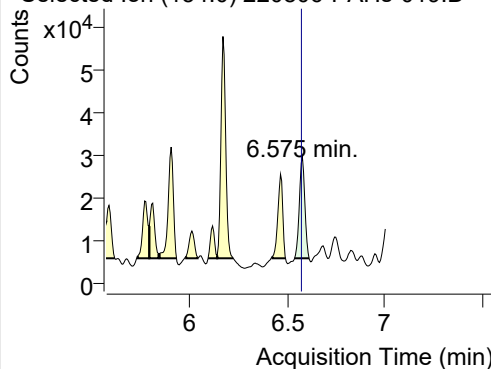


+ SIM (6.469-6.573 min, 18 scans) (\*\*) 220806

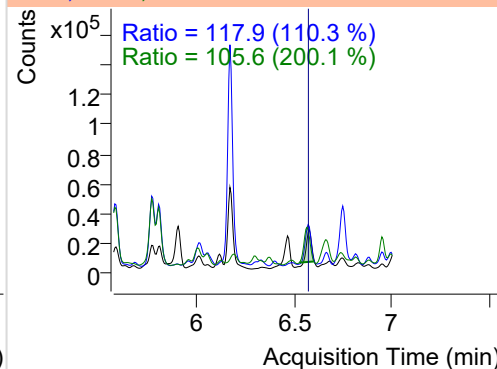


**Acenaphthene**

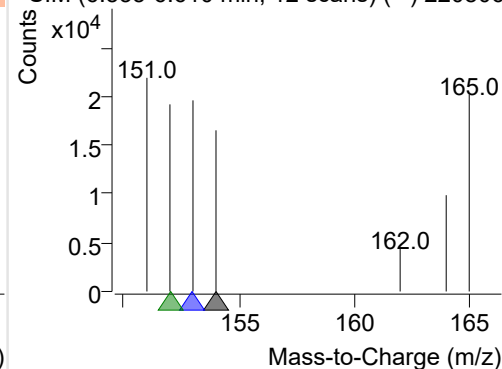
+ Selected Ion (154.0) 220806-PAHs-019.D



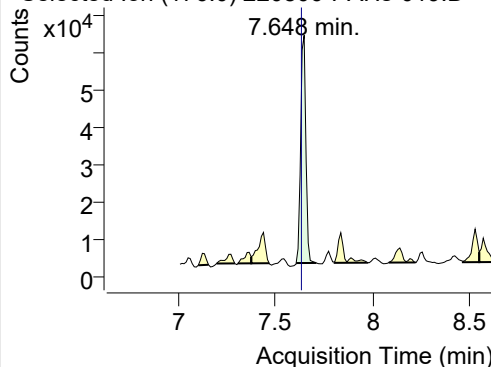
154.0, 153.0, 152.0



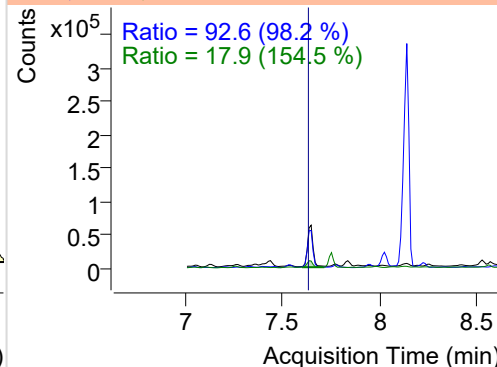
+ SIM (6.535-6.610 min, 12 scans) (\*\*) 220806

**LSS-D10-Fluorene**

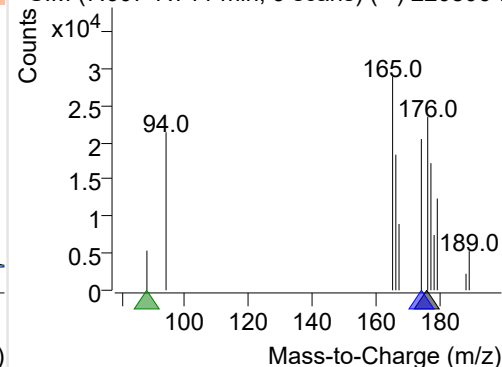
+ Selected Ion (176.0) 220806-PAHs-019.D



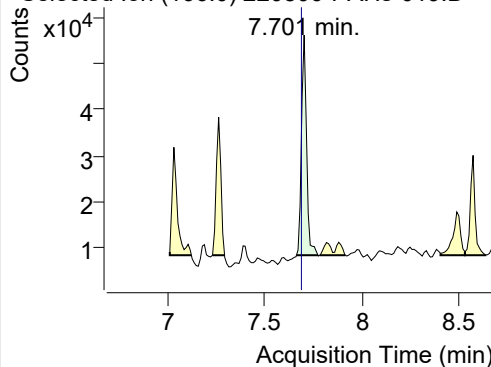
176.0, 174.0, 88.0



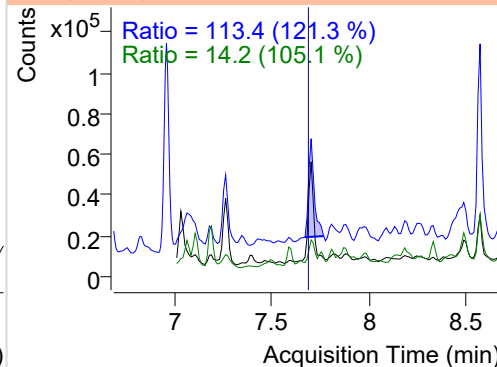
+ SIM (7.607-7.711 min, 9 scans) (\*\*) 220806-I

**Fluorene**

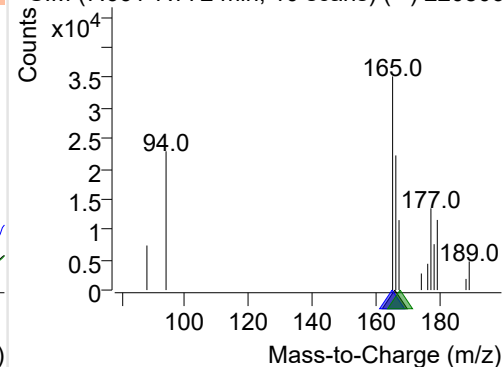
+ Selected Ion (166.0) 220806-PAHs-019.D



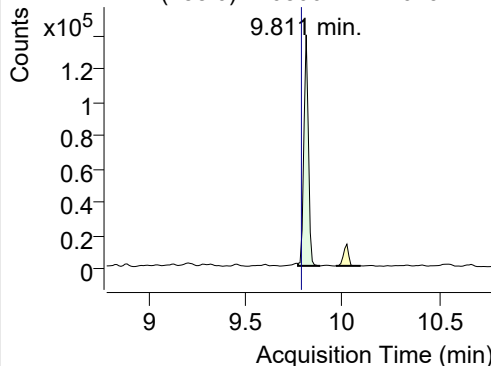
166.0, 165.0, 167.0



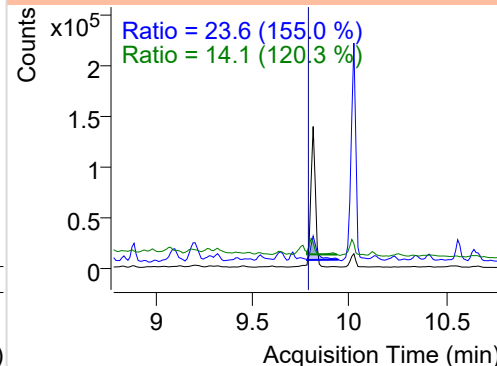
+ SIM (7.661-7.772 min, 10 scans) (\*\*) 220806

**IS-D10-Phenanthrene**

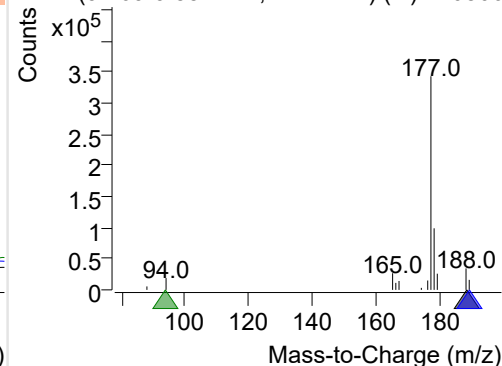
+ Selected Ion (188.0) 220806-PAHs-019.D



188.0, 189.0, 94.0

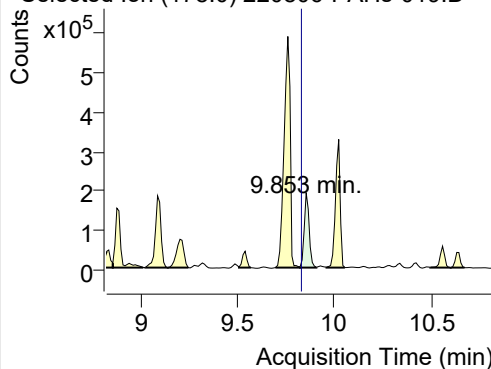


+ SIM (9.769-9.884 min, 11 scans) (\*\*) 220806

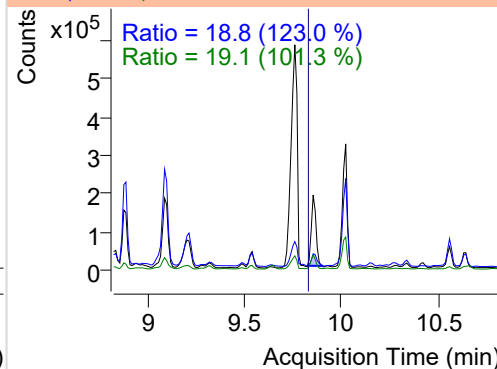


**Phenanthrene**

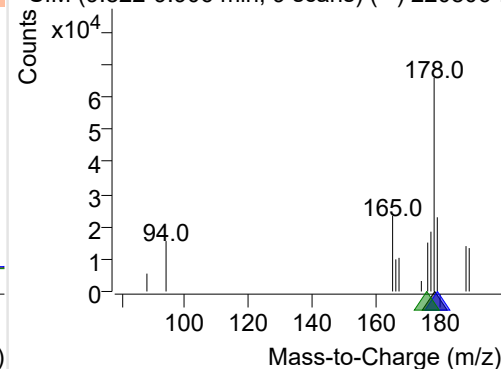
+ Selected Ion (178.0) 220806-PAHs-019.D



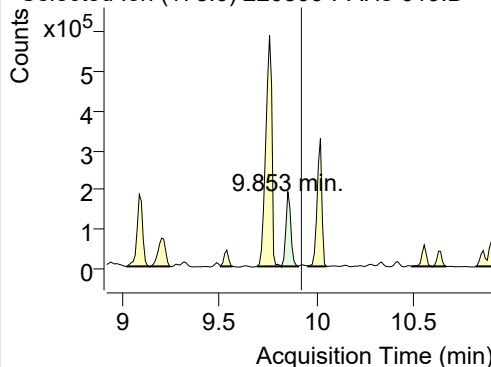
178.0, 179.0, 176.0



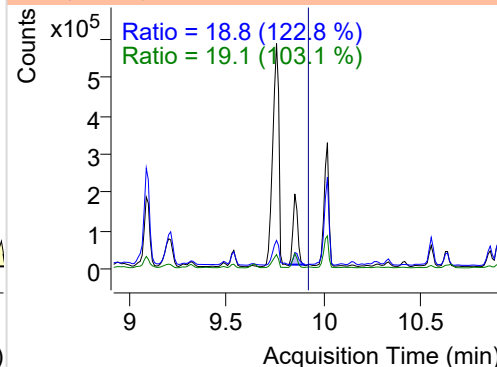
+ SIM (9.822-9.906 min, 9 scans) (\*\*) 220806-I

**Anthracene**

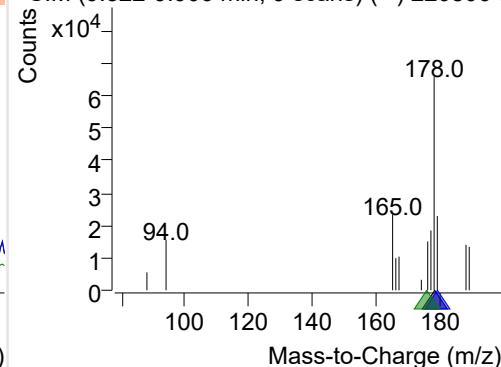
+ Selected Ion (178.0) 220806-PAHs-019.D



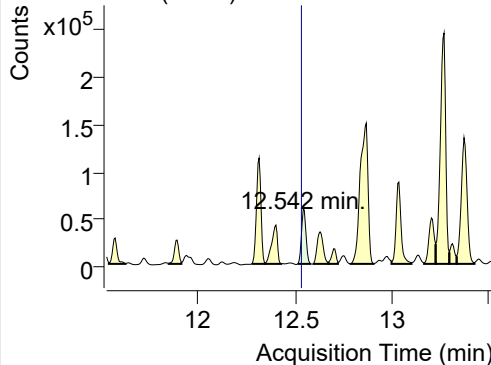
178.0, 179.0, 176.0



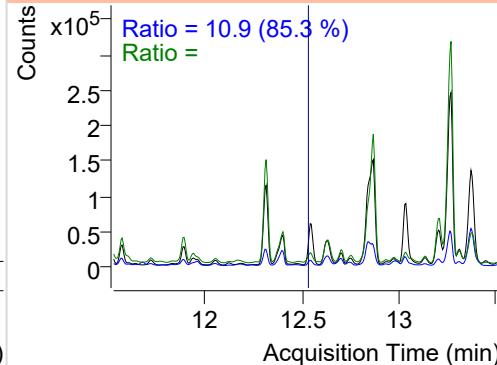
+ SIM (9.822-9.906 min, 9 scans) (\*\*) 220806-I

**Fluoranthene**

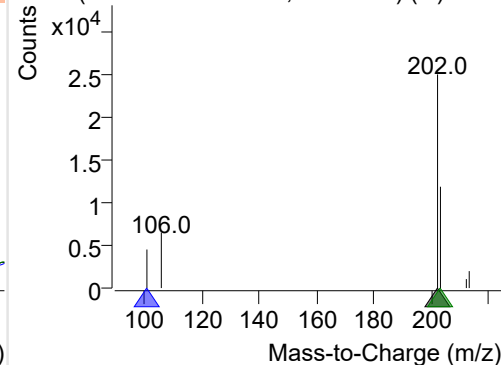
+ Selected Ion (202.0) 220806-PAHs-019.D



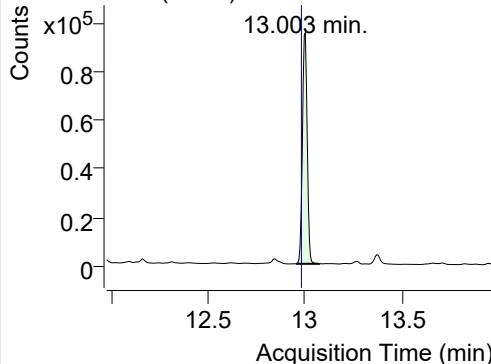
202.0, 101.0, 203.0



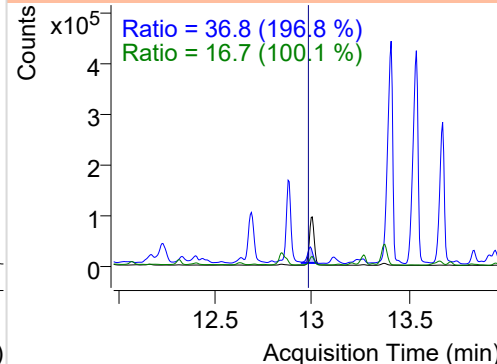
+ SIM (12.514-12.582 min, 13 scans) (\*\*) 2208

**LSS-D10-Pyrene**

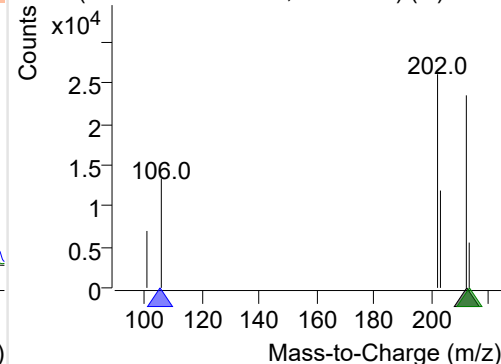
+ Selected Ion (212.0) 220806-PAHs-019.D



212.0, 106.0, 213.0



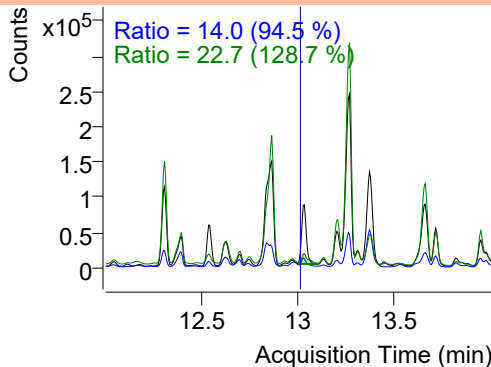
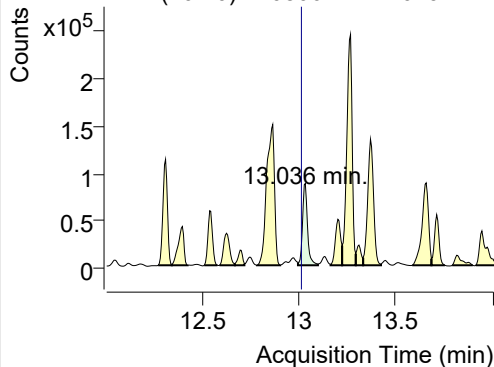
+ SIM (12.955-13.074 min, 22 scans) (\*\*) 2208



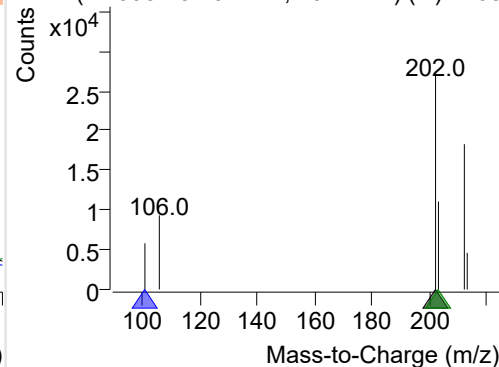
**Pyrene**

+ Selected Ion (202.0) 220806-PAHs-019.D

202.0, 101.0, 203.0

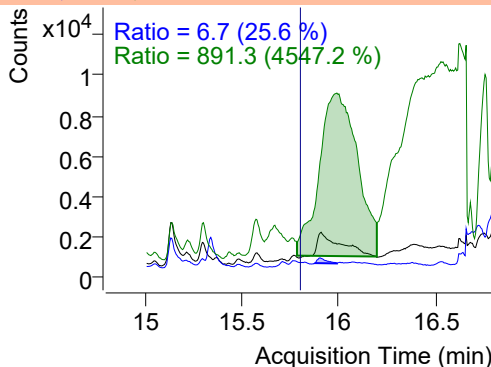
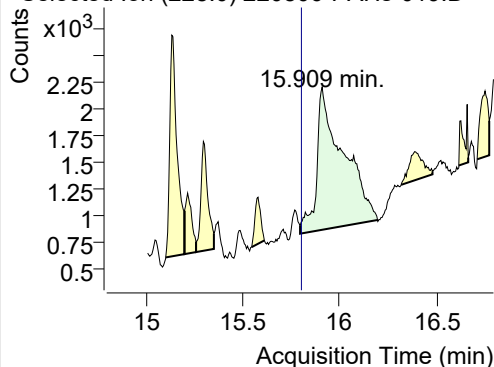


+ SIM (12.998-13.101 min, 20 scans) (\*\*) 2208

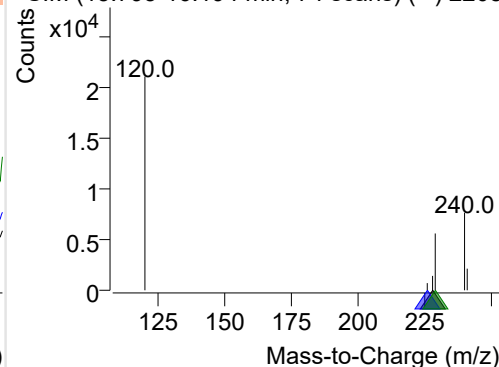
**Benz(a)anthracene**

+ Selected Ion (228.0) 220806-PAHs-019.D

228.0, 226.0, 229.0

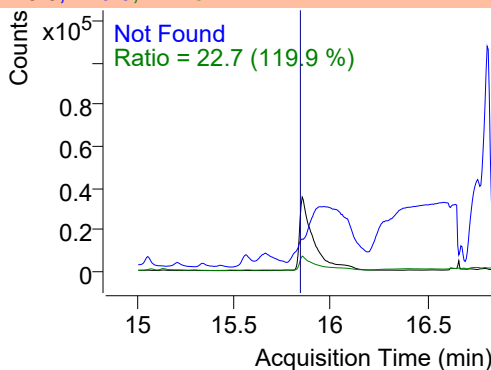
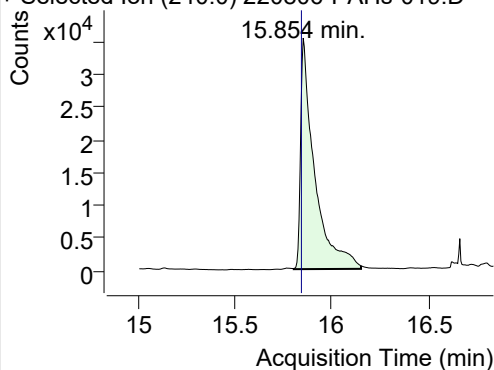


+ SIM (15.795-16.194 min, 74 scans) (\*\*) 2208

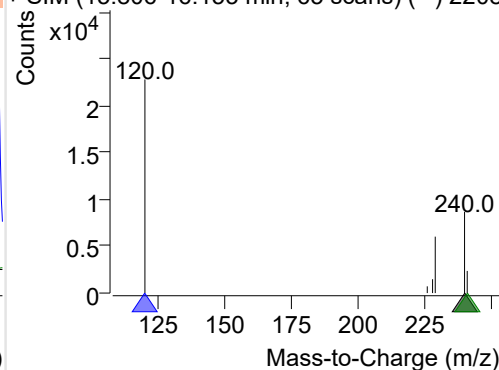
**IS-D12-Chrysene**

+ Selected Ion (240.0) 220806-PAHs-019.D

240.0, 120.0, 241.0

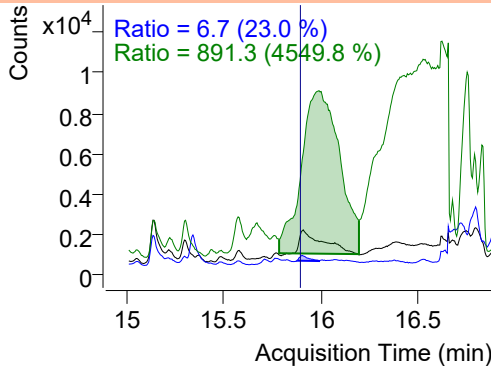
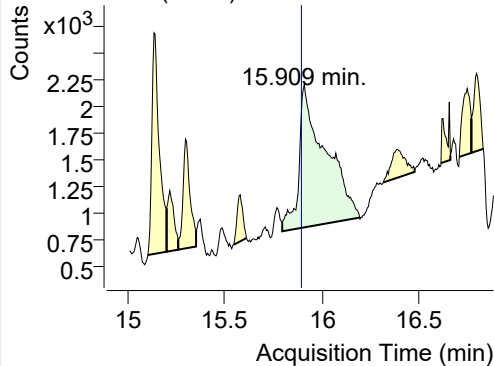


+ SIM (15.806-16.153 min, 65 scans) (\*\*) 2208

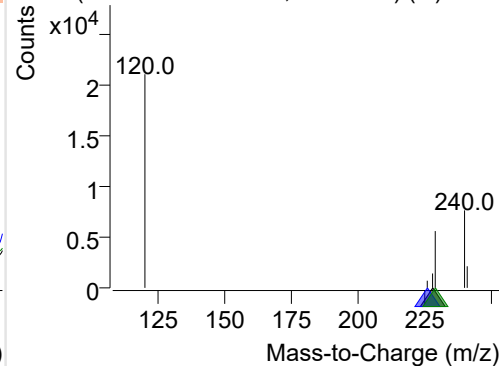
**Chrysene**

+ Selected Ion (228.0) 220806-PAHs-019.D

228.0, 226.0, 229.0



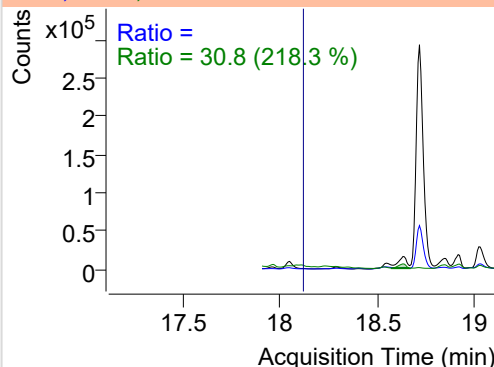
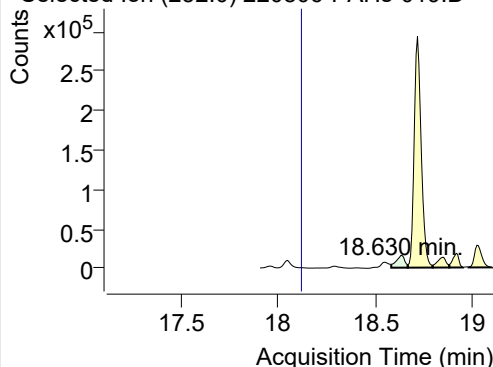
+ SIM (15.795-16.194 min, 74 scans) (\*\*) 2208



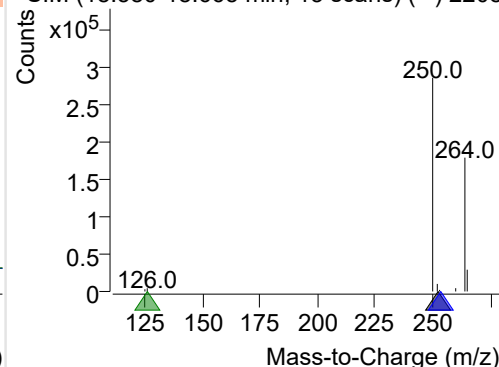
**Benzo(b)fluoranthene**

+ Selected Ion (252.0) 220806-PAHs-019.D

252.0, 253.0, 126.0

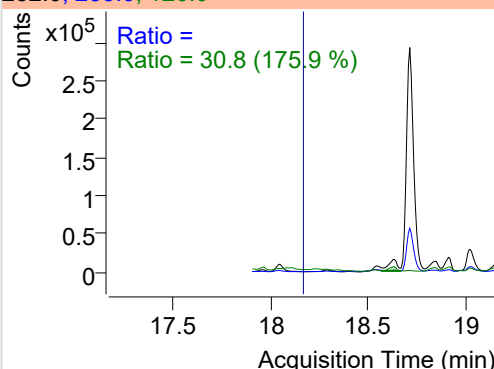
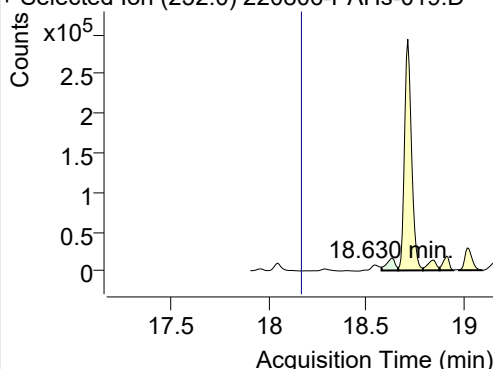


+ SIM (18.580-18.665 min, 13 scans) (\*\*) 2208

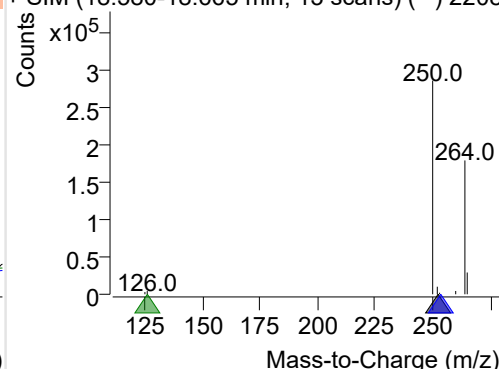
**Benzo(k)fluoranthene**

+ Selected Ion (252.0) 220806-PAHs-019.D

252.0, 253.0, 126.0

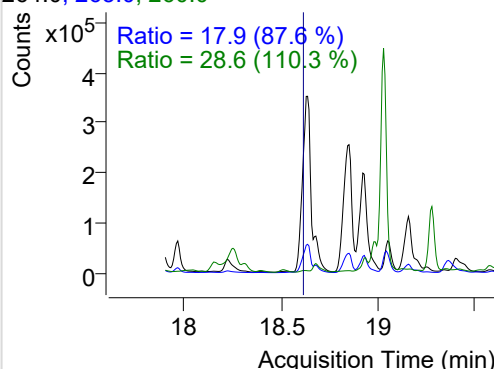
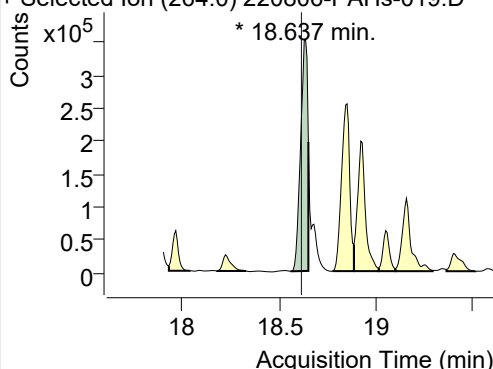


+ SIM (18.580-18.665 min, 13 scans) (\*\*) 2208

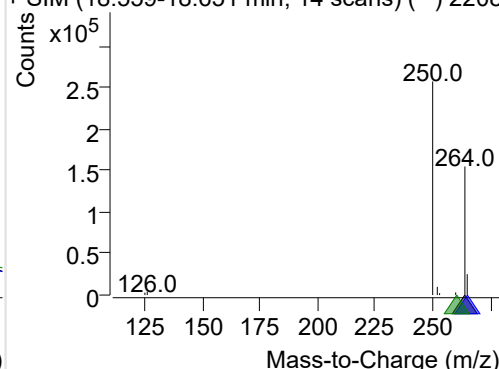
**SS-D12-Benzo(e)pyrene**

+ Selected Ion (264.0) 220806-PAHs-019.D

264.0, 265.0, 260.0

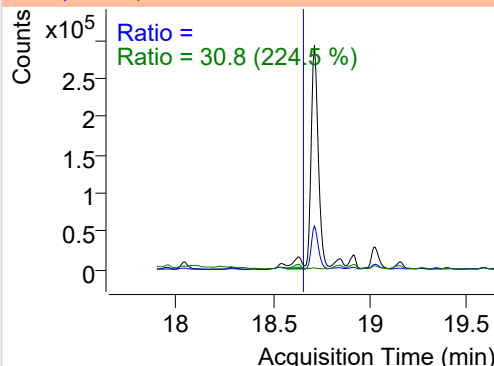
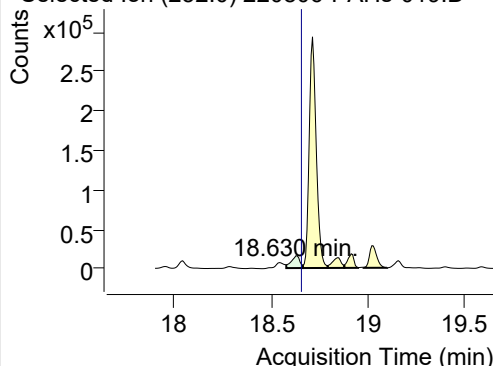


+ SIM (18.559-18.651 min, 14 scans) (\*\*) 2208

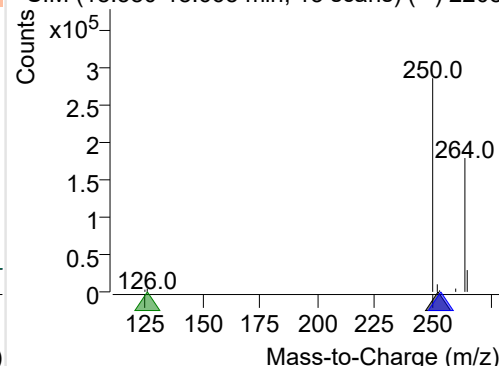
**Benzo(e)pyrene**

+ Selected Ion (252.0) 220806-PAHs-019.D

252.0, 253.0, 126.0



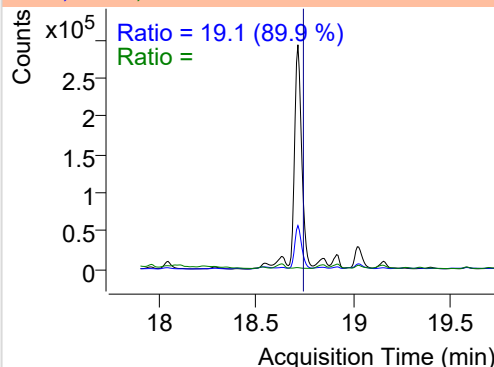
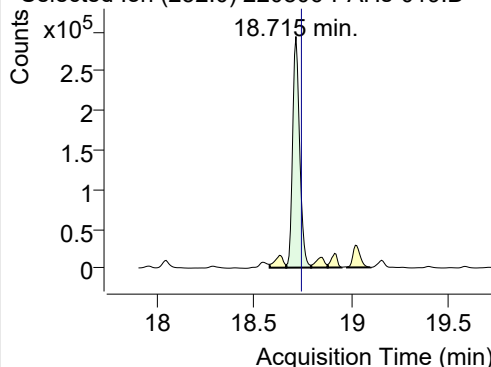
+ SIM (18.580-18.665 min, 13 scans) (\*\*) 2208



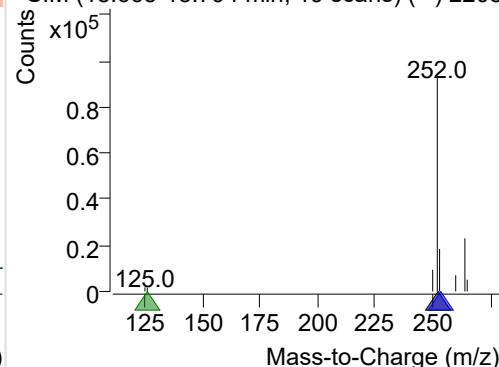
**Benzo(a)pyrene**

+ Selected Ion (252.0) 220806-PAHs-019.D

252.0, 253.0, 126.0

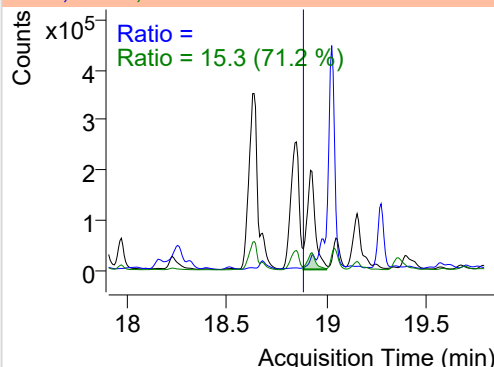
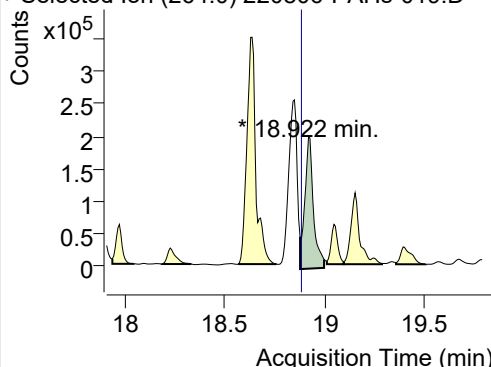


+ SIM (18.665-18.794 min, 19 scans) (\*\*) 2208

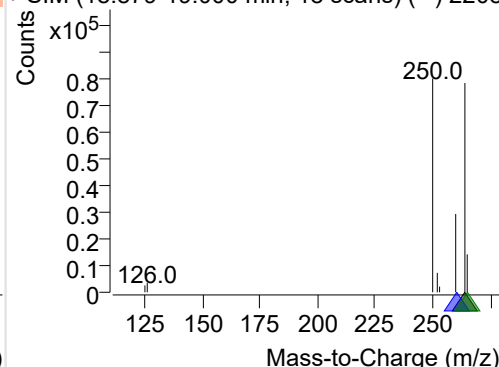
**IS-D12-Perylene**

+ Selected Ion (264.0) 220806-PAHs-019.D

264.0, 260.0, 265.0

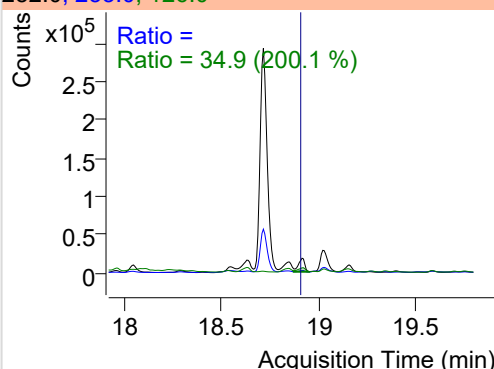
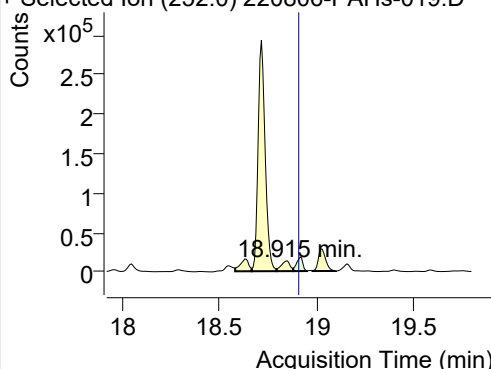


+ SIM (18.879-19.000 min, 18 scans) (\*\*) 2208

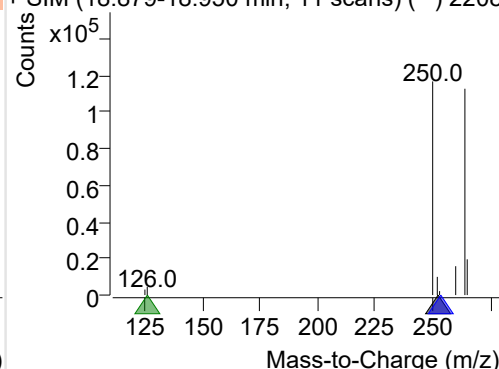
**Perylene**

+ Selected Ion (252.0) 220806-PAHs-019.D

252.0, 253.0, 126.0

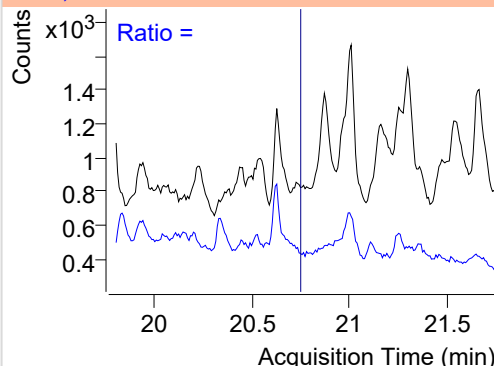
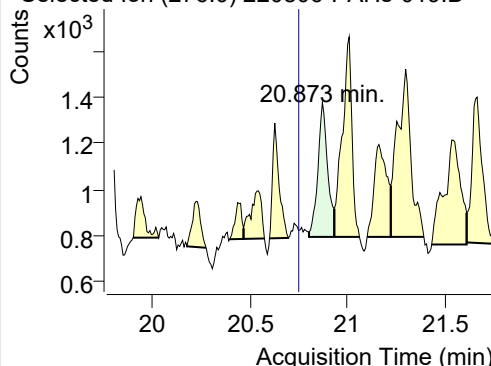


+ SIM (18.879-18.950 min, 11 scans) (\*\*) 2208

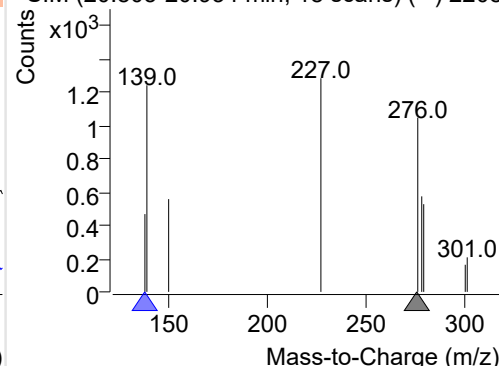
**Indeno(1,2,3-c,d)pyrene**

+ Selected Ion (276.0) 220806-PAHs-019.D

276.0, 138.0



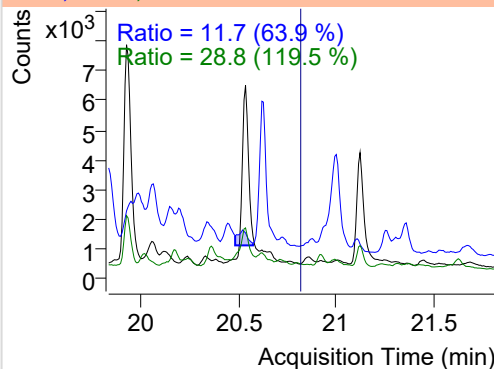
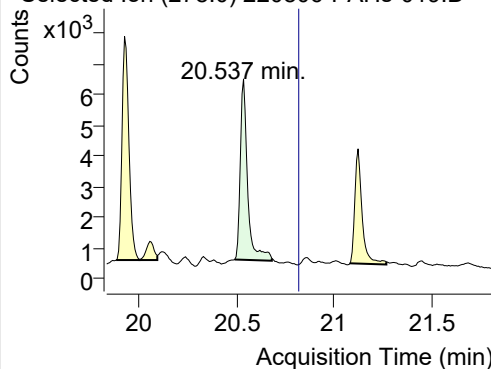
+ SIM (20.805-20.934 min, 18 scans) (\*\*) 2208



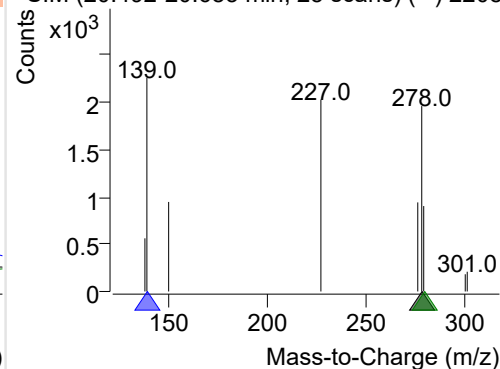
**Dibenz(a,h)anthracene**

+ Selected Ion (278.0) 220806-PAHs-019.D

278.0, 139.0, 279.0

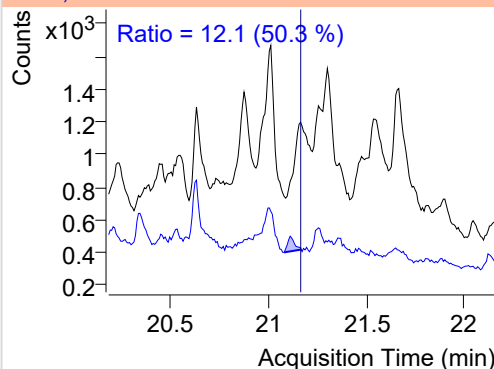
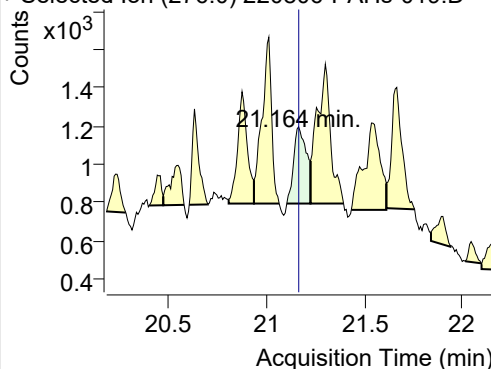


+ SIM (20.492-20.683 min, 25 scans) (\*\*) 2208

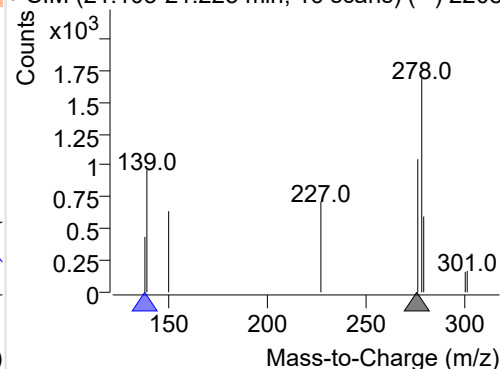
**Benzo(g,h,i)perylene**

+ Selected Ion (276.0) 220806-PAHs-019.D

276.0, 138.0

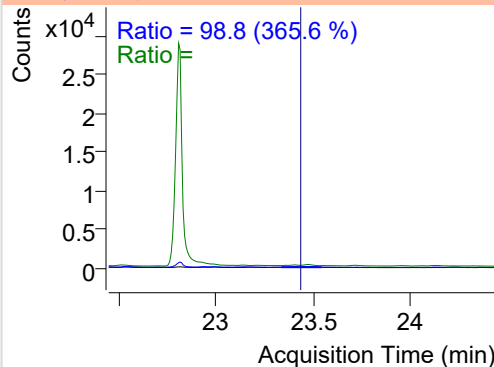
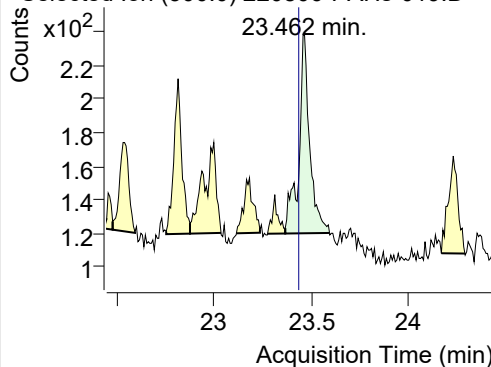


+ SIM (21.103-21.225 min, 16 scans) (\*\*) 2208

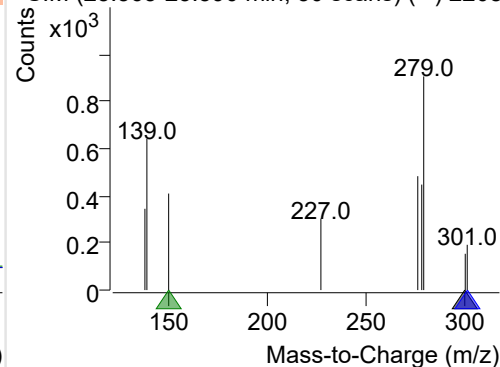
**Coronene**

+ Selected Ion (300.0) 220806-PAHs-019.D

300.0, 301.0, 150.0



+ SIM (23.363-23.590 min, 30 scans) (\*\*) 2208





## Quantitative Analysis Sample Based Report

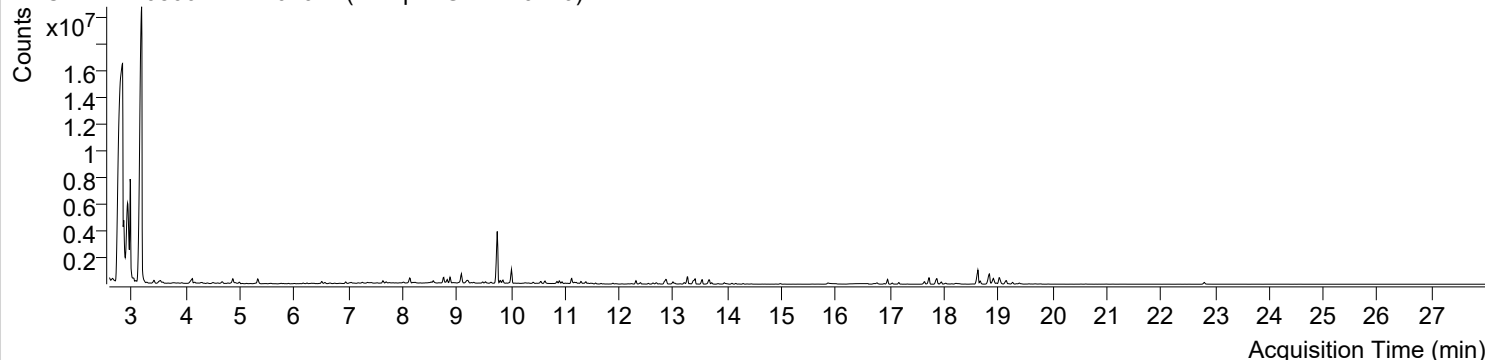


Trusted Answers

|                           |                                                                                            |                       |                        |
|---------------------------|--------------------------------------------------------------------------------------------|-----------------------|------------------------|
| Batch Data Path File Name | D:\MassHunter\GCMS\1\data\PAHs\220806-PAHs-Sample\QuantResults\220806-PAHs-Quant.batch.bin |                       |                        |
| Analysis Time Stamp       | 2022-10-10 오전 10:12:04                                                                     | Analyst Name          | DESKTOP-86B7UPG\5975MS |
| Report Generation Time    | 2022-10-10 오전 10:12:12                                                                     | Report Generator Name | DESKTOP-86B7UPG\5975MS |
| Calibration Last Update   | 2022-12-15 오후 3:30:46                                                                      | Batch State           | Processed              |
| Analyze Quant Version     | 10.2                                                                                       | Report Quant Version  | 10.2                   |
| Acq. Date-Time            | 2022-08-06 오후 8:22:19                                                                      | Data File             | 220806-PAHs-020.D      |
| Type                      | Sample                                                                                     | Name                  | Sample-Gas-220716      |
| Dil.                      | 1                                                                                          | Acq. Method File      | PAHs 19mix-Method      |

## Sample Chromatogram

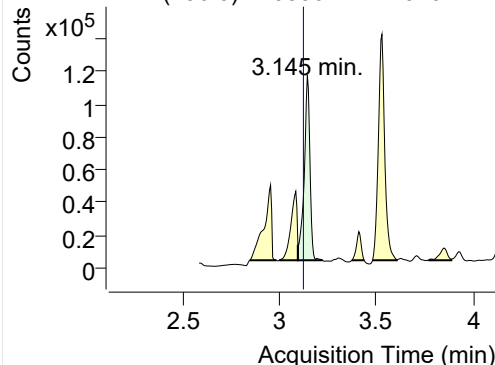
+ TIC SIM 220806-PAHs-020.D (Sample-Gas-220716)



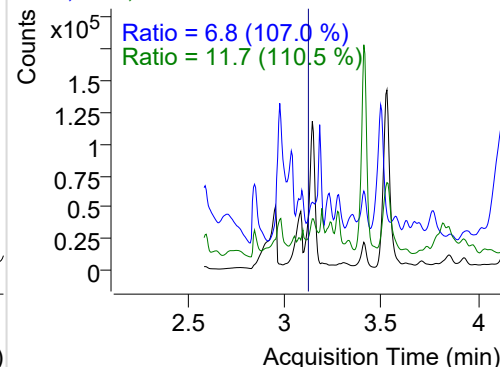
| Name                    | RT     | Transition | Resp.    | Height     | Final Conc. Units | Ratio |
|-------------------------|--------|------------|----------|------------|-------------------|-------|
| IS-D8-Naphthalene       | 3.145  | 136.0      | 230220   | 113036.4   | ND ng/ml          | 11.7  |
| Naphthalene             | 3.166  | 128.0      | 32531717 | 8382070.84 | ND ng/ml          | 24.0  |
| Acenaphthylene          | 6.291  | 152.0      | 6773     | 2835.35    | ND ng/ml          | 375.3 |
| IS-D10-Acenaphthene     | 6.510  | 164.0      | 145496   | 76068.79   | ND ng/ml          | 95.0  |
| Acenaphthene            | 6.570  | 154.0      | 51000    | 24754.50   | ND ng/ml          | 92.6  |
| LSS-D10-Fluorene        | 7.638  | 176.0      | 122383   | 72832.55   | ND ng/ml          | 95.7  |
| Fluorene                | 7.701  | 166.0      | 69092    | 37630.90   | ND ng/ml          | 134.0 |
| IS-D10-Phenanthrene     | 9.812  | 188.0      | 232765   | 132508.95  | ND ng/ml          | 19.1  |
| Phenanthrene            | 9.854  | 178.0      | 233806   | 137009.69  | ND ng/ml          | 18.3  |
| Anthracene              | 9.854  | 178.0      | 233806   | 137009.69  | ND ng/ml          | 18.3  |
| Fluoranthene            | 12.537 | 202.0      | 56139    | 37172.30   | ND ng/ml          |       |
| LSS-D10-Pyrene          | 12.992 | 212.0      | 180161   | 110024.97  | ND ng/ml          | 30.2  |
| Pyrene                  | 13.025 | 202.0      | 95547    | 52836.30   | ND ng/ml          |       |
| Benz(a)anthracene       | 15.909 | 228.0      | 8609     | 1637.00    | ND ng/ml          | 23.1  |
| IS-D12-Chrysene         | 15.855 | 240.0      | 187573   | 59063.82   | ND ng/ml          | 21.7  |
| Chrysene                | 15.909 | 228.0      | 8609     | 1637.00    | ND ng/ml          | 23.1  |
| Benzo(b)fluoranthene    | 18.032 | 252.0      | 17841    | 8668.46    | ND ng/ml          | 19.4  |
| Benzo(k)fluoranthene    | 18.274 | 252.0      | 4366     | 2447.46    | ND ng/ml          | 22.5  |
| SS-D12-Benzo(e)pyrene   | 18.623 | 264.0      | 784793   | 356879.03  | ND ng/ml          |       |
| Benzo(e)pyrene          | 18.623 | 252.0      | 39667    | 15796.46   | ND ng/ml          | 7.3   |
| Benzo(a)pyrene          | 18.694 | 252.0      | 8755     | 4527.46    | ND ng/ml          | 30.8  |
| IS-D12-Perylene         | 18.915 | 264.0      | 503796   | 195829.75  | ND ng/ml          | 13.6  |
| Perylene                | 18.900 | 252.0      | 33093    | 15980.46   | ND ng/ml          | 9.7   |
| Indeno(1,2,3-c,d)pyrene | 20.858 | 276.0      | 1290     | 484.22     | ND ng/ml          | 6.6   |
| Dibenz(a,h)anthracene   | 20.644 | 278.0      | 638      | 200.59     | ND ng/ml          | 213.5 |
| Benzo(g,h,i)perylene    | 21.148 | 276.0      | 801      | 255.17     | ND ng/ml          | 18.2  |
| Coronene                | 23.447 | 300.0      | 242      | 91.23      | ND ng/ml          |       |

## IS-D8-Naphthalene

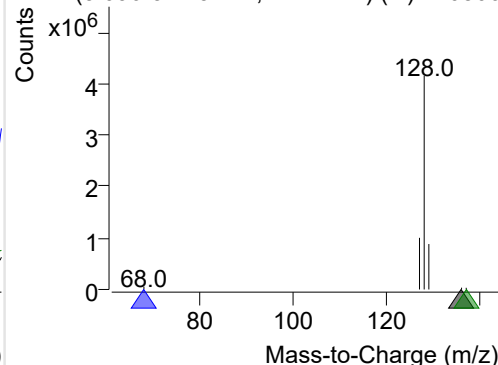
+ Selected Ion (136.0) 220806-PAHs-020.D



136.0, 68.0, 137.0

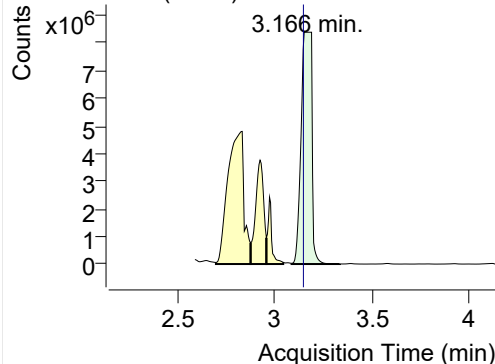


+ SIM (3.096-3.223 min, 24 scans) (\*\*) 220806

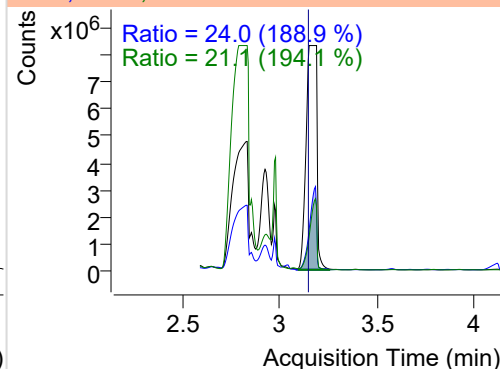


## Naphthalene

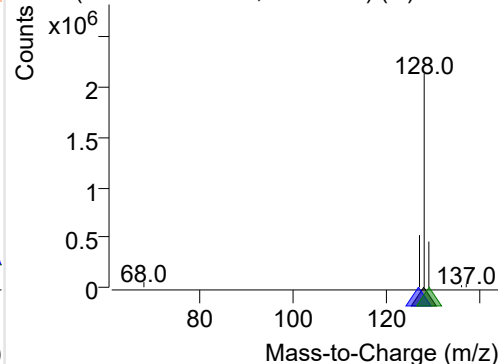
+ Selected Ion (128.0) 220806-PAHs-020.D



128.0, 127.0, 129.0

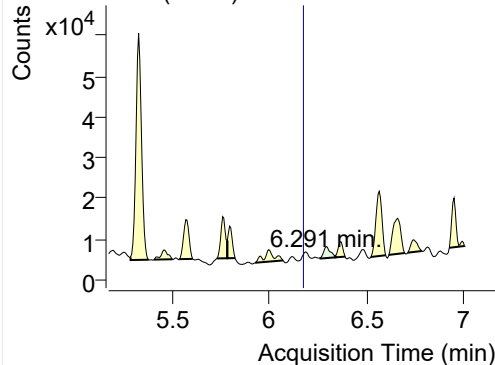


+ SIM (3.085-3.334 min, 47 scans) (\*\*) 220806

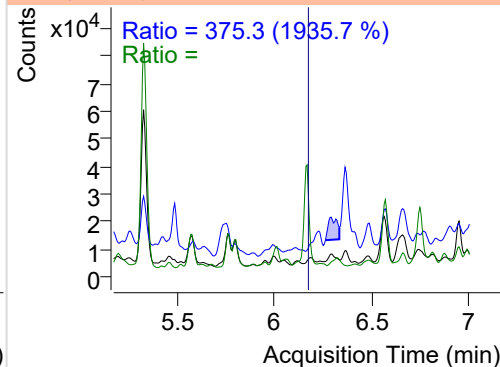


## Acenaphthylene

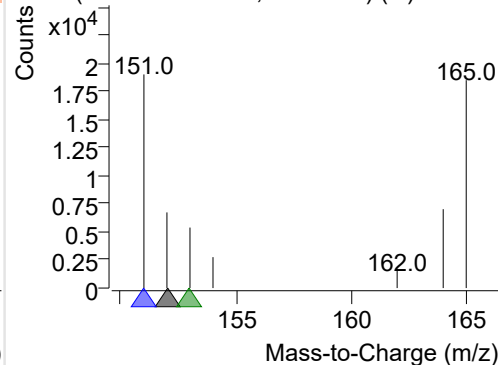
+ Selected Ion (152.0) 220806-PAHs-020.D



152.0, 151.0, 153.0

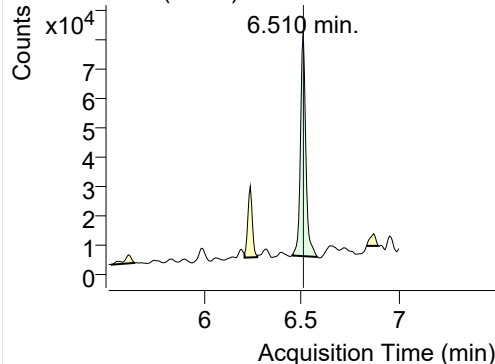


+ SIM (6.262-6.339 min, 14 scans) (\*\*) 220806

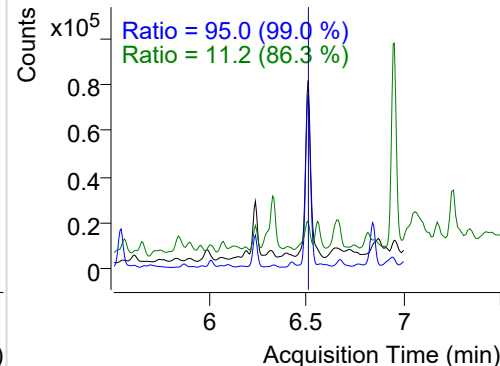


## IS-D10-Acenaphthene

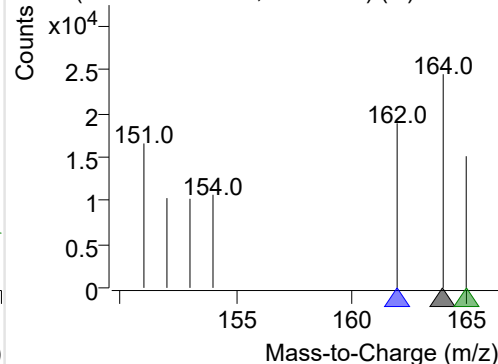
+ Selected Ion (164.0) 220806-PAHs-020.D



164.0, 162.0, 165.0

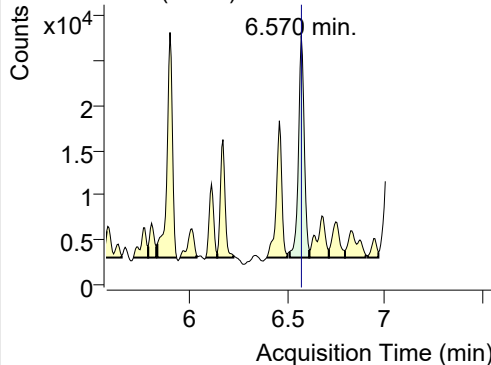


+ SIM (6.457-6.584 min, 22 scans) (\*\*) 220806

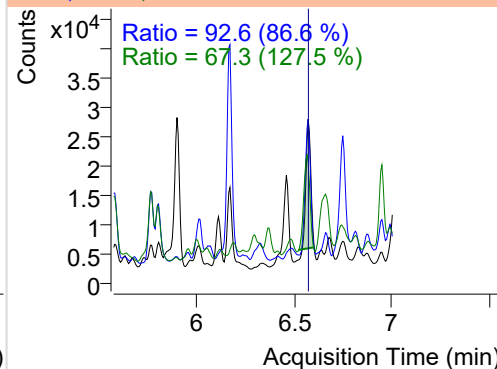


**Acenaphthene**

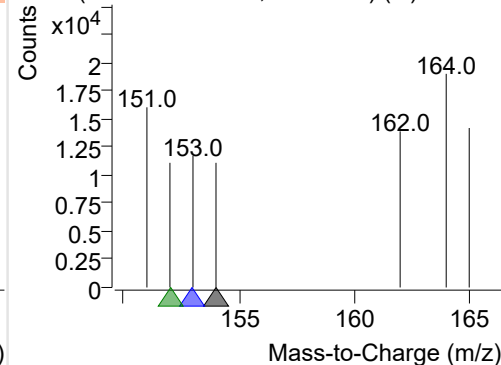
+ Selected Ion (154.0) 220806-PAHs-020.D



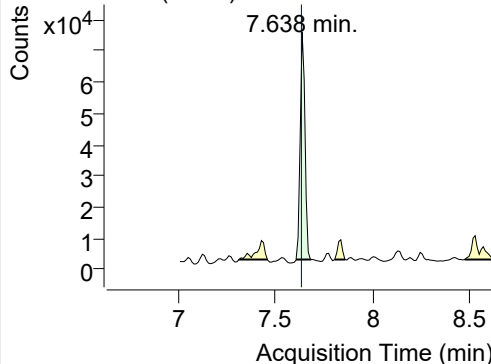
154.0, 153.0, 152.0



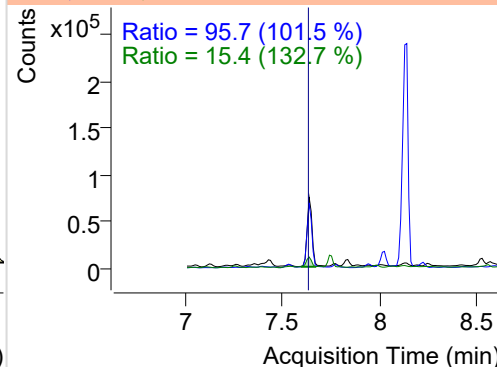
+ SIM (6.510-6.611 min, 18 scans) (\*\*) 220806

**LSS-D10-Fluorene**

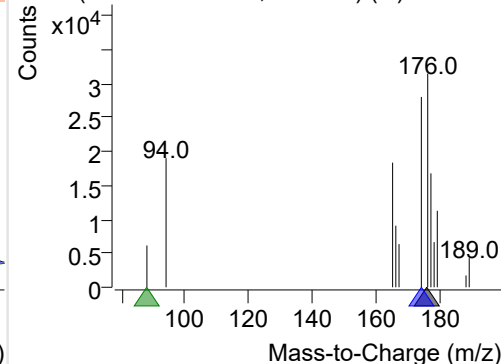
+ Selected Ion (176.0) 220806-PAHs-020.D



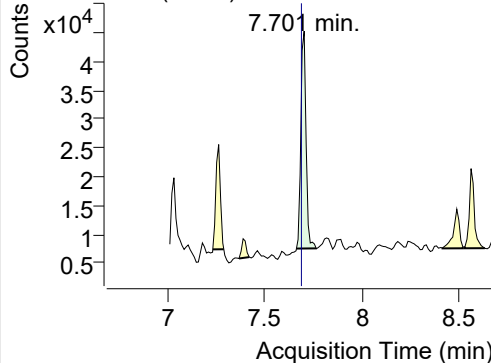
176.0, 174.0, 88.0



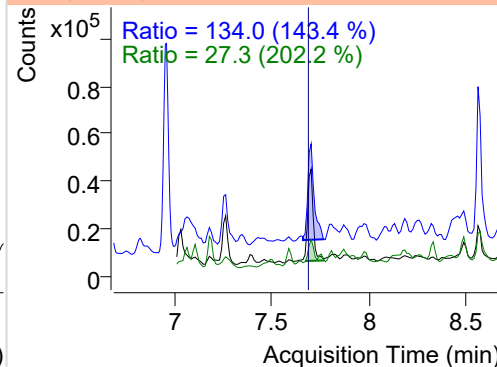
+ SIM (7.607-7.680 min, 7 scans) (\*\*) 220806-I

**Fluorene**

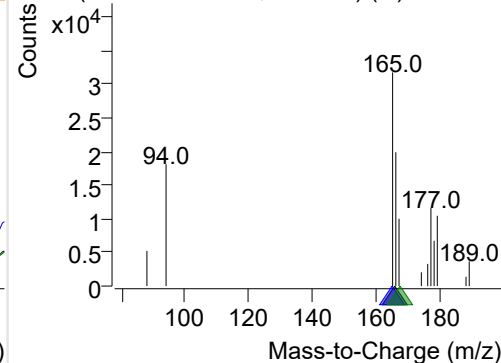
+ Selected Ion (166.0) 220806-PAHs-020.D



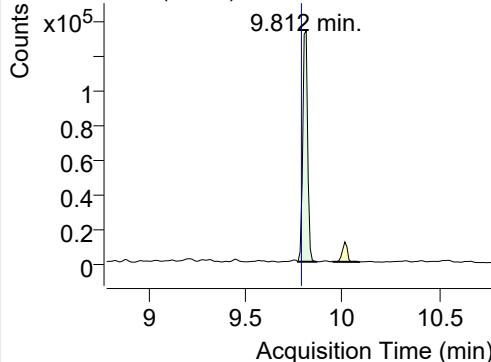
166.0, 165.0, 167.0



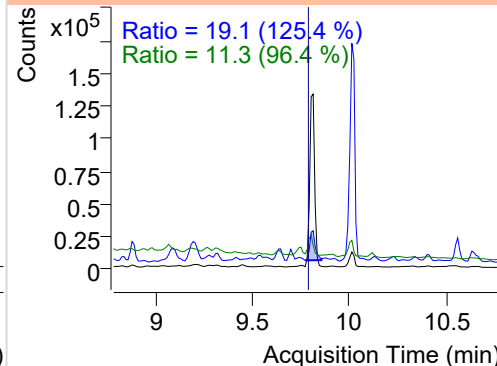
+ SIM (7.661-7.763 min, 9 scans) (\*\*) 220806-I

**IS-D10-Phenanthrene**

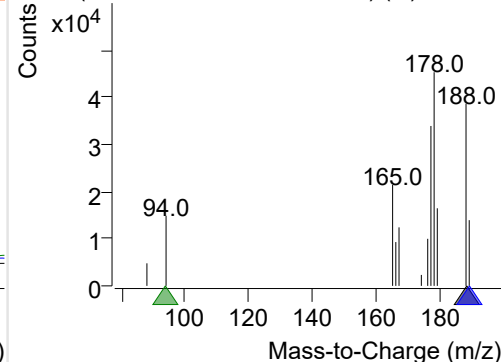
+ Selected Ion (188.0) 220806-PAHs-020.D



188.0, 189.0, 94.0

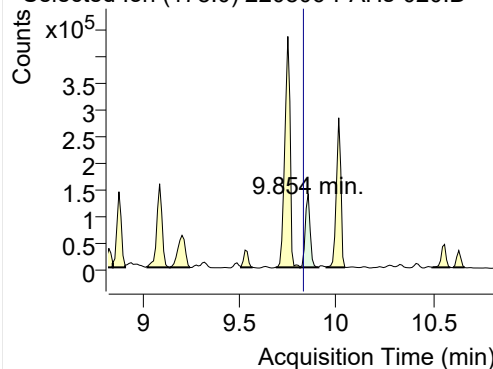


+ SIM (9.770-9.864 min, 10 scans) (\*\*) 220806

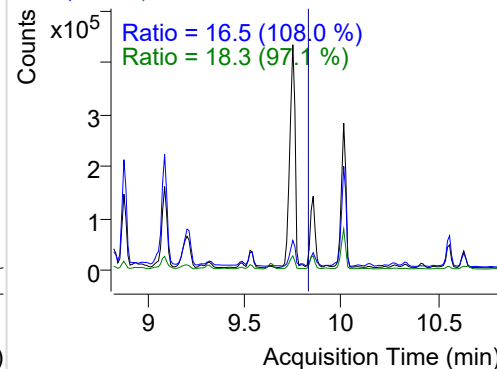


**Phenanthrene**

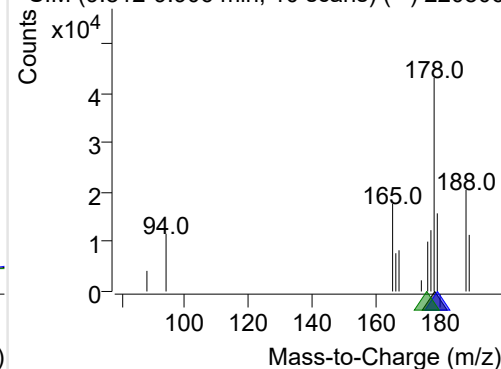
+ Selected Ion (178.0) 220806-PAHs-020.D



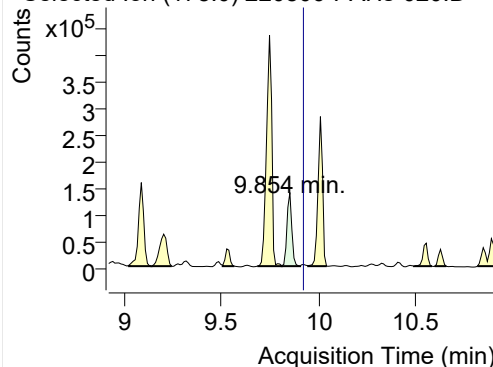
178.0, 179.0, 176.0



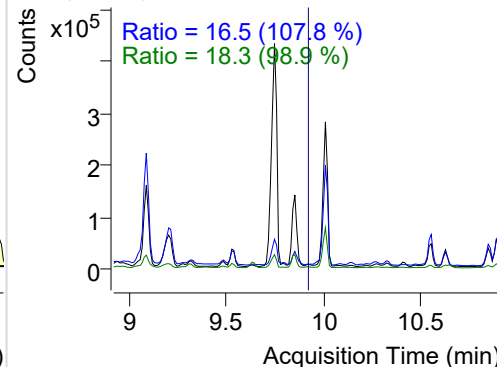
+ SIM (9.812-9.906 min, 10 scans) (\*\*) 220806

**Anthracene**

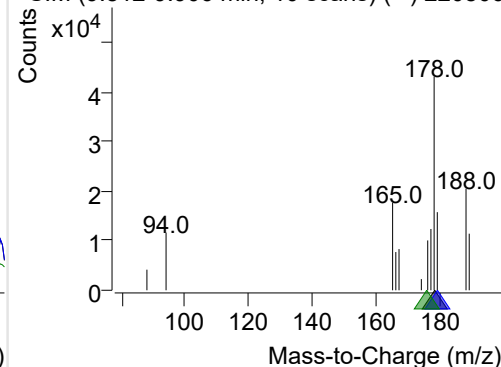
+ Selected Ion (178.0) 220806-PAHs-020.D



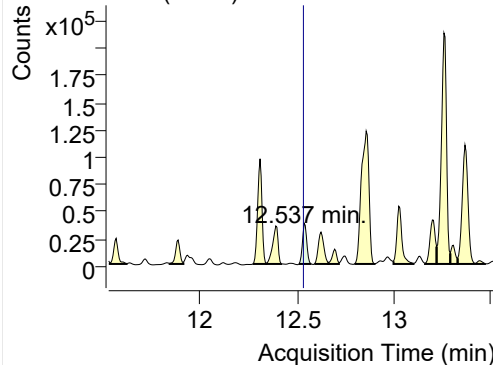
178.0, 179.0, 176.0



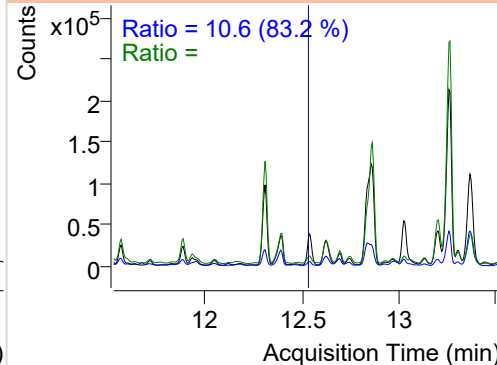
+ SIM (9.812-9.906 min, 10 scans) (\*\*) 220806

**Fluoranthene**

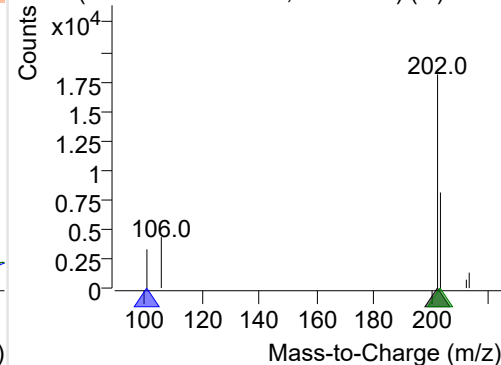
+ Selected Ion (202.0) 220806-PAHs-020.D



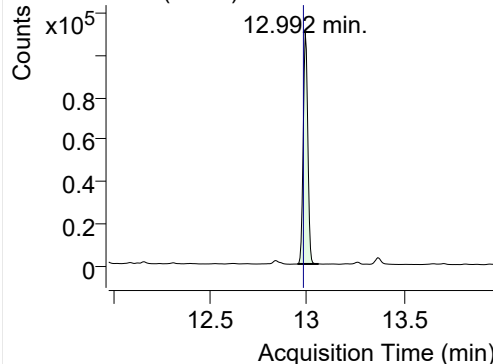
202.0, 101.0, 203.0



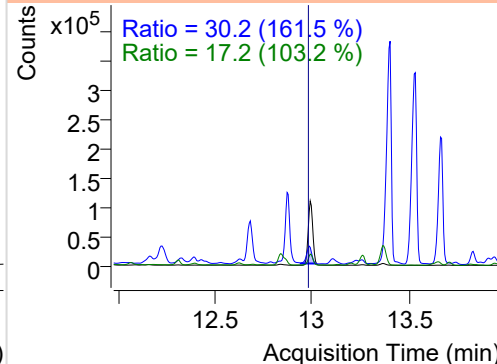
+ SIM (12.510-12.573 min, 11 scans) (\*\*) 2208

**LSS-D10-Pyrene**

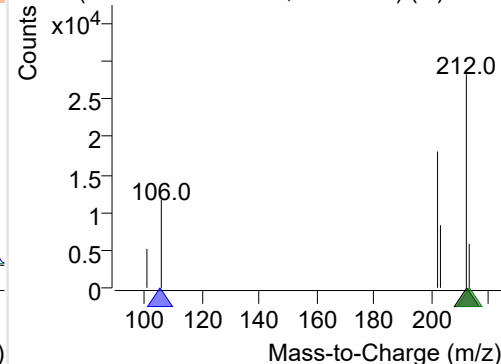
+ Selected Ion (212.0) 220806-PAHs-020.D



212.0, 106.0, 213.0



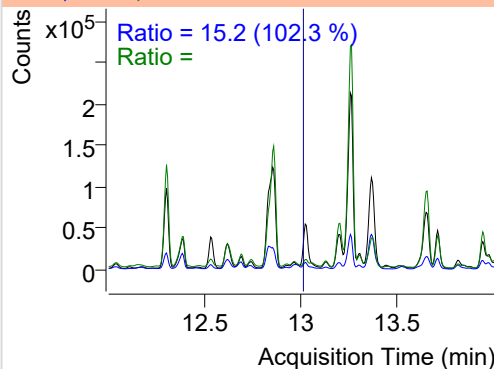
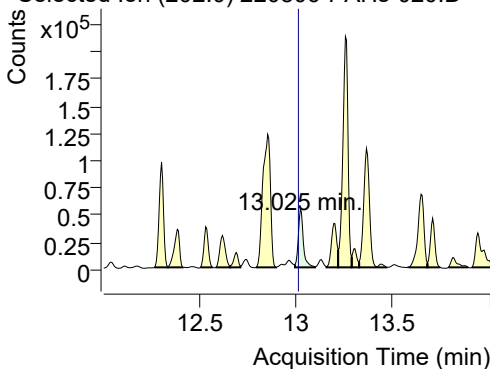
+ SIM (12.952-13.062 min, 20 scans) (\*\*) 2208



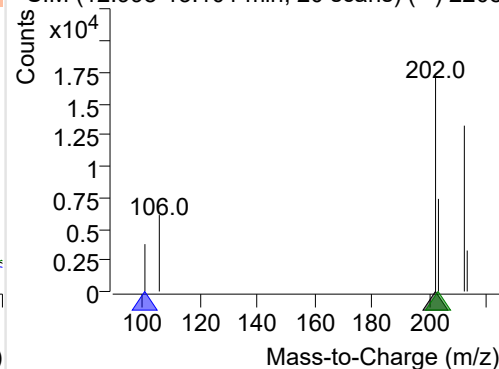
**Pyrene**

+ Selected Ion (202.0) 220806-PAHs-020.D

202.0, 101.0, 203.0

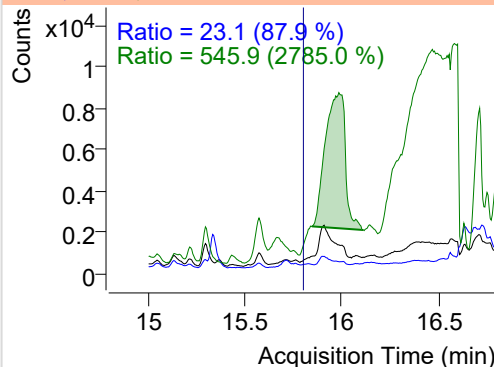
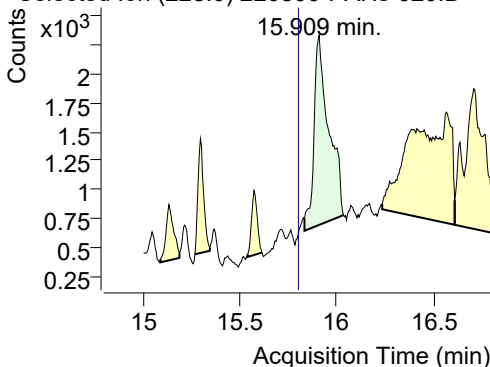


+ SIM (12.998-13.101 min, 20 scans) (\*\*) 2208

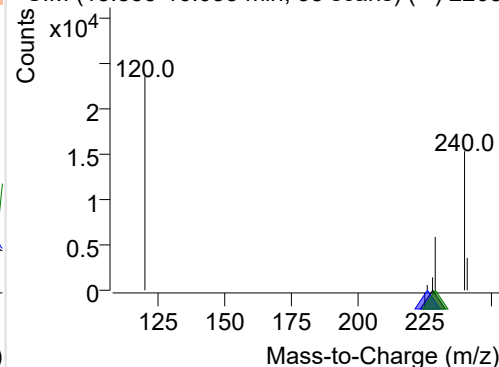
**Benz(a)anthracene**

+ Selected Ion (228.0) 220806-PAHs-020.D

228.0, 226.0, 229.0

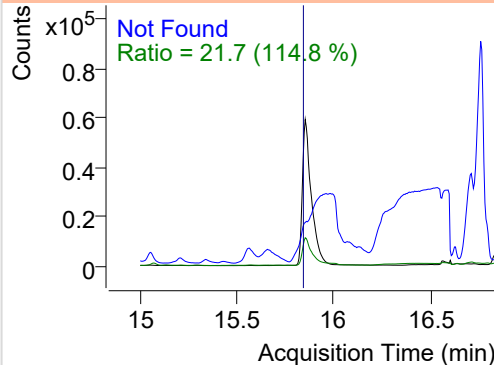
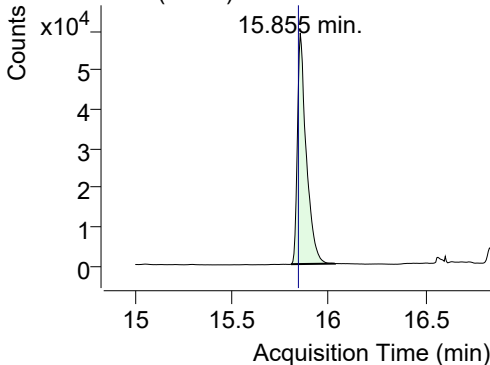


+ SIM (15.833-16.035 min, 38 scans) (\*\*) 2208

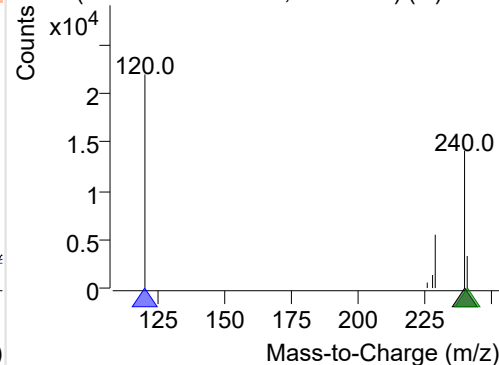
**IS-D12-Chrysene**

+ Selected Ion (240.0) 220806-PAHs-020.D

240.0, 120.0, 241.0

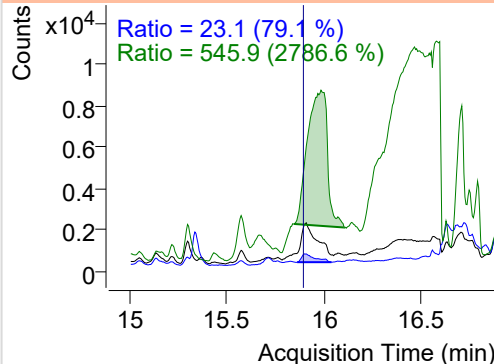
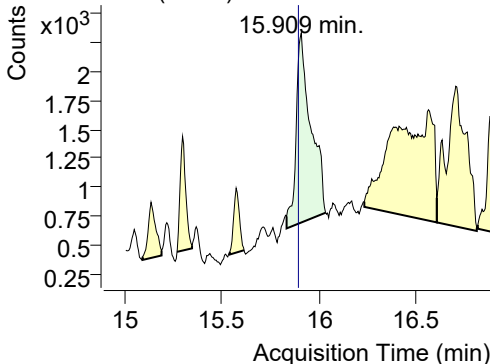


+ SIM (15.807-16.033 min, 42 scans) (\*\*) 2208

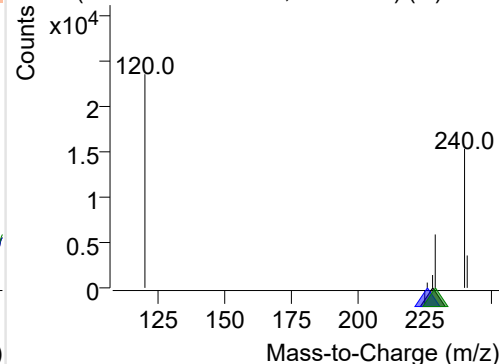
**Chrysene**

+ Selected Ion (228.0) 220806-PAHs-020.D

228.0, 226.0, 229.0



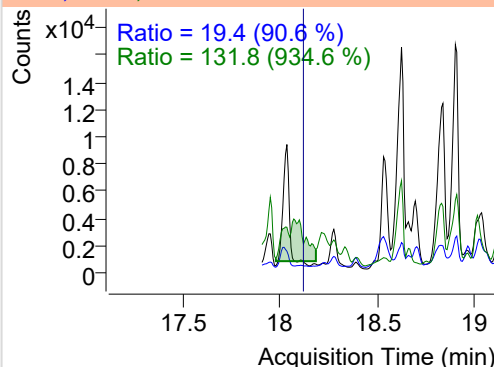
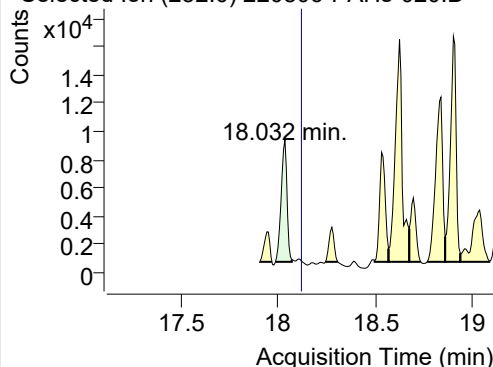
+ SIM (15.833-16.035 min, 38 scans) (\*\*) 2208



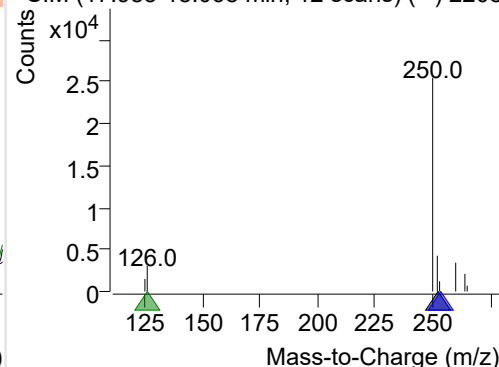
**Benzo(b)fluoranthene**

+ Selected Ion (252.0) 220806-PAHs-020.D

252.0, 253.0, 126.0

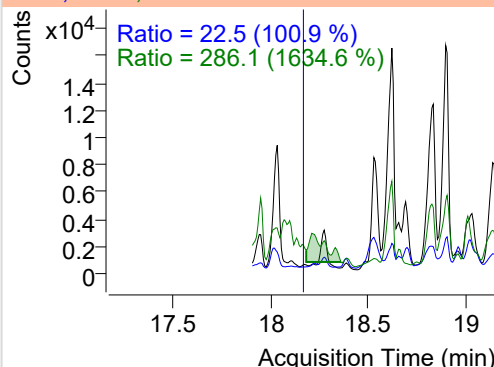
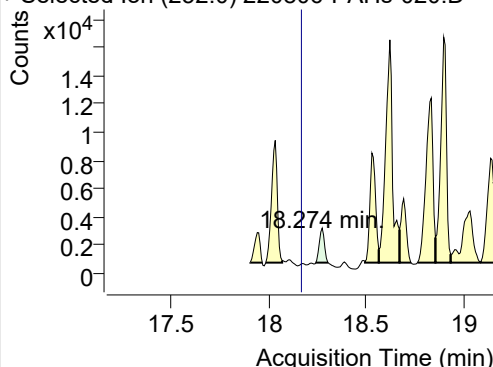


+ SIM (17.983-18.068 min, 12 scans) (\*\*) 2208

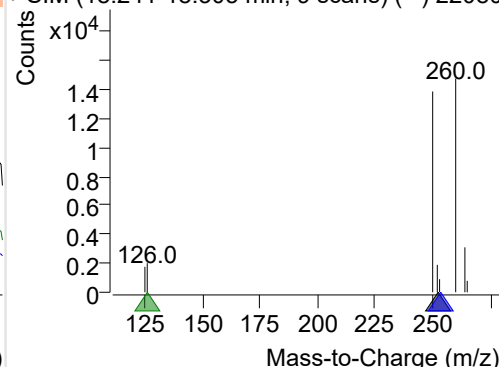
**Benzo(k)fluoranthene**

+ Selected Ion (252.0) 220806-PAHs-020.D

252.0, 253.0, 126.0

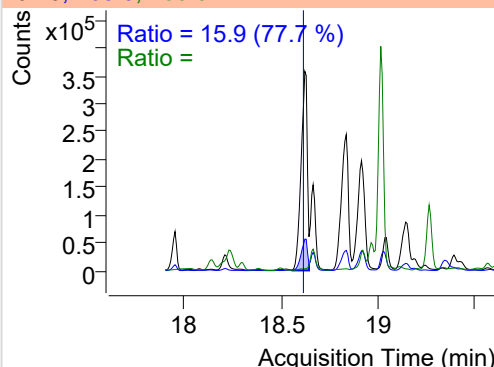
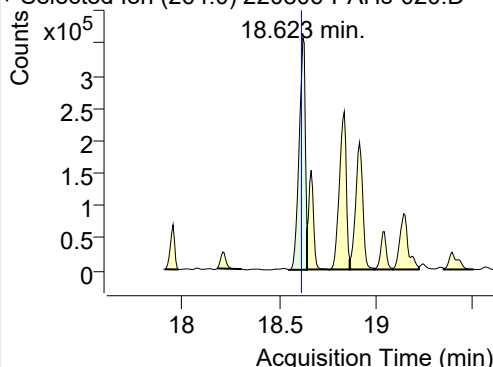


+ SIM (18.241-18.305 min, 9 scans) (\*\*) 22080

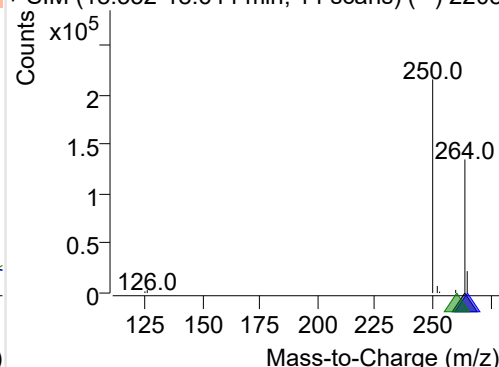
**SS-D12-Benzo(e)pyrene**

+ Selected Ion (264.0) 220806-PAHs-020.D

264.0, 265.0, 260.0

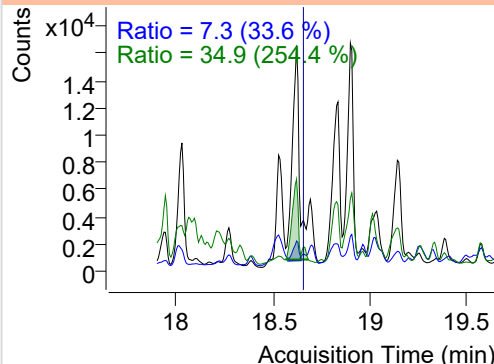
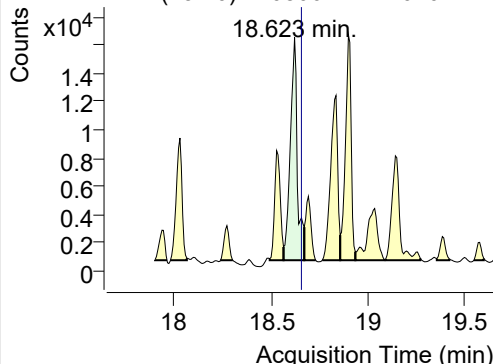


+ SIM (18.552-18.644 min, 14 scans) (\*\*) 2208

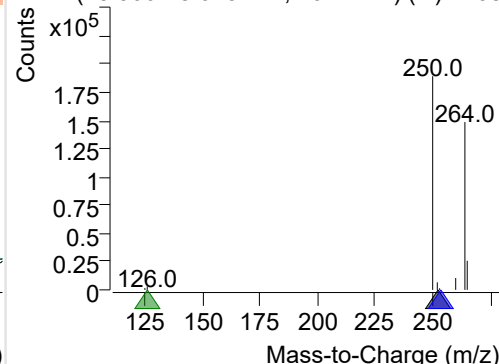
**Benzo(e)pyrene**

+ Selected Ion (252.0) 220806-PAHs-020.D

252.0, 253.0, 126.0



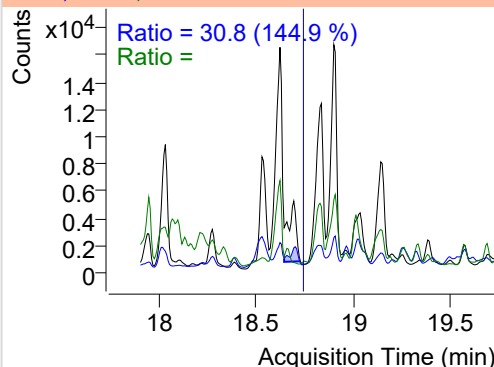
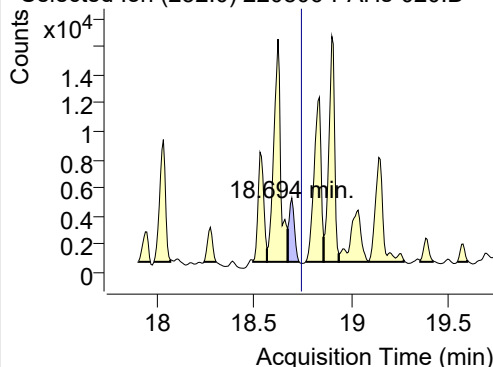
+ SIM (18.566-18.673 min, 16 scans) (\*\*) 2208



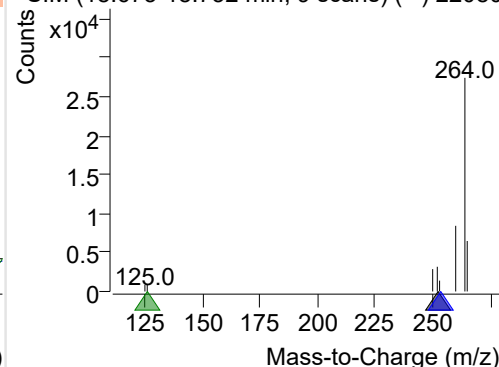
**Benzo(a)pyrene**

+ Selected Ion (252.0) 220806-PAHs-020.D

252.0, 253.0, 126.0

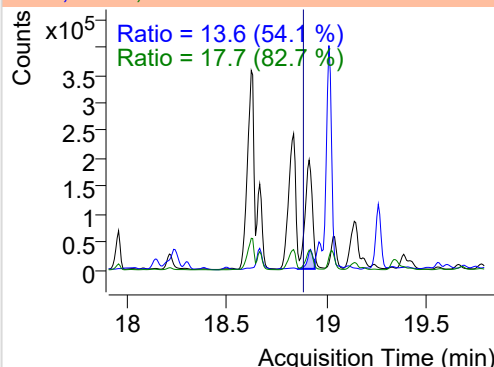
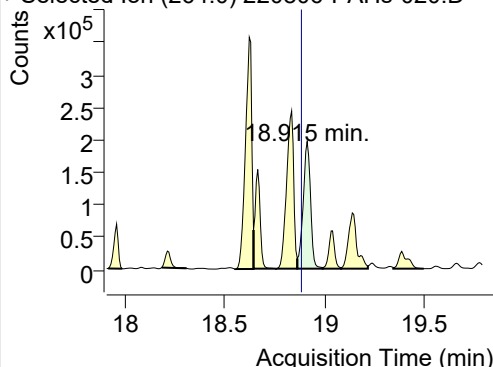


+ SIM (18.673-18.732 min, 9 scans) (\*\*) 22080

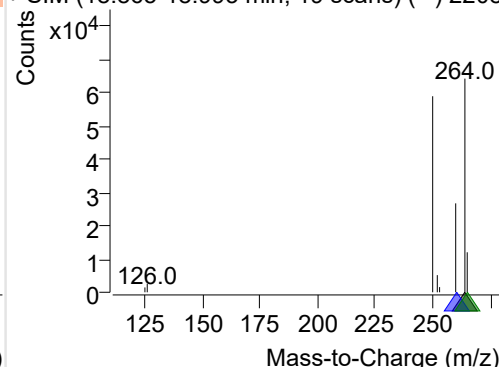
**IS-D12-Perylene**

+ Selected Ion (264.0) 220806-PAHs-020.D

264.0, 260.0, 265.0

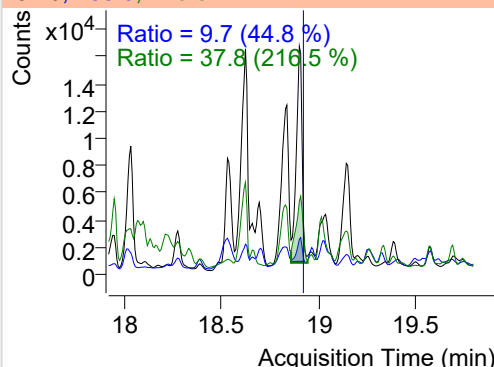
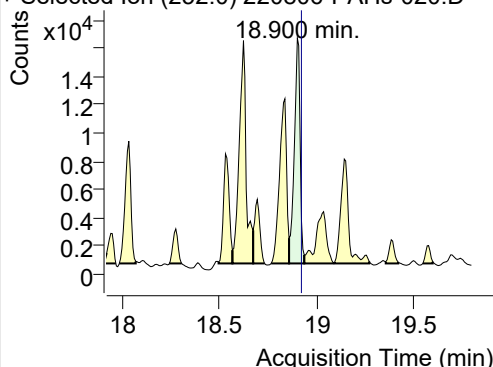


+ SIM (18.865-18.993 min, 19 scans) (\*\*) 2208

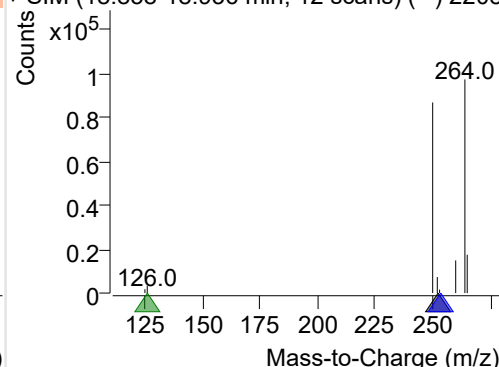
**Perylene**

+ Selected Ion (252.0) 220806-PAHs-020.D

252.0, 253.0, 126.0

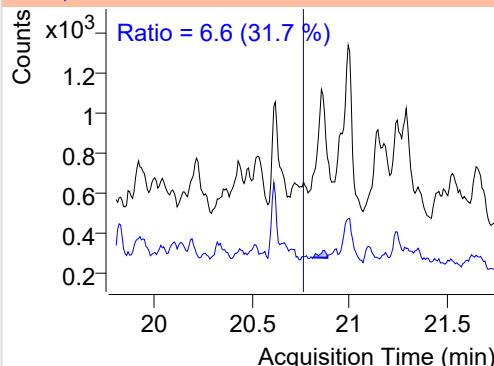
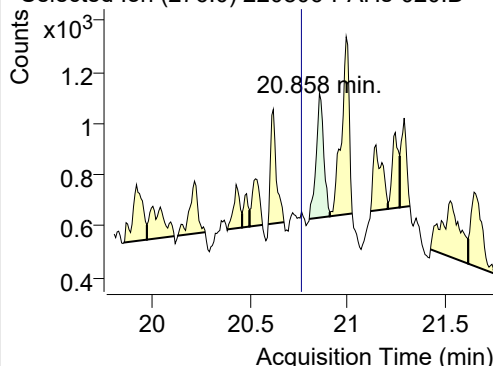


+ SIM (18.858-18.936 min, 12 scans) (\*\*) 2208

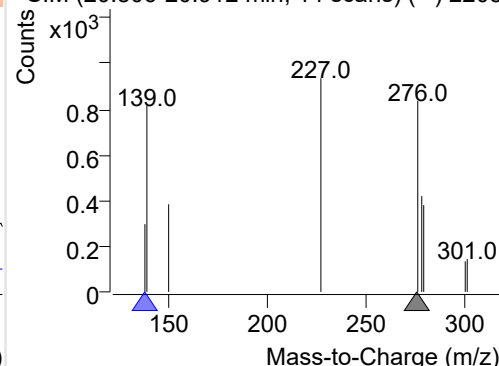
**Indeno(1,2,3-c,d)pyrene**

+ Selected Ion (276.0) 220806-PAHs-020.D

276.0, 138.0



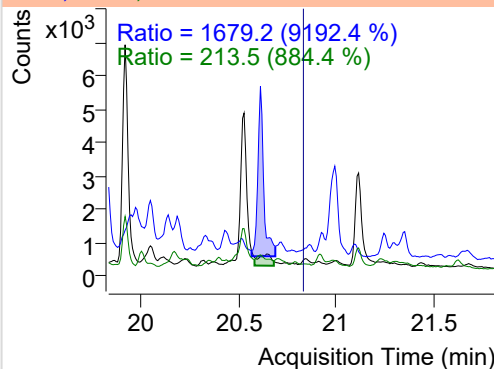
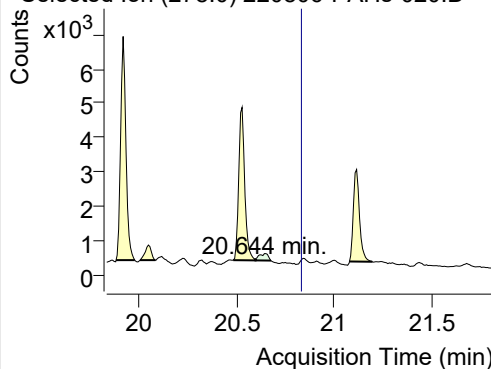
+ SIM (20.806-20.912 min, 14 scans) (\*\*) 2208



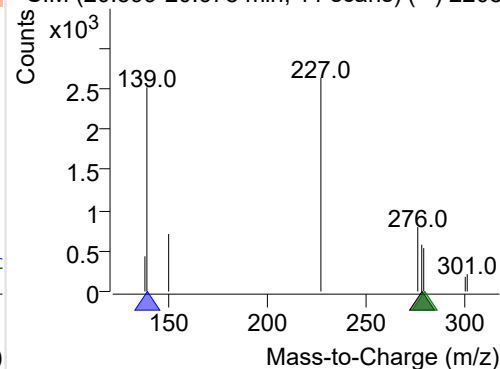
**Dibenz(a,h)anthracene**

+ Selected Ion (278.0) 220806-PAHs-020.D

278.0, 139.0, 279.0

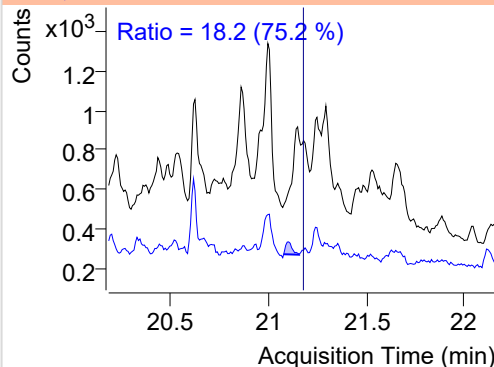
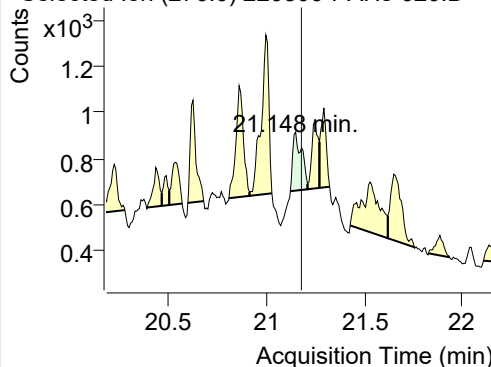


+ SIM (20.599-20.678 min, 11 scans) (\*\*) 2208

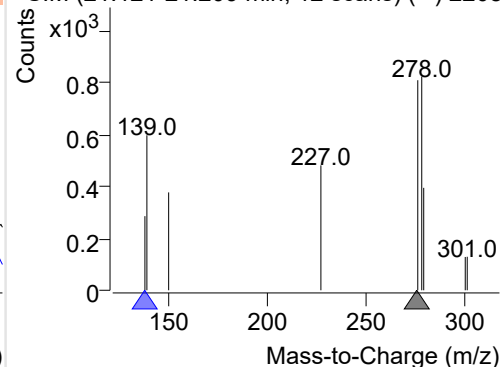
**Benzo(g,h,i)perylene**

+ Selected Ion (276.0) 220806-PAHs-020.D

276.0, 138.0

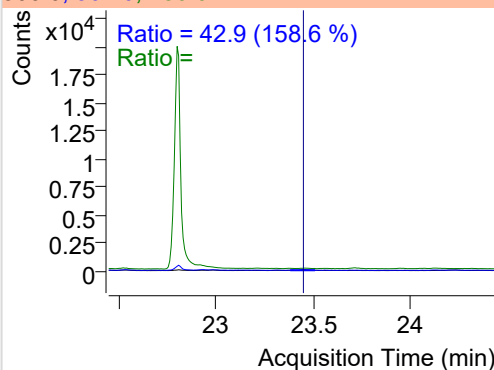
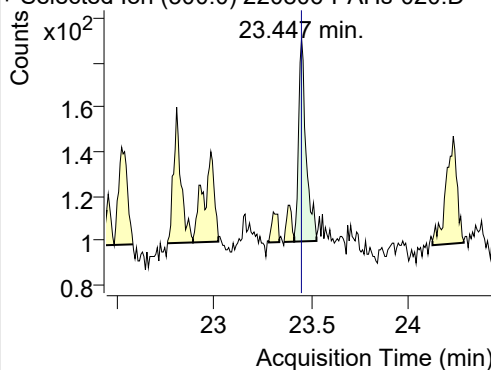


+ SIM (21.121-21.209 min, 12 scans) (\*\*) 2208

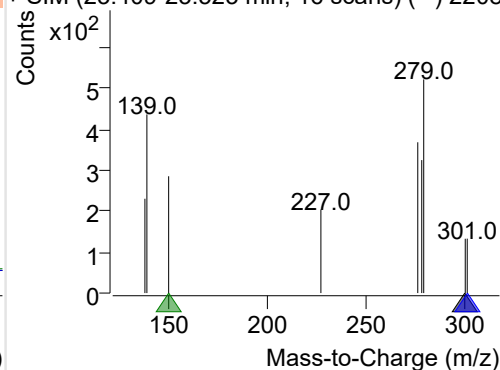
**Coronene**

+ Selected Ion (300.0) 220806-PAHs-020.D

300.0, 301.0, 150.0



+ SIM (23.409-23.523 min, 16 scans) (\*\*) 2208





## Quantitative Analysis Sample Based Report

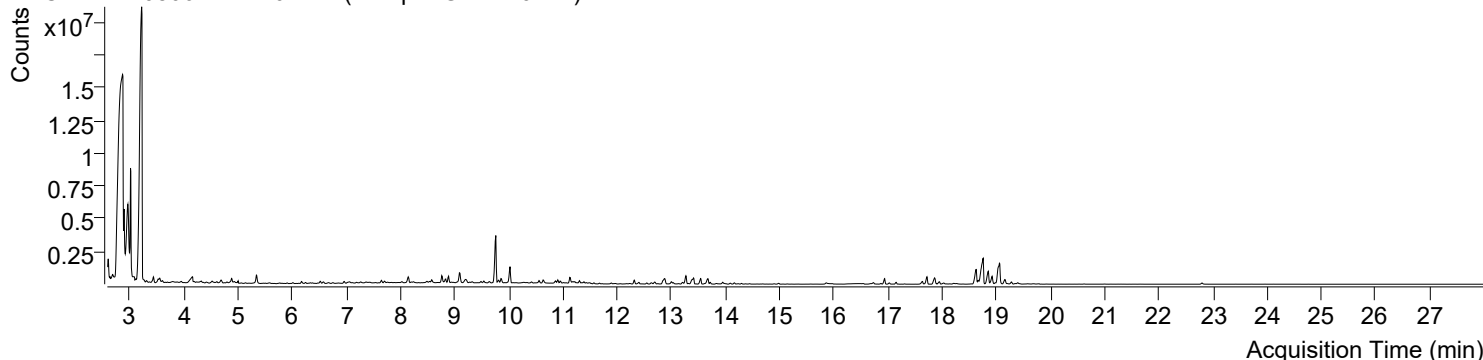


Trusted Answers

|                           |                                                                                            |                       |                        |
|---------------------------|--------------------------------------------------------------------------------------------|-----------------------|------------------------|
| Batch Data Path File Name | D:\MassHunter\GCMS\1\data\PAHs\220806-PAHs-Sample\QuantResults\220806-PAHs-Quant.batch.bin |                       |                        |
| Analysis Time Stamp       | 2022-10-10 오전 10:12:04                                                                     | Analyst Name          | DESKTOP-86B7UPG\5975MS |
| Report Generation Time    | 2022-10-10 오전 10:12:12                                                                     | Report Generator Name | DESKTOP-86B7UPG\5975MS |
| Calibration Last Update   | 2022-12-15 오후 3:30:46                                                                      | Batch State           | Processed              |
| Analyze Quant Version     | 10.2                                                                                       | Report Quant Version  | 10.2                   |
| Acq. Date-Time            | 2022-08-06 오후 8:53:23                                                                      | Data File             | 220806-PAHs-021.D      |
| Type                      | Sample                                                                                     | Name                  | Sample-Gas-220722      |
| Dil.                      | 1                                                                                          | Acq. Method File      | PAHs 19mix-Method      |

## Sample Chromatogram

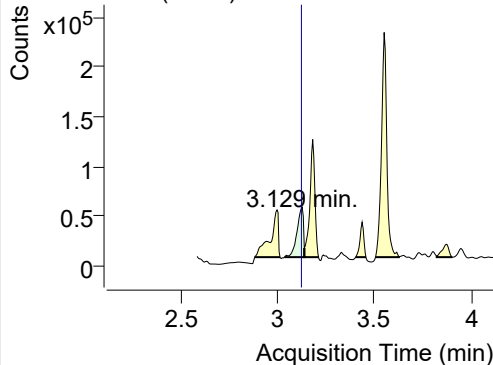
+ TIC SIM 220806-PAHs-021.D (Sample-Gas-220722)



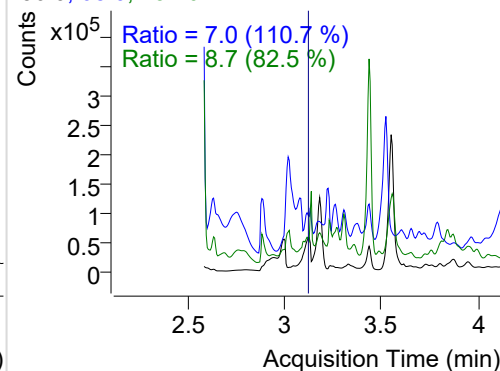
| Name                    | RT     | Transition | Resp.    | Height     | Final Conc. Units | Ratio  |
|-------------------------|--------|------------|----------|------------|-------------------|--------|
| IS-D8-Naphthalene       | 3.129  | 136.0      | 113284   | 49938.38   | ND ng/ml          | 8.7    |
| Naphthalene             | 3.201  | 128.0      | 35312378 | 8377161.89 | ND ng/ml          | 25.4   |
| Acenaphthylene          | 6.374  | 152.0      | 8925     | 5713.55    | ND ng/ml          | 1108.6 |
| IS-D10-Acenaphthene     | 6.516  | 164.0      | 140367   | 76641.78   | ND ng/ml          | 89.8   |
| Acenaphthene            | 6.582  | 154.0      | 64298    | 33504.96   | ND ng/ml          | 91.8   |
| LSS-D10-Fluorene        | 7.648  | 176.0      | 124485   | 77590.29   | ND ng/ml          | 97.6   |
| Fluorene                | 7.701  | 166.0      | 96479    | 56602.87   | ND ng/ml          | 128.2  |
| IS-D10-Phenanthrene     | 9.812  | 188.0      | 222515   | 136613.49  | ND ng/ml          | 29.4   |
| Phenanthrene            | 9.854  | 178.0      | 349838   | 193742.69  | ND ng/ml          | 19.1   |
| Anthracene              | 9.854  | 178.0      | 349838   | 193742.69  | ND ng/ml          | 19.1   |
| Fluoranthene            | 12.548 | 202.0      | 84592    | 55518.19   | ND ng/ml          |        |
| LSS-D10-Pyrene          | 13.003 | 212.0      | 183966   | 110723.92  | ND ng/ml          | 38.0   |
| Pyrene                  | 13.036 | 202.0      | 139555   | 79254.19   | ND ng/ml          | 23.1   |
| Benz(a)anthracene       | 15.903 | 228.0      | 8484     | 2130.57    | ND ng/ml          | 19.0   |
| IS-D12-Chrysene         | 15.860 | 240.0      | 182507   | 67251.72   | ND ng/ml          | 20.5   |
| Chrysene                | 15.903 | 228.0      | 8484     | 2130.57    | ND ng/ml          | 19.0   |
| Benzo(b)fluoranthene    | 18.758 | 252.0      | 5234129  | 1652375.68 | ND ng/ml          | 19.5   |
| Benzo(k)fluoranthene    | 18.758 | 252.0      | 5234129  | 1652375.68 | ND ng/ml          | 19.5   |
| SS-D12-Benzo(e)pyrene   | 18.630 | 264.0      | 986810   | 404932.84  | ND ng/ml          |        |
| Benzo(e)pyrene          | 18.758 | 252.0      | 5234129  | 1652375.68 | ND ng/ml          | 19.5   |
| Benzo(a)pyrene          | 18.758 | 252.0      | 5234129  | 1652375.68 | ND ng/ml          | 19.5   |
| IS-D12-Perylene         | 18.851 | 264.0      | 734873   | 300868.84  | ND ng/ml          |        |
| Perylene                | 19.057 | 252.0      | 2899238  | 1171522.42 | ND ng/ml          | 19.5   |
| Indeno(1,2,3-c,d)pyrene | 20.866 | 276.0      | 2132     | 729.50     | ND ng/ml          |        |
| Dibenz(a,h)anthracene   | 20.851 | 278.0      | 501      | 261.95     | ND ng/ml          | 41.8   |
| Benzo(g,h,i)perylene    | 21.148 | 276.0      | 2068     | 513.50     | ND ng/ml          |        |
| Coronene                | 23.454 | 300.0      | 276      | 84.82      | ND ng/ml          |        |

## IS-D8-Naphthalene

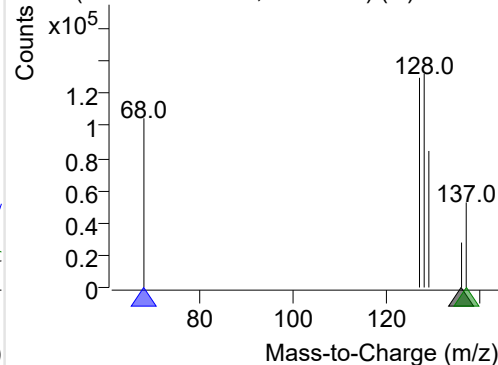
+ Selected Ion (136.0) 220806-PAHs-021.D



136.0, 68.0, 137.0

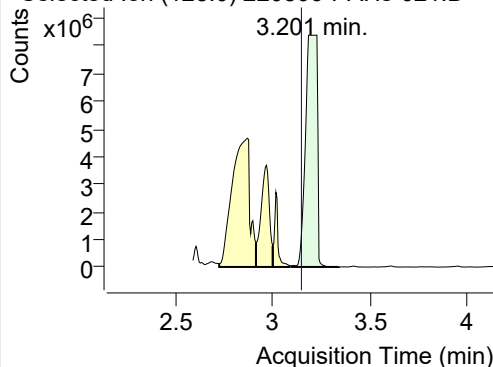


+ SIM (3.037-3.139 min, 19 scans) (\*\*) 220806

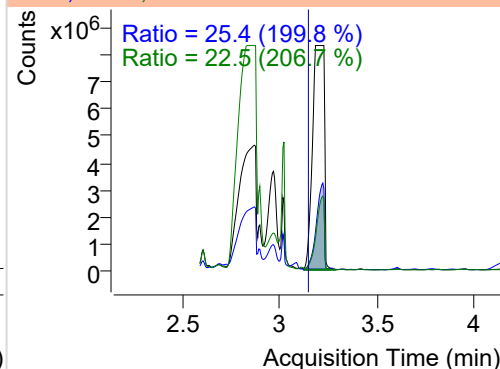


## Naphthalene

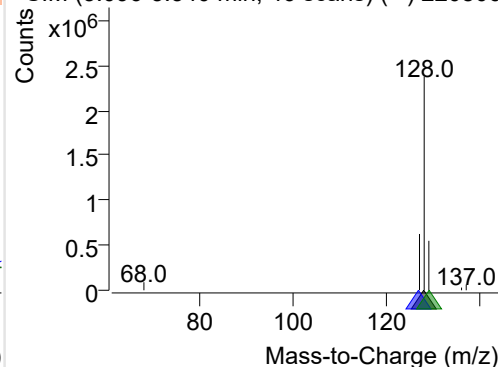
+ Selected Ion (128.0) 220806-PAHs-021.D



128.0, 127.0, 129.0

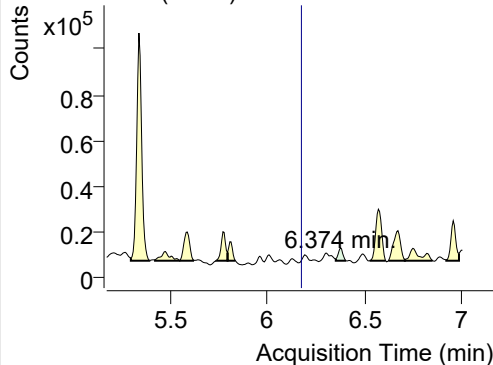


+ SIM (3.096-3.340 min, 46 scans) (\*\*) 220806

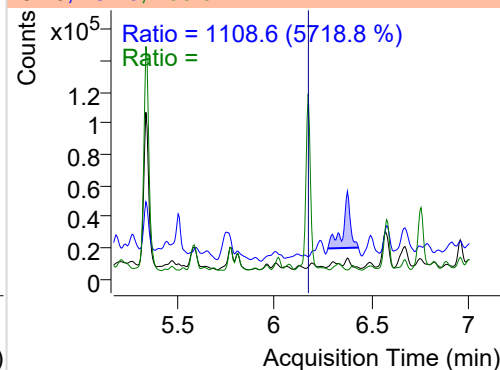


## Acenaphthylene

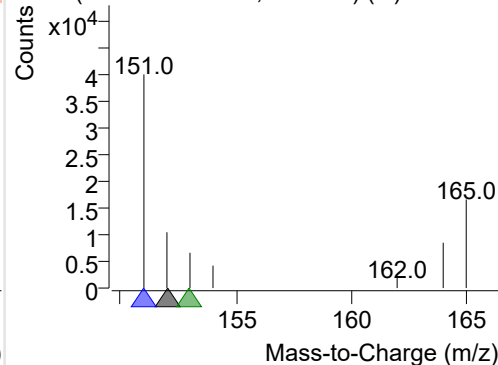
+ Selected Ion (152.0) 220806-PAHs-021.D



152.0, 151.0, 153.0

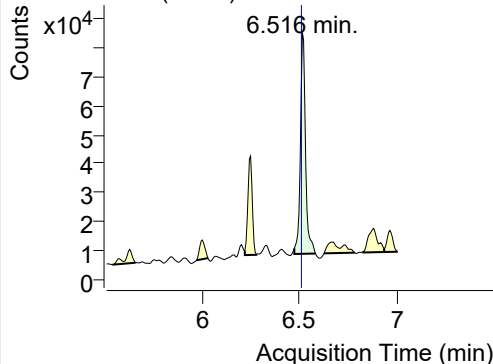


+ SIM (6.351-6.403 min, 9 scans) (\*\*) 220806-

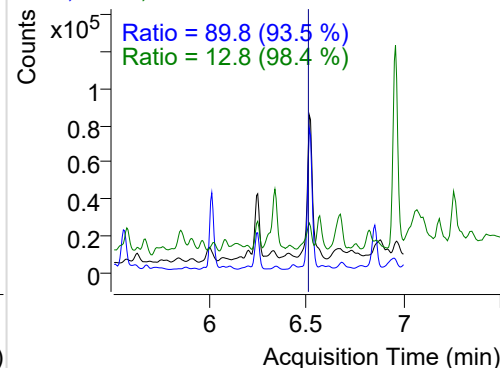


## IS-D10-Acenaphthene

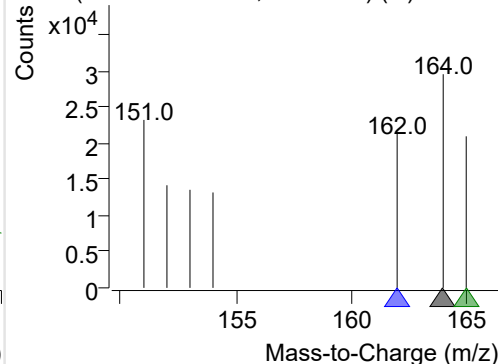
+ Selected Ion (164.0) 220806-PAHs-021.D



164.0, 162.0, 165.0

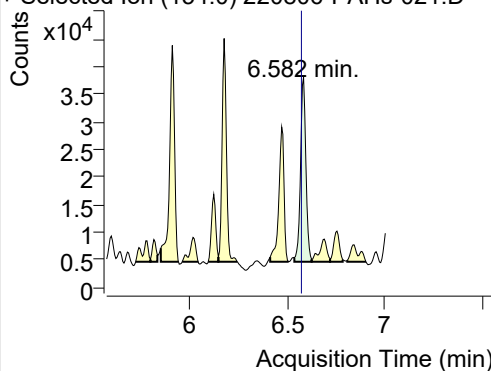


+ SIM (6.475-6.584 min, 19 scans) (\*\*) 220806

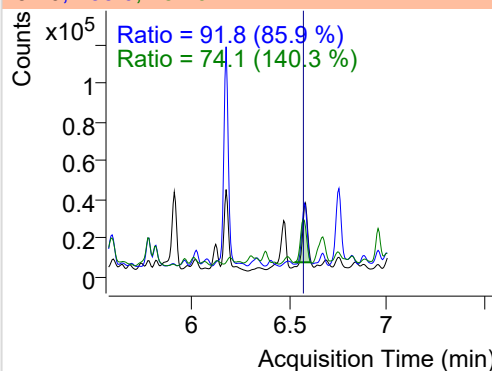


**Acenaphthene**

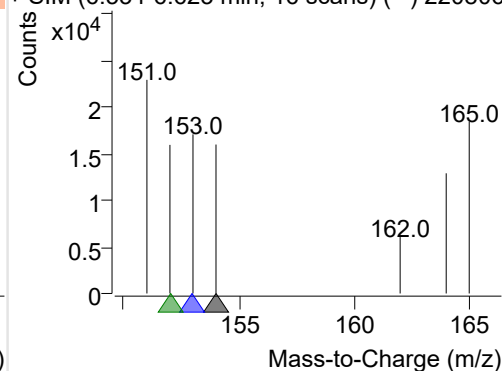
+ Selected Ion (154.0) 220806-PAHs-021.D



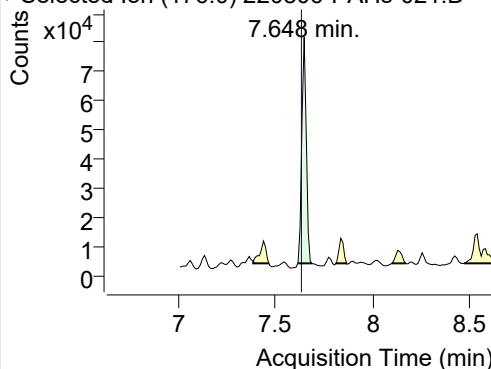
154.0, 153.0, 152.0



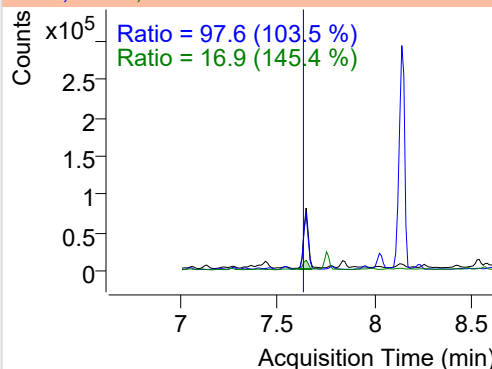
+ SIM (6.534-6.623 min, 16 scans) (\*\*) 220806

**LSS-D10-Fluorene**

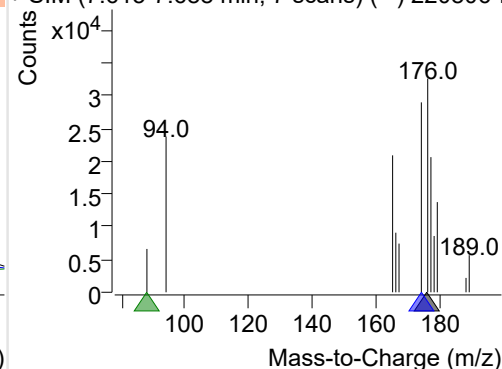
+ Selected Ion (176.0) 220806-PAHs-021.D



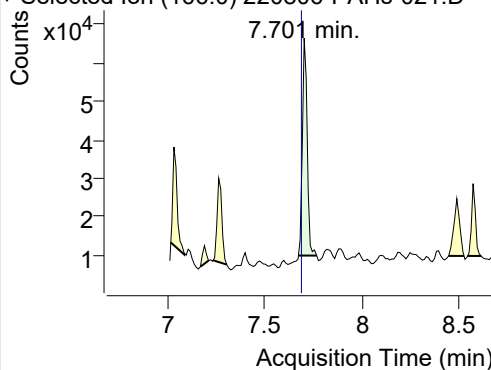
176.0, 174.0, 88.0



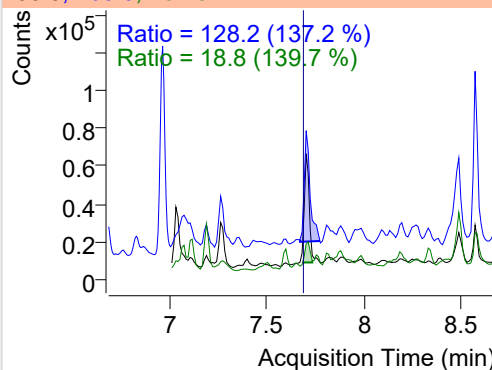
+ SIM (7.615-7.688 min, 7 scans) (\*\*) 220806-I

**Fluorene**

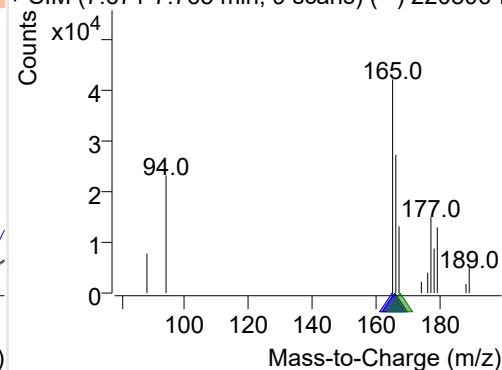
+ Selected Ion (166.0) 220806-PAHs-021.D



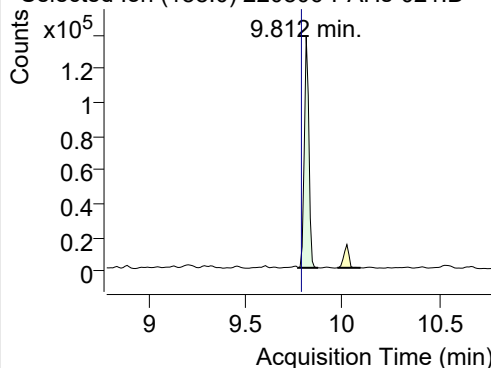
166.0, 165.0, 167.0



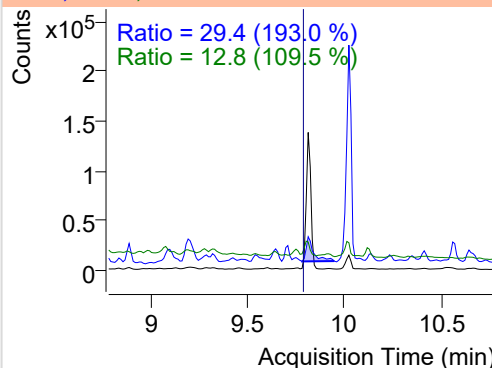
+ SIM (7.671-7.765 min, 9 scans) (\*\*) 220806-I

**IS-D10-Phenanthrene**

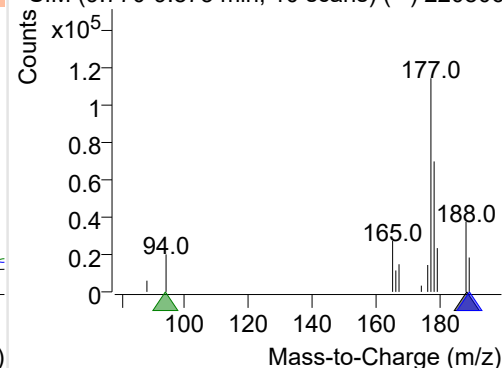
+ Selected Ion (188.0) 220806-PAHs-021.D



188.0, 189.0, 94.0

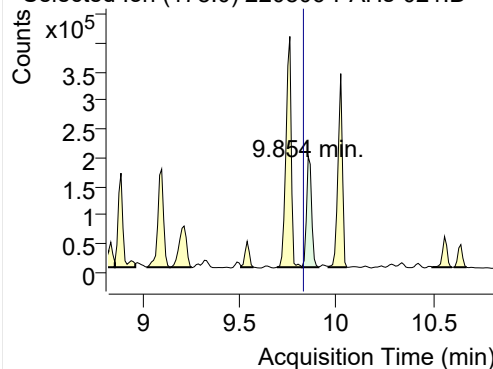


+ SIM (9.770-9.873 min, 10 scans) (\*\*) 220806

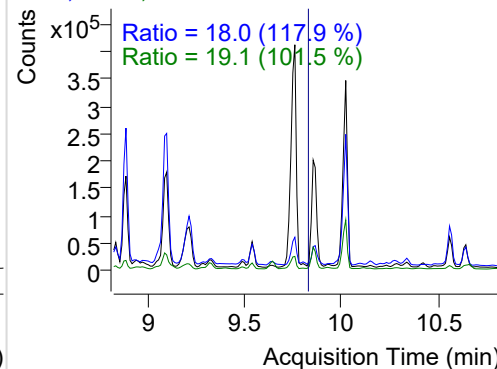


**Phenanthrene**

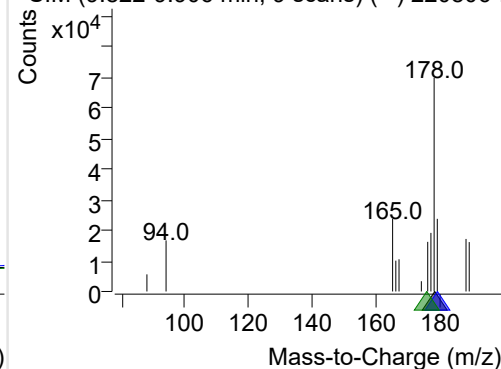
+ Selected Ion (178.0) 220806-PAHs-021.D



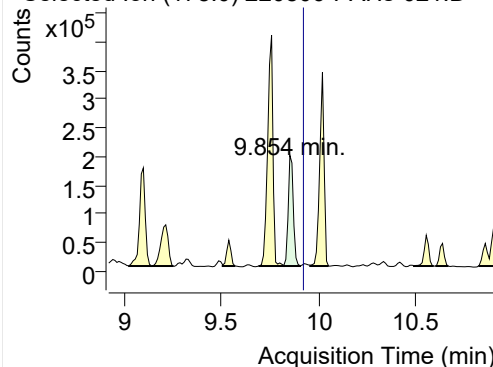
178.0, 179.0, 176.0



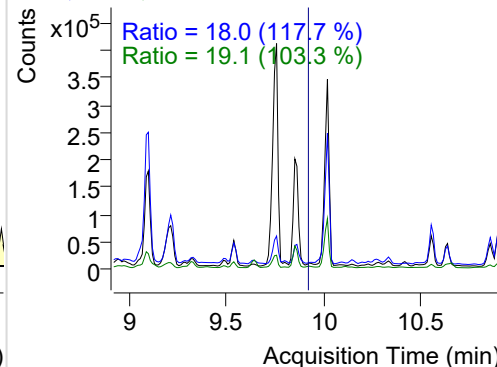
+ SIM (9.822-9.906 min, 9 scans) (\*\*) 220806-I

**Anthracene**

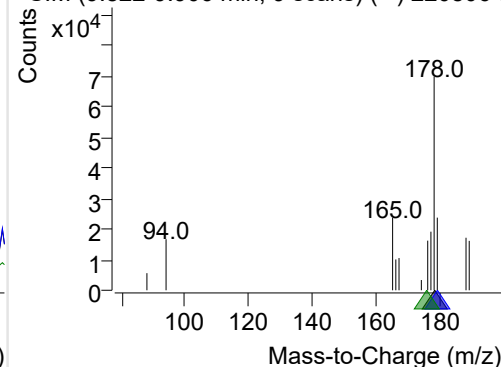
+ Selected Ion (178.0) 220806-PAHs-021.D



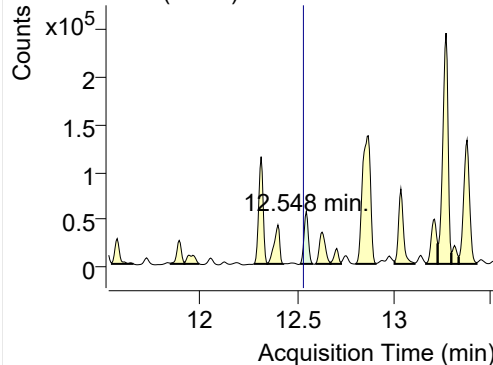
178.0, 179.0, 176.0



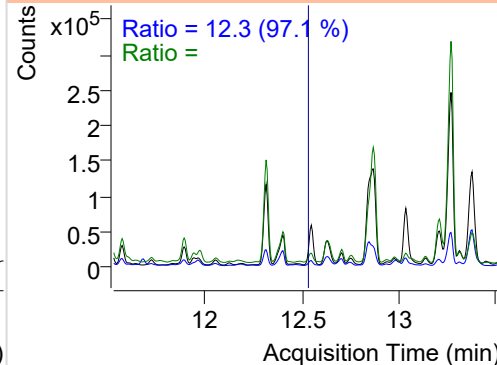
+ SIM (9.822-9.906 min, 9 scans) (\*\*) 220806-I

**Fluoranthene**

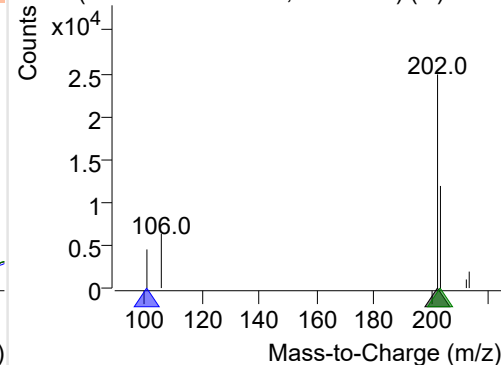
+ Selected Ion (202.0) 220806-PAHs-021.D



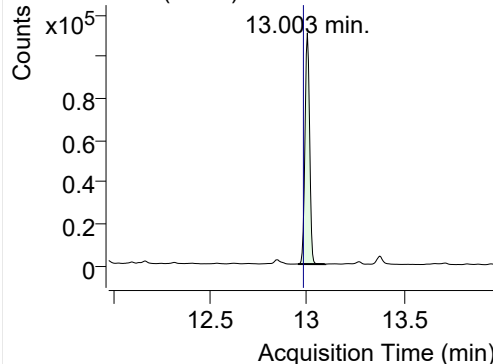
202.0, 101.0, 203.0



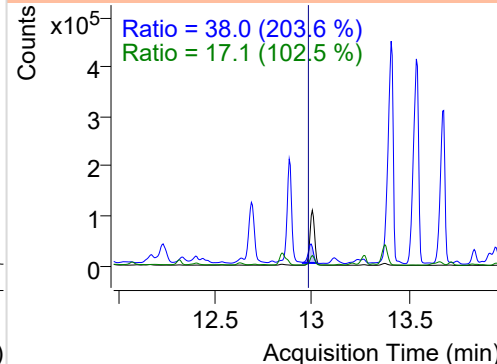
+ SIM (12.516-12.582 min, 12 scans) (\*\*) 2208

**LSS-D10-Pyrene**

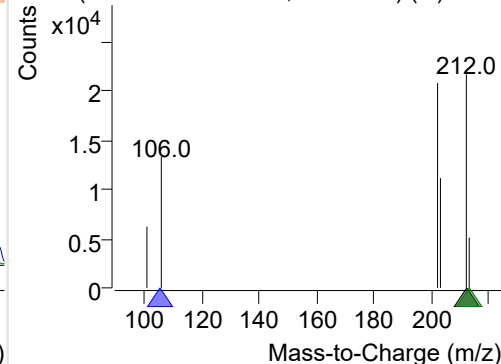
+ Selected Ion (212.0) 220806-PAHs-021.D



212.0, 106.0, 213.0



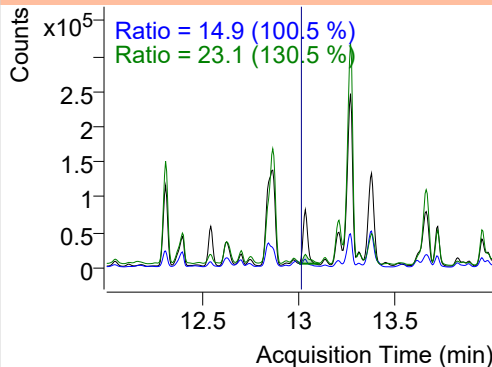
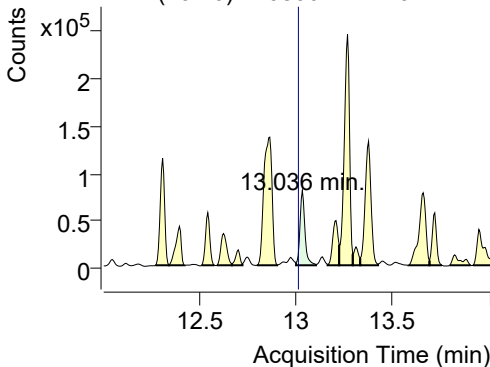
+ SIM (12.955-13.095 min, 27 scans) (\*\*) 2208



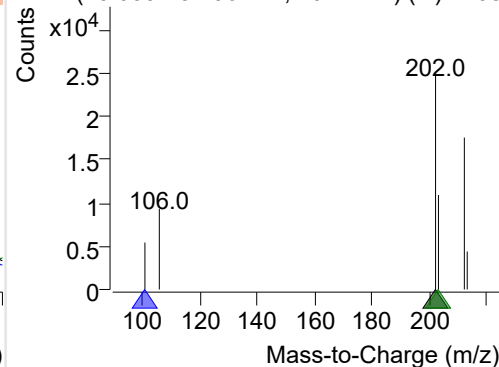
**Pyrene**

+ Selected Ion (202.0) 220806-PAHs-021.D

202.0, 101.0, 203.0

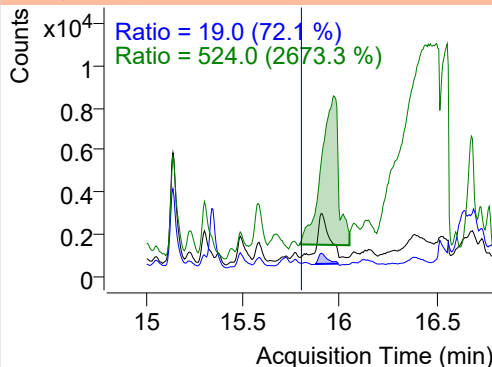
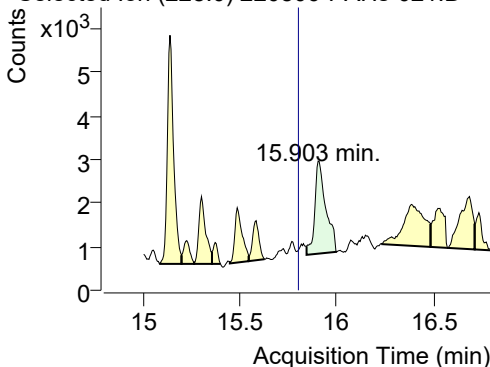


+ SIM (13.003-13.106 min, 20 scans) (\*\*) 2208

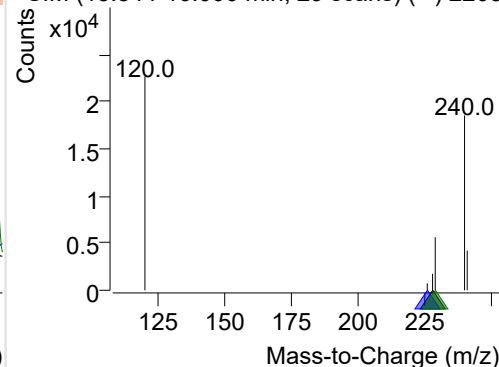
**Benz(a)anthracene**

+ Selected Ion (228.0) 220806-PAHs-021.D

228.0, 226.0, 229.0

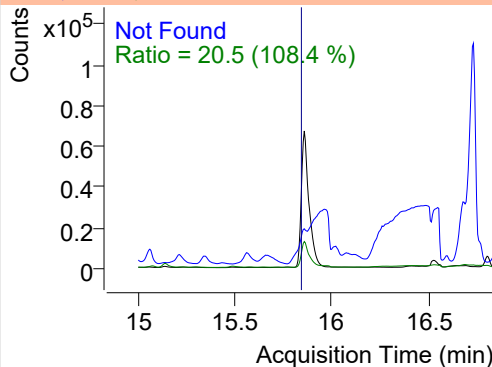
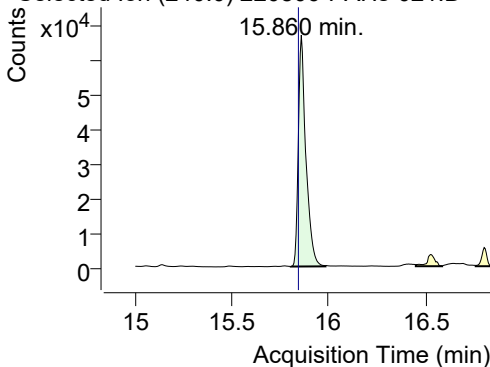


+ SIM (15.844-16.000 min, 29 scans) (\*\*) 2208

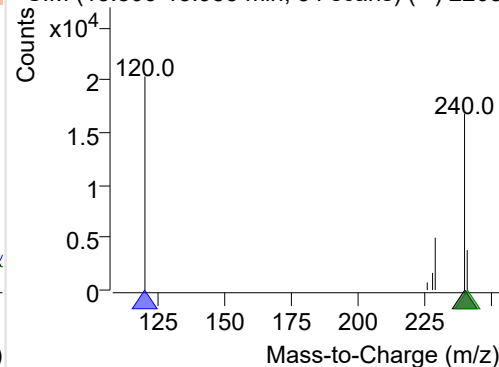
**IS-D12-Chrysene**

+ Selected Ion (240.0) 220806-PAHs-021.D

240.0, 120.0, 241.0

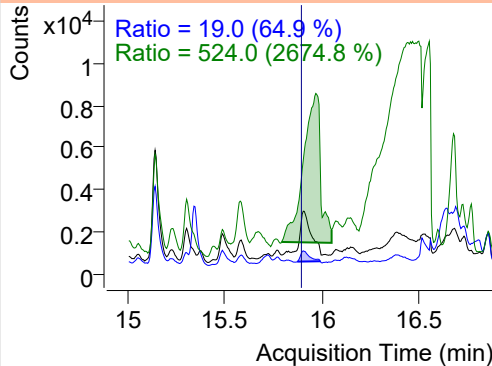
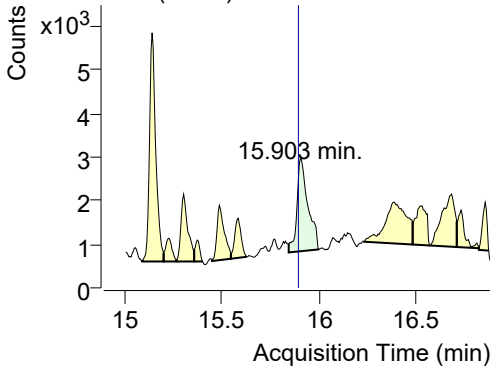


+ SIM (15.806-15.985 min, 34 scans) (\*\*) 2208

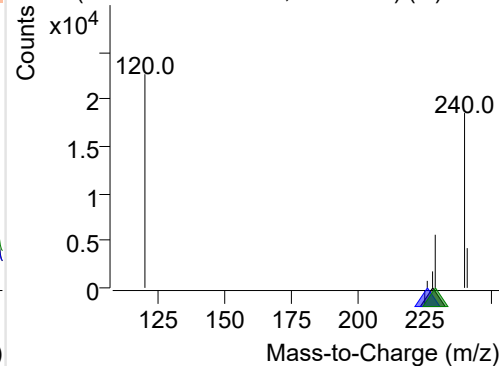
**Chrysene**

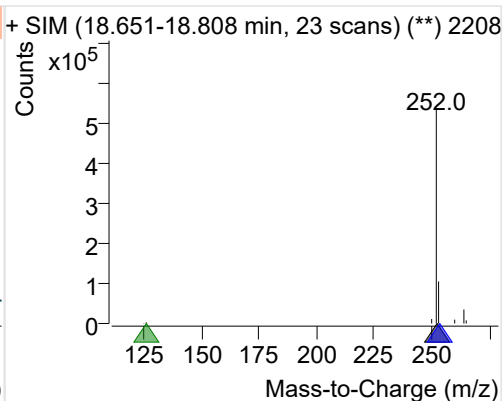
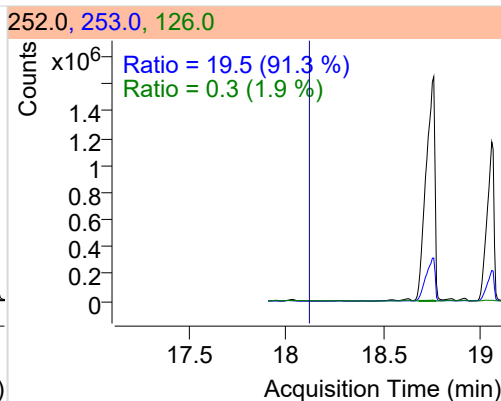
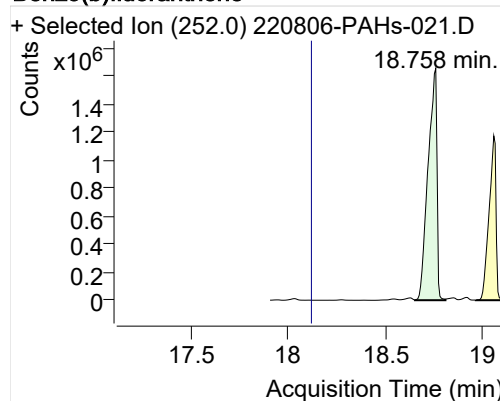
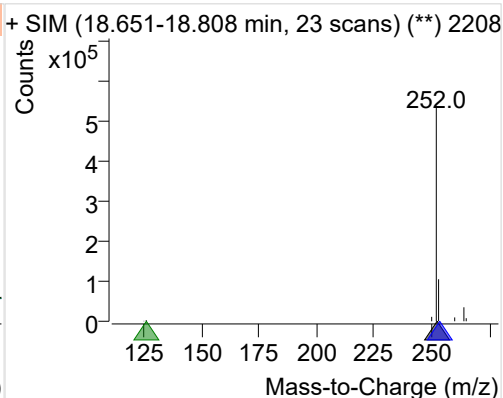
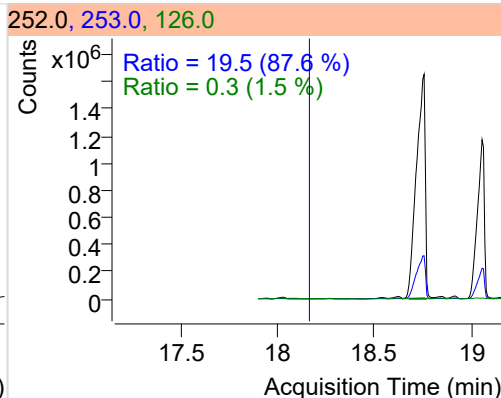
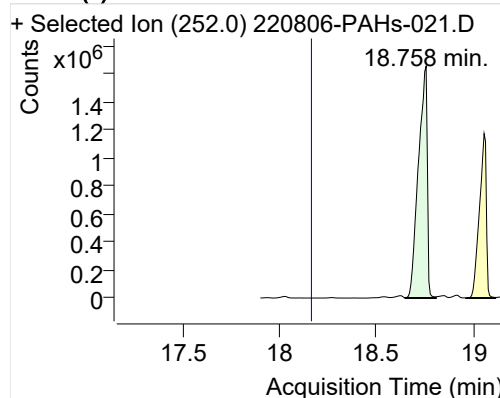
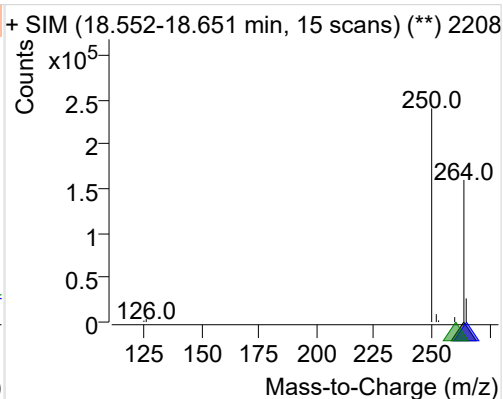
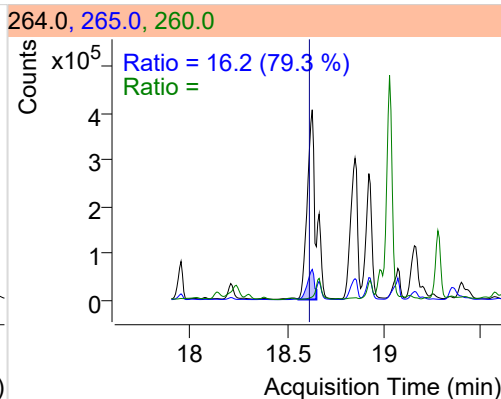
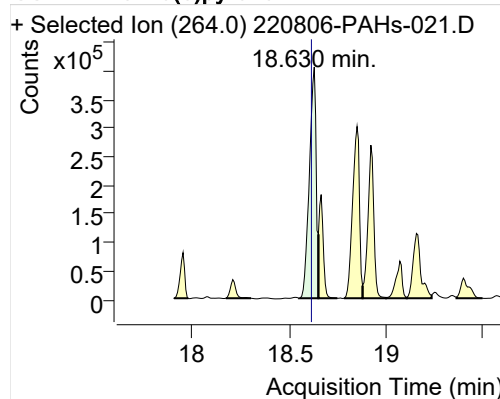
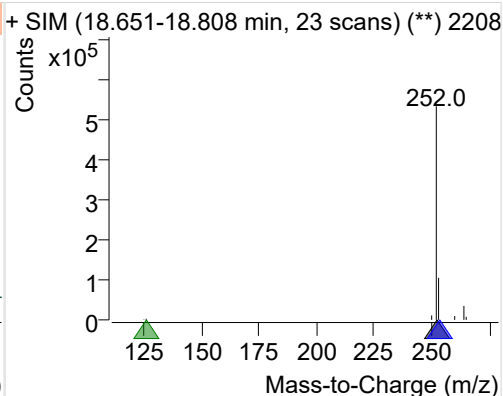
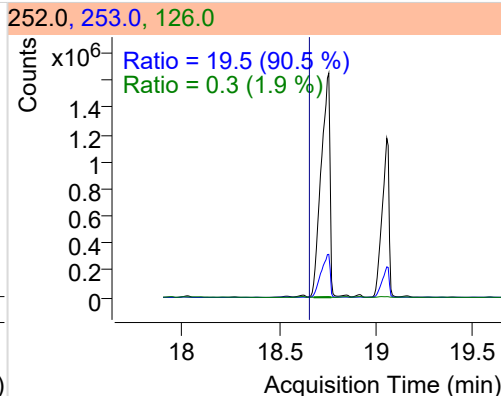
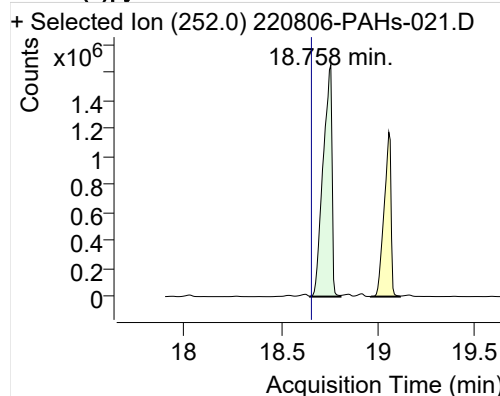
+ Selected Ion (228.0) 220806-PAHs-021.D

228.0, 226.0, 229.0



+ SIM (15.844-16.000 min, 29 scans) (\*\*) 2208

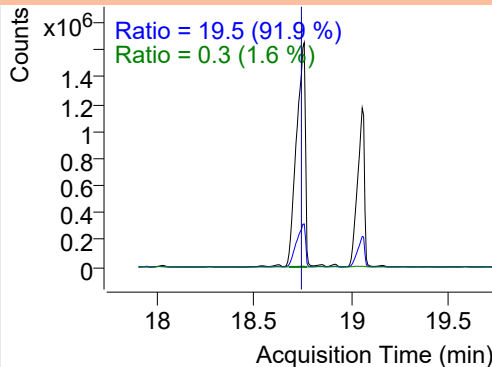
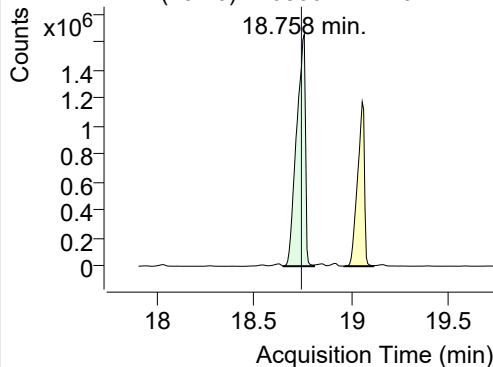


**Benzo(b)fluoranthene****Benzo(k)fluoranthene****SS-D12-Benzo(e)pyrene****Benzo(e)pyrene**

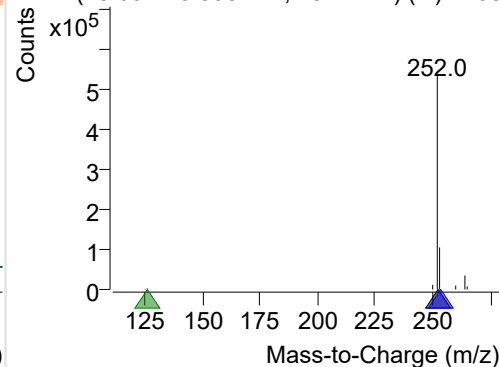
**Benzo(a)pyrene**

+ Selected Ion (252.0) 220806-PAHs-021.D

252.0, 253.0, 126.0

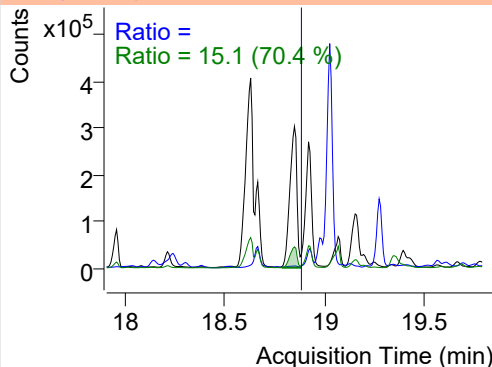
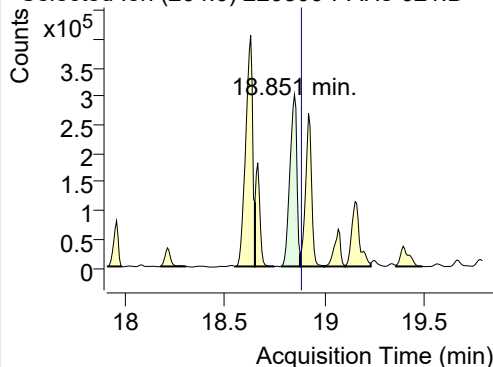


+ SIM (18.651-18.808 min, 23 scans) (\*\*) 2208

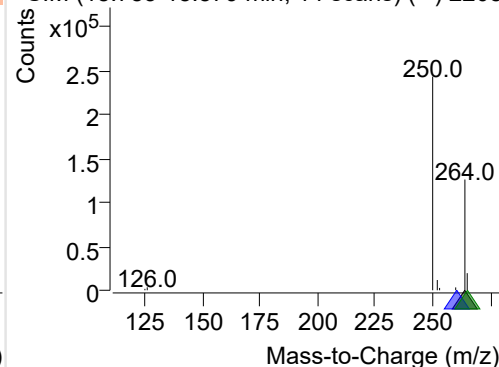
**IS-D12-Perylene**

+ Selected Ion (264.0) 220806-PAHs-021.D

264.0, 260.0, 265.0

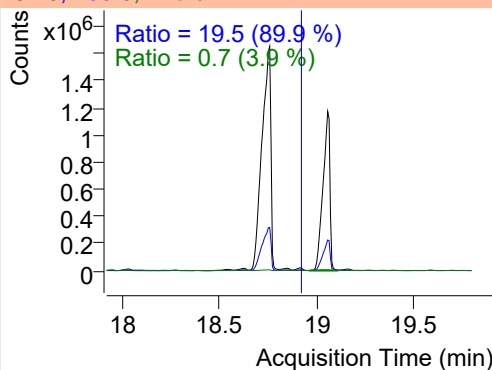
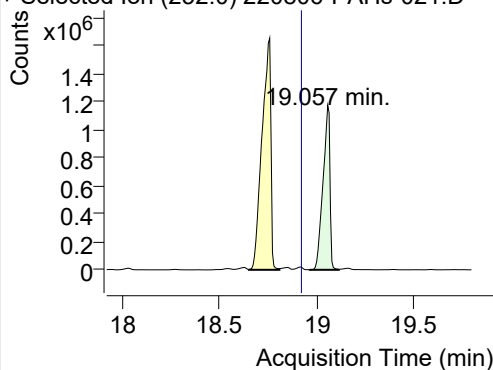


+ SIM (18.783-18.879 min, 14 scans) (\*\*) 2208

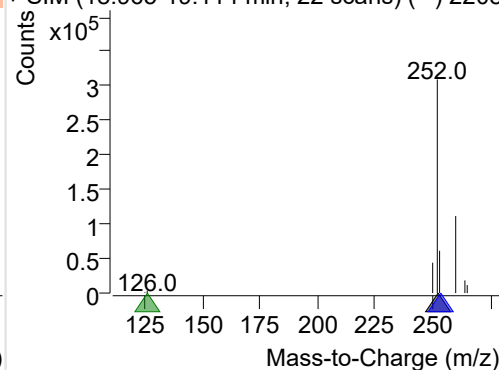
**Perylene**

+ Selected Ion (252.0) 220806-PAHs-021.D

252.0, 253.0, 126.0

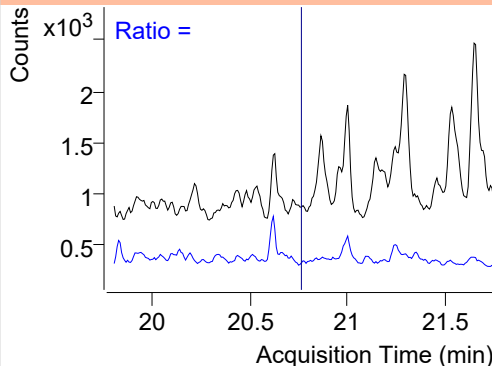
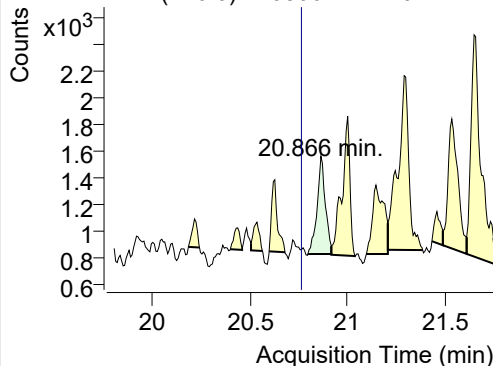


+ SIM (18.965-19.114 min, 22 scans) (\*\*) 2208

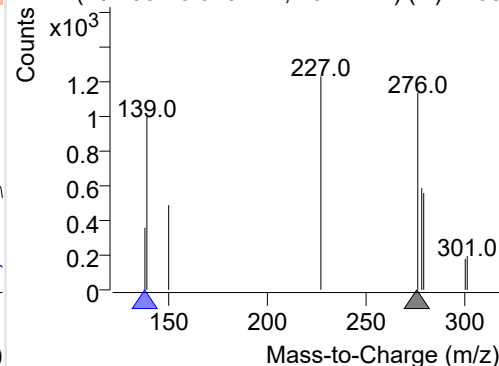
**Indeno(1,2,3-c,d)pyrene**

+ Selected Ion (276.0) 220806-PAHs-021.D

276.0, 138.0



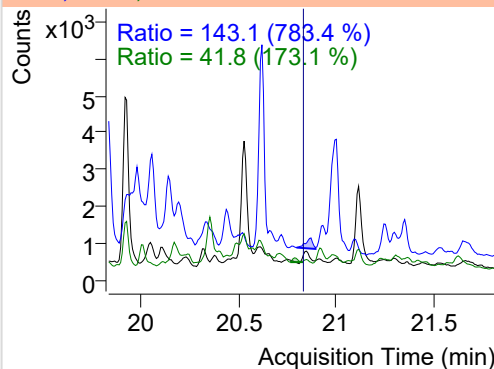
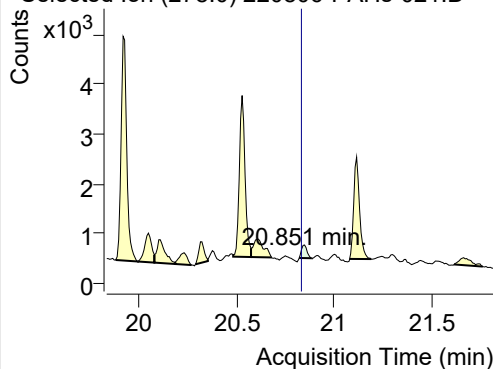
+ SIM (20.799-20.919 min, 16 scans) (\*\*) 2208



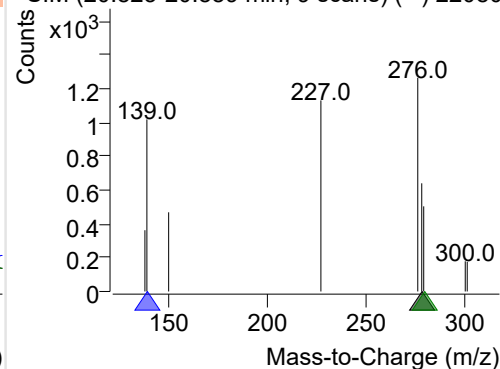
**Dibenz(a,h)anthracene**

+ Selected Ion (278.0) 220806-PAHs-021.D

278.0, 139.0, 279.0

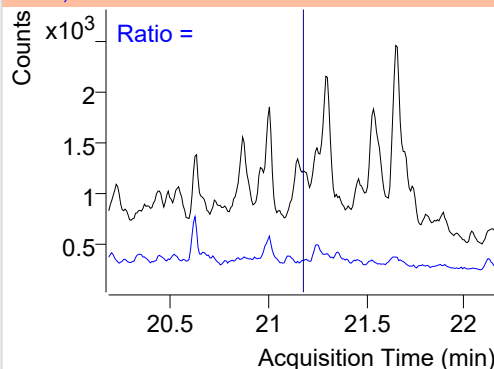
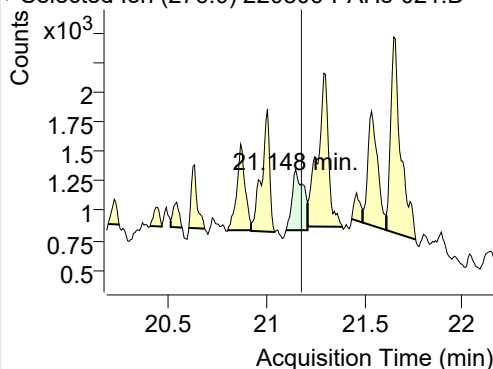


+ SIM (20.823-20.889 min, 9 scans) (\*\*) 22080

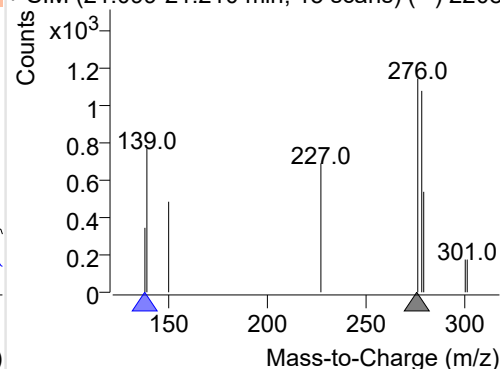
**Benzo(g,h,i)perylene**

+ Selected Ion (276.0) 220806-PAHs-021.D

276.0, 138.0

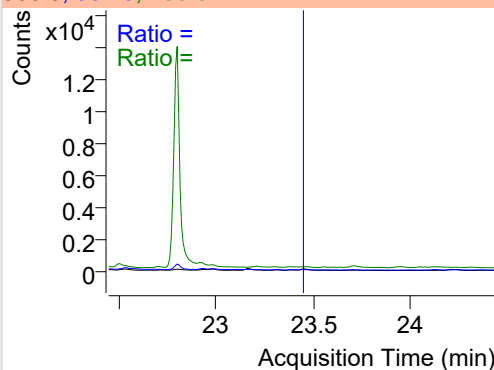
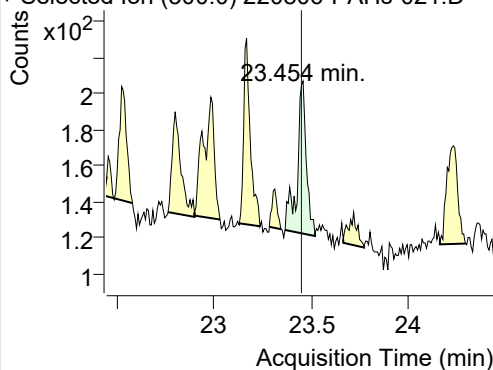


+ SIM (21.099-21.210 min, 15 scans) (\*\*) 2208

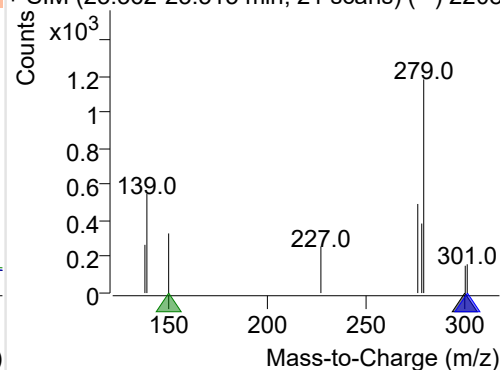
**Coronene**

+ Selected Ion (300.0) 220806-PAHs-021.D

300.0, 301.0, 150.0



+ SIM (23.362-23.515 min, 21 scans) (\*\*) 2208





## Quantitative Analysis Sample Based Report

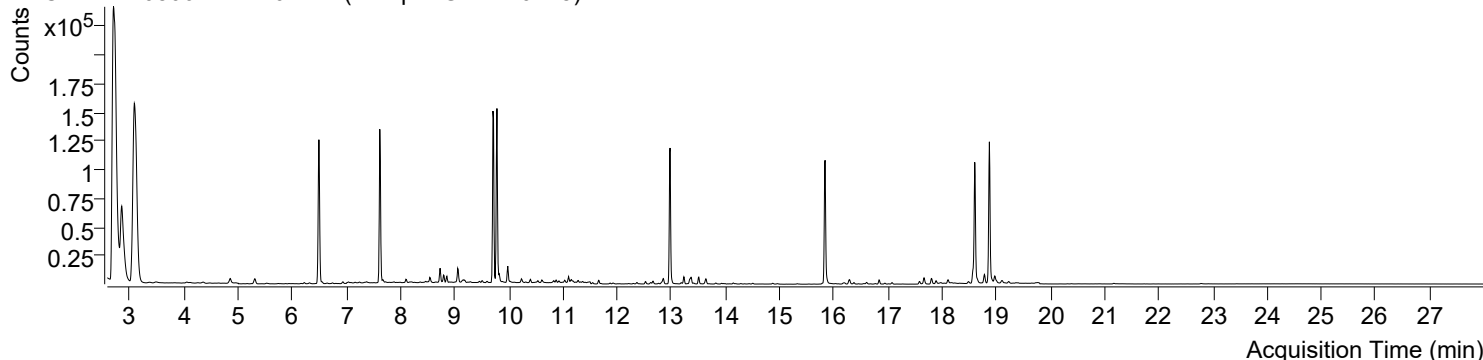


Trusted Answers

|                           |                                                                                            |                       |                        |
|---------------------------|--------------------------------------------------------------------------------------------|-----------------------|------------------------|
| Batch Data Path File Name | D:\MassHunter\GCMS\1\data\PAHs\220806-PAHs-Sample\QuantResults\220806-PAHs-Quant.batch.bin |                       |                        |
| Analysis Time Stamp       | 2022-10-10 오전 10:12:04                                                                     | Analyst Name          | DESKTOP-86B7UPG\5975MS |
| Report Generation Time    | 2022-10-10 오전 10:12:12                                                                     | Report Generator Name | DESKTOP-86B7UPG\5975MS |
| Calibration Last Update   | 2022-12-15 오후 3:30:46                                                                      | Batch State           | Processed              |
| Analyze Quant Version     | 10.2                                                                                       | Report Quant Version  | 10.2                   |
| Acq. Date-Time            | 2022-08-06 오후 9:24:29                                                                      | Data File             | 220806-PAHs-022.D      |
| Type                      | Sample                                                                                     | Name                  | Sample-Gas-220728      |
| Dil.                      | 1                                                                                          | Acq. Method File      | PAHs 19mix-Method      |

## Sample Chromatogram

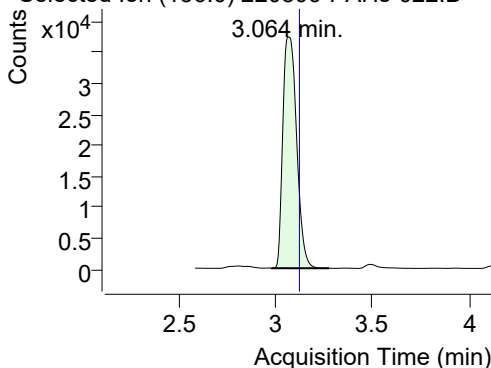
+ TIC SIM 220806-PAHs-022.D (Sample-Gas-220728)



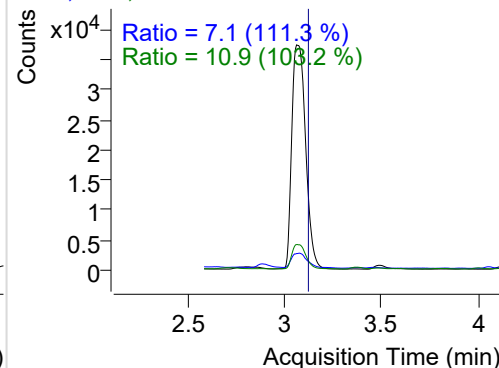
| Name                    | RT     | Transition | Resp.  | Height   | Final Conc. Units | Ratio |
|-------------------------|--------|------------|--------|----------|-------------------|-------|
| IS-D8-Naphthalene       | 3.064  | 136.0      | 185216 | 37428.30 | ND ng/ml          | 10.9  |
| Naphthalene             | 3.091  | 128.0      | 459819 | 93207.92 | ND ng/ml          | 12.8  |
| Acenaphthylene          | 6.161  | 152.0      | 397    | 198.63   | ND ng/ml          | 81.0  |
| IS-D10-Acenaphthene     | 6.493  | 164.0      | 111710 | 59859.35 | ND ng/ml          | 96.5  |
| Acenaphthene            | 6.552  | 154.0      | 798    | 394.80   | ND ng/ml          | 103.3 |
| LSS-D10-Fluorene        | 7.617  | 176.0      | 99629  | 59510.50 | ND ng/ml          | 93.1  |
| Fluorene                | 7.680  | 166.0      | 1447   | 828.84   | ND ng/ml          | 110.8 |
| IS-D10-Phenanthrene     | 9.780  | 188.0      | 191280 | 122935.9 | ND ng/ml          | 15.2  |
| Phenanthrene            | 9.822  | 178.0      | 6015   | 3745.71  | ND ng/ml          | 20.1  |
| Anthracene              | 9.980  | 178.0      | 6262   | 3902.71  | ND ng/ml          | 26.4  |
| Fluoranthene            | 12.521 | 202.0      | 2573   | 1516.89  | ND ng/ml          | 17.3  |
| LSS-D10-Pyrene          | 12.976 | 212.0      | 143611 | 87866.30 | ND ng/ml          | 17.9  |
| Pyrene                  | 13.009 | 202.0      | 3383   | 1868.62  | ND ng/ml          | 20.7  |
| Benz(a)anthracene       | 15.789 | 228.0      | 786    | 433.93   | ND ng/ml          | 26.4  |
| IS-D12-Chrysene         | 15.838 | 240.0      | 145324 | 81582.51 | ND ng/ml          | 18.9  |
| Chrysene                | 15.876 | 228.0      | 832    | 449.65   | ND ng/ml          | 29.7  |
| Benzo(b)fluoranthene    | 18.110 | 252.0      | 3603   | 1659.81  | ND ng/ml          | 21.3  |
| Benzo(k)fluoranthene    | 18.110 | 252.0      | 3603   | 1659.81  | ND ng/ml          | 21.3  |
| SS-D12-Benzo(e)pyrene   | 18.601 | 264.0      | 132712 | 71279.02 | ND ng/ml          | 24.1  |
| Benzo(e)pyrene          | 18.651 | 252.0      | 2605   | 1300.12  | ND ng/ml          | 14.8  |
| Benzo(a)pyrene          | 18.779 | 252.0      | 456    | 247.60   | ND ng/ml          | 17.9  |
| IS-D12-Perylene         | 18.872 | 264.0      | 152201 | 84088.31 | ND ng/ml          | 23.9  |
| Perylene                | 18.865 | 252.0      | 817    | 355.90   | ND ng/ml          | 19.5  |
| Indeno(1,2,3-c,d)pyrene | 20.751 | 276.0      | 57     | 33.11    | ND ng/ml          |       |
| Dibenz(a,h)anthracene   | 20.828 | 278.0      | 123    | 36.34    | ND ng/ml          |       |
| Benzo(g,h,i)perylene    | 21.171 | 276.0      | 1048   | 405.36   | ND ng/ml          | 22.2  |
| Coronene                | 23.439 | 300.0      | 163    | 56.27    | ND ng/ml          |       |

## IS-D8-Naphthalene

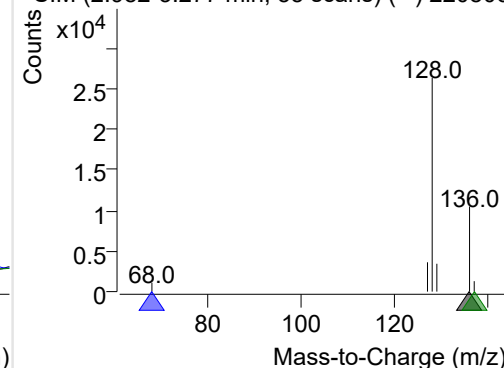
+ Selected Ion (136.0) 220806-PAHs-022.D



136.0, 68.0, 137.0

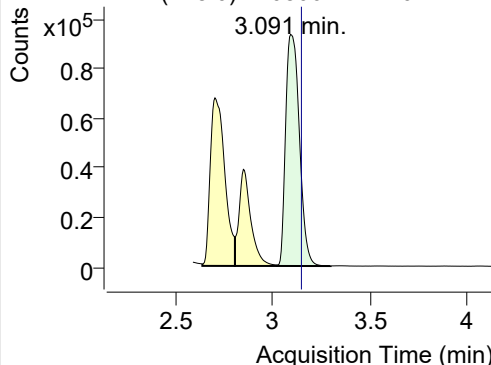


+ SIM (2.982-3.277 min, 55 scans) (\*\*) 220806

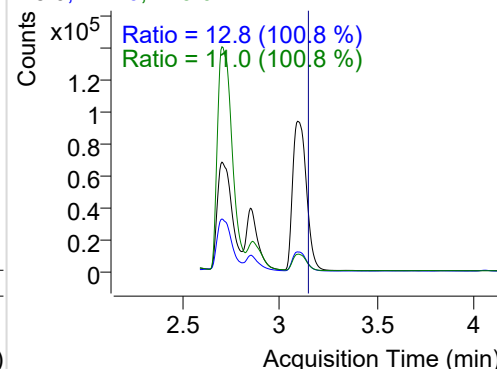


**Naphthalene**

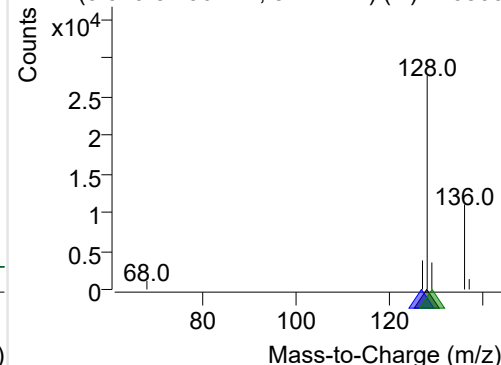
+ Selected Ion (128.0) 220806-PAHs-022.D



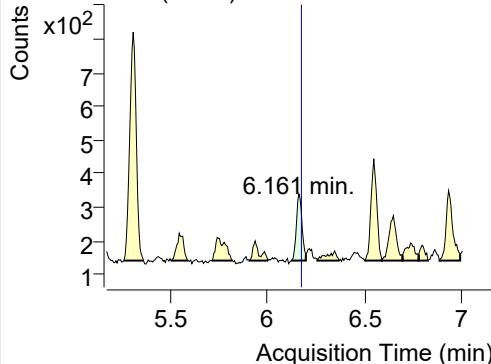
128.0, 127.0, 129.0



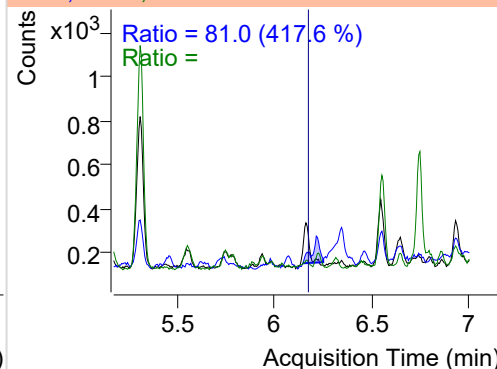
+ SIM (3.020-3.296 min, 52 scans) (\*\*) 220806

**Acenaphthylene**

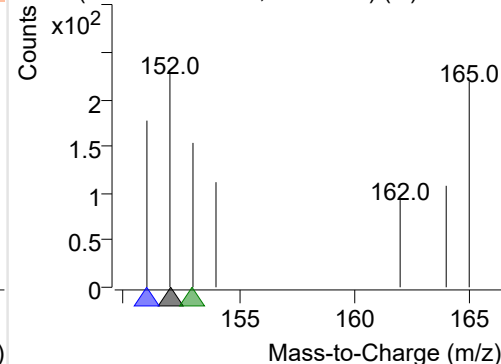
+ Selected Ion (152.0) 220806-PAHs-022.D



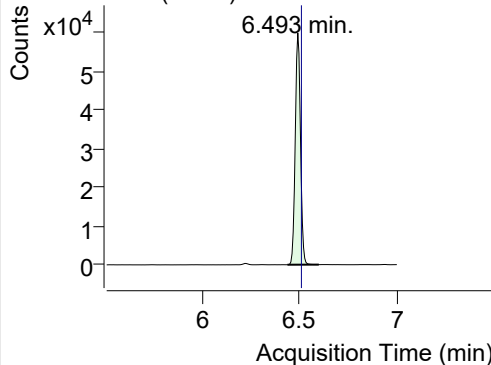
152.0, 151.0, 153.0



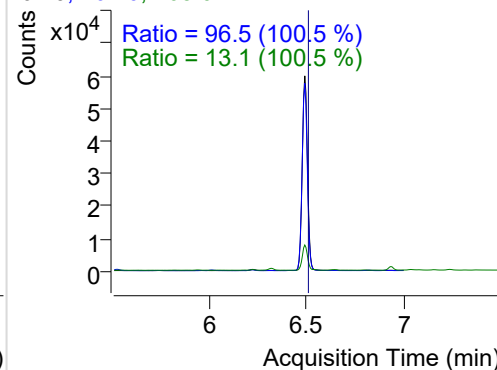
+ SIM (6.122-6.197 min, 13 scans) (\*\*) 220806

**IS-D10-Acenaphthene**

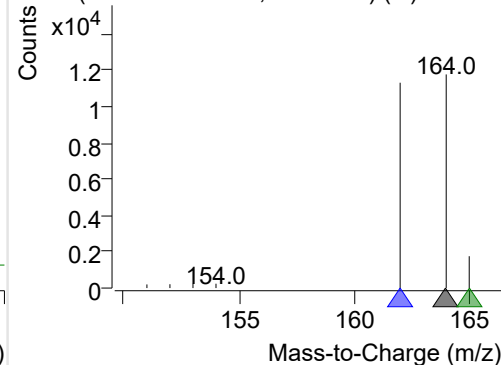
+ Selected Ion (164.0) 220806-PAHs-022.D



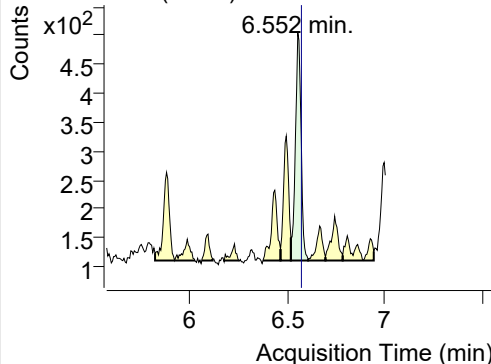
164.0, 162.0, 165.0



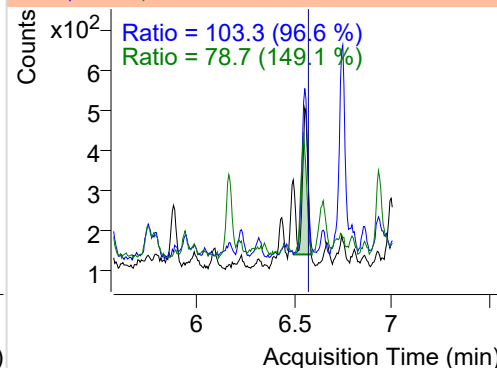
+ SIM (6.440-6.601 min, 27 scans) (\*\*) 220806

**Acenaphthene**

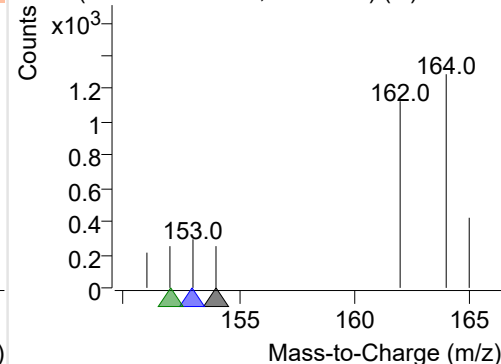
+ Selected Ion (154.0) 220806-PAHs-022.D



154.0, 153.0, 152.0

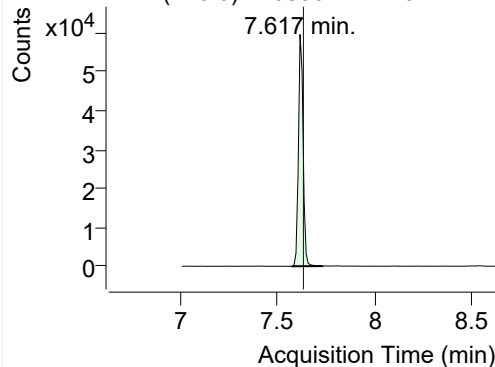


+ SIM (6.516-6.605 min, 16 scans) (\*\*) 220806

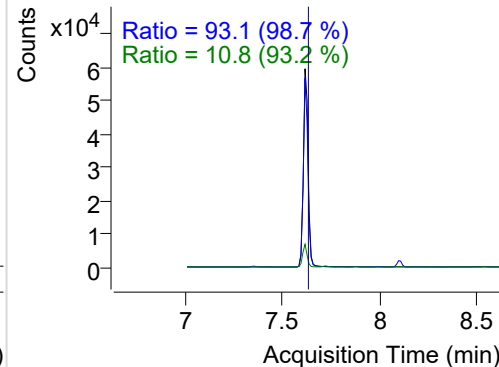


## LSS-D10-Fluorene

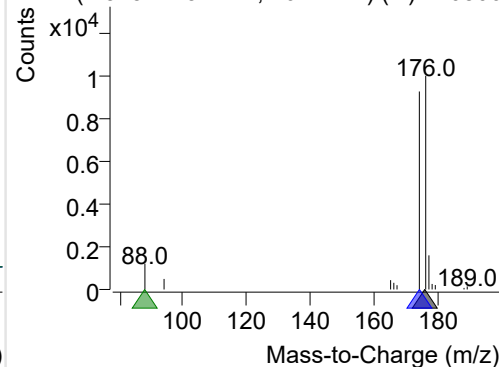
+ Selected Ion (176.0) 220806-PAHs-022.D



176.0, 174.0, 88.0

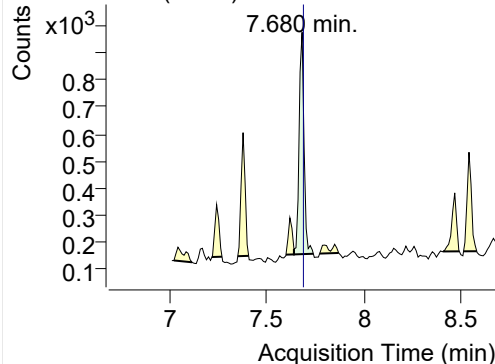


+ SIM (7.575-7.732 min, 16 scans) (\*\*) 220806

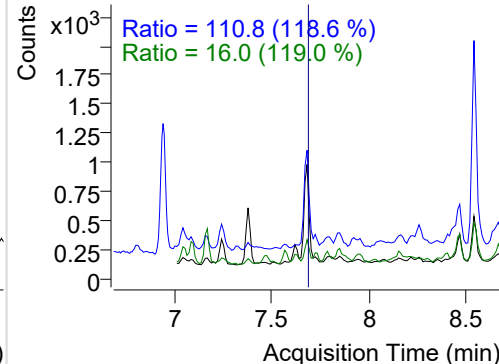


## Fluorene

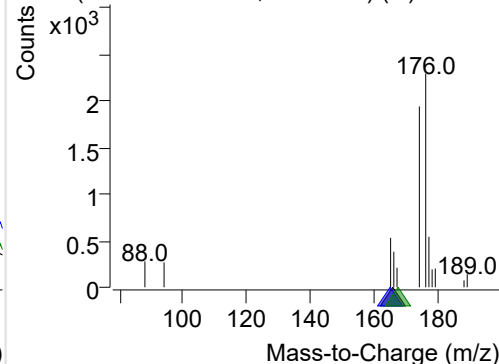
+ Selected Ion (166.0) 220806-PAHs-022.D



166.0, 165.0, 167.0

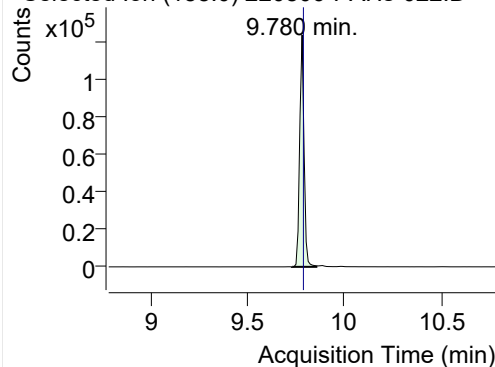


+ SIM (7.638-7.738 min, 10 scans) (\*\*) 220806

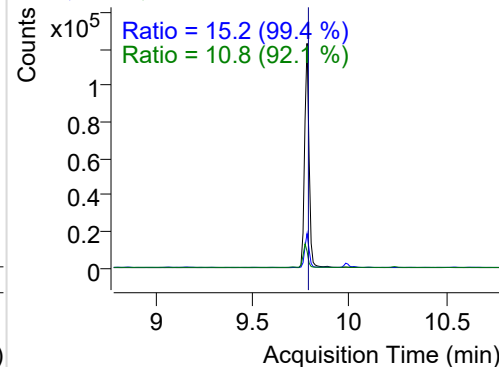


## IS-D10-Phenanthrene

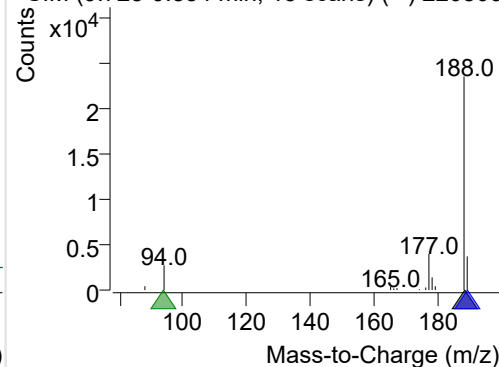
+ Selected Ion (188.0) 220806-PAHs-022.D



188.0, 189.0, 94.0

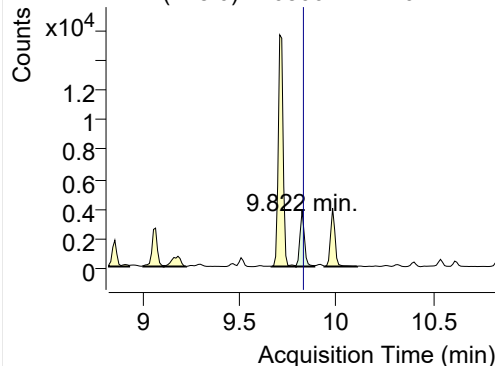


+ SIM (9.728-9.854 min, 13 scans) (\*\*) 220806

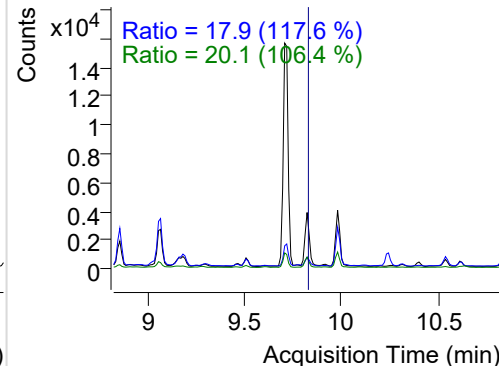


## Phenanthrene

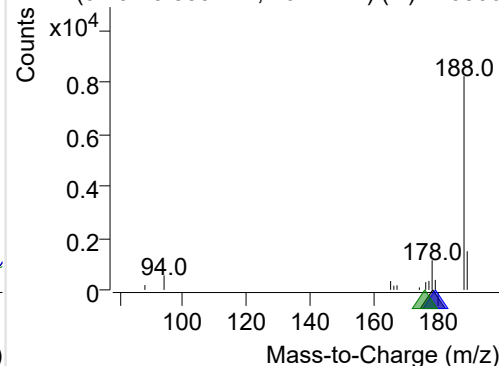
+ Selected Ion (178.0) 220806-PAHs-022.D



178.0, 179.0, 176.0

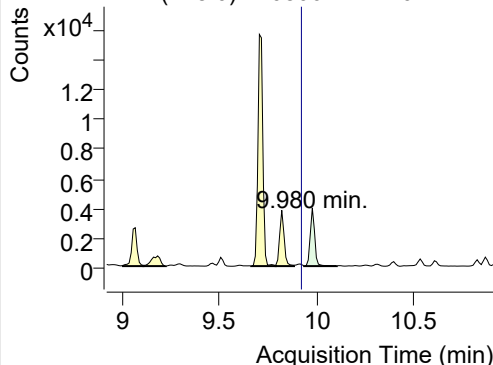


+ SIM (9.791-9.885 min, 10 scans) (\*\*) 220806

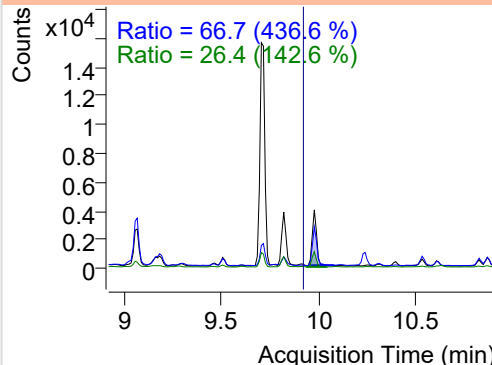


**Anthracene**

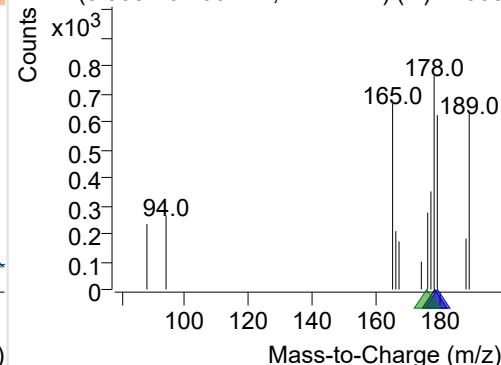
+ Selected Ion (178.0) 220806-PAHs-022.D



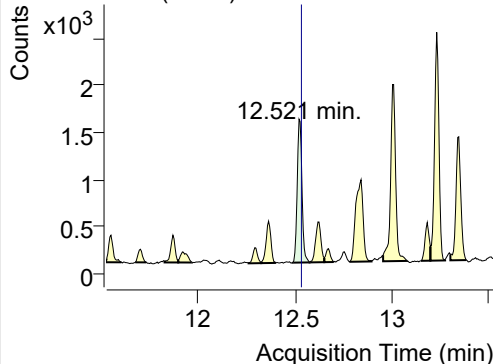
178.0, 179.0, 176.0



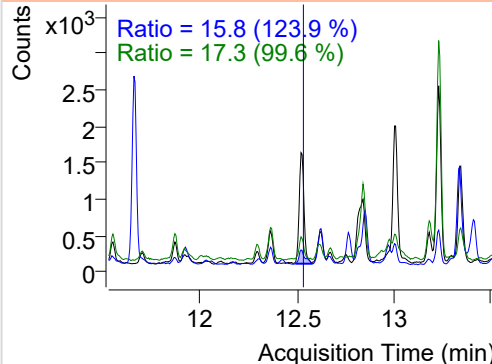
+ SIM (9.938-10.106 min, 17 scans) (\*\*) 22080

**Fluoranthene**

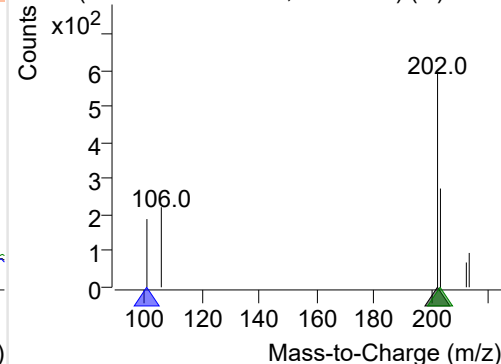
+ Selected Ion (202.0) 220806-PAHs-022.D



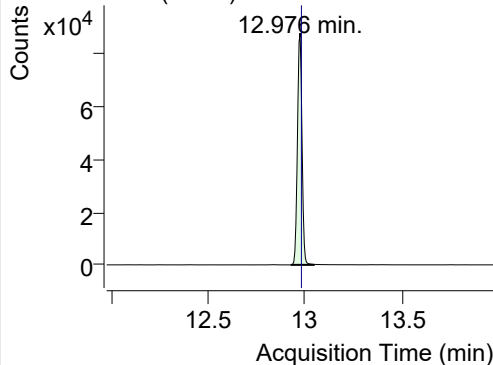
202.0, 101.0, 203.0



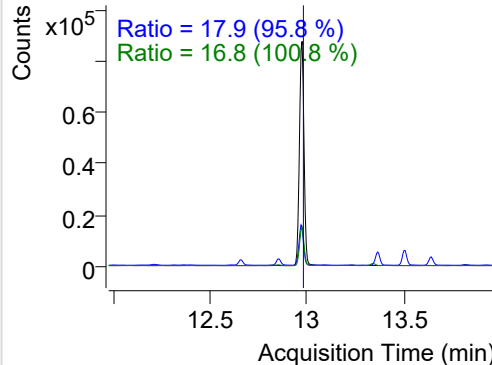
+ SIM (12.488-12.575 min, 17 scans) (\*\*) 2208

**LSS-D10-Pyrene**

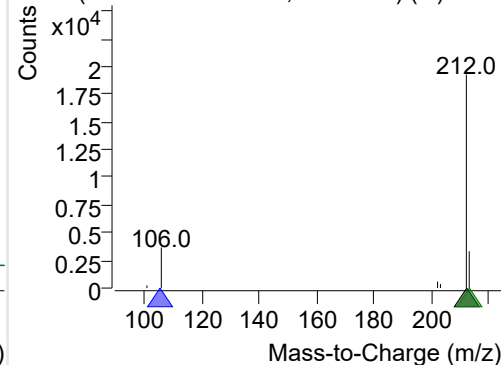
+ Selected Ion (212.0) 220806-PAHs-022.D



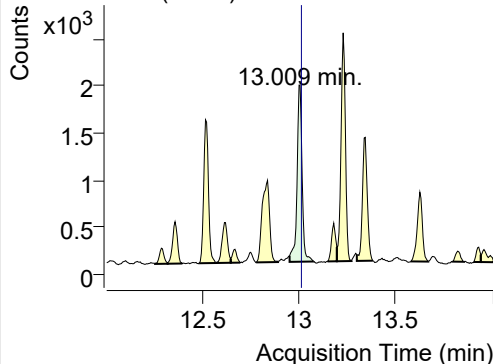
212.0, 106.0, 213.0



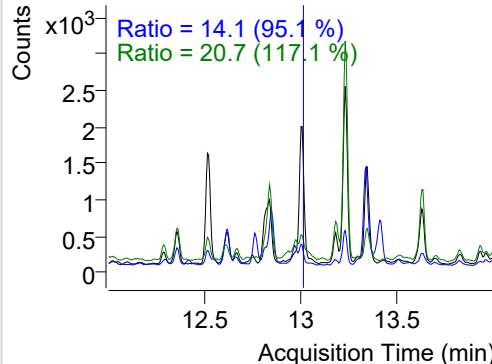
+ SIM (12.927-13.047 min, 23 scans) (\*\*) 2208

**Pyrene**

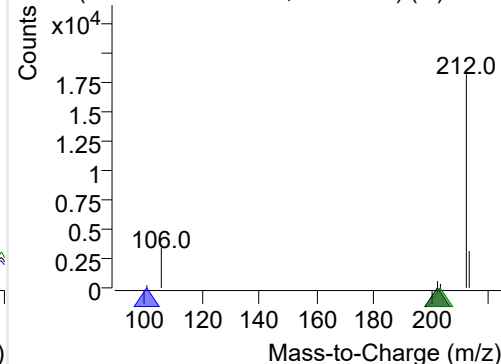
+ Selected Ion (202.0) 220806-PAHs-022.D



202.0, 101.0, 203.0



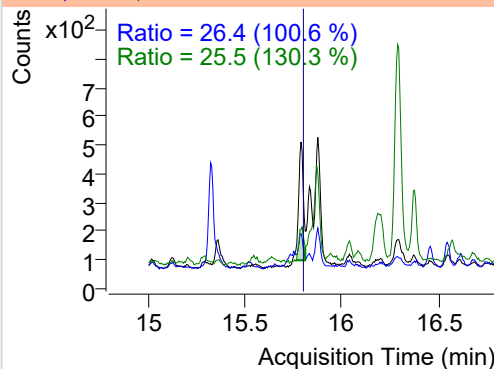
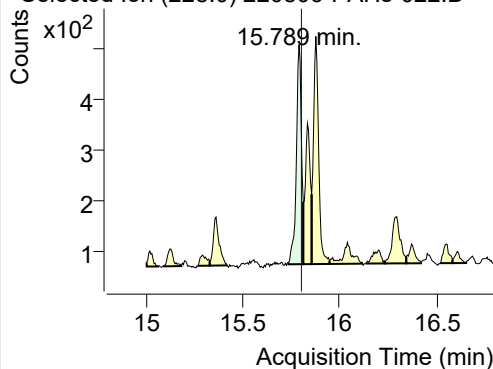
+ SIM (12.955-13.079 min, 24 scans) (\*\*) 2208



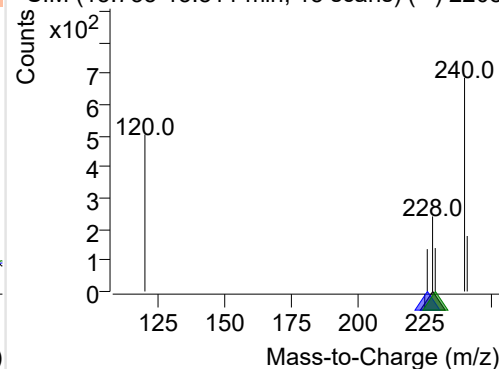
**Benz(a)anthracene**

+ Selected Ion (228.0) 220806-PAHs-022.D

228.0, 226.0, 229.0

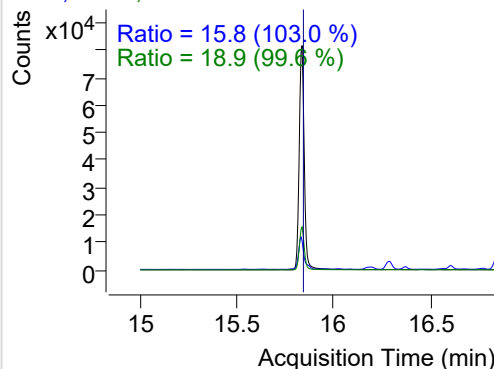
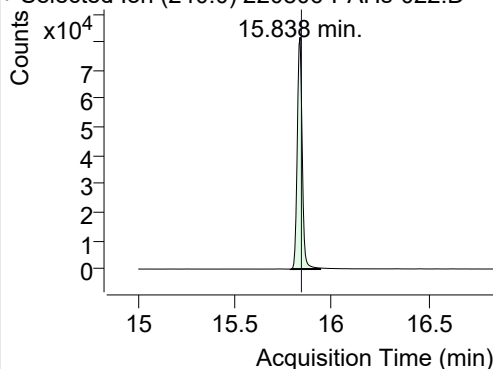


+ SIM (15.735-15.811 min, 15 scans) (\*\*) 2208

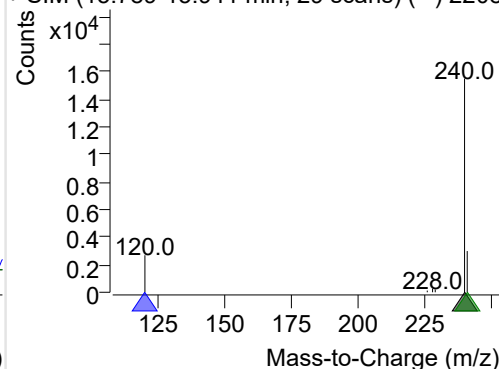
**IS-D12-Chrysene**

+ Selected Ion (240.0) 220806-PAHs-022.D

240.0, 120.0, 241.0

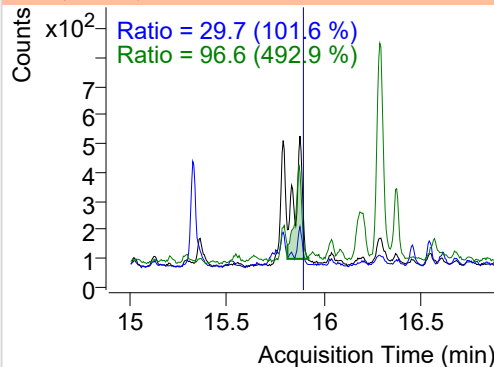
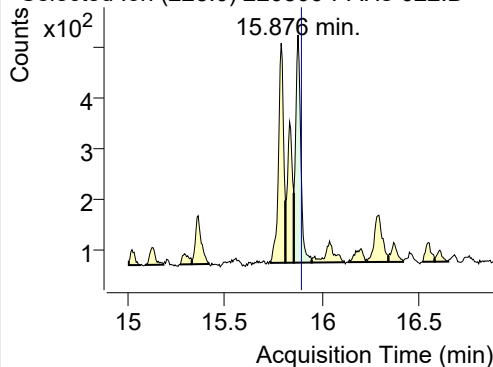


+ SIM (15.789-15.941 min, 29 scans) (\*\*) 2208

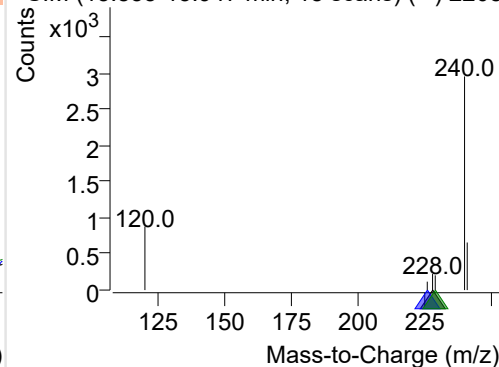
**Chrysene**

+ Selected Ion (228.0) 220806-PAHs-022.D

228.0, 226.0, 229.0

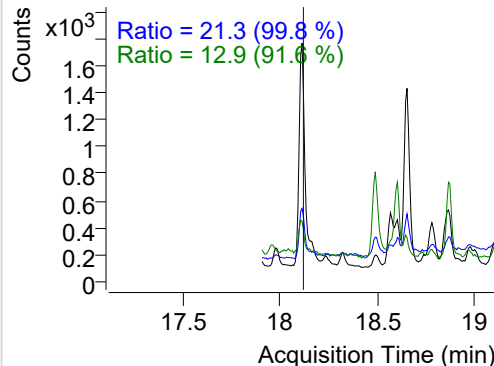
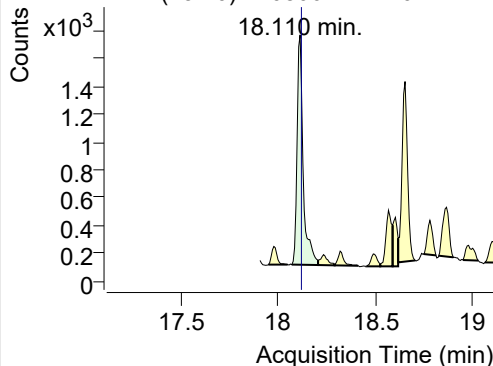


+ SIM (15.855-15.947 min, 18 scans) (\*\*) 2208

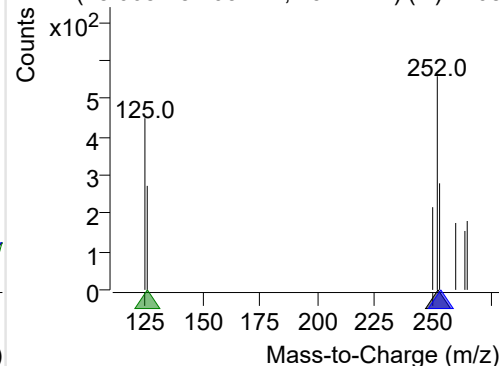
**Benzo(b)fluoranthene**

+ Selected Ion (252.0) 220806-PAHs-022.D

252.0, 253.0, 126.0



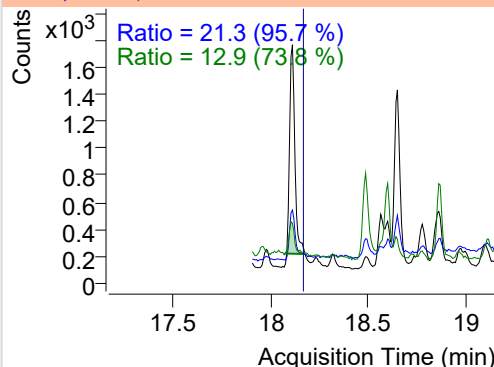
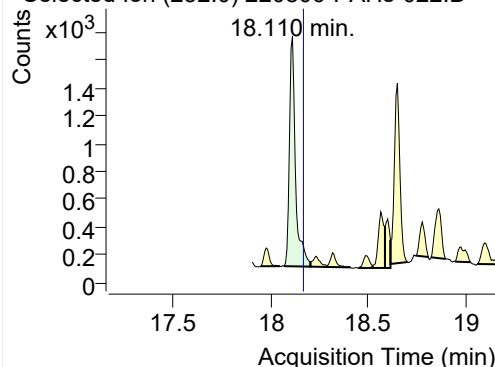
+ SIM (18.068-18.203 min, 19 scans) (\*\*) 2208



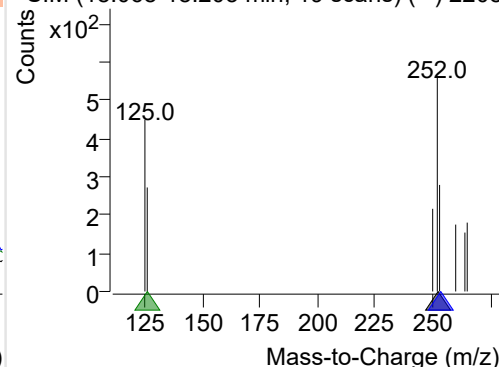
**Benzo(k)fluoranthene**

+ Selected Ion (252.0) 220806-PAHs-022.D

252.0, 253.0, 126.0

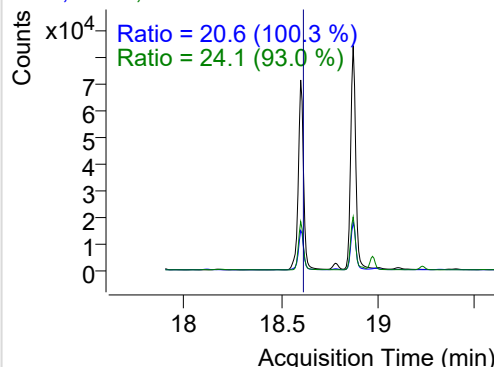
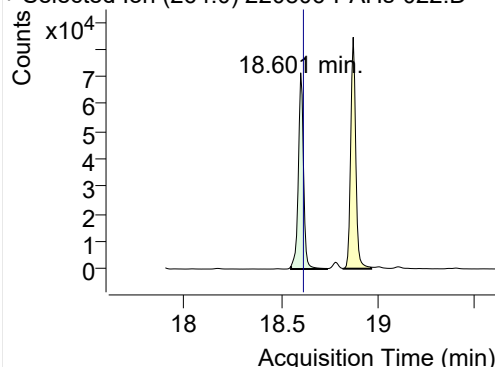


+ SIM (18.068-18.203 min, 19 scans) (\*\*) 2208

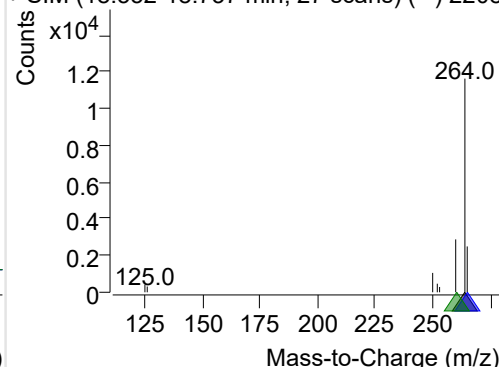
**SS-D12-Benzo(e)pyrene**

+ Selected Ion (264.0) 220806-PAHs-022.D

264.0, 265.0, 260.0

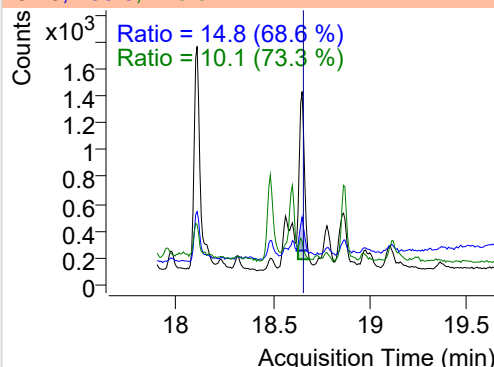
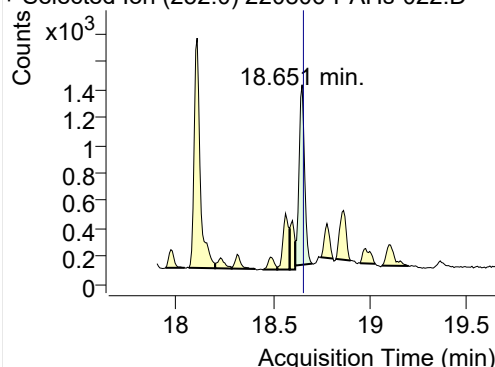


+ SIM (18.552-18.737 min, 27 scans) (\*\*) 2208

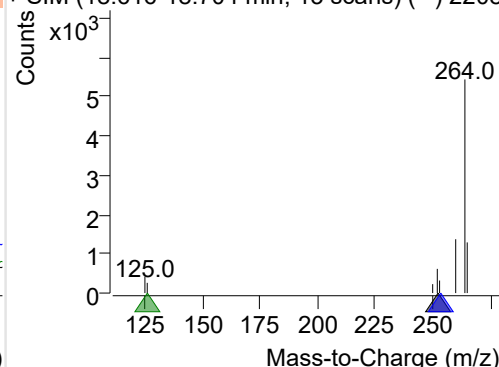
**Benzo(e)pyrene**

+ Selected Ion (252.0) 220806-PAHs-022.D

252.0, 253.0, 126.0

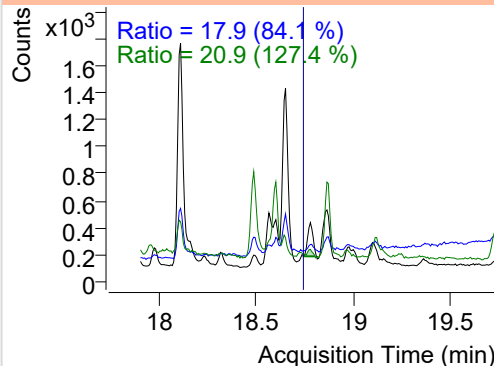
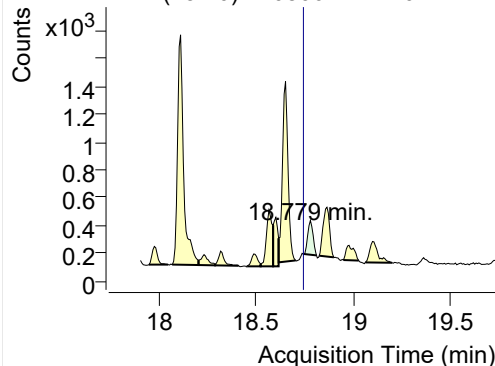


+ SIM (18.616-18.704 min, 13 scans) (\*\*) 2208

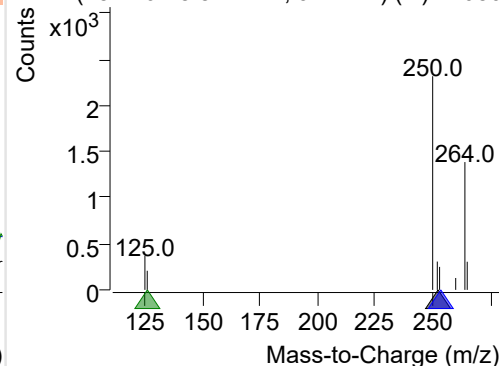
**Benzo(a)pyrene**

+ Selected Ion (252.0) 220806-PAHs-022.D

252.0, 253.0, 126.0

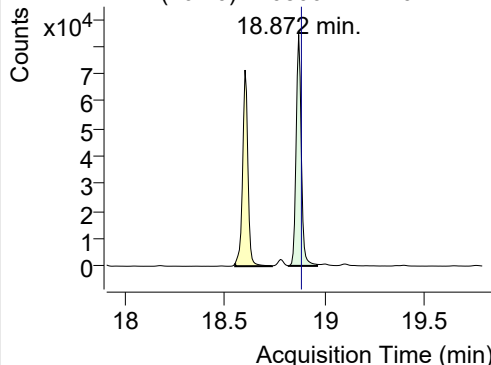


+ SIM (18.746-18.811 min, 9 scans) (\*\*) 22080

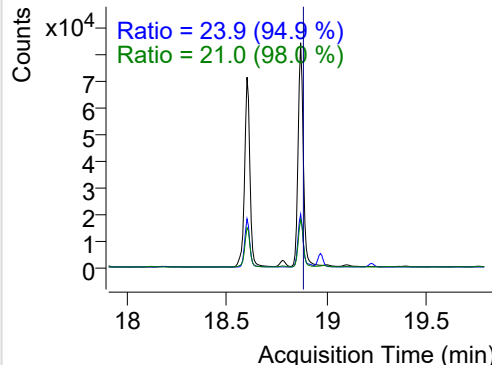


## IS-D12-Perylene

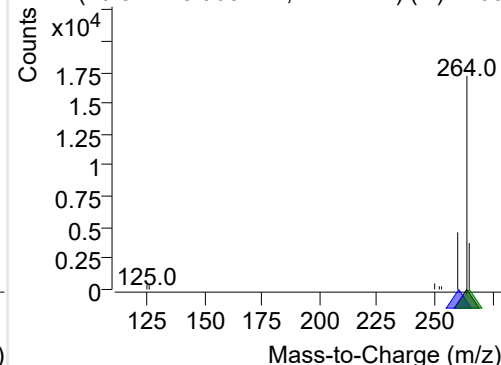
+ Selected Ion (264.0) 220806-PAHs-022.D



264.0, 260.0, 265.0

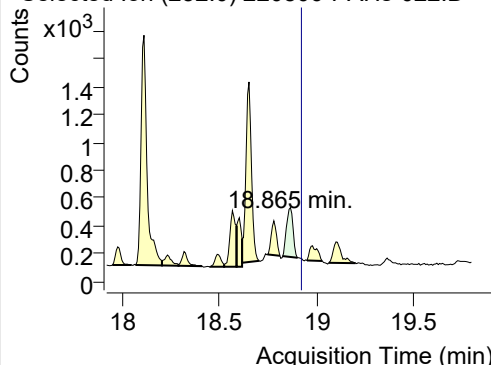


+ SIM (18.822-18.965 min, 21 scans) (\*\*) 2208

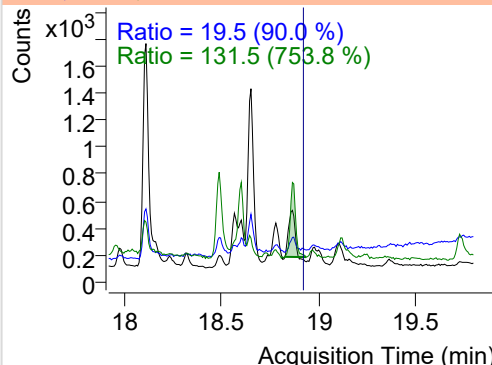


## Perylene

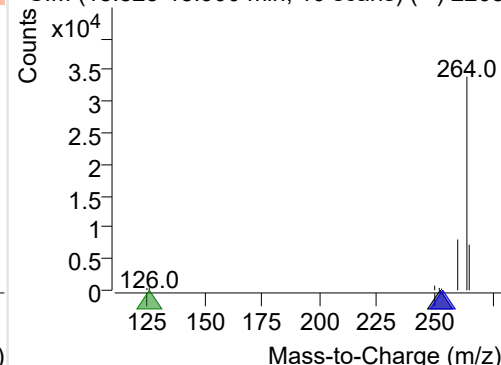
+ Selected Ion (252.0) 220806-PAHs-022.D



252.0, 253.0, 126.0

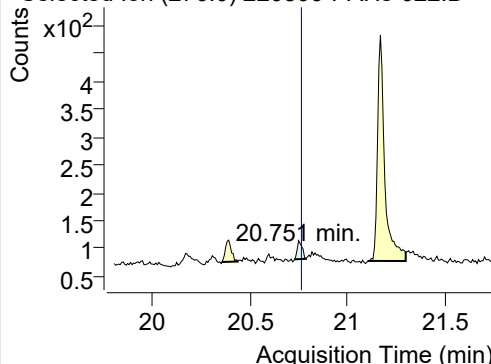


+ SIM (18.825-18.900 min, 10 scans) (\*\*) 2208

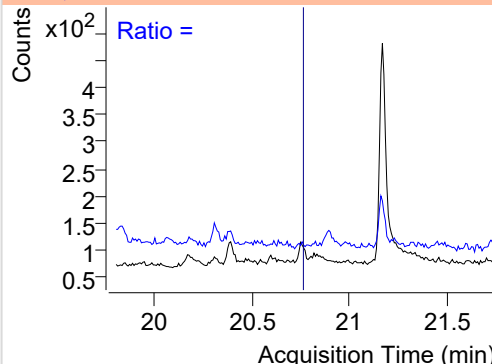


## Indeno(1,2,3-c,d)pyrene

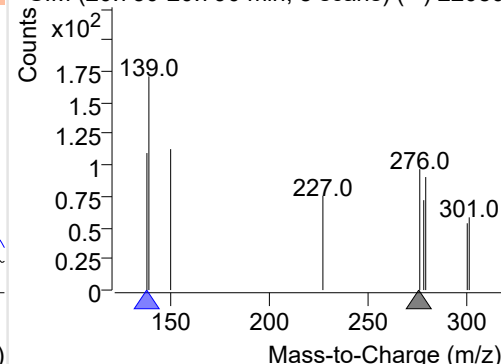
+ Selected Ion (276.0) 220806-PAHs-022.D



276.0, 138.0

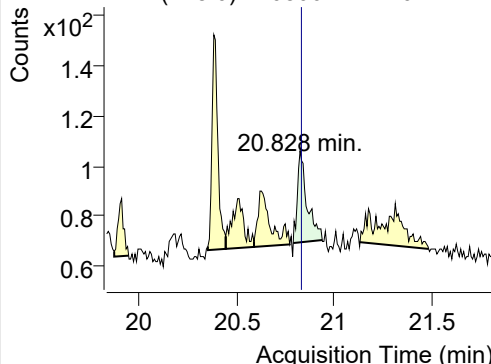


+ SIM (20.730-20.790 min, 8 scans) (\*\*) 22080

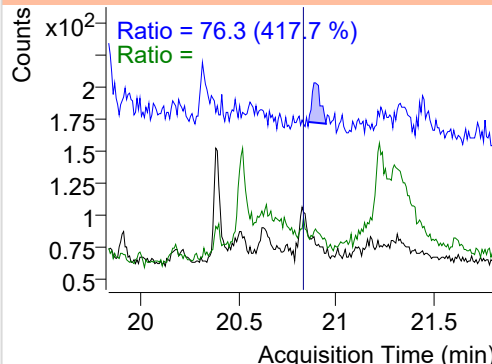


## Dibenz(a,h)anthracene

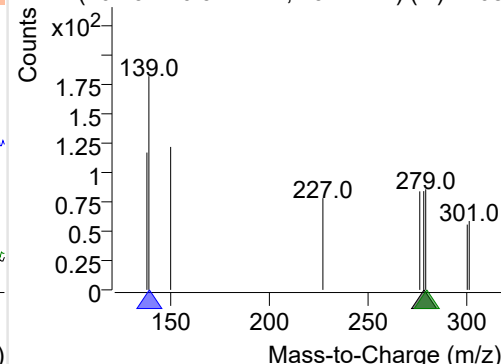
+ Selected Ion (278.0) 220806-PAHs-022.D



278.0, 139.0, 279.0

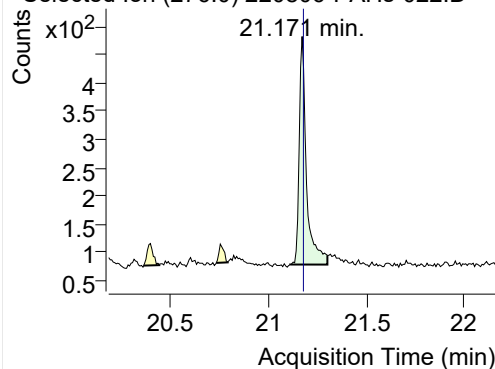


+ SIM (20.792-20.941 min, 19 scans) (\*\*) 2208

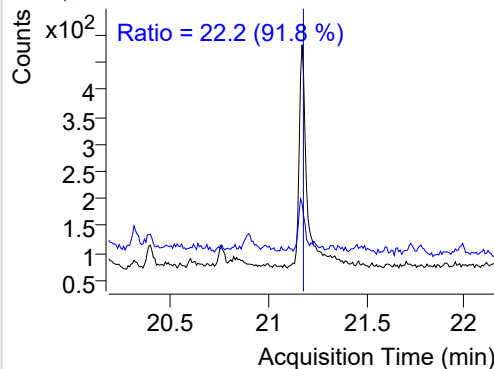


**Benzo(g,h,i)perylene**

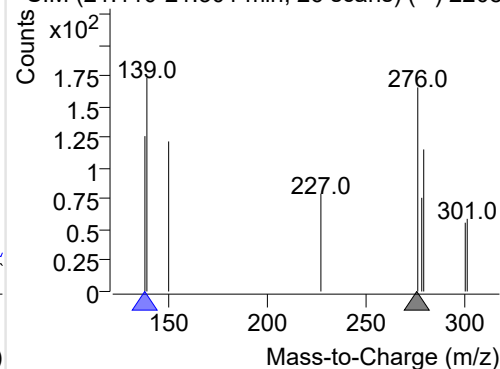
+ Selected Ion (276.0) 220806-PAHs-022.D



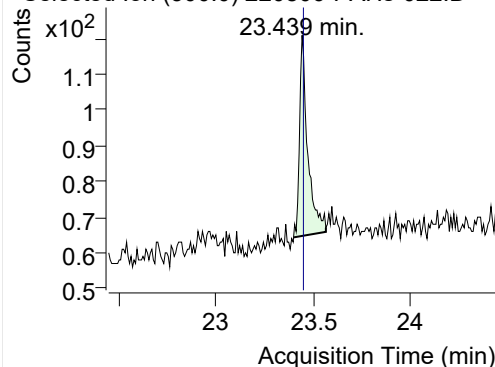
276.0, 138.0



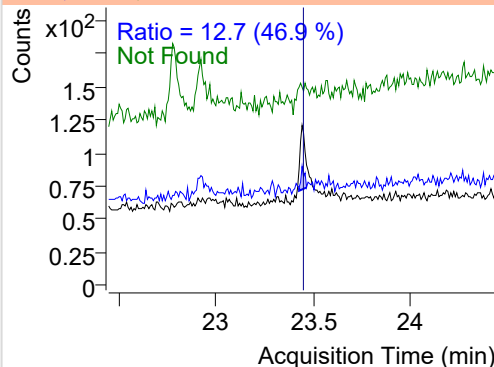
+ SIM (21.110-21.301 min, 26 scans) (\*\*) 2208

**Coronene**

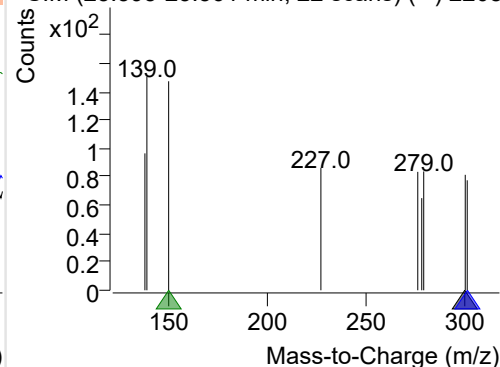
+ Selected Ion (300.0) 220806-PAHs-022.D



300.0, 301.0, 150.0



+ SIM (23.395-23.561 min, 22 scans) (\*\*) 2208





## Quantitative Analysis Sample Based Report

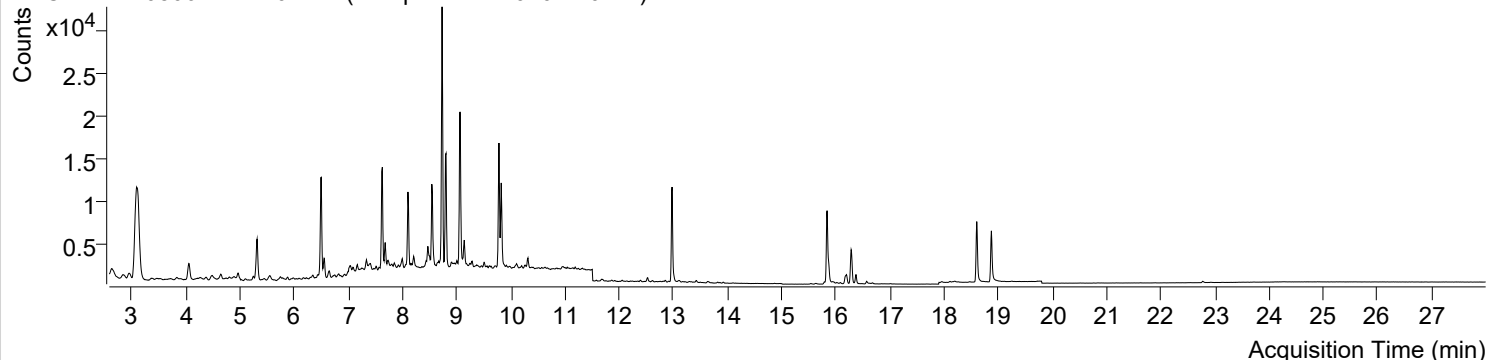


Trusted Answers

|                           |                                                                                            |                       |                        |
|---------------------------|--------------------------------------------------------------------------------------------|-----------------------|------------------------|
| Batch Data Path File Name | D:\MassHunter\GCMS\1\data\PAHs\220806-PAHs-Sample\QuantResults\220806-PAHs-Quant.batch.bin |                       |                        |
| Analysis Time Stamp       | 2022-10-10 오전 10:12:04                                                                     | Analyst Name          | DESKTOP-86B7UPG\5975MS |
| Report Generation Time    | 2022-10-10 오전 10:12:12                                                                     | Report Generator Name | DESKTOP-86B7UPG\5975MS |
| Calibration Last Update   | 2022-12-15 오후 3:30:46                                                                      | Batch State           | Processed              |
| Analyze Quant Version     | 10.2                                                                                       | Report Quant Version  | 10.2                   |
| Acq. Date-Time            | 2022-08-06 오후 10:26:38                                                                     | Data File             | 220806-PAHs-024.D      |
| Type                      | Sample                                                                                     | Name                  | Sample-PM-220704-10DIL |
| Dil.                      | 1                                                                                          | Acq. Method File      | PAHs 19mix-Method      |

## Sample Chromatogram

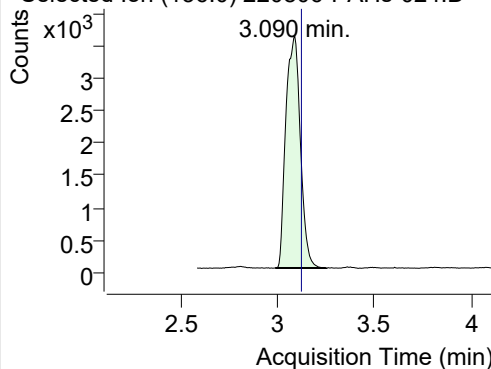
+ TIC SIM 220806-PAHs-024.D (Sample-PM-220704-10DIL)



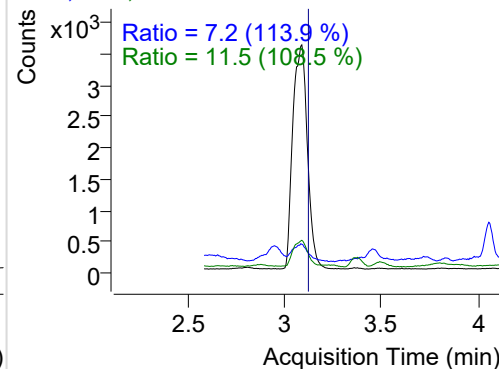
| Name                    | RT     | Transition | Resp. | Height   | Final Conc. Units | Ratio |
|-------------------------|--------|------------|-------|----------|-------------------|-------|
| IS-D8-Naphthalene       | 3.090  | 136.0      | 18563 | 3566.43  | ND ng/ml          | 11.5  |
| Naphthalene             | 3.118  | 128.0      | 30582 | 5907.50  | ND ng/ml          | 13.5  |
| Acenaphthylene          | 6.167  | 152.0      | 197   | 101.07   | ND ng/ml          | 46.7  |
| IS-D10-Acenaphthene     | 6.499  | 164.0      | 10910 | 5639.38  | ND ng/ml          | 96.7  |
| Acenaphthene            | 6.558  | 154.0      | 1329  | 660.40   | ND ng/ml          | 101.0 |
| LSS-D10-Fluorene        | 7.627  | 176.0      | 9543  | 5408.83  | ND ng/ml          | 93.5  |
| Fluorene                | 7.680  | 166.0      | 2274  | 1308.58  | ND ng/ml          | 117.8 |
| IS-D10-Phenanthrene     | 9.780  | 188.0      | 18832 | 11726.37 | ND ng/ml          | 15.4  |
| Phenanthrene            | 9.822  | 178.0      | 10577 | 6217.43  | ND ng/ml          | 18.5  |
| Anthracene              | 9.822  | 178.0      | 10577 | 6217.43  | ND ng/ml          | 18.5  |
| Fluoranthene            | 12.526 | 202.0      | 472   | 289.17   | ND ng/ml          | 67.0  |
| LSS-D10-Pyrene          | 12.976 | 212.0      | 13779 | 8222.87  | ND ng/ml          | 17.6  |
| Pyrene                  | 13.009 | 202.0      | 687   | 376.93   | ND ng/ml          | 21.7  |
| Benz(a)anthracene       | 15.789 | 228.0      | 24    | 14.82    | ND ng/ml          |       |
| IS-D12-Chrysene         | 15.838 | 240.0      | 12582 | 6296.36  | ND ng/ml          | 19.4  |
| Chrysene                | 15.871 | 228.0      | 163   | 49.66    | ND ng/ml          | 40.6  |
| Benzo(b)fluoranthene    | 18.117 | 252.0      | 75    | 16.29    | ND ng/ml          |       |
| Benzo(k)fluoranthene    | 18.117 | 252.0      | 75    | 16.29    | ND ng/ml          |       |
| SS-D12-Benzo(e)pyrene   | 18.601 | 264.0      | 9444  | 4780.50  | ND ng/ml          | 25.3  |
| Benzo(e)pyrene          | 18.651 | 252.0      | 24    | 15.65    | ND ng/ml          |       |
| Benzo(a)pyrene          | 18.651 | 252.0      | 24    | 15.65    | ND ng/ml          |       |
| IS-D12-Perylene         | 18.872 | 264.0      | 8293  | 4075.12  | ND ng/ml          | 23.9  |
| Perylene                | 18.872 | 252.0      | 19    | 12.15    | ND ng/ml          |       |
| Indeno(1,2,3-c,d)pyrene | 20.766 | 276.0      | 20    | 9.77     | ND ng/ml          |       |
| Dibenz(a,h)anthracene   | 20.835 | 278.0      | 45    | 10.48    | ND ng/ml          |       |
| Benzo(g,h,i)perylene    | 21.171 | 276.0      | 23    | 9.30     | ND ng/ml          |       |
| Coronene                | 23.439 | 300.0      | 39    | 10.09    | ND ng/ml          |       |

## IS-D8-Naphthalene

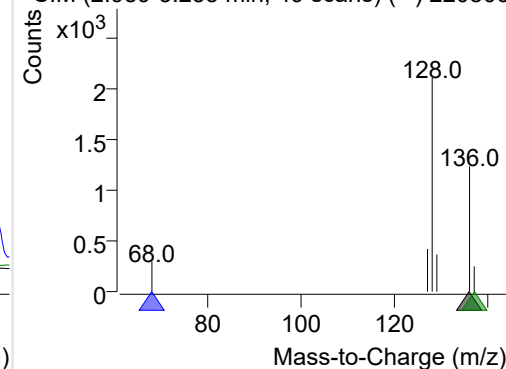
+ Selected Ion (136.0) 220806-PAHs-024.D



136.0, 68.0, 137.0

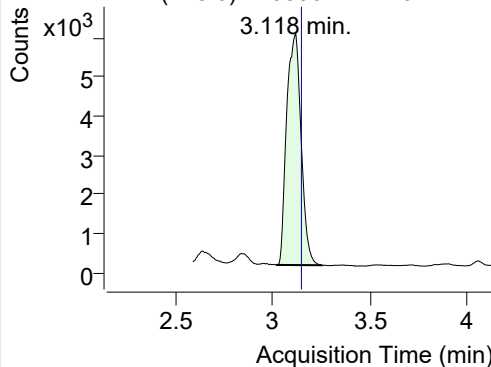


+ SIM (2.989-3.253 min, 49 scans) (\*\*) 220806

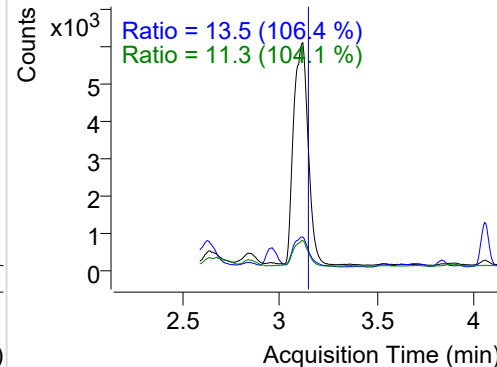


**Naphthalene**

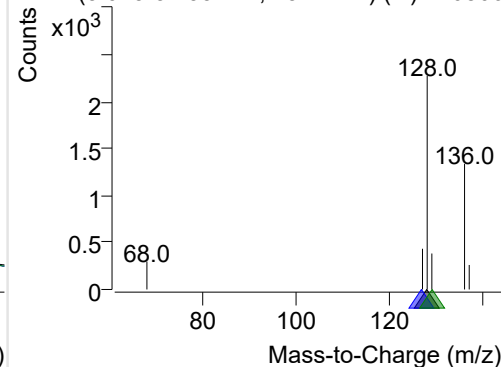
+ Selected Ion (128.0) 220806-PAHs-024.D



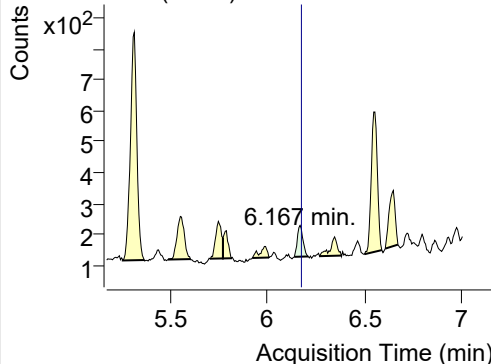
128.0, 127.0, 129.0



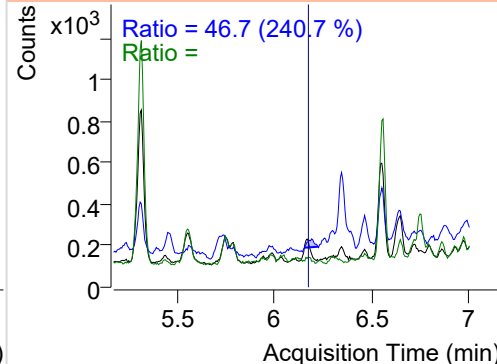
+ SIM (3.015-3.253 min, 45 scans) (\*\*) 220806

**Acenaphthylene**

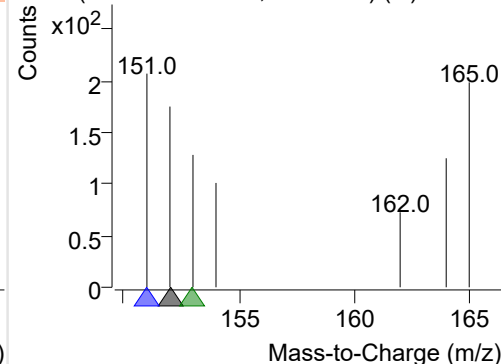
+ Selected Ion (152.0) 220806-PAHs-024.D



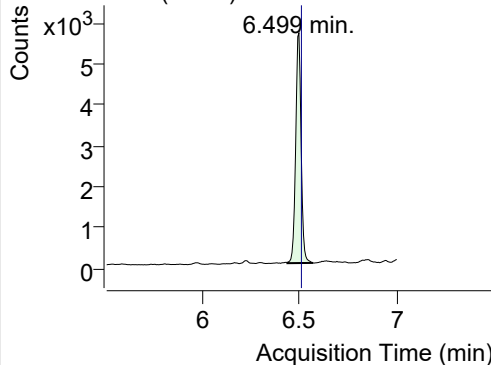
152.0, 151.0, 153.0



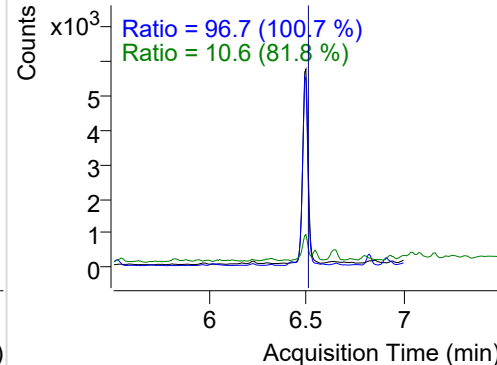
+ SIM (6.138-6.209 min, 12 scans) (\*\*) 220806

**IS-D10-Acenaphthene**

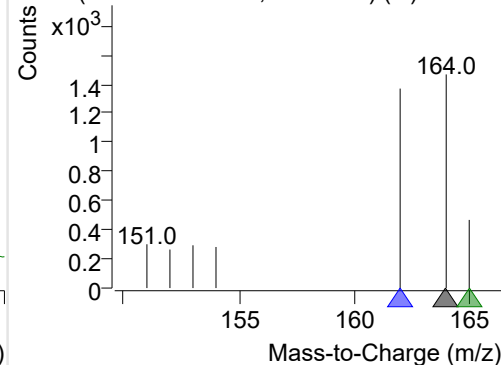
+ Selected Ion (164.0) 220806-PAHs-024.D



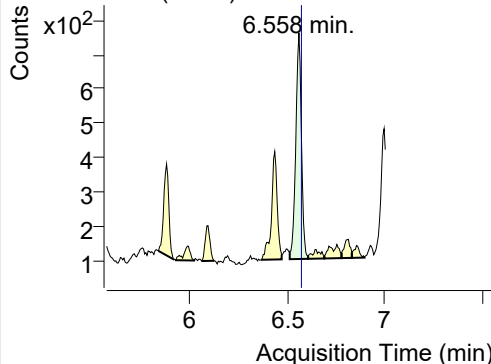
164.0, 162.0, 165.0



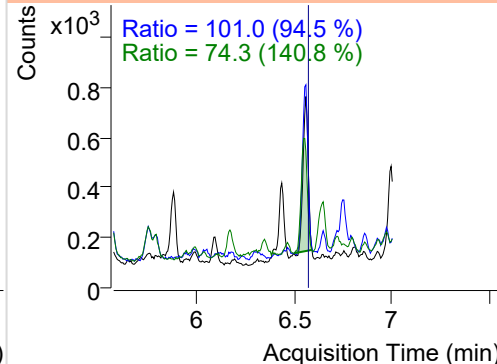
+ SIM (6.439-6.571 min, 23 scans) (\*\*) 220806

**Acenaphthene**

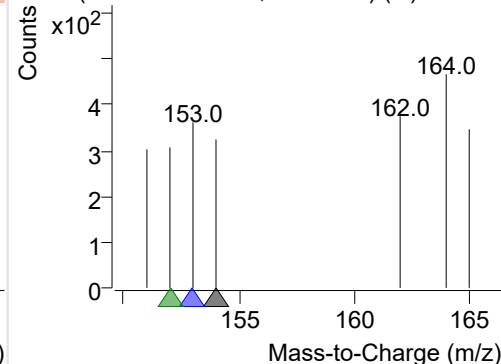
+ Selected Ion (154.0) 220806-PAHs-024.D



154.0, 153.0, 152.0

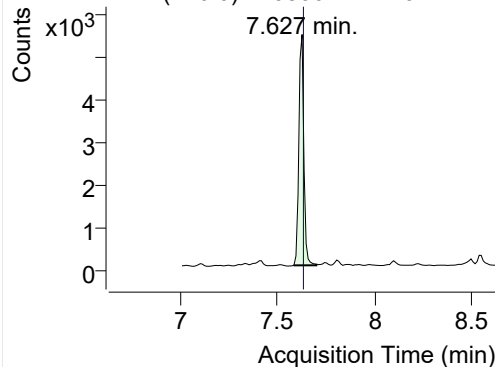


+ SIM (6.510-6.605 min, 17 scans) (\*\*) 220806

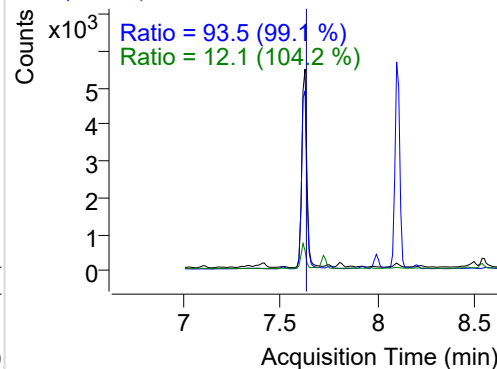


## LSS-D10-Fluorene

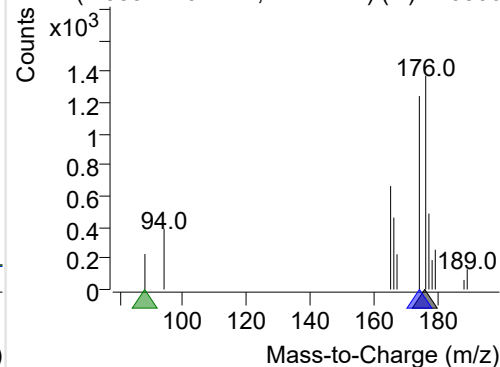
+ Selected Ion (176.0) 220806-PAHs-024.D



176.0, 174.0, 88.0

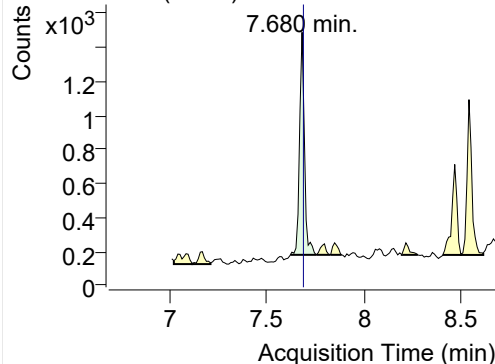


+ SIM (7.583-7.701 min, 12 scans) (\*\*) 220806

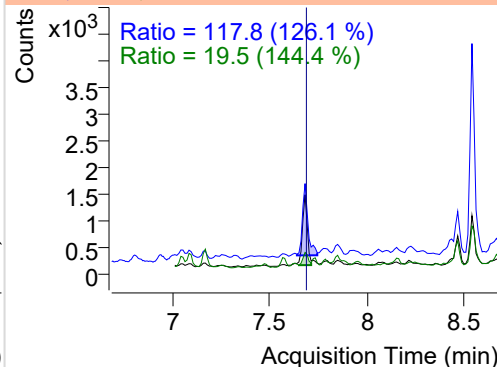


## Fluorene

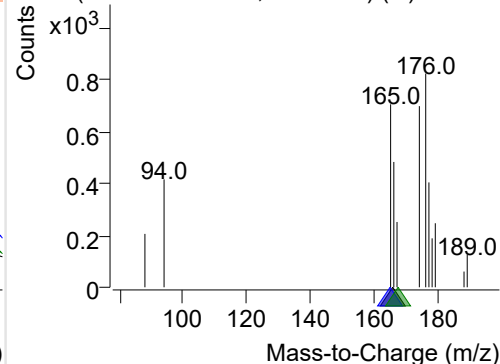
+ Selected Ion (166.0) 220806-PAHs-024.D



166.0, 165.0, 167.0

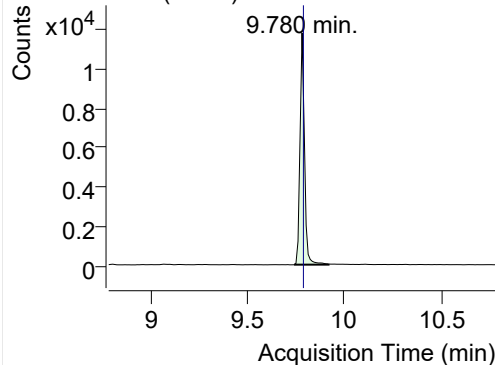


+ SIM (7.619-7.752 min, 12 scans) (\*\*) 220806

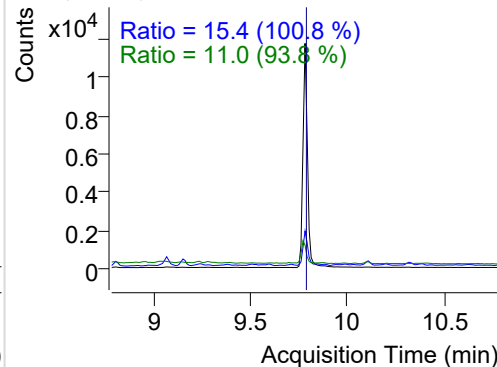


## IS-D10-Phenanthrene

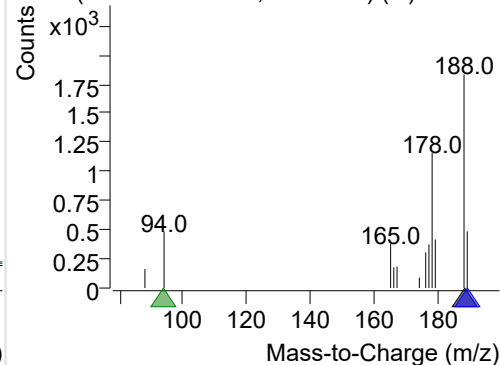
+ Selected Ion (188.0) 220806-PAHs-024.D



188.0, 189.0, 94.0

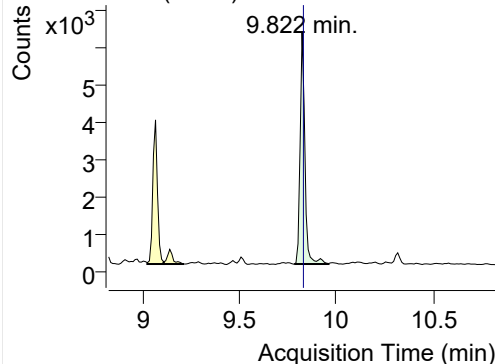


+ SIM (9.739-9.916 min, 17 scans) (\*\*) 220806

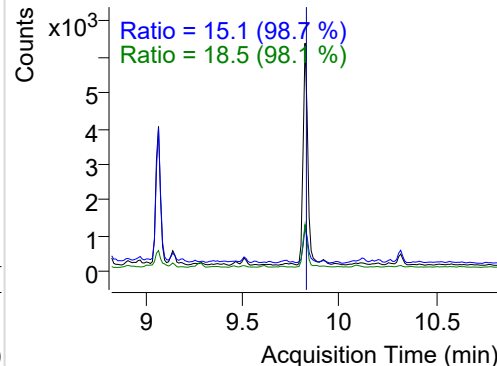


## Phenanthrene

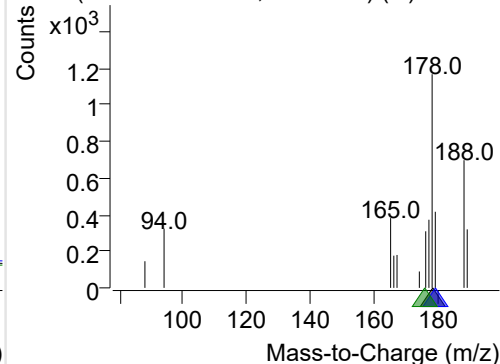
+ Selected Ion (178.0) 220806-PAHs-024.D



178.0, 179.0, 176.0

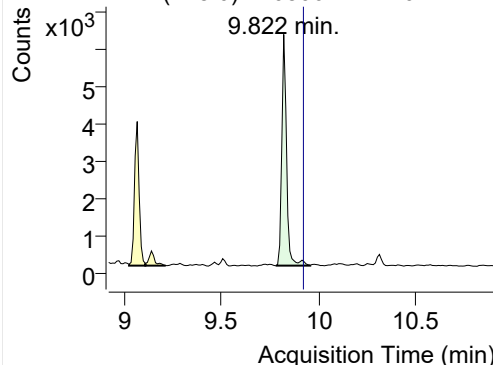


+ SIM (9.781-9.958 min, 17 scans) (\*\*) 220806

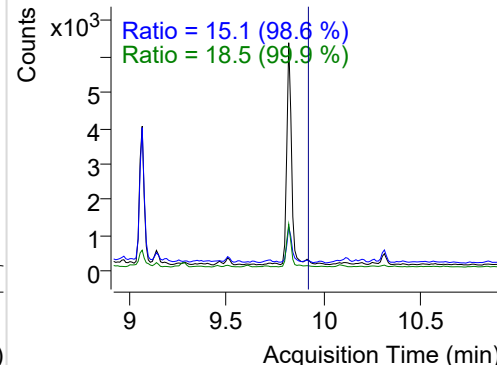


**Anthracene**

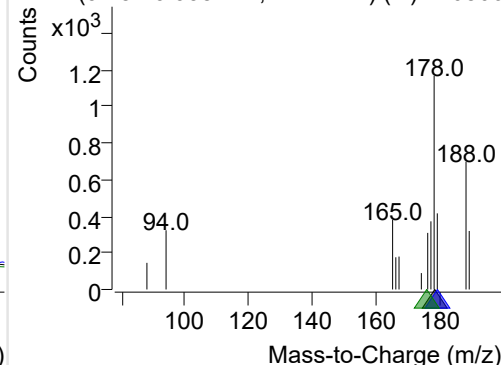
+ Selected Ion (178.0) 220806-PAHs-024.D



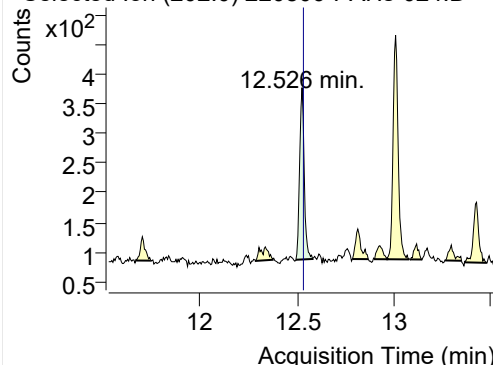
178.0, 179.0, 176.0



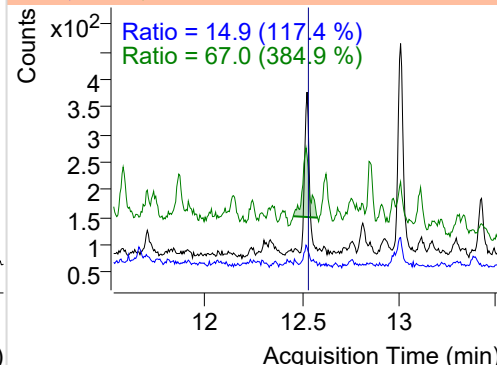
+ SIM (9.781-9.958 min, 17 scans) (\*\*) 220806

**Fluoranthene**

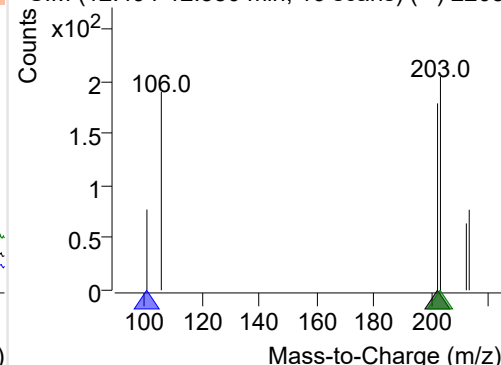
+ Selected Ion (202.0) 220806-PAHs-024.D



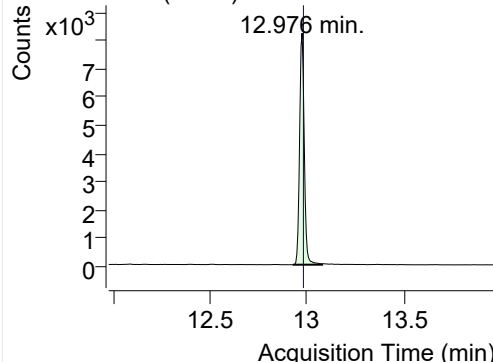
202.0, 101.0, 203.0



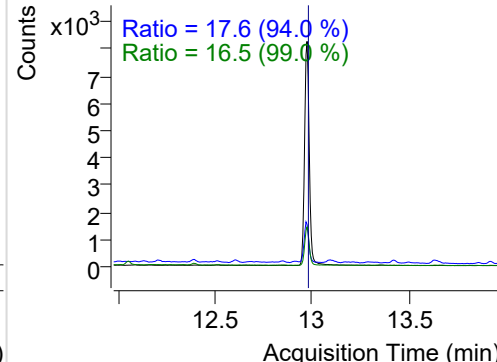
+ SIM (12.494-12.580 min, 16 scans) (\*\*) 2208

**LSS-D10-Pyrene**

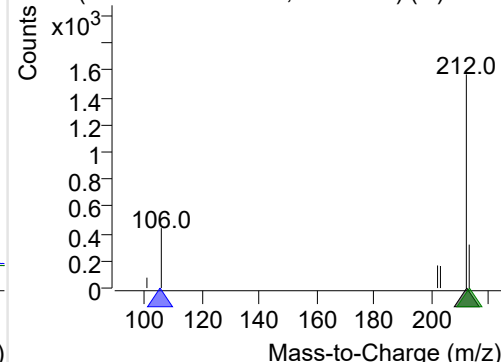
+ Selected Ion (212.0) 220806-PAHs-024.D



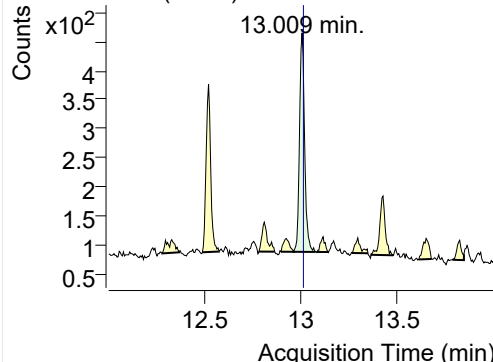
212.0, 106.0, 213.0



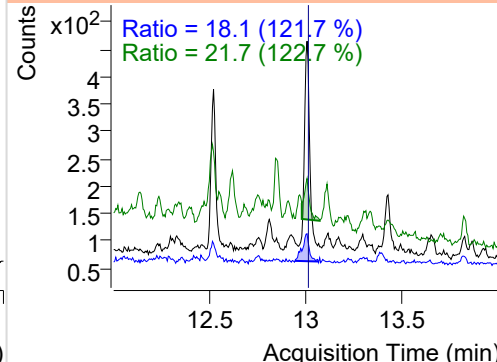
+ SIM (12.928-13.079 min, 28 scans) (\*\*) 2208

**Pyrene**

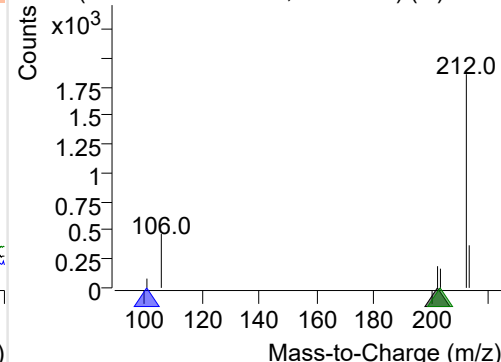
+ Selected Ion (202.0) 220806-PAHs-024.D



202.0, 101.0, 203.0



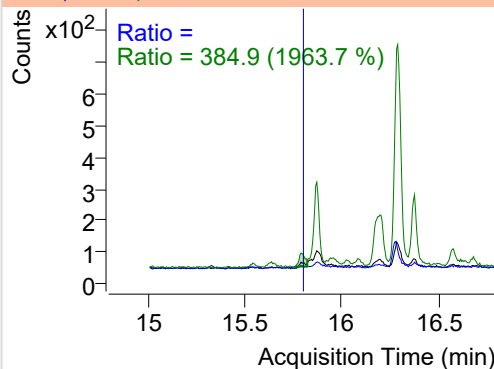
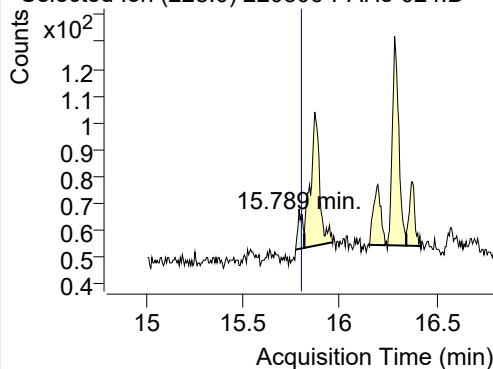
+ SIM (12.965-13.074 min, 21 scans) (\*\*) 2208



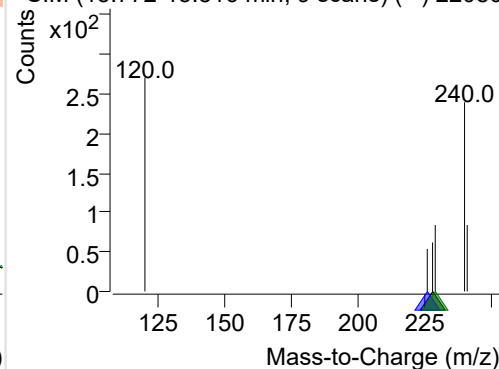
**Benz(a)anthracene**

+ Selected Ion (228.0) 220806-PAHs-024.D

228.0, 226.0, 229.0

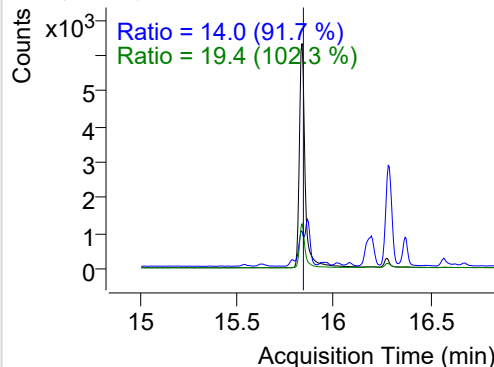
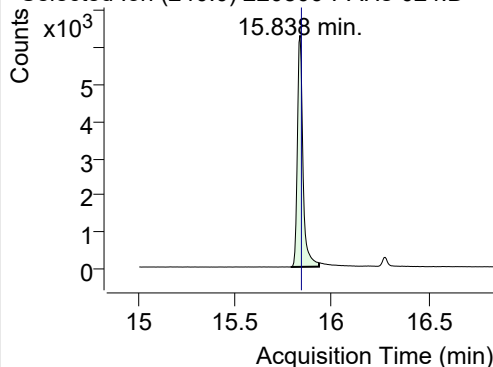


+ SIM (15.772-15.816 min, 9 scans) (\*\*) 22080

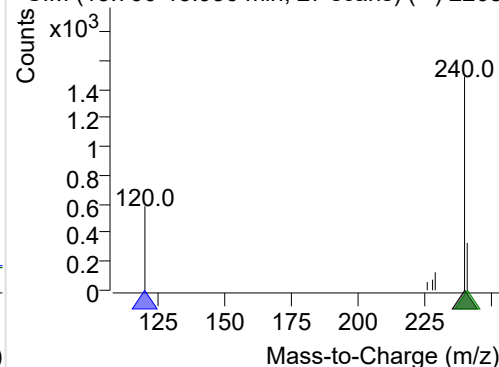
**IS-D12-Chrysene**

+ Selected Ion (240.0) 220806-PAHs-024.D

240.0, 120.0, 241.0

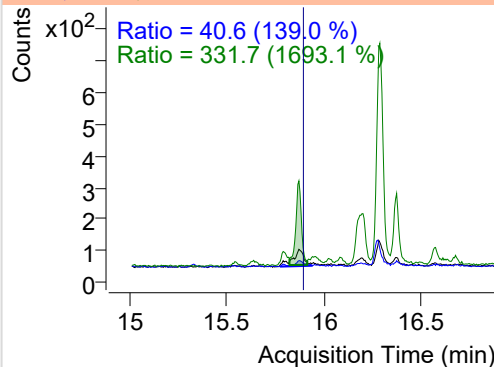
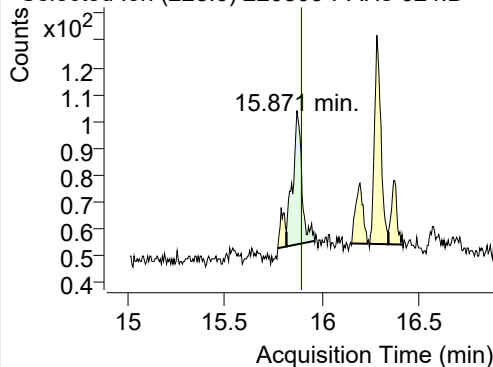


+ SIM (15.790-15.936 min, 27 scans) (\*\*) 2208

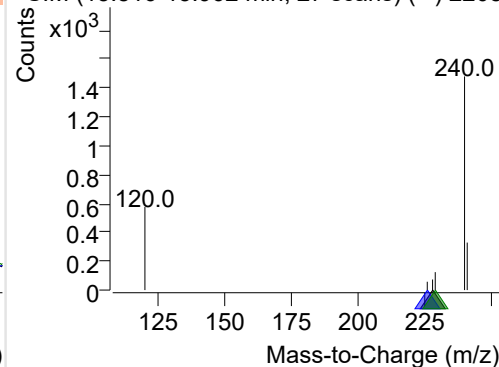
**Chrysene**

+ Selected Ion (228.0) 220806-PAHs-024.D

228.0, 226.0, 229.0

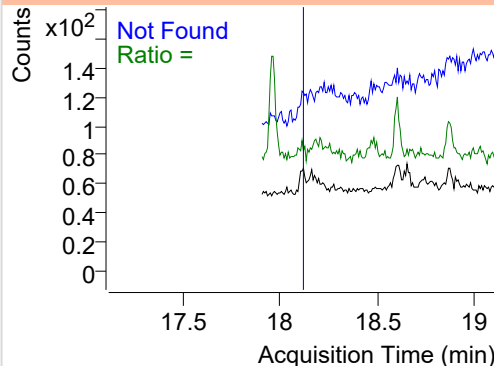
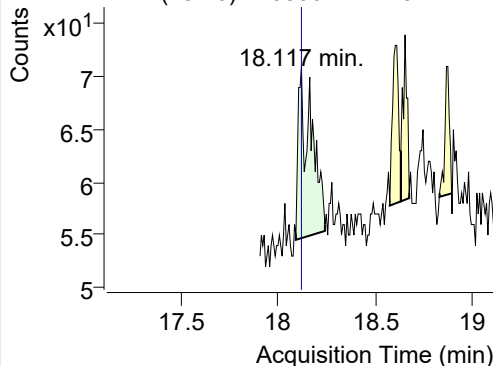


+ SIM (15.816-15.962 min, 27 scans) (\*\*) 2208

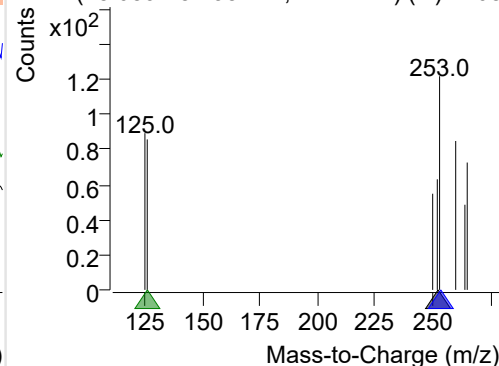
**Benzo(b)fluoranthene**

+ Selected Ion (252.0) 220806-PAHs-024.D

252.0, 253.0, 126.0



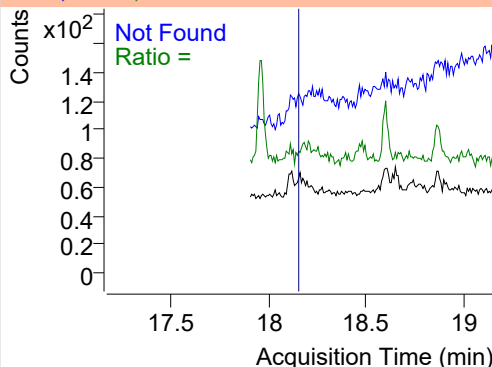
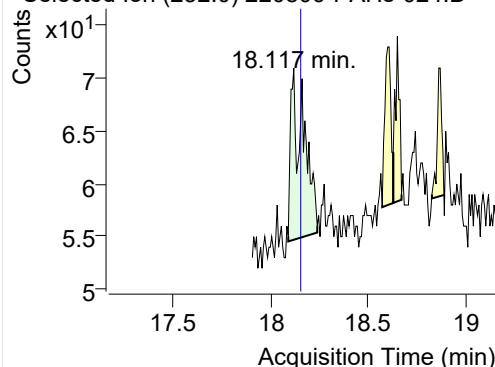
+ SIM (18.089-18.238 min, 22 scans) (\*\*) 2208



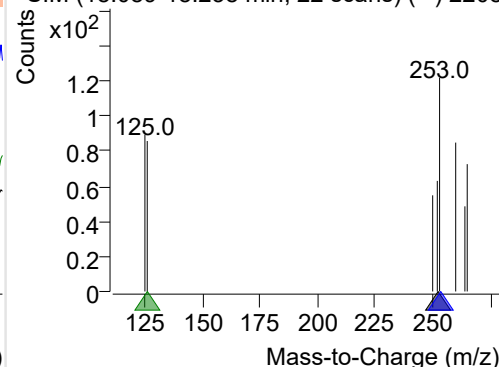
**Benzo(k)fluoranthene**

+ Selected Ion (252.0) 220806-PAHs-024.D

252.0, 253.0, 126.0

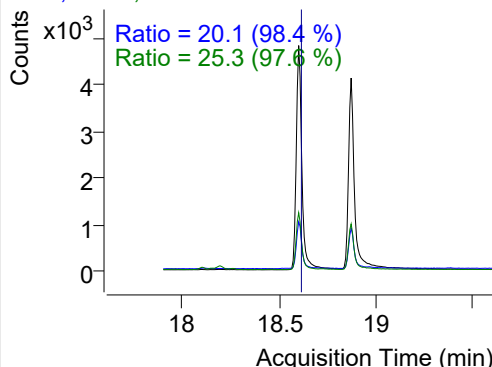
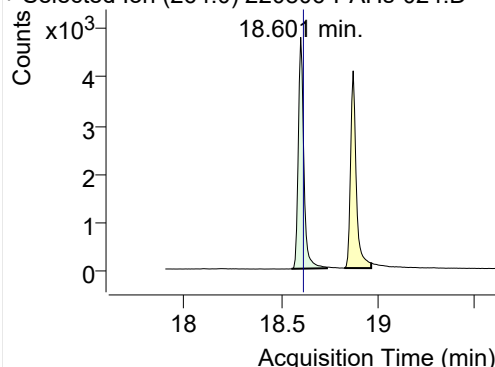


+ SIM (18.089-18.238 min, 22 scans) (\*\*) 2208

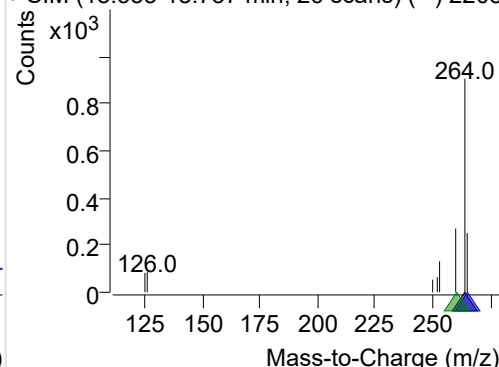
**SS-D12-Benzo(e)pyrene**

+ Selected Ion (264.0) 220806-PAHs-024.D

264.0, 265.0, 260.0

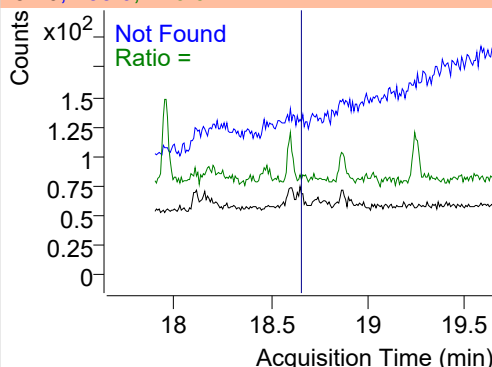
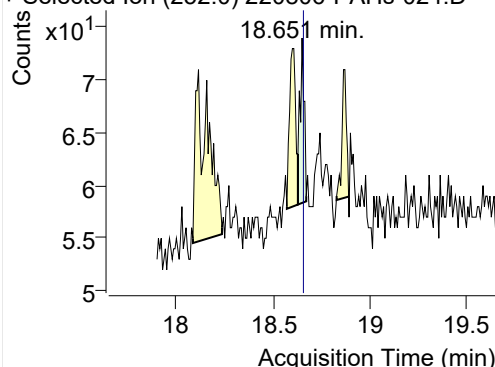


+ SIM (18.553-18.737 min, 26 scans) (\*\*) 2208

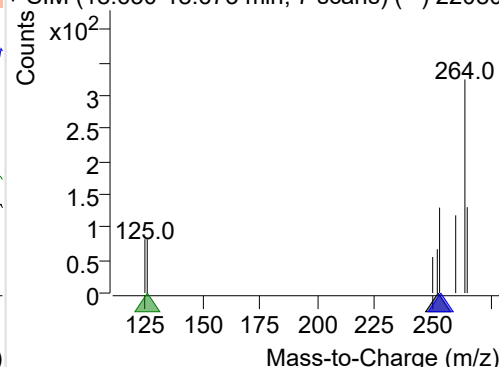
**Benzo(e)pyrene**

+ Selected Ion (252.0) 220806-PAHs-024.D

252.0, 253.0, 126.0

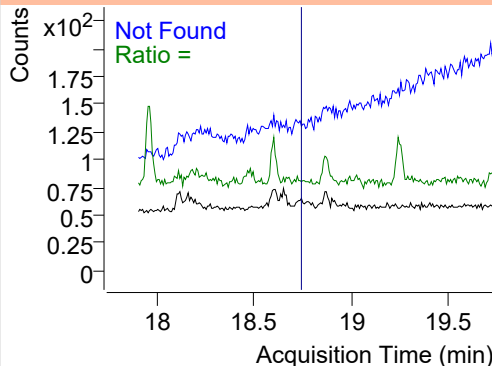
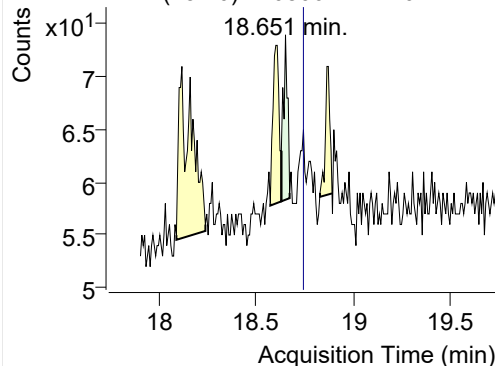


+ SIM (18.630-18.673 min, 7 scans) (\*\*) 22080

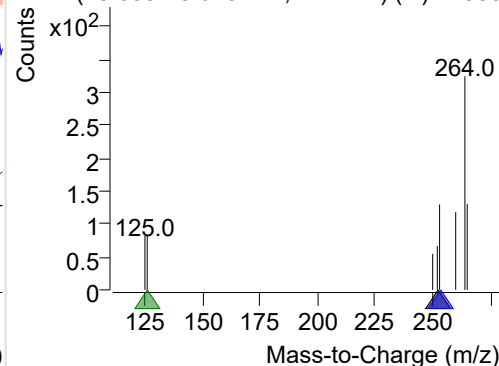
**Benzo(a)pyrene**

+ Selected Ion (252.0) 220806-PAHs-024.D

252.0, 253.0, 126.0

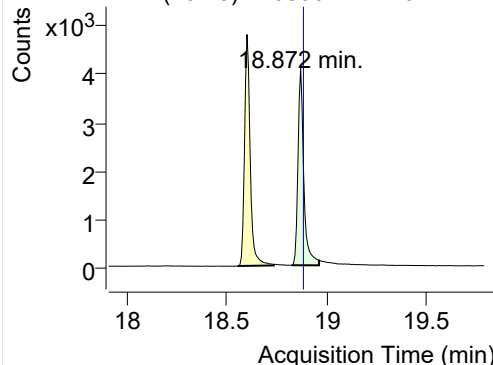


+ SIM (18.630-18.673 min, 7 scans) (\*\*) 22080

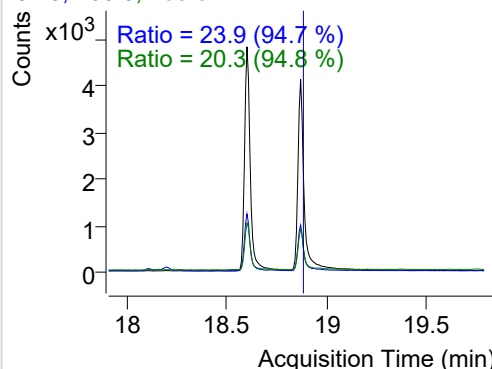


## IS-D12-Perylene

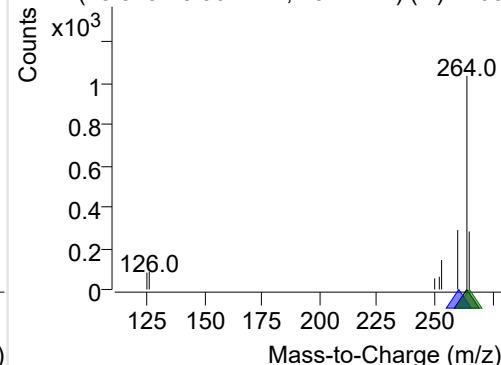
+ Selected Ion (264.0) 220806-PAHs-024.D



264.0, 260.0, 265.0

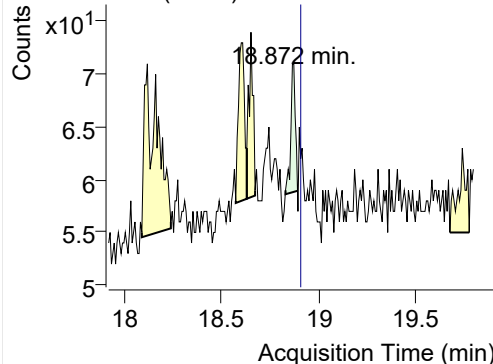


+ SIM (18.825-18.964 min, 20 scans) (\*\*) 2208

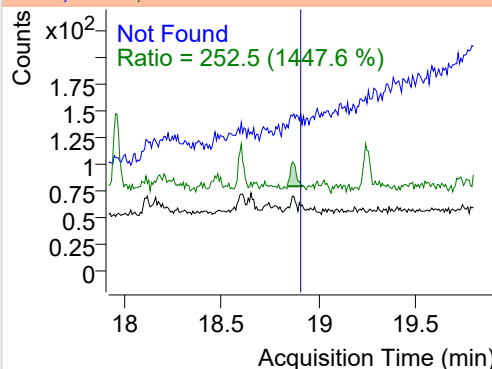


## Perylene

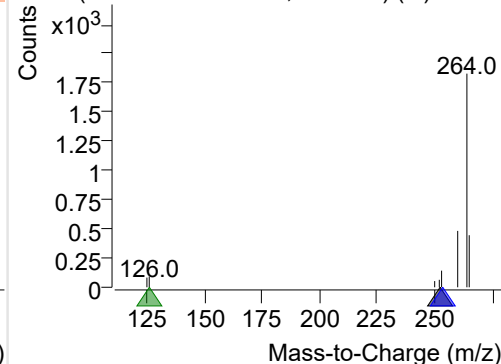
+ Selected Ion (252.0) 220806-PAHs-024.D



252.0, 253.0, 126.0

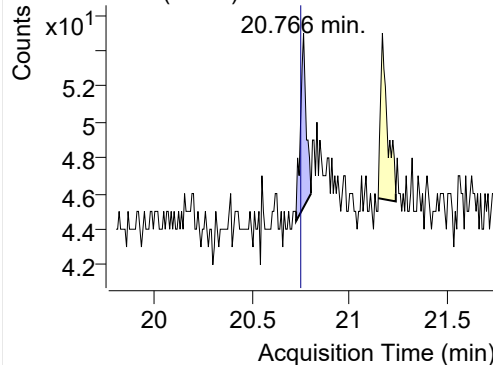


+ SIM (18.829-18.891 min, 9 scans) (\*\*) 22080

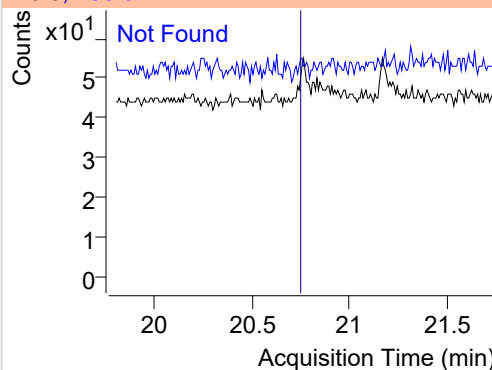


## Indeno(1,2,3-c,d)pyrene

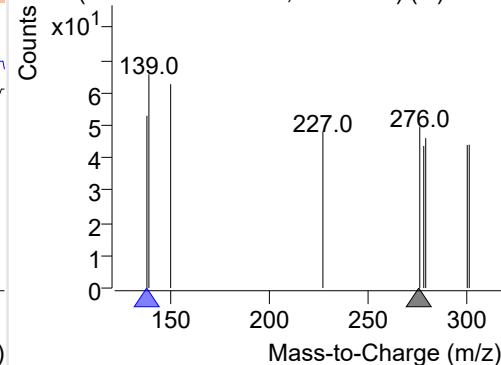
+ Selected Ion (276.0) 220806-PAHs-024.D



276.0, 138.0

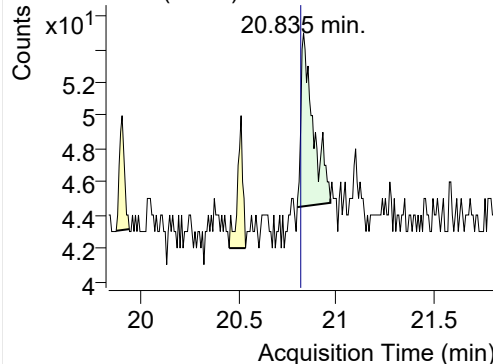


+ SIM (20.728-20.805 min, 10 scans) (\*\*) 2208

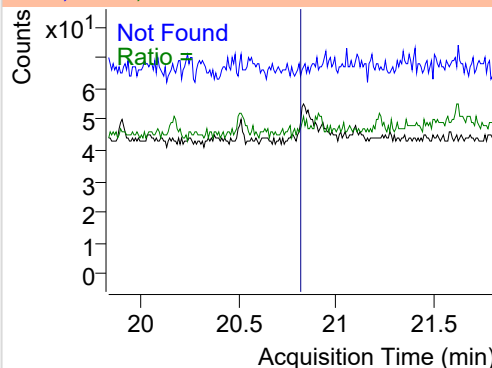


## Dibenz(a,h)anthracene

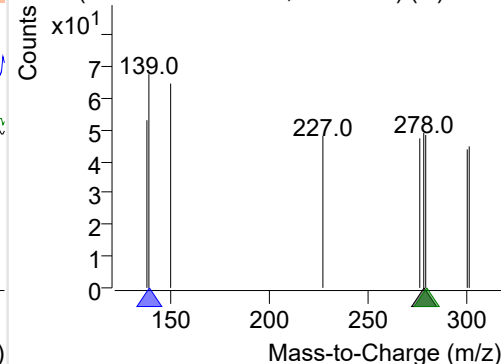
+ Selected Ion (278.0) 220806-PAHs-024.D



278.0, 139.0, 279.0



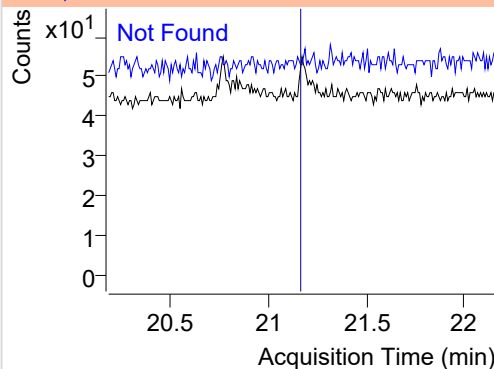
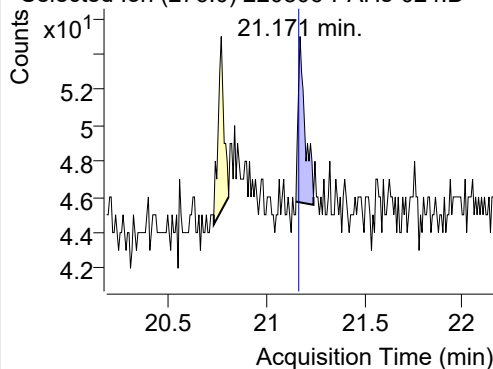
+ SIM (20.803-20.973 min, 23 scans) (\*\*) 2208



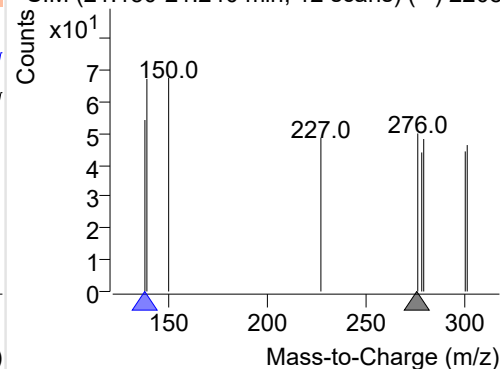
**Benzo(g,h,i)perylene**

+ Selected Ion (276.0) 220806-PAHs-024.D

276.0, 138.0

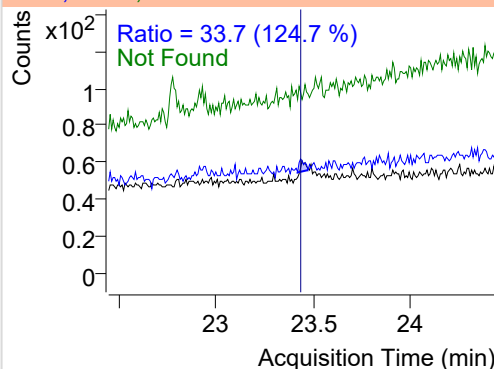
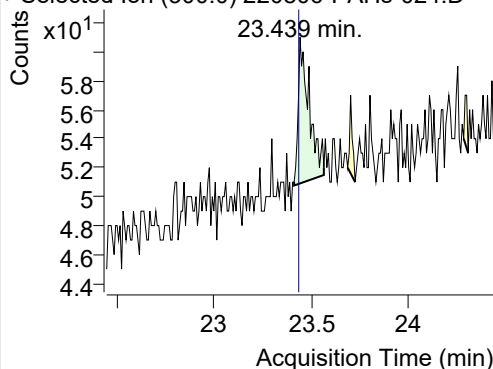


+ SIM (21.150-21.240 min, 12 scans) (\*\*) 2208

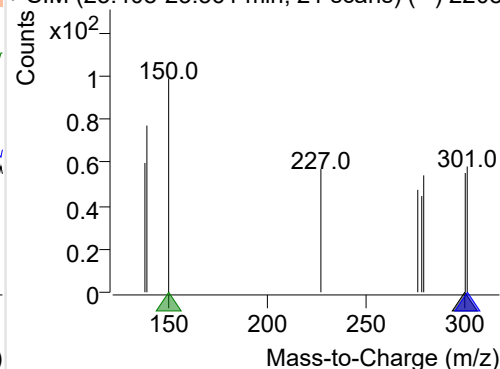
**Coronene**

+ Selected Ion (300.0) 220806-PAHs-024.D

300.0, 301.0, 150.0



+ SIM (23.408-23.561 min, 21 scans) (\*\*) 2208





## Quantitative Analysis Sample Based Report

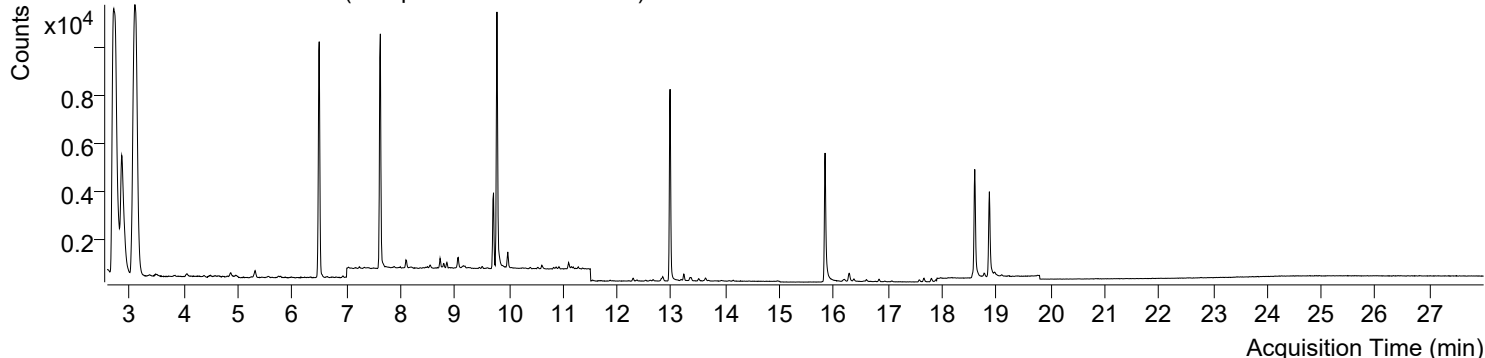


Trusted Answers

|                           |                                                                                            |                       |                        |
|---------------------------|--------------------------------------------------------------------------------------------|-----------------------|------------------------|
| Batch Data Path File Name | D:\MassHunter\GCMS\1\data\PAHs\220806-PAHs-Sample\QuantResults\220806-PAHs-Quant.batch.bin |                       |                        |
| Analysis Time Stamp       | 2022-10-10 오전 10:12:04                                                                     | Analyst Name          | DESKTOP-86B7UPG\5975MS |
| Report Generation Time    | 2022-10-10 오전 10:12:12                                                                     | Report Generator Name | DESKTOP-86B7UPG\5975MS |
| Calibration Last Update   | 2022-12-15 오후 3:30:46                                                                      | Batch State           | Processed              |
| Analyze Quant Version     | 10.2                                                                                       | Report Quant Version  | 10.2                   |
| Acq. Date-Time            | 2022-08-06 오후 10:57:39                                                                     | Data File             | 220806-PAHs-025.D      |
| Type                      | Sample                                                                                     | Name                  | Sample-PM-220710-10DIL |
| Dil.                      | 1                                                                                          | Acq. Method File      | PAHs 19mix-Method      |

## Sample Chromatogram

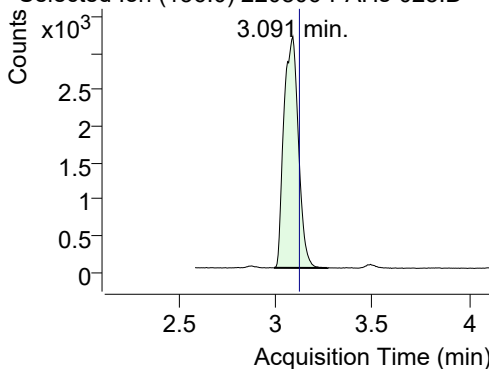
+ TIC SIM 220806-PAHs-025.D (Sample-PM-220710-10DIL)



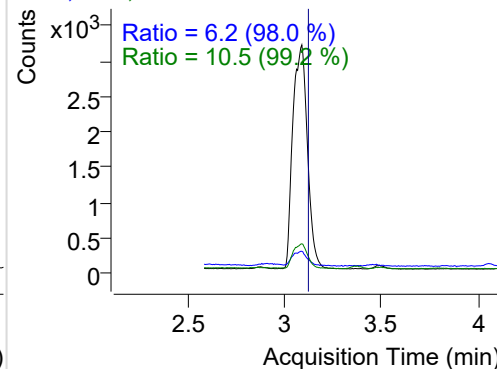
| Name                    | RT     | Transition | Resp. | Height  | Final Conc. Units | Ratio |
|-------------------------|--------|------------|-------|---------|-------------------|-------|
| IS-D8-Naphthalene       | 3.091  | 136.0      | 16493 | 3168.72 | ND ng/ml          | 10.5  |
| Naphthalene             | 3.112  | 128.0      | 34795 | 6675.39 | ND ng/ml          | 12.9  |
| Acenaphthylene          | 5.990  | 152.0      | 20    | 7.34    | ND ng/ml          |       |
| IS-D10-Acenaphthene     | 6.499  | 164.0      | 8957  | 4682.48 | ND ng/ml          | 95.6  |
| Acenaphthene            | 6.558  | 154.0      | 29    | 15.19   | ND ng/ml          | 116.9 |
| LSS-D10-Fluorene        | 7.627  | 176.0      | 7950  | 4509.18 | ND ng/ml          | 92.4  |
| Fluorene                | 7.680  | 166.0      | 55    | 33.40   | ND ng/ml          | 184.9 |
| IS-D10-Phenanthrene     | 9.780  | 188.0      | 14670 | 8528.09 | ND ng/ml          | 14.8  |
| Phenanthrene            | 9.822  | 178.0      | 244   | 111.18  | ND ng/ml          | 17.7  |
| Anthracene              | 9.979  | 178.0      | 278   | 177.18  | ND ng/ml          | 30.9  |
| Fluoranthene            | 12.526 | 202.0      | 50    | 27.05   | ND ng/ml          |       |
| LSS-D10-Pyrene          | 12.976 | 212.0      | 10161 | 5892.34 | ND ng/ml          | 17.6  |
| Pyrene                  | 13.009 | 202.0      | 110   | 48.05   | ND ng/ml          | 31.4  |
| Benz(a)anthracene       | 15.795 | 228.0      | 8     | 6.37    | ND ng/ml          |       |
| IS-D12-Chrysene         | 15.838 | 240.0      | 8043  | 4034.18 | ND ng/ml          | 18.7  |
| Chrysene                | 15.892 | 228.0      | 54    | 15.92   | ND ng/ml          | 23.4  |
| Benzo(b)fluoranthene    | 17.975 | 252.0      | 10    | 7.98    | ND ng/ml          |       |
| Benzo(k)fluoranthene    | 17.975 | 252.0      | 10    | 7.98    | ND ng/ml          |       |
| SS-D12-Benzo(e)pyrene   | 18.601 | 264.0      | 6150  | 2994.89 | ND ng/ml          | 25.6  |
| Benzo(e)pyrene          | 18.658 | 252.0      | 55    | 23.98   | ND ng/ml          |       |
| Benzo(a)pyrene          | 18.779 | 252.0      | 69    | 26.98   | ND ng/ml          |       |
| IS-D12-Perylene         | 18.872 | 264.0      | 5030  | 2403.00 | ND ng/ml          | 23.9  |
| Perylene                | 18.851 | 252.0      | 84    | 21.98   | ND ng/ml          |       |
| Indeno(1,2,3-c,d)pyrene | 20.767 | 276.0      | 10    | 6.34    | ND ng/ml          |       |
| Dibenz(a,h)anthracene   | 20.835 | 278.0      | 15    | 5.33    | ND ng/ml          |       |
| Benzo(g,h,i)perylene    | 21.179 | 276.0      | 15    | 6.00    | ND ng/ml          |       |
| Coronene                | 23.439 | 300.0      | 32    | 7.61    | ND ng/ml          |       |

## IS-D8-Naphthalene

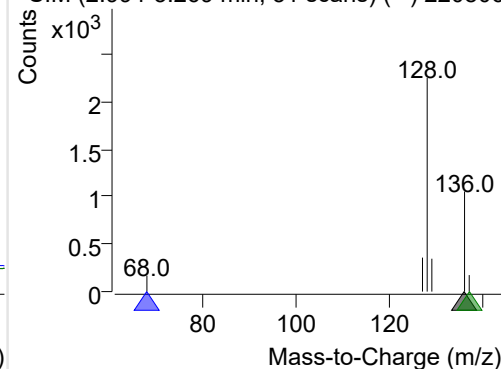
+ Selected Ion (136.0) 220806-PAHs-025.D



136.0, 68.0, 137.0

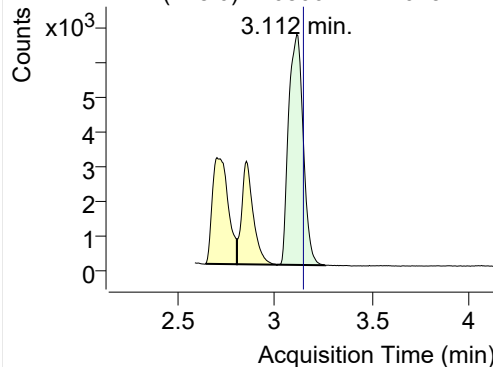


+ SIM (2.994-3.269 min, 51 scans) (\*\*) 220806

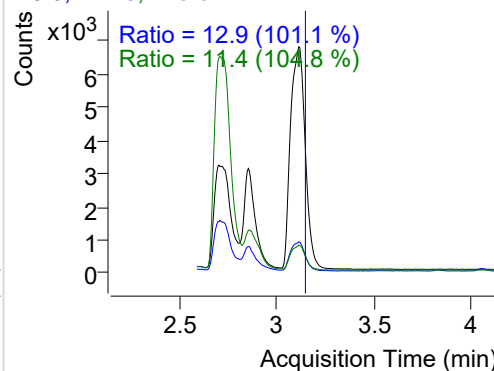


**Naphthalene**

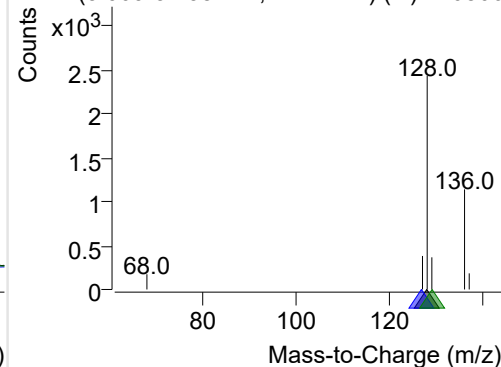
+ Selected Ion (128.0) 220806-PAHs-025.D



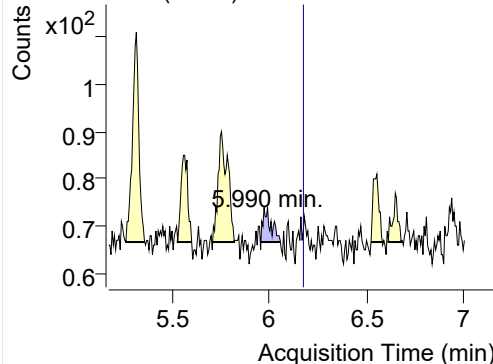
128.0, 127.0, 129.0



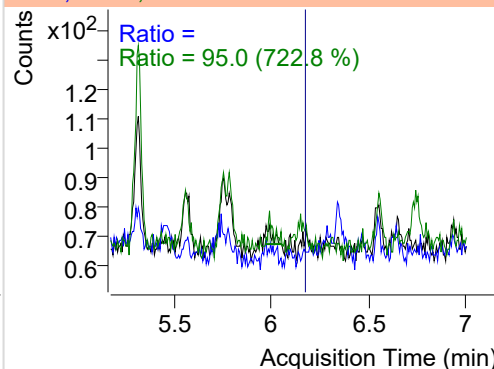
+ SIM (3.009-3.258 min, 47 scans) (\*\*) 220806

**Acenaphthylene**

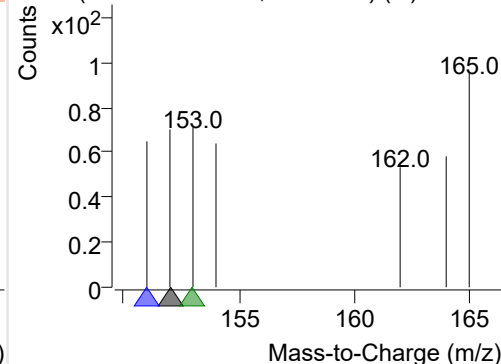
+ Selected Ion (152.0) 220806-PAHs-025.D



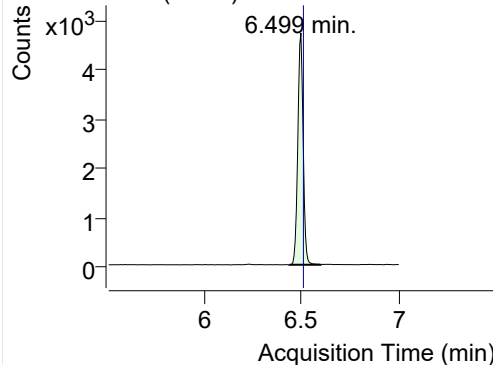
152.0, 151.0, 153.0



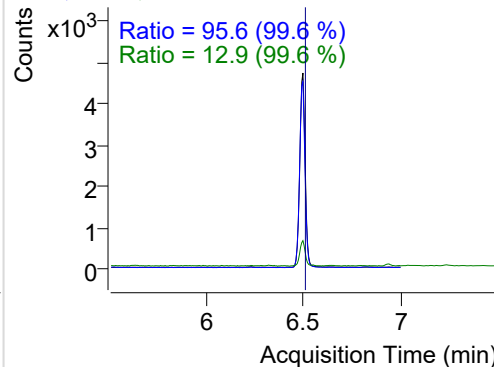
+ SIM (5.956-6.056 min, 17 scans) (\*\*) 220806

**IS-D10-Acenaphthene**

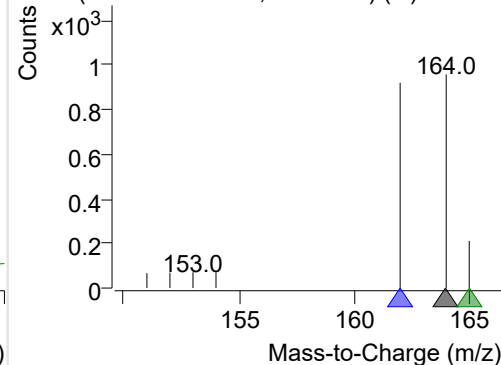
+ Selected Ion (164.0) 220806-PAHs-025.D



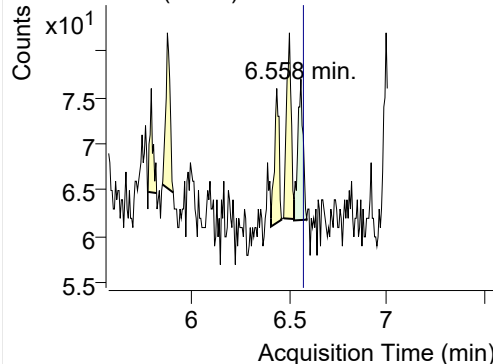
164.0, 162.0, 165.0



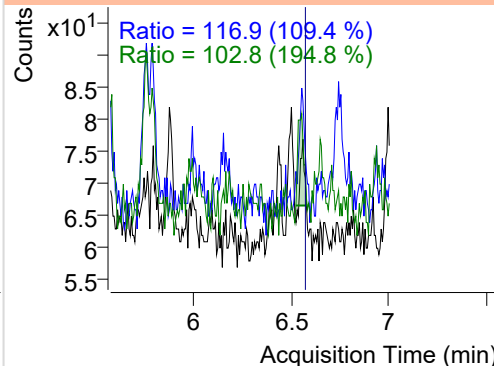
+ SIM (6.439-6.599 min, 28 scans) (\*\*) 220806

**Acenaphthene**

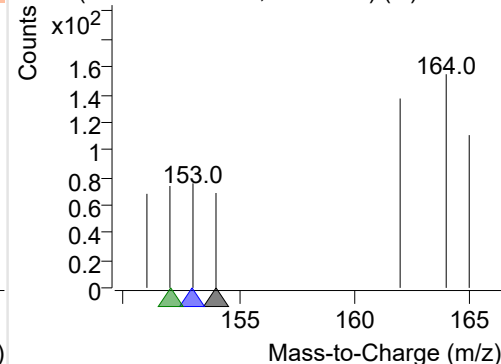
+ Selected Ion (154.0) 220806-PAHs-025.D



154.0, 153.0, 152.0

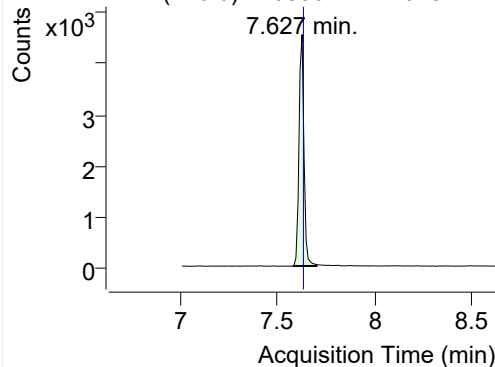


+ SIM (6.522-6.587 min, 12 scans) (\*\*) 220806

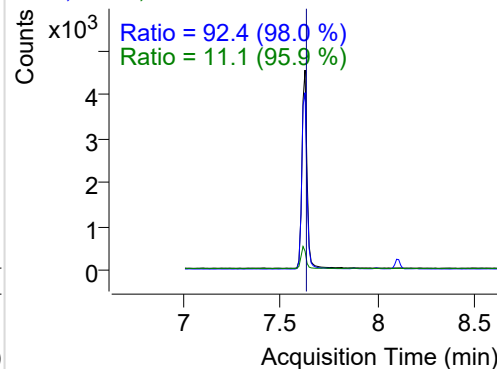


## LSS-D10-Fluorene

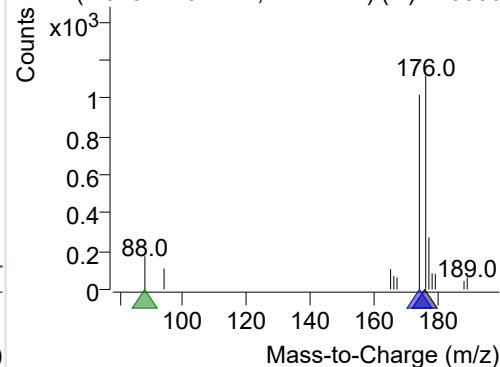
+ Selected Ion (176.0) 220806-PAHs-025.D



176.0, 174.0, 88.0

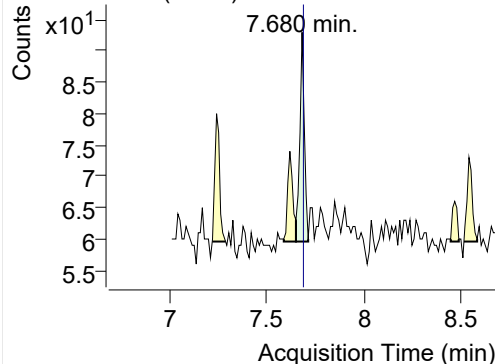


+ SIM (7.579-7.701 min, 12 scans) (\*\*) 220806

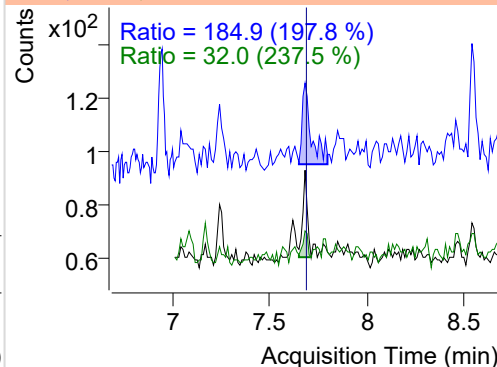


## Fluorene

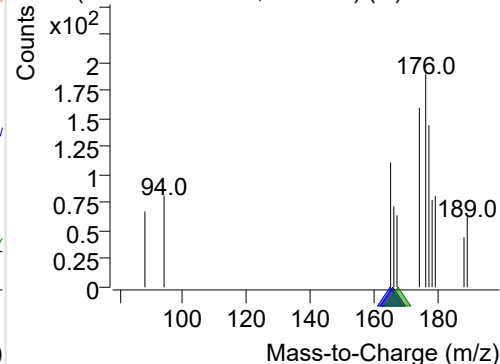
+ Selected Ion (166.0) 220806-PAHs-025.D



166.0, 165.0, 167.0

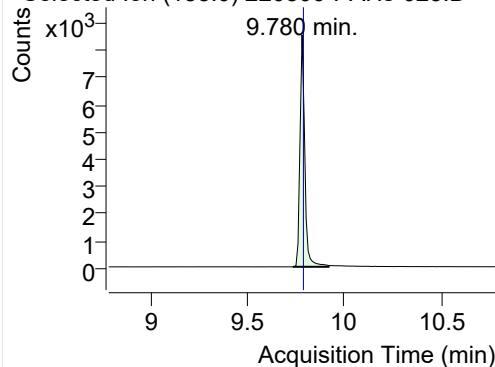


+ SIM (7.648-7.711 min, 7 scans) (\*\*) 220806-I

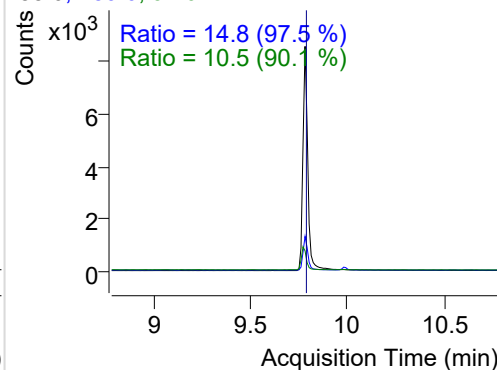


## IS-D10-Phenanthrene

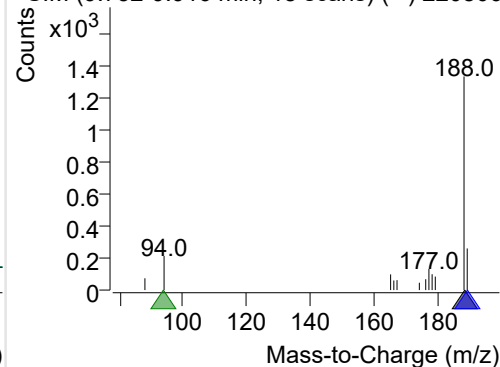
+ Selected Ion (188.0) 220806-PAHs-025.D



188.0, 189.0, 94.0

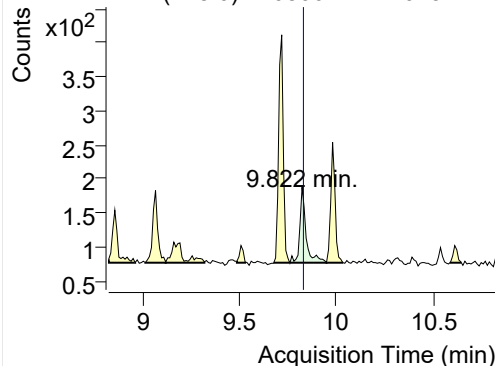


+ SIM (9.732-9.916 min, 18 scans) (\*\*) 220806

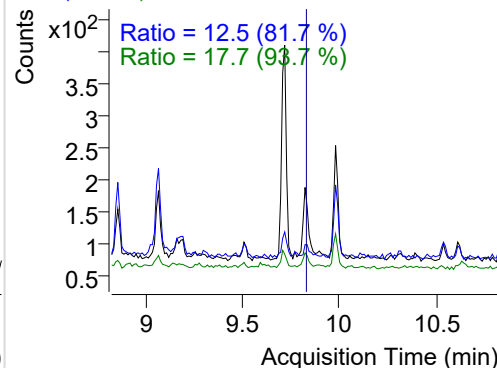


## Phenanthrene

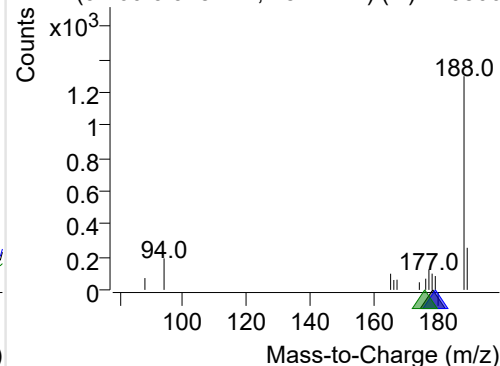
+ Selected Ion (178.0) 220806-PAHs-025.D



178.0, 179.0, 176.0

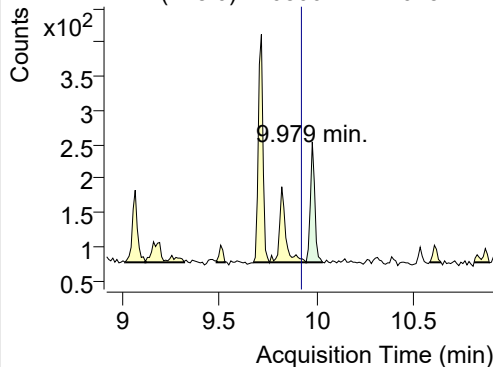


+ SIM (9.760-9.948 min, 18 scans) (\*\*) 220806

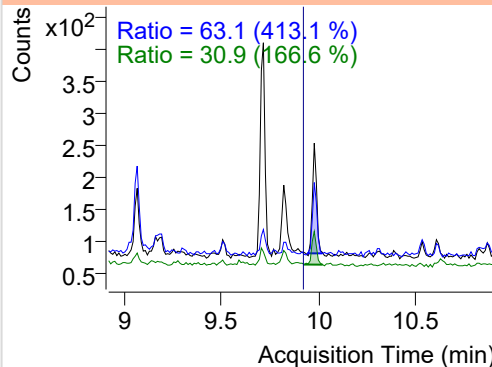


**Anthracene**

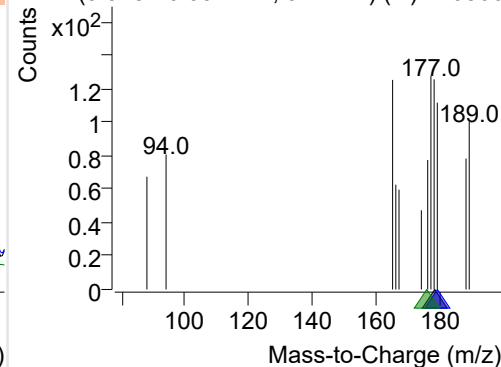
+ Selected Ion (178.0) 220806-PAHs-025.D



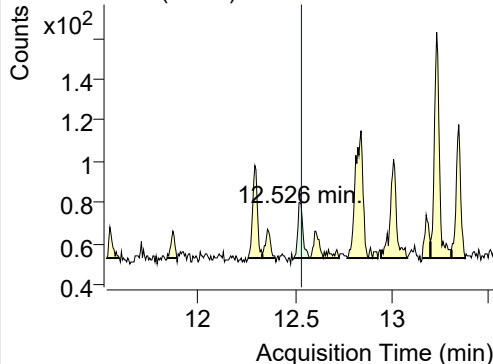
178.0, 179.0, 176.0



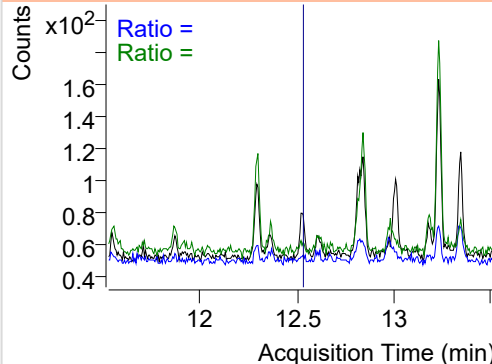
+ SIM (9.948-10.034 min, 9 scans) (\*\*) 220806

**Fluoranthene**

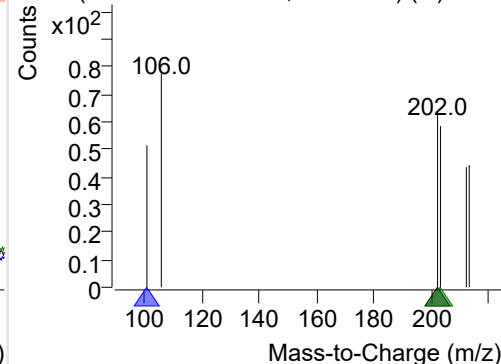
+ Selected Ion (202.0) 220806-PAHs-025.D



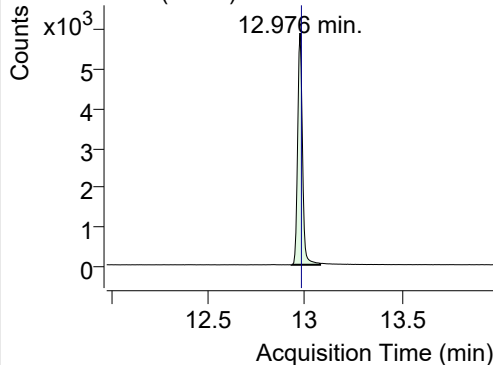
202.0, 101.0, 203.0



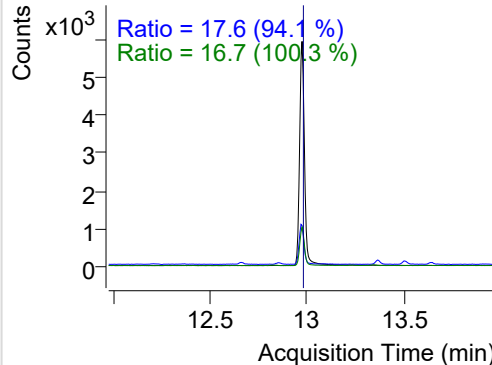
+ SIM (12.493-12.575 min, 16 scans) (\*\*) 2208

**LSS-D10-Pyrene**

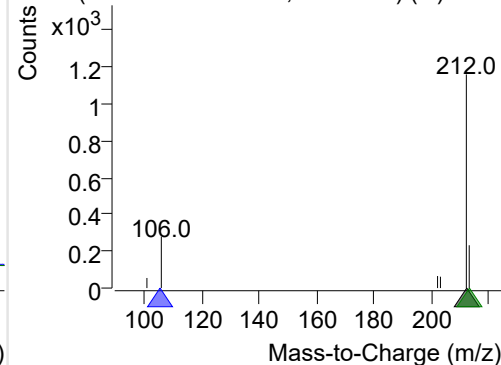
+ Selected Ion (212.0) 220806-PAHs-025.D



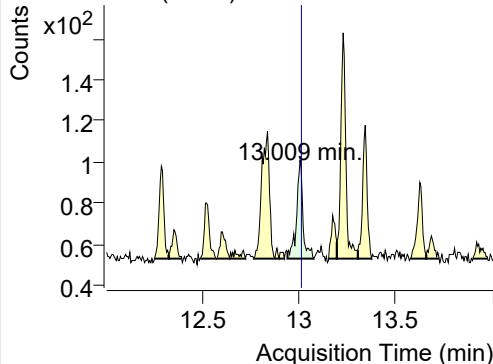
212.0, 106.0, 213.0



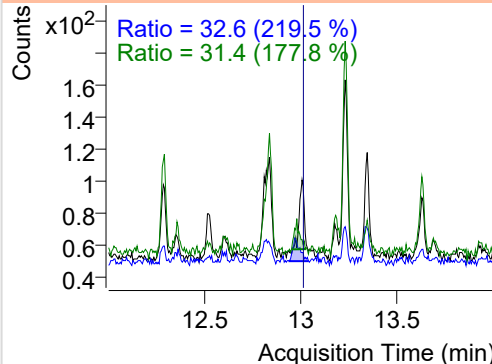
+ SIM (12.933-13.079 min, 28 scans) (\*\*) 2208

**Pyrene**

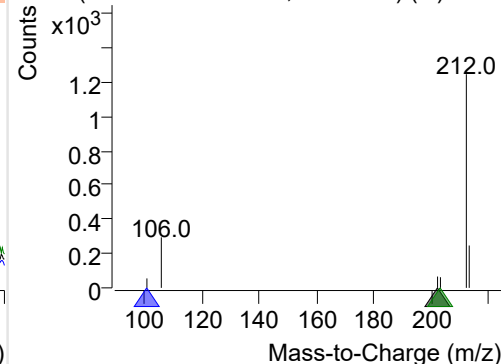
+ Selected Ion (202.0) 220806-PAHs-025.D



202.0, 101.0, 203.0



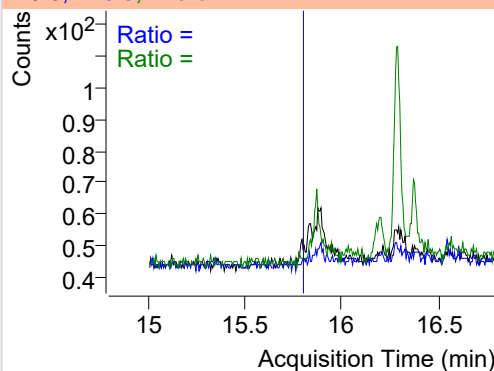
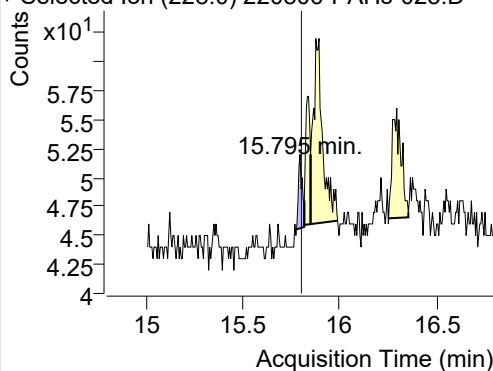
+ SIM (12.944-13.079 min, 26 scans) (\*\*) 2208



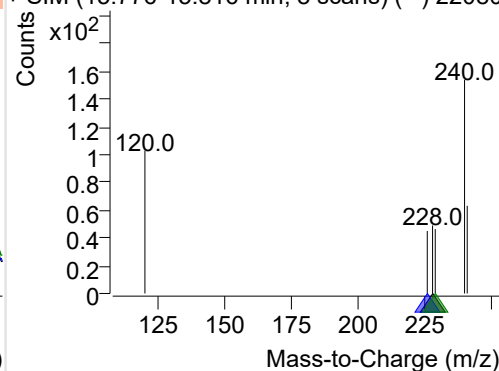
**Benz(a)anthracene**

+ Selected Ion (228.0) 220806-PAHs-025.D

228.0, 226.0, 229.0

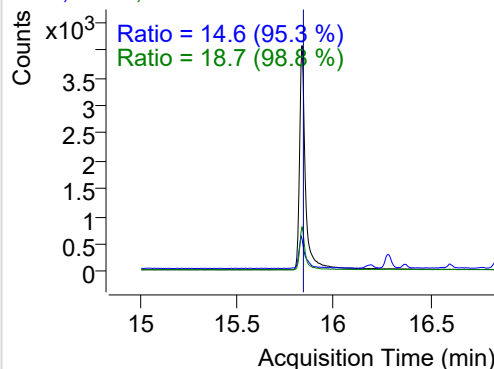
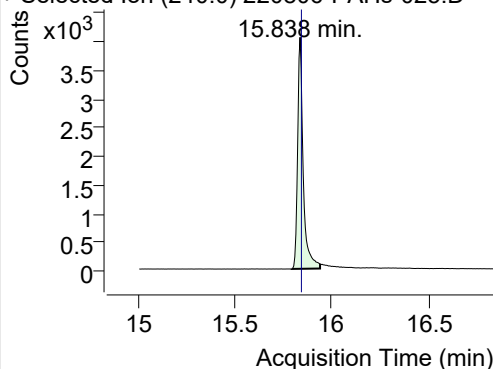


+ SIM (15.776-15.816 min, 8 scans) (\*\*) 22080

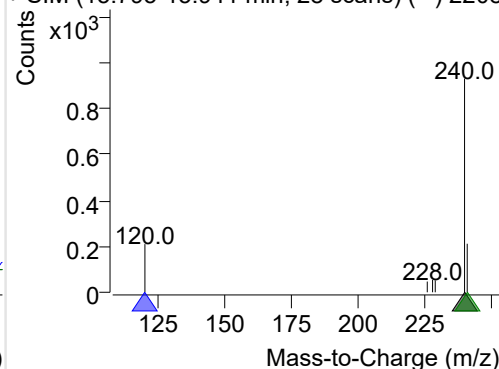
**IS-D12-Chrysene**

+ Selected Ion (240.0) 220806-PAHs-025.D

240.0, 120.0, 241.0

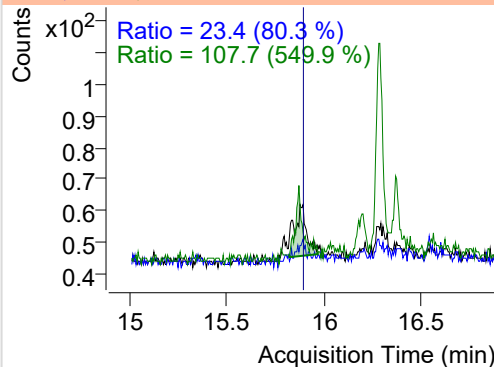
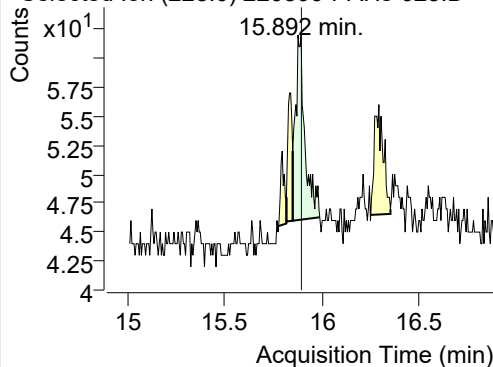


+ SIM (15.795-15.941 min, 28 scans) (\*\*) 2208

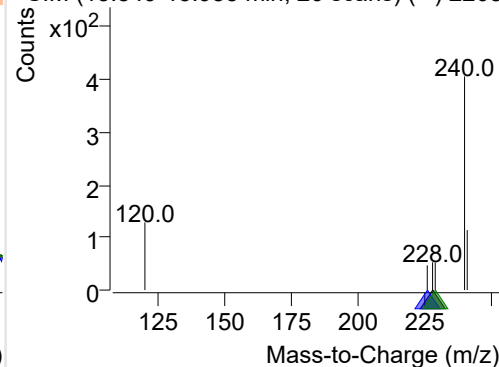
**Chrysene**

+ Selected Ion (228.0) 220806-PAHs-025.D

228.0, 226.0, 229.0

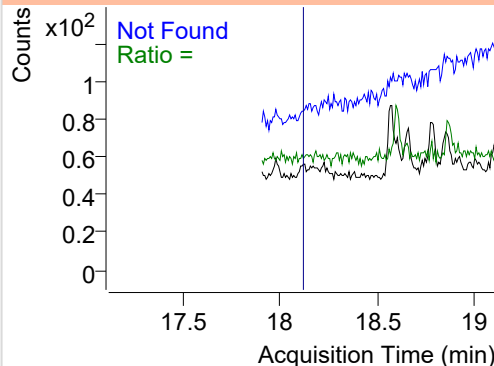
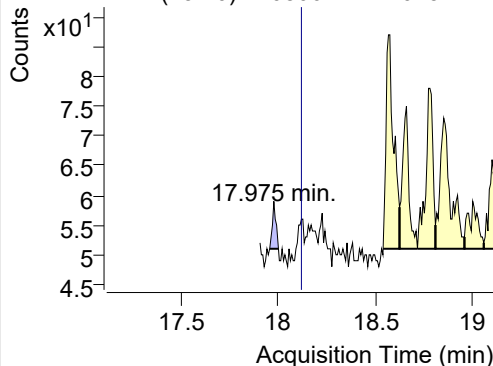


+ SIM (15.849-15.988 min, 26 scans) (\*\*) 2208

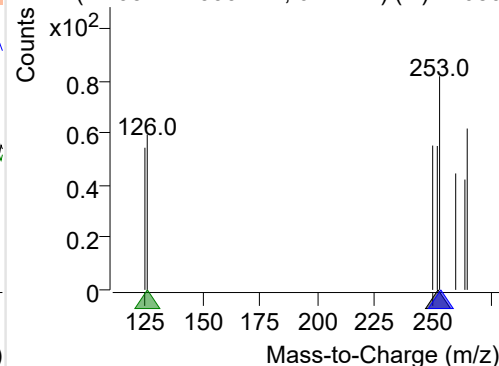
**Benzo(b)fluoranthene**

+ Selected Ion (252.0) 220806-PAHs-025.D

252.0, 253.0, 126.0



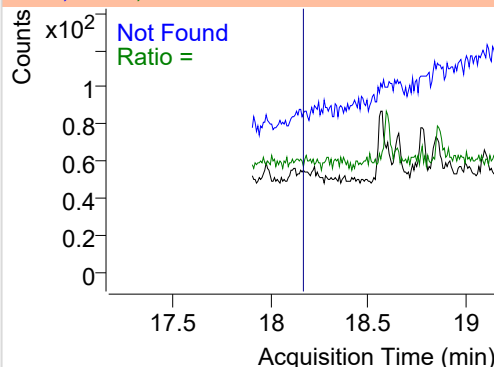
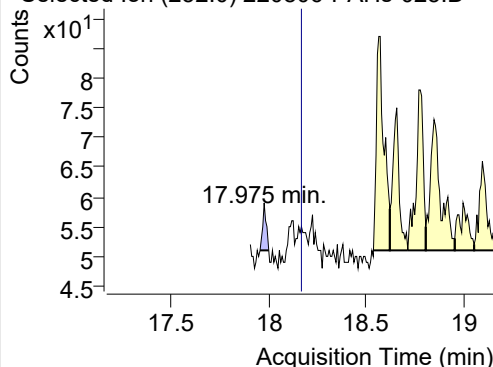
+ SIM (17.954-17.999 min, 6 scans) (\*\*) 22080



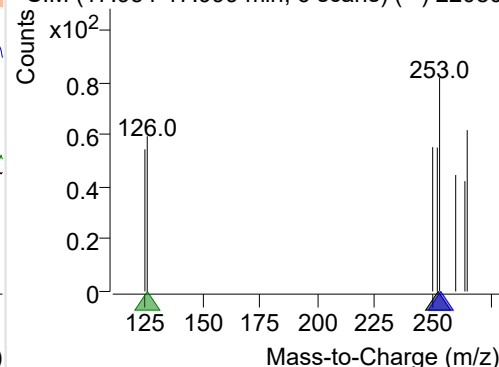
**Benzo(k)fluoranthene**

+ Selected Ion (252.0) 220806-PAHs-025.D

252.0, 253.0, 126.0

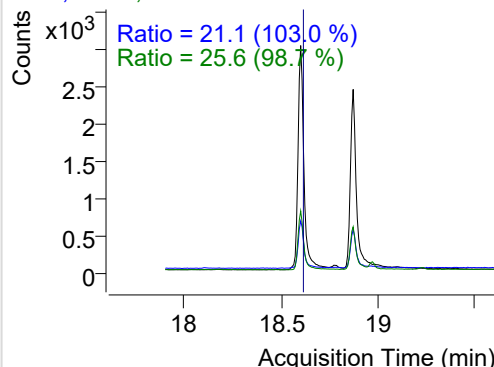
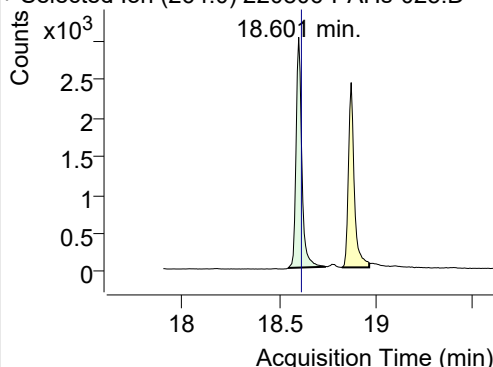


+ SIM (17.954-17.999 min, 6 scans) (\*\*) 22080

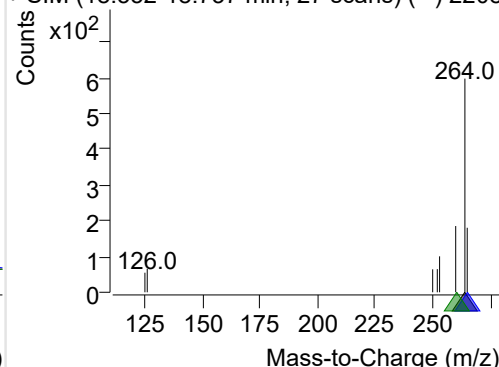
**SS-D12-Benzo(e)pyrene**

+ Selected Ion (264.0) 220806-PAHs-025.D

264.0, 265.0, 260.0

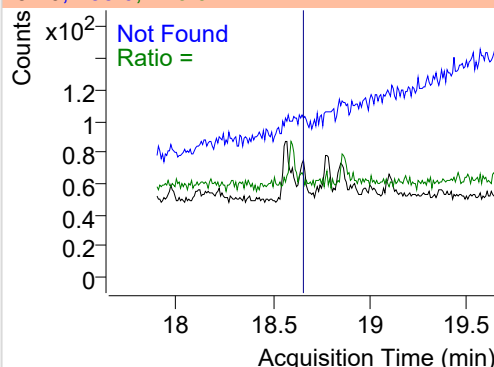
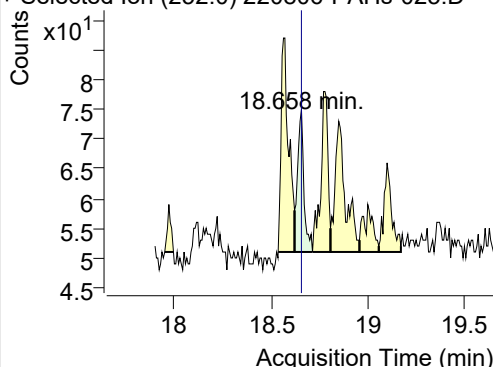


+ SIM (18.552-18.737 min, 27 scans) (\*\*) 2208

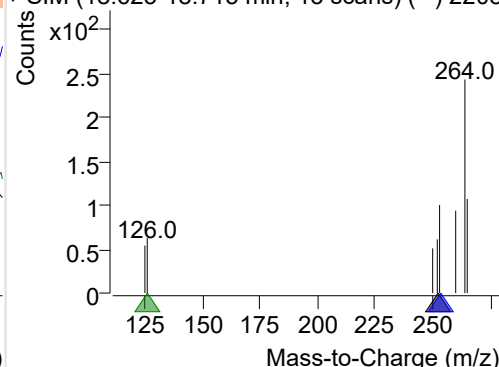
**Benzo(e)pyrene**

+ Selected Ion (252.0) 220806-PAHs-025.D

252.0, 253.0, 126.0

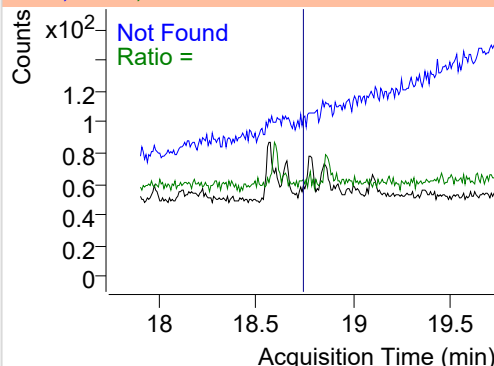
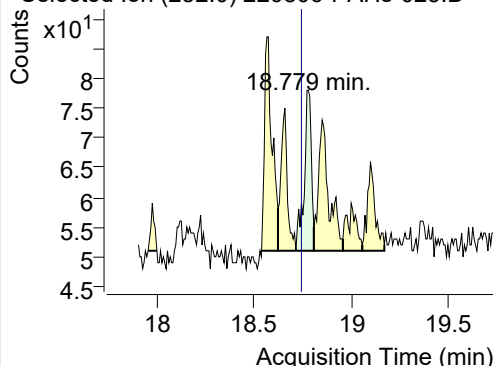


+ SIM (18.623-18.715 min, 13 scans) (\*\*) 2208

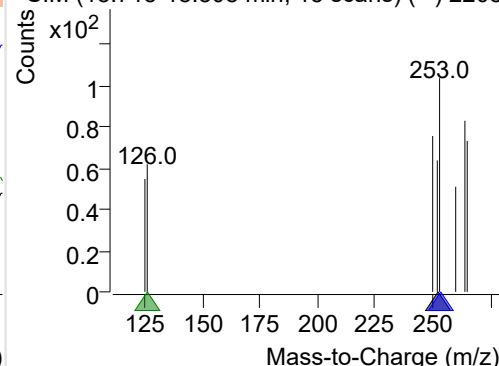
**Benzo(a)pyrene**

+ Selected Ion (252.0) 220806-PAHs-025.D

252.0, 253.0, 126.0

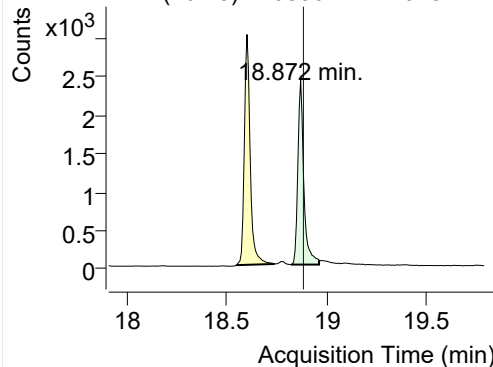


+ SIM (18.715-18.808 min, 13 scans) (\*\*) 2208

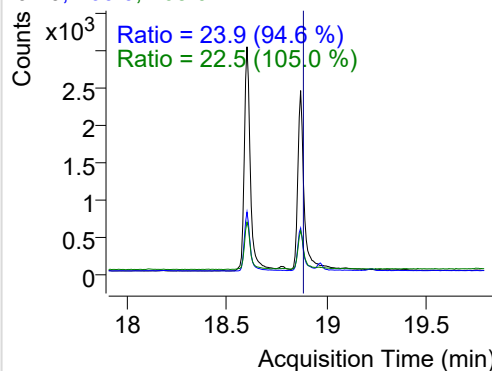


## IS-D12-Perylene

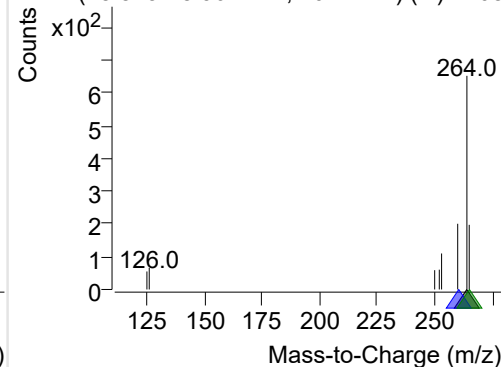
+ Selected Ion (264.0) 220806-PAHs-025.D



264.0, 260.0, 265.0

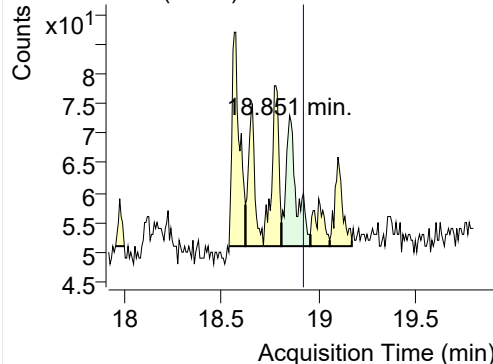


+ SIM (18.823-18.964 min, 20 scans) (\*\*) 2208

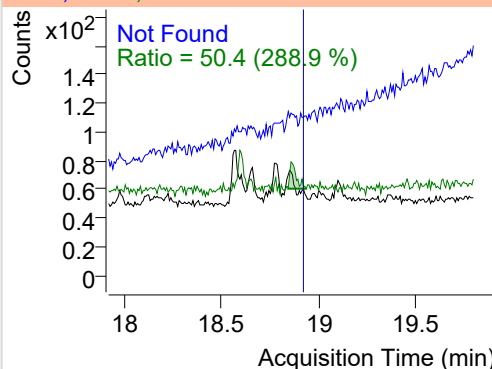


## Perylene

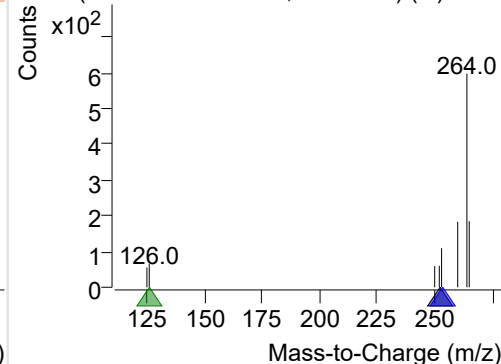
+ Selected Ion (252.0) 220806-PAHs-025.D



252.0, 253.0, 126.0

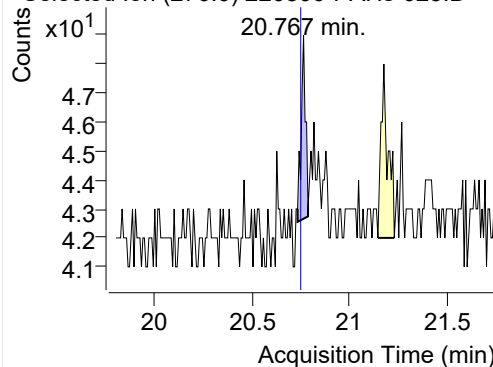


+ SIM (18.808-18.957 min, 22 scans) (\*\*) 2208

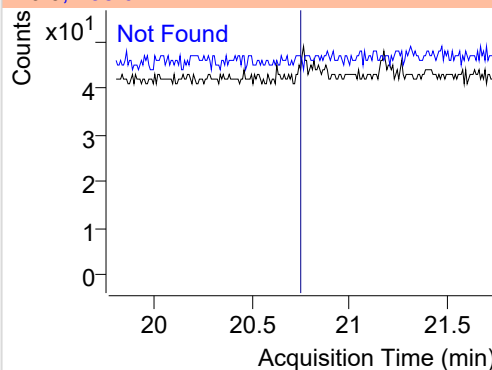


## Indeno(1,2,3-c,d)pyrene

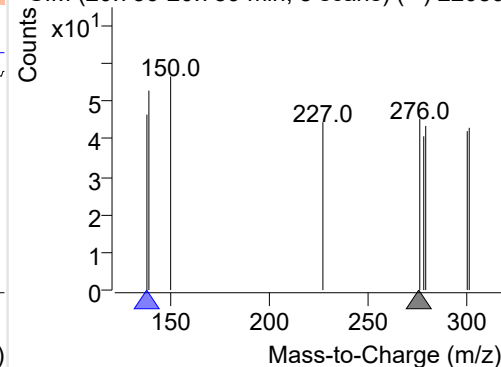
+ Selected Ion (276.0) 220806-PAHs-025.D



276.0, 138.0

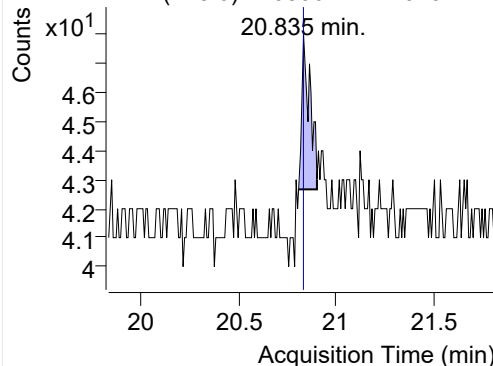


+ SIM (20.736-20.789 min, 8 scans) (\*\*) 22080

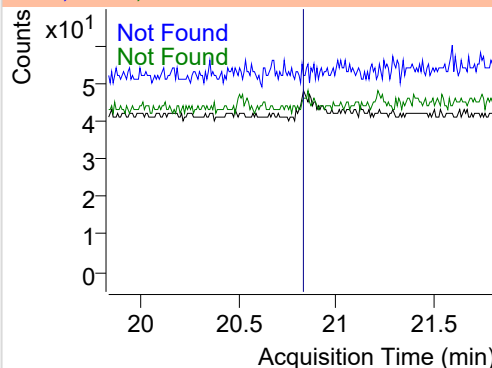


## Dibenz(a,h)anthracene

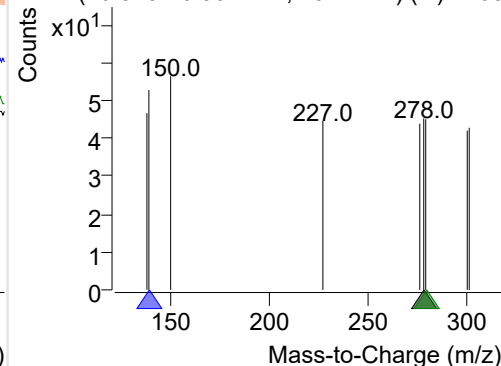
+ Selected Ion (278.0) 220806-PAHs-025.D



278.0, 139.0, 279.0



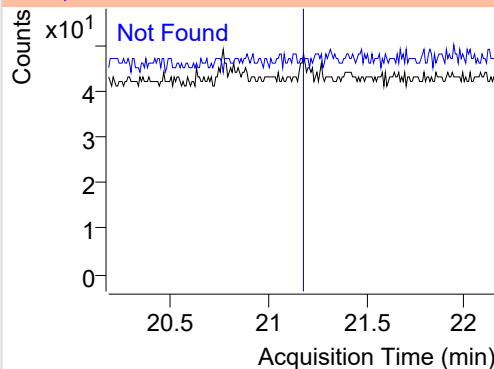
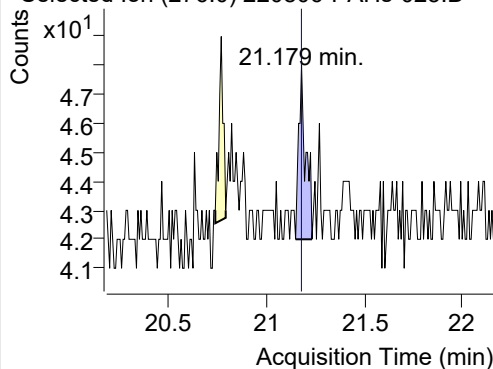
+ SIM (20.810-20.904 min, 13 scans) (\*\*) 2208



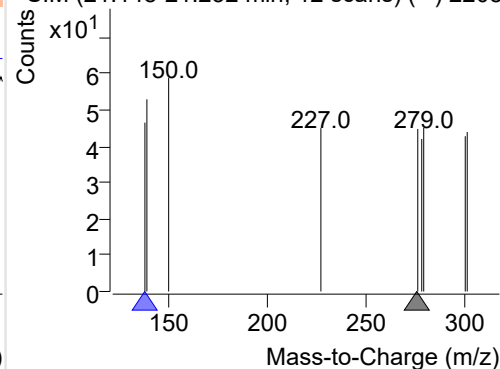
**Benzo(g,h,i)perylene**

+ Selected Ion (276.0) 220806-PAHs-025.D

276.0, 138.0

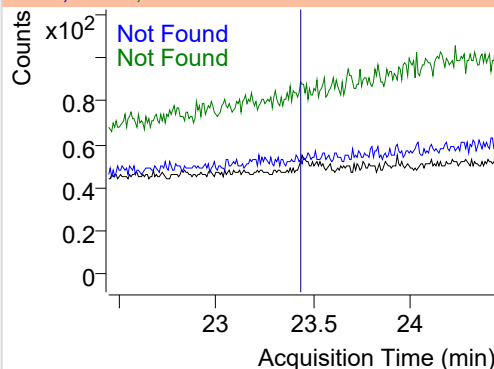
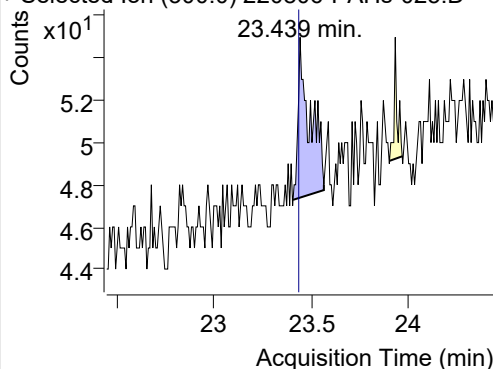


+ SIM (21.148-21.232 min, 12 scans) (\*\*) 2208

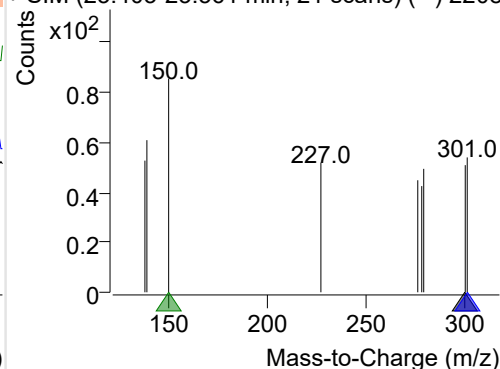
**Coronene**

+ Selected Ion (300.0) 220806-PAHs-025.D

300.0, 301.0, 150.0



+ SIM (23.403-23.561 min, 21 scans) (\*\*) 2208





## Quantitative Analysis Sample Based Report

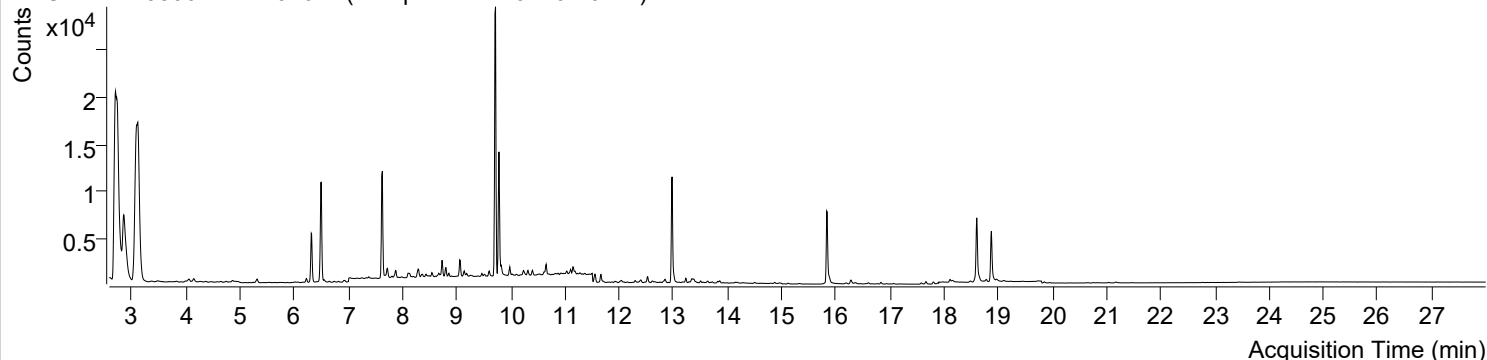


Trusted Answers

|                           |                                                                                            |                       |                        |
|---------------------------|--------------------------------------------------------------------------------------------|-----------------------|------------------------|
| Batch Data Path File Name | D:\MassHunter\GCMS\1\data\PAHs\220806-PAHs-Sample\QuantResults\220806-PAHs-Quant.batch.bin |                       |                        |
| Analysis Time Stamp       | 2022-10-10 오전 10:12:04                                                                     | Analyst Name          | DESKTOP-86B7UPG\5975MS |
| Report Generation Time    | 2022-10-10 오전 10:12:12                                                                     | Report Generator Name | DESKTOP-86B7UPG\5975MS |
| Calibration Last Update   | 2022-12-15 오후 3:30:46                                                                      | Batch State           | Processed              |
| Analyze Quant Version     | 10.2                                                                                       | Report Quant Version  | 10.2                   |
| Acq. Date-Time            | 2022-08-06 오후 11:28:46                                                                     | Data File             | 220806-PAHs-026.D      |
| Type                      | Sample                                                                                     | Name                  | Sample-PM-220716-10DIL |
| Dil.                      | 1                                                                                          | Acq. Method File      | PAHs 19mix-Method      |

## Sample Chromatogram

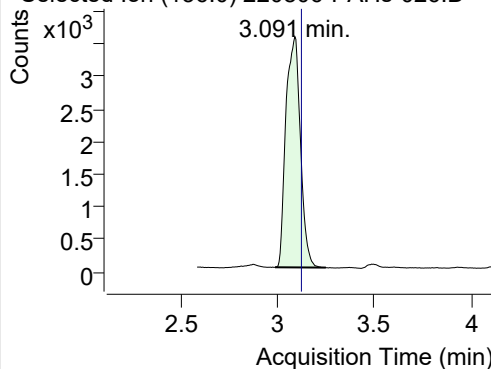
+ TIC SIM 220806-PAHs-026.D (Sample-PM-220716-10DIL)



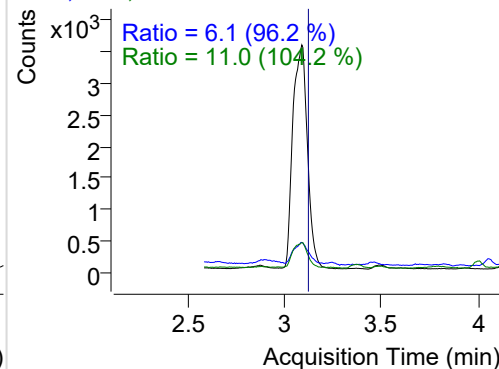
| Name                    | RT     | Transition | Resp. | Height   | Final Conc. Units | Ratio |
|-------------------------|--------|------------|-------|----------|-------------------|-------|
| IS-D8-Naphthalene       | 3.091  | 136.0      | 18356 | 3543.48  | ND ng/ml          | 11.0  |
| Naphthalene             | 3.112  | 128.0      | 56643 | 11083.29 | ND ng/ml          | 11.9  |
| Acenaphthylene          | 6.161  | 152.0      | 13    | 9.74     | ND ng/ml          |       |
| IS-D10-Acenaphthene     | 6.499  | 164.0      | 9547  | 5052.12  | ND ng/ml          | 98.7  |
| Acenaphthene            | 6.558  | 154.0      | 90    | 43.05    | ND ng/ml          | 118.8 |
| LSS-D10-Fluorene        | 7.627  | 176.0      | 9279  | 5185.29  | ND ng/ml          | 92.5  |
| Fluorene                | 7.680  | 166.0      | 158   | 82.72    | ND ng/ml          | 117.8 |
| IS-D10-Phenanthrene     | 9.780  | 188.0      | 17127 | 10455.38 | ND ng/ml          | 15.3  |
| Phenanthrene            | 9.822  | 178.0      | 763   | 485.90   | ND ng/ml          | 27.4  |
| Anthracene              | 9.979  | 178.0      | 313   | 227.59   | ND ng/ml          | 36.1  |
| Fluoranthene            | 12.526 | 202.0      | 745   | 441.25   | ND ng/ml          | 18.0  |
| LSS-D10-Pyrene          | 12.976 | 212.0      | 13781 | 8251.69  | ND ng/ml          | 17.9  |
| Pyrene                  | 13.009 | 202.0      | 738   | 425.08   | ND ng/ml          | 25.0  |
| Benz(a)anthracene       | 15.789 | 228.0      | 88    | 56.77    | ND ng/ml          | 81.2  |
| IS-D12-Chrysene         | 15.833 | 240.0      | 11071 | 5695.25  | ND ng/ml          | 18.6  |
| Chrysene                | 15.882 | 228.0      | 498   | 223.32   | ND ng/ml          | 31.9  |
| Benzo(b)fluoranthene    | 18.110 | 252.0      | 300   | 157.17   | ND ng/ml          | 43.6  |
| Benzo(k)fluoranthene    | 18.153 | 252.0      | 277   | 94.17    | ND ng/ml          |       |
| SS-D12-Benzo(e)pyrene   | 18.601 | 264.0      | 9382  | 4540.32  | ND ng/ml          | 25.0  |
| Benzo(e)pyrene          | 18.651 | 252.0      | 344   | 159.17   | ND ng/ml          | 16.5  |
| Benzo(a)pyrene          | 18.779 | 252.0      | 179   | 56.17    | ND ng/ml          |       |
| IS-D12-Perylene         | 18.872 | 264.0      | 7459  | 3620.80  | ND ng/ml          | 23.9  |
| Perylene                | 18.858 | 252.0      | 120   | 35.17    | ND ng/ml          |       |
| Indeno(1,2,3-c,d)pyrene | 20.759 | 276.0      | 90    | 30.58    | ND ng/ml          |       |
| Dibenz(a,h)anthracene   | 20.835 | 278.0      | 52    | 16.71    | ND ng/ml          |       |
| Benzo(g,h,i)perylene    | 21.171 | 276.0      | 177   | 68.30    | ND ng/ml          | 23.1  |
| Coronene                | 23.447 | 300.0      | 71    | 20.29    | ND ng/ml          |       |

## IS-D8-Naphthalene

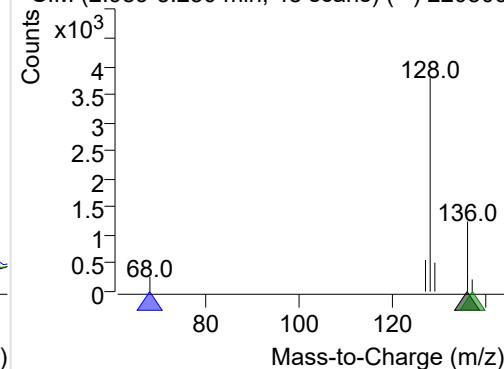
+ Selected Ion (136.0) 220806-PAHs-026.D



136.0, 68.0, 137.0

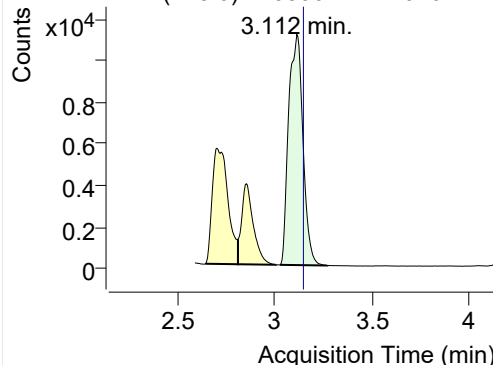


+ SIM (2.989-3.250 min, 48 scans) (\*\*) 220806

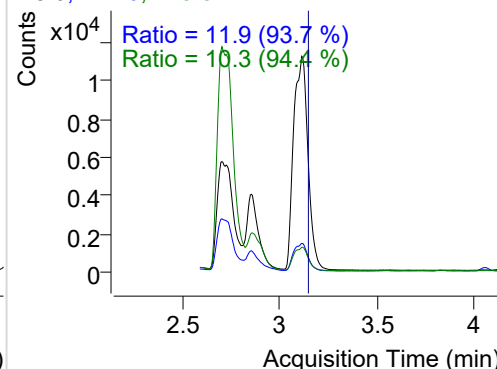


**Naphthalene**

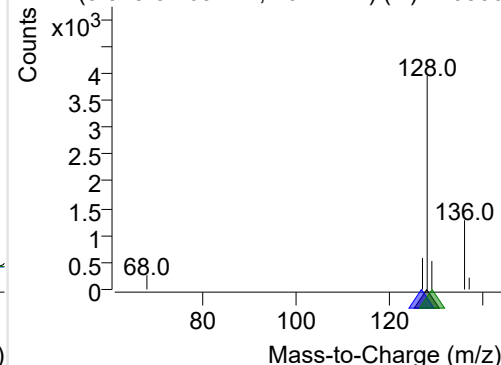
+ Selected Ion (128.0) 220806-PAHs-026.D



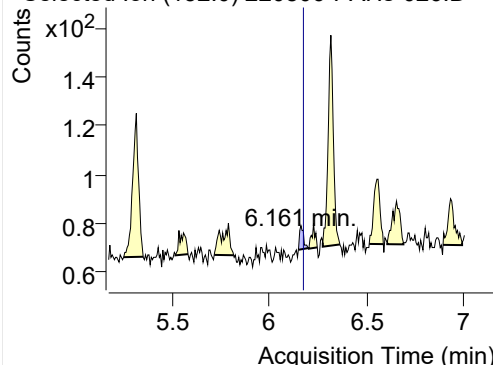
128.0, 127.0, 129.0



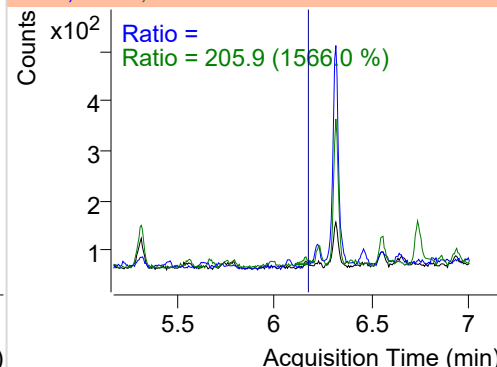
+ SIM (3.025-3.269 min, 46 scans) (\*\*) 220806

**Acenaphthylene**

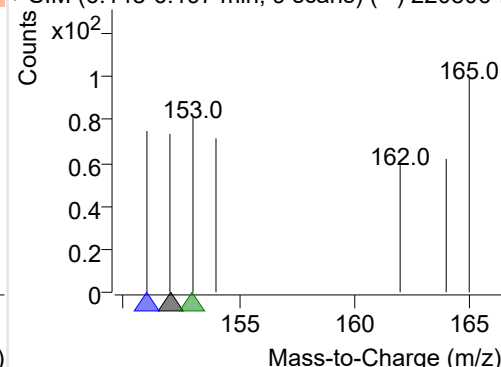
+ Selected Ion (152.0) 220806-PAHs-026.D



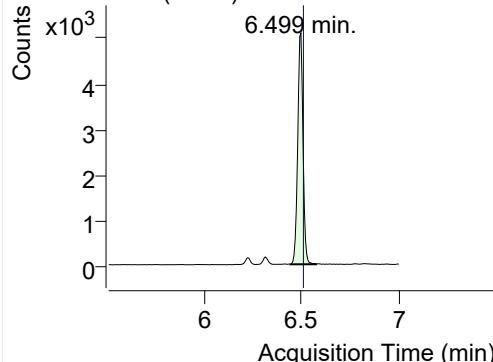
152.0, 151.0, 153.0



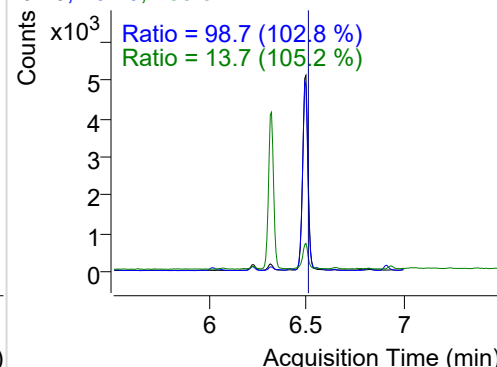
+ SIM (6.148-6.197 min, 9 scans) (\*\*) 220806-I

**IS-D10-Acenaphthene**

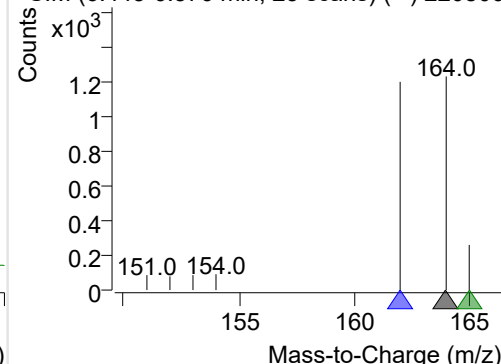
+ Selected Ion (164.0) 220806-PAHs-026.D



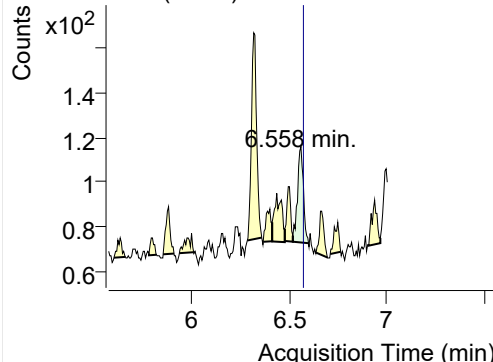
164.0, 162.0, 165.0



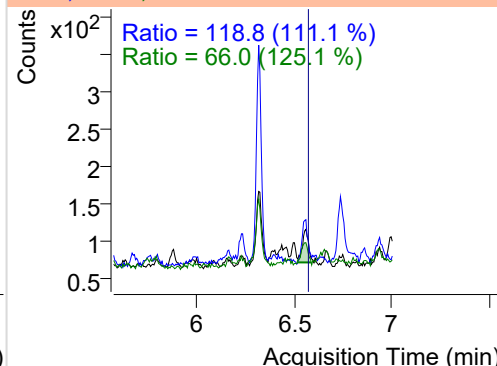
+ SIM (6.445-6.576 min, 23 scans) (\*\*) 220806

**Acenaphthene**

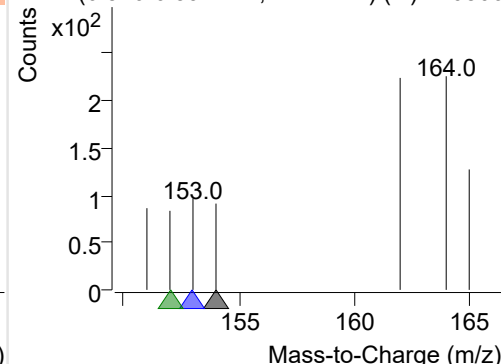
+ Selected Ion (154.0) 220806-PAHs-026.D



154.0, 153.0, 152.0

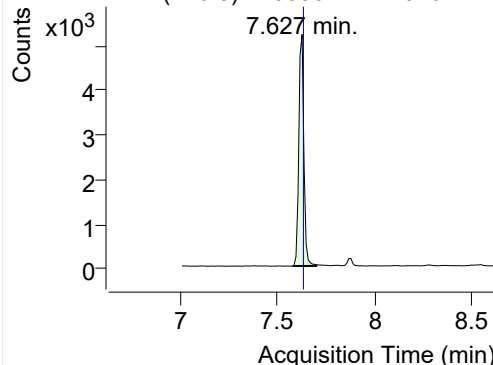


+ SIM (6.516-6.597 min, 14 scans) (\*\*) 220806

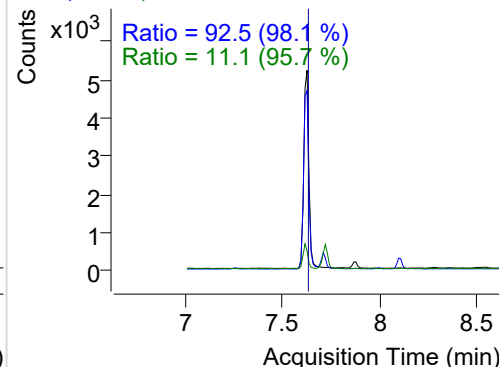


## LSS-D10-Fluorene

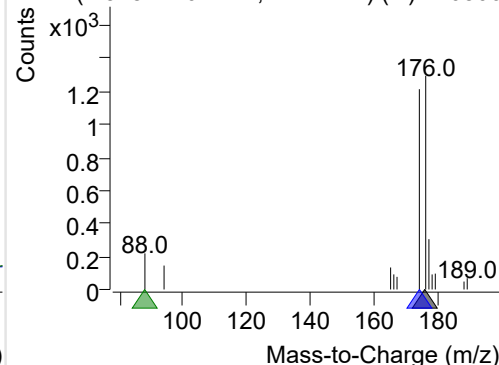
+ Selected Ion (176.0) 220806-PAHs-026.D



176.0, 174.0, 88.0

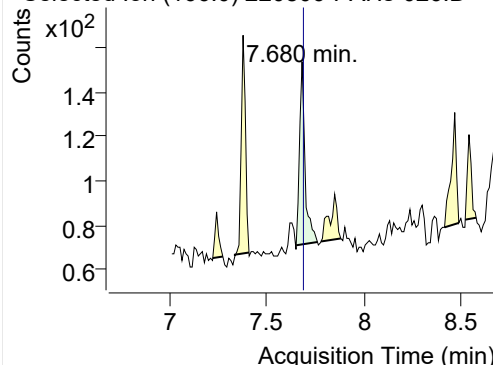


+ SIM (7.578-7.701 min, 12 scans) (\*\*) 220806

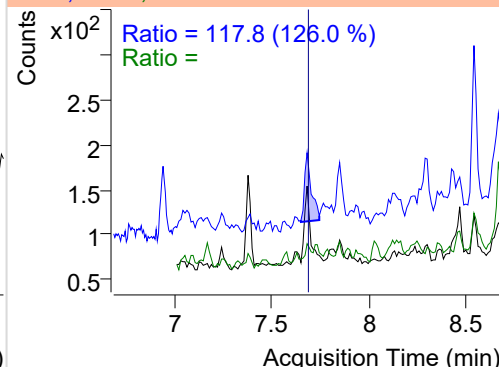


## Fluorene

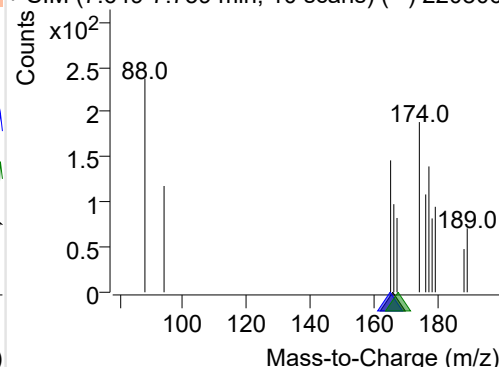
+ Selected Ion (166.0) 220806-PAHs-026.D



166.0, 165.0, 167.0

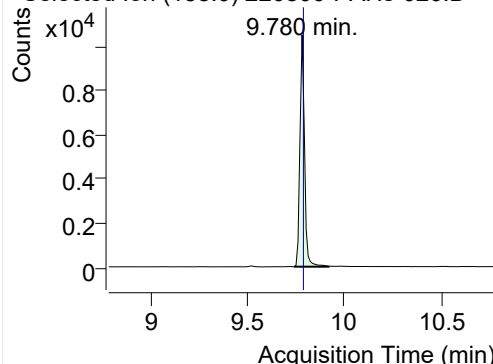


+ SIM (7.649-7.759 min, 10 scans) (\*\*) 220806

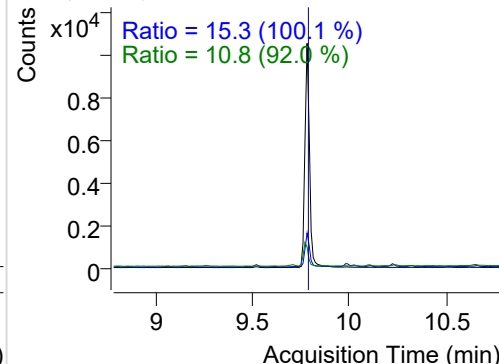


## IS-D10-Phenanthrene

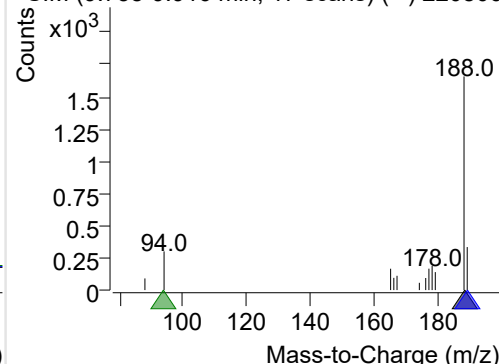
+ Selected Ion (188.0) 220806-PAHs-026.D



188.0, 189.0, 94.0

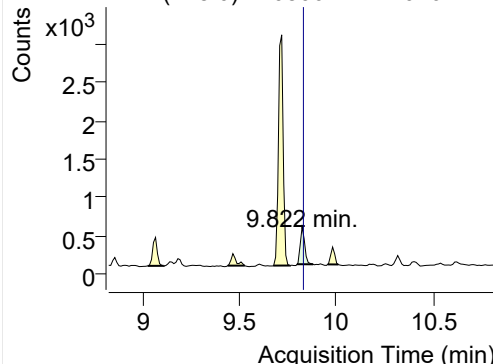


+ SIM (9.738-9.916 min, 17 scans) (\*\*) 220806

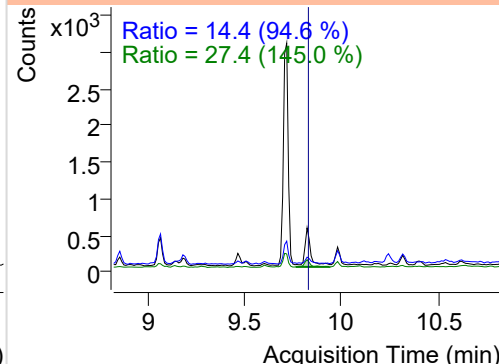


## Phenanthrene

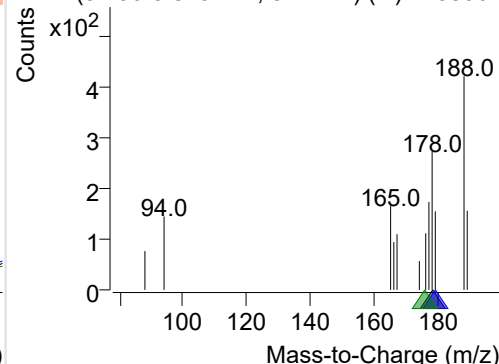
+ Selected Ion (178.0) 220806-PAHs-026.D



178.0, 179.0, 176.0

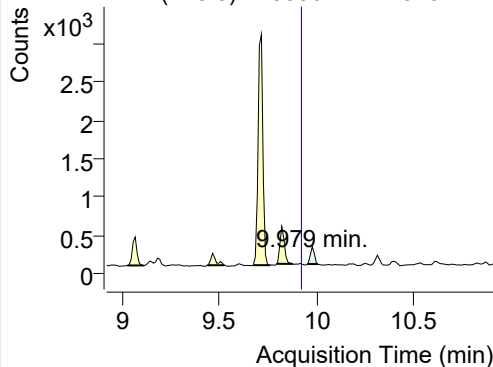


+ SIM (9.796-9.879 min, 8 scans) (\*\*) 220806-I

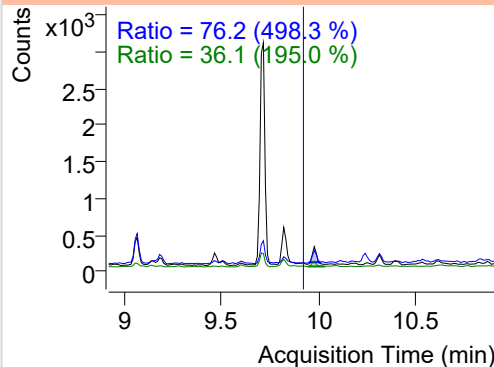


**Anthracene**

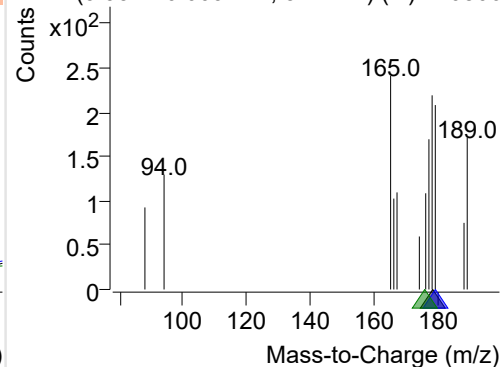
+ Selected Ion (178.0) 220806-PAHs-026.D



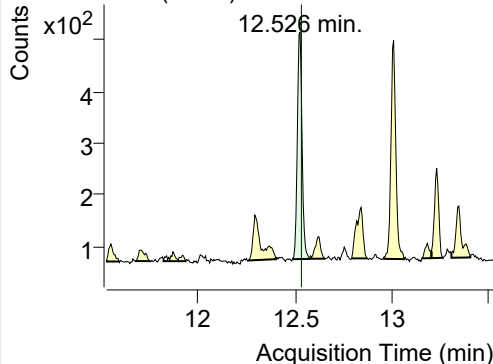
178.0, 179.0, 176.0



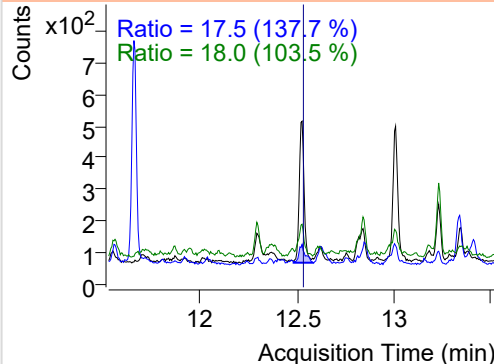
+ SIM (9.954-10.009 min, 5 scans) (\*\*) 220806

**Fluoranthene**

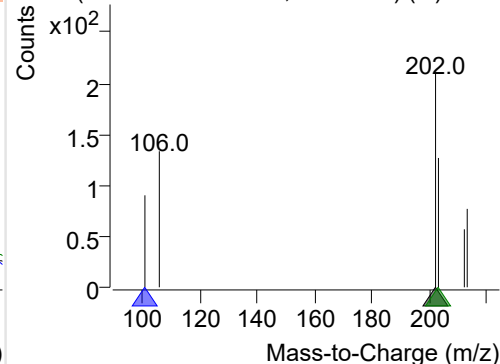
+ Selected Ion (202.0) 220806-PAHs-026.D



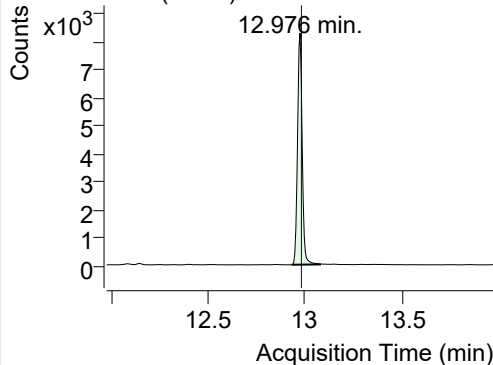
202.0, 101.0, 203.0



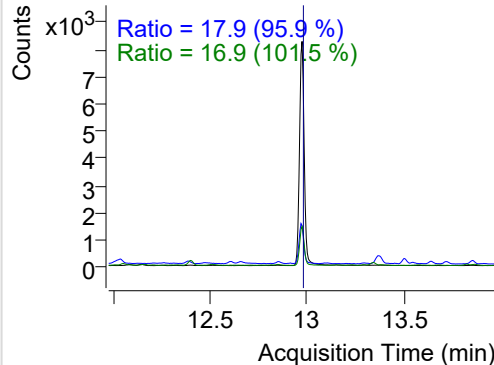
+ SIM (12.487-12.575 min, 17 scans) (\*\*) 2208

**LSS-D10-Pyrene**

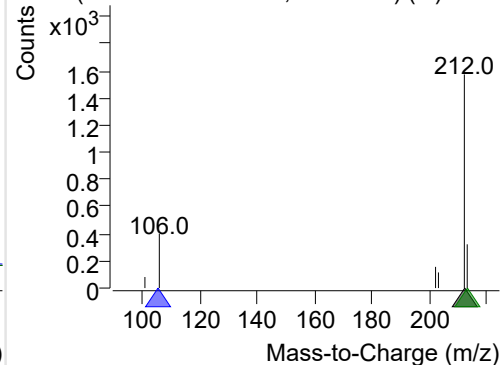
+ Selected Ion (212.0) 220806-PAHs-026.D



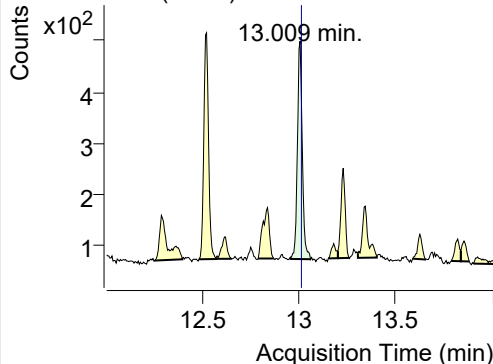
212.0, 106.0, 213.0



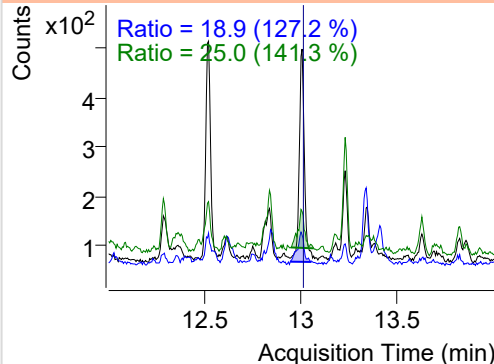
+ SIM (12.933-13.079 min, 28 scans) (\*\*) 2208

**Pyrene**

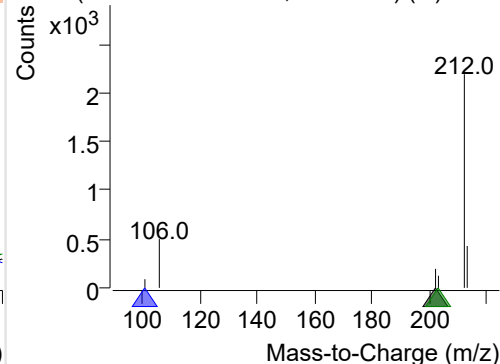
+ Selected Ion (202.0) 220806-PAHs-026.D



202.0, 101.0, 203.0



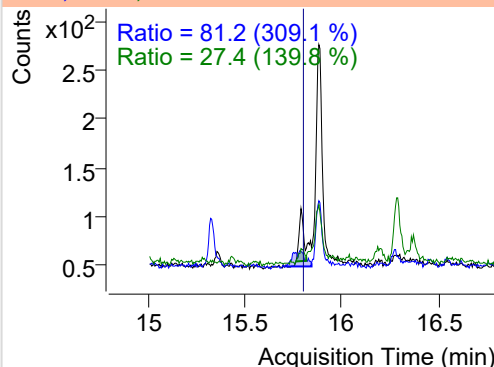
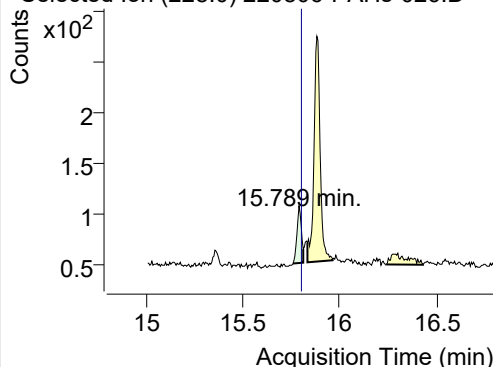
+ SIM (12.960-13.063 min, 19 scans) (\*\*) 2208



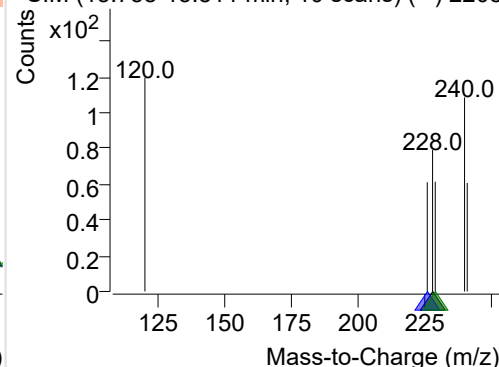
**Benz(a)anthracene**

+ Selected Ion (228.0) 220806-PAHs-026.D

228.0, 226.0, 229.0

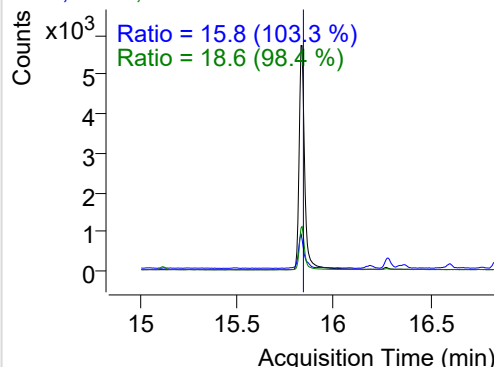
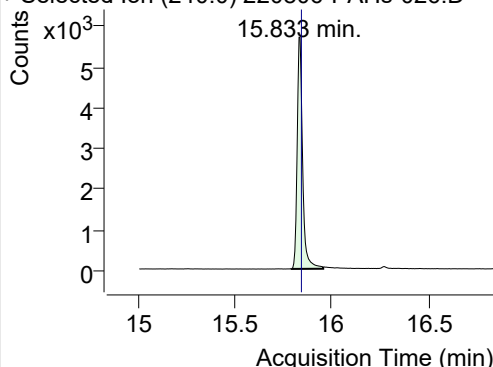


+ SIM (15.758-15.811 min, 10 scans) (\*\*) 2208

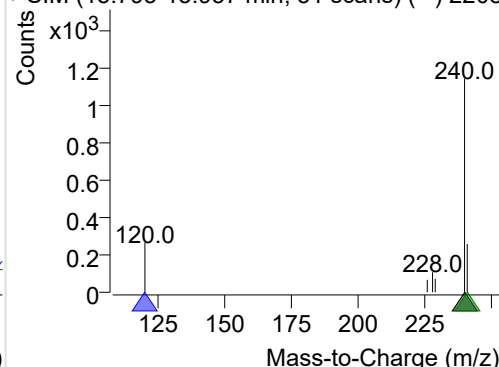
**IS-D12-Chrysene**

+ Selected Ion (240.0) 220806-PAHs-026.D

240.0, 120.0, 241.0

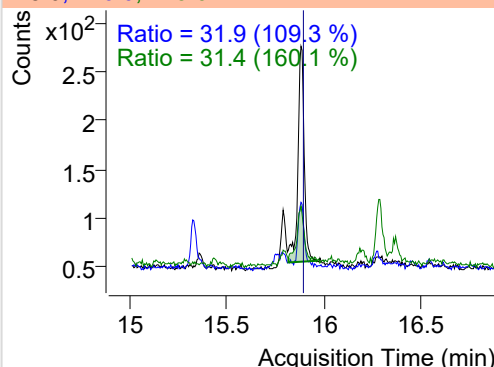
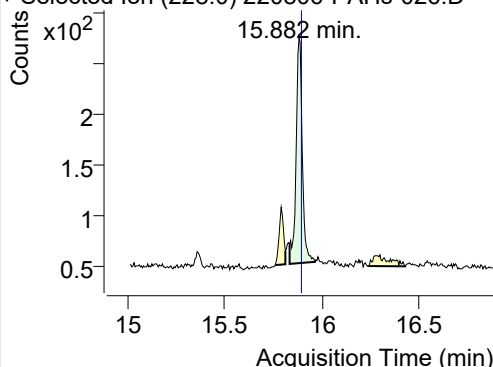


+ SIM (15.795-15.957 min, 31 scans) (\*\*) 2208

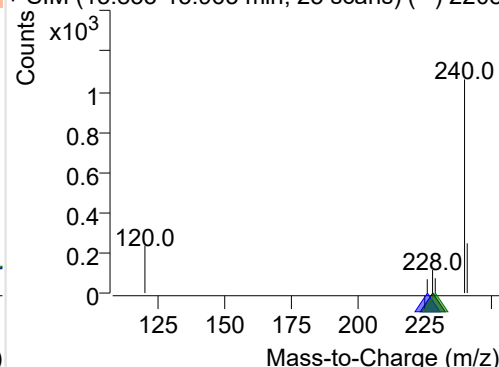
**Chrysene**

+ Selected Ion (228.0) 220806-PAHs-026.D

228.0, 226.0, 229.0

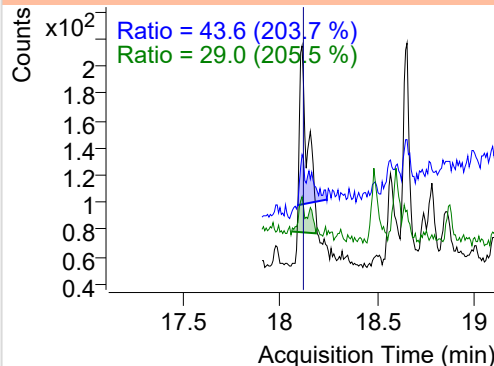
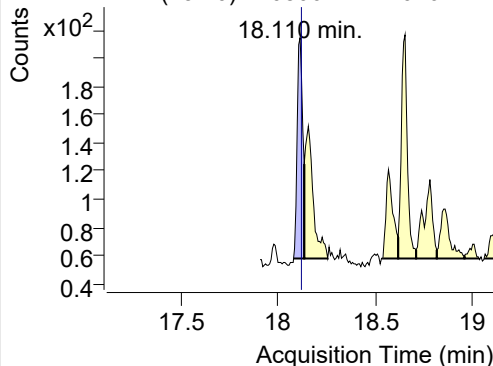


+ SIM (15.833-15.963 min, 25 scans) (\*\*) 2208

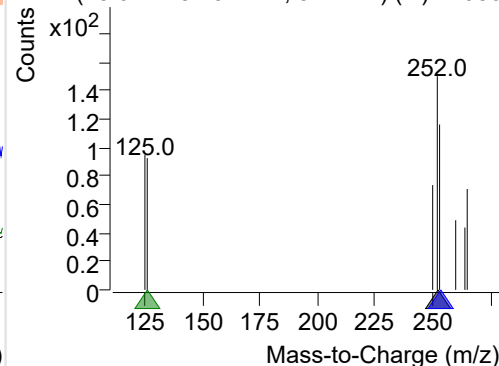
**Benzo(b)fluoranthene**

+ Selected Ion (252.0) 220806-PAHs-026.D

252.0, 253.0, 126.0



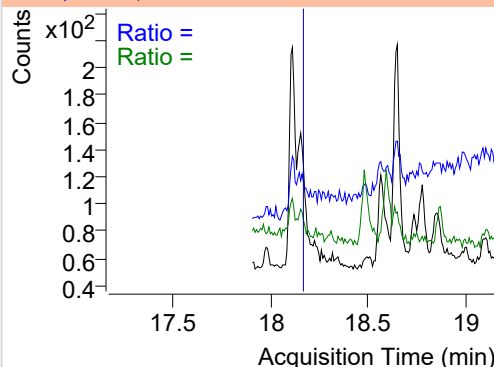
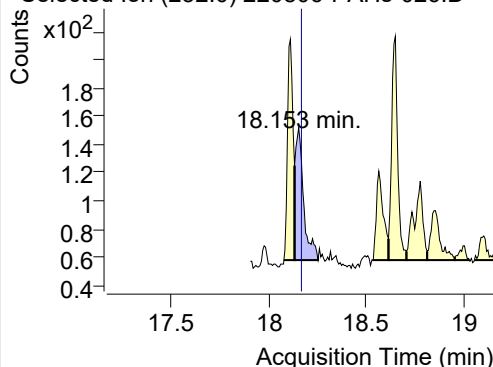
+ SIM (18.077-18.132 min, 8 scans) (\*\*) 22080



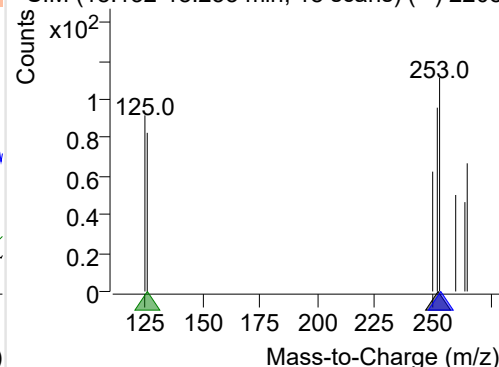
**Benzo(k)fluoranthene**

+ Selected Ion (252.0) 220806-PAHs-026.D

252.0, 253.0, 126.0

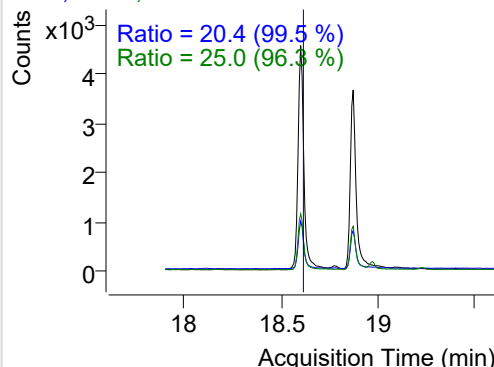
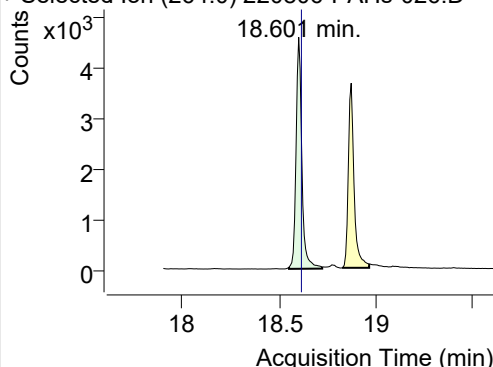


+ SIM (18.132-18.253 min, 18 scans) (\*\*) 2208

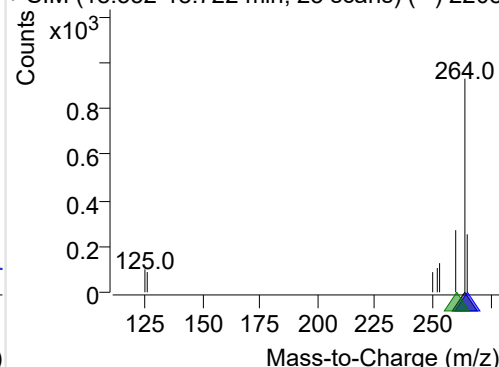
**SS-D12-Benzo(e)pyrene**

+ Selected Ion (264.0) 220806-PAHs-026.D

264.0, 265.0, 260.0

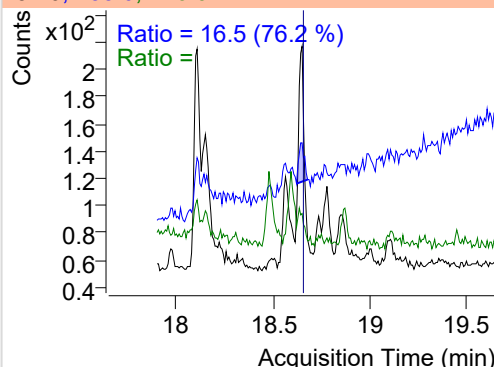
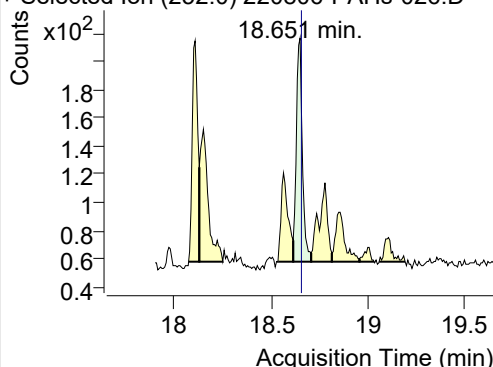


+ SIM (18.552-18.722 min, 25 scans) (\*\*) 2208

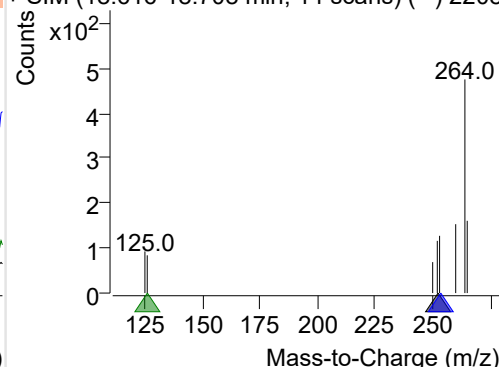
**Benzo(e)pyrene**

+ Selected Ion (252.0) 220806-PAHs-026.D

252.0, 253.0, 126.0

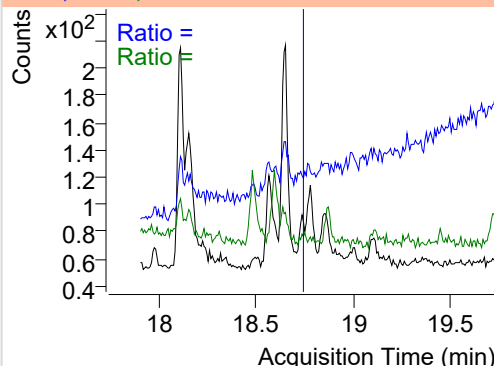
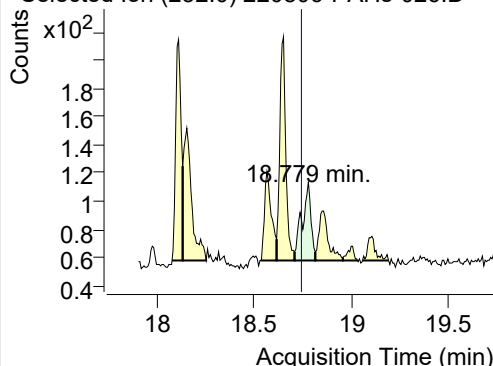


+ SIM (18.616-18.708 min, 14 scans) (\*\*) 2208

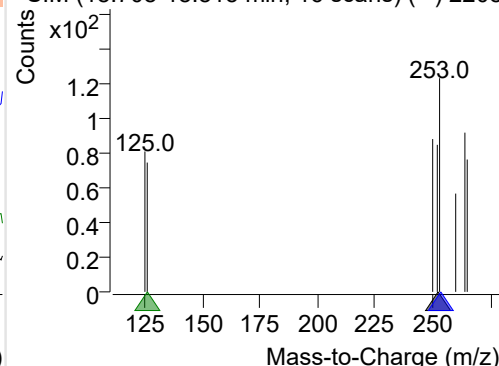
**Benzo(a)pyrene**

+ Selected Ion (252.0) 220806-PAHs-026.D

252.0, 253.0, 126.0

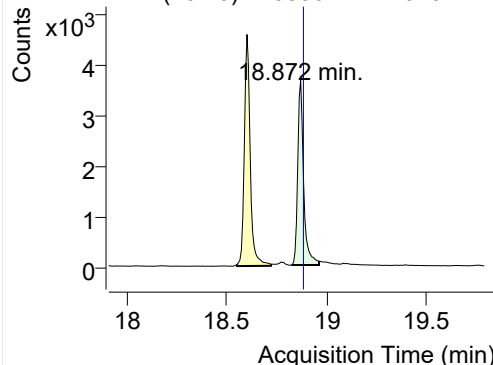


+ SIM (18.708-18.815 min, 16 scans) (\*\*) 2208

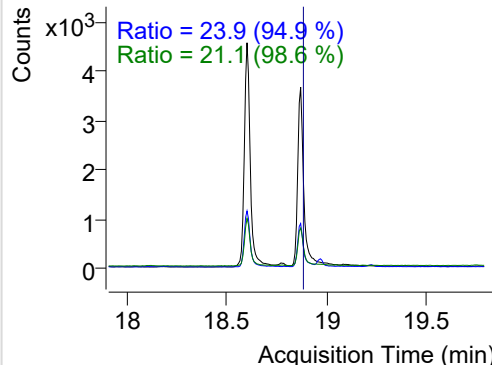


## IS-D12-Perylene

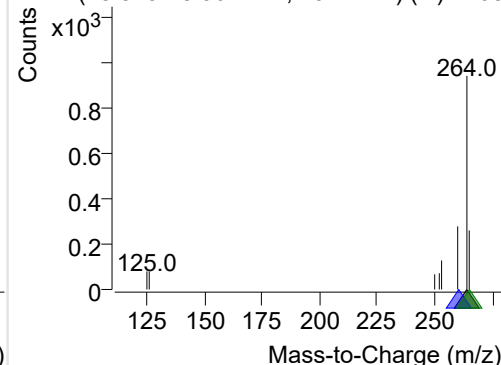
+ Selected Ion (264.0) 220806-PAHs-026.D



264.0, 260.0, 265.0

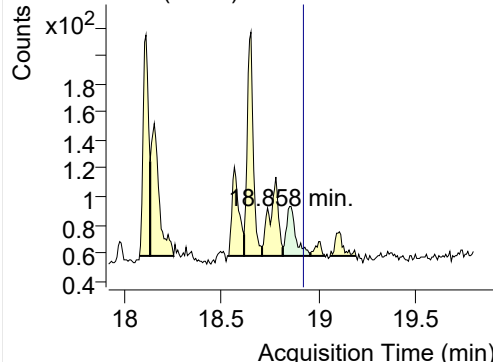
Ratio = 23.9 (94.9 %)  
Ratio = 21.1 (98.6 %)

+ SIM (18.825-18.964 min, 20 scans) (\*\*) 2208

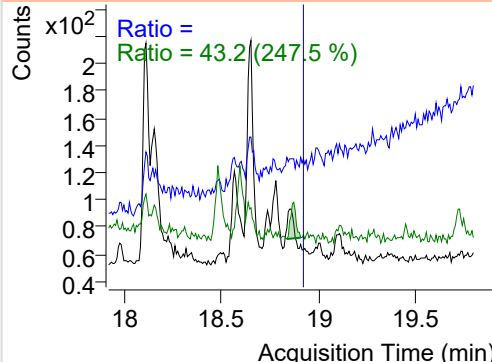


## Perylene

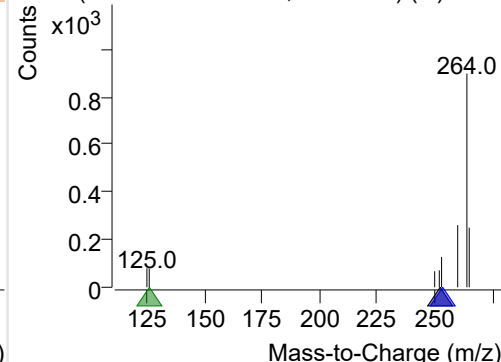
+ Selected Ion (252.0) 220806-PAHs-026.D



252.0, 253.0, 126.0

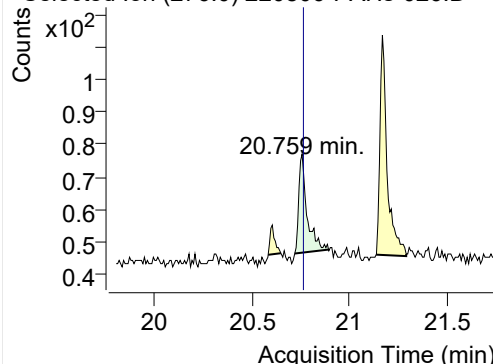
Ratio =  
Ratio = 43.2 (247.5 %)

+ SIM (18.815-18.957 min, 21 scans) (\*\*) 2208



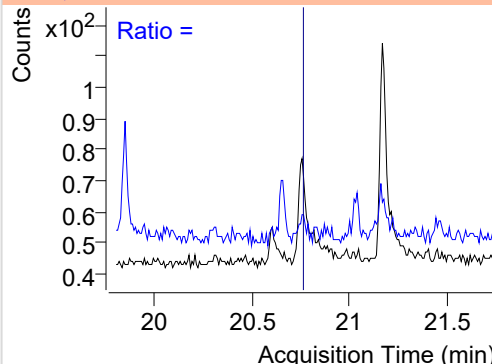
## Indeno(1,2,3-c,d)pyrene

+ Selected Ion (276.0) 220806-PAHs-026.D

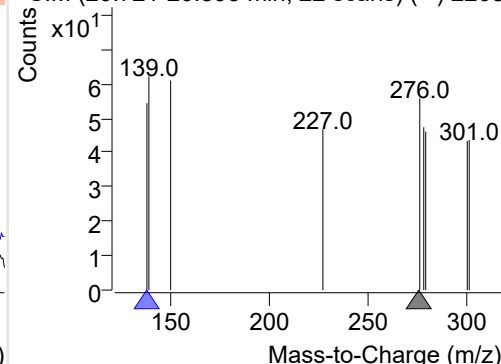


276.0, 138.0

Ratio =

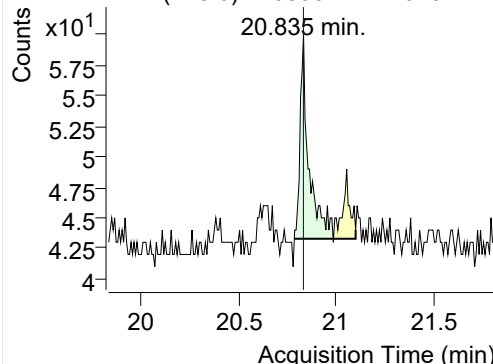


+ SIM (20.721-20.895 min, 22 scans) (\*\*) 2208

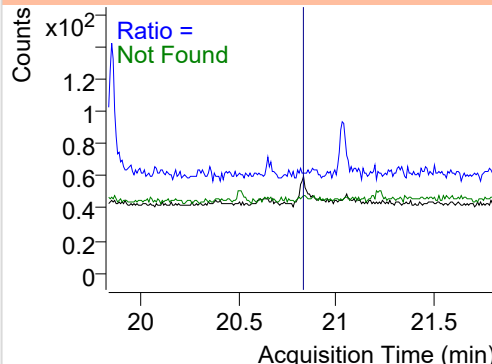


## Dibenz(a,h)anthracene

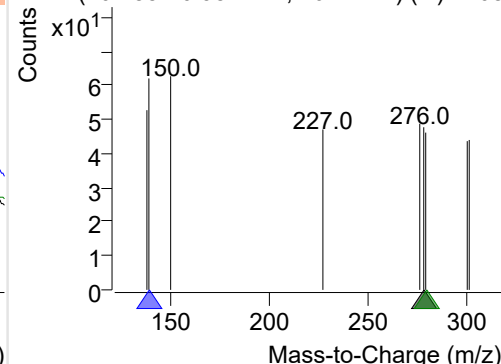
+ Selected Ion (278.0) 220806-PAHs-026.D



278.0, 139.0, 279.0

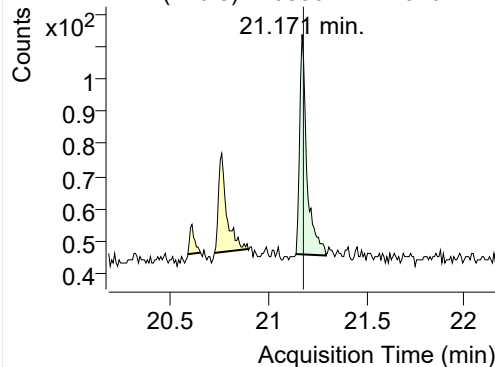
Ratio =  
Not Found

+ SIM (20.788-20.987 min, 26 scans) (\*\*) 2208

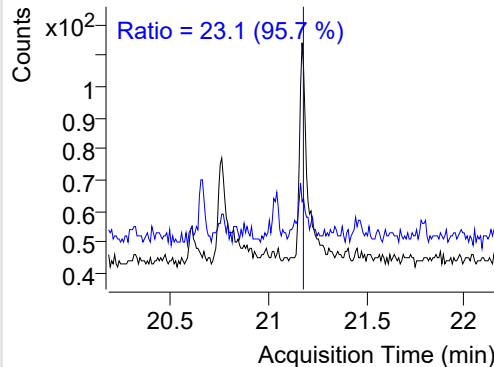


**Benzo(g,h,i)perylene**

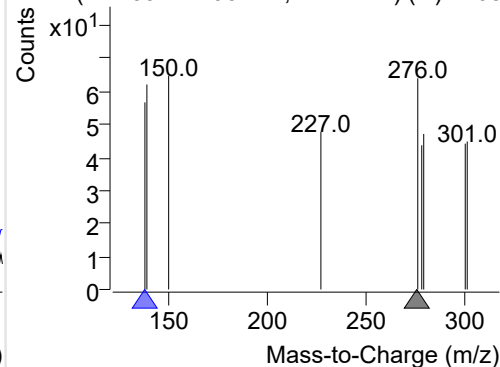
+ Selected Ion (276.0) 220806-PAHs-026.D



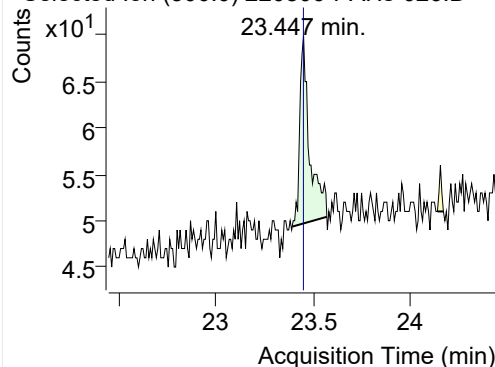
276.0, 138.0



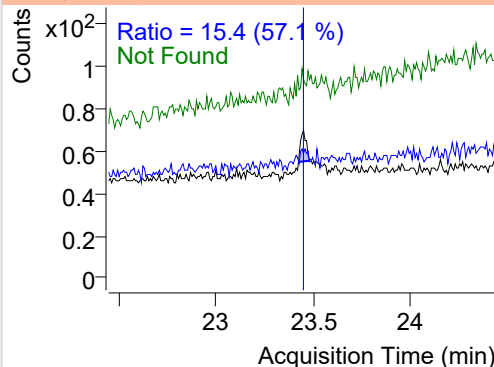
+ SIM (21.139-21.293 min, 21 scans) (\*\*) 2208

**Coronene**

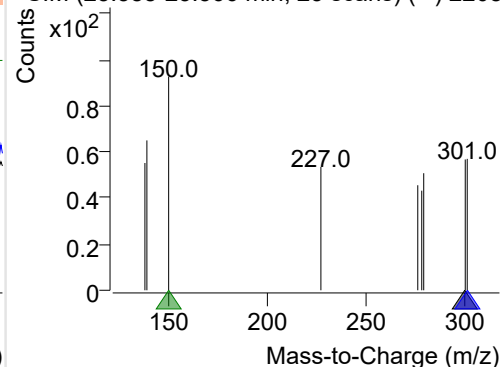
+ Selected Ion (300.0) 220806-PAHs-026.D



300.0, 301.0, 150.0



+ SIM (23.388-23.566 min, 23 scans) (\*\*) 2208





## Quantitative Analysis Sample Based Report

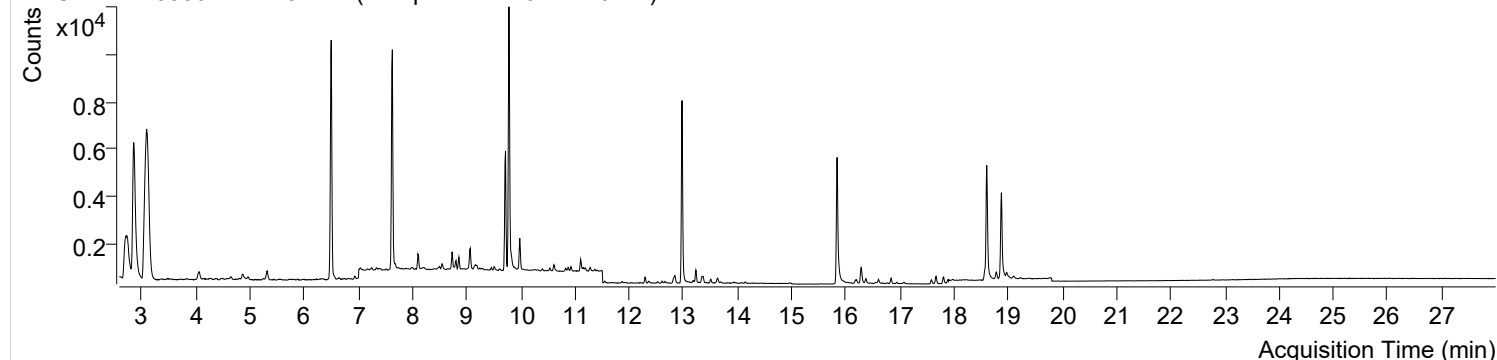


Trusted Answers

|                           |                                                                                            |                       |                        |
|---------------------------|--------------------------------------------------------------------------------------------|-----------------------|------------------------|
| Batch Data Path File Name | D:\MassHunter\GCMS\1\data\PAHs\220806-PAHs-Sample\QuantResults\220806-PAHs-Quant.batch.bin |                       |                        |
| Analysis Time Stamp       | 2022-10-10 오전 10:12:04                                                                     | Analyst Name          | DESKTOP-86B7UPG\5975MS |
| Report Generation Time    | 2022-10-10 오전 10:12:12                                                                     | Report Generator Name | DESKTOP-86B7UPG\5975MS |
| Calibration Last Update   | 2022-12-15 오후 3:30:46                                                                      | Batch State           | Processed              |
| Analyze Quant Version     | 10.2                                                                                       | Report Quant Version  | 10.2                   |
| Acq. Date-Time            | 2022-08-06 오후 11:59:44                                                                     | Data File             | 220806-PAHs-027.D      |
| Type                      | Sample                                                                                     | Name                  | Sample-PM-220722-10DIL |
| Dil.                      | 1                                                                                          | Acq. Method File      | PAHs 19mix-Method      |

## Sample Chromatogram

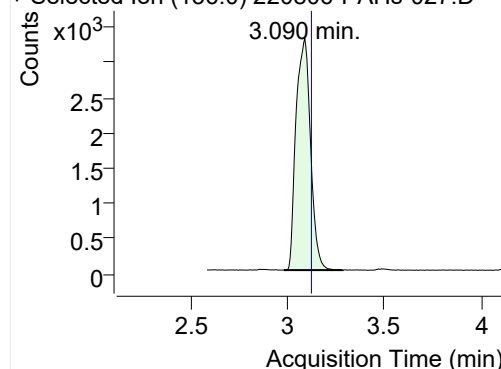
+ TIC SIM 220806-PAHs-027.D (Sample-PM-220722-10DIL)



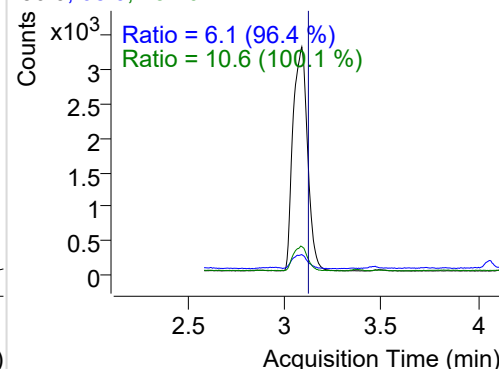
| Name                    | RT     | Transition | Resp. | Height  | Final Conc. Units | Ratio |
|-------------------------|--------|------------|-------|---------|-------------------|-------|
| IS-D8-Naphthalene       | 3.090  | 136.0      | 17054 | 3283.70 | ND ng/ml          | 10.6  |
| Naphthalene             | 3.112  | 128.0      | 11729 | 2255.53 | ND ng/ml          | 12.7  |
| Acenaphthylene          | 6.463  | 152.0      | 9     | 7.33    | ND ng/ml          | 166.0 |
| IS-D10-Acenaphthene     | 6.498  | 164.0      | 9165  | 4873.54 | ND ng/ml          | 96.7  |
| Acenaphthene            | 6.564  | 154.0      | 55    | 30.40   | ND ng/ml          | 113.1 |
| LSS-D10-Fluorene        | 7.627  | 176.0      | 7652  | 4270.85 | ND ng/ml          | 94.1  |
| Fluorene                | 7.680  | 166.0      | 115   | 56.48   | ND ng/ml          | 89.9  |
| IS-D10-Phenanthrene     | 9.780  | 188.0      | 15324 | 8887.73 | ND ng/ml          | 15.0  |
| Phenanthrene            | 9.822  | 178.0      | 360   | 180.20  | ND ng/ml          | 17.2  |
| Anthracene              | 9.979  | 178.0      | 551   | 354.88  | ND ng/ml          | 29.7  |
| Fluoranthene            | 12.532 | 202.0      | 70    | 37.61   | ND ng/ml          |       |
| LSS-D10-Pyrene          | 12.976 | 212.0      | 9642  | 5720.76 | ND ng/ml          | 17.8  |
| Pyrene                  | 13.008 | 202.0      | 134   | 67.16   | ND ng/ml          | 24.6  |
| Benz(a)anthracene       | 15.838 | 228.0      | 29    | 12.73   | ND ng/ml          |       |
| IS-D12-Chrysene         | 15.838 | 240.0      | 8369  | 4004.37 | ND ng/ml          | 18.7  |
| Chrysene                | 15.876 | 228.0      | 49    | 17.50   | ND ng/ml          | 42.4  |
| Benzo(b)fluoranthene    | 18.231 | 252.0      | 13    | 7.65    | ND ng/ml          |       |
| Benzo(k)fluoranthene    | 18.231 | 252.0      | 13    | 7.65    | ND ng/ml          |       |
| SS-D12-Benzo(e)pyrene   | 18.601 | 264.0      | 6875  | 3244.27 | ND ng/ml          | 25.1  |
| Benzo(e)pyrene          | 18.566 | 252.0      | 192   | 74.85   | ND ng/ml          | 29.9  |
| Benzo(a)pyrene          | 18.786 | 252.0      | 128   | 56.22   | ND ng/ml          |       |
| IS-D12-Perylene         | 18.872 | 264.0      | 5280  | 2460.06 | ND ng/ml          | 23.3  |
| Perylene                | 18.850 | 252.0      | 117   | 41.94   | ND ng/ml          |       |
| Indeno(1,2,3-c,d)pytene | 20.774 | 276.0      | 8     | 4.54    | ND ng/ml          |       |
| Dibenz(a,h)anthracene   | 20.850 | 278.0      | 14    | 5.41    | ND ng/ml          |       |
| Benzo(g,h,i)perylene    | 21.186 | 276.0      | 8     | 3.34    | ND ng/ml          |       |
| Coronene                | 23.446 | 300.0      | 17    | 5.86    | ND ng/ml          |       |

## IS-D8-Naphthalene

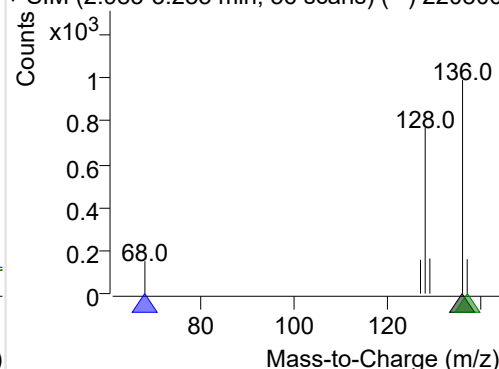
+ Selected Ion (136.0) 220806-PAHs-027.D



136.0, 68.0, 137.0

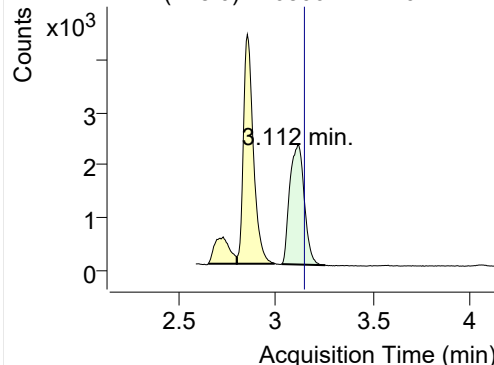


+ SIM (2.983-3.285 min, 56 scans) (\*\*) 220806

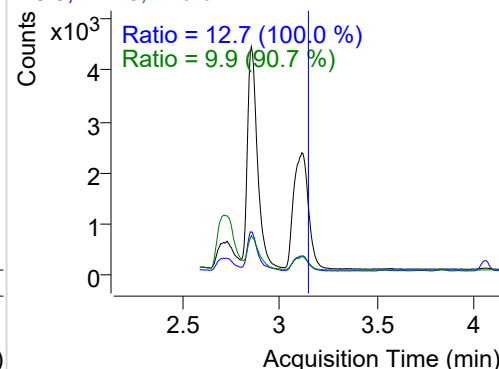


**Naphthalene**

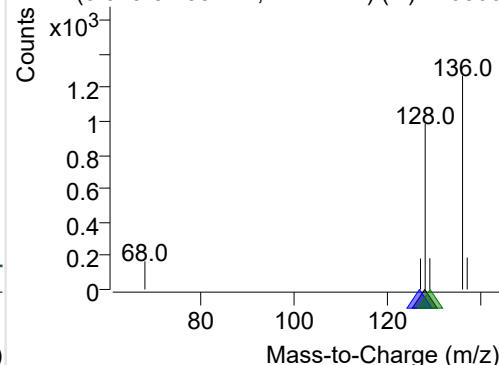
+ Selected Ion (128.0) 220806-PAHs-027.D



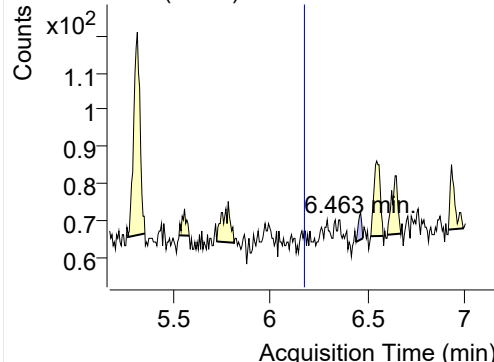
128.0, 127.0, 129.0



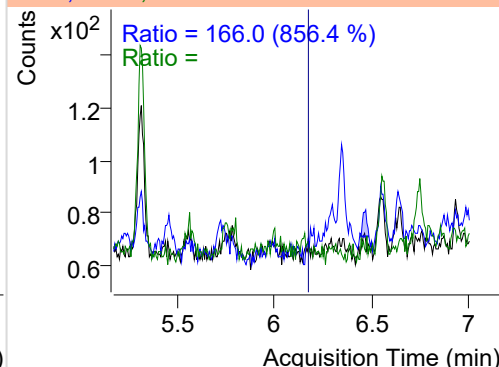
+ SIM (3.029-3.253 min, 42 scans) (\*\*) 220806

**Acenaphthylene**

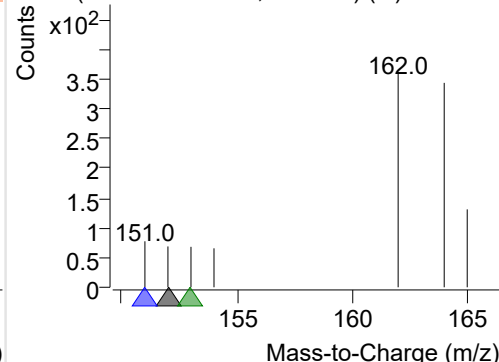
+ Selected Ion (152.0) 220806-PAHs-027.D



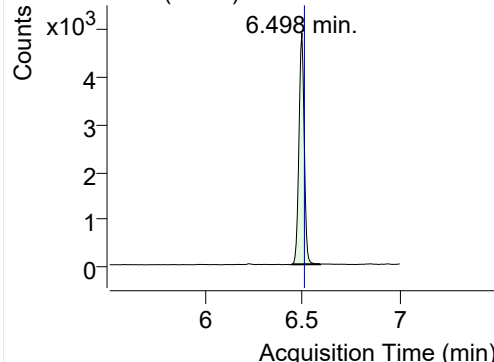
152.0, 151.0, 153.0



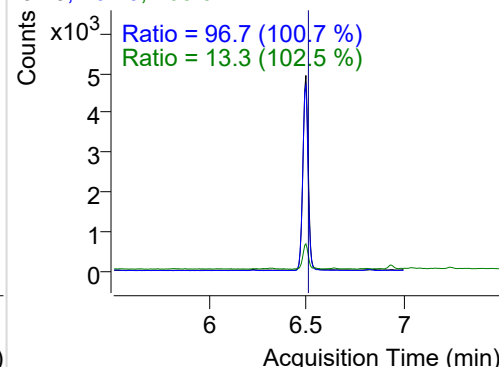
+ SIM (6.439-6.475 min, 6 scans) (\*\*) 220806-I

**IS-D10-Acenaphthene**

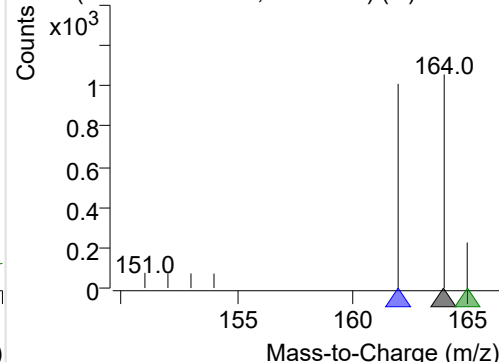
+ Selected Ion (164.0) 220806-PAHs-027.D



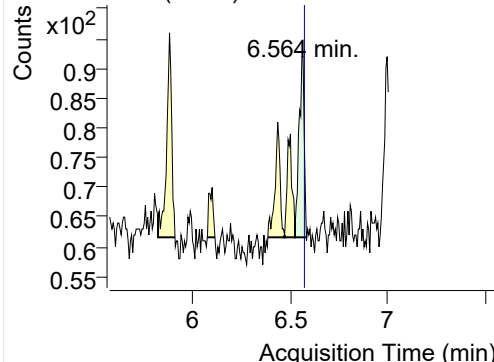
164.0, 162.0, 165.0



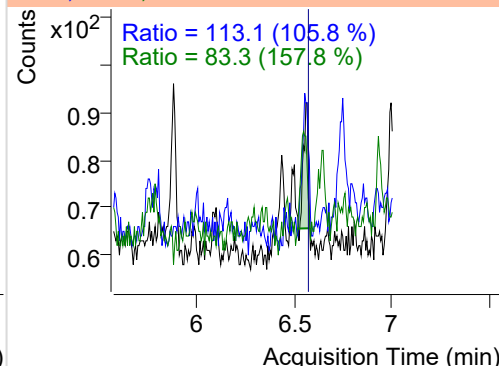
+ SIM (6.445-6.593 min, 26 scans) (\*\*) 220806

**Acenaphthene**

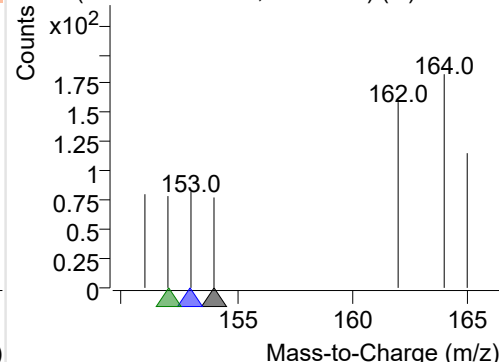
+ Selected Ion (154.0) 220806-PAHs-027.D



154.0, 153.0, 152.0

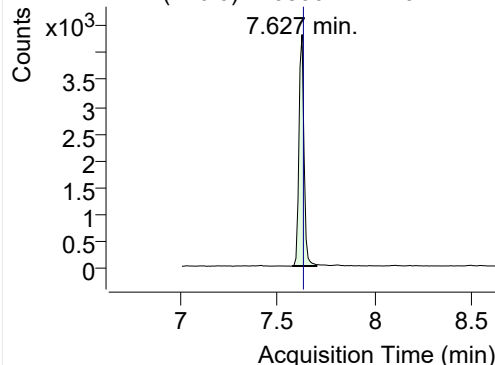


+ SIM (6.522-6.581 min, 10 scans) (\*\*) 220806

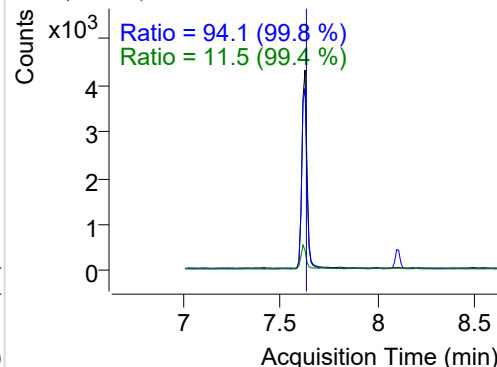


## LSS-D10-Fluorene

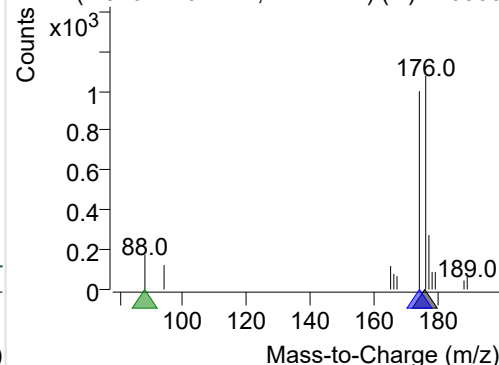
+ Selected Ion (176.0) 220806-PAHs-027.D



176.0, 174.0, 88.0

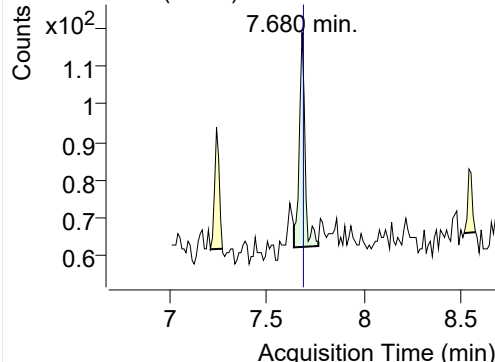


+ SIM (7.576-7.701 min, 12 scans) (\*\*) 220806

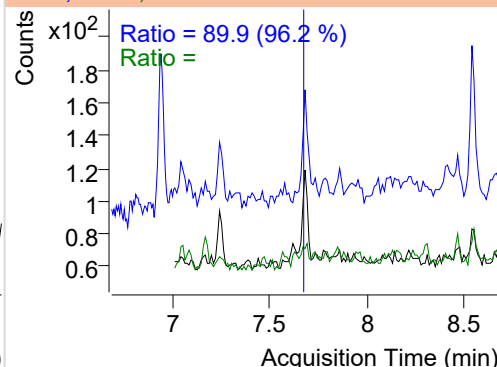


## Fluorene

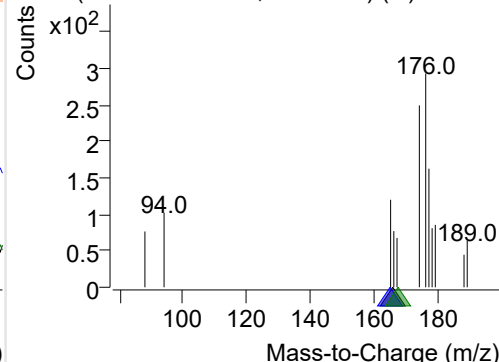
+ Selected Ion (166.0) 220806-PAHs-027.D



166.0, 165.0, 167.0

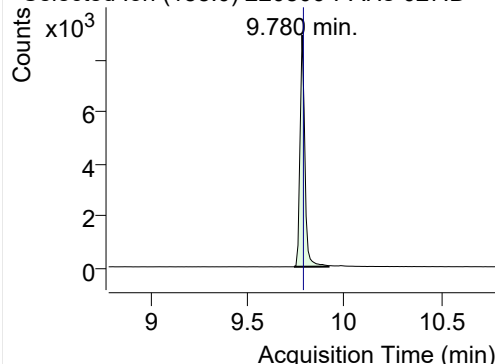


+ SIM (7.638-7.764 min, 13 scans) (\*\*) 220806

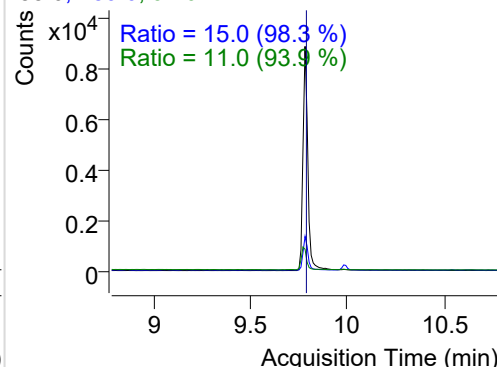


## IS-D10-Phenanthrene

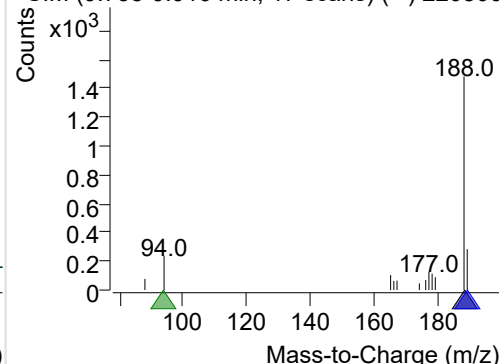
+ Selected Ion (188.0) 220806-PAHs-027.D



188.0, 189.0, 94.0

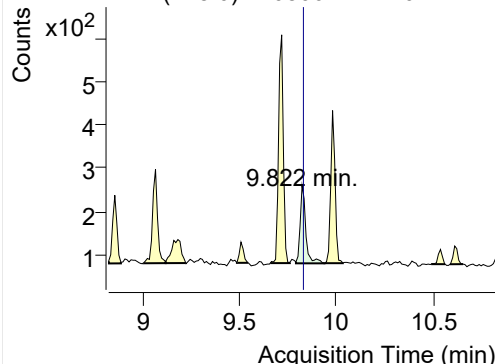


+ SIM (9.738-9.916 min, 17 scans) (\*\*) 220806

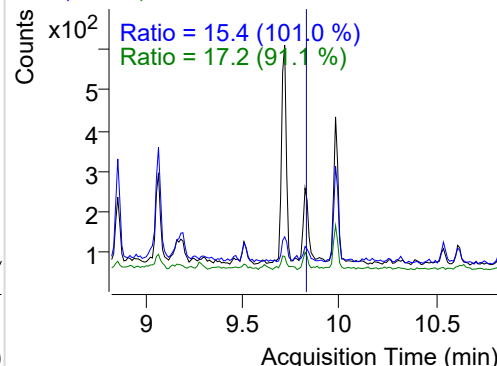


## Phenanthrene

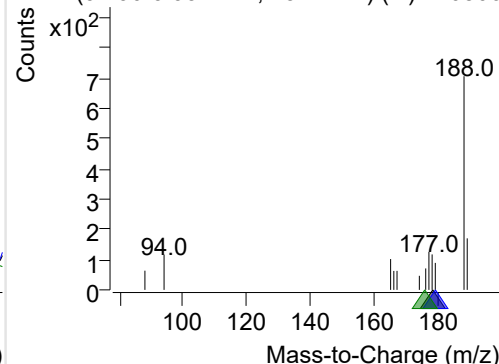
+ Selected Ion (178.0) 220806-PAHs-027.D



178.0, 179.0, 176.0

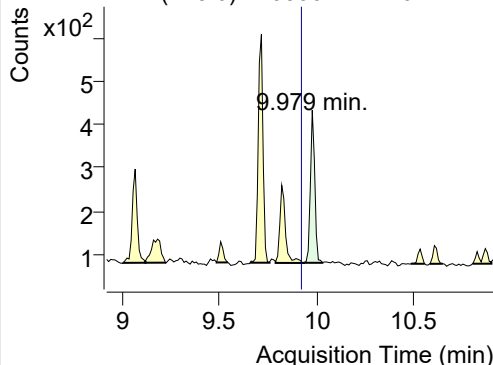


+ SIM (9.790-9.937 min, 15 scans) (\*\*) 220806

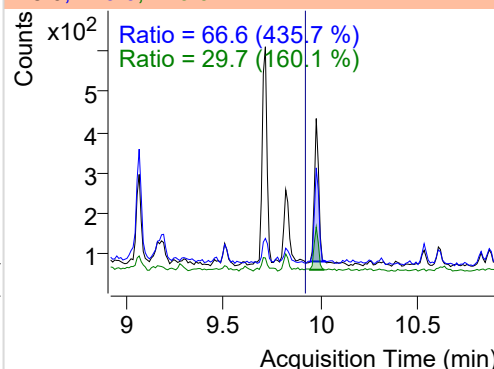


**Anthracene**

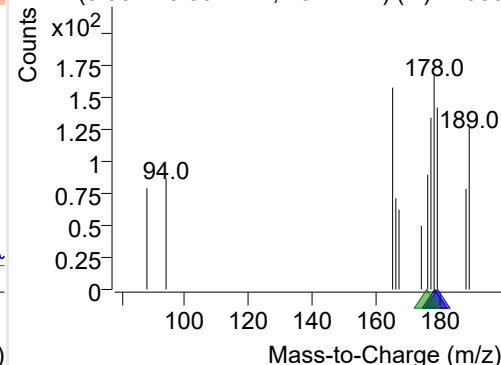
+ Selected Ion (178.0) 220806-PAHs-027.D



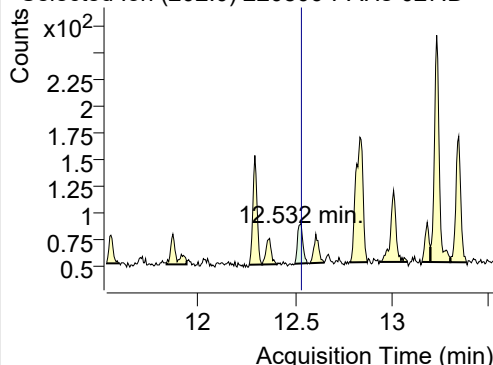
178.0, 179.0, 176.0



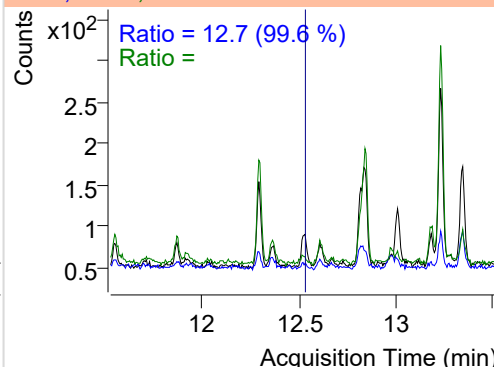
+ SIM (9.937-10.032 min, 10 scans) (\*\*) 22080

**Fluoranthene**

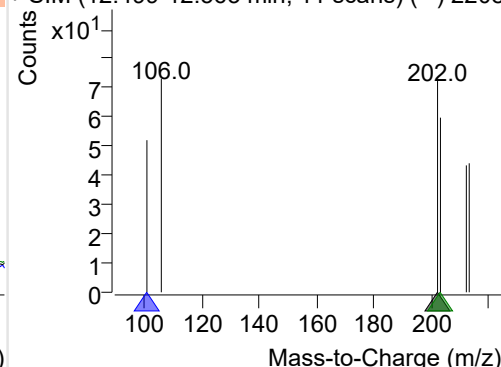
+ Selected Ion (202.0) 220806-PAHs-027.D



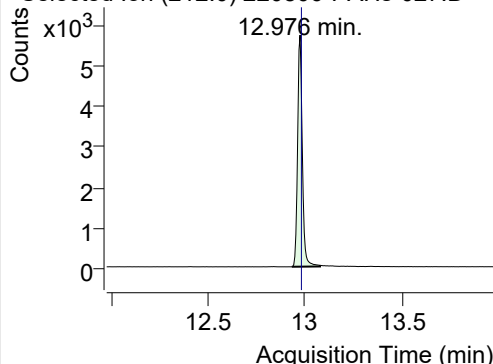
202.0, 101.0, 203.0



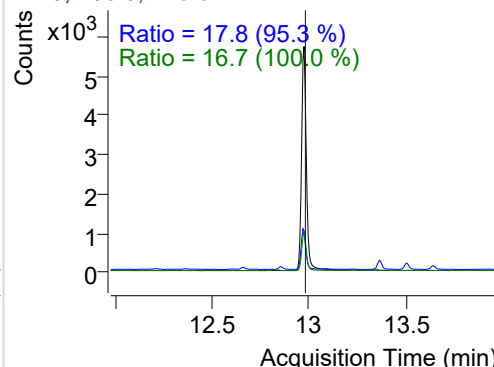
+ SIM (12.499-12.563 min, 11 scans) (\*\*) 2208

**LSS-D10-Pyrene**

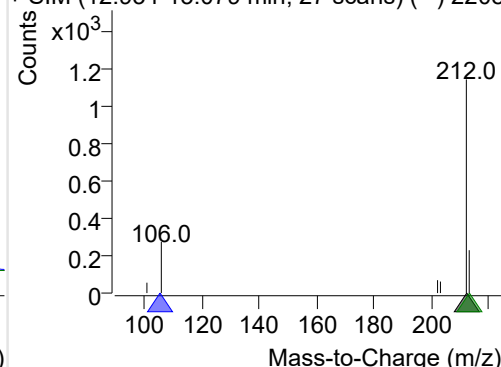
+ Selected Ion (212.0) 220806-PAHs-027.D



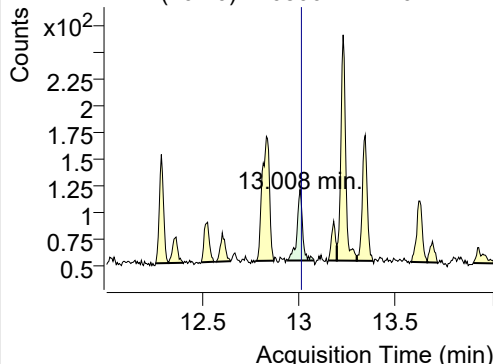
212.0, 106.0, 213.0



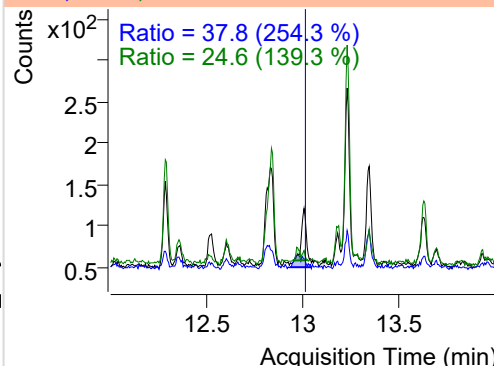
+ SIM (12.934-13.079 min, 27 scans) (\*\*) 2208

**Pyrene**

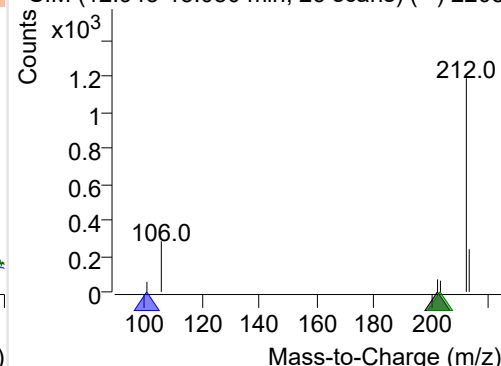
+ Selected Ion (202.0) 220806-PAHs-027.D



202.0, 101.0, 203.0



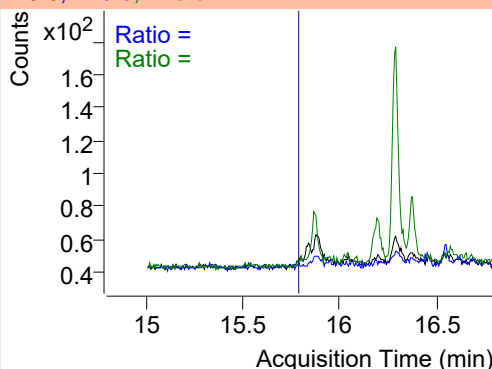
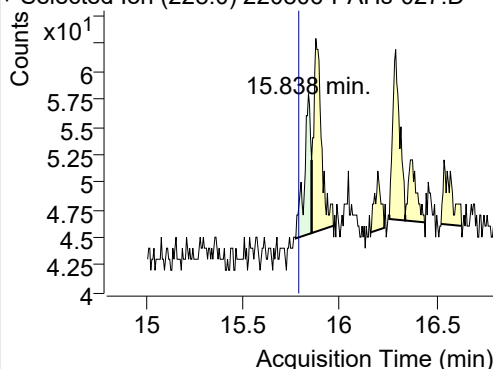
+ SIM (12.943-13.080 min, 26 scans) (\*\*) 2208



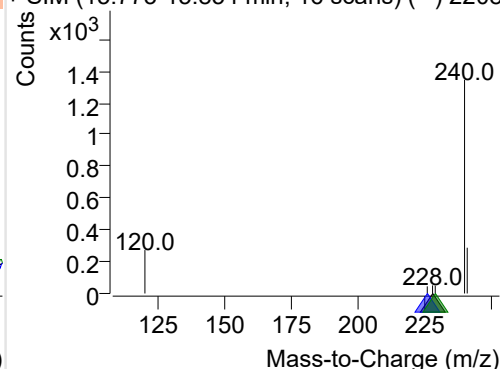
**Benz(a)anthracene**

+ Selected Ion (228.0) 220806-PAHs-027.D

228.0, 226.0, 229.0

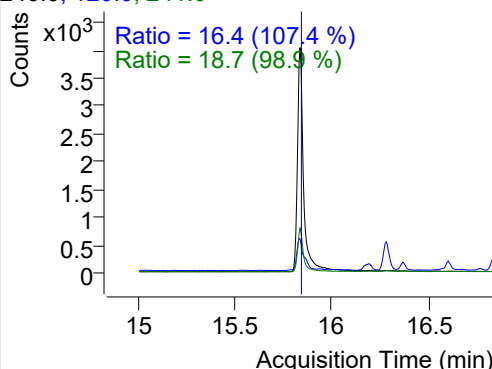
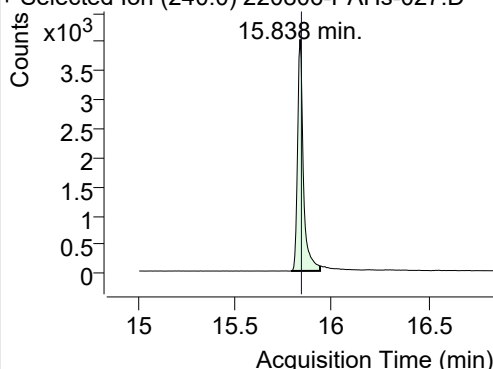


+ SIM (15.773-15.854 min, 16 scans) (\*\*) 2208

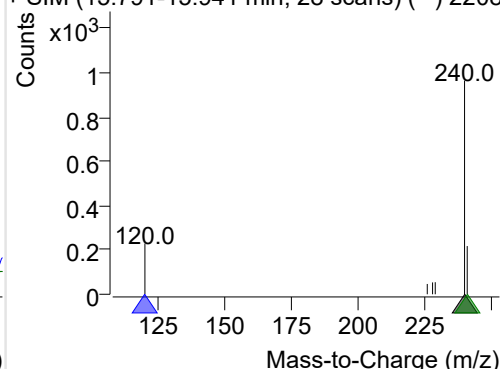
**IS-D12-Chrysene**

+ Selected Ion (240.0) 220806-PAHs-027.D

240.0, 120.0, 241.0

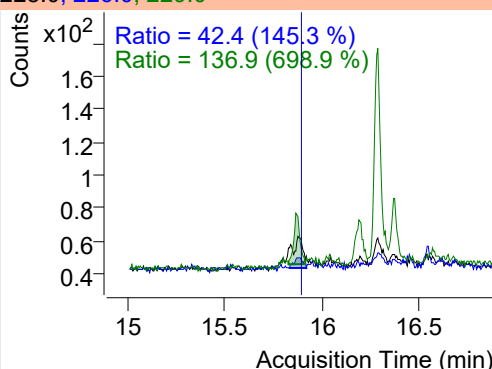
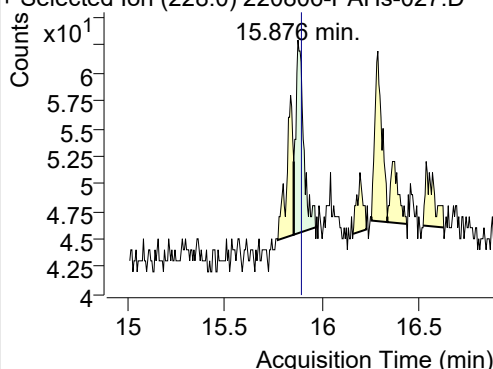


+ SIM (15.791-15.941 min, 28 scans) (\*\*) 2208

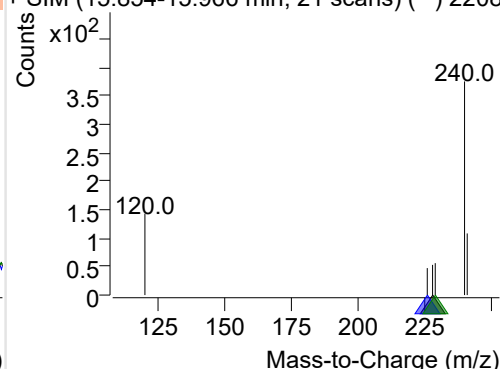
**Chrysene**

+ Selected Ion (228.0) 220806-PAHs-027.D

228.0, 226.0, 229.0

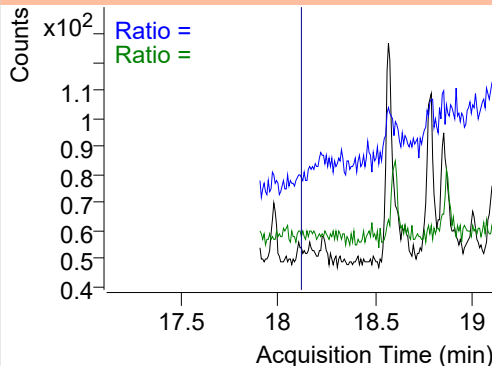
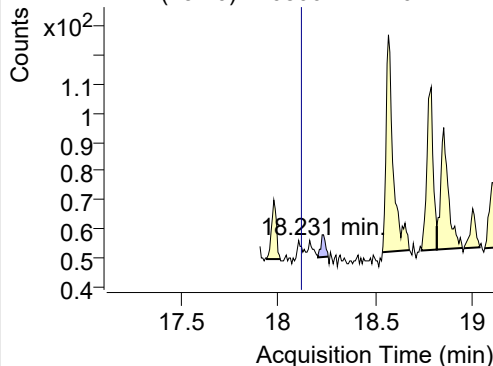


+ SIM (15.854-15.966 min, 21 scans) (\*\*) 2208

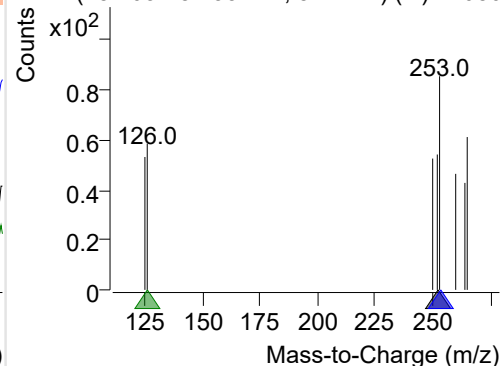
**Benzo(b)fluoranthene**

+ Selected Ion (252.0) 220806-PAHs-027.D

252.0, 253.0, 126.0



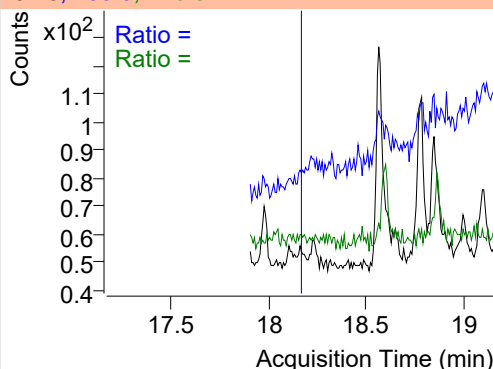
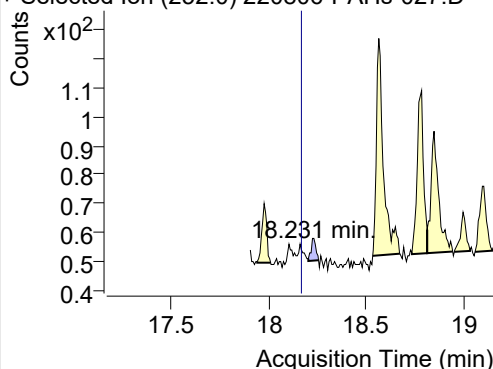
+ SIM (18.203-18.255 min, 8 scans) (\*\*) 22080



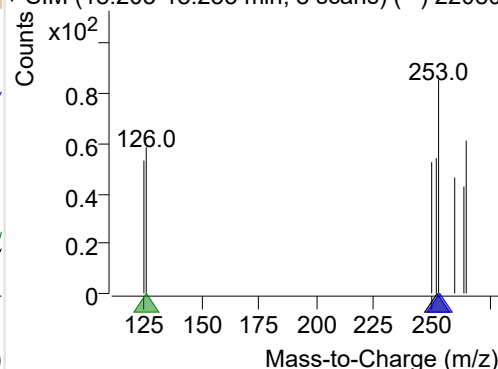
**Benzo(k)fluoranthene**

+ Selected Ion (252.0) 220806-PAHs-027.D

252.0, 253.0, 126.0

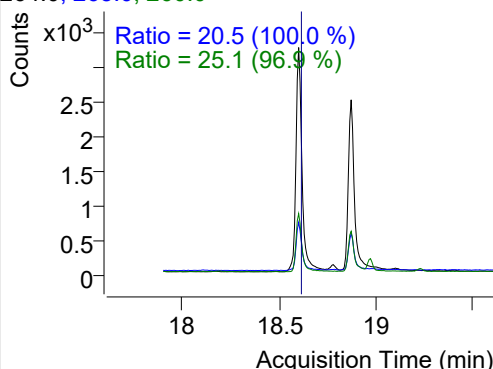
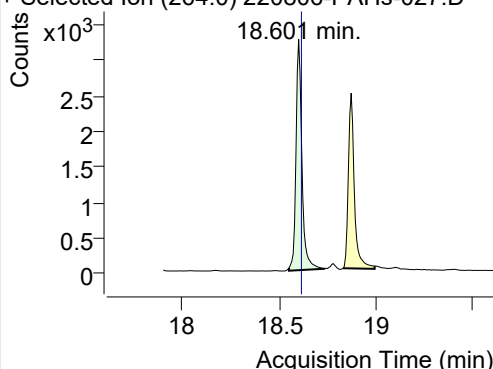


+ SIM (18.203-18.255 min, 8 scans) (\*\*) 22080

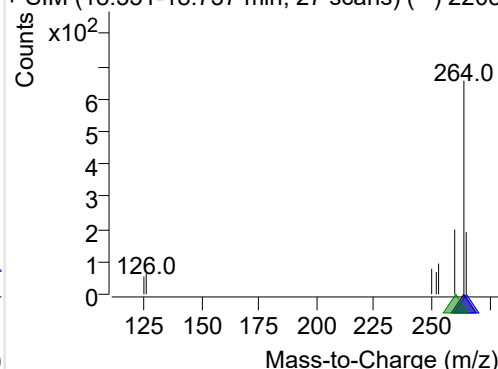
**SS-D12-Benzo(e)pyrene**

+ Selected Ion (264.0) 220806-PAHs-027.D

264.0, 265.0, 260.0

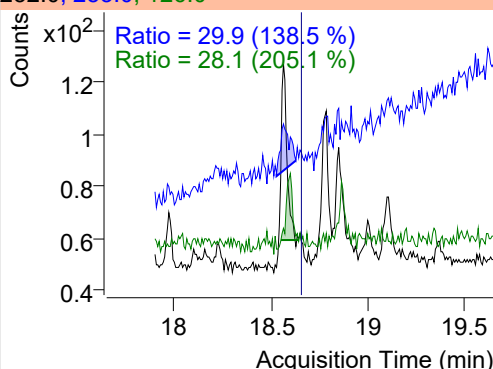
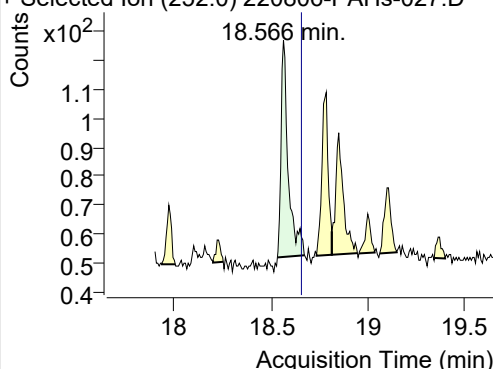


+ SIM (18.551-18.737 min, 27 scans) (\*\*) 2208

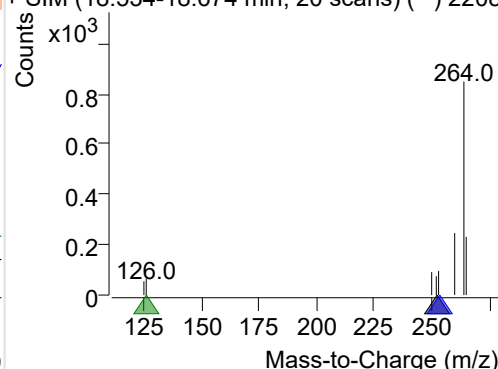
**Benzo(e)pyrene**

+ Selected Ion (252.0) 220806-PAHs-027.D

252.0, 253.0, 126.0

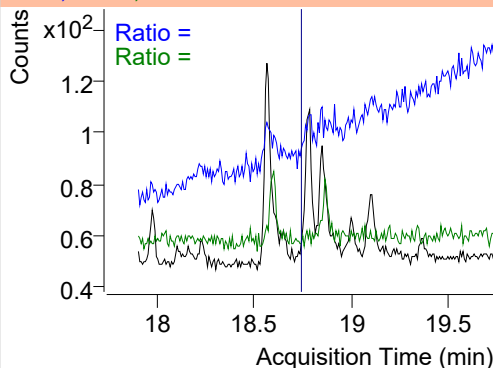
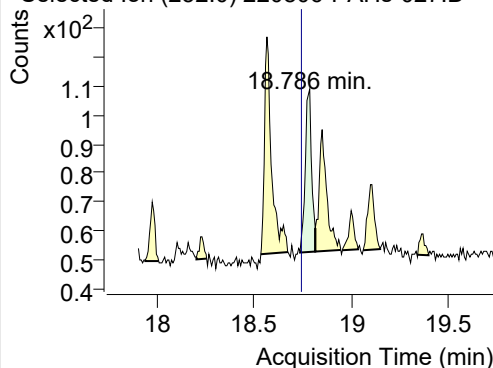


+ SIM (18.534-18.674 min, 20 scans) (\*\*) 2208

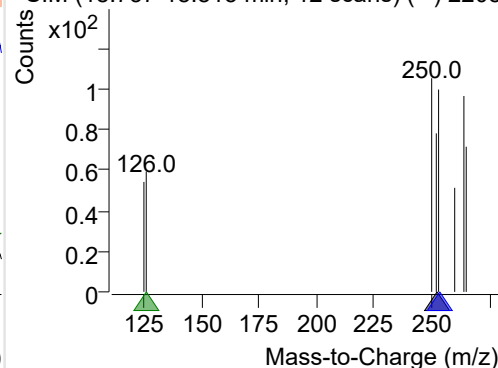
**Benzo(a)pyrene**

+ Selected Ion (252.0) 220806-PAHs-027.D

252.0, 253.0, 126.0

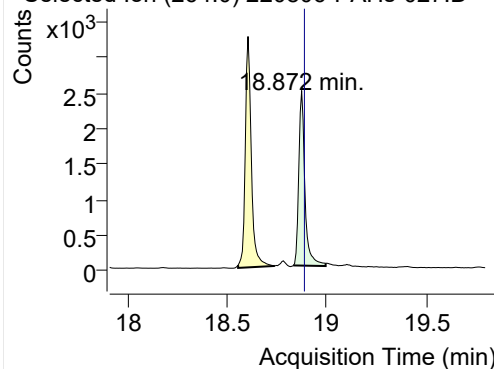


+ SIM (18.737-18.815 min, 12 scans) (\*\*) 2208

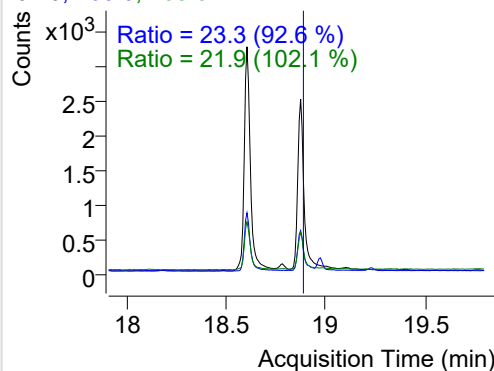


## IS-D12-Perylene

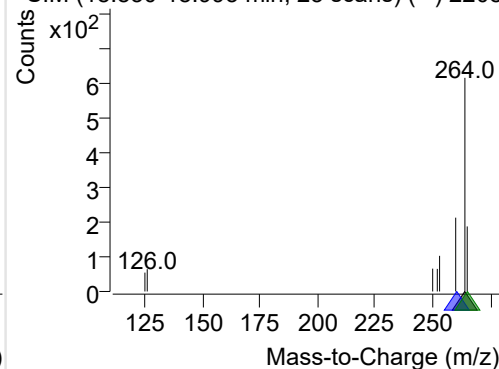
+ Selected Ion (264.0) 220806-PAHs-027.D



264.0, 260.0, 265.0

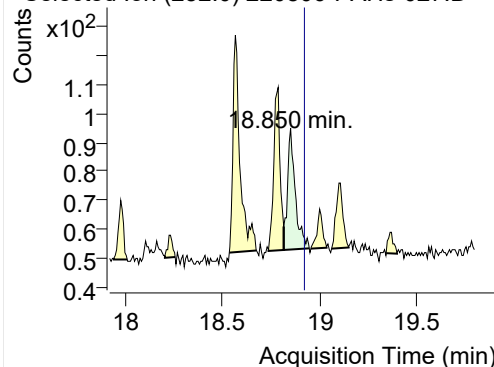
Ratio = 23.3 (92.6 %)  
Ratio = 21.9 (102.1 %)

+ SIM (18.830-18.993 min, 23 scans) (\*\*) 2208

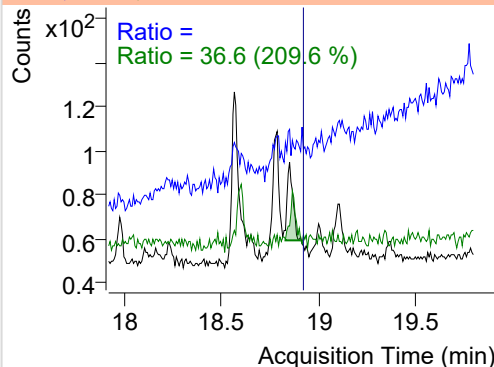


## Perylene

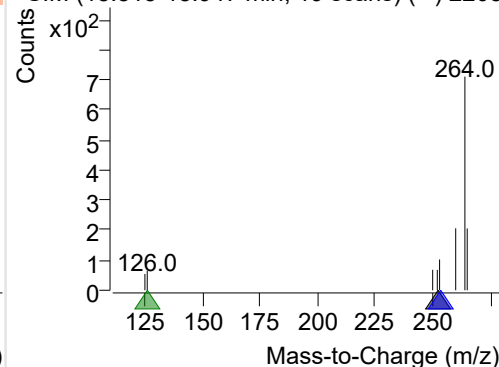
+ Selected Ion (252.0) 220806-PAHs-027.D



252.0, 253.0, 126.0

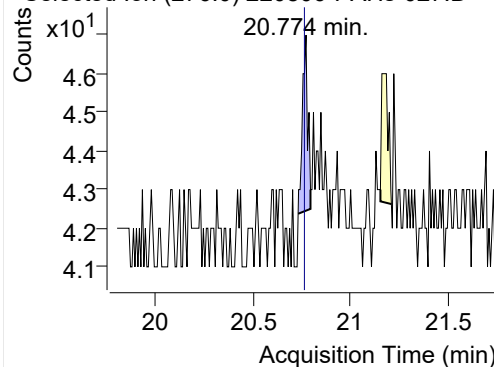
Ratio =  
Ratio = 36.6 (209.6 %)

+ SIM (18.815-18.947 min, 19 scans) (\*\*) 2208



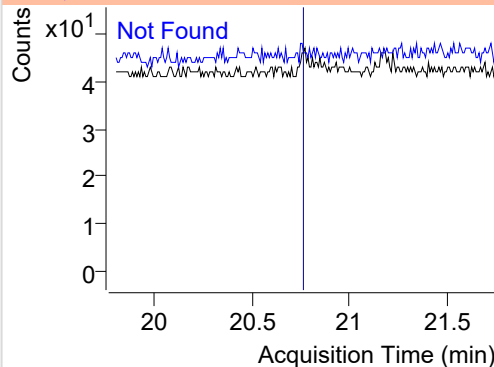
## Indeno(1,2,3-c,d)pyrene

+ Selected Ion (276.0) 220806-PAHs-027.D

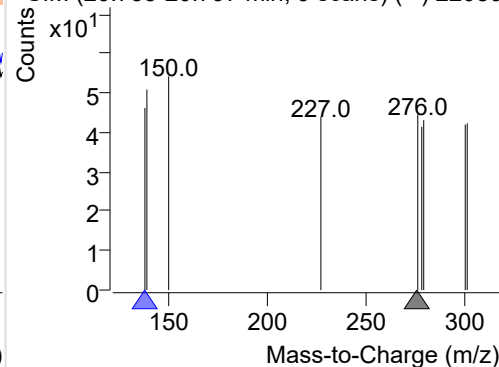


276.0, 138.0

Not Found

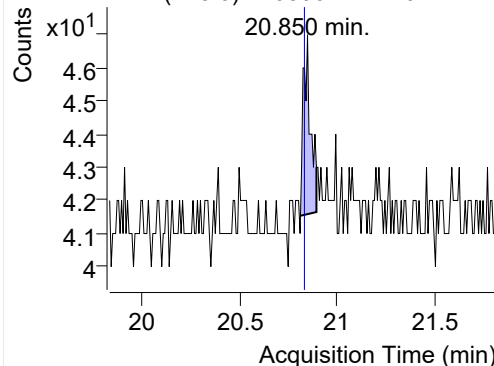


+ SIM (20.733-20.797 min, 9 scans) (\*\*) 22080

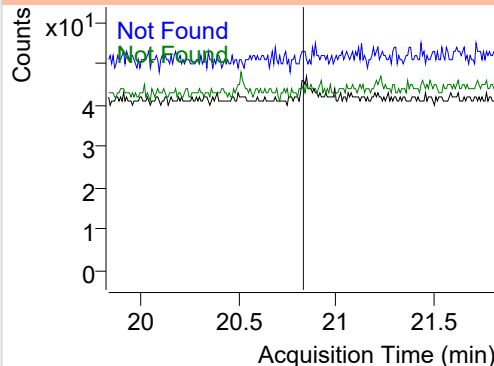


## Dibenz(a,h)anthracene

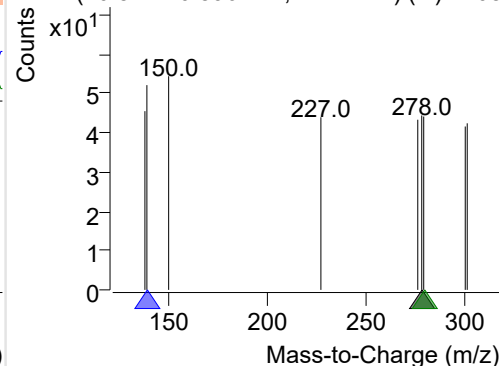
+ Selected Ion (278.0) 220806-PAHs-027.D



278.0, 139.0, 279.0

Not Found  
Not Found

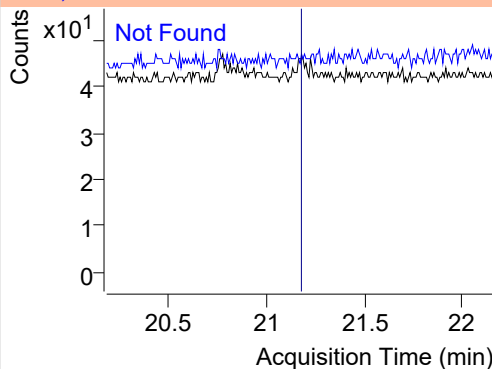
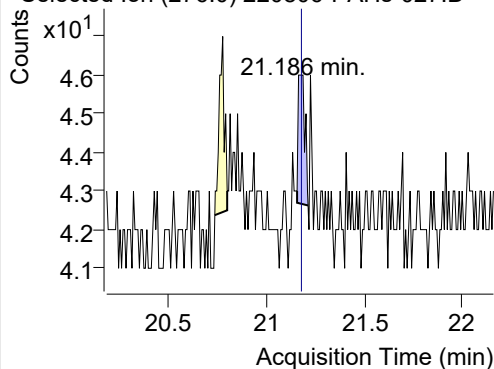
+ SIM (20.814-20.896 min, 11 scans) (\*\*) 2208



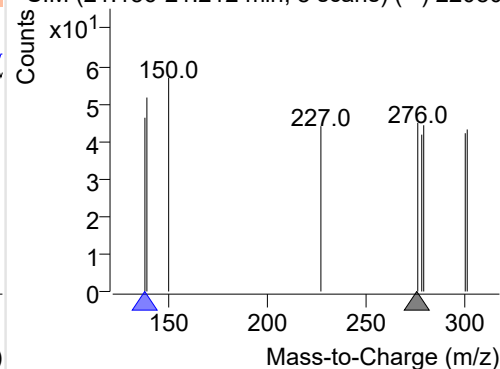
**Benzo(g,h,i)perylene**

+ Selected Ion (276.0) 220806-PAHs-027.D

276.0, 138.0

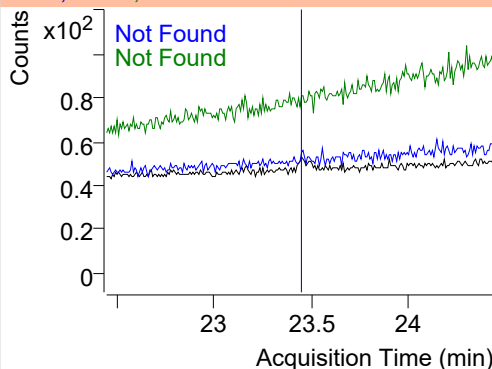
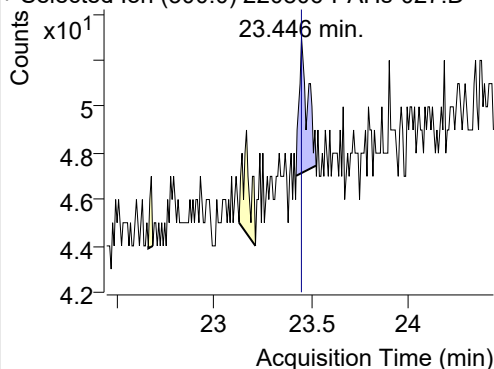


+ SIM (21.156-21.212 min, 8 scans) (\*\*) 22080

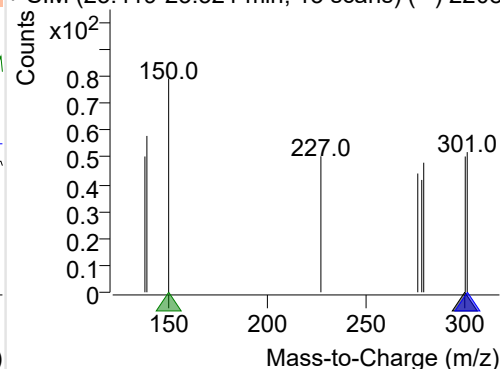
**Coronene**

+ Selected Ion (300.0) 220806-PAHs-027.D

300.0, 301.0, 150.0



+ SIM (23.419-23.521 min, 13 scans) (\*\*) 2208





## Quantitative Analysis Sample Based Report

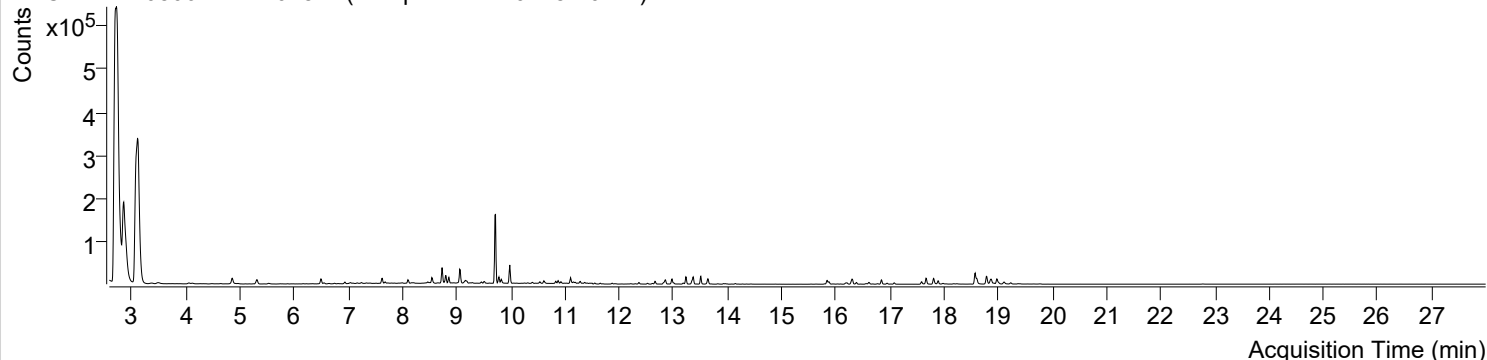


Trusted Answers

|                           |                                                                                            |                       |                        |
|---------------------------|--------------------------------------------------------------------------------------------|-----------------------|------------------------|
| Batch Data Path File Name | D:\MassHunter\GCMS\1\data\PAHs\220806-PAHs-Sample\QuantResults\220806-PAHs-Quant.batch.bin |                       |                        |
| Analysis Time Stamp       | 2022-10-10 오전 10:12:04                                                                     | Analyst Name          | DESKTOP-86B7UPG\5975MS |
| Report Generation Time    | 2022-10-10 오전 10:12:12                                                                     | Report Generator Name | DESKTOP-86B7UPG\5975MS |
| Calibration Last Update   | 2022-12-15 오후 3:30:46                                                                      | Batch State           | Processed              |
| Analyze Quant Version     | 10.2                                                                                       | Report Quant Version  | 10.2                   |
| Acq. Date-Time            | 2022-08-07 오전 12:30:48                                                                     | Data File             | 220806-PAHs-028.D      |
| Type                      | Sample                                                                                     | Name                  | Sample-PM-220728-10DIL |
| Dil.                      | 1                                                                                          | Acq. Method File      | PAHs 19mix-Method      |

## Sample Chromatogram

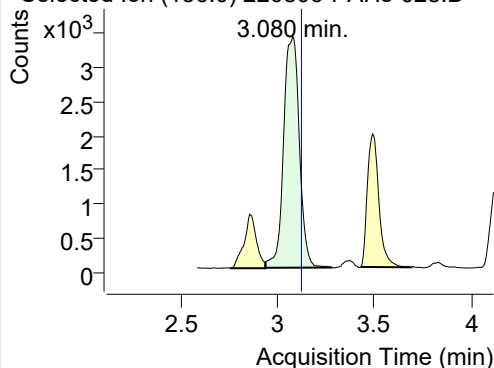
+ TIC SIM 220806-PAHs-028.D (Sample-PM-220728-10DIL)



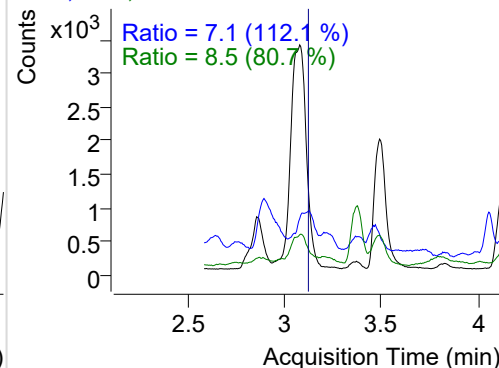
| Name                    | RT     | Transition | Resp.   | Height    | Final Conc. Units | Ratio |
|-------------------------|--------|------------|---------|-----------|-------------------|-------|
| IS-D8-Naphthalene       | 3.080  | 136.0      | 18883   | 3342.42   | ND ng/ml          | 8.5   |
| Naphthalene             | 3.107  | 128.0      | 1388948 | 269894.08 | ND ng/ml          | 12.9  |
| Acenaphthylene          | 6.167  | 152.0      | 717     | 365.68    | ND ng/ml          | 44.5  |
| IS-D10-Acenaphthene     | 6.493  | 164.0      | 10394   | 5496.00   | ND ng/ml          | 98.5  |
| Acenaphthene            | 6.558  | 154.0      | 1202    | 601.48    | ND ng/ml          | 109.7 |
| LSS-D10-Fluorene        | 7.627  | 176.0      | 9422    | 5260.77   | ND ng/ml          | 92.7  |
| Fluorene                | 7.680  | 166.0      | 2413    | 1342.48   | ND ng/ml          | 104.5 |
| IS-D10-Phenanthrene     | 9.780  | 188.0      | 17963   | 11220.03  | ND ng/ml          | 16.8  |
| Phenanthrene            | 9.822  | 178.0      | 9574    | 5502.72   | ND ng/ml          | 18.8  |
| Anthracene              | 9.979  | 178.0      | 17491   | 11646.72  | ND ng/ml          | 27.3  |
| Fluoranthene            | 12.526 | 202.0      | 2169    | 1299.32   | ND ng/ml          |       |
| LSS-D10-Pyrene          | 12.976 | 212.0      | 13712   | 8555.72   | ND ng/ml          | 23.7  |
| Pyrene                  | 13.009 | 202.0      | 3482    | 1892.06   | ND ng/ml          | 19.9  |
| Benz(a)anthracene       | 15.795 | 228.0      | 197     | 73.00     | ND ng/ml          | 26.8  |
| IS-D12-Chrysene         | 15.838 | 240.0      | 12425   | 6456.04   | ND ng/ml          | 20.1  |
| Chrysene                | 15.882 | 228.0      | 490     | 214.51    | ND ng/ml          | 30.0  |
| Benzo(b)fluoranthene    | 18.238 | 252.0      | 344     | 159.44    | ND ng/ml          | 51.4  |
| Benzo(k)fluoranthene    | 18.238 | 252.0      | 344     | 159.44    | ND ng/ml          | 51.4  |
| SS-D12-Benzo(e)pyrene   | 18.573 | 264.0      | 31309   | 9010.08   | ND ng/ml          | 12.6  |
| Benzo(e)pyrene          | 18.573 | 252.0      | 3093    | 1090.42   | ND ng/ml          | 21.0  |
| Benzo(a)pyrene          | 18.779 | 252.0      | 2380    | 904.55    | ND ng/ml          | 11.6  |
| IS-D12-Perylene         | 18.872 | 264.0      | 17068   | 6531.12   | ND ng/ml          | 13.1  |
| Perylene                | 18.851 | 252.0      | 2200    | 732.91    | ND ng/ml          | 7.3   |
| Indeno(1,2,3-c,d)pyrene | 20.851 | 276.0      | 44      | 9.28      | ND ng/ml          |       |
| Dibenz(a,h)anthracene   | 20.835 | 278.0      | 32      | 10.65     | ND ng/ml          | 62.4  |
| Benzo(g,h,i)perylene    | 21.171 | 276.0      | 49      | 10.34     | ND ng/ml          |       |
| Coronene                | 23.454 | 300.0      | 14      | 6.51      | ND ng/ml          |       |

## IS-D8-Naphthalene

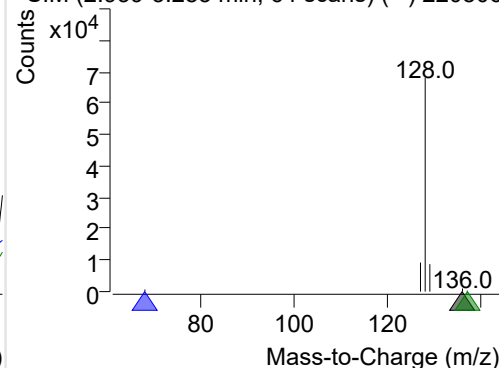
+ Selected Ion (136.0) 220806-PAHs-028.D



136.0, 68.0, 137.0

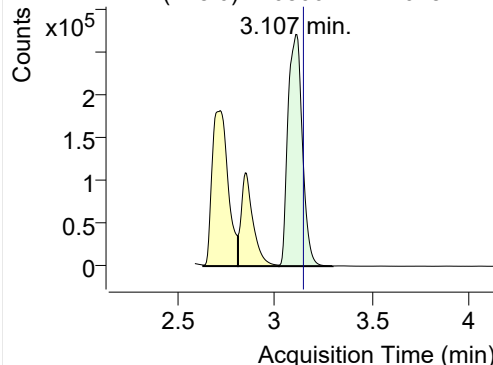


+ SIM (2.939-3.283 min, 64 scans) (\*\*) 220806

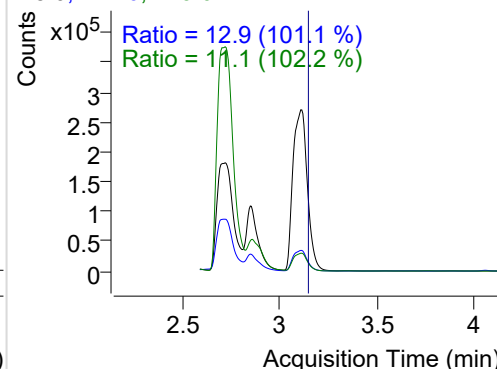


**Naphthalene**

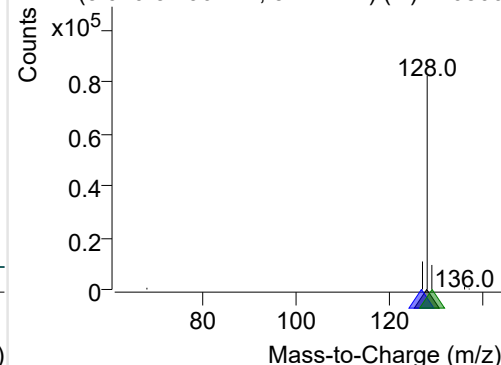
+ Selected Ion (128.0) 220806-PAHs-028.D



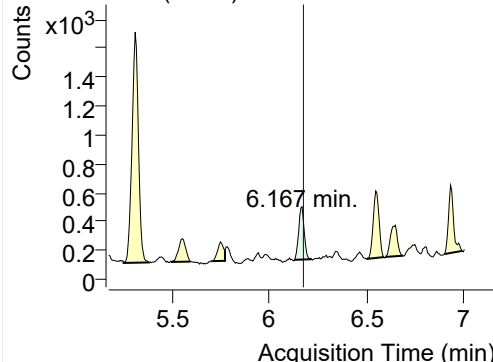
128.0, 127.0, 129.0



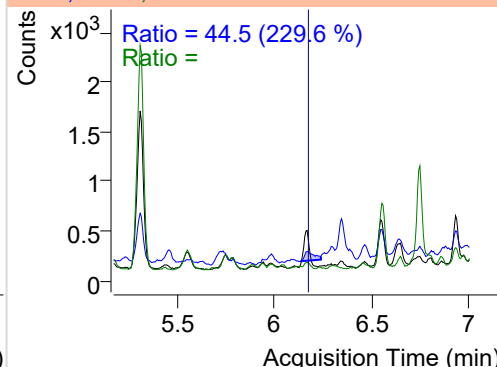
+ SIM (3.020-3.296 min, 52 scans) (\*\*) 220806

**Acenaphthylene**

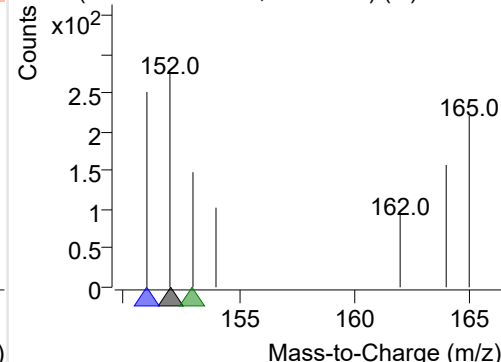
+ Selected Ion (152.0) 220806-PAHs-028.D



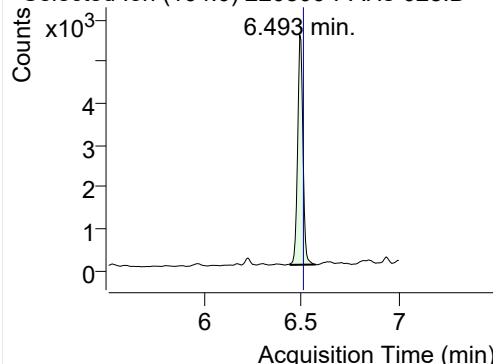
152.0, 151.0, 153.0



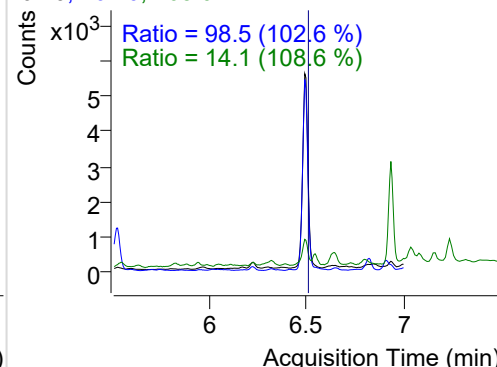
+ SIM (6.128-6.216 min, 15 scans) (\*\*) 220806

**IS-D10-Acenaphthene**

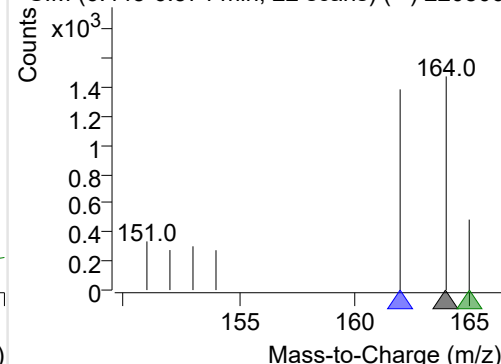
+ Selected Ion (164.0) 220806-PAHs-028.D



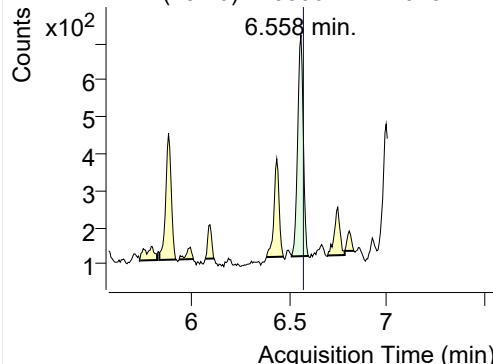
164.0, 162.0, 165.0



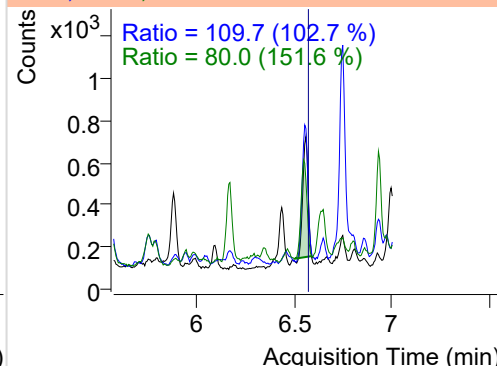
+ SIM (6.445-6.574 min, 22 scans) (\*\*) 220806

**Acenaphthene**

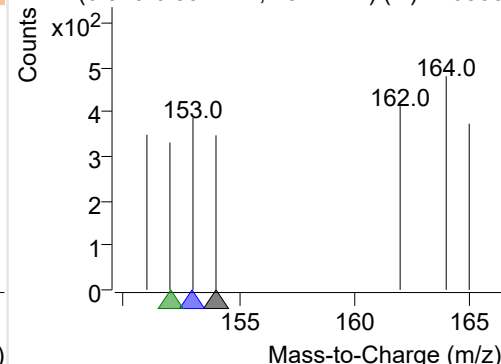
+ Selected Ion (154.0) 220806-PAHs-028.D



154.0, 153.0, 152.0

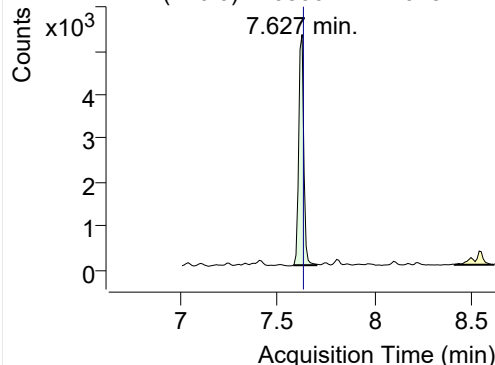


+ SIM (6.510-6.597 min, 15 scans) (\*\*) 220806

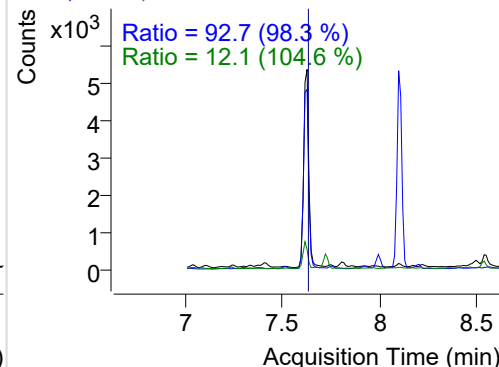


## LSS-D10-Fluorene

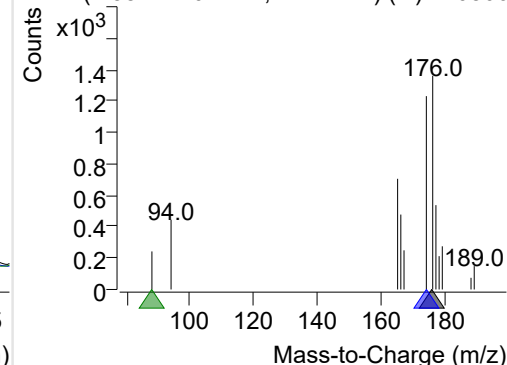
+ Selected Ion (176.0) 220806-PAHs-028.D



176.0, 174.0, 88.0

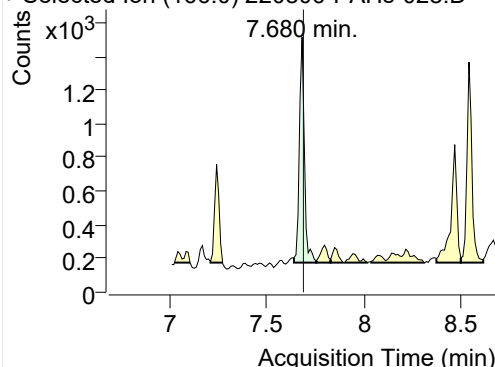


+ SIM (7.582-7.701 min, 12 scans) (\*\*) 220806

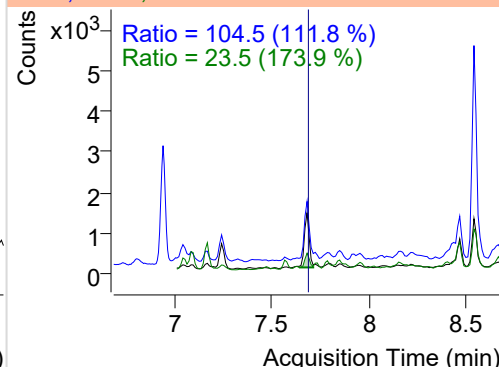


## Fluorene

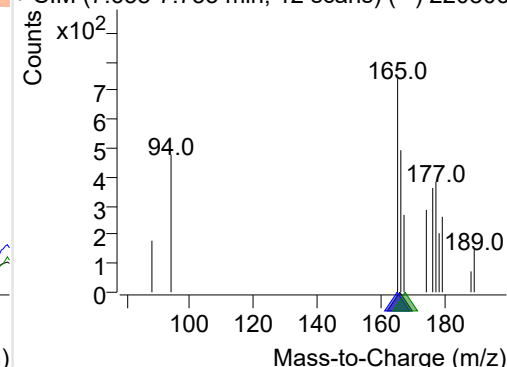
+ Selected Ion (166.0) 220806-PAHs-028.D



166.0, 165.0, 167.0

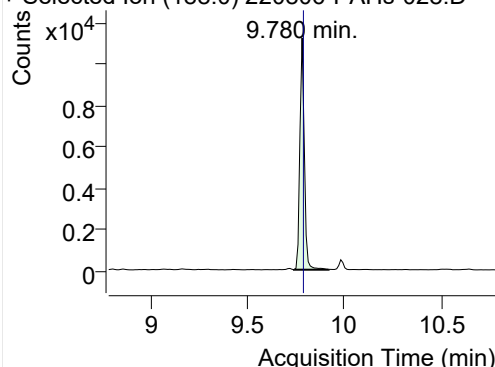


+ SIM (7.638-7.753 min, 12 scans) (\*\*) 220806

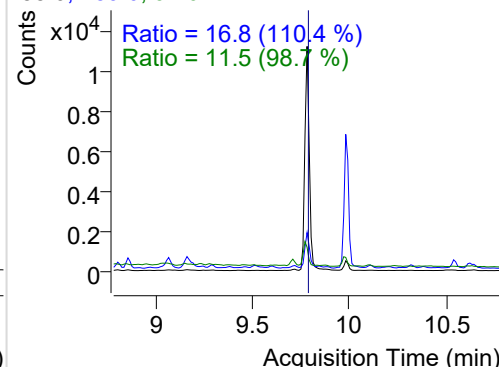


## IS-D10-Phenanthrene

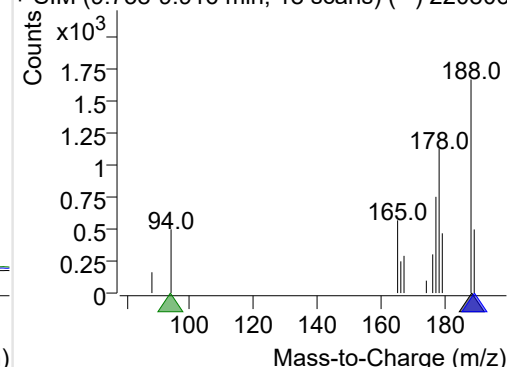
+ Selected Ion (188.0) 220806-PAHs-028.D



188.0, 189.0, 94.0

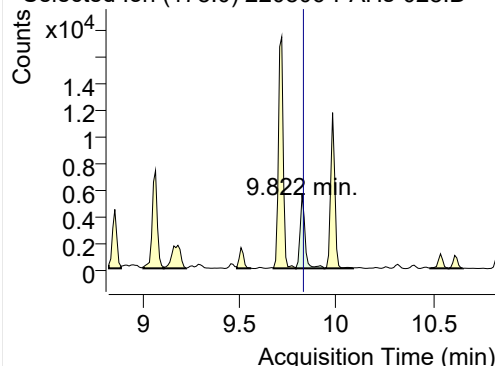


+ SIM (9.738-9.916 min, 18 scans) (\*\*) 220806

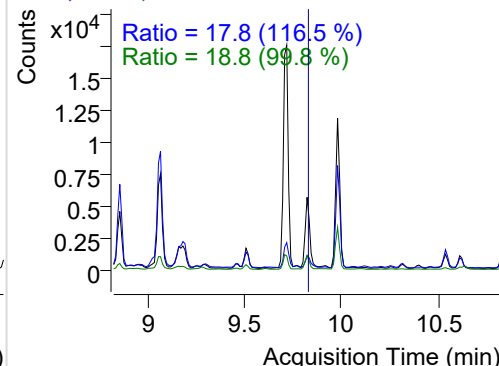


## Phenanthrene

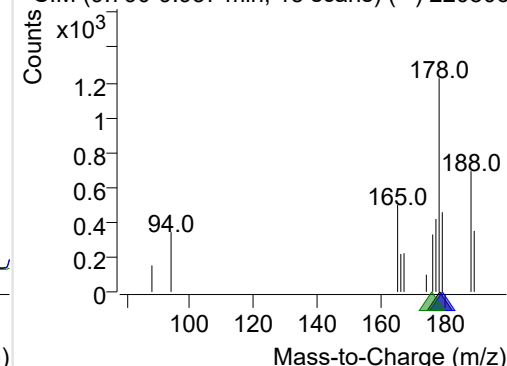
+ Selected Ion (178.0) 220806-PAHs-028.D



178.0, 179.0, 176.0

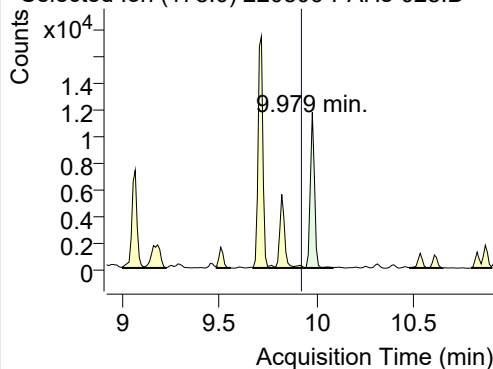


+ SIM (9.790-9.937 min, 15 scans) (\*\*) 220806

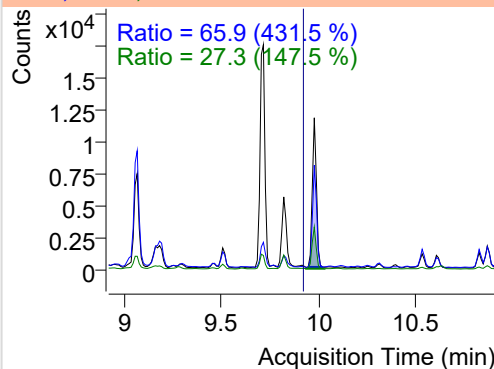


**Anthracene**

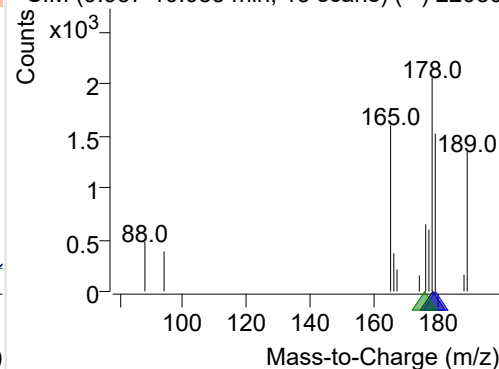
+ Selected Ion (178.0) 220806-PAHs-028.D



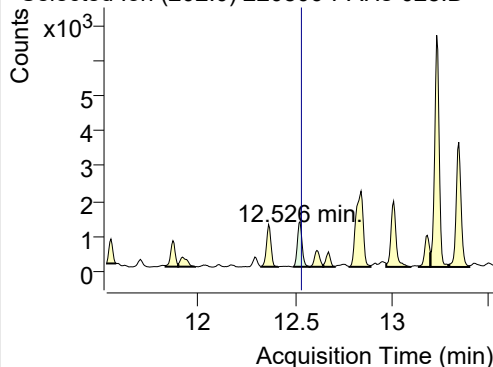
178.0, 179.0, 176.0



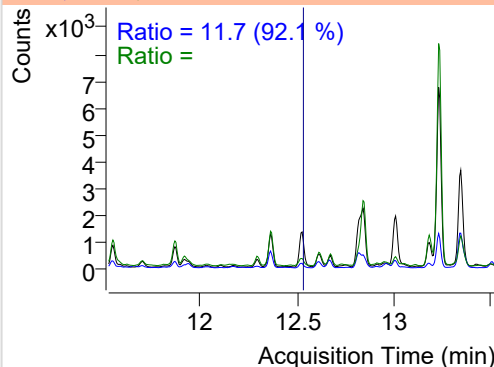
+ SIM (9.937-10.085 min, 15 scans) (\*\*) 22080

**Fluoranthene**

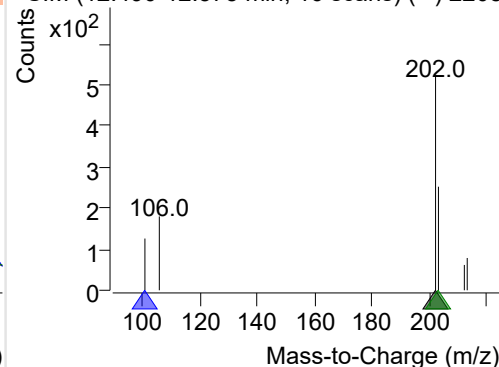
+ Selected Ion (202.0) 220806-PAHs-028.D



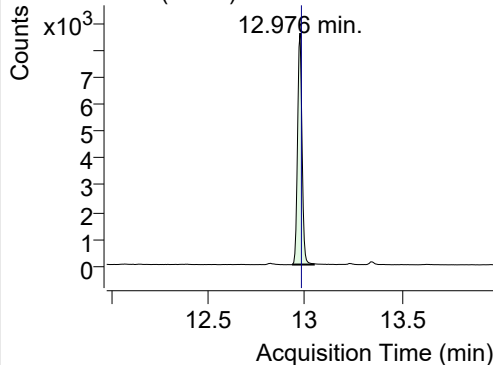
202.0, 101.0, 203.0



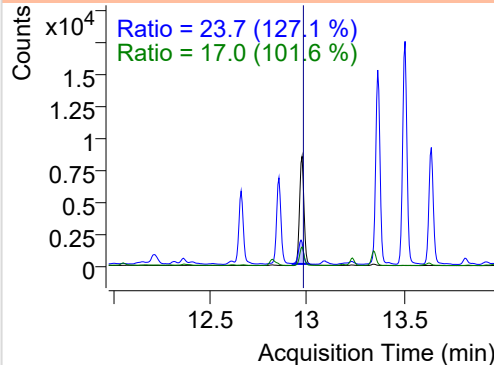
+ SIM (12.490-12.575 min, 16 scans) (\*\*) 2208

**LSS-D10-Pyrene**

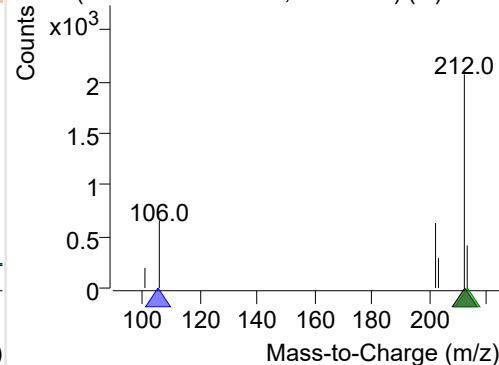
+ Selected Ion (212.0) 220806-PAHs-028.D



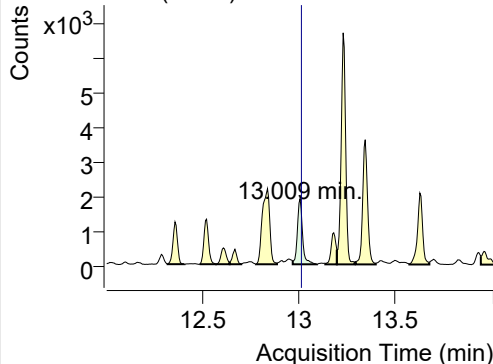
212.0, 106.0, 213.0



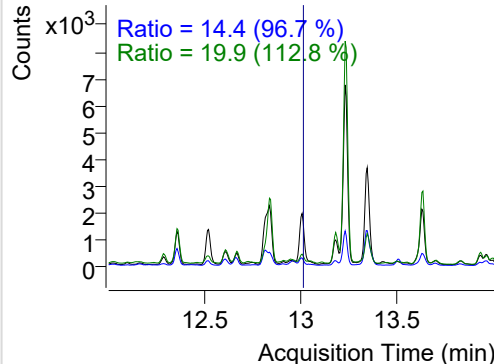
+ SIM (12.935-13.047 min, 21 scans) (\*\*) 2208

**Pyrene**

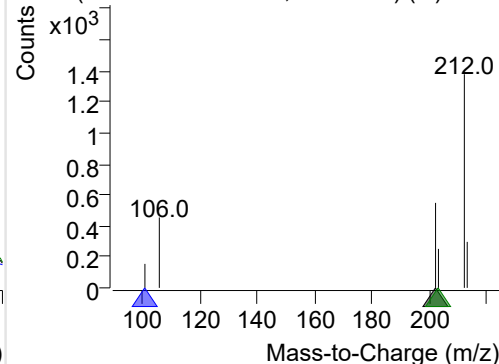
+ Selected Ion (202.0) 220806-PAHs-028.D



202.0, 101.0, 203.0



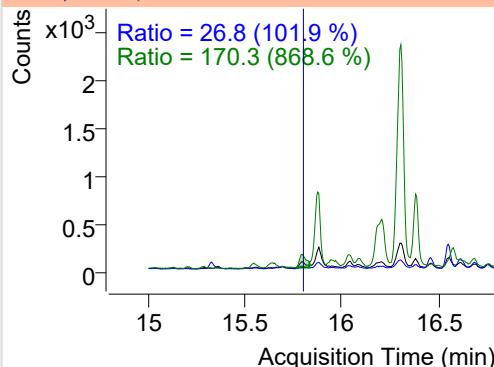
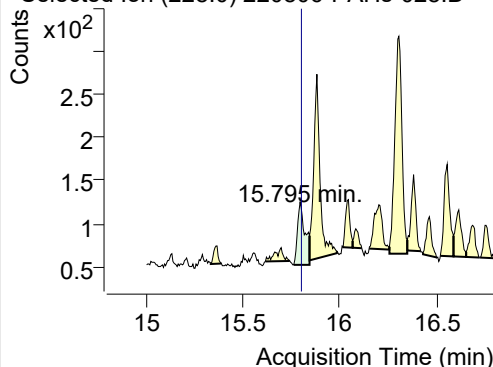
+ SIM (12.971-13.095 min, 24 scans) (\*\*) 2208



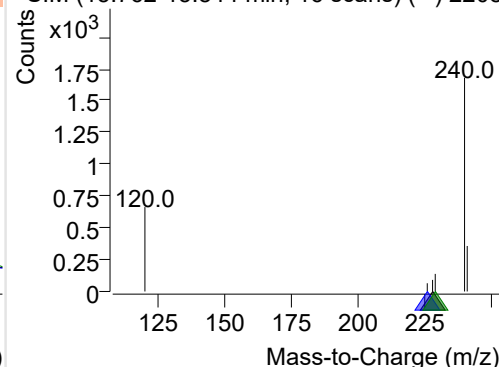
**Benz(a)anthracene**

+ Selected Ion (228.0) 220806-PAHs-028.D

228.0, 226.0, 229.0

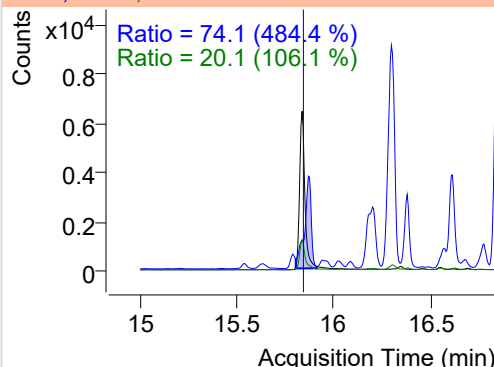
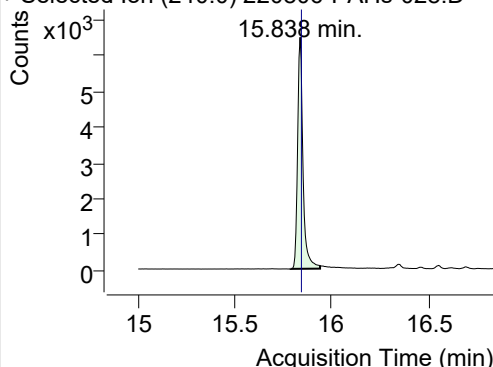


+ SIM (15.762-15.844 min, 16 scans) (\*\*) 2208

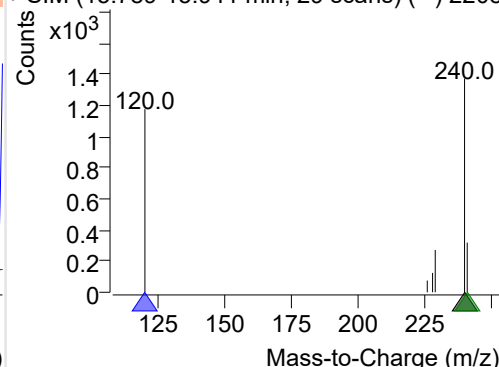
**IS-D12-Chrysene**

+ Selected Ion (240.0) 220806-PAHs-028.D

240.0, 120.0, 241.0

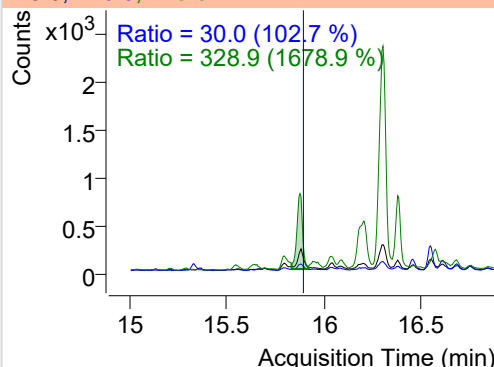
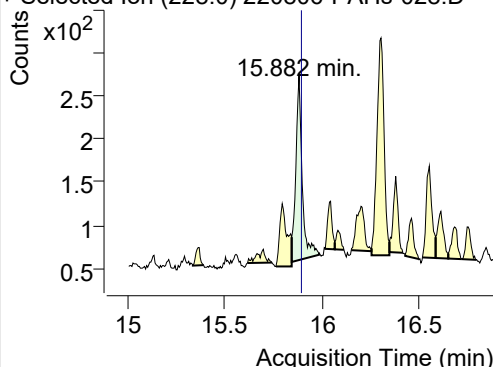


+ SIM (15.789-15.941 min, 29 scans) (\*\*) 2208

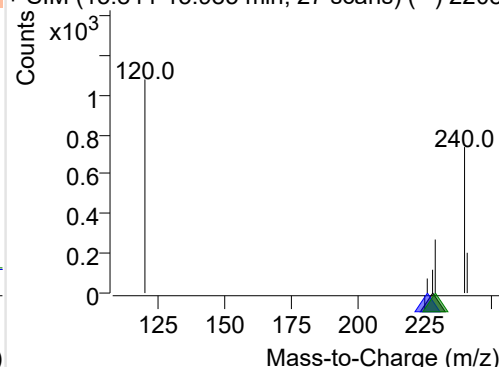
**Chrysene**

+ Selected Ion (228.0) 220806-PAHs-028.D

228.0, 226.0, 229.0

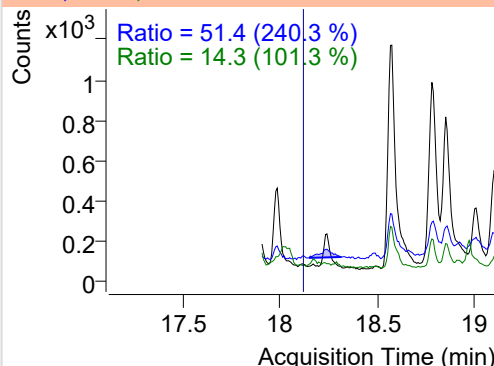
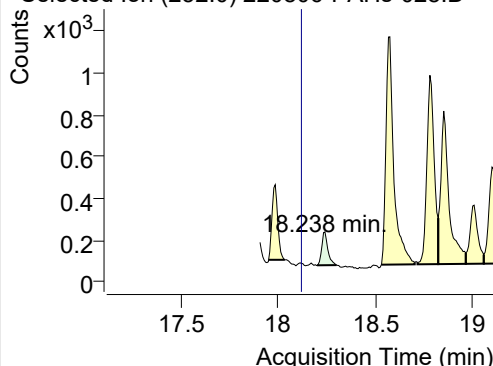


+ SIM (15.844-15.985 min, 27 scans) (\*\*) 2208

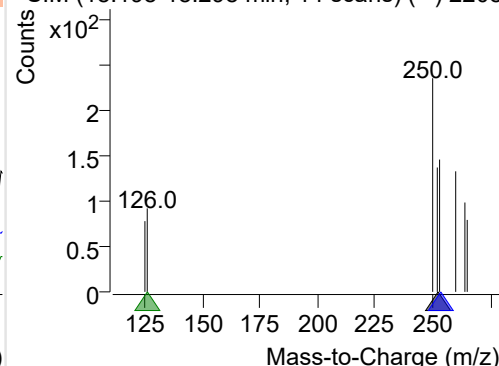
**Benzo(b)fluoranthene**

+ Selected Ion (252.0) 220806-PAHs-028.D

252.0, 253.0, 126.0



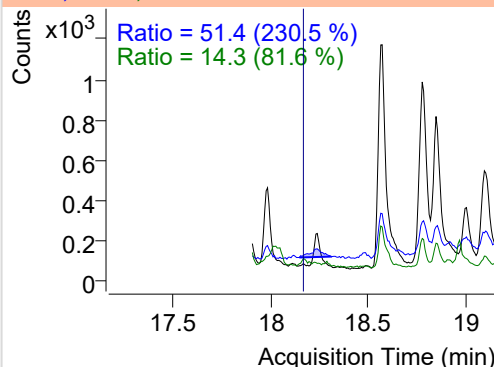
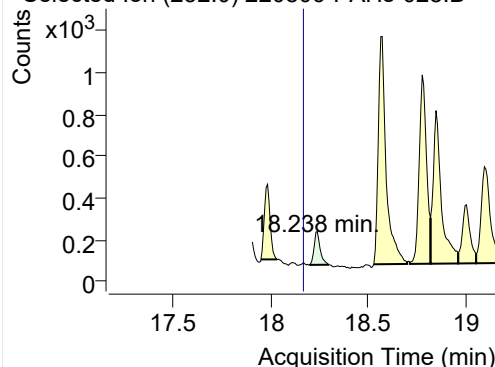
+ SIM (18.198-18.298 min, 14 scans) (\*\*) 2208



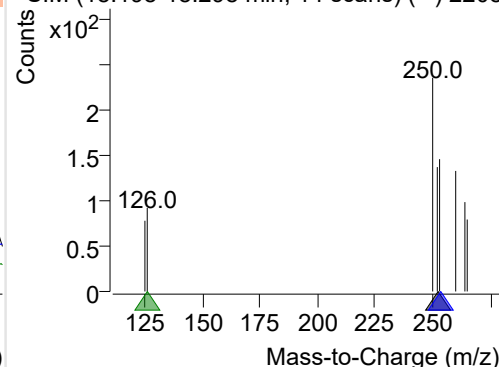
**Benzo(k)fluoranthene**

+ Selected Ion (252.0) 220806-PAHs-028.D

252.0, 253.0, 126.0

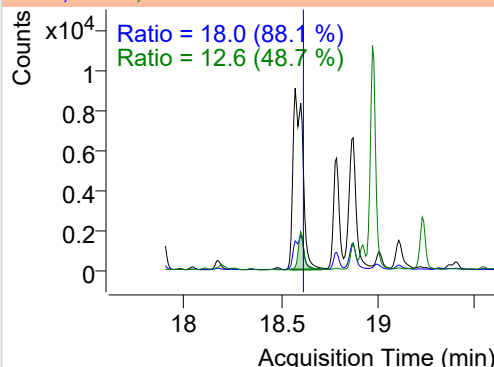
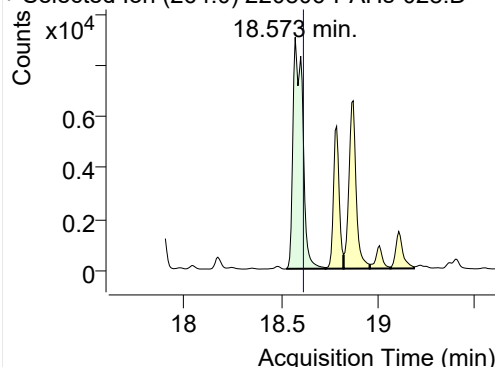


+ SIM (18.198-18.298 min, 14 scans) (\*\*) 2208

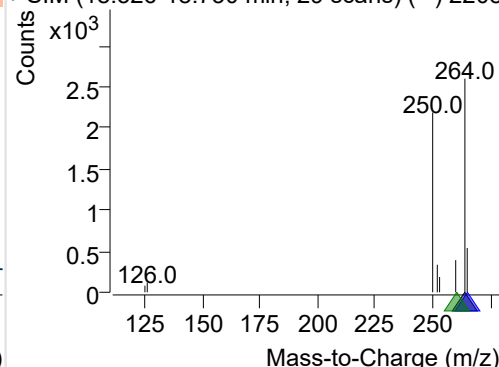
**SS-D12-Benzo(e)pyrene**

+ Selected Ion (264.0) 220806-PAHs-028.D

264.0, 265.0, 260.0

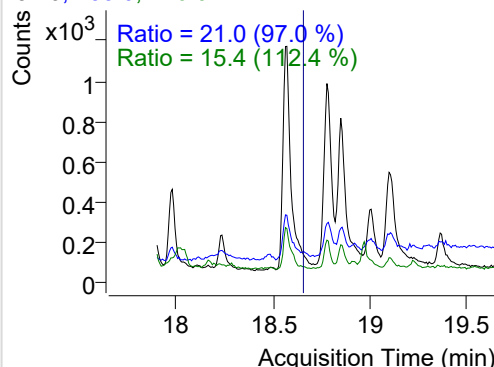
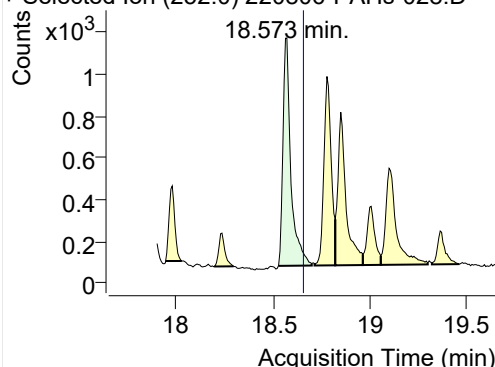


+ SIM (18.526-18.730 min, 29 scans) (\*\*) 2208

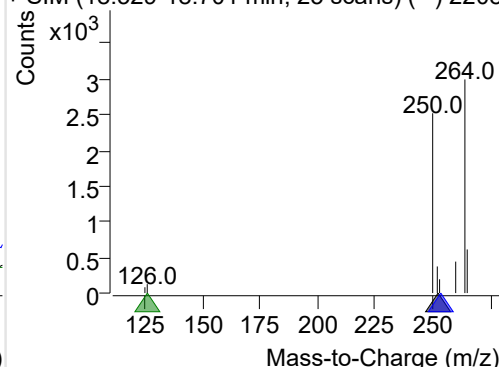
**Benzo(e)pyrene**

+ Selected Ion (252.0) 220806-PAHs-028.D

252.0, 253.0, 126.0

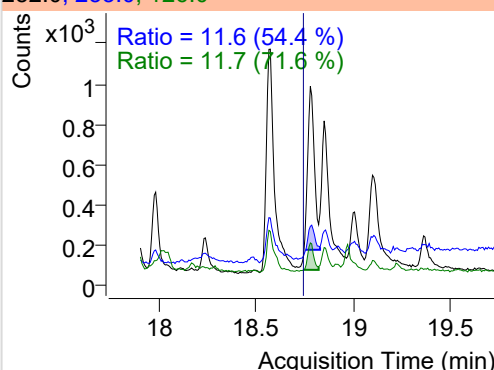
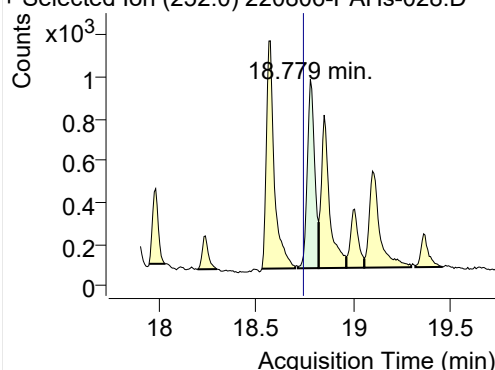


+ SIM (18.529-18.701 min, 25 scans) (\*\*) 2208

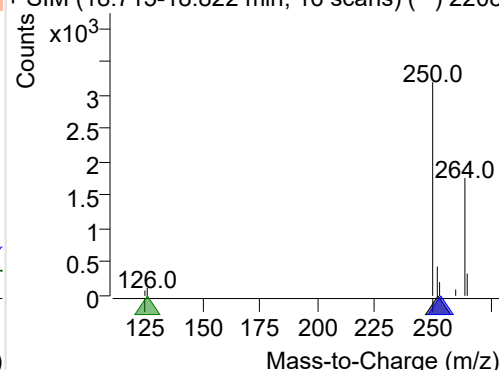
**Benzo(a)pyrene**

+ Selected Ion (252.0) 220806-PAHs-028.D

252.0, 253.0, 126.0



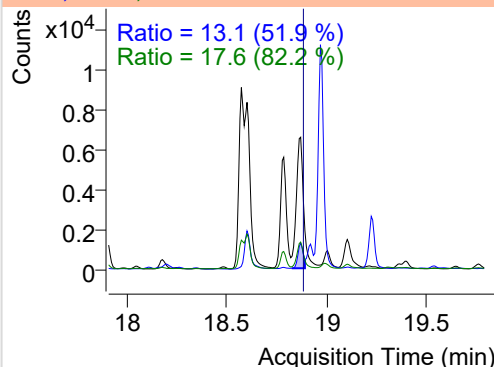
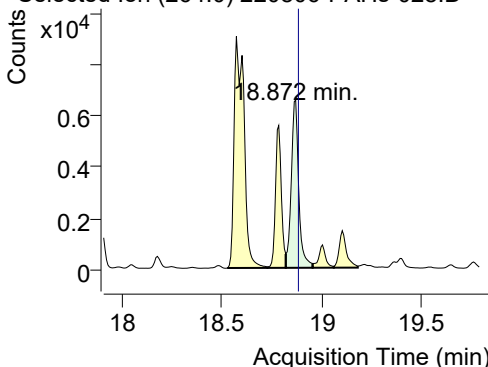
+ SIM (18.715-18.822 min, 16 scans) (\*\*) 2208



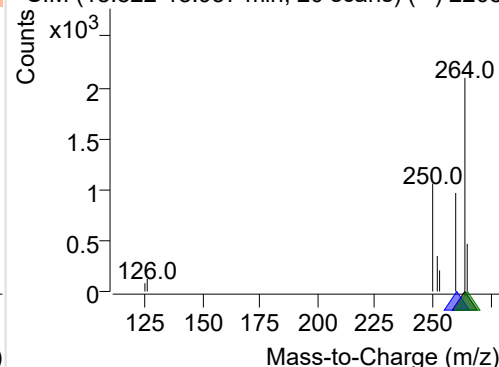
## IS-D12-Perylene

+ Selected Ion (264.0) 220806-PAHs-028.D

264.0, 260.0, 265.0



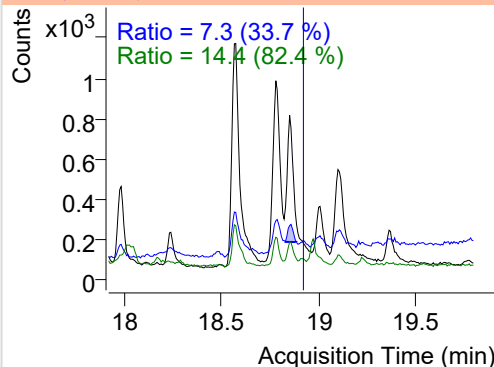
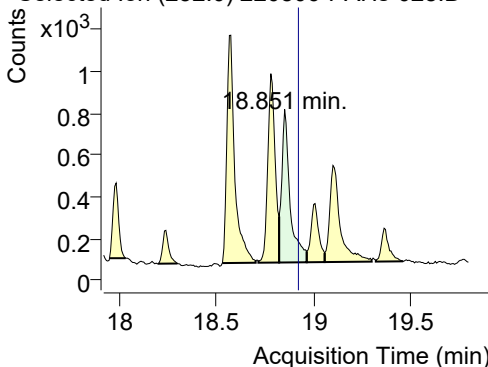
+ SIM (18.822-18.957 min, 20 scans) (\*\*) 2208



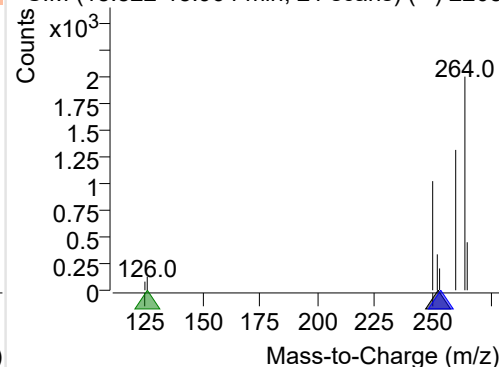
## Perylene

+ Selected Ion (252.0) 220806-PAHs-028.D

252.0, 253.0, 126.0



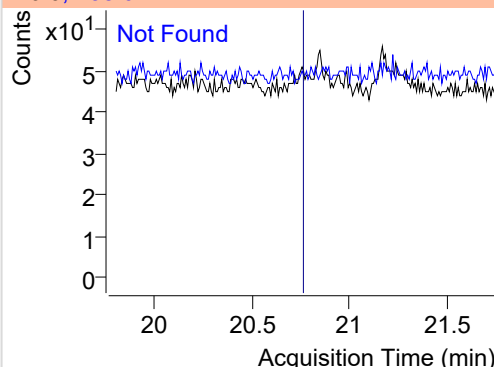
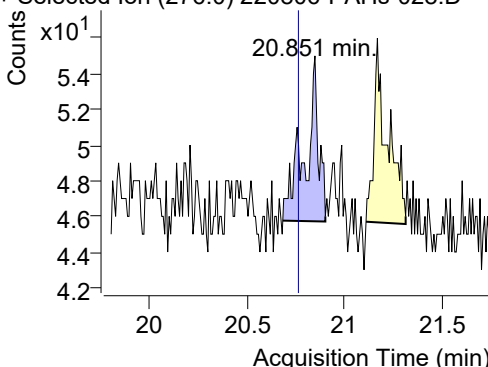
+ SIM (18.822-18.964 min, 21 scans) (\*\*) 2208



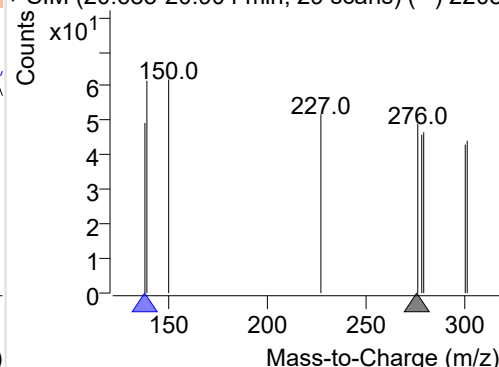
## Indeno(1,2,3-c,d)pyrene

+ Selected Ion (276.0) 220806-PAHs-028.D

276.0, 138.0



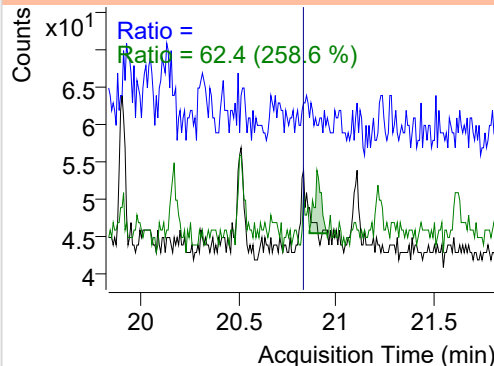
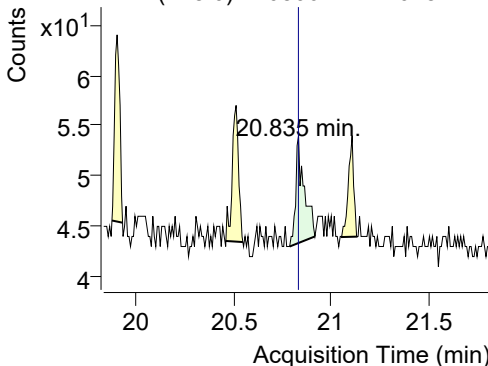
+ SIM (20.685-20.904 min, 29 scans) (\*\*) 2208



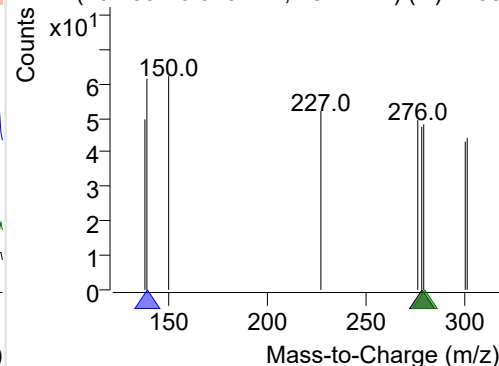
## Dibenz(a,h)anthracene

+ Selected Ion (278.0) 220806-PAHs-028.D

278.0, 139.0, 279.0



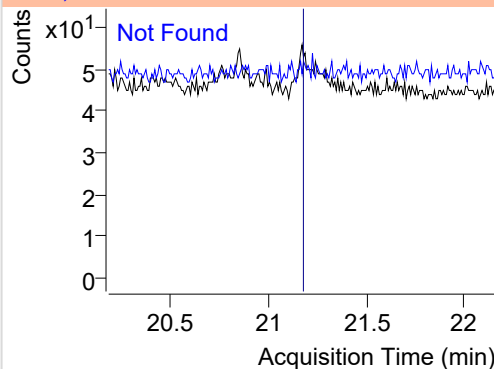
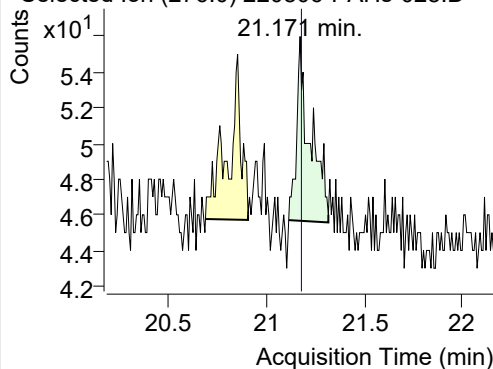
+ SIM (20.789-20.919 min, 18 scans) (\*\*) 2208



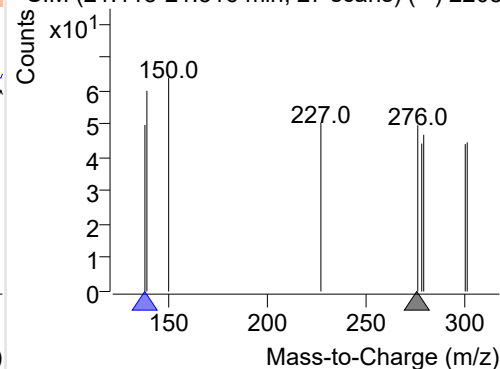
**Benzo(g,h,i)perylene**

+ Selected Ion (276.0) 220806-PAHs-028.D

276.0, 138.0

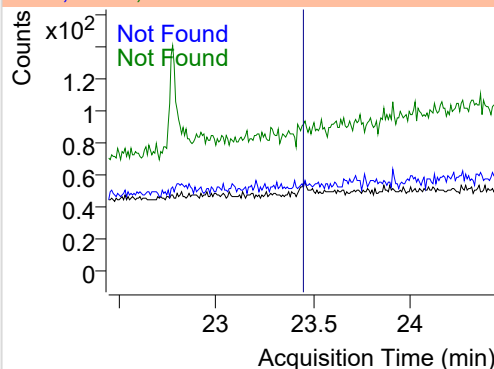
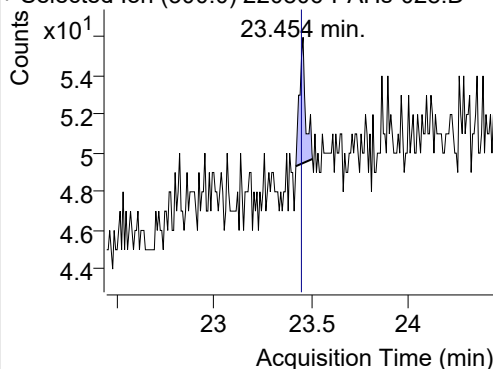


+ SIM (21.113-21.316 min, 27 scans) (\*\*) 2208

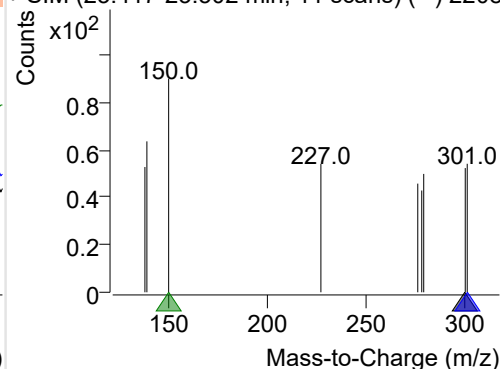
**Coronene**

+ Selected Ion (300.0) 220806-PAHs-028.D

300.0, 301.0, 150.0



+ SIM (23.417-23.502 min, 11 scans) (\*\*) 2208





## Quantitative Analysis Sample Based Report

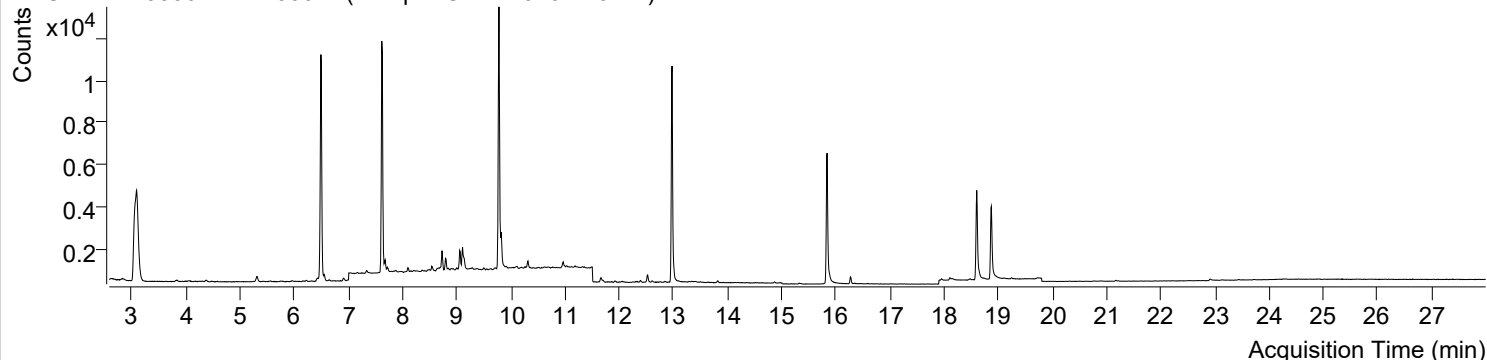


Trusted Answers

|                           |                                                                                            |                       |                         |
|---------------------------|--------------------------------------------------------------------------------------------|-----------------------|-------------------------|
| Batch Data Path File Name | D:\MassHunter\GCMS\1\data\PAHs\220806-PAHs-Sample\QuantResults\220806-PAHs-Quant.batch.bin |                       |                         |
| Analysis Time Stamp       | 2022-10-10 오전 10:12:04                                                                     | Analyst Name          | DESKTOP-86B7UPG\5975MS  |
| Report Generation Time    | 2022-10-10 오전 10:12:12                                                                     | Report Generator Name | DESKTOP-86B7UPG\5975MS  |
| Calibration Last Update   | 2022-12-15 오후 3:30:46                                                                      | Batch State           | Processed               |
| Analyze Quant Version     | 10.2                                                                                       | Report Quant Version  | 10.2                    |
| Acq. Date-Time            | 2022-08-07 오전 1:33:09                                                                      | Data File             | 220806-PAHs-030.D       |
| Type                      | Sample                                                                                     | Name                  | Sample-Gas-220704-10DIL |
| Dil.                      | 1                                                                                          | Acq. Method File      | PAHs 19mix-Method       |

## Sample Chromatogram

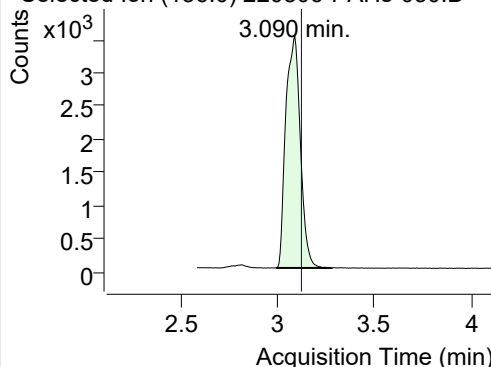
+ TIC SIM 220806-PAHs-030.D (Sample-Gas-220704-10DIL)



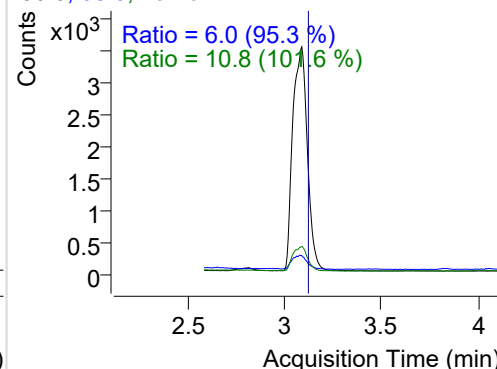
| Name                    | RT     | Transition | Resp. | Height   | Final Conc. Units | Ratio |
|-------------------------|--------|------------|-------|----------|-------------------|-------|
| IS-D8-Naphthalene       | 3.090  | 136.0      | 18199 | 3490.81  | ND ng/ml          | 10.8  |
| Naphthalene             | 3.117  | 128.0      | 1207  | 241.73   | ND ng/ml          | 12.2  |
| Acenaphthylene          | 6.161  | 152.0      | 58    | 19.91    | ND ng/ml          | 35.9  |
| IS-D10-Acenaphthene     | 6.493  | 164.0      | 9758  | 5115.46  | ND ng/ml          | 98.0  |
| Acenaphthene            | 6.558  | 154.0      | 157   | 76.45    | ND ng/ml          | 105.5 |
| LSS-D10-Fluorene        | 7.617  | 176.0      | 9099  | 4872.70  | ND ng/ml          | 94.0  |
| Fluorene                | 7.680  | 166.0      | 407   | 226.08   | ND ng/ml          | 95.4  |
| IS-D10-Phenanthrene     | 9.780  | 188.0      | 17288 | 10052.22 | ND ng/ml          | 15.1  |
| Phenanthrene            | 9.822  | 178.0      | 1489  | 874.48   | ND ng/ml          | 19.5  |
| Anthracene              | 9.916  | 178.0      | 81    | 40.83    | ND ng/ml          |       |
| Fluoranthene            | 12.521 | 202.0      | 456   | 254.03   | ND ng/ml          | 23.9  |
| LSS-D10-Pyrene          | 12.976 | 212.0      | 12949 | 7681.35  | ND ng/ml          | 18.1  |
| Pyrene                  | 13.009 | 202.0      | 473   | 262.11   | ND ng/ml          | 25.0  |
| Benz(a)anthracene       | 15.789 | 228.0      | 33    | 19.45    | ND ng/ml          | 81.6  |
| IS-D12-Chrysene         | 15.838 | 240.0      | 9293  | 4710.33  | ND ng/ml          | 18.7  |
| Chrysene                | 15.881 | 228.0      | 238   | 86.97    | ND ng/ml          | 28.3  |
| Benzo(b)fluoranthene    | 18.110 | 252.0      | 139   | 65.57    | ND ng/ml          |       |
| Benzo(k)fluoranthene    | 18.153 | 252.0      | 117   | 41.16    | ND ng/ml          | 43.8  |
| SS-D12-Benzo(e)pyrene   | 18.601 | 264.0      | 6146  | 2893.10  | ND ng/ml          | 25.2  |
| Benzo(e)pyrene          | 18.644 | 252.0      | 146   | 70.14    | ND ng/ml          |       |
| Benzo(a)pyrene          | 18.744 | 252.0      | 36    | 14.24    | ND ng/ml          |       |
| IS-D12-Perylene         | 18.872 | 264.0      | 5282  | 2368.58  | ND ng/ml          | 23.4  |
| Perylene                | 18.872 | 252.0      | 31    | 9.23     | ND ng/ml          |       |
| Indeno(1,2,3-c,d)pyrene | 20.766 | 276.0      | 40    | 13.26    | ND ng/ml          |       |
| Dibenz(a,h)anthracene   | 20.835 | 278.0      | 20    | 6.68     | ND ng/ml          |       |
| Benzo(g,h,i)perylene    | 21.179 | 276.0      | 84    | 29.95    | ND ng/ml          | 27.6  |
| Coronene                | 23.447 | 300.0      | 48    | 16.07    | ND ng/ml          |       |

## IS-D8-Naphthalene

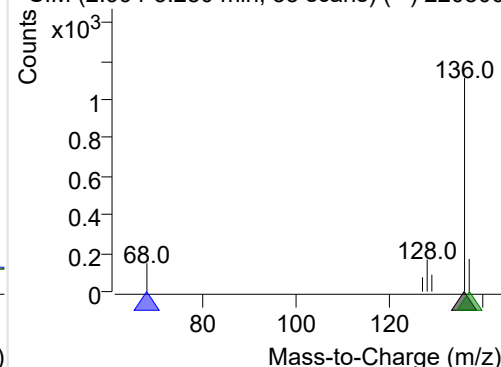
+ Selected Ion (136.0) 220806-PAHs-030.D



136.0, 68.0, 137.0

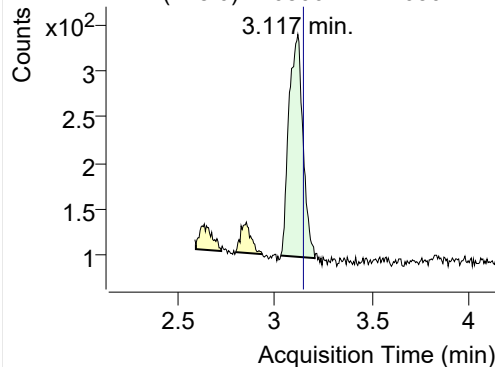


+ SIM (2.994-3.280 min, 53 scans) (\*\*) 220806

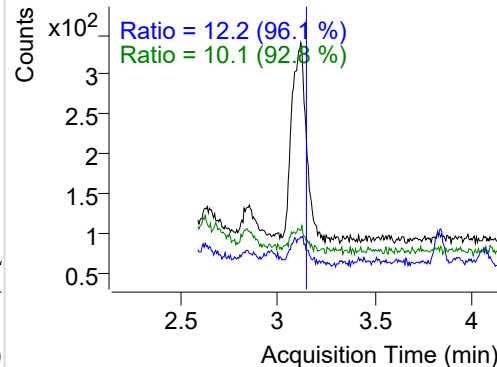


**Naphthalene**

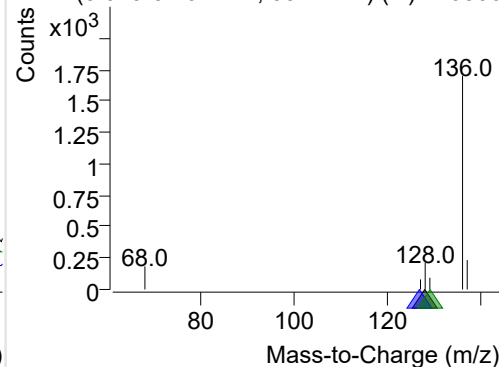
+ Selected Ion (128.0) 220806-PAHs-030.D



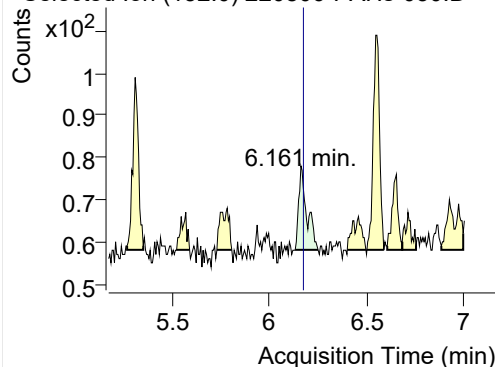
128.0, 127.0, 129.0



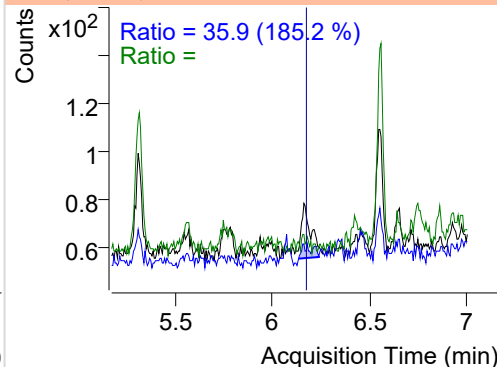
+ SIM (3.029-3.204 min, 33 scans) (\*\*) 220806

**Acenaphthylene**

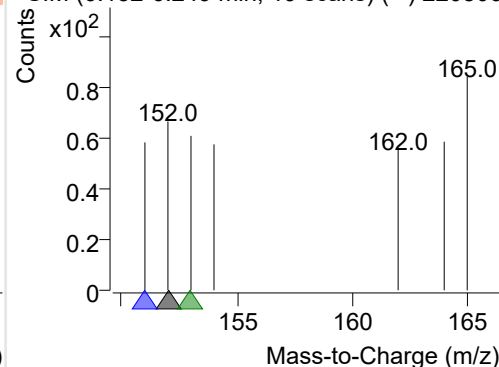
+ Selected Ion (152.0) 220806-PAHs-030.D



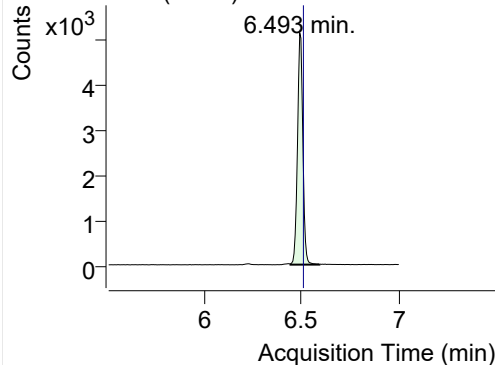
152.0, 151.0, 153.0



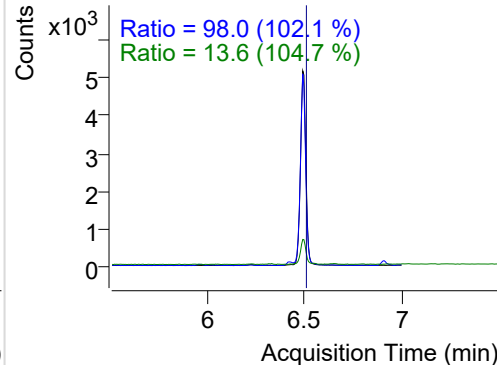
+ SIM (6.132-6.249 min, 19 scans) (\*\*) 220806

**IS-D10-Acenaphthene**

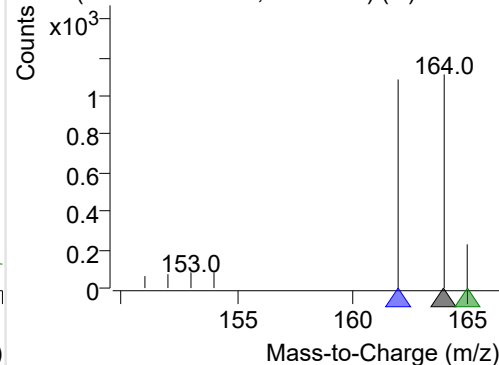
+ Selected Ion (164.0) 220806-PAHs-030.D



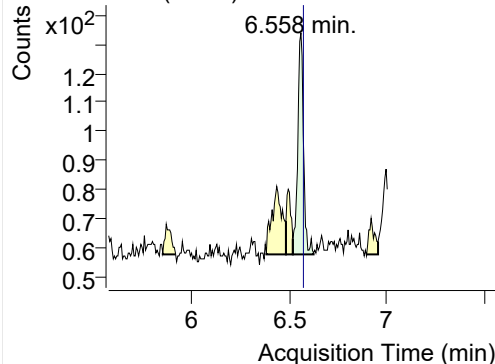
164.0, 162.0, 165.0



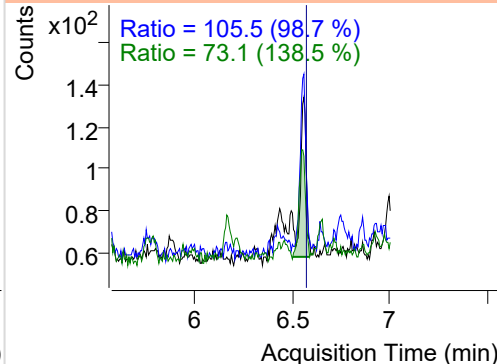
+ SIM (6.445-6.593 min, 26 scans) (\*\*) 220806

**Acenaphthene**

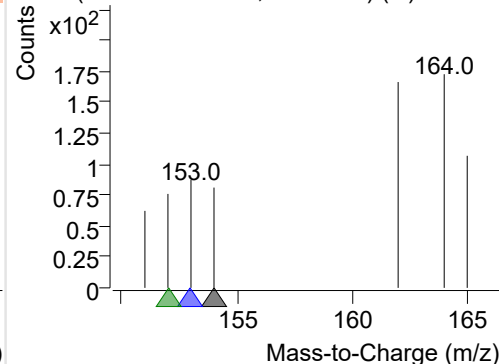
+ Selected Ion (154.0) 220806-PAHs-030.D



154.0, 153.0, 152.0

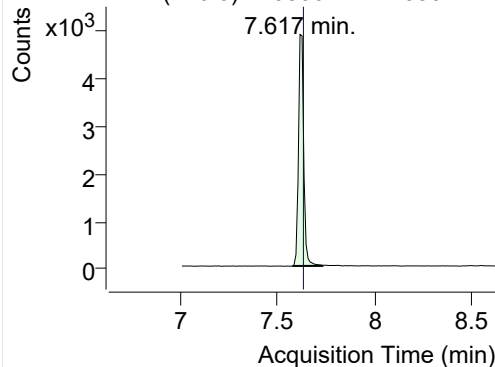


+ SIM (6.516-6.623 min, 19 scans) (\*\*) 220806

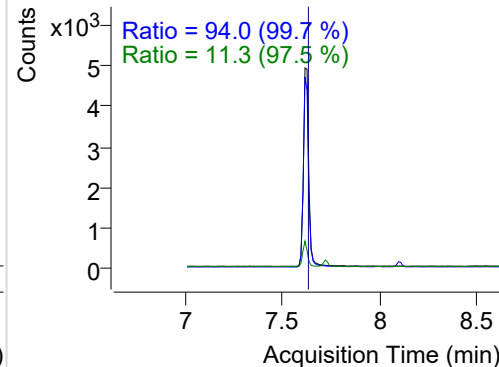


## LSS-D10-Fluorene

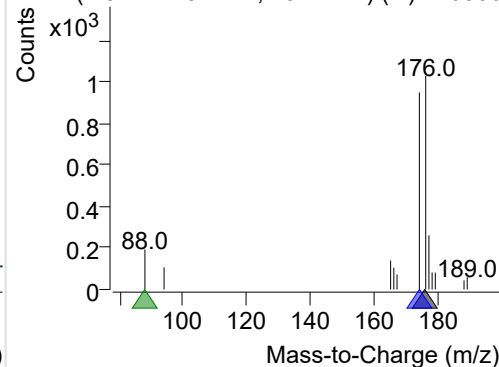
+ Selected Ion (176.0) 220806-PAHs-030.D



176.0, 174.0, 88.0

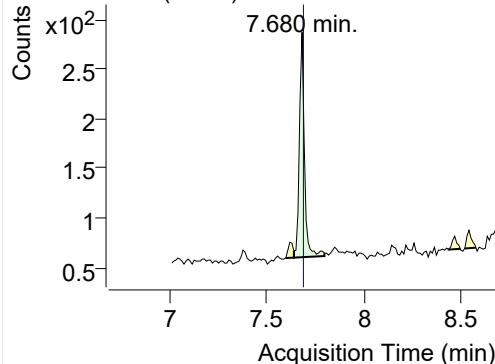


+ SIM (7.577-7.732 min, 15 scans) (\*\*) 220806

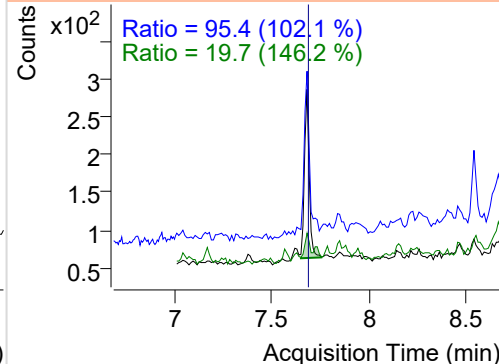


## Fluorene

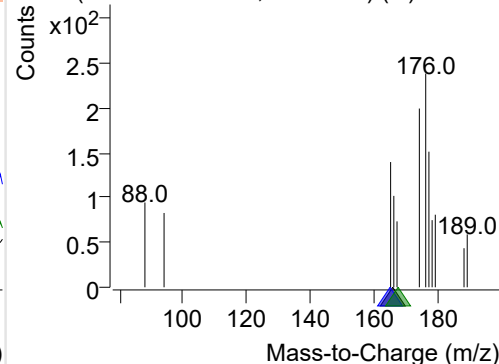
+ Selected Ion (166.0) 220806-PAHs-030.D



166.0, 165.0, 167.0

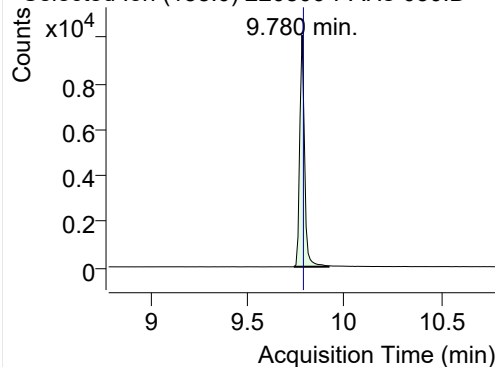


+ SIM (7.638-7.795 min, 16 scans) (\*\*) 220806

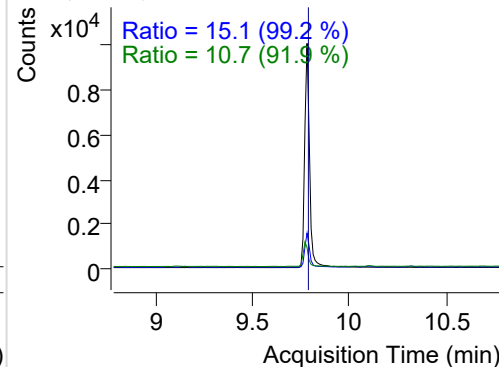


## IS-D10-Phenanthrene

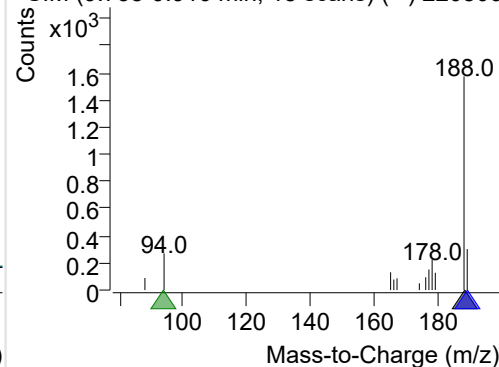
+ Selected Ion (188.0) 220806-PAHs-030.D



188.0, 189.0, 94.0

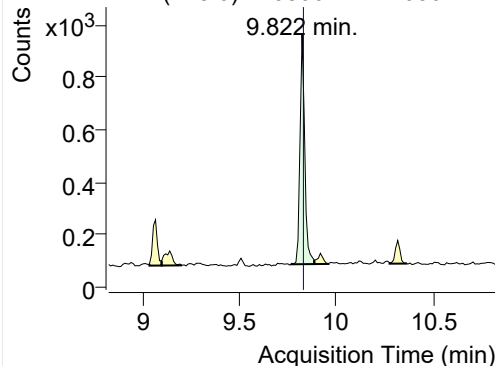


+ SIM (9.738-9.916 min, 18 scans) (\*\*) 220806

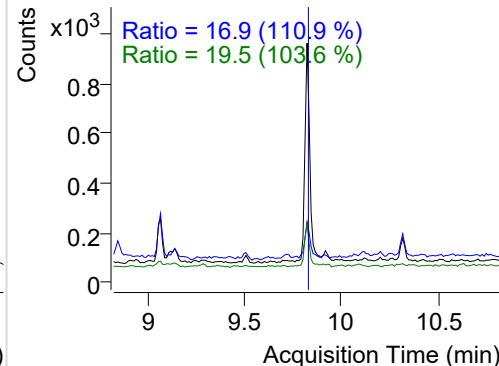


## Phenanthrene

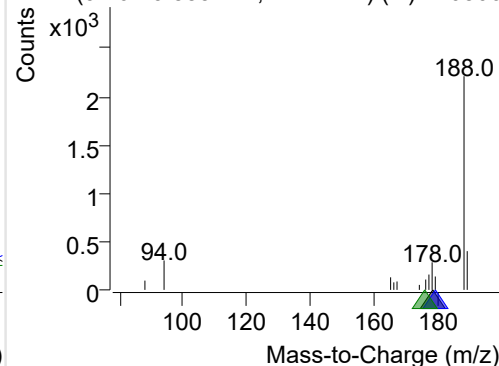
+ Selected Ion (178.0) 220806-PAHs-030.D



178.0, 179.0, 176.0

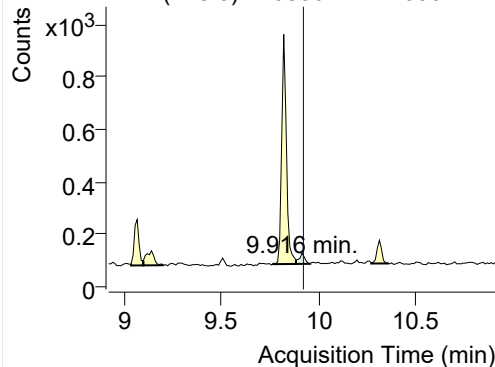


+ SIM (9.764-9.885 min, 12 scans) (\*\*) 220806

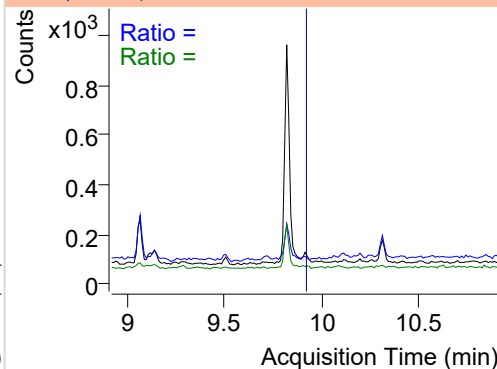


**Anthracene**

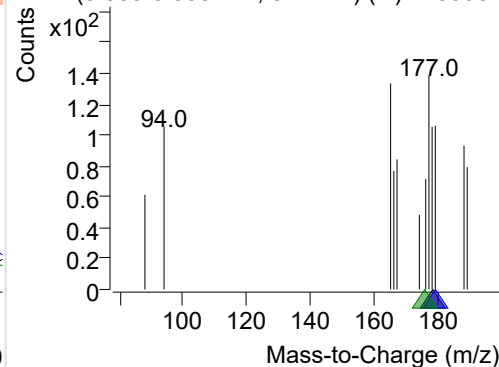
+ Selected Ion (178.0) 220806-PAHs-030.D



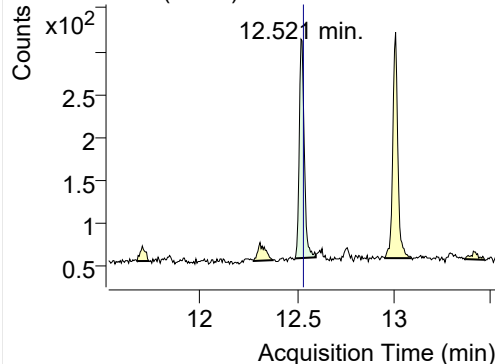
178.0, 179.0, 176.0



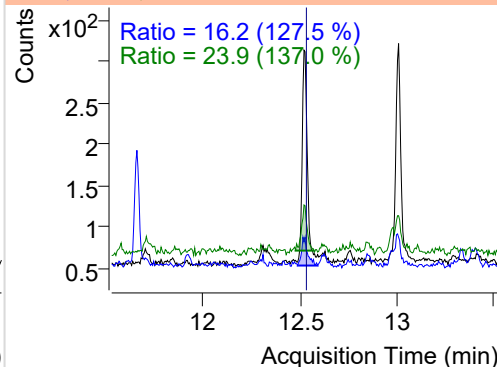
+ SIM (9.885-9.958 min, 8 scans) (\*\*) 220806-I

**Fluoranthene**

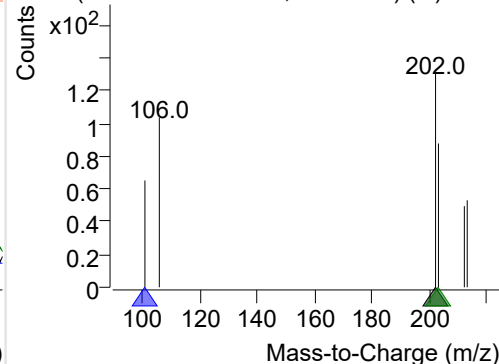
+ Selected Ion (202.0) 220806-PAHs-030.D



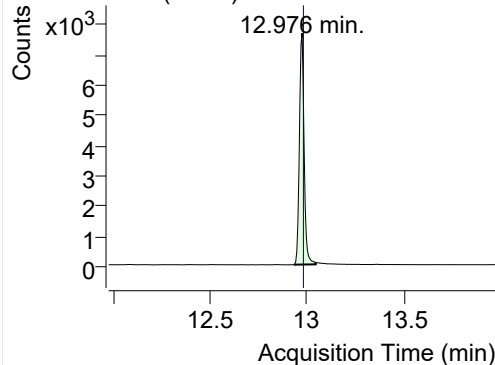
202.0, 101.0, 203.0



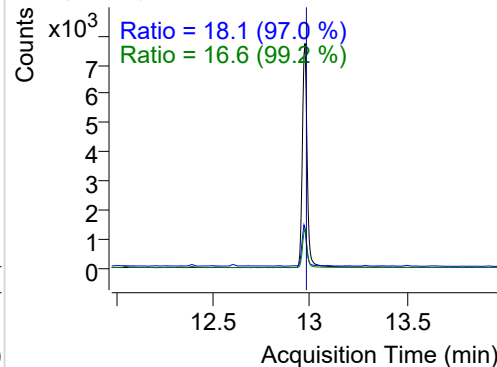
+ SIM (12.490-12.597 min, 20 scans) (\*\*) 2208

**LSS-D10-Pyrene**

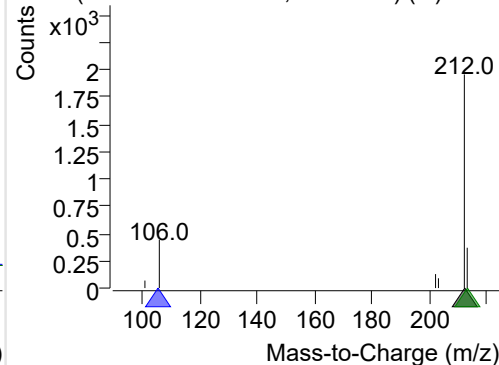
+ Selected Ion (212.0) 220806-PAHs-030.D



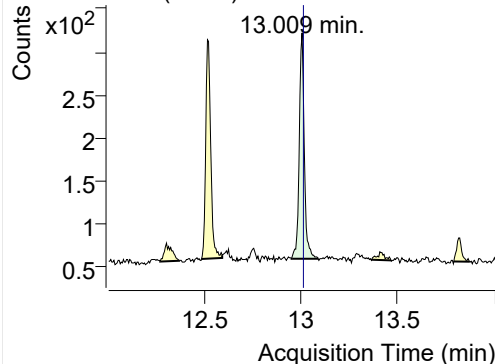
212.0, 106.0, 213.0



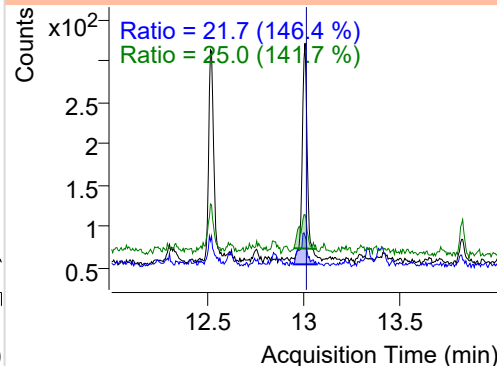
+ SIM (12.933-13.046 min, 21 scans) (\*\*) 2208

**Pyrene**

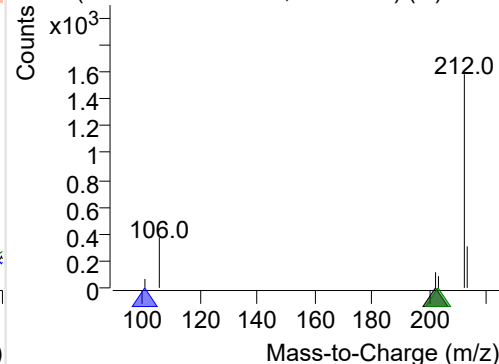
+ Selected Ion (202.0) 220806-PAHs-030.D



202.0, 101.0, 203.0



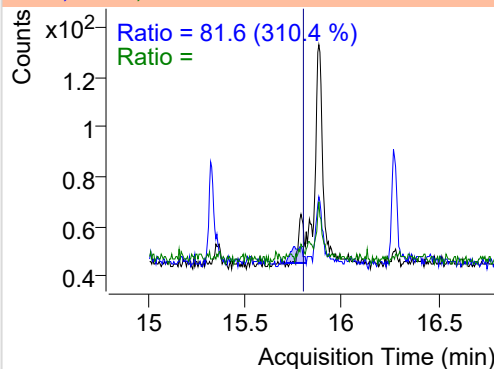
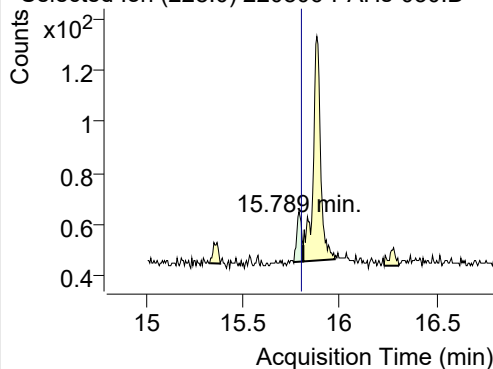
+ SIM (12.954-13.092 min, 26 scans) (\*\*) 2208



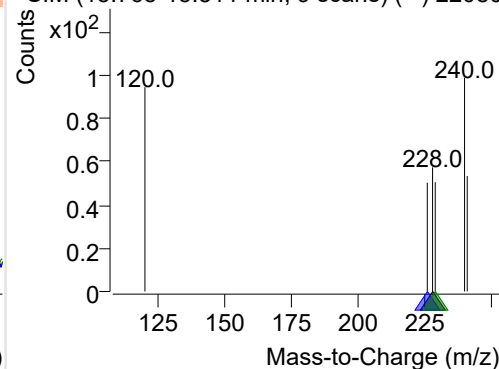
**Benz(a)anthracene**

+ Selected Ion (228.0) 220806-PAHs-030.D

228.0, 226.0, 229.0

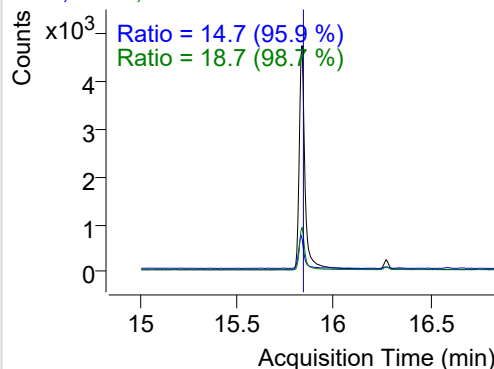
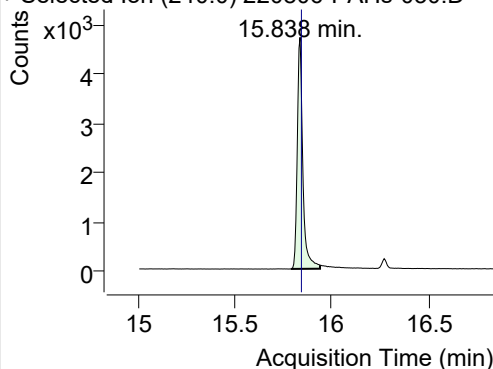


+ SIM (15.763-15.811 min, 9 scans) (\*\*) 22080

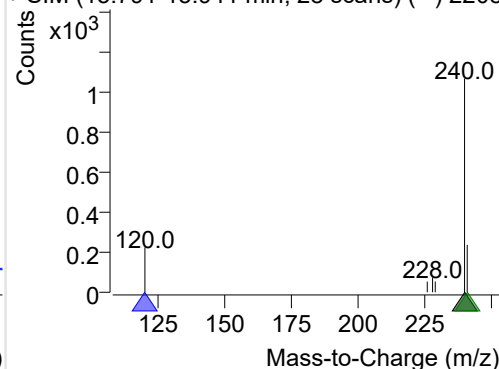
**IS-D12-Chrysene**

+ Selected Ion (240.0) 220806-PAHs-030.D

240.0, 120.0, 241.0

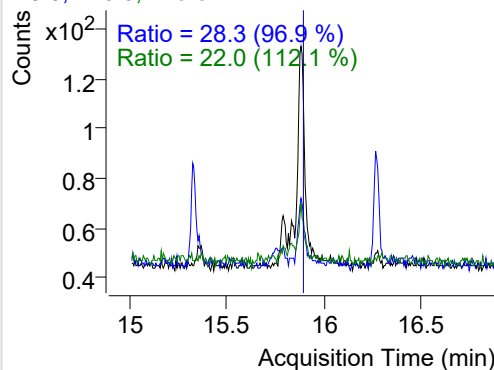
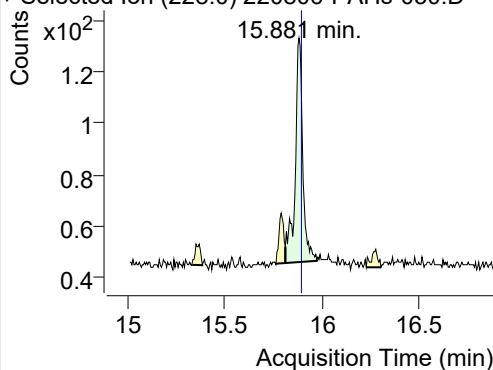


+ SIM (15.791-15.941 min, 28 scans) (\*\*) 2208

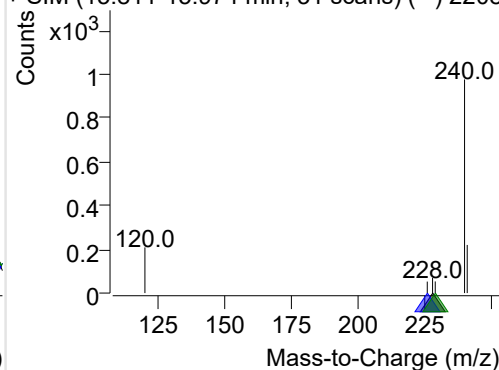
**Chrysene**

+ Selected Ion (228.0) 220806-PAHs-030.D

228.0, 226.0, 229.0

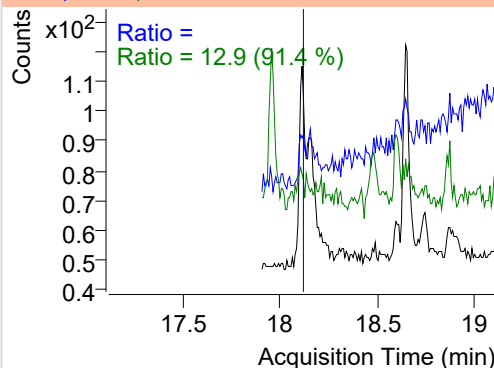
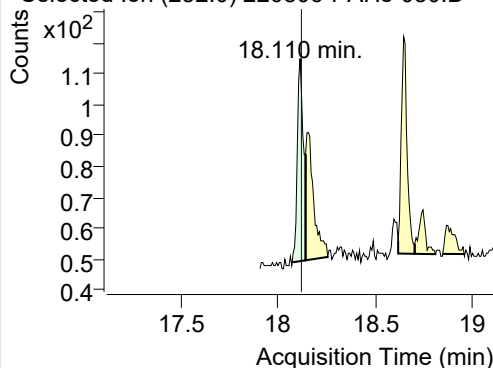


+ SIM (15.811-15.974 min, 31 scans) (\*\*) 2208

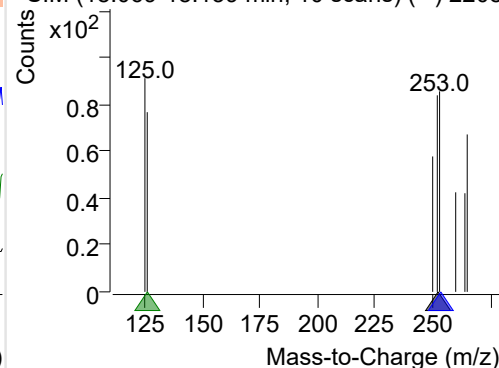
**Benzo(b)fluoranthene**

+ Selected Ion (252.0) 220806-PAHs-030.D

252.0, 253.0, 126.0



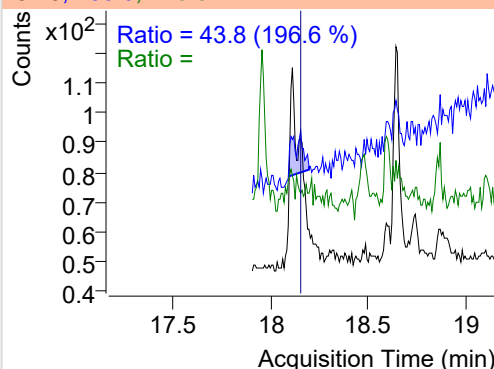
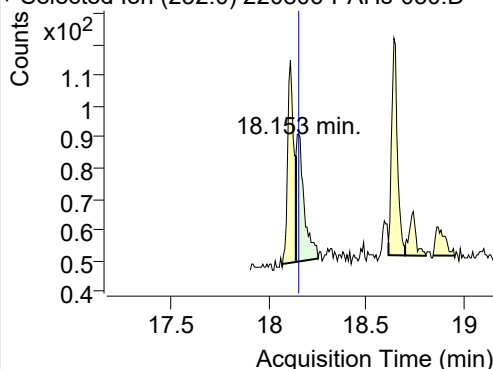
+ SIM (18.069-18.139 min, 10 scans) (\*\*) 2208



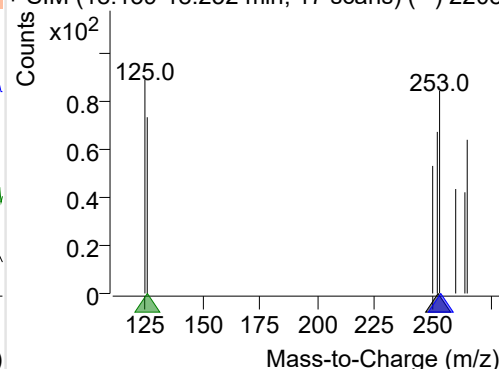
**Benzo(k)fluoranthene**

+ Selected Ion (252.0) 220806-PAHs-030.D

252.0, 253.0, 126.0

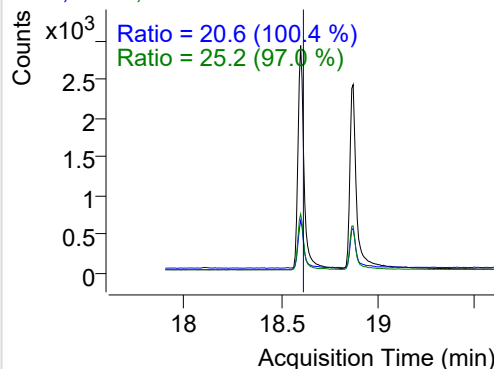
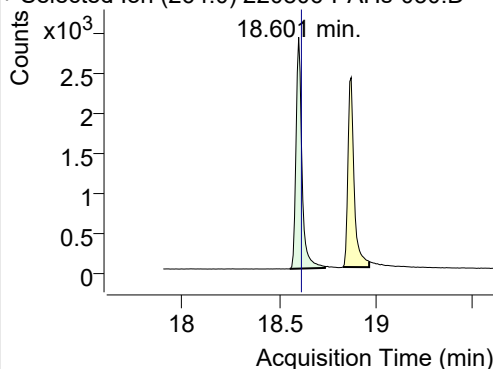


+ SIM (18.139-18.252 min, 17 scans) (\*\*) 2208

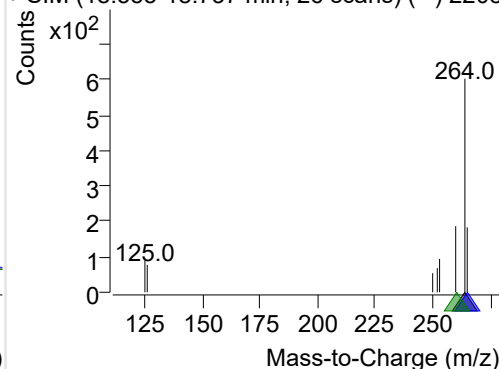
**SS-D12-Benzo(e)pyrene**

+ Selected Ion (264.0) 220806-PAHs-030.D

264.0, 265.0, 260.0

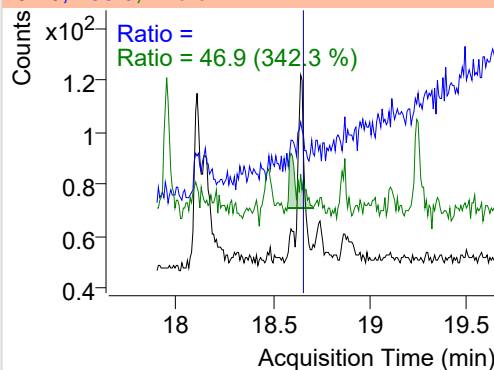
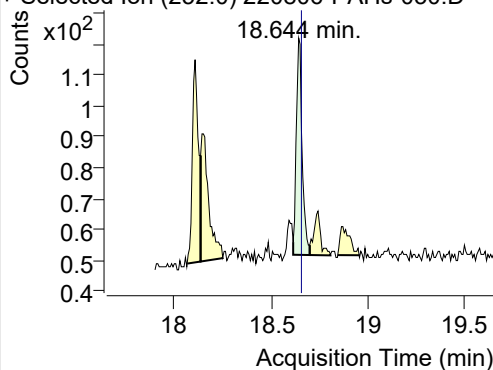


+ SIM (18.555-18.737 min, 26 scans) (\*\*) 2208

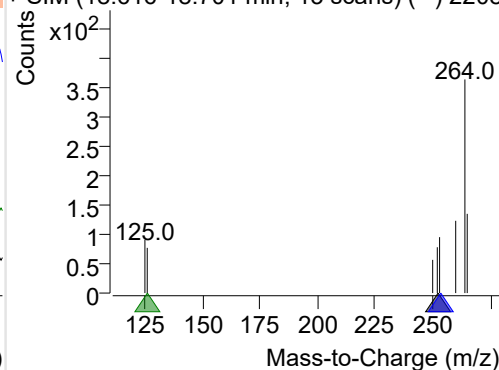
**Benzo(e)pyrene**

+ Selected Ion (252.0) 220806-PAHs-030.D

252.0, 253.0, 126.0

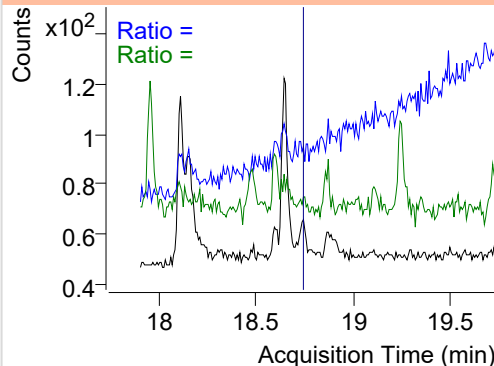
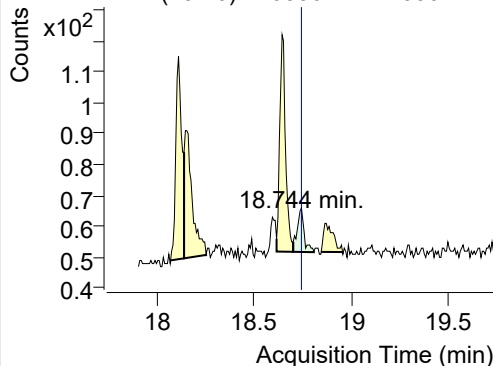


+ SIM (18.616-18.701 min, 13 scans) (\*\*) 2208

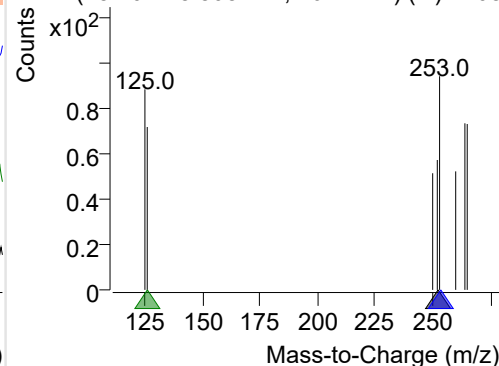
**Benzo(a)pyrene**

+ Selected Ion (252.0) 220806-PAHs-030.D

252.0, 253.0, 126.0

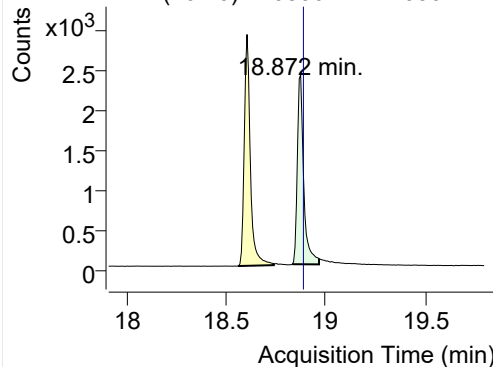


+ SIM (18.701-18.808 min, 16 scans) (\*\*) 2208

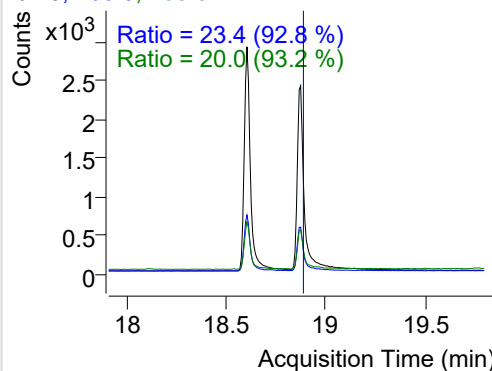


## IS-D12-Perylene

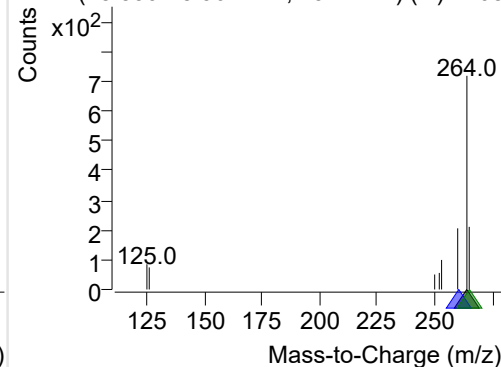
+ Selected Ion (264.0) 220806-PAHs-030.D



264.0, 260.0, 265.0

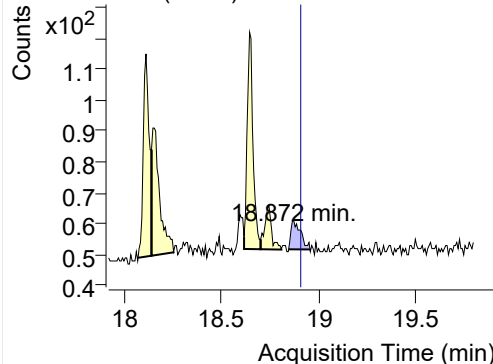


+ SIM (18.830-18.964 min, 19 scans) (\*\*) 2208

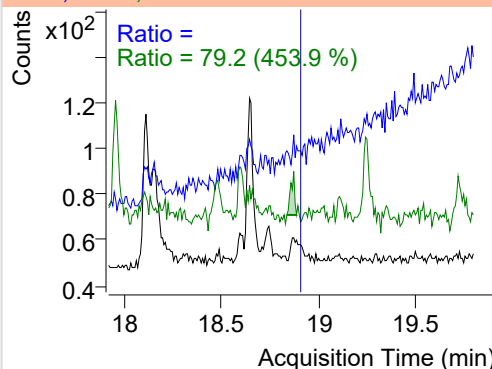


## Perylene

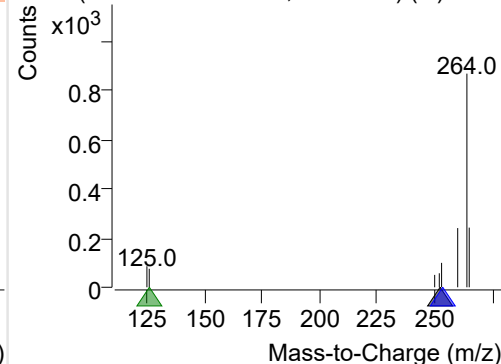
+ Selected Ion (252.0) 220806-PAHs-030.D



252.0, 253.0, 126.0

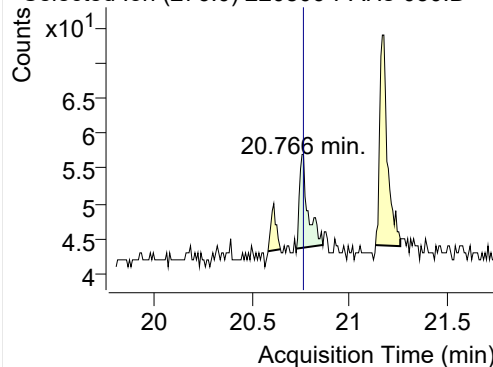


+ SIM (18.845-18.955 min, 15 scans) (\*\*) 2208

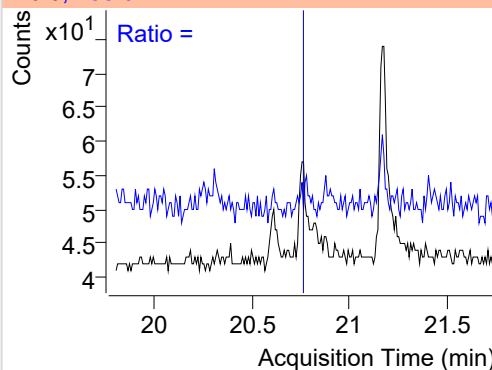


## Indeno(1,2,3-c,d)pyrene

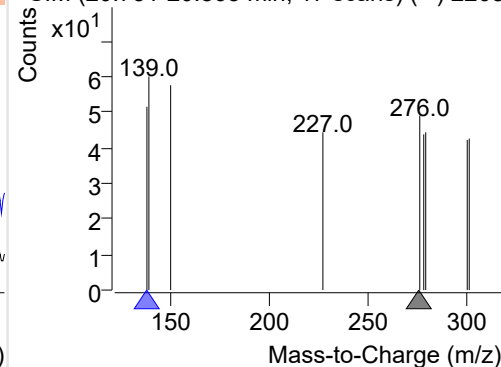
+ Selected Ion (276.0) 220806-PAHs-030.D



276.0, 138.0

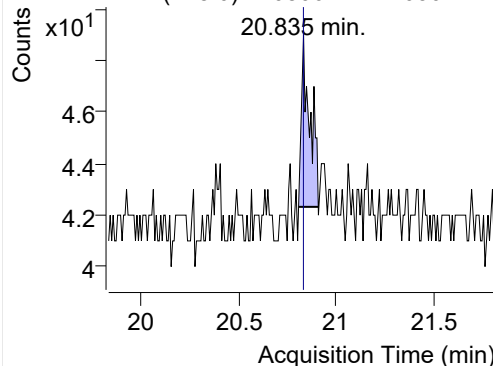


+ SIM (20.731-20.865 min, 17 scans) (\*\*) 2208

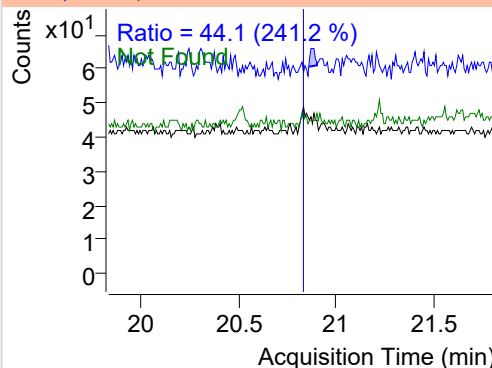


## Dibenz(a,h)anthracene

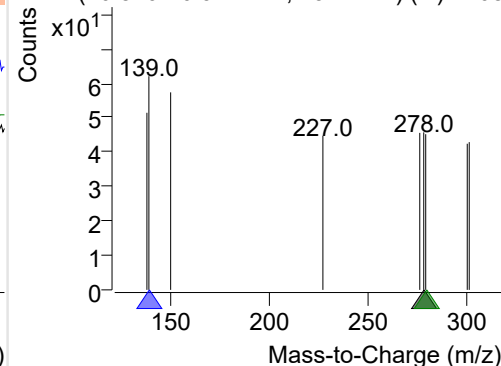
+ Selected Ion (278.0) 220806-PAHs-030.D



278.0, 139.0, 279.0

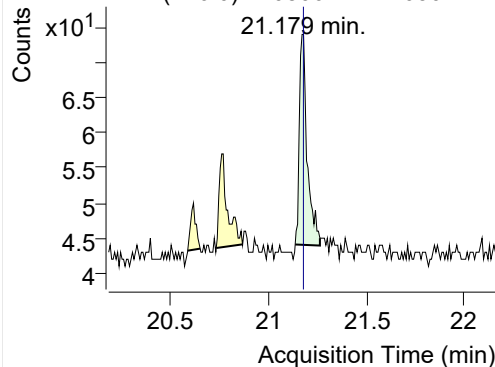


+ SIM (20.810-20.911 min, 13 scans) (\*\*) 2208

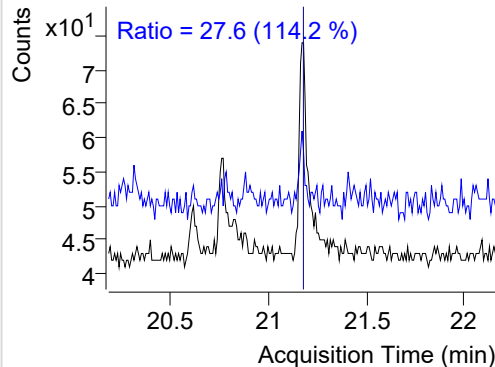


**Benzo(g,h,i)perylene**

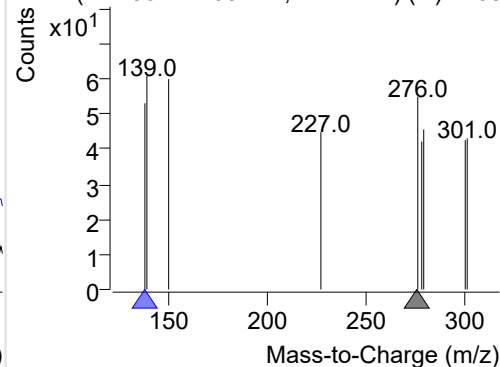
+ Selected Ion (276.0) 220806-PAHs-030.D



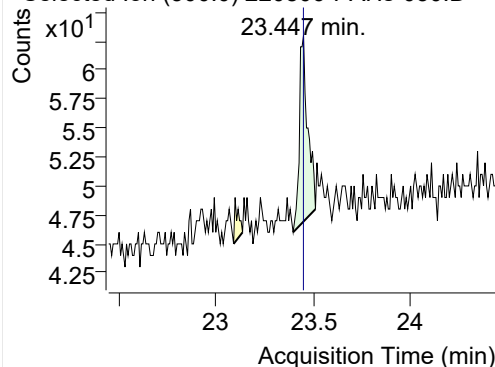
276.0, 138.0



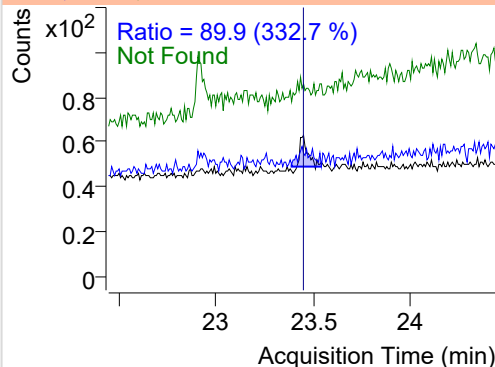
+ SIM (21.136-21.263 min, 17 scans) (\*\*) 2208

**Coronene**

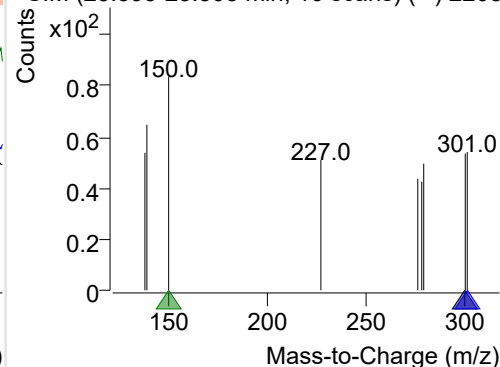
+ Selected Ion (300.0) 220806-PAHs-030.D



300.0, 301.0, 150.0



+ SIM (23.393-23.508 min, 16 scans) (\*\*) 2208





## Quantitative Analysis Sample Based Report

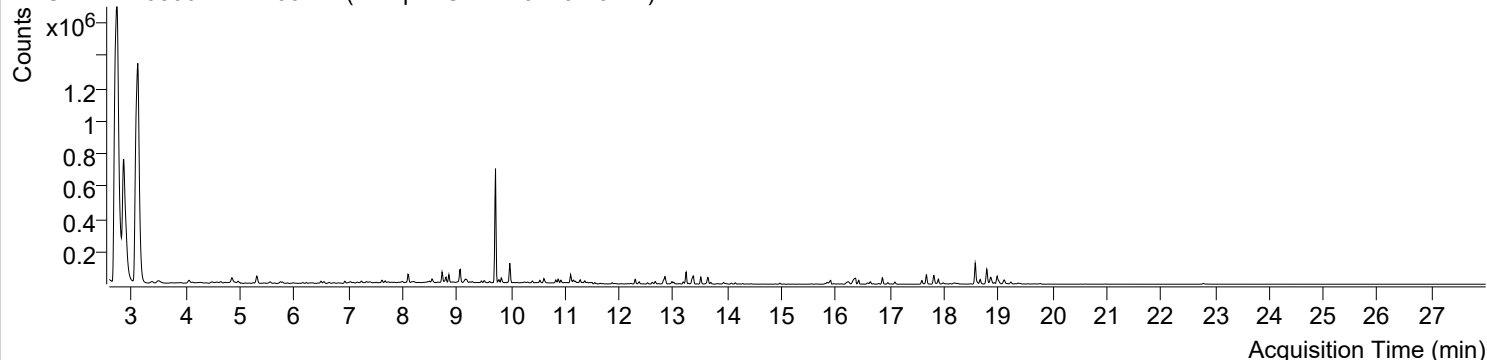


Trusted Answers

|                           |                                                                                            |                       |                         |
|---------------------------|--------------------------------------------------------------------------------------------|-----------------------|-------------------------|
| Batch Data Path File Name | D:\MassHunter\GCMS\1\data\PAHs\220806-PAHs-Sample\QuantResults\220806-PAHs-Quant.batch.bin |                       |                         |
| Analysis Time Stamp       | 2022-10-10 오전 10:12:04                                                                     | Analyst Name          | DESKTOP-86B7UPG\5975MS  |
| Report Generation Time    | 2022-10-10 오전 10:12:12                                                                     | Report Generator Name | DESKTOP-86B7UPG\5975MS  |
| Calibration Last Update   | 2022-12-15 오후 3:30:46                                                                      | Batch State           | Processed               |
| Analyze Quant Version     | 10.2                                                                                       | Report Quant Version  | 10.2                    |
| Acq. Date-Time            | 2022-08-07 오전 2:04:10                                                                      | Data File             | 220806-PAHs-031.D       |
| Type                      | Sample                                                                                     | Name                  | Sample-Gas-220710-10DIL |
| Dil.                      | 1                                                                                          | Acq. Method File      | PAHs 19mix-Method       |

## Sample Chromatogram

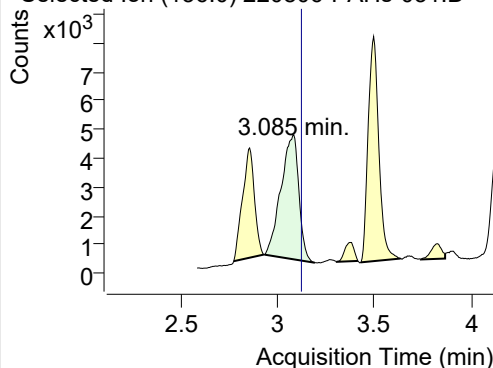
+ TIC SIM 220806-PAHs-031.D (Sample-Gas-220710-10DIL)



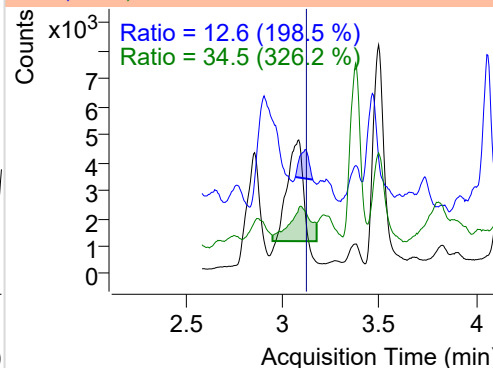
| Name                    | RT     | Transition | Resp.   | Height     | Final Conc. Units | Ratio |
|-------------------------|--------|------------|---------|------------|-------------------|-------|
| IS-D8-Naphthalene       | 3.085  | 136.0      | 27537   | 4323.08    | ND ng/ml          | 34.5  |
| Naphthalene             | 3.112  | 128.0      | 5086239 | 1081409.60 | ND ng/ml          | 13.1  |
| Acenaphthylene          | 6.167  | 152.0      | 1462    | 655.82     | ND ng/ml          | 89.3  |
| IS-D10-Acenaphthene     | 6.493  | 164.0      | 13278   | 6142.06    | ND ng/ml          | 97.0  |
| Acenaphthene            | 6.558  | 154.0      | 4959    | 2280.61    | ND ng/ml          | 108.2 |
| LSS-D10-Fluorene        | 7.627  | 176.0      | 10064   | 5915.51    | ND ng/ml          | 96.0  |
| Fluorene                | 7.680  | 166.0      | 8357    | 4696.05    | ND ng/ml          | 106.7 |
| IS-D10-Phenanthrene     | 9.780  | 188.0      | 19993   | 12761.17   | ND ng/ml          | 27.2  |
| Phenanthrene            | 9.822  | 178.0      | 29893   | 17821.87   | ND ng/ml          | 19.1  |
| Anthracene              | 9.979  | 178.0      | 50617   | 32261.87   | ND ng/ml          | 27.1  |
| Fluoranthene            | 12.526 | 202.0      | 8225    | 5164.24    | ND ng/ml          |       |
| LSS-D10-Pyrene          | 12.976 | 212.0      | 15256   | 9681.12    | ND ng/ml          | 33.7  |
| Pyrene                  | 13.009 | 202.0      | 14068   | 7980.24    | ND ng/ml          | 22.4  |
| Benz(a)anthracene       | 15.800 | 228.0      | 254     | 96.37      | ND ng/ml          | 41.5  |
| IS-D12-Chrysene         | 15.838 | 240.0      | 15254   | 7469.33    | ND ng/ml          | 18.7  |
| Chrysene                | 15.898 | 228.0      | 1517    | 606.96     | ND ng/ml          | 32.2  |
| Benzo(b)fluoranthene    | 17.982 | 252.0      | 2355    | 1129.40    | ND ng/ml          |       |
| Benzo(k)fluoranthene    | 17.982 | 252.0      | 2355    | 1129.40    | ND ng/ml          |       |
| SS-D12-Benzo(e)pyrene   | 18.594 | 264.0      | 14677   | 14266.46   | ND ng/ml          | 24.4  |
| Benzo(e)pyrene          | 18.665 | 252.0      | 44466   | 22647.40   | ND ng/ml          | 19.0  |
| Benzo(a)pyrene          | 18.786 | 252.0      | 6174    | 2447.40    | ND ng/ml          | 12.2  |
| IS-D12-Perylene         | 18.865 | 264.0      | 43696   | 17426.25   | ND ng/ml          | 23.6  |
| Perylene                | 18.858 | 252.0      | 5798    | 2171.40    | ND ng/ml          | 9.7   |
| Indeno(1,2,3-c,d)pyrene | 20.751 | 276.0      | 23      | 9.34       | ND ng/ml          |       |
| Dibenz(a,h)anthracene   | 20.835 | 278.0      | 47      | 16.40      | ND ng/ml          |       |
| Benzo(g,h,i)perylene    | 21.156 | 276.0      | 76      | 21.47      | ND ng/ml          |       |
| Coronene                | 23.454 | 300.0      | 27      | 8.88       | ND ng/ml          |       |

## IS-D8-Naphthalene

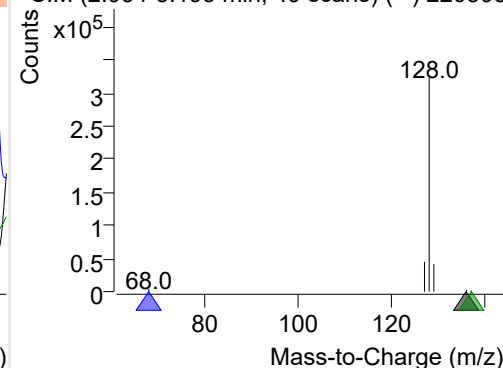
+ Selected Ion (136.0) 220806-PAHs-031.D



136.0, 68.0, 137.0

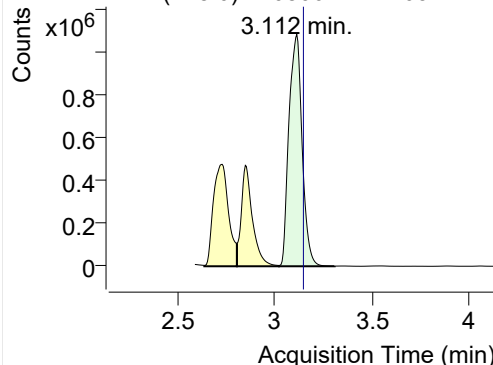


+ SIM (2.934-3.193 min, 49 scans) (\*\*) 220806

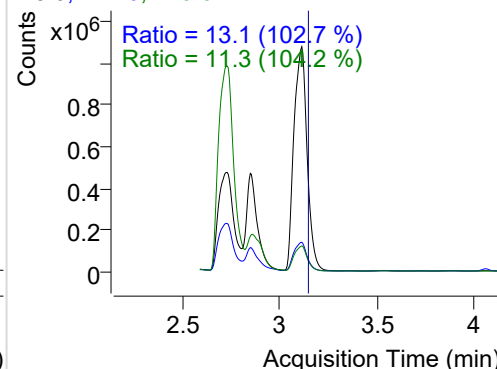


**Naphthalene**

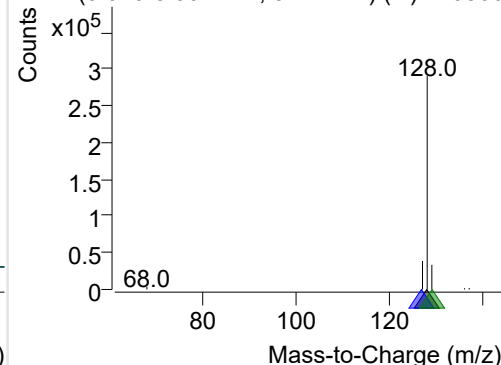
+ Selected Ion (128.0) 220806-PAHs-031.D



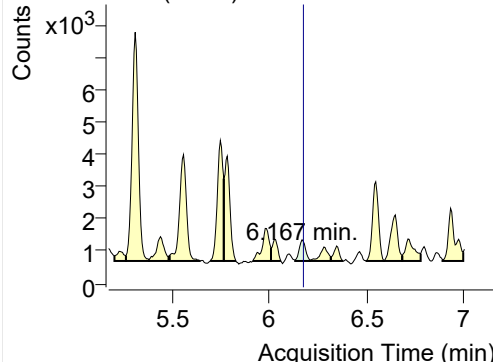
128.0, 127.0, 129.0



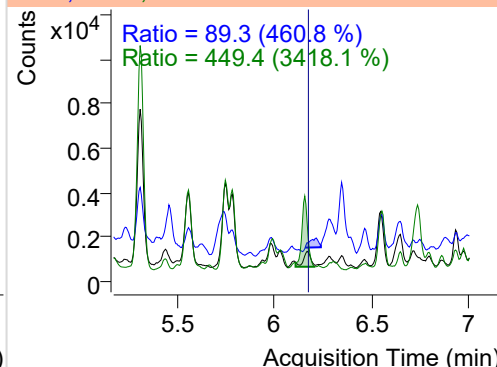
+ SIM (3.020-3.307 min, 54 scans) (\*\*) 220806

**Acenaphthylene**

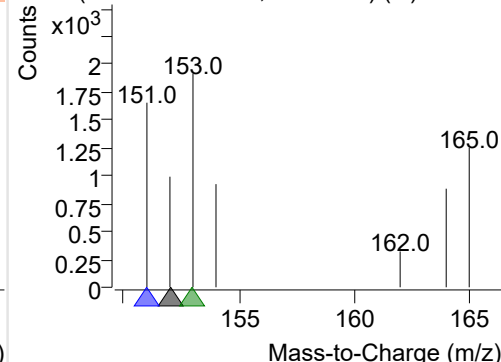
+ Selected Ion (152.0) 220806-PAHs-031.D



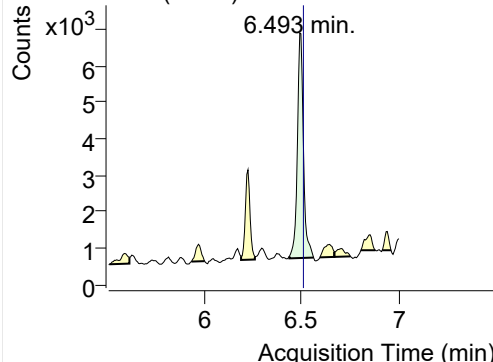
152.0, 151.0, 153.0



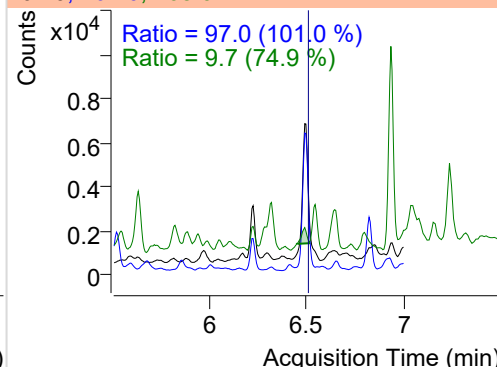
+ SIM (6.132-6.209 min, 14 scans) (\*\*) 220806

**IS-D10-Acenaphthene**

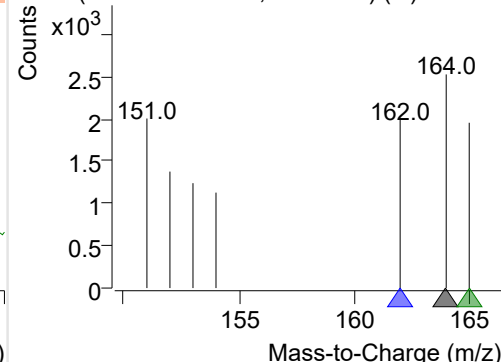
+ Selected Ion (164.0) 220806-PAHs-031.D



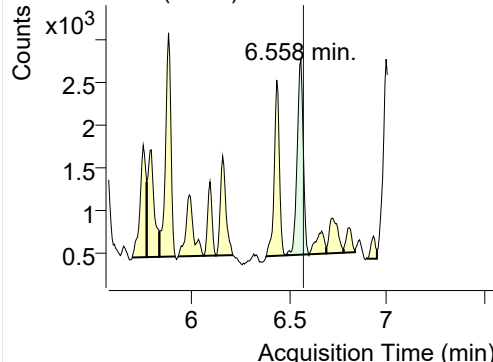
164.0, 162.0, 165.0



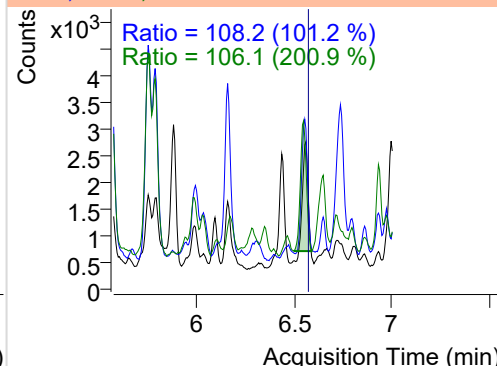
+ SIM (6.439-6.564 min, 21 scans) (\*\*) 220806

**Acenaphthene**

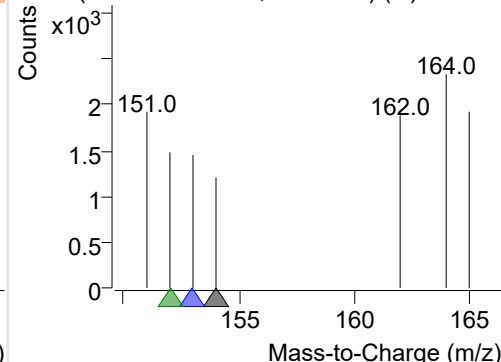
+ Selected Ion (154.0) 220806-PAHs-031.D



154.0, 153.0, 152.0

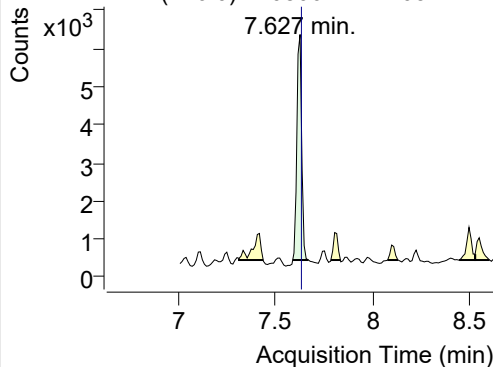


+ SIM (6.487-6.598 min, 19 scans) (\*\*) 220806

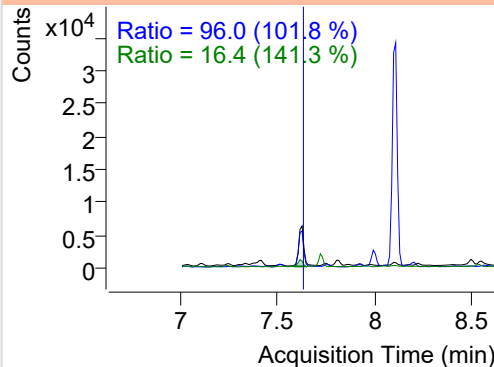


## LSS-D10-Fluorene

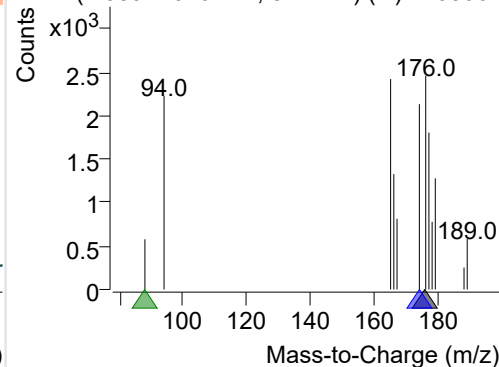
+ Selected Ion (176.0) 220806-PAHs-031.D



176.0, 174.0, 88.0

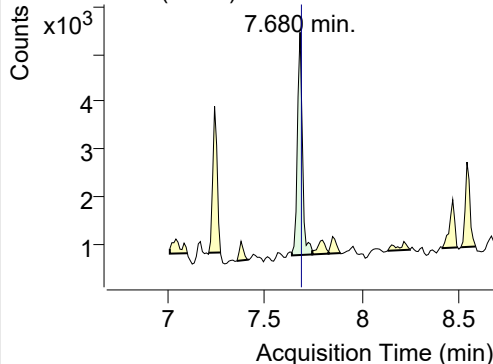


+ SIM (7.589-7.670 min, 8 scans) (\*\*) 220806-I

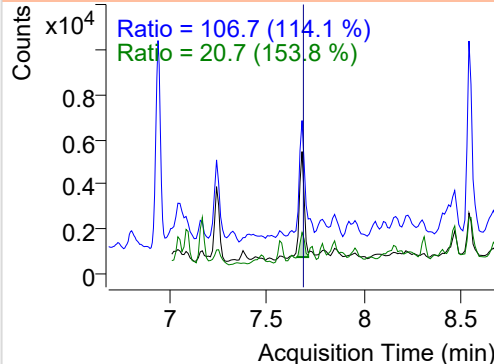


## Fluorene

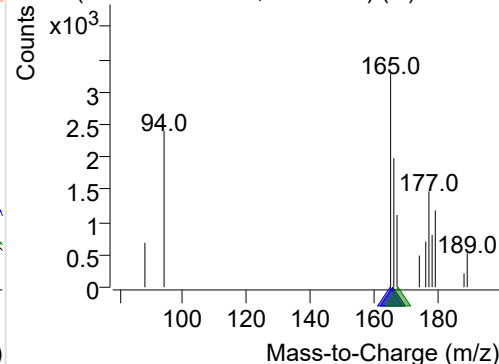
+ Selected Ion (166.0) 220806-PAHs-031.D



166.0, 165.0, 167.0

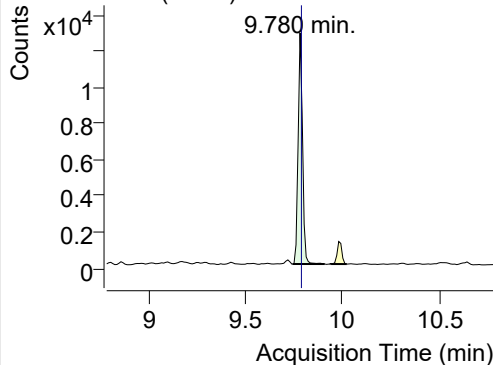


+ SIM (7.638-7.743 min, 11 scans) (\*\*) 220806

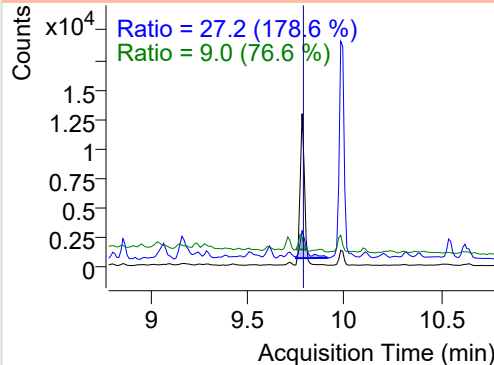


## IS-D10-Phenanthrene

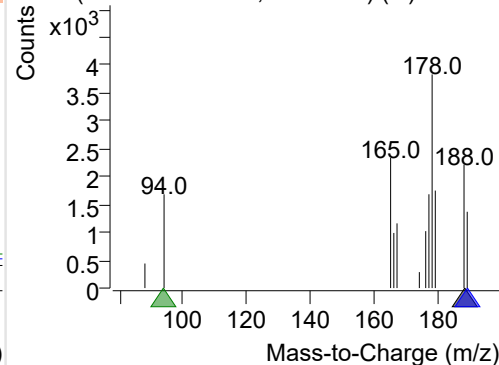
+ Selected Ion (188.0) 220806-PAHs-031.D



188.0, 189.0, 94.0

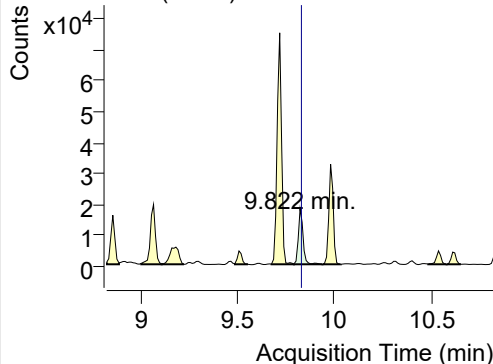


+ SIM (9.742-9.907 min, 16 scans) (\*\*) 220806

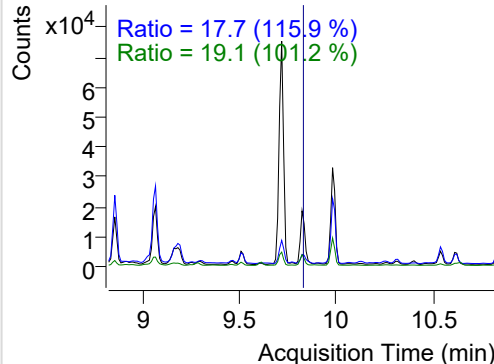


## Phenanthrene

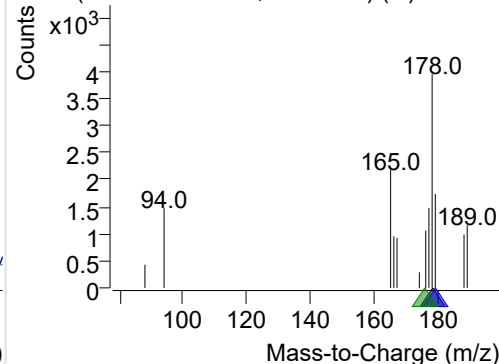
+ Selected Ion (178.0) 220806-PAHs-031.D



178.0, 179.0, 176.0

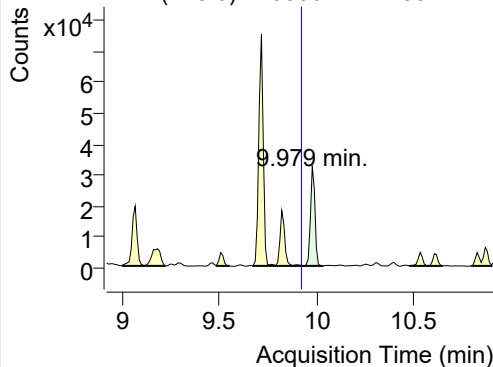


+ SIM (9.790-9.937 min, 15 scans) (\*\*) 220806

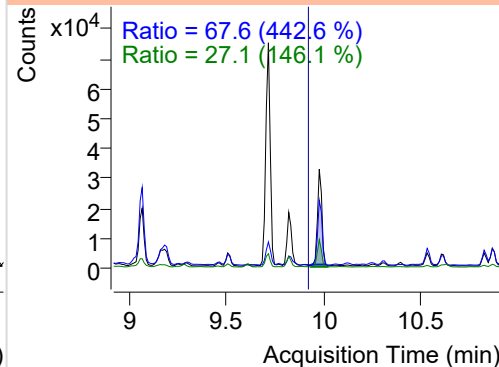


**Anthracene**

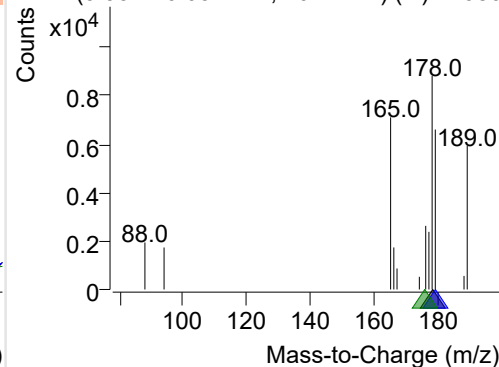
+ Selected Ion (178.0) 220806-PAHs-031.D



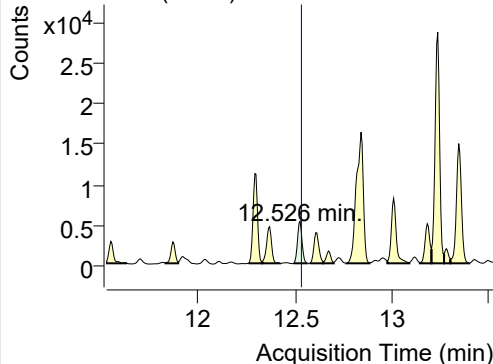
178.0, 179.0, 176.0



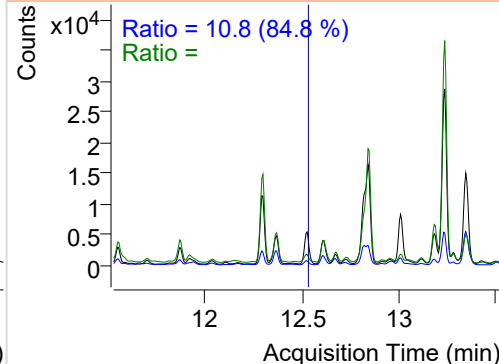
+ SIM (9.937-10.032 min, 10 scans) (\*\*) 22080

**Fluoranthene**

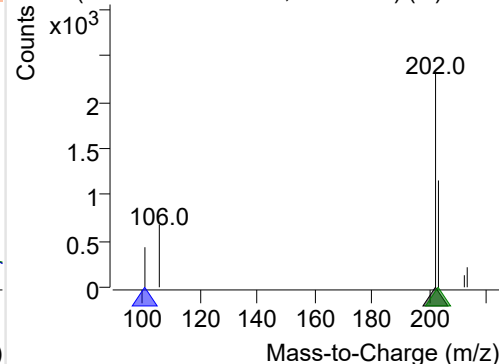
+ Selected Ion (202.0) 220806-PAHs-031.D



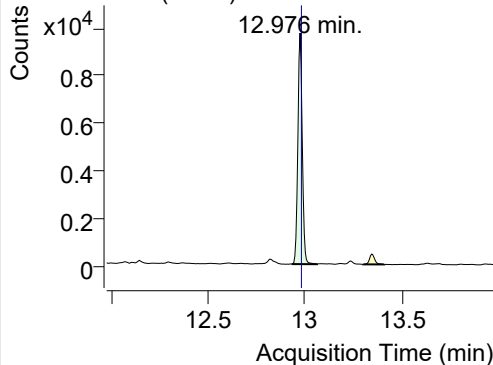
202.0, 101.0, 203.0



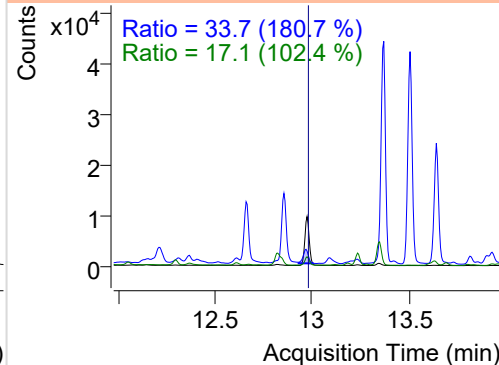
+ SIM (12.494-12.564 min, 13 scans) (\*\*) 2208

**LSS-D10-Pyrene**

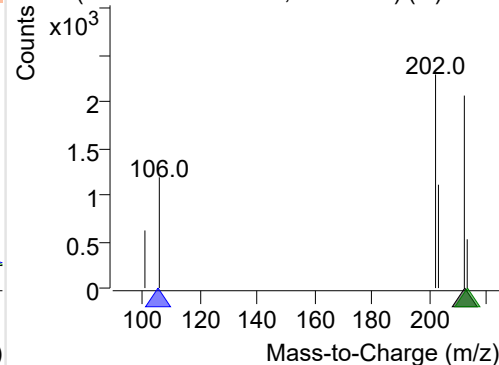
+ Selected Ion (212.0) 220806-PAHs-031.D



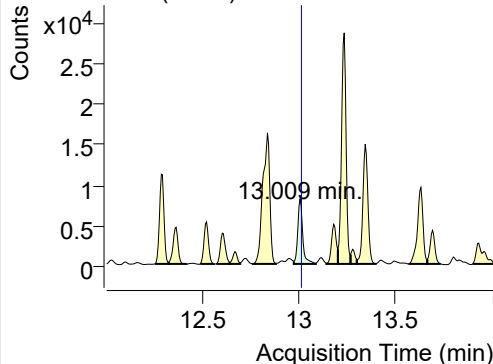
212.0, 106.0, 213.0



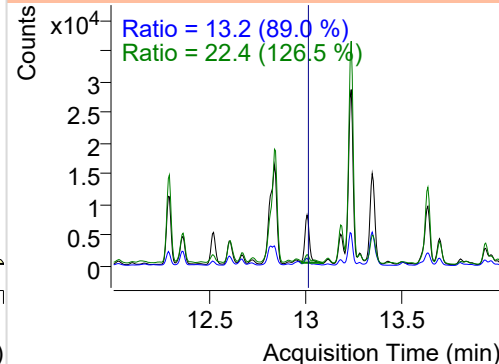
+ SIM (12.933-13.063 min, 24 scans) (\*\*) 2208

**Pyrene**

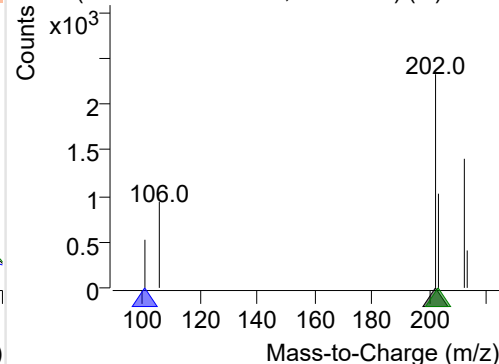
+ Selected Ion (202.0) 220806-PAHs-031.D



202.0, 101.0, 203.0



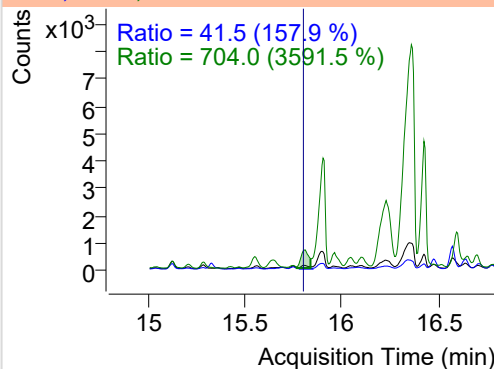
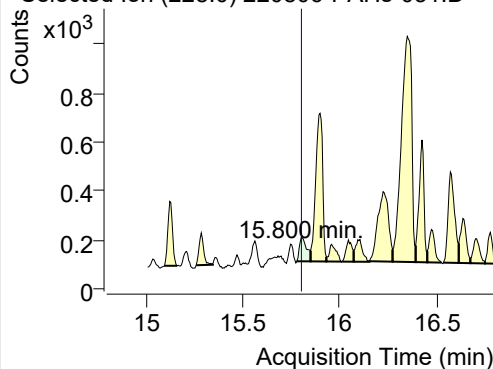
+ SIM (12.976-13.090 min, 22 scans) (\*\*) 2208



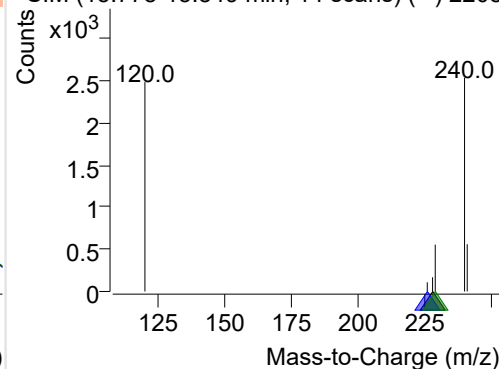
**Benz(a)anthracene**

+ Selected Ion (228.0) 220806-PAHs-031.D

228.0, 226.0, 229.0

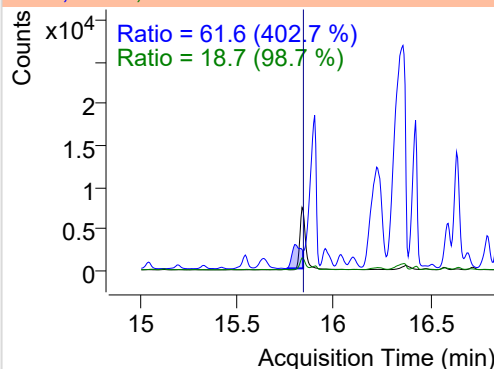
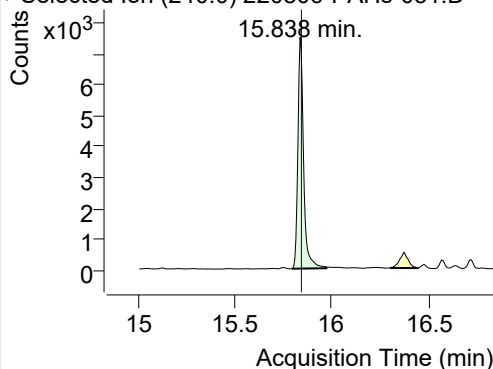


+ SIM (15.778-15.849 min, 14 scans) (\*\*) 2208

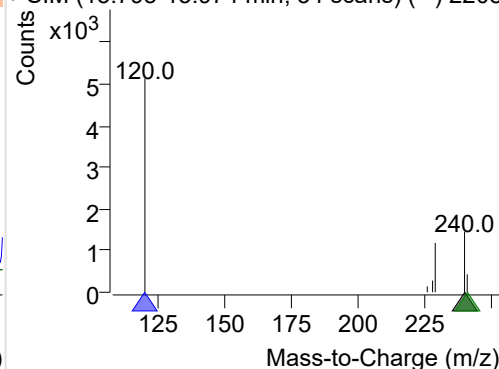
**IS-D12-Chrysene**

+ Selected Ion (240.0) 220806-PAHs-031.D

240.0, 120.0, 241.0

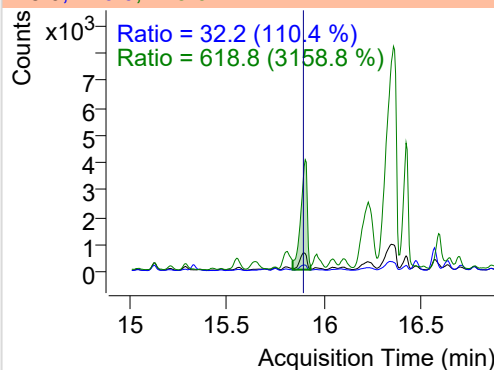
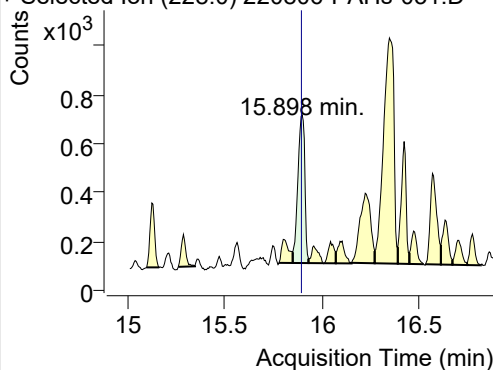


+ SIM (15.795-15.974 min, 34 scans) (\*\*) 2208

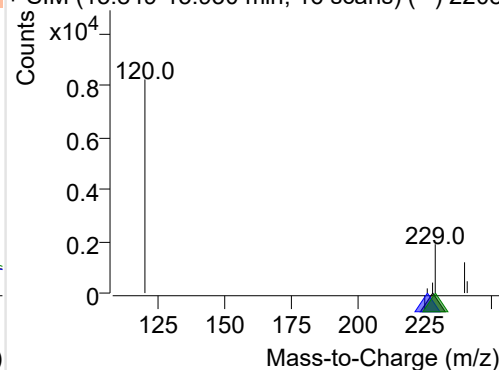
**Chrysene**

+ Selected Ion (228.0) 220806-PAHs-031.D

228.0, 226.0, 229.0

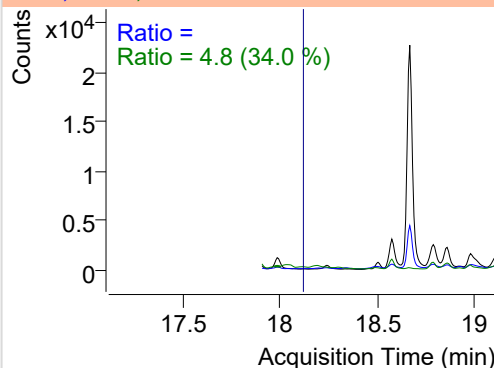
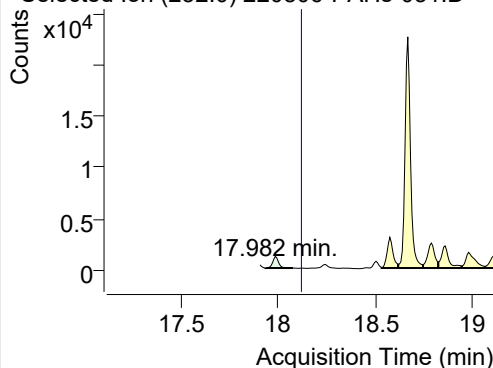


+ SIM (15.849-15.930 min, 16 scans) (\*\*) 2208

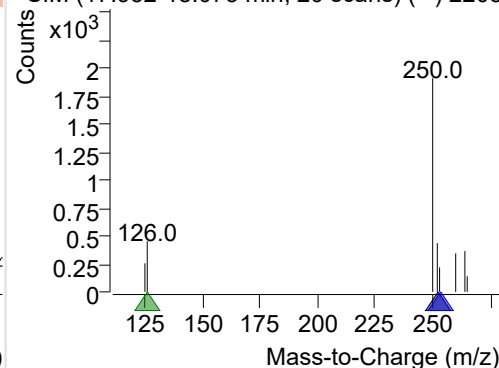
**Benzo(b)fluoranthene**

+ Selected Ion (252.0) 220806-PAHs-031.D

252.0, 253.0, 126.0



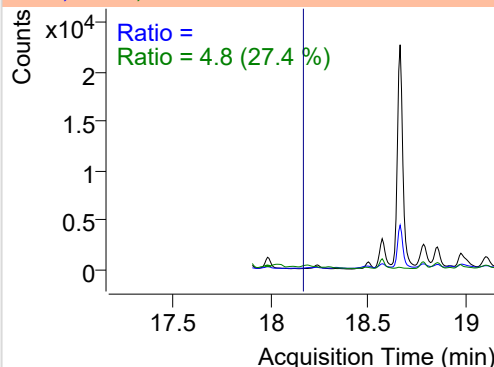
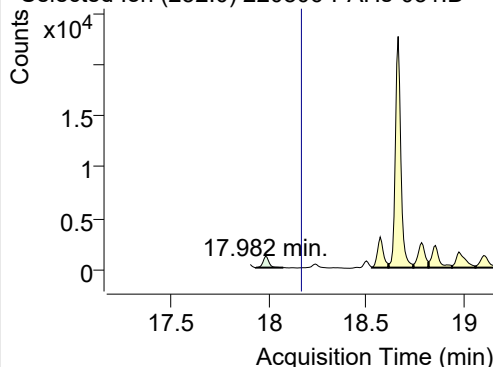
+ SIM (17.932-18.073 min, 20 scans) (\*\*) 2208



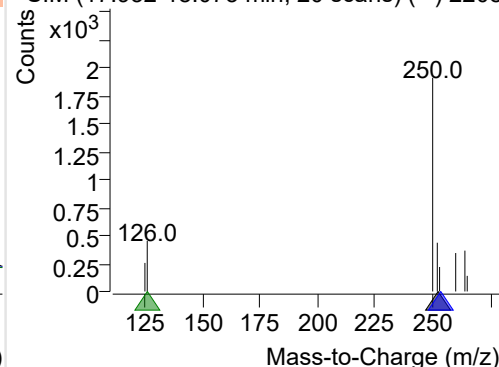
**Benzo(k)fluoranthene**

+ Selected Ion (252.0) 220806-PAHs-031.D

252.0, 253.0, 126.0

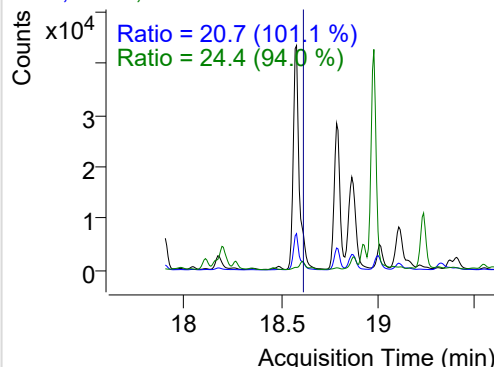
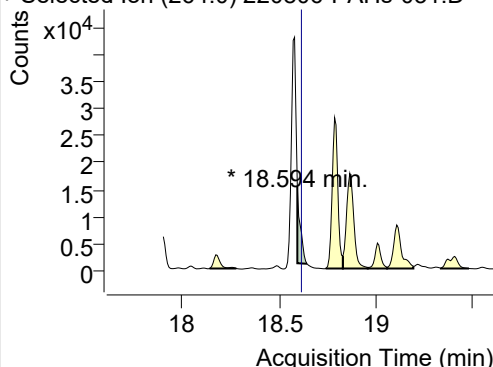


+ SIM (17.932-18.073 min, 20 scans) (\*\*) 2208

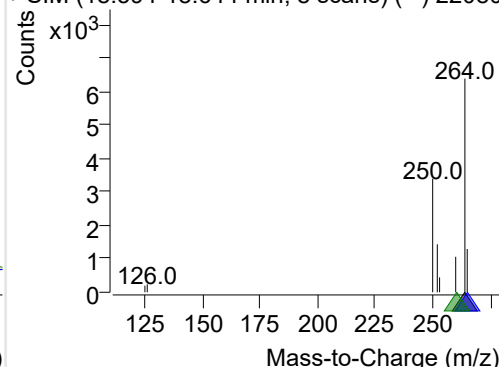
**SS-D12-Benzo(e)pyrene**

+ Selected Ion (264.0) 220806-PAHs-031.D

264.0, 265.0, 260.0

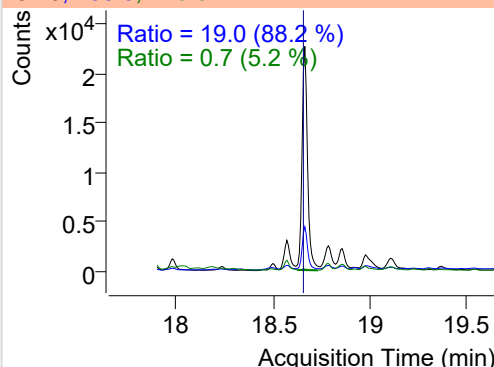
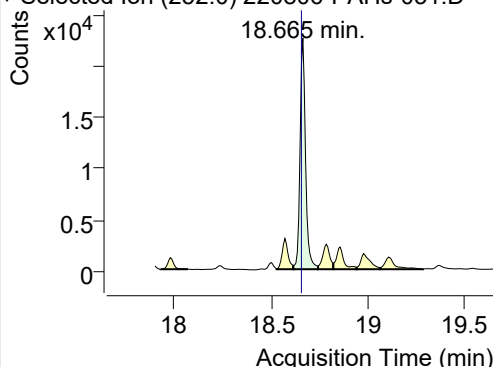


+ SIM (18.594-18.644 min, 8 scans) (\*\*) 22080

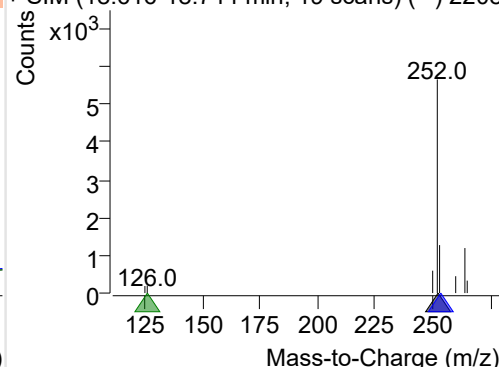
**Benzo(e)pyrene**

+ Selected Ion (252.0) 220806-PAHs-031.D

252.0, 253.0, 126.0

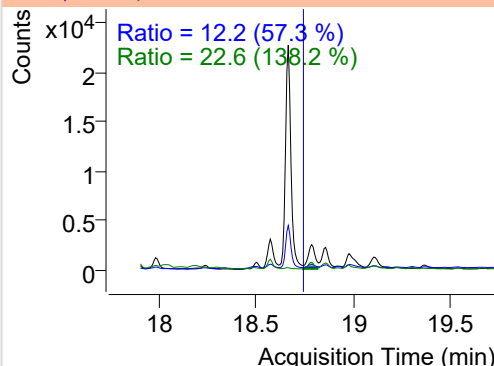
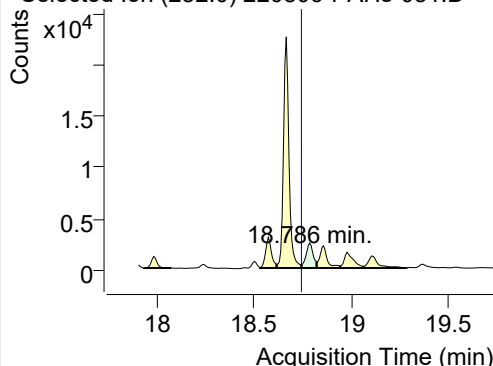


+ SIM (18.616-18.744 min, 19 scans) (\*\*) 2208

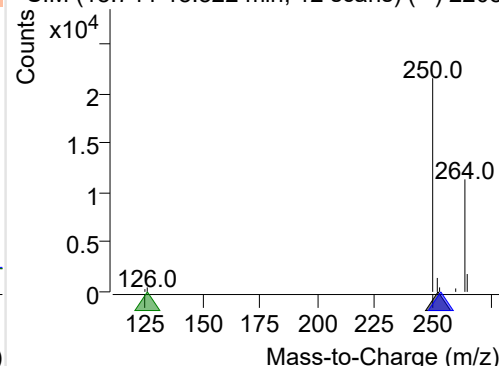
**Benzo(a)pyrene**

+ Selected Ion (252.0) 220806-PAHs-031.D

252.0, 253.0, 126.0

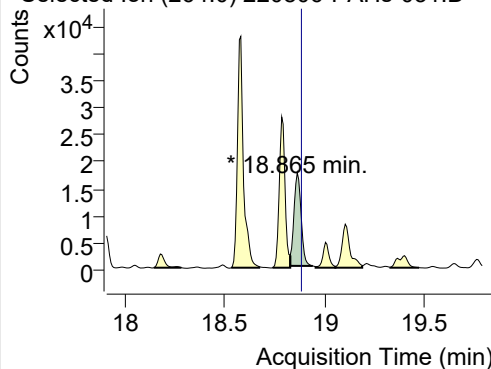


+ SIM (18.744-18.822 min, 12 scans) (\*\*) 2208

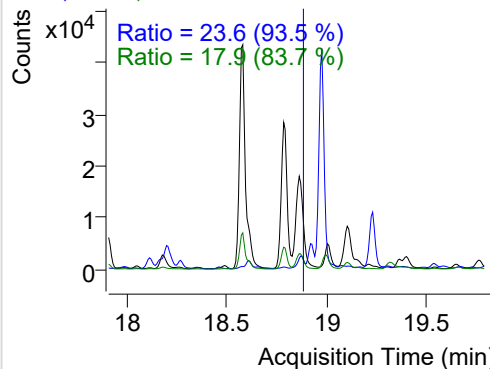


## IS-D12-Perylene

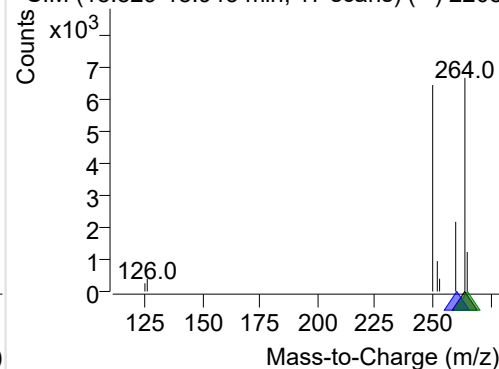
+ Selected Ion (264.0) 220806-PAHs-031.D



264.0, 260.0, 265.0

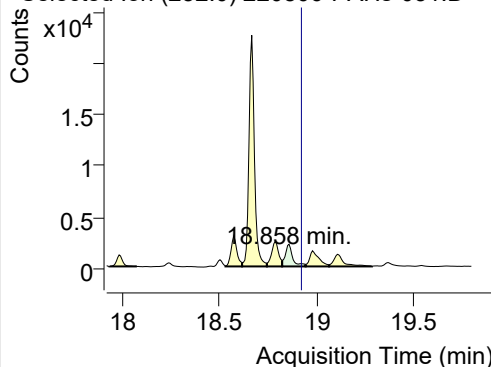


+ SIM (18.829-18.943 min, 17 scans) (\*\*) 2208

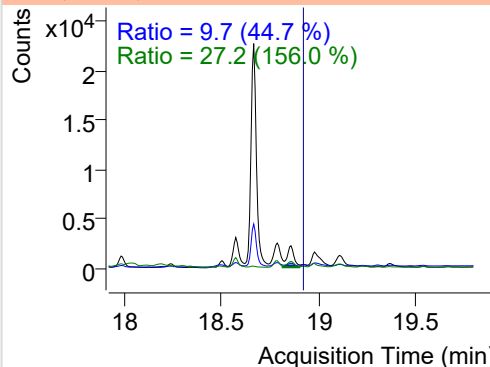


## Perylene

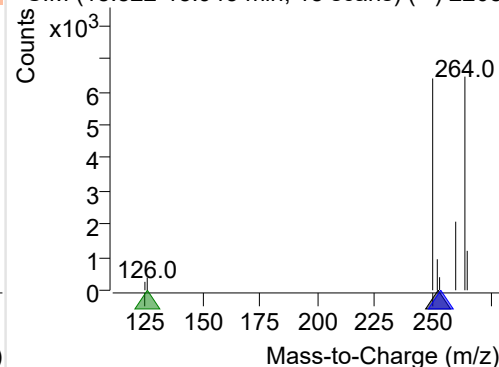
+ Selected Ion (252.0) 220806-PAHs-031.D



252.0, 253.0, 126.0

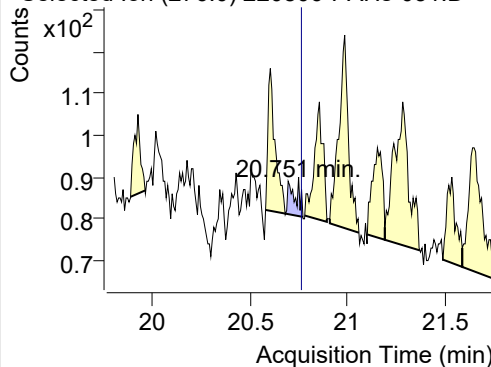


+ SIM (18.822-18.943 min, 18 scans) (\*\*) 2208

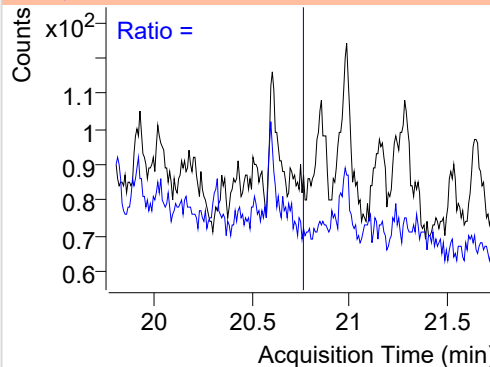


## Indeno(1,2,3-c,d)pyrene

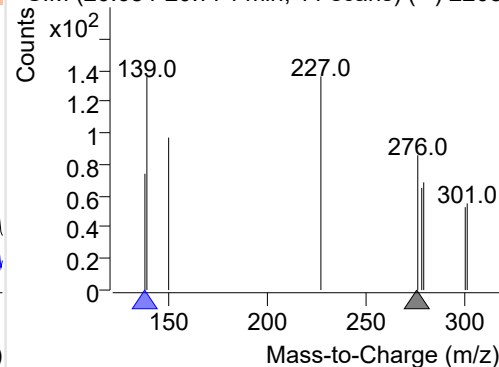
+ Selected Ion (276.0) 220806-PAHs-031.D



276.0, 138.0

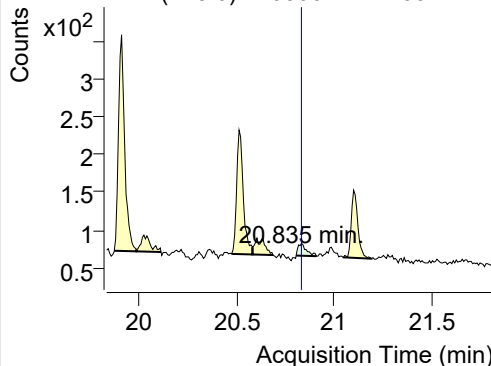


+ SIM (20.684-20.774 min, 11 scans) (\*\*) 2208

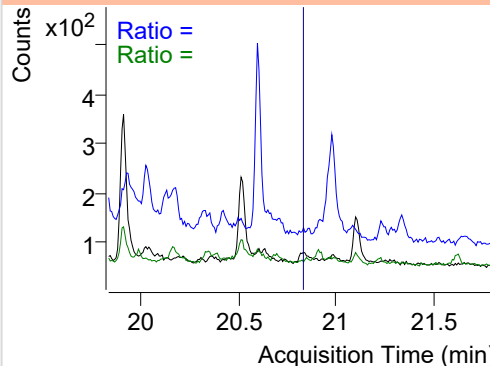


## Dibenz(a,h)anthracene

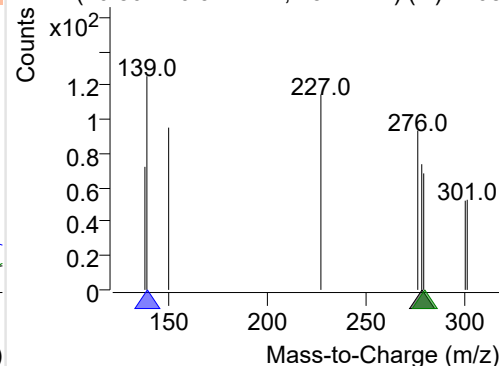
+ Selected Ion (278.0) 220806-PAHs-031.D



278.0, 139.0, 279.0



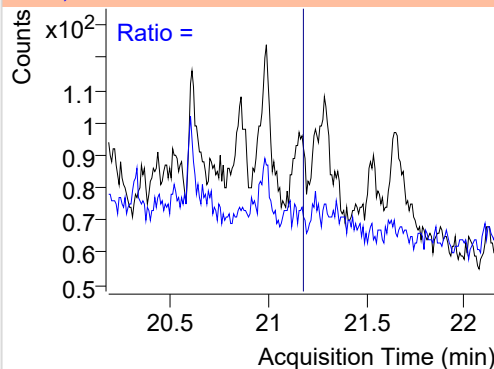
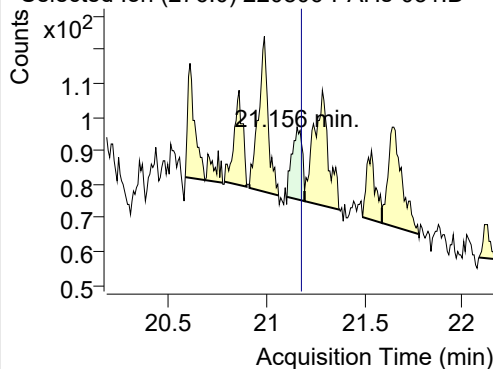
+ SIM (20.807-20.912 min, 13 scans) (\*\*) 2208



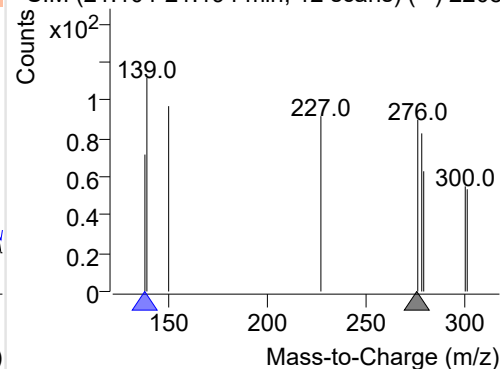
**Benzo(g,h,i)perylene**

+ Selected Ion (276.0) 220806-PAHs-031.D

276.0, 138.0

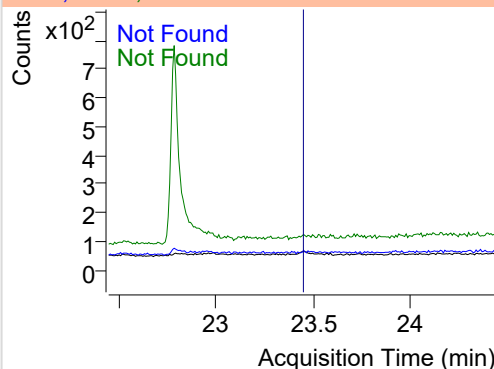
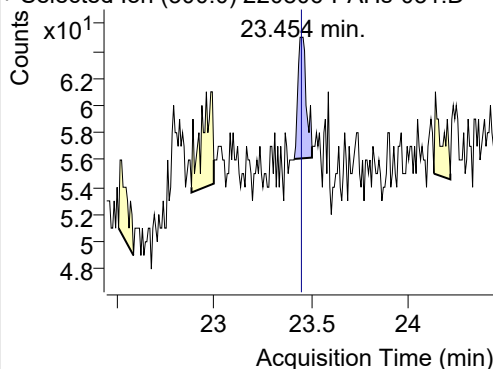


+ SIM (21.104-21.194 min, 12 scans) (\*\*) 2208

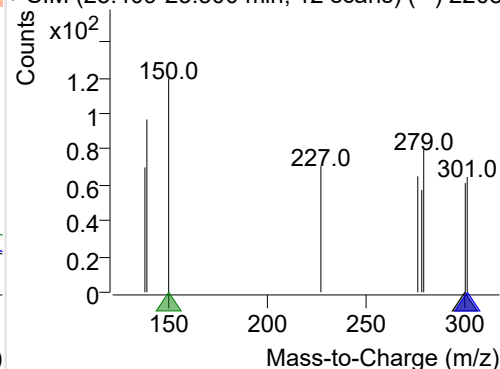
**Coronene**

+ Selected Ion (300.0) 220806-PAHs-031.D

300.0, 301.0, 150.0



+ SIM (23.409-23.500 min, 12 scans) (\*\*) 2208





## Quantitative Analysis Sample Based Report

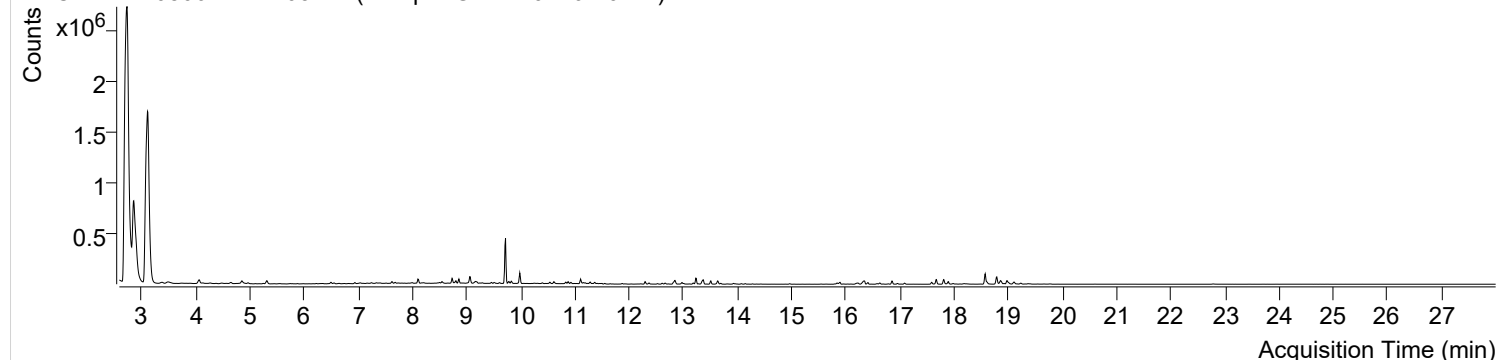


Trusted Answers

|                           |                                                                                            |                       |                         |
|---------------------------|--------------------------------------------------------------------------------------------|-----------------------|-------------------------|
| Batch Data Path File Name | D:\MassHunter\GCMS\1\data\PAHs\220806-PAHs-Sample\QuantResults\220806-PAHs-Quant.batch.bin |                       |                         |
| Analysis Time Stamp       | 2022-10-10 오전 10:12:04                                                                     | Analyst Name          | DESKTOP-86B7UPG\5975MS  |
| Report Generation Time    | 2022-10-10 오전 10:12:12                                                                     | Report Generator Name | DESKTOP-86B7UPG\5975MS  |
| Calibration Last Update   | 2022-12-15 오후 3:30:46                                                                      | Batch State           | Processed               |
| Analyze Quant Version     | 10.2                                                                                       | Report Quant Version  | 10.2                    |
| Acq. Date-Time            | 2022-08-07 오전 2:35:19                                                                      | Data File             | 220806-PAHs-032.D       |
| Type                      | Sample                                                                                     | Name                  | Sample-Gas-220716-10DIL |
| Dil.                      | 1                                                                                          | Acq. Method File      | PAHs 19mix-Method       |

## Sample Chromatogram

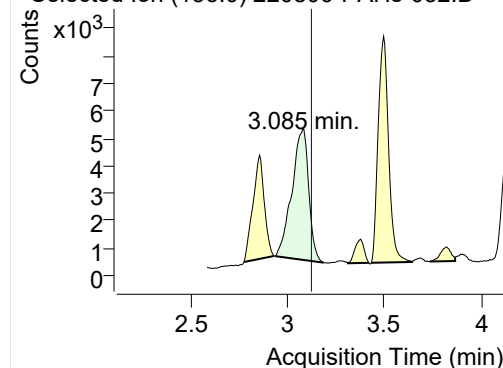
+ TIC SIM 220806-PAHs-032.D (Sample-Gas-220716-10DIL)



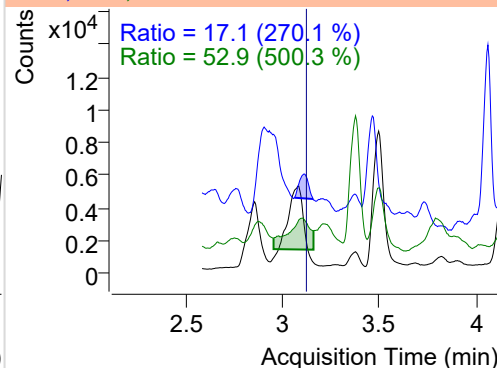
| Name                    | RT     | Transition | Resp.   | Height     | Final Conc. Units | Ratio |
|-------------------------|--------|------------|---------|------------|-------------------|-------|
| IS-D8-Naphthalene       | 3.085  | 136.0      | 28598   | 4779.95    | ND ng/ml          | 52.9  |
| Naphthalene             | 3.107  | 128.0      | 6223030 | 1356550.74 | ND ng/ml          | 12.9  |
| Acenaphthylene          | 6.286  | 152.0      | 1012    | 293.29     | ND ng/ml          | 263.4 |
| IS-D10-Acenaphthene     | 6.493  | 164.0      | 14085   | 6941.50    | ND ng/ml          | 94.6  |
| Acenaphthene            | 6.558  | 154.0      | 4258    | 2129.24    | ND ng/ml          | 77.2  |
| LSS-D10-Fluorene        | 7.617  | 176.0      | 11560   | 6400.71    | ND ng/ml          | 95.1  |
| Fluorene                | 7.680  | 166.0      | 6641    | 3847.61    | ND ng/ml          | 125.8 |
| IS-D10-Phenanthrene     | 9.780  | 188.0      | 21440   | 13547.26   | ND ng/ml          | 24.8  |
| Phenanthrene            | 9.822  | 178.0      | 21347   | 12916.60   | ND ng/ml          | 18.9  |
| Anthracene              | 9.980  | 178.0      | 43025   | 28217.60   | ND ng/ml          | 27.0  |
| Fluoranthene            | 12.526 | 202.0      | 5253    | 3256.70    | ND ng/ml          |       |
| LSS-D10-Pyrene          | 12.976 | 212.0      | 16970   | 10625.84   | ND ng/ml          | 28.5  |
| Pyrene                  | 13.009 | 202.0      | 9087    | 4941.70    | ND ng/ml          |       |
| Benz(a)anthracene       | 15.800 | 228.0      | 243     | 96.38      | ND ng/ml          | 42.2  |
| IS-D12-Chrysene         | 15.838 | 240.0      | 15564   | 8119.30    | ND ng/ml          | 18.6  |
| Chrysene                | 15.892 | 228.0      | 1208    | 550.33     | ND ng/ml          | 32.4  |
| Benzo(b)fluoranthene    | 18.238 | 252.0      | 713     | 293.97     | ND ng/ml          | 56.2  |
| Benzo(k)fluoranthene    | 18.238 | 252.0      | 713     | 293.97     | ND ng/ml          | 56.2  |
| SS-D12-Benzo(e)pyrene   | 18.594 | 264.0      | 19763   | 12602.96   | ND ng/ml          | 28.2  |
| Benzo(e)pyrene          | 18.658 | 252.0      | 394     | 201.11     | ND ng/ml          | 56.3  |
| Benzo(a)pyrene          | 18.787 | 252.0      | 4469    | 1820.33    | ND ng/ml          | 13.7  |
| IS-D12-Perylene         | 18.865 | 264.0      | 40034   | 15241.41   | ND ng/ml          | 22.2  |
| Perylene                | 18.915 | 252.0      | 333     | 139.01     | ND ng/ml          | 45.2  |
| Indeno(1,2,3-c,d)pyrene | 20.759 | 276.0      | 67      | 21.70      | ND ng/ml          |       |
| Dibenz(a,h)anthracene   | 20.828 | 278.0      | 85      | 26.05      | ND ng/ml          |       |
| Benzo(g,h,i)perylene    | 21.171 | 276.0      | 87      | 29.38      | ND ng/ml          |       |
| Coronene                | 23.439 | 300.0      | 64      | 21.37      | ND ng/ml          |       |

## IS-D8-Naphthalene

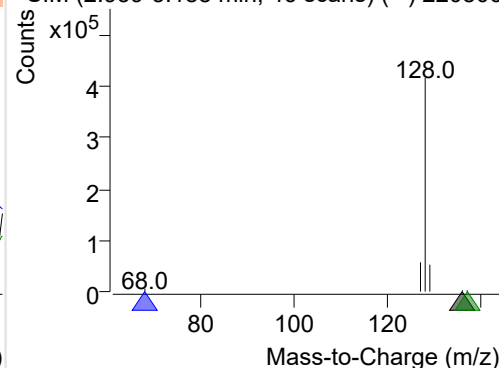
+ Selected Ion (136.0) 220806-PAHs-032.D



136.0, 68.0, 137.0

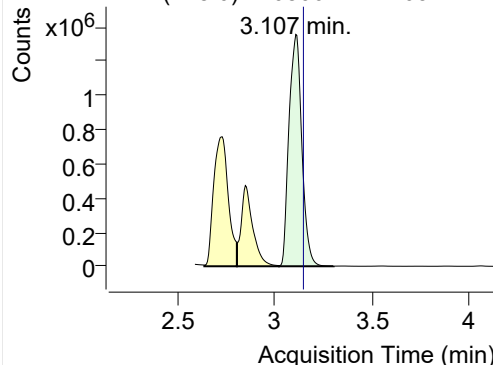


+ SIM (2.939-3.188 min, 46 scans) (\*\*) 220806

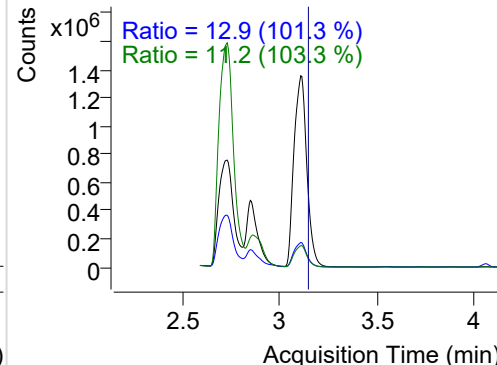


**Naphthalene**

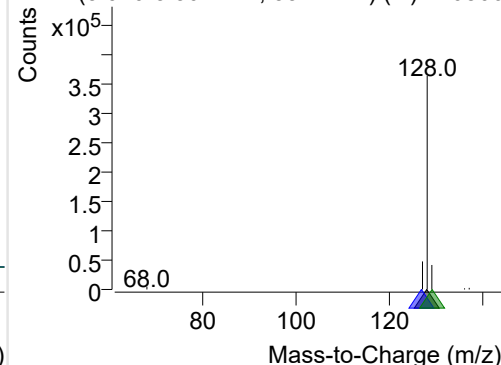
+ Selected Ion (128.0) 220806-PAHs-032.D



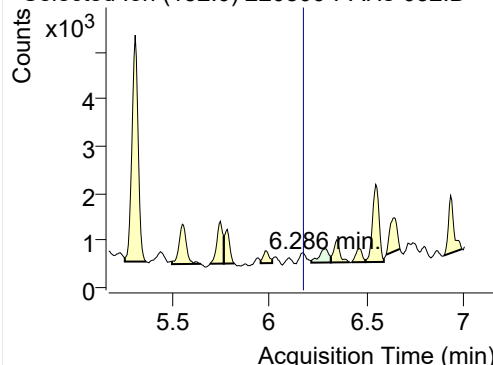
128.0, 127.0, 129.0



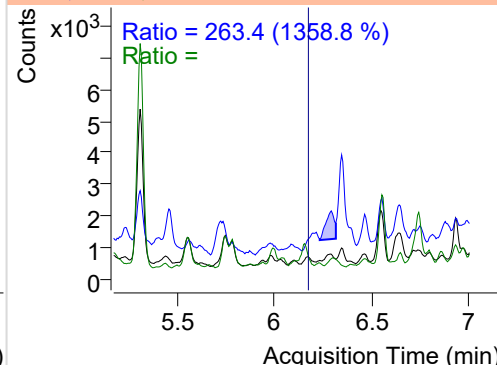
+ SIM (3.020-3.302 min, 53 scans) (\*\*) 220806

**Acenaphthylene**

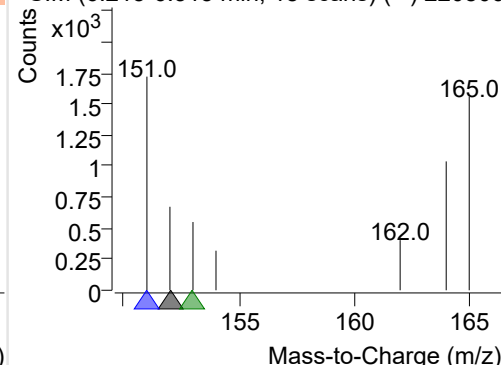
+ Selected Ion (152.0) 220806-PAHs-032.D



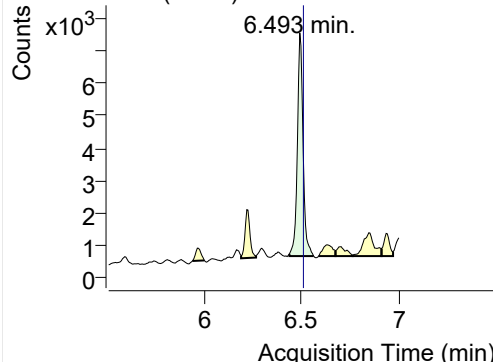
152.0, 151.0, 153.0



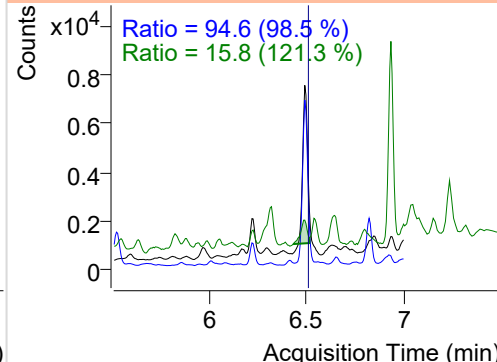
+ SIM (6.215-6.315 min, 18 scans) (\*\*) 220806

**IS-D10-Acenaphthene**

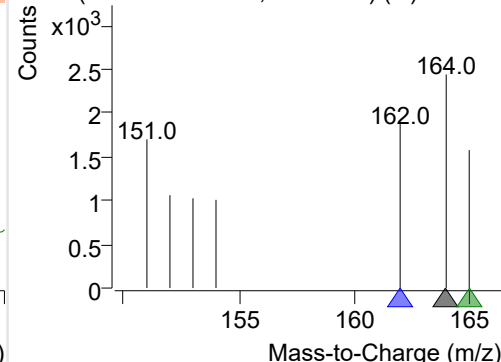
+ Selected Ion (164.0) 220806-PAHs-032.D



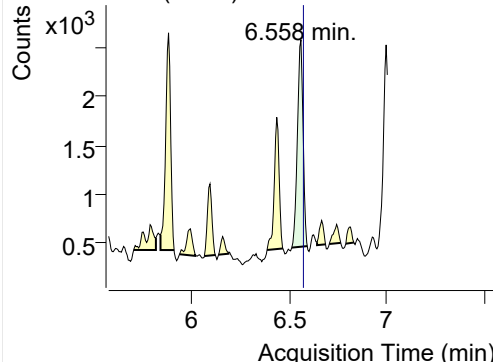
164.0, 162.0, 165.0



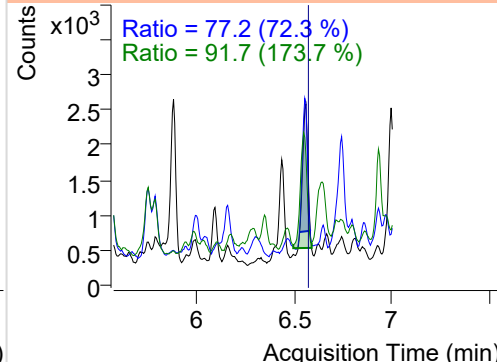
+ SIM (6.439-6.564 min, 22 scans) (\*\*) 220806

**Acenaphthene**

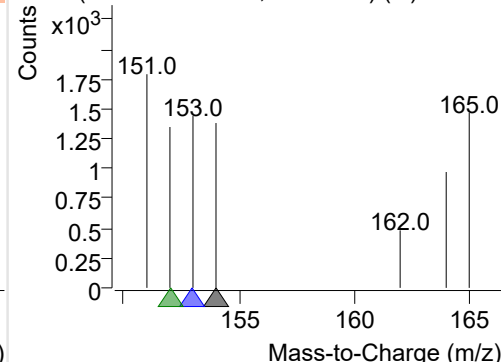
+ Selected Ion (154.0) 220806-PAHs-032.D



154.0, 153.0, 152.0

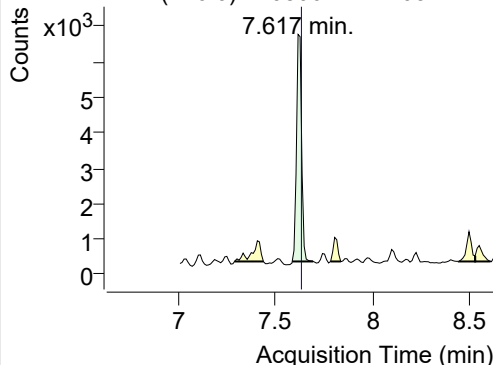


+ SIM (6.511-6.590 min, 13 scans) (\*\*) 220806

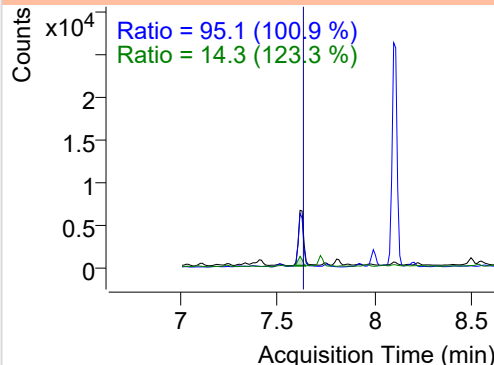


## LSS-D10-Fluorene

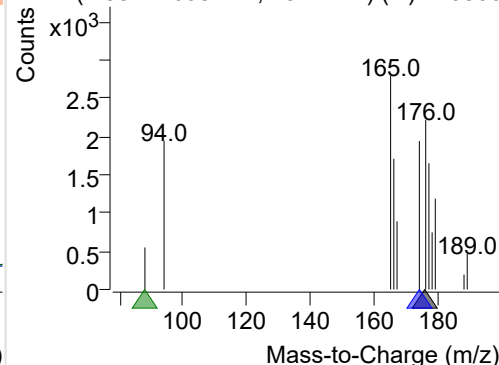
+ Selected Ion (176.0) 220806-PAHs-032.D



176.0, 174.0, 88.0

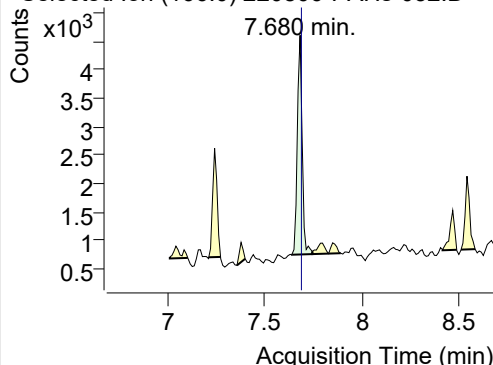


+ SIM (7.587-7.695 min, 10 scans) (\*\*) 220806

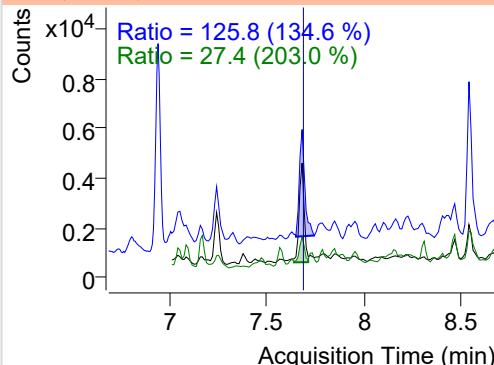


## Fluorene

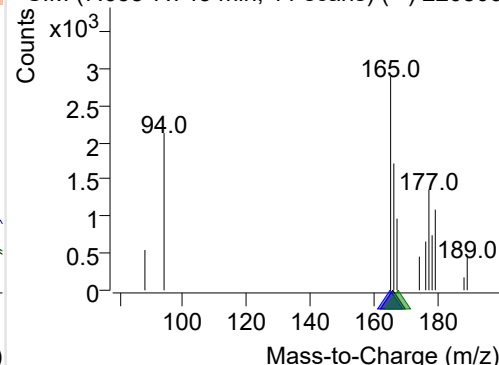
+ Selected Ion (166.0) 220806-PAHs-032.D



166.0, 165.0, 167.0

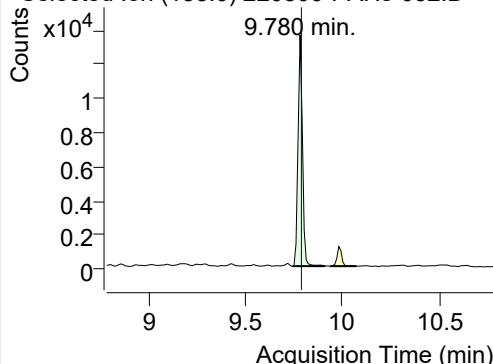


+ SIM (7.638-7.743 min, 11 scans) (\*\*) 220806

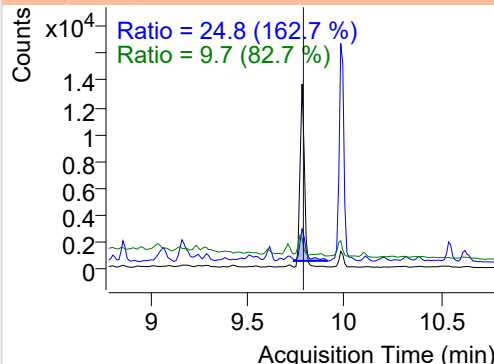


## IS-D10-Phenanthrene

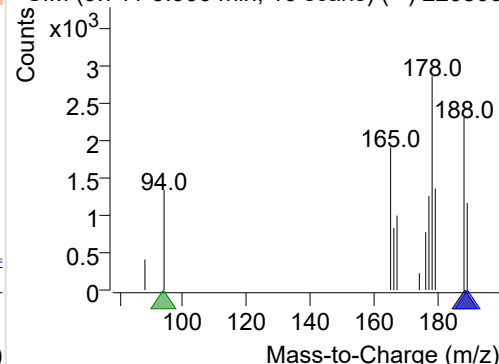
+ Selected Ion (188.0) 220806-PAHs-032.D



188.0, 189.0, 94.0

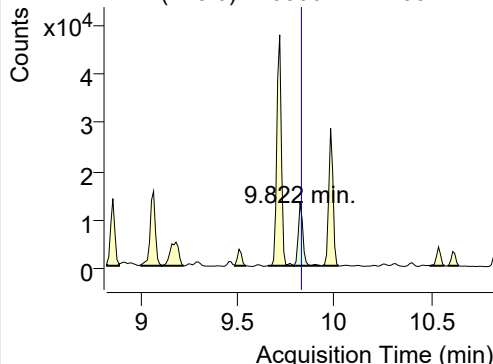


+ SIM (9.741-9.906 min, 16 scans) (\*\*) 220806

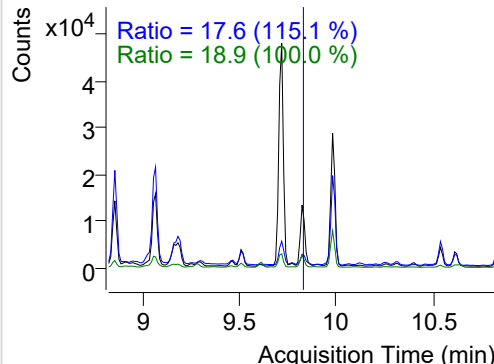


## Phenanthrene

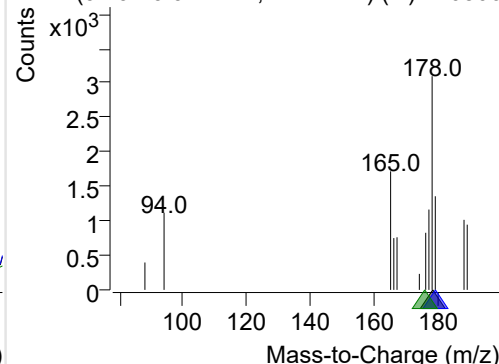
+ Selected Ion (178.0) 220806-PAHs-032.D



178.0, 179.0, 176.0

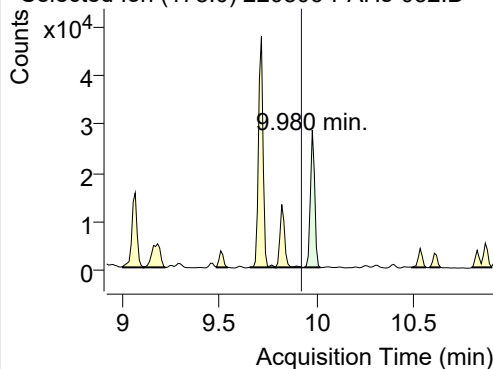


+ SIM (9.791-9.927 min, 14 scans) (\*\*) 220806

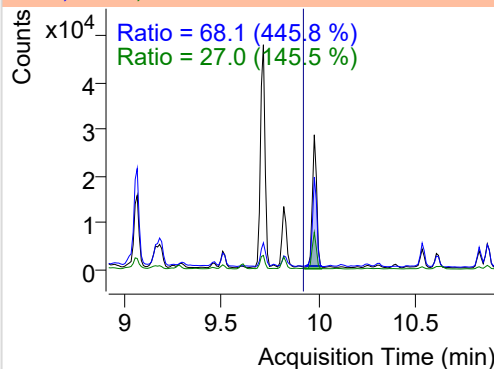


**Anthracene**

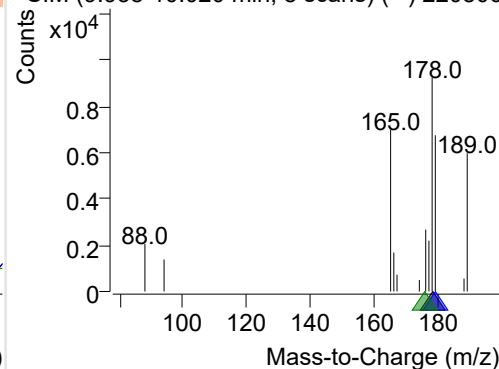
+ Selected Ion (178.0) 220806-PAHs-032.D



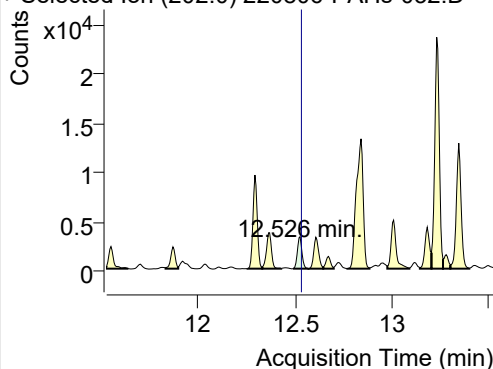
178.0, 179.0, 176.0



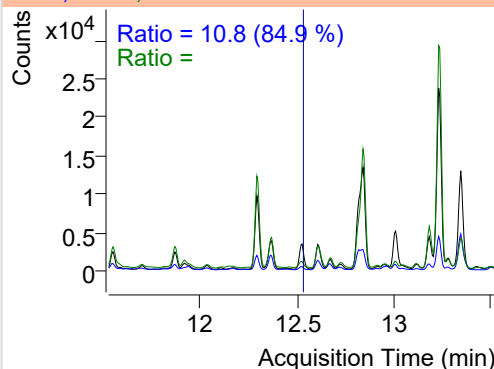
+ SIM (9.938-10.020 min, 8 scans) (\*\*) 220806

**Fluoranthene**

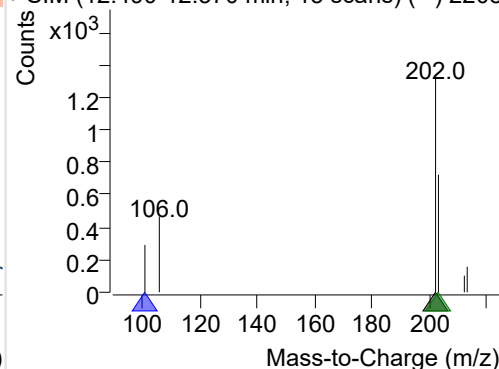
+ Selected Ion (202.0) 220806-PAHs-032.D



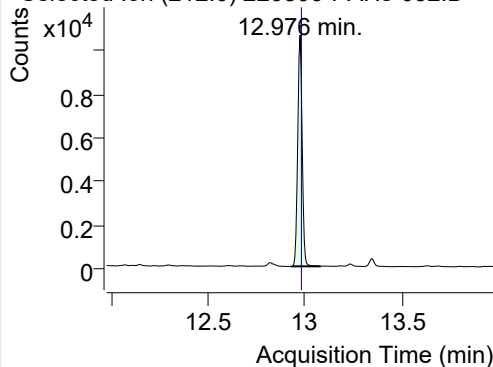
202.0, 101.0, 203.0



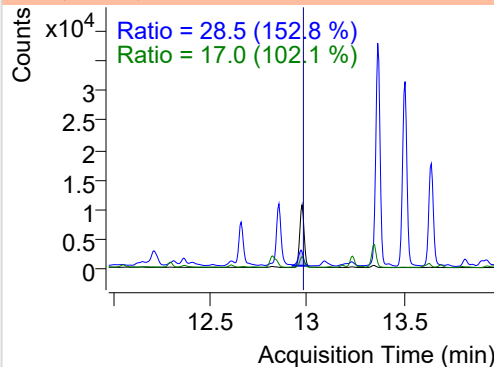
+ SIM (12.490-12.570 min, 15 scans) (\*\*) 2208

**LSS-D10-Pyrene**

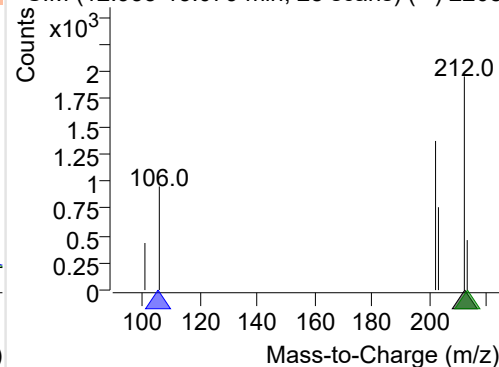
+ Selected Ion (212.0) 220806-PAHs-032.D



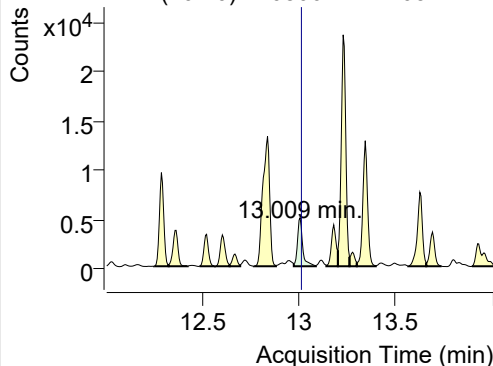
212.0, 106.0, 213.0



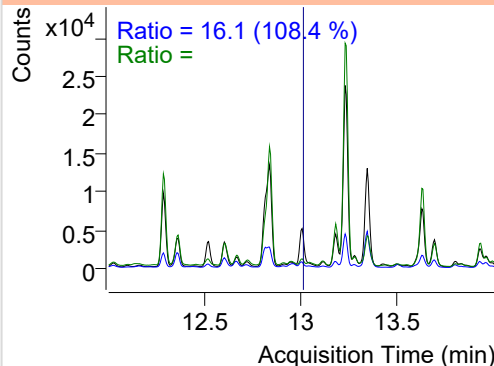
+ SIM (12.933-13.079 min, 28 scans) (\*\*) 2208

**Pyrene**

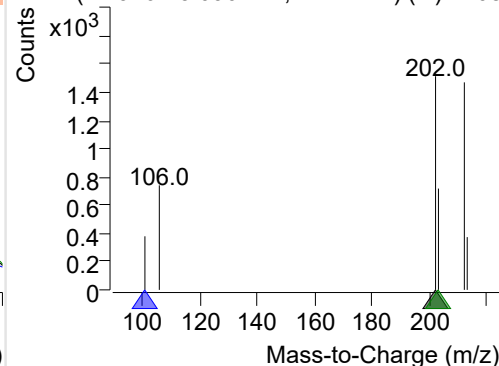
+ Selected Ion (202.0) 220806-PAHs-032.D



202.0, 101.0, 203.0



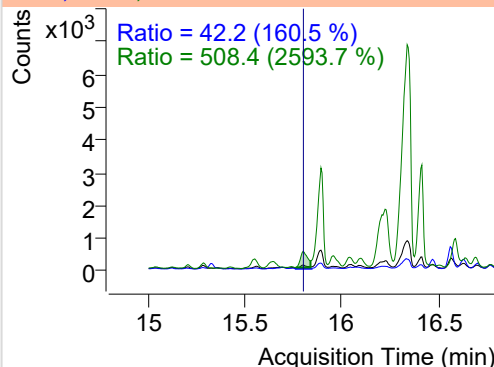
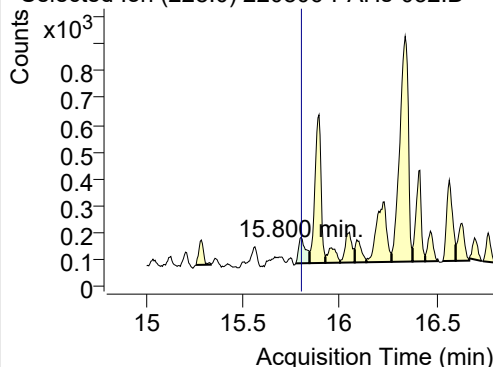
+ SIM (12.976-13.090 min, 22 scans) (\*\*) 2208



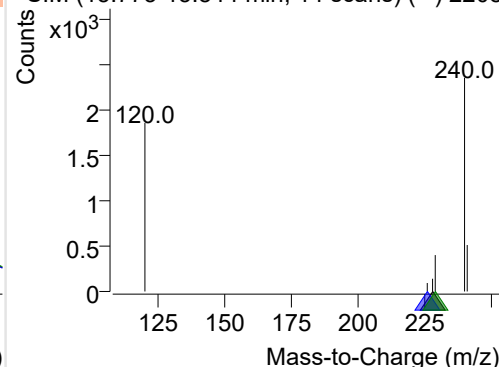
**Benz(a)anthracene**

+ Selected Ion (228.0) 220806-PAHs-032.D

228.0, 226.0, 229.0

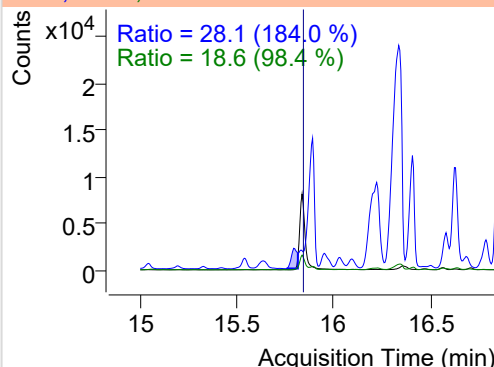
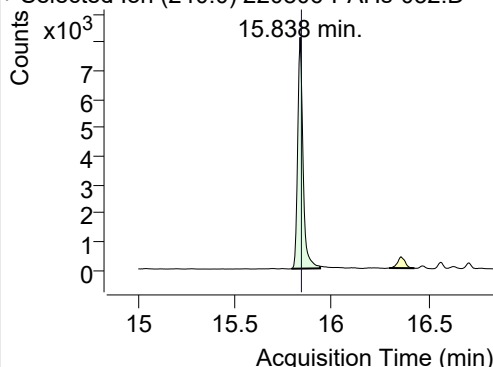


+ SIM (15.773-15.844 min, 14 scans) (\*\*) 2208

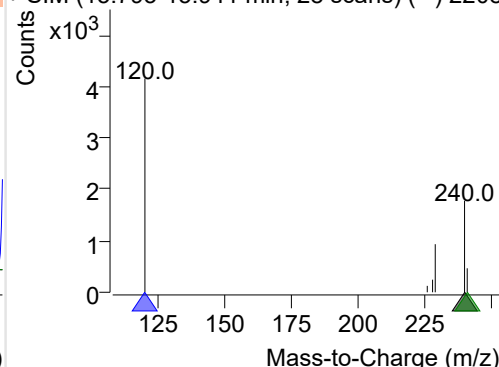
**IS-D12-Chrysene**

+ Selected Ion (240.0) 220806-PAHs-032.D

240.0, 120.0, 241.0

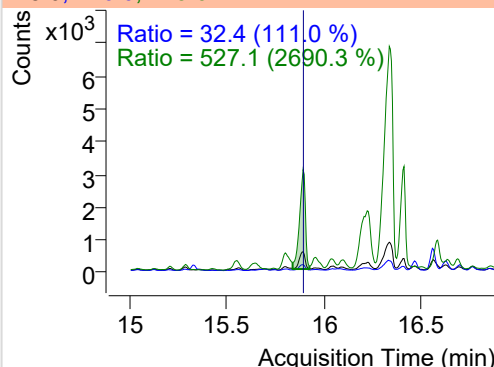
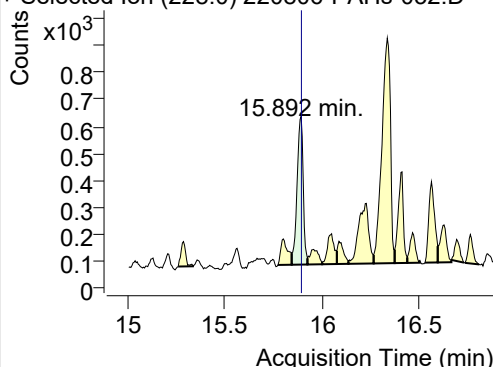


+ SIM (15.793-15.941 min, 28 scans) (\*\*) 2208

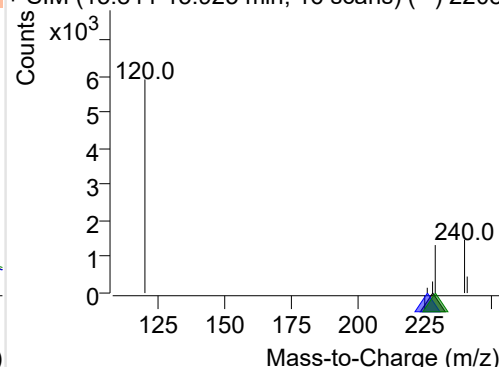
**Chrysene**

+ Selected Ion (228.0) 220806-PAHs-032.D

228.0, 226.0, 229.0

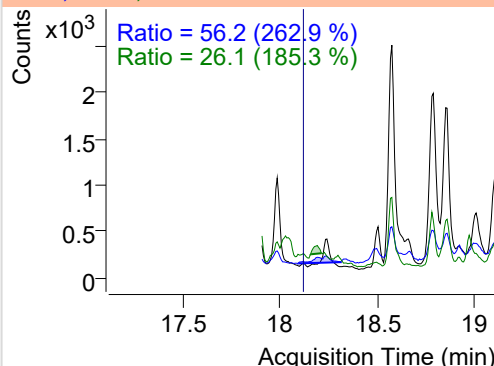
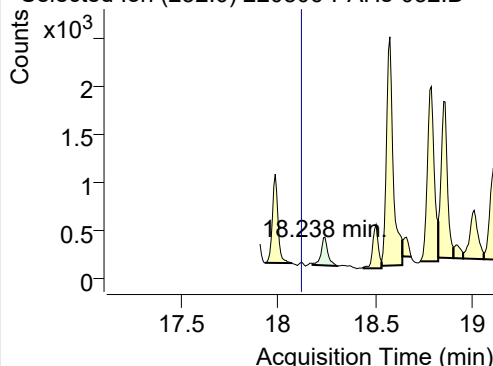


+ SIM (15.844-15.925 min, 16 scans) (\*\*) 2208

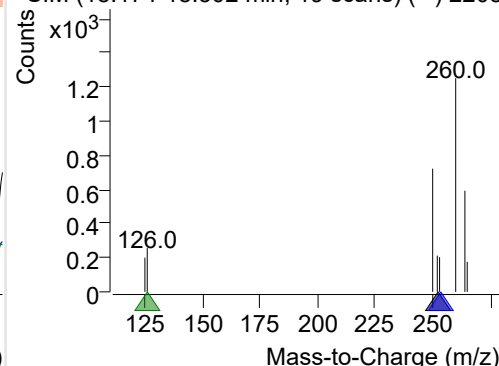
**Benzo(b)fluoranthene**

+ Selected Ion (252.0) 220806-PAHs-032.D

252.0, 253.0, 126.0



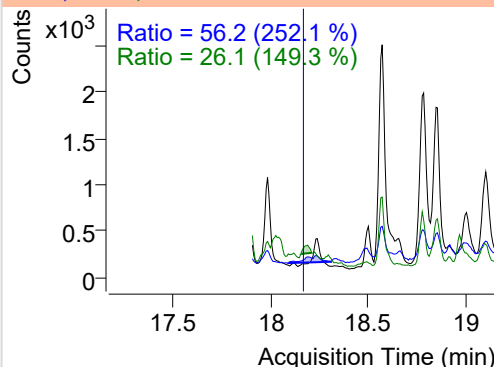
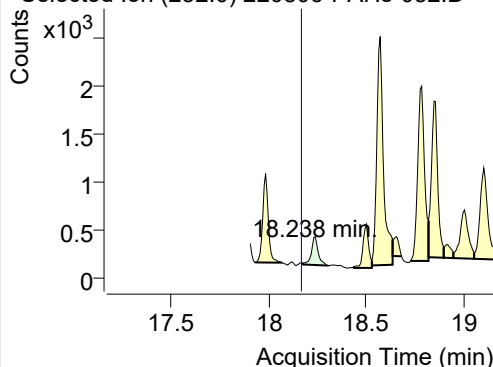
+ SIM (18.174-18.302 min, 19 scans) (\*\*) 2208



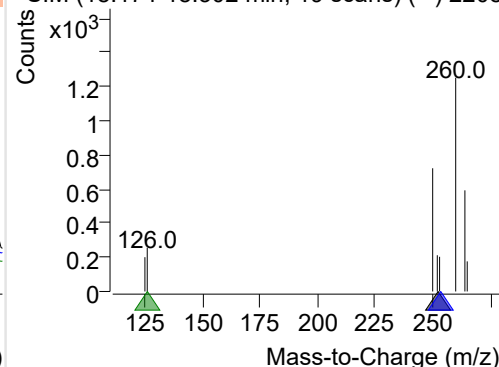
**Benzo(k)fluoranthene**

+ Selected Ion (252.0) 220806-PAHs-032.D

252.0, 253.0, 126.0

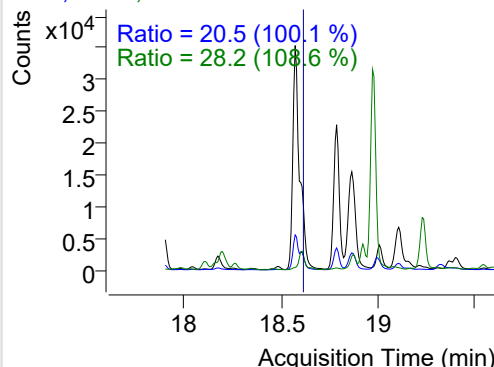
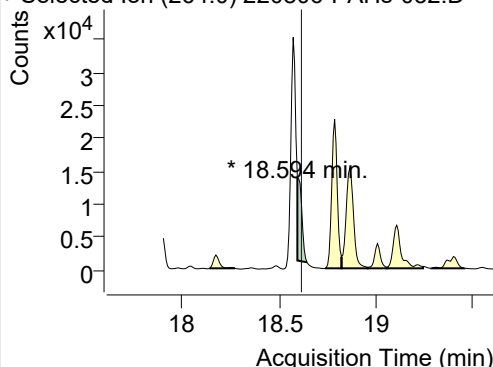


+ SIM (18.174-18.302 min, 19 scans) (\*\*) 2208

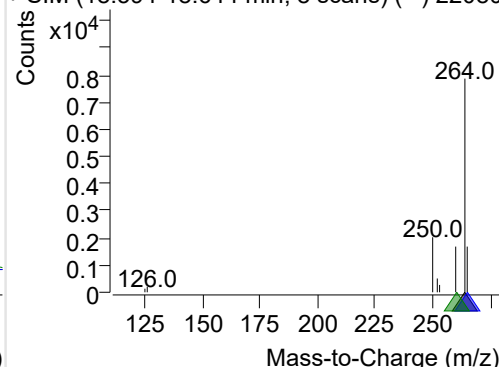
**SS-D12-Benzo(e)pyrene**

+ Selected Ion (264.0) 220806-PAHs-032.D

264.0, 265.0, 260.0

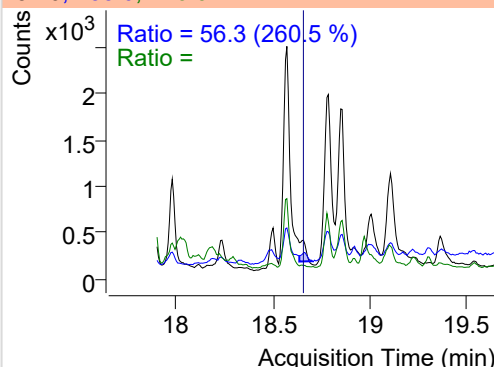
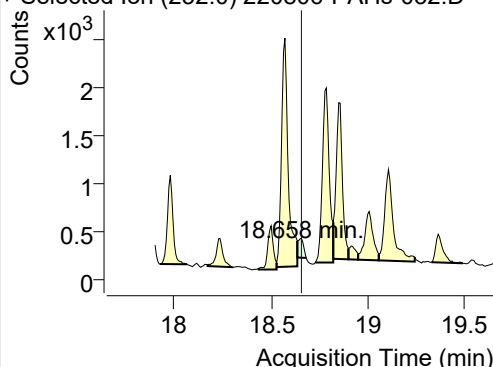


+ SIM (18.594-18.644 min, 8 scans) (\*\*) 22080

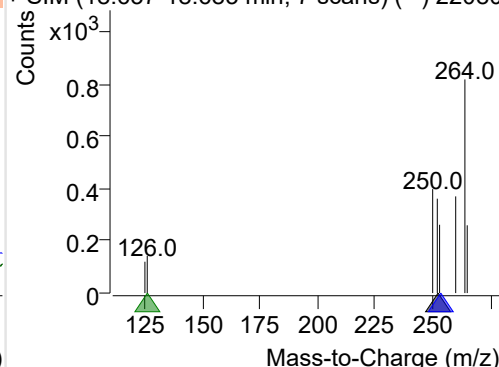
**Benzo(e)pyrene**

+ Selected Ion (252.0) 220806-PAHs-032.D

252.0, 253.0, 126.0

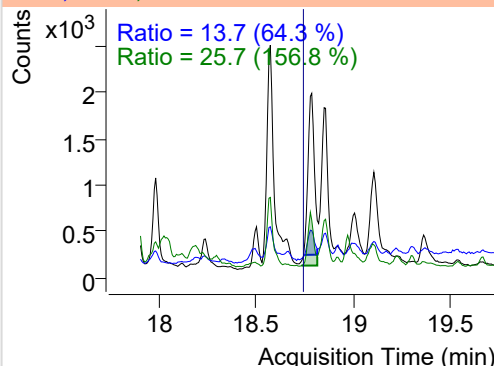
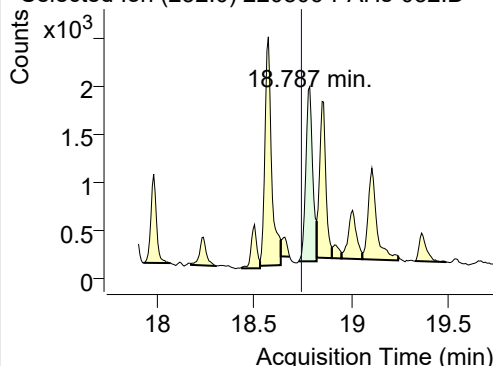


+ SIM (18.637-18.683 min, 7 scans) (\*\*) 22080

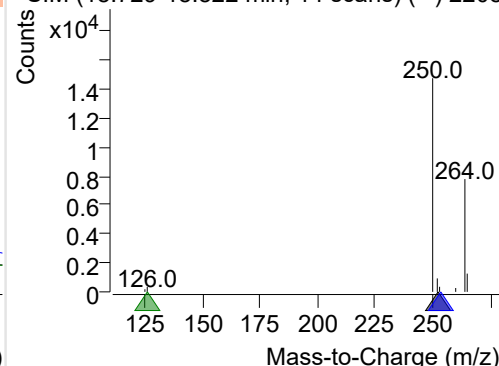
**Benzo(a)pyrene**

+ Selected Ion (252.0) 220806-PAHs-032.D

252.0, 253.0, 126.0

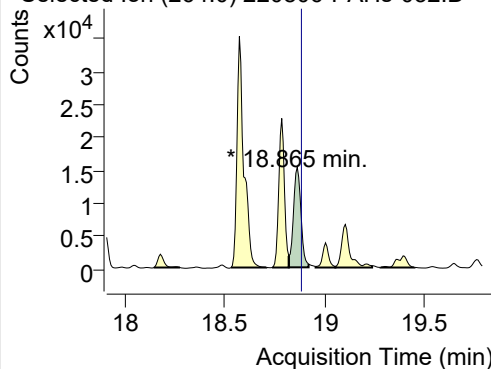


+ SIM (18.729-18.822 min, 14 scans) (\*\*) 2208

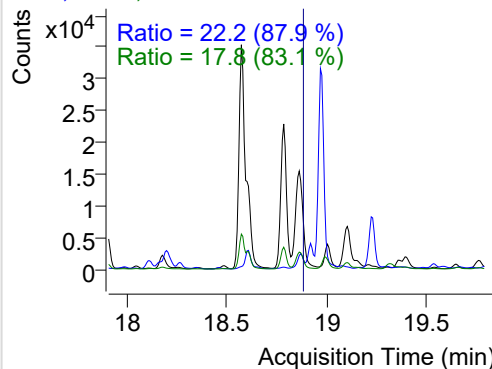


## IS-D12-Perylene

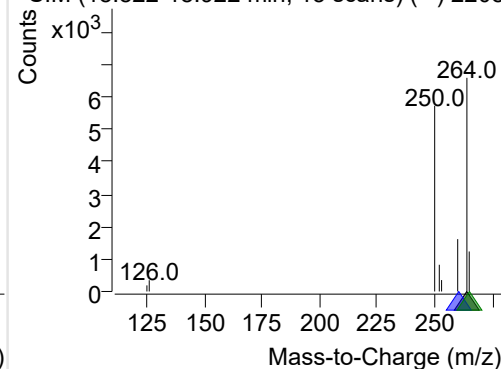
+ Selected Ion (264.0) 220806-PAHs-032.D



264.0, 260.0, 265.0

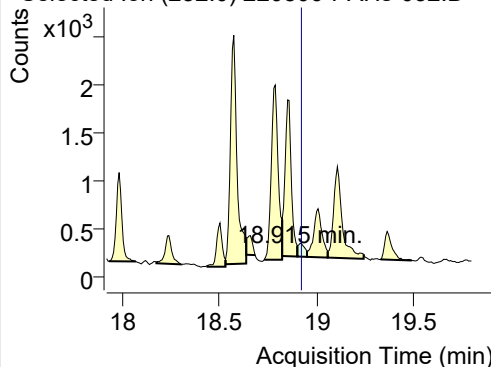


+ SIM (18.822-18.922 min, 15 scans) (\*\*) 2208

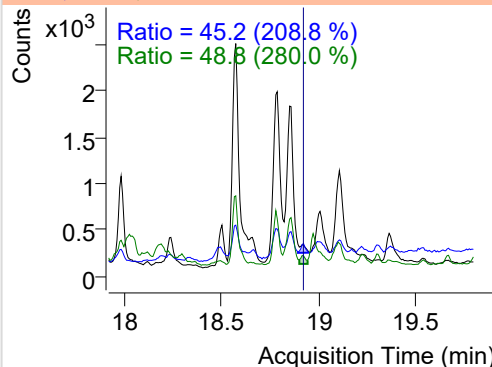


## Perylene

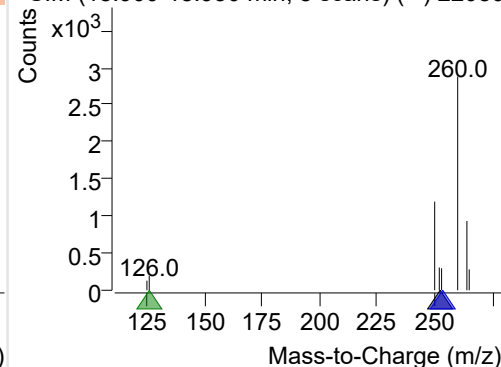
+ Selected Ion (252.0) 220806-PAHs-032.D



252.0, 253.0, 126.0

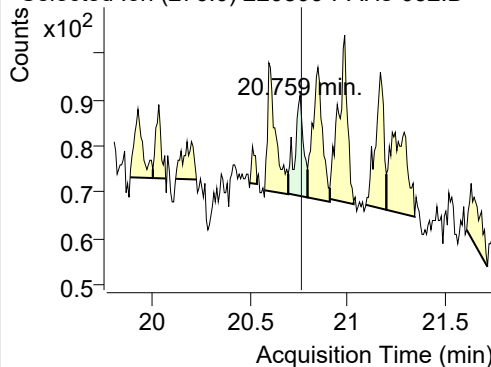


+ SIM (18.900-18.950 min, 8 scans) (\*\*) 22080

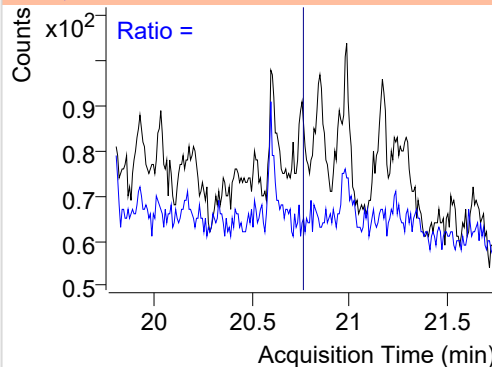


## Indeno(1,2,3-c,d)pyrene

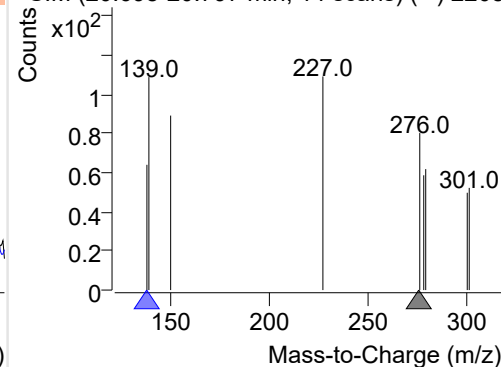
+ Selected Ion (276.0) 220806-PAHs-032.D



276.0, 138.0

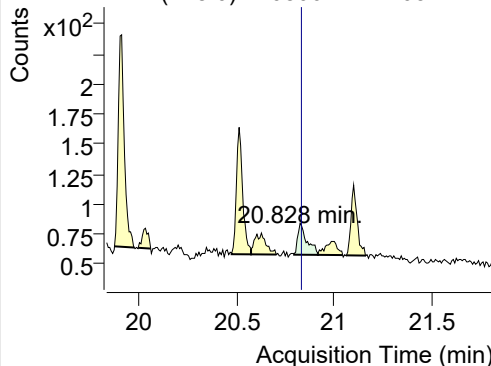


+ SIM (20.698-20.797 min, 14 scans) (\*\*) 2208

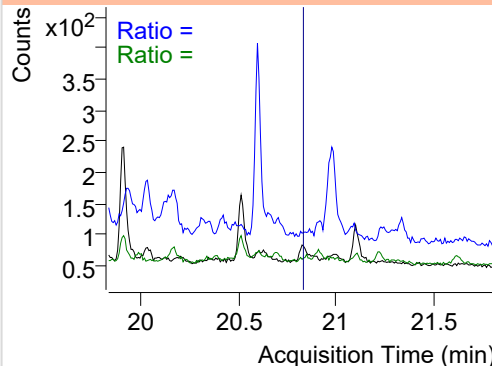


## Dibenz(a,h)anthracene

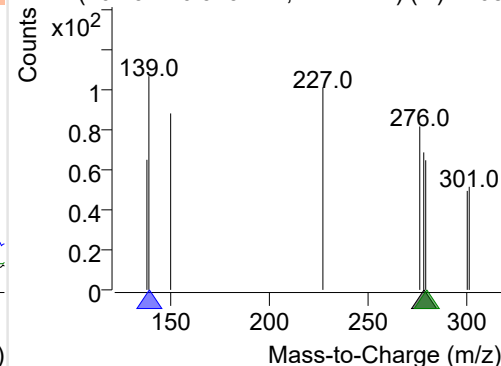
+ Selected Ion (278.0) 220806-PAHs-032.D



278.0, 139.0, 279.0



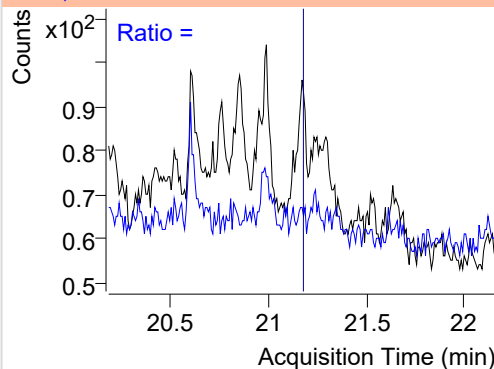
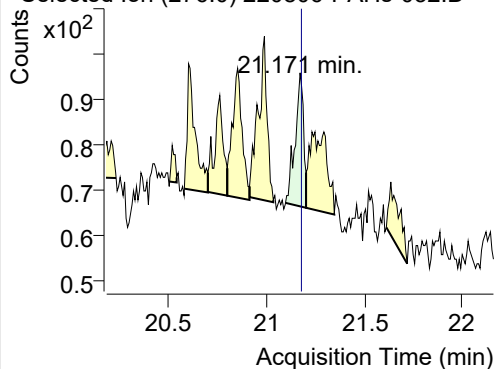
+ SIM (20.797-20.919 min, 17 scans) (\*\*) 2208



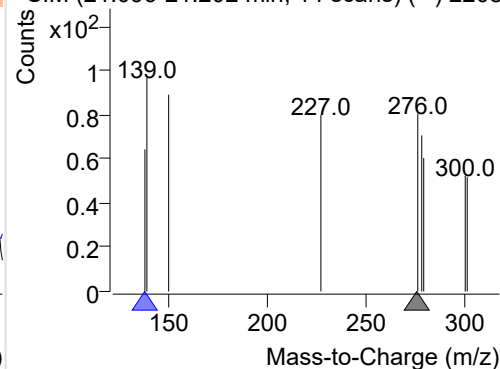
**Benzo(g,h,i)perylene**

+ Selected Ion (276.0) 220806-PAHs-032.D

276.0, 138.0

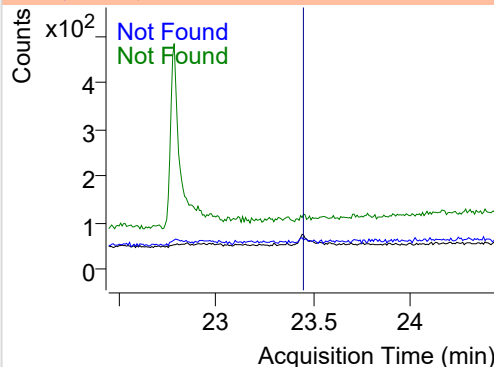
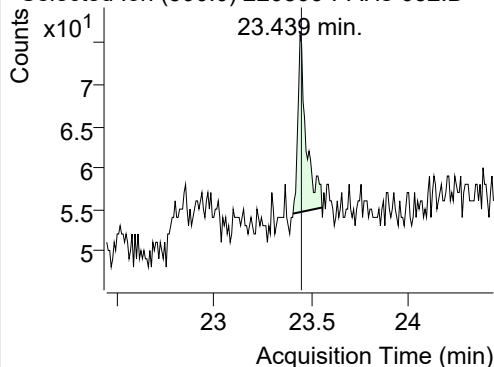


+ SIM (21.096-21.202 min, 14 scans) (\*\*) 2208

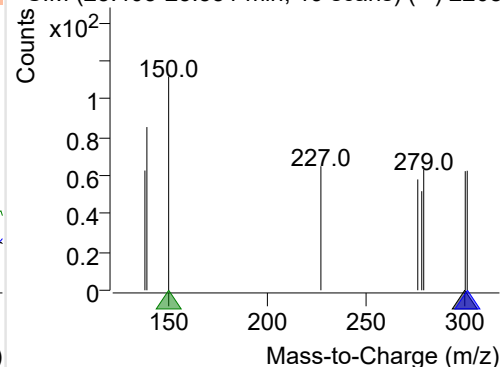
**Coronene**

+ Selected Ion (300.0) 220806-PAHs-032.D

300.0, 301.0, 150.0



+ SIM (23.403-23.551 min, 19 scans) (\*\*) 2208





## Quantitative Analysis Sample Based Report

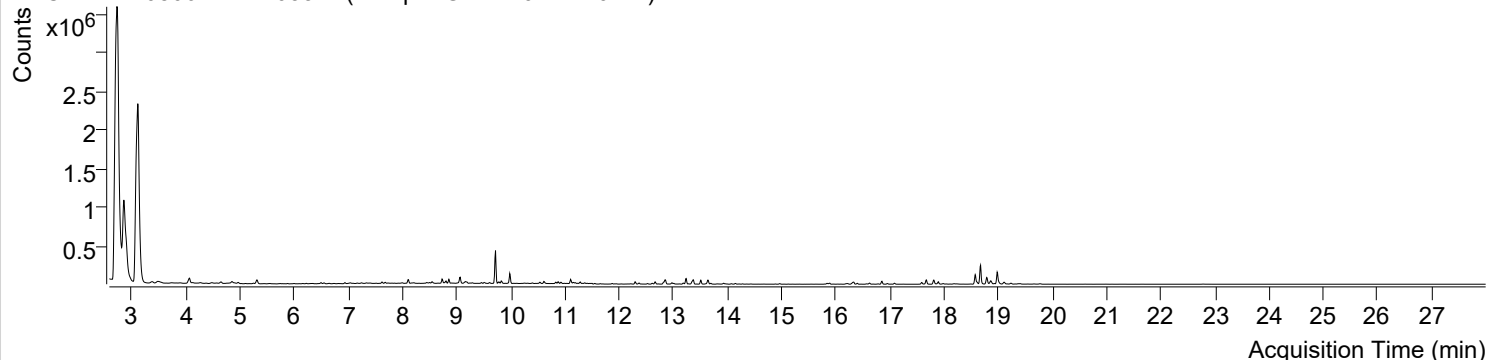


Trusted Answers

|                           |                                                                                            |                       |                         |
|---------------------------|--------------------------------------------------------------------------------------------|-----------------------|-------------------------|
| Batch Data Path File Name | D:\MassHunter\GCMS\1\data\PAHs\220806-PAHs-Sample\QuantResults\220806-PAHs-Quant.batch.bin |                       |                         |
| Analysis Time Stamp       | 2022-10-10 오전 10:12:04                                                                     | Analyst Name          | DESKTOP-86B7UPG\5975MS  |
| Report Generation Time    | 2022-10-10 오전 10:12:12                                                                     | Report Generator Name | DESKTOP-86B7UPG\5975MS  |
| Calibration Last Update   | 2022-12-15 오후 3:30:46                                                                      | Batch State           | Processed               |
| Analyze Quant Version     | 10.2                                                                                       | Report Quant Version  | 10.2                    |
| Acq. Date-Time            | 2022-08-07 오전 3:06:20                                                                      | Data File             | 220806-PAHs-033.D       |
| Type                      | Sample                                                                                     | Name                  | Sample-Gas-220722-10DIL |
| Dil.                      | 1                                                                                          | Acq. Method File      | PAHs 19mix-Method       |

## Sample Chromatogram

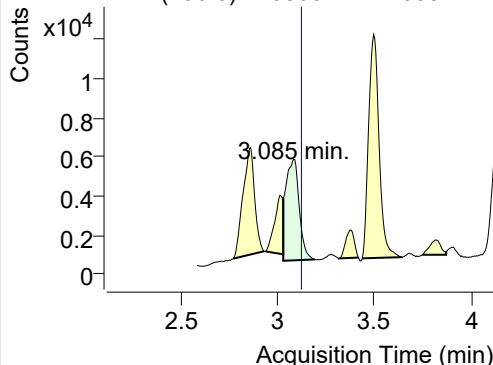
+ TIC SIM 220806-PAHs-033.D (Sample-Gas-220722-10DIL)



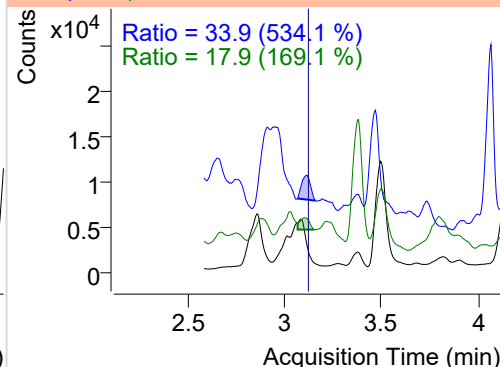
| Name                    | RT     | Transition | Resp.   | Height     | Final Conc. Units | Ratio |
|-------------------------|--------|------------|---------|------------|-------------------|-------|
| IS-D8-Naphthalene       | 3.085  | 136.0      | 24734   | 5184.49    | ND ng/ml          | 17.9  |
| Naphthalene             | 3.112  | 128.0      | 8117575 | 1869416.08 | ND ng/ml          | 12.9  |
| Acenaphthylene          | 6.285  | 152.0      | 988     | 335.23     | ND ng/ml          |       |
| IS-D10-Acenaphthene     | 6.498  | 164.0      | 14640   | 6651.71    | ND ng/ml          | 89.8  |
| Acenaphthene            | 6.558  | 154.0      | 5819    | 2880.81    | ND ng/ml          | 97.3  |
| LSS-D10-Fluorene        | 7.627  | 176.0      | 11774   | 6759.91    | ND ng/ml          | 95.6  |
| Fluorene                | 7.680  | 166.0      | 9364    | 5702.70    | ND ng/ml          | 130.3 |
| IS-D10-Phenanthrene     | 9.780  | 188.0      | 20254   | 13586.09   | ND ng/ml          | 25.2  |
| Phenanthrene            | 9.822  | 178.0      | 31971   | 19313.29   | ND ng/ml          | 21.0  |
| Anthracene              | 9.979  | 178.0      | 52697   | 34009.29   | ND ng/ml          | 27.3  |
| Fluoranthene            | 12.526 | 202.0      | 7971    | 4950.33    | ND ng/ml          |       |
| LSS-D10-Pyrene          | 12.976 | 212.0      | 17248   | 10822.53   | ND ng/ml          | 33.8  |
| Pyrene                  | 13.009 | 202.0      | 13323   | 7359.33    | ND ng/ml          |       |
| Benz(a)anthracene       | 15.800 | 228.0      | 144     | 76.50      | ND ng/ml          |       |
| IS-D12-Chrysene         | 15.838 | 240.0      | 15239   | 7791.75    | ND ng/ml          | 18.2  |
| Chrysene                | 15.881 | 228.0      | 949     | 461.95     | ND ng/ml          | 30.8  |
| Benzo(b)fluoranthene    | 18.672 | 252.0      | 376652  | 204958.31  | ND ng/ml          | 19.0  |
| Benzo(k)fluoranthene    | 18.672 | 252.0      | 376652  | 204958.31  | ND ng/ml          | 19.0  |
| SS-D12-Benzo(e)pyrene   | 18.601 | 264.0      | 19394   | 16173.46   | ND ng/ml          | 26.0  |
| Benzo(e)pyrene          | 18.672 | 252.0      | 376652  | 204958.31  | ND ng/ml          | 19.0  |
| Benzo(a)pyrene          | 18.672 | 252.0      | 376652  | 204958.31  | ND ng/ml          | 19.0  |
| IS-D12-Perylene         | 18.865 | 264.0      | 44057   | 18849.95   | ND ng/ml          | 22.7  |
| Perylene                | 18.979 | 252.0      | 166855  | 89183.74   | ND ng/ml          | 18.9  |
| Indeno(1,2,3-c,d)pyrene | 20.751 | 276.0      | 49      | 12.93      | ND ng/ml          |       |
| Dibenz(a,h)anthracene   | 20.828 | 278.0      | 67      | 22.73      | ND ng/ml          |       |
| Benzo(g,h,i)perylene    | 21.163 | 276.0      | 63      | 18.82      | ND ng/ml          | 33.0  |
| Coronene                | 23.446 | 300.0      | 33      | 11.82      | ND ng/ml          |       |

## IS-D8-Naphthalene

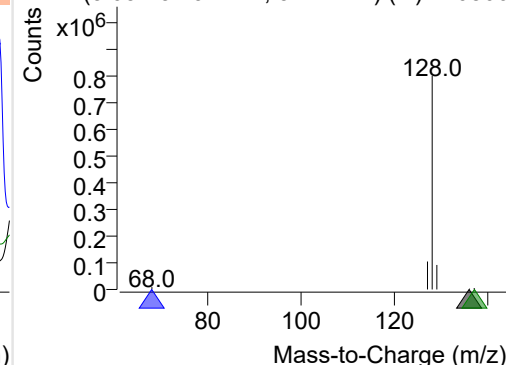
+ Selected Ion (136.0) 220806-PAHs-033.D



136.0, 68.0, 137.0

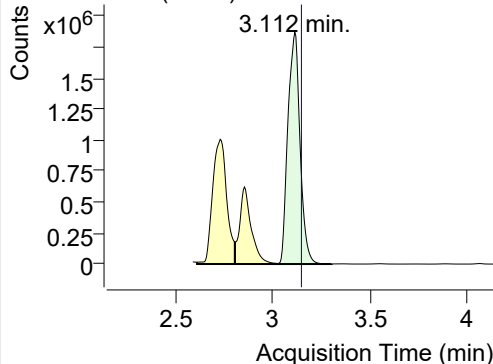
Ratio = 33.9 (534.1 %)  
Ratio = 17.9 (169.1 %)

+ SIM (3.031-3.194 min, 31 scans) (\*\*) 220806

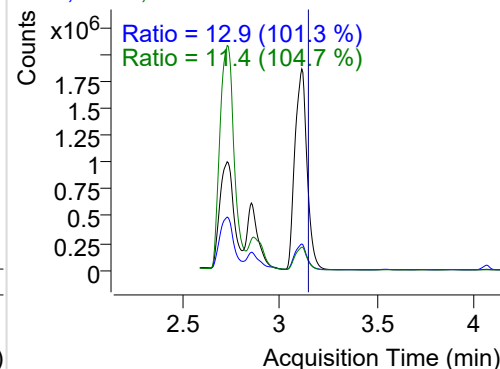


## Naphthalene

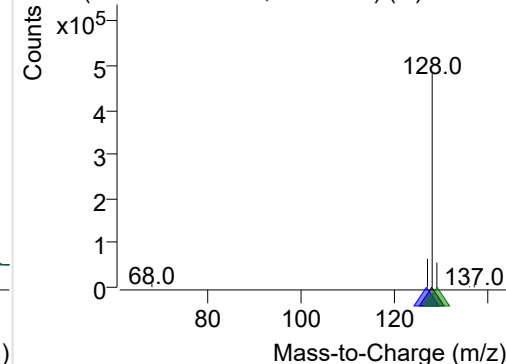
+ Selected Ion (128.0) 220806-PAHs-033.D



128.0, 127.0, 129.0

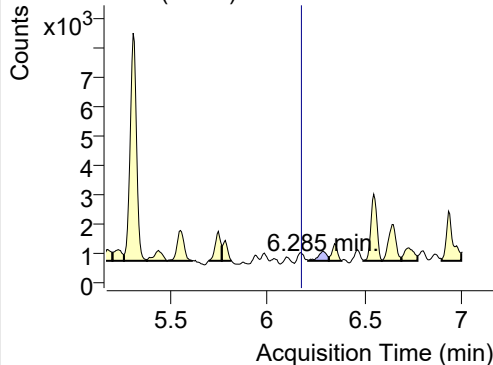
Ratio = 12.9 (101.3 %)  
Ratio = 11.4 (104.7 %)

+ SIM (3.025-3.302 min, 52 scans) (\*\*) 220806

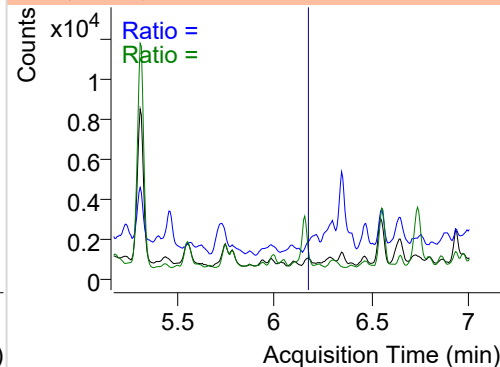


## Acenaphthylene

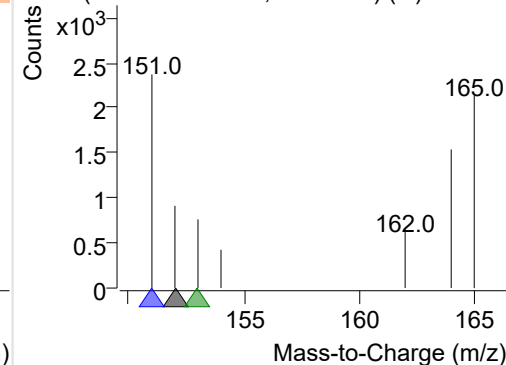
+ Selected Ion (152.0) 220806-PAHs-033.D



152.0, 151.0, 153.0

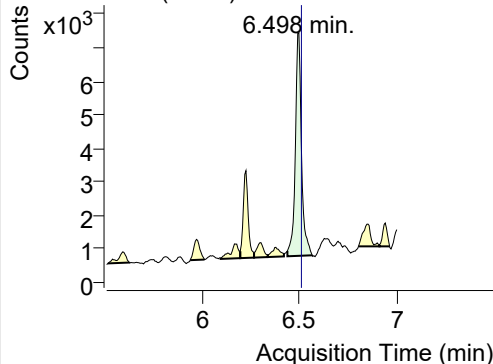
Ratio =  
Ratio =

+ SIM (6.208-6.315 min, 19 scans) (\*\*) 220806

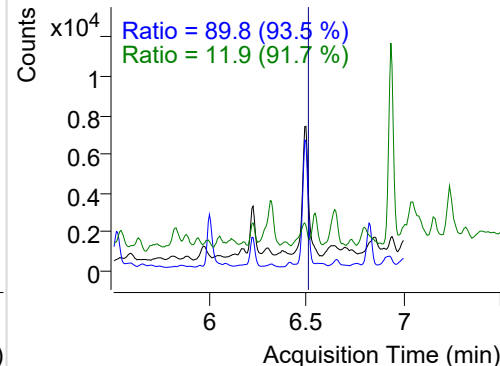


## IS-D10-Acenaphthene

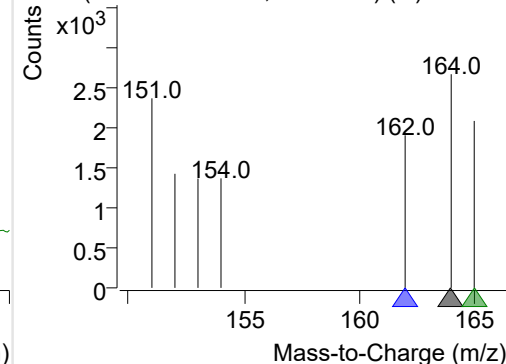
+ Selected Ion (164.0) 220806-PAHs-033.D



164.0, 162.0, 165.0

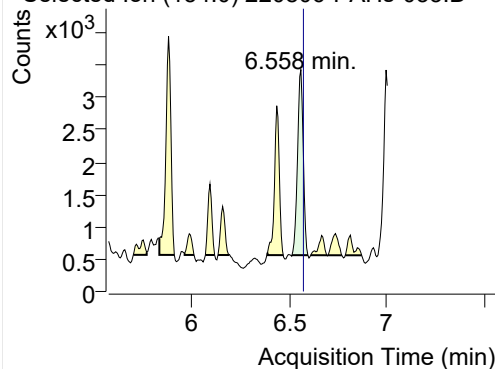
Ratio = 89.8 (93.5 %)  
Ratio = 11.9 (91.7 %)

+ SIM (6.439-6.567 min, 22 scans) (\*\*) 220806

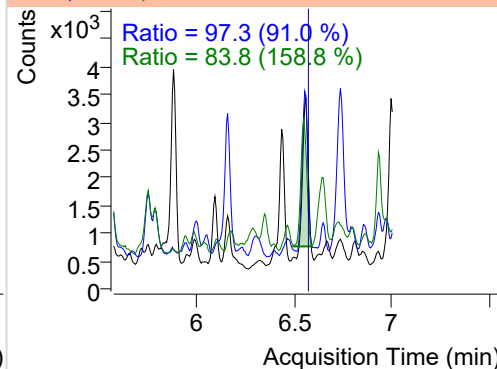


**Acenaphthene**

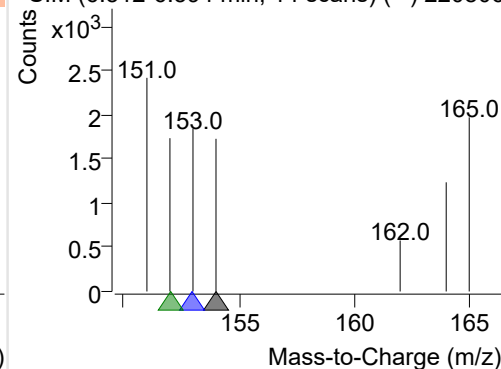
+ Selected Ion (154.0) 220806-PAHs-033.D



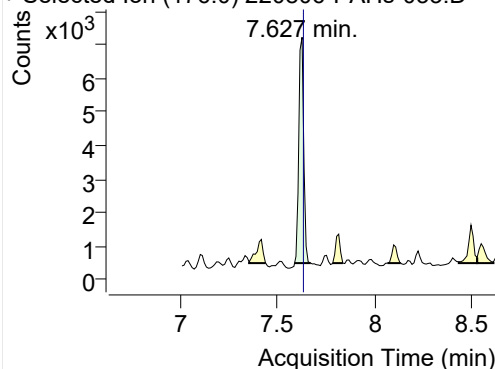
154.0, 153.0, 152.0



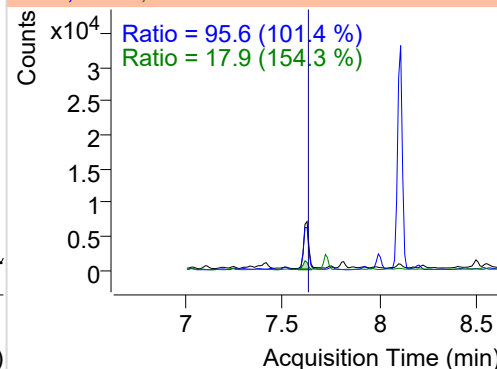
+ SIM (6.512-6.594 min, 14 scans) (\*\*) 220806

**LSS-D10-Fluorene**

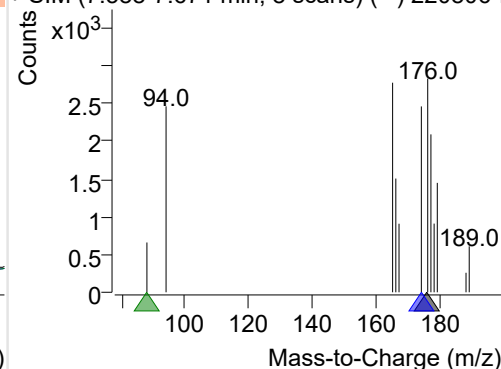
+ Selected Ion (176.0) 220806-PAHs-033.D



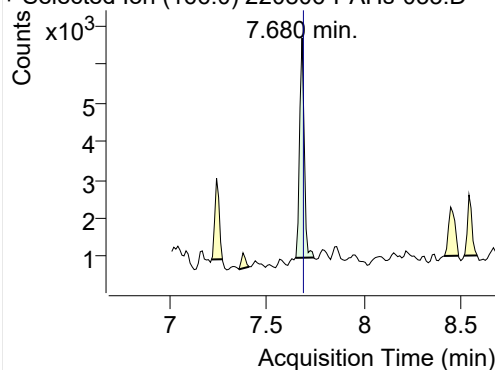
176.0, 174.0, 88.0



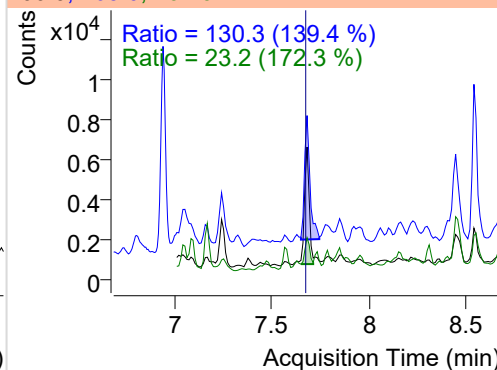
+ SIM (7.588-7.671 min, 8 scans) (\*\*) 220806-I

**Fluorene**

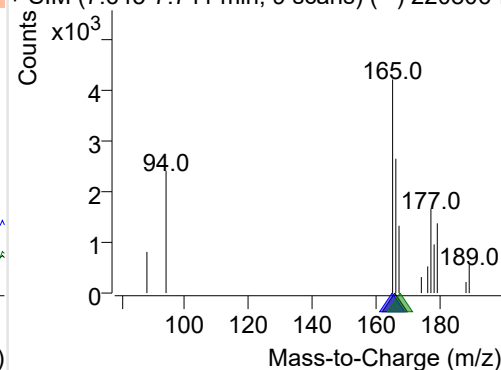
+ Selected Ion (166.0) 220806-PAHs-033.D



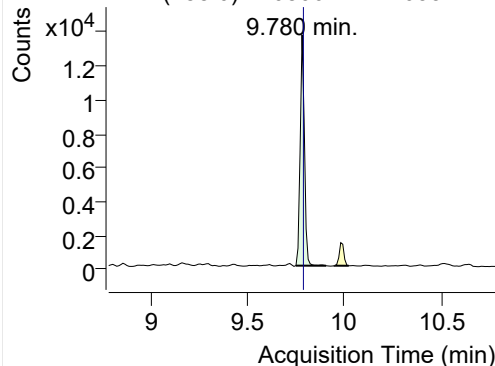
166.0, 165.0, 167.0



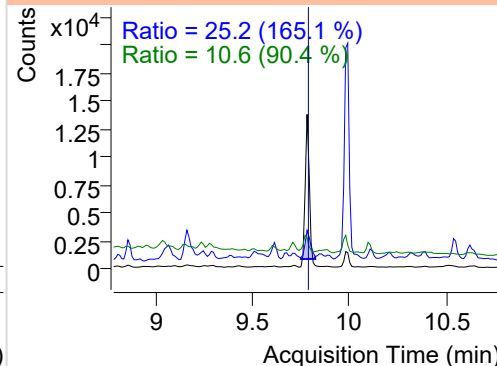
+ SIM (7.645-7.741 min, 9 scans) (\*\*) 220806-I

**IS-D10-Phenanthrene**

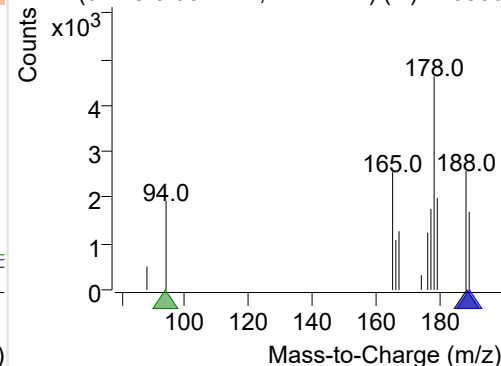
+ Selected Ion (188.0) 220806-PAHs-033.D



188.0, 189.0, 94.0

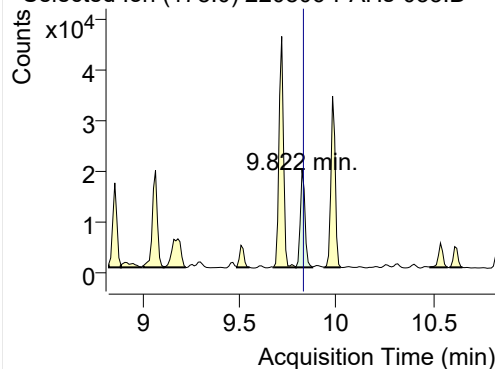


+ SIM (9.748-9.904 min, 14 scans) (\*\*) 220806

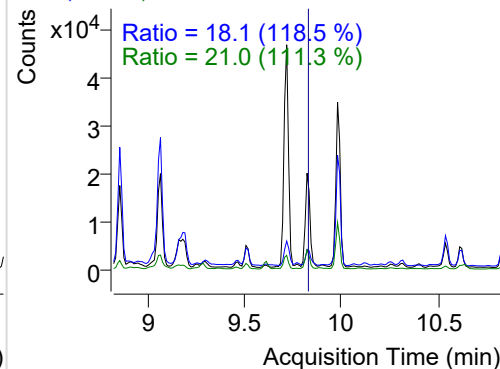


**Phenanthrene**

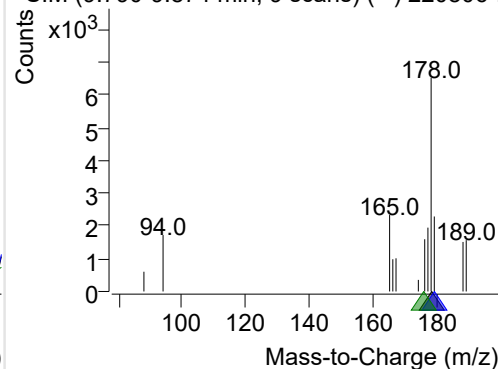
+ Selected Ion (178.0) 220806-PAHs-033.D



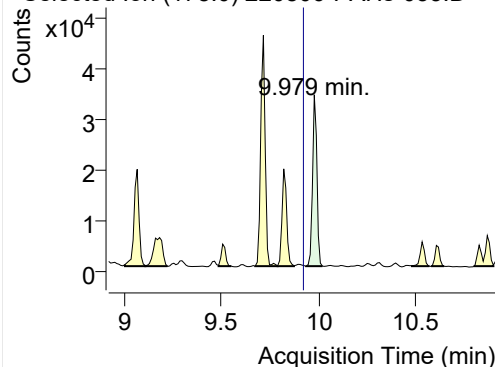
178.0, 179.0, 176.0



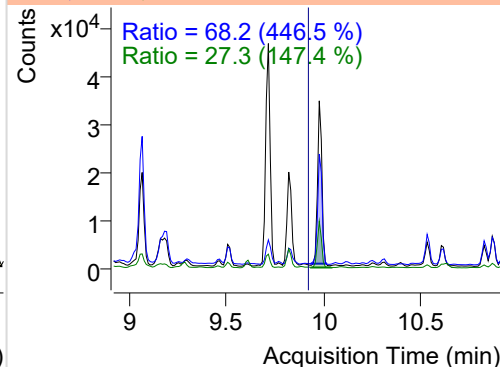
+ SIM (9.790-9.874 min, 9 scans) (\*\*) 220806-I

**Anthracene**

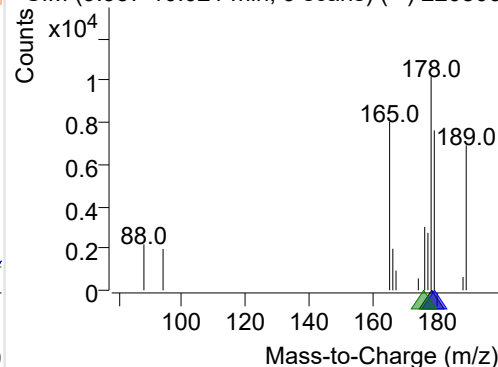
+ Selected Ion (178.0) 220806-PAHs-033.D



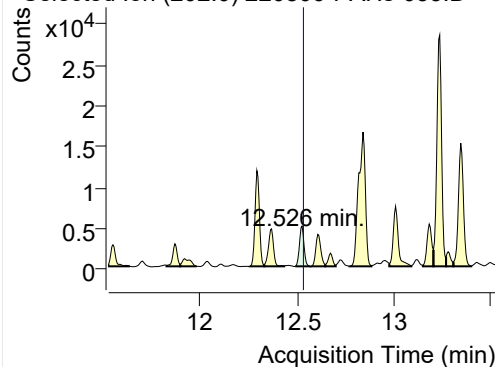
178.0, 179.0, 176.0



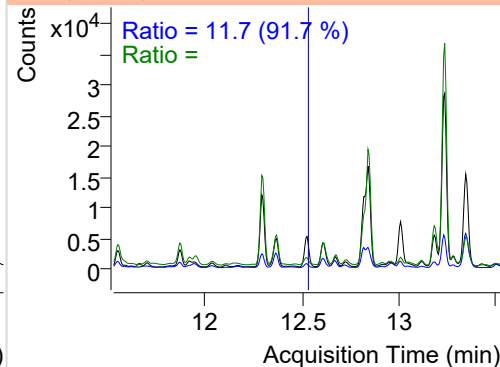
+ SIM (9.937-10.021 min, 9 scans) (\*\*) 220806

**Fluoranthene**

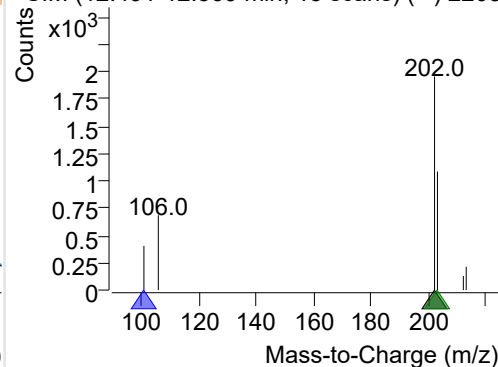
+ Selected Ion (202.0) 220806-PAHs-033.D



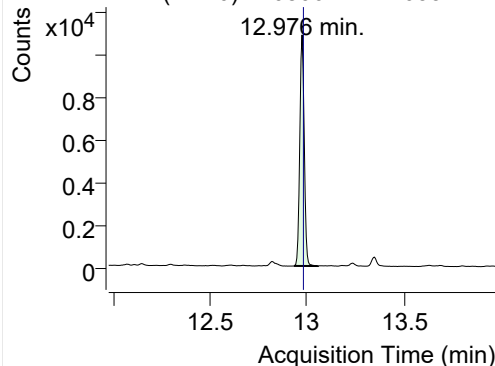
202.0, 101.0, 203.0



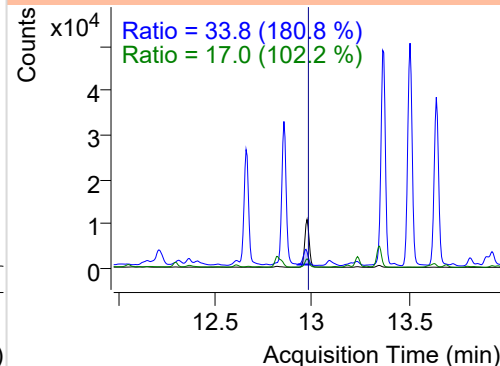
+ SIM (12.491-12.569 min, 15 scans) (\*\*) 2208

**LSS-D10-Pyrene**

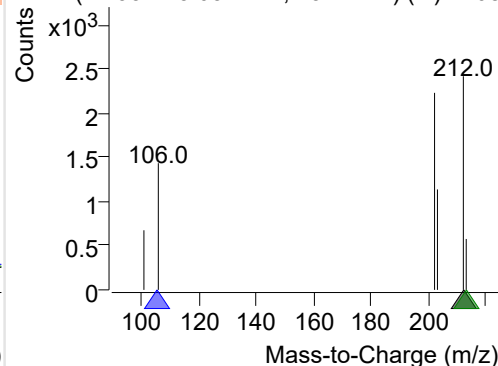
+ Selected Ion (212.0) 220806-PAHs-033.D



212.0, 106.0, 213.0

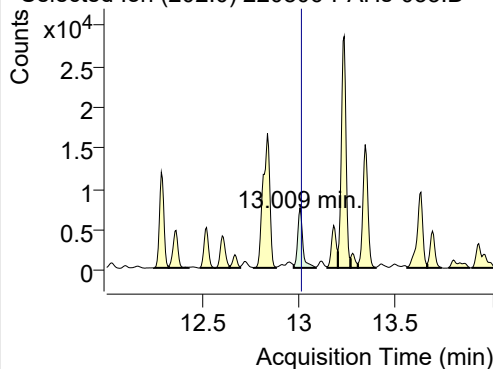


+ SIM (12.934-13.057 min, 23 scans) (\*\*) 2208

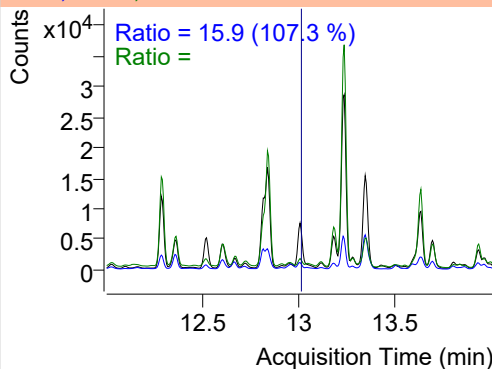


**Pyrene**

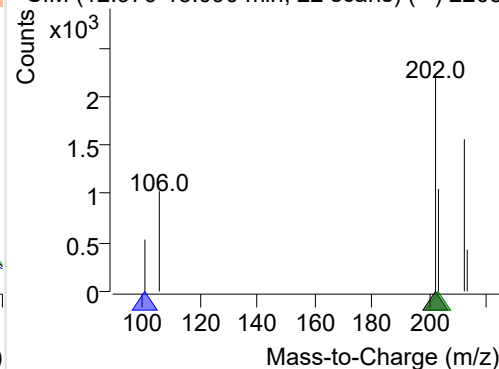
+ Selected Ion (202.0) 220806-PAHs-033.D



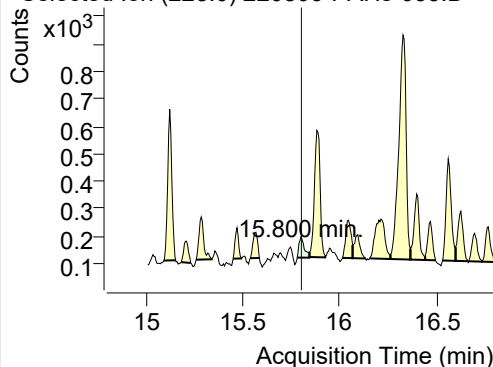
202.0, 101.0, 203.0



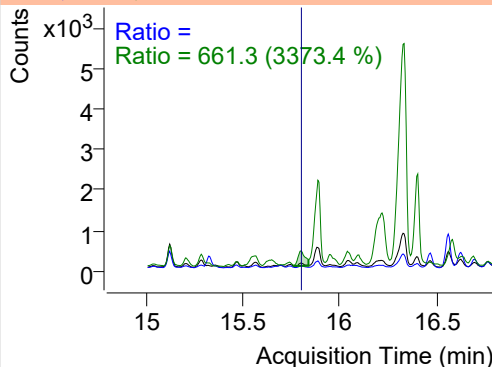
+ SIM (12.976-13.090 min, 22 scans) (\*\*) 2208

**Benz(a)anthracene**

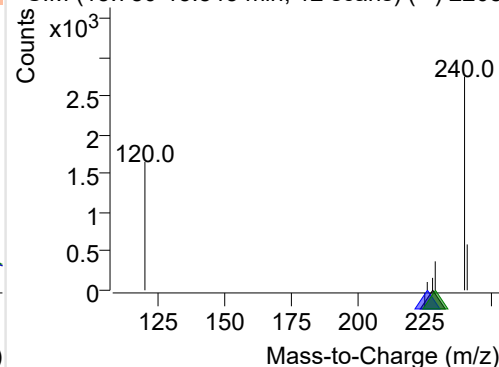
+ Selected Ion (228.0) 220806-PAHs-033.D



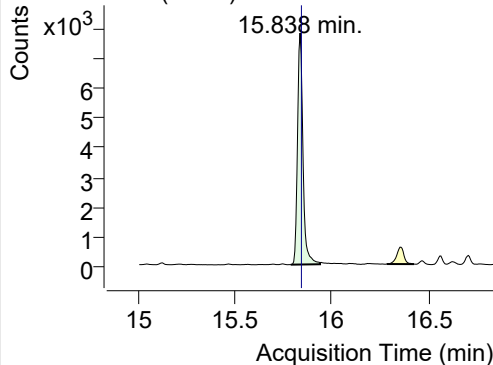
228.0, 226.0, 229.0



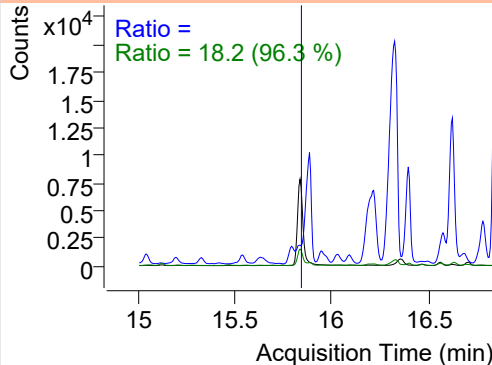
+ SIM (15.780-15.843 min, 12 scans) (\*\*) 2208

**IS-D12-Chrysene**

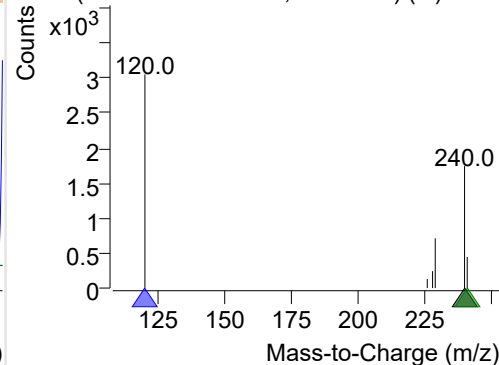
+ Selected Ion (240.0) 220806-PAHs-033.D



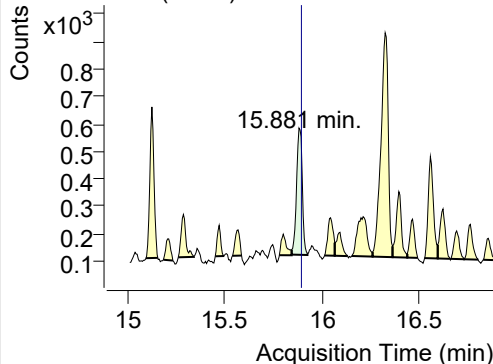
240.0, 120.0, 241.0



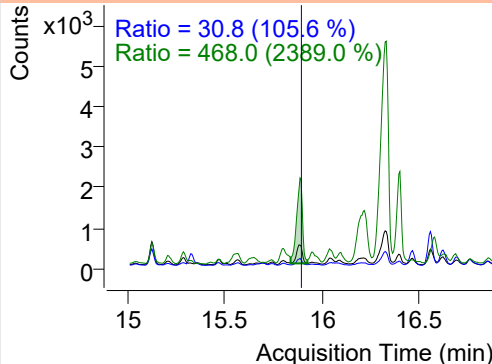
+ SIM (15.790-15.941 min, 28 scans) (\*\*) 2208

**Chrysene**

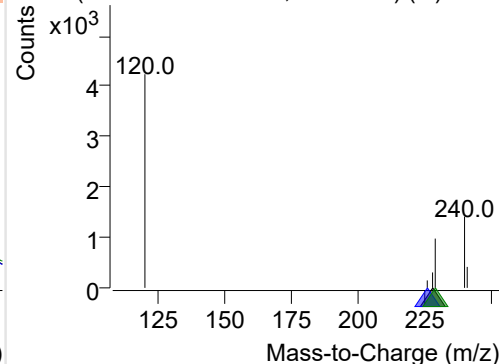
+ Selected Ion (228.0) 220806-PAHs-033.D

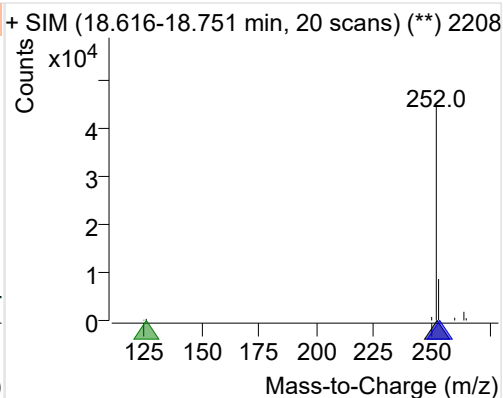
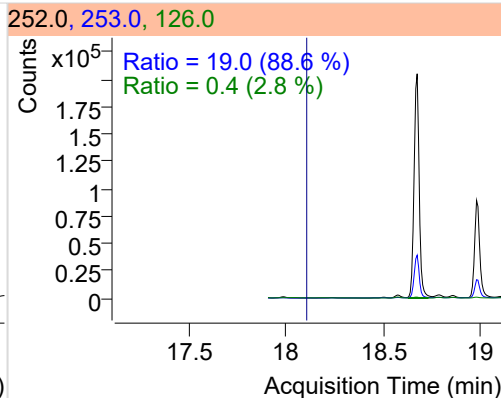
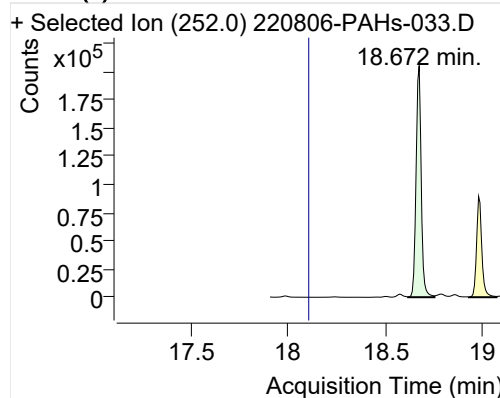
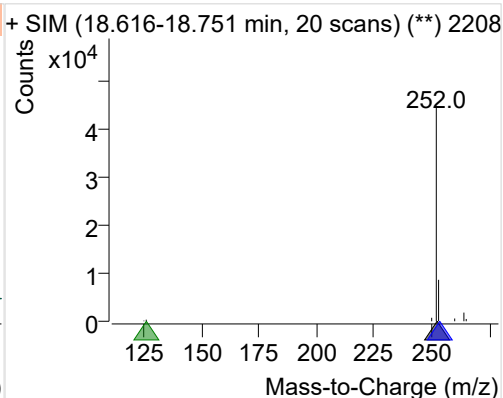
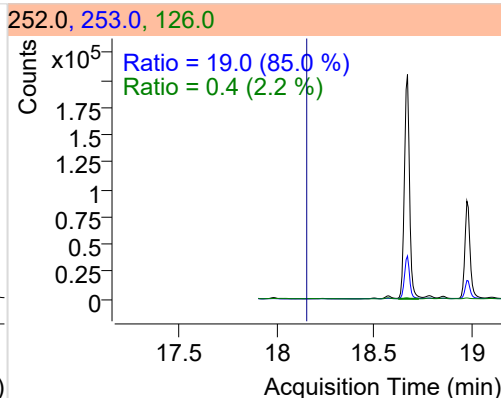
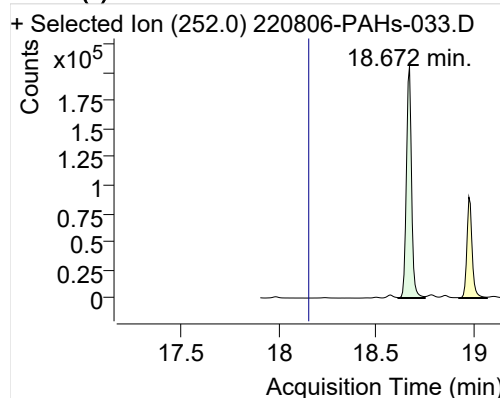
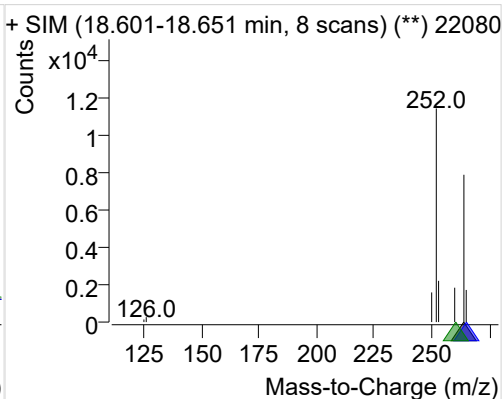
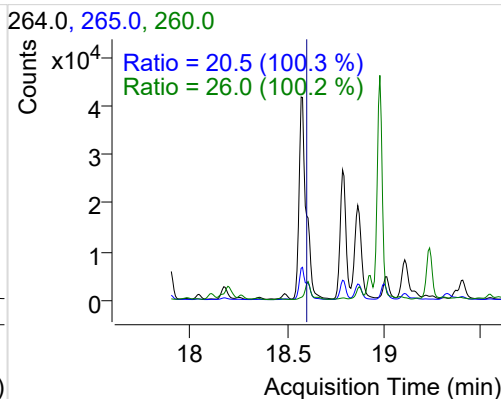
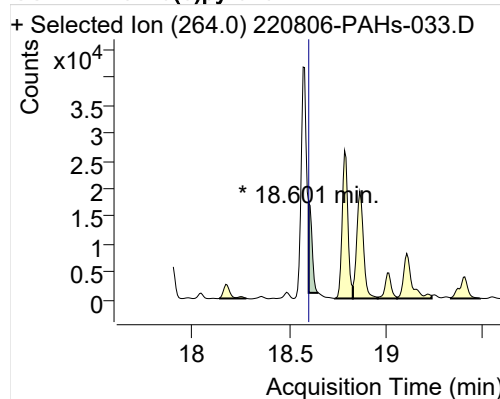
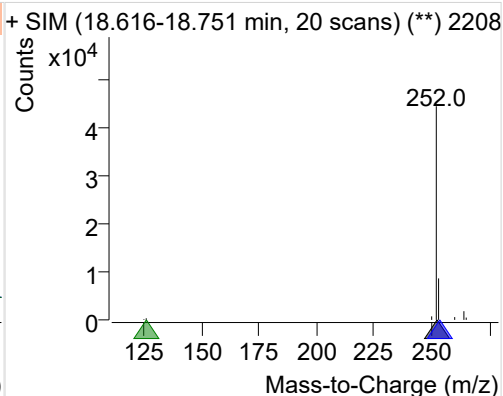
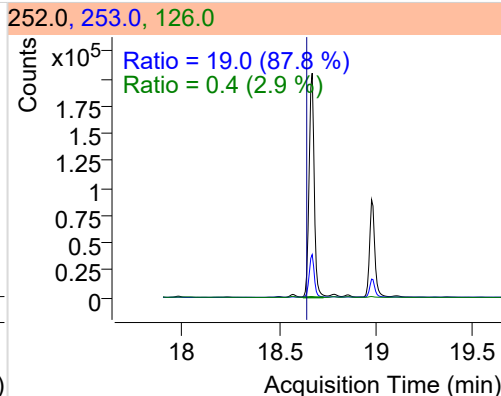
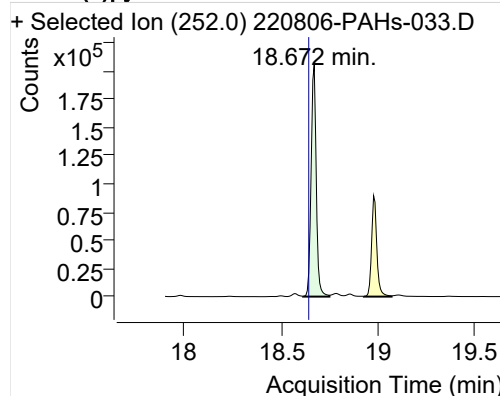


228.0, 226.0, 229.0



+ SIM (15.843-15.925 min, 16 scans) (\*\*) 2208

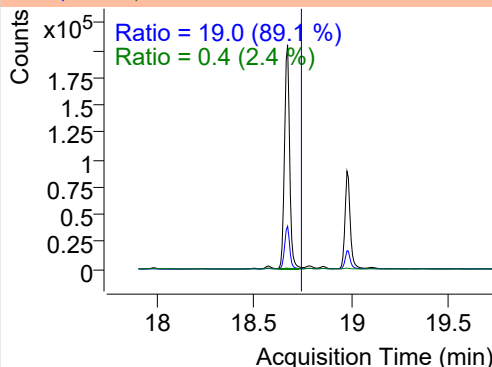
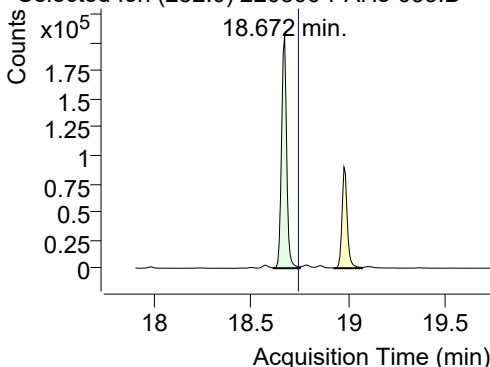


**Benzo(b)fluoranthene****Benzo(k)fluoranthene****SS-D12-Benzo(e)pyrene****Benzo(e)pyrene**

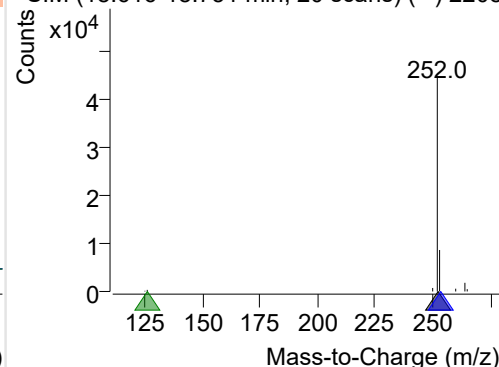
**Benzo(a)pyrene**

+ Selected Ion (252.0) 220806-PAHs-033.D

252.0, 253.0, 126.0

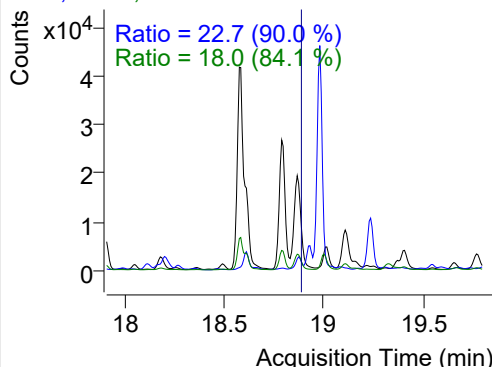
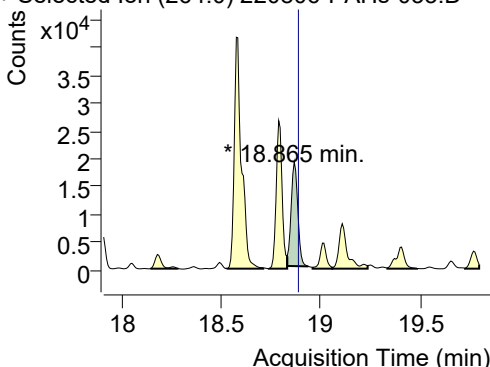


+ SIM (18.616-18.751 min, 20 scans) (\*\*) 2208

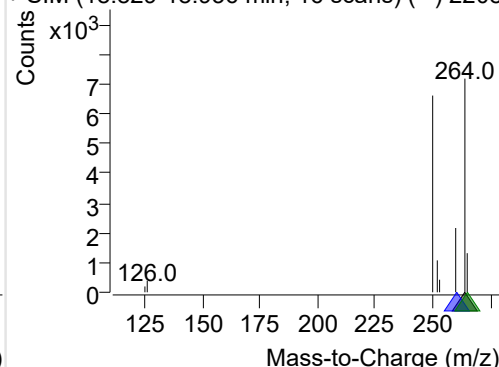
**IS-D12-Perylene**

+ Selected Ion (264.0) 220806-PAHs-033.D

264.0, 260.0, 265.0

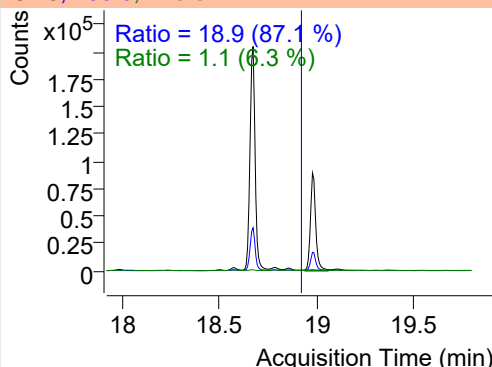
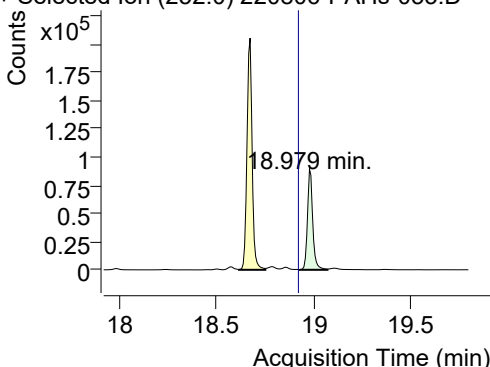


+ SIM (18.829-18.936 min, 16 scans) (\*\*) 2208

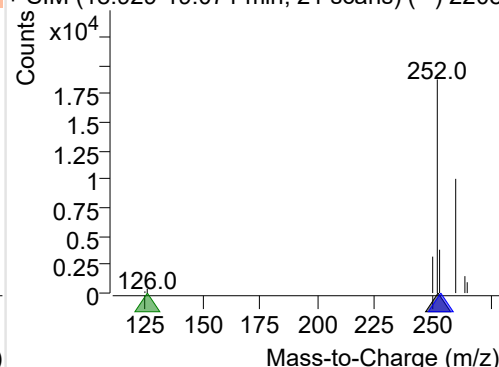
**Perylene**

+ Selected Ion (252.0) 220806-PAHs-033.D

252.0, 253.0, 126.0

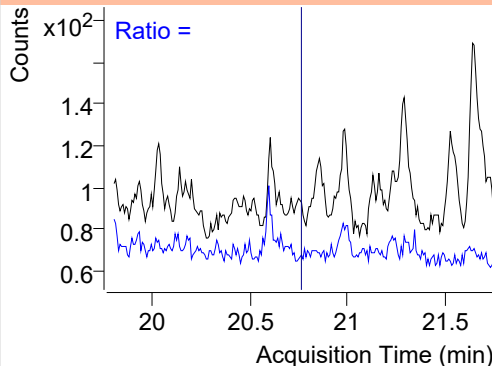
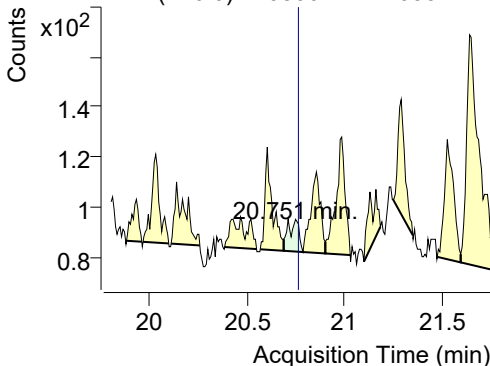


+ SIM (18.929-19.071 min, 21 scans) (\*\*) 2208

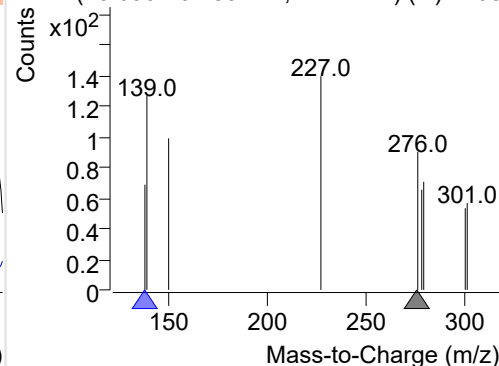
**Indeno(1,2,3-c,d)pyrene**

+ Selected Ion (276.0) 220806-PAHs-033.D

276.0, 138.0



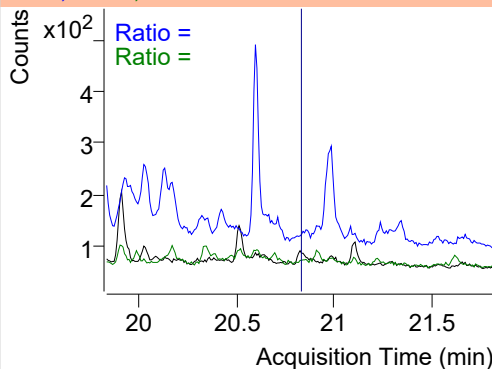
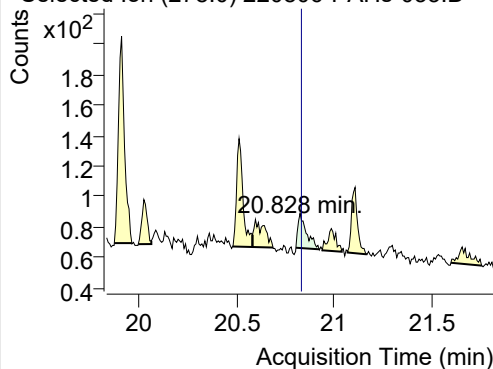
+ SIM (20.690-20.789 min, 14 scans) (\*\*) 2208



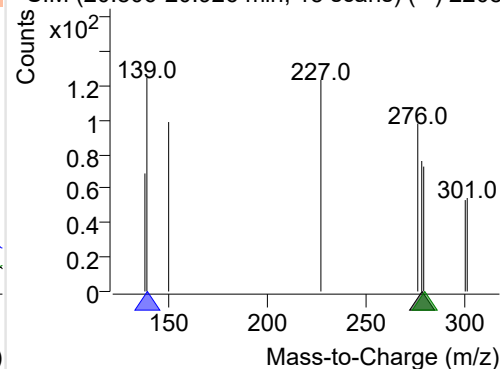
**Dibenz(a,h)anthracene**

+ Selected Ion (278.0) 220806-PAHs-033.D

278.0, 139.0, 279.0

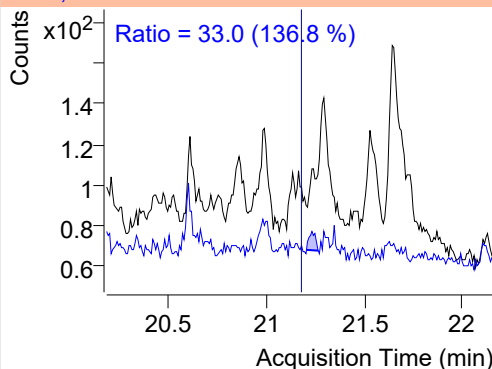
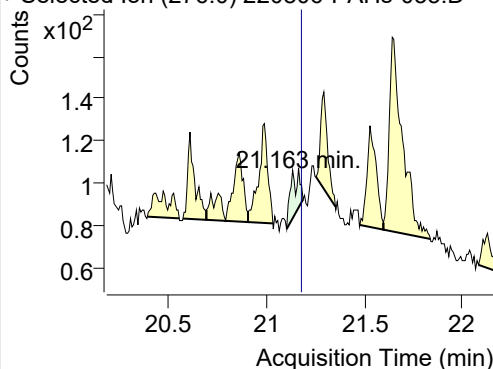


+ SIM (20.806-20.926 min, 15 scans) (\*\*) 2208

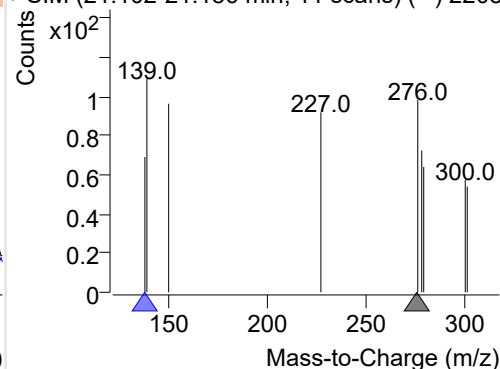
**Benzo(g,h,i)perylene**

+ Selected Ion (276.0) 220806-PAHs-033.D

276.0, 138.0

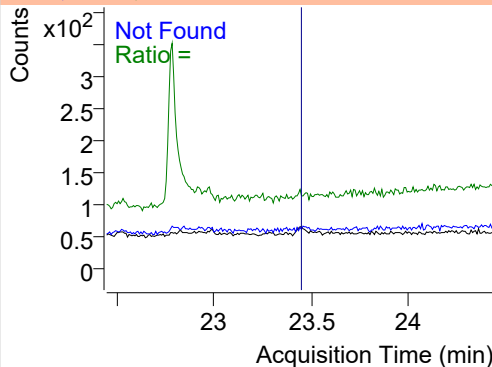
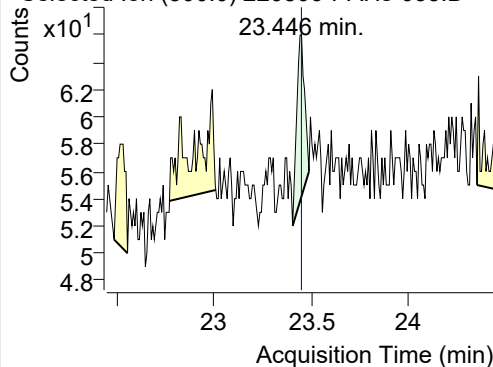


+ SIM (21.102-21.186 min, 11 scans) (\*\*) 2208

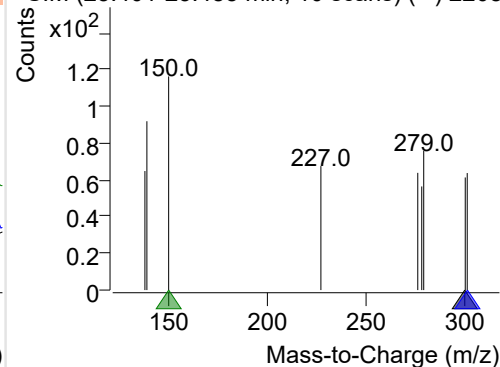
**Coronene**

+ Selected Ion (300.0) 220806-PAHs-033.D

300.0, 301.0, 150.0



+ SIM (23.401-23.485 min, 10 scans) (\*\*) 2208





## Quantitative Analysis Sample Based Report

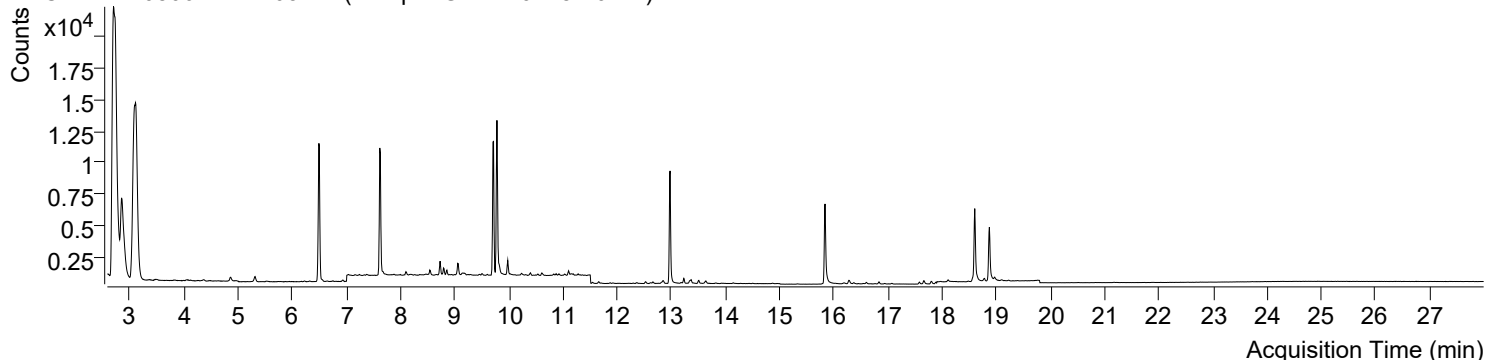


Trusted Answers

|                           |                                                                                            |                       |                         |
|---------------------------|--------------------------------------------------------------------------------------------|-----------------------|-------------------------|
| Batch Data Path File Name | D:\MassHunter\GCMS\1\data\PAHs\220806-PAHs-Sample\QuantResults\220806-PAHs-Quant.batch.bin |                       |                         |
| Analysis Time Stamp       | 2022-10-10 오전 10:12:04                                                                     | Analyst Name          | DESKTOP-86B7UPG\5975MS  |
| Report Generation Time    | 2022-10-10 오전 10:12:12                                                                     | Report Generator Name | DESKTOP-86B7UPG\5975MS  |
| Calibration Last Update   | 2022-12-15 오후 3:30:46                                                                      | Batch State           | Processed               |
| Analyze Quant Version     | 10.2                                                                                       | Report Quant Version  | 10.2                    |
| Acq. Date-Time            | 2022-08-07 오전 3:37:28                                                                      | Data File             | 220806-PAHs-034.D       |
| Type                      | Sample                                                                                     | Name                  | Sample-Gas-220728-10DIL |
| Dil.                      | 1                                                                                          | Acq. Method File      | PAHs 19mix-Method       |

## Sample Chromatogram

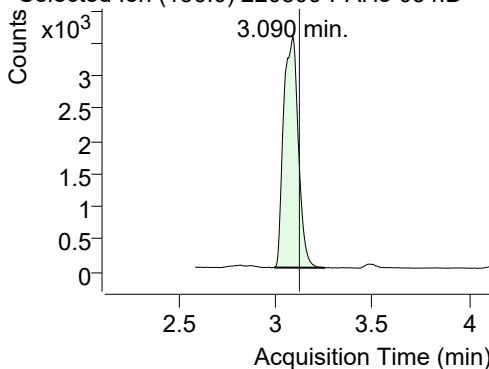
+ TIC SIM 220806-PAHs-034.D (Sample-Gas-220728-10DIL)



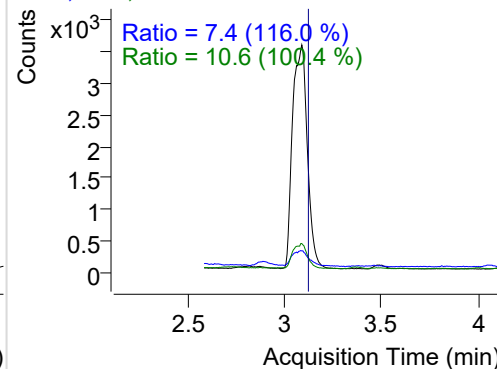
| Name                    | RT     | Transition | Resp. | Height  | Final Conc. Units | Ratio |
|-------------------------|--------|------------|-------|---------|-------------------|-------|
| IS-D8-Naphthalene       | 3.090  | 136.0      | 18662 | 3542.03 | ND ng/ml          | 10.6  |
| Naphthalene             | 3.112  | 128.0      | 46018 | 8958.27 | ND ng/ml          | 12.7  |
| Acenaphthylene          | 6.155  | 152.0      | 27    | 14.30   | ND ng/ml          | 42.7  |
| IS-D10-Acenaphthene     | 6.493  | 164.0      | 10169 | 5243.40 | ND ng/ml          | 95.7  |
| Acenaphthene            | 6.558  | 154.0      | 59    | 32.05   | ND ng/ml          | 137.1 |
| LSS-D10-Fluorene        | 7.627  | 176.0      | 8523  | 4539.61 | ND ng/ml          | 93.3  |
| Fluorene                | 7.680  | 166.0      | 142   | 73.41   | ND ng/ml          | 91.0  |
| IS-D10-Phenanthrene     | 9.780  | 188.0      | 16806 | 9856.91 | ND ng/ml          | 15.1  |
| Phenanthrene            | 9.822  | 178.0      | 580   | 303.18  | ND ng/ml          | 17.6  |
| Anthracene              | 9.979  | 178.0      | 494   | 309.18  | ND ng/ml          | 27.2  |
| Fluoranthene            | 12.526 | 202.0      | 183   | 111.01  | ND ng/ml          | 17.0  |
| LSS-D10-Pyrene          | 12.976 | 212.0      | 11157 | 6645.21 | ND ng/ml          | 18.2  |
| Pyrene                  | 13.009 | 202.0      | 251   | 142.96  | ND ng/ml          | 34.9  |
| Benz(a)anthracene       | 15.789 | 228.0      | 44    | 23.94   | ND ng/ml          | 24.0  |
| IS-D12-Chrysene         | 15.838 | 240.0      | 9548  | 4827.02 | ND ng/ml          | 18.8  |
| Chrysene                | 15.876 | 228.0      | 126   | 44.17   | ND ng/ml          | 26.5  |
| Benzo(b)fluoranthene    | 18.110 | 252.0      | 175   | 74.40   | ND ng/ml          | 19.4  |
| Benzo(k)fluoranthene    | 18.110 | 252.0      | 175   | 74.40   | ND ng/ml          | 19.4  |
| SS-D12-Benzo(e)pyrene   | 18.601 | 264.0      | 7769  | 3902.38 | ND ng/ml          | 25.5  |
| Benzo(e)pyrene          | 18.644 | 252.0      | 158   | 65.40   | ND ng/ml          |       |
| Benzo(a)pyrene          | 18.779 | 252.0      | 101   | 43.40   | ND ng/ml          |       |
| IS-D12-Perylene         | 18.872 | 264.0      | 6167  | 2908.72 | ND ng/ml          | 24.0  |
| Perylene                | 18.858 | 252.0      | 97    | 29.40   | ND ng/ml          |       |
| Indeno(1,2,3-c,d)pytene | 20.751 | 276.0      | 9     | 4.83    | ND ng/ml          |       |
| Dibenz(a,h)anthracene   | 20.835 | 278.0      | 17    | 4.68    | ND ng/ml          |       |
| Benzo(g,h,i)perylene    | 21.171 | 276.0      | 43    | 16.33   | ND ng/ml          |       |
| Coronene                | 23.447 | 300.0      | 18    | 7.38    | ND ng/ml          |       |

## IS-D8-Naphthalene

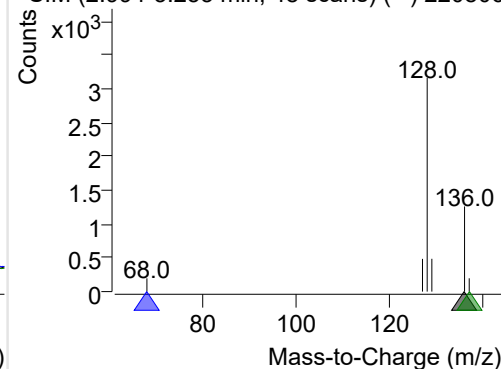
+ Selected Ion (136.0) 220806-PAHs-034.D



136.0, 68.0, 137.0

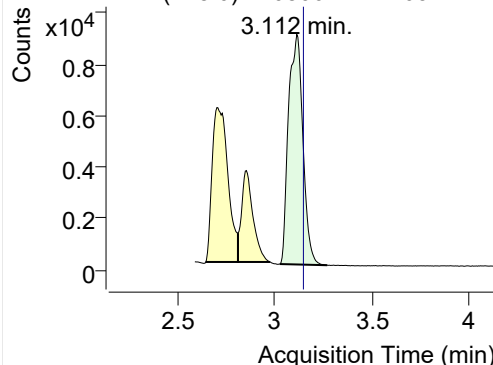


+ SIM (2.994-3.253 min, 48 scans) (\*\*) 220806

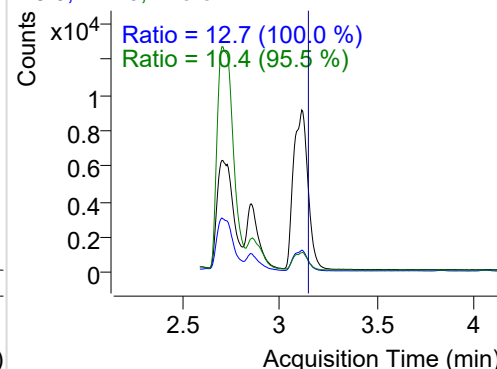


**Naphthalene**

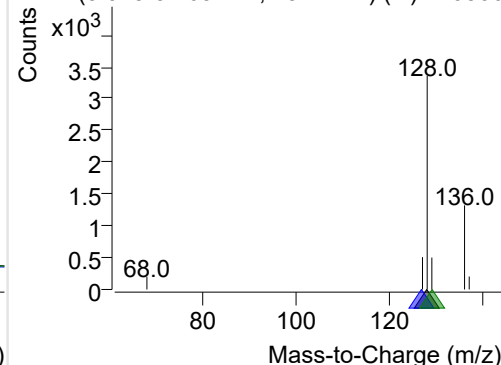
+ Selected Ion (128.0) 220806-PAHs-034.D



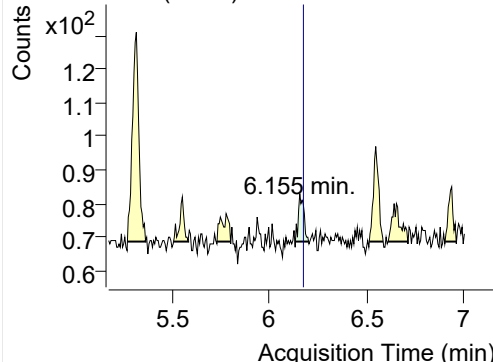
128.0, 127.0, 129.0



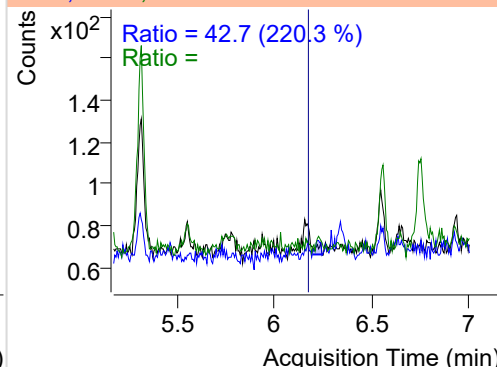
+ SIM (3.025-3.269 min, 45 scans) (\*\*) 220806

**Acenaphthylene**

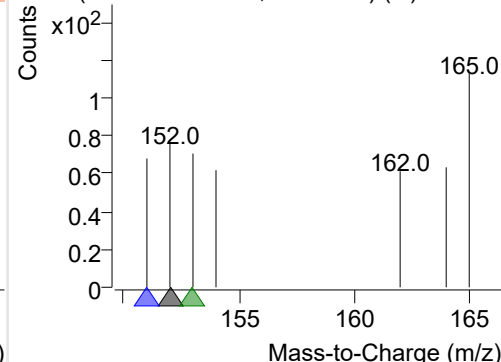
+ Selected Ion (152.0) 220806-PAHs-034.D



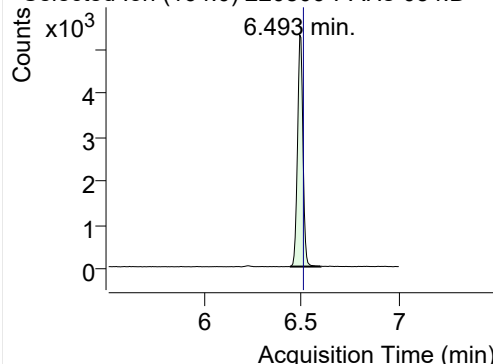
152.0, 151.0, 153.0



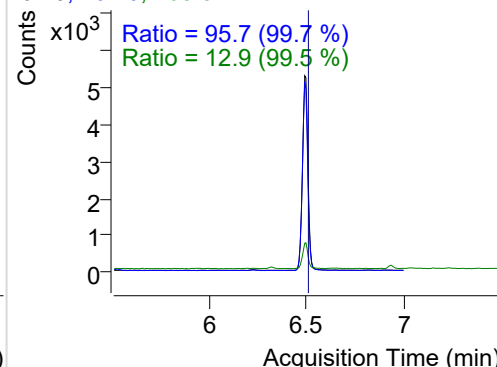
+ SIM (6.133-6.200 min, 11 scans) (\*\*) 220806

**IS-D10-Acenaphthene**

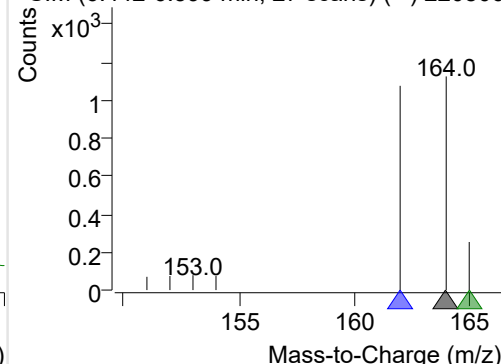
+ Selected Ion (164.0) 220806-PAHs-034.D



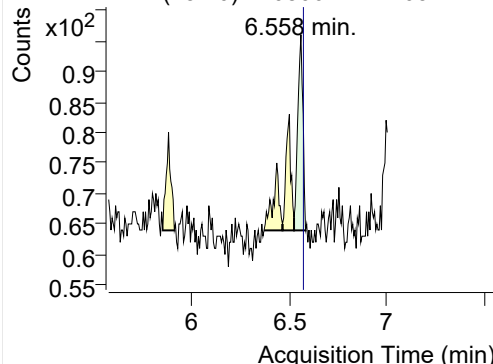
164.0, 162.0, 165.0



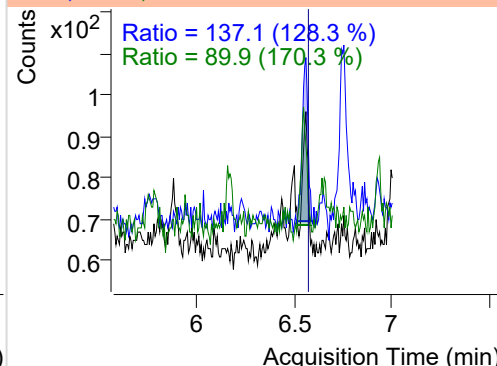
+ SIM (6.442-6.599 min, 27 scans) (\*\*) 220806

**Acenaphthene**

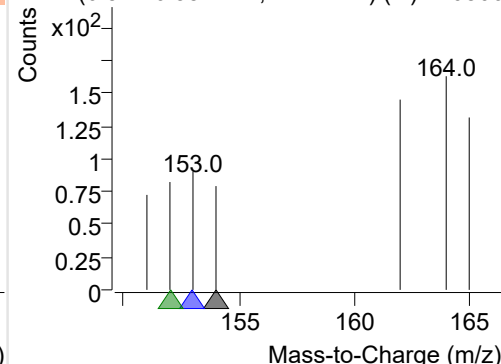
+ Selected Ion (154.0) 220806-PAHs-034.D



154.0, 153.0, 152.0

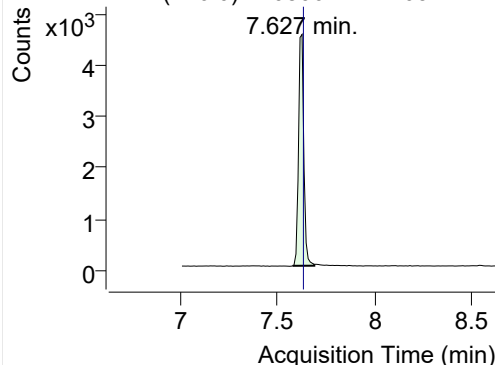


+ SIM (6.522-6.581 min, 11 scans) (\*\*) 220806

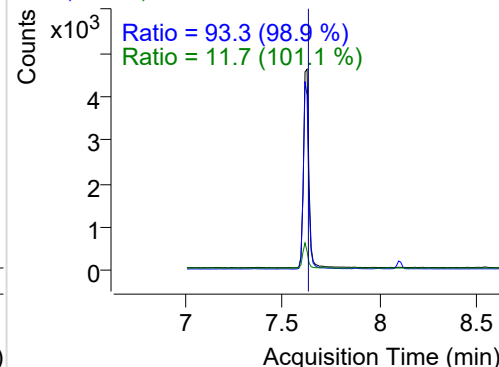


## LSS-D10-Fluorene

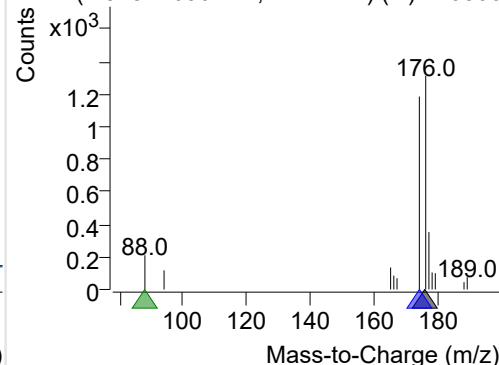
+ Selected Ion (176.0) 220806-PAHs-034.D



176.0, 174.0, 88.0

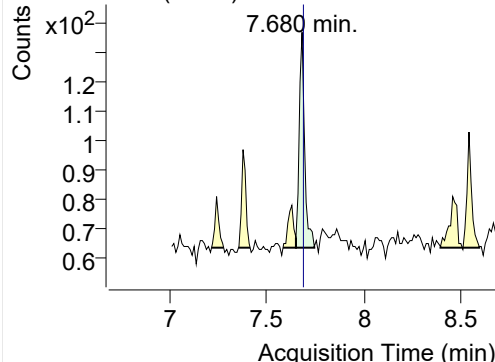


+ SIM (7.578-7.690 min, 11 scans) (\*\*) 220806

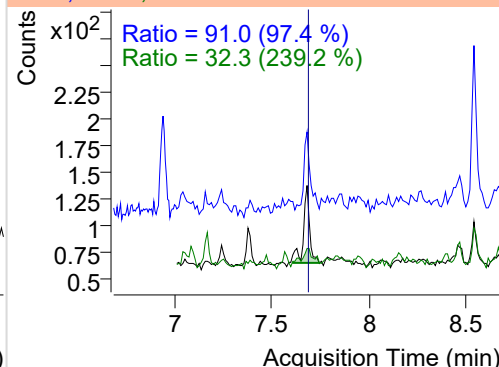


## Fluorene

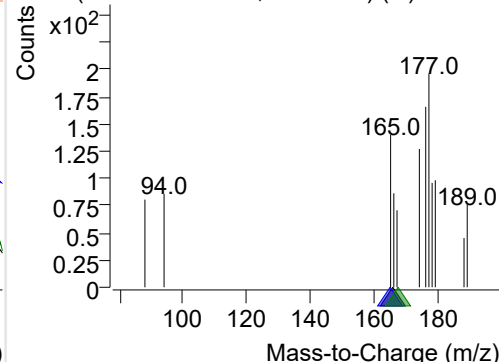
+ Selected Ion (166.0) 220806-PAHs-034.D



166.0, 165.0, 167.0

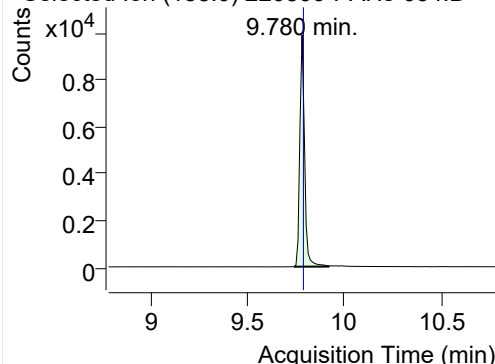


+ SIM (7.648-7.743 min, 10 scans) (\*\*) 220806

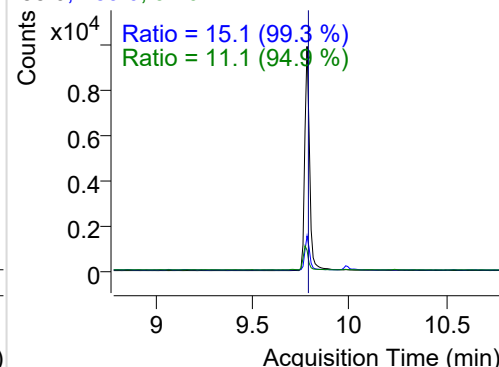


## IS-D10-Phenanthrene

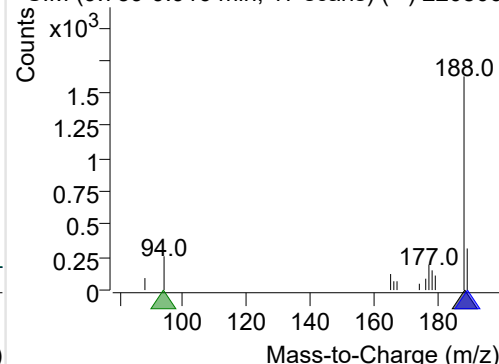
+ Selected Ion (188.0) 220806-PAHs-034.D



188.0, 189.0, 94.0

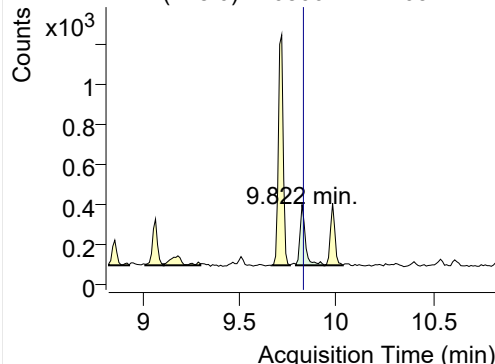


+ SIM (9.739-9.916 min, 17 scans) (\*\*) 220806

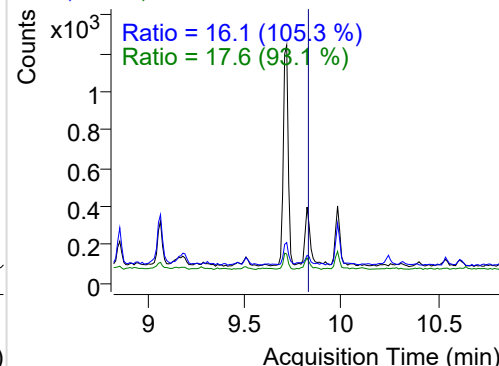


## Phenanthrene

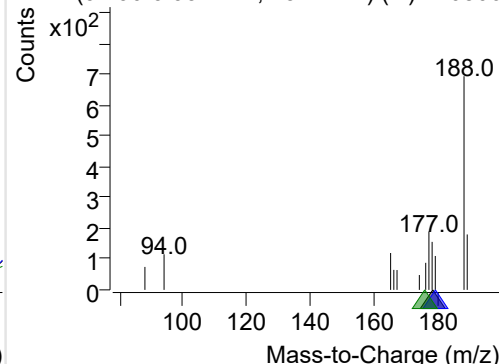
+ Selected Ion (178.0) 220806-PAHs-034.D



178.0, 179.0, 176.0

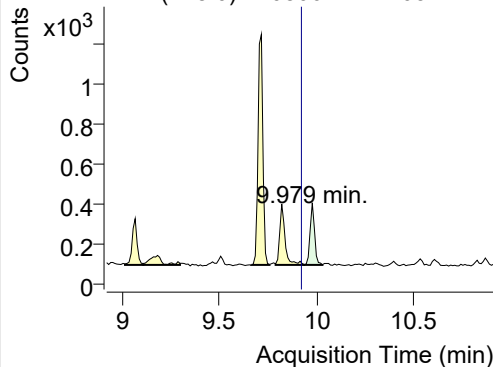


+ SIM (9.790-9.937 min, 15 scans) (\*\*) 220806

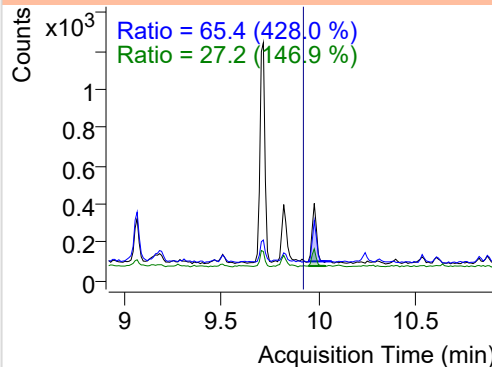


**Anthracene**

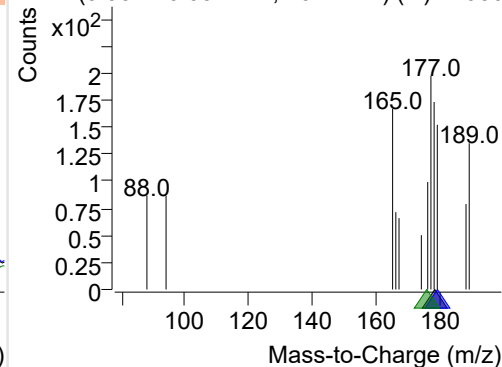
+ Selected Ion (178.0) 220806-PAHs-034.D



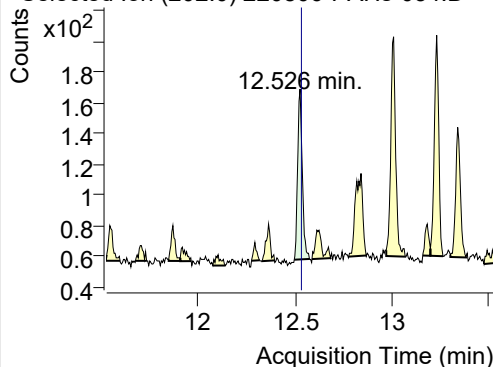
178.0, 179.0, 176.0



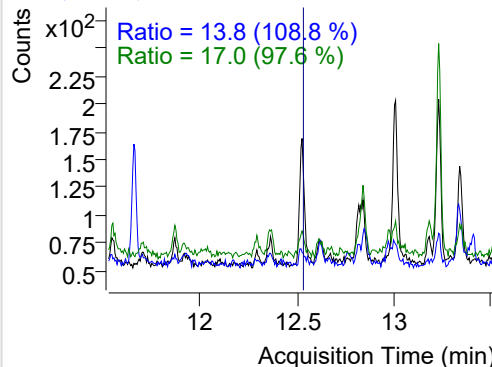
+ SIM (9.937-10.032 min, 10 scans) (\*\*) 22080

**Fluoranthene**

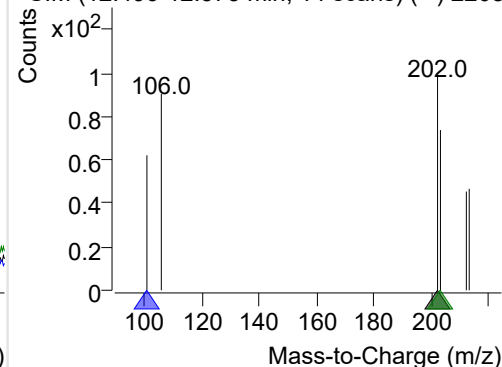
+ Selected Ion (202.0) 220806-PAHs-034.D



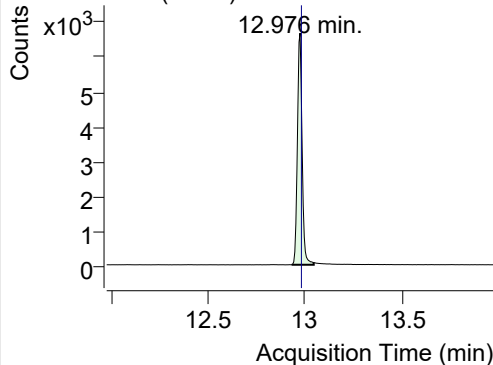
202.0, 101.0, 203.0



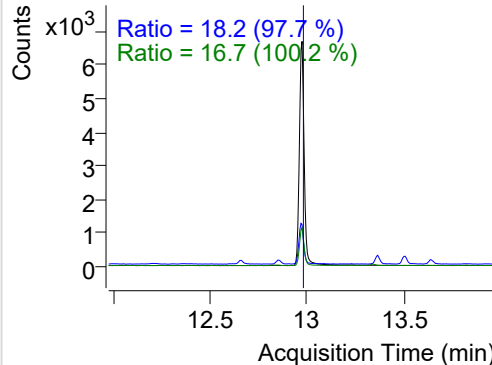
+ SIM (12.496-12.575 min, 14 scans) (\*\*) 2208

**LSS-D10-Pyrene**

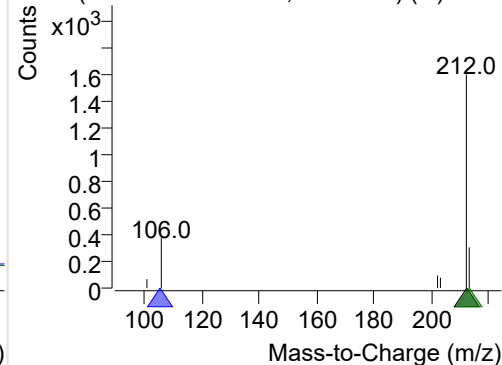
+ Selected Ion (212.0) 220806-PAHs-034.D



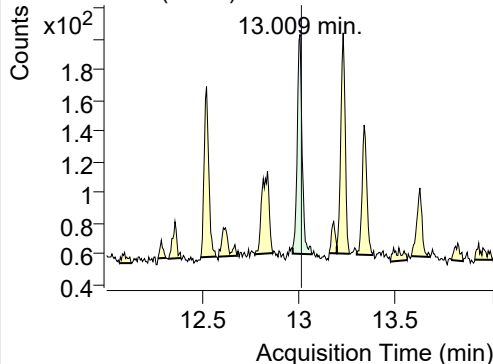
212.0, 106.0, 213.0



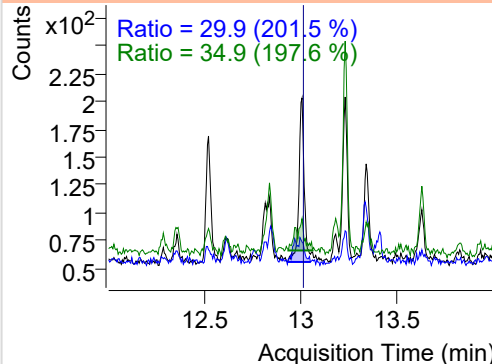
+ SIM (12.933-13.047 min, 22 scans) (\*\*) 2208

**Pyrene**

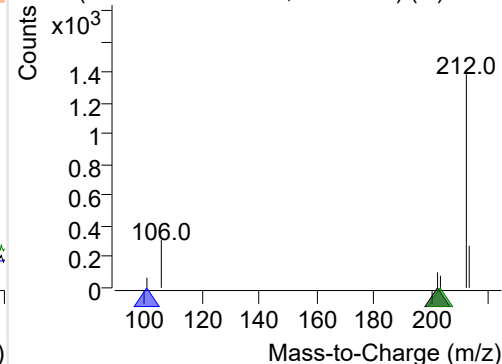
+ Selected Ion (202.0) 220806-PAHs-034.D



202.0, 101.0, 203.0



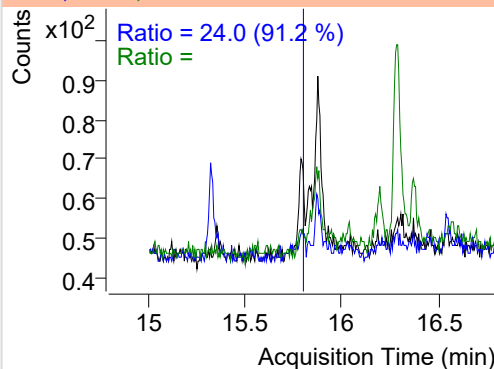
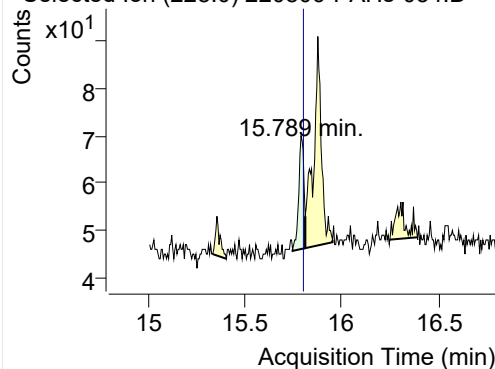
+ SIM (12.971-13.068 min, 19 scans) (\*\*) 2208



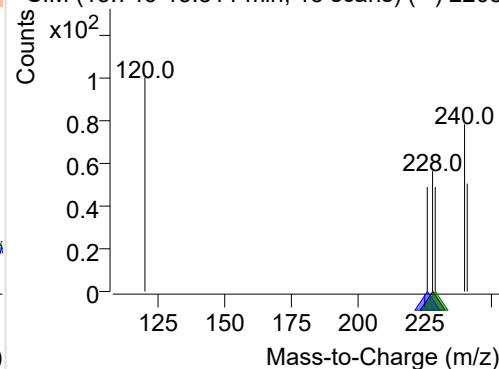
**Benz(a)anthracene**

+ Selected Ion (228.0) 220806-PAHs-034.D

228.0, 226.0, 229.0

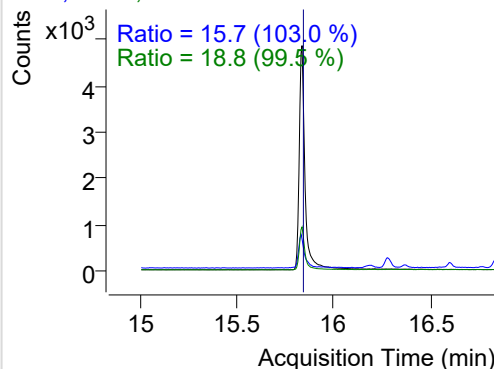
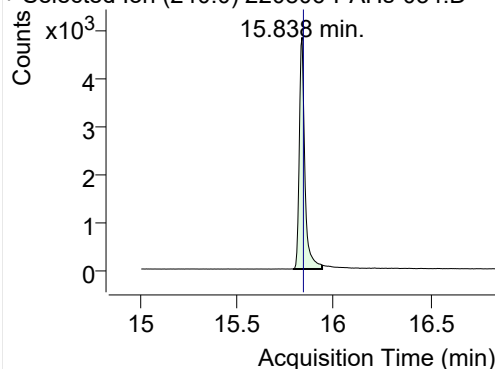


+ SIM (15.746-15.811 min, 13 scans) (\*\*) 2208

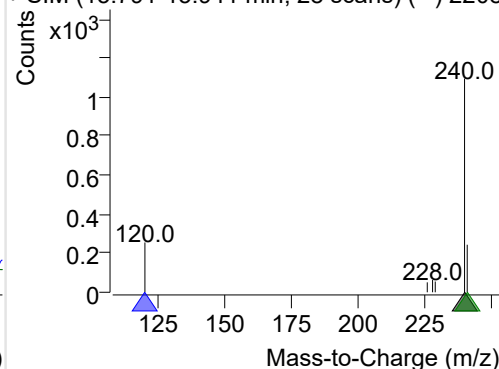
**IS-D12-Chrysene**

+ Selected Ion (240.0) 220806-PAHs-034.D

240.0, 120.0, 241.0

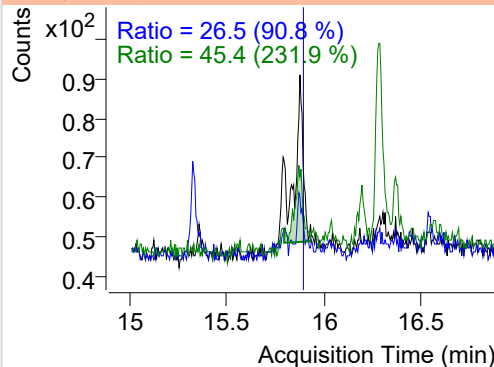
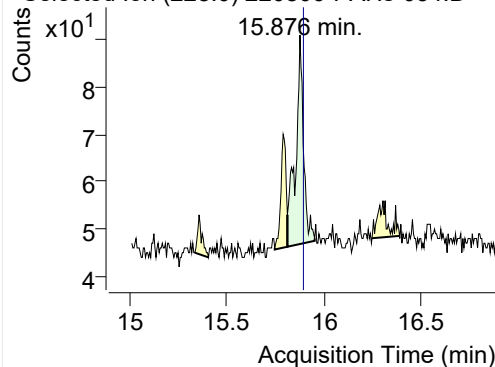


+ SIM (15.791-15.941 min, 28 scans) (\*\*) 2208

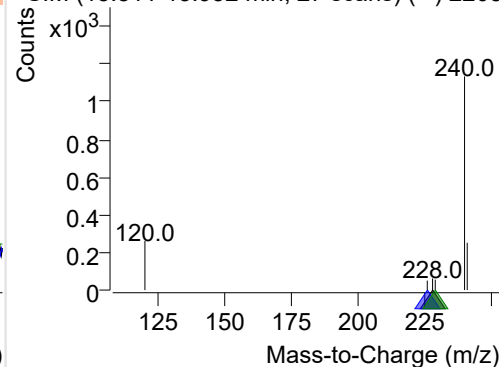
**Chrysene**

+ Selected Ion (228.0) 220806-PAHs-034.D

228.0, 226.0, 229.0

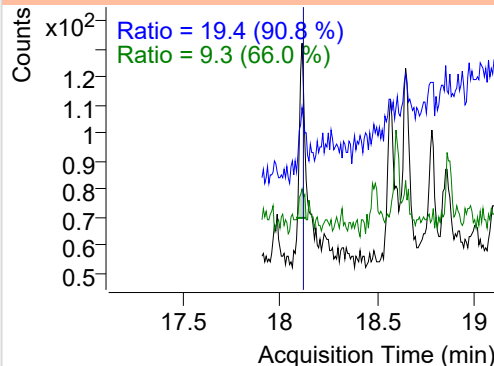
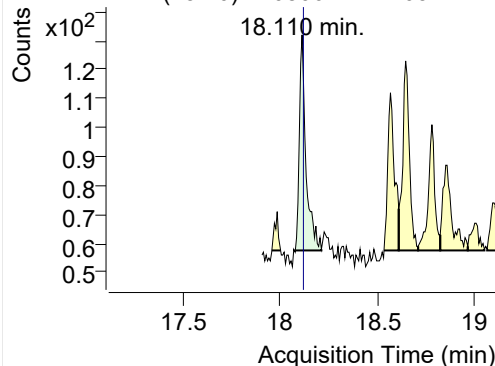


+ SIM (15.811-15.952 min, 27 scans) (\*\*) 2208

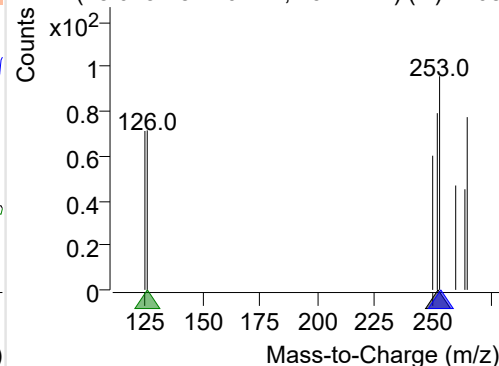
**Benzo(b)fluoranthene**

+ Selected Ion (252.0) 220806-PAHs-034.D

252.0, 253.0, 126.0



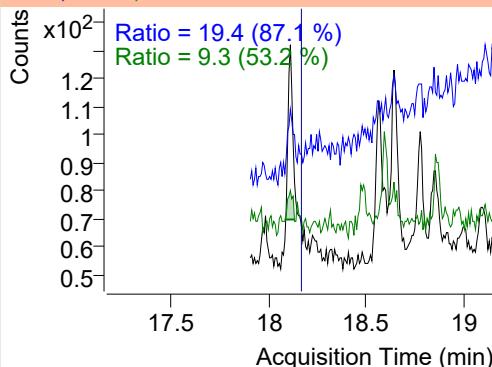
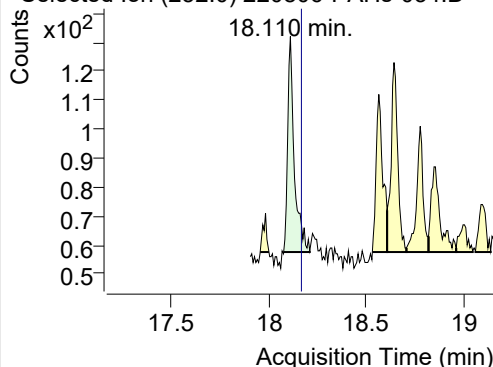
+ SIM (18.075-18.210 min, 19 scans) (\*\*) 2208



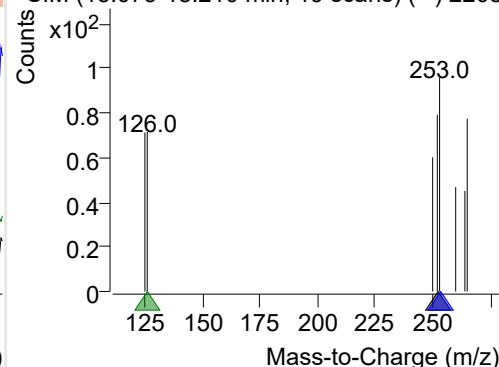
**Benzo(k)fluoranthene**

+ Selected Ion (252.0) 220806-PAHs-034.D

252.0, 253.0, 126.0

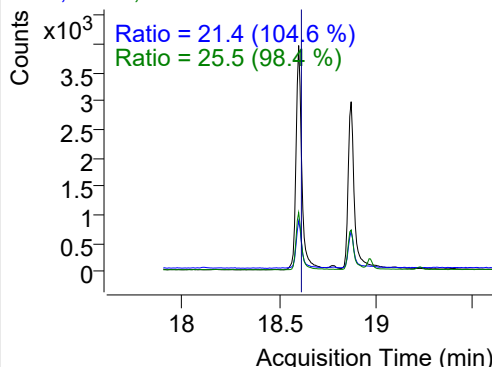
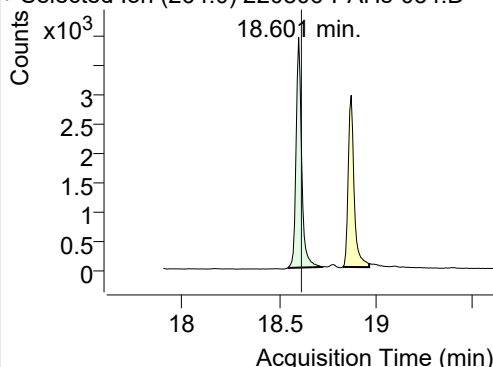


+ SIM (18.075-18.210 min, 19 scans) (\*\*) 2208

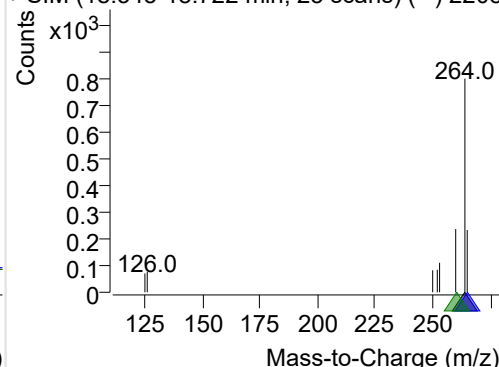
**SS-D12-Benzo(e)pyrene**

+ Selected Ion (264.0) 220806-PAHs-034.D

264.0, 265.0, 260.0

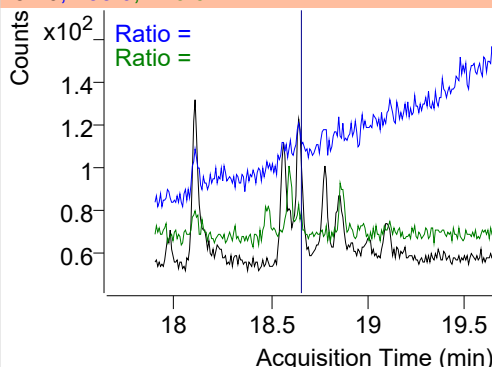
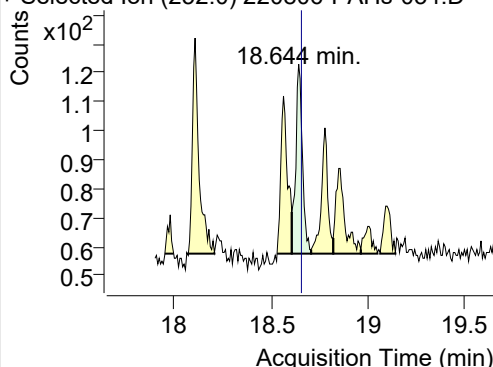


+ SIM (18.545-18.722 min, 25 scans) (\*\*) 2208

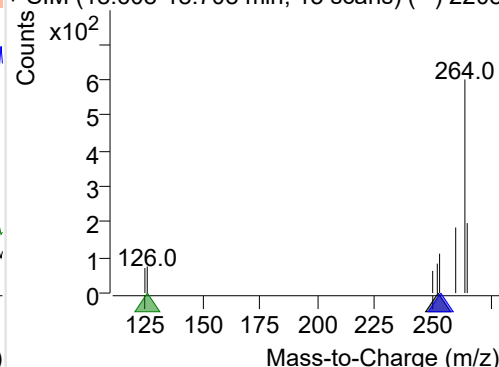
**Benzo(e)pyrene**

+ Selected Ion (252.0) 220806-PAHs-034.D

252.0, 253.0, 126.0

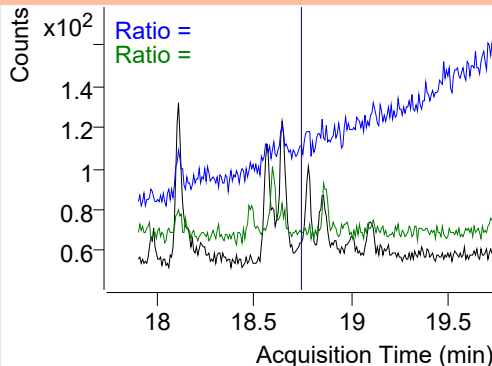
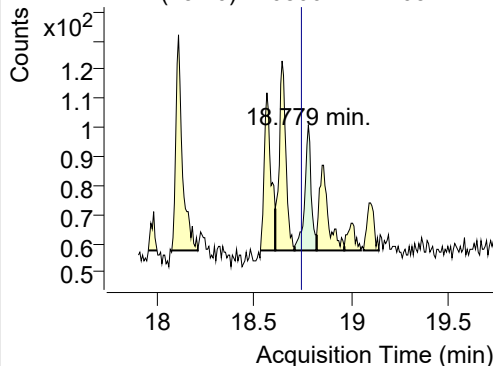


+ SIM (18.608-18.708 min, 15 scans) (\*\*) 2208

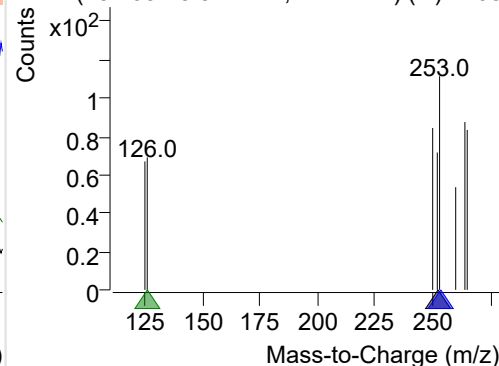
**Benzo(a)pyrene**

+ Selected Ion (252.0) 220806-PAHs-034.D

252.0, 253.0, 126.0

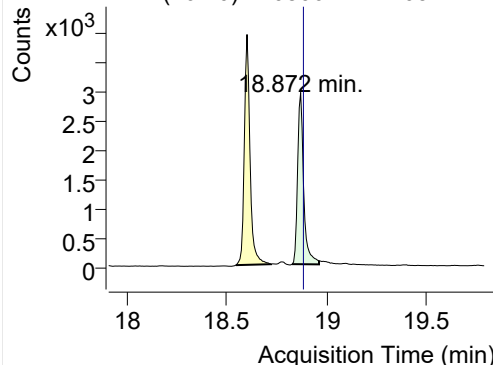


+ SIM (18.708-18.822 min, 17 scans) (\*\*) 2208

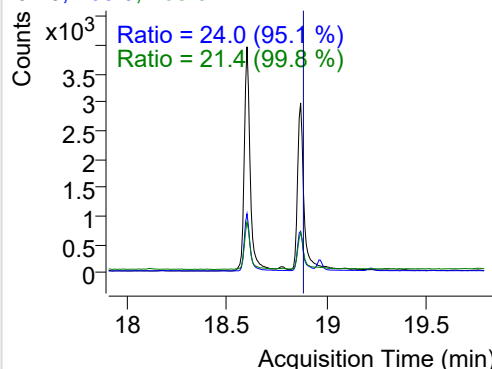


## IS-D12-Perylene

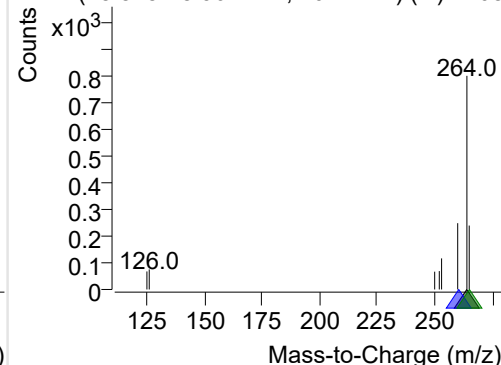
+ Selected Ion (264.0) 220806-PAHs-034.D



264.0, 260.0, 265.0

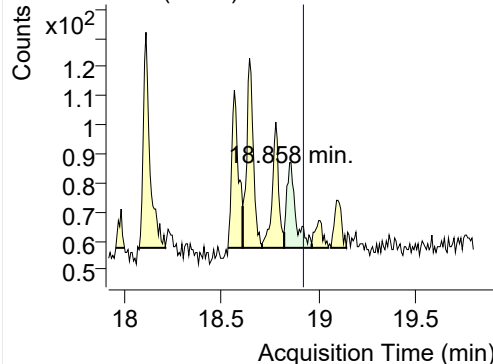


+ SIM (18.828-18.964 min, 20 scans) (\*\*) 2208

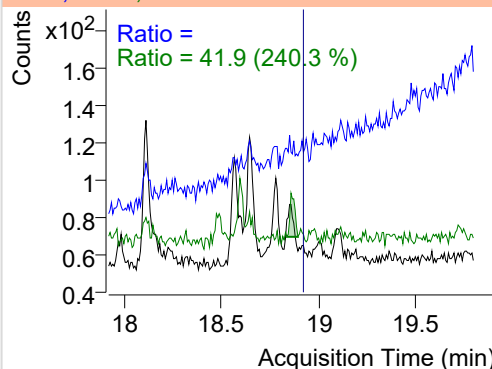


## Perylene

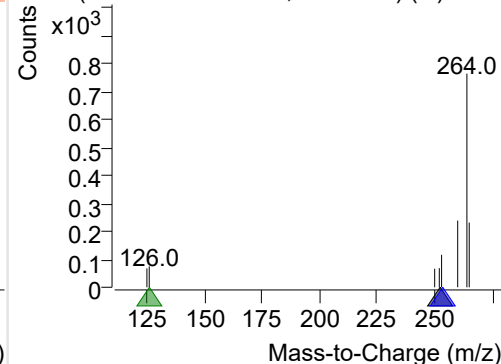
+ Selected Ion (252.0) 220806-PAHs-034.D



252.0, 253.0, 126.0

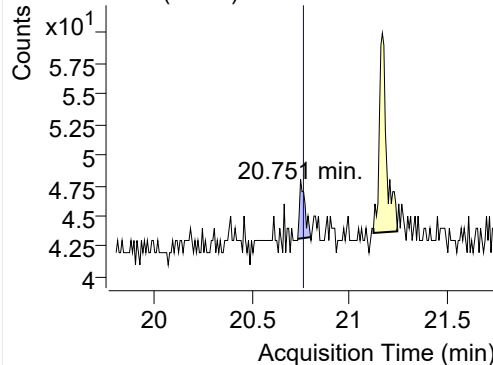


+ SIM (18.822-18.964 min, 21 scans) (\*\*) 2208

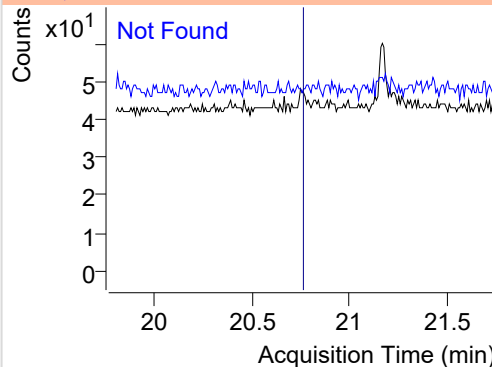


## Indeno(1,2,3-c,d)pyrene

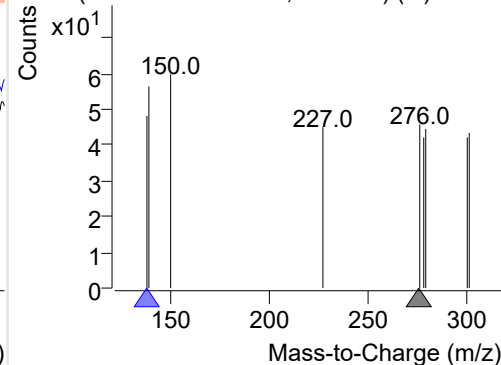
+ Selected Ion (276.0) 220806-PAHs-034.D



276.0, 138.0

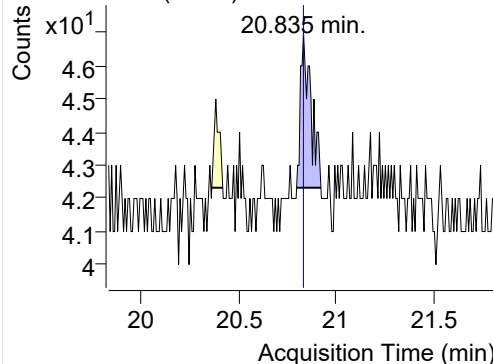


+ SIM (20.736-20.803 min, 8 scans) (\*\*) 22080

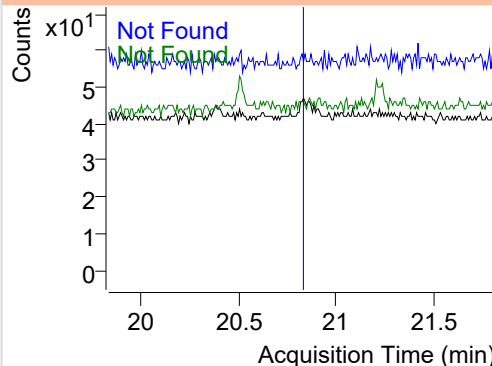


## Dibenz(a,h)anthracene

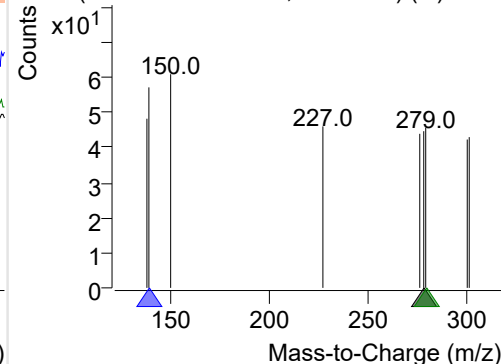
+ Selected Ion (278.0) 220806-PAHs-034.D



278.0, 139.0, 279.0



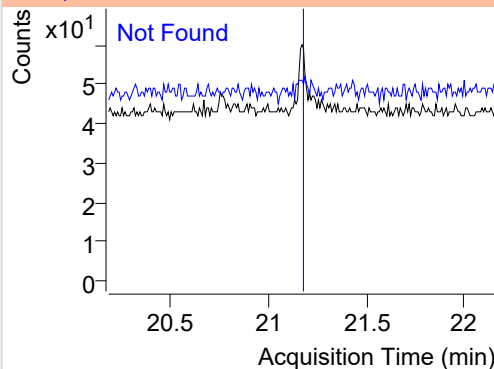
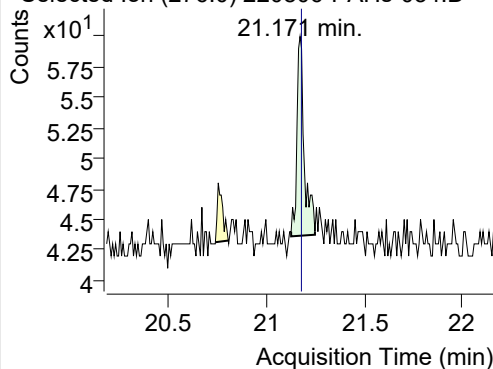
+ SIM (20.799-20.924 min, 16 scans) (\*\*) 2208



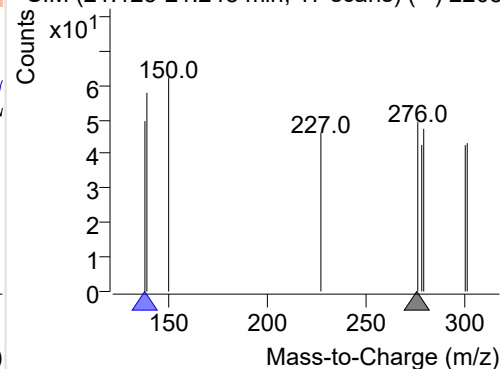
**Benzo(g,h,i)perylene**

+ Selected Ion (276.0) 220806-PAHs-034.D

276.0, 138.0

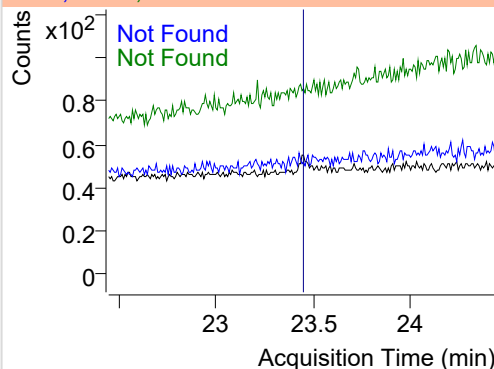
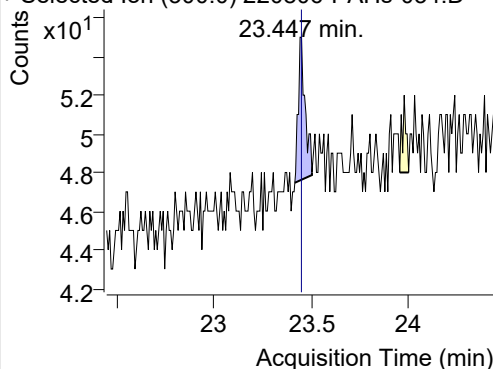


+ SIM (21.125-21.248 min, 17 scans) (\*\*) 2208

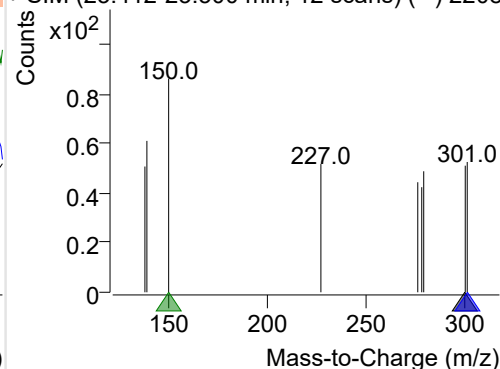
**Coronene**

+ Selected Ion (300.0) 220806-PAHs-034.D

300.0, 301.0, 150.0



+ SIM (23.412-23.500 min, 12 scans) (\*\*) 2208





## Quantitative Analysis Sample Based Report

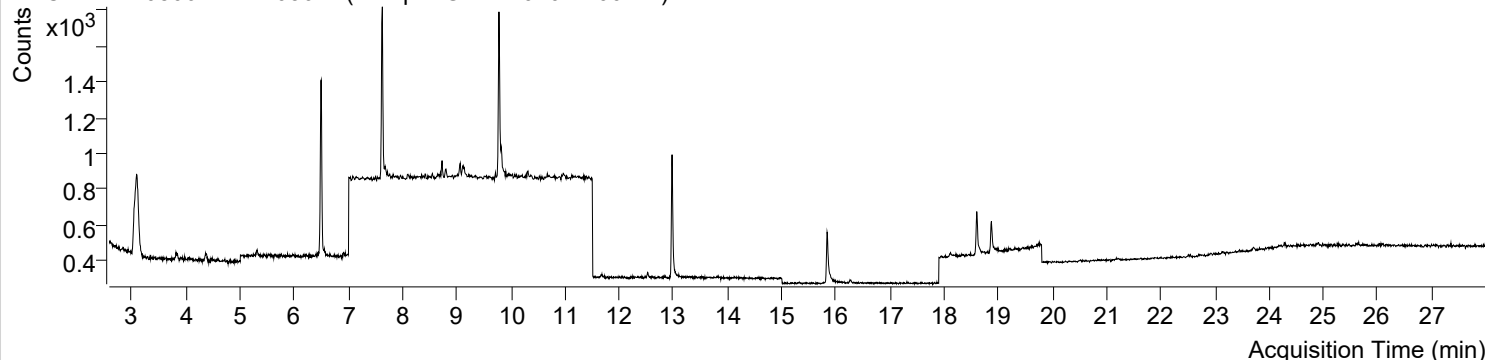


Trusted Answers

|                           |                                                                                            |                       |                          |
|---------------------------|--------------------------------------------------------------------------------------------|-----------------------|--------------------------|
| Batch Data Path File Name | D:\MassHunter\GCMS\1\data\PAHs\220806-PAHs-Sample\QuantResults\220806-PAHs-Quant.batch.bin |                       |                          |
| Analysis Time Stamp       | 2022-10-10 오전 10:12:04                                                                     | Analyst Name          | DESKTOP-86B7UPG\5975MS   |
| Report Generation Time    | 2022-10-10 오전 10:12:12                                                                     | Report Generator Name | DESKTOP-86B7UPG\5975MS   |
| Calibration Last Update   | 2022-12-15 오후 3:30:46                                                                      | Batch State           | Processed                |
| Analyze Quant Version     | 10.2                                                                                       | Report Quant Version  | 10.2                     |
| Acq. Date-Time            | 2022-08-07 오전 4:39:45                                                                      | Data File             | 220806-PAHs-036.D        |
| Type                      | Sample                                                                                     | Name                  | Sample-Gas-220704-100DIL |
| Dil.                      | 1                                                                                          | Acq. Method File      | PAHs 19mix-Method        |

## Sample Chromatogram

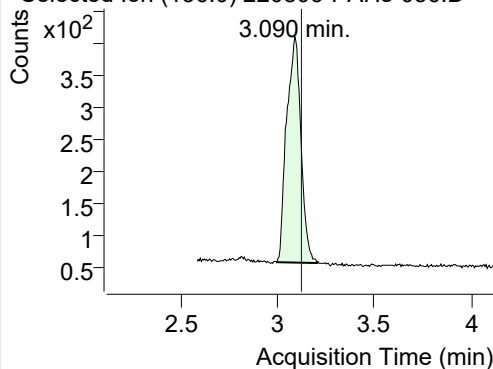
+ TIC SIM 220806-PAHs-036.D (Sample-Gas-220704-100DIL)



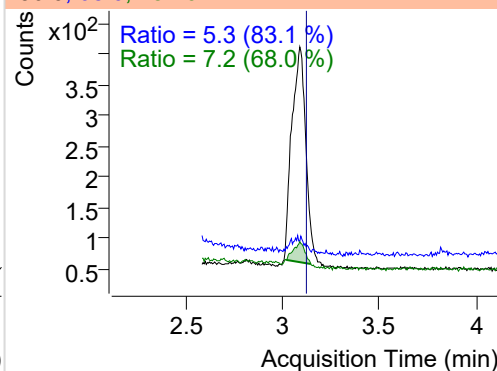
| Name                    | RT     | Transition | Resp. | Height | Final Conc. Units | Ratio |
|-------------------------|--------|------------|-------|--------|-------------------|-------|
| IS-D8-Naphthalene       | 3.090  | 136.0      | 1815  | 355.80 | ND ng/ml          | 7.2   |
| Naphthalene             | 3.112  | 128.0      | 229   | 47.66  | ND ng/ml          |       |
| Acenaphthylene          | 6.546  | 152.0      | 10    | 5.73   | ND ng/ml          |       |
| IS-D10-Acenaphthene     | 6.498  | 164.0      | 924   | 467.33 | ND ng/ml          | 98.0  |
| Acenaphthene            | 6.558  | 154.0      | 12    | 8.80   | ND ng/ml          | 134.3 |
| LSS-D10-Fluorene        | 7.627  | 176.0      | 821   | 447.01 | ND ng/ml          | 91.3  |
| Fluorene                | 7.680  | 166.0      | 38    | 16.19  | ND ng/ml          | 118.7 |
| IS-D10-Phenanthrene     | 9.780  | 188.0      | 1367  | 725.52 | ND ng/ml          | 15.6  |
| Phenanthrene            | 9.822  | 178.0      | 157   | 67.04  | ND ng/ml          | 15.1  |
| Anthracene              | 9.822  | 178.0      | 157   | 67.04  | ND ng/ml          | 15.1  |
| Fluoranthene            | 12.532 | 202.0      | 38    | 19.67  | ND ng/ml          |       |
| LSS-D10-Pyrene          | 12.976 | 212.0      | 944   | 510.79 | ND ng/ml          | 18.7  |
| Pyrene                  | 13.008 | 202.0      | 46    | 22.67  | ND ng/ml          |       |
| Benz(a)anthracene       | 15.892 | 228.0      | 30    | 8.53   | ND ng/ml          | 20.6  |
| IS-D12-Chrysene         | 15.838 | 240.0      | 541   | 212.89 | ND ng/ml          | 18.9  |
| Chrysene                | 15.892 | 228.0      | 30    | 8.53   | ND ng/ml          | 20.6  |
| Benzo(b)fluoranthene    | 18.651 | 252.0      | 12    | 7.14   | ND ng/ml          |       |
| Benzo(k)fluoranthene    | 18.651 | 252.0      | 12    | 7.14   | ND ng/ml          |       |
| SS-D12-Benzo(e)pyrene   | 18.601 | 264.0      | 347   | 158.84 | ND ng/ml          | 25.6  |
| Benzo(e)pyrene          | 18.651 | 252.0      | 12    | 7.14   | ND ng/ml          |       |
| Benzo(a)pyrene          | 18.651 | 252.0      | 12    | 7.14   | ND ng/ml          |       |
| IS-D12-Perylene         | 18.872 | 264.0      | 289   | 121.37 | ND ng/ml          | 26.8  |
| Perylene                | 18.651 | 252.0      | 12    | 7.14   | ND ng/ml          |       |
| Indeno(1,2,3-c,d)pyrene | 20.766 | 276.0      | 17    | 3.00   | ND ng/ml          |       |
| Dibenz(a,h)anthracene   | 20.843 | 278.0      | 6     | 2.67   | ND ng/ml          |       |
| Benzo(g,h,i)perylene    | 21.179 | 276.0      | 13    | 6.00   | ND ng/ml          |       |
| Coronene                | 23.454 | 300.0      | 13    | 4.82   | ND ng/ml          |       |

## IS-D8-Naphthalene

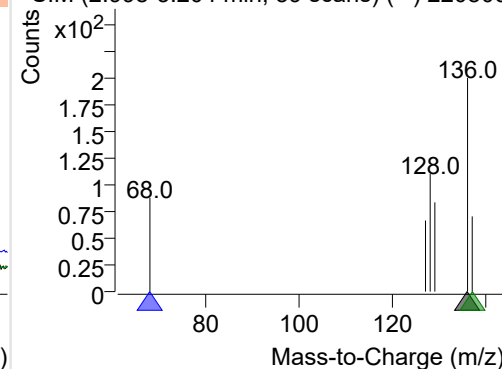
+ Selected Ion (136.0) 220806-PAHs-036.D



136.0, 68.0, 137.0

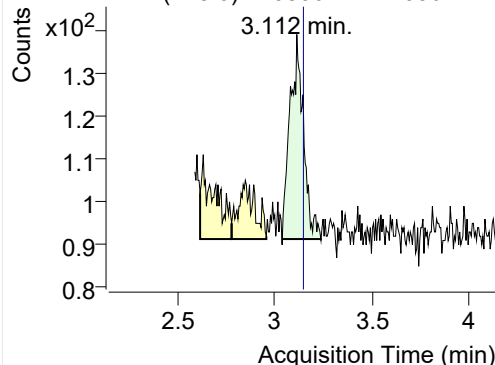


+ SIM (2.998-3.204 min, 39 scans) (\*\*) 220806

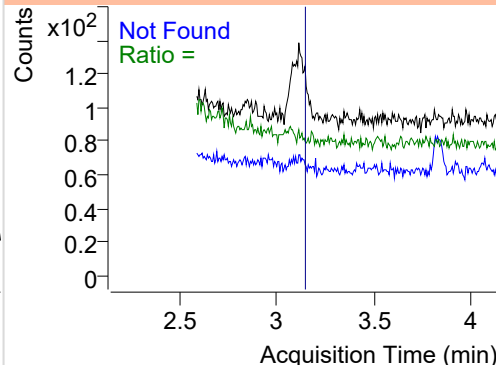


**Naphthalene**

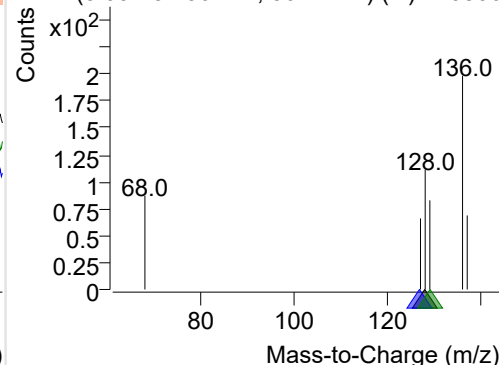
+ Selected Ion (128.0) 220806-PAHs-036.D



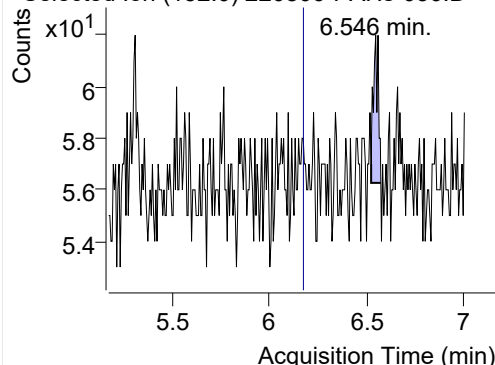
128.0, 127.0, 129.0



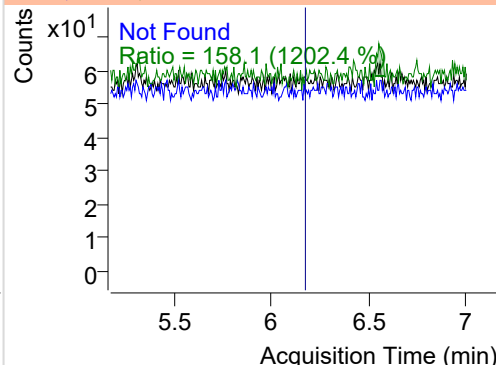
+ SIM (3.037-3.236 min, 36 scans) (\*\*) 220806

**Acenaphthylene**

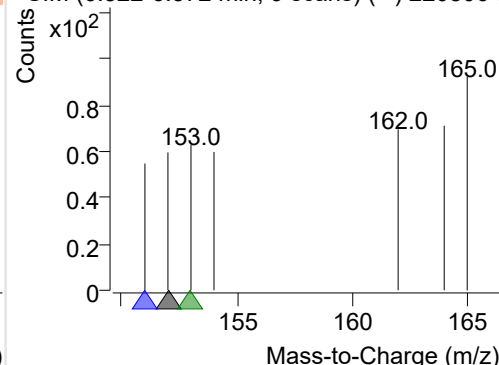
+ Selected Ion (152.0) 220806-PAHs-036.D



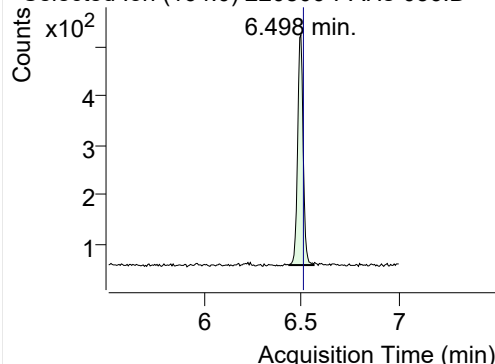
152.0, 151.0, 153.0



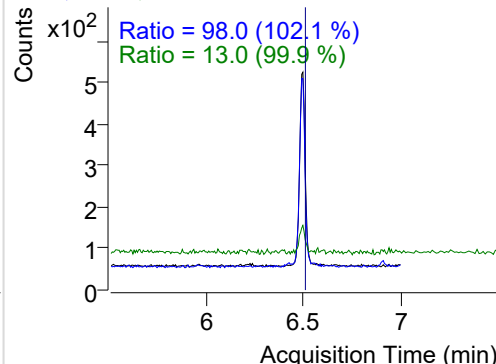
+ SIM (6.522-6.572 min, 9 scans) (\*\*) 220806-I

**IS-D10-Acenaphthene**

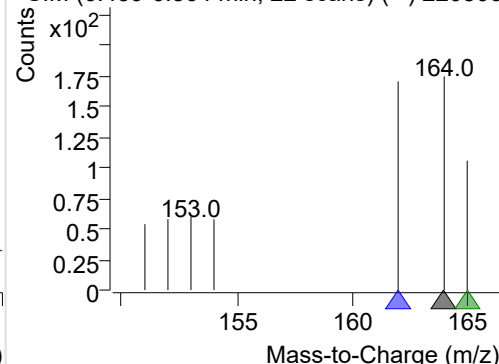
+ Selected Ion (164.0) 220806-PAHs-036.D



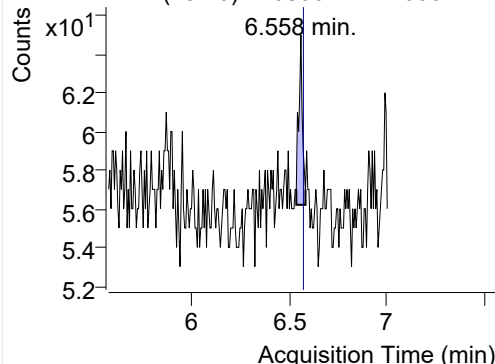
164.0, 162.0, 165.0



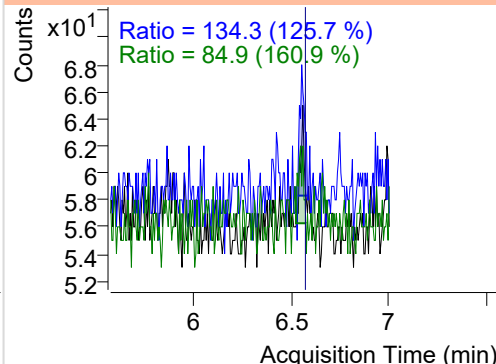
+ SIM (6.439-6.564 min, 22 scans) (\*\*) 220806

**Acenaphthene**

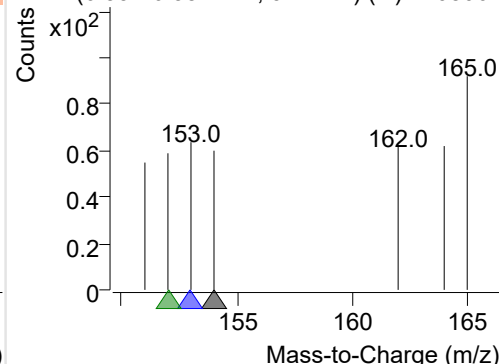
+ Selected Ion (154.0) 220806-PAHs-036.D



154.0, 153.0, 152.0

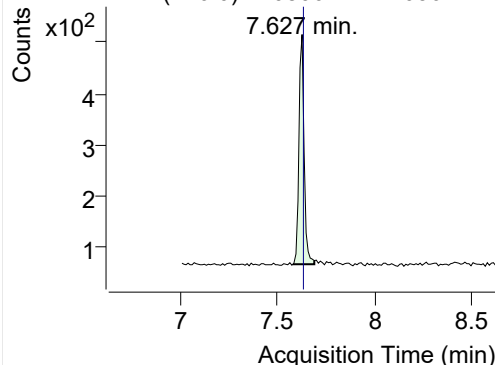


+ SIM (6.534-6.581 min, 9 scans) (\*\*) 220806-I

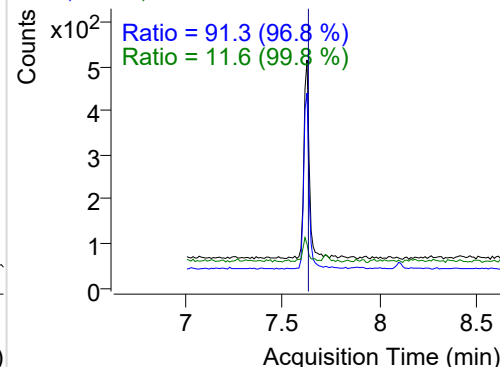


## LSS-D10-Fluorene

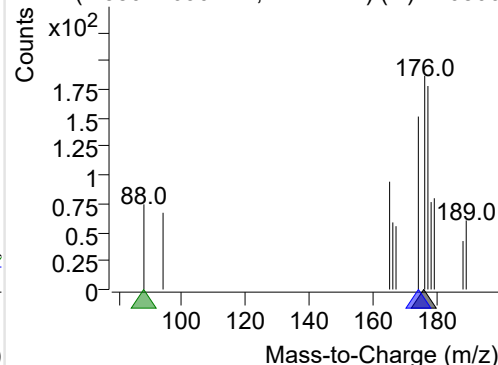
+ Selected Ion (176.0) 220806-PAHs-036.D



176.0, 174.0, 88.0

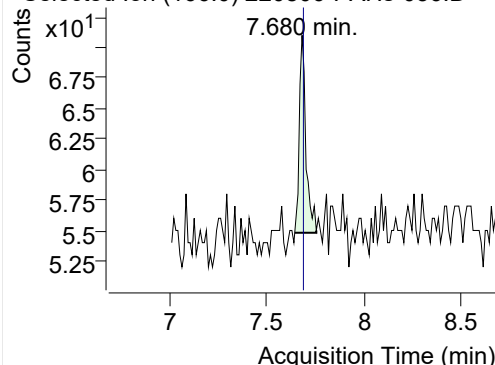


+ SIM (7.580-7.690 min, 11 scans) (\*\*) 220806

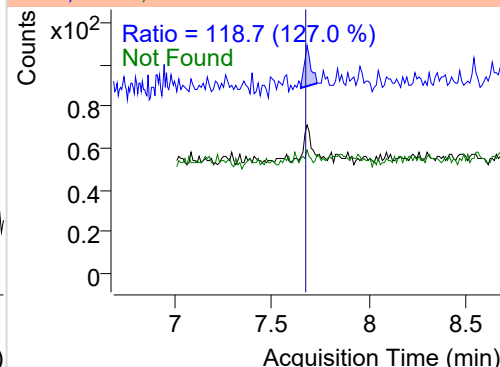


## Fluorene

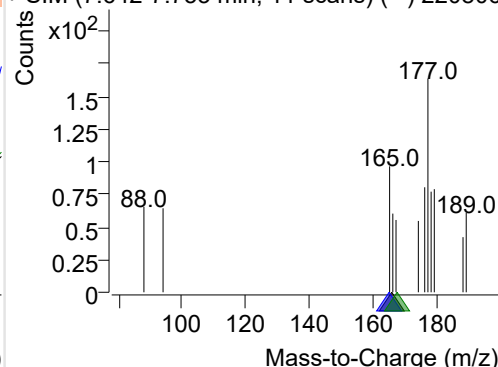
+ Selected Ion (166.0) 220806-PAHs-036.D



166.0, 165.0, 167.0

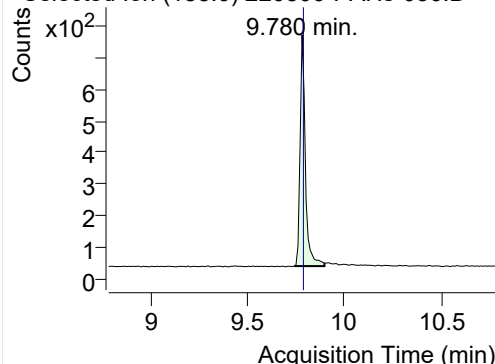


+ SIM (7.642-7.753 min, 11 scans) (\*\*) 220806

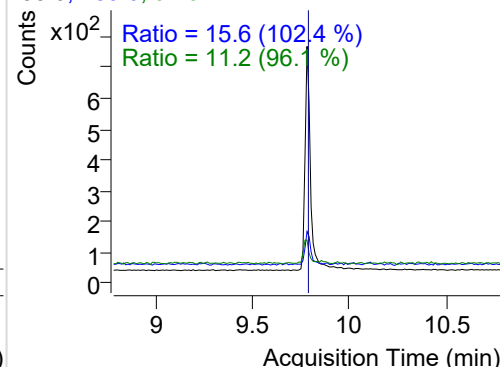


## IS-D10-Phenanthrene

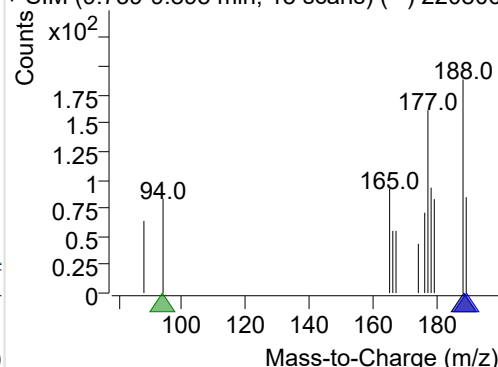
+ Selected Ion (188.0) 220806-PAHs-036.D



188.0, 189.0, 94.0

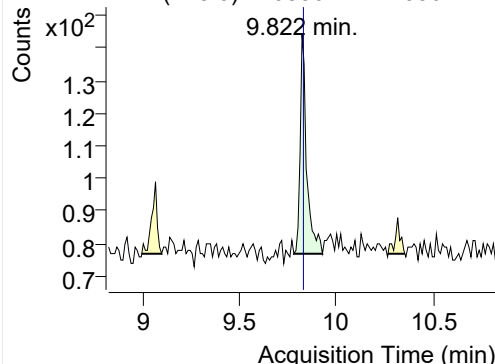


+ SIM (9.739-9.895 min, 15 scans) (\*\*) 220806

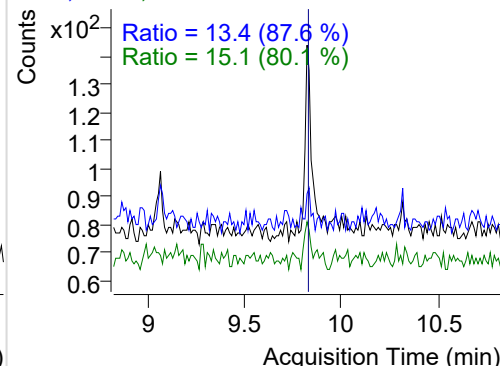


## Phenanthrene

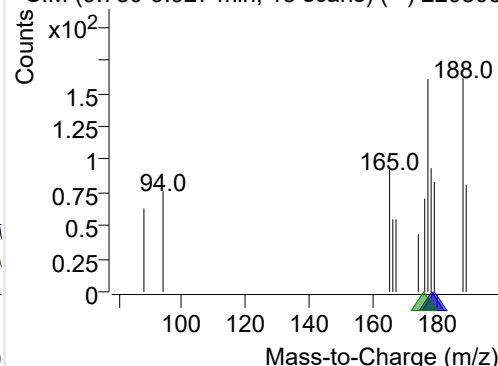
+ Selected Ion (178.0) 220806-PAHs-036.D



178.0, 179.0, 176.0

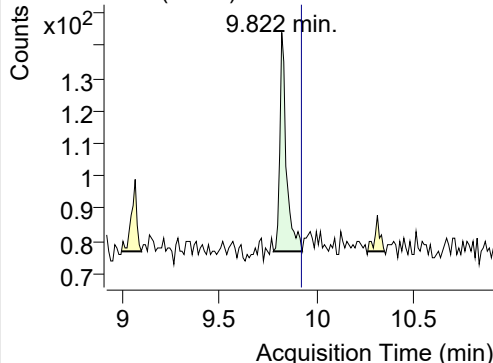


+ SIM (9.780-9.927 min, 15 scans) (\*\*) 220806

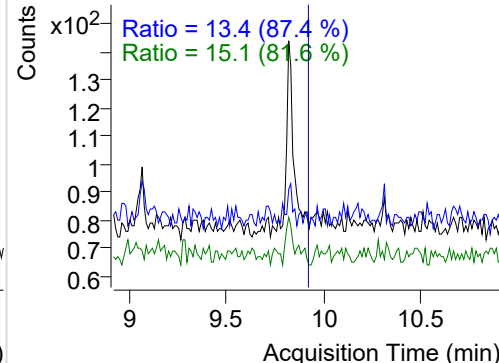


**Anthracene**

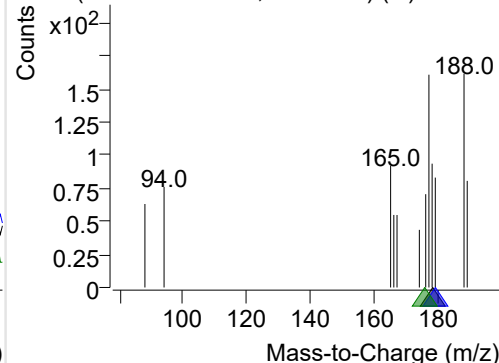
+ Selected Ion (178.0) 220806-PAHs-036.D



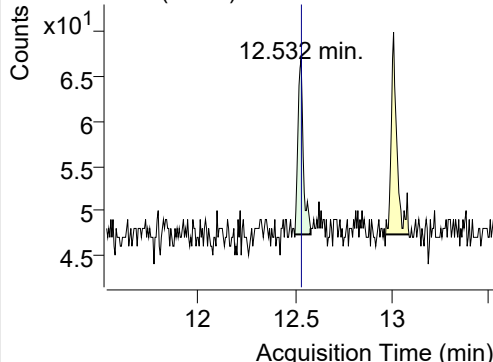
178.0, 179.0, 176.0



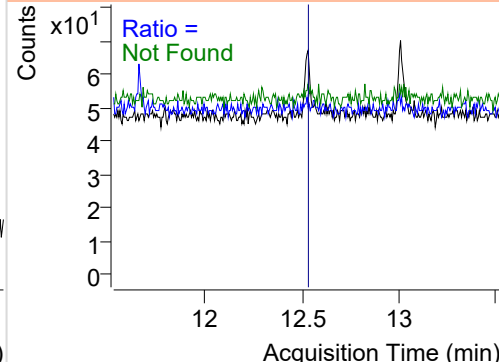
+ SIM (9.780-9.927 min, 15 scans) (\*\*) 220806

**Fluoranthene**

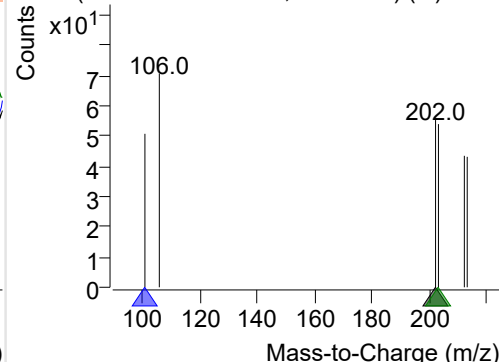
+ Selected Ion (202.0) 220806-PAHs-036.D



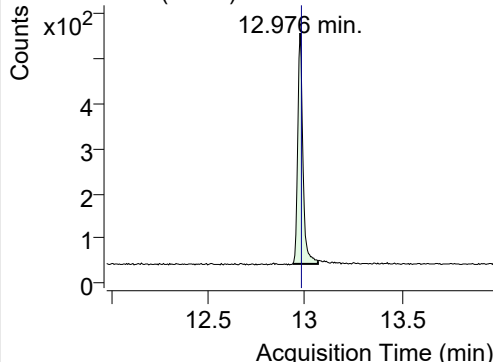
202.0, 101.0, 203.0



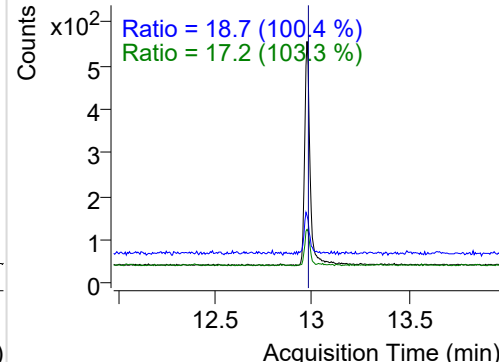
+ SIM (12.500-12.580 min, 15 scans) (\*\*) 2208

**LSS-D10-Pyrene**

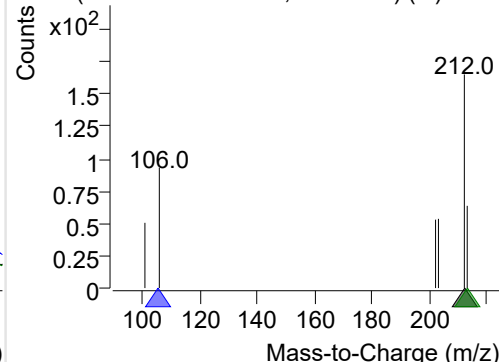
+ Selected Ion (212.0) 220806-PAHs-036.D



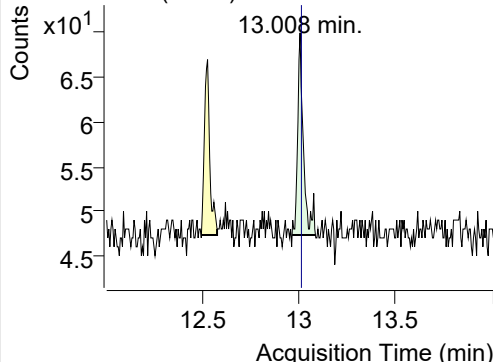
212.0, 106.0, 213.0



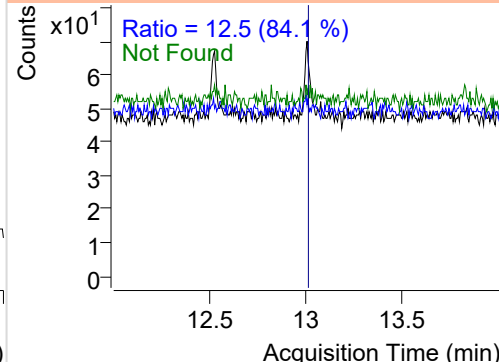
+ SIM (12.938-13.068 min, 24 scans) (\*\*) 2208

**Pyrene**

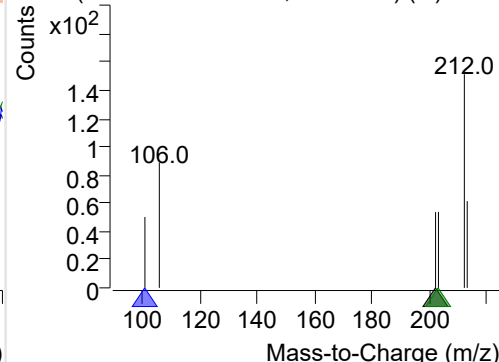
+ Selected Ion (202.0) 220806-PAHs-036.D



202.0, 101.0, 203.0



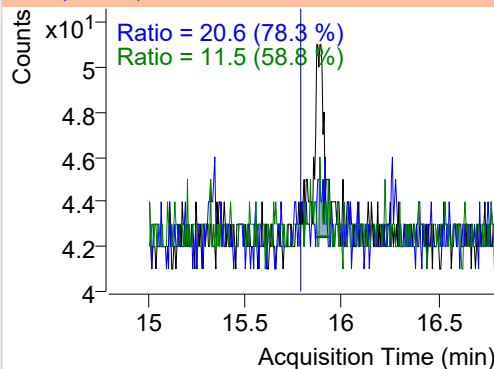
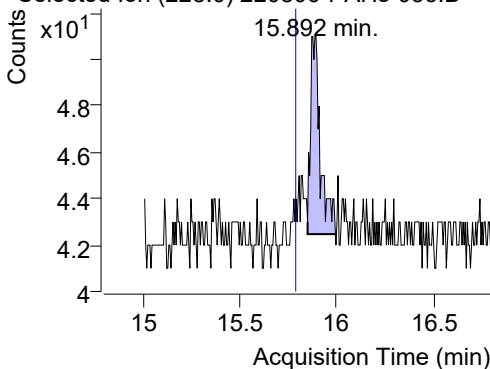
+ SIM (12.968-13.088 min, 22 scans) (\*\*) 2208



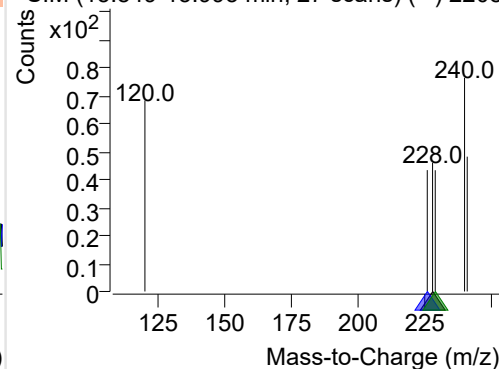
**Benz(a)anthracene**

+ Selected Ion (228.0) 220806-PAHs-036.D

228.0, 226.0, 229.0

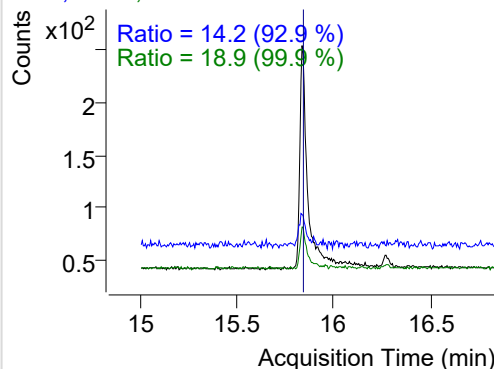
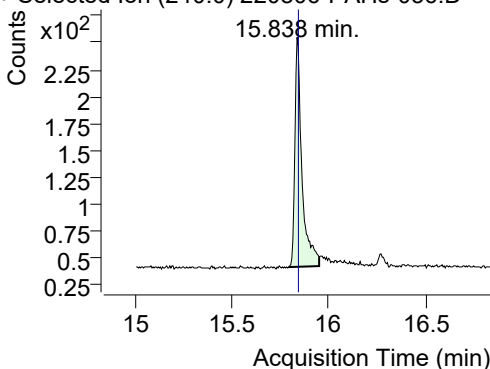


+ SIM (15.849-15.993 min, 27 scans) (\*\*) 2208

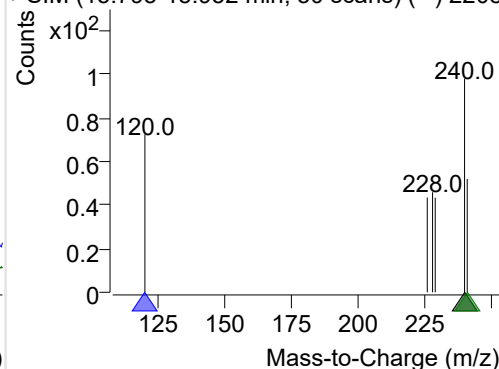
**IS-D12-Chrysene**

+ Selected Ion (240.0) 220806-PAHs-036.D

240.0, 120.0, 241.0

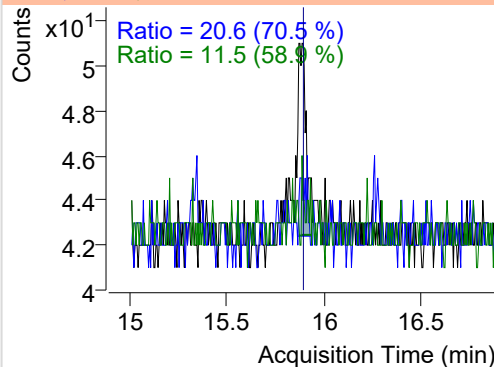
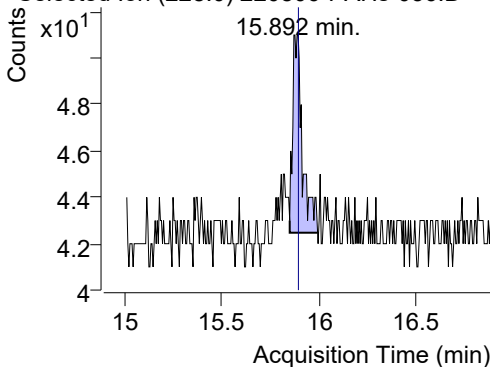


+ SIM (15.795-15.952 min, 30 scans) (\*\*) 2208

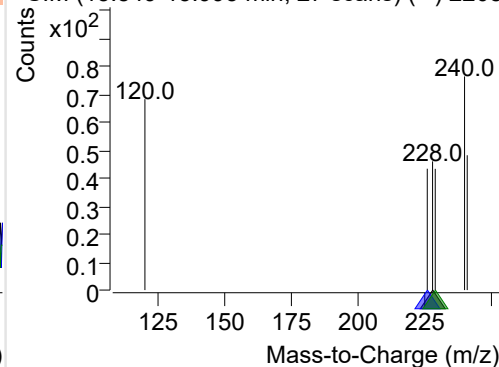
**Chrysene**

+ Selected Ion (228.0) 220806-PAHs-036.D

228.0, 226.0, 229.0

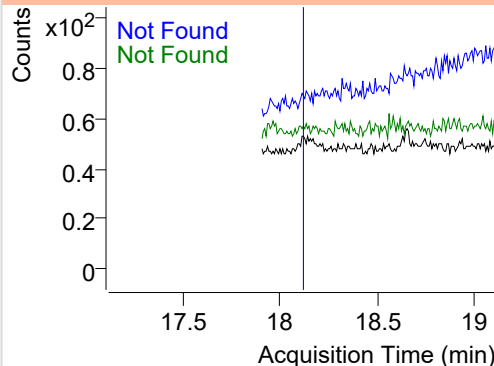
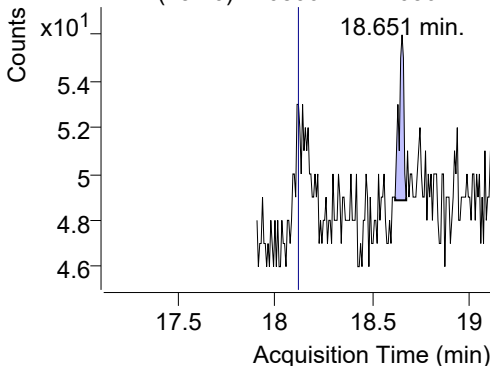


+ SIM (15.849-15.993 min, 27 scans) (\*\*) 2208

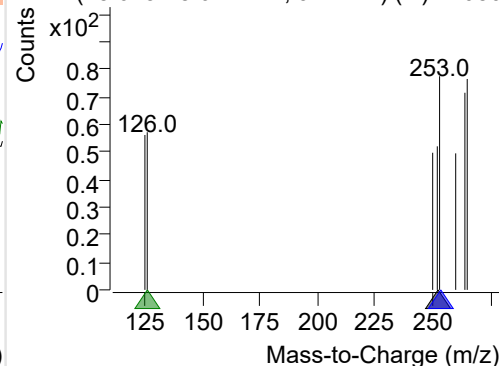
**Benzo(b)fluoranthene**

+ Selected Ion (252.0) 220806-PAHs-036.D

252.0, 253.0, 126.0



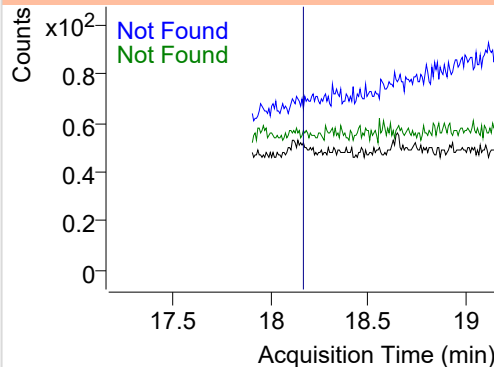
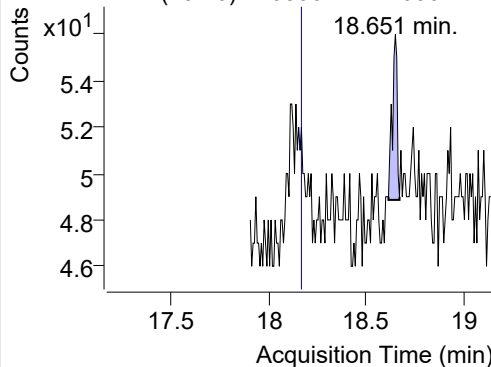
+ SIM (18.615-18.672 min, 9 scans) (\*\*) 22080



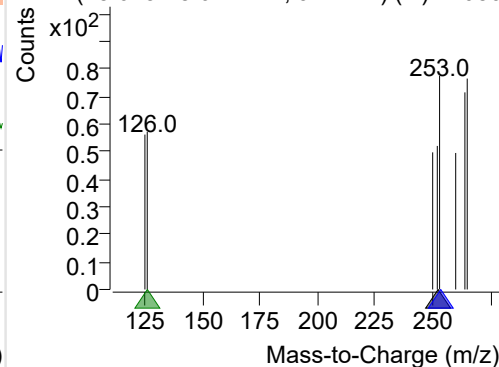
**Benzo(k)fluoranthene**

+ Selected Ion (252.0) 220806-PAHs-036.D

252.0, 253.0, 126.0

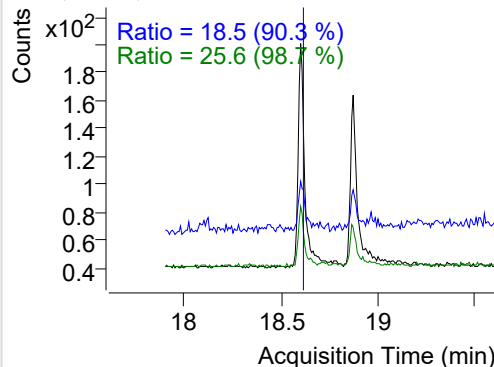
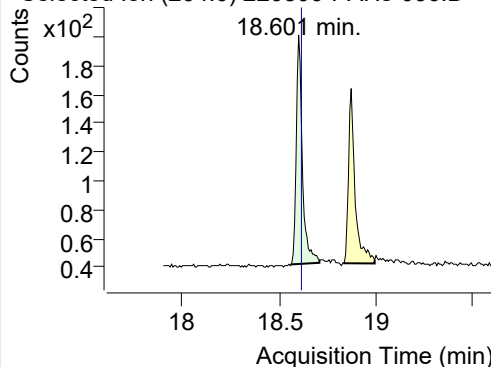


+ SIM (18.615-18.672 min, 9 scans) (\*\*) 22080

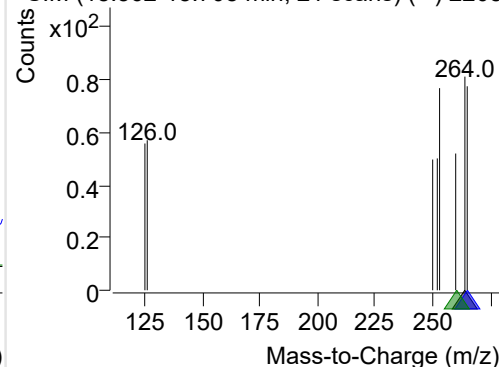
**SS-D12-Benzo(e)pyrene**

+ Selected Ion (264.0) 220806-PAHs-036.D

264.0, 265.0, 260.0

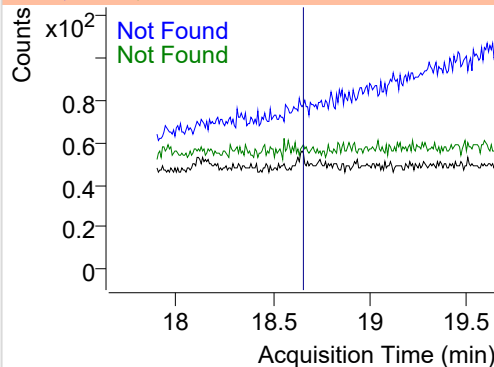
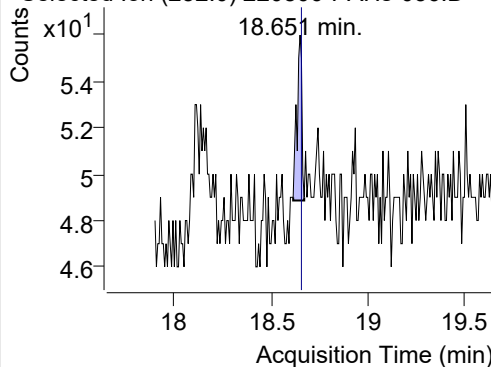


+ SIM (18.562-18.708 min, 21 scans) (\*\*) 2208

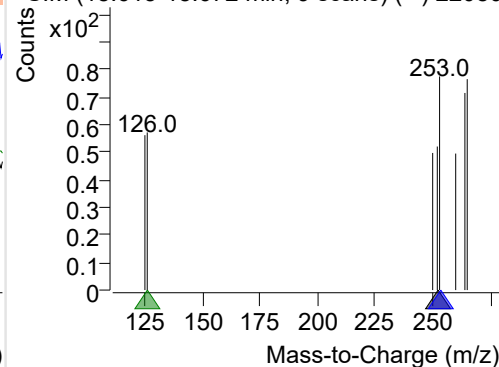
**Benzo(e)pyrene**

+ Selected Ion (252.0) 220806-PAHs-036.D

252.0, 253.0, 126.0

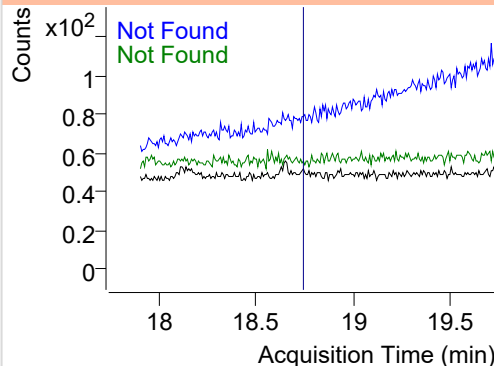
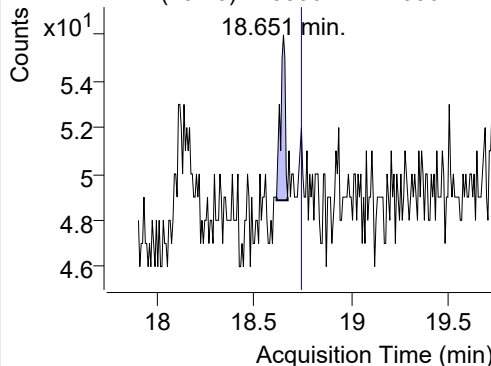


+ SIM (18.615-18.672 min, 9 scans) (\*\*) 22080

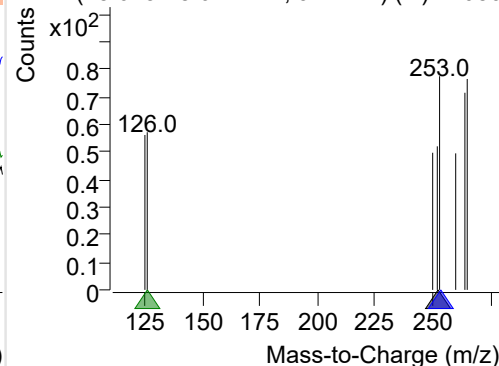
**Benzo(a)pyrene**

+ Selected Ion (252.0) 220806-PAHs-036.D

252.0, 253.0, 126.0

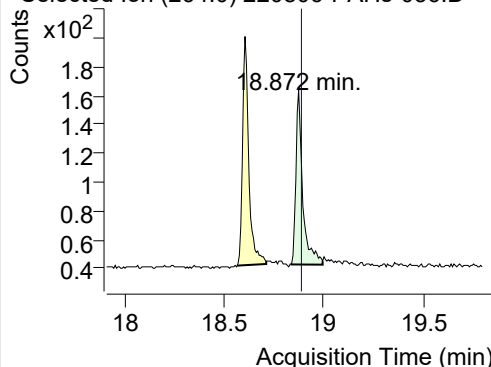


+ SIM (18.615-18.672 min, 9 scans) (\*\*) 22080

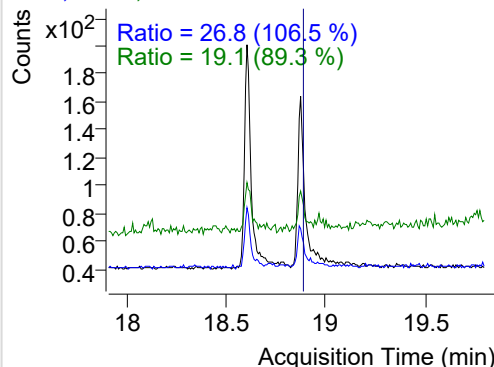


## IS-D12-Perylene

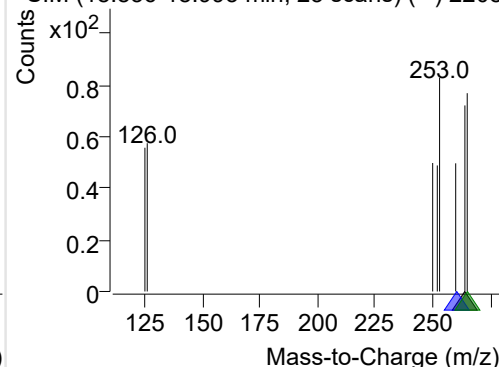
+ Selected Ion (264.0) 220806-PAHs-036.D



264.0, 260.0, 265.0

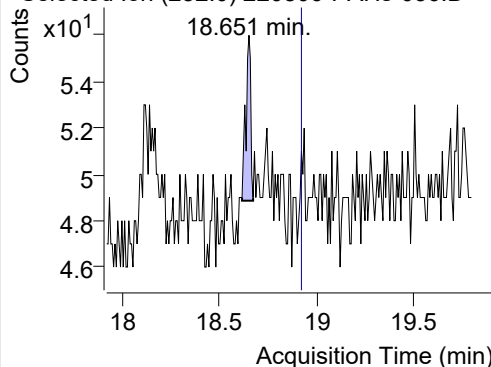


+ SIM (18.836-18.993 min, 23 scans) (\*\*) 2208

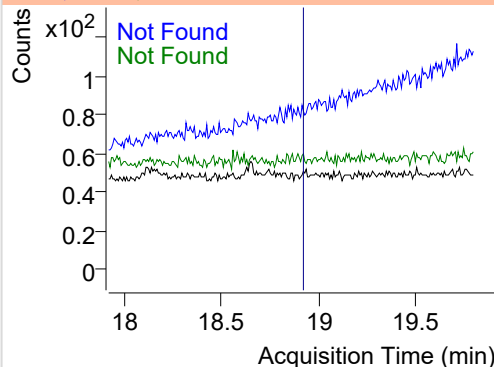


## Perylene

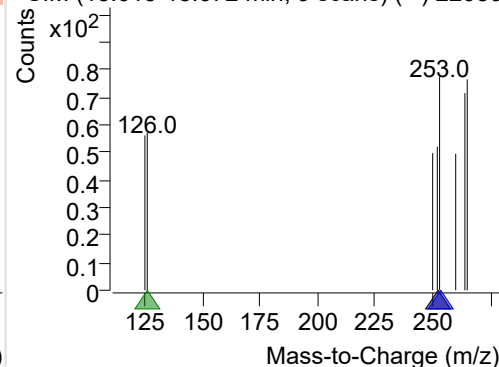
+ Selected Ion (252.0) 220806-PAHs-036.D



252.0, 253.0, 126.0

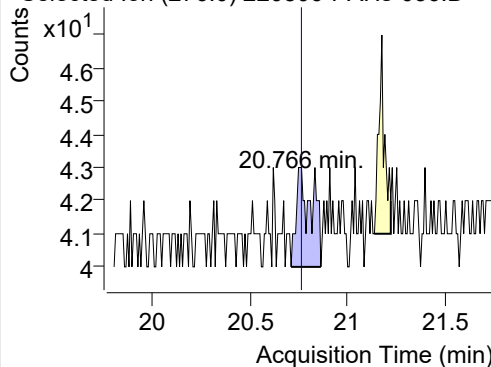


+ SIM (18.615-18.672 min, 9 scans) (\*\*) 22080

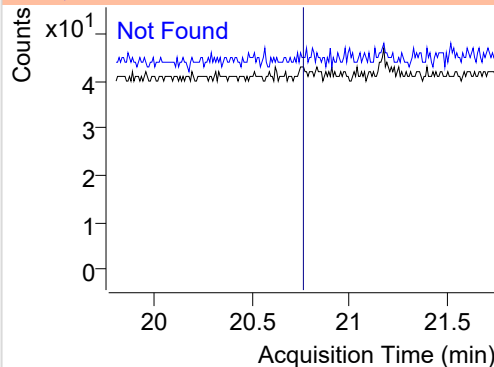


## Indeno(1,2,3-c,d)pyrene

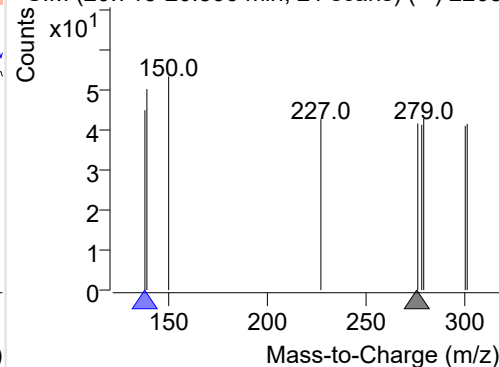
+ Selected Ion (276.0) 220806-PAHs-036.D



276.0, 138.0

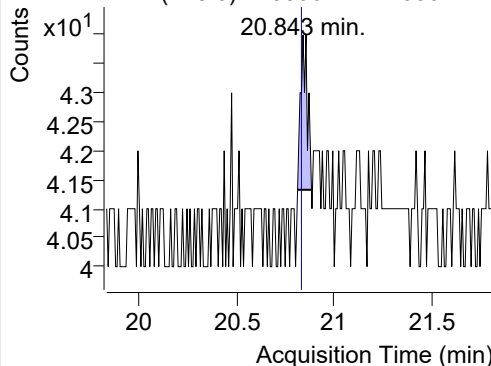


+ SIM (20.713-20.866 min, 21 scans) (\*\*) 2208

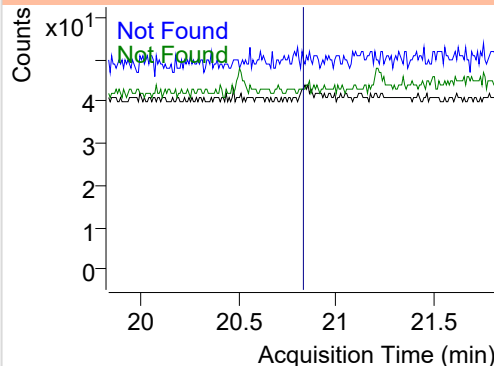


## Dibenz(a,h)anthracene

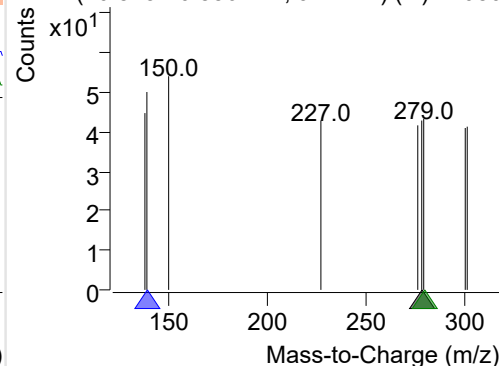
+ Selected Ion (278.0) 220806-PAHs-036.D



278.0, 139.0, 279.0



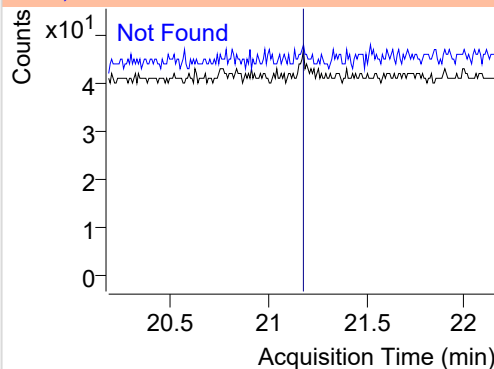
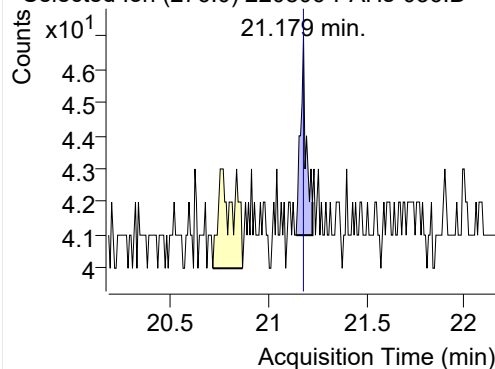
+ SIM (20.815-20.886 min, 9 scans) (\*\*) 22080



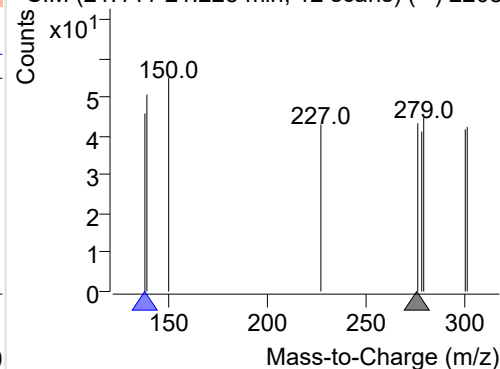
**Benzo(g,h,i)perylene**

+ Selected Ion (276.0) 220806-PAHs-036.D

276.0, 138.0

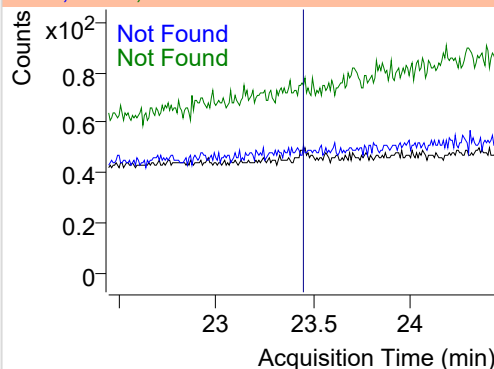
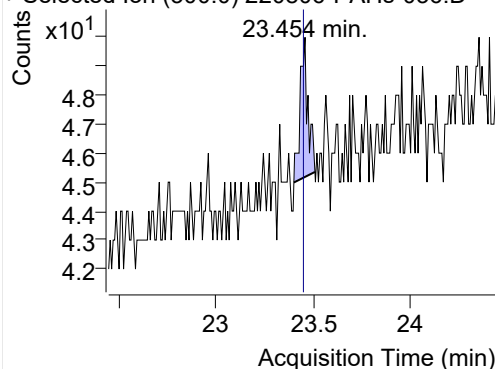


+ SIM (21.141-21.225 min, 12 scans) (\*\*) 2208

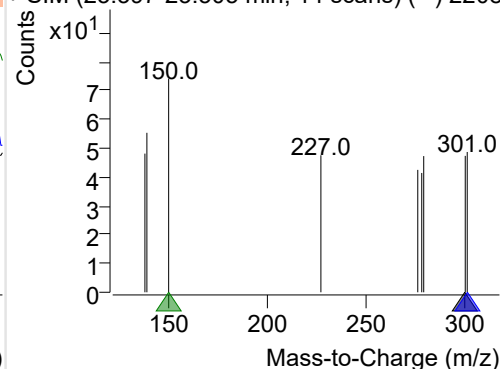
**Coronene**

+ Selected Ion (300.0) 220806-PAHs-036.D

300.0, 301.0, 150.0



+ SIM (23.397-23.505 min, 14 scans) (\*\*) 2208





## Quantitative Analysis Sample Based Report

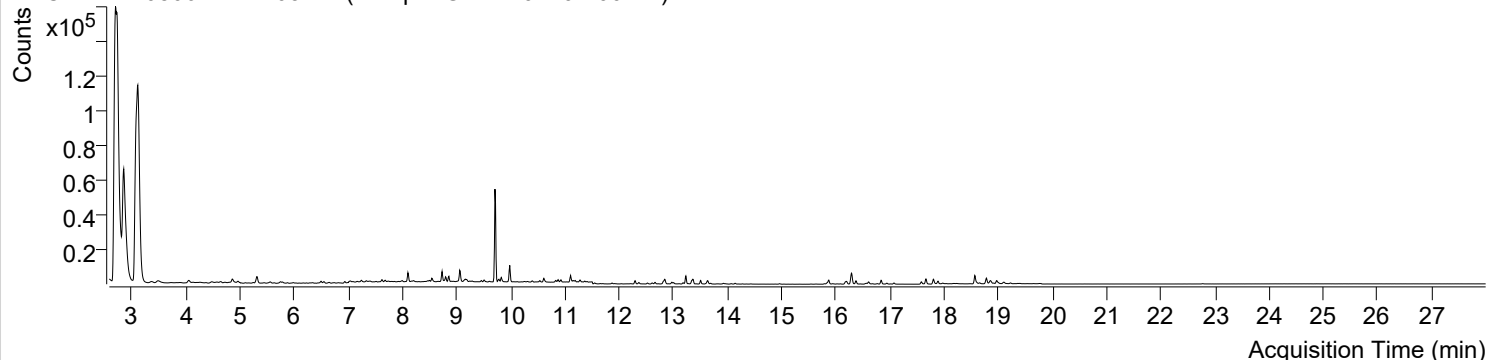


Trusted Answers

|                           |                                                                                            |                       |                          |
|---------------------------|--------------------------------------------------------------------------------------------|-----------------------|--------------------------|
| Batch Data Path File Name | D:\MassHunter\GCMS\1\data\PAHs\220806-PAHs-Sample\QuantResults\220806-PAHs-Quant.batch.bin |                       |                          |
| Analysis Time Stamp       | 2022-10-10 오전 10:12:04                                                                     | Analyst Name          | DESKTOP-86B7UPG\5975MS   |
| Report Generation Time    | 2022-10-10 오전 10:12:12                                                                     | Report Generator Name | DESKTOP-86B7UPG\5975MS   |
| Calibration Last Update   | 2022-12-15 오후 3:30:46                                                                      | Batch State           | Processed                |
| Analyze Quant Version     | 10.2                                                                                       | Report Quant Version  | 10.2                     |
| Acq. Date-Time            | 2022-08-07 오전 5:10:47                                                                      | Data File             | 220806-PAHs-037.D        |
| Type                      | Sample                                                                                     | Name                  | Sample-Gas-220710-100DIL |
| Dil.                      | 1                                                                                          | Acq. Method File      | PAHs 19mix-Method        |

## Sample Chromatogram

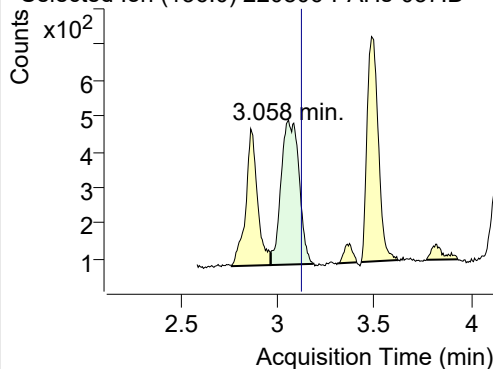
+ TIC SIM 220806-PAHs-037.D (Sample-Gas-220710-100DIL)



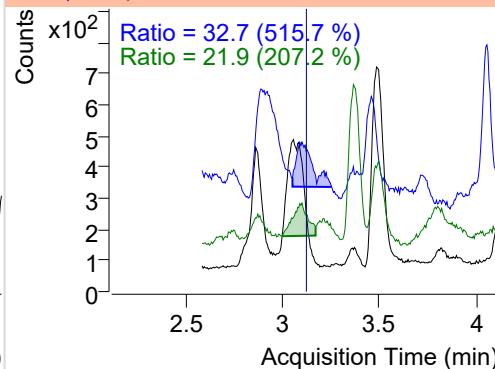
| Name                    | RT     | Transition | Resp.  | Height   | Final Conc. Units | Ratio |
|-------------------------|--------|------------|--------|----------|-------------------|-------|
| IS-D8-Naphthalene       | 3.058  | 136.0      | 2618   | 406.19   | ND ng/ml          | 21.9  |
| Naphthalene             | 3.112  | 128.0      | 470898 | 91289.00 | ND ng/ml          | 13.3  |
| Acenaphthylene          | 6.167  | 152.0      | 127    | 52.51    | ND ng/ml          | 33.4  |
| IS-D10-Acenaphthene     | 6.499  | 164.0      | 1085   | 521.31   | ND ng/ml          | 97.5  |
| Acenaphthene            | 6.552  | 154.0      | 381    | 184.05   | ND ng/ml          | 119.6 |
| LSS-D10-Fluorene        | 7.617  | 176.0      | 828    | 460.50   | ND ng/ml          | 97.5  |
| Fluorene                | 7.680  | 166.0      | 777    | 373.18   | ND ng/ml          | 119.5 |
| IS-D10-Phenanthrene     | 9.780  | 188.0      | 1742   | 1077.71  | ND ng/ml          | 27.9  |
| Phenanthrene            | 9.822  | 178.0      | 2610   | 1492.21  | ND ng/ml          | 19.3  |
| Anthracene              | 9.979  | 178.0      | 4057   | 2643.21  | ND ng/ml          | 27.8  |
| Fluoranthene            | 12.521 | 202.0      | 598    | 367.05   | ND ng/ml          |       |
| LSS-D10-Pyrene          | 12.971 | 212.0      | 1147   | 659.22   | ND ng/ml          | 26.4  |
| Pyrene                  | 13.003 | 202.0      | 1017   | 550.55   | ND ng/ml          |       |
| Benz(a)anthracene       | 15.800 | 228.0      | 22     | 9.68     | ND ng/ml          |       |
| IS-D12-Chrysene         | 15.838 | 240.0      | 1102   | 488.06   | ND ng/ml          | 27.5  |
| Chrysene                | 15.876 | 228.0      | 174    | 61.29    | ND ng/ml          | 23.6  |
| Benzo(b)fluoranthene    | 18.231 | 252.0      | 113    | 56.24    | ND ng/ml          | 120.5 |
| Benzo(k)fluoranthene    | 18.231 | 252.0      | 113    | 56.24    | ND ng/ml          | 120.5 |
| SS-D12-Benzo(e)pyrene   | 18.566 | 264.0      | 3551   | 1428.42  | ND ng/ml          | 7.0   |
| Benzo(e)pyrene          | 18.658 | 252.0      | 839    | 376.70   | ND ng/ml          | 15.8  |
| Benzo(a)pyrene          | 18.779 | 252.0      | 914    | 363.87   | ND ng/ml          | 15.3  |
| IS-D12-Perylene         | 18.865 | 264.0      | 2136   | 747.42   | ND ng/ml          | 10.4  |
| Perylene                | 18.851 | 252.0      | 843    | 248.38   | ND ng/ml          | 13.0  |
| Indeno(1,2,3-c,d)pyrene |        | 276.0      |        |          | ND ng/ml          |       |
| Dibenz(a,h)anthracene   | 21.102 | 278.0      | 9      | 6.41     | ND ng/ml          |       |
| Benzo(g,h,i)perylene    |        | 276.0      |        |          | ND ng/ml          |       |
| Coronene                | 23.454 | 300.0      | 7      | 3.31     | ND ng/ml          |       |

## IS-D8-Naphthalene

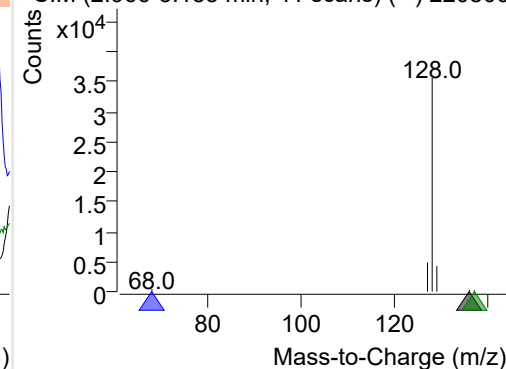
+ Selected Ion (136.0) 220806-PAHs-037.D



136.0, 68.0, 137.0

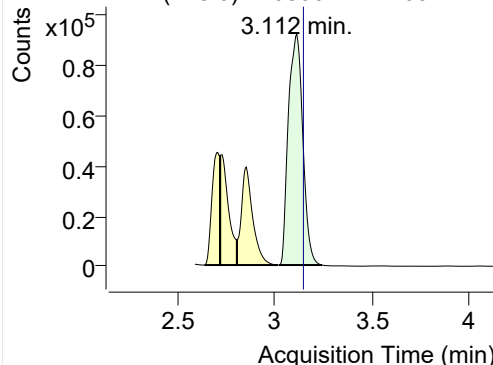


+ SIM (2.966-3.183 min, 41 scans) (\*\*) 220806

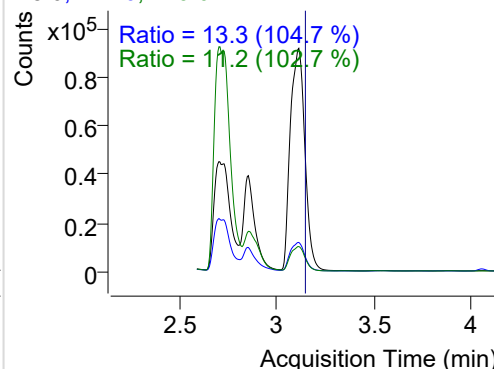


**Naphthalene**

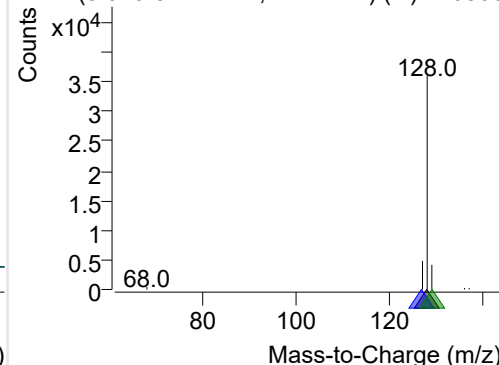
+ Selected Ion (128.0) 220806-PAHs-037.D



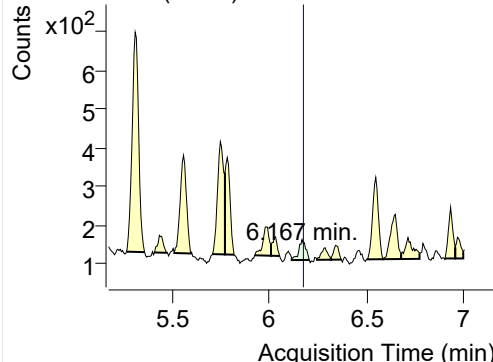
128.0, 127.0, 129.0



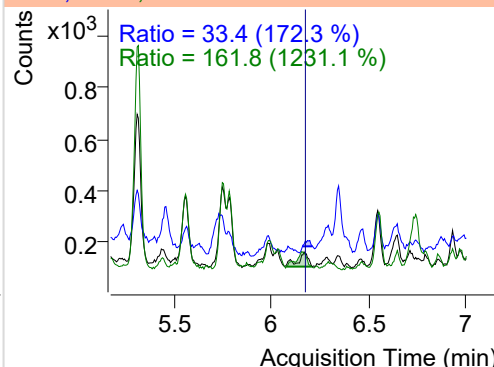
+ SIM (3.020-3.242 min, 41 scans) (\*\*) 220806

**Acenaphthylene**

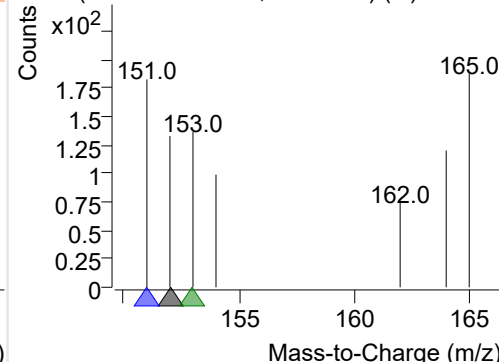
+ Selected Ion (152.0) 220806-PAHs-037.D



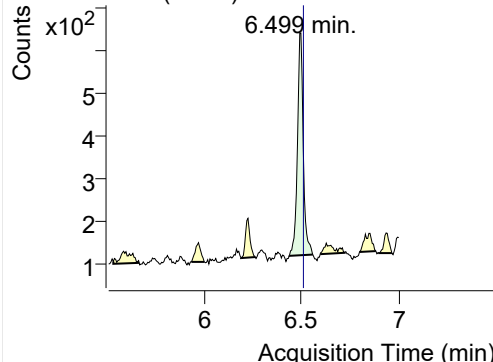
152.0, 151.0, 153.0



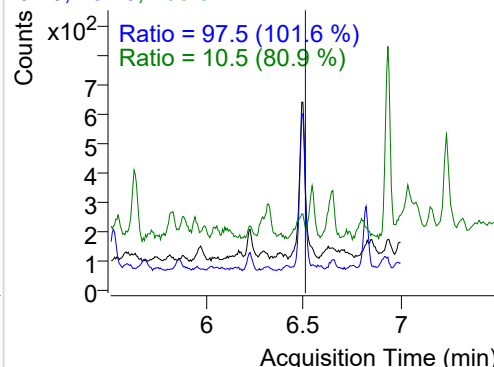
+ SIM (6.114-6.204 min, 16 scans) (\*\*) 220806

**IS-D10-Acenaphthene**

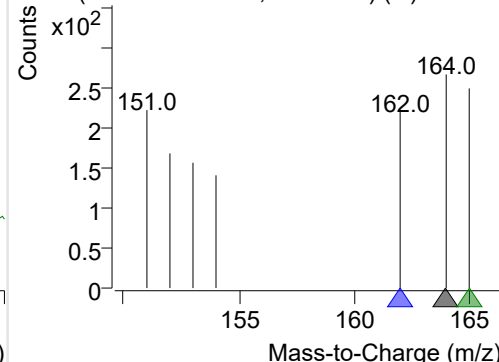
+ Selected Ion (164.0) 220806-PAHs-037.D



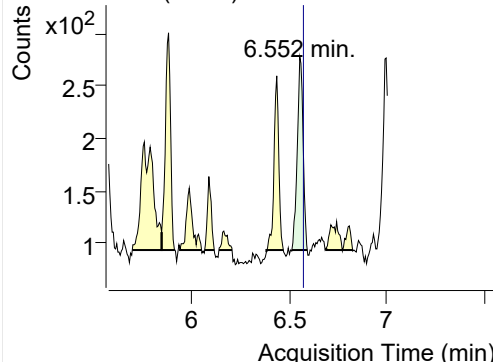
164.0, 162.0, 165.0



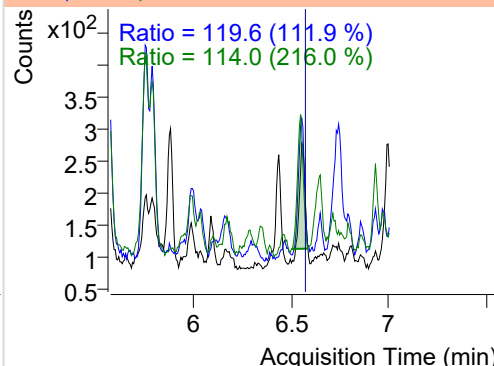
+ SIM (6.439-6.559 min, 21 scans) (\*\*) 220806

**Acenaphthene**

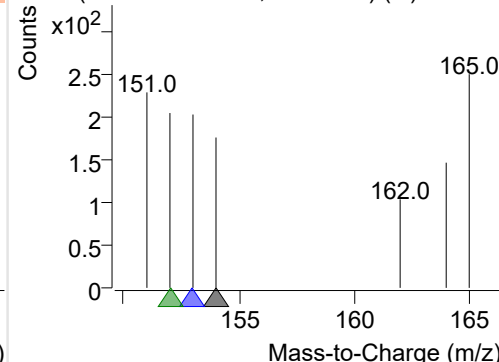
+ Selected Ion (154.0) 220806-PAHs-037.D



154.0, 153.0, 152.0

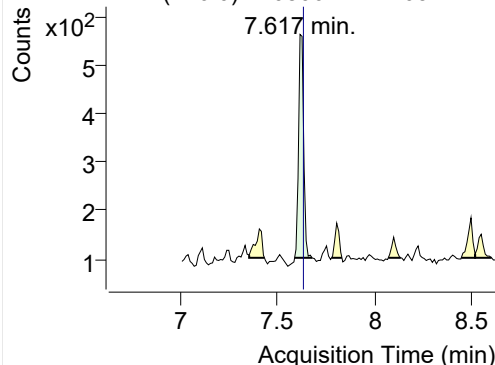


+ SIM (6.511-6.590 min, 13 scans) (\*\*) 220806

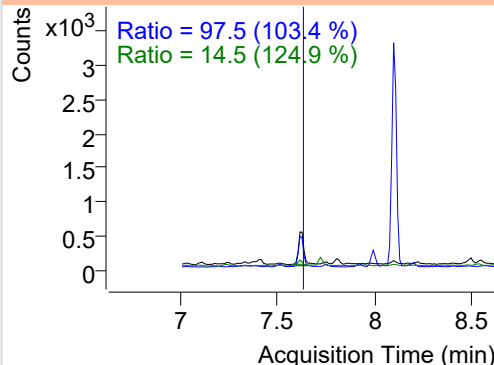


## LSS-D10-Fluorene

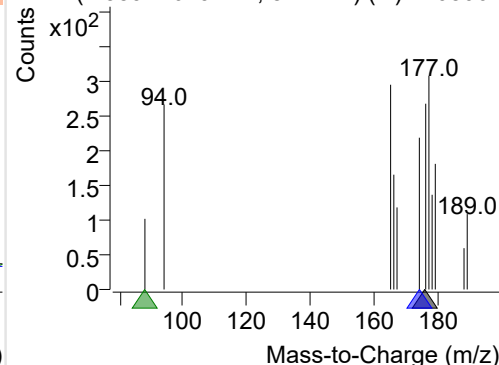
+ Selected Ion (176.0) 220806-PAHs-037.D



176.0, 174.0, 88.0

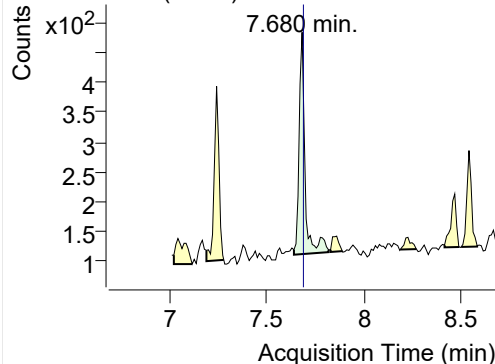


+ SIM (7.589-7.679 min, 8 scans) (\*\*) 220806-I

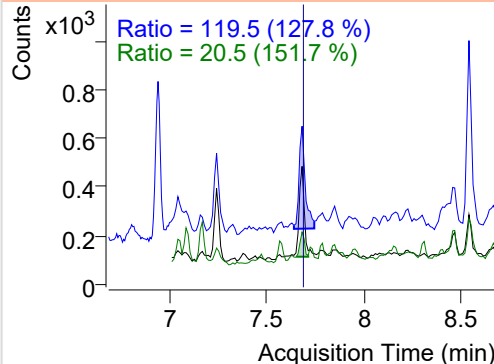


## Fluorene

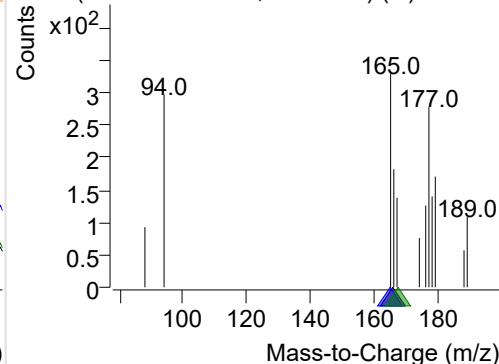
+ Selected Ion (166.0) 220806-PAHs-037.D



166.0, 165.0, 167.0

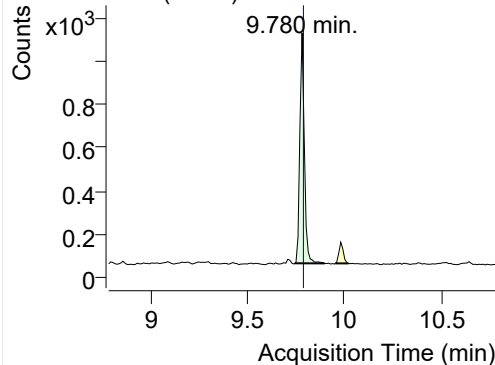


+ SIM (7.638-7.816 min, 18 scans) (\*\*) 220806

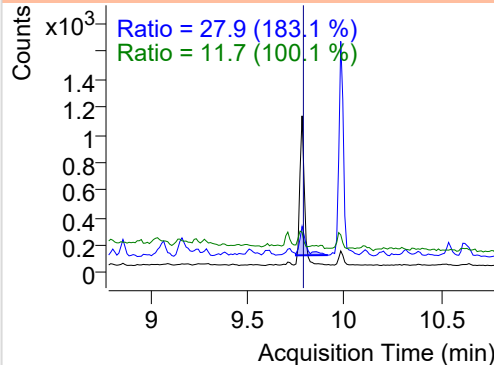


## IS-D10-Phenanthrene

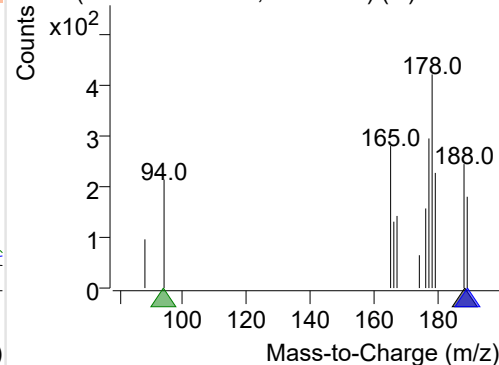
+ Selected Ion (188.0) 220806-PAHs-037.D



188.0, 189.0, 94.0

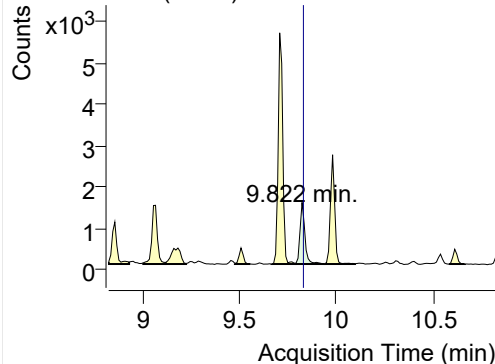


+ SIM (9.742-9.896 min, 15 scans) (\*\*) 220806

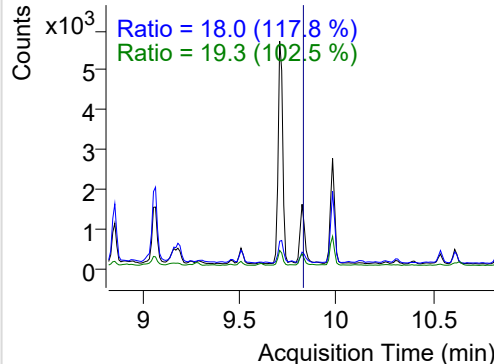


## Phenanthrene

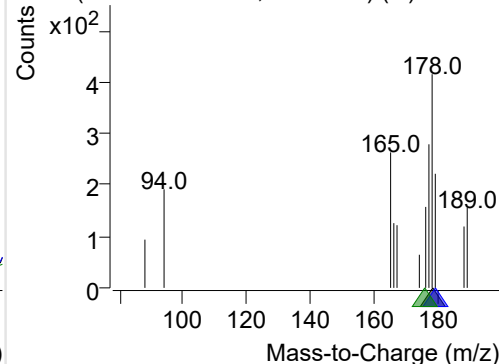
+ Selected Ion (178.0) 220806-PAHs-037.D



178.0, 179.0, 176.0

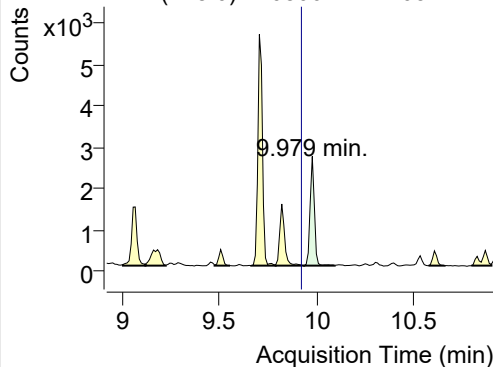


+ SIM (9.790-9.937 min, 15 scans) (\*\*) 220806

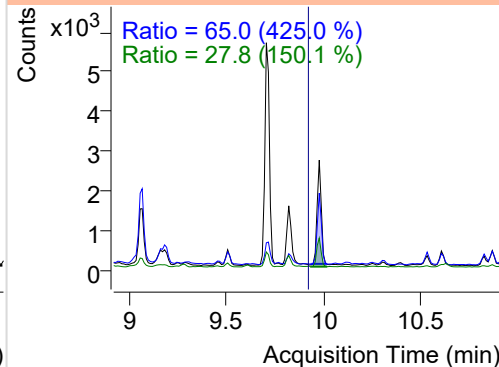


**Anthracene**

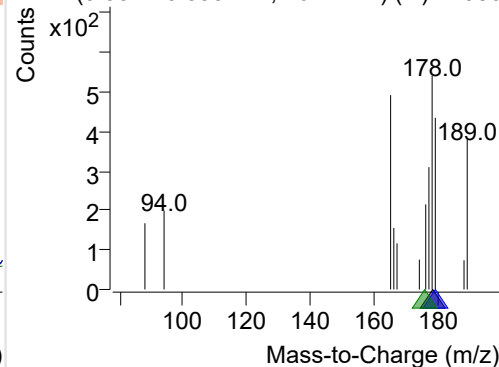
+ Selected Ion (178.0) 220806-PAHs-037.D



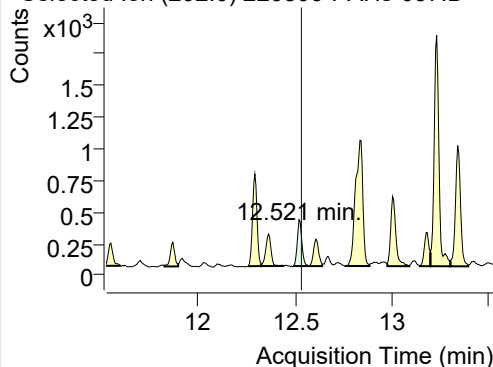
178.0, 179.0, 176.0



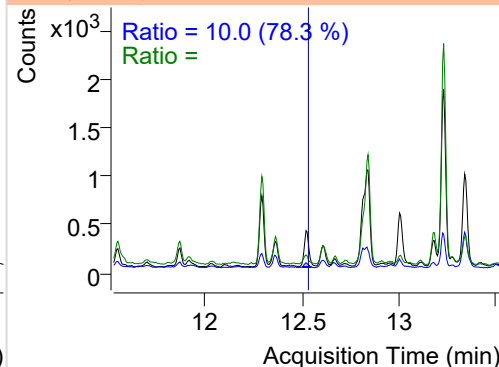
+ SIM (9.937-10.095 min, 16 scans) (\*\*) 22080

**Fluoranthene**

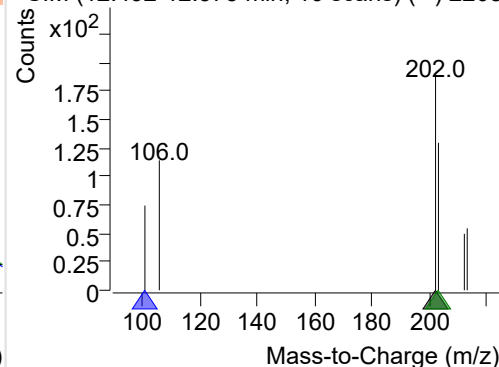
+ Selected Ion (202.0) 220806-PAHs-037.D



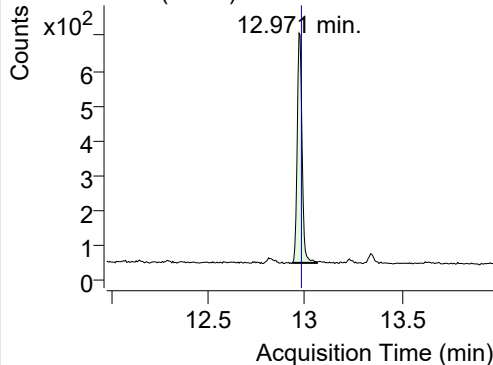
202.0, 101.0, 203.0



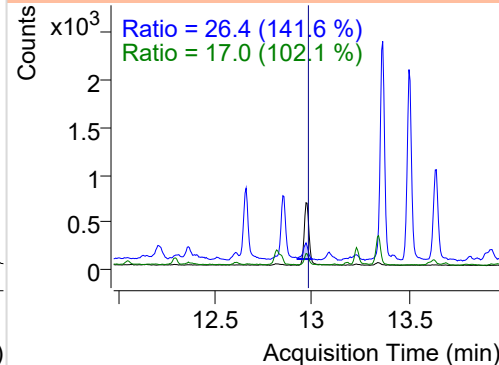
+ SIM (12.492-12.575 min, 16 scans) (\*\*) 2208

**LSS-D10-Pyrene**

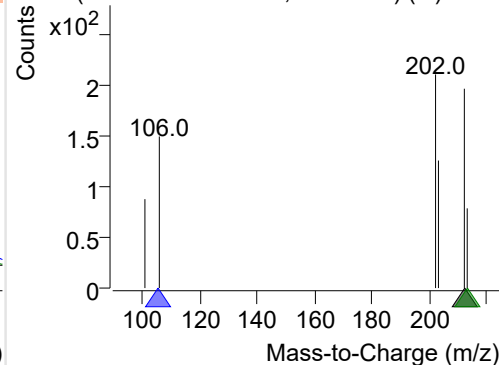
+ Selected Ion (212.0) 220806-PAHs-037.D



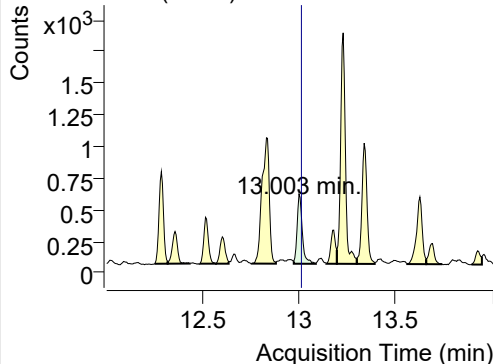
212.0, 106.0, 213.0



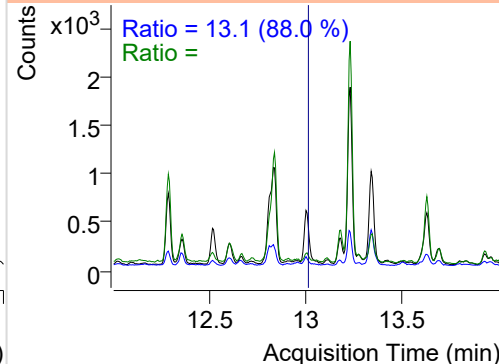
+ SIM (12.936-13.063 min, 24 scans) (\*\*) 2208

**Pyrene**

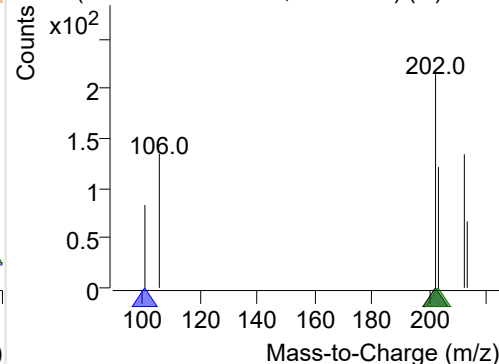
+ Selected Ion (202.0) 220806-PAHs-037.D



202.0, 101.0, 203.0



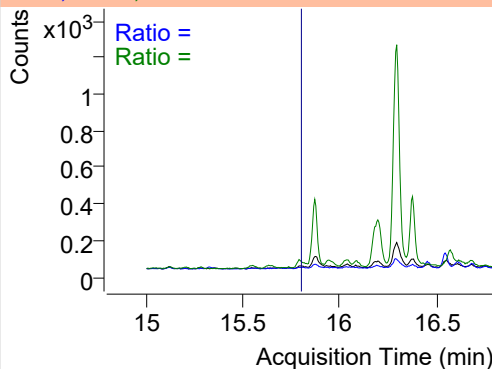
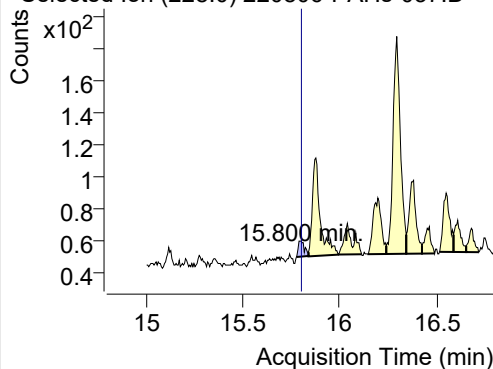
+ SIM (12.976-13.090 min, 22 scans) (\*\*) 2208



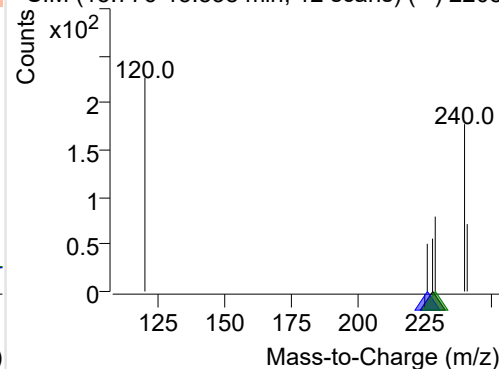
**Benz(a)anthracene**

+ Selected Ion (228.0) 220806-PAHs-037.D

228.0, 226.0, 229.0

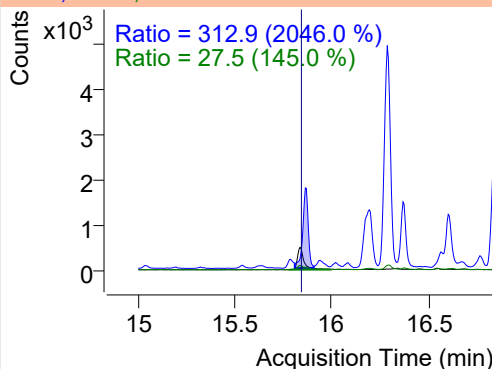
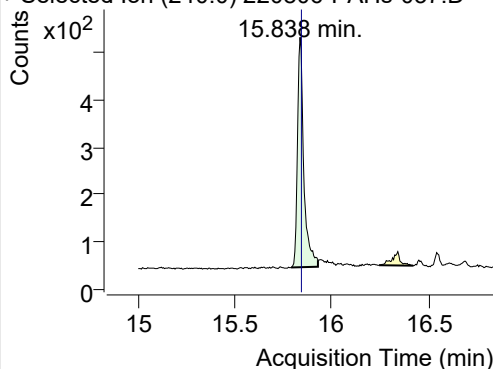


+ SIM (15.776-15.838 min, 12 scans) (\*\*) 2208

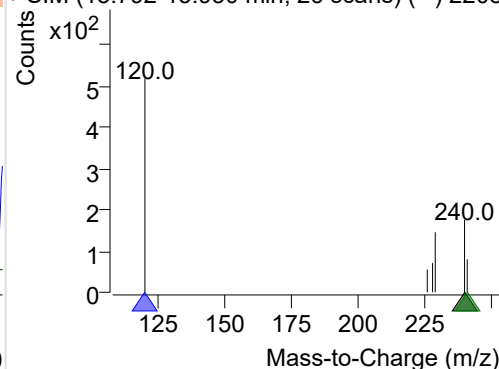
**IS-D12-Chrysene**

+ Selected Ion (240.0) 220806-PAHs-037.D

240.0, 120.0, 241.0

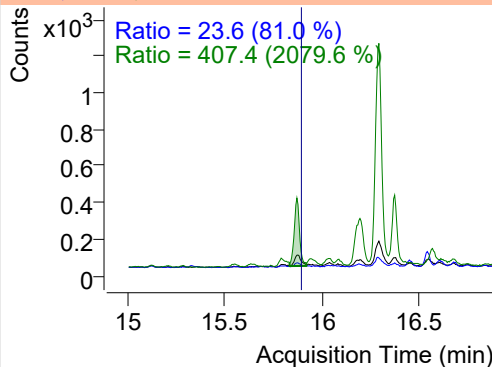
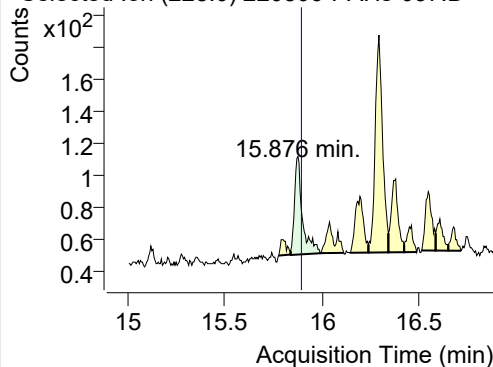


+ SIM (15.792-15.930 min, 26 scans) (\*\*) 2208

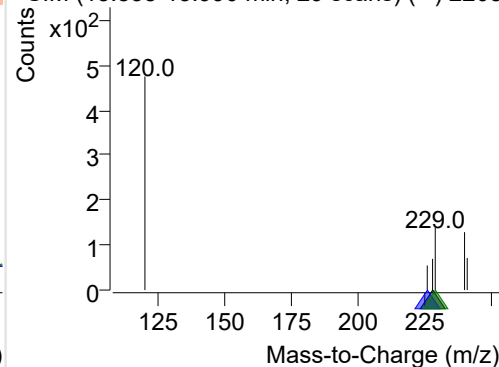
**Chrysene**

+ Selected Ion (228.0) 220806-PAHs-037.D

228.0, 226.0, 229.0

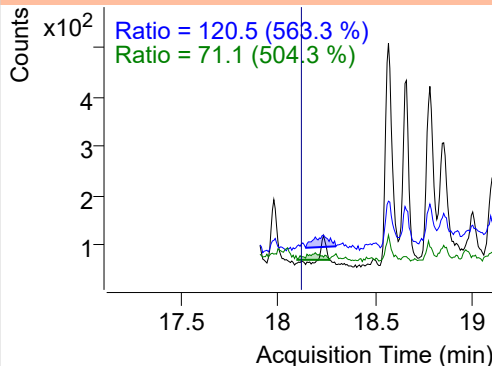
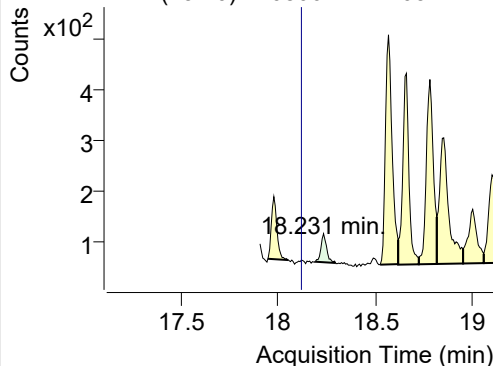


+ SIM (15.838-15.990 min, 29 scans) (\*\*) 2208

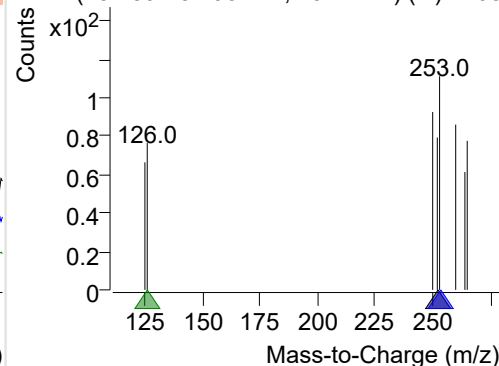
**Benzo(b)fluoranthene**

+ Selected Ion (252.0) 220806-PAHs-037.D

252.0, 253.0, 126.0



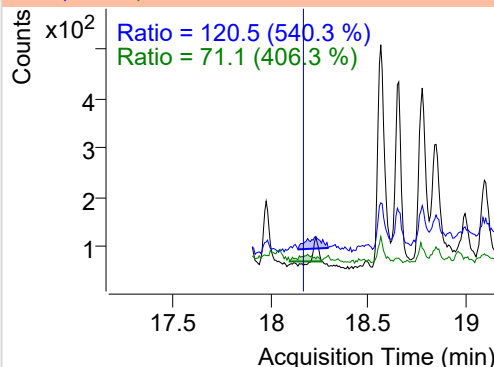
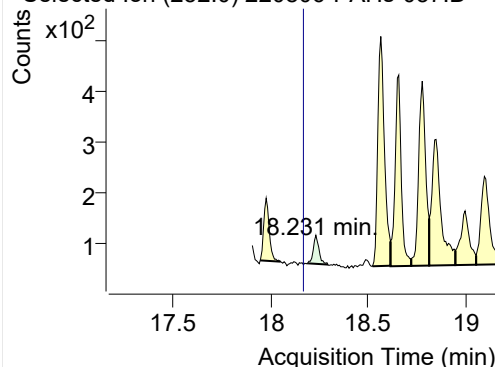
+ SIM (18.189-18.293 min, 15 scans) (\*\*) 2208



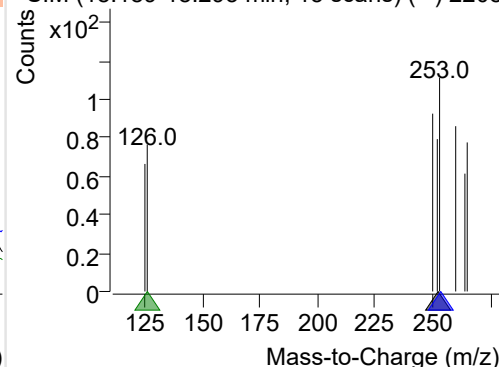
**Benzo(k)fluoranthene**

+ Selected Ion (252.0) 220806-PAHs-037.D

252.0, 253.0, 126.0

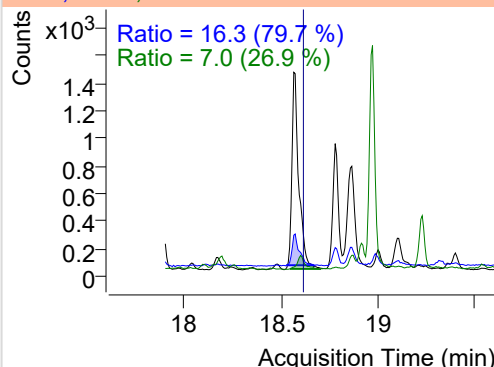
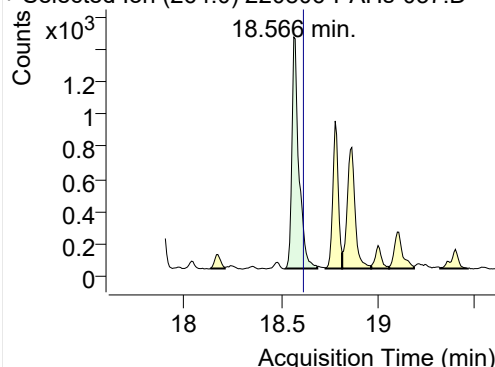


+ SIM (18.189-18.293 min, 15 scans) (\*\*) 2208

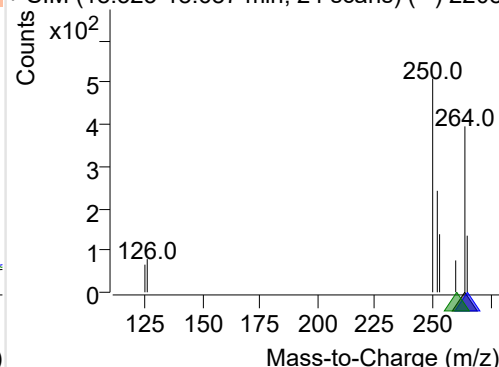
**SS-D12-Benzo(e)pyrene**

+ Selected Ion (264.0) 220806-PAHs-037.D

264.0, 265.0, 260.0

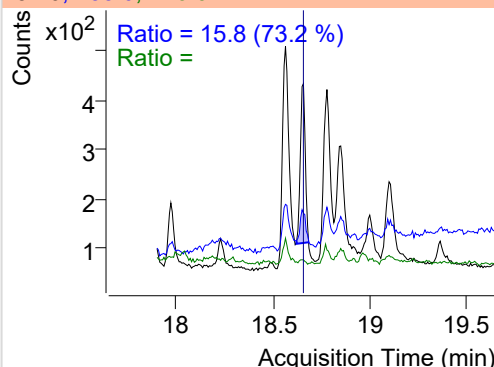
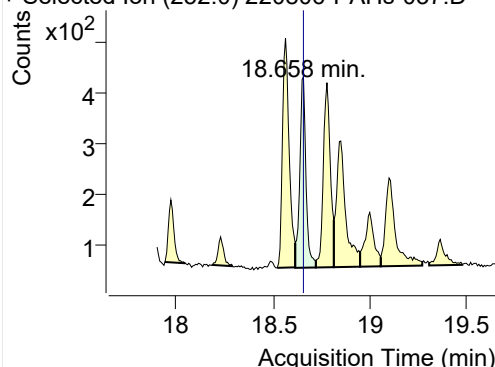


+ SIM (18.523-18.687 min, 24 scans) (\*\*) 2208

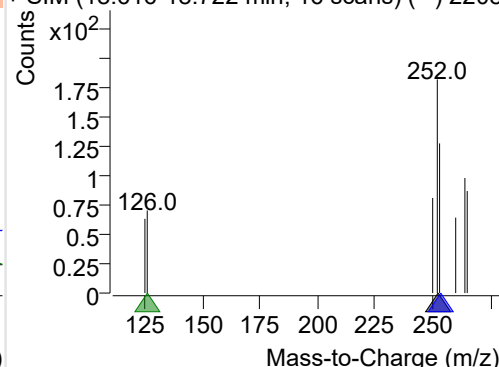
**Benzo(e)pyrene**

+ Selected Ion (252.0) 220806-PAHs-037.D

252.0, 253.0, 126.0

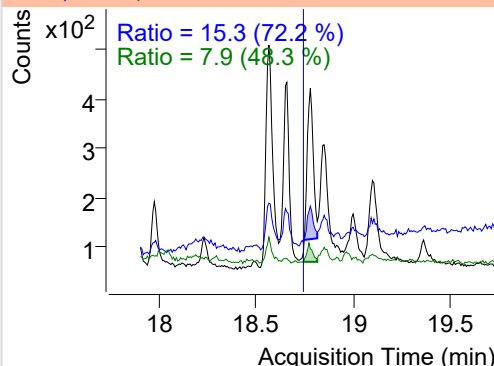
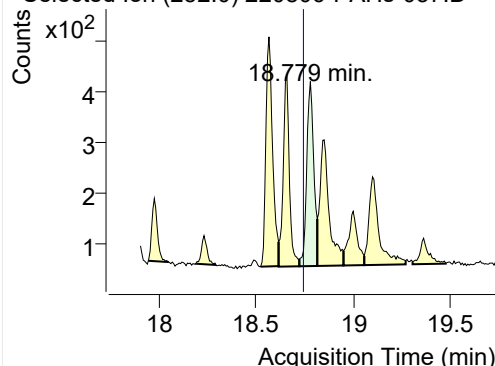


+ SIM (18.616-18.722 min, 16 scans) (\*\*) 2208

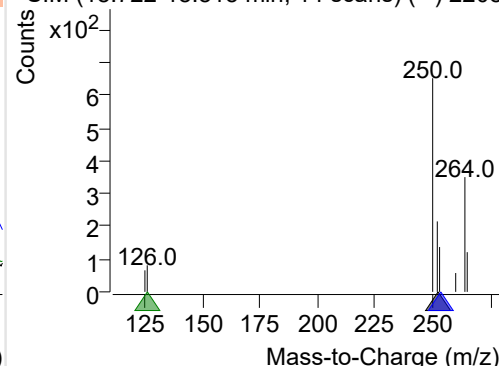
**Benzo(a)pyrene**

+ Selected Ion (252.0) 220806-PAHs-037.D

252.0, 253.0, 126.0



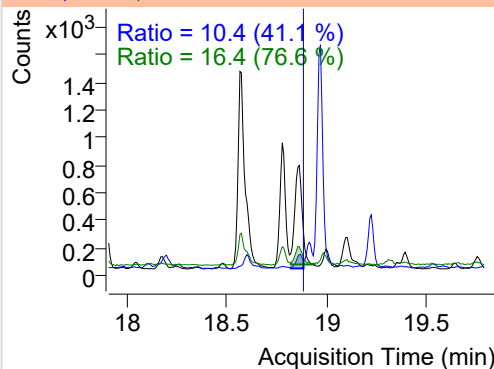
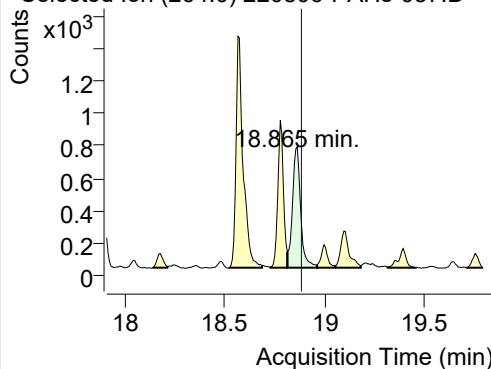
+ SIM (18.722-18.815 min, 14 scans) (\*\*) 2208



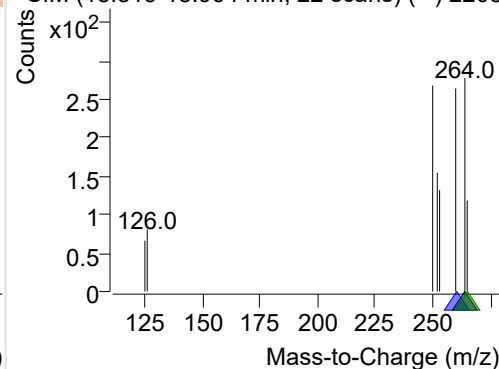
## IS-D12-Perylene

+ Selected Ion (264.0) 220806-PAHs-037.D

264.0, 260.0, 265.0



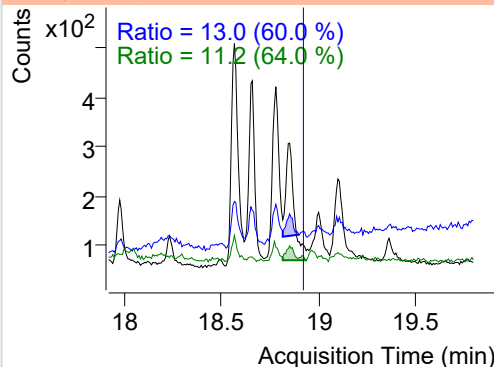
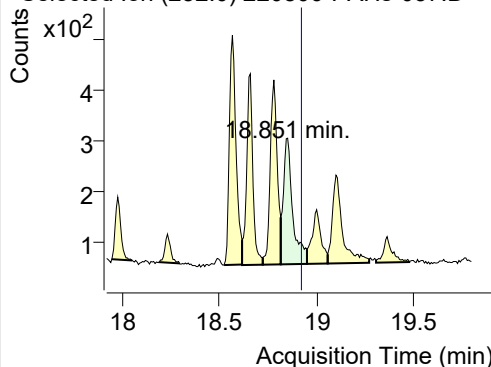
+ SIM (18.815-18.964 min, 22 scans) (\*\*) 2208



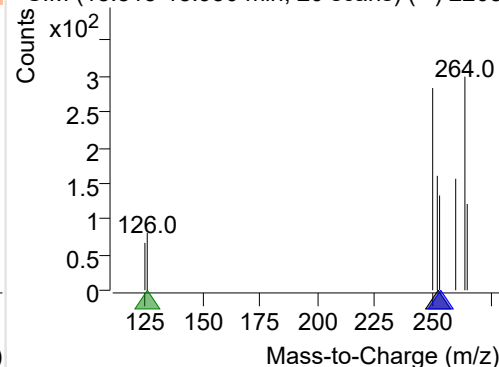
## Perylene

+ Selected Ion (252.0) 220806-PAHs-037.D

252.0, 253.0, 126.0



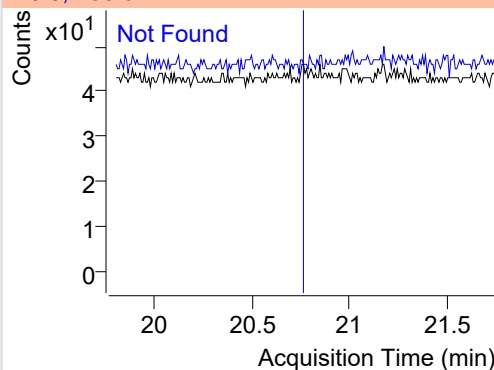
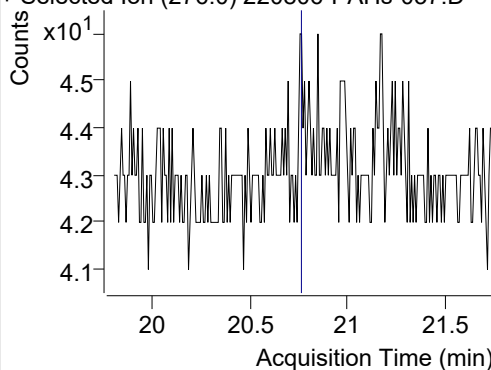
+ SIM (18.815-18.950 min, 20 scans) (\*\*) 2208



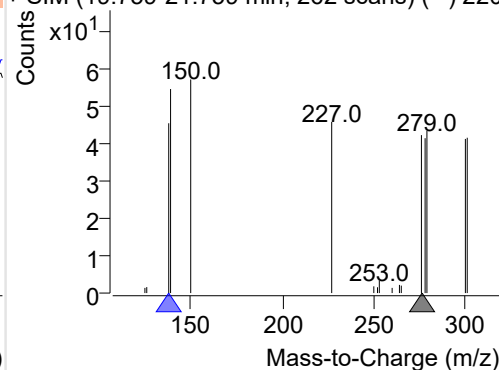
## Indeno(1,2,3-c,d)pyrene

+ Selected Ion (276.0) 220806-PAHs-037.D

276.0, 138.0



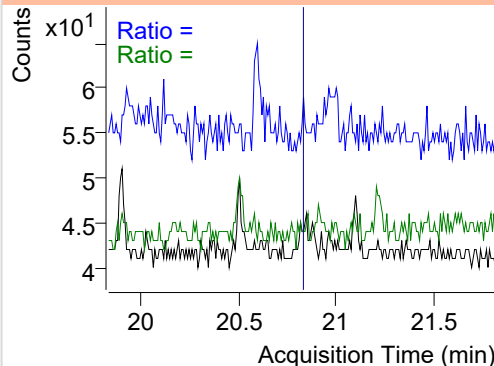
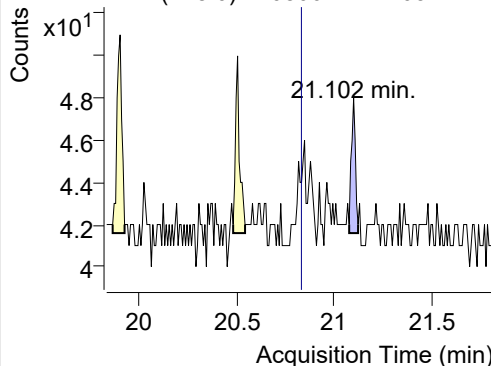
+ SIM (19.759-21.759 min, 262 scans) (\*\*) 220



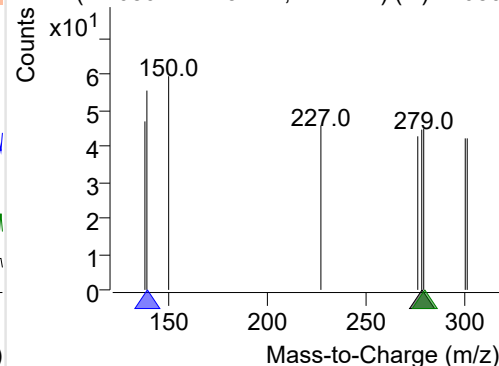
## Dibenz(a,h)anthracene

+ Selected Ion (278.0) 220806-PAHs-037.D

278.0, 139.0, 279.0



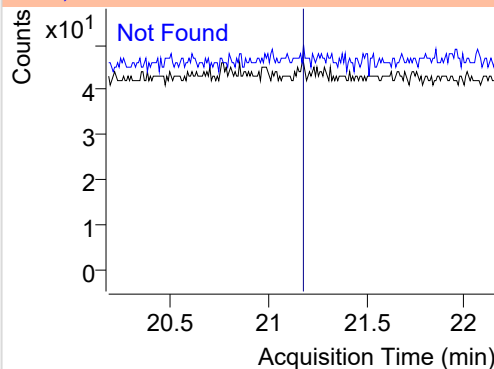
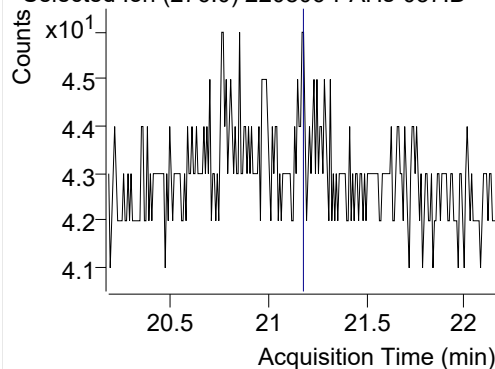
+ SIM (21.080-21.125 min, 7 scans) (\*\*) 22080



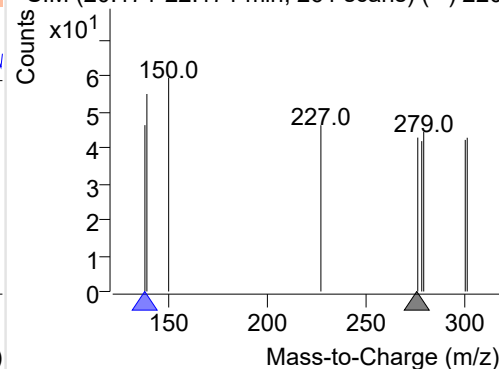
**Benzo(g,h,i)perylene**

+ Selected Ion (276.0) 220806-PAHs-037.D

276.0, 138.0

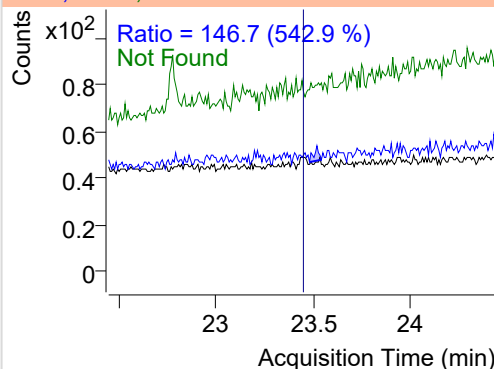
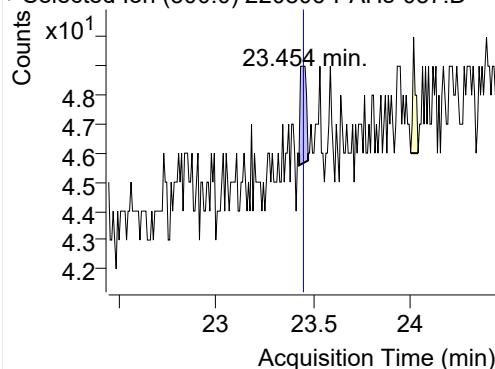


+ SIM (20.171-22.171 min, 261 scans) (\*\*) 220

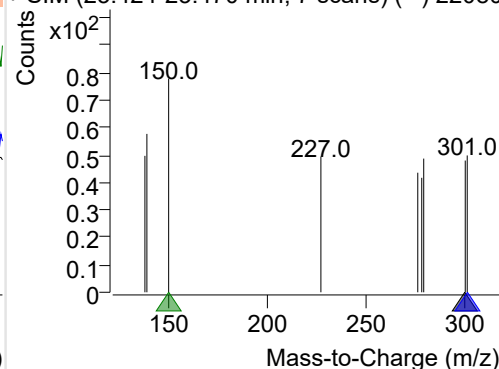
**Coronene**

+ Selected Ion (300.0) 220806-PAHs-037.D

300.0, 301.0, 150.0



+ SIM (23.424-23.470 min, 7 scans) (\*\*) 22080





## Quantitative Analysis Sample Based Report

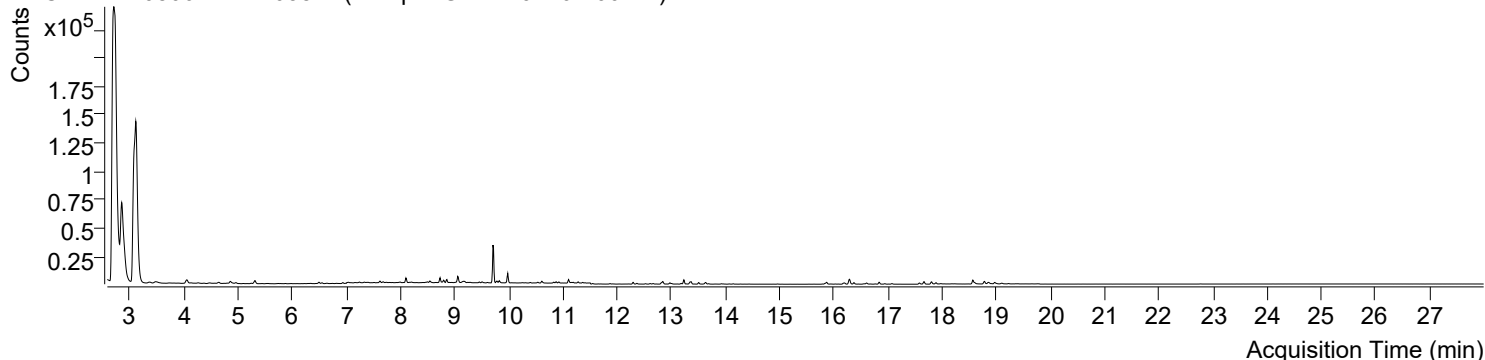


Trusted Answers

|                           |                                                                                            |                       |                          |
|---------------------------|--------------------------------------------------------------------------------------------|-----------------------|--------------------------|
| Batch Data Path File Name | D:\MassHunter\GCMS\1\data\PAHs\220806-PAHs-Sample\QuantResults\220806-PAHs-Quant.batch.bin |                       |                          |
| Analysis Time Stamp       | 2022-10-10 오전 10:12:04                                                                     | Analyst Name          | DESKTOP-86B7UPG\5975MS   |
| Report Generation Time    | 2022-10-10 오전 10:12:12                                                                     | Report Generator Name | DESKTOP-86B7UPG\5975MS   |
| Calibration Last Update   | 2022-12-15 오후 3:30:46                                                                      | Batch State           | Processed                |
| Analyze Quant Version     | 10.2                                                                                       | Report Quant Version  | 10.2                     |
| Acq. Date-Time            | 2022-08-07 오전 5:41:58                                                                      | Data File             | 220806-PAHs-038.D        |
| Type                      | Sample                                                                                     | Name                  | Sample-Gas-220716-100DIL |
| Dil.                      | 1                                                                                          | Acq. Method File      | PAHs 19mix-Method        |

## Sample Chromatogram

+ TIC SIM 220806-PAHs-038.D (Sample-Gas-220716-100DIL)

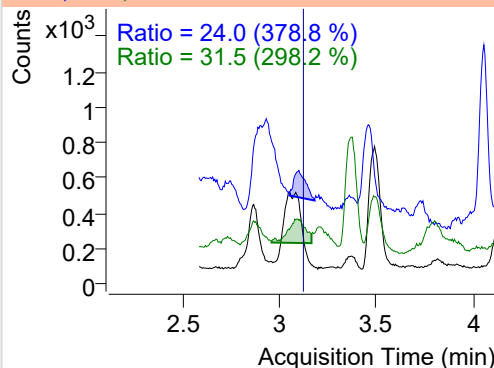
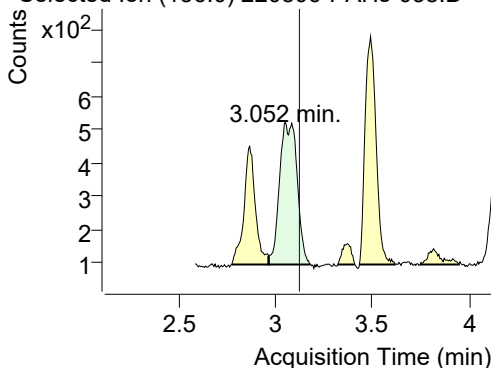


| Name                    | RT     | Transition | Resp.  | Height    | Final Conc. Units | Ratio |
|-------------------------|--------|------------|--------|-----------|-------------------|-------|
| IS-D8-Naphthalene       | 3.052  | 136.0      | 2688   | 426.25    | ND ng/ml          | 31.5  |
| Naphthalene             | 3.112  | 128.0      | 585148 | 114650.98 | ND ng/ml          | 12.8  |
| Acenaphthylene          | 6.339  | 152.0      | 68     | 34.09     | ND ng/ml          | 518.8 |
| IS-D10-Acenaphthene     | 6.492  | 164.0      | 1208   | 588.27    | ND ng/ml          | 91.2  |
| Acenaphthene            | 6.558  | 154.0      | 379    | 178.52    | ND ng/ml          | 90.1  |
| LSS-D10-Fluorene        | 7.627  | 176.0      | 1055   | 566.33    | ND ng/ml          | 91.1  |
| Fluorene                | 7.680  | 166.0      | 628    | 312.93    | ND ng/ml          | 112.9 |
| IS-D10-Phenanthrene     | 9.780  | 188.0      | 1898   | 1130.78   | ND ng/ml          | 25.7  |
| Phenanthrene            | 9.822  | 178.0      | 1902   | 1111.12   | ND ng/ml          | 19.9  |
| Anthracene              | 9.979  | 178.0      | 3452   | 2294.12   | ND ng/ml          | 28.4  |
| Fluoranthene            | 12.521 | 202.0      | 349    | 205.00    | ND ng/ml          |       |
| LSS-D10-Pyrene          | 12.976 | 212.0      | 1267   | 746.44    | ND ng/ml          | 22.8  |
| Pyrene                  | 13.008 | 202.0      | 609    | 353.74    | ND ng/ml          |       |
| Benz(a)anthracene       | 15.795 | 228.0      | 13     | 8.82      | ND ng/ml          |       |
| IS-D12-Chrysene         | 15.838 | 240.0      | 1132   | 485.04    | ND ng/ml          | 22.8  |
| Chrysene                | 15.876 | 228.0      | 129    | 49.20     | ND ng/ml          | 33.1  |
| Benzo(b)fluoranthene    | 18.231 | 252.0      | 82     | 38.48     | ND ng/ml          | 195.3 |
| Benzo(k)fluoranthene    | 18.231 | 252.0      | 82     | 38.48     | ND ng/ml          | 195.3 |
| SS-D12-Benzo(e)pyrene   | 18.566 | 264.0      | 3376   | 1035.36   | ND ng/ml          | 11.5  |
| Benzo(e)pyrene          | 18.566 | 252.0      | 961    | 380.33    | ND ng/ml          | 18.0  |
| Benzo(a)pyrene          | 18.779 | 252.0      | 710    | 288.76    | ND ng/ml          | 17.8  |
| IS-D12-Perylene         | 18.865 | 264.0      | 1581   | 582.05    | ND ng/ml          | 12.5  |
| Perylene                | 18.850 | 252.0      | 642    | 199.57    | ND ng/ml          | 19.7  |
| Indeno(1,2,3-c,d)pyrene | 21.171 | 276.0      | 2      | 3.37      | ND ng/ml          |       |
| Dibenz(a,h)anthracene   | 20.514 | 278.0      | 7      | 4.61      | ND ng/ml          | 206.8 |
| Benzo(g,h,i)perylene    | 21.171 | 276.0      | 2      | 3.37      | ND ng/ml          |       |
| Coronene                | 23.431 | 300.0      | 9      | 4.69      | ND ng/ml          |       |

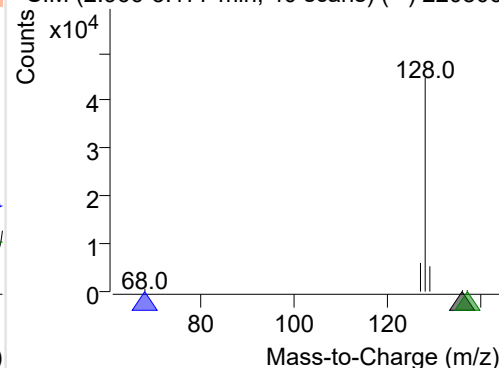
## IS-D8-Naphthalene

+ Selected Ion (136.0) 220806-PAHs-038.D

136.0, 68.0, 137.0

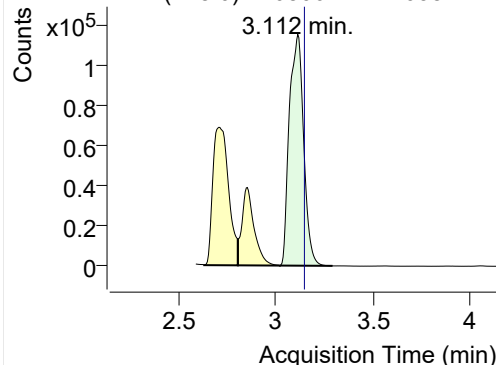


+ SIM (2.966-3.177 min, 40 scans) (\*\*) 220806

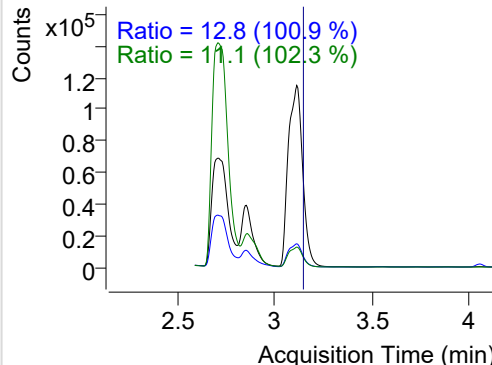


**Naphthalene**

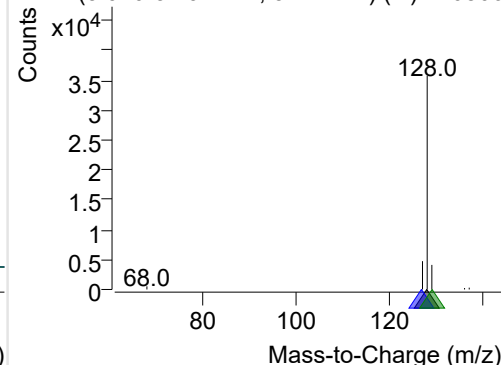
+ Selected Ion (128.0) 220806-PAHs-038.D



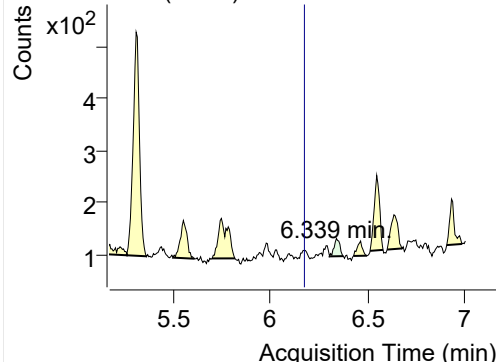
128.0, 127.0, 129.0



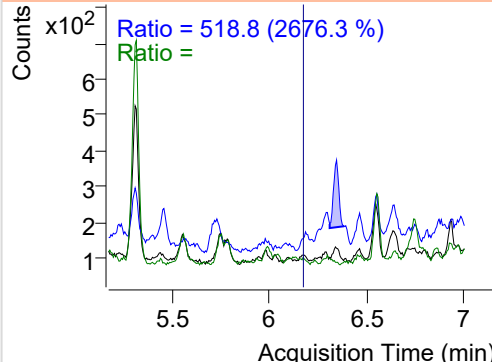
+ SIM (3.020-3.291 min, 51 scans) (\*\*) 220806

**Acenaphthylene**

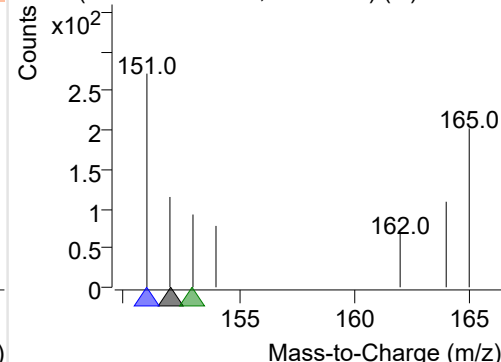
+ Selected Ion (152.0) 220806-PAHs-038.D



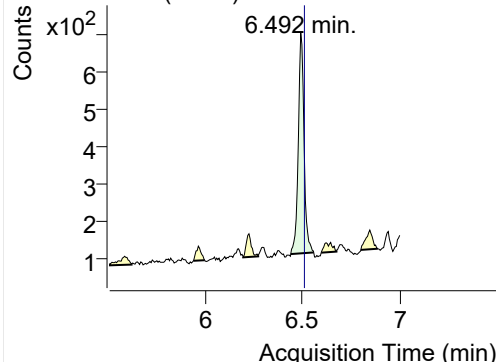
152.0, 151.0, 153.0



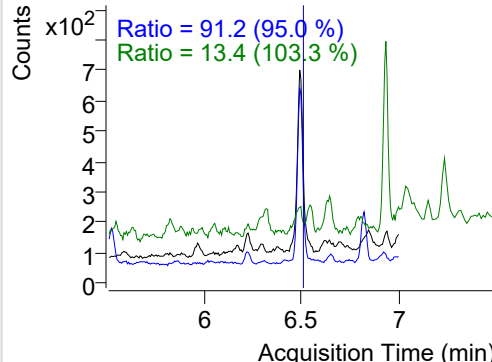
+ SIM (6.303-6.374 min, 12 scans) (\*\*) 220806

**IS-D10-Acenaphthene**

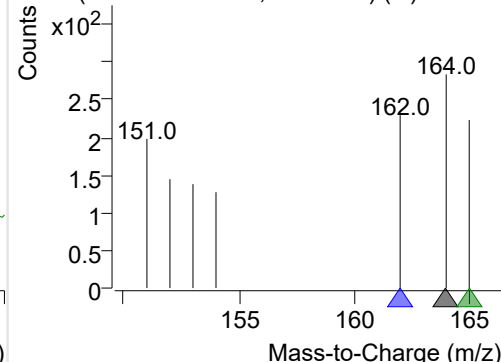
+ Selected Ion (164.0) 220806-PAHs-038.D



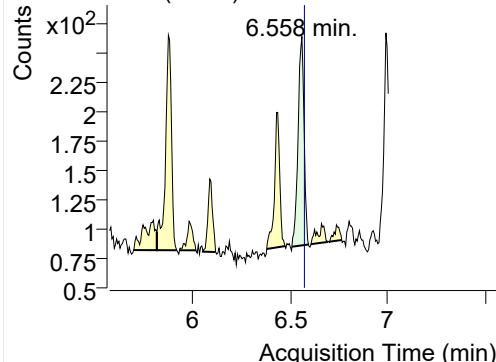
164.0, 162.0, 165.0



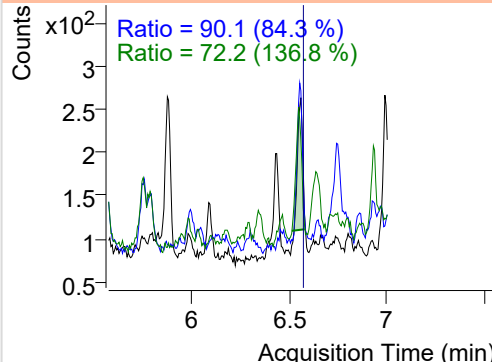
+ SIM (6.441-6.559 min, 20 scans) (\*\*) 220806

**Acenaphthene**

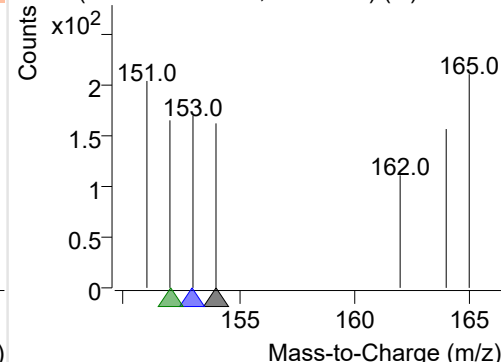
+ Selected Ion (154.0) 220806-PAHs-038.D



154.0, 153.0, 152.0

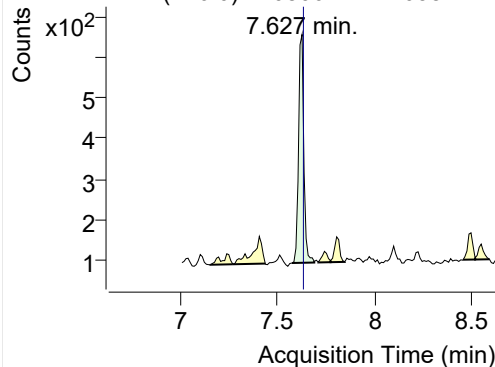


+ SIM (6.506-6.592 min, 14 scans) (\*\*) 220806

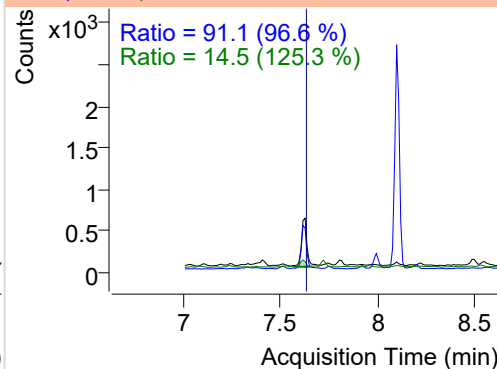


## LSS-D10-Fluorene

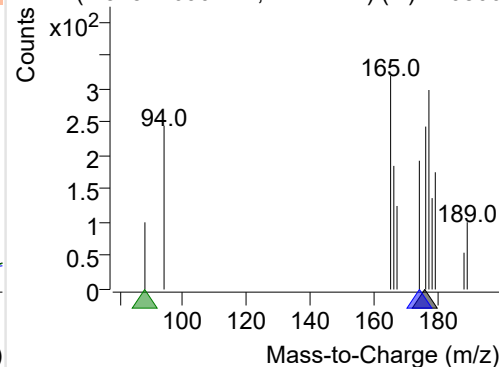
+ Selected Ion (176.0) 220806-PAHs-038.D



176.0, 174.0, 88.0

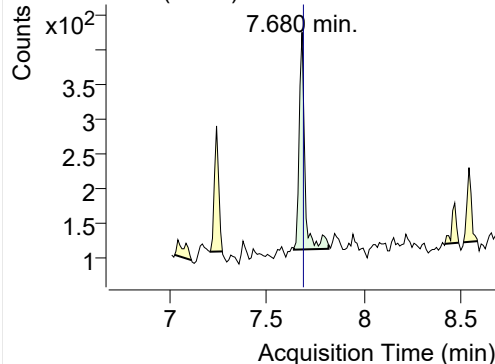


+ SIM (7.575-7.690 min, 11 scans) (\*\*) 220806

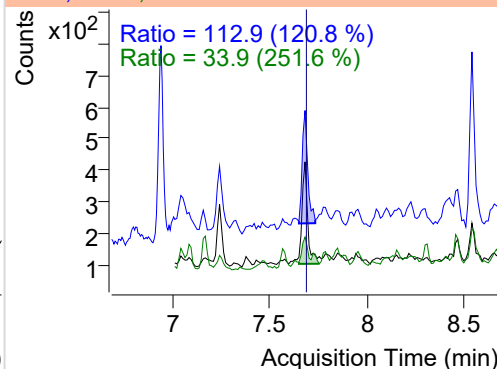


## Fluorene

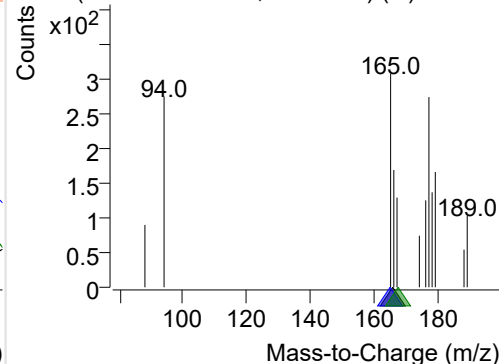
+ Selected Ion (166.0) 220806-PAHs-038.D



166.0, 165.0, 167.0

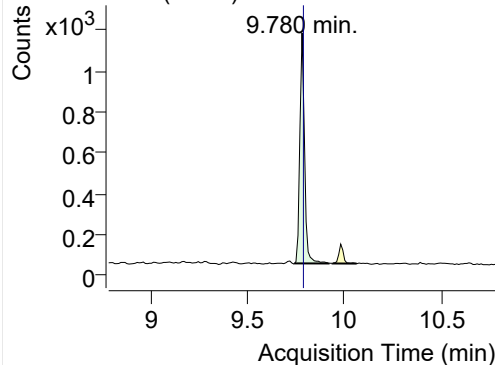


+ SIM (7.638-7.816 min, 18 scans) (\*\*) 220806

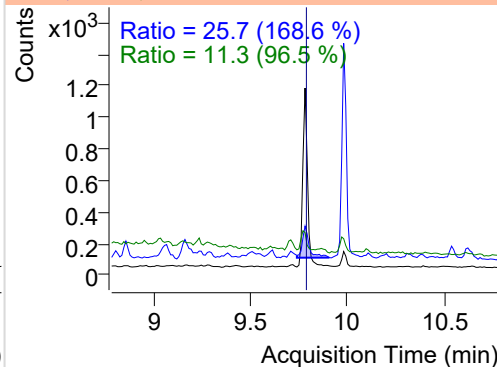


## IS-D10-Phenanthrene

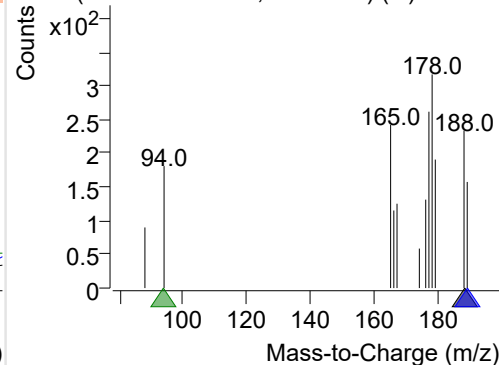
+ Selected Ion (188.0) 220806-PAHs-038.D



188.0, 189.0, 94.0

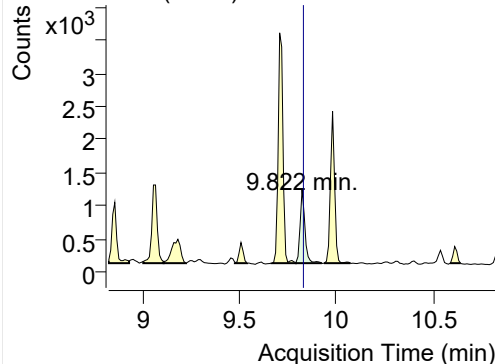


+ SIM (9.741-9.916 min, 17 scans) (\*\*) 220806

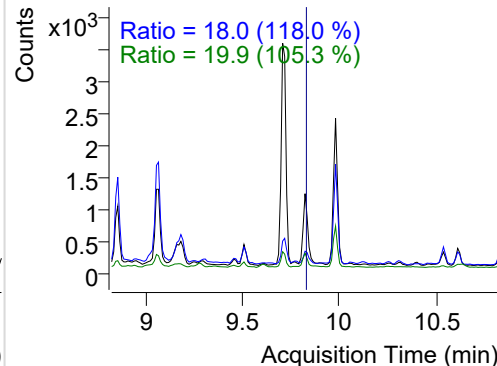


## Phenanthrene

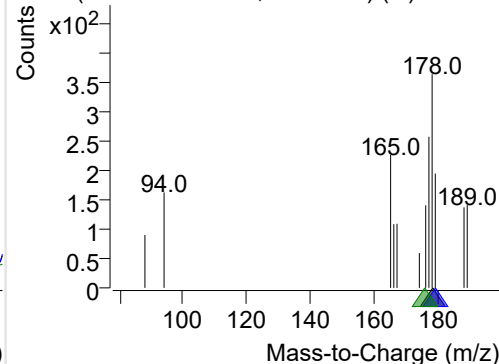
+ Selected Ion (178.0) 220806-PAHs-038.D



178.0, 179.0, 176.0

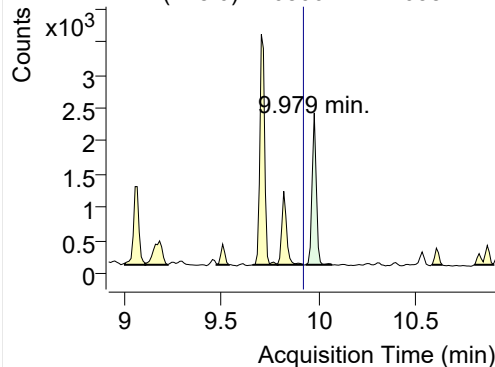


+ SIM (9.790-9.924 min, 13 scans) (\*\*) 220806

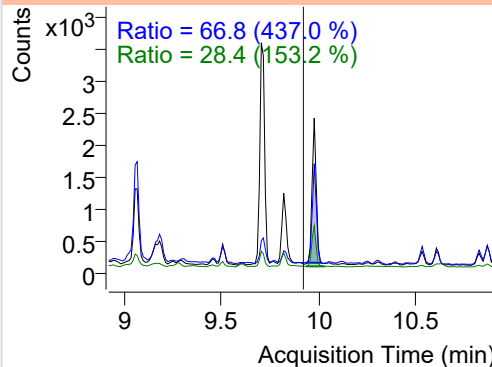


**Anthracene**

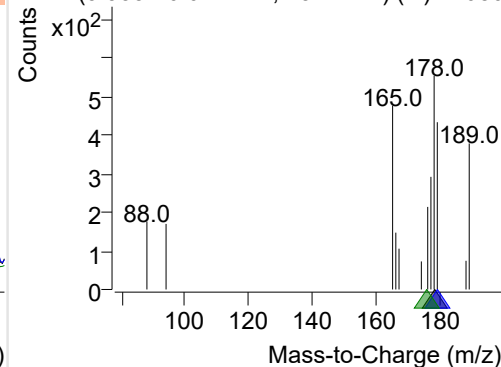
+ Selected Ion (178.0) 220806-PAHs-038.D



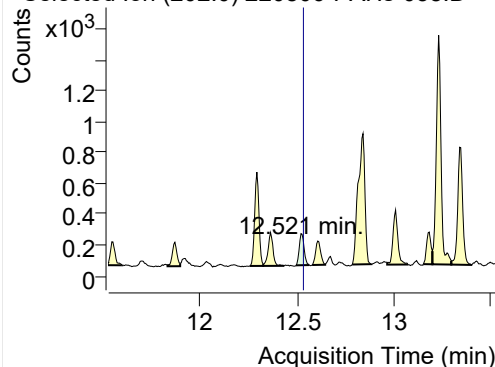
178.0, 179.0, 176.0



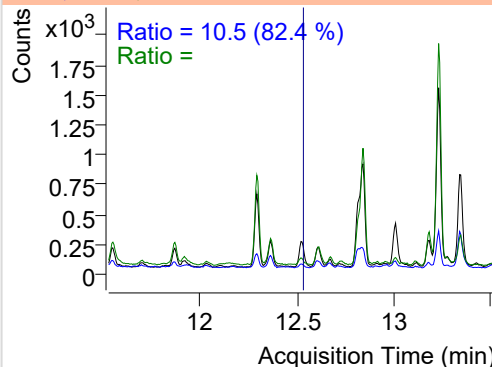
+ SIM (9.935-10.071 min, 13 scans) (\*\*) 22080

**Fluoranthene**

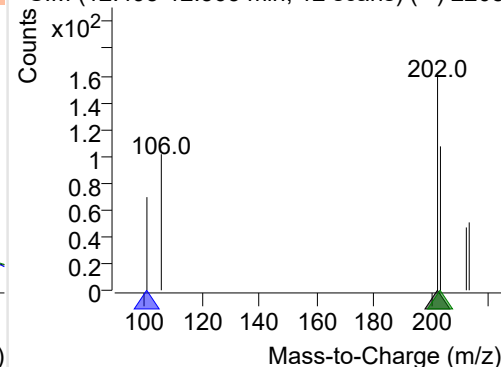
+ Selected Ion (202.0) 220806-PAHs-038.D



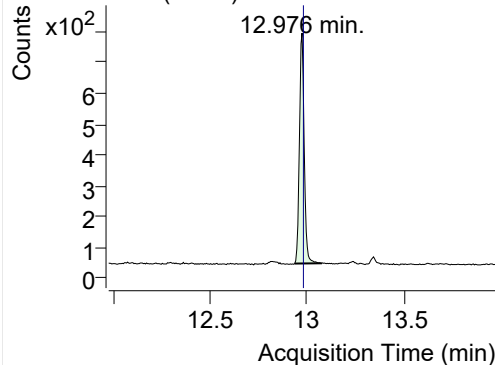
202.0, 101.0, 203.0



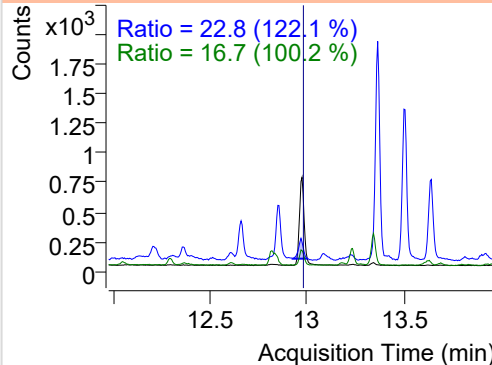
+ SIM (12.495-12.563 min, 12 scans) (\*\*) 2208

**LSS-D10-Pyrene**

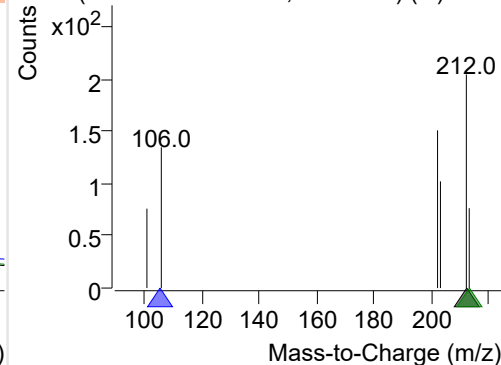
+ Selected Ion (212.0) 220806-PAHs-038.D



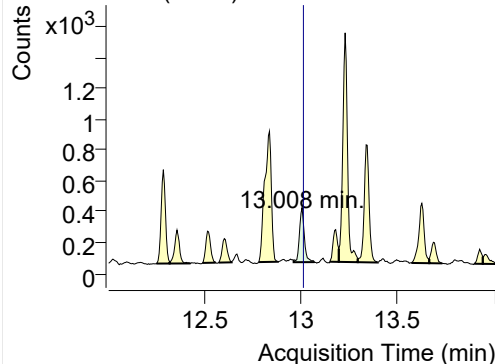
212.0, 106.0, 213.0



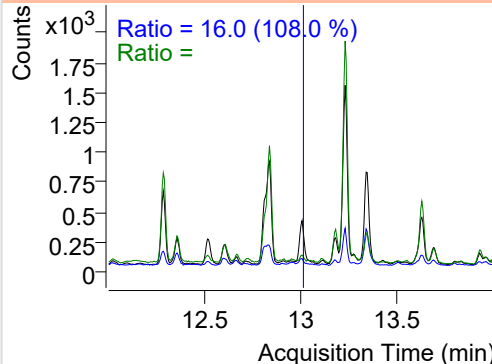
+ SIM (12.938-13.074 min, 25 scans) (\*\*) 2208

**Pyrene**

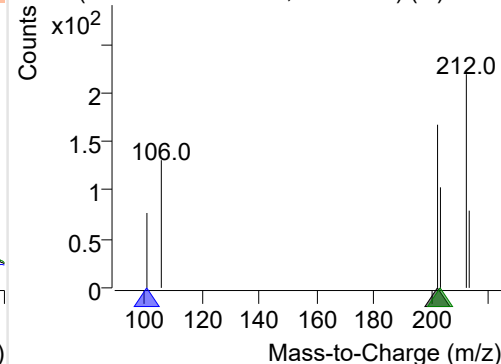
+ Selected Ion (202.0) 220806-PAHs-038.D



202.0, 101.0, 203.0



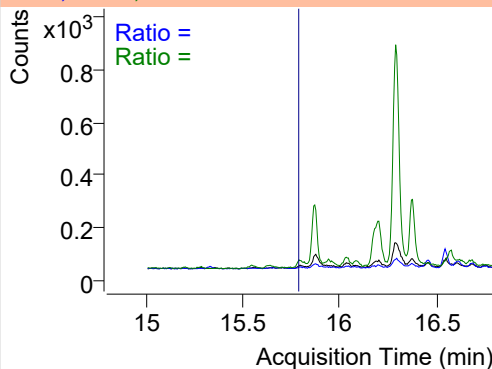
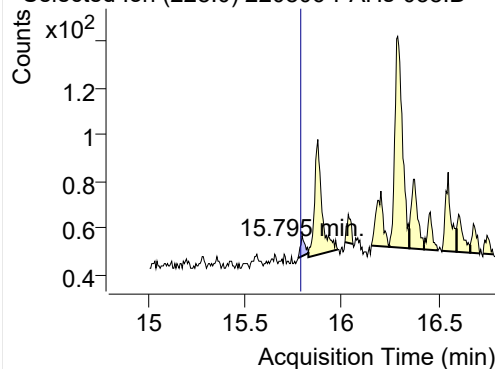
+ SIM (12.965-13.072 min, 20 scans) (\*\*) 2208



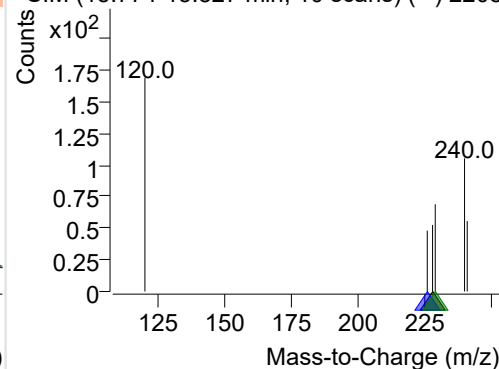
**Benz(a)anthracene**

+ Selected Ion (228.0) 220806-PAHs-038.D

228.0, 226.0, 229.0

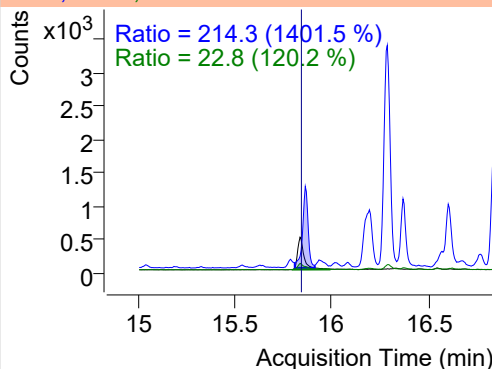
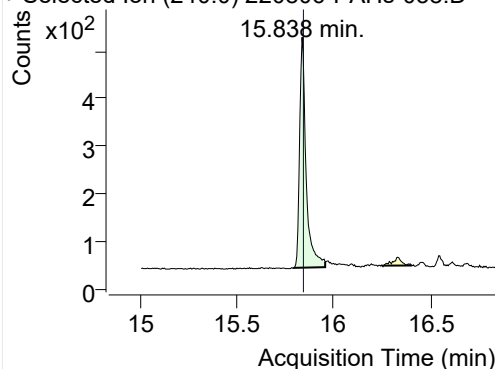


+ SIM (15.774-15.827 min, 10 scans) (\*\*) 2208

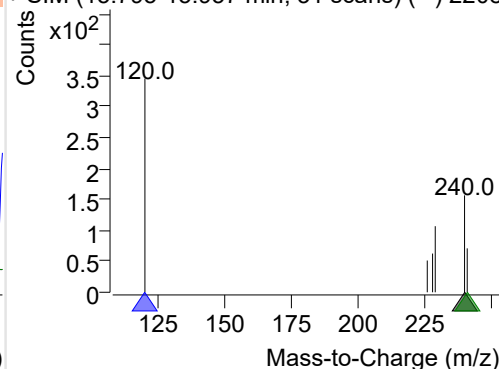
**IS-D12-Chrysene**

+ Selected Ion (240.0) 220806-PAHs-038.D

240.0, 120.0, 241.0

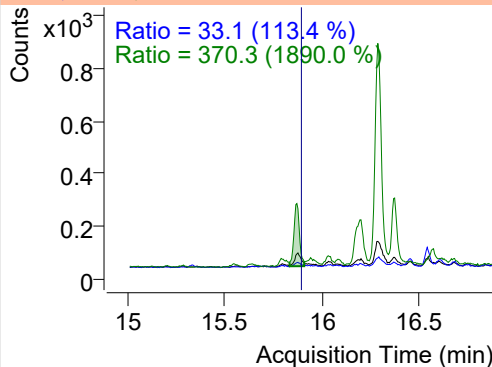
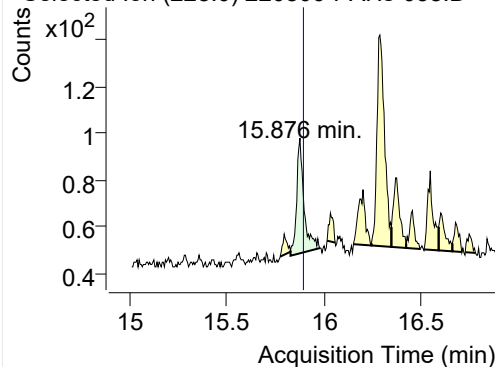


+ SIM (15.795-15.957 min, 31 scans) (\*\*) 2208

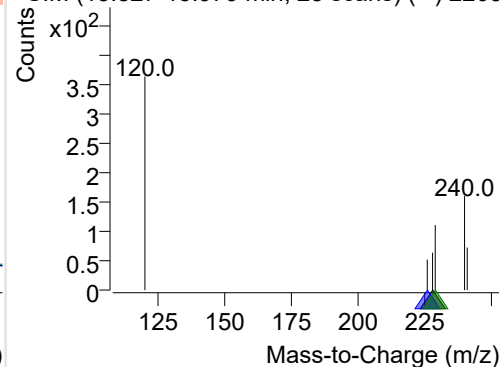
**Chrysene**

+ Selected Ion (228.0) 220806-PAHs-038.D

228.0, 226.0, 229.0

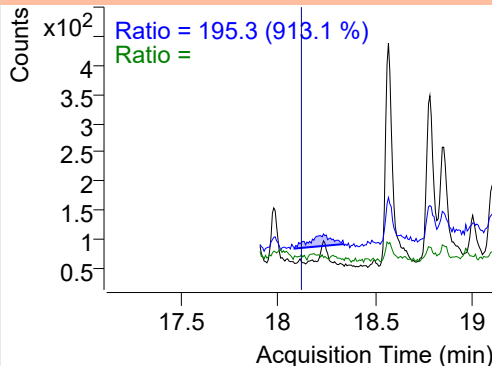
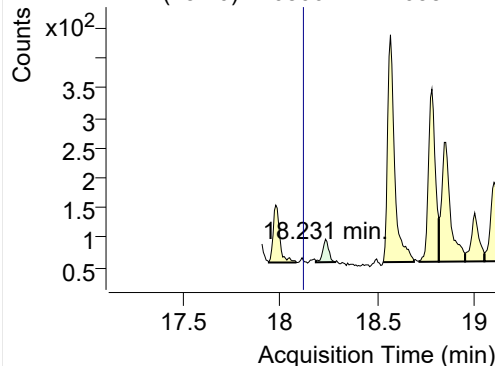


+ SIM (15.827-15.979 min, 28 scans) (\*\*) 2208

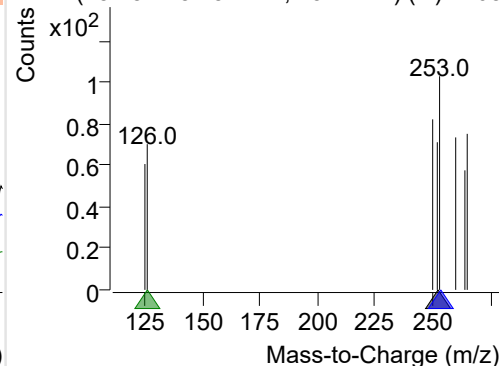
**Benzo(b)fluoranthene**

+ Selected Ion (252.0) 220806-PAHs-038.D

252.0, 253.0, 126.0



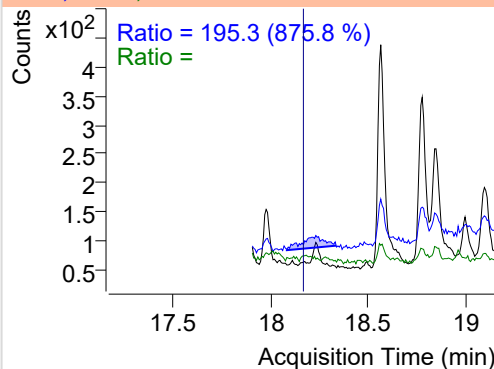
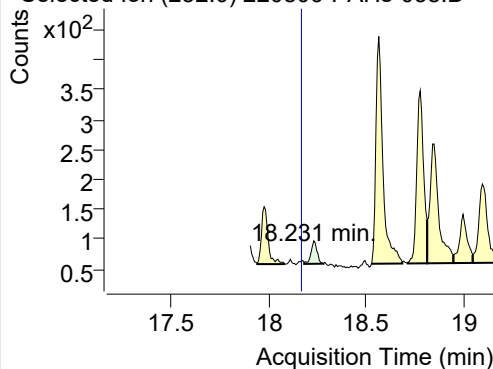
+ SIM (18.181-18.281 min, 15 scans) (\*\*) 2208



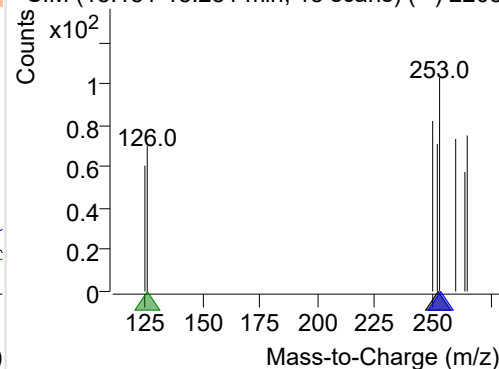
**Benzo(k)fluoranthene**

+ Selected Ion (252.0) 220806-PAHs-038.D

252.0, 253.0, 126.0

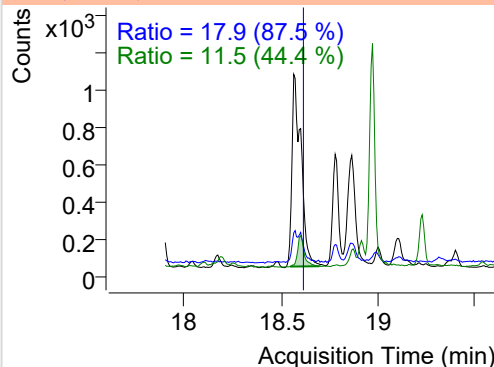
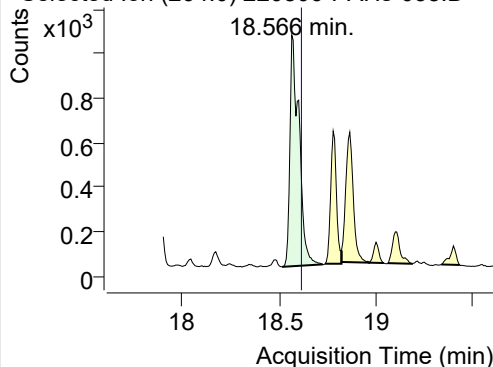


+ SIM (18.181-18.281 min, 15 scans) (\*\*) 2208

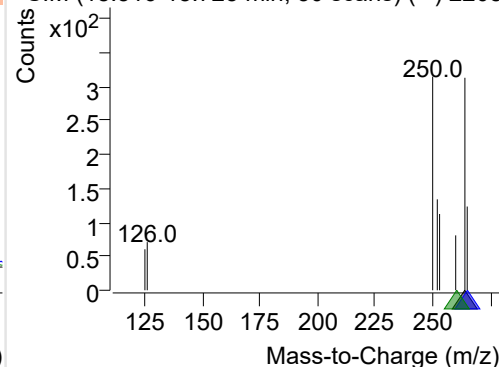
**SS-D12-Benzo(e)pyrene**

+ Selected Ion (264.0) 220806-PAHs-038.D

264.0, 265.0, 260.0

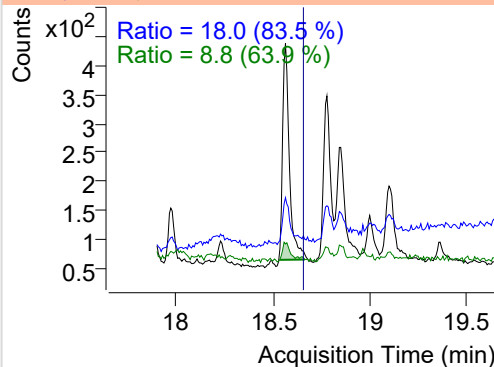
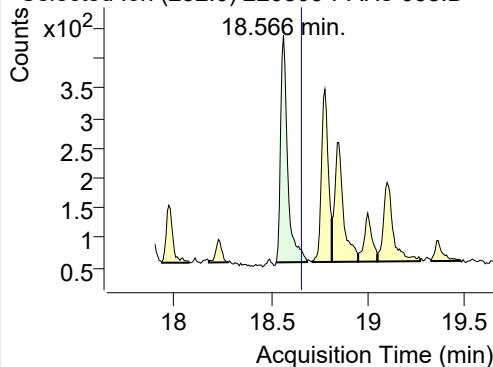


+ SIM (18.516-18.725 min, 30 scans) (\*\*) 2208

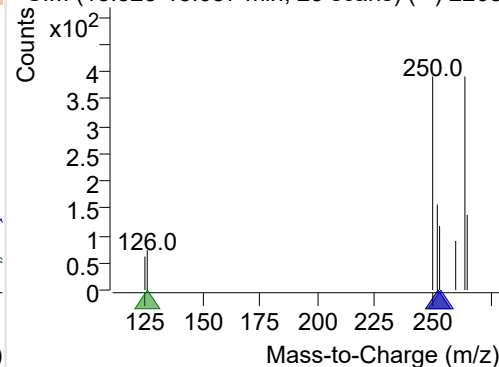
**Benzo(e)pyrene**

+ Selected Ion (252.0) 220806-PAHs-038.D

252.0, 253.0, 126.0

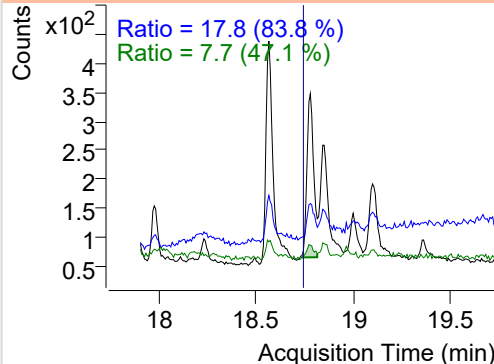
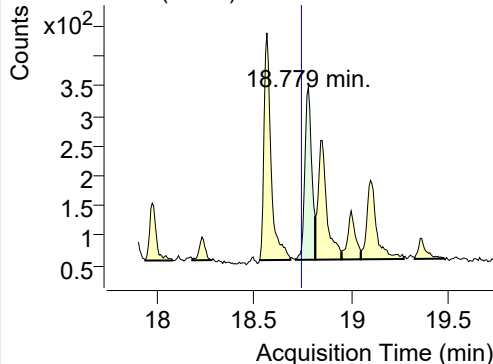


+ SIM (18.528-18.687 min, 23 scans) (\*\*) 2208

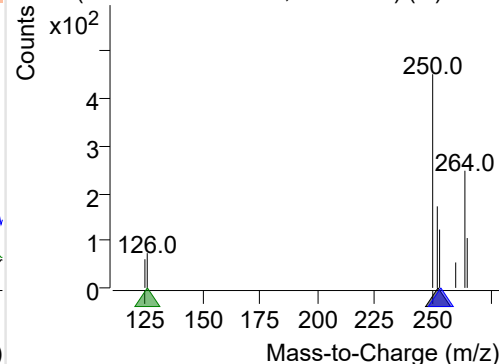
**Benzo(a)pyrene**

+ Selected Ion (252.0) 220806-PAHs-038.D

252.0, 253.0, 126.0



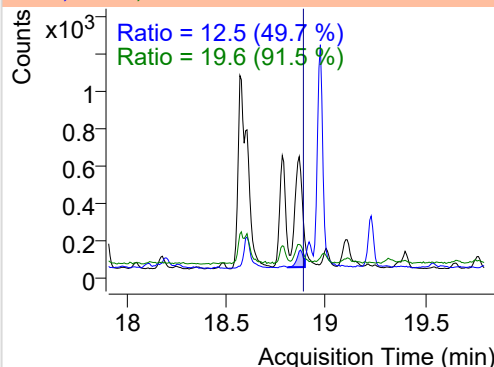
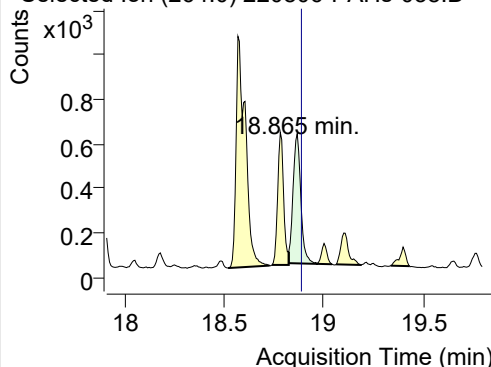
+ SIM (18.715-18.815 min, 15 scans) (\*\*) 2208



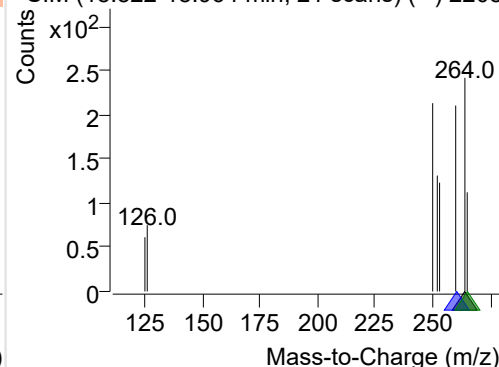
## IS-D12-Perylene

+ Selected Ion (264.0) 220806-PAHs-038.D

264.0, 260.0, 265.0



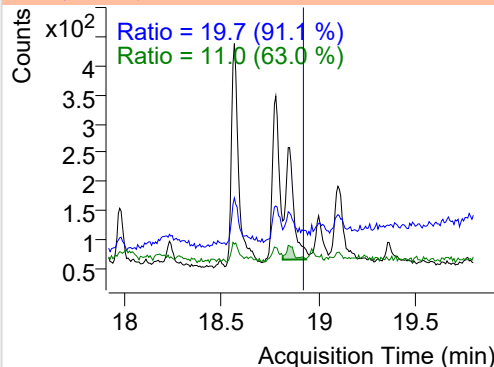
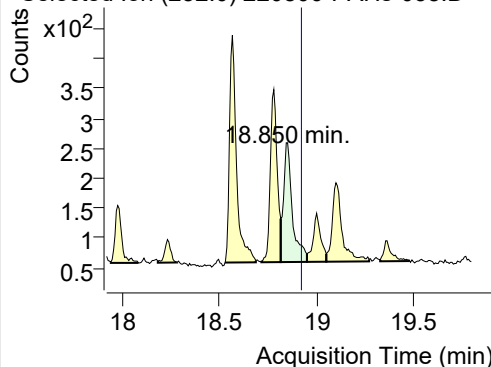
+ SIM (18.822-18.964 min, 21 scans) (\*\*) 2208



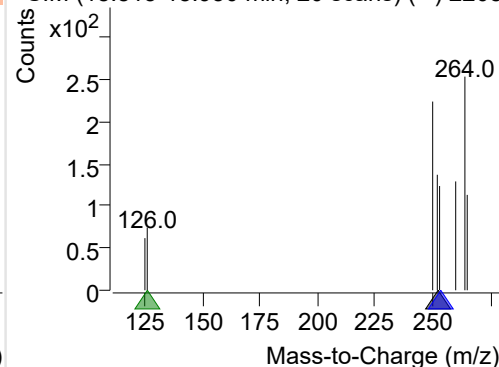
## Perylene

+ Selected Ion (252.0) 220806-PAHs-038.D

252.0, 253.0, 126.0



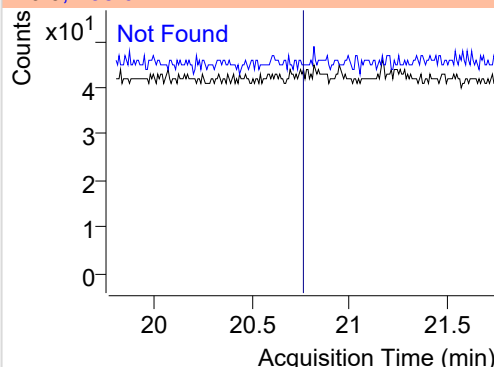
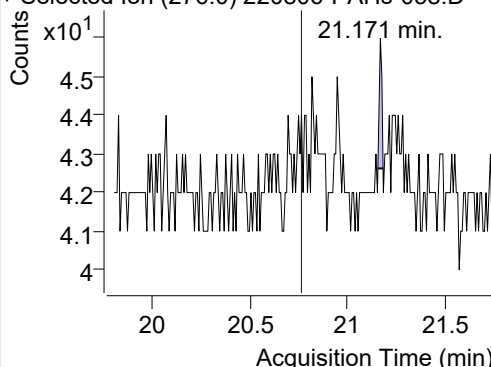
+ SIM (18.815-18.950 min, 20 scans) (\*\*) 2208



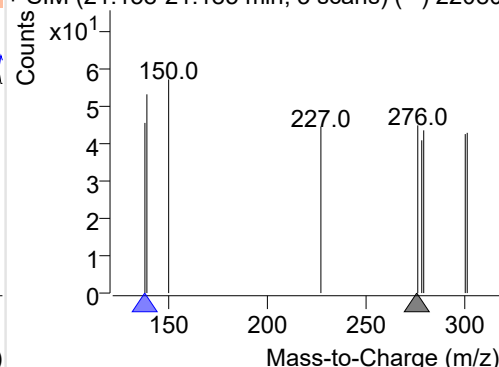
## Indeno(1,2,3-c,d)pyrene

+ Selected Ion (276.0) 220806-PAHs-038.D

276.0, 138.0



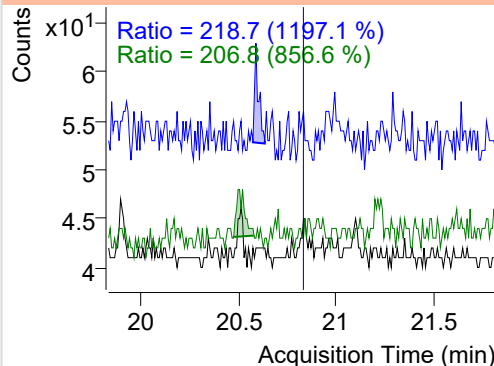
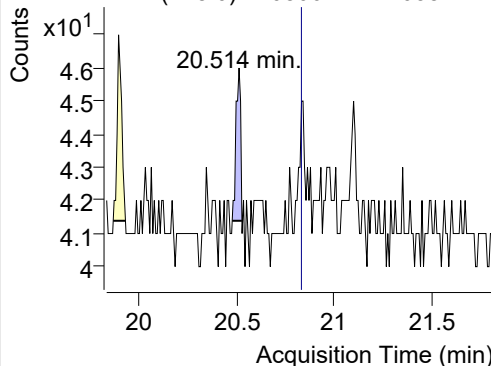
+ SIM (21.158-21.185 min, 3 scans) (\*\*) 22080



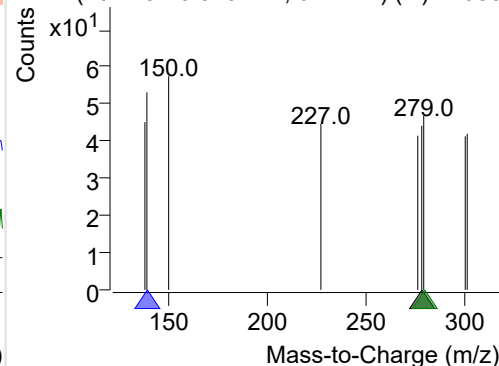
## Dibenz(a,h)anthracene

+ Selected Ion (278.0) 220806-PAHs-038.D

278.0, 139.0, 279.0



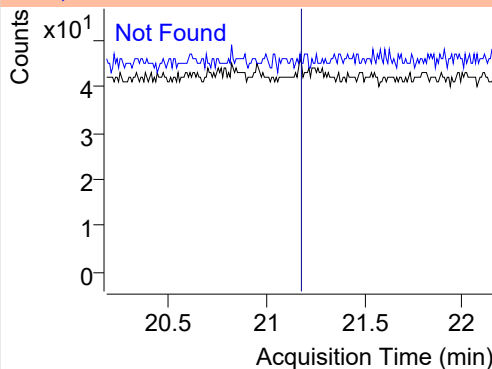
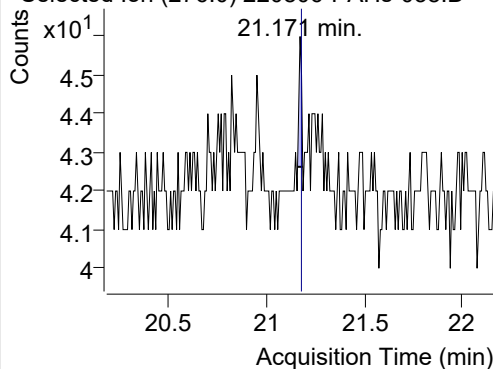
+ SIM (20.479-20.529 min, 6 scans) (\*\*) 22080



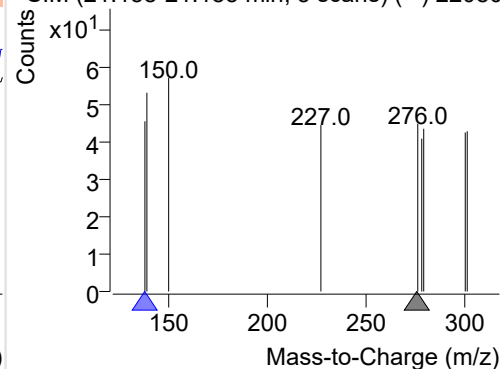
**Benzo(g,h,i)perylene**

+ Selected Ion (276.0) 220806-PAHs-038.D

276.0, 138.0

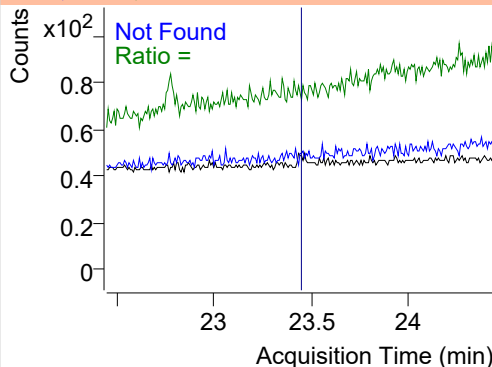
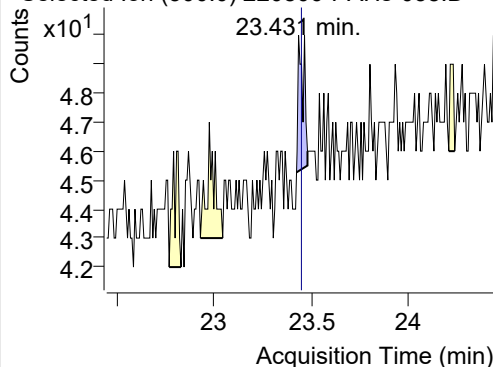


+ SIM (21.158-21.185 min, 3 scans) (\*\*) 22080

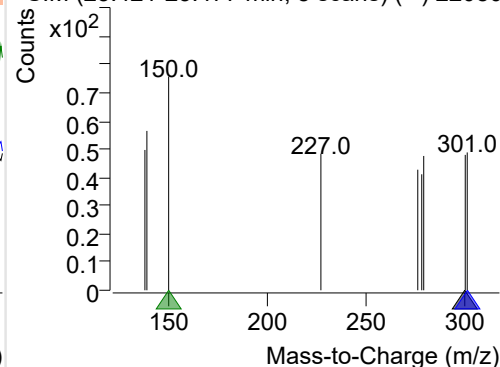
**Coronene**

+ Selected Ion (300.0) 220806-PAHs-038.D

300.0, 301.0, 150.0



+ SIM (23.421-23.477 min, 8 scans) (\*\*) 22080





## Quantitative Analysis Sample Based Report

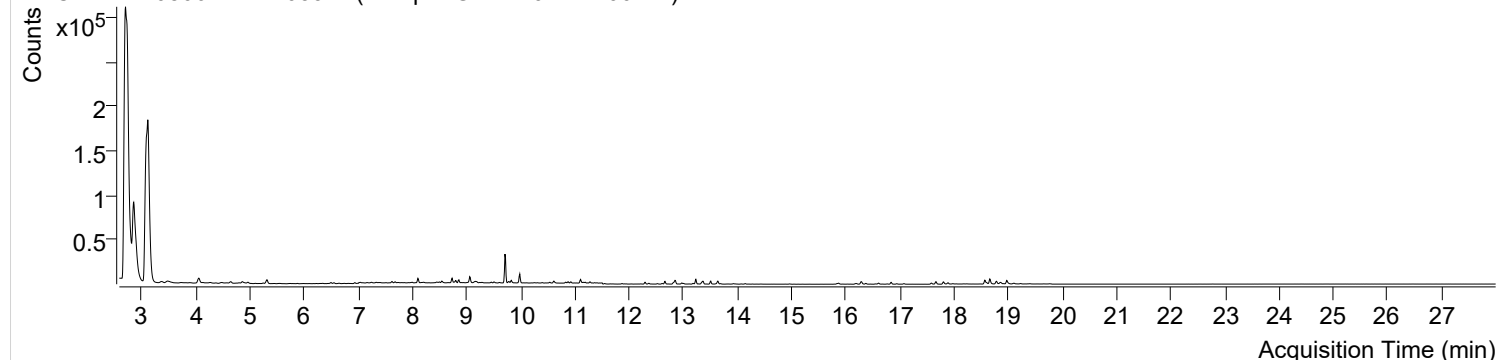


Trusted Answers

|                           |                                                                                            |                       |                          |
|---------------------------|--------------------------------------------------------------------------------------------|-----------------------|--------------------------|
| Batch Data Path File Name | D:\MassHunter\GCMS\1\data\PAHs\220806-PAHs-Sample\QuantResults\220806-PAHs-Quant.batch.bin |                       |                          |
| Analysis Time Stamp       | 2022-10-10 오전 10:12:04                                                                     | Analyst Name          | DESKTOP-86B7UPG\5975MS   |
| Report Generation Time    | 2022-10-10 오전 10:12:12                                                                     | Report Generator Name | DESKTOP-86B7UPG\5975MS   |
| Calibration Last Update   | 2022-12-15 오후 3:30:46                                                                      | Batch State           | Processed                |
| Analyze Quant Version     | 10.2                                                                                       | Report Quant Version  | 10.2                     |
| Acq. Date-Time            | 2022-08-07 오전 6:13:03                                                                      | Data File             | 220806-PAHs-039.D        |
| Type                      | Sample                                                                                     | Name                  | Sample-Gas-220722-100DIL |
| Dil.                      | 1                                                                                          | Acq. Method File      | PAHs 19mix-Method        |

## Sample Chromatogram

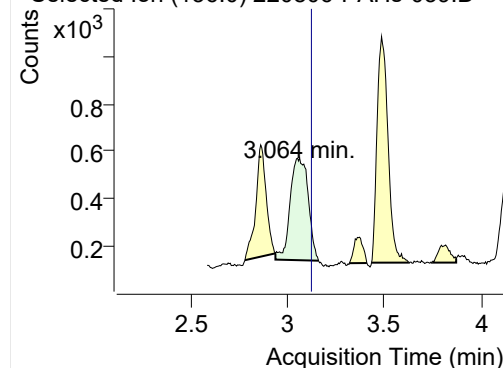
+ TIC SIM 220806-PAHs-039.D (Sample-Gas-220722-100DIL)



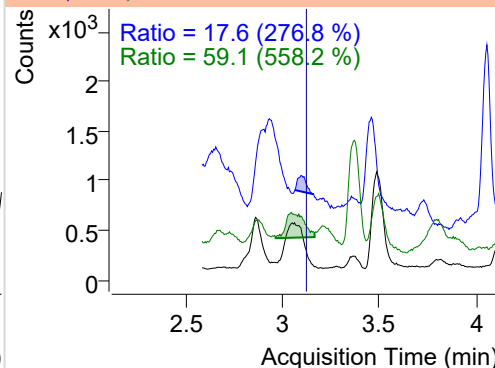
| Name                    | RT     | Transition | Resp.  | Height    | Final Conc. Units | Ratio |
|-------------------------|--------|------------|--------|-----------|-------------------|-------|
| IS-D8-Naphthalene       | 3.064  | 136.0      | 2786   | 433.26    | ND ng/ml          | 59.1  |
| Naphthalene             | 3.112  | 128.0      | 747879 | 146928.12 | ND ng/ml          | 13.0  |
| Acenaphthylene          | 6.339  | 152.0      | 153    | 46.59     | ND ng/ml          | 481.2 |
| IS-D10-Acenaphthene     | 6.493  | 164.0      | 1255   | 579.27    | ND ng/ml          | 87.1  |
| Acenaphthene            | 6.558  | 154.0      | 510    | 245.93    | ND ng/ml          | 105.2 |
| LSS-D10-Fluorene        | 7.617  | 176.0      | 996    | 560.50    | ND ng/ml          | 99.2  |
| Fluorene                | 7.680  | 166.0      | 961    | 463.35    | ND ng/ml          | 118.0 |
| IS-D10-Phenanthrene     | 9.780  | 188.0      | 1844   | 1103.04   | ND ng/ml          | 25.7  |
| Phenanthrene            | 9.822  | 178.0      | 2887   | 1681.40   | ND ng/ml          | 19.8  |
| Anthracene              | 9.980  | 178.0      | 4279   | 2783.40   | ND ng/ml          | 28.1  |
| Fluoranthene            | 12.521 | 202.0      | 564    | 342.03    | ND ng/ml          |       |
| LSS-D10-Pyrene          | 12.976 | 212.0      | 1380   | 795.97    | ND ng/ml          | 29.9  |
| Pyrene                  | 13.003 | 202.0      | 843    | 515.18    | ND ng/ml          |       |
| Benz(a)anthracene       | 15.789 | 228.0      | 13     | 8.91      | ND ng/ml          |       |
| IS-D12-Chrysene         | 15.838 | 240.0      | 1057   | 492.84    | ND ng/ml          | 22.8  |
| Chrysene                | 15.876 | 228.0      | 106    | 37.26     | ND ng/ml          | 37.2  |
| Benzo(b)fluoranthene    | 18.566 | 252.0      | 1008   | 442.43    | ND ng/ml          | 10.9  |
| Benzo(k)fluoranthene    | 18.566 | 252.0      | 1008   | 442.43    | ND ng/ml          | 10.9  |
| SS-D12-Benzo(e)pyrene   | 18.573 | 264.0      | 4395   | 1343.60   | ND ng/ml          | 11.0  |
| Benzo(e)pyrene          | 18.658 | 252.0      | 9381   | 4667.27   | ND ng/ml          | 17.8  |
| Benzo(a)pyrene          | 18.779 | 252.0      | 802    | 320.68    | ND ng/ml          | 16.0  |
| IS-D12-Perylene         | 18.865 | 264.0      | 2190   | 781.60    | ND ng/ml          | 10.3  |
| Perylene                | 18.972 | 252.0      | 2736   | 1251.19   | ND ng/ml          | 18.8  |
| Indeno(1,2,3-c,d)pyrene | 21.171 | 276.0      | 6      | 4.24      | ND ng/ml          |       |
| Dibenz(a,h)anthracene   | 20.828 | 278.0      | 12     | 3.62      | ND ng/ml          |       |
| Benzo(g,h,i)perylene    | 21.171 | 276.0      | 6      | 4.24      | ND ng/ml          |       |
| Coronene                | 23.767 | 300.0      | 4      | 4.00      | ND ng/ml          |       |

## IS-D8-Naphthalene

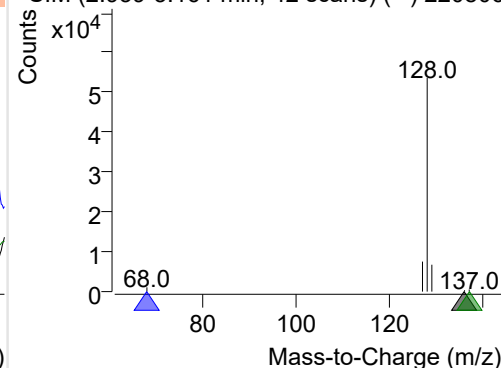
+ Selected Ion (136.0) 220806-PAHs-039.D



136.0, 68.0, 137.0

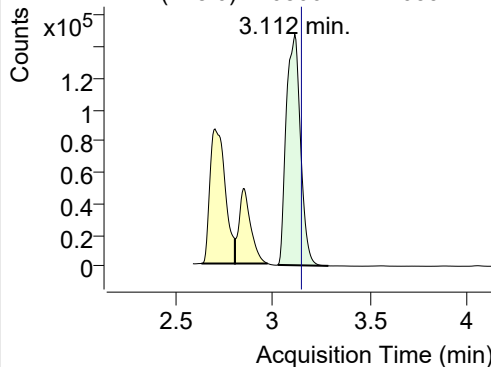


+ SIM (2.939-3.161 min, 42 scans) (\*\*) 220806

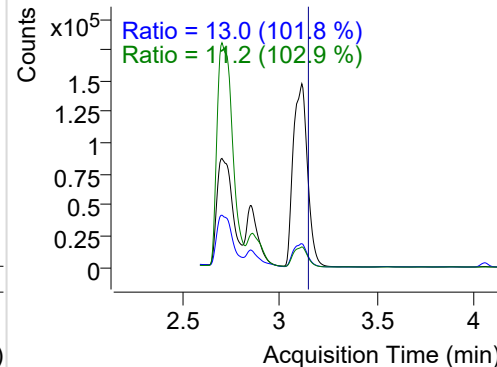


**Naphthalene**

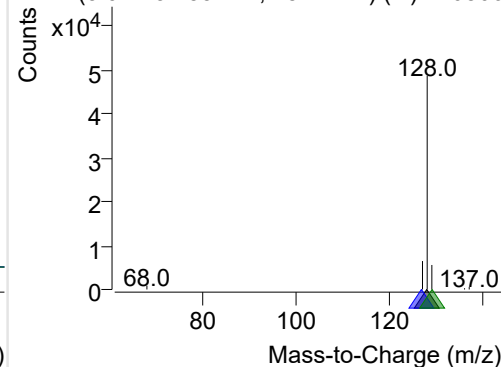
+ Selected Ion (128.0) 220806-PAHs-039.D



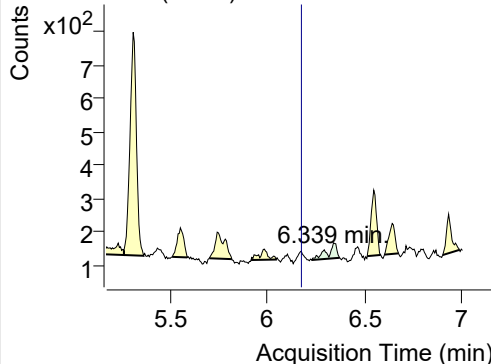
128.0, 127.0, 129.0



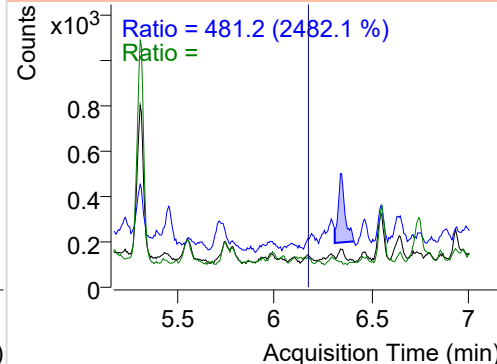
+ SIM (3.024-3.285 min, 48 scans) (\*\*) 220806

**Acenaphthylene**

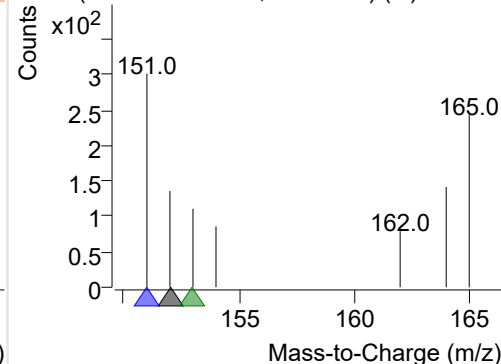
+ Selected Ion (152.0) 220806-PAHs-039.D



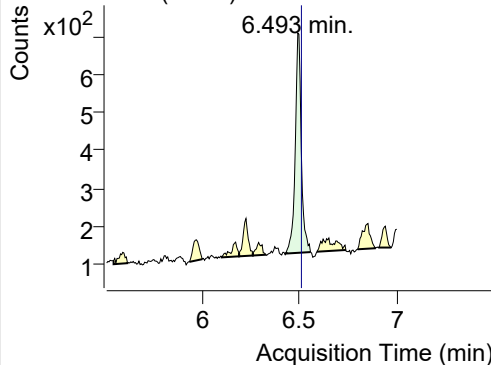
152.0, 151.0, 153.0



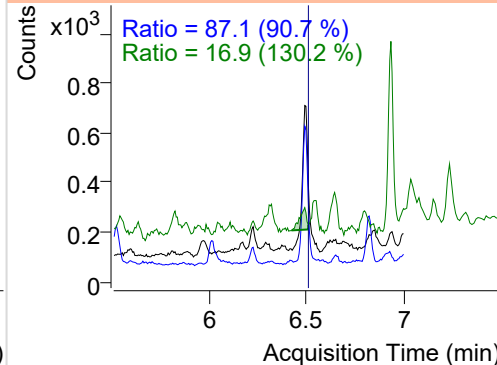
+ SIM (6.227-6.371 min, 24 scans) (\*\*) 220806

**IS-D10-Acenaphthene**

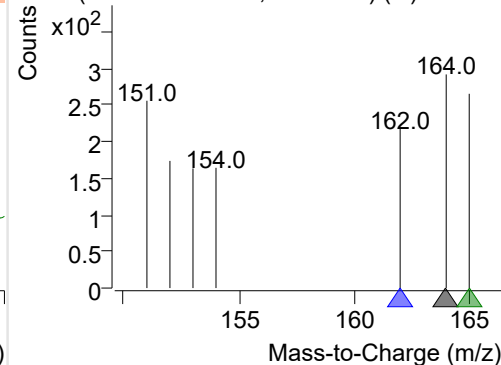
+ Selected Ion (164.0) 220806-PAHs-039.D



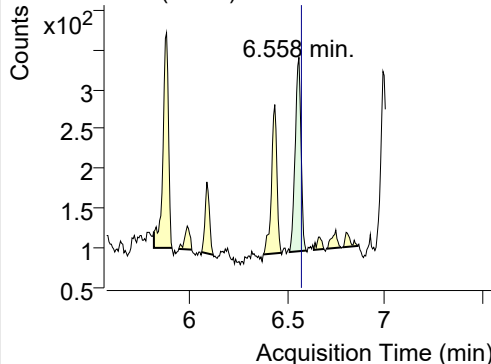
164.0, 162.0, 165.0



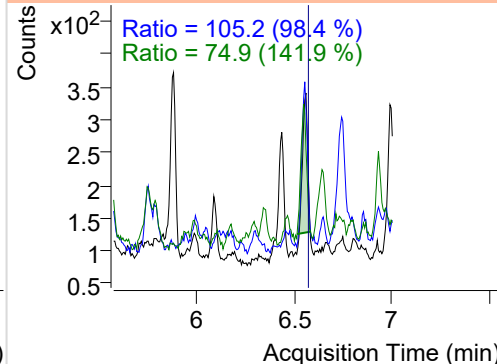
+ SIM (6.434-6.558 min, 22 scans) (\*\*) 220806

**Acenaphthene**

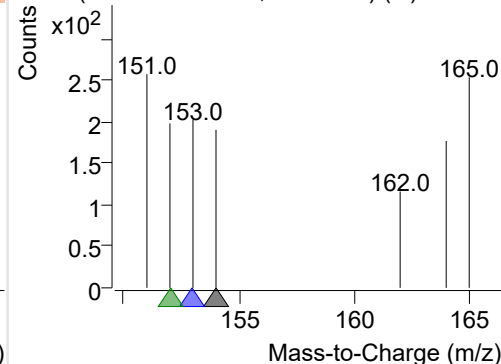
+ Selected Ion (154.0) 220806-PAHs-039.D



154.0, 153.0, 152.0

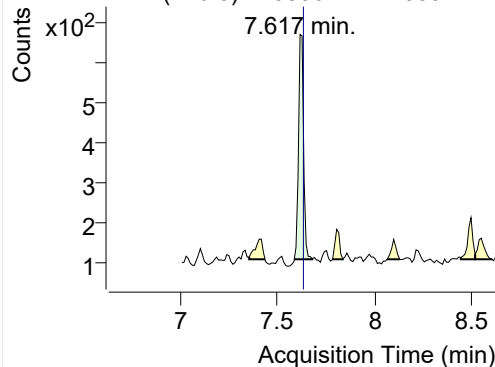


+ SIM (6.510-6.595 min, 15 scans) (\*\*) 220806

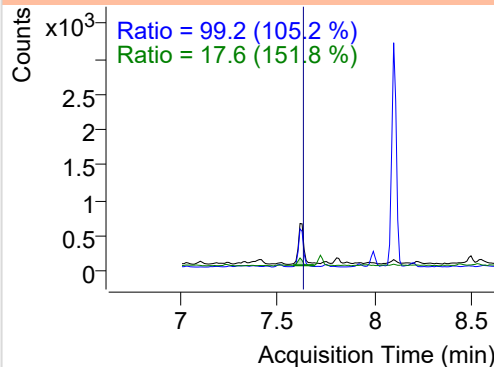


## LSS-D10-Fluorene

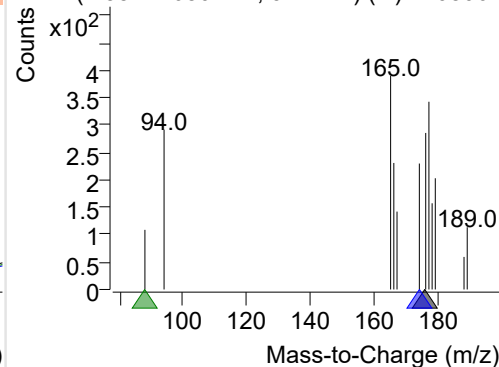
+ Selected Ion (176.0) 220806-PAHs-039.D



176.0, 174.0, 88.0

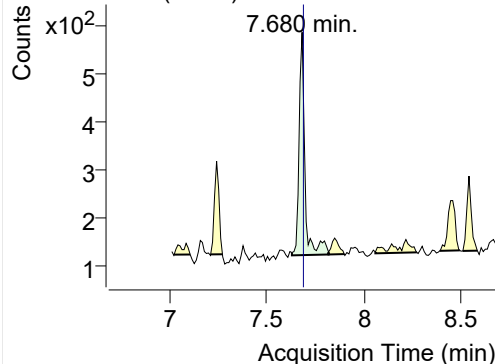


+ SIM (7.587-7.680 min, 9 scans) (\*\*) 220806-I

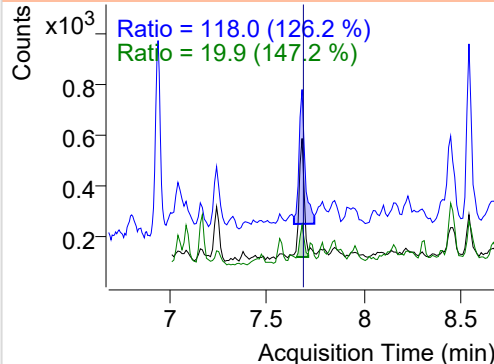


## Fluorene

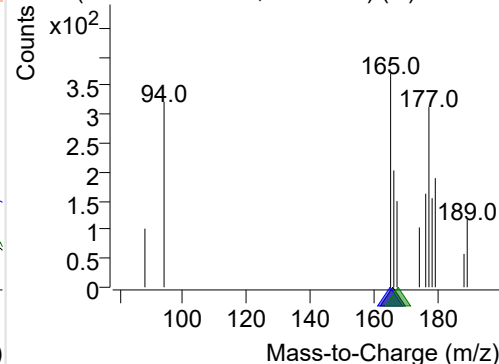
+ Selected Ion (166.0) 220806-PAHs-039.D



166.0, 165.0, 167.0

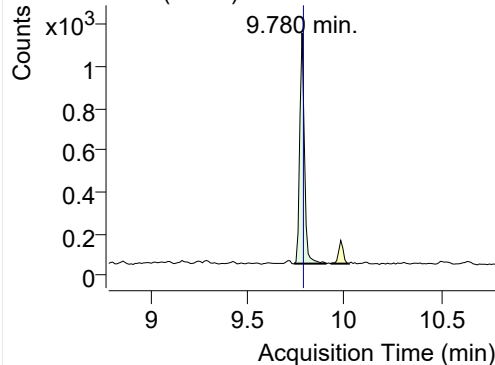


+ SIM (7.627-7.816 min, 19 scans) (\*\*) 220806

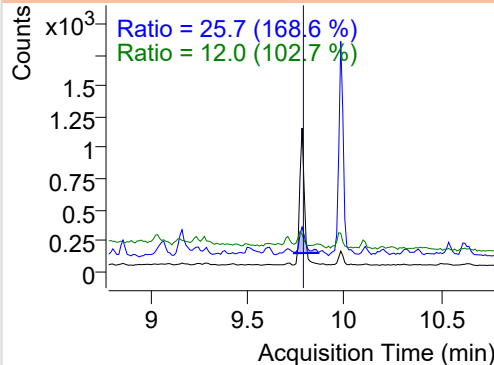


## IS-D10-Phenanthrene

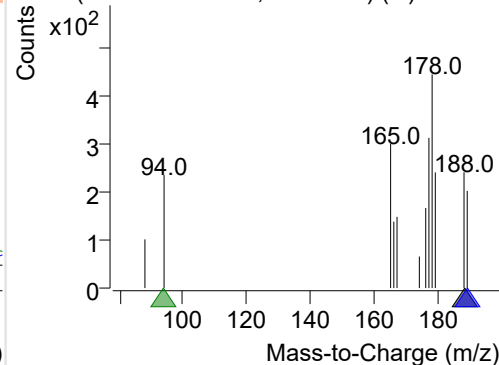
+ Selected Ion (188.0) 220806-PAHs-039.D



188.0, 189.0, 94.0

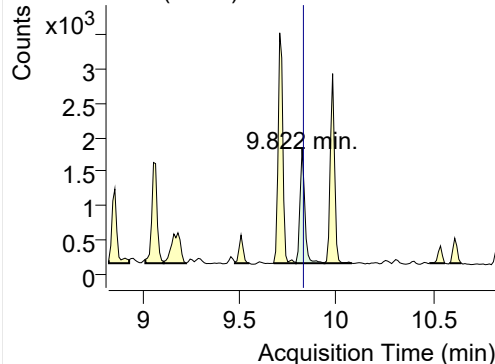


+ SIM (9.739-9.906 min, 16 scans) (\*\*) 220806

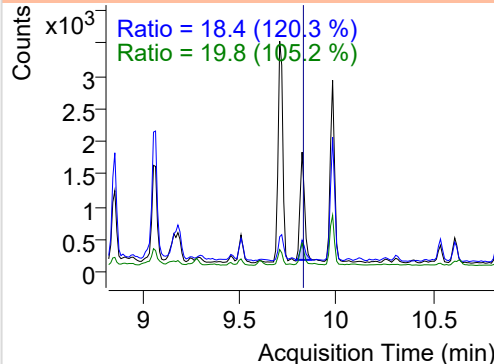


## Phenanthrene

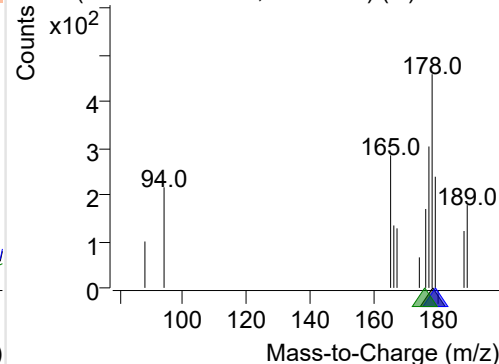
+ Selected Ion (178.0) 220806-PAHs-039.D



178.0, 179.0, 176.0

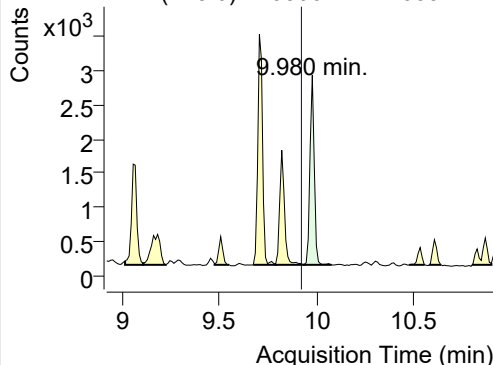


+ SIM (9.791-9.938 min, 15 scans) (\*\*) 220806

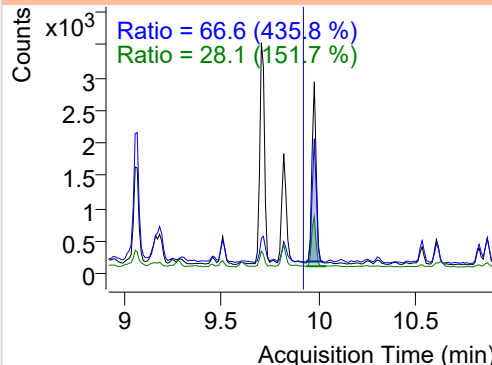


**Anthracene**

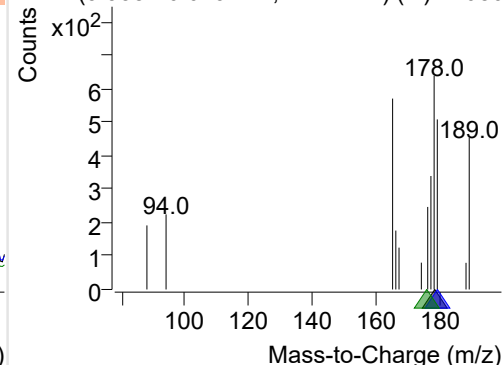
+ Selected Ion (178.0) 220806-PAHs-039.D



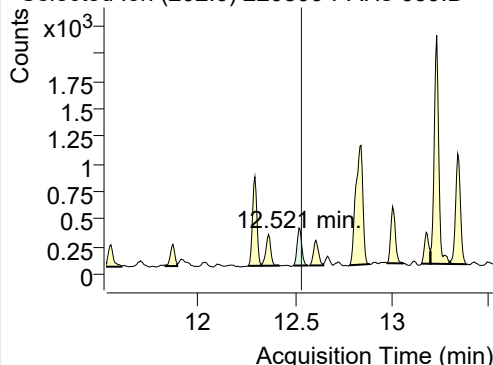
178.0, 179.0, 176.0



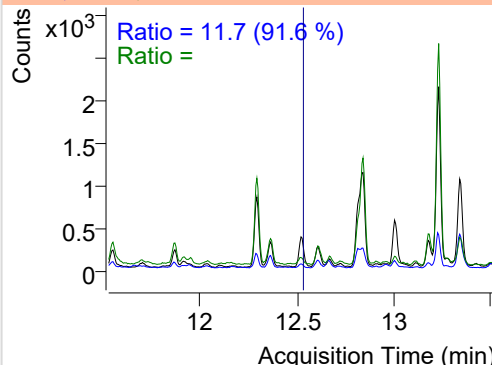
+ SIM (9.938-10.079 min, 14 scans) (\*\*) 22080

**Fluoranthene**

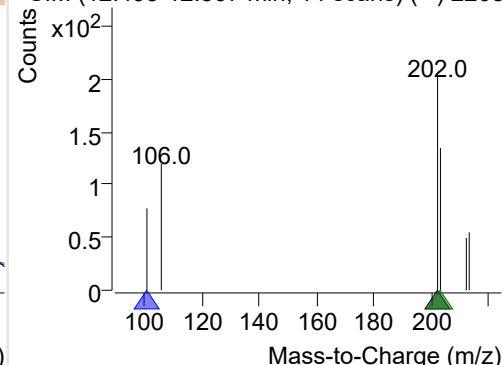
+ Selected Ion (202.0) 220806-PAHs-039.D



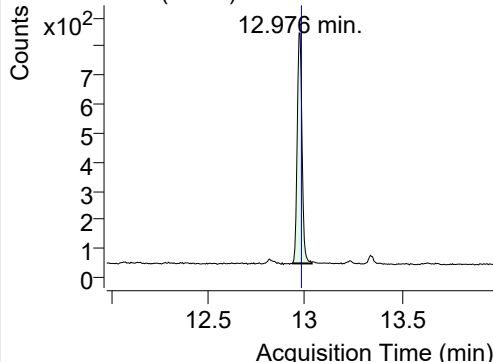
202.0, 101.0, 203.0



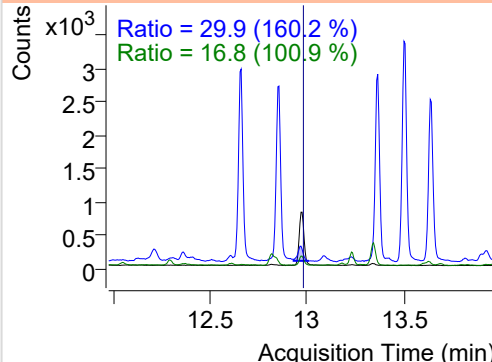
+ SIM (12.493-12.567 min, 14 scans) (\*\*) 2208

**LSS-D10-Pyrene**

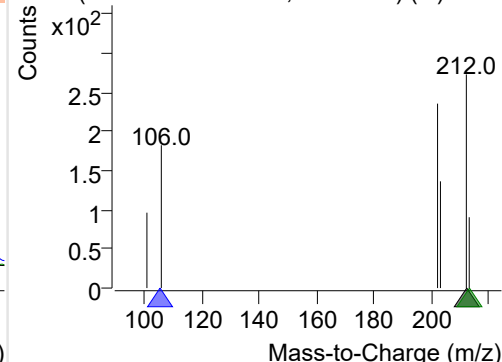
+ Selected Ion (212.0) 220806-PAHs-039.D



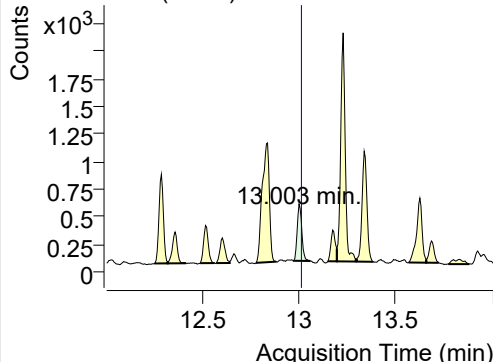
212.0, 106.0, 213.0



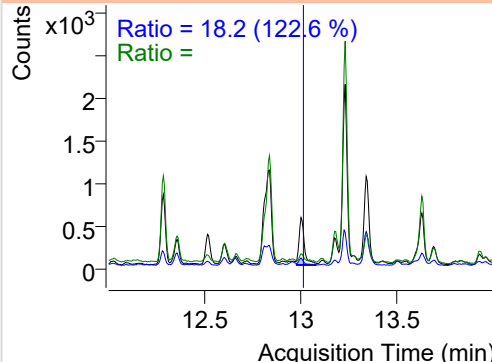
+ SIM (12.935-13.036 min, 19 scans) (\*\*) 2208

**Pyrene**

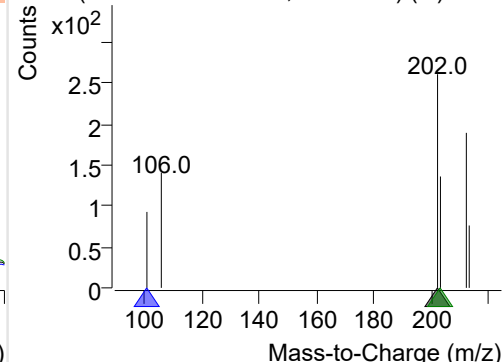
+ Selected Ion (202.0) 220806-PAHs-039.D



202.0, 101.0, 203.0



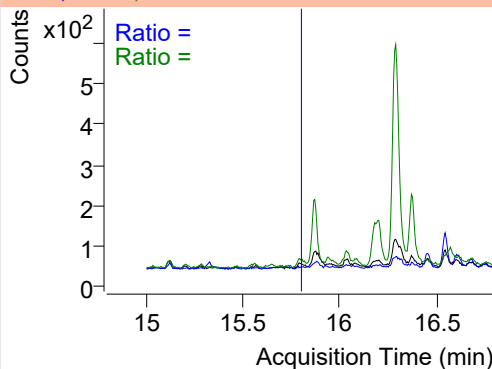
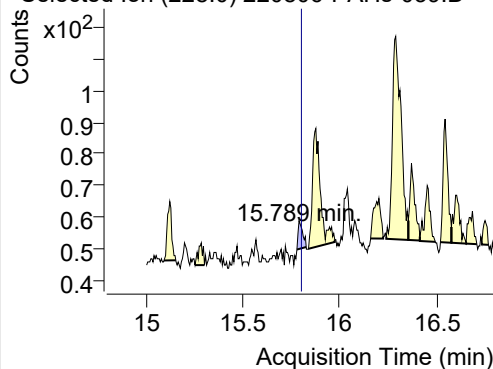
+ SIM (12.976-13.061 min, 16 scans) (\*\*) 2208



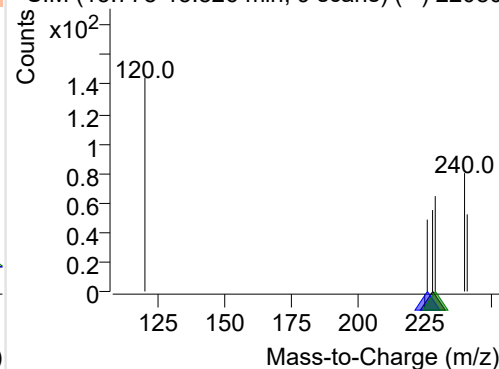
**Benz(a)anthracene**

+ Selected Ion (228.0) 220806-PAHs-039.D

228.0, 226.0, 229.0

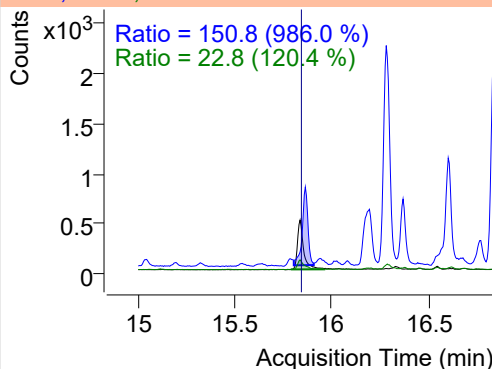
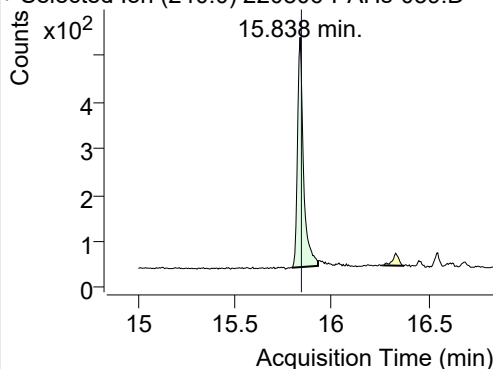


+ SIM (15.778-15.826 min, 9 scans) (\*\*) 22080

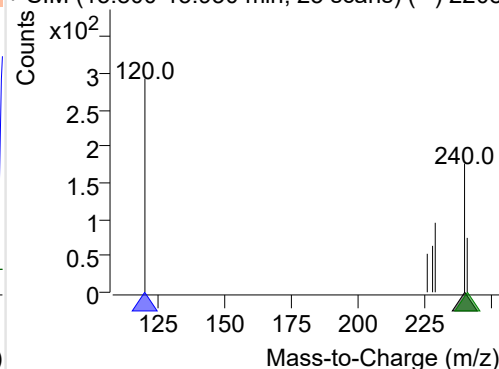
**IS-D12-Chrysene**

+ Selected Ion (240.0) 220806-PAHs-039.D

240.0, 120.0, 241.0

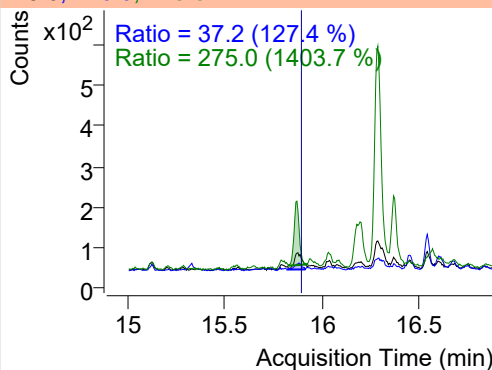
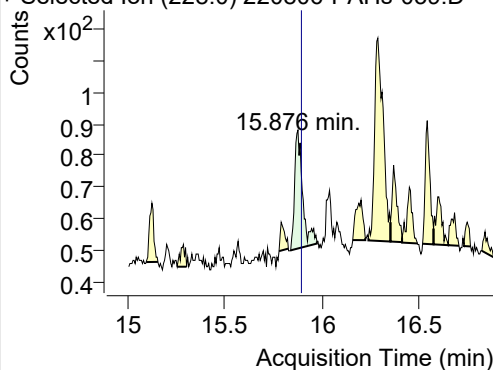


+ SIM (15.800-15.930 min, 25 scans) (\*\*) 2208

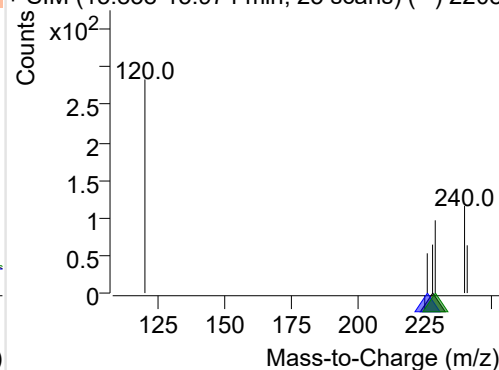
**Chrysene**

+ Selected Ion (228.0) 220806-PAHs-039.D

228.0, 226.0, 229.0

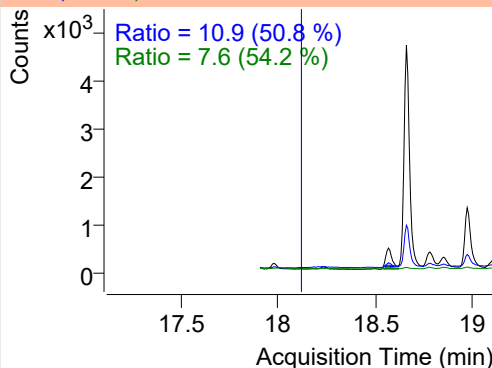
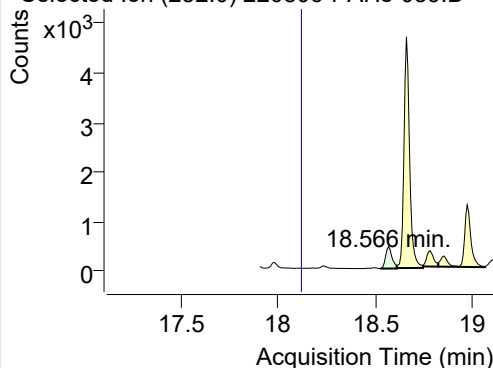


+ SIM (15.838-15.974 min, 25 scans) (\*\*) 2208

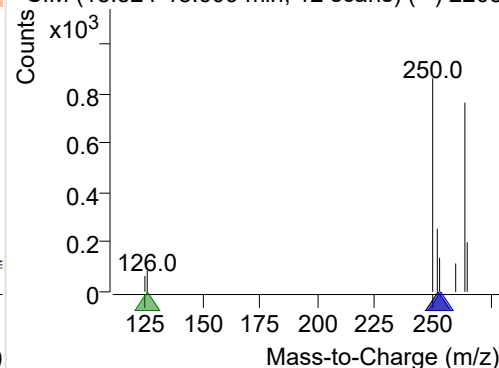
**Benzo(b)fluoranthene**

+ Selected Ion (252.0) 220806-PAHs-039.D

252.0, 253.0, 126.0



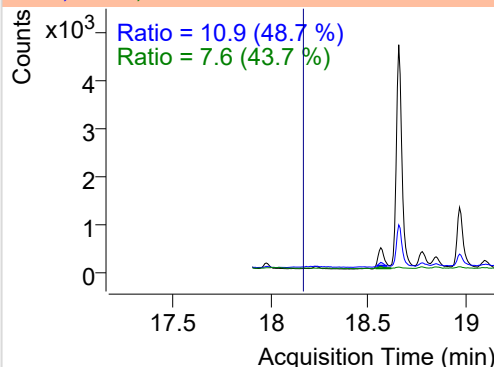
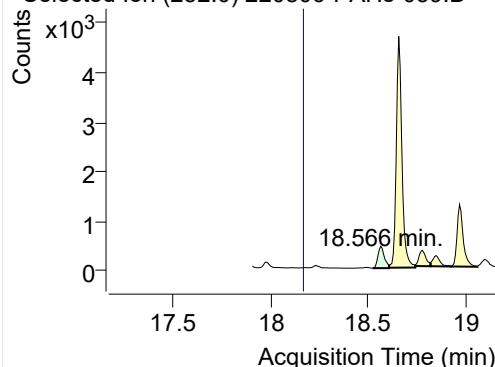
+ SIM (18.524-18.609 min, 12 scans) (\*\*) 2208



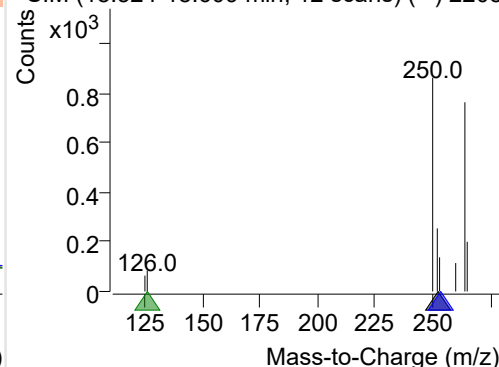
**Benzo(k)fluoranthene**

+ Selected Ion (252.0) 220806-PAHs-039.D

252.0, 253.0, 126.0

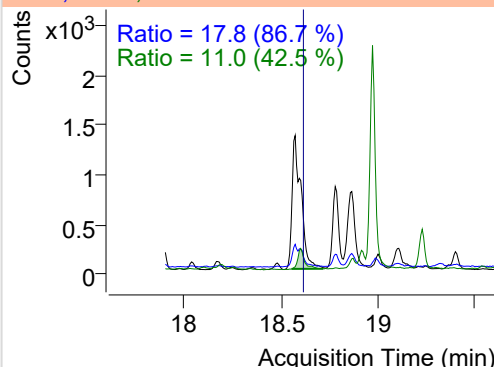
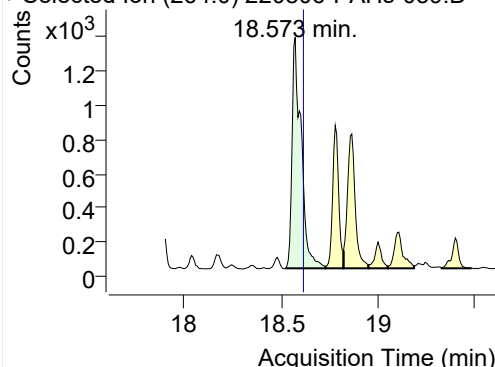


+ SIM (18.524-18.609 min, 12 scans) (\*\*) 2208

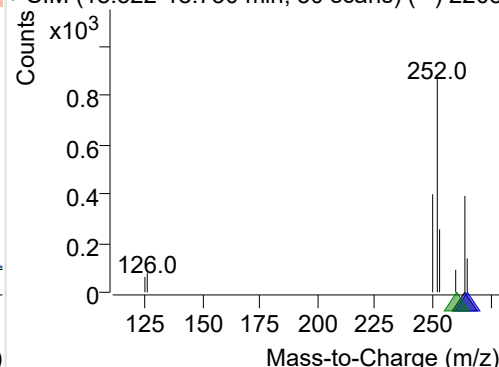
**SS-D12-Benzo(e)pyrene**

+ Selected Ion (264.0) 220806-PAHs-039.D

264.0, 265.0, 260.0

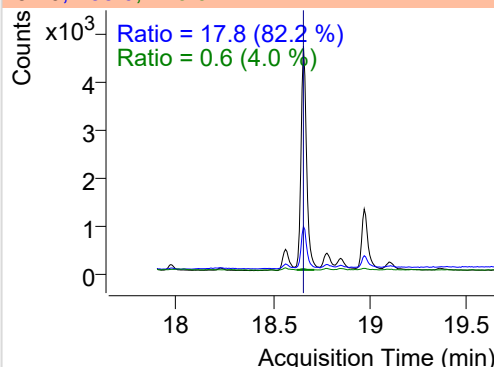
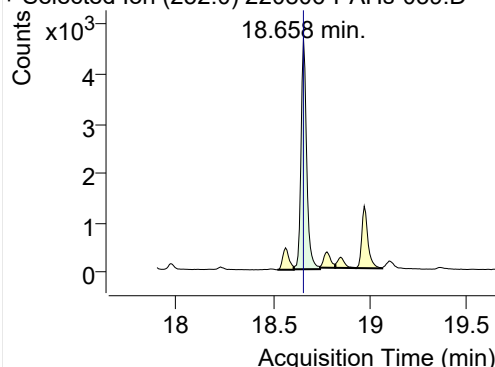


+ SIM (18.522-18.730 min, 30 scans) (\*\*) 2208

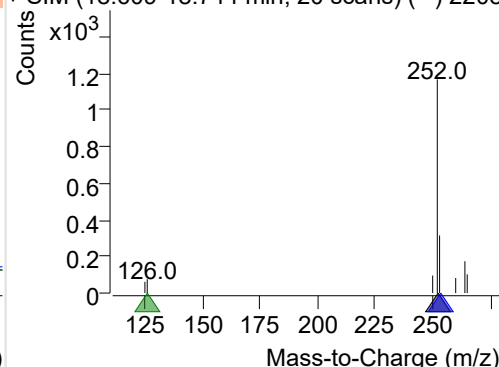
**Benzo(e)pyrene**

+ Selected Ion (252.0) 220806-PAHs-039.D

252.0, 253.0, 126.0

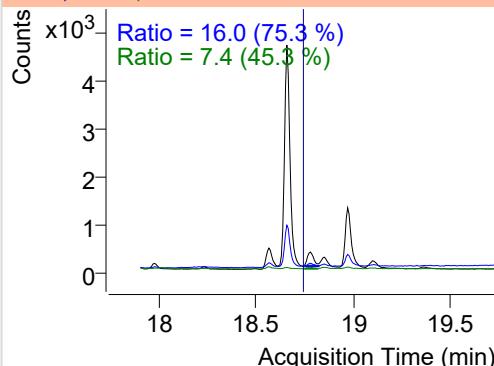
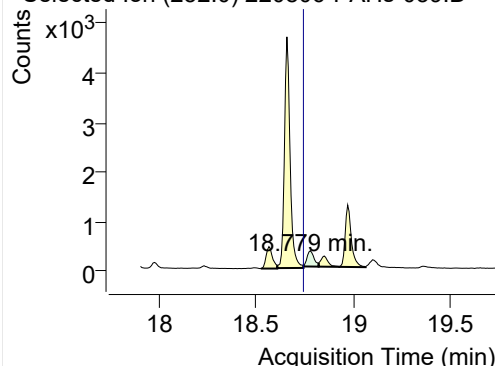


+ SIM (18.609-18.744 min, 20 scans) (\*\*) 2208

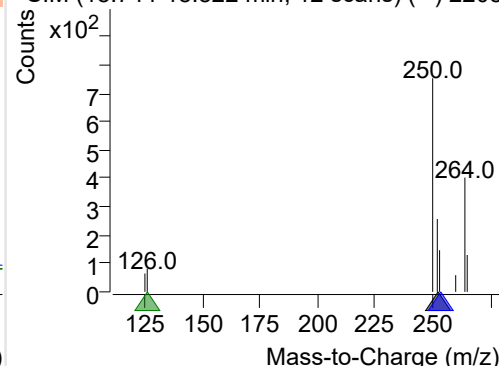
**Benzo(a)pyrene**

+ Selected Ion (252.0) 220806-PAHs-039.D

252.0, 253.0, 126.0



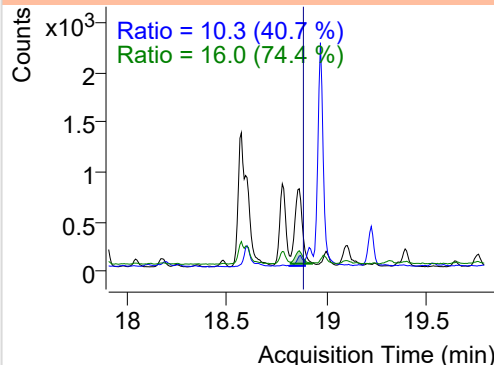
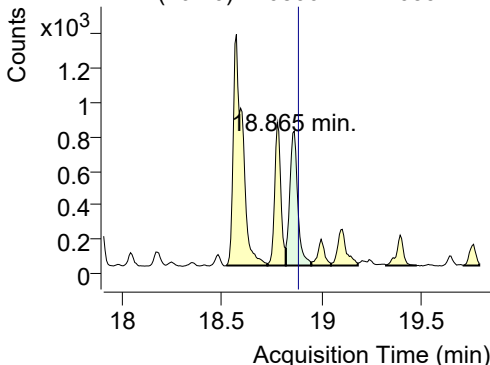
+ SIM (18.744-18.822 min, 12 scans) (\*\*) 2208



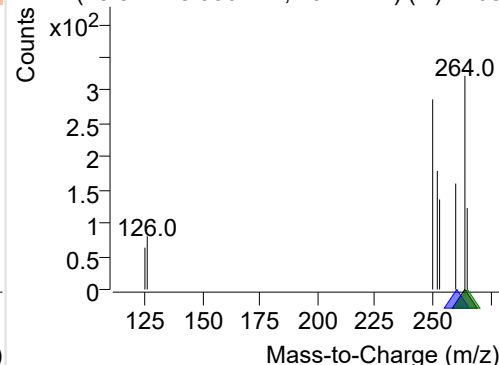
## IS-D12-Perylene

+ Selected Ion (264.0) 220806-PAHs-039.D

264.0, 260.0, 265.0



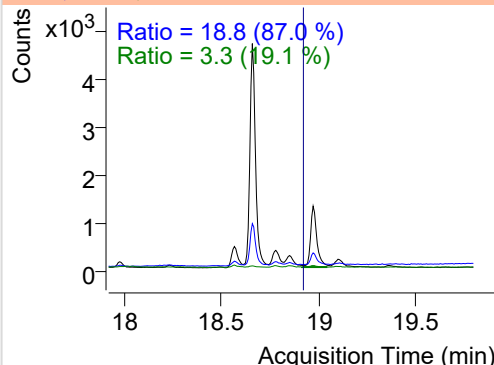
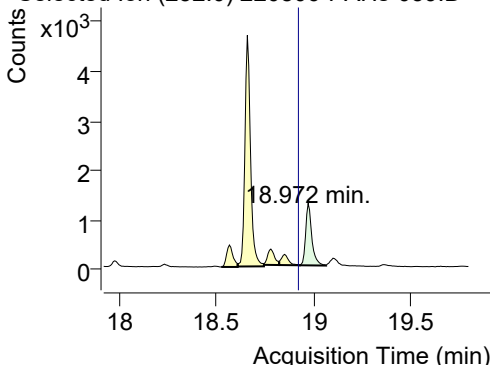
+ SIM (18.822-18.950 min, 19 scans) (\*\*) 2208



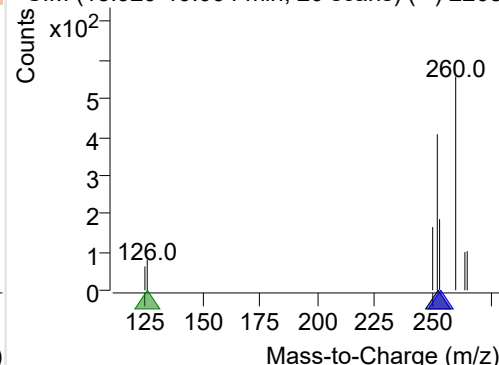
## Perylene

+ Selected Ion (252.0) 220806-PAHs-039.D

252.0, 253.0, 126.0



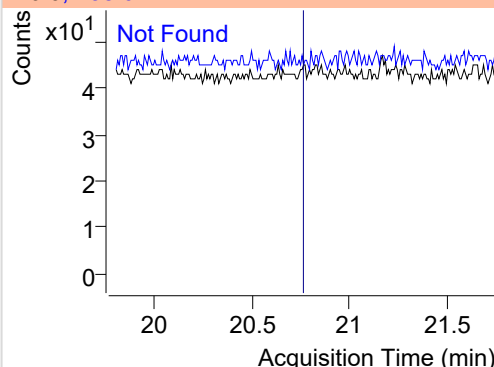
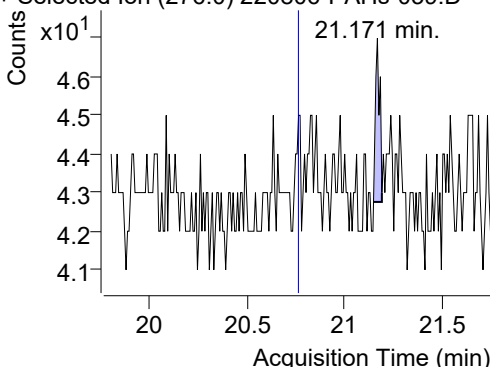
+ SIM (18.929-19.064 min, 20 scans) (\*\*) 2208



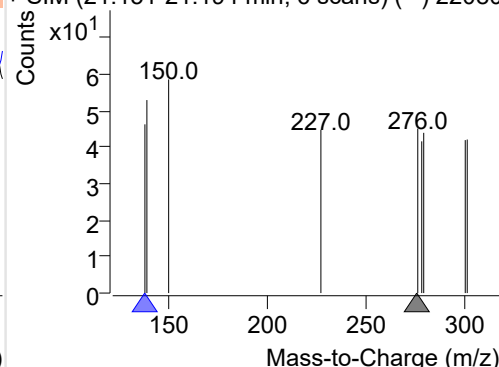
## Indeno(1,2,3-c,d)pyrene

+ Selected Ion (276.0) 220806-PAHs-039.D

276.0, 138.0



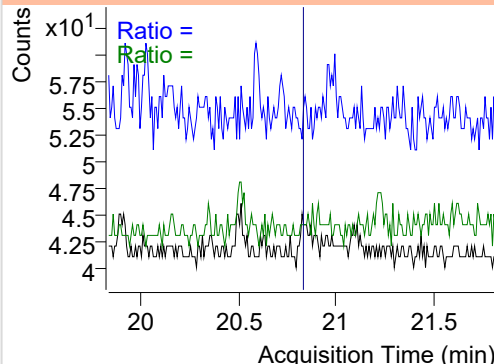
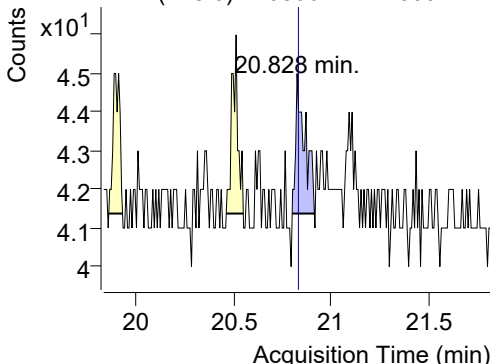
+ SIM (21.151-21.194 min, 6 scans) (\*\*) 22080



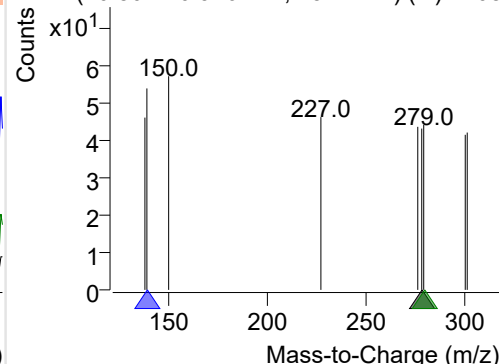
## Dibenz(a,h)anthracene

+ Selected Ion (278.0) 220806-PAHs-039.D

278.0, 139.0, 279.0



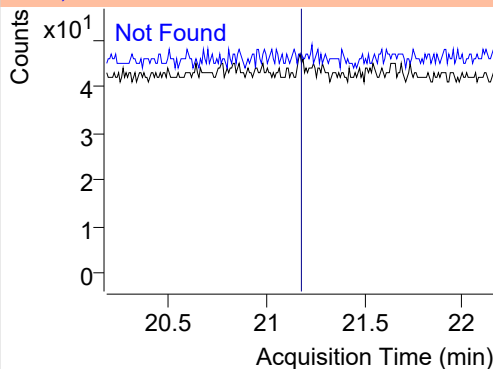
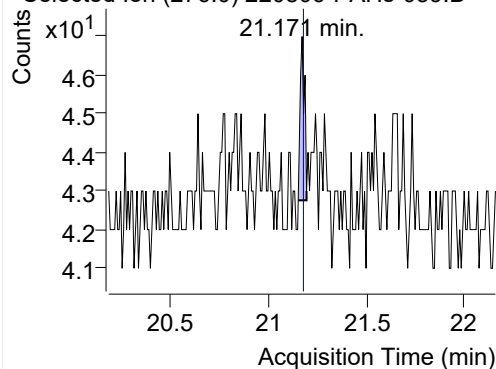
+ SIM (20.802-20.916 min, 15 scans) (\*\*) 2208



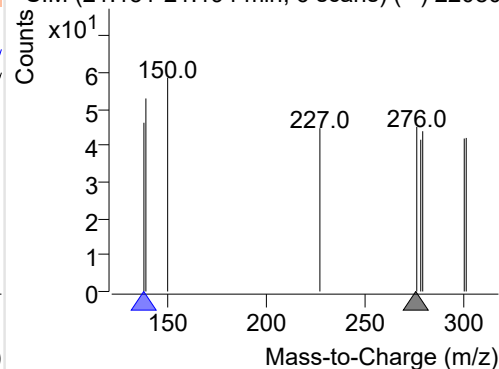
**Benzo(g,h,i)perylene**

+ Selected Ion (276.0) 220806-PAHs-039.D

276.0, 138.0

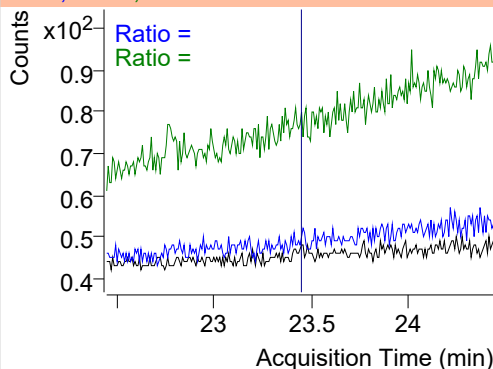
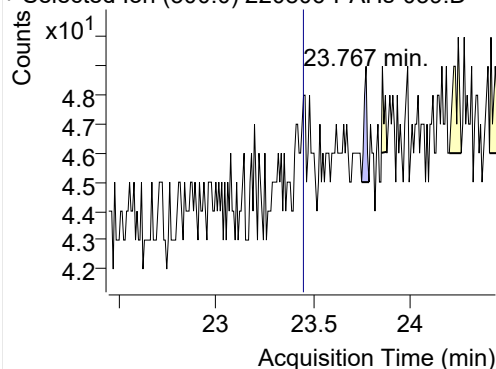


+ SIM (21.151-21.194 min, 6 scans) (\*\*) 22080

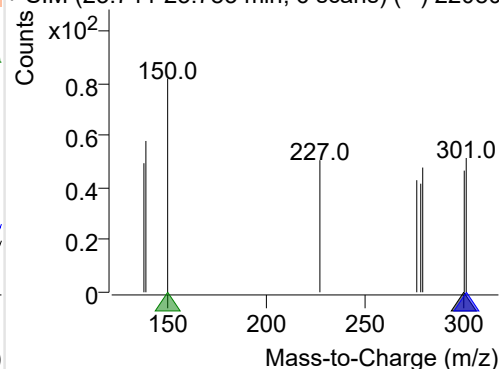
**Coronene**

+ Selected Ion (300.0) 220806-PAHs-039.D

300.0, 301.0, 150.0



+ SIM (23.744-23.783 min, 6 scans) (\*\*) 22080





## Quantitative Analysis Sample Based Report

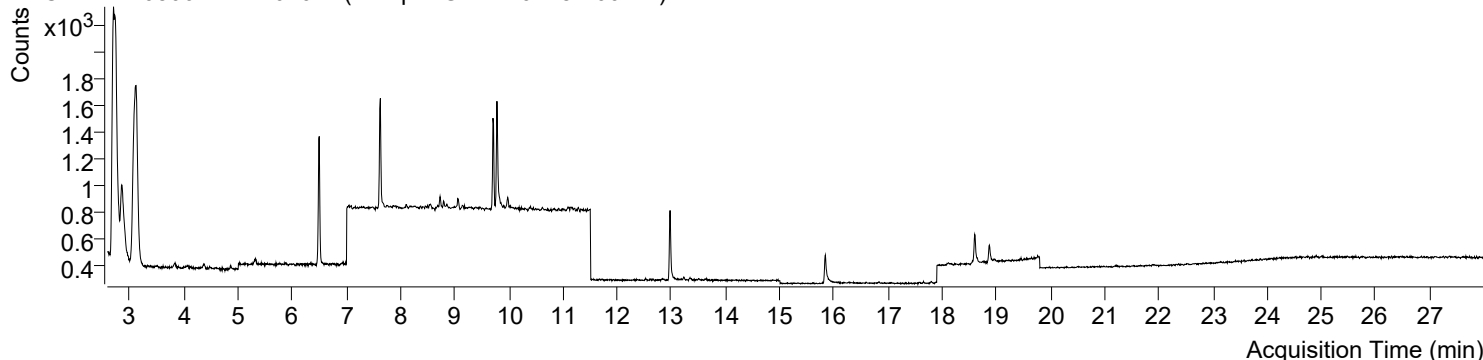


Trusted Answers

|                           |                                                                                            |                       |                          |
|---------------------------|--------------------------------------------------------------------------------------------|-----------------------|--------------------------|
| Batch Data Path File Name | D:\MassHunter\GCMS\1\data\PAHs\220806-PAHs-Sample\QuantResults\220806-PAHs-Quant.batch.bin |                       |                          |
| Analysis Time Stamp       | 2022-10-10 오전 10:12:04                                                                     | Analyst Name          | DESKTOP-86B7UPG\5975MS   |
| Report Generation Time    | 2022-10-10 오전 10:12:12                                                                     | Report Generator Name | DESKTOP-86B7UPG\5975MS   |
| Calibration Last Update   | 2022-12-15 오후 3:30:46                                                                      | Batch State           | Processed                |
| Analyze Quant Version     | 10.2                                                                                       | Report Quant Version  | 10.2                     |
| Acq. Date-Time            | 2022-08-07 오전 6:44:14                                                                      | Data File             | 220806-PAHs-040.D        |
| Type                      | Sample                                                                                     | Name                  | Sample-Gas-220728-100DIL |
| Dil.                      | 1                                                                                          | Acq. Method File      | PAHs 19mix-Method        |

## Sample Chromatogram

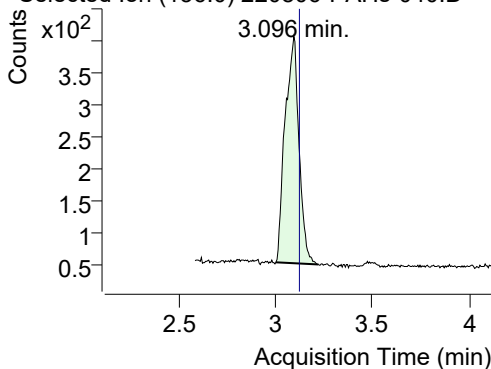
+ TIC SIM 220806-PAHs-040.D (Sample-Gas-220728-100DIL)



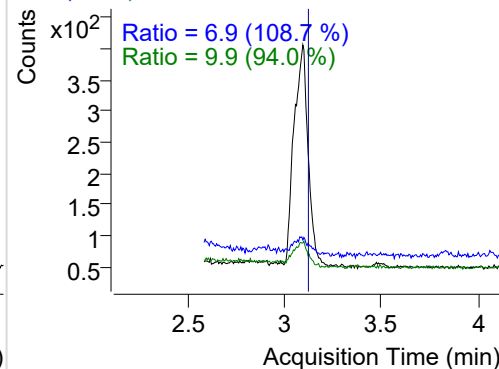
| Name                    | RT     | Transition | Resp. | Height | Final Conc. Units | Ratio |
|-------------------------|--------|------------|-------|--------|-------------------|-------|
| IS-D8-Naphthalene       | 3.096  | 136.0      | 1752  | 352.92 | ND ng/ml          | 9.9   |
| Naphthalene             | 3.117  | 128.0      | 4392  | 878.20 | ND ng/ml          | 12.0  |
| Acenaphthylene          | 5.332  | 152.0      | 14    | 6.20   | ND ng/ml          |       |
| IS-D10-Acenaphthene     | 6.498  | 164.0      | 872   | 461.39 | ND ng/ml          | 95.0  |
| Acenaphthene            | 6.558  | 154.0      | 7     | 5.20   | ND ng/ml          |       |
| LSS-D10-Fluorene        | 7.627  | 176.0      | 684   | 378.97 | ND ng/ml          | 92.8  |
| Fluorene                | 7.680  | 166.0      | 16    | 10.27  | ND ng/ml          |       |
| IS-D10-Phenanthrene     | 9.780  | 188.0      | 1206  | 634.65 | ND ng/ml          | 15.8  |
| Phenanthrene            | 9.822  | 178.0      | 62    | 23.28  | ND ng/ml          |       |
| Anthracene              | 9.979  | 178.0      | 42    | 23.28  | ND ng/ml          |       |
| Fluoranthene            | 12.526 | 202.0      | 17    | 8.93   | ND ng/ml          |       |
| LSS-D10-Pyrene          | 12.976 | 212.0      | 730   | 387.18 | ND ng/ml          | 19.7  |
| Pyrene                  | 13.009 | 202.0      | 26    | 11.93  | ND ng/ml          |       |
| Benz(a)anthracene       | 15.871 | 228.0      | 17    | 6.61   | ND ng/ml          |       |
| IS-D12-Chrysene         | 15.843 | 240.0      | 413   | 156.55 | ND ng/ml          | 19.0  |
| Chrysene                | 15.871 | 228.0      | 17    | 6.61   | ND ng/ml          |       |
| Benzo(b)fluoranthene    | 18.117 | 252.0      | 15    | 4.60   | ND ng/ml          |       |
| Benzo(k)fluoranthene    | 18.117 | 252.0      | 15    | 4.60   | ND ng/ml          |       |
| SS-D12-Benzo(e)pyrene   | 18.601 | 264.0      | 340   | 141.29 | ND ng/ml          | 26.2  |
| Benzo(e)pyrene          | 18.651 | 252.0      | 9     | 7.14   | ND ng/ml          |       |
| Benzo(a)pyrene          | 18.765 | 252.0      | 3     | 4.33   | ND ng/ml          |       |
| IS-D12-Perylene         | 18.872 | 264.0      | 206   | 87.49  | ND ng/ml          | 25.2  |
| Perylene                | 18.765 | 252.0      | 3     | 4.33   | ND ng/ml          |       |
| Indeno(1,2,3-c,d)pyrene |        | 276.0      |       |        | ND ng/ml          |       |
| Dibenz(a,h)anthracene   |        | 278.0      |       |        | ND ng/ml          |       |
| Benzo(g,h,i)perylene    |        | 276.0      |       |        | ND ng/ml          |       |
| Coronene                | 23.408 | 300.0      | 24    | 3.58   | ND ng/ml          |       |

## IS-D8-Naphthalene

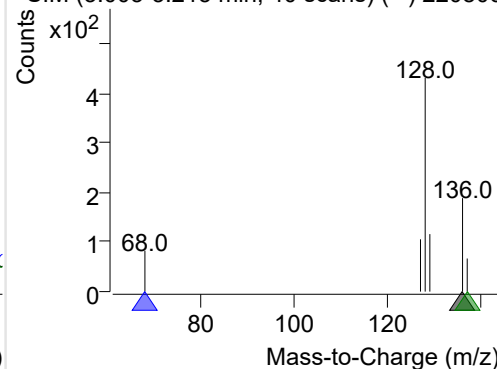
+ Selected Ion (136.0) 220806-PAHs-040.D



136.0, 68.0, 137.0

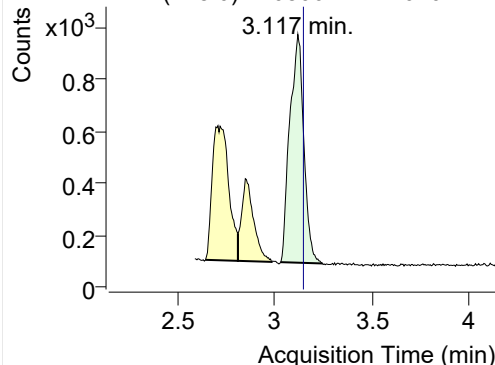


+ SIM (3.003-3.215 min, 40 scans) (\*\*) 220806

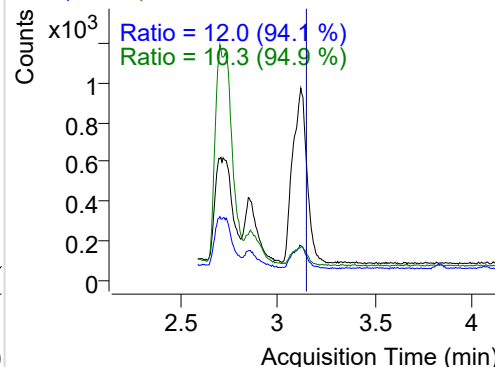


**Naphthalene**

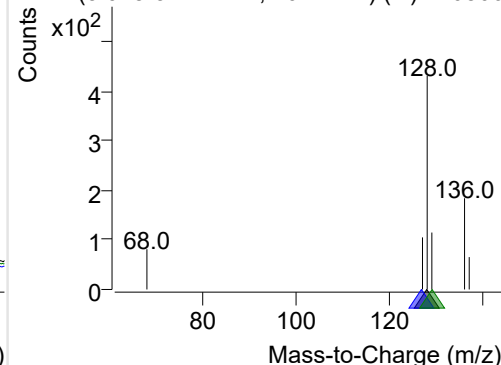
+ Selected Ion (128.0) 220806-PAHs-040.D



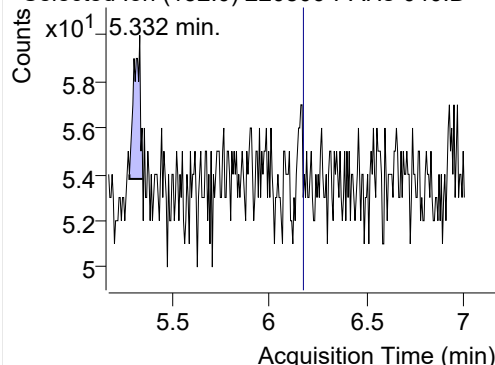
128.0, 127.0, 129.0



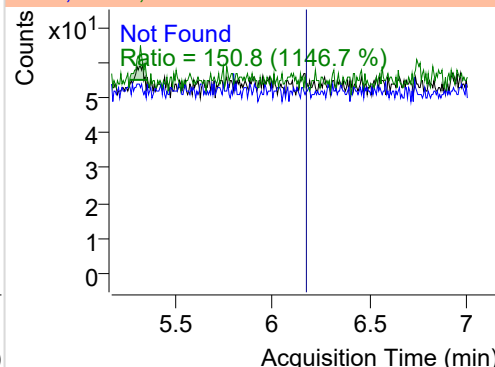
+ SIM (3.028-3.244 min, 40 scans) (\*\*) 220806

**Acenaphthylene**

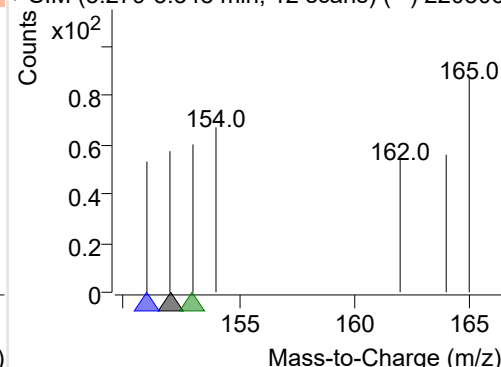
+ Selected Ion (152.0) 220806-PAHs-040.D



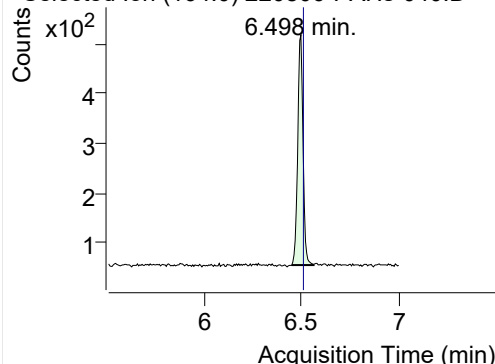
152.0, 151.0, 153.0



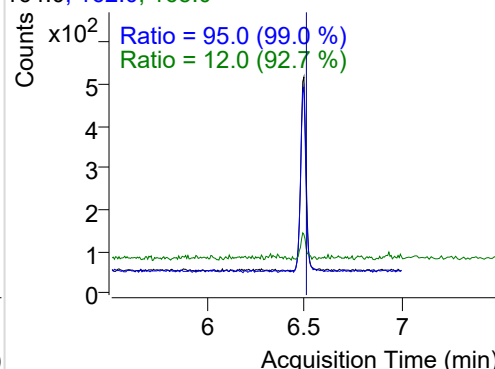
+ SIM (5.279-5.348 min, 12 scans) (\*\*) 220806

**IS-D10-Acenaphthene**

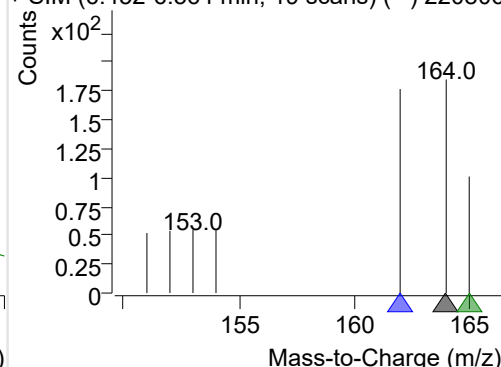
+ Selected Ion (164.0) 220806-PAHs-040.D



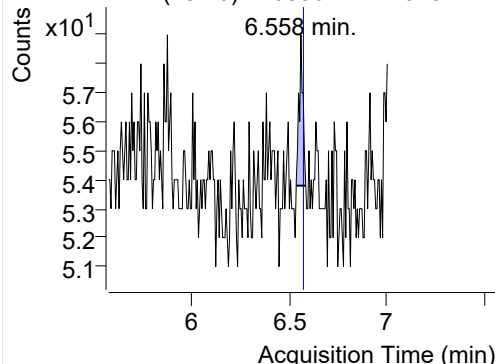
164.0, 162.0, 165.0



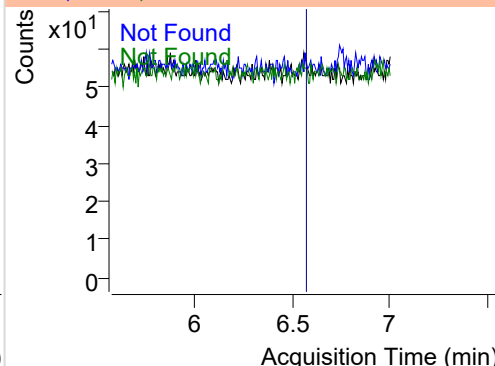
+ SIM (6.452-6.564 min, 19 scans) (\*\*) 220806

**Acenaphthene**

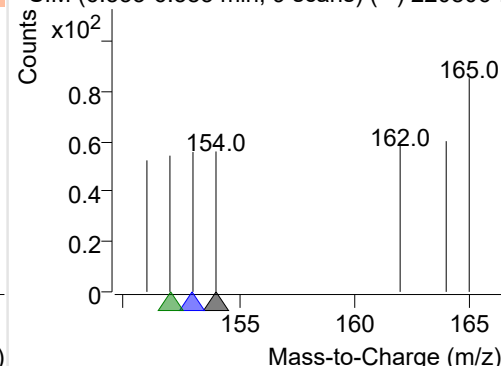
+ Selected Ion (154.0) 220806-PAHs-040.D



154.0, 153.0, 152.0

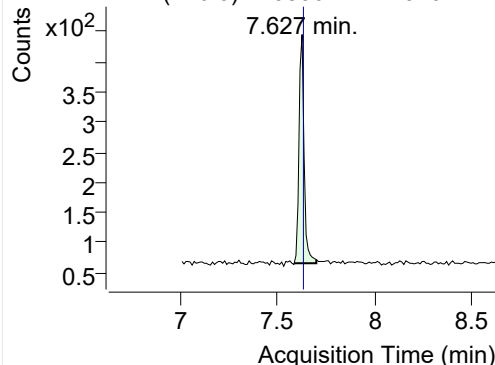


+ SIM (6.533-6.583 min, 9 scans) (\*\*) 220806-I

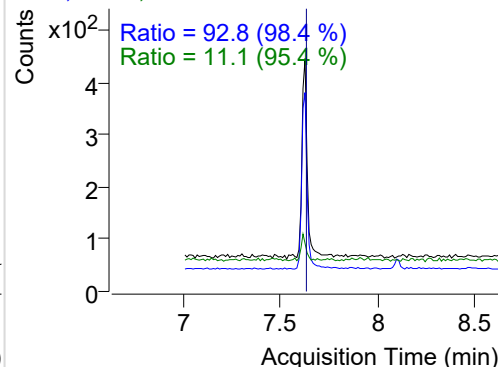


## LSS-D10-Fluorene

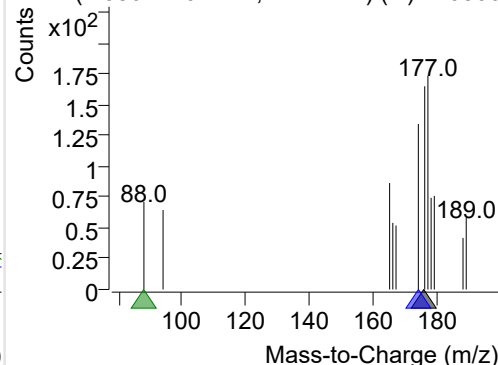
+ Selected Ion (176.0) 220806-PAHs-040.D



176.0, 174.0, 88.0

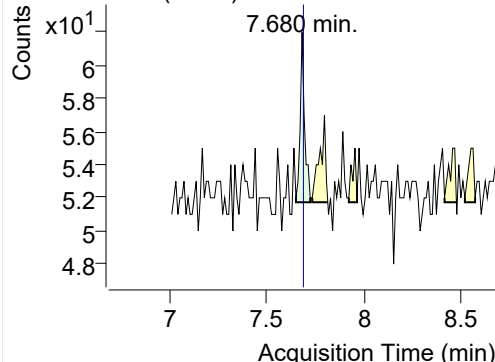


+ SIM (7.586-7.701 min, 11 scans) (\*\*) 220806

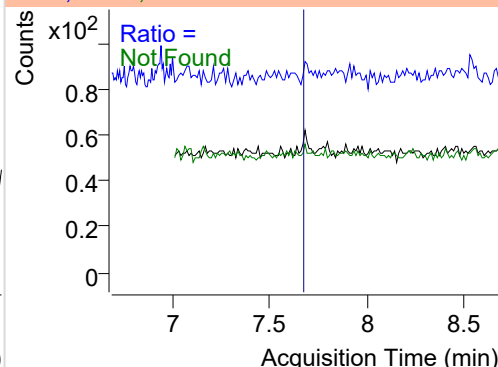


## Fluorene

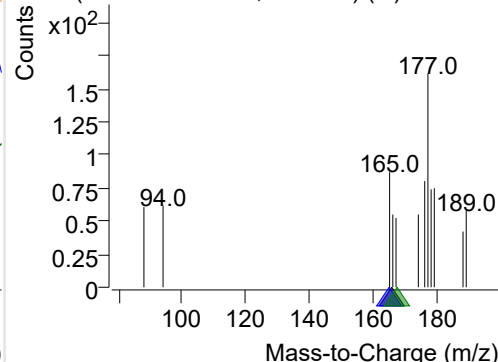
+ Selected Ion (166.0) 220806-PAHs-040.D



166.0, 165.0, 167.0

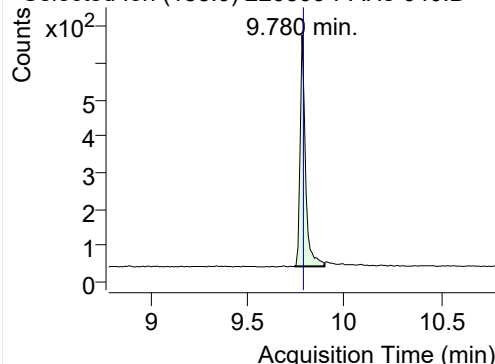


+ SIM (7.648-7.722 min, 8 scans) (\*\*) 220806-I

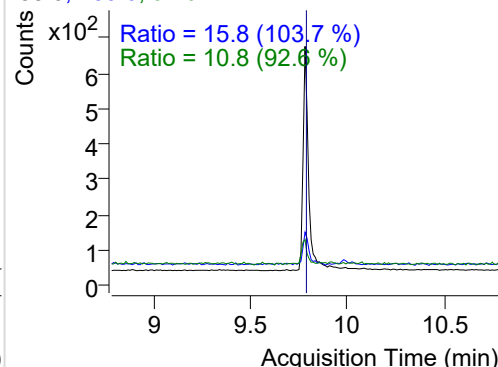


## IS-D10-Phenanthrene

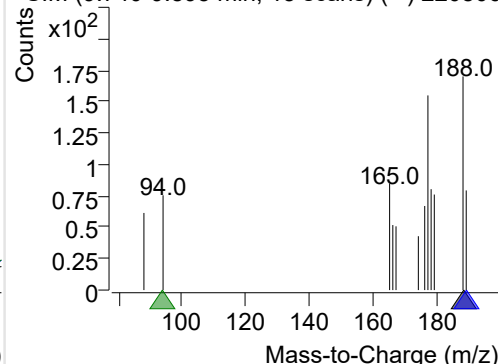
+ Selected Ion (188.0) 220806-PAHs-040.D



188.0, 189.0, 94.0

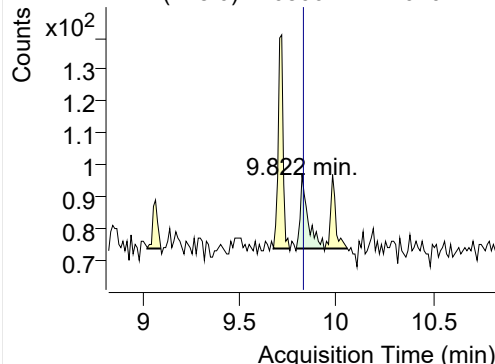


+ SIM (9.740-9.895 min, 15 scans) (\*\*) 220806

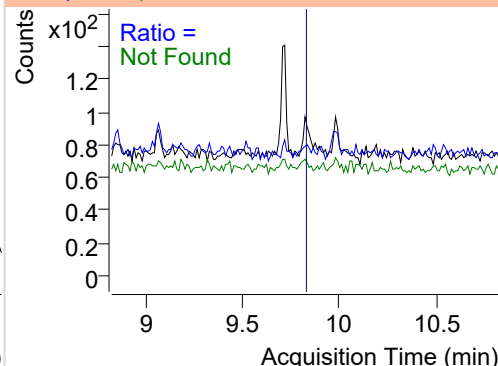


## Phenanthrene

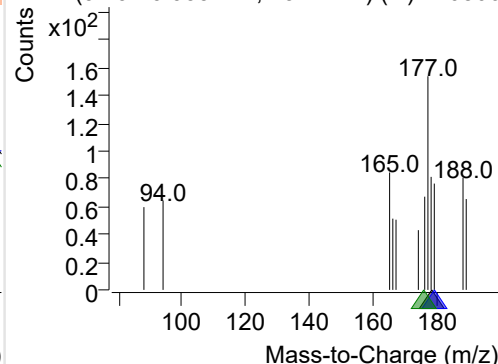
+ Selected Ion (178.0) 220806-PAHs-040.D



178.0, 179.0, 176.0

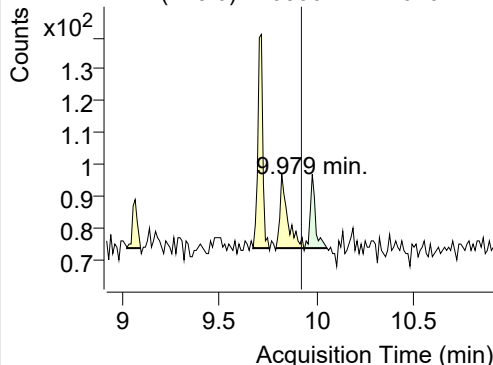


+ SIM (9.792-9.935 min, 13 scans) (\*\*) 220806

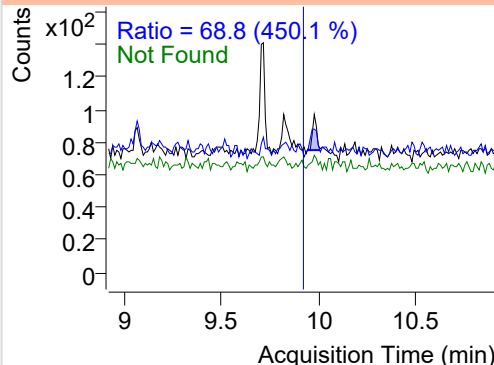


**Anthracene**

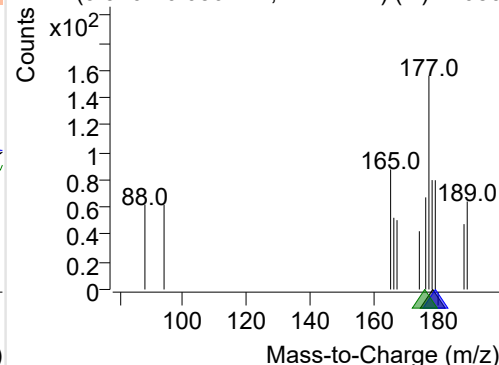
+ Selected Ion (178.0) 220806-PAHs-040.D



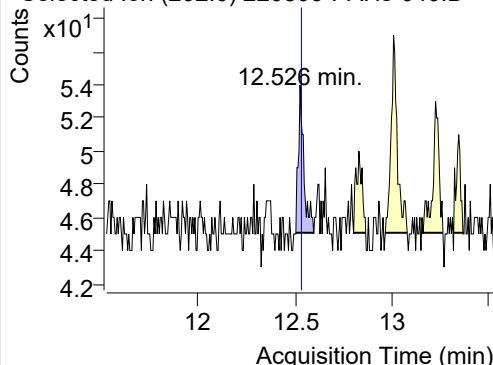
178.0, 179.0, 176.0



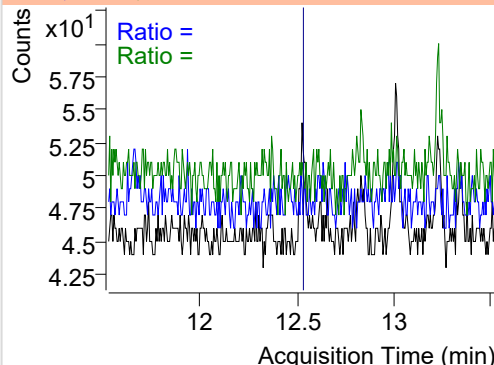
+ SIM (9.940-10.056 min, 11 scans) (\*\*) 22080

**Fluoranthene**

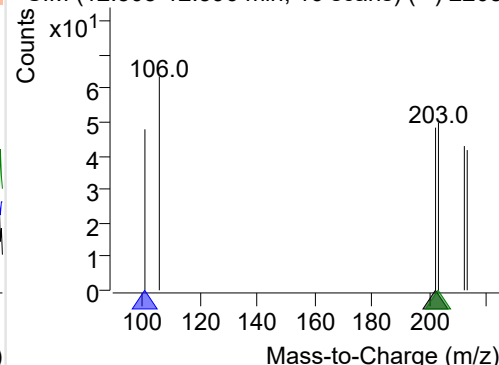
+ Selected Ion (202.0) 220806-PAHs-040.D



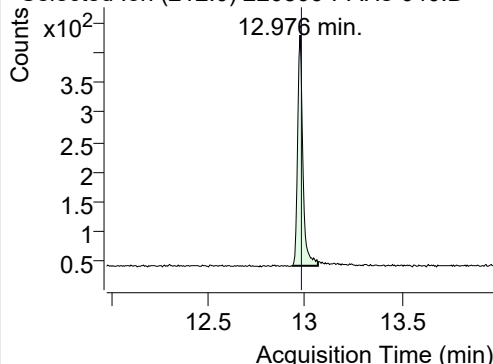
202.0, 101.0, 203.0



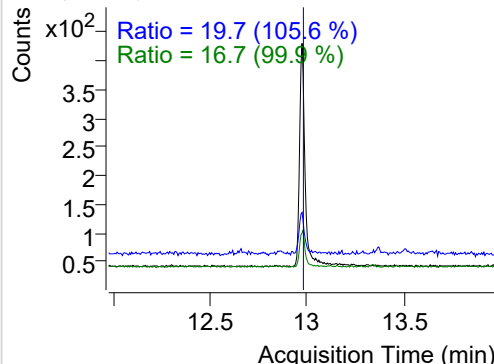
+ SIM (12.505-12.596 min, 16 scans) (\*\*) 2208

**LSS-D10-Pyrene**

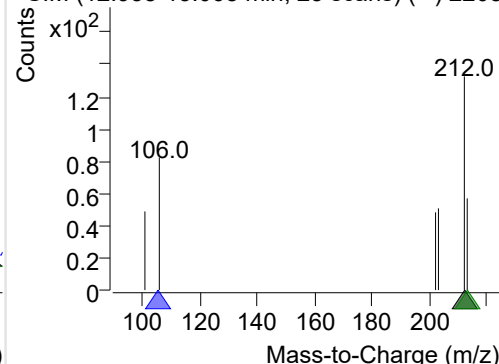
+ Selected Ion (212.0) 220806-PAHs-040.D



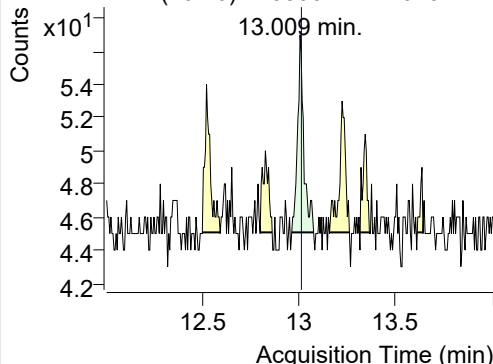
212.0, 106.0, 213.0



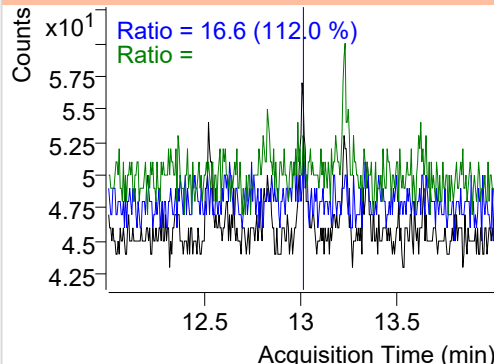
+ SIM (12.938-13.068 min, 25 scans) (\*\*) 2208

**Pyrene**

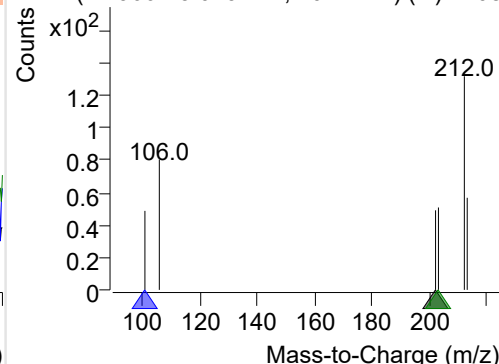
+ Selected Ion (202.0) 220806-PAHs-040.D



202.0, 101.0, 203.0



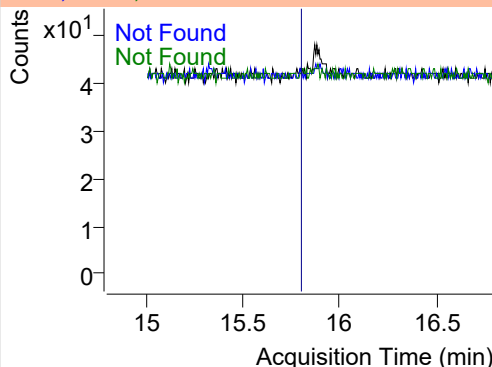
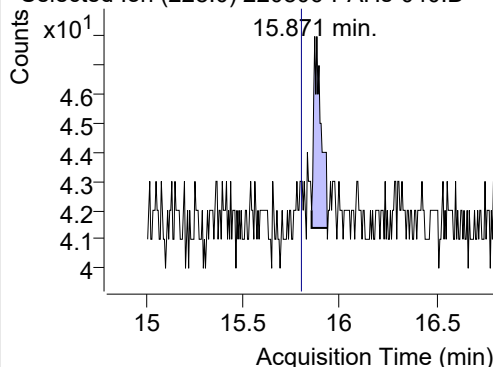
+ SIM (12.966-13.079 min, 20 scans) (\*\*) 2208



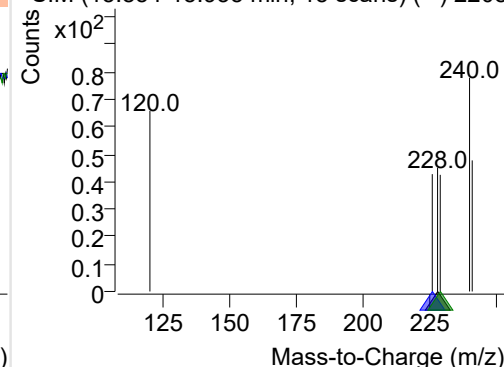
**Benz(a)anthracene**

+ Selected Ion (228.0) 220806-PAHs-040.D

228.0, 226.0, 229.0

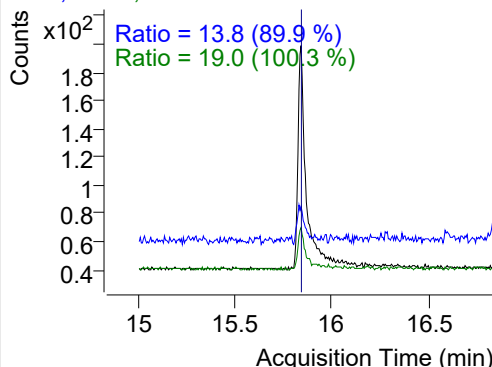
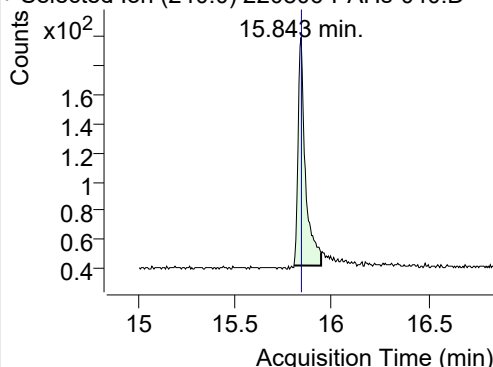


+ SIM (15.854-15.935 min, 15 scans) (\*\*) 2208

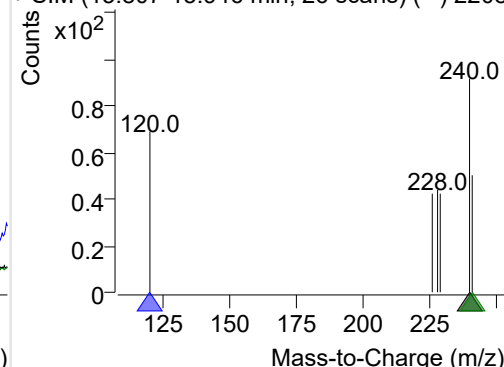
**IS-D12-Chrysene**

+ Selected Ion (240.0) 220806-PAHs-040.D

240.0, 120.0, 241.0

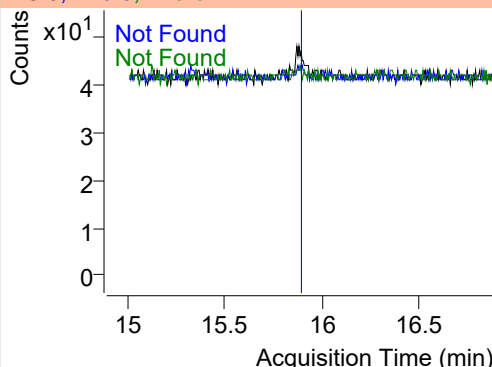
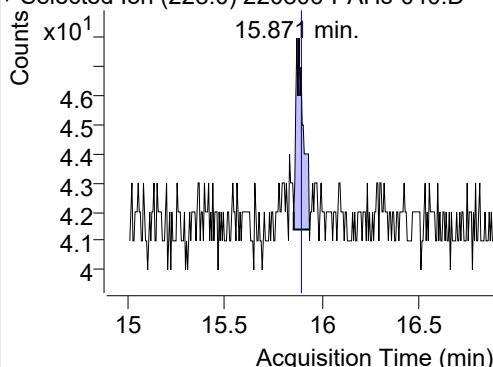


+ SIM (15.807-15.946 min, 26 scans) (\*\*) 2208

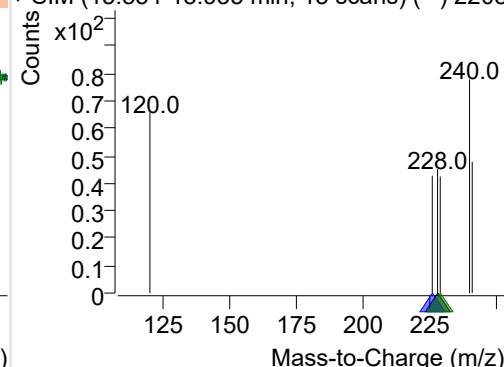
**Chrysene**

+ Selected Ion (228.0) 220806-PAHs-040.D

228.0, 226.0, 229.0

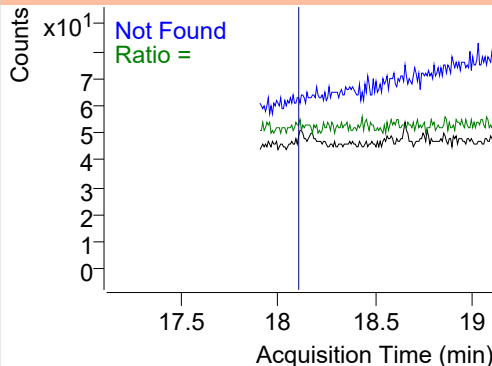
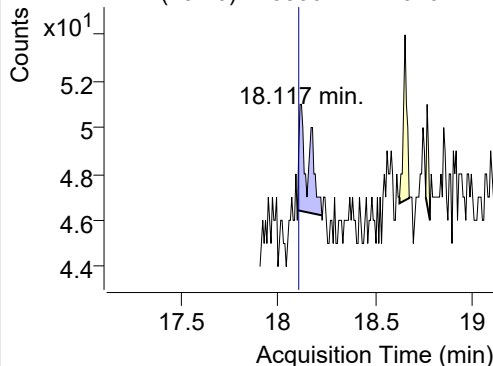


+ SIM (15.854-15.935 min, 15 scans) (\*\*) 2208

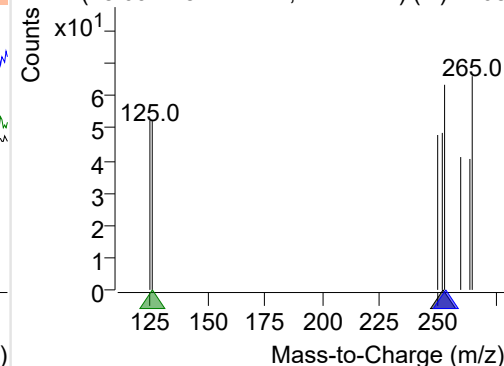
**Benzo(b)fluoranthene**

+ Selected Ion (252.0) 220806-PAHs-040.D

252.0, 253.0, 126.0



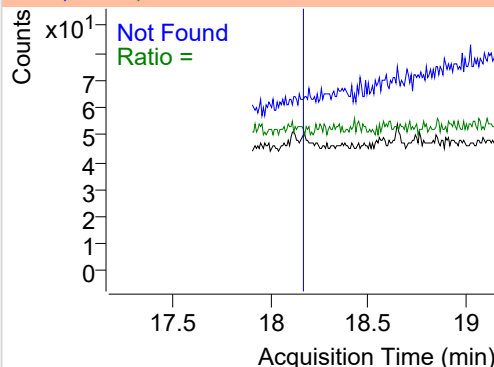
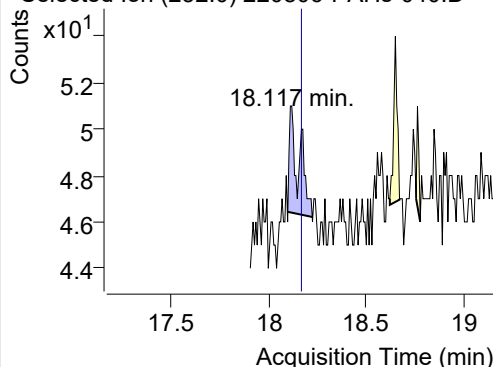
+ SIM (18.097-18.222 min, 17 scans) (\*\*) 2208



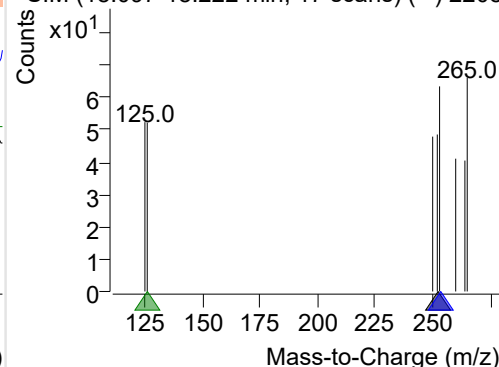
**Benzo(k)fluoranthene**

+ Selected Ion (252.0) 220806-PAHs-040.D

252.0, 253.0, 126.0

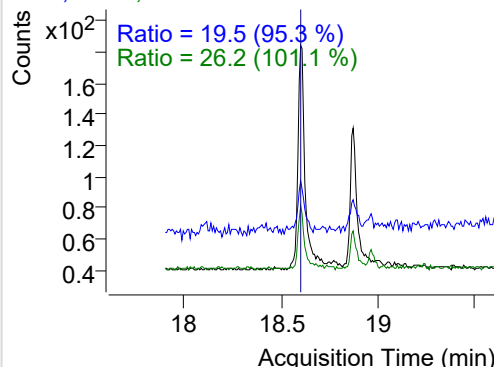
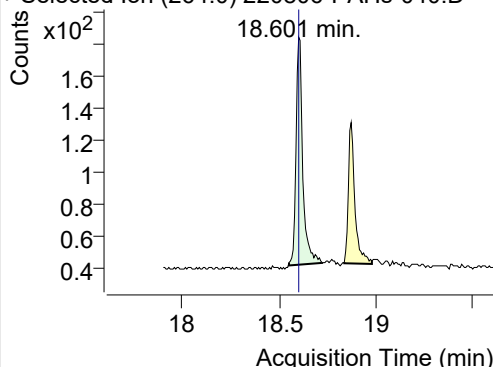


+ SIM (18.097-18.222 min, 17 scans) (\*\*) 2208

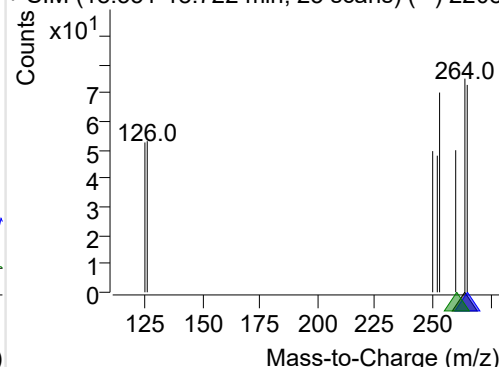
**SS-D12-Benzo(e)pyrene**

+ Selected Ion (264.0) 220806-PAHs-040.D

264.0, 265.0, 260.0

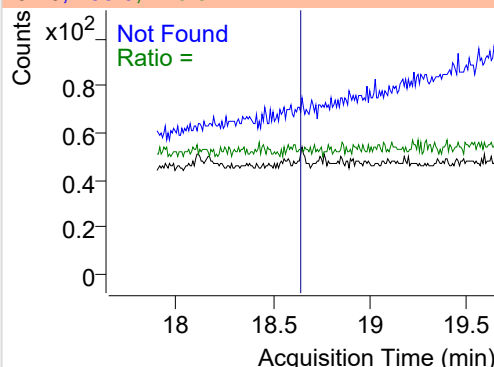
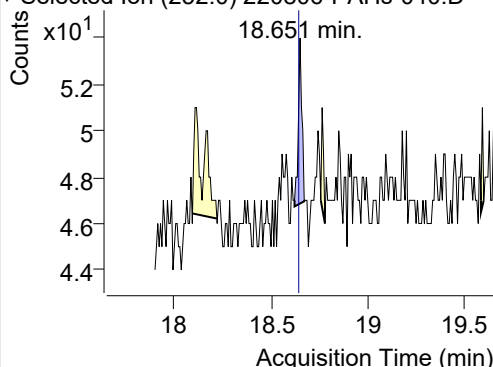


+ SIM (18.551-18.722 min, 25 scans) (\*\*) 2208

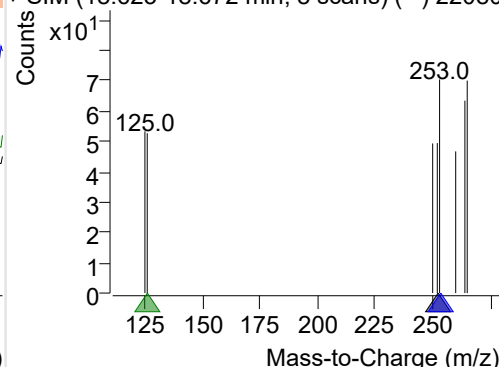
**Benzo(e)pyrene**

+ Selected Ion (252.0) 220806-PAHs-040.D

252.0, 253.0, 126.0

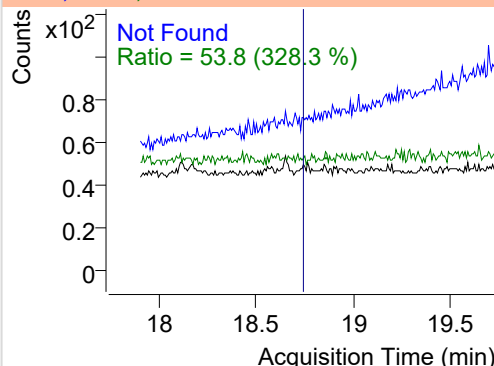
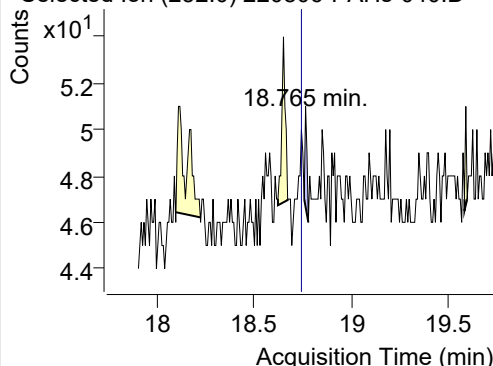


+ SIM (18.623-18.672 min, 8 scans) (\*\*) 22080

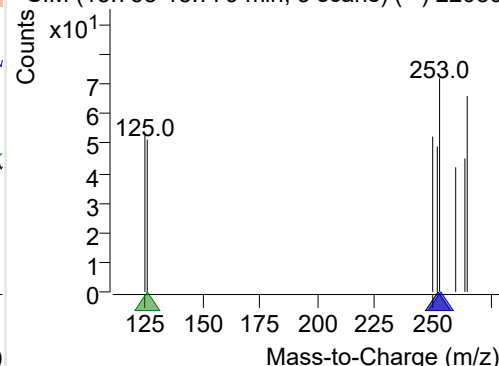
**Benzo(a)pyrene**

+ Selected Ion (252.0) 220806-PAHs-040.D

252.0, 253.0, 126.0

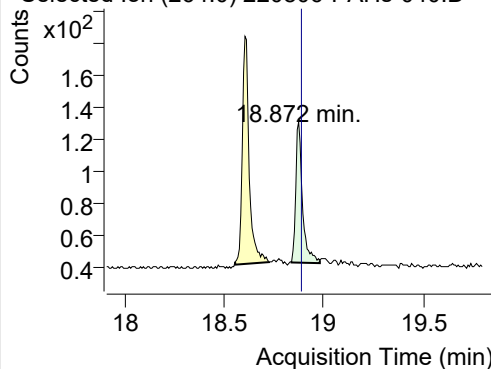


+ SIM (18.758-18.779 min, 3 scans) (\*\*) 22080

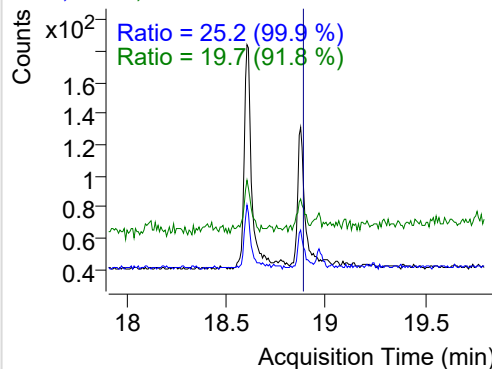


## IS-D12-Perylene

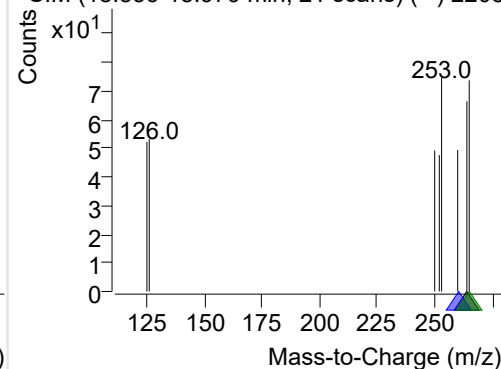
+ Selected Ion (264.0) 220806-PAHs-040.D



264.0, 260.0, 265.0

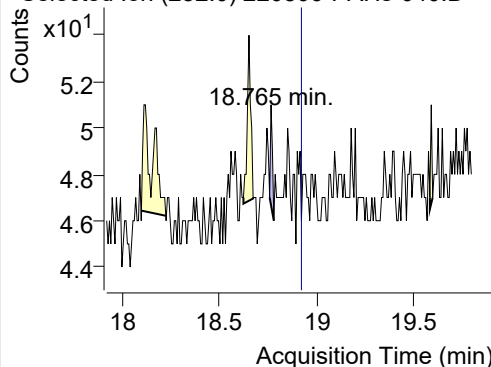


+ SIM (18.836-18.979 min, 21 scans) (\*\*) 2208

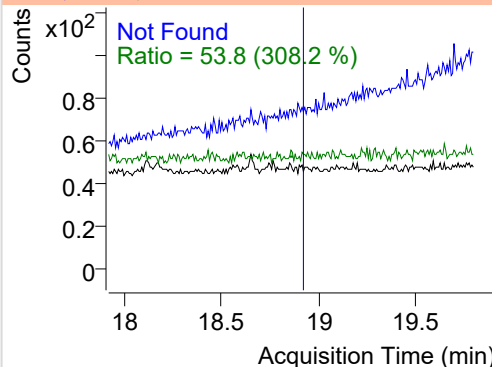


## Perylene

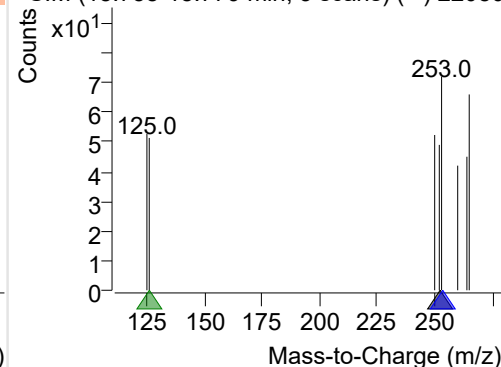
+ Selected Ion (252.0) 220806-PAHs-040.D



252.0, 253.0, 126.0

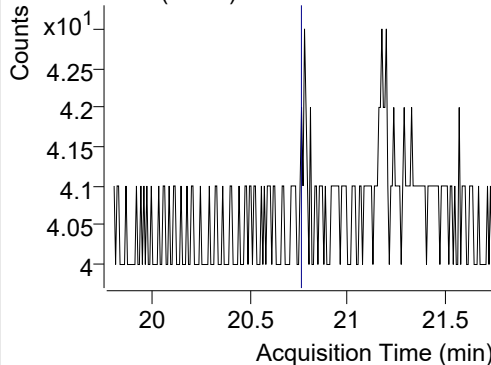


+ SIM (18.758-18.779 min, 3 scans) (\*\*) 22080

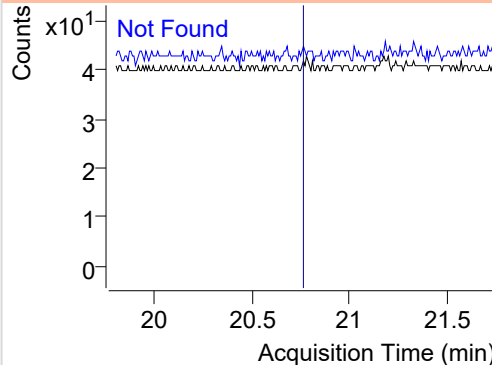


## Indeno(1,2,3-c,d)pyrene

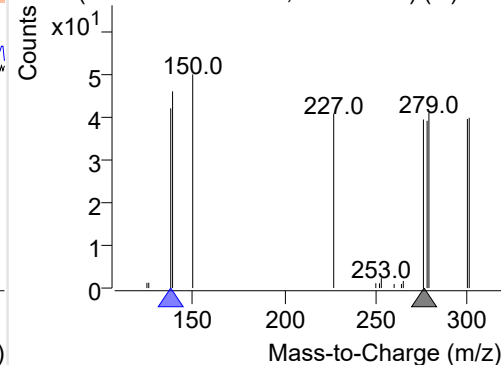
+ Selected Ion (276.0) 220806-PAHs-040.D



276.0, 138.0

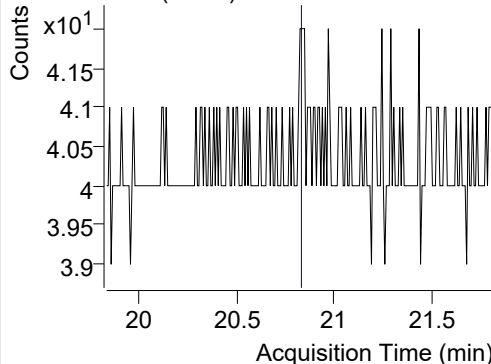


+ SIM (19.759-21.759 min, 262 scans) (\*\*) 220

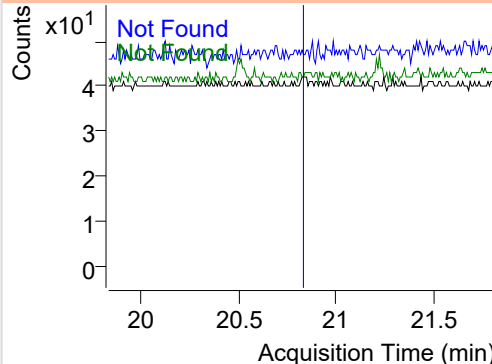


## Dibenz(a,h)anthracene

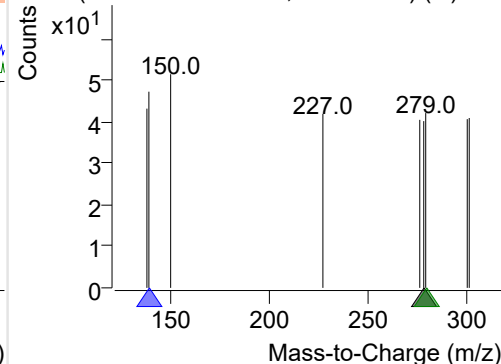
+ Selected Ion (278.0) 220806-PAHs-040.D



278.0, 139.0, 279.0



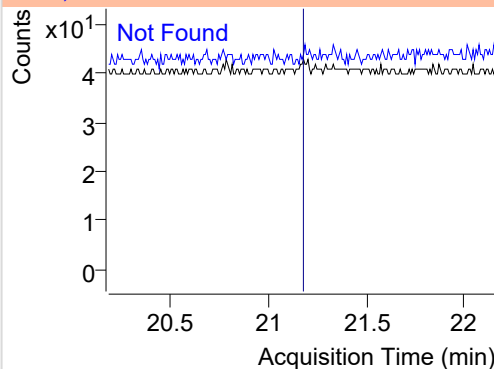
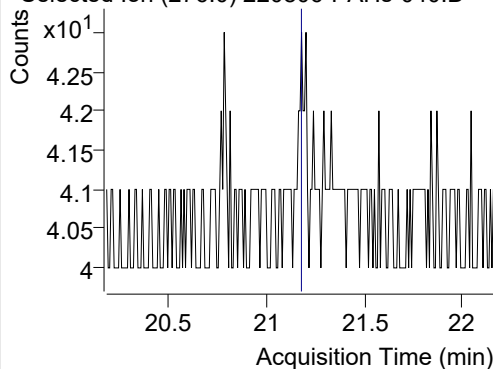
+ SIM (19.828-21.828 min, 261 scans) (\*\*) 220



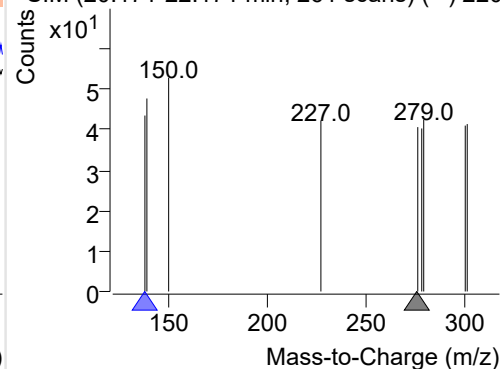
**Benzo(g,h,i)perylene**

+ Selected Ion (276.0) 220806-PAHs-040.D

276.0, 138.0

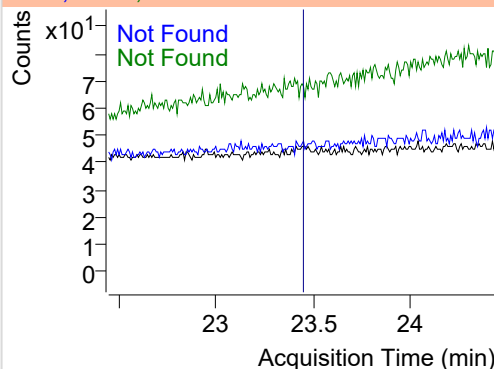
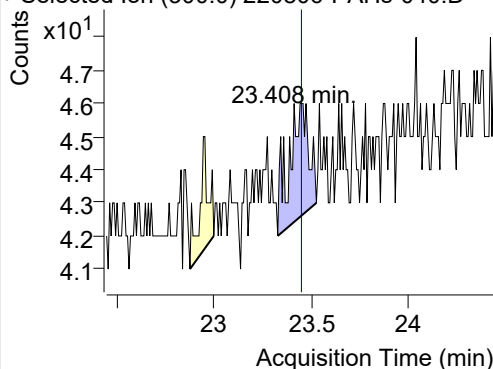


+ SIM (20.171-22.171 min, 261 scans) (\*\*) 220

**Coronene**

+ Selected Ion (300.0) 220806-PAHs-040.D

300.0, 301.0, 150.0



+ SIM (23.324-23.523 min, 26 scans) (\*\*) 2208

