## GC/MS Maintenance Log

**Instrument:** GCMS-5

<table>
<thead>
<tr>
<th>Date</th>
<th>He Tank Pressure</th>
<th>Air Tank Pressure*</th>
<th>H₂ Water Level*</th>
<th>H₂ Pressure*</th>
<th>Auto Tune</th>
<th>Septum Change</th>
<th>Wash Vials Filled</th>
<th>Syringe Washed</th>
<th>Rough Pump Oil Level Checked</th>
<th>Liner Change</th>
<th>Gold Seal Replaced</th>
<th>Column Cut</th>
<th>Output*</th>
<th>Comments</th>
<th>Analyst</th>
</tr>
</thead>
<tbody>
<tr>
<td>12/18/19</td>
<td>80</td>
<td>80</td>
<td>80</td>
<td>80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>12.8 0.925 4 injections BSD SPE</td>
<td>MB</td>
</tr>
<tr>
<td>12/19/19</td>
<td>80</td>
<td>80</td>
<td>80</td>
<td>80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10.4 0.925 A-PSD LLE + 22 Diluted stock samples</td>
<td>GB</td>
</tr>
</tbody>
</table>

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*For GC/MS-NPD Instrument (GCMS-5).

**Signature:** [Signature Image]  
**Date Completed:** 12-23-19
## Extraction Source Autotune - 5977

**Tune timestamp:** 12/18/2019 10:46 AM (UTC-06:00)  
**GC-MS 5**  
**US1609M002**

### Ion Polarity
- **Pos**  
- **Mass Gain:** -98
- **Emission:** 34.6  
- **Mass Offset:** -21
- **Electron Energy:** 70.0  
- **Amu Offset:** 1933
- **Filament:** 1  
- **Amu Offset:** 140.13
- **Repeller:** 3.09  
- **Width219:** -0.018
- **Ion Focus:** 89.8  
- **DC Polarity:** Neg
- **Entrance Lens:** 15.1  
- **HED Enable:** On
- **Ent Lens Offset:** 11.49  
- **EM Volts:** 1241.5
- **Ion Body:** 9.25  
- **Extractor Lens:** -0.60
- **Post Extractor 1:** 0  
- **Scan Speed:** 3
- **Post Extractor 2:** 0  
- **Averages:** 3
- **PFTBA**

### Temperatures and Pressures
- **MS Source:** 300 Turbo Speed 100.0  
- **MS Quad:** 160 Hi Vac N/C

### Low  | High  | Step  | Speed  | Threshold  | Peaks  | Base  | Abundance  | Total Ion  
---|---|---|---|---|---|---|---|---
10.00 | 701.00 | 0.10 | 3 | 100 | 97 | 219.00 | 403,968 | 1,390,771

### Target m/z  Actual m/z  Abund  Rel Abund  Iso m/z  Iso Abund  Iso Ratio
---|---|---|---|---|---|---
69.00 | 69.00 | 362,368 | 100.0% | 76.10 | 3,847 | 1.1%  
219.00 | 219.00 | 403,968 | 111.5% | 220.00 | 17,024 | 4.2% 
502.00 | 502.00 | 33,160 | 9.2% | 503.00 | 3,293 | 9.5%

**Air/Water Check:** H2O ~3.4% N2 ~4.8% D2 ~1.4% CO2 ~0.3% N2/H2O ~142.2%

**Column(1) Flow:** 4.50  
**Column(2):** 0.00 ml/min  
**Interface Temp:** 310

**Ramp Criteria:**
- Ion Focus maximum 90 volts using ion 502; Electron Multiplier Gain 54983.493
- Repeller maximum 35 volts using ion 219; Gain Factor 0.5493

**Mass Gain Values (Scan Speed):** +93(3) +88(2) -73(1) -61(0) -39(51) -15(FS2) +15(FS3)

**TARGET MASS:**
- **50**  
  - Amu Offset: 140.1
  - Entrance Lens Offset: 11.5
- **69**  
  - Amu Offset: 140.1
  - Entrance Lens Offset: 11.5
- **131**  
  - Amu Offset: 140.1
  - Entrance Lens Offset: 11.5
- **219**  
  - Amu Offset: 140.1
  - Entrance Lens Offset: 11.5
- **414**  
  - Amu Offset: 140.1
  - Entrance Lens Offset: 11.5
- **502**  
  - Amu Offset: 140.1
  - Entrance Lens Offset: 11.5
- **1050**  
  - Amu Offset: 140.1
  - Entrance Lens Offset: 11.5
Extraction Source Autotune - 5977

Tune timestamp: 12/19/2019 10:36 AM (UTC-06:00)

D:\MASSHUNTER\GCMS\4\5977\etune.u

<table>
<thead>
<tr>
<th>Ion Polarity</th>
<th>Pos</th>
<th>Mass Gain</th>
<th>-101</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission</td>
<td>34.6</td>
<td>Mass Offset</td>
<td>-22</td>
</tr>
<tr>
<td>Electron Energy</td>
<td>70.0</td>
<td>Amu Gain</td>
<td>1935</td>
</tr>
<tr>
<td>Filament</td>
<td>1 Amu Offset</td>
<td>140.25</td>
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</tr>
<tr>
<td>Repeller</td>
<td>2.79</td>
<td>Width219</td>
<td>-0.018</td>
</tr>
<tr>
<td>Ion Focus</td>
<td>89.8</td>
<td>DC Polarity</td>
<td>Neg</td>
</tr>
<tr>
<td>Entrance Lens</td>
<td>12.6</td>
<td>HED Enable</td>
<td>On</td>
</tr>
<tr>
<td>Ent Lens Offset</td>
<td>12.69</td>
<td>EM Volts</td>
<td>1259.5</td>
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<tr>
<td>Ion Body</td>
<td>8.00</td>
<td>Extractor Lens</td>
<td>-0.80</td>
</tr>
<tr>
<td>Post Extractor 1</td>
<td>0 Scan Speed</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Post Extractor 2</td>
<td>0 Averages</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>PFTBA</td>
<td>Open Step Size</td>
<td>0.10</td>
<td></td>
</tr>
</tbody>
</table>

Temperatures and Pressures

- MS Source: 300 Turbo Speed 100.0
- MS Quad: 180 Hi Vac N/C

<table>
<thead>
<tr>
<th>Low</th>
<th>High</th>
<th>Step</th>
<th>Speed</th>
<th>Threshold</th>
<th>Peaks</th>
<th>Base</th>
<th>Abundance</th>
<th>Total Ion</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.00</td>
<td>701.00</td>
<td>0.10</td>
<td>3</td>
<td>100</td>
<td>113</td>
<td>219.00</td>
<td>443,840</td>
<td>1,544,920</td>
</tr>
</tbody>
</table>

Air/Water Check: H2O ~2.7% N2 ~4.3% O2 ~1.4% CO2 ~0.3% N2/H2O ~159.7%

Column(1) Flow: 4.50 Column(2): 0.00 ml/min Interface Temp: 310

Ramp Criteria:
- Ion Focus maximum 90 volts using ion 502; Electron Multiplier Gain 62244.955
- Repeller maximum 35 volts using ion 219; Gain Factor 0.6224

Mass Gain Values (Scan Speed): -91(3) -86(2) -80(1) -64(0) -42(FS1) -6(FS2) 9(FS3)

Target m/z | Actual m/z | Abund | Rel Abund | Iso m/z | Iso Abund | Iso Ratio |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>69.00</td>
<td>69.00</td>
<td>412,224</td>
<td>100.0%</td>
<td>70.00</td>
<td>4,856</td>
<td>1.2%</td>
</tr>
<tr>
<td>219.00</td>
<td>219.00</td>
<td>443,840</td>
<td>107.7%</td>
<td>220.00</td>
<td>19,136</td>
<td>4.3%</td>
</tr>
<tr>
<td>502.00</td>
<td>502.00</td>
<td>34,060</td>
<td>8.3%</td>
<td>503.10</td>
<td>3,409</td>
<td>10.0%</td>
</tr>
</tbody>
</table>

TARGET MASS:
- Amu Offset: 140.3 140.3 140.3 140.3 140.3 140.3 140.3
- Entrance Lens Offset: 12.7 12.7 12.7 12.7 12.7 12.7 12.7