



8/16/2024

**Worklist: 6900**

**REVIEWED**  
By Brittany Wylie at 1:35 pm, Aug 16, 2024

| <u>LAB CASE</u> | <u>ITEM</u> | <u>ITEM TYPE</u> | <u>DESCRIPTION</u> |
|-----------------|-------------|------------------|--------------------|
| C2024-1422      | 1           | UCK              | AM 2 Urine Toxi A  |





## AM 2: De-Tox Tube A Urine Extraction

Extraction Date 8/16/24

Analyst: Anne Nord

Negative Urine Lot: 6524

GC/MS ID: deadlift

### **Pre-Analytic:**

- ☒ 1. *Positive Control Working Solution Preparation Instructions:*  
*Tube A positive control may be commercially obtained or prepared in-house. At a minimum, the control must contain at least one phenethylamine at an approximate concentration between 500 and 3000 ng/mL, and one opiate at an approximate concentration between 300 and 3000 ng/mL.*
- ☒ 2. Verify Tune and Tune evaluation completed within the previous 7 days. Tune and Tune evaluation reports initialed and filed.
- ☒ 3. Create GCMS sequence to include controls, case blanks and case samples.

### **Analytic:**

- ☒ 1. Remove working solutions, controls, and samples from cold storage.  
  
*(Optional Steps for Enzyme Hydrolysis- completed in addition to General extraction without Hydrolysis)*
  - ☐ 2a. In labeled round bottom Extraction tubes: add 4.5mL of case samples, and controls.
  - ☐ 2b. Add 150uL of 2M acetate buffer, vortex.
  - ☐ 2c. Add 100uL glucuronidase, cap and rock gently.
  - ☐ 2d. Heat at 60C for 2 hours. Allow to cool before proceeding to step 3.
- ☒ 3. To each labeled De-Tox Tube add 5mL sample, Positive control: spike positive control working solution.
- ☒ 4. Place on tube rocker at ambient temp for approx. 10 minutes.
- ☒ 5. Centrifuge for approx. 10 min at ~2500-3000rpm.
- ☒ 6. Transfer solvent (upper layer) to new tube, and evaporate to ~100-300uL.
- ☒ 7. Transfer to labeled ALS vial with insert.
- ☒ 8. Place ALS Vials in appropriate location on GCMS rack and run using appropriate GCMS method.

### **Post-Analytic**

- ☒ 1. Complete Data analysis on all samples and corresponding sample blanks
- ☒ 2. Did positive and negative control samples provide intended response? Yes
- ☒ 3. Sample Criteria for ID: RT +/- 0.2 min. (or 0.1 min. for phenethylamines)
- ☒ 4. Central File Packet to include: LIMS Worklist, Method Checklist, Working solution prep sheet(s), Positive control GCMS data printouts,

Comments:



# Idaho State Police Forensic Services

## Toxicology AM #2 working solution

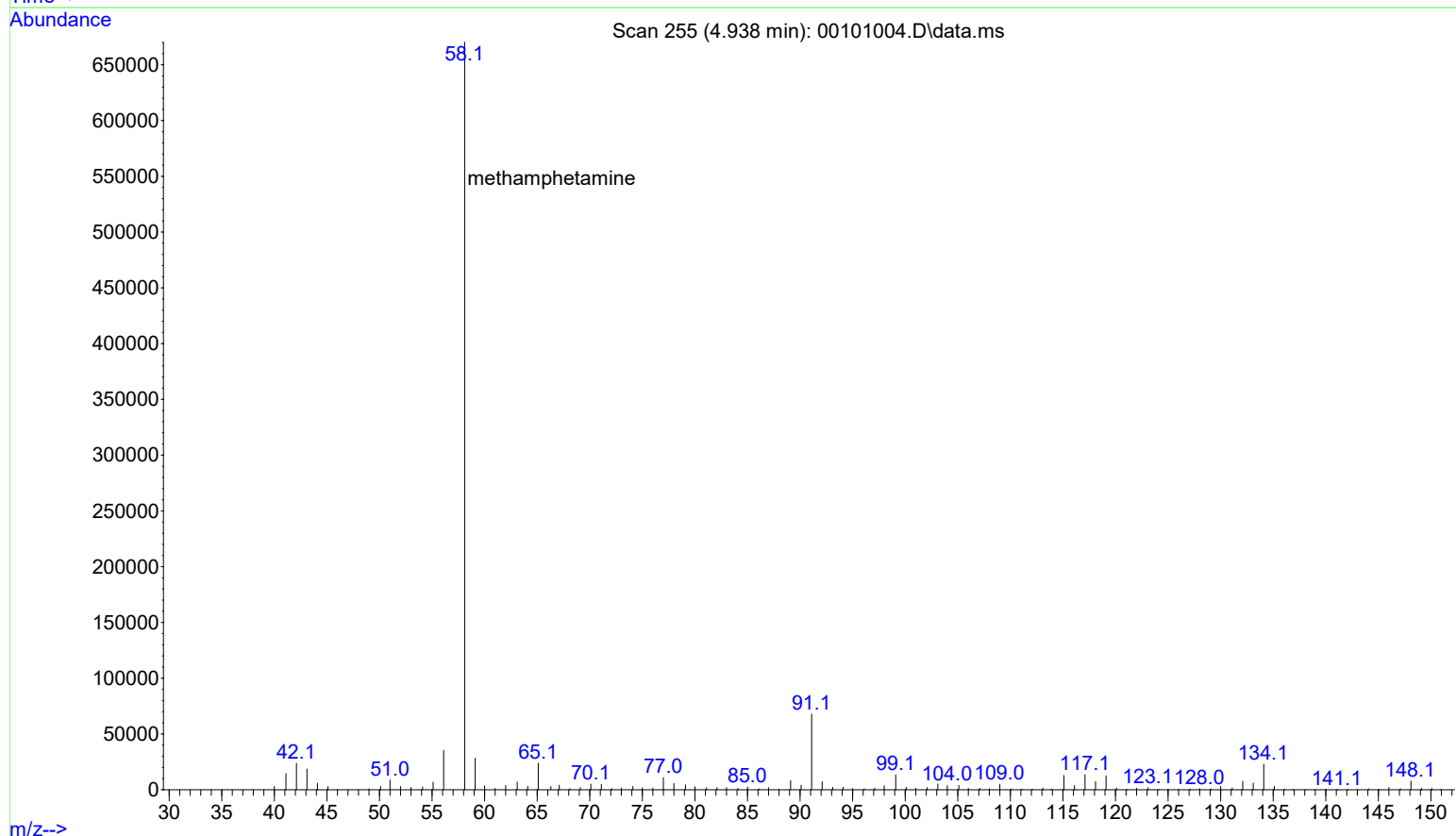
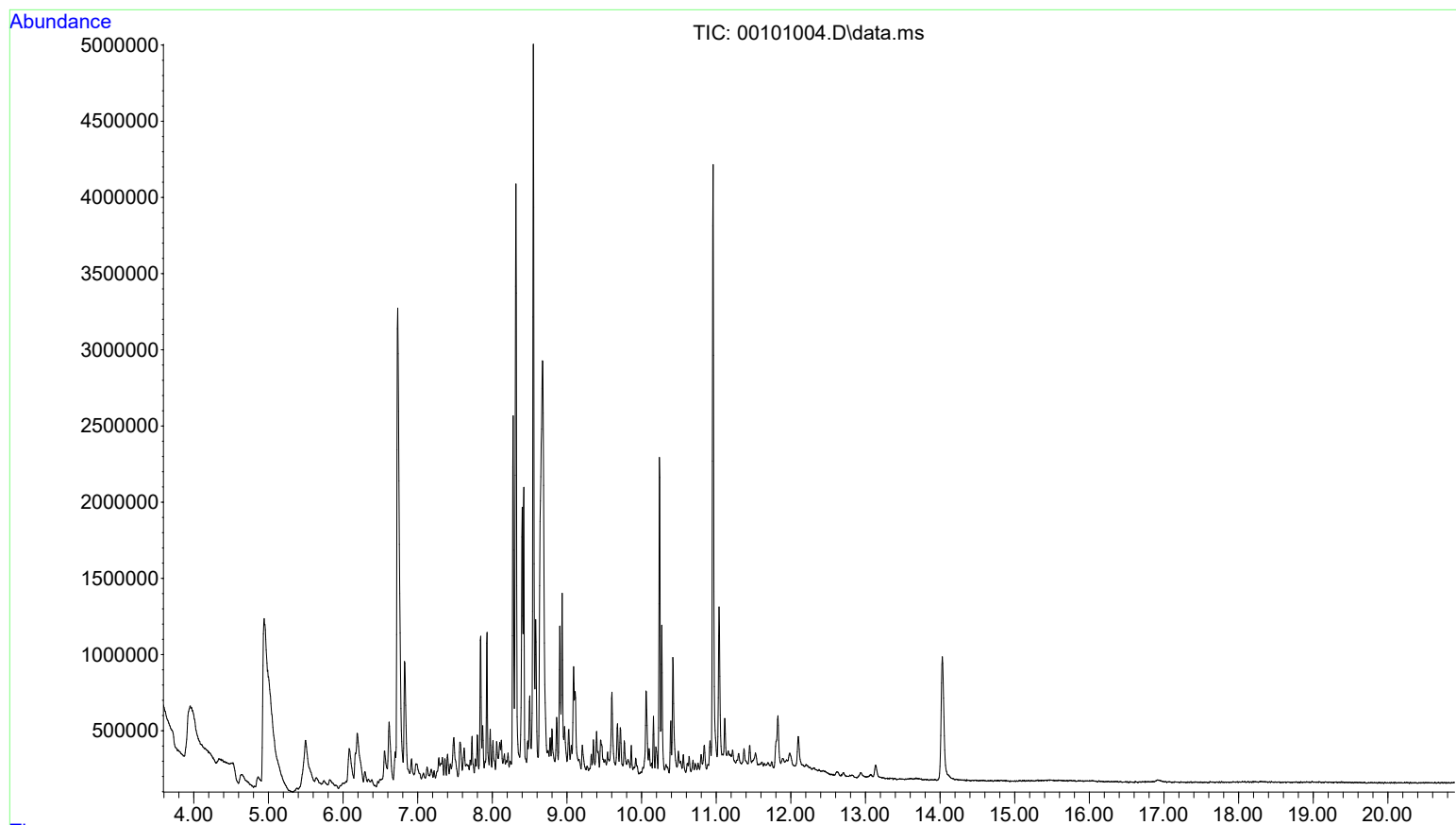
*150  $\mu$ L of 1mg/mL stock was added of each drug to 9700  $\mu$ L of LC MeOH. ~15000ng/ml*

| <i>Component</i> | <i>Source</i>                | <i>Source Lot Number</i> | <i>Expiration Date</i> |
|------------------|------------------------------|--------------------------|------------------------|
| Methamphetamine  | Cerilliant                   | FE03132001               | 7/1/2025               |
| Morphine         | Cerilliant                   | FE03232010               | 4/1/2025               |
| Prepared:        | 06/10/2024 Lot number 061024 |                          |                        |
| Expires:         | 04/01/2025                   |                          |                        |
| Prepared By:     | Anne Nord                    |                          |                        |

**AM 2 control add 500 ul working solution to 4500 ul negative urine and extract approximate concentration 1500 ng/ml.**

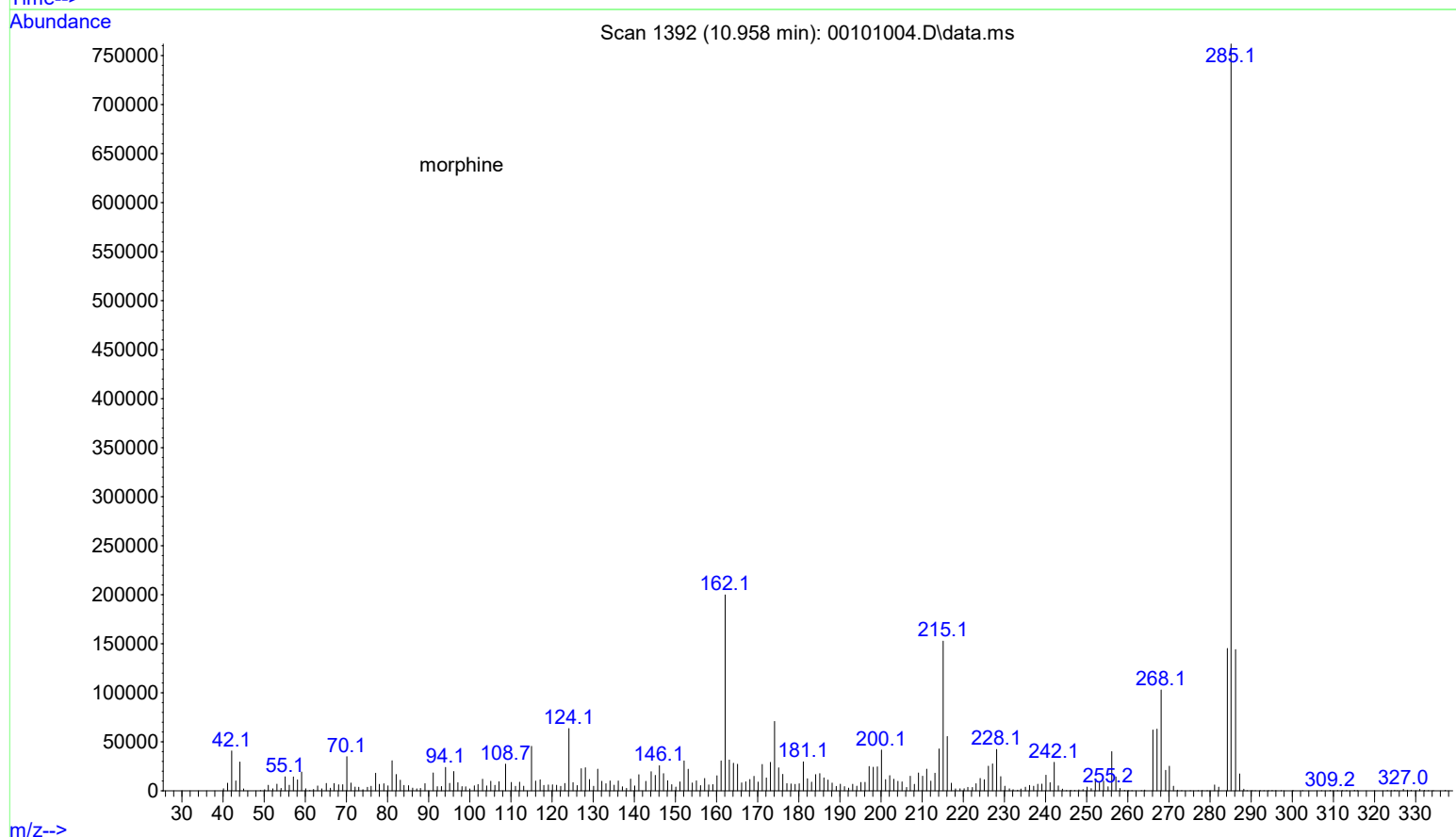
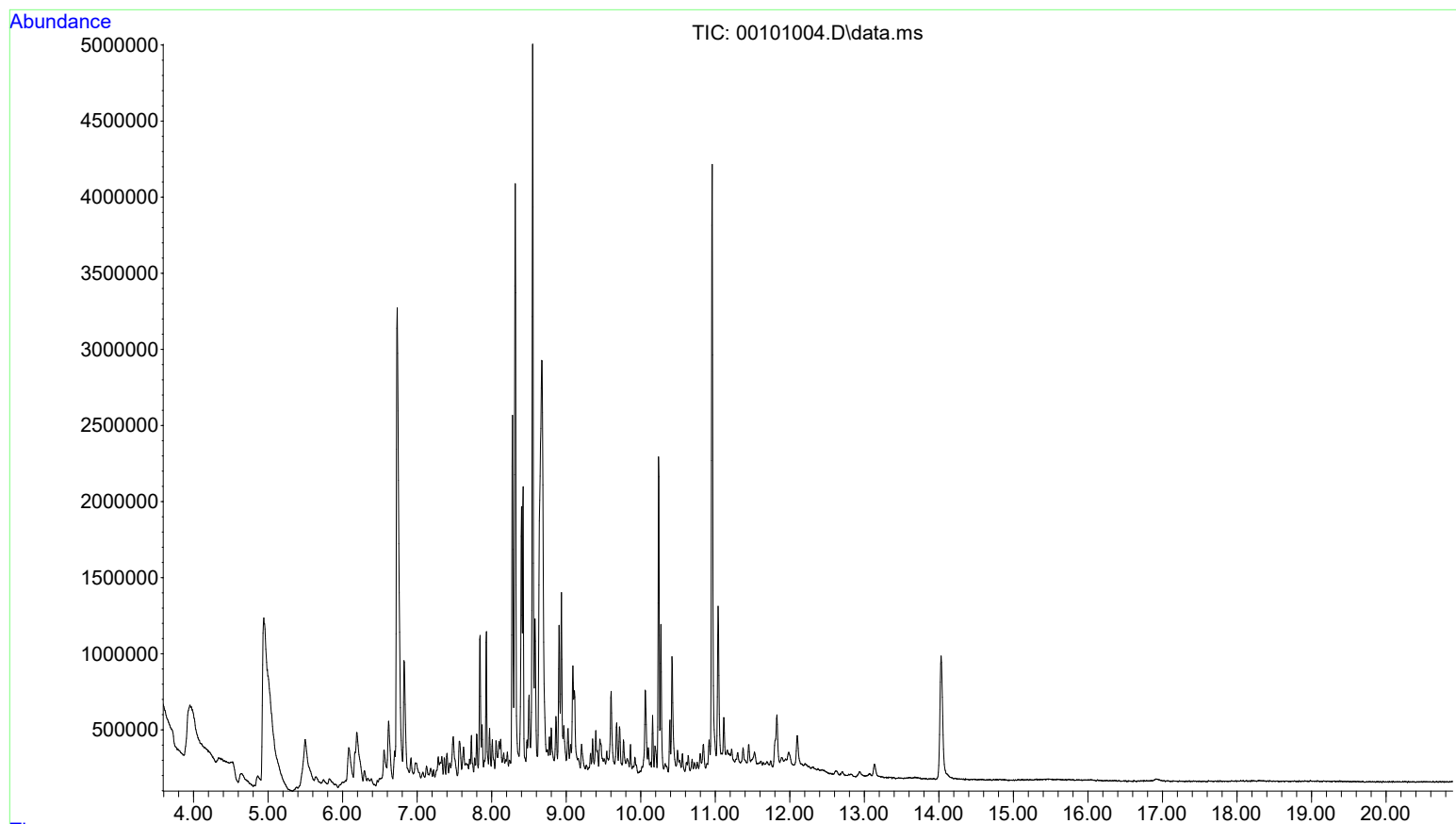
File :D:\MassHunter\GCMS\1\data\2024\081624\00101004.D  
Operator :  
Acquired : 16 Aug 2024 10:58 using AcqMethod am2.M  
Instrument : Deadlift  
Sample Name: positive control urine  
Misc Info : am2  
Vial Number: 1

*[Handwritten signature]*



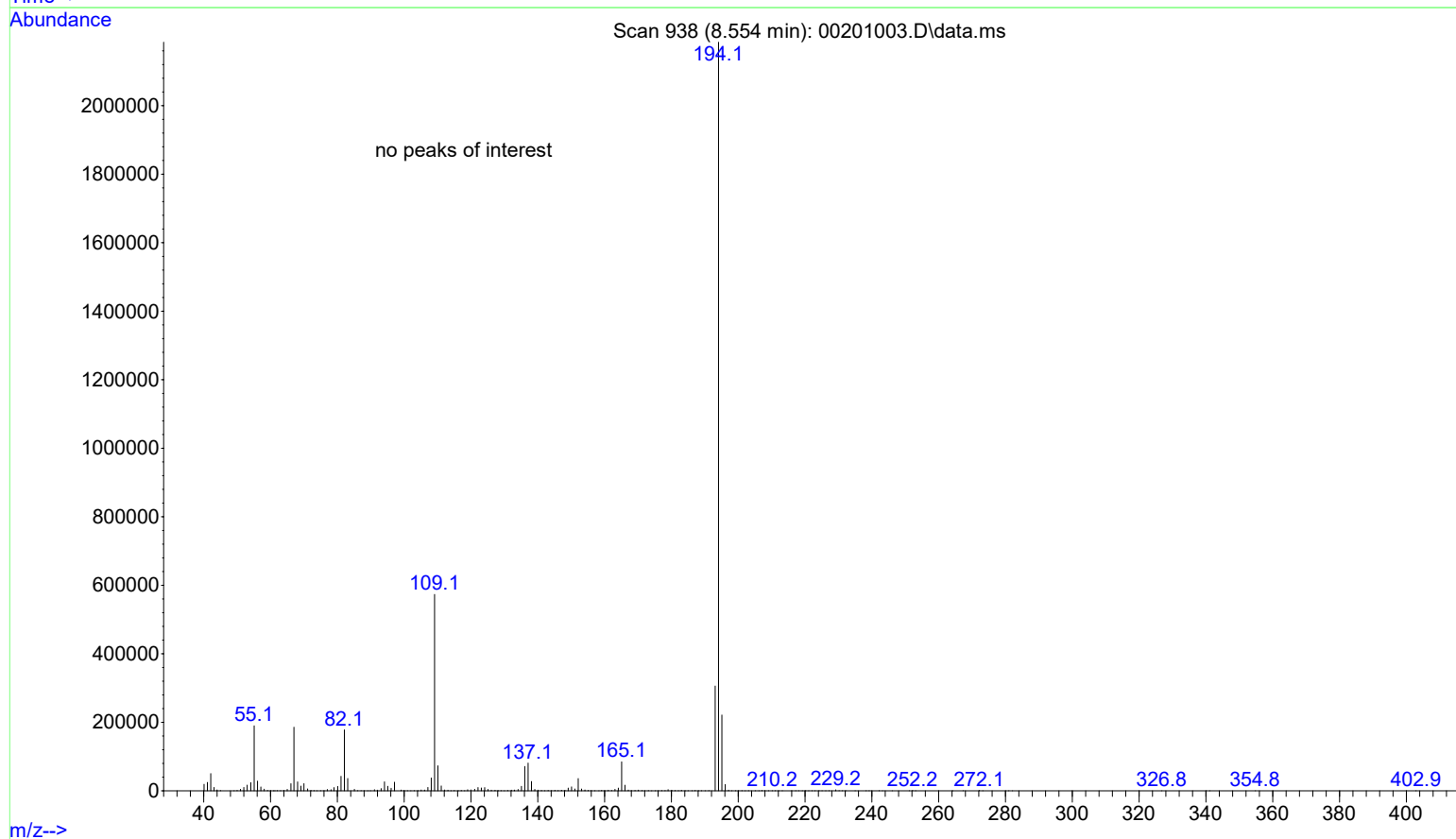
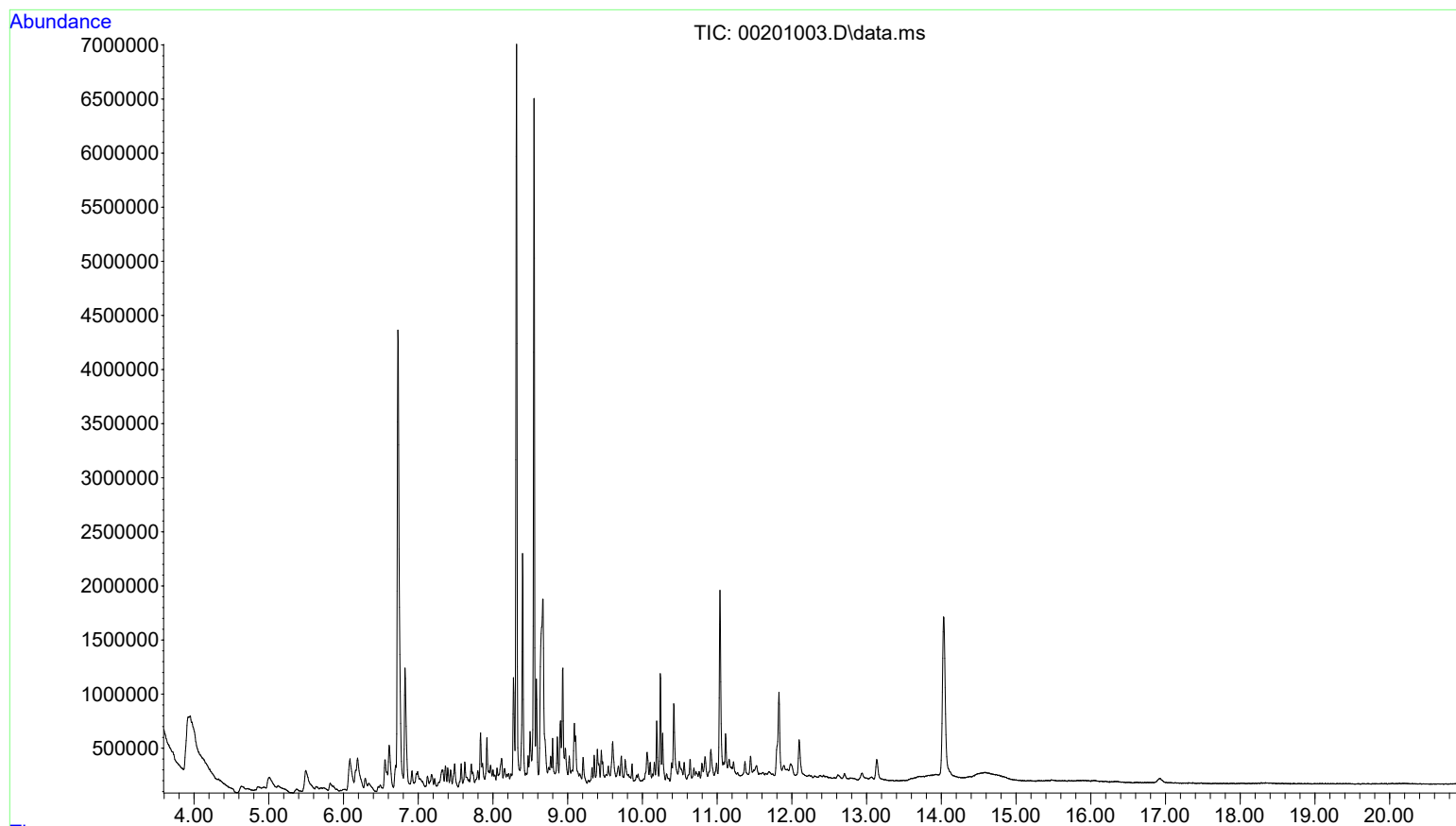
File :D:\MassHunter\GCMS\1\data\2024\081624\00101004.D  
Operator :  
Acquired : 16 Aug 2024 10:58 using AcqMethod am2.M  
Instrument : Deadlift  
Sample Name: positive control urine  
Misc Info : am2  
Vial Number: 1





File :D:\MassHunter\GCMS\1\data\2024\081624\00201003.D  
Operator :  
Acquired : 16 Aug 2024 10:34 using AcqMethod am2.M  
Instrument : Deadlift  
Sample Name: negative control urine  
Misc Info : am2  
Vial Number: 2





Instrument Name : Deadlift  
DC Polarity : Positive  
Filament 2  
Current Vacuum status :High Vacuum: 1.94E-05 Torr Turbo:100%

|                                            |        |    |
|--------------------------------------------|--------|----|
| BasePeak should be 69 or 219               |        | OK |
| Position of mass 69                        | 69.00  | OK |
| Position of mass 219                       | 219.00 | OK |
| Position of mass 502                       | 502.00 | OK |
| Position of isotope mass 70                | 70.01  | OK |
| Position of isotope mass 220               | 220.00 | OK |
| Position of isotope mass 503               | 503.01 | OK |
| Ratio of mass 70 to mass 69(0.5 - 1.6%)    | 1.09   | OK |
| Ratio of mass 220 to mass 219(3.2 - 5.4%)  | 4.39   | OK |
| Ratio of mass 503 to mass 502(7.9 - 12.3%) | 10.40  | OK |
| Ratio of 219 to 69 should be > 40% and is  | 126.42 | OK |
| Ratio of 502 to 69 should be > 2.4% and is | 15.96  | OK |
| Mass 69 Precursor (<= 3%)                  | 0.33   | OK |
| Mass 219 Precursor (<= 6%)                 | 0.68   | OK |
| Mass 502 Precursor (<= 12%)                | 0.82   | OK |

## 597x Air and Water Check

Fri Aug 16 09:38:18 2024

D:\MassHunter\GCMS\1\5977\ATUNE.U

Instrument: Deadlift  
US2238MA23

## Testing for a leak in the system

|                          |       |    |
|--------------------------|-------|----|
| Ratio of 18 to 69 (<20%) | 15.19 | OK |
| Ratio of 28 to 69 (<10%) | 4.38  | OK |

|                             |      |    |
|-----------------------------|------|----|
| Electron Multiplier Voltage | 1049 | OK |
|-----------------------------|------|----|

Tune portion of System Verification passed.

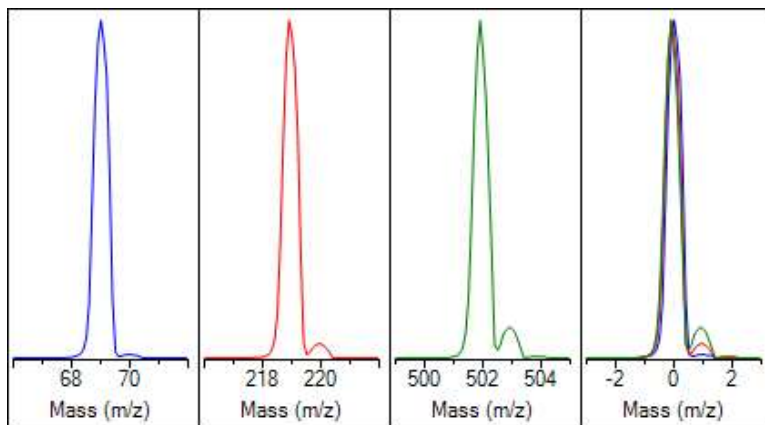
## Autotune - 5977C

Tune timestamp: 8/16/2024 9:32 AM (UTC-07:00)

Deadlift

D:\MASSHUNTER\GCMS\1\5977\atune.u

US2238MA23



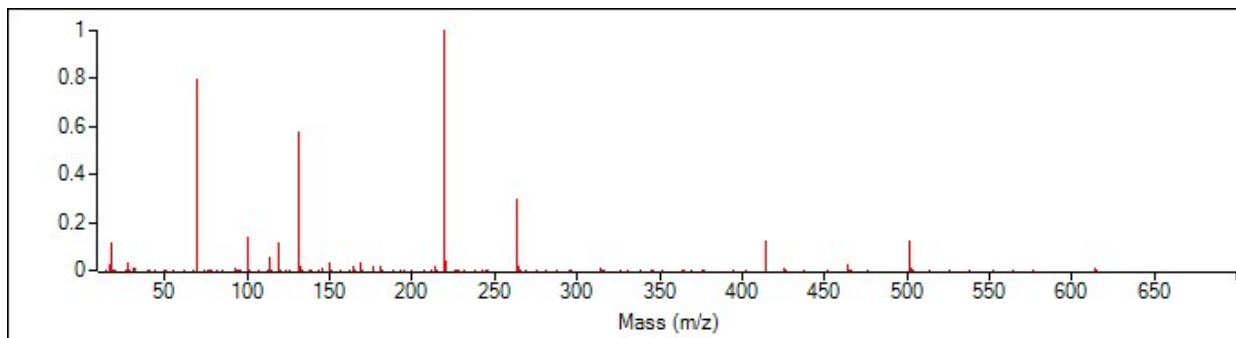
|                   |        |                |        |
|-------------------|--------|----------------|--------|
| Ion Polarity      | Pos    | PFTBA          | Open   |
| Emission          | 34.6   | Mass Gain      | 250    |
| Electron Energy   | 70.0   | Mass Offset    | -22    |
| Filament          | 2      | Amu Gain       | 2911   |
| Repeller          | 24.34  | Amu Offset     | 136.44 |
| Ion Focus         | 90.3   | Width219       | -0.033 |
| Entrance Lens     | 20.2   | DC Polarity    | Pos    |
| Ent Lens Offset   | 11.16  | HED Enable     | On     |
| Ion Body          | 0.00   | EM Volts       | 1048.9 |
| Post Extractor 1  | 0      | Extractor Lens | 0.00   |
| Post Extractor 2  | 0      | Scan Speed     | 3      |
| JetClean Flow     | 0.00   | Averages       | 3      |
| Actual/[Setpoint] | [0.00] |                |        |

| Actual m/z | Abund   | Rel Abund | Pw50 |
|------------|---------|-----------|------|
| 69.00      | 327,153 | 100.0%    | 0.60 |
| 218.90     | 416,806 | 127.4%    | 0.59 |
| 501.90     | 54,585  | 16.7%     | 0.59 |

## Temperatures and Pressures

|           |     |             |          |
|-----------|-----|-------------|----------|
| MS Source | 230 | Turbo Speed | 100.0    |
| MS Quad   | 150 | Hi Vac      | 2.15e-05 |

| Low   | High   | Step | Speed | Threshold | Peaks | Base   | Abundance | Total Ion |
|-------|--------|------|-------|-----------|-------|--------|-----------|-----------|
| 10.00 | 701.00 | 0.10 | 3     | 100       | 131   | 219.00 | 389,504   | 1,500,266 |



| Target m/z | Actual m/z | Abund   | Rel Abund | Iso m/z | Iso Abund | Iso Ratio |
|------------|------------|---------|-----------|---------|-----------|-----------|
| 69.00      | 69.00      | 310,848 | 100.0%    | 70.00   | 3,471     | 1.1%      |
| 219.00     | 219.00     | 389,504 | 125.3%    | 220.00  | 16,250    | 4.2%      |
| 502.00     | 502.00     | 49,048  | 15.8%     | 503.00  | 5,009     | 10.2%     |

Air/Water Check: H2O ~14.5% N2 ~4.5% O2 ~1.1% CO2 ~0.1% N2/H2O ~30.7%

Column(1) Flow: 2.47 Column(2): 0.00 ml/min Interface Temp: 250

## Ramp Criteria:

Ion Focus maximum 90 volts using ion 502; Electron Multiplier Gain 89245.111

Repeller maximum 35 volts using ion 219; Gain Factor 0.8925

Mass Gain Values(Scan Speed): 262(3) 273(2) 281(1) 298(0) 351(FS1) 350(FS2)

| TARGET MASS:         | 50    | 69    | 131   | 219   | 414   | 502   | 1091  |
|----------------------|-------|-------|-------|-------|-------|-------|-------|
| Amu Offset           | 136.4 | 136.4 | 136.4 | 136.4 | 136.4 | 136.4 | 136.4 |
| Entrance Lens Offset | 11.2  | 11.2  | 11.2  | 11.2  | 11.2  | 11.2  | 11.2  |

Report Created: 8/16/2024 9:32 AM (UTC-07:00)