REVIEWED
By Celena Shrum at 7:09 am, May 28, 2024

5/17/2024

Worklist: 6820

LAB_CASE	ITEM	ITEM_TYPE	DESCRIPTION
C2024-0792	1	UCK	AM 2 Urine Toxi A
C2024-0813	1	UCK	AM 2 Urine Toxi A

AM 2: De-Tox Tube A Urine Extraction

Extraction Date 5/16/24 Analyst: Anne Nord

Negative Urine Lot: 1324 **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: Samples were originally extracted 5/9/24 there was in indication of contamination in the negative control. The samples were re-extracted 5/16/24 there was still an indication of contamination in the negative control. I changed the liner and re-injected still a slight indication of contamination in the negative control. 5/17/24 I trimmed the front of the column and re-injected the samples that were extracted on 5/16/24. Those injections were evaluated.

Idaho State Police
Forensic Services

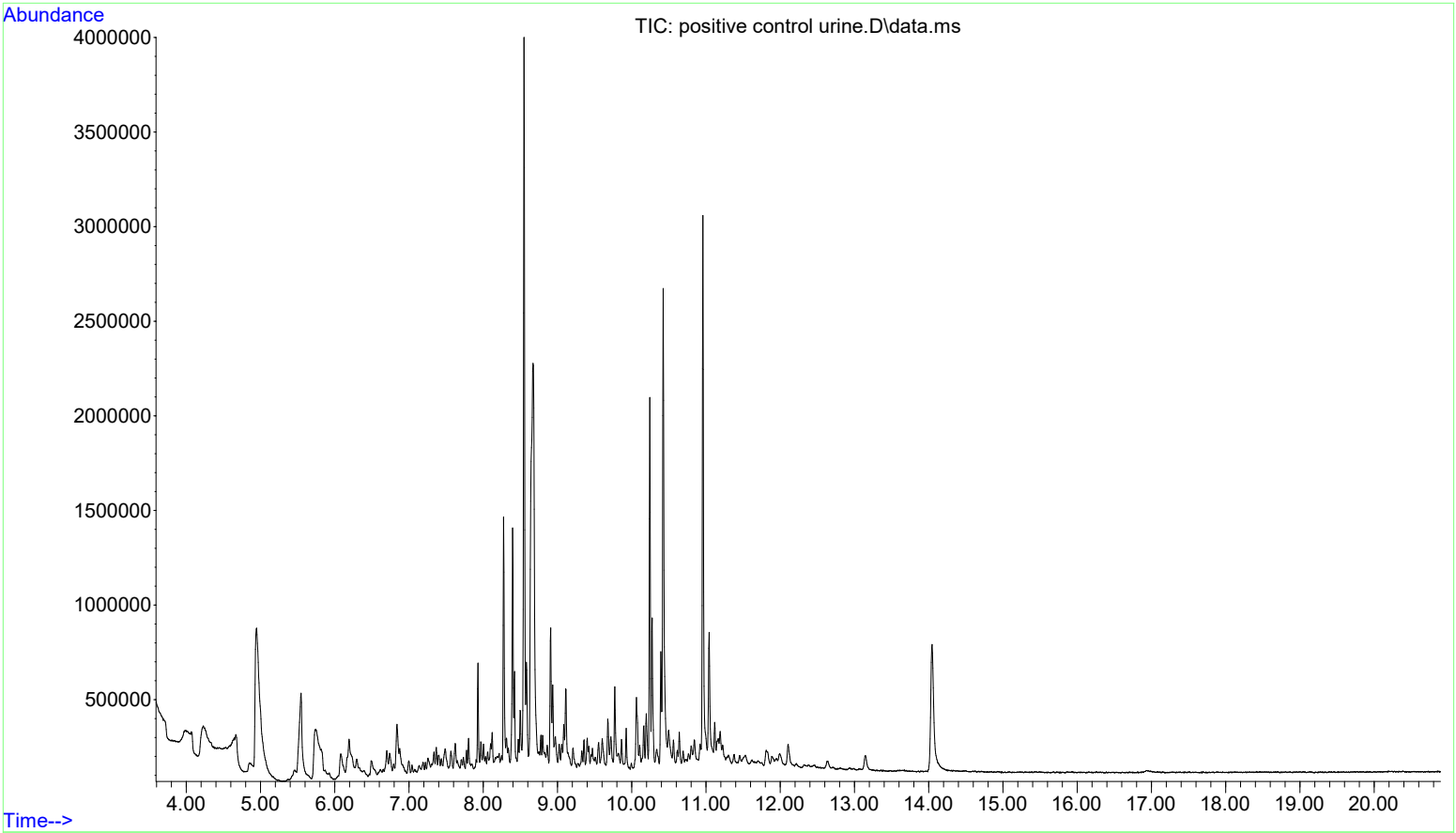
Toxicology AM #2 working solution

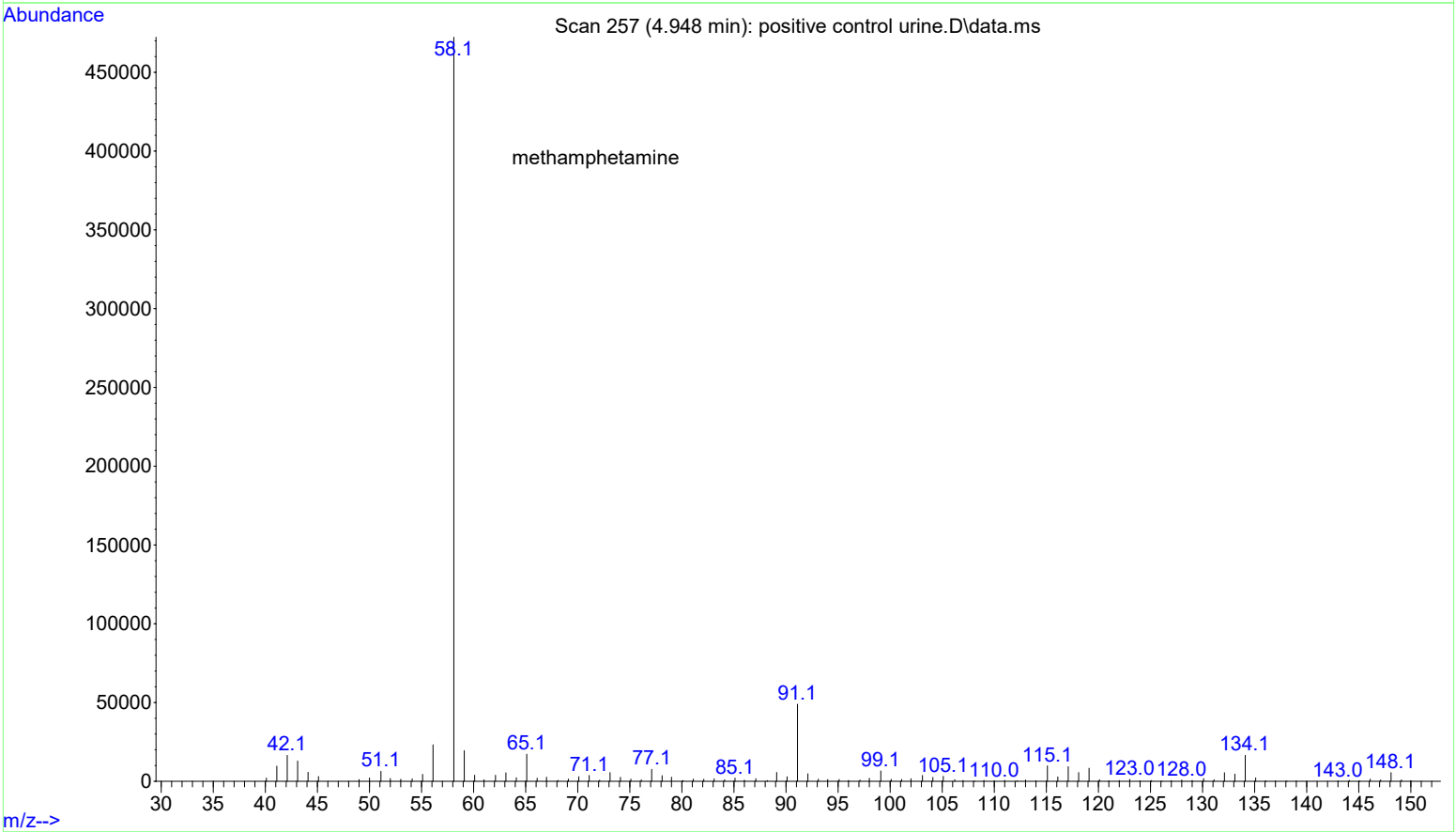
150 µL of 1mg/mL stock was added of each drug to 9700 µL of LC MeOH. ~15000ng/ml

Component	*Source*	*Source Lot Number*	*Expiration Date*
Methamphetamine	Cerilliant	FE03132001	7/1/2025
Morphine	Cerilliant	FE03232010	4/1/2025
Prepared:	06/08/2023 Lot number 060824		
Expires:	06/08/2024		
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\051724\positive control urine
... .D
Operator :
Instrument : Deadlift
Acquired : 17 May 2024 09:37 using AcqMethod am2.M
Sample Name: positive control urine
Misc Info : am2





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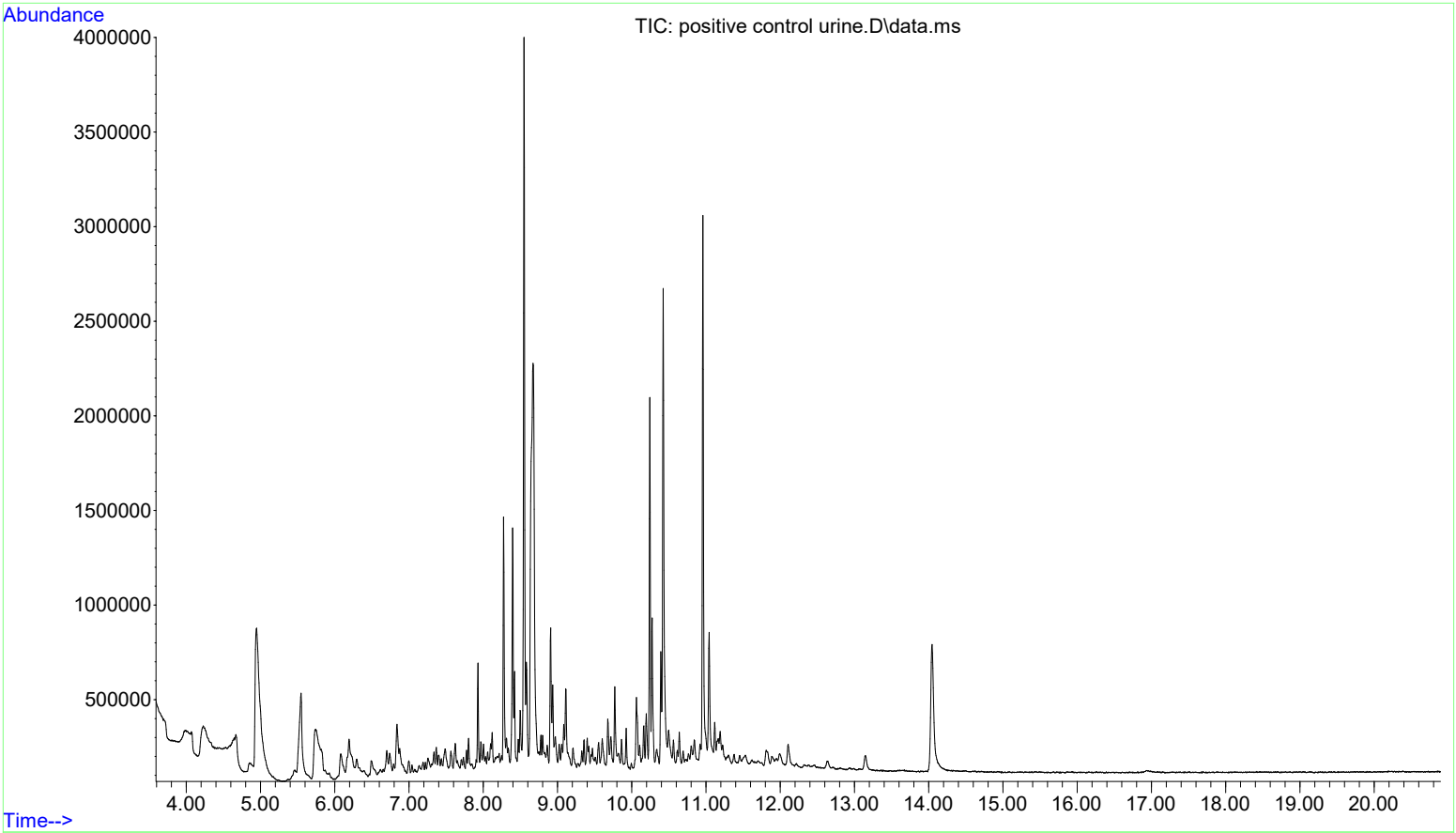
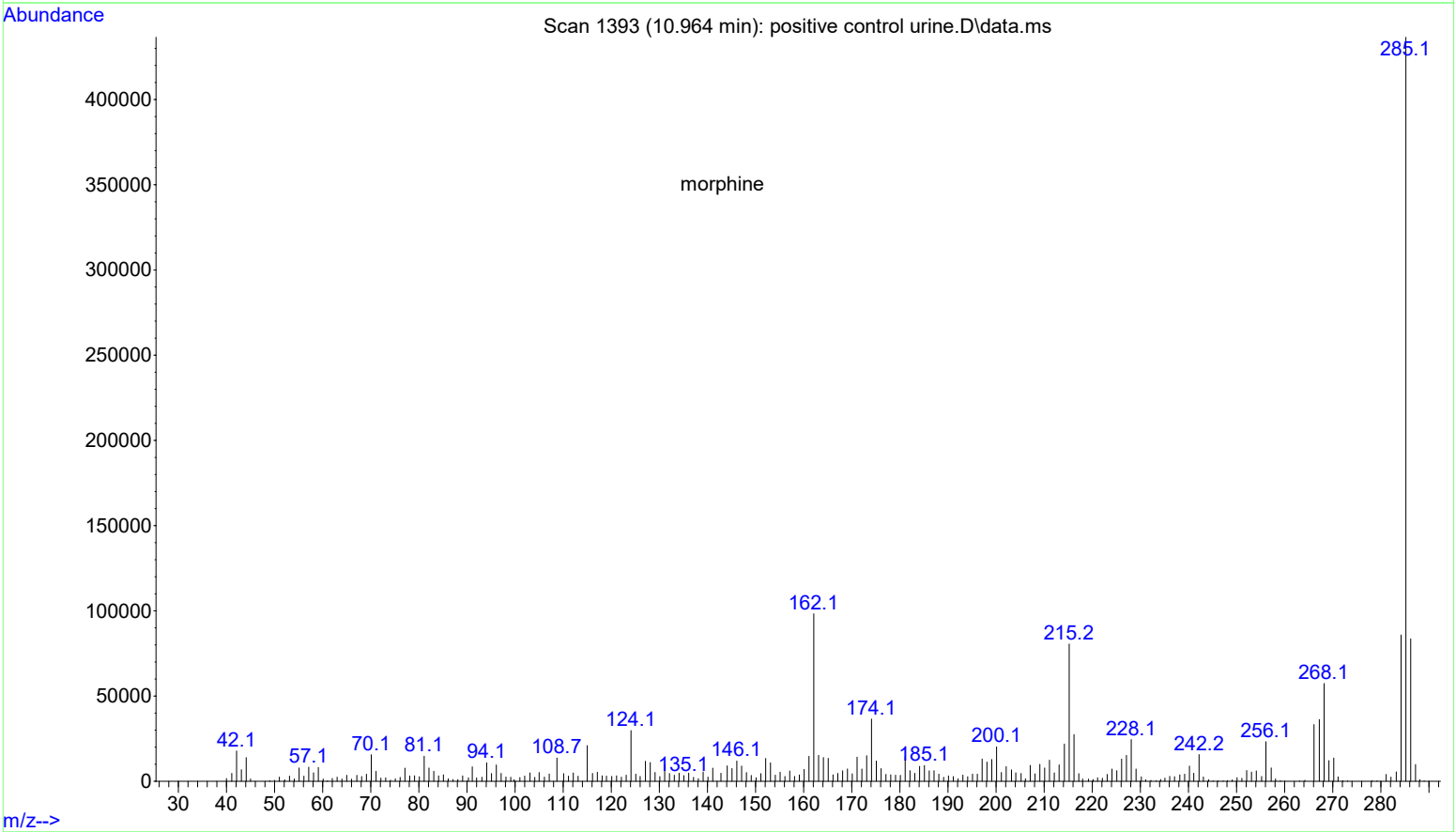
Operator :
Instrument : Deadlift
Acquired : 17 May 2024 09:37 using AcqMethod am2.M
Sample Name: positive control urine
Misc Info : am2





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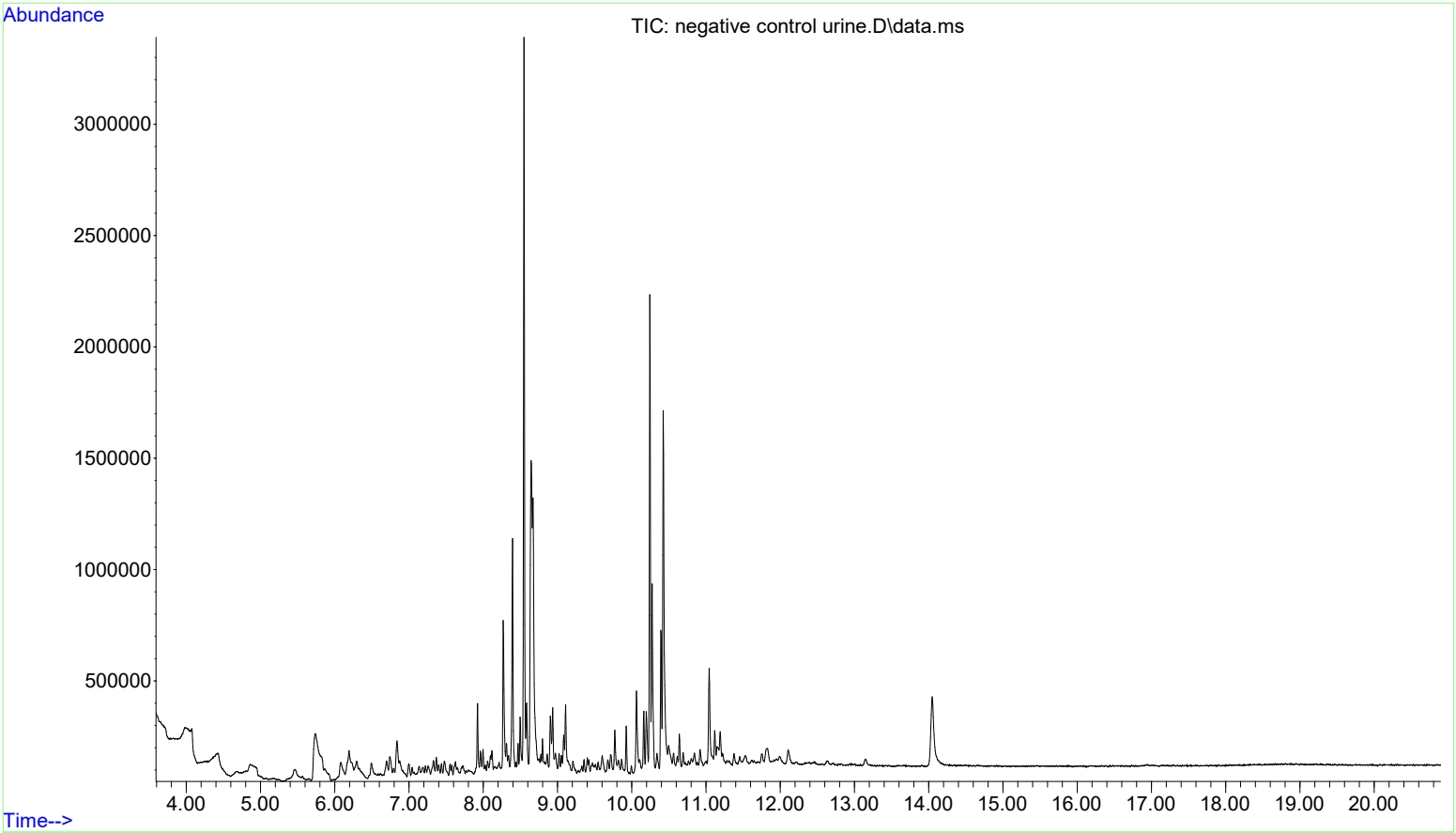
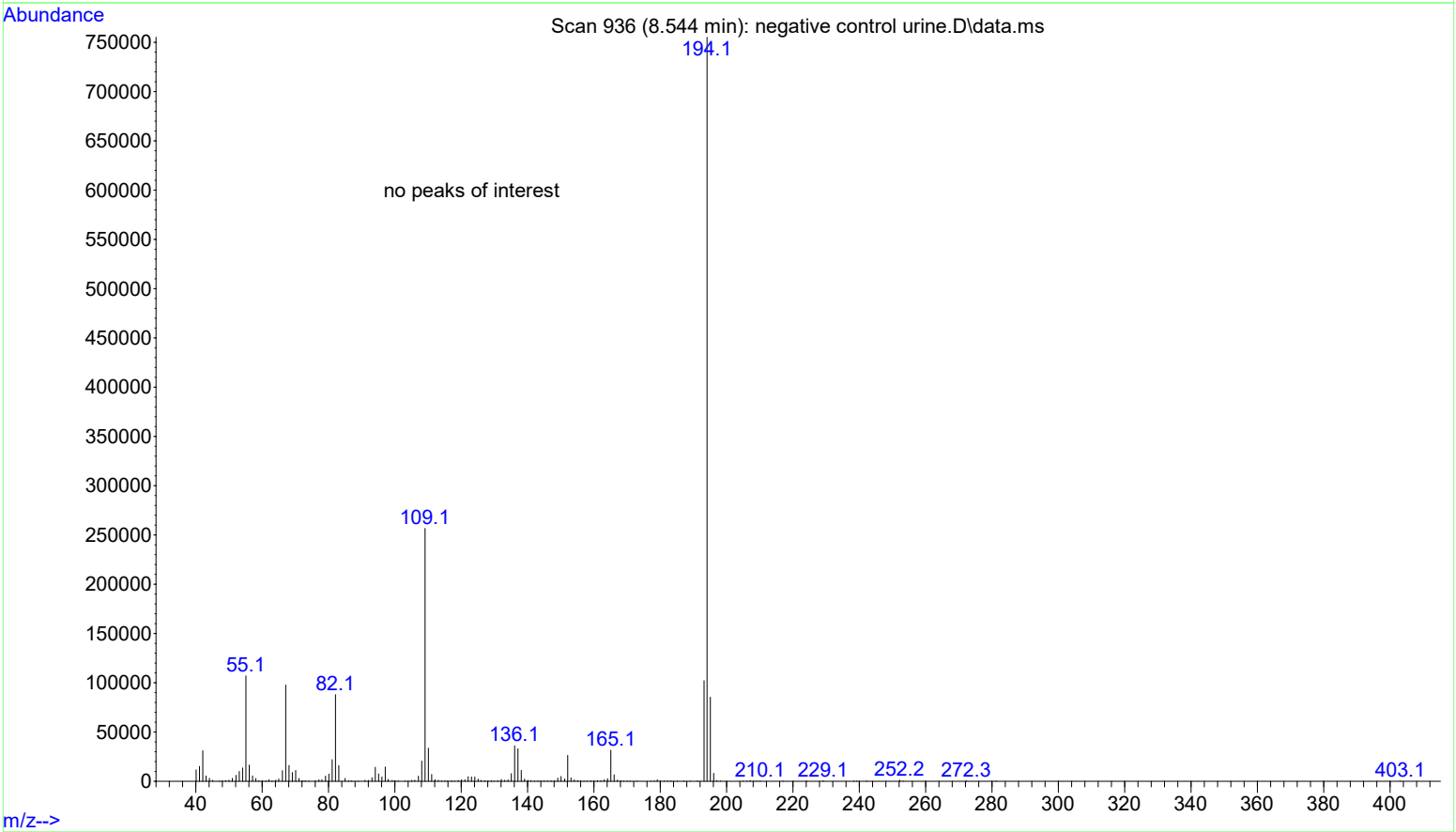
... .D
Operator :
Instrument : Deadlift
Acquired : 17 May 2024 09:13 using AcqMethod am2.M
Sample Name: negative control urine
Misc Info : am2





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	70.03	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%)	1.08	OK
Ratio of mass 220 to mass 219(3.2 - 5.4%)	4.37	OK
Ratio of mass 503 to mass 502(7.9 - 12.3%)	10.11	OK
Ratio of 219 to 69 should be > 40% and is	122.20	OK
Ratio of 502 to 69 should be > 2.4% and is	15.11	OK
Mass 69 Precursor (<= 3%)	0.31	OK
Mass 219 Precursor (<= 6%)	0.64	OK
Mass 502 Precursor (<= 12%)	0.79	OK

597x Air and Water Check
Thu May 16 09:43:50 2024 Instrument: Deadlift
D:\MassHunter\GCMS\1\5977\ATUNE.U US2238MA23

Testing for a leak in the system

Ratio of 18 to 69 (<20%)	0.48	OK
Ratio of 28 to 69 (<10%)	3.35	OK
Electron Multiplier Voltage	1056	OK

Tune portion of System Verification passed.

Autotune - 5977C

Tune timestamp: 5/16/2024 9:38 AM (UTC-07:00)

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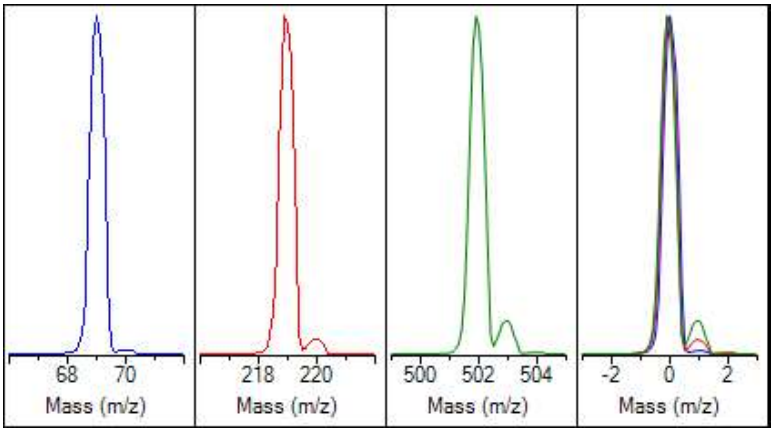
Deadlift

US2238MA23

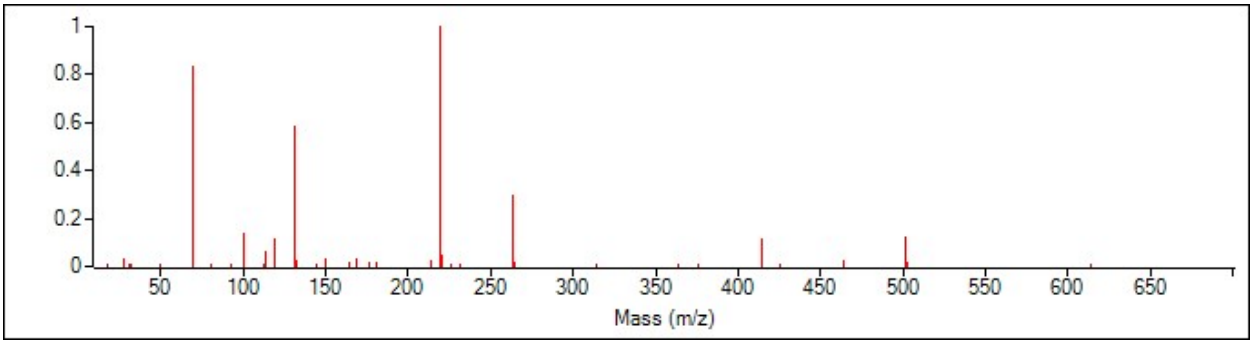


Ion Polarity	Pos	PFTBA	Open
Emission	34.6	Mass Gain	251
Electron Energy	70.0	Mass Offset	-22
Filament	2	Amu Gain	2914
Repeller	23.94	Amu Offset	134.31
Ion Focus	90.3	Width219	-0.039
Entrance Lens	20.2	DC Polarity	Pos
Ent Lens Offset	11.16	HED Enable	On
Ion Body	0.00	EM Volts	1056.0
Post Extractor 1	0	Extractor Lens	0.00
Post Extractor 2	0	Scan Speed	3
JetClean Flow Actual/[Setpoint]	0.00 [0.00]	Averages	3

Actual m/z	Abund	Rel Abund	Pw50
69.00	415,247	100.0%	0.60
218.90	501,497	120.8%	0.59
501.90	63,176	15.2%	0.60

Temperatures and Pressures			
MS Source	230	Turbo Speed	100.0
MS Quad	150	Hi Vac	2.18e-05

Low	High	Step	Speed	Threshold	Peaks	Base	Abundance	Total Ion
10.00	701.00	0.10	3	100	148	219.00	474,432	1,784,623



Target m/z	Actual m/z	Abund	Rel Abund	Iso m/z	Iso Abund	Iso Ratio
69.00	69.00	394,688	100.0%	70.00	4,099	1.0%
219.00	219.00	474,432	120.2%	220.00	20,776	4.4%
502.00	502.00	58,472	14.8%	503.00	6,254	10.7%

Air/Water Check: H20 ~0.6% N2 ~3.4% O2 ~0.7% CO2 ~0.3% N2/H20 ~618.0%

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 100052.485

Repeller maximum 35 volts using ion 219; Gain Factor 1.0005

Mass Gain Values(Scan Speed): 262(3) 268(2) 279(1) 296(0) 349(FS1) 348(FS2)

TARGET MASS:	50	69	131	219	414	502	1091
Amu Offset	134.3	134.3	134.3	134.3	134.3	134.3	134.3
Entrance Lens Offset	11.2	11.2	11.2	11.2	11.2	11.2	11.2

Report Created: 5/16/2024 9:38 AM (UTC-07:00)

Autotune - 5977C

Tune timestamp: 5/8/2024 10:31 AM (UTC-07:00)

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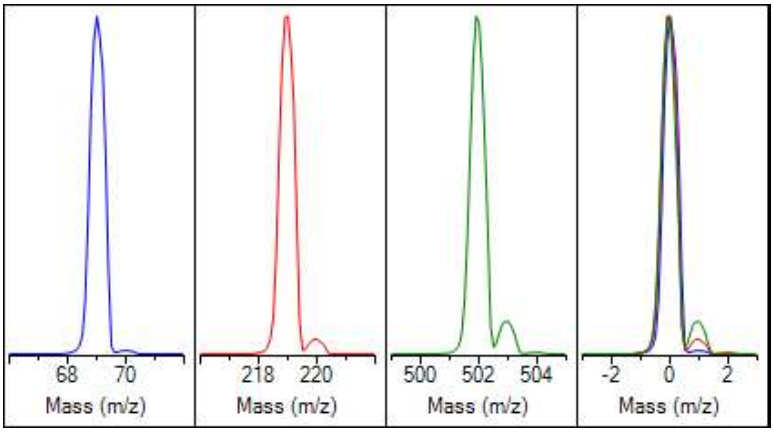
Deadlift

US2238MA23

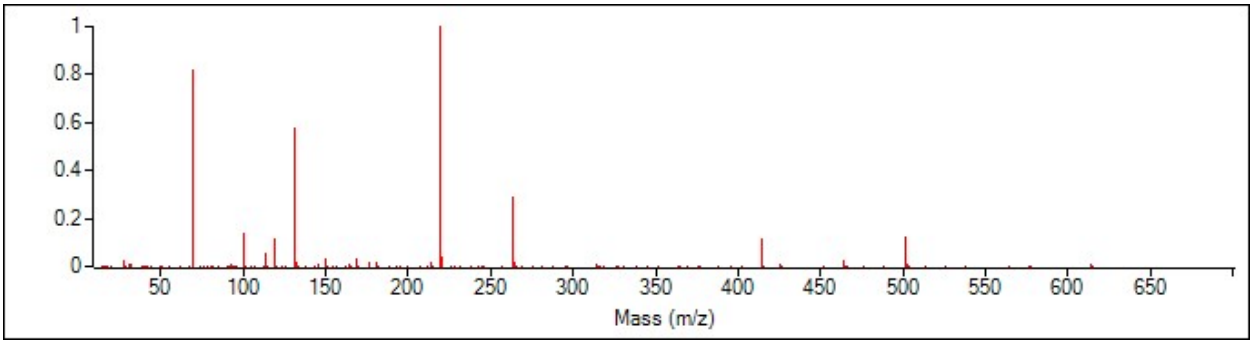


Ion Polarity	Pos	PFTBA	Open
Emission	34.6	Mass Gain	253
Electron Energy	70.0	Mass Offset	-22
Filament	2	Amu Gain	2913
Repeller	24.14	Amu Offset	135.00
Ion Focus	90.3	Width219	-0.035
Entrance Lens	20.2	DC Polarity	Pos
Ent Lens Offset	11.16	HED Enable	On
Ion Body	0.00	EM Volts	1040.8
Post Extractor 1	0	Extractor Lens	0.00
Post Extractor 2	0	Scan Speed	3
JetClean Flow Actual/[Setpoint]	0.00 [0.00]	Averages	3

Actual m/z	Abund	Rel Abund	Pw50
69.00	345,982	100.0%	0.60
219.00	409,595	118.4%	0.61
501.90	52,744	15.2%	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	136	219.00	398,464	1,483,811



Target m/z	Actual m/z	Abund	Rel Abund	Iso m/z	Iso Abund	Iso Ratio
69.00	69.00	326,336	100.0%	70.00	4,076	1.2%
219.00	219.00	398,464	122.1%	220.00	17,520	4.4%
502.00	502.00	48,712	14.9%	503.00	4,406	9.0%

Air/Water Check: H20 ~0.4% N2 ~3.6% O2 ~0.7% CO2 ~0.3% N2/H20 ~842.9%

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 87962.555

Repeller maximum 35 volts using ion 219; Gain Factor 0.8796

Mass Gain Values(Scan Speed): 265(3) 270(2) 282(1) 302(0) 354(FS1) 353(FS2)

TARGET MASS:	50	69	131	219	414	502	1091
Amu Offset	135.0	135.0	135.0	135.0	135.0	135.0	135.0
Entrance Lens Offset	11.2	11.2	11.2	11.2	11.2	11.2	11.2

Report Created: 5/8/2024 10:32 AM (UTC-07:00)

Instrument Name : Deadlift
DC Polarity : Positive
Filament 2
Current Vacuum status :High Vacuum: 1.9E-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	70.03	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%)	1.11	OK
Ratio of mass 220 to mass 219(3.2 - 5.4%)	4.34	OK
Ratio of mass 503 to mass 502(7.9 - 12.3%)	10.25	OK
Ratio of 219 to 69 should be > 40% and is	122.28	OK
Ratio of 502 to 69 should be > 2.4% and is	14.92	OK
Mass 69 Precursor (<= 3%)	0.31	OK
Mass 219 Precursor (<= 6%)	0.65	OK
Mass 502 Precursor (<= 12%)	0.74	OK

597x Air and Water Check
Wed May 08 10:50:58 2024 Instrument: Deadlift
D:\MassHunter\GCMS\1\5977\ATUNE.U US2238MA23

Testing for a leak in the system

Ratio of 18 to 69 (<20%)	0.40	OK
Ratio of 28 to 69 (<10%)	3.68	OK
Electron Multiplier Voltage	1041	OK

Tune portion of System Verification passed.