

REVIEWED

By Tamara Salazar at 2:59 pm, Jan 28, 2022

1/28/2022


CS

Worklist: 5550

| <u>LAB CASE</u> | <u>ITEM</u> | <u>ITEM TYPE</u> | <u>DESCRIPTION</u> | |
|-----------------|-------------|------------------|--|---|
| M2021-4509 | 5 | UCK | AM 25/AM 26 Urine MultiDrug/THC Screen by LC-QQQ |  |
| M2021-4837 | 2 | UCK | AM 25/AM 26 Urine MultiDrug/THC Screen by LC-QQQ |  |
| M2021-5427 | 3 | UCK | AM 25/AM 26 Urine MultiDrug/THC Screen by LC-QQQ |  |
| M2021-5600 | 3 | UCK | AM 25/AM 26 Urine MultiDrug/THC Screen by LC-QQQ |  |
| M2021-5672 | 3 | UCK | AM 25/AM 26 Urine MultiDrug/THC Screen by LC-QQQ |  |
| M2021-5672 | 4 | UCK | AM 25/AM 26 Urine MultiDrug/THC Screen by LC-QQQ |  |
| M2022-0018 | 4 | UCK | AM 25/AM 26 Urine MultiDrug/THC Screen by LC-QQQ |  |
| M2022-0061 | 2 | BCK | AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ |  |
| P2021-4029 | 1 | UCK | AM 25/AM 26 Urine MultiDrug/THC Screen by LC-QQQ |  |
| P2021-4077 | 1 | UCK | AM 25/AM 26 Urine MultiDrug/THC Screen by LC-QQQ |  |
| P2021-4092 | 2 | UCK | AM 25/AM 26 Urine MultiDrug/THC Screen by LC-QQQ |  |
| P2021-4247 | 1 | UCK | AM 25/AM 26 Urine MultiDrug/THC Screen by LC-QQQ |  |
| P2021-4247 | 2 | UCK | AM 25/AM 26 Urine MultiDrug/THC Screen by LC-QQQ |  |
| P2022-0015 | 2 | UCK | AM 25/AM 26 Urine MultiDrug/THC Screen by LC-QQQ |  |
| P2022-0051 | 1 | BCK | AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ |  |
| P2022-0052 | 1 | BCK | AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ |  |
| P2022-0053 | 1 | BCK | AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ |  |
| P2022-0055 | 1 | BCK | AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ |  |
| P2022-0058 | 1 | BCK | AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ |  |
| P2022-0071 | 1 | UCK | AM 25/AM 26 Urine MultiDrug/THC Screen by LC-QQQ |  |
| P2022-0087 | 1 | BCK | AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ |  |

Worklist: 5550

CS

| <u>LAB CASE</u> | <u>ITEM</u> | <u>ITEM TYPE</u> | <u>DESCRIPTION</u> | |
|-----------------|-------------|------------------|--|---|
| P2022-0088 | 1 | BCK | AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ |  |

AM# 25: Multi-Drug Screen in Blood and Urine by LC-MS/MS

Extraction Date: 01/11/2022 and 01/14/2022

Plate lot#: 211015

Mobile phase A: 10mM Amm Form

Instant Buffer I

Blank Blood Lot: Lampire 20L20725

LCMS-QQ ID: 069901

Analyst: Celena Shrum

Plate Retest Date: 04/15/2022

Mobile phase B: 0.1% Formic Acid in MeOH

Ethyl Acetate LC Methanol

Column: Phenomenex Phenyl Hexyl (4.6x50mm, 2.6um)

Blank Urine Lot: POC031319

Pre-Analytic:

- 1. Check levels of mobile phases and needle wash refill as needed. Ensure waste is not full.
- 2. Ensure correct column is installed and begin mobile phase flow allow to equilibrate ~ 30 minutes.

Analytic:

- 1. Remove standards, plate, controls, and samples from cold storage. Allow to reach room temperature.
- 2. Using a calibrated pipette, pipette **250µL blood** into wells of analytical (standards) plate. **Pipette ID: 42**
- 3. Place on shaking incubator at ambient temp., 900rpm for 15 minutes.
- 4. Pipette **250µL 0.5 M ammonium hydroxide** in wells of analytical plate.
- 5. Place on shaking incubator at ambient temp., 900rpm for 15 minutes.
- 6. Transfer **200-450µL of blood+base and** mixture to corresponding wells of SLE+ plate.
Amount transferred: 300µl
- 7. Apply positive pressure for approx. 10-15 seconds (or until no liquid remains on top of sorbent).
(Load at 85-100 PSI- Selector to the right). Manifold ID: 067104
- 8. Wait 5 minutes.
- 9. Add **900uL ethyl acetate**.
- 10. Wait 5 minutes.
- 11. Apply positive pressure for approx. 15 seconds. *(10-15 PSI- Selector to the left).*
- 12. Add **900uL ethyl acetate**.
- 13. Wait 5 minutes.
- 14. Apply positive pressure for approx. 15 seconds. *(10-15 PSI- Selector to the left).*
- 15. Remove plate containing eluate. Place on SPE Dry and evaporate to dryness at approx. 35°C.
- 16. Reconstitute in **100µL 20% LC MeOH** and heat seal plate with foil. Place in autosampler and run worklist.

Post-Analytic

- 1. Open quantitation software and create a new quantitation batch.
- 2. Make necessary changes to integration limits
- 3. Evaluate samples, S/N of primary transition >5 and S/N of secondary transition >3 or evaluation of peak symmetry and resolution. Within +/- 2% or 0.1 min RT of administrative control. Calculated concentration of 5 or greater or 2-5 for discretionary range.
- 4. Did all QCs pass for each analyte? If no, describe issue in comments (below).
- 5. Central File Packet to include: LIMS Worklist, Method Checklist, Calibration and Control Reports

COMMENTS: The extraction was originally done on 1/11/22 but due to an issue with the calibrator, the data was not used and the extraction was redone on 1/14/22.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|--------------|--------------|------------------|--------------|
| A | | | | | | | | | | P2021-4247-1 | M2021-5427-3 | P2022-0055-1 |
| B | | | | | | | | | | P2021-4092-2 | M2021-4837-2 | P2022-0053-1 |
| C | | | | | | | | | | P2021-4077-1 | M2021-4509-5 | P2022-0052-1 |
| D | | | | | | | | | | P2021-4029-1 | Urine Ext. Ctrl. | P2022-0051-1 |
| E | | | | | | | | | | M2022-0018-4 | NEG Urine | M2022-0061-2 |
| F | | | | | | | | | P2022-0071-1 | M2021-5672-4 | P2022-0088-1 | NEG Blood |
| G | | | | | | | | | P2022-0015-2 | M2021-5672-3 | P2022-0087-1 | |
| H | | | | | | | | | P2021-4247-2 | M2021-5600-3 | P2022-0058-1 | Cal |



Idaho State Police Forensic Services

**AM #25 Urine Multi-Drug Screen by LCMS-QQQ
And
AM #28 Urine Multi-Drug Confirmatory Analysis by
LCMS-QQQ---Panel 1**

Methanol External Control Solution (Lot: 120320)

100 μ L of 1mg/mL stock was added to each drug to 9700 μ L of LC MeOH.

| <i>Component</i> | <i>Source</i> | <i>Source Lot Number</i> | <i>Expiration Date</i> |
|----------------------|---------------|--------------------------|------------------------|
| Methanol (LCMS) | Fisher | 197468 | |
| O-desmethyl Tramadol | Cerilliant | FN01241702 | 04/30/2022 |
| Amphetamine | Cerilliant | FE04061701 | 06/30/2022 |
| Alprazolam | Cerilliant | FE07061604 | 07/31/2021 |
| Prepared: | 12/03/2020 | | |
| Prepared By: | Celena Shrum | | |

Urine External Control Solution (Lot: WS110521)

*100 μ L of methanol external control solution was added to 9900 μ L of urine.
Approximately 100 ng/mL of each compound.*

| <i>Component</i> | <i>Source</i> | <i>Source Lot Number</i> |
|------------------------------------|---------------|--------------------------|
| Negative Urine | Pocatello Lab | POC031319 |
| Methanol External Control Solution | | 120320 |
| Prepared: | 11/05/2021 | |
| Prepared by: | Celena Shrum | |

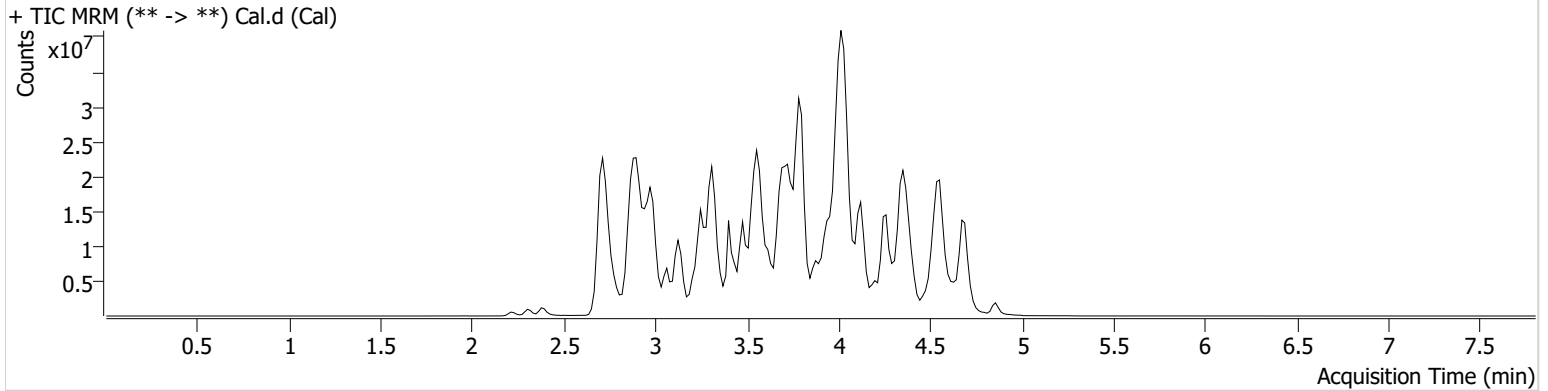
AM #25 Multi-Drug Screen Results



Batch results D:\MassHunter\Data\2022\AM 25-26\01-14-22 AM 25 and 27 CS\QuantResults\AM 25.batch.bin
Calibration Last Update 1/27/2022 1:09:05 PM

| | | | |
|-------------------------|----------------------|------------------|--------------|
| Instrument | Falco (069901) | Data File | Cal.d |
| Type | Cal | Sample | Cal |
| Acq. Method | AM 25 MDS.m | Operator | Celena Shrum |
| Sample Position | P6-H12 | Comment | |
| Injection Volume | 5 | | |
| Acq. Date-Time | 1/14/2022 6:57:45 PM | | |

Sample Chromatogram



| Name | RT | Resp. | S/N | S/N | ISTD Resp. | Calc. Conc. |
|------------------------|-------|----------|----------|------------|------------|-------------|
| 6-MAM | 2.847 | 78395 | 345.36 | 21306.83 | 2650716 | 10.0000 |
| 7-aminoclonazepam | 3.572 | 1017814 | 199.63 | 196.90 | 4066892 | 10.0000 |
| 7-aminoflunitrazepam | 3.771 | 1228589 | 1084.95 | 254.00 | 4066892 | 10.0000 |
| Acetyl Fentanyl | 3.706 | 538599 | 121.16 | 271980.44 | 39419453 | 10.0000 |
| Acetyl Norfentanyl | 2.886 | 628971 | 1107.98 | 221.67 | 39419453 | 10.0000 |
| a-hydroxyalprazolam | 4.536 | 300460 | 80.57 | 141.19 | 4066892 | 10.0000 |
| alpha-hydroxymidazolam | 4.504 | 3443520 | 322.81 | 555.52 | 4066892 | 10.0000 |
| Alpha-PHP | 3.760 | 5327937 | 6768.11 | 2078.66 | 39419453 | 10.0000 |
| alpha-PVP | 3.485 | 8606492 | 2526.07 | 552.64 | 20428613 | 10.0000 |
| Alprazolam | 4.631 | 3673691 | 470.16 | 712.53 | 29436644 | 10.0000 |
| Amitriptyline | 4.374 | 3396931 | 159.27 | 206.96 | 12959561 | 10.0000 |
| Amphetamine | 2.905 | 6541747 | 2242.96 | 1090.01 | 20428613 | 10.0000 |
| Benzoylcegonine | 3.402 | 416466 | 349.26 | 48.01 | 810683 | 10.0000 |
| Brompheniramine | 3.999 | 163209 | 75.38 | 669.90 | 51595409 | 10.0000 |
| Buprenorphine | 4.024 | 907312 | 565.35 | 96710.83 | 3513090 | 10.0000 |
| Bupropion | 3.684 | 7599677 | 1519.85 | 1381.46 | 28474157 | 10.0000 |
| Carbamazepine | 4.270 | 14546517 | ∞ | 949.26 | 467793 | 10.0000 |
| Carisoprodol | 4.252 | 1697944 | 538.63 | 200.50 | 10194466 | 10.0000 |
| Chlordiazepoxide | 4.602 | 1637732 | 500.10 | 1539.18 | 29436644 | 10.0000 |
| Chlorpheniramine | 3.911 | 12047881 | 1221.85 | 5.75 | 51595409 | 10.0000 |
| Citalopram | 4.044 | 4992896 | 486.03 | 4922536.59 | 51595409 | 10.0000 |
| Clomipramine | 4.569 | 5763738 | 12243.51 | 3031.73 | 51595409 | 10.0000 |
| Clonazepam | 4.476 | 2501256 | 361.39 | 267735.19 | 29436644 | 10.0000 |
| Clonazolam | 4.396 | 1835750 | 666.26 | 153252.12 | 29436644 | 10.0000 |
| Cocaethylene | 3.737 | 8274090 | 1324.67 | 5569.01 | 36423233 | 10.0000 |
| Cocaine | 3.539 | 8545786 | 1093.31 | 720.26 | 36423233 | 10.0000 |
| Codeine | 2.729 | 541145 | 14085.48 | 546.65 | 13910110 | 10.0000 |
| Cyclobenzaprine | 4.297 | 5474067 | 780.47 | 83.81 | 12959561 | 10.0000 |
| Desipramine | 4.344 | 9343551 | 2980.65 | 770.00 | 12959561 | 10.0000 |
| Dextromethorphan | 4.035 | 3370830 | 393.72 | 9884.38 | 19249652 | 10.0000 |
| Dextrorphan | 3.358 | 4138413 | 1964.59 | 1272.69 | 19249652 | 10.0000 |
| Diazepam | 4.864 | 2445585 | 1228.04 | 1014.63 | 29436644 | 10.0000 |
| Dihydrocodeine | 2.697 | 1599635 | 1166.71 | 1047.77 | 13910110 | 10.0000 |
| Diphenhydramine | 4.005 | 15315559 | 40660.99 | 1079.82 | 51595409 | 10.0000 |

Cal

AM #25 Multi-Drug Screen Results



| Name | RT | Resp. | S/N | S/N | ISTD Resp. | Calc. Conc. |
|----------------------|-------|----------|-------------|------------|------------|-------------|
| Doxepin | 4.111 | 3920110 | 483.41 | 103.29 | 28131371 | 10.0000 |
| Doxylamine | 3.573 | 17156868 | 283.75 | 301.01 | 19249652 | 10.0000 |
| EDDP | 4.049 | 1608782 | 453.38 | 129.10 | 4025866 | 10.0000 |
| Estazolam | 4.557 | 6882998 | 1048.34 | 522.95 | 29436644 | 10.0000 |
| Etizolam | 4.642 | 379877 | 39331.80 | 940370.17 | 29436644 | 10.0000 |
| Fentanyl | 3.936 | 487269 | 162.43 | 100690.20 | 29895087 | 10.0000 |
| Flualprazolam | 4.505 | 1130345 | 4388.55 | 2902.16 | 29436644 | 10.0000 |
| Flunitrazepam | 4.585 | 3802366 | 541.27 | 452.45 | 29436644 | 10.0000 |
| Fluoxetine | 4.309 | 5376903 | 1863.78 | 409.53 | 9792014 | 10.0000 |
| Flurazepam | 4.072 | 4762721 | 1178.25 | 2847.20 | 29436644 | 10.0000 |
| Hydrocodone | 2.927 | 2188642 | 908.69 | 506.76 | 13910110 | 10.0000 |
| Hydromorphone | 2.381 | 1862473 | 2491.59 | 23750.46 | 464291 | 10.0000 |
| Imipramine | 4.342 | 10454273 | 1891.18 | 1716.31 | 12959561 | 10.0000 |
| Ketamine | 3.314 | 6146650 | 8857.53 | 324.41 | 20129683 | 10.0000 |
| Lamotrigine | 3.482 | 554328 | 2924.85 | 3376.20 | 51595409 | 10.0000 |
| Levamisole | 2.887 | 5628654 | 1562.84 | 527.68 | 36423233 | 10.0000 |
| Levetiracetam | 2.675 | 2252049 | 792.29 | 987.76 | 51595409 | 10.0000 |
| Lorazepam | 4.475 | 743785 | 302.43 | ∞ | 29436644 | 10.0000 |
| Maprotiline | 4.374 | 2466401 | 141.33 | 594.85 | 12959561 | 10.0000 |
| MDA | 2.995 | 5411091 | 1124.72 | 32.28 | 41242293 | 10.0000 |
| MDEA | 3.224 | 8268537 | 691.85 | 435.71 | 41242293 | 10.0000 |
| MDMA | 3.071 | 10884394 | 51328.82 | 353.42 | 41242293 | 10.0000 |
| Meperidine | 3.559 | 4517151 | 1103.84 | 455.24 | 19249652 | 10.0000 |
| Meprobamate | 3.701 | 841326 | ∞ | 109.39 | 10194466 | 10.0000 |
| Methadone | 4.355 | 10277455 | 12886.99 | 358.76 | 4025866 | 10.0000 |
| Methamphetamine | 2.996 | 12851073 | 2042.18 | 727.63 | 41242293 | 10.0000 |
| Methocarbamol | 3.606 | 874530 | 922.78 | 141.86 | 4025866 | 10.0000 |
| Methylphenidate | 3.484 | 18152301 | ∞ | 275.89 | 30423327 | 10.0000 |
| Metoprolol | 3.419 | 1107090 | 338.23 | 956.01 | 19249652 | 10.0000 |
| Midazolam | 4.352 | 876548 | 1430.35 | 446.09 | 29436644 | 10.0000 |
| Mirtazapine | 3.619 | 5465725 | 4570.50 | 243188.82 | 19249652 | 10.0000 |
| Mitragynine | 4.071 | 516482 | 890.54 | 492560.80 | 19249652 | 10.0000 |
| Morphine | 2.215 | 394374 | 610.44 | 925.67 | 464291 | 10.0000 |
| Norbuprenorphine | 3.795 | 130044 | 160.74 | 44971.63 | 3513090 | 10.0000 |
| Nordiazepam | 4.728 | 2492766 | 630.58 | 276.79 | 29436644 | 10.0000 |
| Norfentanyl | 3.330 | 11696423 | 632.71 | 1338.26 | 39419453 | 10.0000 |
| Norhydrocodone | 2.914 | 128474 | 73.28 | 53.82 | 464291 | 10.0000 |
| Norketamine | 3.284 | 1149649 | 342.36 | 1772.71 | 20129683 | 10.0000 |
| Normeperidine | 3.592 | 6090469 | 4955.53 | 345.90 | 51595409 | 10.0000 |
| Noroxycodone | 2.866 | 1260139 | 247.63 | 105.94 | 20129683 | 10.0000 |
| Nortriptyline | 4.376 | 3027099 | 886.23 | 269.74 | 12959561 | 10.0000 |
| O-desmethyl-tramadol | 2.915 | 13247196 | 2088.22 | 173.71 | 51595409 | 10.0000 |
| Olanzapine | 3.215 | 2162547 | 563.58 | 403.62 | 467793 | 10.0000 |
| Oxazepam | 4.541 | 3256735 | 907.95 | 161.48 | 14624142 | 10.0000 |
| Oxycodone | 2.879 | 4306118 | 1697.13 | 494.55 | 20129683 | 10.0000 |
| Oxymorphone | 2.302 | 2003857 | 295.87 | 268.18 | 464291 | 10.0000 |
| Paroxetine | 4.305 | 694513 | 180.99 | 240249.14 | 9792014 | 10.0000 |
| Phenazepam | 4.672 | 3327027 | 979.61 | 3282294.80 | 29436644 | 10.0000 |
| Phencyclidine | 3.883 | 8931741 | 1523.01 | 361.44 | 19249652 | 10.0000 |
| Phentermine | 3.150 | 2519418 | 314.90 | 44.68 | 30423327 | 10.0000 |
| Phenytoin | 4.161 | 765634 | 415.84 | 435.08 | 467793 | 10.0000 |
| Promethazine | 4.265 | 12497608 | 298921.58 | 261.34 | 51595409 | 10.0000 |
| Pseudoephedrine | 2.721 | 67987743 | 7208.47 | 77422.88 | 41242293 | 10.0000 |
| Quetiapine | 4.195 | 6116097 | 1575.50 | 1501.85 | 43095480 | 10.0000 |
| Sertraline | 4.524 | 1783311 | 585136.19 | 713.64 | 9792014 | 10.0000 |
| Sufentanil | 4.180 | 404870 | 69200.95 | 181.18 | 39419453 | 10.0000 |
| Tapentadol | 3.439 | 8337891 | ∞ | 7672.63 | 20129683 | 10.0000 |
| Temazepam | 4.694 | 6292828 | 926.14 | 132.91 | 29436644 | 10.0000 |
| Tramadol | 3.404 | 15489492 | 12532825.26 | 68.54 | 51595409 | 10.0000 |
| Trazodone | 4.011 | 7270187 | 3246.78 | 2209.79 | 28131371 | 10.0000 |

Cal

AM #25 Multi-Drug Screen Results



| Name | RT | Resp. | S/N | S/N | ISTD Resp. | Calc. Conc. |
|-------------|-------|----------|---------|----------|------------|-------------|
| Venlafaxine | 3.787 | 9699001 | 1650.13 | 614.92 | 9792014 | 10.0000 |
| Zaleplon | 4.356 | 2637325 | 711.20 | 604.07 | 43095480 | 10.0000 |
| Zolpidem | 3.723 | 11797833 | 3411.40 | 4331.18 | 43095480 | 10.0000 |
| Zopiclone | 3.688 | 540668 | 661.85 | 81348.68 | 2675987 | 10.0000 |

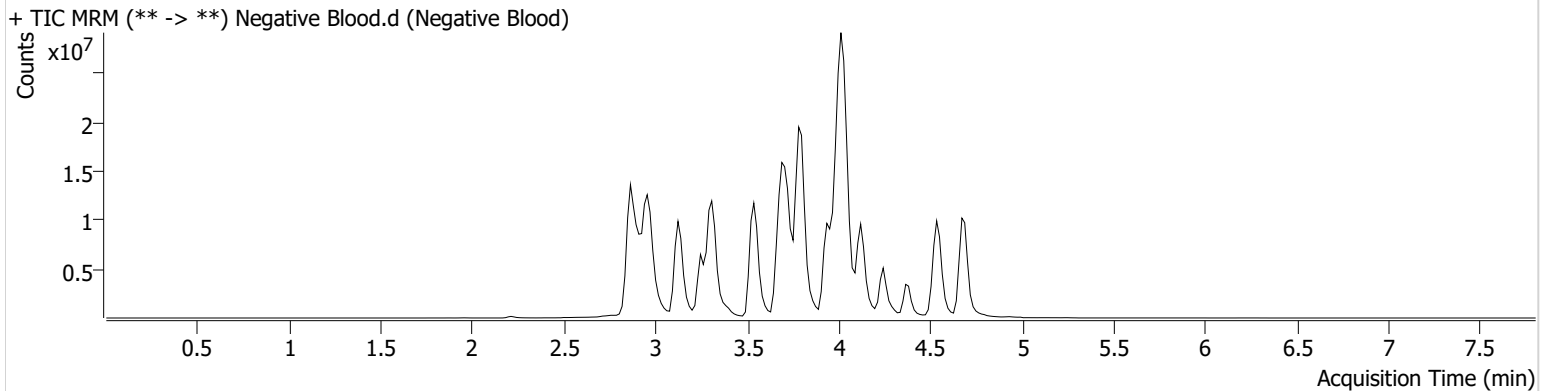
AM #25 Multi-Drug Screen Results



Batch results D:\MassHunter\Data\2022\AM 25-26\01-14-22 AM 25 and 27 CS\QuantResults\AM 25.batch.bin
Calibration Last Update 1/27/2022 1:09:05 PM

| | | | |
|-------------------------|----------------------|------------------|------------------|
| Instrument | Falco (069901) | Data File | Negative Blood.d |
| Type | Sample | Sample | Negative Blood |
| Acq. Method | AM 25 MDS.m | Operator | Celena Shrum |
| Sample Position | P6-F12 | Comment | |
| Injection Volume | 5 | | |
| Acq. Date-Time | 1/14/2022 7:06:19 PM | | |
| Sample Info. | | | |

Sample Chromatogram



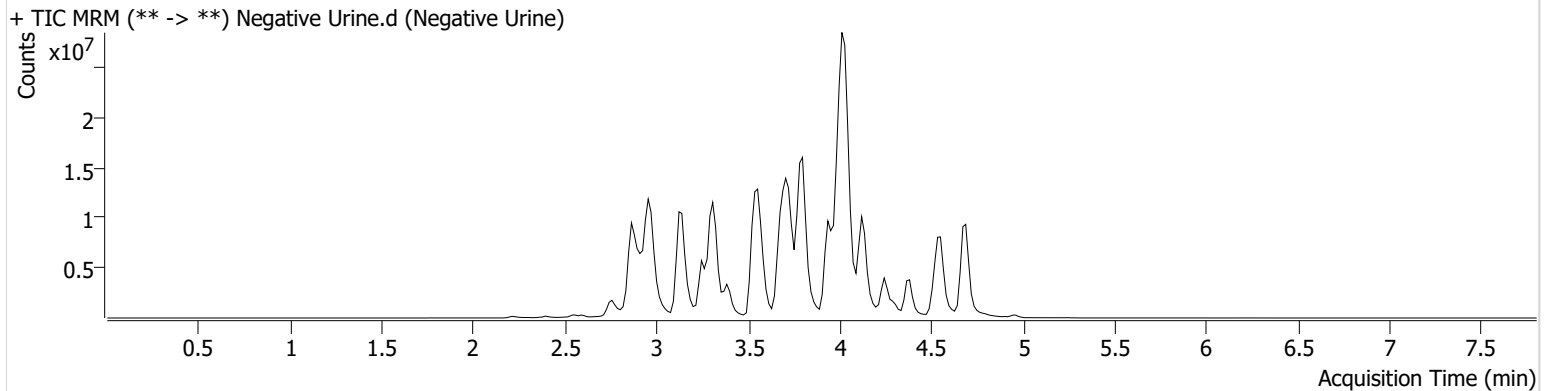
AM #25 Multi-Drug Screen Results



Batch results D:\MassHunter\Data\2022\AM 25-26\01-14-22 AM 25 and 27 CS\QuantResults\AM 25.batch.bin
Calibration Last Update 1/27/2022 1:09:05 PM

| | | | |
|-------------------------|----------------------|------------------|------------------|
| Instrument | Falco (069901) | Data File | Negative Urine.d |
| Type | Sample | Sample | Negative Urine |
| Acq. Method | AM 25 MDS.m | Operator | Celena Shrum |
| Sample Position | P6-E11 | Comment | |
| Injection Volume | 5 | | |
| Acq. Date-Time | 1/14/2022 8:30:37 PM | | |
| Sample Info. | | | |

Sample Chromatogram



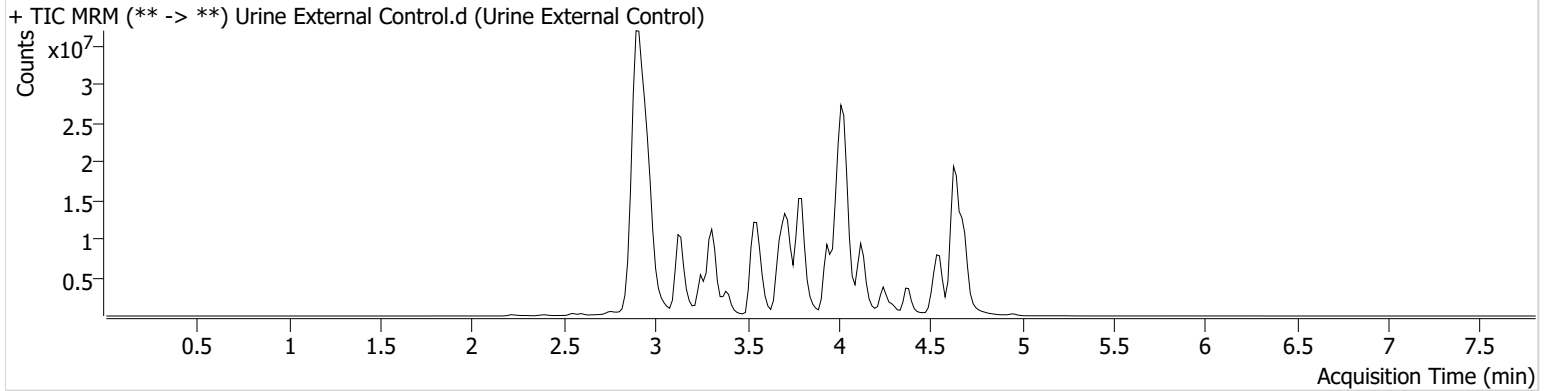
AM #25 Multi-Drug Screen Results



Batch results D:\MassHunter\Data\2022\AM 25-26\01-14-22 AM 25 and 27 CS\QuantResults\AM 25.batch.bin
Calibration Last Update 1/27/2022 1:09:05 PM

| | | | |
|-------------------------|----------------------|------------------|--------------------------|
| Instrument | Falco (069901) | Data File | Urine External Control.d |
| Type | Sample | Sample | Urine External Control |
| Acq. Method | AM 25 MDS.m | Operator | Celena Shrum |
| Sample Position | P6-D11 | Comment | |
| Injection Volume | 5 | | |
| Acq. Date-Time | 1/14/2022 8:39:01 PM | | |
| Sample Info. | | | |

Sample Chromatogram



| Name | RT | Resp. | S/N | S/N | ISTD Resp. | Calc. Conc. |
|----------------------|-------|----------|----------|--------|------------|-------------|
| Alprazolam | 4.631 | 32654229 | 766.96 | 762.13 | 29582076 | 88.4497 |
| Amphetamine | 2.905 | 38725023 | 633.29 | 494.40 | 12327890 | 98.0953 |
| O-desmethyl-tramadol | 2.930 | 57574668 | 27662.35 | 935.26 | 49150015 | 45.6242 |

AM# 26: Screening of THC and Metabolites in Blood and Urine by LC-MS/MS

Extraction Date: 01/11/2022

Analyst: Celena Shrum

Plate lot#: 211018

Plate Retest Date: 04/18/2022

Mobile phase A: 0.1% Formic Acid in LCMS Water

Mobile phase B: 0.1% Formic acid in Acetonitrile

Blank Blood Lot: Lampire 20L20725

Column: Phenomenex Phenyl Hexyl (4.6x50mm, 2.6um)

LCMS-QQQ ID: 069901

Blank Urine Lot: POC031319

Pre-Analytic:

- 1. Check levels of mobile phases and needle wash refill as needed. Ensure waste is not full.
- 2. Ensure correct column is installed and begin mobile phase flow allow to equilibrate ~ 30 minutes.

Analytic:

- 1. Remove standards, plate, controls, and samples from cold storage. Allow to reach room temperature.
- 2. Using a calibrated pipette, add **1000µl blood (calibrated pipette)** into the appropriate wells of analytical (standards) plate. **Pipette ID: #42**
- 3. Place on shaking incubator at ambient temp., 900rpm for 15 minutes.
- 4. Pipette **500µL 0.1% formic acid in water blood sample** of analytical plate.
- 5. Place on shaking incubator at ambient temp., 900rpm for 15 minutes.
- 6. Transfer **800µL of blood+acid** mixture to corresponding wells of SLE+ plate.
- 7. Apply positive pressure for approx. 10-15 seconds (or until no liquid remains on top of sorbent). **(Load at 85-100 PSI- Selector to the right)** Manifold ID: 067104
- 8. Wait 5 minutes.
- 9. Add **2.25mL MTBE. (Add in 3 increments of 750uL)**
- 10. Wait 5 minutes.
- 11. Apply positive pressure for approx. 15 seconds. **(10-15 PSI- Selector to the left).**
- 12. Add **2.25mL Hexane. (Add in 3 increments of 750uL)**
- 13. Wait 5 minutes.
- 14. Apply positive pressure for approx. 15 seconds. **(10-15 PSI- Selector to the left).**
- 15. Remove plate containing eluate. Place on SPE Dry and evaporate to dryness at approx. 35°C. **SPE Dry ID: 067103**
- 16. Reconstitute in **100µL 100% MeOH** and heat seal plate with foil. Place in autosampler and run worklist.

Post-Analytic

- 1. Create batch and process data.
- 2. Make any necessary integration changes, R² values ≥0.98 for each analyte
- 3. RT +/- 2% or 0.100 min, whichever is greater
- 4. Confirmation testing on case samples with a response for THC and OH-THC of 3ng/mL or greater and/or Carboxy-THC at 10ng/mL or greater (analyst discretion between 5-10ng/mL) may be pursued.
- 5. Did all QCs pass for each analyte? (if not, describe in comments section)
- 6. Central File Packet to include: LIMS Worklist, Method Checklist, Calibration and Control Reports

COMMENTS: Run stopped due to pressure issues and had to be restarted. The run was restarted with no issues.

Urine cases only evaluated for THC and THC-COOH.

| | 1 | 2 | 3 | 4 | 5 | 6 |
|---|------------|--------------|--------------|--------------|---|---|
| a | cal 1ng | QC 2 | P2022-0087-1 | M2022-0018-4 | | |
| b | cal 3 ng | NEG Blood | P2022-0088-1 | P2021-4029-1 | | |
| c | cal 5 ng | M2022-0061-2 | NEG Urine | P2021-4077-1 | | |
| d | cal 10ng | P2022-0051-1 | M2021-4509-5 | P2021-4092-2 | | |
| e | cal 25 ng | P2022-0052-1 | M2021-4837-2 | P2021-4247-1 | | |
| f | cal 50 ng | P2022-0053-1 | M2021-5427-3 | P2021-4247-2 | | |
| g | cal 100 ng | P2022-0055-1 | M2021-5600-3 | P2022-0015-2 | | |
| h | QC 1 | P2022-0058-1 | M2021-5672-4 | P2022-0071-1 | | |



IDAHO STATE POLICE

MEMORANDUM

DATE: 3/3/2022

TO: Toxicology Discipline/ Jason Crowe

FROM: Celena Shrum- Toxicology Discipline lead

SUBJECT: Use of internal control in lieu of external control

Toxicology Analytical Methods #25, 26, and 27 specify that if a run contains urine samples, a negative control and **external** urine control must also be included in the run. The purpose of this control is to demonstrate that the extraction worked as intended and to ensure that the results and concentrations obtained are accurate. It was decided in October 2021 that extra QC's would be included on the analytical plates so that they could be used as an internal control for runs with urine cases instead of continuing with including an external control. An internal control serves the same purpose as an external control but is prepared and placed on the analytical plate rather than being prepared in-house and placed on the plate at the time of testing. Utilizing internal controls versus external increases the efficacy of the controls used by ensuring consistent spiking and preparation, eliminating evaporation of compounds, etc. There is no quality issue with any of the cases, since an additional urine control was used that served the same purpose as the external control, but it was a violation of the wording specified in the method.

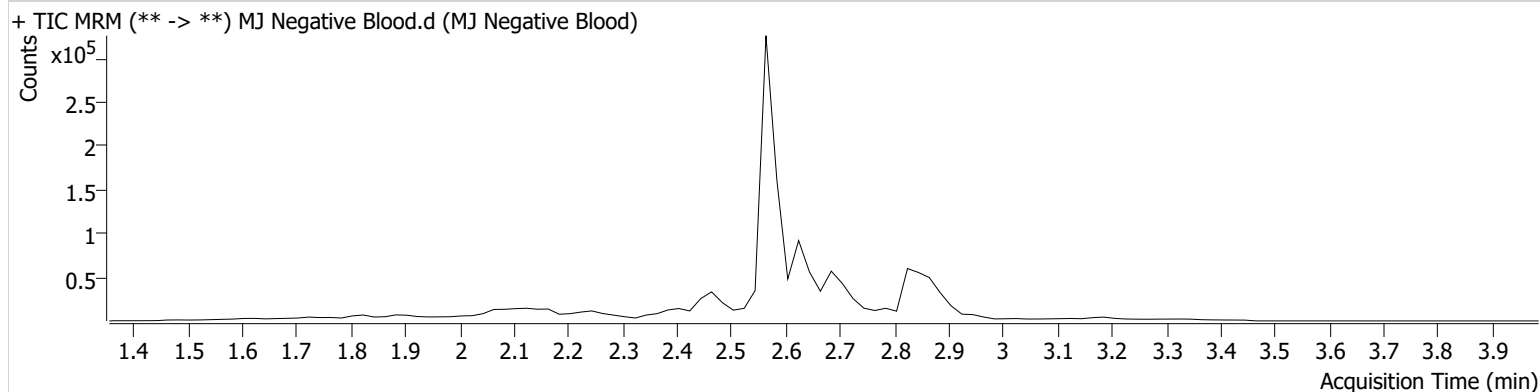
AM #26 Cannabinoids Screen Results



Batch results D:\MassHunter\Data\2022\AM 25-26\011122 AM 25 26 CS\QuantResults\AM 26.batch.bin
Calibration Last Update 1/27/2022 1:04:52 PM

| | | | |
|-------------------------|----------------------|------------------|---------------------|
| Instrument | Falco (069901) | Data File | MJ Negative Blood.d |
| Type | Sample | Sample | MJ Negative Blood |
| Acq. Method | AM 26 THCS.m | Operator | Celena Shrum |
| Sample Position | P5-B2 | Comment | |
| Injection Volume | 10 | | |
| Acq. Date-Time | 1/11/2022 3:27:54 PM | | |
| Sample Info. | | | |

Sample Chromatogram



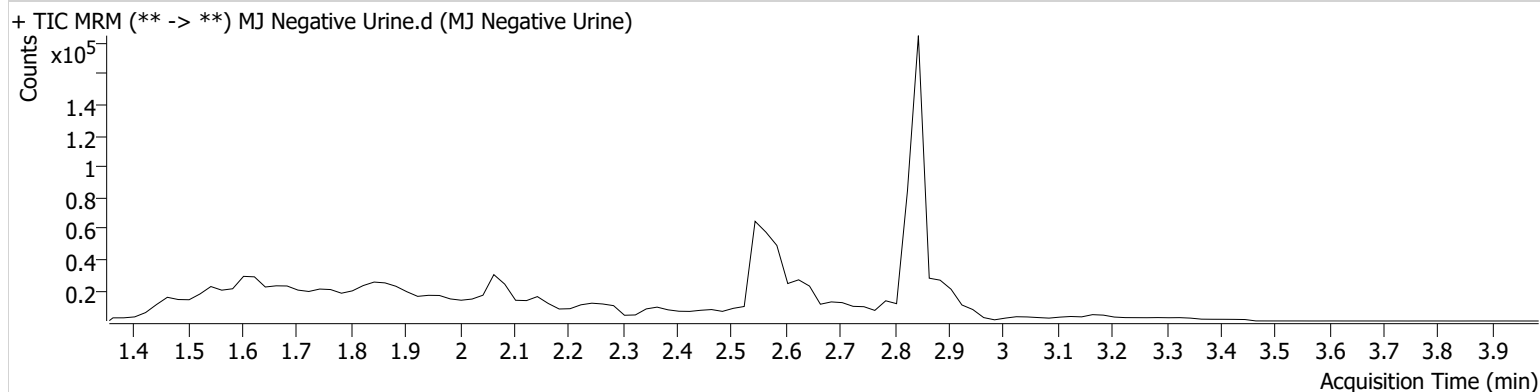
AM #26 Cannabinoids Screen Results



Batch results D:\MassHunter\Data\2022\AM 25-26\011122 AM 25 26 CS\QuantResults\AM 26.batch.bin
Calibration Last Update 1/27/2022 1:04:52 PM

| | | | |
|-------------------------|----------------------|------------------|---------------------|
| Instrument | Falco (069901) | Data File | MJ Negative Urine.d |
| Type | Sample | Sample | MJ Negative Urine |
| Acq. Method | AM 26 THCS.m | Operator | Celena Shrum |
| Sample Position | P5-C3 | Comment | |
| Injection Volume | 10 | | |
| Acq. Date-Time | 1/11/2022 4:33:33 PM | | |
| Sample Info. | | | |

Sample Chromatogram



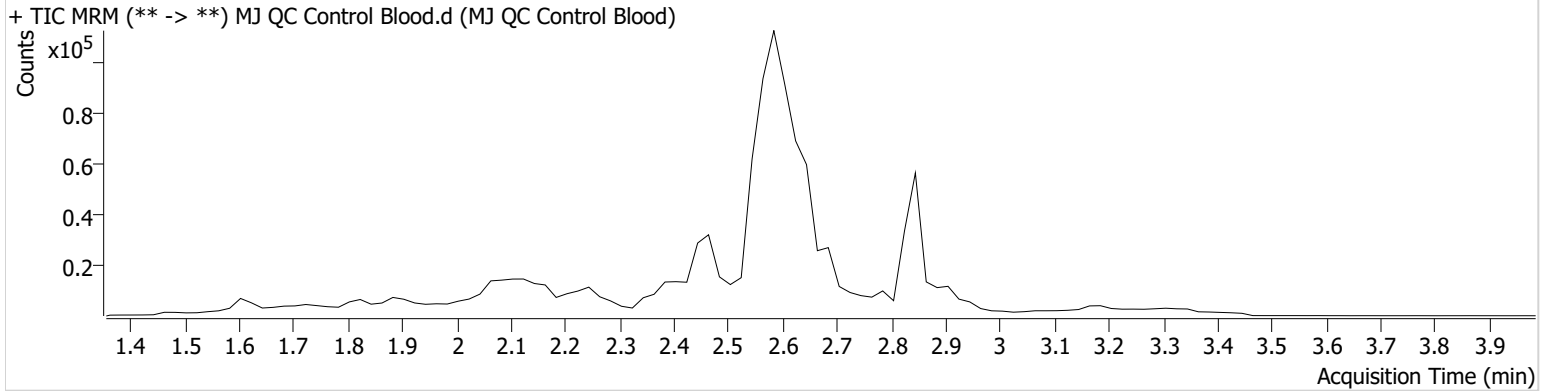
AM #26 Cannabinoids Screen Results



Batch results D:\MassHunter\Data\2022\AM 25-26\011122 AM 25 26 CS\QuantResults\AM 26.batch.bin
Calibration Last Update 1/27/2022 1:04:52 PM

| | | | |
|-------------------------|----------------------|------------------|-----------------------|
| Instrument | Falco (069901) | Data File | MJ QC Control Blood.d |
| Type | QC | Sample | MJ QC Control Blood |
| Acq. Method | AM 26 THCS.m | Operator | Celena Shrum |
| Sample Position | P5-H1 | Comment | |
| Injection Volume | 10 | | |
| Acq. Date-Time | 1/11/2022 3:14:46 PM | | |
| Sample Info. | | | |

Sample Chromatogram



| Name | RT | Resp. | ISTD Resp. | Final Conc. |
|----------|-------|-------|------------|---------------|
| THC | 2.899 | 936 | 12888 | 8.6560 ng/ml |
| THC-COOH | 2.627 | 26123 | 41269 | 47.1186 ng/ml |
| THC-OH | 2.574 | 8408 | 215002 | 17.2627 ng/ml |

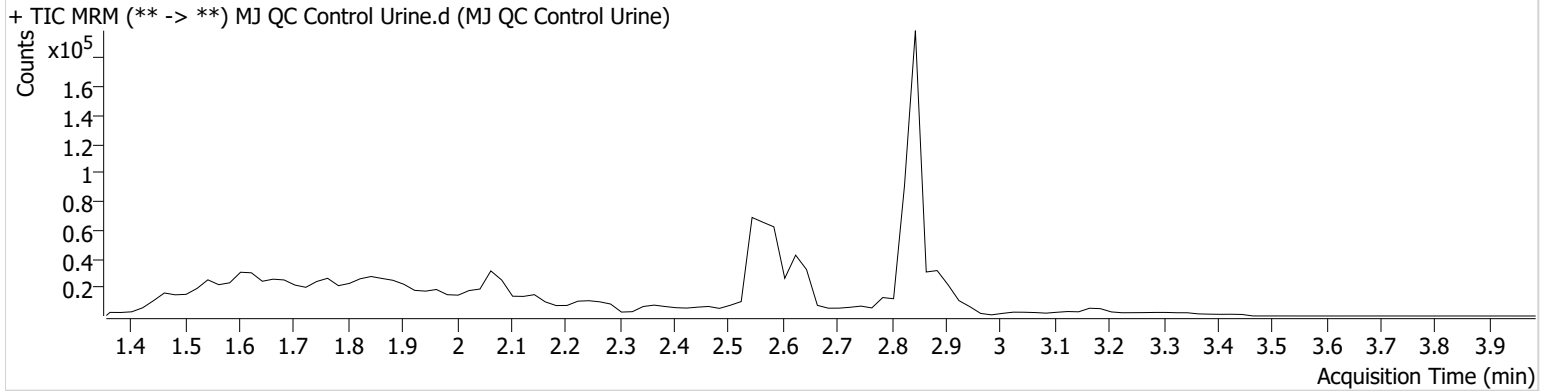
AM #26 Cannabinoids Screen Results



Batch results D:\MassHunter\Data\2022\AM 25-26\011122 AM 25 26 CS\QuantResults\AM 26.batch.bin
Calibration Last Update 1/27/2022 1:04:52 PM

| | | | |
|-------------------------|----------------------|------------------|-----------------------|
| Instrument | Falco (069901) | Data File | MJ QC Control Urine.d |
| Type | QC | Sample | MJ QC Control Urine |
| Acq. Method | AM 26 THCS.m | Operator | Celena Shrum |
| Sample Position | P5-A2 | Comment | |
| Injection Volume | 10 | | |
| Acq. Date-Time | 1/11/2022 4:40:06 PM | | |

Sample Chromatogram

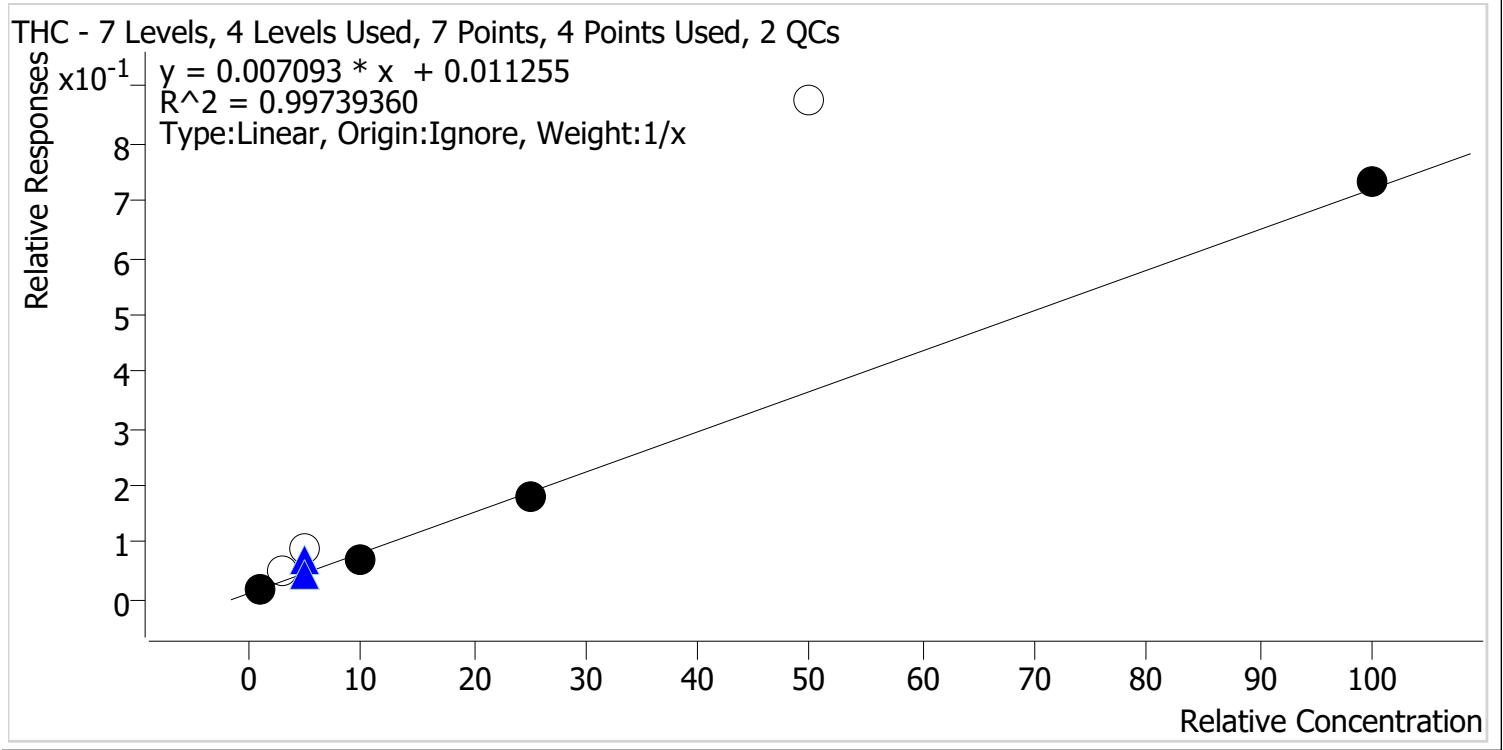


| Name | RT | Resp. | ISTD Resp. | Final Conc. |
|----------|-------|-------|------------|-------------------------|
| THC | 2.899 | 1493 | 35444 | 4.3502 ng/ml |
| THC-COOH | 2.627 | 17544 | 48400 | 26.9782 ng/ml |
| THC-OH | 2.554 | 2246 | 218298 | 1.7915 ng/ml Low |



AM #26 Cannabinoids Screen Calibration Curve Report

Batch results D:\MassHunter\Data\2022\AM 25-26\011122 AM 25 26 CS\QuantResults\AM 26.batch.bin
Last Cal. Update 1/27/2022 1:04 PM
Analyst Name ISP\datastor
Analyte THC **Internal Standard** THC-D3

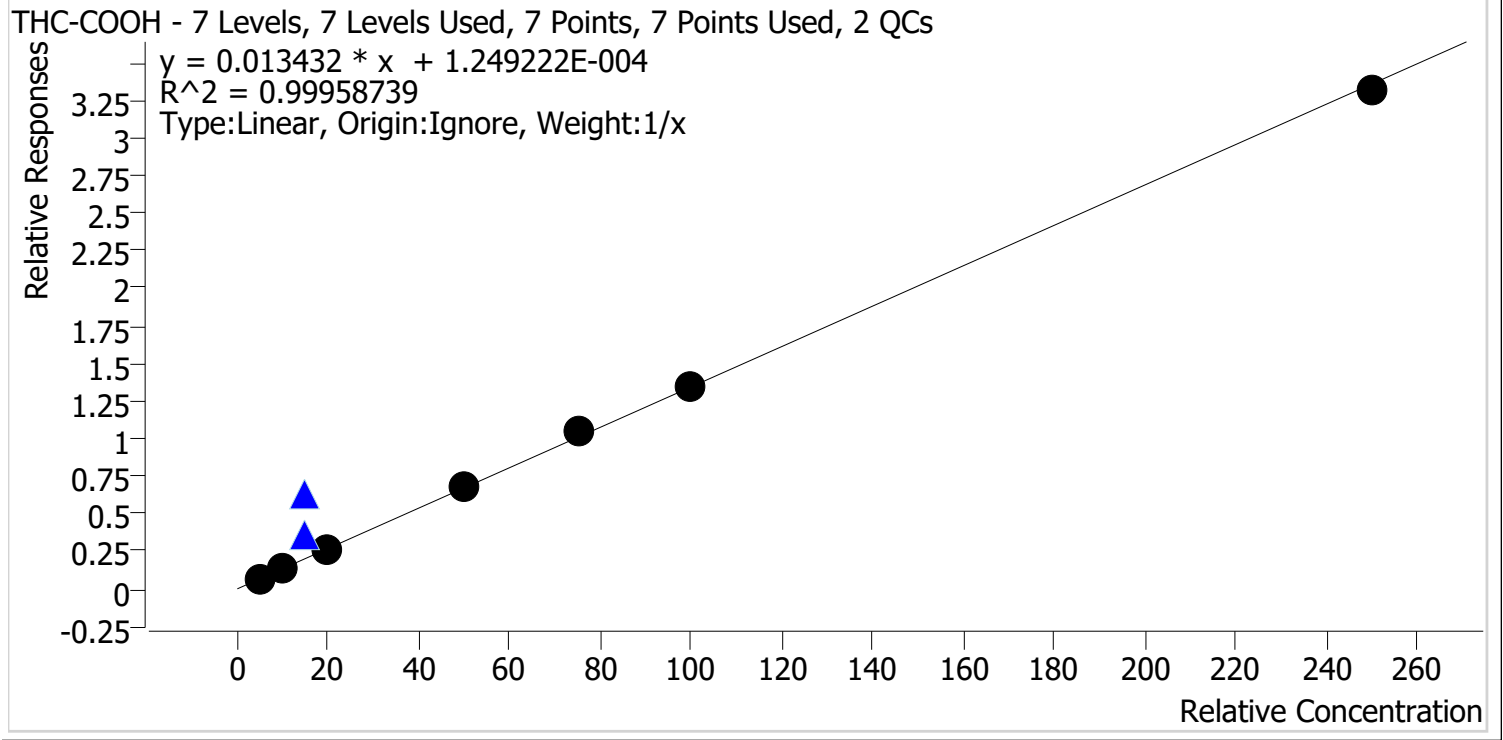


| Sample | Level | Enabled | Expected Concentration | Final Concentration | Accuracy |
|----------|-------|---------|------------------------|---------------------|----------|
| MJ Cal 1 | 1 | ✓ | 1.0 | 1.2 | 116.0 |
| MJ Cal 2 | 2 | ✗ | 3.0 | 5.9 | 195.2 |
| MJ Cal 3 | 3 | ✗ | 5.0 | 10.7 | 214.7 |
| MJ Cal 4 | 4 | ✓ | 10.0 | 8.5 | 85.3 |
| MJ Cal 5 | 5 | ✓ | 25.0 | 24.1 | 96.5 |
| MJ Cal 6 | 6 | ✗ | 50.0 | 121.9 | 243.8 |
| MJ Cal 7 | 7 | ✓ | 100.0 | 102.2 | 102.2 |



AM #26 Cannabinoids Screen Calibration Curve Report

Batch results D:\MassHunter\Data\2022\AM 25-26\011122 AM 25 26 CS\QuantResults\AM 26.batch.bin
Last Cal. Update 1/27/2022 1:04 PM
Analyst Name ISP\datastor
Analyte THC-COOH **Internal Standard** THC-COOH-D9

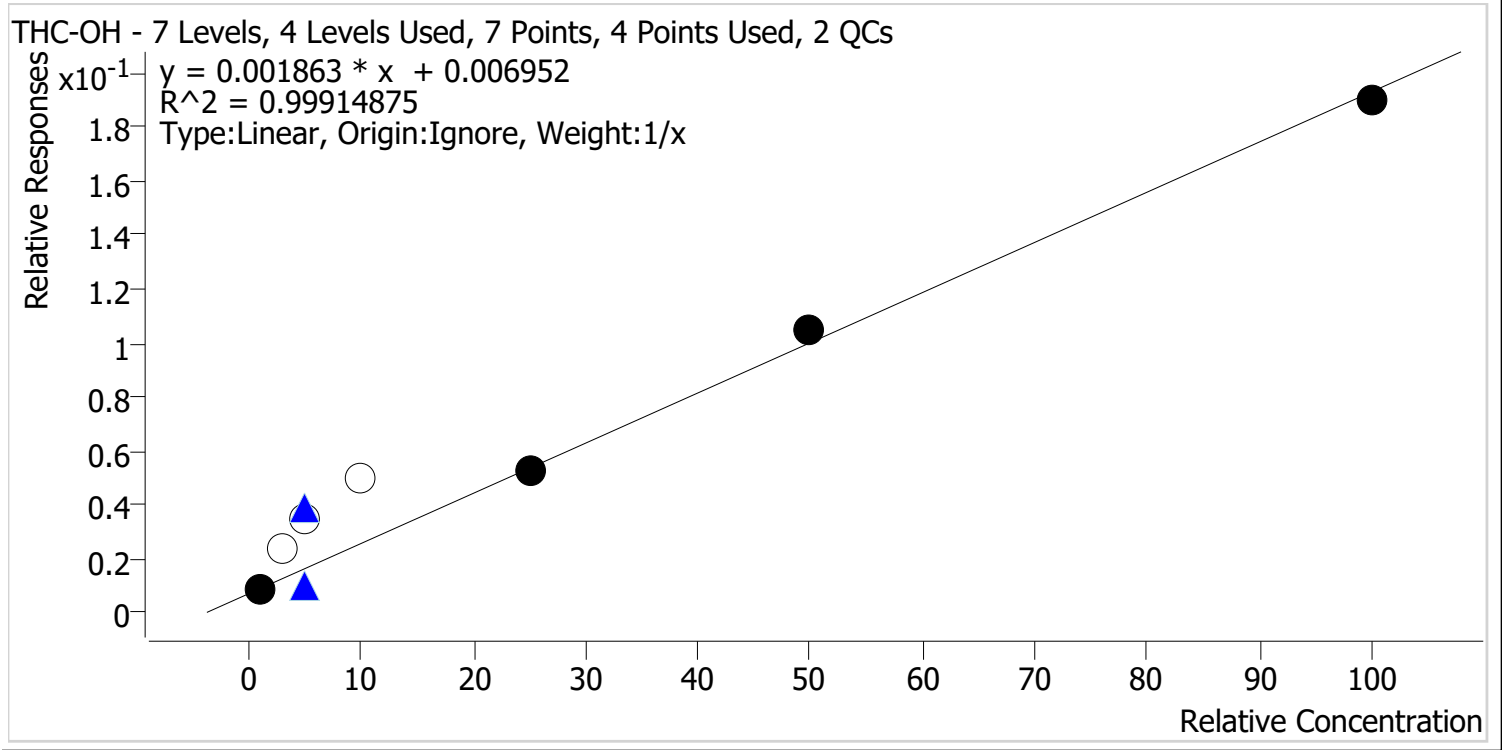


| Sample | Level | Enabled | Expected Concentration | Final Concentration | Accuracy |
|----------|-------|---------|------------------------|---------------------|----------|
| MJ Cal 1 | 1 | ✓ | 5.0 | 5.0 | 100.3 |
| MJ Cal 2 | 2 | ✓ | 10.0 | 9.7 | 97.5 |
| MJ Cal 3 | 3 | ✓ | 20.0 | 19.6 | 97.8 |
| MJ Cal 4 | 4 | ✓ | 50.0 | 51.0 | 102.0 |
| MJ Cal 5 | 5 | ✓ | 75.0 | 77.4 | 103.1 |
| MJ Cal 6 | 6 | ✓ | 100.0 | 100.7 | 100.7 |
| MJ Cal 7 | 7 | ✓ | 250.0 | 246.6 | 98.7 |



AM #26 Cannabinoids Screen Calibration Curve Report

Batch results D:\MassHunter\Data\2022\AM 25-26\011122 AM 25 26 CS\QuantResults\AM 26.batch.bin
Last Cal. Update 1/27/2022 1:04 PM
Analyst Name ISP\datastor
Analyte THC-OH **Internal Standard** THC-OH-D3



| Sample | Level | Enabled | Expected Concentration | Final Concentration | Accuracy |
|----------|-------|---------|------------------------|---------------------|----------|
| MJ Cal 1 | 1 | ✓ | 1.0 | 1.0 | 99.0 |
| MJ Cal 2 | 2 | ✗ | 3.0 | 9.1 | 302.6 |
| MJ Cal 3 | 3 | ✗ | 5.0 | 15.0 | 299.8 |
| MJ Cal 4 | 4 | ✗ | 10.0 | 23.2 | 231.7 |
| MJ Cal 5 | 5 | ✓ | 25.0 | 24.6 | 98.4 |
| MJ Cal 6 | 6 | ✓ | 50.0 | 52.2 | 104.4 |
| MJ Cal 7 | 7 | ✓ | 100.0 | 98.2 | 98.2 |

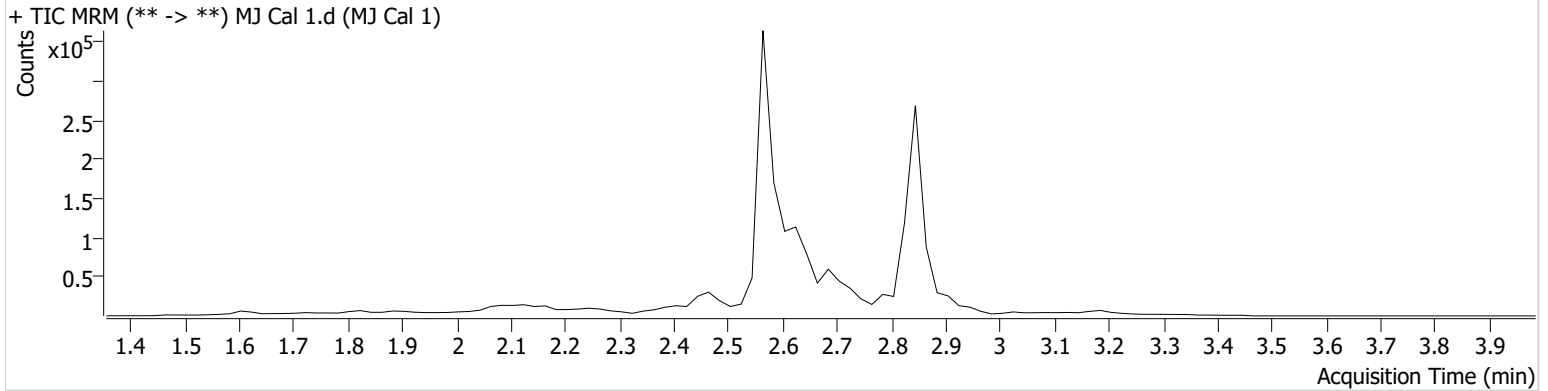
AM #26 Cannabinoids Screen Results



Batch results D:\MassHunter\Data\2022\AM 25-26\011122 AM 25 26 CS\QuantResults\AM 26.batch.bin
Calibration Last Update 1/27/2022 1:04:52 PM

| | | | |
|-------------------------|----------------------|------------------|--------------|
| Instrument | Falco (069901) | Data File | MJ Cal 1.d |
| Type | Cal | Sample | MJ Cal 1 |
| Acq. Method | AM 26 THCS.m | Operator | Celena Shrum |
| Sample Position | P5-A1 | Comment | |
| Injection Volume | 10 | | |
| Acq. Date-Time | 1/11/2022 2:28:39 PM | | |

Sample Chromatogram



| Name | RT | Resp. | ISTD Resp. | Final Conc. | |
|----------|-------|-------|------------|--------------|-----|
| THC | 2.899 | 531 | 27245 | 1.1599 ng/ml | Low |
| THC-COOH | 2.647 | 9340 | 138364 | 5.0165 ng/ml | |
| THC-OH | 2.614 | 5422 | 616428 | 0.9900 ng/ml | Low |

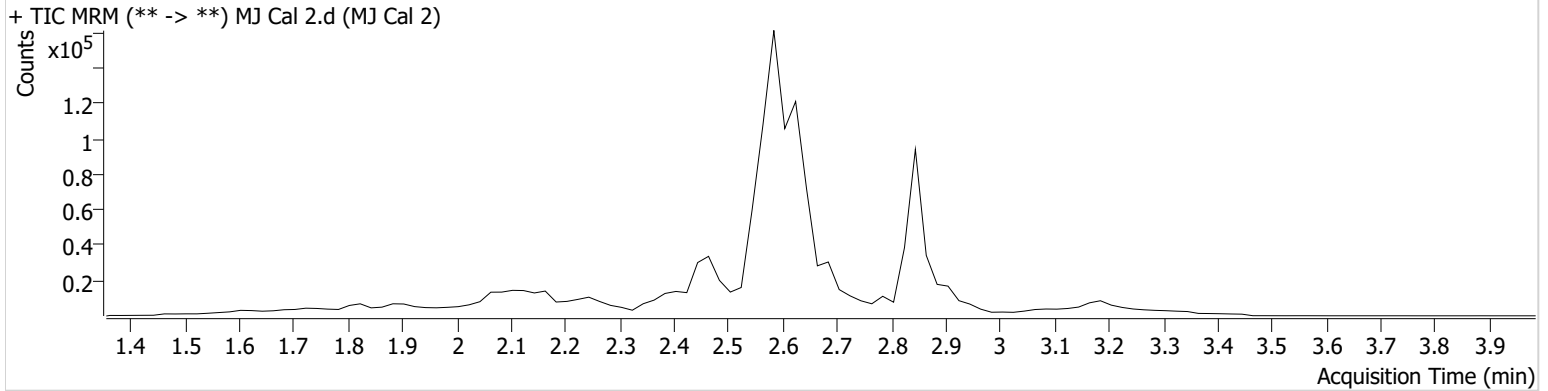


AM #26 Cannabinoids Screen Results

Batch results D:\MassHunter\Data\2022\AM 25-26\011122 AM 25 26 CS\QuantResults\AM 26.batch.bin
Calibration Last Update 1/27/2022 1:04:52 PM

Instrument Falco (069901) **Data File** MJ Cal 2.d
Type Cal **Sample** MJ Cal 2
Acq. Method AM 26 THCS.m **Operator** Celena Shrum
Sample Position P5-B1 **Comment**
Injection Volume 10
Acq. Date-Time 1/11/2022 2:35:23 PM
Sample Info.

Sample Chromatogram



| Name | RT | Resp. | ISTD Resp. | Final Conc. |
|----------|-------|-------|------------|--------------|
| THC | 2.899 | 873 | 16531 | 5.8559 ng/ml |
| THC-COOH | 2.647 | 17182 | 131145 | 9.7450 ng/ml |
| THC-OH | 2.574 | 7067 | 296140 | 9.0788 ng/ml |

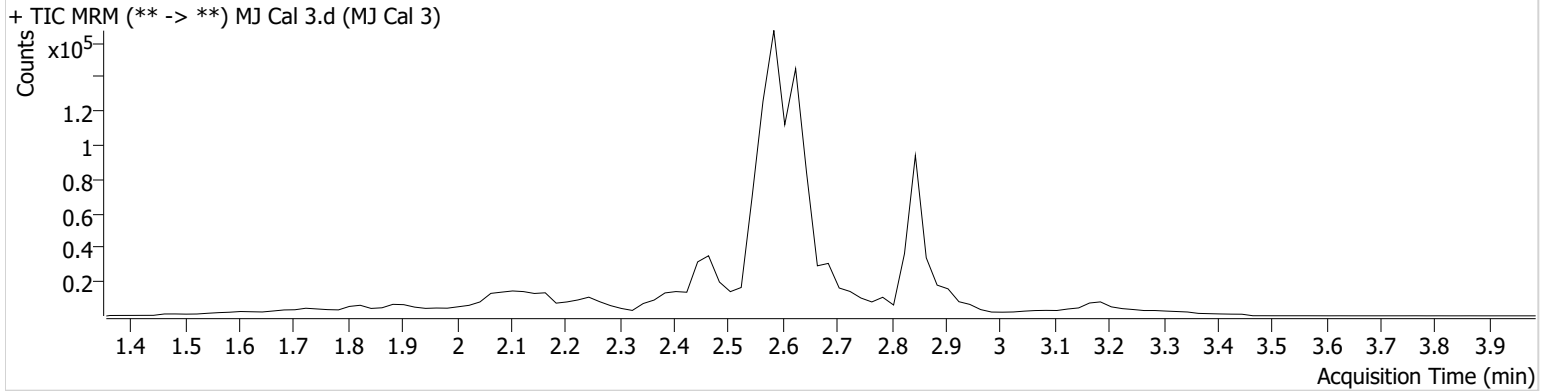
AM #26 Cannabinoids Screen Results



Batch results D:\MassHunter\Data\2022\AM 25-26\011122 AM 25 26 CS\QuantResults\AM 26.batch.bin
Calibration Last Update 1/27/2022 1:04:52 PM

| | | | |
|-------------------------|----------------------|------------------|--------------|
| Instrument | Falco (069901) | Data File | MJ Cal 3.d |
| Type | Cal | Sample | MJ Cal 3 |
| Acq. Method | AM 26 THCS.m | Operator | Celena Shrum |
| Sample Position | P5-C1 | Comment | |
| Injection Volume | 10 | | |
| Acq. Date-Time | 1/11/2022 2:41:57 PM | | |

Sample Chromatogram



| Name | RT | Resp. | ISTD Resp. | Final Conc. |
|----------|-------|-------|------------|---------------|
| THC | 2.899 | 1497 | 17131 | 10.7341 ng/ml |
| THC-COOH | 2.627 | 34983 | 133154 | 19.5509 ng/ml |
| THC-OH | 2.574 | 10658 | 305660 | 14.9883 ng/ml |

AM #26 Cannabinoids Screen Results

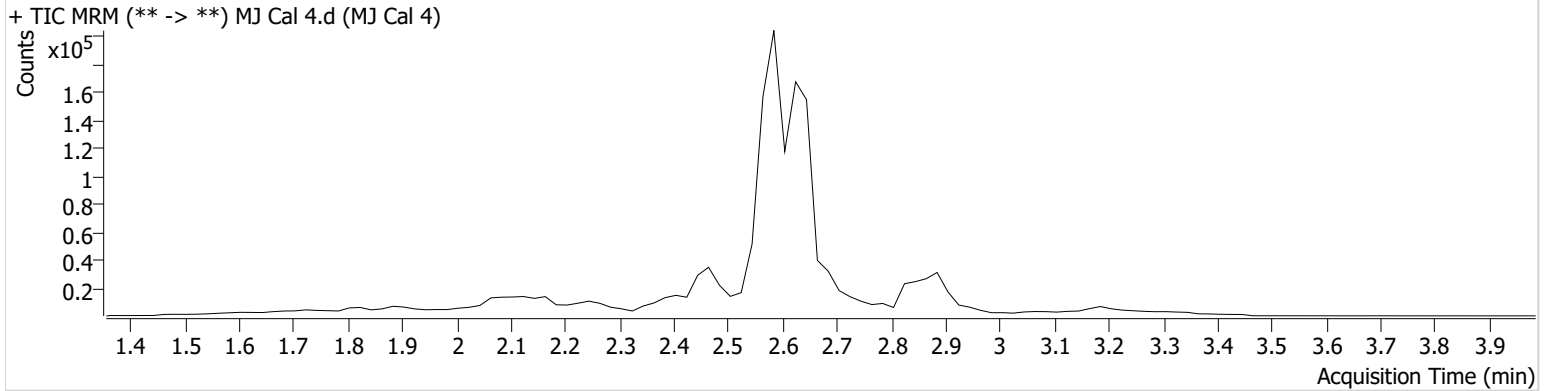


Batch results D:\MassHunter\Data\2022\AM 25-26\011122 AM 25 26 CS\QuantResults\AM 26.batch.bin
Calibration Last Update 1/27/2022 1:04:52 PM

| | | | |
|-------------------------|----------------------|------------------|--------------|
| Instrument | Falco (069901) | Data File | MJ Cal 4.d |
| Type | Cal | Sample | MJ Cal 4 |
| Acq. Method | AM 26 THCS.m | Operator | Celena Shrum |
| Sample Position | P5-D1 | Comment | |
| Injection Volume | 10 | | |
| Acq. Date-Time | 1/11/2022 2:48:30 PM | | |

Sample Info.

Sample Chromatogram



| Name | RT | Resp. | ISTD Resp. | Final Conc. |
|----------|-------|-------|------------|---------------|
| THC | 2.899 | 2462 | 34297 | 8.5334 ng/ml |
| THC-COOH | 2.647 | 87515 | 127783 | 50.9801 ng/ml |
| THC-OH | 2.574 | 16700 | 333210 | 23.1747 ng/ml |

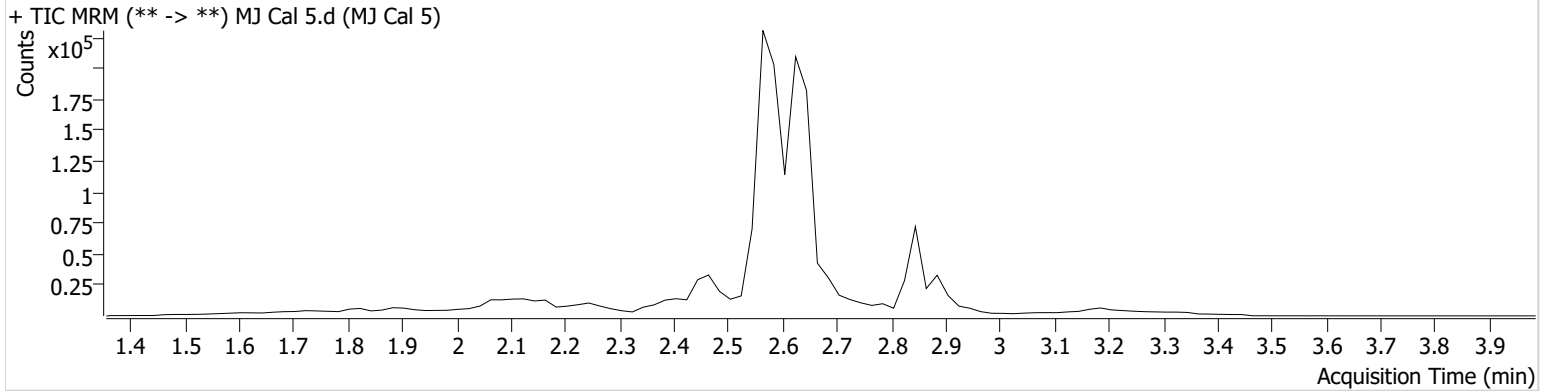
AM #26 Cannabinoids Screen Results



Batch results D:\MassHunter\Data\2022\AM 25-26\011122 AM 25 26 CS\QuantResults\AM 26.batch.bin
Calibration Last Update 1/27/2022 1:04:52 PM

| | | | |
|-------------------------|----------------------|------------------|--------------|
| Instrument | Falco (069901) | Data File | MJ Cal 5.d |
| Type | Cal | Sample | MJ Cal 5 |
| Acq. Method | AM 26 THCS.m | Operator | Celena Shrum |
| Sample Position | P5-E1 | Comment | |
| Injection Volume | 10 | | |
| Acq. Date-Time | 1/11/2022 2:55:05 PM | | |

Sample Chromatogram



| Name | RT | Resp. | ISTD Resp. | Final Conc. |
|----------|-------|--------|------------|---------------|
| THC | 2.899 | 6224 | 34131 | 24.1235 ng/ml |
| THC-COOH | 2.647 | 126686 | 121921 | 77.3511 ng/ml |
| THC-OH | 2.594 | 15849 | 300388 | 24.5932 ng/ml |

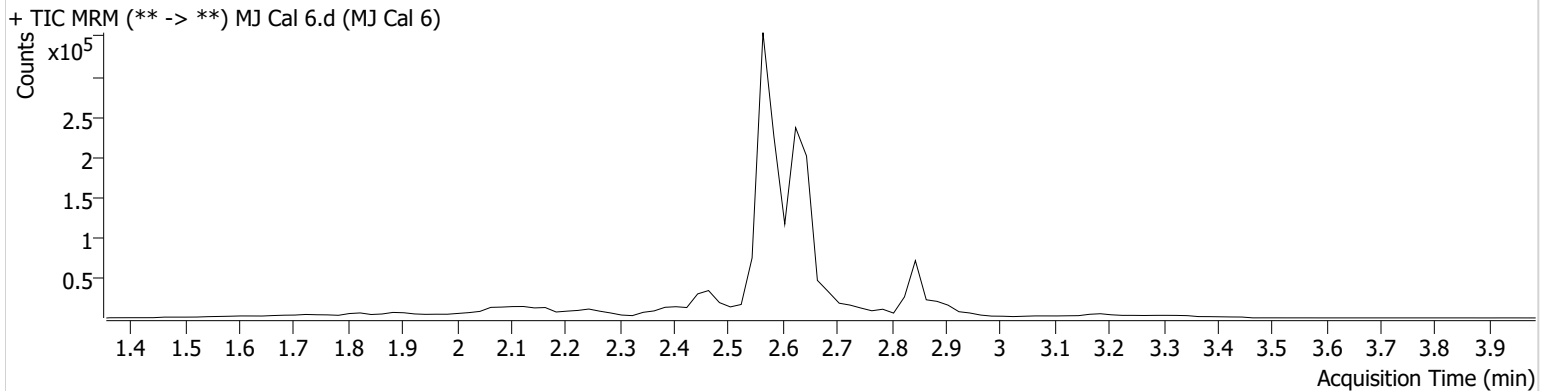
AM #26 Cannabinoids Screen Results



Batch results D:\MassHunter\Data\2022\AM 25-26\011122 AM 25 26 CS\QuantResults\AM 26.batch.bin
Calibration Last Update 1/27/2022 1:04:52 PM

| | | | |
|-------------------------|----------------------|------------------|--------------|
| Instrument | Falco (069901) | Data File | MJ Cal 6.d |
| Type | Cal | Sample | MJ Cal 6 |
| Acq. Method | AM 26 THCS.m | Operator | Celena Shrum |
| Sample Position | P5-F1 | Comment | |
| Injection Volume | 10 | | |
| Acq. Date-Time | 1/11/2022 3:01:38 PM | | |

Sample Chromatogram



| Name | RT | Resp. | ISTD Resp. | Final Conc. |
|----------|-------|--------|------------|----------------|
| THC | 2.899 | 11279 | 12878 | 121.8910 ng/ml |
| THC-COOH | 2.627 | 152486 | 112715 | 100.7107 ng/ml |
| THC-OH | 2.594 | 28050 | 269167 | 52.2152 ng/ml |

CS

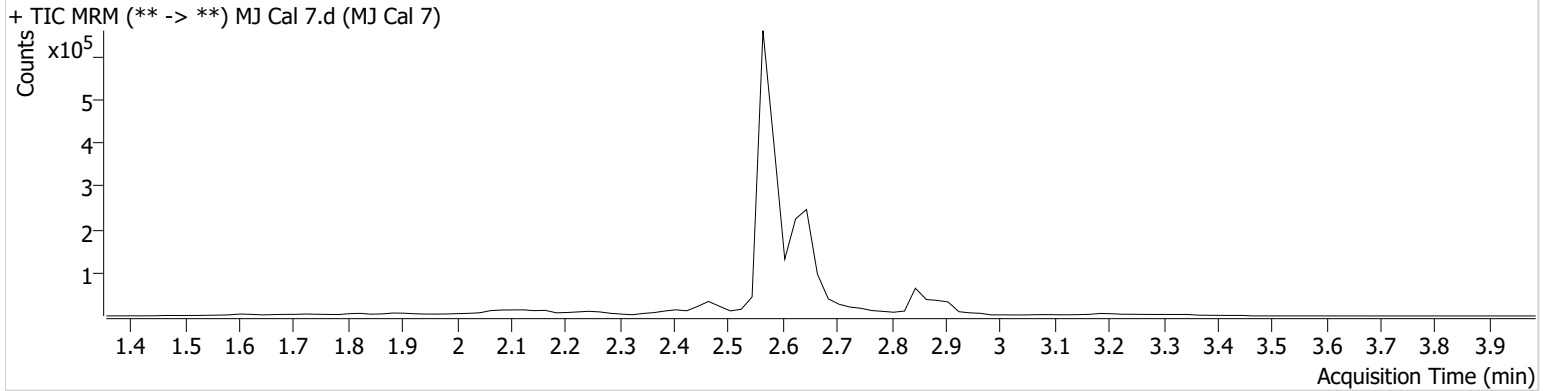


AM #26 Cannabinoids Screen Results

Batch results D:\MassHunter\Data\2022\AM 25-26\011122 AM 25 26 CS\QuantResults\AM 26.batch.bin
Calibration Last Update 1/27/2022 1:04:52 PM

| | | | |
|-------------------------|----------------------|------------------|--------------|
| Instrument | Falco (069901) | Data File | MJ Cal 7.d |
| Type | Cal | Sample | MJ Cal 7 |
| Acq. Method | AM 26 THCS.m | Operator | Celena Shrum |
| Sample Position | P5-G1 | Comment | |
| Injection Volume | 10 | | |
| Acq. Date-Time | 1/11/2022 3:08:12 PM | | |

Sample Chromatogram



| Name | RT | Resp. | ISTD Resp. | Final Conc. |
|----------|-------|--------|------------|----------------|
| THC | 2.919 | 23943 | 32529 | 102.1832 ng/ml |
| THC-COOH | 2.647 | 282245 | 85194 | 246.6455 ng/ml |
| THC-OH | 2.574 | 100396 | 528764 | 98.2016 ng/ml |