REVIEWED
By Celena Shrum at 3:01 pm, Oct 01, 2019

REVIEWED
By Sarah Pickle at 9:44 am, Oct 15, 2019

9/23/2019

**Worklist: 3713**

| LAB_CASE | ITEM | TASK_ID | DESCRIPTION |
|---|---|---|---|
| C2019-1741 | 1 | 162563 | AM 25/AM 26 Blood MultiDrug/THC Screen by L( |
| C2019-1744 | 1 | 162609 | AM 25/AM 26 Blood MultiDrug/THC Screen by L( |
| C2019-1754 | 1 | 162703 | AM 25/AM 26 Blood MultiDrug/THC Screen by L( |
| C2019-1771 | 1 | 163082 | AM 25/AM 26 Blood MultiDrug/THC Screen by L( |
| C2019-1772 | 1 | 163098 | AM 25/AM 26 Blood MultiDrug/THC Screen by L( |
| C2019-1777 | 1 | 163160 | AM 25/AM 26 Blood MultiDrug/THC Screen by L( |
| C2019-1786 | 1 | 163320 | AM 25/AM 26 Blood MultiDrug/THC Screen by L( |
| C2019-1788 | 1 | 164832 | AM 25/AM 26 Blood MultiDrug/THC Screen by L( |
| C2019-1790 | 1 | 163406 | AM 25/AM 26 Blood MultiDrug/THC Screen by L( |
| C2019-1792 | 4 | 163412 | AM 25/AM 26 Blood MultiDrug/THC Screen by L( |
| C2019-1799 | 1 | 163991 | AM 25/AM 26 Blood MultiDrug/THC Screen by L( |
| C2019-1828 | 1 | 164938 | AM 25/AM 26 Blood MultiDrug/THC Screen by L( |
| C2019-1829 | 1 | 164784 | AM 25/AM 26 Blood MultiDrug/THC Screen by L( |
| C2019-1830 | 1 | 164786 | AM 25/AM 26 Blood MultiDrug/THC Screen by L( |

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

Extraction Date: 9/23/19 Analyst: Anne Nord
Plate lot#: 0543908 Plate Expiration: November 28 2019

**Mobile phase A**: 10mM Amm Form 0.5M Ammonium Hydroxide **Mobile phase B:** 0.1% Formic Acid in MeOH Ethyl Acetate LC Methanol
**Blank Blood Lot**: 445283-2 **Blank Urine lot:** 8919 **Column**: Phenomenex Phenyl Hexyl (4.6x50mm, 2.6um)
**LCMS-QQQ ID**: 69679

## 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. Urine hydrolysis pipette: 250 ul urine in blank well, add 40 ul BG Turbo, add 100 ul 500 mm sodium phosphate buffer mix for at least five minutes ambient temperature.
Pipette **250 µL blood (calibrated pipette)** or 250 ul urine in wells of analytical (standards) plate. **Pipette ID: 1926134**
☒ 3. Place on shaking incubator at ambient temp., 900 rpm for 15 minutes. *Shaker ID: 66759*
☒ 4. Pipette **250 µL of 0.5 M ammonium hydroxide** in wells of analytical plate.
☒ 5. Place on shaking incubator at ambient temp., 900 rpm for 15 minutes.
☒ 6. Transfer **300 µL of blood or urine+base** 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: 66792*
☒ 8. Wait 5 minutes.
☒ 9. Add **900 µL ethyl acetate.**
☒ 10. Wait 5 minutes.
☒ 11. Apply positive pressure for approx. 10-15 seconds. ***(12-15 PSI- Selector to the left).***
☒ 12. Add **900 µL ethyl acetate.**
☒ 13. Wait 5 minutes.
☒ 14. Apply positive pressure for approx. 10-15 seconds. ***(12-15 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: 66819*
☒ 16. Reconstitute in **100 µL 100% 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 5 or greater or 2-5 for discretionary range.
☒ 4. Did all QCs pass for each analyte? Y / N _____
☒ 5. Central File Packet to include: LIMS Worklist, Method Checklist, Calibration and Control Reports

COMMENTS: *Zopiclone not evaluated in urine samples poor internal standard recovery.*

Toxicology AM method 25 and 28 external prep information
working solution 10000 ng/ml in meoh amphetamine, dextromethorphan, methamphetamine, morphine, paroxetine, amitriptyline meperidine, doxepine, mirtazpine, 1000 ng/ml buprenorphine
Stock solution 1mg/ml (.1mg/ml buprenorphine ) 100 ul each in 9000 ul meOH
Ppd 3/14/19 Exp: 3/14/20 lot 31420 by AMN

| Drug | lot | expiration | |
|---|---|---|---|
| amphetamine | FE06011503 | 6/1/2020 | |
| dextromethorphan | FN07231501 | 7/1/2020 | |
| methamphetamine | FE08101708 | 10/1/2022 | |
| morphine | FE08141515 | 11/1/2020 | |
| buprenorphine | FE09211501 | 9/1/2020 | |
| paroxetine | FN05111505 | 6/1/2020 | |
| mirtazapine | FN04201503 | 4/1/2020 | |
| meperidine | FE01191502 | 2/1/2020 | (this compound will not be evaluated in this control after 2/1/2020) |
| doxepin | FN01281502 | 2/1/2020 | (this compound will not be evaluated in this control after 2/1/2020) |
| amitriptyline | FN07081401 | 9/1/2019 | (this compound will not be evaluated in this control after 9/1/2019) |

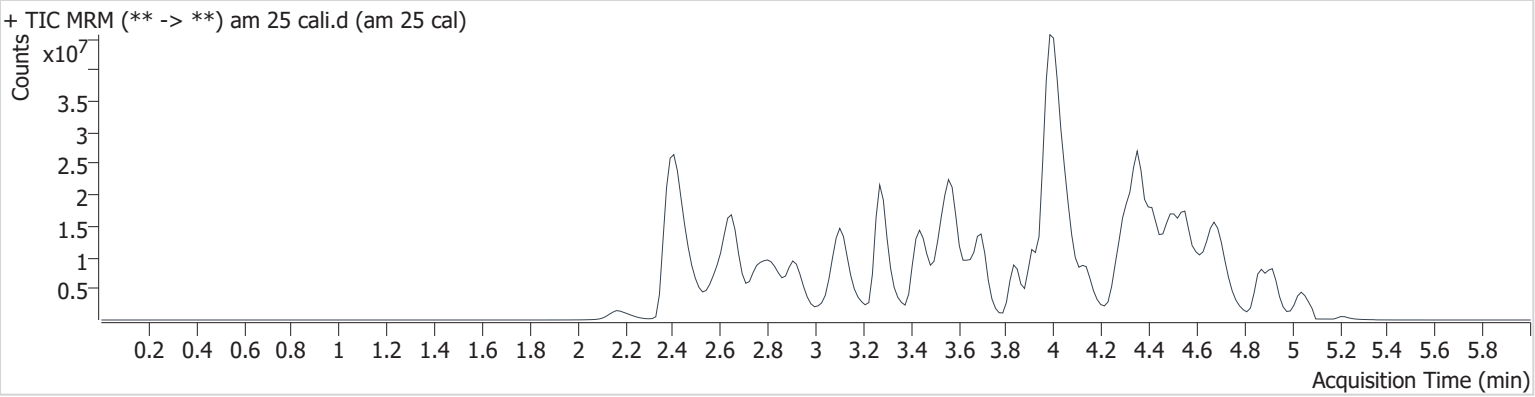
AM 25-28 urine control 100 ul working solution lot (31420) in 5000 ul urine lot (31319)
ppd 9/5/19 Exp 3/14/2020 by AMN Concentration 196 ng/ml each (19.6 ng/ml buprenorphine) Lot 9519

# AM #25 Multi-Drug Screen Results

**Batch results** D:\MassHunter\Data\2019\am 25-26\092319\QuantResults\mds.batch.bin
**Calibration Last Update** 9/23/2019 4:06:19 PM

| | | | |
|---|---|---|---|
| **Instrument** | 69679 | **Data File** | am 25 cali.d |
| **Type** | Cal | **Sample** | am 25 cal |
| **Acq. Method** | am 25 short.m | **Operator** | Anne Nord |
| **Sample Position** | P2-A1 | **Comment** | |
| **Injection Volume** | 2.5 | | |
| **Acq. Date-Time** | 9/23/2019 12:08:50 PM | | |
| **Sample Info.** | | | |

**Sample Chromatogram**




| Name | RT | Resp. | S/N | S/N | ISTD Resp. | Calc. Conc. |
|---|---|---|---|---|---|---|
| 6-MAM | 3.009 | 66046 | 11444 | 255.15 | 1573686 | 10.000 |
| 7-aminoclonazepam | 3.289 | 511853 | 315.54 | 447.01 | 2011065 | 10.000 |
| 7-aminoflunitrazepam | 3.532 | 1831807 | 2463.8 | 302.83 | 10281920 | 10.000 |
| Acetyl Fentanyl | 4.291 | 495937 | 233.87 | 4128.4 | 30039847 | 10.000 |
| Acetyl Norfentanyl | 2.624 | 311444 | 497.75 | 215.17 | 15764033 | 10.000 |
| a-hydroxyalprazolam | 4.306 | 145375 | 78.087 | 58.968 | 712860 | 10.000 |
| alpha-hydroxymidazolam | 4.412 | 1685943 | 1569.8 | 1279.3 | 12217828 | 10.000 |
| alpha-PVP | 3.660 | 4463084 | 1378.5 | 337.84 | 17147222 | 10.000 |
| Alprazolam | 4.416 | 1431294 | 133.38 | 364.37 | 4702839 | 10.000 |
| Amitriptyline | 4.652 | 1806364 | 732.32 | 456.87 | 8094220 | 10.000 |
| Amphetamine | 2.659 | 3851003 | 494.7 | 616.6 | 9649026 | 10.000 |
| Benzoylecgonine | 3.059 | 799209 | 980.76 | 653.16 | 3811978 | 10.000 |
| Buprenorphine | 5.235 | 279824 | 355.24 | 836.43 | 1404925 | 10.000 |
| Bupropion | 3.980 | 2449333 | 1476.3 | 776.96 | 15607931 | 10.000 |
| Carbamazepine | 4.011 | 4496212 | ∞ | 1669.8 | 22098850 | 10.000 |
| Carisoprodol | 3.991 | 705281 | 514.76 | 107.67 | 3334723 | 10.000 |
| Chlordiazepoxide | 4.557 | 563165 | 120.91 | 520.96 | 11696198 | 10.000 |
| Chlorpheniramine | 3.960 | 16300 | ∞ | 5.2832E+16 | 46241151 | 10.000 |
| Citalopram | 4.090 | 3464490 | 399.55 | 581.36 | 15492483 | 10.000 |
| Clonazepam | 4.261 | 465767 | 360.26 | 85099 | 693940 | 10.000 |
| Cocaine | 3.604 | 5593123 | 3490 | 39672 | 26672909 | 10.000 |
| Codeine | 2.936 | 497021 | 566.32 | 611.18 | 2441142 | 10.000 |
| Cyclobenzaprine | 4.529 | 4011350 | 1592.6 | 196.74 | 14509215 | 10.000 |
| Desipramine | 4.438 | 5736018 | 646.25 | 529.6 | 29054918 | 10.000 |
| Dextromethorphan | 4.160 | 2782385 | ∞ | 400.46 | 12861844 | 10.000 |
| Dextrorphan | 3.306 | 2457836 | 874.89 | 278.53 | 12647353 | 10.000 |
| Diazepam | 4.681 | 893472 | 1040.2 | 882.44 | 3827316 | 10.000 |
| Dihydrocodeine | 2.693 | 1251042 | 579.83 | 261.28 | 6534221 | 10.000 |
| Diphenhydramine | 4.054 | 10369304 | 1087.6 | 1090 | 46241151 | 10.000 |
| Doxepin | 4.327 | 2257871 | 116.77 | 4.6249 **Low** | 12038218 | 10.000 |
| Doxylamine | 3.563 | 10974994 | 916.31 | 4591.2 | 41314117 | 10.000 |
| EDDP | 3.989 | 5607853 | 2156.6 | 4501.1 | 31054079 | 10.000 |
| Estazolam | 4.326 | 2646354 | 1308.9 | 3192.9 | 6811655 | 10.000 |

# AM #25 Multi-Drug Screen Results

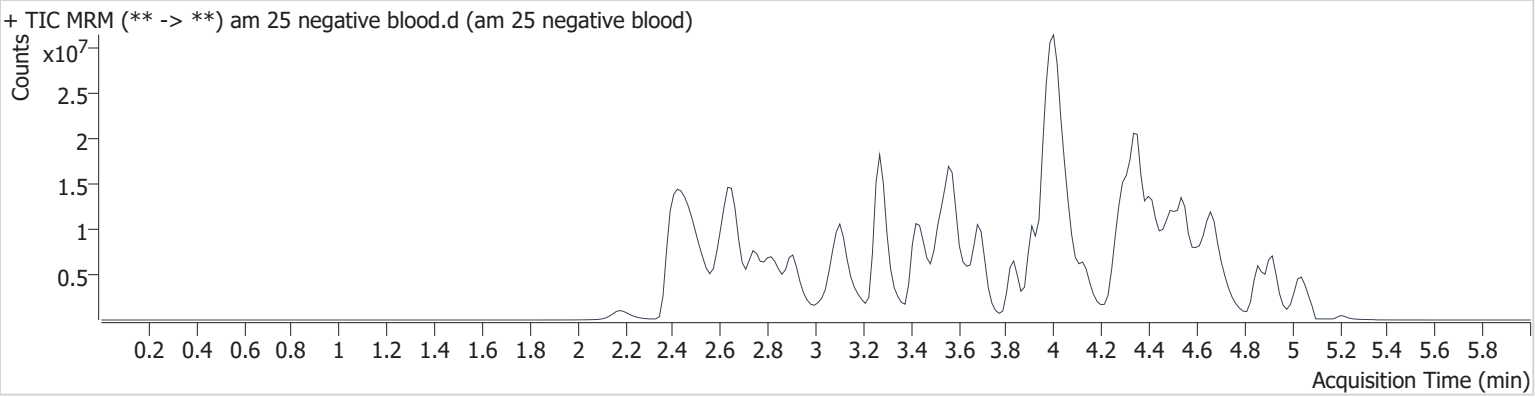
| Name | RT | Resp. | S/N | S/N | ISTD Resp. | Calc. Conc. |
|---|---|---|---|---|---|---|
| Etizolam | 4.443 | 166820 | 5463.1 | 2.5045E+05 | 6811655 | 10.000 |
| Fentanyl | 4.520 | 390647 | 122.18 | 2281.7 | 19277234 | 10.000 |
| Flunitrazepam | 4.385 | 1381090 | 2571 | 6978.1 | 254807 | 10.000 |
| Fluoxetine | 4.309 | 4087839 | 972.6 | 215.63 | 17248866 | 10.000 |
| Flurazepam | 4.519 | 3573271 | 1.3295E+06 | 2.8028E+05 | 254807 | 10.000 |
| Hydrocodone | 3.225 | 1325285 | 402.23 | 238.81 | 8271035 | 10.000 |
| Hydromorphone | 2.471 | 1168552 | 303.71 | 477.14 | 1834982 | 10.000 |
| Imipramine | 4.574 | 6893853 | 907.67 | 1111 | 24540569 | 10.000 |
| Ketamine | 3.949 | 2706347 | 1899.8 | 372.47 | 15566993 | 10.000 |
| Lamotrigine | 3.398 | 302452 | 1247 | 1973.5 | 13524683 | 10.000 |
| Levamisole | 3.096 | 3418256 | 265.96 | 218.18 | 26672909 | 10.000 |
| Lorazepam | 4.229 | 65005 | 1990.1 | 5821.7 | 4702839 | 10.000 |
| Maprotiline | 4.452 | 490254 | 132.46 | 235.57 | 8094220 | 10.000 |
| MDA | 2.838 | 2807261 | 423.73 | 648.26 | 12584242 | 10.000 |
| MDEA | 3.096 | 5101732 | 1057.5 | 980.7 | 22445404 | 10.000 |
| MDMA | 2.945 | 5795866 | 2391.4 | 1935.1 | 3173788 | 10.000 |
| Meperidine | 3.657 | 3005365 | 518.74 | 748.49 | 13524683 | 10.000 |
| Meprobamate | 3.386 | 526613 | 666.38 | 200.25 | 2325373 | 10.000 |
| Methadone | 4.370 | 6874260 | 1723.9 | 1195.6 | 30317175 | 10.000 |
| Methamphetamine | 2.795 | 5921904 | 46.934 | 142.13 | 23752300 | 10.000 |
| Methocarbamol | 3.277 | 200778 | 64.543 | 455.65 | 13524683 | 10.000 |
| Methylphenidate | 3.445 | 9691048 | 3192.4 | 6783.9 | 39273134 | 10.000 |
| Metoprolol | 3.275 | 626991 | 714.5 | 350.02 | 13524683 | 10.000 |
| Midazolam | 4.613 | 738744 | 2459.4 | 1020.8 | 9542897 | 10.000 |
| Mirtazapine | 4.500 | 3154949 | 1675 | 1771.4 | 13524683 | 10.000 |
| Mitragynine | 4.548 | 510640 | 781.44 | 2.9766E+05 | 12038218 | 10.000 |
| Morphine | 2.230 | 403153 | ∞ | 259.19 | 297779 | 10.000 |
| Norbuprenorphine | 3.876 | 81951 | 40.27 | 29.526 | 411024 | 10.000 |
| Nordiazepam | 4.515 | 432601 | 352.69 | 177.25 | 1330246 | 10.000 |
| Norfentanyl | 3.140 | 5674798 | 1156.9 | 810.48 | 23859692 | 10.000 |
| Norhydrocodone | 2.803 | 66410 | 36.626 | 21.364 | 1787905 | 10.000 |
| Normeperidine | 3.476 | 3099465 | 1014.1 | 550.23 | 11451795 | 10.000 |
| Noroxycodone | 2.709 | 1293917 | ∞ | 38.867 | 4228907 | 10.000 |
| Nortriptyline | 4.485 | 2363656 | 644.06 | 250.8 | 5529973 | 10.000 |
| O-desmethyl-tramadol | 2.669 | 7853450 | 3512.5 | 611.01 | 36980874 | 10.000 |
| Olanzapine | 4.170 | 247759 | 387.93 | 61.729 | 149630 | 10.000 |
| Oxazepam | 4.311 | 271497 | 152.53 | 13.538 | 1360245 | 10.000 |
| Oxycodone | 2.888 | 2655370 | 677.96 | 860.3 | 11686666 | 10.000 |
| Oxymorphone | 2.178 | 1649574 | 392.81 | 113.2 | 5474059 | 10.000 |
| Paroxetine | 4.490 | 460138 | 109.27 | 118.46 | 9959151 | 10.000 |
| Phenazepam | 4.458 | 573274 | 929.57 | 216.41 | 2094592 | 10.000 |
| Phencyclidine | 3.856 | 4941455 | 1353.2 | 1256.2 | 23313740 | 10.000 |
| Phentermine | 2.932 | 1708764 | 6.2366 | 60.116 | 16923582 | 10.000 |
| Phenytoin | 3.901 | 25229 | 120.76 | 83.87 | 149630 | 10.000 |
| Promethazine | 4.697 | 8619316 | 6533.5 | 1138.7 | 36311645 | 10.000 |
| Pseudoephedrine | 2.414 | 49870840 | 32986 | 717.38 | 123869186 | 10.000 |
| Quetiapine | 4.703 | 5032162 | 1443 | 2727.3 | 6639924 | 10.000 |
| Sertraline | 4.725 | 2281974 | 318.22 | 285.39 | 9959151 | 10.000 |
| Sufentanil | 4.933 | 383826 | 2776.1 | 210.47 | 20811672 | 10.000 |
| Tapentadol | 3.278 | 4003811 | 4301.1 | 373.87 | 19755576 | 10.000 |
| Temazepam | 4.479 | 1318138 | 674.52 | 37.162 | 5898233 | 10.000 |
| Tramadol | 3.290 | 6960389 | 5297.2 | 125.99 | 34629563 | 10.000 |
| Trazodone | 4.873 | 5069336 | 15482 | 987.77 | 19782385 | 10.000 |
| Venlafaxine | 3.714 | 7143215 | 14117 | 569.82 | 32837697 | 10.000 |
| Zaleplon | 4.141 | 1565217 | 916.06 | 1194.8 | 4472279 | 10.000 |
| Zolpidem | 4.355 | 8087777 | 1467.7 | 929.86 | 33345767 | 10.000 |
| Zopiclone | 4.365 | 96155 | 141.76 | 48.109 | 492473 | 10.000 |

# AM #25 Multi-Drug Screen Results

**Batch results** D:\MassHunter\Data\2019\am 25-26\092319\QuantResults\mds.batch.bin
**Calibration Last Update** 9/23/2019 4:06:19 PM

| | | | |
|---|---|---|---|
| **Instrument** | 69679 | **Data File** | am 25 negative blood.d |
| **Type** | Sample | **Sample** | am 25 negative blood |
| **Acq. Method** | am 25 short.m | **Operator** | Anne Nord |
| **Sample Position** | P2-C1 | **Comment** | negative blood |
| **Injection Volume** | 2.5 | | |
| **Acq. Date-Time** | 9/23/2019 12:16:00 PM | | |
| **Sample Info.** | | | |

**Sample Chromatogram**

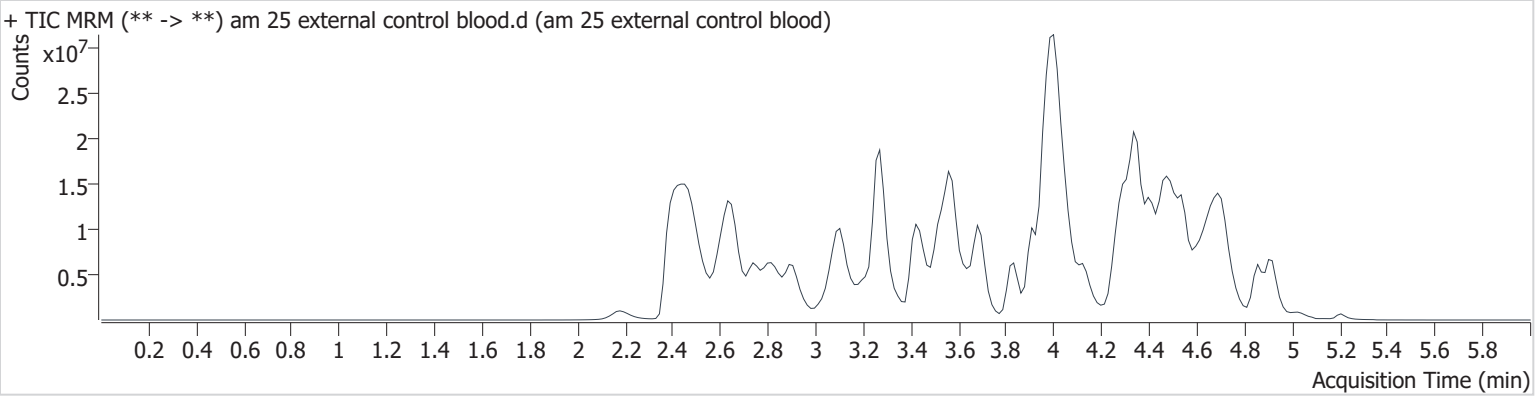


# AM #25 Multi-Drug Screen Results

**Batch results** D:\MassHunter\Data\2019\am 25-26\092319\QuantResults\mds.batch.bin
**Calibration Last Update** 9/23/2019 4:06:19 PM

| | | | |
|---|---|---|---|
| **Instrument** | 69679 | **Data File** | am 25 external control blood.d |
| **Type** | Sample | **Sample** | am 25 external control blood |
| **Acq. Method** | am 25 short.m | **Operator** | Anne Nord |
| **Sample Position** | P2-D1 | **Comment** | blood external control |
| **Injection Volume** | 2.5 | | |
| **Acq. Date-Time** | 9/23/2019 12:23:08 PM | | |
| **Sample Info.** | | | |

**Sample Chromatogram**



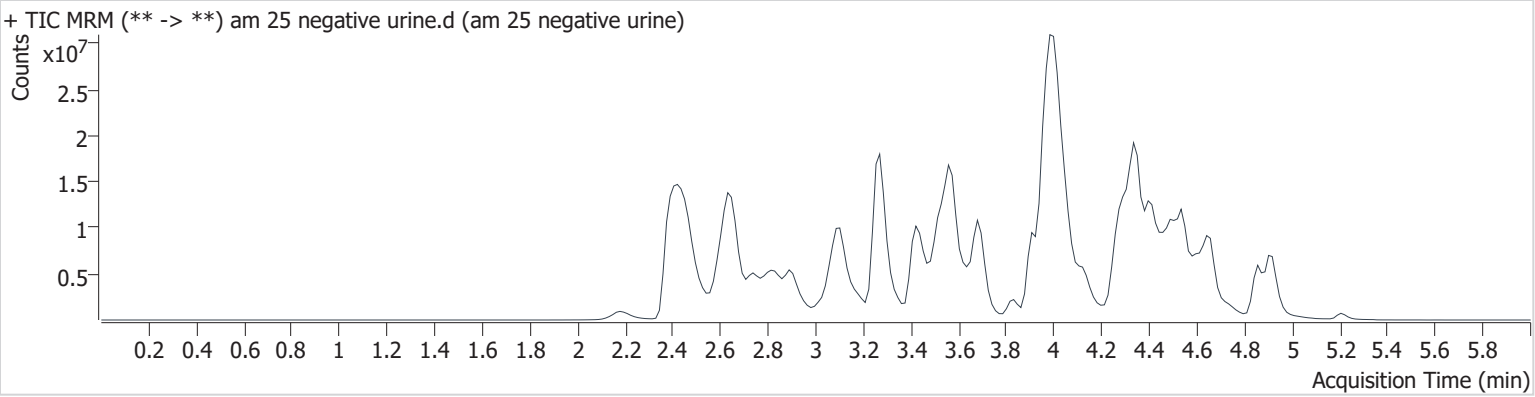

| Name | RT | Resp. | S/N | S/N | ISTD Resp. | Calc. Conc. |
|---|---|---|---|---|---|---|
| Hydrocodone | 3.225 | 11870571 | 709.91 | 552.87 | 8011711 | 92.469 |
| Hydromorphone | 2.486 | 8841635 | 2832.1 | 482.3 | 2961637 | 46.880 |
| Nortriptyline | 4.469 | 17661144 | 1797.6 | 3347.6 | 5295309 | 78.031 |
| Sertraline | 4.710 | 17852802 | 3698.6 | 893.93 | 10258224 | 75.953 |

# AM #25 Multi-Drug Screen Results

**Batch results** D:\MassHunter\Data\2019\am 25-26\092319\QuantResults\mds.batch.bin
**Calibration Last Update** 9/23/2019 4:06:19 PM

| | | | |
|---|---|---|---|
| **Instrument** | 69679 | **Data File** | am 25 negative urine.d |
| **Type** | Sample | **Sample** | am 25 negative urine |
| **Acq. Method** | am 25 short.m | **Operator** | Anne Nord |
| **Sample Position** | P2-A3 | **Comment** | |
| **Injection Volume** | 2.5 | | |
| **Acq. Date-Time** | 9/23/2019 1:55:54 PM | | |
| **Sample Info.** | | | |

**Sample Chromatogram**

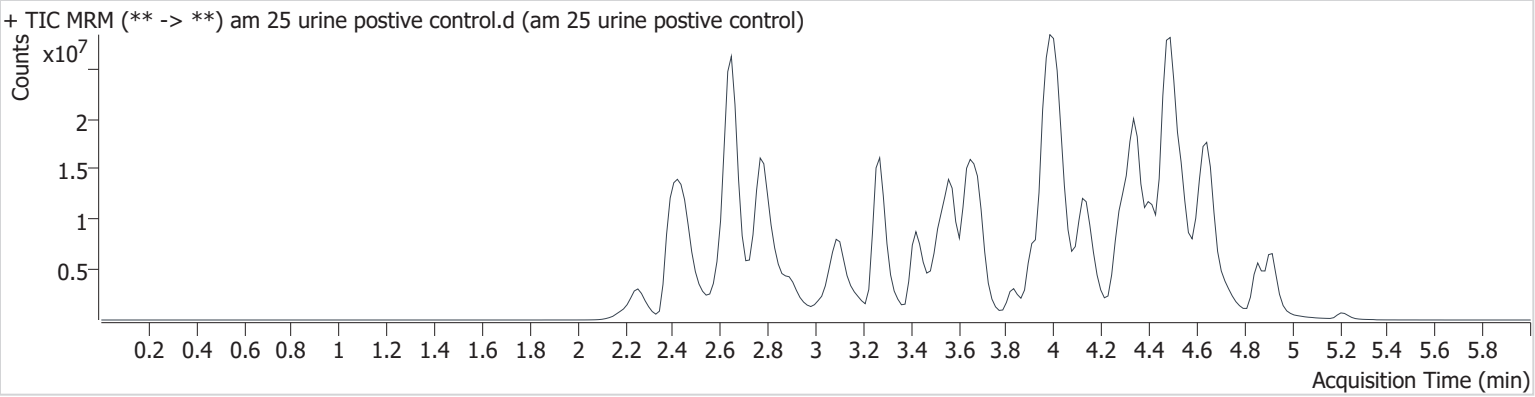


# AM #25 Multi-Drug Screen Results

**Batch results** D:\MassHunter\Data\2019\am 25-26\092319\QuantResults\mds.batch.bin
**Calibration Last Update** 9/23/2019 4:06:19 PM

| | | | |
|---|---|---|---|
| **Instrument** | 69679 | **Data File** | am 25 urine postive control.d |
| **Type** | Sample | **Sample** | am 25 urine postive control |
| **Acq. Method** | am 25 short.m | **Operator** | Anne Nord |
| **Sample Position** | P2-B3 | **Comment** | |
| **Injection Volume** | 2.5 | | |
| **Acq. Date-Time** | 9/23/2019 2:03:03 PM | | |
| **Sample Info.** | | | |

**Sample Chromatogram**




| Name | RT | Resp. | S/N | S/N | ISTD Resp. | Calc. Conc. |
|---|---|---|---|---|---|---|
| Amitriptyline | 4.637 | 14091825 | 481.35 | 5387.4 | 4939939 | 127.825 |
| Amphetamine | 2.659 | 21489717 | 10518 | 22676 | 4164776 | 129.285 |
| Buprenorphine | 5.235 | 435692 | 461.52 | 1.1527E+05 | 1805209 | 12.118 |
| Desipramine | 4.484 | 2277022 | 381.18 | | 24619309 | 4.685< 5 |
| Dextromethorphan | 4.145 | 24299651 | ∞ | 6419.3 | 8326543 | 134.903 |
| Doxepin | 4.327 | 17563722 | 408.55 | 560.81 | 7489199 | 125.039 |
| Meperidine | 3.657 | 27780137 | 1225.1 | 1760.5 | 9025172 | 138.519 |
| Methamphetamine | 2.780 | 28851969 | 527.52 | 419.65 | 7984487 | 144.935 |
| Mirtazapine | 4.484 | 29682541 | 1557.4 | 2829.8 | 9025172 | 140.987 |
| Morphine | 2.261 | 4501995 | 25990 | 3635.1 | 289585 | 114.830 |
| Paroxetine | 4.459 | 4341433 | 293.33 | 324.77 | 3927218 | 239.267 |

Mirtazapine in known to give a positive response for desipramine.

# AM# 26: THC and Metabolites Screen in Blood by LC-MS/MS

Extraction Date: 9/23/19 Analyst: Anne Nord

Plate lot#: 190716 Plate Expiration: 01/16/2020

**Mobile phase A**: 10mM Ammonium Formate 0.1% Formic Acid in Water
**Mobile phase B:** 0.1% Formic acid in MeOH MTBE Hexane
**Blank Blood Lot**: 445283-2 **Urine Blank:** 8919
**Column**: Phenomenex Phenyl Hexyl (4.6x50mm: 2.6 um)
**LCMS-QQQ ID**: 69679

## 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. Urine hydrolysis: add 1.5 ml urine to blank plate, add 250 ul 1N KOH mix and incubate at 40 degrees for 15 minutes.
Pipette **1000 µL blood (calibrated pipette)** in wells of analytical (standards) plate. **Pipette ID: K52558g**
Pipette 1000 ul urine to analytical (standards) plate.
☒ 3. Place on shaking incubator at ambient temp., 900 rpm for 15 minutes. *Shaker ID: 66759*
☒ 4. Pipette **500 µL 0.1% formic acid in blood** wells **500 ul saturated phosphate buffer in urine** wells of analytical plate.
☒ 5. Place on shaking incubator at ambient temp., 900 rpm for 15 minutes.
☒ 6. Transfer 8**00 µL of blood acid or urine 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: 66792
☒ 8. Wait 5 minutes.
☒ 9. Add **2.25 mL MTBE** (add in 3 increments of 750 µL).
☒ 10. Wait 5 minutes.
☒ 11. Apply positive pressure for approx. 10-15 seconds. ***(12-15 PSI- Selector to the left).***
☒ 12. Add **2.25 mL hexane** (add in 3 increments of 750 µL).
☒ 13. Wait 5 minutes.
☒ 14. Apply positive pressure for approx. 10-15 seconds. ***(12-15 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: 66819*
☒ 16. Reconstitute in **100 µL 100% LCMS MeOH** and heat seal plate with foil. Place in autosampler and run worklist.

## Post-Analytic

☒ 1. Create batch and process data.
☒ 2. Calculated sample concentration of 3 ng/mL or greater for THC and THC-OH, a calculated sample concentration of 10 ng/mL or greater for Carboxy-THC.
☒ 3. Retention time within +/- 2% or +/-0.100 min whichever is greater of the average retention time of the calibrators.
☒ 4. Did all QCs pass for each analyte? Y / N
☒ 5. Central File Packet to include: LIMS Worklist, Method Checklist, Calibration and Control Reports

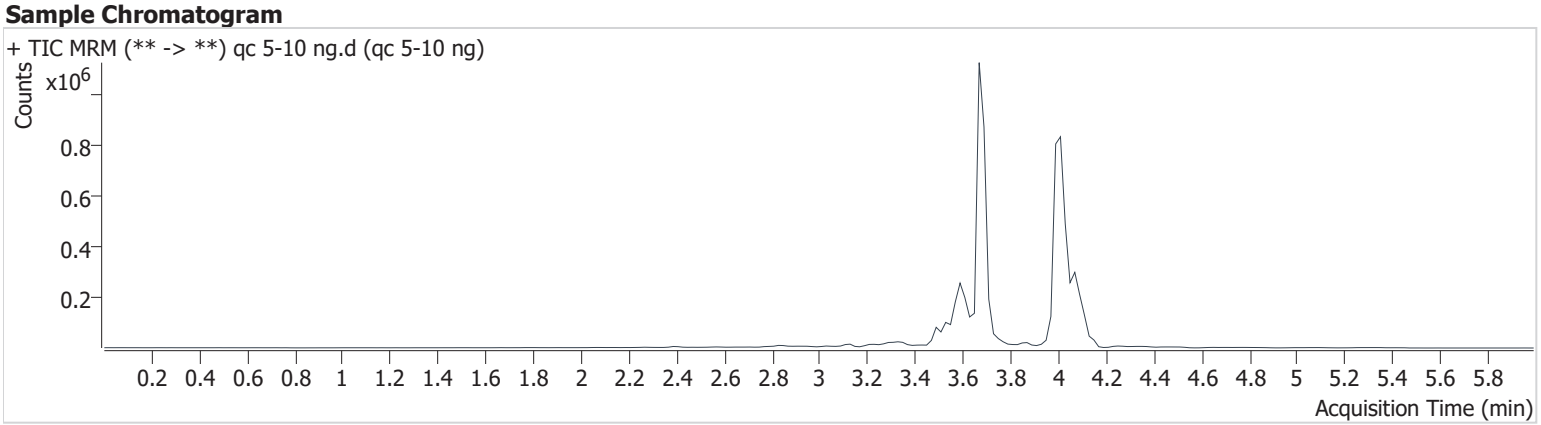
COMMENTS:

# AM #26 Cannabinoids Screen Results

**Batch results** D:\MassHunter\Data\2019\am 25-26\092319\QuantResults\cann screen.batch.bin
**Calibration Last Update** 9/24/2019 12:59:26 PM

| | | | |
|---|---|---|---|
| **Instrument** | 69679 | **Data File** | qc 5-10 ng.d |
| **Type** | QC | **Sample** | qc 5-10 ng |
| **Acq. Method** | am 26 cann screen.m | **Operator** | Anne Nord |
| **Sample Position** | P3-H1 | **Comment** | |
| **Injection Volume** | 5 | | |
| **Acq. Date-Time** | 9/23/2019 3:38:21 PM | | |
| **Sample Info.** | | | |

**Sample Chromatogram**



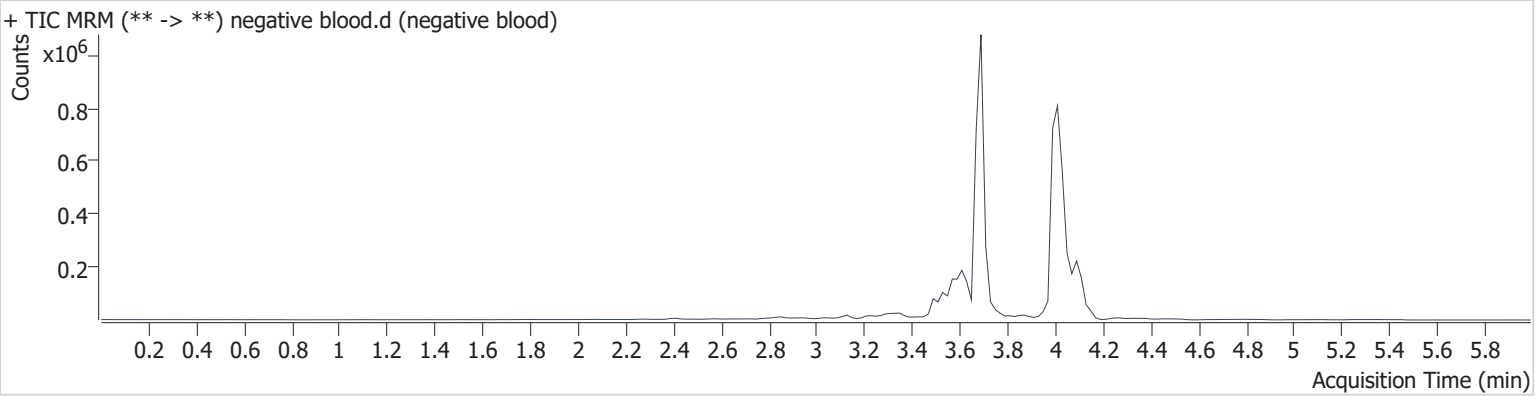

| Name | RT | Resp. | ISTD Resp. | Final Conc. |
|---|---|---|---|---|
| THC | 4.080 | 19560 | 314022 | 4.721 ng/ml |
| THC-COOH | 3.590 | 77873 | 371597 | 14.790 ng/ml |
| THC-OH | 3.676 | 20613 | 2683170 | 4.113 ng/ml |

# AM #26 Cannabinoids Screen Results

**Batch results** D:\MassHunter\Data\2019\am 25-26\092319\QuantResults\cann screen.batch.bin
**Calibration Last Update** 9/24/2019 12:59:26 PM

| | | | |
|---|---|---|---|
| **Instrument** | 69679 | **Data File** | negative blood.d |
| **Type** | Sample | **Sample** | negative blood |
| **Acq. Method** | am 26 cann screen.m | **Operator** | Anne Nord |
| **Sample Position** | P3-A2 | **Comment** | |
| **Injection Volume** | 5 | | |
| **Acq. Date-Time** | 9/23/2019 3:44:59 PM | | |
| **Sample Info.** | | | |

**Sample Chromatogram**

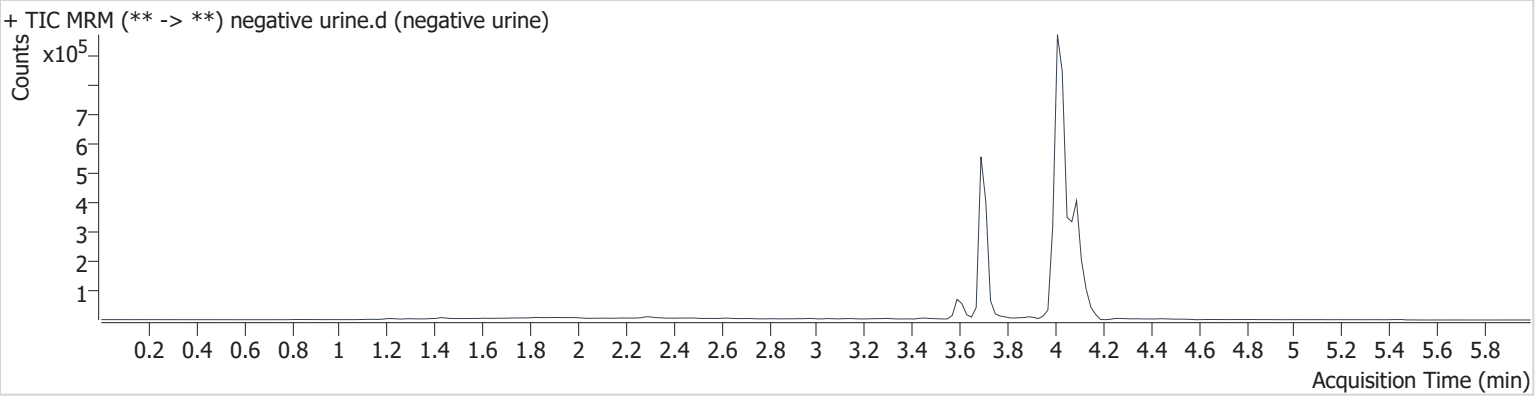


# AM #26 Cannabinoids Screen Results

**Batch results** D:\MassHunter\Data\2019\am 25-26\092319\QuantResults\cann screen.batch.bin
**Calibration Last Update** 9/24/2019 12:59:26 PM

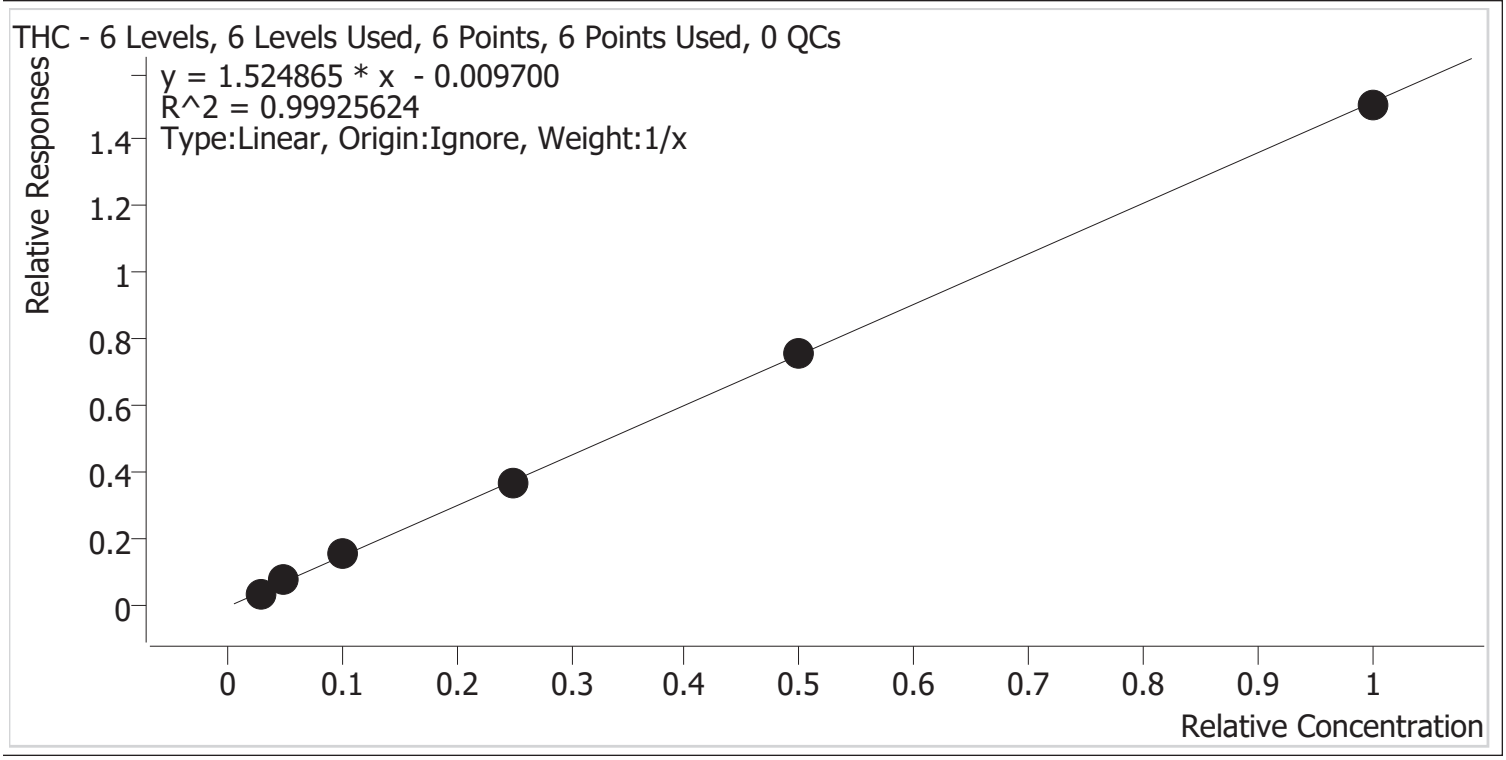
| | | | |
|---|---|---|---|
| **Instrument** | 69679 | **Data File** | negative urine.d |
| **Type** | Sample | **Sample** | negative urine |
| **Acq. Method** | am 26 cann screen.m | **Operator** | Anne Nord |
| **Sample Position** | P3-F3 | **Comment** | |
| **Injection Volume** | 5 | | |
| **Acq. Date-Time** | 9/23/2019 5:04:11 PM | | |
| **Sample Info.** | | | |

**Sample Chromatogram**



# Compound Calibration Report

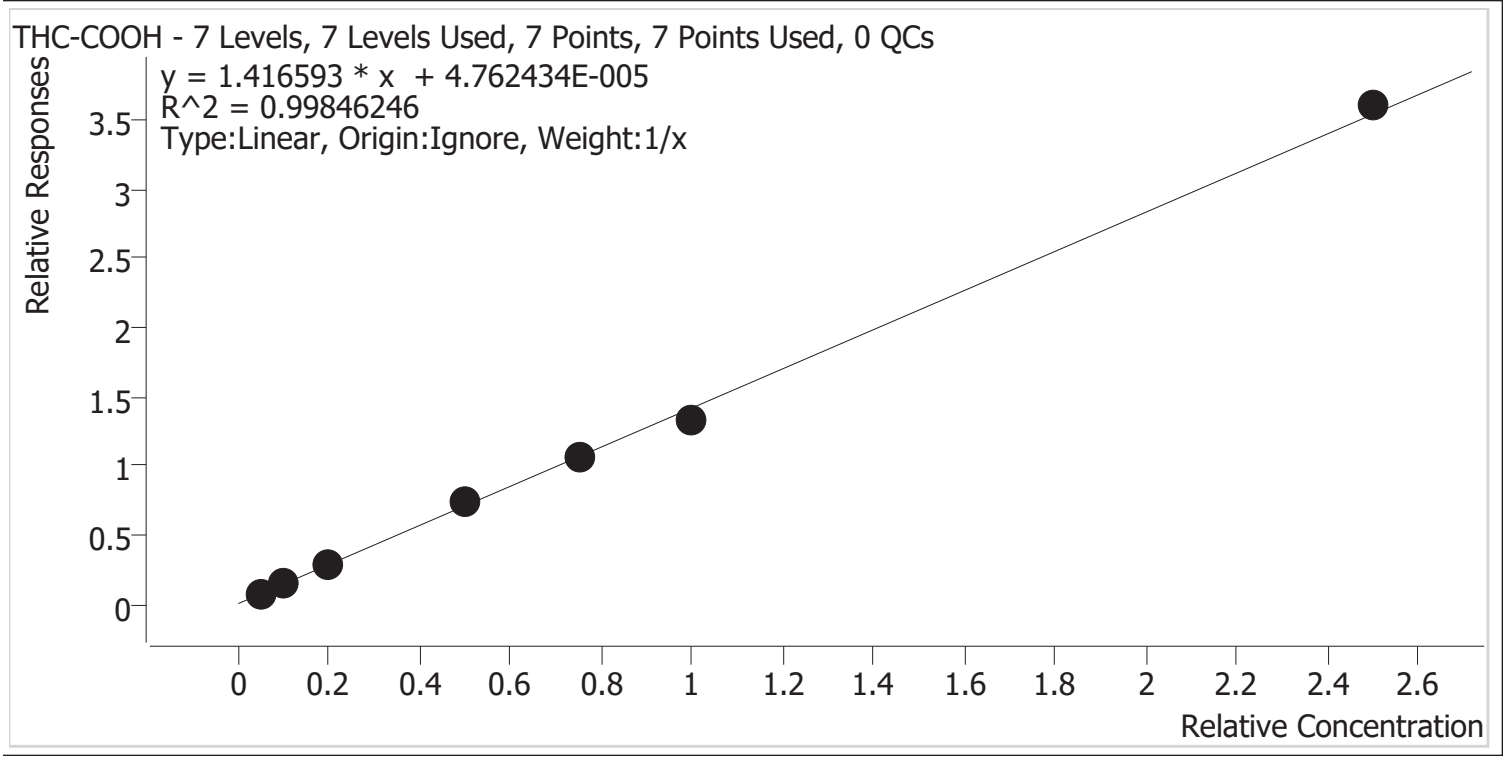
| | |
|---|---|
| **Batch results** | D:\MassHunter\Data\2019\am 25-26\092319\QuantResults\cann screen.batch.bin |
| **Last Cal. Update** | 9/24/2019 12:59 PM |
| **Analyst Name** | ISP\datastor |
| **Analyte** | THC |
| **Internal Standard** | THC-d3 |




| Sample | Level | Enabled | Expected Concentration | Final Concentration | Accuracy |
|---|---|---|---|---|---|
| cal 2 | 2 | ✓ | 3.0 | 2.7 | 88.5 |
| cal 3 | 3 | ✓ | 5.0 | 5.3 | 106.9 |
| cal 4 | 4 | ✓ | 10.0 | 10.6 | 105.6 |
| cal 5 | 5 | ✓ | 25.0 | 24.8 | 99.0 |
| cal-6 | 6 | ✓ | 50.0 | 50.4 | 100.8 |
| cal-7 | 7 | ✓ | 100.0 | 99.3 | 99.3 |

# Compound Calibration Report

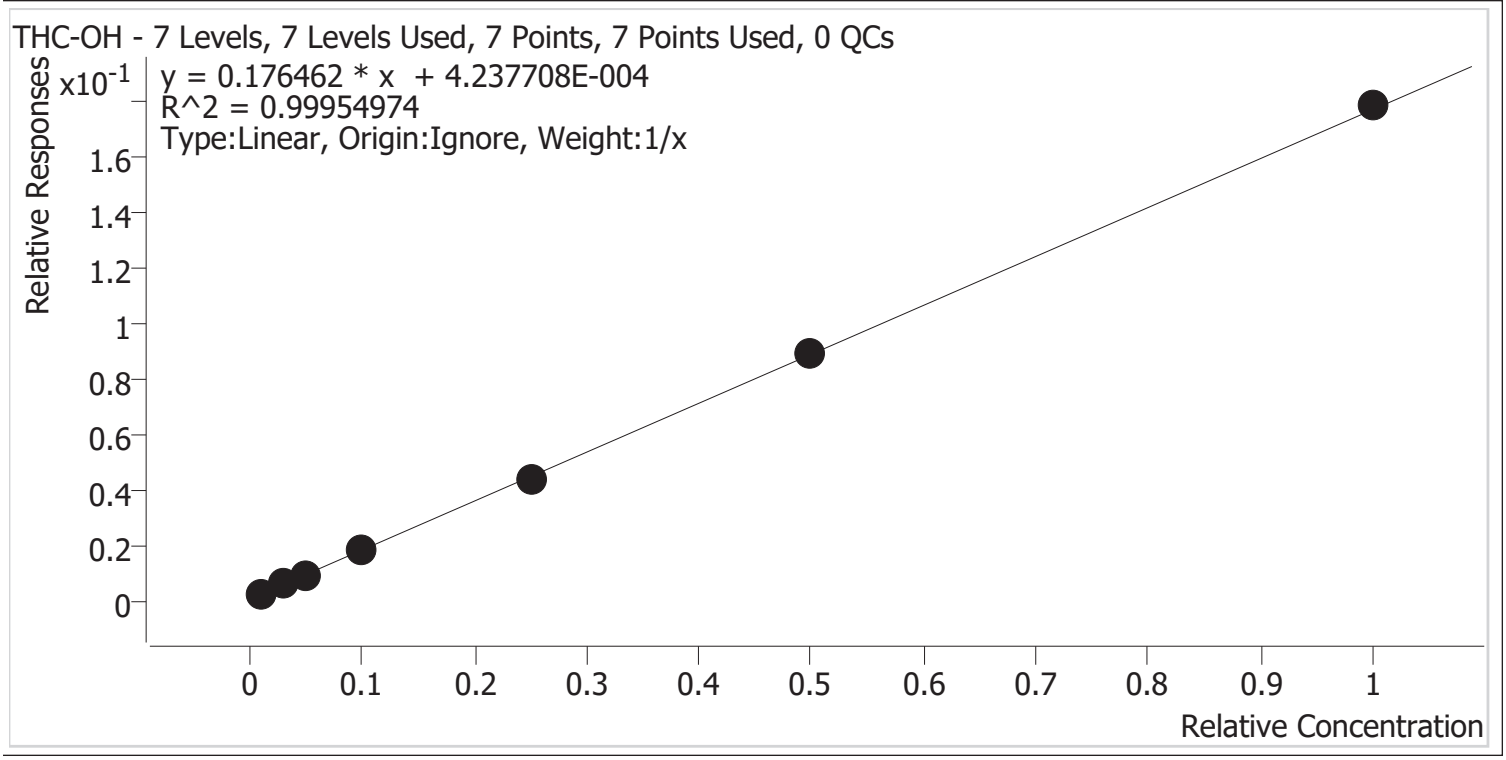
| | |
|---|---|
| **Batch results** | D:\MassHunter\Data\2019\am 25-26\092319\QuantResults\cann screen.batch.bin |
| **Last Cal. Update** | 9/24/2019 12:59 PM |
| **Analyst Name** | ISP\datastor |
| **Analyte** | THC-COOH |
| **Internal Standard** | THC-COOH-d9 |




| Sample | Level | Enabled | Expected Concentration | Final Concentration | Accuracy |
|---|---|---|---|---|---|
| check std 1ng | 1 | ✓ | 5.0 | 5.1 | 101.0 |
| cal 2 | 2 | ✓ | 10.0 | 10.2 | 101.7 |
| cal 3 | 3 | ✓ | 20.0 | 19.5 | 97.5 |
| cal 4 | 4 | ✓ | 50.0 | 52.1 | 104.1 |
| cal 5 | 5 | ✓ | 75.0 | 75.3 | 100.4 |
| cal-6 | 6 | ✓ | 100.0 | 93.5 | 93.5 |
| cal-7 | 7 | ✓ | 250.0 | 254.4 | 101.8 |

# Compound Calibration Report

| | |
|---|---|
| **Batch results** | D:\MassHunter\Data\2019\am 25-26\092319\QuantResults\cann screen.batch.bin |
| **Last Cal. Update** | 9/24/2019 12:59 PM |
| **Analyst Name** | ISP\datastor |
| **Analyte** | THC-OH |
| **Internal Standard** | THC-OH-d3 |



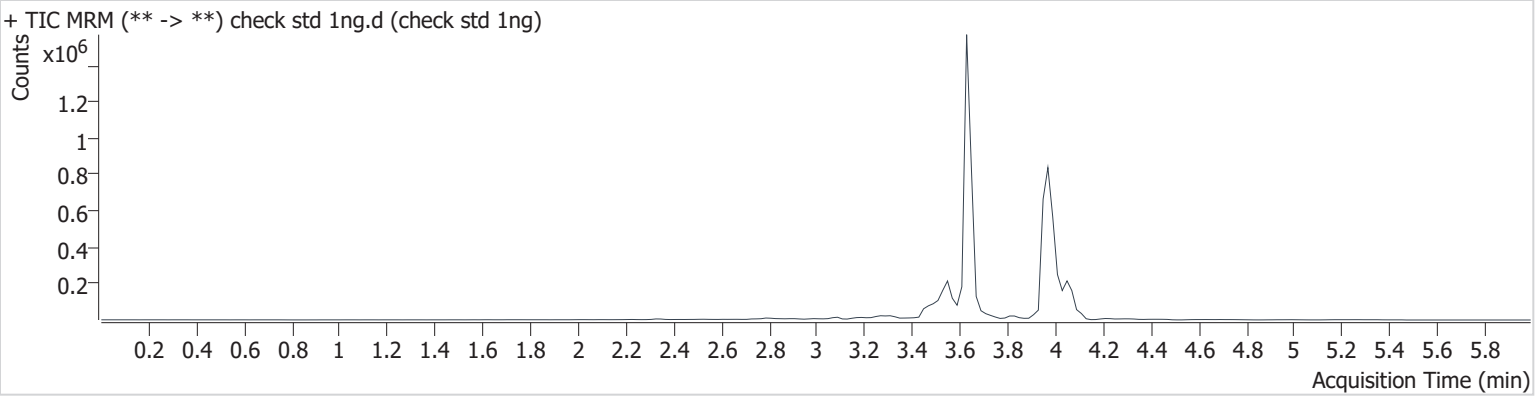

| Sample | Level | Enabled | Expected Concentration | Final Concentration | Accuracy |
|---|---|---|---|---|---|
| check std 1ng | 1 | ✓ | 1.0 | 1.1 | 106.9 |
| cal 2 | 2 | ✓ | 3.0 | 3.1 | 104.7 |
| cal 3 | 3 | ✓ | 5.0 | 4.5 | 89.9 |
| cal 4 | 4 | ✓ | 10.0 | 9.9 | 99.3 |
| cal 5 | 5 | ✓ | 25.0 | 24.6 | 98.5 |
| cal-6 | 6 | ✓ | 50.0 | 49.9 | 99.9 |
| cal-7 | 7 | ✓ | 100.0 | 100.8 | 100.8 |

# AM #26 Cannabinoids Screen Results

**Batch results** D:\MassHunter\Data\2019\am 25-26\092319\QuantResults\cann screen.batch.bin
**Calibration Last Update** 9/24/2019 12:59:26 PM

| | | | |
|---|---|---|---|
| **Instrument** | 69679 | **Data File** | check std 1ng.d |
| **Type** | Cal | **Sample** | check std 1ng |
| **Acq. Method** | am 26 cann screen.m | **Operator** | Anne Nord |
| **Sample Position** | P3-G1 | **Comment** | |
| **Injection Volume** | 5 | | |
| **Acq. Date-Time** | 9/23/2019 2:45:38 PM | | |
| **Sample Info.** | | | |

**Sample Chromatogram**



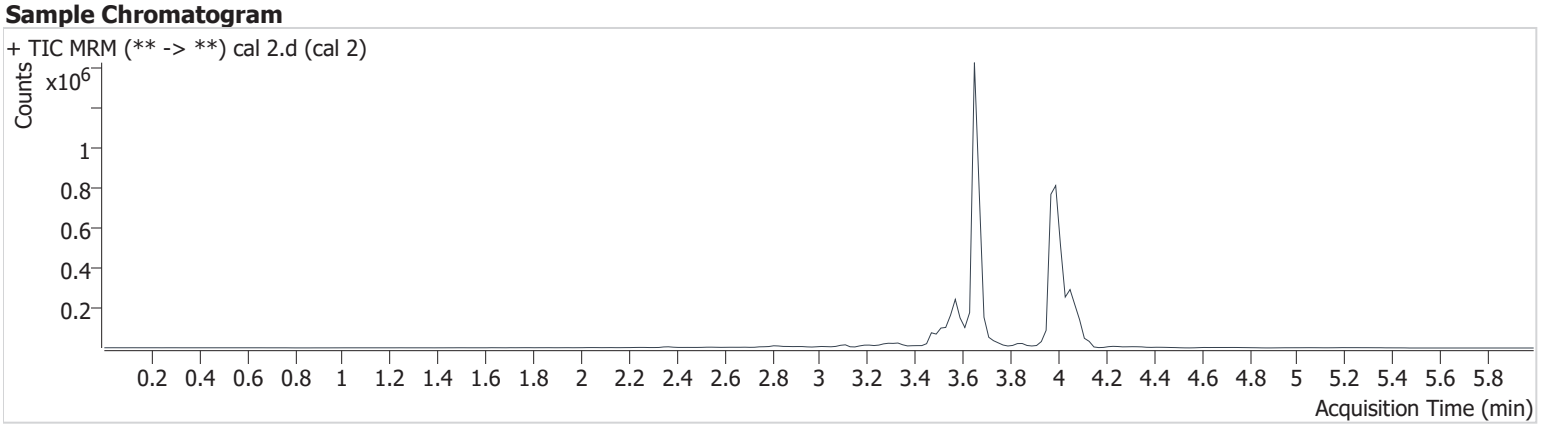

| Name | RT | Resp. | ISTD Resp. | Final Conc. |
|---|---|---|---|---|
| THC-COOH | 3.550 | 25555 | 356833 | 5.052 ng/ml **Low** |
| THC-OH | 3.636 | 7514 | 3253703 | 1.069 ng/ml **Low** |

# AM #26 Cannabinoids Screen Results

**Batch results** D:\MassHunter\Data\2019\am 25-26\092319\QuantResults\cann screen.batch.bin
**Calibration Last Update** 9/24/2019 12:59:26 PM

| | | | |
|---|---|---|---|
| **Instrument** | 69679 | **Data File** | cal 2.d |
| **Type** | Cal | **Sample** | cal 2 |
| **Acq. Method** | am 26 cann screen.m | **Operator** | Anne Nord |
| **Sample Position** | P3-F1 | **Comment** | |
| **Injection Volume** | 5 | | |
| **Acq. Date-Time** | 9/23/2019 2:52:15 PM | | |
| **Sample Info.** | | | |

**Sample Chromatogram**



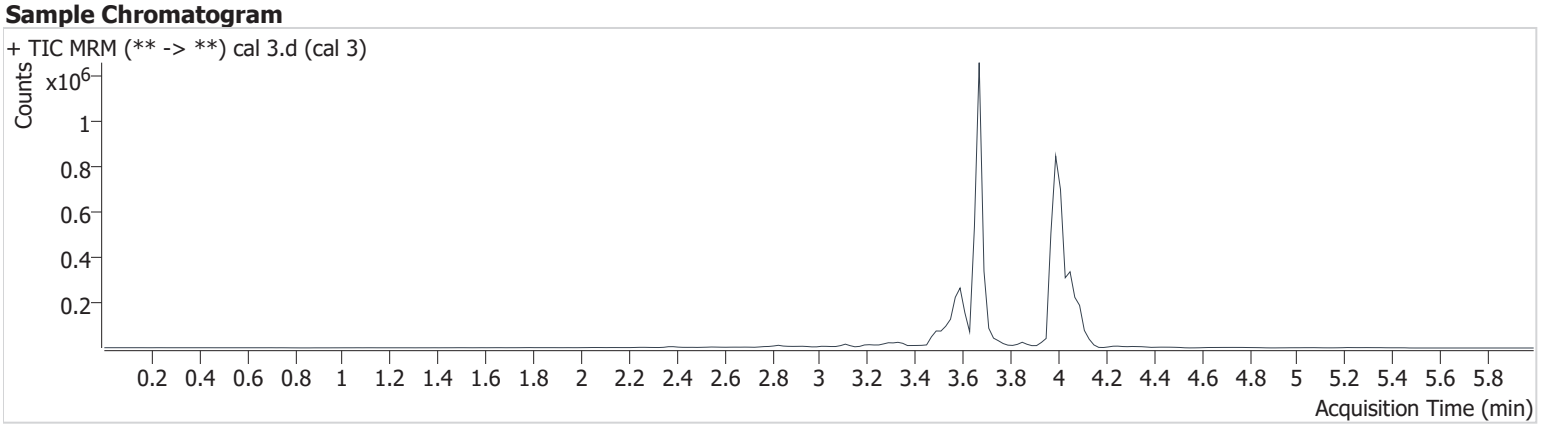

| Name | RT | Resp. | ISTD Resp. | Final Conc. |
|---|---|---|---|---|
| THC | 4.060 | 8426 | 273891 | 2.654 ng/ml **Low** |
| THC-COOH | 3.570 | 51440 | 357033 | 10.167 ng/ml |
| THC-OH | 3.656 | 17663 | 2959830 | 3.142 ng/ml |

# AM #26 Cannabinoids Screen Results

**Batch results** D:\MassHunter\Data\2019\am 25-26\092319\QuantResults\cann screen.batch.bin
**Calibration Last Update** 9/24/2019 12:59:26 PM

| | | | |
|---|---|---|---|
| **Instrument** | 69679 | **Data File** | cal 3.d |
| **Type** | Cal | **Sample** | cal 3 |
| **Acq. Method** | am 26 cann screen.m | **Operator** | Anne Nord |
| **Sample Position** | P3-E1 | **Comment** | |
| **Injection Volume** | 5 | | |
| **Acq. Date-Time** | 9/23/2019 2:58:51 PM | | |
| **Sample Info.** | | | |

**Sample Chromatogram**



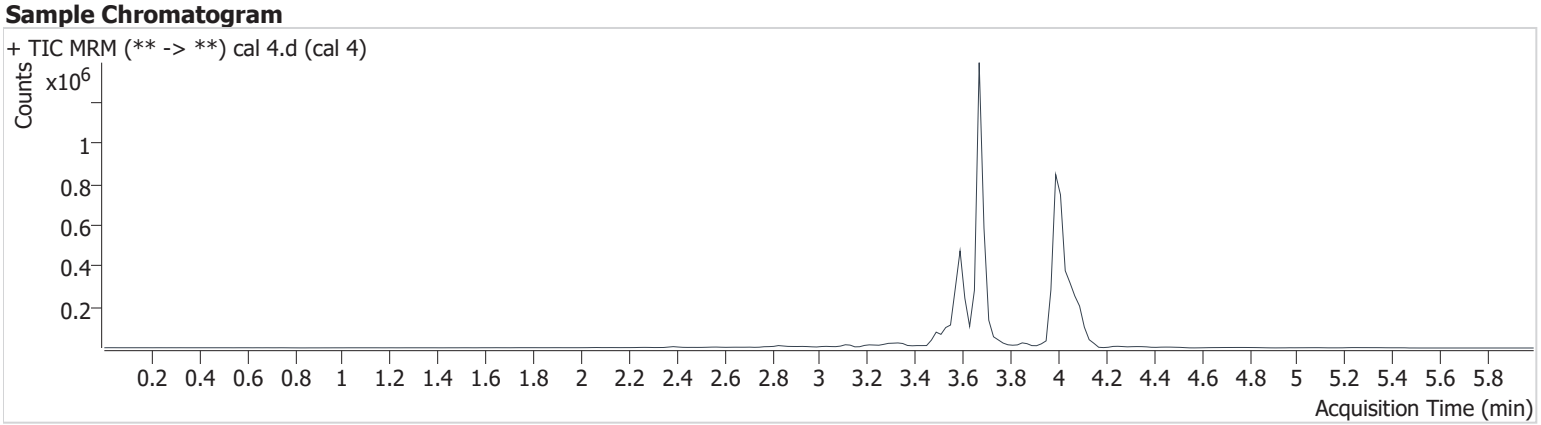

| Name | RT | Resp. | ISTD Resp. | Final Conc. |
|---|---|---|---|---|
| THC | 4.060 | 21501 | 299532 | 5.344 ng/ml |
| THC-COOH | 3.590 | 95519 | 345852 | 19.493 ng/ml |
| THC-OH | 3.676 | 21528 | 2575855 | 4.496 ng/ml |

# AM #26 Cannabinoids Screen Results

**Batch results** D:\MassHunter\Data\2019\am 25-26\092319\QuantResults\cann screen.batch.bin
**Calibration Last Update** 9/24/2019 12:59:26 PM

| | | | |
|---|---|---|---|
| **Instrument** | 69679 | **Data File** | cal 4.d |
| **Type** | Cal | **Sample** | cal 4 |
| **Acq. Method** | am 26 cann screen.m | **Operator** | Anne Nord |
| **Sample Position** | P3-D1 | **Comment** | |
| **Injection Volume** | 5 | | |
| **Acq. Date-Time** | 9/23/2019 3:05:27 PM | | |
| **Sample Info.** | | | |

**Sample Chromatogram**



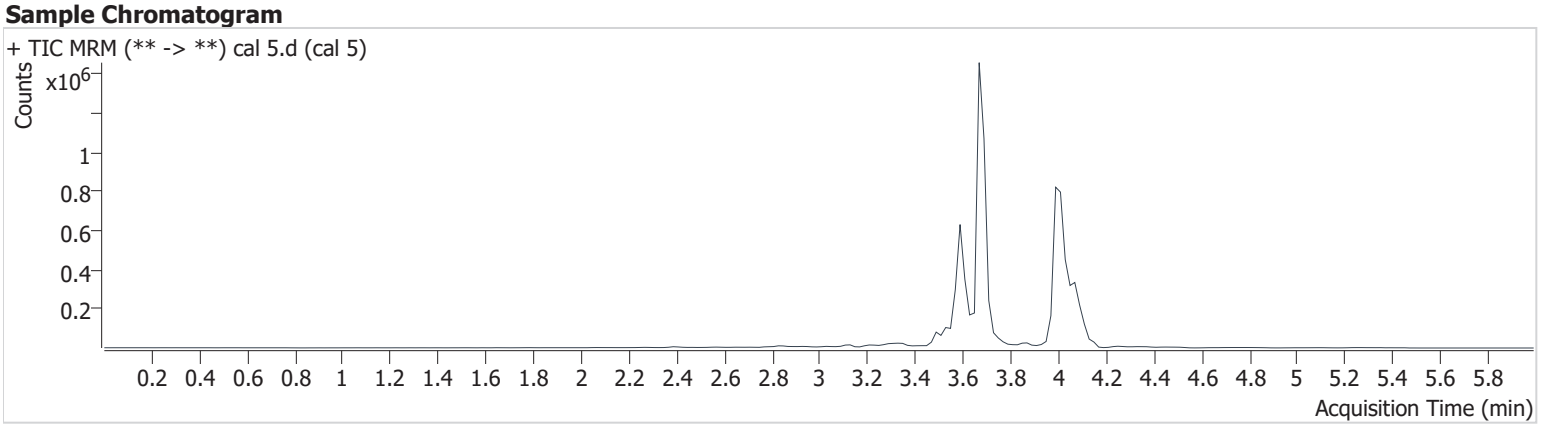

| Name | RT | Resp. | ISTD Resp. | Final Conc. |
|---|---|---|---|---|
| THC | 4.060 | 43637 | 288504 | 10.555 ng/ml |
| THC-COOH | 3.590 | 263193 | 356850 | 52.061 ng/ml |
| THC-OH | 3.676 | 44809 | 2496798 | 9.930 ng/ml |

# AM #26 Cannabinoids Screen Results

**Batch results** D:\MassHunter\Data\2019\am 25-26\092319\QuantResults\cann screen.batch.bin
**Calibration Last Update** 9/24/2019 12:59:26 PM

| | | | |
|---|---|---|---|
| **Instrument** | 69679 | **Data File** | cal 5.d |
| **Type** | Cal | **Sample** | cal 5 |
| **Acq. Method** | am 26 cann screen.m | **Operator** | Anne Nord |
| **Sample Position** | P3-C1 | **Comment** | |
| **Injection Volume** | 5 | | |
| **Acq. Date-Time** | 9/23/2019 3:12:03 PM | | |
| **Sample Info.** | | | |

**Sample Chromatogram**



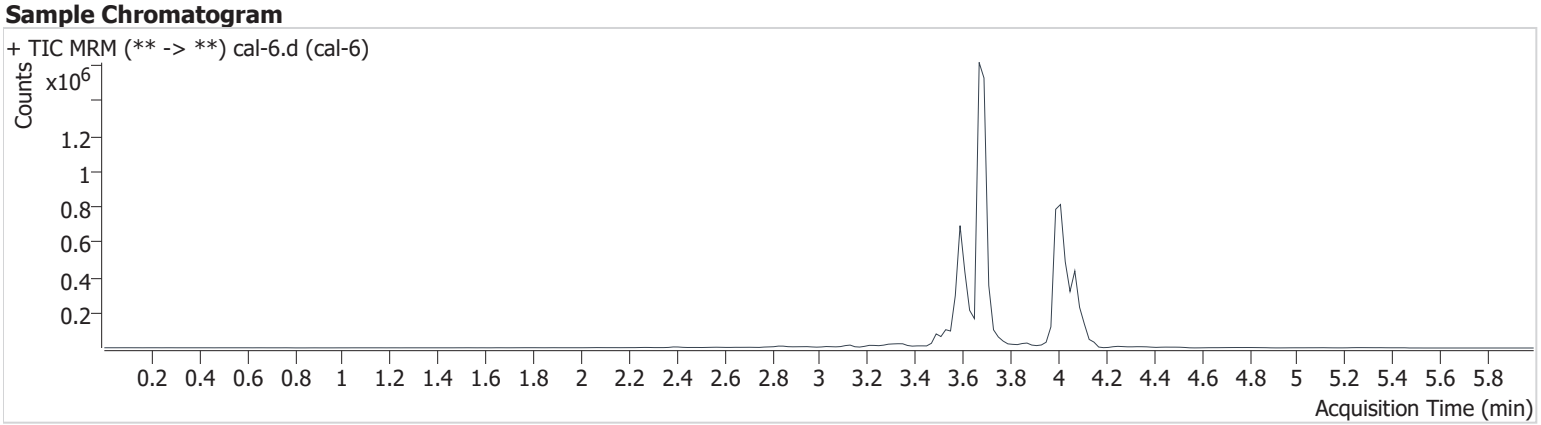

| Name | RT | Resp. | ISTD Resp. | Final Conc. |
|---|---|---|---|---|
| THC | 4.080 | 114224 | 310595 | 24.754 ng/ml |
| THC-COOH | 3.590 | 394063 | 369432 | 75.295 ng/ml |
| THC-OH | 3.676 | 113324 | 2582092 | 24.631 ng/ml |

# AM #26 Cannabinoids Screen Results

**Batch results** D:\MassHunter\Data\2019\am 25-26\092319\QuantResults\cann screen.batch.bin
**Calibration Last Update** 9/24/2019 12:59:26 PM

| | | | |
|---|---|---|---|
| **Instrument** | 69679 | **Data File** | cal-6.d |
| **Type** | Cal | **Sample** | cal-6 |
| **Acq. Method** | am 26 cann screen.m | **Operator** | Anne Nord |
| **Sample Position** | P3-B1 | **Comment** | |
| **Injection Volume** | 5 | | |
| **Acq. Date-Time** | 9/23/2019 3:18:39 PM | | |
| **Sample Info.** | | | |

**Sample Chromatogram**



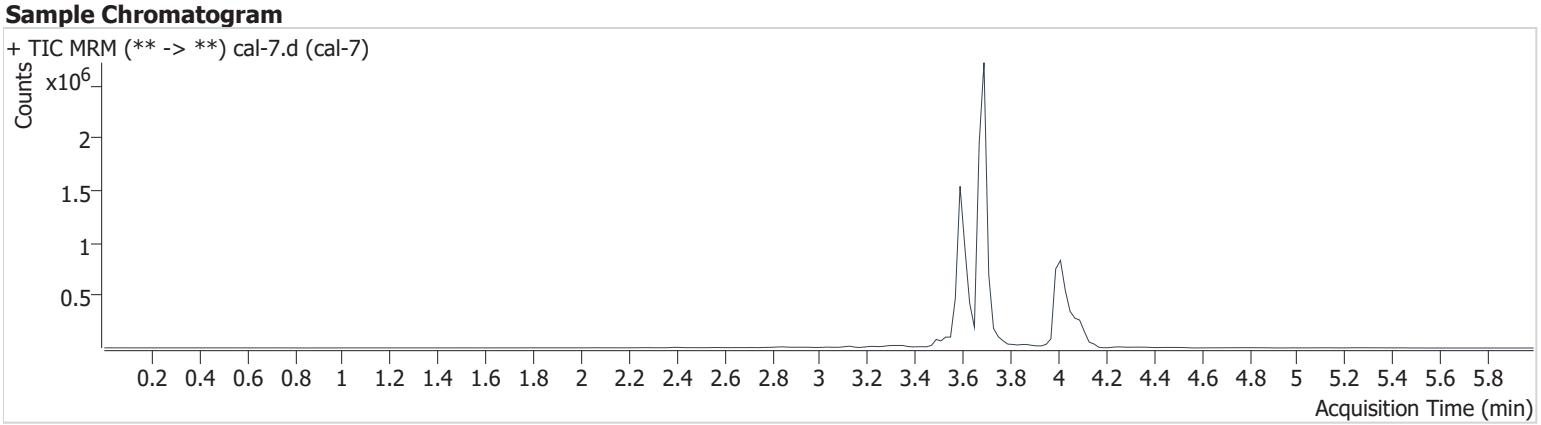

| Name | RT | Resp. | ISTD Resp. | Final Conc. |
|---|---|---|---|---|
| THC | 4.080 | 235140 | 309772 | 50.416 ng/ml |
| THC-COOH | 3.590 | 499471 | 376890 | 93.548 ng/ml |
| THC-OH | 3.676 | 221431 | 2500620 | 49.941 ng/ml |

# AM #26 Cannabinoids Screen Results

**Batch results** D:\MassHunter\Data\2019\am 25-26\092319\QuantResults\cann screen.batch.bin
**Calibration Last Update** 9/24/2019 12:59:26 PM

| | | | |
|---|---|---|---|
| **Instrument** | 69679 | **Data File** | cal-7.d |
| **Type** | Cal | **Sample** | cal-7 |
| **Acq. Method** | am 26 cann screen.m | **Operator** | Anne Nord |
| **Sample Position** | P3-A1 | **Comment** | |
| **Injection Volume** | 5 | | |
| **Acq. Date-Time** | 9/23/2019 3:25:15 PM | | |
| **Sample Info.** | | | |

**Sample Chromatogram**



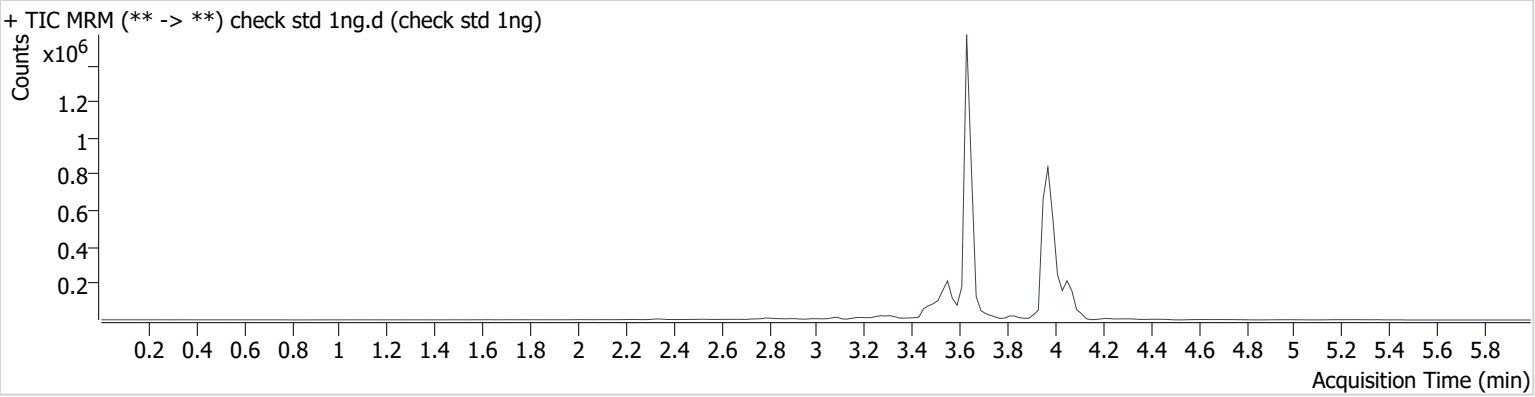

| Name | RT | Resp. | ISTD Resp. | Final Conc. |
|---|---|---|---|---|
| THC | 4.060 | 215121 | 143018 | 99.278 ng/ml |
| THC-COOH | 3.590 | 1309285 | 363325 | 254.383 ng/ml |
| THC-OH | 3.696 | 456506 | 2560564 | 100.792 ng/ml |

# AM #26 Cannabinoids Screen Results

**Batch results** D:\MassHunter\Data\2019\am 25-26\092319\QuantResults\cann screen.batch.bin
**Calibration Last Update** 10/1/2019 11:33:53 AM

| | | | |
|---|---|---|---|
| **Instrument** | 69679 | **Data File** | check std 1ng.d |
| **Type** | Cal | **Sample** | check std 1ng |
| **Acq. Method** | am 26 cann screen.m | **Operator** | Anne Nord |
| **Sample Position** | P3-G1 | **Comment** | |
| **Injection Volume** | 5 | | |
| **Acq. Date-Time** | 9/23/2019 2:45:38 PM | | |
| **Sample Info.** | | | |

**Sample Chromatogram**




| Name | RT | Resp. | ISTD Resp. | Final Conc. |
|---|---|---|---|---|
| THC | 4.060 | 1340 | 98608 | 1.528 ng/ml **Low** |
| THC-COOH | 3.550 | 25555 | 356833 | 5.052 ng/ml **Low** |
| THC-OH | 3.636 | 7514 | 3253703 | 1.069 ng/ml **Low** |

manually integrated THC 10/1/19

10/1/19

Toxicology AM method 25 blood external prep information
working solution 10000 ng/ml in meoh Hydromorphone, Hydrocodone, Nortriptyline, Sertraline
Stock solution 1mg/ml 100 ul each in 9600ul meOH

ppd 5/20/19: Exp: 5/20/20 lot 52020 by baw

| Drug | lot | expiration |
|---|---|---|
| Hydromorphone | FE04101502 | 6/1/2020 |
| Hydrocodone | FE09091505 | 9/1/2020 |
| nortriptyline | FN06191503 | 8/1/2020 |
| sertraline | FN01081501 | 3/1/2020 |

AM 25 control 100 ul working solution (52020) in 9900 ul neg blood

ppd 5/20/19, exp 3/1/20 lot 52019 neg blood lot 19A207P3 by BAW

Concentration 100ng/ml hydrocodone, nortriptyline, sertraline, hydromorphone