

*Bylee*

**Worklist: 2578**

| <u>LAB_CASE</u> | <u>ITEM</u> | <u>TASK_ID</u> | <u>DESCRIPTION</u>                           |   |
|-----------------|-------------|----------------|--|---|
| C2018-1231      | 2           | 119677         | AM 25/AM 26 Blood MultiDrug/THC Screen by LC |    |
| C2018-1243      | 1           | 119776         | AM 25/AM 26 Blood MultiDrug/THC Screen by LC |    |
| C2018-1286      | 1           | 120471         | AM 25/AM 26 Blood MultiDrug/THC Screen by LC |    |
| C2018-1287      | 1           | 120473         | AM 25/AM 26 Blood MultiDrug/THC Screen by LC |    |
| C2018-1299      | 1           | 120553         | AM 25/AM 26 Blood MultiDrug/THC Screen by LC |    |
| C2018-1300      | 1           | 120556         | AM 25/AM 26 Blood MultiDrug/THC Screen by LC |    |
| C2018-1305      | 1           | 120701         | AM 25/AM 26 Blood MultiDrug/THC Screen by LC |    |
| C2018-1318      | 1           | 120800         | AM 25/AM 26 Blood MultiDrug/THC Screen by LC |    |
| C2018-1328      | 1           | 120886         | AM 25/AM 26 Blood MultiDrug/THC Screen by LC |    |
| C2018-1329      | 1           | 120889         | AM 25/AM 26 Blood MultiDrug/THC Screen by LC |    |
| C2018-1335      | 1           | 120898         | AM 25/AM 26 Blood MultiDrug/THC Screen by LC |   |
| C2018-1339      | 2           | 120905         | AM 25/AM 26 Blood MultiDrug/THC Screen by LC |  |
| C2018-1361      | 1           | 121056         | AM 25/AM 26 Blood MultiDrug/THC Screen by LC |  |
| C2018-1383      | 1           | 121201         | AM 25/AM 26 Blood MultiDrug/THC Screen by LC |  |

*[Handwritten signature]*

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

Extraction Date: 7-17-18  
Plate lot#: 0515207

Analyst: Anne Nord  
Plate Expiration: 10/18/2018

**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:** 17J20718

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

**LCMS-QQQ ID:** 62340

### 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.
3. Create worklist:

### Analytic:

1. Remove standards, plate, controls, and samples from cold storage. Allow to reach room temperature.
2. Pipette **250µL blood (calibrated pipette) Pipette ID: 1926134** in wells of analytical (standards) plate.
3. Place on shaking incubator at ambient temp., 900rpm for 15 minutes. *Shaker ID: 66759*
4. Pipette **250µL 00.5M ammonium hydroxide** in wells of analytical plate.
5. Place on shaking incubator at ambient temp., 900rpm for 15 minutes.
6. Transfer **300µL of blood+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 **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.  
*SPE Dry ID: 66819*
16. Reconstitute in **100µL 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.  
Batch Name: 071718 AM 25-26 Worklist path: MDS p1  
MDS p2
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. > 1/3 the response of administrative control.
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:



Toxicology AM method 25 external prep information

working solution 10000 ng/ml in meoh Hydrocodone, Hydromorphone, Nortriptyline, Sertraline

Stock solution 1mg/ml 100 ul each in 9600ul meOH

Ppd 4/23/18 Exp: 4/23/19 lot 42318 by Amn

| 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 (42318) in 9900 ul neg blood

ppd 04/23/18 exp 4/23/19 lot 42318

neg blood lot 17J20718

by Amn

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

| Compound Method      | Transition      | Acq. Date/Time       | RT    | p1 cal 1-2a Results | Qualifier 1 M... | Qualifier 1 Results | ISTD Method | ISTD Results |                         |                 |       |          |
|----------------------|-----------------|----------------------|-------|---------------------|------------------|---------------------|-------------|--------------|-------------------------|-----------------|-------|----------|
| Name                 | Transition      | Acq. Date/Time       | RT    | Resp.               | S/N              | Area                | Name        | Transition   | RT                      | Resp.           |       |          |
| 6-MAM                | 328.2 -> 165... | 7/17/2018 11:01 A... | 5.441 | 755                 | 7.30             | 328.2 -> 211...     | 4.17        | 1525         | 6-MAM-D6                | 334.2 -> 165... | 5.420 | 65295    |
| 7-aminoclonazepam    | 286.1 -> 121... | 7/17/2018 11:01 A... | 5.529 | 27263               | 433.38           | 286.1 -> 222...     | 320.08      | 20180        | 7-Aminoclonazepam-D4    | 290.1 -> 121... | 5.507 | 154083   |
| Benzoylcegonine      | 290.1 -> 168... | 7/17/2018 11:01 A... | 5.305 | 16004               | 120.41           | 290.1 -> 105...     | 42.66       | 10326        | Benzoylcegonine-D8      | 298.2 -> 171... | 5.304 | 5949     |
| Metoprolol           | 268.2 -> 116... | 7/17/2018 11:01 A... | 5.553 | 21165               | 4717.44          | 268.2 -> 56.3       | 21822.23    | 24033        | Noroxycodone-D3         | 305.2 -> 287... | 4.976 | 178594   |
| a-hydroxyvalprazolam | 325.1 -> 297... | 7/17/2018 11:01 A... | 6.400 | 8715                | 109.11           | 325.1 -> 215...     | 75.97       | 4887         | a-hydroxyvalprazolam-D5 | 330.1 -> 302... | 6.379 | 53940    |
| alpha-PVP            | 232.2 -> 91.0   | 7/17/2018 11:01 A... | 5.987 | 137971              | 99.52            | 232.2 -> 77.1       | 23.11       | 45737        | alpha-PVP-d8            | 240.2 -> 91.1   | 5.904 | 675665   |
| Alprazolam           | 309.1 -> 281... | 7/17/2018 11:01 A... | 6.485 | 60778               | 10037.50         | 309.1 -> 205...     | 312.09      | 60076        | Alprazolam-D5           | 314.1 -> 286... | 6.484 | 268937   |
| Amphetamine          | 136.1 -> 91.1   | 7/17/2018 11:01 A... | 4.931 | 113330              | 10.84            | 136.1 -> 119...     | 22.81       | 40178        | Amphetamine-D11         | 147.2 -> 130... | 4.890 | 90724    |
| Cocaine              | 304.2 -> 182... | 7/17/2018 11:01 A... | 5.895 | 180319              | 200.64           | 304.2 -> 105...     | 75.86       | 46727        | Cocaine-D3              | 307.2 -> 185... | 5.874 | 896727   |
| Bupropion            | 240.1 -> 184... | 7/17/2018 11:01 A... | 6.210 | 86848               | 71.24            | 240.1 -> 131...     | 35.61       | 43975        | Bupropion-D9            | 249.2 -> 185... | 6.169 | 475028   |
| Carisoprodol         | 261.2 -> 176... | 7/17/2018 11:01 A... | 6.127 | 70503               | 338.22           | 261.2 -> 55.3       | 86.15       | 80069        | Carisoprodol-D7         | 268.2 -> 183... | 6.126 | 513412   |
| Citalopram           | 325.2 -> 109... | 7/17/2018 11:01 A... | 6.216 | 208582              | 132.80           | 325.2 -> 262...     | 8372.08     | 47022        | Citalopram-D6           | 331.2 -> 109... | 6.195 | 10884... |
| Clonazepam           | 316.1 -> 269... | 7/17/2018 11:01 A... | 6.340 | 26756               | 99.00            | 316.1 -> 213...     | 38.54       | 7092         | Clonazepam-D4           | 320.1 -> 217... | 6.319 | 45249    |
| Codaine              | 300.2 -> 215... | 7/17/2018 11:01 A... | 5.466 | 9284                | 125.52           | 300.2 -> 165...     | 52.47       | 8702         | Codaine-D6              | 306.2 -> 218... | 5.403 | 54064    |
| Cyclobenzaprine      | 276.2 -> 214... | 7/17/2018 11:01 A... | 6.592 | 128254              | 1582.21          | 276.2 -> 231...     | 108.44      | 37097        | Cyclobenzaprine-D3      | 279.2 -> 215... | 6.571 | 678954   |
| Dextromethorphan     | 272.2 -> 171... | 7/17/2018 11:01 A... | 6.288 | 58081               | 811.23           | 272.2 -> 147...     | 135.27      | 54161        | Dextromethorphan-D3     | 275.2 -> 171... | 6.288 | 347393   |
| Dextropropfan        | 258.2 -> 157... | 7/17/2018 11:01 A... | 5.575 | 45245               | 589.46           | 258.2 -> 133...     | 169.81      | 30648        | Dextropropfan-D3        | 261.2 -> 157... | 5.575 | 280932   |
| Diazepam             | 285.1 -> 193... | 7/17/2018 11:01 A... | 6.711 | 45748               | 102.37           | 285.1 -> 153...     | 504.87      | 29458        | Diazepam-D5             | 290.1 -> 198... | 6.710 | 217096   |
| Dihydrocodeine       | 302.2 -> 198... | 7/17/2018 11:01 A... | 5.160 | 26487               | 70.21            | 302.2 -> 128...     | 24.85       | 17208        | Dihydrocodeine-D6       | 308.2 -> 202... | 5.097 | 159089   |
| Diphenhydramine      | 256.2 -> 167... | 7/17/2018 11:01 A... | 6.229 | 298138              | 238.05           | 256.2 -> 152...     | 1644.18     | 73154        | Diphenhydramine-D3      | 259.2 -> 167... | 6.209 | 19789... |
| Doxylamine           | 271.2 -> 182... | 7/17/2018 11:01 A... | 5.819 | 270075              | 475.19           | 271.2 -> 167...     | 219.24      | 1948...      | Doxylamine-D5           | 276.2 -> 187... | 5.818 | 15626... |
| EDDP                 | 279.2 -> 235... | 7/17/2018 11:01 A... | 6.163 | 176528              | 624.77           | 279.2 -> 250...     | 71.19       | 48505        | EDDP-D3                 | 282.2 -> 235... | 6.163 | 84970    |
| Fentanyl             | 337.2 -> 105... | 7/17/2018 11:01 A... | 6.581 | 31999               | 20.75            | 337.2 -> 188...     | 58.20       | 23042        | Fentanyl-D5             | 342.3 -> 105... | 6.581 | 18532... |
| Fluoxetine           | 310.1 -> 44.3   | 7/17/2018 11:01 A... | 6.403 | 300106              | 2001.23          | 310.1 -> 148...     | 35.28       | 9881         | Fluoxetine-D6           | 316.2 -> 44.3   | 6.401 | 15152... |
| Hydrocodone          | 300.2 -> 198... | 7/17/2018 11:01 A... | 5.671 | 40039               | 51.08            | 300.2 -> 128...     | Infinity    | 19774        | Hydrocodone-D6          | 306.2 -> 202... | 5.608 | 275250   |
| Hydromorphone        | 286.2 -> 184... | 7/17/2018 11:01 A... | 5.022 | 25240               | 63.81            | 286.2 -> 157...     | 16.17       | 13991        | Hydromorphone-D6        | 292.2 -> 185... | 4.939 | 92539    |
| Ketamine             | 238.1 -> 125... | 7/17/2018 11:01 A... | 6.170 | 107825              | 9475.41          | 238.1 -> 220...     | 17.80       | 39543        | Ketamine-D4             | 242.1 -> 129... | 6.169 | 514388   |
| Mirtazapine          | 266.2 -> 195... | 7/17/2018 11:01 A... | 6.554 | 241291              | 424.21           | 266.2 -> 72.3       | 282.45      | 1671...      | Tramadol-13C-D3         | 268.2 -> 58.3   | 5.594 | 15225... |
| Mitragynine          | 399.2 -> 238... | 7/17/2018 11:01 A... | 6.598 | 29934               | 5307.62          | 399.2 -> 174...     | 439.52      | 70670        | Tramadol-13C-D3         | 268.2 -> 58.3   | 5.594 | 15225... |
| Meprobamate          | 219.1 -> 158... | 7/17/2018 11:01 A... | 5.599 | 23623               | 147.42           | 219.1 -> 97.1       | 45.13       | 20275        | Meprobamate-D7          | 226.2 -> 165... | 5.599 | 143605   |
| Methadone            | 310.2 -> 265... | 7/17/2018 11:01 A... | 6.504 | 237274              | 1641.10          | 310.2 -> 105...     | 199.32      | 2277...      | Methadone-D9            | 319.3 -> 268... | 6.503 | 13992... |
| Methamphetamine      | 150.1 -> 91.1   | 7/17/2018 11:01 A... | 5.132 | 163009              | Infinity         | 150.1 -> 119...     | 10.84       | 52625        | Methamphetamine-D11     | 161.2 -> 97.1   | 5.071 | 103971   |
| Morphine             | 286.2 -> 201... | 7/17/2018 11:01 A... | 4.759 | 5462                | 118.57           | 286.2 -> 165...     | 4.89        | 3606         | Morphine-D6             | 292.2 -> 152... | 4.677 | 4600     |
| Norbuprenorphine     | 414.3 -> 101... | 7/17/2018 11:01 A... | 6.029 | 5135                | 38.31            | 414.3 -> 57.3       | 14.44       | 5669         | Norbuprenorphine-D3     | 417.3 -> 101... | 6.029 | 30994... |
| Nordiazepam          | 271.1 -> 140... | 7/17/2018 11:01 A... | 6.573 | 25040               | 125.66           | 271.1 -> 208...     | 6809.55     | 17862        | Nordiazepam-D5          | 276.1 -> 140... | 6.572 | 96162    |
| Nortofentanyl        | 233.2 -> 84.2   | 7/17/2018 11:01 A... | 5.435 | 144205              | 2011.11          | 233.2 -> 55.3       | 57.35       | 51796        | Nortofentanyl-D5        | 238.2 -> 84.2   | 5.434 | 726316   |
| Noroxycodone         | 286.2 -> 199... | 7/17/2018 11:01 A... | 5.103 | 2689                | Infinity         | 286.2 -> 171...     | Infinity    | 741          | Noroxycodone-D3         | 289.2 -> 202... | 5.082 | 78442    |
| O-desmethyl-tramadol | 302.1 -> 284... | 7/17/2018 11:01 A... | 4.998 | 30736               | 34.65            | 302.1 -> 186...     | 53.87       | 11244        | Noroxycodone-D3         | 305.2 -> 287... | 4.976 | 178594   |
| Oxazepam             | 250.2 -> 58.3   | 7/17/2018 11:01 A... | 5.027 | 210945              | 576.70           | 250.2 -> 42.3       | 41.94       | 10643        | O-desmethyl-tramadol... | 256.2 -> 64.3   | 5.007 | 10642... |
| Oxycodone            | 287.1 -> 240... | 7/17/2018 11:01 A... | 6.386 | 22039               | 102.40           | 287.1 -> 268...     | 10.02       | 10723        | Oxazepam-D5             | 292.1 -> 246... | 6.385 | 136603   |
| Oxymorphone          | 316.2 -> 298... | 7/17/2018 11:01 A... | 5.361 | 65290               | 66.65            | 316.2 -> 241...     | 134.44      | 19376        | Oxycodone-D6            | 322.2 -> 304... | 5.299 | 369116   |
| Oxymorphone          | 302.1 -> 284... | 7/17/2018 11:01 A... | 4.654 | 71815               | 81.63            | 302.1 -> 227...     | 376.70      | 16570        | Oxymorphone-D3          | 305.2 -> 287... | 4.592 | 378848   |

| Compound Method | Transition      | Acq. Date-Time       | RT    | Resp.               | S/N      | Qualifier 1 M...    | Transition | S/N       | Area    | Name            | Transition      | RT    | Resp.        |
|-----------------|-----------------|----------------------|-------|---------------------|----------|---------------------|------------|-----------|---------|-----------------|-----------------|-------|--------------|
|                 |                 | p1 cal 1-2a          |       | p1 cal 1-2a Results |          | Qualifier 1 Results |            |           |         | ISTD Method     |                 |       | ISTD Results |
| Phentermine     | 150.1 -> 65.2   | 7/17/2018 11:01 A... | 5.234 | 23641               | Infinity | 150.1 -> 133...     |            | Infinity  | 881     | Phentermine-D5  | 155.2 -> 96.2   | 5.213 | 240242       |
| Promethazine    | 285.1 -> 86.2   | 7/17/2018 11:01 A... | 6.711 | 455172              | 551.39   | 285.1 -> 71.3       |            | 188.02    | 95555   | Promethazine-D3 | 288.2 -> 89.2   | 6.691 | 26516...     |
| Quetiapine      | 384.2 -> 253... | 7/17/2018 11:01 A... | 6.721 | 249693              | 93609.96 | 384.2 -> 221...     |            | 23614.01  | 1369... | Quetiapine-D8   | 392.2 -> 226... | 6.699 | 392738       |
| Setraline       | 306.1 -> 158... | 7/17/2018 11:01 A... | 6.749 | 56282               | 159.49   | 306.1 -> 275...     |            | 14704.97  | 53078   | Setraline-D3    | 309.1 -> 275... | 6.728 | 327089       |
| Temazepam       | 301.1 -> 255... | 7/17/2018 11:01 A... | 6.548 | 89531               | 169.28   | 301.1 -> 283...     |            | 26.41     | 32979   | Temazepam-D5    | 306.1 -> 260... | 6.527 | 501443       |
| Tramadol        | 264.2 -> 58.3   | 7/17/2018 11:01 A... | 5.615 | 274446              | 178.02   | 264.2 -> 43.3       |            | 9.88      | 12378   | Tramadol-13C-D3 | 268.2 -> 58.3   | 5.594 | 15225...     |
| Trazodone       | 372.2 -> 176... | 7/17/2018 11:01 A... | 6.884 | 271355              | 46424.44 | 372.2 -> 148...     |            | 158197... | 1917... | Trazodone-D6    | 378.2 -> 182... | 6.863 | 13589...     |
| Venlafaxine     | 278.2 -> 58.3   | 7/17/2018 11:01 A... | 5.940 | 281364              | 619.99   | 278.2 -> 260...     |            | 41.05     | 53121   | Venlafaxine-D6  | 284.2 -> 64.3   | 5.919 | 14289...     |
| Zolpidem        | 308.2 -> 235... | 7/17/2018 11:01 A... | 6.445 | 255933              | 5255.93  | 308.2 -> 263...     |            | Infinity  | 93758   | Zolpidem-D6     | 314.2 -> 235... | 6.422 | 15391...     |

| Compound Method      |                 | p1negative control |       | p1negative control Results |          |                  | ISTD Method |       |                          | ISTD Results    |       |          |
|----------------------|-----------------|--------------------|-------|----------------------------|----------|------------------|-------------|-------|--------------------------|-----------------|-------|----------|
| Name                 | Transition      | Acq. Date-Time     | RT    | Resp.                      | S/N      | Qualifier 1 M... | S/N         | Area  | Name                     | Transition      | RT    | Resp.    |
| 6-MAM                | 328.2 -> 165... | 7/17/2018 11:20 AM |       |                            |          | 328.2 -> 211...  |             |       | 6-MAM-D6                 | 334.2 -> 165... | 5.420 | 68896    |
| 7-Aminoclonazepam    | 286.1 -> 121... | 7/17/2018 11:20 AM |       |                            |          | 286.1 -> 222...  |             |       | 7-Aminoclonazepam-D4     | 290.1 -> 121... | 5.507 | 173995   |
| Benzoylcegonine      | 290.1 -> 168... | 7/17/2018 11:20 AM |       |                            |          | 290.1 -> 105...  |             |       | Benzoylcegonine-D8       | 298.2 -> 171... | 5.284 | 6692     |
| Metoprolol           | 268.2 -> 116... | 7/17/2018 11:20 AM |       |                            |          | 268.2 -> 56.3    |             |       | Noroxycodone-D3          | 305.2 -> 287... | 4.976 | 194821   |
| a-hydroxyalprazolam  | 325.1 -> 297... | 7/17/2018 11:20 AM |       |                            |          | 325.1 -> 215...  |             |       | a-hydroxyalprazolam-D5   | 330.1 -> 302... | 6.379 | 55245    |
| alpha-PVP            | 232.2 -> 91.0   | 7/17/2018 11:20 AM |       |                            |          | 232.2 -> 77.1    |             |       | alpha-PVP-d8             | 240.2 -> 91.1   | 5.904 | 740042   |
| Alprazolam           | 309.1 -> 281... | 7/17/2018 11:20 AM |       |                            |          | 309.1 -> 205...  |             |       | Alprazolam-D5            | 314.1 -> 286... | 6.484 | 292394   |
| Amphetamine          | 136.1 -> 91.1   | 7/17/2018 11:20 AM | 4.931 | 49721                      | 25.64    | 136.1 -> 119...  |             |       | Amphetamine-D11          | 147.2 -> 130... | 4.890 | 107215   |
| Cocaine              | 304.2 -> 182... | 7/17/2018 11:20 AM |       |                            |          | 304.2 -> 105...  |             |       | Cocaine-D3               | 307.2 -> 185... | 5.874 | 918351   |
| Bupropion            | 240.1 -> 184... | 7/17/2018 11:20 AM |       |                            |          | 240.1 -> 131...  |             |       | Bupropion-D9             | 249.2 -> 185... | 6.169 | 675566   |
| Carisoprodol         | 261.2 -> 176... | 7/17/2018 11:20 AM |       |                            |          | 261.2 -> 55.3    |             |       | Carisoprodol-D7          | 268.2 -> 183... | 6.126 | 549487   |
| Citalopram           | 325.2 -> 109... | 7/17/2018 11:20 AM |       |                            |          | 325.2 -> 262...  |             |       | Citalopram-D6            | 331.2 -> 109... | 6.195 | 11783... |
| Clonazepam           | 316.1 -> 269... | 7/17/2018 11:20 AM |       |                            |          | 316.1 -> 213...  |             |       | Clonazepam-D4            | 320.1 -> 217... | 6.319 | 44997    |
| Codaine              | 300.2 -> 215... | 7/17/2018 11:20 AM |       |                            |          | 300.2 -> 165...  |             |       | Codaine-D6               | 306.2 -> 218... | 5.403 | 54231    |
| Cyclobenzaprine      | 276.2 -> 214... | 7/17/2018 11:20 AM |       |                            |          | 276.2 -> 231...  |             |       | Cyclobenzaprine-D3       | 279.2 -> 215... | 6.571 | 720003   |
| Dextromethorphan     | 272.2 -> 171... | 7/17/2018 11:20 AM |       |                            |          | 272.2 -> 147...  |             |       | Dextromethorphan-D3      | 275.2 -> 171... | 6.288 | 354832   |
| Dextrophan           | 258.2 -> 157... | 7/17/2018 11:20 AM |       |                            |          | 258.2 -> 133...  |             |       | Dextrophan-D3            | 261.2 -> 157... | 5.575 | 299569   |
| Diazepam             | 285.1 -> 193... | 7/17/2018 11:20 AM |       |                            |          | 285.1 -> 153...  |             |       | Diazepam-D5              | 290.1 -> 198... | 6.710 | 245315   |
| Dihydrocodeine       | 302.2 -> 198... | 7/17/2018 11:20 AM |       |                            |          | 302.2 -> 128...  |             |       | Dihydrocodeine-D6        | 308.2 -> 202... | 5.097 | 166900   |
| Diphenhydramine      | 256.2 -> 167... | 7/17/2018 11:20 AM |       |                            |          | 256.2 -> 152...  |             |       | Diphenhydramine-D3       | 259.2 -> 167... | 6.209 | 20343... |
| Doxylamine           | 271.2 -> 182... | 7/17/2018 11:20 AM |       |                            |          | 271.2 -> 167...  |             |       | Doxylamine-D5            | 276.2 -> 187... | 5.818 | 16113... |
| EDDP                 | 279.2 -> 235... | 7/17/2018 11:20 AM |       |                            |          | 279.2 -> 250...  |             |       | EDDP-D3                  | 282.2 -> 235... | 6.163 | 110016   |
| Fentanyl             | 337.2 -> 105... | 7/17/2018 11:20 AM |       |                            |          | 337.2 -> 188...  |             |       | Fentanyl-D5              | 342.3 -> 105... | 6.581 | 19574... |
| Fluoxetine           | 310.1 -> 44.3   | 7/17/2018 11:20 AM |       |                            |          | 310.1 -> 148...  |             |       | Fluoxetine-D6            | 316.2 -> 44.3   | 6.401 | 16747... |
| Hydrocodone          | 300.2 -> 198... | 7/17/2018 11:20 AM |       |                            |          | 300.2 -> 128...  |             |       | Hydrocodone-D6           | 306.2 -> 202... | 5.608 | 277522   |
| Hydromorphone        | 286.2 -> 184... | 7/17/2018 11:20 AM |       |                            |          | 286.2 -> 157...  |             |       | Hydromorphone-D6         | 292.2 -> 185... | 4.939 | 94450    |
| Ketamine             | 238.1 -> 125... | 7/17/2018 11:20 AM |       |                            |          | 238.1 -> 220...  |             |       | Ketamine-D4              | 242.1 -> 129... | 6.169 | 559623   |
| Mirtazapine          | 266.2 -> 195... | 7/17/2018 11:20 AM |       |                            |          | 266.2 -> 72.3    |             |       | Tramadol-13C-D3          | 268.2 -> 58.3   | 5.594 | 15172... |
| Mitragynine          | 399.2 -> 238... | 7/17/2018 11:20 AM |       |                            |          | 399.2 -> 174...  |             |       | Tramadol-13C-D3          | 268.2 -> 58.3   | 5.594 | 15172... |
| Meproamate           | 219.1 -> 158... | 7/17/2018 11:20 AM |       |                            |          | 219.1 -> 97.1    |             |       | Meproamate-D7            | 226.2 -> 165... | 5.599 | 164990   |
| Methadone            | 310.2 -> 265... | 7/17/2018 11:20 AM |       |                            |          | 310.2 -> 105...  |             |       | Methadone-D9             | 319.3 -> 268... | 6.503 | 15301... |
| Methamphetamine      | 150.1 -> 91.1   | 7/17/2018 11:20 AM | 5.153 | 149947                     | Infinity | 150.1 -> 119...  | 25.24       | 44930 | Methamphetamine-D11      | 161.2 -> 97.1   | 5.071 | 139584   |
| Morphine             | 286.2 -> 201... | 7/17/2018 11:20 AM |       |                            |          | 286.2 -> 165...  |             |       | Morphine-D6              | 292.2 -> 152... | 4.677 | 3945     |
| Norbuprenorphine     | 414.3 -> 101... | 7/17/2018 11:20 AM |       |                            |          | 414.3 -> 57.3    |             |       | Norbuprenorphine-D3      | 417.3 -> 101... | 6.009 | 37718    |
| Nordiazepam          | 271.1 -> 140... | 7/17/2018 11:20 AM |       |                            |          | 271.1 -> 208...  |             |       | Nordiazepam-D5           | 276.1 -> 140... | 6.572 | 109848   |
| Norfentanyl          | 233.2 -> 84.2   | 7/17/2018 11:20 AM |       |                            |          | 233.2 -> 55.3    |             |       | Norfentanyl-D5           | 239.2 -> 84.2   | 5.434 | 756990   |
| Norhydrocodone       | 286.2 -> 199... | 7/17/2018 11:20 AM |       |                            |          | 286.2 -> 171...  |             |       | Norhydrocodone-D3        | 289.2 -> 202... | 5.082 | 79383    |
| Noroxycodone         | 302.1 -> 284... | 7/17/2018 11:20 AM |       |                            |          | 302.1 -> 186...  |             |       | Noroxycodone-D3          | 305.2 -> 287... | 4.976 | 194621   |
| O-desmethyl-tramadol | 250.2 -> 58.3   | 7/17/2018 11:20 AM |       |                            |          | 250.2 -> 42.3    |             |       | O-desmethyl-tramadol-... | 256.2 -> 64.3   | 5.007 | 11258... |
| Oxazepam             | 287.1 -> 240... | 7/17/2018 11:20 AM |       |                            |          | 287.1 -> 268...  |             |       | Oxazepam-D5              | 292.1 -> 246... | 6.385 | 156901   |
| Oxycodone            | 316.2 -> 298... | 7/17/2018 11:20 AM |       |                            |          | 316.2 -> 241...  |             |       | Oxycodone-D6             | 322.2 -> 304... | 5.299 | 382738   |
| Oxymorphone          | 302.1 -> 284... | 7/17/2018 11:20 AM |       |                            |          | 302.1 -> 227...  |             |       | Oxymorphone-D3           | 305.2 -> 287... | 4.592 | 393921   |

| Compound Method | Transition      | Acq. Date-Time     | RT    | Resp. | S/N  | Qualifier 1 M... | Transition | S/N | Area | ISTD Method     | Transition      | RT    | Resp.    |
|-----------------|-----------------|--------------------|-------|-------|------|------------------|------------|-----|------|-----------------|-----------------|-------|----------|
| Phentermine     | 150.1 -> 65.2   | 7/17/2018 11:20 AM | 5.153 | 26605 | 1.54 | 150.1 -> 133...  |            |     |      | Phentermine-D5  | 155.2 -> 96.2   | 5.213 | 301919   |
| Promethazine    | 285.1 -> 86.2   | 7/17/2018 11:20 AM |       |       |      | 285.1 -> 71.3    |            |     |      | Promethazine-D3 | 288.2 -> 89.2   | 6.691 | 30260... |
| Quetiapine      | 384.2 -> 253... | 7/17/2018 11:20 AM |       |       |      | 384.2 -> 221...  |            |     |      | Quetiapine-D8   | 392.2 -> 226... | 6.699 | 427979   |
| Sertraline      | 306.1 -> 158... | 7/17/2018 11:20 AM |       |       |      | 306.1 -> 275...  |            |     |      | Sertraline-D3   | 309.1 -> 275... | 6.728 | 385995   |
| Temazepam       | 301.1 -> 255... | 7/17/2018 11:20 AM |       |       |      | 301.1 -> 283...  |            |     |      | Temazepam-D5    | 306.1 -> 260... | 6.527 | 556416   |
| Tramadol        | 264.2 -> 58.3   | 7/17/2018 11:20 AM |       |       |      | 264.2 -> 43.3    |            |     |      | Tramadol-13C-D3 | 268.2 -> 58.3   | 5.594 | 15172... |
| Trazodone       | 372.2 -> 176... | 7/17/2018 11:20 AM |       |       |      | 372.2 -> 148...  |            |     |      | Trazodone-D6    | 378.2 -> 182... | 6.863 | 13846... |
| Venlafaxine     | 278.2 -> 58.3   | 7/17/2018 11:20 AM |       |       |      | 278.2 -> 260...  |            |     |      | Venlafaxine-D6  | 284.2 -> 64.3   | 5.919 | 14698... |
| Zolpidem        | 308.2 -> 235... | 7/17/2018 11:20 AM |       |       |      | 308.2 -> 263...  |            |     |      | Zolpidem-D6     | 314.2 -> 235... | 6.422 | 15413... |

| Compound Method      |                 |                    | p1 external control | p1 external control | Resul... |                  |          | ISTD Method |                          |                 | ISTD Results |           |  |
|----------------------|-----------------|--------------------|---------------------|---------------------|----------|------------------|----------|-------------|--------------------------|-----------------|--------------|-----------|--|
| Name                 | Transition      | Acq. Date/Time     | RT                  | Resp.               | S/N      | Qualifier 1 M... | S/N      | Area        | Name                     | Transition      | RT           | Resp.     |  |
| 6-MAM                | 328.2 -> 165... | 7/17/2018 11:40 AM |                     |                     |          | 328.2 -> 211...  |          |             | 6-MAM-D6                 | 334.2 -> 165... | 5.420        | 64535     |  |
| 7-Aminoclonazepam    | 286.1 -> 121... | 7/17/2018 11:40 AM |                     |                     |          | 286.1 -> 222...  |          |             | 7-Aminoclonazepam-D4     | 290.1 -> 121... | 5.507        | 211132    |  |
| Benzoylcegonine      | 290.1 -> 168... | 7/17/2018 11:40 AM |                     |                     |          | 290.1 -> 105...  |          |             | Benzoylcegonine-D8       | 298.2 -> 171... | 5.284        | 5974      |  |
| Metoprolol           | 268.2 -> 116... | 7/17/2018 11:40 AM |                     |                     |          | 268.2 -> 56.3    |          |             | Noroxycodone-D3          | 305.2 -> 287... | 4.976        | 167237    |  |
| a-hydroxyalprazolam  | 325.1 -> 297... | 7/17/2018 11:40 AM |                     |                     |          | 325.1 -> 215...  |          |             | a-hydroxyalprazolam-D5   | 330.1 -> 302... | 6.379        | 56072     |  |
| alpha-PVP            | 232.2 -> 91.0   | 7/17/2018 11:40 AM |                     |                     |          | 232.2 -> 77.1    |          |             | alpha-PVP-d8             | 240.2 -> 91.1   | 5.904        | 776255    |  |
| Alprazolam           | 309.1 -> 281... | 7/17/2018 11:40 AM |                     |                     |          | 309.1 -> 205...  |          |             | Alprazolam-D5            | 314.1 -> 286... | 6.484        | 265562    |  |
| Amphetamine          | 136.1 -> 91.1   | 7/17/2018 11:40 AM | 4.931               | 29090               | Infinity | 136.1 -> 119...  |          |             | Amphetamine-D11          | 147.2 -> 130... | 4.890        | 144278    |  |
| Cocaine              | 304.2 -> 182... | 7/17/2018 11:40 AM |                     |                     |          | 304.2 -> 105...  |          |             | Cocaine-D3               | 307.2 -> 185... | 5.874        | 866941    |  |
| Bupropion            | 240.1 -> 184... | 7/17/2018 11:40 AM |                     |                     |          | 240.1 -> 131...  |          |             | Bupropion-D9             | 249.2 -> 185... | 6.169        | 698159    |  |
| Carisoprodol         | 261.2 -> 176... | 7/17/2018 11:40 AM |                     |                     |          | 261.2 -> 55.3    |          |             | Carisoprodol-D7          | 268.2 -> 183... | 6.105        | 463894    |  |
| Citalopram           | 325.2 -> 109... | 7/17/2018 11:40 AM |                     |                     |          | 325.2 -> 262...  |          |             | Citalopram-D6            | 331.2 -> 109... | 6.195        | 10793...  |  |
| Clonazepam           | 316.1 -> 269... | 7/17/2018 11:40 AM |                     |                     |          | 316.1 -> 213...  |          |             | Clonazepam-D4            | 320.1 -> 217... | 6.319        | 42963     |  |
| Codeine              | 300.2 -> 215... | 7/17/2018 11:40 AM | 5.651               | 10945               | 95.82    | 300.2 -> 165...  | 51.47    | 31106       | Codeine-D6               | 306.2 -> 218... | 5.403        | 50904     |  |
| Cyclobenzaprine      | 276.2 -> 214... | 7/17/2018 11:40 AM |                     |                     |          | 276.2 -> 231...  |          |             | Cyclobenzaprine-D3       | 279.2 -> 215... | 6.571        | 680445    |  |
| Dextromethorphan     | 272.2 -> 171... | 7/17/2018 11:40 AM |                     |                     |          | 272.2 -> 147...  |          |             | Dextromethorphan-D3      | 275.2 -> 171... | 6.288        | 330155    |  |
| Dextropropran        | 258.2 -> 157... | 7/17/2018 11:40 AM |                     |                     |          | 258.2 -> 133...  |          |             | Dextropropran-D3         | 261.2 -> 157... | 5.575        | 276687    |  |
| Diazepam             | 285.1 -> 193... | 7/17/2018 11:40 AM |                     |                     |          | 285.1 -> 153...  |          |             | Diazepam-D5              | 290.1 -> 198... | 6.710        | 211976    |  |
| Dihydrocodeine       | 302.2 -> 198... | 7/17/2018 11:40 AM |                     |                     |          | 302.2 -> 128...  |          |             | Dihydrocodeine-D6        | 308.2 -> 202... | 5.097        | 154006    |  |
| Diphenhydramine      | 256.2 -> 167... | 7/17/2018 11:40 AM |                     |                     |          | 256.2 -> 152...  |          |             | Diphenhydramine-D3       | 259.2 -> 167... | 6.209        | 18151...  |  |
| Doxylamine           | 271.2 -> 182... | 7/17/2018 11:40 AM |                     |                     |          | 271.2 -> 167...  |          |             | Doxylamine-D5            | 276.2 -> 187... | 5.818        | 16286...  |  |
| EDDP                 | 279.2 -> 235... | 7/17/2018 11:40 AM |                     |                     |          | 279.2 -> 250...  |          |             | EDDP-D3                  | 282.2 -> 235... | 6.163        | 113145    |  |
| Fentanyl             | 337.2 -> 105... | 7/17/2018 11:40 AM |                     |                     |          | 337.2 -> 188...  |          |             | Fentanyl-D5              | 342.3 -> 105... | 6.581        | 18609...  |  |
| Fluoxetine           | 310.1 -> 44.3   | 7/17/2018 11:40 AM |                     |                     |          | 310.1 -> 148...  |          |             | Fluoxetine-D6            | 316.2 -> 44.3   | 6.401        | 17205...  |  |
| Hydrocodone          | 300.2 -> 198... | 7/17/2018 11:40 AM | 5.651               | 354285              | 236.39   | 300.2 -> 128...  | 73.18    | 1471...     | Hydrocodone-D6           | 306.2 -> 202... | 5.608        | 265771    |  |
| Hydromorphone        | 286.2 -> 184... | 7/17/2018 11:40 AM | 5.022               | 237890              | 348.90   | 286.2 -> 157...  | 123.66   | 1614...     | Hydromorphone-D6         | 292.2 -> 185... | 4.939        | 95252     |  |
| Ketamine             | 238.1 -> 125... | 7/17/2018 11:40 AM |                     |                     |          | 238.1 -> 220...  |          |             | Ketamine-D4              | 242.1 -> 129... | 6.169        | 506963    |  |
| Mirtazapine          | 266.2 -> 195... | 7/17/2018 11:40 AM |                     |                     |          | 266.2 -> 72.3    |          |             | Tramadol-13C-D3          | 268.2 -> 58.3   | 5.594        | 14463...  |  |
| Mitragynine          | 399.2 -> 238... | 7/17/2018 11:40 AM |                     |                     |          | 399.2 -> 174...  |          |             | Tramadol-13C-D3          | 268.2 -> 58.3   | 5.594        | 14463...  |  |
| Meprobanate          | 219.1 -> 158... | 7/17/2018 11:40 AM |                     |                     |          | 219.1 -> 97.1    |          |             | Meprobanate-D7           | 226.2 -> 165... | 5.599        | 138019    |  |
| Methadone            | 310.2 -> 265... | 7/17/2018 11:40 AM |                     |                     |          | 310.2 -> 105...  |          |             | Methadone-D9             | 319.3 -> 268... | 6.503        | 139972... |  |
| Methamphetamine      | 150.1 -> 91.1   | 7/17/2018 11:40 AM | 5.132               | 161221              | Infinity | 150.1 -> 119...  | Infinity | 52840       | Methamphetamine-D11      | 161.2 -> 97.1   | 5.071        | 398682    |  |
| Morphine             | 286.2 -> 201... | 7/17/2018 11:40 AM |                     |                     |          | 286.2 -> 165...  |          |             | Morphine-D6              | 292.2 -> 152... | 4.696        | 4848      |  |
| Norbuprenorphine     | 414.3 -> 101... | 7/17/2018 11:40 AM |                     |                     |          | 414.3 -> 57.3    |          |             | Norbuprenorphine-D3      | 417.3 -> 101... | 6.009        | 39088     |  |
| Nordiazepam          | 271.1 -> 140... | 7/17/2018 11:40 AM |                     |                     |          | 271.1 -> 208...  |          |             | Nordiazepam-D5           | 276.1 -> 140... | 6.572        | 100558    |  |
| Norfentanyl          | 233.2 -> 84.2   | 7/17/2018 11:40 AM |                     |                     |          | 233.2 -> 55.3    |          |             | Norfentanyl-D5           | 238.2 -> 84.2   | 5.414        | 722950    |  |
| Norhydrocodone       | 286.2 -> 199... | 7/17/2018 11:40 AM | 5.103               | 334                 | Infinity | 286.2 -> 171...  | Infinity | 116         | Norhydrocodone-D3        | 305.2 -> 202... | 5.082        | 77861     |  |
| Noroxycodone         | 302.1 -> 284... | 7/17/2018 11:40 AM |                     |                     |          | 302.1 -> 186...  |          |             | Noroxycodone-D3          | 305.2 -> 287... | 4.976        | 167237    |  |
| O-desmethyl-tramadol | 250.2 -> 58.3   | 7/17/2018 11:40 AM |                     |                     |          | 250.2 -> 42.3    |          |             | O-desmethyl-tramadol-... | 256.2 -> 64.3   | 5.007        | 10134...  |  |
| Oxazepam             | 287.1 -> 240... | 7/17/2018 11:40 AM |                     |                     |          | 287.1 -> 268...  |          |             | Oxazepam-D5              | 292.1 -> 246... | 6.385        | 157606    |  |
| Oxycodone            | 316.2 -> 298... | 7/17/2018 11:40 AM |                     |                     |          | 316.2 -> 241...  |          |             | Oxycodone-D6             | 322.2 -> 304... | 5.299        | 370348    |  |
| Oxymorphone          | 302.1 -> 284... | 7/17/2018 11:40 AM |                     |                     |          | 302.1 -> 227...  |          |             | Oxymorphone-D3           | 305.2 -> 287... | 4.592        | 379026    |  |

| Compound Method | p1 external control | p1 external control | Result | Qualifier 1 M... | Qualifier 1 Results | ISTD Method     | ISTD Results |         |                 |                 |       |          |
|-----------------|---------------------|---------------------|--------|------------------|---------------------|-----------------|--------------|---------|-----------------|-----------------|-------|----------|
| Name            | Transition          | Acq. Date-Time      | RT     | Resp.            | S/N                 | Transition      | S/N          | Area    | Name            | Transition      | RT    | Resp.    |
| Phentermine     | 150.1 -> 65.2       | 7/17/2018 11:40 AM  | 5.153  | 27180            | 1.99                | 150.1 -> 133... |              |         | Phentermine-D5  | 155.2 -> 96.2   | 5.213 | 418326   |
| Promethazine    | 285.1 -> 86.2       | 7/17/2018 11:40 AM  |        |                  |                     | 285.1 -> 71.3   |              |         | Promethazine-D3 | 288.2 -> 89.2   | 6.691 | 27958... |
| Quetiapine      | 384.2 -> 253...     | 7/17/2018 11:40 AM  |        |                  |                     | 384.2 -> 221... |              |         | Quetiapine-D8   | 392.2 -> 226... | 6.699 | 409371   |
| Sertraline      | 306.1 -> 158...     | 7/17/2018 11:40 AM  | 6.749  | 663353           | Infinity            | 306.1 -> 275... | 112578....   | 6691... | Sertraline-D3   | 309.1 -> 275... | 6.749 | 349079   |
| Temazepam       | 301.1 -> 255...     | 7/17/2018 11:40 AM  |        |                  |                     | 301.1 -> 283... |              |         | Temazepam-D5    | 306.1 -> 260... | 6.527 | 496313   |
| Tramadol        | 264.2 -> 58.3       | 7/17/2018 11:40 AM  |        |                  |                     | 264.2 -> 43.3   |              |         | Tramadol-13C-D3 | 268.2 -> 58.3   | 5.594 | 14463... |
| Trazodone       | 372.2 -> 176...     | 7/17/2018 11:40 AM  |        |                  |                     | 372.2 -> 148... |              |         | Trazodone-D6    | 378.2 -> 182... | 6.863 | 12903... |
| Venlafaxine     | 278.2 -> 58.3       | 7/17/2018 11:40 AM  |        |                  |                     | 278.2 -> 260... |              |         | Venlafaxine-D6  | 284.2 -> 64.3   | 5.919 | 14053... |
| Zolpidem        | 308.2 -> 235...     | 7/17/2018 11:40 AM  |        |                  |                     | 308.2 -> 263... |              |         | Zolpidem-D6     | 314.2 -> 235... | 6.422 | 14127... |

| Compound Method         |                 |                    | p2 cal 1-2b | p2 cal 1-2b Results |          |                 | Qualifier 1 M... |         |                           | Qualifier 1 Results |       |         | ISTD Method               |                 |       | ISTD Results |  |  |
|-------------------------|-----------------|--------------------|-------------|---------------------|----------|-----------------|------------------|---------|---------------------------|---------------------|-------|---------|---------------------------|-----------------|-------|--------------|--|--|
| Name                    | Transition      | Acq. Date-Time     | RT          | Resp.               | S/N      | Transition      | S/N              | Area    | Name                      | Transition          | RT    | Resp.   | Name                      | Transition      | RT    | Resp.        |  |  |
| Acetyl/fentanyl         | 323.2 -> 188... | 7/17/2018 11:11... | 6.408       | 20625               | 100.80   | 323.2 -> 105... | 44.49            | 32102   | Acetyl/fentanyl-D5        | 328.2 -> 105...     | 6.387 | 2167650 | Acetyl/fentanyl-D5        | 328.2 -> 105... | 6.387 | 2167650      |  |  |
| alpha-hydroxymidazol... | 342.1 -> 324... | 7/17/2018 11:11... | 6.467       | 80123               | Infinity | 342.1 -> 203... | 22600...         | 49522   | alpha-hydroxymidazolam... | 346.1 -> 328...     | 6.466 | 465859  | alpha-hydroxymidazolam... | 346.1 -> 328... | 6.466 | 465859       |  |  |
| Amtriptyline            | 278.2 -> 91.2   | 7/17/2018 11:11... | 6.699       | 180496              | Infinity | 278.2 -> 105... | Infinity         | 96211   | Amtriptyline-D3           | 281.2 -> 91.2       | 6.677 | 627634  | Amtriptyline-D3           | 281.2 -> 91.2   | 6.677 | 627634       |  |  |
| Acetyl/orfentanyl       | 219.1 -> 84.2   | 7/17/2018 11:11... | 4.978       | 8754                | 59.46    | 219.1 -> 56.3   | 31.96            | 2637    | Acetyl/orfentanyl-D5      | 224.2 -> 84.2       | 4.957 | 513217  | Acetyl/orfentanyl-D5      | 224.2 -> 84.2   | 4.957 | 513217       |  |  |
| Carbamazepine           | 237.1 -> 193... | 7/17/2018 11:11... | 6.137       | 29663               | 253.33   | 237.1 -> 194... | Infinity         | 2424... | Carbamazepine-13C6        | 243.1 -> 200...     | 6.136 | 1473642 | Carbamazepine-13C6        | 243.1 -> 200... | 6.136 | 1473642      |  |  |
| Chlordiazepoxide        | 300.1 -> 227... | 7/17/2018 11:11... | 6.613       | 38928               | 191.24   | 300.1 -> 282... | 63.47            | 20958   | Chlordiazepoxide-D5       | 305.1 -> 286...     | 6.593 | 391218  | Chlordiazepoxide-D5       | 305.1 -> 286... | 6.593 | 391218       |  |  |
| Sufentanil              | 387.2 -> 238... | 7/17/2018 11:11... | 6.948       | 30214               | 154.63   | 387.2 -> 111... | 415.08           | 26911   | Sufentanil-D5             | 392.2 -> 238...     | 6.927 | 1255694 | Sufentanil-D5             | 392.2 -> 238... | 6.927 | 1255694      |  |  |
| Desipramine             | 267.2 -> 72.3   | 7/17/2018 11:11... | 6.499       | 320082              | Infinity | 267.2 -> 44.3   | Infinity         | 1586... | Desipramine-D3            | 270.2 -> 75.3       | 6.499 | 1629640 | Desipramine-D3            | 270.2 -> 75.3   | 6.499 | 1629640      |  |  |
| Doxepin                 | 280.2 -> 107... | 7/17/2018 11:11... | 6.415       | 139340              | 175.71   | 280.2 -> 77.2   | Infinity         | 49494   | Doxepin-D3                | 283.2 -> 107...     | 6.394 | 809920  | Doxepin-D3                | 283.2 -> 107... | 6.394 | 809920       |  |  |
| Estazolam               | 295.1 -> 267... | 7/17/2018 11:11... | 6.413       | 61148               | 588.72   | 295.1 -> 205... | 365.72           | 55823   | Estazolam-D5              | 300.1 -> 272...     | 6.391 | 338317  | Estazolam-D5              | 300.1 -> 272... | 6.391 | 338317       |  |  |
| Funitrazepam            | 314.1 -> 268... | 7/17/2018 11:11... | 6.450       | 58128               | 248.04   | 314.1 -> 239... | 7416.56          | 22124   | Funitrazepam-D7           | 321.1 -> 245...     | 6.429 | 13661   | Funitrazepam-D7           | 321.1 -> 245... | 6.429 | 13661        |  |  |
| Flurazepam              | 388.2 -> 315... | 7/17/2018 11:11... | 6.606       | 189261              | 1349.51  | 388.2 -> 317... | 17201...         | 46607   | Zopiclone-D4              | 393.1 -> 244...     | 6.423 | 301339  | Zopiclone-D4              | 393.1 -> 244... | 6.423 | 301339       |  |  |
| Imipramine              | 281.2 -> 86.2   | 7/17/2018 11:11... | 6.637       | 443314              | 167.93   | 281.2 -> 58.3   | Infinity         | 2544... | Imipramine-D3             | 284.2 -> 61.3       | 6.616 | 1408153 | Imipramine-D3             | 284.2 -> 61.3   | 6.616 | 1408153      |  |  |
| Levamisole              | 205.1 -> 91.2   | 7/17/2018 11:11... | 5.570       | 55695               | Infinity | 205.1 -> 178... | Infinity         | 43593   | Sufentanil-D5             | 392.2 -> 238...     | 6.927 | 1255694 | Sufentanil-D5             | 392.2 -> 238... | 6.927 | 1255694      |  |  |
| Maprotiline             | 278.2 -> 91.2   | 7/17/2018 11:11... | 6.699       | 180496              | Infinity | 278.2 -> 117... | Infinity         | 59428   | Amtriptyline-D3           | 281.2 -> 91.2       | 6.677 | 627634  | Amtriptyline-D3           | 281.2 -> 91.2   | 6.677 | 627634       |  |  |
| MDA                     | 180.1 -> 163... | 7/17/2018 11:11... | 5.085       | 39964               | Infinity | 180.1 -> 105... | Infinity         | 33491   | MDA-D5                    | 185.1 -> 168...     | 5.064 | 256653  | MDA-D5                    | 185.1 -> 168... | 5.064 | 256653       |  |  |
| MDEA                    | 208.1 -> 163... | 7/17/2018 11:11... | 5.366       | 92556               | 818.72   | 208.1 -> 105... | 65.30            | 76376   | MDEA-D6                   | 214.2 -> 166...     | 5.345 | 544946  | MDEA-D6                   | 214.2 -> 166... | 5.345 | 544946       |  |  |
| MDMA                    | 194.1 -> 163... | 7/17/2018 11:11... | 5.205       | 74487               | Infinity | 194.1 -> 105... | Infinity         | 50259   | MDMA-D6                   | 200.2 -> 166...     | 5.205 | 49387   | MDMA-D6                   | 200.2 -> 166... | 5.205 | 49387        |  |  |
| Meperidine              | 248.2 -> 220... | 7/17/2018 11:11... | 5.952       | 67143               | 44.06    | 248.2 -> 174... | 73.80            | 36615   | Meperidine-D4             | 252.2 -> 224...     | 5.931 | 385816  | Meperidine-D4             | 252.2 -> 224... | 5.931 | 385816       |  |  |
| Methylphenidate         | 234.2 -> 84.2   | 7/17/2018 11:11... | 5.751       | 312253              | Infinity | 234.2 -> 56.3   | 140.63           | 77554   | Meperidine-D4             | 252.2 -> 224...     | 5.931 | 385816  | Meperidine-D4             | 252.2 -> 224... | 5.931 | 385816       |  |  |
| Midazolam               | 326.1 -> 223... | 7/17/2018 11:11... | 6.651       | 28692               | 12726... | 326.1 -> 249... | 146.77           | 25278   | Midazolam-D4              | 330.1 -> 295...     | 6.630 | 496607  | Midazolam-D4              | 330.1 -> 295... | 6.630 | 496607       |  |  |
| Normeperidine           | 234.1 -> 42.3   | 7/17/2018 11:11... | 5.731       | 77371               | Infinity | 234.1 -> 160... | 652.22           | 52728   | Normeperidine-D4          | 238.2 -> 164...     | 5.708 | 283665  | Normeperidine-D4          | 238.2 -> 164... | 5.708 | 283665       |  |  |
| 7-Aminoflunitrazepam    | 284.1 -> 135... | 7/17/2018 11:11... | 5.721       | 38364               | 592.89   | 284.1 -> 93.2   | 26.60            | 14450   | 7-aminoflunitrazepam-D7   | 291.2 -> 138...     | 5.700 | 226398  | 7-aminoflunitrazepam-D7   | 291.2 -> 138... | 5.700 | 226398       |  |  |
| Nortriptyline           | 264.2 -> 91.2   | 7/17/2018 11:11... | 6.540       | 109951              | Infinity | 264.2 -> 233... | Infinity         | 90563   | Nortriptyline-D3          | 267.2 -> 233...     | 6.539 | 420088  | Nortriptyline-D3          | 267.2 -> 233... | 6.539 | 420088       |  |  |
| Phenazepam              | 349.0 -> 206... | 7/17/2018 11:11... | 6.506       | 55704               | 5420.15  | 349.0 -> 183... | 1410.02          | 37179   | Phenazepam-D4             | 353.0 -> 183...     | 6.506 | 21677   | Phenazepam-D4             | 353.0 -> 183... | 6.506 | 21677        |  |  |
| Phencyclidine           | 244.2 -> 86.2   | 7/17/2018 11:11... | 6.054       | 182797              | 208.90   | 244.2 -> 91.1   | Infinity         | 1505... | Phencyclidine-D5          | 249.2 -> 86.2       | 6.054 | 1095534 | Phencyclidine-D5          | 249.2 -> 86.2   | 6.054 | 1095534      |  |  |
| Phenylethanolamine      | 253.1 -> 104... | 7/17/2018 11:11... | 6.033       | 3437                | Infinity | 253.1 -> 182... | 15.47            | 3550    | Phenylethanolamine-D10    | 263.2 -> 192...     | 6.012 | 19190   | Phenylethanolamine-D10    | 263.2 -> 192... | 6.012 | 19190        |  |  |
| Pseudoephedrine         | 166.1 -> 148... | 7/17/2018 11:11... | 4.723       | 606121              | 409.11   | 166.1 -> 133... | 60.37            | 1202... | Pseudoephedrine-D3        | 169.1 -> 151...     | 4.702 | 341790  | Pseudoephedrine-D3        | 169.1 -> 151... | 4.702 | 341790       |  |  |
| Tapentadol              | 222.2 -> 107... | 7/17/2018 11:11... | 5.569       | 148559              | Infinity | 222.2 -> 121... | 32.35            | 57639   | Tapentadol-D3             | 225.2 -> 107...     | 5.568 | 861032  | Tapentadol-D3             | 225.2 -> 107... | 5.568 | 861032       |  |  |
| Zaleplon                | 306.1 -> 236... | 7/17/2018 11:11... | 6.227       | 73276               | 506.10   | 306.1 -> 264... | 376.34           | 53471   | Zaleplon-D4               | 310.2 -> 240...     | 6.227 | 317189  | Zaleplon-D4               | 310.2 -> 240... | 6.227 | 317189       |  |  |
| Zopiclone               | 389.1 -> 244... | 7/17/2018 11:11... | 6.423       | 21209               | 312.24   | 389.1 -> 216... | 37.08            | 12261   | Zopiclone-D4              | 393.1 -> 244...     | 6.423 | 301339  | Zopiclone-D4              | 393.1 -> 244... | 6.423 | 301339       |  |  |

| Compound Method         |                 |                    | p2 negative control | p2 negative control Results |     |                  | ISTD Method |      |                            | ISTD Results    |       |          |
|-------------------------|-----------------|--------------------|---------------------|-----------------------------|-----|------------------|-------------|------|----------------------------|-----------------|-------|----------|
| Name                    | Transition      | Acq. Date-Time     | RT                  | Resp.                       | S/N | Qualifier 1 M... | S/N         | Area | Name                       | Transition      | RT    | Resp.    |
| Acetylfentanyl          | 323.2 -> 188... | 7/17/2018 11:30 AM |                     |                             |     | 323.2 -> 105...  |             |      | Acetylfentanyl-D5          | 328.2 -> 105... | 6.407 | 22269... |
| alpha-hydroxymidazol... | 342.1 -> 324... | 7/17/2018 11:30 AM |                     |                             |     | 342.1 -> 203...  |             |      | alpha-hydroxymidazolam-... | 346.1 -> 328... | 6.466 | 502728   |
| Amtripyline             | 278.2 -> 91.2   | 7/17/2018 11:30 AM |                     |                             |     | 278.2 -> 105...  |             |      | Amtripyline-D3             | 281.2 -> 91.2   | 6.697 | 653884   |
| Acetylornofentanyl      | 219.1 -> 84.2   | 7/17/2018 11:30 AM |                     |                             |     | 219.1 -> 56.3    |             |      | Acetylornofentanyl-D5      | 224.2 -> 84.2   | 4.957 | 553679   |
| Carbamazepine           | 237.1 -> 193... | 7/17/2018 11:30 AM |                     |                             |     | 237.1 -> 194...  |             |      | Carbamazepine-13C6         | 243.1 -> 200... | 6.136 | 14919... |
| Chlordiazepoxide        | 300.1 -> 227... | 7/17/2018 11:30 AM |                     |                             |     | 300.1 -> 282...  |             |      | Chlordiazepoxide-D5        | 305.1 -> 286... | 6.593 | 400997   |
| Sufentanil              | 387.2 -> 238... | 7/17/2018 11:30 AM |                     |                             |     | 387.2 -> 111...  |             |      | Sufentanil-D5              | 392.2 -> 238... | 6.927 | 13230... |
| Desipramine             | 267.2 -> 72.3   | 7/17/2018 11:30 AM |                     |                             |     | 267.2 -> 44.3    |             |      | Desipramine-D3             | 270.2 -> 75.3   | 6.499 | 17303... |
| Doxepin                 | 280.2 -> 107... | 7/17/2018 11:30 AM |                     |                             |     | 280.2 -> 77.2    |             |      | Doxepin-D3                 | 283.2 -> 107... | 6.394 | 842888   |
| Estazolam               | 295.1 -> 267... | 7/17/2018 11:30 AM |                     |                             |     | 295.1 -> 205...  |             |      | Estazolam-D5               | 300.1 -> 272... | 6.391 | 386848   |
| Flunitrazepam           | 314.1 -> 268... | 7/17/2018 11:30 AM |                     |                             |     | 314.1 -> 239...  |             |      | Flunitrazepam-D7           | 321.1 -> 245... | 6.429 | 16140    |
| Flurazepam              | 388.2 -> 315... | 7/17/2018 11:30 AM |                     |                             |     | 388.2 -> 317...  |             |      | Zopiclone-D4               | 393.1 -> 244... | 6.423 | 307185   |
| Imipramine              | 281.2 -> 86.2   | 7/17/2018 11:30 AM |                     |                             |     | 281.2 -> 58.3    |             |      | Imipramine-D3              | 284.2 -> 61.3   | 6.636 | 14627... |
| Levamisole              | 205.1 -> 91.2   | 7/17/2018 11:30 AM |                     |                             |     | 205.1 -> 178...  |             |      | Sufentanil-D5              | 392.2 -> 238... | 6.927 | 13230... |
| Maprotiline             | 278.2 -> 91.2   | 7/17/2018 11:30 AM |                     |                             |     | 278.2 -> 117...  |             |      | Amtripyline-D3             | 281.2 -> 91.2   | 6.697 | 653884   |
| MDA                     | 180.1 -> 163... | 7/17/2018 11:30 AM |                     |                             |     | 180.1 -> 105...  |             |      | MDA-D5                     | 185.1 -> 168... | 5.064 | 268663   |
| MDEA                    | 208.1 -> 163... | 7/17/2018 11:30 AM |                     |                             |     | 208.1 -> 105...  |             |      | MDEA-D6                    | 214.2 -> 166... | 5.345 | 560594   |
| MDMA                    | 194.1 -> 163... | 7/17/2018 11:30 AM |                     |                             |     | 194.1 -> 105...  |             |      | MDEA-D6                    | 200.2 -> 166... | 5.205 | 48710    |
| Meperidine              | 248.2 -> 220... | 7/17/2018 11:30 AM |                     |                             |     | 248.2 -> 174...  |             |      | Meperidine-D4              | 252.2 -> 224... | 5.931 | 423985   |
| Methylphenidate         | 234.2 -> 84.2   | 7/17/2018 11:30 AM |                     |                             |     | 234.2 -> 56.3    |             |      | Meperidine-D4              | 252.2 -> 224... | 5.931 | 423985   |
| Midazolam               | 326.1 -> 223... | 7/17/2018 11:30 AM |                     |                             |     | 326.1 -> 249...  |             |      | Midazolam-D4               | 330.1 -> 295... | 6.630 | 540728   |
| Normeperidine           | 234.1 -> 42.3   | 7/17/2018 11:30 AM |                     |                             |     | 234.1 -> 160...  |             |      | Normeperidine-D4           | 238.2 -> 164... | 5.729 | 299608   |
| 7-Aminoflunitrazepam    | 284.1 -> 135... | 7/17/2018 11:30 AM |                     |                             |     | 284.1 -> 93.2    |             |      | 7-aminoflunitrazepam-D7    | 291.2 -> 138... | 5.700 | 266997   |
| Nortriptyline           | 264.2 -> 91.2   | 7/17/2018 11:30 AM |                     |                             |     | 264.2 -> 233...  |             |      | Nortriptyline-D3           | 267.2 -> 233... | 6.539 | 456328   |
| Phenazepam              | 349.0 -> 206... | 7/17/2018 11:30 AM |                     |                             |     | 349.0 -> 183...  |             |      | Phenazepam-D4              | 353.0 -> 183... | 6.506 | 27000    |
| Phencyclidine           | 244.2 -> 86.2   | 7/17/2018 11:30 AM |                     |                             |     | 244.2 -> 91.1    |             |      | Phencyclidine-D5           | 249.2 -> 86.2   | 6.054 | 12029... |
| Phenytoln               | 253.1 -> 104... | 7/17/2018 11:30 AM |                     |                             |     | 253.1 -> 182...  |             |      | Phenytoln-D10              | 263.2 -> 192... | 6.012 | 20175    |
| Pseudoephedrine         | 166.1 -> 148... | 7/17/2018 11:30 AM |                     |                             |     | 166.1 -> 133...  |             |      | Pseudoephedrine-D3         | 169.1 -> 151... | 4.702 | 358597   |
| Tapentadol              | 222.2 -> 107... | 7/17/2018 11:30 AM |                     |                             |     | 222.2 -> 121...  |             |      | Tapentadol-D3              | 225.2 -> 107... | 5.568 | 884474   |
| Zaleplon                | 306.1 -> 236... | 7/17/2018 11:30 AM |                     |                             |     | 306.1 -> 264...  |             |      | Zaleplon-D4                | 310.2 -> 240... | 6.227 | 327578   |
| Zopiclone               | 389.1 -> 244... | 7/17/2018 11:30 AM |                     |                             |     | 389.1 -> 216...  |             |      | Zopiclone-D4               | 393.1 -> 244... | 6.423 | 307185   |

| Compound Method         | p2 external control |                      |       |        | p2 external control Results |                  |            |         | ISTD Method |                            |                 |       |          |
|-------------------------|---------------------|----------------------|-------|--------|-----------------------------|------------------|------------|---------|-------------|----------------------------|-----------------|-------|----------|
| Name                    | Transition          | Acq. Date-Time       | RT    | Resp.  | S/N                         | Qualifier 1 M... | Transition | S/N     | Area        | Name                       | Transition      | RT    | Resp.    |
| Acetylfentanyl          | 323.2 -> 188...     | 7/17/2018 11:50 A... |       |        |                             | 323.2 -> 105...  |            |         |             | Acetylfentanyl-D5          | 328.2 -> 105... | 6.407 | 21345... |
| alpha-hydroxymidazol... | 342.1 -> 324...     | 7/17/2018 11:50 A... |       |        |                             | 342.1 -> 203...  |            |         |             | alpha-hydroxymidazolam-... | 346.1 -> 328... | 6.466 | 484011   |
| Amtripyline             | 278.2 -> 91.2       | 7/17/2018 11:50 A... |       |        |                             | 278.2 -> 105...  |            |         |             | Amtripyline-D3             | 281.2 -> 91.2   | 6.880 | 31301    |
| Acetylornfantanyl       | 219.1 -> 84.2       | 7/17/2018 11:50 A... |       |        |                             | 219.1 -> 56.3    |            |         |             | Acetylornfantanyl-D5       | 224.2 -> 84.2   | 4.957 | 505702   |
| Carbamazepine           | 237.1 -> 193...     | 7/17/2018 11:50 A... |       |        |                             | 237.1 -> 194...  |            |         |             | Carbamazepine-13C6         | 243.1 -> 200... | 6.136 | 14128... |
| Chlordiazepoxide        | 300.1 -> 227...     | 7/17/2018 11:50 A... |       |        |                             | 300.1 -> 282...  |            |         |             | Chlordiazepoxide-D5        | 305.1 -> 286... | 6.593 | 380457   |
| Sufentanil              | 387.2 -> 238...     | 7/17/2018 11:50 A... |       |        |                             | 387.2 -> 111...  |            |         |             | Sufentanil-D5              | 392.2 -> 238... | 6.927 | 12878... |
| Desipramine             | 267.2 -> 72.3       | 7/17/2018 11:50 A... |       |        |                             | 267.2 -> 44.3    |            |         |             | Desipramine-D3             | 270.2 -> 75.3   | 6.499 | 16701... |
| Doxepin                 | 280.2 -> 107...     | 7/17/2018 11:50 A... |       |        |                             | 280.2 -> 77.2    |            |         |             | Doxepin-D3                 | 283.2 -> 107... | 6.414 | 819694   |
| Estazolam               | 295.1 -> 267...     | 7/17/2018 11:50 A... |       |        |                             | 295.1 -> 205...  |            |         |             | Estazolam-D5               | 300.1 -> 272... | 6.411 | 365783   |
| Flunitrazepam           | 314.1 -> 268...     | 7/17/2018 11:50 A... |       |        |                             | 314.1 -> 239...  |            |         |             | Flunitrazepam-D7           | 321.1 -> 245... | 6.429 | 14550    |
| Flurazepam              | 388.2 -> 315...     | 7/17/2018 11:50 A... |       |        |                             | 388.2 -> 317...  |            |         |             | Zopiclone-D4               | 393.1 -> 244... | 6.423 | 220461   |
| Imipramine              | 281.2 -> 86.2       | 7/17/2018 11:50 A... |       |        |                             | 281.2 -> 58.3    |            |         |             | Imipramine-D3              | 284.2 -> 61.3   | 6.636 | 14463... |
| Levamisole              | 205.1 -> 91.2       | 7/17/2018 11:50 A... |       |        |                             | 205.1 -> 178...  |            |         |             | Sufentanil-D5              | 392.2 -> 238... | 6.927 | 12878... |
| Maprotiline             | 278.2 -> 91.2       | 7/17/2018 11:50 A... | 6.760 | 8699   | 5.80                        | 278.2 -> 117...  |            |         |             | Amtripyline-D3             | 281.2 -> 91.2   | 6.880 | 31301    |
| MDA                     | 180.1 -> 163...     | 7/17/2018 11:50 A... |       |        |                             | 180.1 -> 105...  |            |         |             | MDA-D5                     | 185.1 -> 168... | 5.064 | 249858   |
| MDEA                    | 208.1 -> 163...     | 7/17/2018 11:50 A... |       |        |                             | 208.1 -> 105...  |            |         |             | MDEA-D6                    | 214.2 -> 166... | 5.366 | 509185   |
| MDMA                    | 194.1 -> 163...     | 7/17/2018 11:50 A... |       |        |                             | 194.1 -> 105...  |            |         |             | MDMA-D6                    | 200.2 -> 166... | 5.205 | 45738    |
| Mepidine                | 248.2 -> 220...     | 7/17/2018 11:50 A... |       |        |                             | 248.2 -> 174...  |            |         |             | Mepidine-D4                | 252.2 -> 224... | 5.931 | 418466   |
| Methylphenidate         | 234.2 -> 84.2       | 7/17/2018 11:50 A... |       |        |                             | 234.2 -> 56.3    |            |         |             | Mepidine-D4                | 252.2 -> 224... | 5.931 | 418466   |
| Midazolam               | 326.1 -> 223...     | 7/17/2018 11:50 A... |       |        |                             | 326.1 -> 249...  |            |         |             | Midazolam-D4               | 330.1 -> 295... | 6.630 | 500119   |
| Normeperidine           | 234.1 -> 42.3       | 7/17/2018 11:50 A... |       |        |                             | 234.1 -> 160...  |            |         |             | Normeperidine-D4           | 238.2 -> 164... | 5.729 | 266372   |
| 7-Aminoflunitrazepam    | 284.1 -> 135...     | 7/17/2018 11:50 A... |       |        |                             | 284.1 -> 93.2    |            |         |             | 7-aminoflunitrazepam-D7    | 291.2 -> 138... | 5.700 | 275248   |
| Nortriptyline           | 264.2 -> 91.2       | 7/17/2018 11:50 A... | 6.540 | 986137 | 1344.83                     | 264.2 -> 233...  | 1404...    | 8653... |             | Nortriptyline-D3           | 267.2 -> 233... | 6.539 | 450154   |
| Phenazepam              | 349.0 -> 206...     | 7/17/2018 11:50 A... |       |        |                             | 349.0 -> 183...  |            |         |             | Phenazepam-D4              | 353.0 -> 183... | 6.506 | 23480    |
| Phencyclidine           | 244.2 -> 86.2       | 7/17/2018 11:50 A... |       |        |                             | 244.2 -> 91.1    |            |         |             | Phencyclidine-D5           | 249.2 -> 86.2   | 6.054 | 12588... |
| Phenytol                | 253.1 -> 104...     | 7/17/2018 11:50 A... |       |        |                             | 253.1 -> 182...  |            |         |             | Phenytol-D10               | 263.2 -> 192... | 6.032 | 19822    |
| Pseudoephedrine         | 166.1 -> 148...     | 7/17/2018 11:50 A... |       |        |                             | 166.1 -> 133...  |            |         |             | Pseudoephedrine-D3         | 169.1 -> 151... | 4.723 | 463793   |
| Tapentadol              | 222.2 -> 107...     | 7/17/2018 11:50 A... |       |        |                             | 222.2 -> 121...  |            |         |             | Tapentadol-D3              | 225.2 -> 107... | 5.568 | 859787   |
| Zaleplon                | 306.1 -> 236...     | 7/17/2018 11:50 A... |       |        |                             | 306.1 -> 264...  |            |         |             | Zaleplon-D4                | 310.2 -> 240... | 6.227 | 310185   |
| Zopiclone               | 389.1 -> 244...     | 7/17/2018 11:50 A... |       |        |                             | 389.1 -> 216...  |            |         |             | Zopiclone-D4               | 393.1 -> 244... | 6.423 | 220461   |

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

Extraction Date: 7-17-18

Analyst: Anne Nore

Plate lot#: 0515037

Plate Expiration: 9/28/2018

**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:** 17J20718

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

**LCMS-QQQ ID:** 62340

## 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.
- 3. Create worklist:

## Analytic:

- 1. Remove standards, plate, controls, and samples from cold storage. Allow to reach room temperature.
- 2. Pipette **1000 µL blood (calibrated pipette) Pipette ID: k52558** in wells of analytical (standards) plate.
  - Blank blood for locations containing standards/QCs and internal standards
  - Sample blood for locations containing only internal standards
- 3. Place on shaking incubator at ambient temp., 900rpm for 15 minutes. *Shaker ID: 66759*
- 4. Pipette **500 µL 0.1% formic acid** in wells of analytical plate.
- 5. Place on shaking incubator at ambient temp., 900rpm for 15 minutes.
- 6. Transfer **800 µL of blood+base** mixture to corresponding wells of SLE+ plate.
- 7. Apply positive pressure for approx. 4 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 750uL).
- 10. Wait 5 minutes.
- 11. Apply positive pressure for approx. 15 seconds. *(10-15 PSI- Selector to the left).*
- 12. Add **2.25 mL 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: 66819*
- 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.  
Worklist path: 071718 AM 25-26 Batch Name: can screen
- 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 +/- .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:

# ISP FORENSICS - Cd'A Instrument #62340

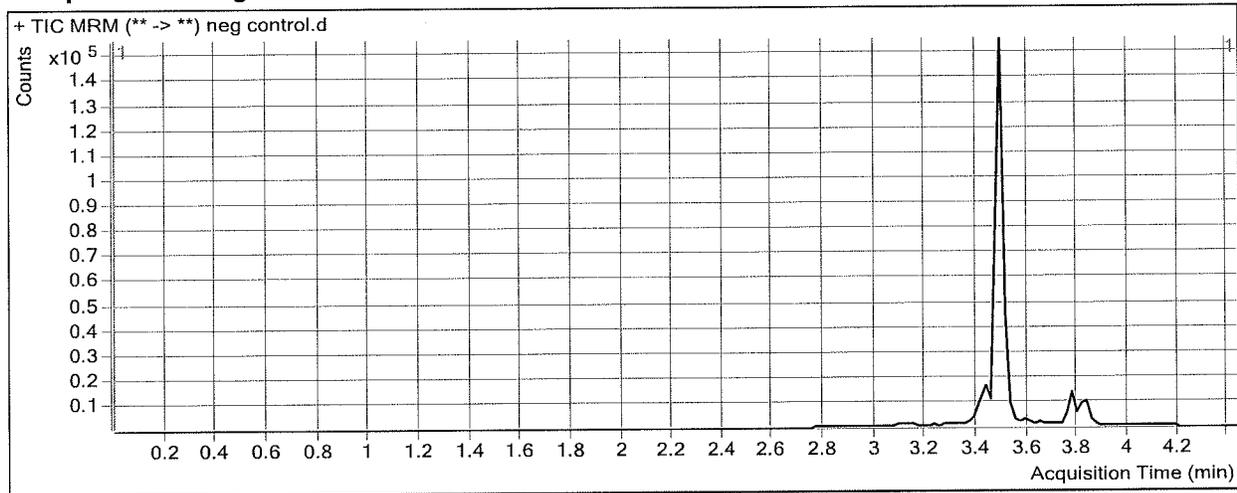
## Cannabinoid Screen Report

**Batch Data Path** D:\2018 Data\071718 AM 25-26\QuantResults\cann screen.batch.bin  
**Analysis Time** 7/18/2018 8:03 AM **Analyst Name** ISP Tox  
**Report Time** 7/19/2018 9:19 AM **Reporter Name** ISP Tox  
**Last Calib Update** 7/18/2018 8:03 AM **Batch State** Processed

### Analysis Info

**Acq Time** 2018-07-17 18:10 **Data File** neg control.d  
**Sample Type** Sample **Sample Name** neg control  
**Dilution** 1 **Acq Method** Screen THC 8-2017.m  
**Position** P1-A2 **Sample Info**  
**Inj Vol** -1 **Comment** AM 26 Cannabinoid screen

### Sample Chromatogram



# ISP FORENSICS - Cd'A Instrument #62340

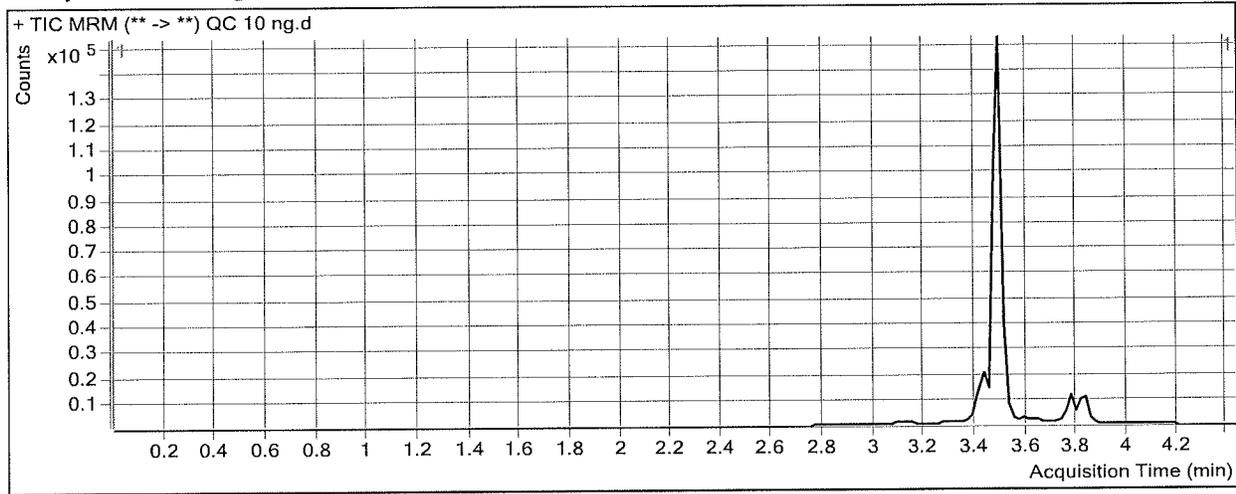
## Cannabinoid Screen Report

**Batch Data Path** D:\2018 Data\071718 AM 25-26\QuantResults\cann screen.batch.bin  
**Analysis Time** 7/18/2018 8:03 AM **Analyst Name** ISP Tox  
**Report Time** 7/19/2018 9:19 AM **Reporter Name** ISP Tox  
**Last Calib Update** 7/18/2018 8:03 AM **Batch State** Processed

### Analysis Info

**Acq Time** 2018-07-17 17:57 **Data File** QC 10 ng.d  
**Sample Type** QC **Sample Name** QC 10 ng  
**Dilution** 1 **Acq Method** Screen THC 8-2017.m  
**Position** P1-H1 **Sample Info**  
**Inj Vol** -1 **Comment** AM 26 Cannabinoid screen

### Sample Chromatogram



### Results

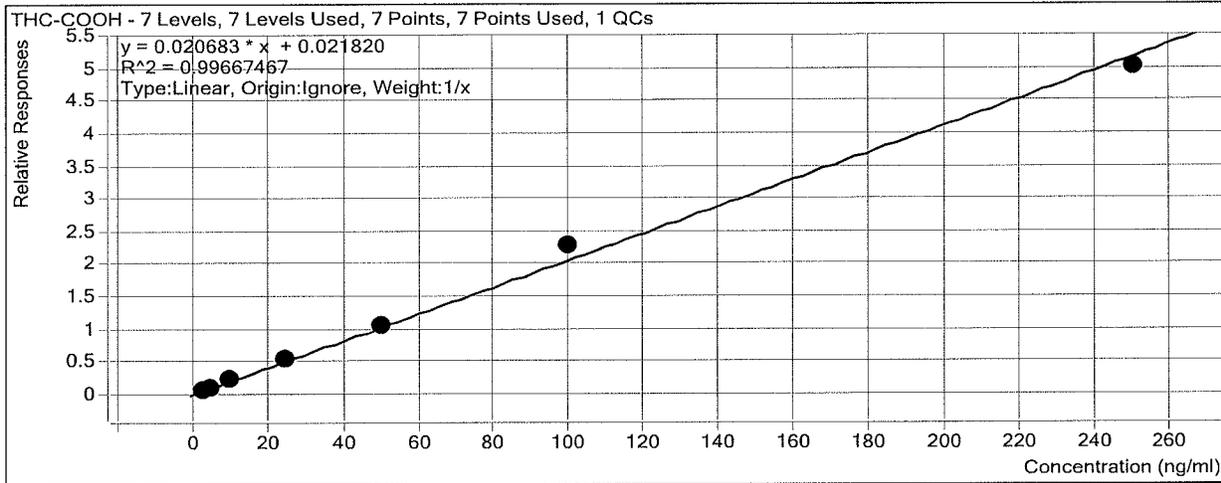
| Compound | RT    | Response | ISTD Resp | Resp Ratio | Final Conc |
|----------|-------|----------|-----------|------------|------------|
| THC-COOH | 3.426 | 11563    | 42920     | 0.2694     | 11.9700    |
| THC-OH   | 3.493 | 33205    | 316953    | 0.1048     | 9.9979     |
| THC      | 3.840 | 2283     | 20437     | 0.1117     | 9.5555     |

# ISP Forensics Calibration Curve Report

**Batch Data Path**  
**Last Calib Update**

D:\2018 Data\071718 AM 25-26\QuantResults\cann screen.batch.bin  
7/18/2018 8:03 AM **Analyst Name** ISP TOX

**Target Compound** *THC-COOH*  
**Internal Standard** *THC-COOH-d9*



| Sample        | Level | Enabled                             | Exp Conc | Final Conc | Accuracy |
|---------------|-------|-------------------------------------|----------|------------|----------|
| cal 1 - 3ng   | 1     | <input checked="" type="checkbox"/> | 3        | 3.0        | 98.4     |
| cal 2 - 5ng   | 2     | <input checked="" type="checkbox"/> | 5        | 4.5        | 90.1     |
| cal 3 - 10ng  | 3     | <input checked="" type="checkbox"/> | 10       | 10.7       | 107.3    |
| QC 10 ng      | 3     | <input checked="" type="checkbox"/> | 10       | 12.0       | 119.7    |
| cal 4 - 25ng  | 4     | <input checked="" type="checkbox"/> | 25       | 24.8       | 99.1     |
| cal 5 - 50ng  | 5     | <input checked="" type="checkbox"/> | 50       | 49.7       | 99.5     |
| cal 6 - 100ng | 6     | <input checked="" type="checkbox"/> | 100      | 109.1      | 109.1    |
| cal 7 - 250ng | 7     | <input checked="" type="checkbox"/> | 250      | 241.2      | 96.5     |

# ISP Forensics Calibration Curve Report

**Batch Data Path**  
**Last Calib Update**

D:\2018 Data\071718 AM 25-26\QuantResults\cann screen.batch.bin

7/18/2018 8:03 AM

**Analyst Name**

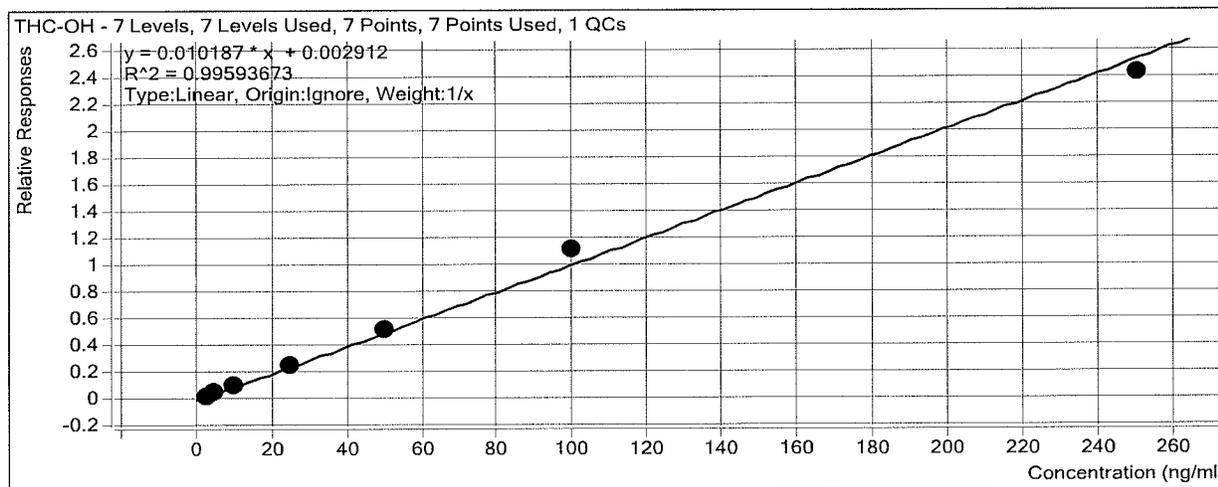
ISP TOX

**Target Compound**

THC-OH

**Internal Standard**

THC-OH-d3



| Sample        | Level | Enabled                             | Exp Conc | Final Conc | Accuracy |
|---------------|-------|-------------------------------------|----------|------------|----------|
| cal 1 - 3ng   | 1     | <input checked="" type="checkbox"/> | 3        | 2.8        | 92.6     |
| cal 2 - 5ng   | 2     | <input checked="" type="checkbox"/> | 5        | 4.7        | 94.8     |
| cal 3 - 10ng  | 3     | <input checked="" type="checkbox"/> | 10       | 10.3       | 103.0    |
| QC 10 ng      | 3     | <input checked="" type="checkbox"/> | 10       | 10.0       | 100.0    |
| cal 4 - 25ng  | 4     | <input checked="" type="checkbox"/> | 25       | 25.3       | 101.1    |
| cal 5 - 50ng  | 5     | <input checked="" type="checkbox"/> | 50       | 51.8       | 103.5    |
| cal 6 - 100ng | 6     | <input checked="" type="checkbox"/> | 100      | 109.5      | 109.5    |
| cal 7 - 250ng | 7     | <input checked="" type="checkbox"/> | 250      | 238.6      | 95.5     |

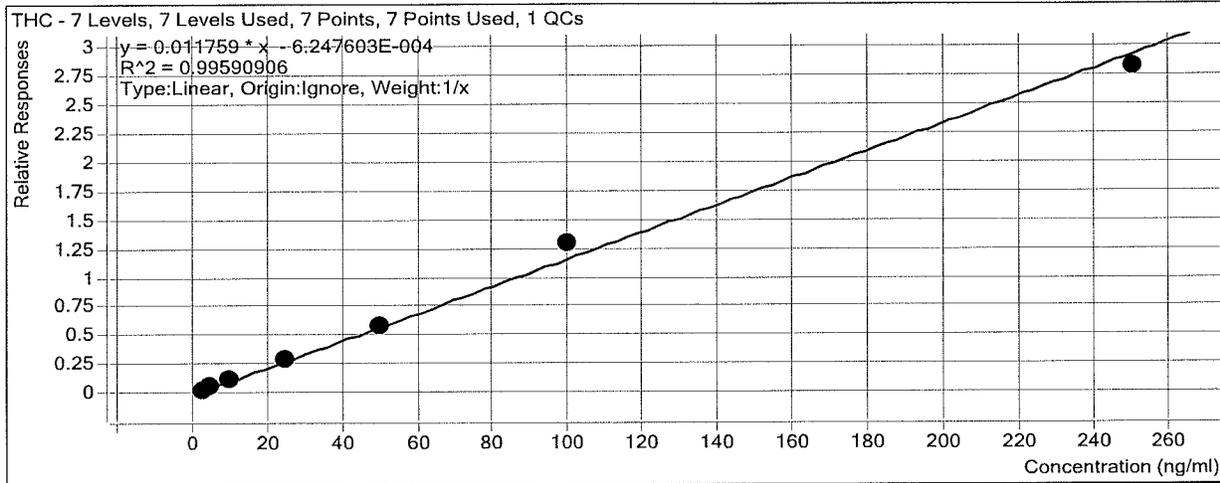
# ISP Forensics Calibration Curve Report

**Batch Data Path**  
**Last Calib Update**

D:\2018 Data\071718 AM 25-26\QuantResults\cann screen.batch.bin  
7/18/2018 8:03 AM

**Analyst Name**      ISP TOX

**Target Compound**      *THC*  
**Internal Standard**      *THC-d3*



| Sample        | Level | Enabled                             | Exp Conc | Final Conc | Accuracy |
|---------------|-------|-------------------------------------|----------|------------|----------|
| cal 1 - 3ng   | 1     | <input checked="" type="checkbox"/> | 3        | 2.9        | 96.3     |
| cal 2 - 5ng   | 2     | <input checked="" type="checkbox"/> | 5        | 4.8        | 96.8     |
| cal 3 - 10ng  | 3     | <input checked="" type="checkbox"/> | 10       | 10.1       | 100.5    |
| QC 10 ng      | 3     | <input checked="" type="checkbox"/> | 10       | 9.6        | 95.6     |
| cal 4 - 25ng  | 4     | <input checked="" type="checkbox"/> | 25       | 24.8       | 99.3     |
| cal 5 - 50ng  | 5     | <input checked="" type="checkbox"/> | 50       | 50.4       | 100.8    |
| cal 6 - 100ng | 6     | <input checked="" type="checkbox"/> | 100      | 110.4      | 110.4    |
| cal 7 - 250ng | 7     | <input checked="" type="checkbox"/> | 250      | 239.6      | 95.8     |

# ISP FORENSICS - Cd'A Instrument #62340

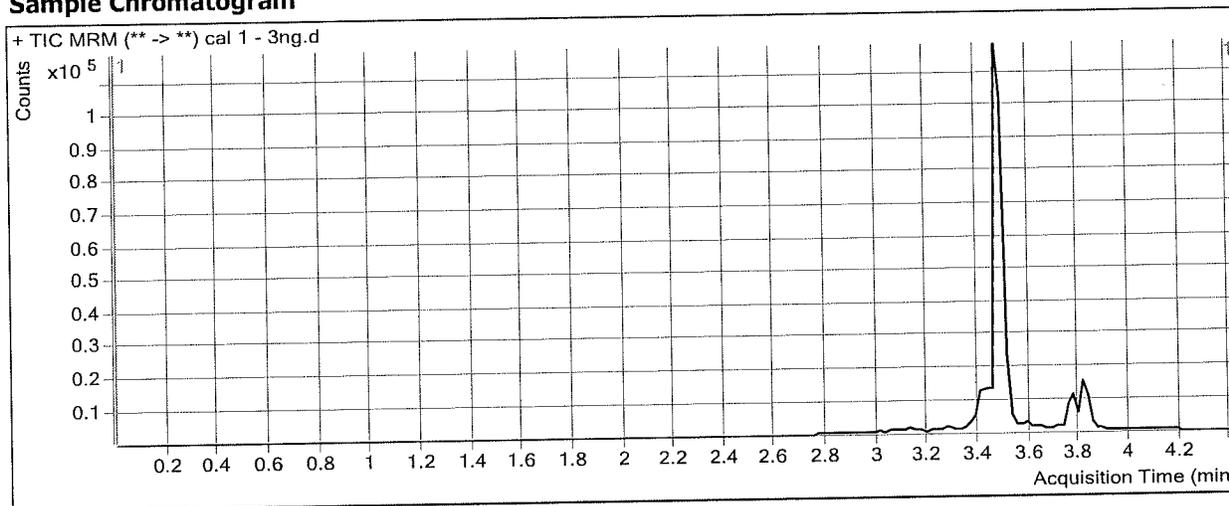
## Cannabinoid Screen Report

**Batch Data Path** D:\2018 Data\071718 AM 25-26\QuantResults\cann screen.batch.bin  
**Analysis Time** 7/18/2018 8:03 AM **Analyst Name** ISP Tox  
**Report Time** 7/19/2018 9:19 AM **Reporter Name** ISP Tox  
**Last Calib Update** 7/18/2018 8:03 AM **Batch State** Processed

### Analysis Info

**Acq Time** 2018-07-17 17:04 **Data File** cal 1 - 3ng.d  
**Sample Type** Calibration **Sample Name** cal 1 - 3ng  
**Dilution** 1 **Acq Method** Screen THC 8-2017.m  
**Position** p1-a1 **Sample Info**  
**Inj Vol** -1 **Comment** AM 26 Cannabinoid screen

### Sample Chromatogram



### Results

| Compound | RT    | Response | ISTD Resp | Resp Ratio | Final Conc |
|----------|-------|----------|-----------|------------|------------|
| THC-COOH | 3.426 | 3145     | 37962     | 0.0829     | 2.9508     |
| THC-OH   | 3.493 | 8880     | 284554    | 0.0312     | 2.7776     |
| THC      | 3.820 | 1022     | 30622     | 0.0334     | 2.8904     |

# ISP FORENSICS - Cd'A Instrument #62340

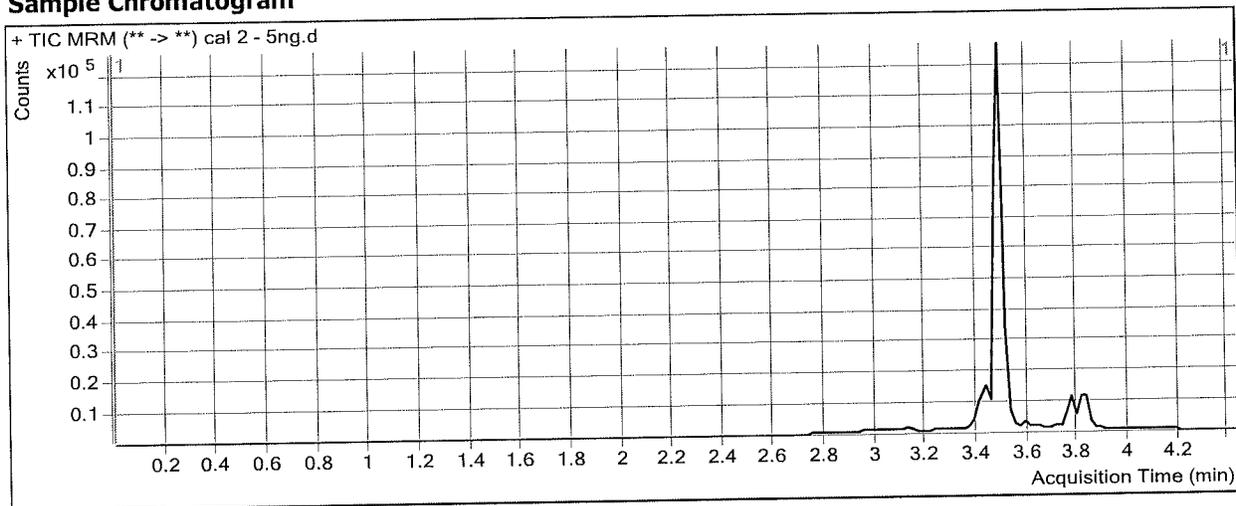
## Cannabinoid Screen Report

|                          |   |                      |           |
|--------------------------|---|----------------------|-----------|
| <b>Batch Data Path</b>   | D:\2018 Data\071718 AM 25-26\QuantResults\cann screen.batch.bin | <b>Analyst Name</b>  | ISP Tox   |
| <b>Analysis Time</b>     | 7/18/2018 8:03 AM   | <b>Reporter Name</b> | ISP Tox   |
| <b>Report Time</b>       | 7/19/2018 9:19 AM   | <b>Batch State</b>   | Processed |
| <b>Last Calib Update</b> | 7/18/2018 8:03 AM   |                      |           |

### Analysis Info

|                    |                  |                    |                          |
|--------------------|------------------|--------------------|--------------------------|
| <b>Acq Time</b>    | 2018-07-17 17:11 | <b>Data File</b>   | cal 2 - 5ng.d            |
| <b>Sample Type</b> | Calibration      | <b>Sample Name</b> | cal 2 - 5ng              |
| <b>Dilution</b>    | 1                | <b>Acq Method</b>  | Screen THC 8-2017.m      |
| <b>Position</b>    | P1-B1            | <b>Sample Info</b> |                          |
| <b>Inj Vol</b>     | -1               | <b>Comment</b>     | AM 26 Cannabinoid screen |

### Sample Chromatogram



### Results

| Compound | RT    | Response | ISTD Resp | Resp Ratio | Final Conc |
|----------|-------|----------|-----------|------------|------------|
| THC-COOH | 3.426 | 4157     | 36137     | 0.1150     | 4.5073     |
| THC-OH   | 3.493 | 14278    | 278747    | 0.0512     | 4.7422     |
| THC      | 3.840 | 1336     | 23738     | 0.0563     | 4.8392     |

# ISP FORENSICS - Cd'A Instrument #62340

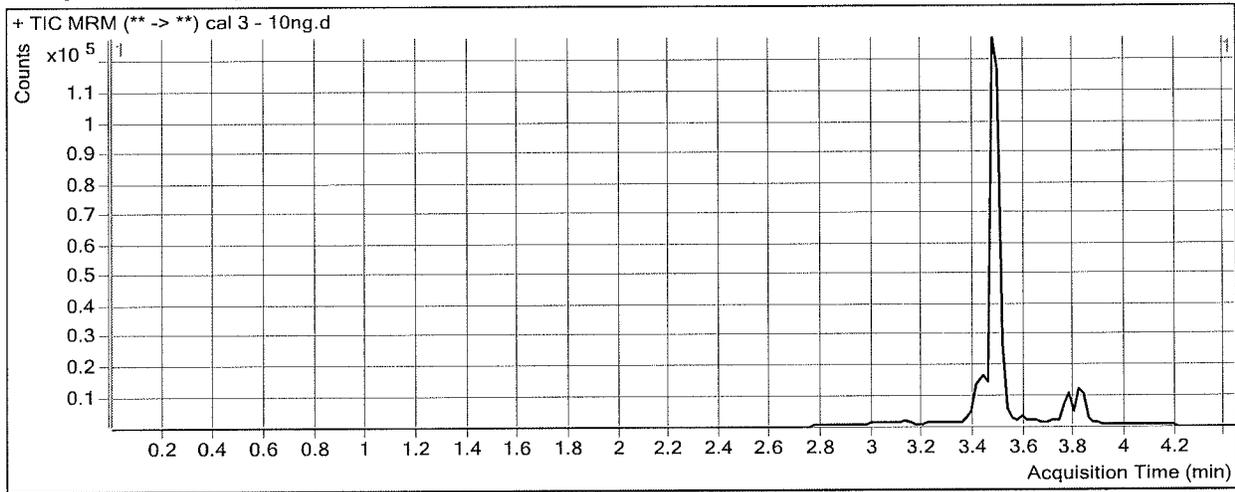
## Cannabinoid Screen Report

**Batch Data Path** D:\2018 Data\071718 AM 25-26\QuantResults\cann screen.batch.bin  
**Analysis Time** 7/18/2018 8:03 AM **Analyst Name** ISP Tox  
**Report Time** 7/19/2018 9:19 AM **Reporter Name** ISP Tox  
**Last Calib Update** 7/18/2018 8:03 AM **Batch State** Processed

### Analysis Info

**Acq Time** 2018-07-17 17:17 **Data File** cal 3 - 10ng.d  
**Sample Type** Calibration **Sample Name** cal 3 - 10ng  
**Dilution** 1 **Acq Method** Screen THC 8-2017.m  
**Position** p1-c1 **Sample Info**  
**Inj Vol** -1 **Comment** AM 26 Cannabinoid screen

### Sample Chromatogram



### Results

| Compound | RT    | Response | ISTD Resp | Resp Ratio | Final Conc |
|----------|-------|----------|-----------|------------|------------|
| THC-COOH | 3.426 | 9149     | 37521     | 0.2438     | 10.7343    |
| THC-OH   | 3.493 | 31312    | 290460    | 0.1078     | 10.2962    |
| THC      | 3.820 | 2767     | 23523     | 0.1176     | 10.0549    |

# ISP FORENSICS - Cd'A Instrument #62340

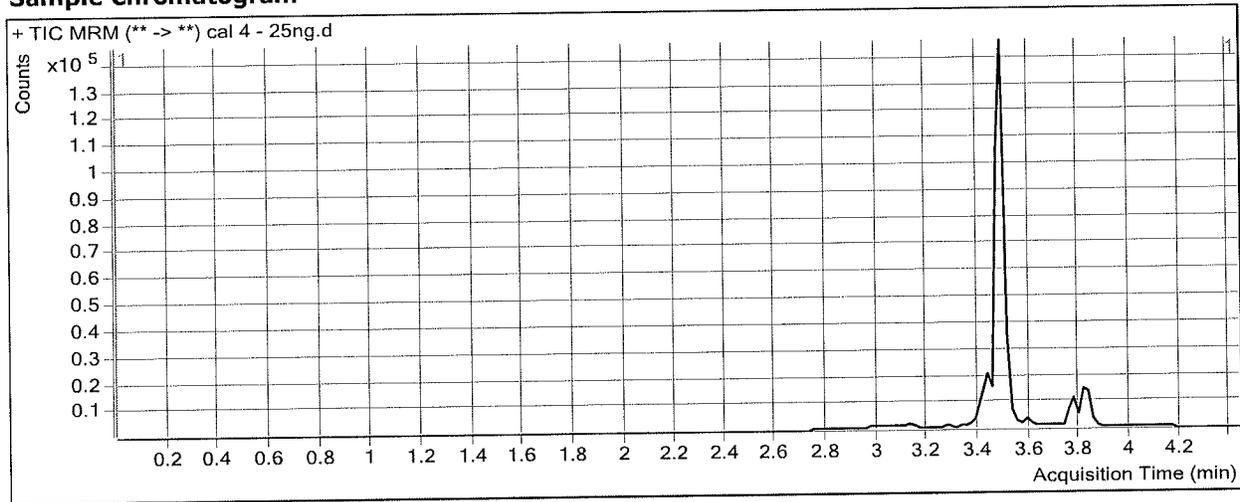
## Cannabinoid Screen Report

|                          |   |                      |           |
|--------------------------|---|----------------------|-----------|
| <b>Batch Data Path</b>   | D:\2018 Data\071718 AM 25-26\QuantResults\cann screen.batch.bin |                      |           |
| <b>Analysis Time</b>     | 7/18/2018 8:03 AM   | <b>Analyst Name</b>  | ISP Tox   |
| <b>Report Time</b>       | 7/19/2018 9:19 AM   | <b>Reporter Name</b> | ISP Tox   |
| <b>Last Calib Update</b> | 7/18/2018 8:03 AM   | <b>Batch State</b>   | Processed |

### Analysis Info

|                    |                  |                    |                          |
|--------------------|------------------|--------------------|--------------------------|
| <b>Acq Time</b>    | 2018-07-17 17:24 | <b>Data File</b>   | cal 4 - 25ng.d           |
| <b>Sample Type</b> | Calibration      | <b>Sample Name</b> | cal 4 - 25ng             |
| <b>Dilution</b>    | 1                | <b>Acq Method</b>  | Screen THC 8-2017.m      |
| <b>Position</b>    | P1-D1            | <b>Sample Info</b> |                          |
| <b>Inj Vol</b>     | -1               | <b>Comment</b>     | AM 26 Cannabinoid screen |

### Sample Chromatogram



### Results

| Compound | RT    | Response | ISTD Resp | Resp Ratio | Final Conc |
|----------|-------|----------|-----------|------------|------------|
| THC-COOH | 3.426 | 17440    | 32650     | 0.5342     | 24.7710    |
| THC-OH   | 3.493 | 69610    | 267298    | 0.2604     | 25.2781    |
| THC      | 3.820 | 7271     | 24969     | 0.2912     | 24.8182    |

# ISP FORENSICS - Cd'A Instrument #62340

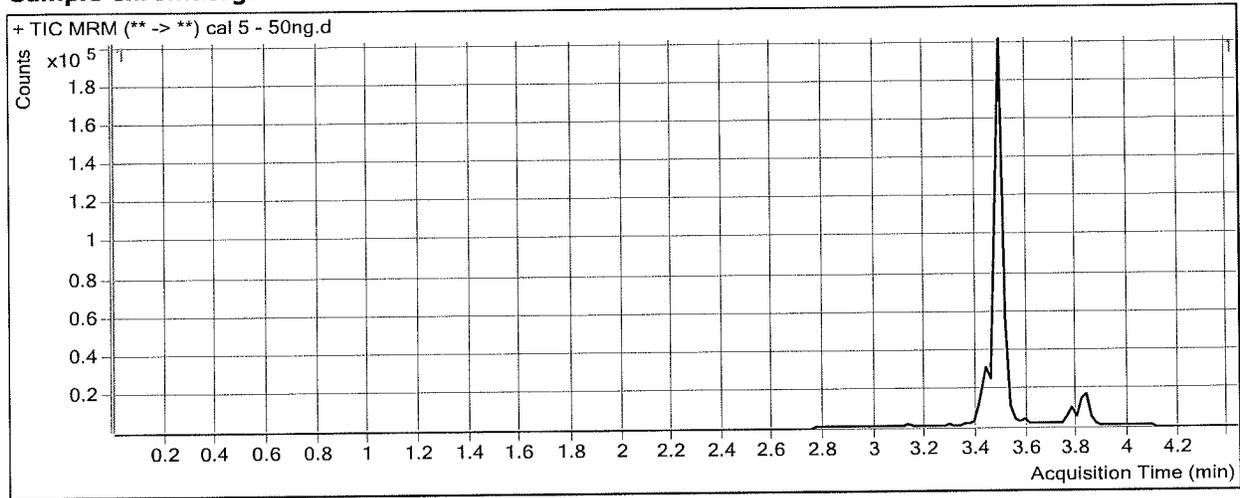
## Cannabinoid Screen Report

**Batch Data Path** D:\2018 Data\071718 AM 25-26\QuantResults\cann screen.batch.bin  
**Analysis Time** 7/18/2018 8:03 AM **Analyst Name** ISP Tox  
**Report Time** 7/19/2018 9:19 AM **Reporter Name** ISP Tox  
**Last Calib Update** 7/18/2018 8:03 AM **Batch State** Processed

### Analysis Info

|                    |                  |                    |                          |
|--------------------|------------------|--------------------|--------------------------|
| <b>Acq Time</b>    | 2018-07-17 17:31 | <b>Data File</b>   | cal 5 - 50ng.d           |
| <b>Sample Type</b> | Calibration      | <b>Sample Name</b> | cal 5 - 50ng             |
| <b>Dilution</b>    | 1                | <b>Acq Method</b>  | Screen THC 8-2017.m      |
| <b>Position</b>    | p1-e1            | <b>Sample Info</b> |                          |
| <b>Inj Vol</b>     | -1               | <b>Comment</b>     | AM 26 Cannabinoid screen |

### Sample Chromatogram



### Results

| Compound | RT    | Response | ISTD Resp | Resp Ratio | Final Conc |
|----------|-------|----------|-----------|------------|------------|
| THC-COOH | 3.426 | 37139    | 35348     | 1.0507     | 49.7428    |
| THC-OH   | 3.493 | 147685   | 278514    | 0.5303     | 51.7667    |
| THC      | 3.840 | 11984    | 20245     | 0.5920     | 50.3961    |

# ISP FORENSICS - Cd'A Instrument #62340

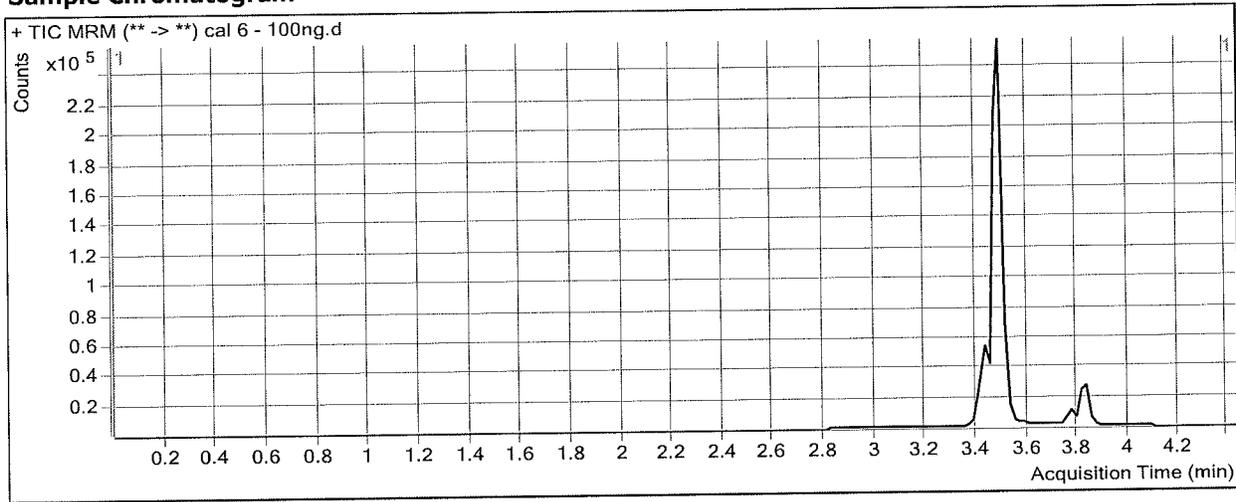
## Cannabinoid Screen Report

**Batch Data Path** D:\2018 Data\071718 AM 25-26\QuantResults\cann screen.batch.bin  
**Analysis Time** 7/18/2018 8:03 AM **Analyst Name** ISP Tox  
**Report Time** 7/19/2018 9:19 AM **Reporter Name** ISP Tox  
**Last Calib Update** 7/18/2018 8:03 AM **Batch State** Processed

### Analysis Info

**Acq Time** 2018-07-17 17:37 **Data File** cal 6 - 100ng.d  
**Sample Type** Calibration **Sample Name** cal 6 - 100ng  
**Dilution** 1 **Acq Method** Screen THC 8-2017.m  
**Position** P1-F1 **Sample Info**  
**Inj Vol** -1 **Comment** AM 26 Cannabinoid screen

### Sample Chromatogram



### Results

| Compound | RT    | Response | ISTD Resp | Resp Ratio | Final Conc |
|----------|-------|----------|-----------|------------|------------|
| THC-COOH | 3.426 | 81778    | 35891     | 2.2785     | 109.1075   |
| THC-OH   | 3.493 | 313659   | 280437    | 1.1185     | 109.5068   |
| THC      | 3.840 | 30332    | 23371     | 1.2978     | 110.4243   |

# ISP FORENSICS - Cd'A Instrument #62340

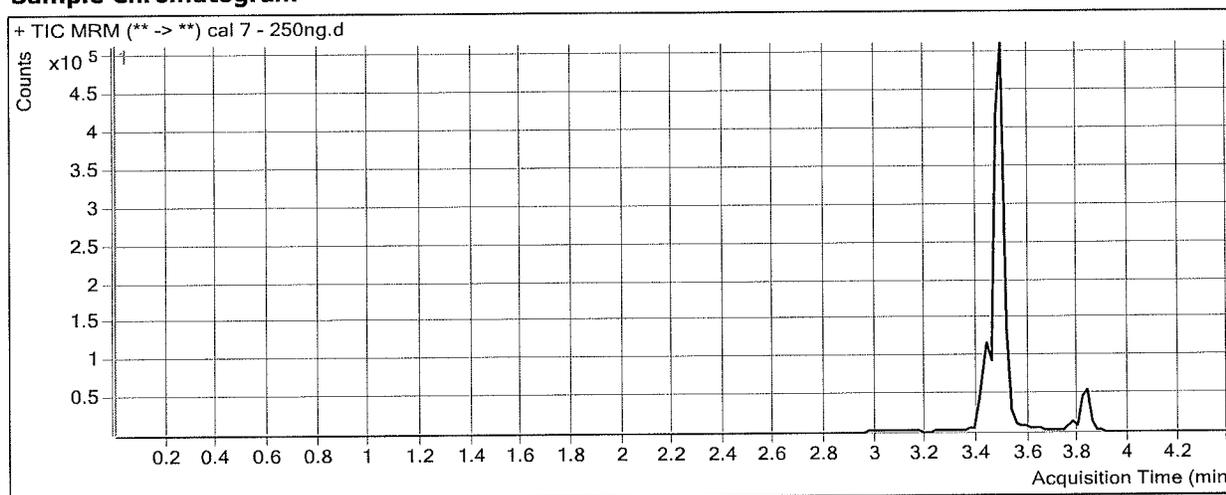
## Cannabinoid Screen Report

**Batch Data Path** D:\2018 Data\071718 AM 25-26\QuantResults\cann screen.batch.bin  
**Analysis Time** 7/18/2018 8:03 AM **Analyst Name** ISP Tox  
**Report Time** 7/19/2018 9:19 AM **Reporter Name** ISP Tox  
**Last Calib Update** 7/18/2018 8:03 AM **Batch State** Processed

### Analysis Info

|                    |                  |                    |                          |
|--------------------|------------------|--------------------|--------------------------|
| <b>Acq Time</b>    | 2018-07-17 17:44 | <b>Data File</b>   | cal 7 - 250ng.d          |
| <b>Sample Type</b> | Calibration      | <b>Sample Name</b> | cal 7 - 250ng            |
| <b>Dilution</b>    | 1                | <b>Acq Method</b>  | Screen THC 8-2017.m      |
| <b>Position</b>    | p1-g1            | <b>Sample Info</b> |                          |
| <b>Inj Vol</b>     | -1               | <b>Comment</b>     | AM 26 Cannabinoid screen |

### Sample Chromatogram



### Results

| Compound | RT    | Response | ISTD Resp | Resp Ratio | Final Conc |
|----------|-------|----------|-----------|------------|------------|
| THC-COOH | 3.426 | 206928   | 41300     | 5.0104     | 241.1863   |
| THC-OH   | 3.493 | 821397   | 337485    | 2.4339     | 238.6324   |
| THC      | 3.840 | 81982    | 29108     | 2.8165     | 239.5769   |