

**REVIEWED**

By Sarah Pickle at 1:45 pm, Dec 31, 2019



12/27/2019

**Worklist: 3915**

<u>LAB CASE</u>	<u>ITEM</u>	<u>ITEM TYPE</u>	<u>DESCRIPTION</u>	
C2019-2347	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
C2019-2349	2	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
C2019-2351	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
C2019-2361	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
C2019-2365	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
C2019-2394	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
C2019-2401	6	UCK	AM 25/AM 26 Urine MultiDrug/THC Screen by LC-QQQ	
C2019-2403	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
C2019-2408	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
C2019-2409	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
C2019-2428	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
C2019-2429	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
C2019-2432	1	UCK	AM 25/AM 26 Urine MultiDrug/THC Screen by LC-QQQ	
P2019-3807	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	

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

Extraction Date: 12/27/19  
Plate lot#: 190725

Analyst: Anne Nord  
Plate Expiration: 1/25/2020

**Mobile phase A:** 10mM Amm Form  
Ammonium Hydroxide

**Mobile phase B:** 0.1% Formic Acid in MeOH  
Ethyl Acetate LC Methanol

0.5M

**Blank Blood Lot:** 19H52275 **Blank Urine lot:** 11719 **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. **Urine samples add 50 ul 1% HCl in MeOH** 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? (If no is it described in comments?)
- 5. Central File Packet to include: LIMS Worklist, Method Checklist, Calibration and Control Reports

COMMENTS: *Buprenorphine not evaluated, outside acquisition window. Zopiclone not evaluated in urine samples and C2019-2409, due to poor IS response. The first time the blood external control was injected most retention times for the internal standards were out of tolerance, this injection was not evaluated, the blood external control was re-injected and evaluated.*

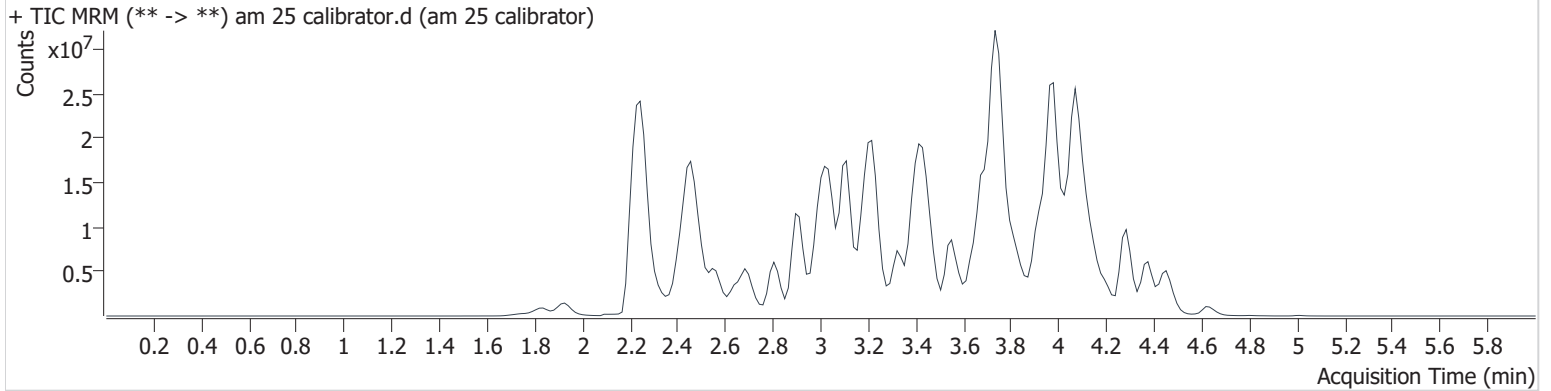
# AM #25 Multi-Drug Screen Results

**Batch results** D:\MassHunter\Data\2019\am 25-26\122719\QuantResults\mds1.batch.bin  
**Calibration Last Update** 12/30/2019 1:07:49 PM

**Instrument** 69679  
**Type** Cal  
**Acq. Method** am 25 short1.m  
**Sample Position** P2-B1  
**Injection Volume** 2.5  
**Acq. Date-Time** 12/28/2019 11:22:13 AM  
**Sample Info.**

**Data File** am 25 calibrator.d  
**Sample** am 25 calibrator  
**Operator** Anne Nord  
**Comment**

## Sample Chromatogram



Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
6-MAM	2.408	31064	7871.7	340.2	1149343	10.000
7-aminoclonazepam	3.249	925003	989.7	812.4	4195957	10.000
7-aminoflunitrazepam	3.477	1707257	10389.2	244.8	10370039	10.000
Acetyl Fentanyl	3.398	334405	171.0	415.1	22852989	10.000
Acetyl Norfentanyl	2.431	220911	136.4	101.2	13606387	10.000
a-hydroxyalprazolam	4.285	93463	108.6	81.9	516605	10.000
alpha-hydroxymidazolam	4.283	918881	665.4	432.6	6720665	10.000
alpha-PVP	3.118	3013493	438.1	669.6	14421203	10.000
Alprazolam	4.395	1151795	614.0	825.5	3858237	10.000
Amitriptyline	4.124	1828430	285.7	152.0	7210800	10.000
Amphetamine	2.437	1235920	188.0	180.4	4816847	10.000
Benzoyllecgonine	3.020	535795	496.0	269.8	2487621	10.000
Bupropion	3.346	2843825	5596.9	1091.6	10670341	10.000
Carbamazepine	3.975	4935970	1197.5	1054.9	27211955	10.000
Carisoprodol	3.973	889670	600.3	364.5	4591141	10.000
Chlordiazepoxide	4.381	74670	7.3	2057.9	11905934	10.000
Chlorpheniramine	3.602	23542	69.8	12785.5	36846011	10.000
Citalopram	3.750	1473902	647.8	72865.1	6483500	10.000
Clonazepam	4.225	517362	813.0	445.8	1051207	10.000
Cocaine	3.185	3769205	1099.4	1121.4	20988922	10.000
Codeine	2.291	189535	499.8	890.4	832191	10.000
Cyclobenzaprine	4.032	2254928	1036.0	52.8	11299153	10.000
Desipramine	4.080	4452454	3551.5	240.5	23823527	10.000
Dextromethorphan	3.725	1217115	125.1	994.5	6014196	10.000
Dextrorphan	2.976	2257609	178.5	955.6	13322601	10.000
Diazepam	4.643	530977	705.9	537.7	2547786	10.000
Dihydrocodeine	2.259	383872	344.9	451.6	2690978	10.000
Diphenhydramine	3.696	7335094	2211.5	1771.5	36846011	10.000
Doxepin	3.815	1956860	834.0	386.6	10743920	10.000
Doxylamine	3.235	6728460	19198.9	17044.0	33283104	10.000
EDDP	3.739	3022737	3510.2	220551.9	19407089	10.000
Estazolam	4.306	2338765	739.4	1604.3	5397329	10.000
Etizolam	4.405	195674	189072.8	393696.5	5397329	10.000
Fentanyl	3.641	298259	154.8	191287.9	18868316	10.000

# AM #25 Multi-Drug Screen Results

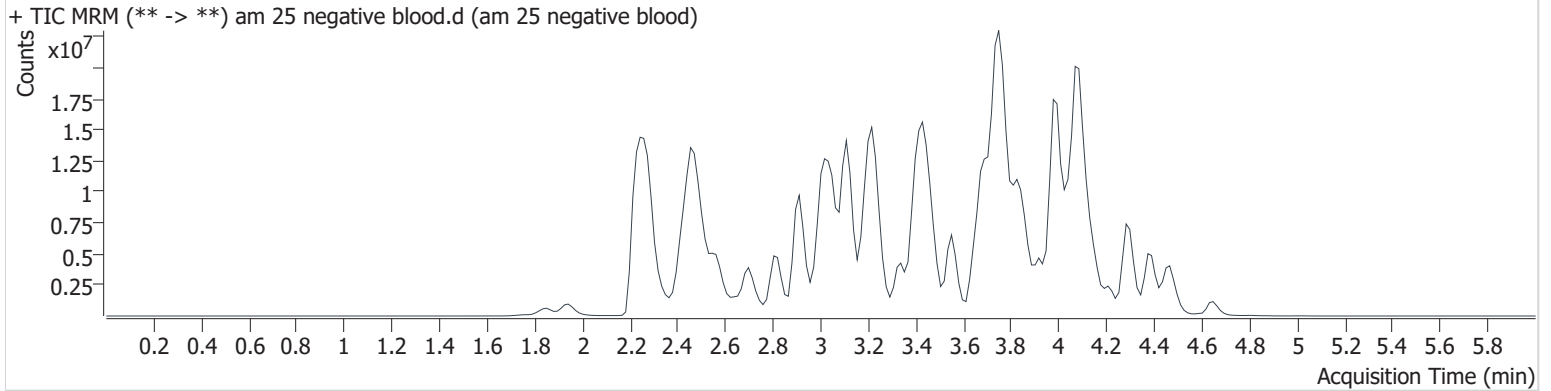
Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Flunitrazepam	4.348	1056028	3359.8	97151.9	606981	10.000
Fluoxetine	4.043	2926122	1718.2	144.5	13094993	10.000
Flurazepam	3.778	1354043	1244.2	3484.2	606981	10.000
Hydrocodone	2.503	744206	946.1	815.5	5422662	10.000
Hydromorphone	1.931	956029	466.2	2404.1	4289175	10.000
Imipramine	4.077	4718893	2945.1	883.5	20122655	10.000
Ketamine	2.918	2453554	2589.5	181.5	12022458	10.000
Lamotrigine	3.130	240861	336.1	169793.8	6851489	10.000
Levamisole	2.463	2126007	704.7	896.1	20988922	10.000
Lorazepam	4.209	202600	∞	1039.8	3858237	10.000
Maprotiline	4.109	1536347	597.2	704.6	7210800	10.000
MDA	2.570	2160150	18744.0	383.3	8705298	10.000
MDEA	2.829	3387541	3615.9	2450.8	15478287	10.000
MDMA	2.661	4249067	1334.9	1361.4	2628719	10.000
Meperidine	3.206	1516726	377.4	407.0	6851489	10.000
Meprobamate	3.365	585807	1535.0	224.3	2883642	10.000
Methadone	4.073	3225523	823.6	425.1	20607318	10.000
Methamphetamine	2.557	2342700	∞	40.2	6343130	10.000
Methocarbamol	3.254	194394	204.0	1326.0	6851489	10.000
Methylphenidate	3.117	6872151	1102.4	∞	32414353	10.000
Metoprolol	3.037	599648	793.4	874.1	6851489	10.000
Midazolam	4.147	473650	1604.4	845.7	6135174	10.000
Mirtazapine	3.312	1914440	15835.8	249.8	6851489	10.000
Mitragynine	3.792	227385	921.1	1870.1	10743920	10.000
Morphine	1.754	141838	5231.8	3025.9	79307	10.000
Norbuprenorphine	3.472	65943	125.3	24743.9	321687	10.000
Nordiazepam	4.493	1043654	1542.1	654.8	3461412	10.000
Norfentanyl	2.919	4275541	2648.5	676.5	20002134	10.000
Norhydrocodone	2.489	27448	66.1	52.6	1069260	10.000
Normeperidine	3.226	1573307	11246.8	88.6	6378348	10.000
Noroxycodone	2.440	556111	∞	45.5	1922334	10.000
Nortriptyline	4.126	1501975	628.3	201.6	4010574	10.000
O-desmethyl-tramadol	2.460	6084404	1072.1	138.6	32805392	10.000
Olanzapine	2.955	957216	40.4	48.4	130234	10.000
Oxazepam	4.291	606253	952.8	223.0	3798795	10.000
Oxycodone	2.438	1040039	309.4	520.2	6055962	10.000
Oxymorphone	1.838	744320	9525.0	776.4	2913492	10.000
Paroxetine	4.055	401455	1784.1	40124.1	7811296	10.000
Phenazepam	4.434	796985	2223.2	787.9	3578439	10.000
Phencyclidine	3.559	3960974	8060.5	10252.3	20747257	10.000
Phentermine	2.725	1097398	36.2	86.0	11947973	10.000
Phenytion	3.881	20027	5806.8	86.4	130234	10.000
Promethazine	3.983	6497528	4936.2	1543.3	26328772	10.000
Pseudoephedrine	2.253	32590449	14060.2	23747.1	84649608	10.000
Quetiapine	3.915	1847408	793.6	873.1	2882043	10.000
Sertraline	4.288	1538166	678.9	1056.9	7811296	10.000
Sufentanil	3.915	142742	571.5	98.7	8956832	10.000
Tapentadol	3.058	4009987	788.0	654.4	21983333	10.000
Temazepam	4.457	1630258	900.9	113.3	7302110	10.000
Tramadol	3.023	7310461	3664.5	706.0	35547552	10.000
Trazodone	3.764	1852301	372.1	263.8	8075189	10.000
Venlafaxine	3.433	5430381	2091.2	353.9	29011518	10.000
Zaleplon	4.120	643264	954.8	221.9	1764891	10.000
Zolpidem	3.414	4315064	2828.9	5117.8	26453772	10.000
Zopiclone	3.366	254377	314.4	185.6	1305536	10.000

# AM #25 Multi-Drug Screen Results

**Batch results** D:\MassHunter\Data\2019\am 25-26\122719\QuantResults\mds1.batch.bin  
**Calibration Last Update** 12/30/2019 1:07:49 PM

<b>Instrument</b>	69679	<b>Data File</b>	am 25 negative blood.d
<b>Type</b>	Sample	<b>Sample</b>	am 25 negative blood
<b>Acq. Method</b>	am 25 short1.m	<b>Operator</b>	Anne Nord
<b>Sample Position</b>	P2-F3	<b>Comment</b>	
<b>Injection Volume</b>	2.5		
<b>Acq. Date-Time</b>	12/28/2019 11:28:46 AM		
<b>Sample Info.</b>			

## Sample Chromatogram



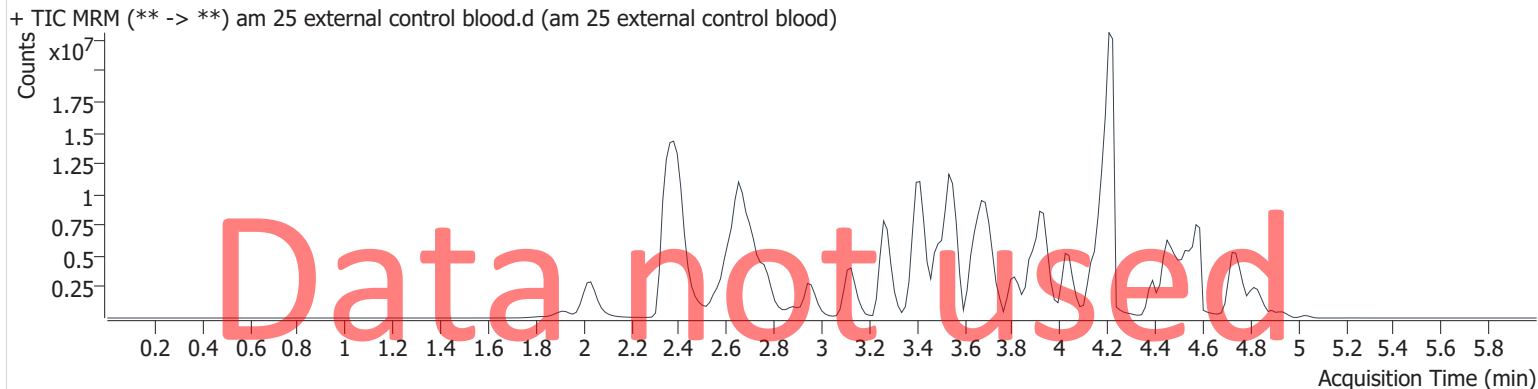
Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Alprazolam	4.211	366017	592.9		3867861	3.170 <5
Methamphetamine	2.557	2178297	31.4	58.8	6139442	9.607 <10

# AM #25 Multi-Drug Screen Results

**Batch results** D:\MassHunter\Data\2019\am 25-26\122719\QuantResults\mds1.batch.bin  
**Calibration Last Update** 12/30/2019 1:07:49 PM

<b>Instrument</b>	69679	<b>Data File</b>	am 25 external control blood.d
<b>Type</b>	Sample	<b>Sample</b>	am 25 external control blood
<b>Acq. Method</b>	am 25 short1.m	<b>Operator</b>	Anne Nord
<b>Sample Position</b>	P2-G3	<b>Comment</b>	
<b>Injection Volume</b>	2.5		
<b>Acq. Date-Time</b>	12/28/2019 11:35:27 AM		
<b>Sample Info.</b>			

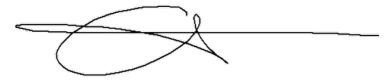
## Sample Chromatogram



Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Hydromorphone	2.037 <b>High</b>	5111097	11054.0	2335.5	262140	874.750
Methamphetamine	2.755 <b>High</b>	1167516	0.4 <b>Low</b>	302.8	6160736	5.131
Phentermine	2.694	423739	24.1	1756	26267.158	

for evaluation

The retention times for internal standards were out of tolerance for this injection the sample was re-injected and evaluated.

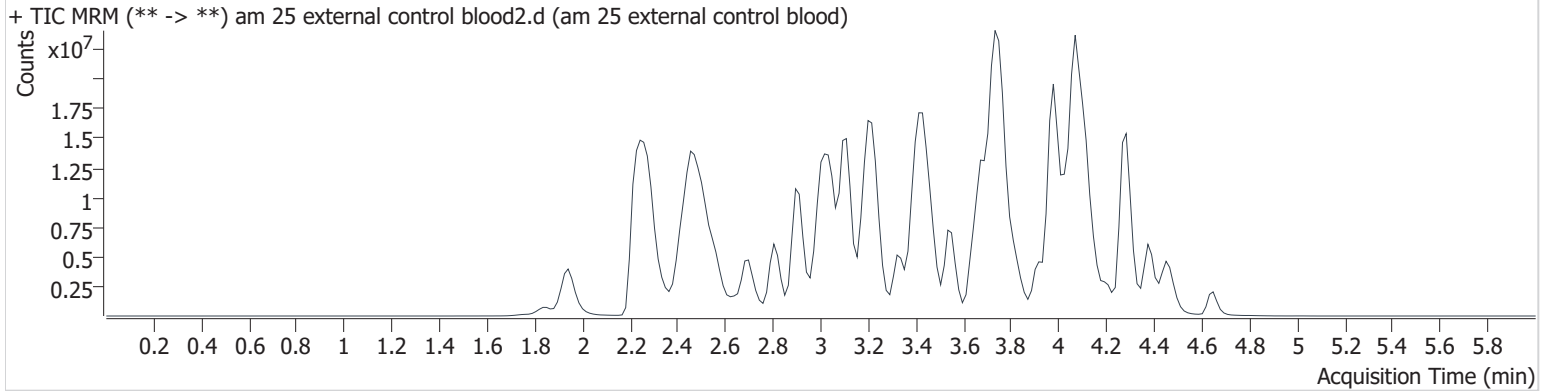


# AM #25 Multi-Drug Screen Results

**Batch results** D:\MassHunter\Data\2019\am 25-26\122719\QuantResults\mds1.batch.bin  
**Calibration Last Update** 12/30/2019 1:07:49 PM

<b>Instrument</b>	69679	<b>Data File</b>	am 25 external control blood2.d
<b>Type</b>	Sample	<b>Sample</b>	am 25 external control blood
<b>Acq. Method</b>	am 25 short1.m	<b>Operator</b>	Anne Nord
<b>Sample Position</b>	P2-G3	<b>Comment</b>	
<b>Injection Volume</b>	2.5		
<b>Acq. Date-Time</b>	12/28/2019 12:35:41 PM		
<b>Sample Info.</b>			

## Sample Chromatogram



Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Hydrocodone	2.518	7221689	573.3	3301.6	5244918	100.327
Hydromorphone	1.946	6539221	4308.5	2325.7	3972228	73.857
Methamphetamine	2.542	2723709	70.2	∞	8257197	8.931 <10
Nortriptyline	4.126	12115786	1316.9	13031.5	3796059	85.224
Sertraline	4.273	13526877	25970.9	4203347. 6	7541620	91.086

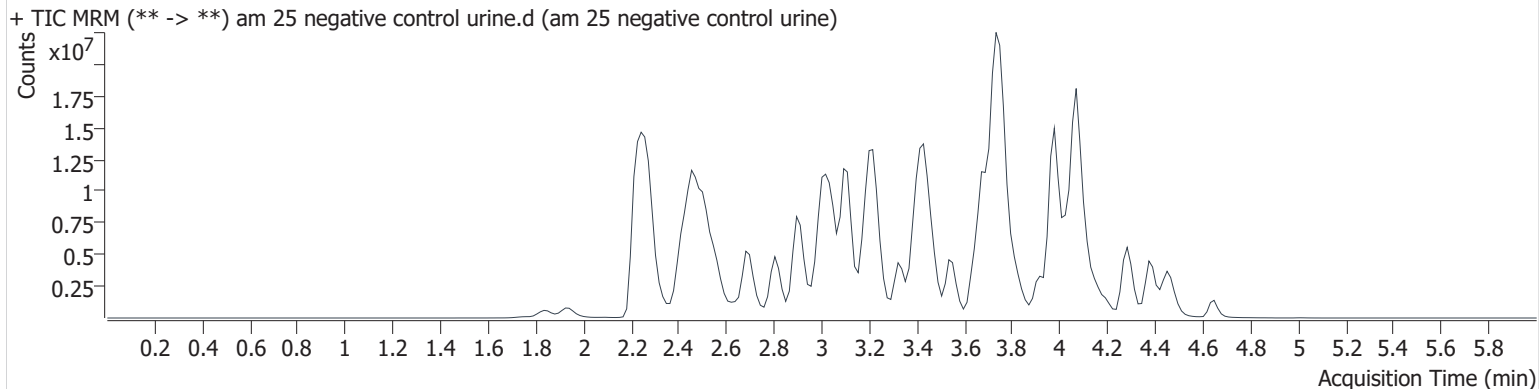
# AM #25 Multi-Drug Screen Results

**Batch results** D:\MassHunter\Data\2019\am 25-26\122719\QuantResults\mds1.batch.bin  
**Calibration Last Update** 12/30/2019 1:07:49 PM

<b>Instrument</b>	69679	<b>Data File</b>	am 25 negative control urine.d
<b>Type</b>	Sample	<b>Sample</b>	am 25 negative control urine
<b>Acq. Method</b>	am 25 short1.m	<b>Operator</b>	Anne Nord
<b>Sample Position</b>	P2-D5	<b>Comment</b>	
<b>Injection Volume</b>	2.5		
<b>Acq. Date-Time</b>	12/28/2019 1:09:11 PM		

**Sample Info.**

## Sample Chromatogram



Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Methamphetamine	2.557	3584392	∞	∞	18928935	5.127 < 10

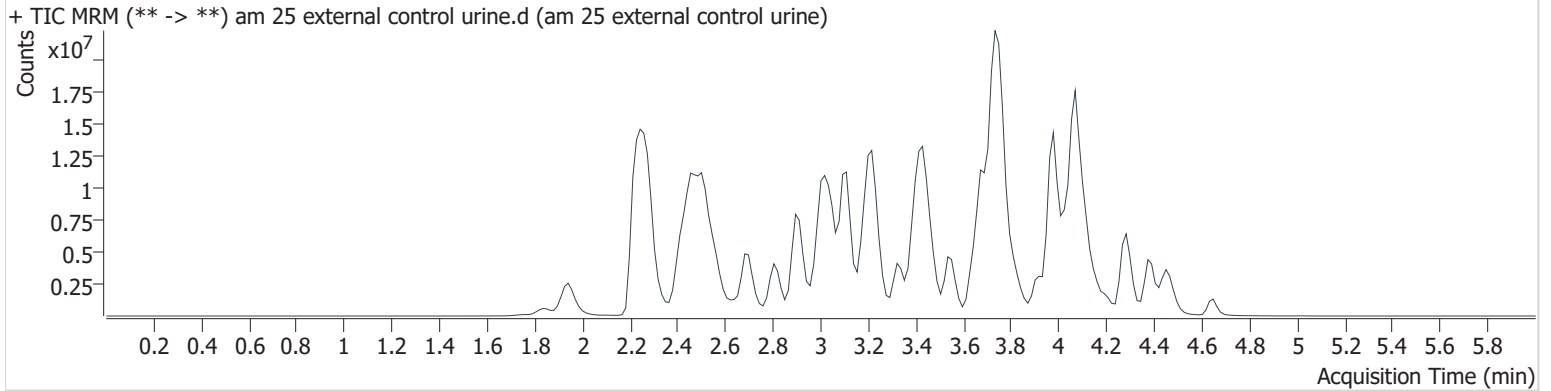


# AM #25 Multi-Drug Screen Results

**Batch results** D:\MassHunter\Data\2019\am 25-26\122719\QuantResults\mds1.batch.bin  
**Calibration Last Update** 12/30/2019 1:07:49 PM

<b>Instrument</b>	69679	<b>Data File</b>	am 25 external control urine.d
<b>Type</b>	Sample	<b>Sample</b>	am 25 external control urine
<b>Acq. Method</b>	am 25 short1.m	<b>Operator</b>	Anne Nord
<b>Sample Position</b>	P2-E5	<b>Comment</b>	
<b>Injection Volume</b>	2.5		
<b>Acq. Date-Time</b>	12/28/2019 1:15:53 PM		
<b>Sample Info.</b>			

## Sample Chromatogram



Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Hydrocodone	2.503	3894033	2108.3	1579.2	4266607	66.502
Hydromorphone	1.946	4023867	3578.9	1765.2	2956759	61.056
Methamphetamine	2.557	3099248	53.2	99.8	18044526	4.650 < 10
Nortriptyline	4.126	3550020	1319.6	2720.8	2994646	31.654
Sertraline	4.273	1767051	1804.2	2031.1	4390159	20.440



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

Extraction Date: 12/27/19

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:** 19H52275 **Urine Blank:** 11719 **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 800 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? Yes
- 5. Central File Packet to include: LIMS Worklist, Method Checklist, Calibration and Control Reports

COMMENTS: dropped 5ng THC calibrator IS peak cut off. Dropped 100 ng THC-OH primary peak cutoff.



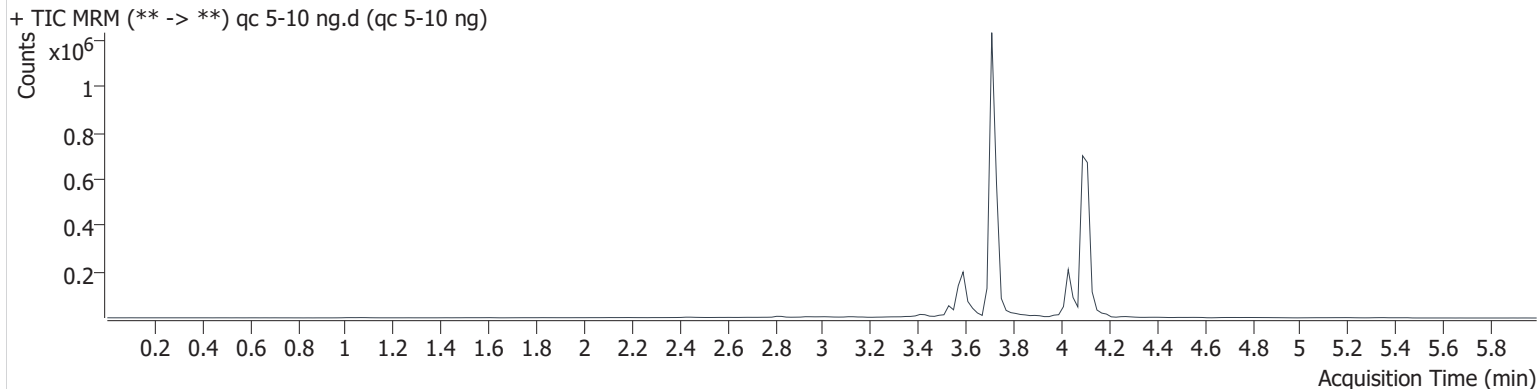
# AM #26 Cannabinoids Screen Results

**Batch results** D:\MassHunter\Data\2019\am 25-26\122719\QuantResults\cann screen.batch.bin  
**Calibration Last Update** 12/27/2019 4:58:39 PM

<b>Instrument</b>	69679	<b>Data File</b>	qc 5-10 ng.d
<b>Type</b>	QC	<b>Sample</b>	qc 5-10 ng
<b>Acq. Method</b>	am 26 cann screen.m	<b>Operator</b>	Anne Nord
<b>Sample Position</b>	P3-H1	<b>Comment</b>	
<b>Injection Volume</b>	5		
<b>Acq. Date-Time</b>	12/27/2019 2:21:59 PM		

**Sample Info.**

## Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	4.120	118185	1691752	4.559 ng/ml
THC-COOH	3.590	64042	350983	14.839 ng/ml
THC-OH	3.716	21011	2294738	4.951 ng/ml

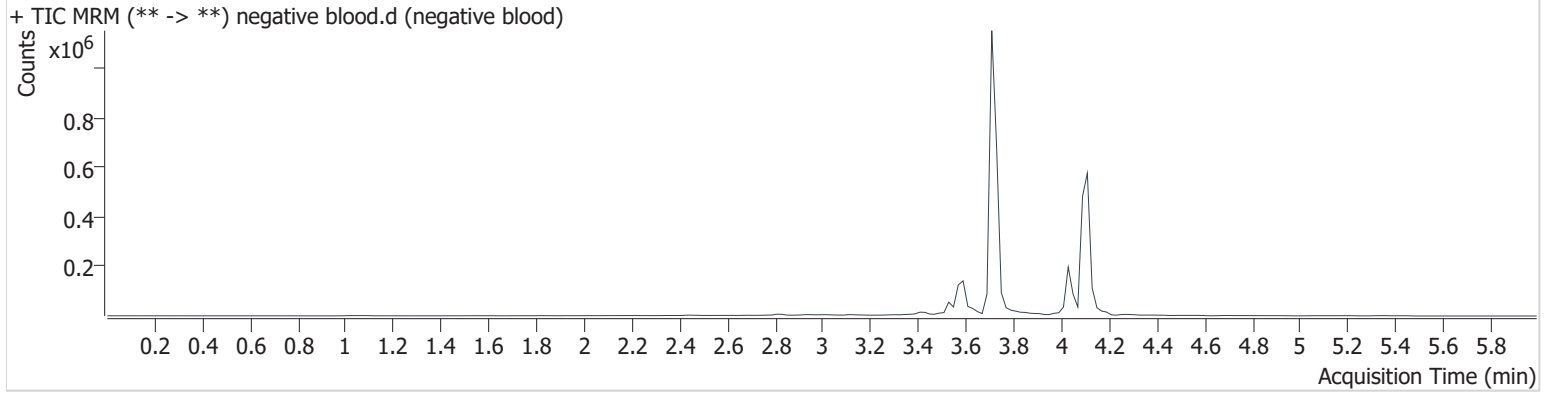


# AM #26 Cannabinoids Screen Results

**Batch results** D:\MassHunter\Data\2019\am 25-26\122719\QuantResults\cann screen.batch.bin  
**Calibration Last Update** 12/27/2019 4:58:39 PM

<b>Instrument</b>	69679	<b>Data File</b>	negative blood.d
<b>Type</b>	Sample	<b>Sample</b>	negative blood
<b>Acq. Method</b>	am 26 cann screen.m	<b>Operator</b>	Anne Nord
<b>Sample Position</b>	P3-A2	<b>Comment</b>	
<b>Injection Volume</b>	5		
<b>Acq. Date-Time</b>	12/27/2019 2:28:37 PM		
<b>Sample Info.</b>			

## Sample Chromatogram

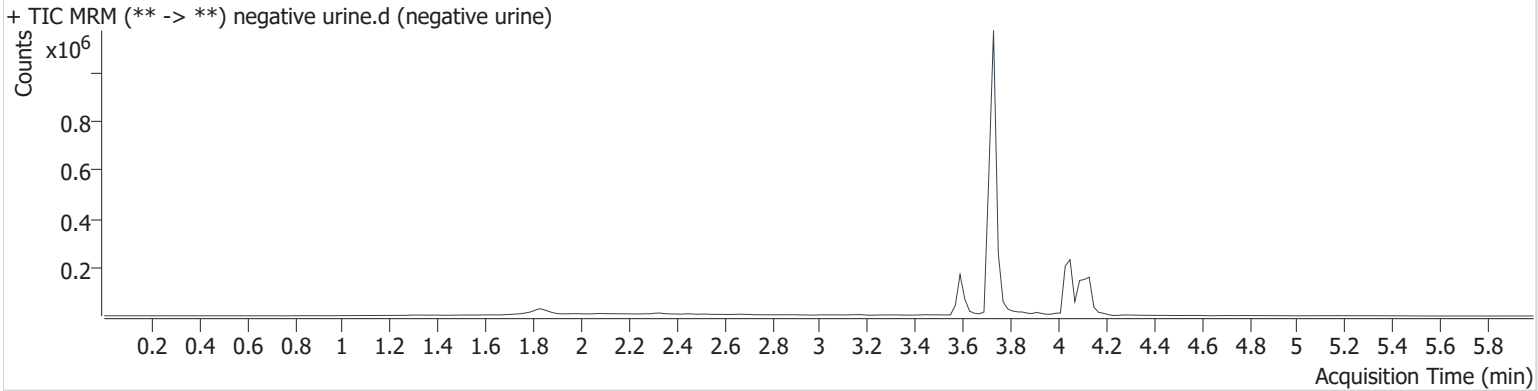


# AM #26 Cannabinoids Screen Results

**Batch results** D:\MassHunter\Data\2019\am 25-26\122719\QuantResults\cann screen.batch.bin  
**Calibration Last Update** 12/27/2019 4:58:39 PM

<b>Instrument</b>	69679	<b>Data File</b>	negative urine.d
<b>Type</b>	Sample	<b>Sample</b>	negative urine
<b>Acq. Method</b>	am 26 cann screen.m	<b>Operator</b>	Anne Nord
<b>Sample Position</b>	P3-F3	<b>Comment</b>	
<b>Injection Volume</b>	5		
<b>Acq. Date-Time</b>	12/27/2019 3:54:25 PM		
<b>Sample Info.</b>			

### Sample Chromatogram



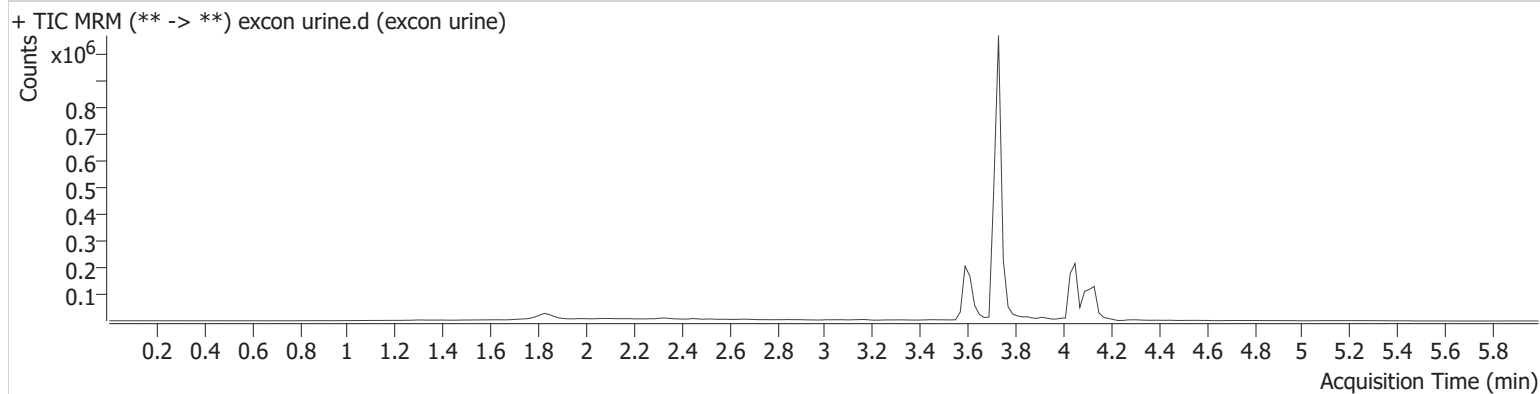
Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	4.120	4978	545251	0.909 ng/ml <b>Low</b>

# AM #26 Cannabinoids Screen Results

**Batch results** D:\MassHunter\Data\2019\am 25-26\122719\QuantResults\cann screen.batch.bin  
**Calibration Last Update** 12/27/2019 4:58:39 PM

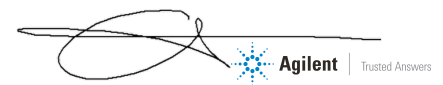
<b>Instrument</b>	69679	<b>Data File</b>	excon urine.d
<b>Type</b>	Sample	<b>Sample</b>	excon urine
<b>Acq. Method</b>	am 26 cann screen.m	<b>Operator</b>	Anne Nord
<b>Sample Position</b>	P3-G3	<b>Comment</b>	
<b>Injection Volume</b>	5		
<b>Acq. Date-Time</b>	12/27/2019 4:01:01 PM		
<b>Sample Info.</b>			

## Sample Chromatogram



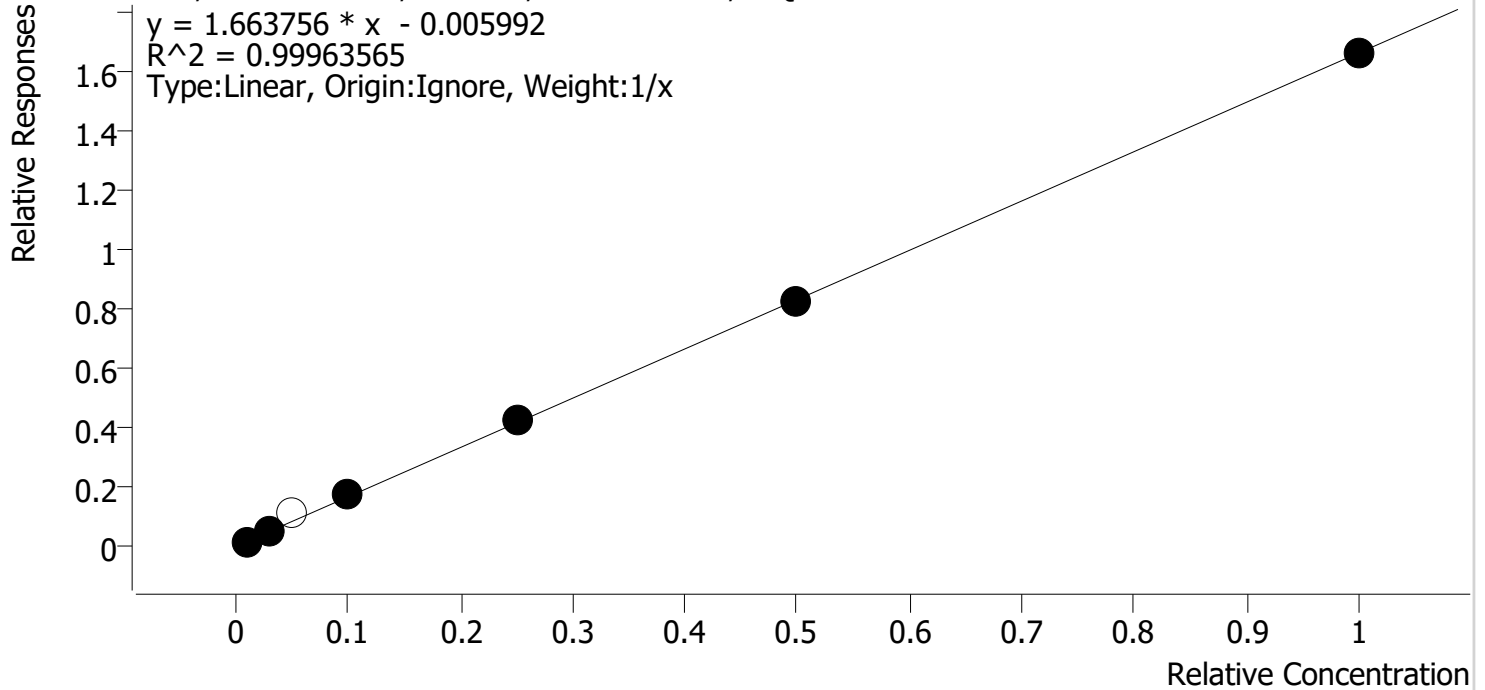
Name	RT	Resp.	ISTD Resp.	Final Conc.
THC-COOH	3.610	116057	267045	35.439 ng/ml

# Compound Calibration Report



**Batch results** D:\MassHunter\Data\2019\am 25-26\122719\QuantResults\cann screen.batch.bin  
**Last Cal. Update** 12/27/2019 4:58 PM  
**Analyst Name** ISP\datastor  
**Analyte** THC **Internal Standard** THC-d3

THC - 7 Levels, 6 Levels Used, 7 Points, 6 Points Used, 0 QCs



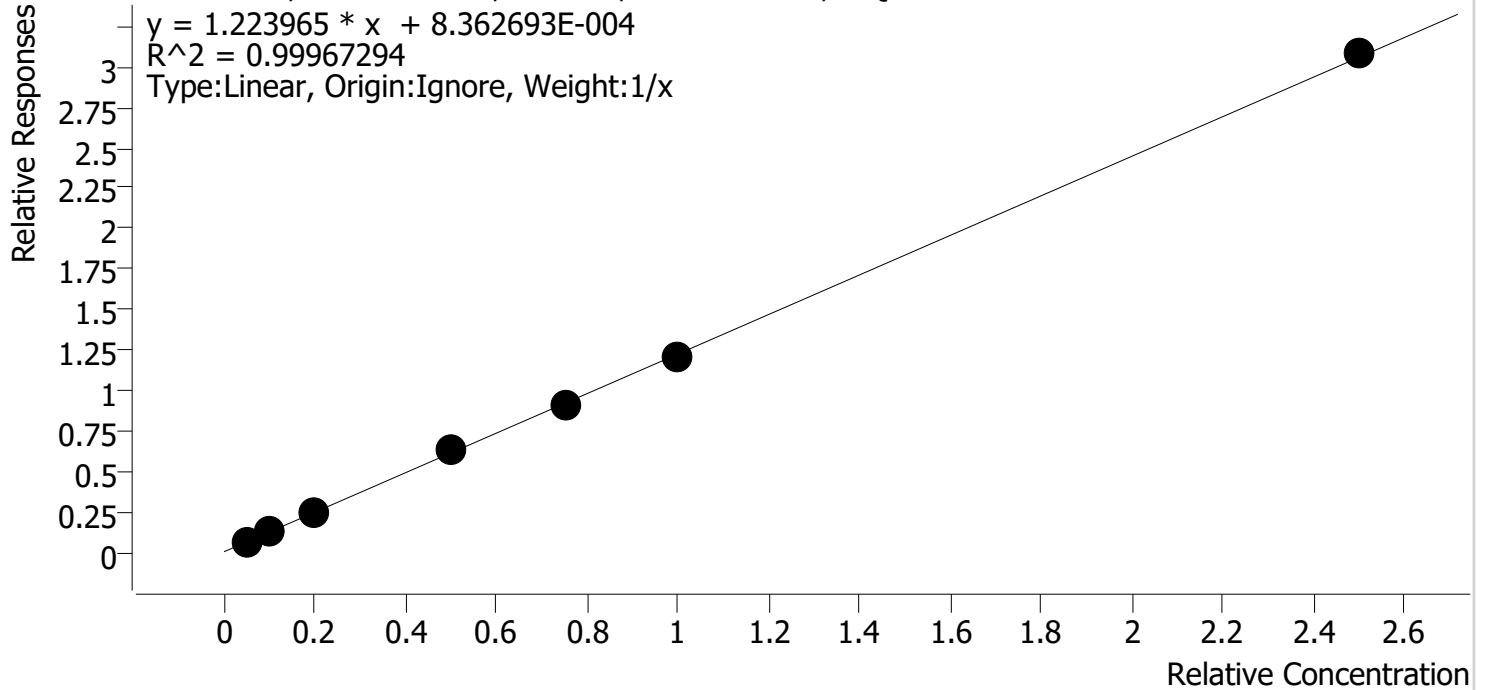
Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
check std 1ng	1	✓	1.0	0.9	90.3
cal 2	2	✓	3.0	3.1	104.5
cal 3	3	✗	5.0	7.1	142.3
cal 4	4	✓	10.0	10.6	105.8
cal 5	5	✓	25.0	25.2	100.9
cal-6	6	✓	50.0	49.3	98.7
cal-7	7	✓	100.0	99.8	99.8

# Compound Calibration Report



**Batch results** D:\MassHunter\Data\2019\am 25-26\122719\QuantResults\cann screen.batch.bin  
**Last Cal. Update** 12/27/2019 4:58 PM  
**Analyst Name** ISP\datastor  
**Analyte** THC-COOH **Internal Standard** THC-COOH-d9

THC-COOH - 7 Levels, 7 Levels Used, 7 Points, 7 Points Used, 0 QCs



Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
check std 1ng	1	✓	5.0	5.0	100.6
cal 2	2	✓	10.0	10.4	103.9
cal 3	3	✓	20.0	19.1	95.3
cal 4	4	✓	50.0	51.0	102.0
cal 5	5	✓	75.0	74.3	99.0
cal-6	6	✓	100.0	98.4	98.4
cal-7	7	✓	250.0	251.8	100.7

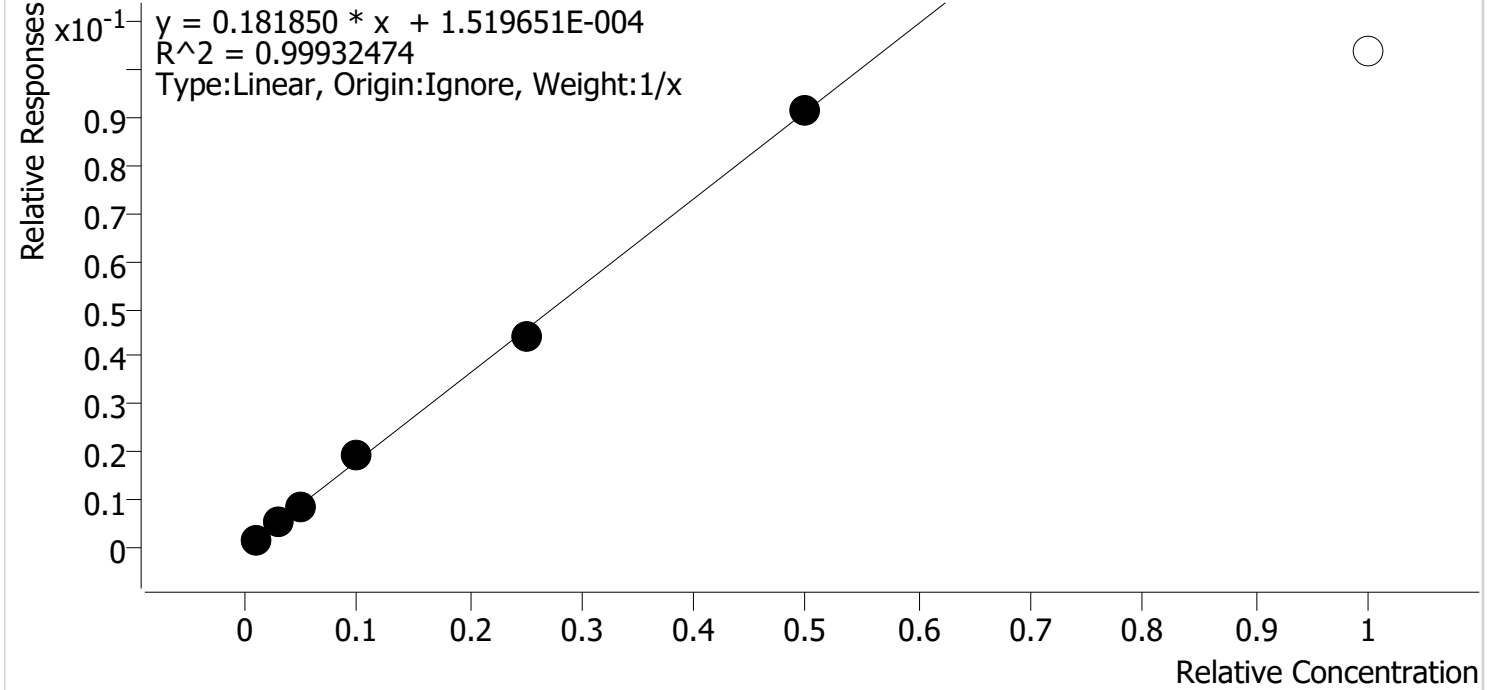


# Compound Calibration Report



**Batch results** D:\MassHunter\Data\2019\am 25-26\122719\QuantResults\cann screen.batch.bin  
**Last Cal. Update** 12/27/2019 4:58 PM  
**Analyst Name** ISP\datastor  
**Analyte** THC-OH **Internal Standard** THC-OH-d3

THC-OH - 7 Levels, 6 Levels Used, 7 Points, 6 Points Used, 0 QCs



Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
check std 1ng	1	✓	1.0	1.0	100.8
cal 2	2	✓	3.0	2.9	97.5
cal 3	3	✓	5.0	4.9	98.2
cal 4	4	✓	10.0	10.5	105.5
cal 5	5	✓	25.0	24.4	97.6
cal-6	6	✓	50.0	50.2	100.4
cal-7	7	x	100.0	56.8	56.8

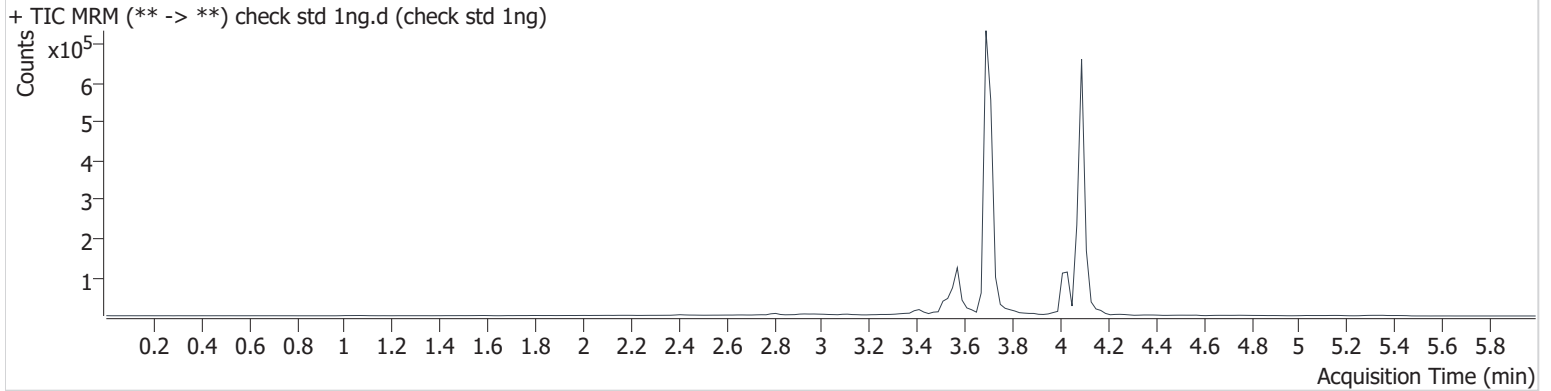


# AM #26 Cannabinoids Screen Results

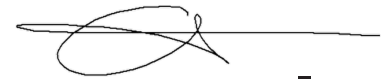
**Batch results** D:\MassHunter\Data\2019\am 25-26\122719\QuantResults\cann screen.batch.bin  
**Calibration Last Update** 12/27/2019 4:58:39 PM

<b>Instrument</b>	69679	<b>Data File</b>	check std 1ng.d
<b>Type</b>	Cal	<b>Sample</b>	check std 1ng
<b>Acq. Method</b>	am 26 cann screen.m	<b>Operator</b>	Anne Nord
<b>Sample Position</b>	P3-G1	<b>Comment</b>	
<b>Injection Volume</b>	5		
<b>Acq. Date-Time</b>	12/27/2019 1:29:15 PM		
<b>Sample Info.</b>			

## Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	4.080	11754	1301222	0.903 ng/ml <b>Low</b>
THC-COOH	3.570	15272	244676	5.031 ng/ml <b>Low</b>
THC-OH	3.696	3540	1782751	1.008 ng/ml <b>Low</b>

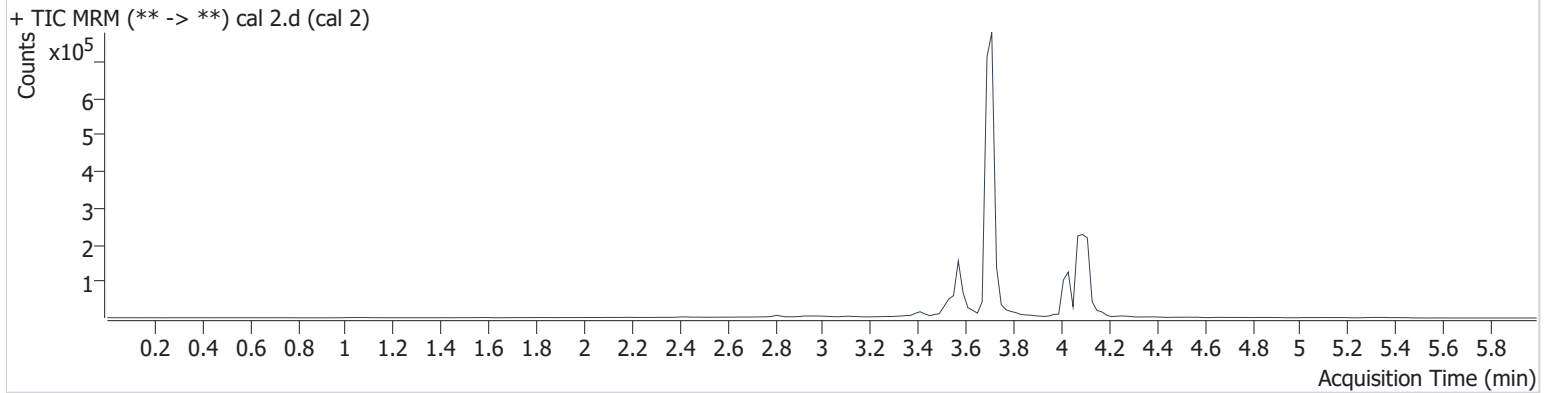


# AM #26 Cannabinoids Screen Results

**Batch results** D:\MassHunter\Data\2019\am 25-26\122719\QuantResults\cann screen.batch.bin  
**Calibration Last Update** 12/27/2019 4:58:39 PM

<b>Instrument</b>	69679	<b>Data File</b>	cal 2.d
<b>Type</b>	Cal	<b>Sample</b>	cal 2
<b>Acq. Method</b>	am 26 cann screen.m	<b>Operator</b>	Anne Nord
<b>Sample Position</b>	P3-F1	<b>Comment</b>	
<b>Injection Volume</b>	5		
<b>Acq. Date-Time</b>	12/27/2019 1:35:53 PM		
<b>Sample Info.</b>			

## Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	4.120	36600	792377	3.136 ng/ml
THC-COOH	3.570	34250	267644	10.387 ng/ml
THC-OH	3.716	10849	1983107	2.925 ng/ml <b>Low</b>

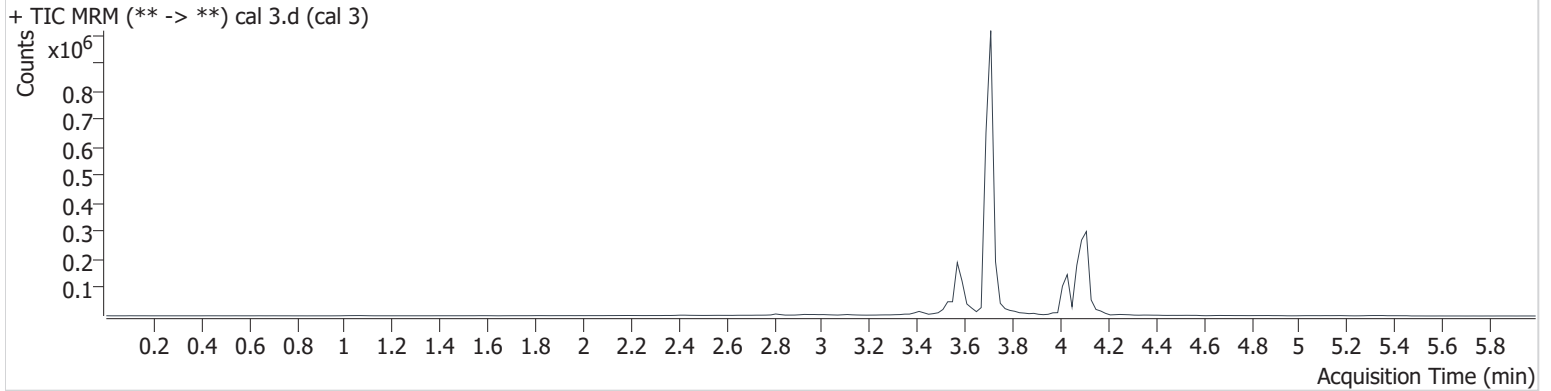
# AM #26 Cannabinoids Screen Results

**Batch results** D:\MassHunter\Data\2019\am 25-26\122719\QuantResults\cann screen.batch.bin  
**Calibration Last Update** 12/27/2019 4:58:39 PM

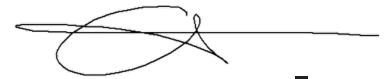
<b>Instrument</b>	69679	<b>Data File</b>	cal 3.d
<b>Type</b>	Cal	<b>Sample</b>	cal 3
<b>Acq. Method</b>	am 26 cann screen.m	<b>Operator</b>	Anne Nord
<b>Sample Position</b>	P3-E1	<b>Comment</b>	
<b>Injection Volume</b>	5		
<b>Acq. Date-Time</b>	12/27/2019 1:42:29 PM		

**Sample Info.**

## Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	4.100	95686	851135	7.117 ng/ml
THC-COOH	3.590	67518	288330	19.064 ng/ml
THC-OH	3.716	19756	2176261	4.909 ng/ml

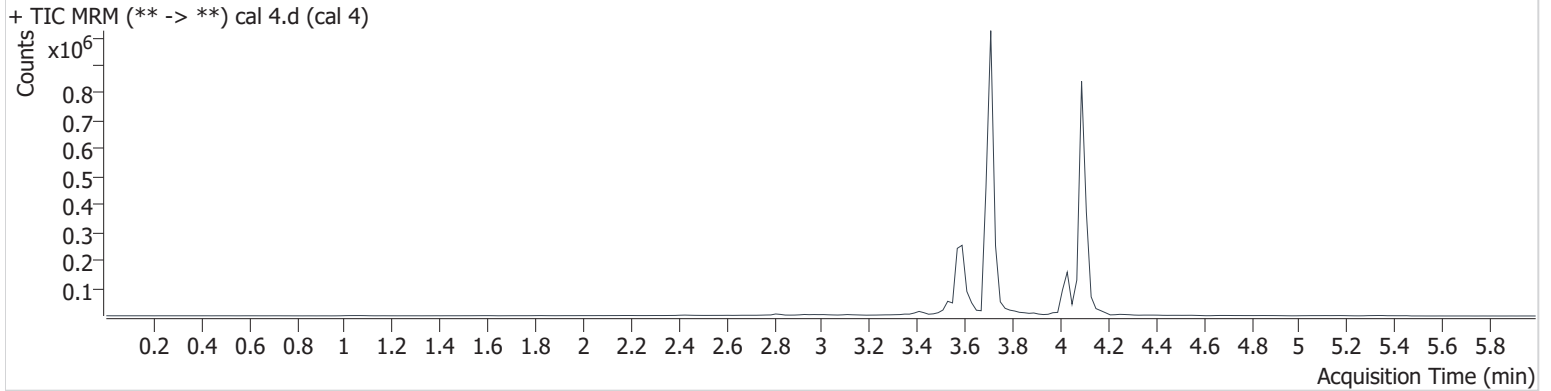


# AM #26 Cannabinoids Screen Results

**Batch results** D:\MassHunter\Data\2019\am 25-26\122719\QuantResults\cann screen.batch.bin  
**Calibration Last Update** 12/27/2019 4:58:39 PM

<b>Instrument</b>	69679	<b>Data File</b>	cal 4.d
<b>Type</b>	Cal	<b>Sample</b>	cal 4
<b>Acq. Method</b>	am 26 cann screen.m	<b>Operator</b>	Anne Nord
<b>Sample Position</b>	P3-D1	<b>Comment</b>	
<b>Injection Volume</b>	5		
<b>Acq. Date-Time</b>	12/27/2019 1:49:05 PM		
<b>Sample Info.</b>			

## Sample Chromatogram



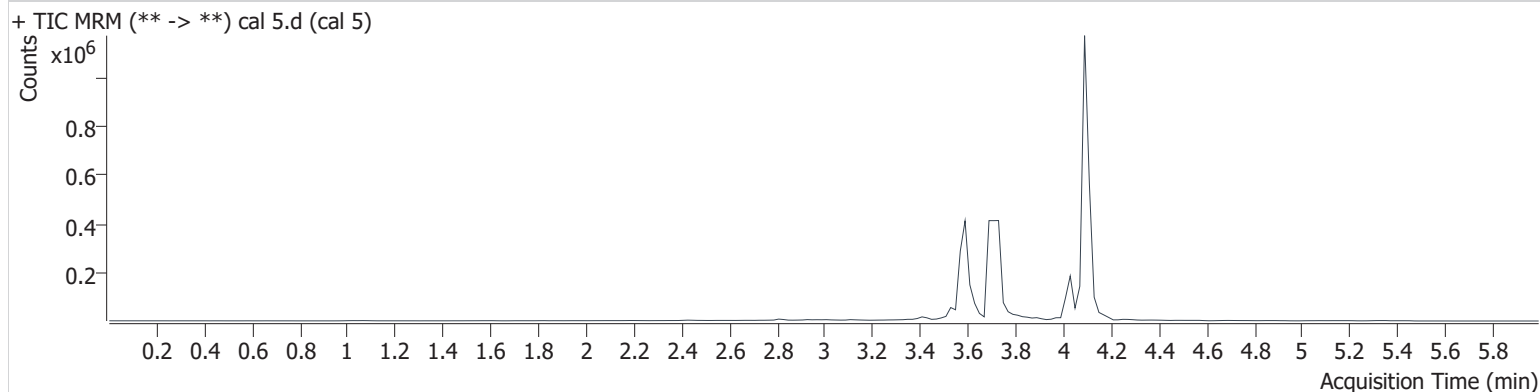
Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	4.100	240383	1414105	10.577 ng/ml
THC-COOH	3.590	180369	288436	51.022 ng/ml
THC-OH	3.716	38473	1989898	10.548 ng/ml

# AM #26 Cannabinoids Screen Results

**Batch results** D:\MassHunter\Data\2019\am 25-26\122719\QuantResults\cann screen.batch.bin  
**Calibration Last Update** 12/27/2019 4:58:39 PM

<b>Instrument</b>	69679	<b>Data File</b>	cal 5.d
<b>Type</b>	Cal	<b>Sample</b>	cal 5
<b>Acq. Method</b>	am 26 cann screen.m	<b>Operator</b>	Anne Nord
<b>Sample Position</b>	P3-C1	<b>Comment</b>	
<b>Injection Volume</b>	5		
<b>Acq. Date-Time</b>	12/27/2019 1:55:41 PM		
<b>Sample Info.</b>			

## Sample Chromatogram



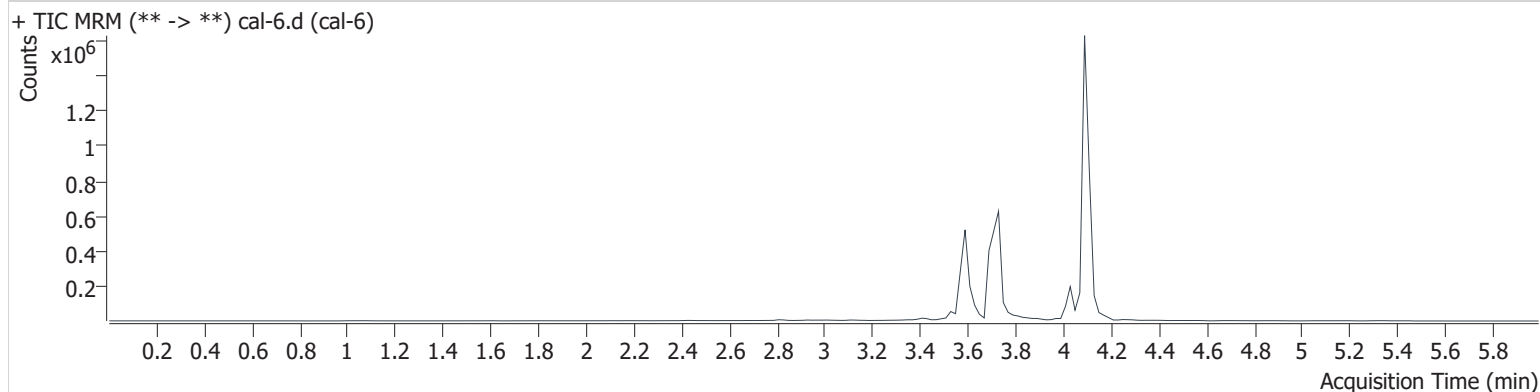
Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	4.100	664798	1607381	25.219 ng/ml
THC-COOH	3.590	297003	326479	74.257 ng/ml
THC-OH	3.696	53054	1191749	24.397 ng/ml

# AM #26 Cannabinoids Screen Results

**Batch results** D:\MassHunter\Data\2019\am 25-26\122719\QuantResults\cann screen.batch.bin  
**Calibration Last Update** 12/27/2019 4:58:39 PM

<b>Instrument</b>	69679	<b>Data File</b>	cal-6.d
<b>Type</b>	Cal	<b>Sample</b>	cal-6
<b>Acq. Method</b>	am 26 cann screen.m	<b>Operator</b>	Anne Nord
<b>Sample Position</b>	P3-B1	<b>Comment</b>	
<b>Injection Volume</b>	5		
<b>Acq. Date-Time</b>	12/27/2019 2:02:17 PM		
<b>Sample Info.</b>			

## Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	4.100	1403222	1722386	49.328 ng/ml
THC-COOH	3.590	379675	315034	98.397 ng/ml
THC-OH	3.736	103441	1130937	50.213 ng/ml

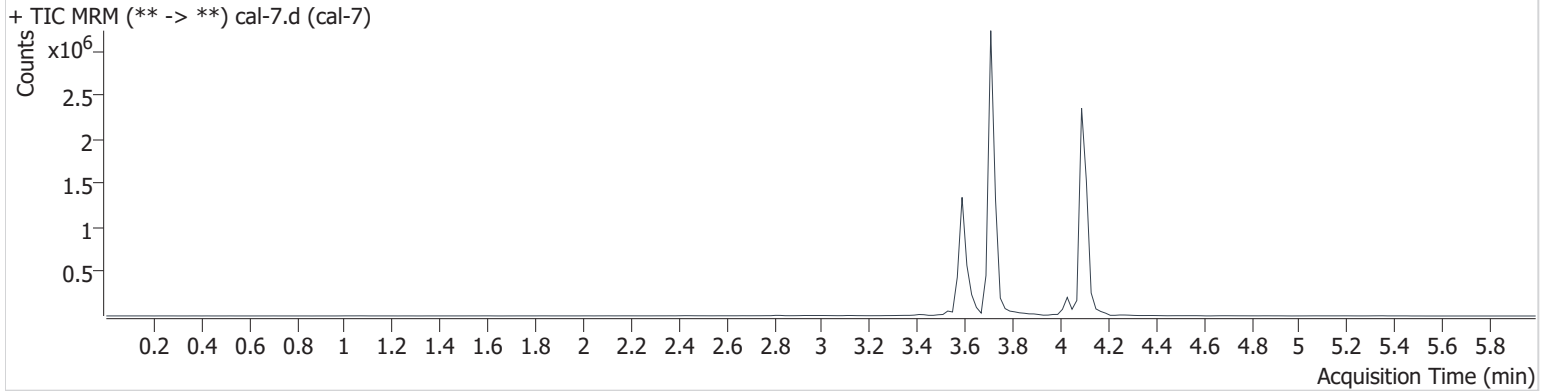
# AM #26 Cannabinoids Screen Results

**Batch results** D:\MassHunter\Data\2019\am 25-26\122719\QuantResults\cann screen.batch.bin  
**Calibration Last Update** 12/27/2019 4:58:39 PM

<b>Instrument</b>	69679	<b>Data File</b>	cal-7.d
<b>Type</b>	Cal	<b>Sample</b>	cal-7
<b>Acq. Method</b>	am 26 cann screen.m	<b>Operator</b>	Anne Nord
<b>Sample Position</b>	P3-A1	<b>Comment</b>	
<b>Injection Volume</b>	5		
<b>Acq. Date-Time</b>	12/27/2019 2:08:53 PM		

**Sample Info.**

## Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	4.100	2851118	1722684	99.837 ng/ml
THC-COOH	3.590	1068869	346665	251.841 ng/ml
THC-OH	3.736	237747	2298964	56.785 ng/ml





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

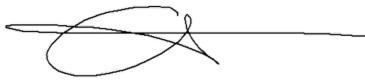
ppd 5/20/19: Exp: 5/20/20 lot 52020 by baw

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



Toxicology AM method 25 urine external control prep  
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 30 ul working solution (52020) in 270 ul negative urine

ppd 10/7/19, exp 3/1/20 lot 10719 negative urine lot 8919 by AMN

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



Toxicology AM method 27 external urine preparation information

Stock solution 8 ul (100 ug/ml) C-THC in 9.992 mls urine  
Ppd 11/8/19 Exp: 3/1/20 lot 3120 by AMN

Drug	lot	expiration	lot
C-THC	FE03121501	3/1/2020	3120

concentration ~ 80 ng/ml Carboxy THC