

**REVIEWED**

By Anne Nord at 11:41 am, May 22, 2020

5/21/2020

BW

**Worklist: 4249**

<u>LAB CASE</u>	<u>ITEM</u>	<u>ITEM TYPE</u>	<u>DESCRIPTION</u>	
C2020-0824	1	UCK	AM 25/AM 26 Urine MultiDrug/THC Screen by LC-QQQ	
C2020-0827	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
C2020-0830	1	UCK	AM 25/AM 26 Urine MultiDrug/THC Screen by LC-QQQ	
C2020-0831	2	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
C2020-0853	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
C2020-0862	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
C2020-0863	2	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
C2020-0870	1	UCK	AM 25/AM 26 Urine MultiDrug/THC Screen by LC-QQQ	
C2020-0877	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
C2020-0887	1	UCK	AM 25/AM 26 Urine MultiDrug/THC Screen by LC-QQQ	
C2020-0889	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
C2020-0890	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
C2020-0906	2	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
C2020-0915	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
C2020-0951	1	UCK	AM 25/AM 26 Urine MultiDrug/THC Screen by LC-QQQ	

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

Extraction Date: 5/20/20

Analyst: Britany Wylie

Plate lot#: 190725

Plate Expiration: 1/25/2020

**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:** 20A52255 **Blank Urine lot:** 41520 **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.
- 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 50ul 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. Methamphetamine >10 or >32 in urine.
- 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: Run was stopped due to some compounds peaks being cutoff due to RT shift, acquisition method updated and worklist re-started (controls, calibrator and 2 case samples reinjected)- original injections were not evaluated.

**Idaho State Police  
Forensic Services  
Toxicology Discipline**

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**Request for Departure from an Analytical Method**

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Date of Request  
01/13/2020

Forensic Scientist  
Celena Shrum

Analytical Methods  
Toxicology AM #25, Toxicology AM #26/27, and AM #28

Deviation

The expiration dates listed for the current batch of PinPoint ToxBox extraction plates are as follows:

- \*MDS (batch IDP-107-190725)- Expiration is 1/25/2020
- ~~\*THC (batch IDP-108-190716)- Expiration is 1/16/2020~~ New plates recieved 5-22-20 BW
- \*MDQ P1 (batch IDP-111-190729)- Expiration is 1/29/2020
- \*MDQ P2 (batch IDP-112-190730)- Expiration is 1/30/2020

I am issuing a deviation to allow for the use of the remaining plates of these batches. The controls will be used to evaluate if the plate is working as intended. In addition, at least one external control must be included for each run.

*Celena Shrum*

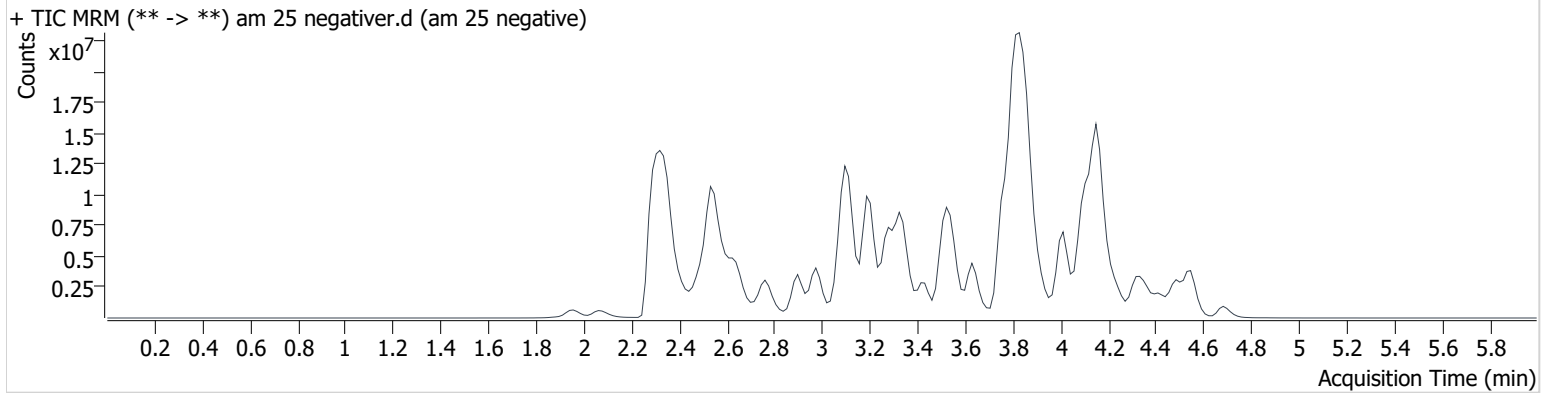
Date: 01/13/2020  
Celena Shrum  
Toxicology Discipline Lead

# AM #25 Multi-Drug Screen Results

**Batch results** D:\MassHunter\Data\2020 Data\am 25-26 5-20-20\QuantResults\mds.batch.bin  
**Calibration Last Update** 5/21/2020 9:04:40 AM

<b>Instrument</b>	69679	<b>Data File</b>	am 25 negativer.d
<b>Type</b>	Sample	<b>Sample</b>	am 25 negative
<b>Acq. Method</b>	am 25 short 5-20-20.m	<b>Operator</b>	Britany Wylie
<b>Sample Position</b>	P2-C1	<b>Comment</b>	
<b>Injection Volume</b>	2.5		
<b>Acq. Date-Time</b>	5/20/2020 3:06:06 PM		
<b>Sample Info.</b>			

## Sample Chromatogram

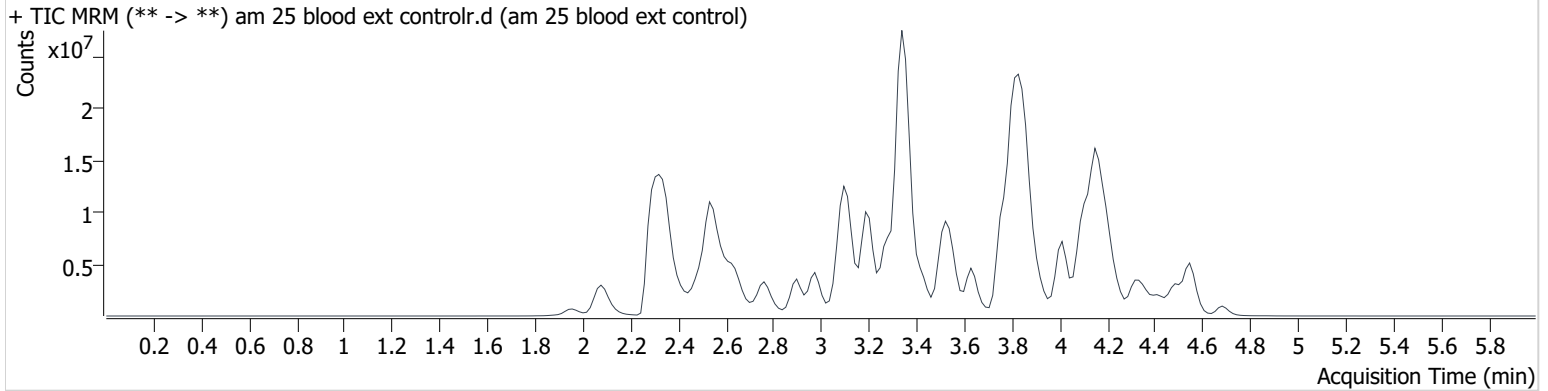


# AM #25 Multi-Drug Screen Results

**Batch results** D:\MassHunter\Data\2020 Data\am 25-26 5-20-20\QuantResults\mds.batch.bin  
**Calibration Last Update** 5/21/2020 9:04:40 AM

<b>Instrument</b>	69679	<b>Data File</b>	am 25 blood ext controlr.d
<b>Type</b>	Sample	<b>Sample</b>	am 25 blood ext control
<b>Acq. Method</b>	am 25 short 5-20-20.m	<b>Operator</b>	Britany Wylie
<b>Sample Position</b>	P2-D1	<b>Comment</b>	
<b>Injection Volume</b>	2.5		
<b>Acq. Date-Time</b>	5/20/2020 3:12:49 PM		
<b>Sample Info.</b>			

**Sample Chromatogram**



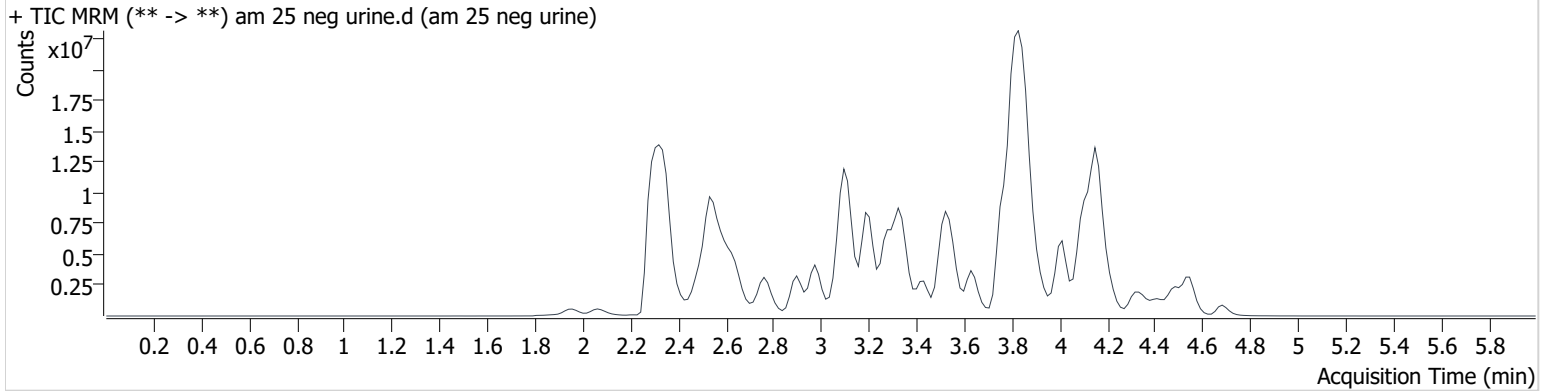
Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Chlordiazepoxide	4.551	1232174	753.9	1624.7	7041189	106.678
Doxylamine	3.343	43415296	13671.0	3783.4	23203937	89.603
Hydromorphone	2.083	5816798	86887.7	5930.8	2606997	91.837
Nortriptyline	4.206	9393766	1384.5	1056.8	2551351	93.218

# AM #25 Multi-Drug Screen Results

**Batch results** D:\MassHunter\Data\2020 Data\am 25-26 5-20-20\QuantResults\mds.batch.bin  
**Calibration Last Update** 5/21/2020 9:04:40 AM

<b>Instrument</b>	69679	<b>Data File</b>	am 25 neg urine.d
<b>Type</b>	Sample	<b>Sample</b>	am 25 neg urine
<b>Acq. Method</b>	am 25 short 5-20-20.m	<b>Operator</b>	Britany Wylie
<b>Sample Position</b>	P2-G2	<b>Comment</b>	
<b>Injection Volume</b>	2.5		
<b>Acq. Date-Time</b>	5/20/2020 4:46:16 PM		

**Sample Chromatogram**



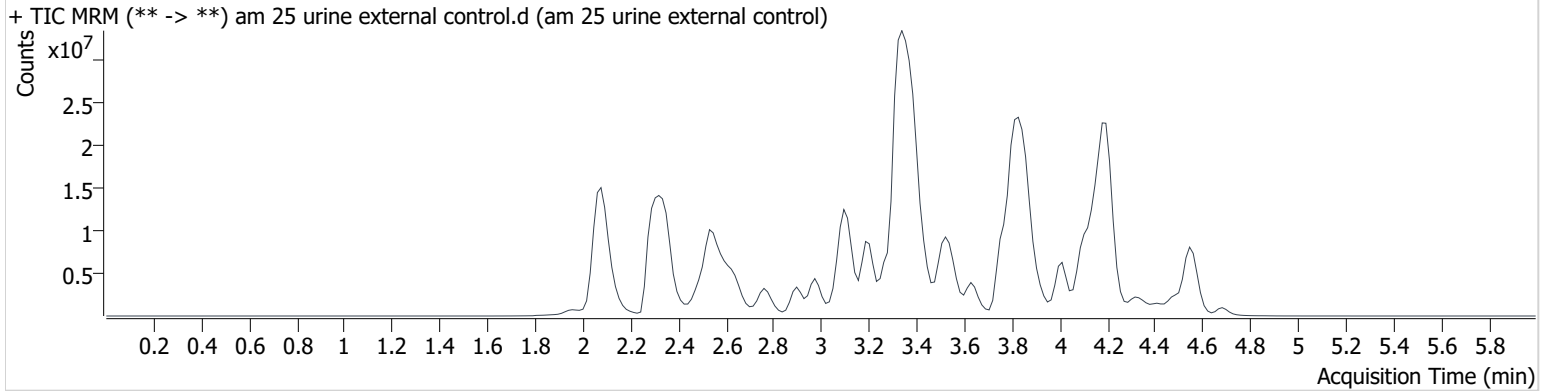
Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Methamphetamine	2.635	2456326	80.8	48.4	13562078	3.763

# AM #25 Multi-Drug Screen Results

**Batch results** D:\MassHunter\Data\2020 Data\am 25-26 5-20-20\QuantResults\mds.batch.bin  
**Calibration Last Update** 5/21/2020 9:04:40 AM

<b>Instrument</b>	69679	<b>Data File</b>	am 25 urine external control.d
<b>Type</b>	Sample	<b>Sample</b>	am 25 urine external control
<b>Acq. Method</b>	am 25 short 5-20-20.m	<b>Operator</b>	Britany Wylie
<b>Sample Position</b>	P2-H2	<b>Comment</b>	
<b>Injection Volume</b>	2.5		
<b>Acq. Date-Time</b>	5/20/2020 4:52:59 PM		

**Sample Chromatogram**



Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Chlordiazepoxide	4.551	5987162	607.6	900.8	5082449	718.119
Diazepam	4.553 <b>Low</b>	11970	43.8		2914143	0.200
Doxylamine	3.358	97746158	456.6	161884.0	18141485	258.028
Hydromorphone	2.083	38144115	394331.5	433697.9	2109120	744.391
Methamphetamine	2.635	2685793	214.3	107.9	13961895	3.996
Nortriptyline	4.206	39268045	13935298.5	6830.1	1610130	617.456

Toxicology AM method 25/28 urine external control prep

working solution 10000 ng/ml in meoh Hydromorphone, Diphenhydramine, Nortriptyline, Chlordiazepoxide

Stock solution 1mg/ml 50 ul each in 4800ul meOH (Alfa Aesar lot Z22F712)

ppd 5/6/20: Exp: 6/1/20 lot 5620 by baw

Drug	lot	expiration
Hydromorphone	FE04101502	6/1/2020
Doxylamine	FN11201501	11/1/2020
nortriptyline	FN06191503	8/1/2020
chlordiazepoxide	FE07241502	8/1/2020

AM 25/28 control 500 ul working solution (5620) in 4500 ul negative urine (1000ng/mL Expected concentration)

ppd 5/6/20, exp 6/1/20 lot u32420 negative urine 41520 by BAW

AM 25/28 Blood Control: 50ul working solution (562020) in 4950 ul neg blood (100ng/mL Expected concentration)

ppd 5/6/20, exp 6/1/20 lot b3920 neg blood lot 20A52255 by BAW

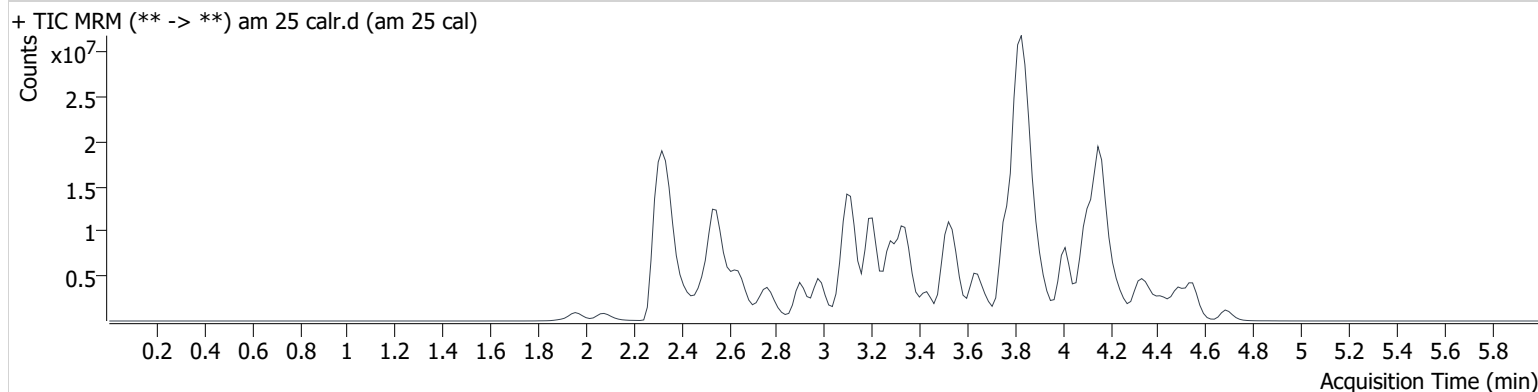


# AM #25 Multi-Drug Screen Results

**Batch results** D:\MassHunter\Data\2020 Data\am 25-26 5-20-20\QuantResults\mds.batch.bin  
**Calibration Last Update** 5/21/2020 9:04:40 AM

<b>Instrument</b>	69679	<b>Data File</b>	am 25 calr.d
<b>Type</b>	Cal	<b>Sample</b>	am 25 cal
<b>Acq. Method</b>	am 25 short 5-20-20.m	<b>Operator</b>	Britany Wylie
<b>Sample Position</b>	P2-B1	<b>Comment</b>	
<b>Injection Volume</b>	2.5		
<b>Acq. Date-Time</b>	5/20/2020 3:19:30 PM		

**Sample Chromatogram**



Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
6-MAM	2.546	23736	11946.6	18114.6	822701	10.000
7-aminoclonazepam	3.327	643318	1701.8	952096.8	2827695	10.000
7-aminoflunitrazepam	3.555	1016047	40377.0	1565.8	6295211	10.000
Acetyl Fentanyl	3.552	225095	83.4	36407.1	14598803	10.000
Acetyl Norfentanyl	2.525	141550	1592.8	122.3	8258986	10.000
a-hydroxyalprazolam	4.319	99405	168.3	339.1	542247	10.000
alpha-hydroxymidazolam	4.409	540492	500.0	7866.7	3409584	10.000
alpha-PVP	3.227	2190342	479.5	526.6	9998515	10.000
Alprazolam	4.443	706659	2709.5	1548.6	2509975	10.000
Amitriptyline	4.203	996482	72.1	86.7	4308614	10.000
Amphetamine	2.529	1156325	267.6	4854.7	3745321	10.000
Benzoyllecgonine	3.081	402035	206024.3	120.5	2028014	10.000
Buprenorphine	4.115	176440	416.7	10295.8	900653	10.000
Bupropion	3.455	2011609	2078.3	1838.0	7438869	10.000
Carbamazepine	4.023	3420486	3416.2	2337.1	19628756	10.000
Carisoprodol	4.005	680934	3254.8	371.4	3289348	10.000
Chlordiazepoxide	4.551	116293	85.1	330.8	7089296	10.000
Chlorpheniramine	3.682	12217	93.5	8246.1	29719698	10.000
Citalopram	3.843	886847	351.2	627.1	4036903	10.000
Clonazepam	4.274	606468	850.8	397.4	1034083	10.000
Cocaine	3.279	2753276	1250808.9	4847.0	15657649	10.000
Codeine	2.428	165006	181.3	1324.6	897923	10.000
Cyclobenzaprine	4.127	1504977	125.8	∞	6325058	10.000
Desipramine	4.159	2153451	708.9	331.5	11497762	10.000
Dextromethorphan	3.819	506585	80.4	26.3	2594828	10.000
Dextrorphan	3.084	961774	12450.4	565.4	5436533	10.000
Diazepam	4.708	581474	4949.9	662.2	2834256	10.000
Dihydrocodeine	2.366	400786	632.6	513.6	2239172	10.000
Diphenhydramine	3.775	4320406	855.7	5020.2	29719698	10.000
Doxepin	3.909	1136005	953.3	224.0	6061576	10.000
Doxylamine	3.343	4809772	800.3	726.2	23033773	10.000
EDDP	3.832	3535438	10396.2	24620.1	22652895	10.000
Estazolam	4.339	1846168	1906.4	831.1	5042129	10.000
Etizolam	4.454	94796	719.7	146588.2	5042129	10.000

am 25 cal

# AM #25 Multi-Drug Screen Results

Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Fentanyl	3.796	117568	69.7	34314.4	8295595	10.000
Flunitrazepam	4.397	757534	187708.8	213047.6	231480	10.000
Fluoxetine	4.121	1382834	346.9	97959.1	6264906	10.000
Flurazepam	3.902	1369918	722563.9	142559.7	231480	10.000
Hydrocodone	2.641	693923	507.0	1208.5	4218049	10.000
Hydromorphone	2.083	619687	623.9	1734.9	2550627	10.000
Imipramine	4.171	2749309	695.2	287.3	11426167	10.000
Ketamine	3.103	1530032	2238.2	141.7	7777385	10.000
Lamotrigine	3.285	137805	70.3	1063.2	4959465	10.000
Levamisole	2.586	1661182	710.1	478.2	15657649	10.000
Lorazepam	4.243	191840	230.0	150.4	2509975	10.000
Maprotiline	4.203	756689	92.6	1380.2	4308614	10.000
MDA	2.663	1603594	2748.2	272.9	7376173	10.000
MDEA	2.921	2458667	4825.3	864.7	11520419	10.000
MDMA	2.755	2626673	1227.5	398.4	1673417	10.000
Meperidine	3.286	1068532	605.6	711.8	4959465	10.000
Meprobamate	3.396	438276	1321.3	199.5	2092143	10.000
Methadone	4.167	2882622	1239.3	261.1	15994229	10.000
Methamphetamine	2.635	2305662	408.7	59.6	4789936	10.000
Methocarbamol	3.302	181557	137.7	380.1	4959465	10.000
Methylphenidate	3.210	4812821	1567.7	1071.8	24758836	10.000
Metoprolol	3.129	296785	14553.7	1385.0	4959465	10.000
Midazolam	4.562	321666	141296.0	106685.6	4421808	10.000
Mirtazapine	3.528	1338748	5394.4	25420.5	4959465	10.000
Mitragynine	3.932	153980	34210.4	180042.8	6061576	10.000
Morphine	1.918	109993	∞	712.2	62189	10.000
Norbuprenorphine	3.580	30130	39.1	56410.2	177959	10.000
Nordiazepam	4.525	506581	1129.7	1667.6	1798173	10.000
Norfentanyl	2.997	2641224	14664.6	1214.8	12620694	10.000
Norhydrocodone	2.597	11367	26.2	12.2	736002	10.000
Normeperidine	3.304	863359	1906.5	269.0	3525684	10.000
Noroxycodone	2.549	656085	∞	∞	2698050	10.000
Nortriptyline	4.206	916886	604.4	364.7	2321364	10.000
O-desmethyl-tramadol	2.553	3776756	2424.1	235.2	22438381	10.000
Olanzapine	3.599	398815	334.9	70.7	125906	10.000
Oxazepam	4.325	821883	654.7	548.5	5384109	10.000
Oxycodone	2.562	1247591	803.9	222.6	6208601	10.000
Oxymorphone	1.958	723214	1154.6	11436.4	2733640	10.000
Paroxetine	4.149	177651	363.1	5868.2	4499511	10.000
Phenazepam	4.484	879161	1689.7	1715.6	3835311	10.000
Phencyclidine	3.653	2696323	8605.9	1554.1	13171171	10.000
Phentermine	2.803	748577	28.2	6.3	7111678	10.000
Phenytoin	3.914	20562	16221.0	23.8	125906	10.000
Promethazine	4.093	3826284	27552.8	284.3	15701626	10.000
Pseudoephedrine	2.329	23335393	8050.8	262.8	91572794	10.000
Quetiapine	4.132	932570	515870.6	16.0	1442497	10.000
Sertraline	4.368	923806	489.2	626.3	4499511	10.000
Sufentanil	4.116	105456	79008.9	167.9	6967897	10.000
Tapentadol	3.135	2294790	786.4	426.3	12172501	10.000
Temazepam	4.505	1150016	483.0	57.3	5468374	10.000
Tramadol	3.114	4740027	1961.6	132.0	25981831	10.000
Trazodone	4.178	1890974	435.6	1871379.3	8379804	10.000
Venlafaxine	3.511	3510478	2384.9	233.3	20422223	10.000
Zaleplon	4.169	557927	924.2	24764.3	1568340	10.000
Zolpidem	3.892	3465761	24012.2	226.2	16928443	10.000
Zopiclone	3.719	294323	1946.1	379.3	1634144	10.000

**AM# 26: THC and Metabolites Screen in Blood by LC-MS/MS**Extraction Date: 5/20/2020Analyst: Britany Wylie

Plate lot#: 200303

Plate Expiration: 09/03/2020

**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:** 20A52255 **Urine Blank:** 41520 **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.
- 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

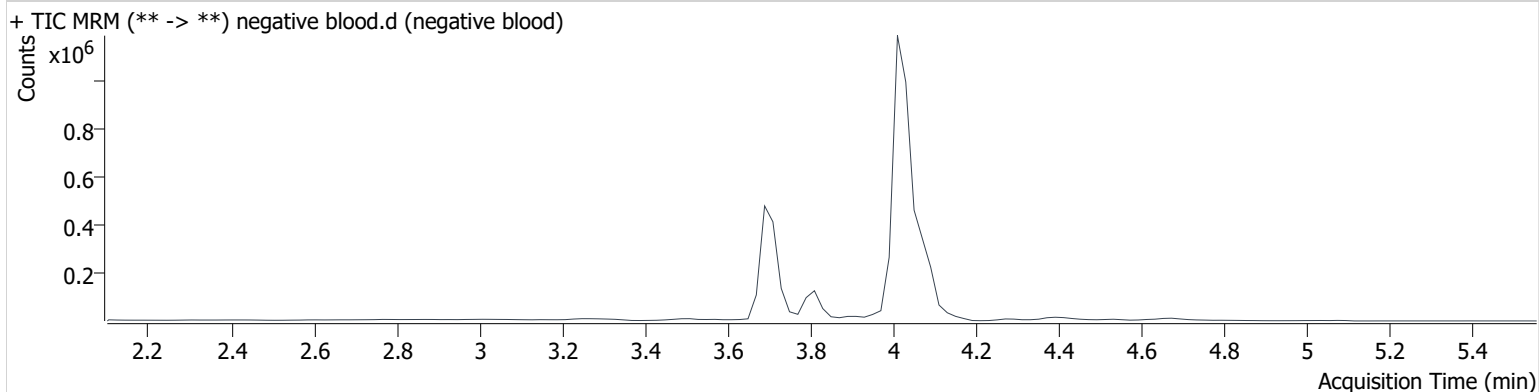
COMMENTS: *urines evaluated for Carboxy-THC only, THC Curve limited: 1-50*

# AM #26 Cannabinoids Screen Results

**Batch results** D:\MassHunter\Data\2020 Data\am 25-26 5-20-20\QuantResults\thcs.batch.bin  
**Calibration Last Update** 5/21/2020 8:44:11 AM

<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 scr 5-5-20.m	<b>Operator</b>	Britany Wylie
<b>Sample Position</b>	P3-A2	<b>Comment</b>	
<b>Injection Volume</b>	5		
<b>Acq. Date-Time</b>	5/20/2020 7:45:47 PM		
<b>Sample Info.</b>			

## Sample Chromatogram



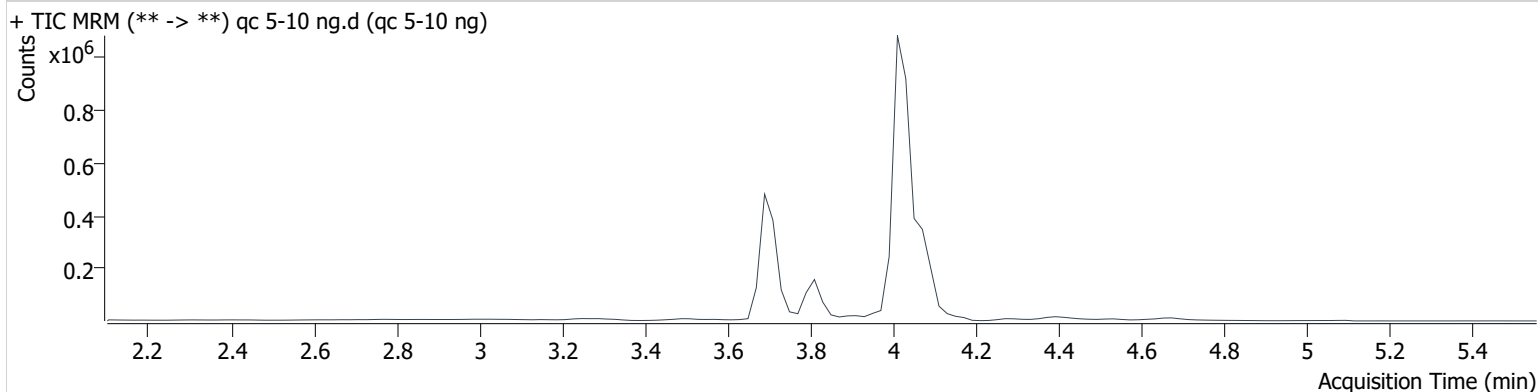
BW

# AM #26 Cannabinoids Screen Results

**Batch results** D:\MassHunter\Data\2020 Data\am 25-26 5-20-20\QuantResults\thcs.batch.bin  
**Calibration Last Update** 5/21/2020 8:44:11 AM

<b>Instrument</b>	69679	<b>Data File</b>	qc 5-10 ng.d
<b>Type</b>	QC	<b>Sample</b>	<del>qc 5-10 ng</del>
<b>Acq. Method</b>	am 26 cann scr 5-5-20.m	<b>Operator</b>	Britany Wylie QC 5-15ng
<b>Sample Position</b>	P3-H1	<b>Comment</b>	BW 5-22-20
<b>Injection Volume</b>	5		
<b>Acq. Date-Time</b>	5/20/2020 7:39:09 PM		
<b>Sample Info.</b>			

## Sample Chromatogram



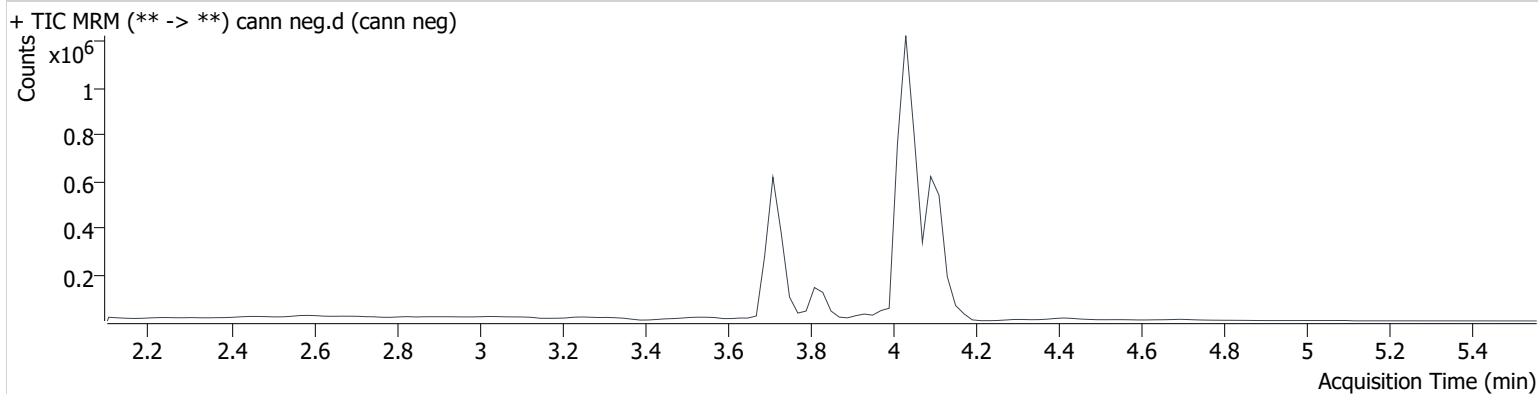
Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	4.084	16407	518955	3.100 ng/ml
THC-COOH	3.810	101410	273675	14.159 ng/ml
THC-OH	3.696	109706	1263513	4.402 ng/ml

# AM #26 Cannabinoids Screen Results

**Batch results** D:\MassHunter\Data\2020 Data\am 25-26 5-20-20\QuantResults\thcs.batch.bin  
**Calibration Last Update** 5/21/2020 8:44:11 AM

<b>Instrument</b>	69679	<b>Data File</b>	cann neg.d
<b>Type</b>	Sample	<b>Sample</b>	cann neg <span style="color: blue;">urine</span>
<b>Acq. Method</b>	am 26 cann scr 5-5-20.m	<b>Operator</b>	Britany Wylie
<b>Sample Position</b>	P3-D3	<b>Comment</b>	
<b>Injection Volume</b>	5		
<b>Acq. Date-Time</b>	5/20/2020 8:58:31 PM		
<b>Sample Info.</b>			

**Sample Chromatogram**

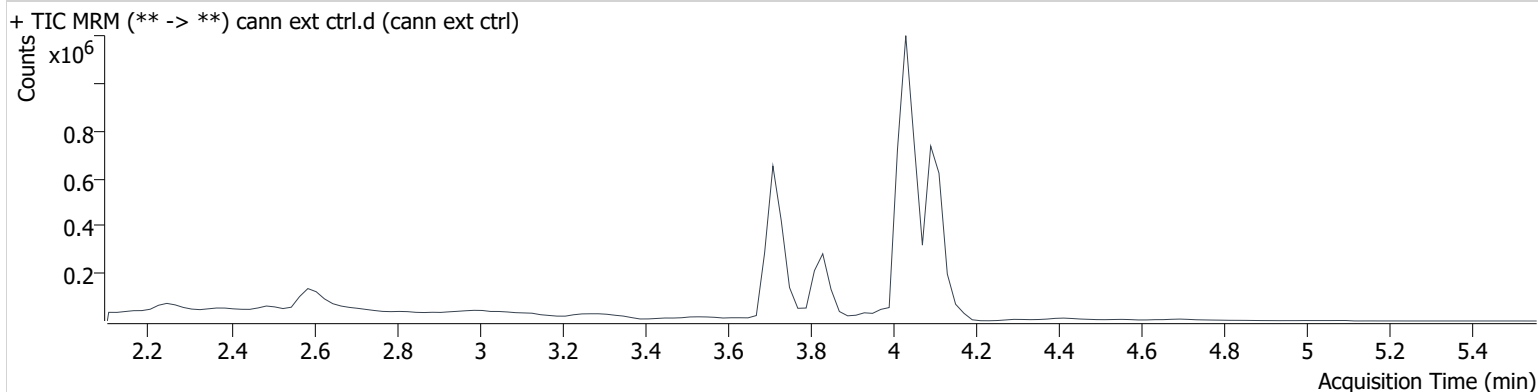


# AM #26 Cannabinoids Screen Results

**Batch results** D:\MassHunter\Data\2020 Data\am 25-26 5-20-20\QuantResults\thcs.batch.bin  
**Calibration Last Update** 5/21/2020 8:44:11 AM

<b>Instrument</b>	69679	<b>Data File</b>	cann ext ctrl.d
<b>Type</b>	Sample	<b>Sample</b>	cann ext ctrl <i>urine</i>
<b>Acq. Method</b>	am 26 cann scr 5-5-20.m	<b>Operator</b>	Britany Wylie
<b>Sample Position</b>	P3-E3	<b>Comment</b>	
<b>Injection Volume</b>	5		
<b>Acq. Date-Time</b>	5/20/2020 9:05:08 PM		

**Sample Chromatogram**



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	4.104	202312	1468579	16.213 ng/ml
THC-COOH	3.830	257749	351928	34.280 ng/ml
THC-OH	3.716	319968	1467586	11.983 ng/ml

**Toxicology AM method 27/26 external prep information**

working solution 1 ug/ml in meoh C-THC, THC-OH, THC

Stock solution 1mg/ml 7.5 ul each THC, 100 ug/ml 150 ul C-THC, 75 ul THC-OH in 9767.5 ul meOH

Ppd 2/13/20 Exp: 8/13/20 lot 21320 by AMN

Drug	lot	expiration
C-THC	FE07171501	9/1/2020
THC-OH	FE07721601	7/1/2021
THC	FE001041701	3/1/2022

AM 27/26 blood control 100 ul working solution lot (91319) in 9900 ul blood lot (20A52255)

ppd 02/13/20 Exp 08/13/20 lot b81320 Concentration 7.5 ng/ml THC, THC-OH and 15 ng/ml C-THC by AMN

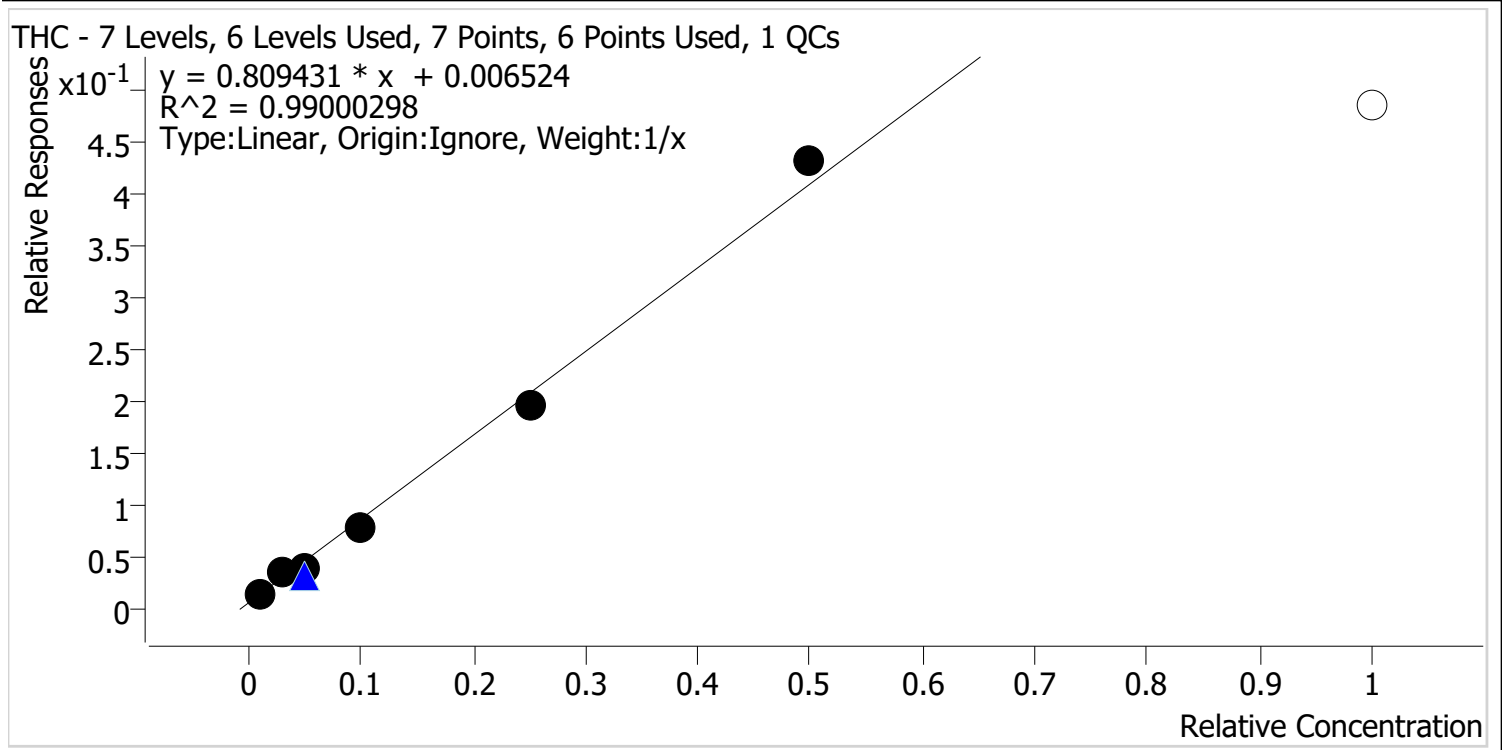
AM 27/26 urine control 400 ul working solution lot (21320) in 9600 ul urine lot (32420)

ppd 4/17/20 Exp 9120 lot u101720 Concentration 30 ng/ml THC, THC-OH and 60 ng/ml C-THC by BAW



# Compound Calibration Report

**Batch results** D:\MassHunter\Data\2020 Data\am 25-26 5-20-20\QuantResults\thcs.batch.bin  
**Last Cal. Update** 5/21/2020 8:44 AM  
**Analyst Name** ISP\datastor  
**Analyte** THC **Internal Standard** THC-d3



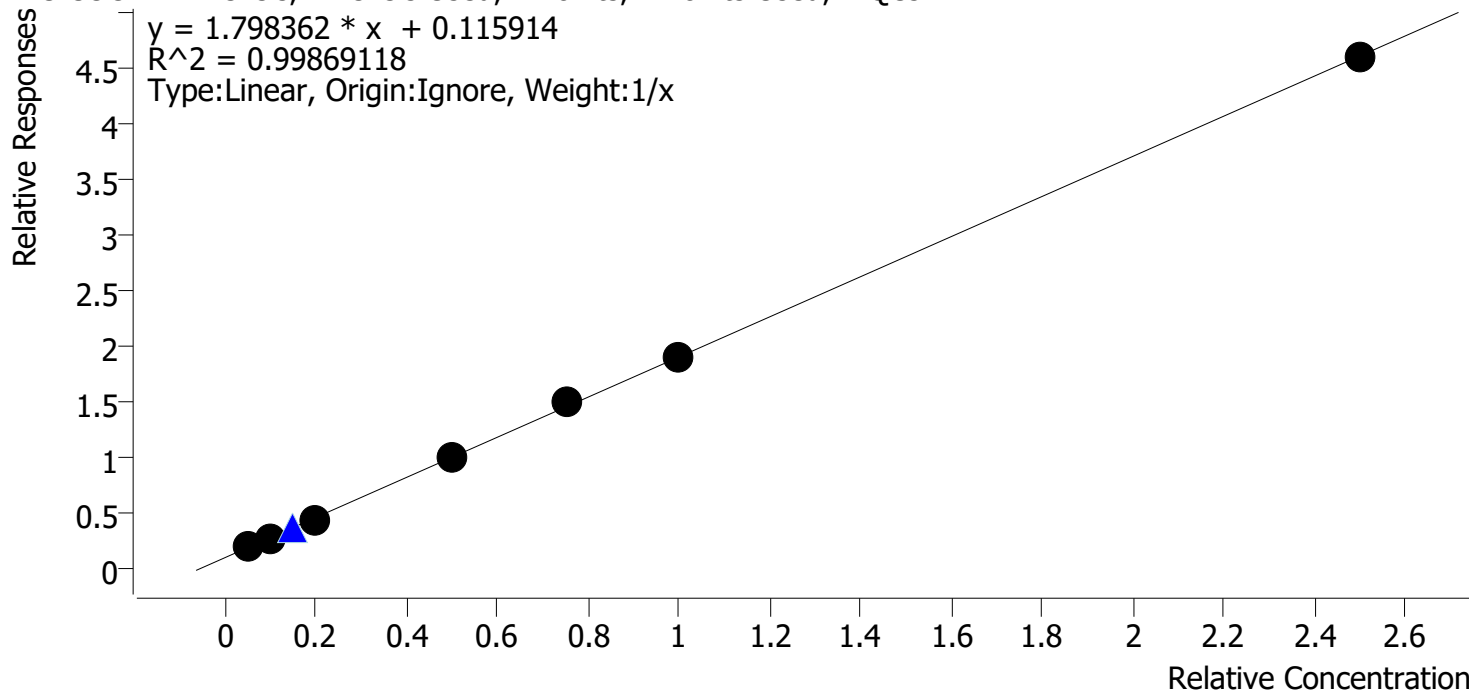
Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
check std 1ng	1	✓	1.0	1.1	106.9
cal 2	2	✓	3.0	3.7	124.4
cal 3	3	✓	5.0	4.0	80.9
cal 4	4	✓	10.0	8.8	87.7
cal 5	5	✓	25.0	23.7	94.7
cal-6	6	✓	50.0	52.7	105.4
cal-7	7	x	100.0	59.3	59.3

# Compound Calibration Report

**Batch results** D:\MassHunter\Data\2020 Data\am 25-26 5-20-20\QuantResults\thcs.batch.bin  
**Last Cal. Update** 5/21/2020 8:44 AM  
**Analyst Name** ISP\datastor  
**Analyte** THC-COOH **Internal Standard** THC-COOH-d9

*BW*

THC-COOH - 7 Levels, 7 Levels Used, 7 Points, 7 Points Used, 1 QCs



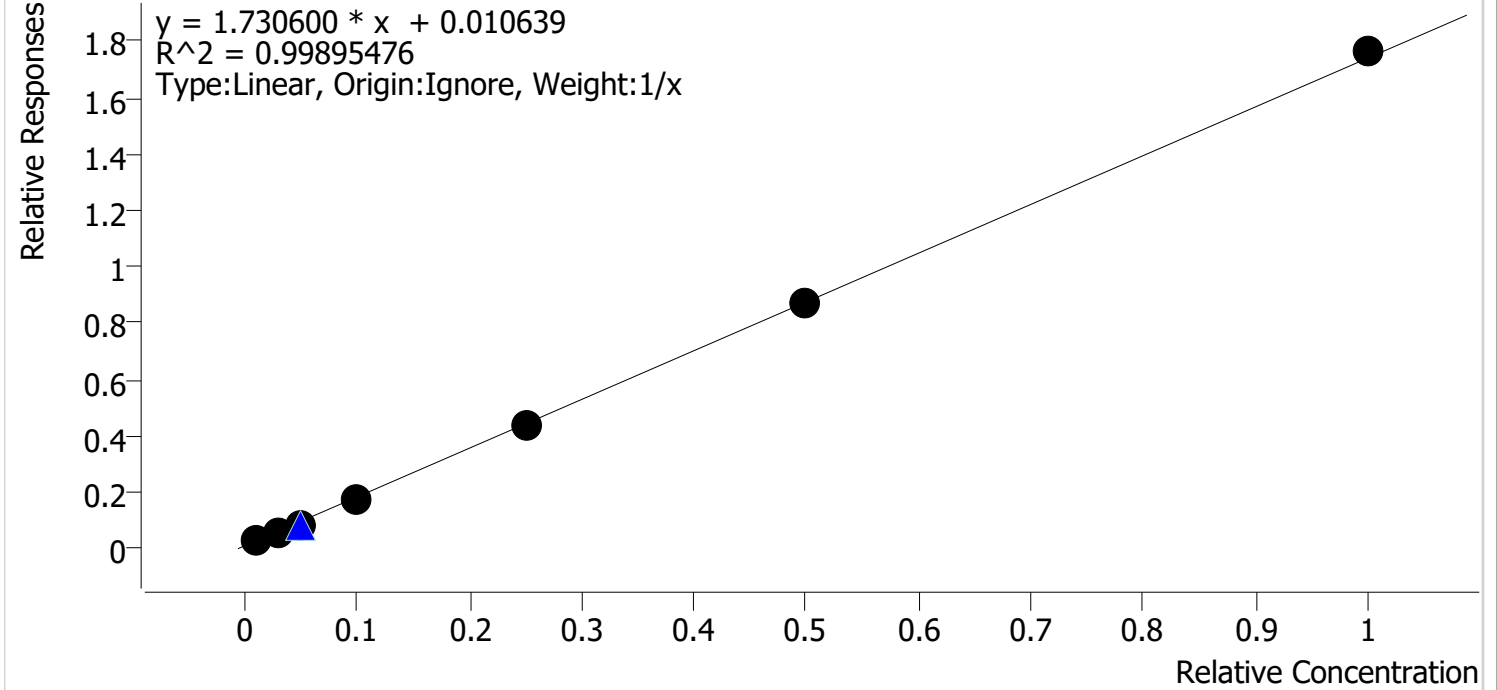
Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
check std 1ng	1	✓	5.0	5.9	117.3
cal 2	2	✓	10.0	8.6	86.1
cal 3	3	✓	20.0	18.5	92.7
cal 4	4	✓	50.0	50.7	101.5
cal 5	5	✓	75.0	76.8	102.4
cal-6	6	✓	100.0	100.3	100.3
cal-7	7	✓	250.0	249.1	99.7

# Compound Calibration Report

**Batch results** D:\MassHunter\Data\2020 Data\am 25-26 5-20-20\QuantResults\thcs.batch.bin  
**Last Cal. Update** 5/21/2020 8:44 AM  
**Analyst Name** ISP\datastor  
**Analyte** THC-OH **Internal Standard** THC-OH-d3

*BW*

THC-OH - 7 Levels, 7 Levels Used, 7 Points, 7 Points Used, 1 QCs



Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
check std 1ng	1	✓	1.0	1.2	123.1
cal 2	2	✓	3.0	2.7	91.2
cal 3	3	✓	5.0	4.4	88.5
cal 4	4	✓	10.0	9.7	96.7
cal 5	5	✓	25.0	25.0	99.9
cal-6	6	✓	50.0	49.7	99.3
cal-7	7	✓	100.0	101.3	101.3

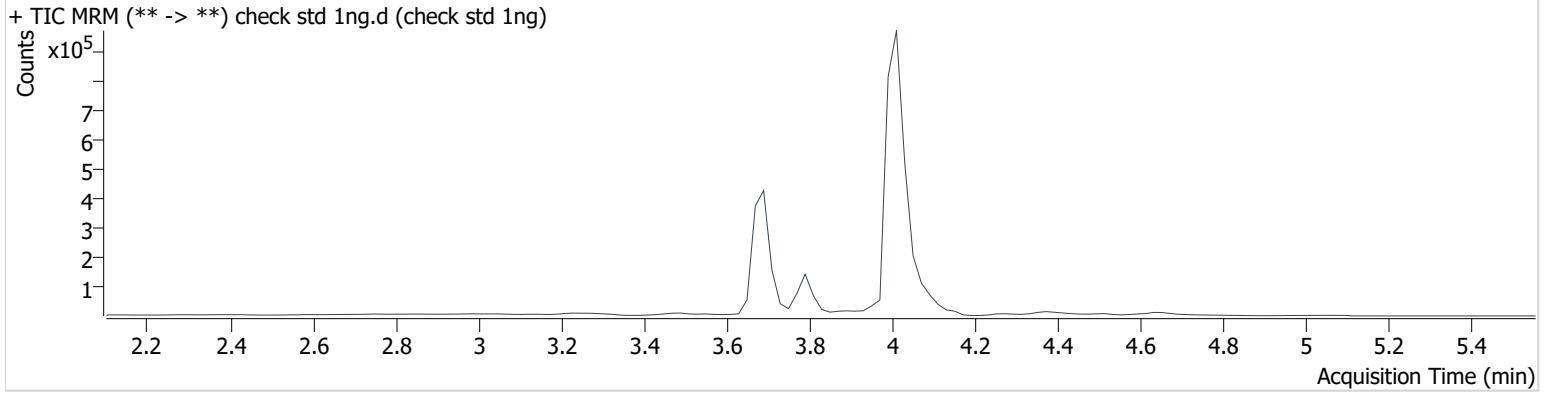
# AM #26 Cannabinoids Screen Results

**Batch results** D:\MassHunter\Data\2020 Data\am 25-26 5-20-20\QuantResults\thcs.batch.bin  
**Calibration Last Update** 5/21/2020 8:44:11 AM

<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 scr 5-5-20.m	<b>Operator</b>	Britany Wylie
<b>Sample Position</b>	P3-A1	<b>Comment</b>	
<b>Injection Volume</b>	5		
<b>Acq. Date-Time</b>	5/20/2020 6:46:18 PM		

**Sample Info.**

## Sample Chromatogram



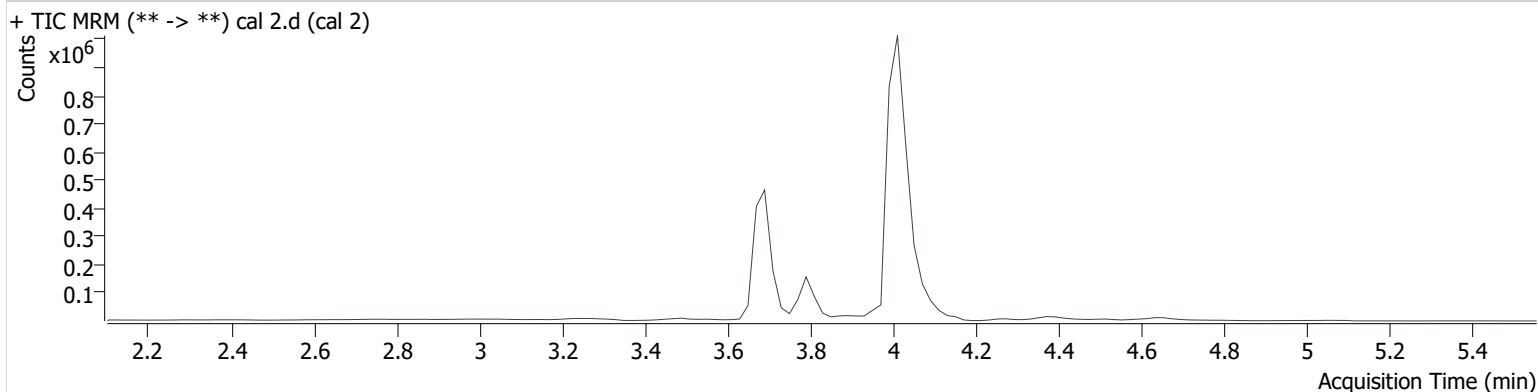
Name	RT	Resp.	ISTD Resp.	Final Conc.	
THC	4.084	3290	216800	1.069 ng/ml	Low
THC-COOH	3.790	63018	284640	5.865 ng/ml	Low
THC-OH	3.696	39075	1223287	1.231 ng/ml	Low

# AM #26 Cannabinoids Screen Results

**Batch results** D:\MassHunter\Data\2020 Data\am 25-26 5-20-20\QuantResults\thcs.batch.bin  
**Calibration Last Update** 5/21/2020 8:44:11 AM

<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 scr 5-5-20.m	<b>Operator</b>	Britany Wylie
<b>Sample Position</b>	P3-B1	<b>Comment</b>	
<b>Injection Volume</b>	5		
<b>Acq. Date-Time</b>	5/20/2020 6:52:56 PM		

**Sample Chromatogram**



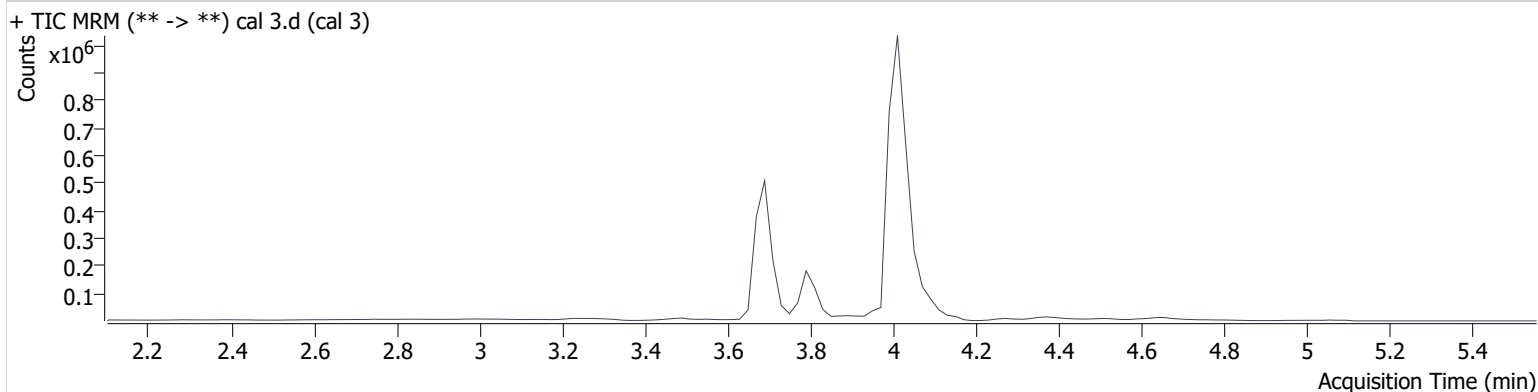
Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	4.084	9231	251330	3.731 ng/ml
THC-COOH	3.790	79141	292293	8.610 ng/ml <b>Low</b>
THC-OH	3.696	75351	1299208	2.737 ng/ml <b>Low</b>

# AM #26 Cannabinoids Screen Results

**Batch results** D:\MassHunter\Data\2020 Data\am 25-26 5-20-20\QuantResults\thcs.batch.bin  
**Calibration Last Update** 5/21/2020 8:44:11 AM

<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 scr 5-5-20.m	<b>Operator</b>	Britany Wylie
<b>Sample Position</b>	P3-C1	<b>Comment</b>	
<b>Injection Volume</b>	5		
<b>Acq. Date-Time</b>	5/20/2020 6:59:34 PM		

**Sample Chromatogram**



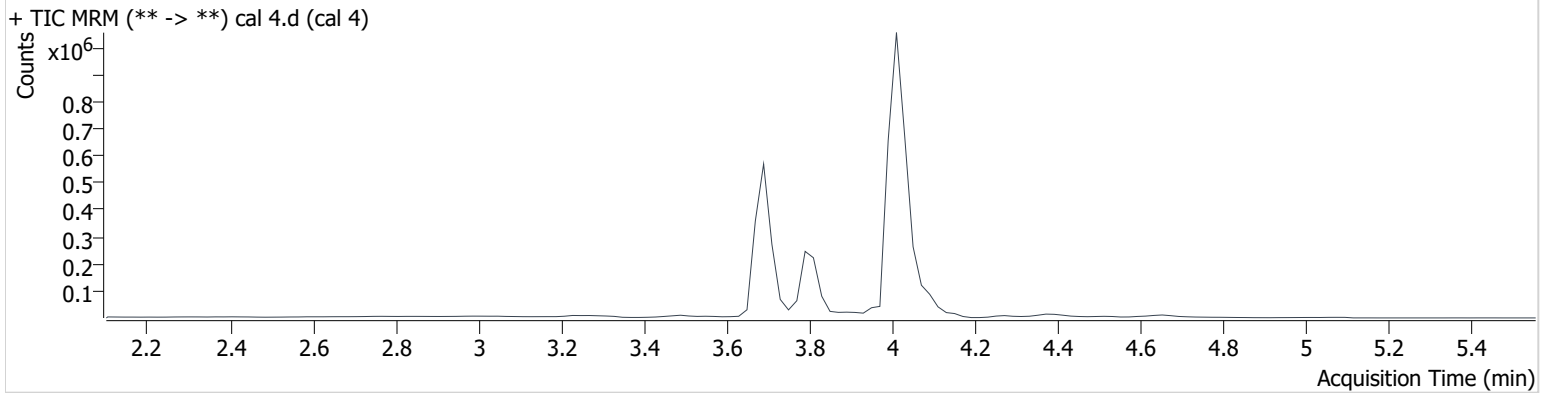
Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	4.064	8711	221864	4.045 ng/ml
THC-COOH	3.810	129228	287494	18.549 ng/ml
THC-OH	3.696	111580	1279225	4.425 ng/ml

# AM #26 Cannabinoids Screen Results

**Batch results** D:\MassHunter\Data\2020 Data\am 25-26 5-20-20\QuantResults\thcs.batch.bin  
**Calibration Last Update** 5/21/2020 8:44:11 AM

<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 scr 5-5-20.m	<b>Operator</b>	Britany Wylie
<b>Sample Position</b>	P3-D1	<b>Comment</b>	
<b>Injection Volume</b>	5		
<b>Acq. Date-Time</b>	5/20/2020 7:06:12 PM		

**Sample Chromatogram**



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	4.104	17144	221210	8.769 ng/ml
THC-COOH	3.810	308631	300067	50.748 ng/ml
THC-OH	3.696	232123	1304716	9.666 ng/ml

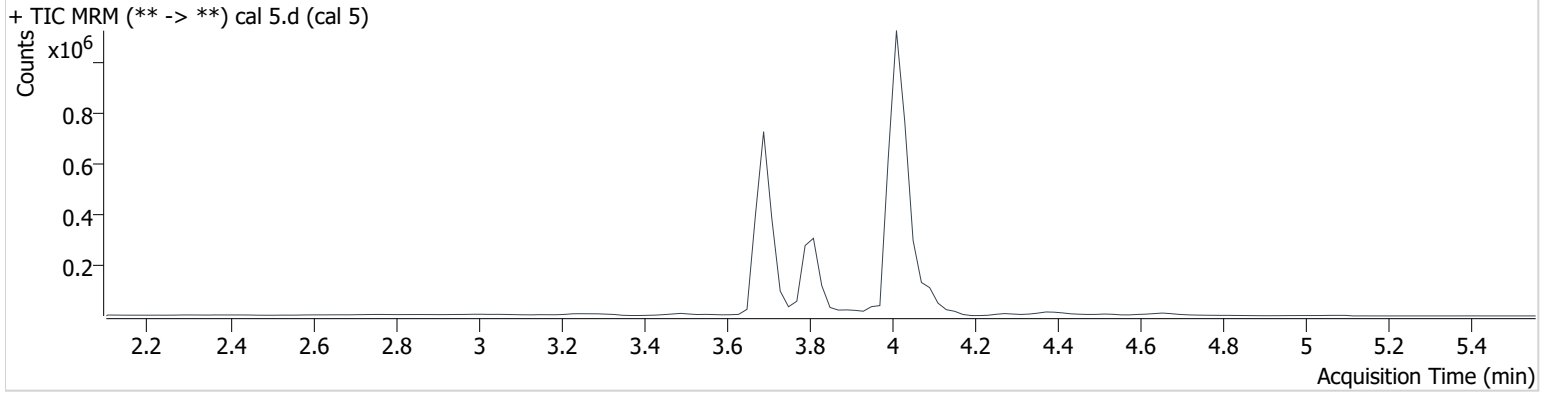
# AM #26 Cannabinoids Screen Results

**Batch results** D:\MassHunter\Data\2020 Data\am 25-26 5-20-20\QuantResults\thcs.batch.bin  
**Calibration Last Update** 5/21/2020 8:44:11 AM

<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 scr 5-5-20.m	<b>Operator</b>	Britany Wylie
<b>Sample Position</b>	P3-E1	<b>Comment</b>	
<b>Injection Volume</b>	5		
<b>Acq. Date-Time</b>	5/20/2020 7:12:48 PM		

**Sample Info.**

## Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	4.104	39610	199892	23.675 ng/ml
THC-COOH	3.810	434713	290338	76.812 ng/ml
THC-OH	3.696	590249	1333071	24.970 ng/ml

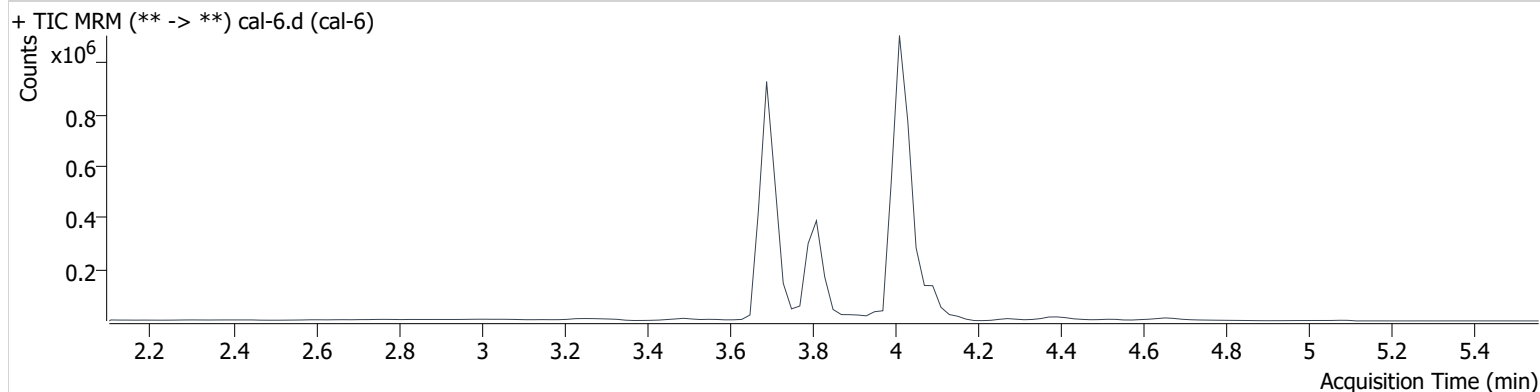


# AM #26 Cannabinoids Screen Results

**Batch results** D:\MassHunter\Data\2020 Data\am 25-26 5-20-20\QuantResults\thcs.batch.bin  
**Calibration Last Update** 5/21/2020 8:44:11 AM

<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 scr 5-5-20.m	<b>Operator</b>	Britany Wylie
<b>Sample Position</b>	P3-F1	<b>Comment</b>	
<b>Injection Volume</b>	5		
<b>Acq. Date-Time</b>	5/20/2020 7:19:24 PM		

**Sample Chromatogram**



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	4.104	78678	181626	52.711 ng/ml
THC-COOH	3.810	557341	290398	100.276 ng/ml
THC-OH	3.696	1118958	1285832	49.670 ng/ml

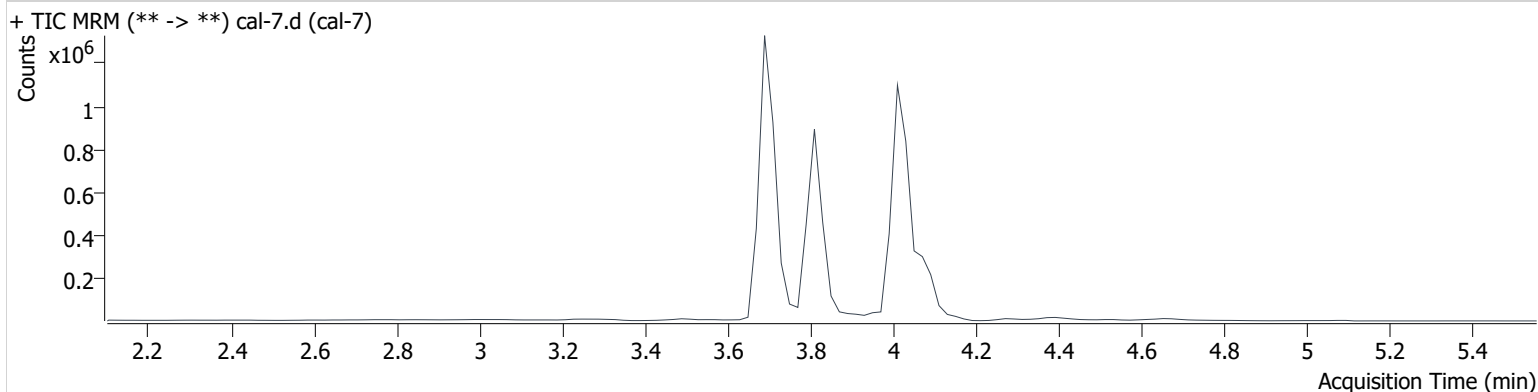
# AM #26 Cannabinoids Screen Results

**Batch results** D:\MassHunter\Data\2020 Data\am 25-26 5-20-20\QuantResults\thcs.batch.bin  
**Calibration Last Update** 5/21/2020 8:44:11 AM

<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 scr 5-5-20.m	<b>Operator</b>	Britany Wylie
<b>Sample Position</b>	P3-G1	<b>Comment</b>	
<b>Injection Volume</b>	5		
<b>Acq. Date-Time</b>	5/20/2020 7:26:00 PM		

**Sample Info.**

## Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	4.104	173555	356633	59.317 ng/ml
THC-COOH	3.810	1341630	291890	249.140 ng/ml
THC-OH	3.696	2188286	1240688	101.302 ng/ml