




















**Worklist: 4100**

<u>LAB CASE</u>	<u>ITEM</u>	<u>ITEM TYPE</u>	<u>DESCRIPTION</u>	
C2020-0454	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
C2020-0455	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
C2020-0456	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
C2020-0458	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
C2020-0459	1	UCK	AM 25/AM 26 Urine MultiDrug/THC Screen by LC-QQQ	
C2020-0489	2	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
C2020-0492	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
C2020-0506	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
C2020-0513	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
C2020-0515	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
C2020-0521	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
C2020-0525	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
C2020-0532	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
C2020-0537	1	UCK	AM 25/AM 26 Urine MultiDrug/THC Screen by LC-QQQ	
C2020-0553	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
C2020-0554	3	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
C2020-0562	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
C2020-0563	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	

**Worklist: 4104**

<u>LAB CASE</u>	<u>ITEM</u>	<u>ITEM TYPE</u>	<u>DESCRIPTION</u>	
C2020-0566	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	

**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~~ 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 in Blood and Urine by LC-MS/MS

Extraction Date: 3/24/20  
Plate lot#: 190725

Analyst: Britany Wylie  
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:** 32420 **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

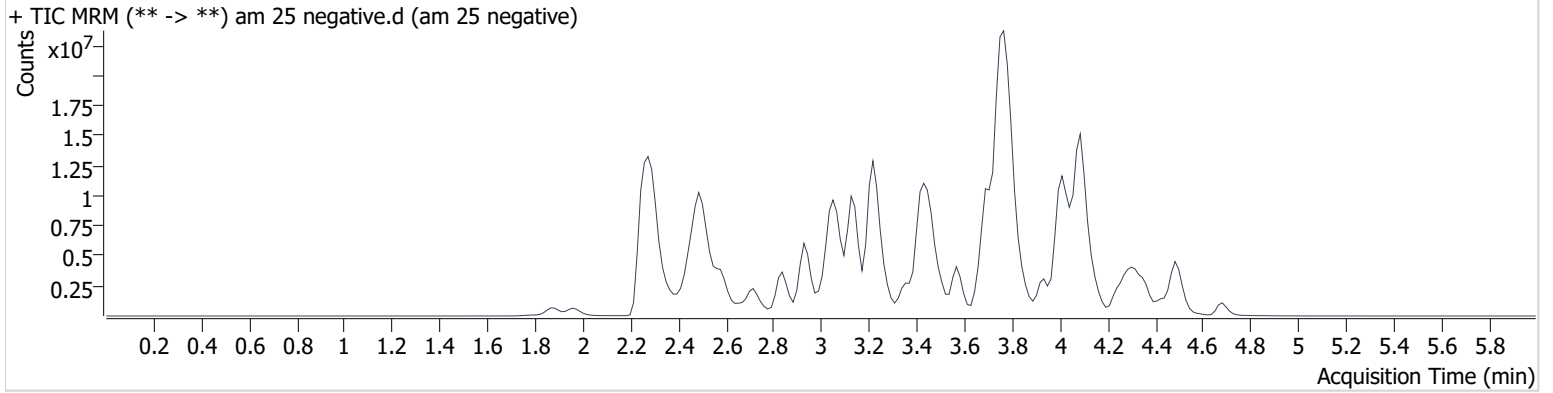
COMMENTS:

# AM #25 Multi-Drug Screen Results

**Batch results** D:\MassHunter\Data\2020 Data\am 25-26 3-24-20\QuantResults\mds.batch.bin  
**Calibration Last Update** 3/24/2020 8:15:05 PM

<b>Instrument</b>	69679	<b>Data File</b>	am 25 negative.d
<b>Type</b>	Sample	<b>Sample</b>	am 25 negative
<b>Acq. Method</b>	am25 short rt short.m	<b>Operator</b>	Britany Wylie
<b>Sample Position</b>	P2-A6	<b>Comment</b>	
<b>Injection Volume</b>	2.5		
<b>Acq. Date-Time</b>	3/24/2020 1:46:06 PM		
<b>Sample Info.</b>			

## Sample Chromatogram

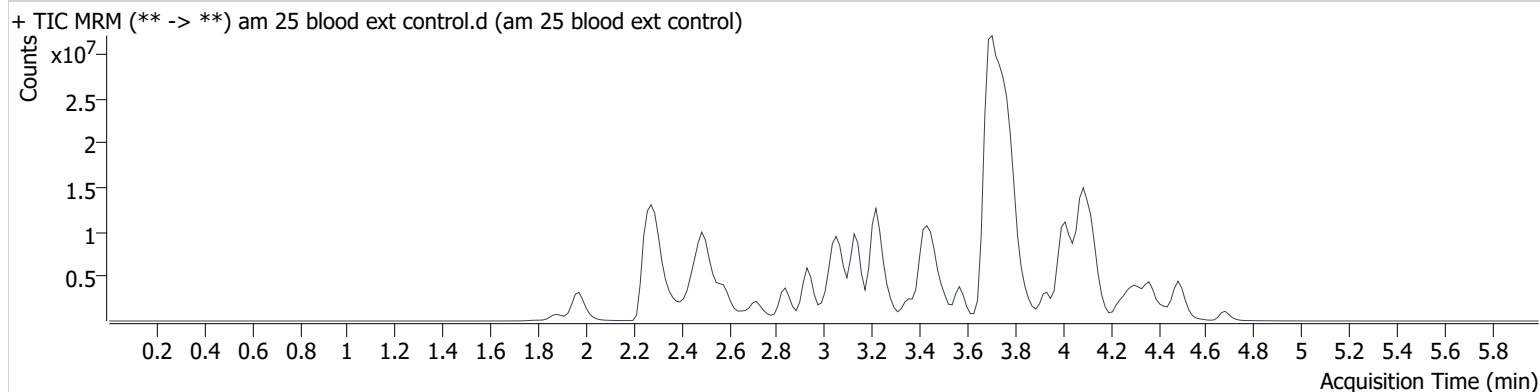


# AM #25 Multi-Drug Screen Results

**Batch results** D:\MassHunter\Data\2020 Data\am 25-26 3-24-20\QuantResults\mds.batch.bin  
**Calibration Last Update** 3/28/2020 2:37:57 PM

<b>Instrument</b>	69679	<b>Data File</b>	am 25 blood ext control.d
<b>Type</b>	Sample	<b>Sample</b>	am 25 blood ext control
<b>Acq. Method</b>	am25 short rt short.m	<b>Operator</b>	Britany Wylie
<b>Sample Position</b>	P2-B6	<b>Comment</b>	
<b>Injection Volume</b>	2.5		
<b>Acq. Date-Time</b>	3/24/2020 1:52:48 PM		

**Sample Chromatogram**



Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Chlordiazepoxide	4.384	2694180	1118.8	4029.7	5227330	106.118
Diphenhydramine	3.713	61824221	136020.0	3120.3	24379463	159.743
Hydromorphone	1.978	5930132	74915.6	4288.9	2373011	97.590
Methamphetamine	2.574	1246254	∞	∞	3364609	6.767 <10
Nortriptyline	4.128	10596119	4225.7	1231.5	2501365	109.293

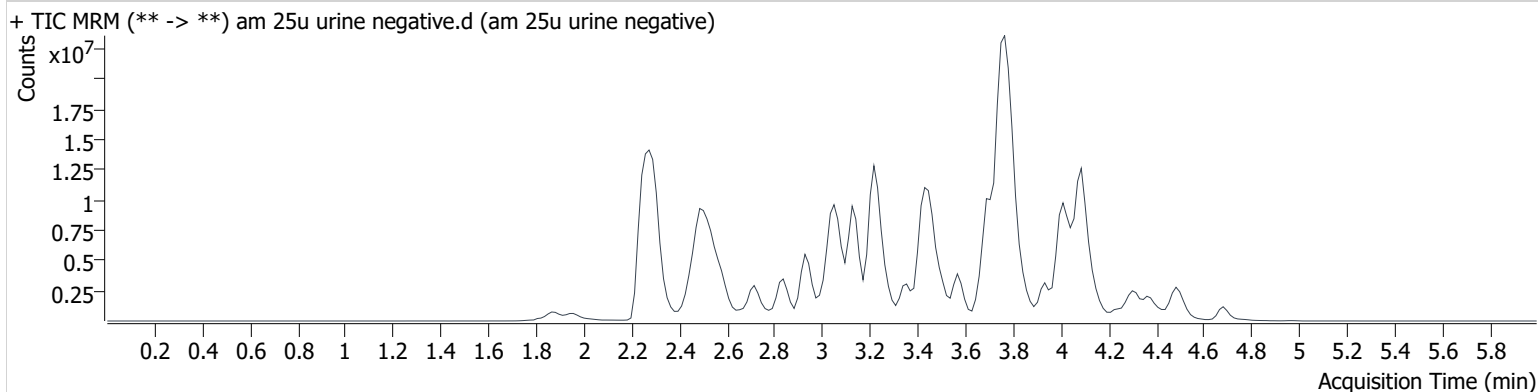
# AM #25 Multi-Drug Screen Results

**Batch results** D:\MassHunter\Data\2020 Data\am 25-26 3-24-20\QuantResults\mds.batch.bin  
**Calibration Last Update** 3/24/2020 8:15:05 PM

<b>Instrument</b>	69679	<b>Data File</b>	am 25u urine negative.d
<b>Type</b>	Sample	<b>Sample</b>	am 25u urine negative
<b>Acq. Method</b>	am25 short rt short.m	<b>Operator</b>	Britany Wylie
<b>Sample Position</b>	P2-C6	<b>Comment</b>	
<b>Injection Volume</b>	2.5		
<b>Acq. Date-Time</b>	3/24/2020 4:19:57 PM		

**Sample Info.**

## Sample Chromatogram



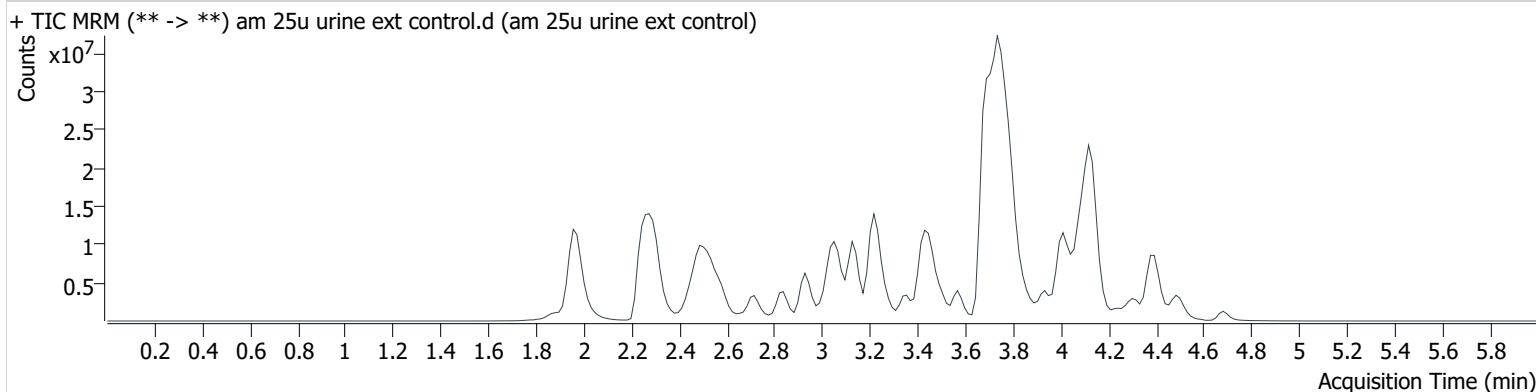
Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Methamphetamine	2.574	2455667	99.6	121.8	12806433	3.503 <32

# AM #25 Multi-Drug Screen Results

**Batch results** D:\MassHunter\Data\2020 Data\am 25-26 3-24-20\QuantResults\mds.batch.bin  
**Calibration Last Update** 3/28/2020 2:37:57 PM

<b>Instrument</b>	69679	<b>Data File</b>	am 25u urine ext control.d
<b>Type</b>	Sample	<b>Sample</b>	am 25u urine ext control
<b>Acq. Method</b>	am25 short rt short.m	<b>Operator</b>	Britany Wylie
<b>Sample Position</b>	P2-D6	<b>Comment</b>	
<b>Injection Volume</b>	2.5		
<b>Acq. Date-Time</b>	3/24/2020 4:33:15 PM		

**Sample Chromatogram**



Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Chlordiazepoxide	4.399	11140111	2366.6	8497.8	4555440	503.501
Diphenhydramine	3.775	100677532	∞	28771.4	12322911	514.645
Hydromorphone	1.963	28585376	3084.7	6636.8	1851324	602.981
Methamphetamine	2.574	2731930	∞	112.4	14435775	3.458 <32
Nortriptyline	4.143	37710165	3600.9	2144.3	1881998	516.966



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

ppd 3/9/20: Exp: 6/1/20 lot 3920                      by baw

Drug	lot	expiration
Hydromorphone	FE04101502	6/1/2020
Diphenhydramine	FN09161502	9/1/2020
nortriptyline	FN06191503	8/1/2020
chlordiazepoxide	FE07241502	8/1/2020

AM 25 control 30 ul working solution (3920) in 270 ul negative urine

ppd 3/9/20, exp 6/1/20 lot u3920                      negative urine 11420                      by BAW

AM 25 Blood Control:

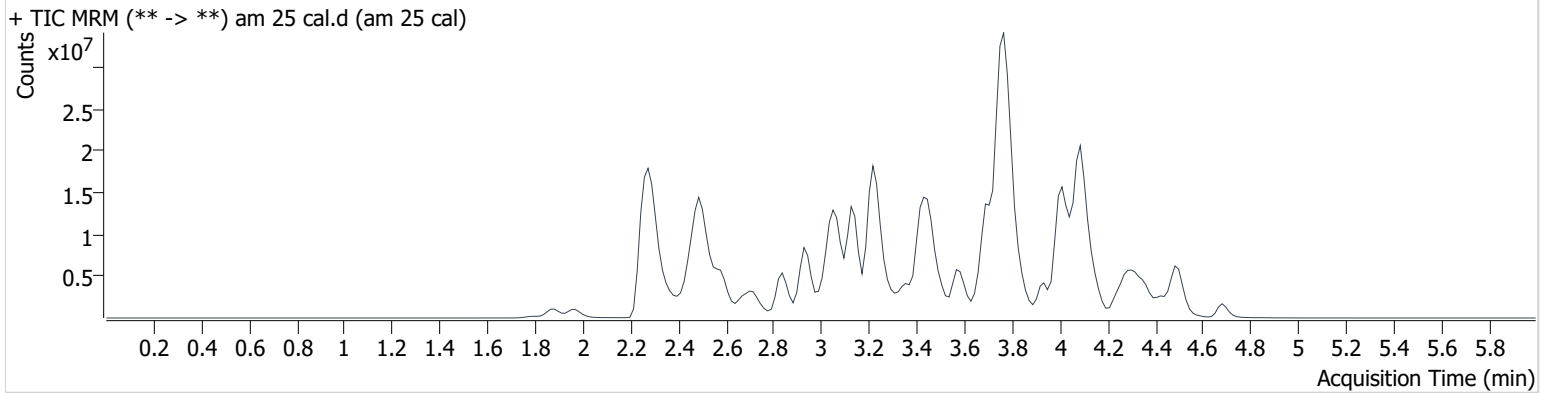
ppd 3/9/20, exp 6/1/20 lot b3920                      neg blood lot 20A52255                      by BAW

# AM #25 Multi-Drug Screen Results

**Batch results** D:\MassHunter\Data\2020 Data\am 25-26 3-24-20\QuantResults\mds.batch.bin  
**Calibration Last Update** 3/26/2020 10:49:14 PM

<b>Instrument</b>	69679	<b>Data File</b>	am 25 cal.d
<b>Type</b>	Cal	<b>Sample</b>	am 25 cal
<b>Acq. Method</b>	am25 short rt short.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>	3/24/2020 1:59:30 PM		

**Sample Chromatogram**



Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
6-MAM	2.455	27275	221.4	186.7	952314	10.000
7-aminoclonazepam	3.282	681098	418.5	255.3	3017458	10.000
7-aminoflunitrazepam	3.525	1000240	334.0	286.4	6273958	10.000
Acetyl Fentanyl	3.429	240086	142.7	72187.7	15392174	10.000
Acetyl Norfentanyl	2.479	172287	192.3	109.7	10341613	10.000
a-hydroxyalprazolam	4.318	92447	98.2	66037.7	563199	10.000
alpha-hydroxymidazolam	4.286	626609	334.5	1064.7	3847818	10.000
alpha-PVP	3.150	1934543	452.3	436.3	9194766	10.000
Alprazolam	4.443	1020395	218.2	1374.3	3967358	10.000
Amitriptyline	4.126	1132839	151.6	464.2	4494422	10.000
Amphetamine	2.468	885026	858.4	798.7	2956653	10.000
Benzoyllecgonine	3.081	497742	263.1	272.9	2327148	10.000
Buprenorphine	3.748	138014	259.3	11376.2	743271	10.000
Bupropion	3.363	1579888	755.9	800.5	5921971	10.000
Carbamazepine	4.022	3419685	1345.9	621.5	19047597	10.000
Carisoprodol	4.005	816736	1438.8	122.1	3949733	10.000
Chlordiazepoxide	4.384	300614	68.0	203.5	6189435	10.000
Chlorpheniramine	3.605	14405	46.1	31198.7	32623459	10.000
Citalopram	3.767	959048	267.5	296.7	4392003	10.000
Clonazepam	4.274	852609	1426.8	625.9	1514054	10.000
Cocaine	3.202	3003535	1582971.1	426.9	17311847	10.000
Codeine	2.322	182163	1765.0	1625.6	943375	10.000
Cyclobenzaprine	4.049	2003538	2924.7	129.7	8460986	10.000
Desipramine	4.097	2408306	22823.6	569.9	13249902	10.000
Dextromethorphan	3.743	815705	185.2	640.7	4219528	10.000
Dextrorphan	3.009	1431343	2806.7	567.6	8381858	10.000
Diazepam	4.692	815935	868.4	1018.2	3878680	10.000
Dihydrocodeine	2.291	449812	1032.0	1559.4	2601232	10.000
Diphenhydramine	3.713	5178952	1199.0	390.5	32623459	10.000
Doxepin	3.832	1259131	2116.2	60.5	6699004	10.000
Doxylamine	3.236	5201803	1623.6	32682.0	25608588	10.000
EDDP	3.771	3715727	480.9	1231.1	24629175	10.000
Estazolam	4.354	1730481	596.3	382.1	4600641	10.000
Etizolam	4.454	106940	147924.6	119167.3	4600641	10.000

# AM #25 Multi-Drug Screen Results

Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Fentanyl	3.674	197644	79.9	52514.7	12363900	10.000
Flunitrazepam	4.397	1449583	1892.6	44606.1	249463	10.000
Fluoxetine	4.060	1679677	890502.2	2125.5	7559202	10.000
Flurazepam	3.795	1277171	880042.8	247.8	249463	10.000
Hydrocodone	2.534	832404	797.6	392.6	5235031	10.000
Hydromorphone	1.978	721609	468.7	674.4	2818019	10.000
Imipramine	4.094	2932756	1025.2	545.4	12376585	10.000
Ketamine	2.950	1699785	1931.4	186.8	8401497	10.000
Lamotrigine	3.146	151011	320.4	232.7	6259682	10.000
Levamisole	2.495	1602943	653.5	260.1	17311847	10.000
Lorazepam	4.243	280795	807.8	2771.2	3967358	10.000
Maprotiline	4.126	857869	222.1	244.5	4494422	10.000
MDA	2.603	1846365	461.0	379.6	8745930	10.000
MDEA	2.845	2705728	1466.1	663.5	12995456	10.000
MDMA	2.678	3021730	1000.9	681.6	1941947	10.000
Meperidine	3.223	1343311	645.1	769.9	6259682	10.000
Meprobamate	3.396	575171	1035.1	159.2	2830332	10.000
Methadone	4.105	3599923	559.8	571.3	18756153	10.000
Methamphetamine	2.574	2374345	211.7	59.8	4338072	10.000
Methocarbamol	3.302	285102	937.7	363.6	6259682	10.000
Methylphenidate	3.149	4868791	5808.5	1799.0	25308776	10.000
Metoprolol	3.068	326942	1058.9	2327.0	6259682	10.000
Midazolam	4.103	276254	1099.9	2032.7	3874761	10.000
Mirtazapine	3.314	1397110	6502.7	1869.4	6259682	10.000
Mitragynine	3.824	152828	517.6	1288.0	6699004	10.000
Morphine	1.800	132207	∞	1624.7	96309	10.000
Norbuprenorphine	3.504	36143	18885.9	18166.7	189839	10.000
Nordiazepam	4.524	770335	887.1	630.0	2579329	10.000
Norfentanyl	2.951	3101265	19411.2	258.0	14526734	10.000
Norhydrocodone	2.536	13763	∞	38.2	883373	10.000
Normeperidine	3.256	1361079	2308.2	878.7	5663777	10.000
Noroxycodone	2.473	627825	191.4	79.0	3293214	10.000
Nortriptyline	4.128	1146728	648.6	759.8	2958581	10.000
O-desmethyl-tramadol	2.507	3823037	1346.5	121.5	23184047	10.000
Olanzapine	2.866	688537	328.1	243.3	261015	10.000
Oxazepam	4.324	912180	335.9	208.7	5957736	10.000
Oxycodone	2.486	1484757	54.8	899.3	7410660	10.000
Oxymorphone	1.883	779300	∞	7720.4	3349679	10.000
Paroxetine	4.072	241292	223.6	1195.3	5225046	10.000
Phenazepam	4.484	1257056	971.9	1130.1	5510607	10.000
Phencyclidine	3.592	2600823	2271.6	428.7	13076741	10.000
Phentermine	2.742	577032	68.1	11.4	6400196	10.000
Phenytoin	3.928	40620	51.1	42.8	261015	10.000
Promethazine	4.000	4658288	3772.5	587.5	18768349	10.000
Pseudoephedrine	2.284	18863817	223.6	17125.5	79842761	10.000
Quetiapine	3.933	1069488	411.0	186603.8	1685290	10.000
Sertraline	4.291	1058429	15020.2	632.9	5225046	10.000
Sufentanil	3.933	137901	25092.5	95.5	8910202	10.000
Tapentadol	3.090	2387772	911.5	1112.7	13246606	10.000
Temazepam	4.505	2026551	9456.2	183.5	9991739	10.000
Tramadol	3.054	4996127	4110.2	70.5	27220463	10.000
Trazodone	3.750	1304664	492.5	405.9	7181767	10.000
Venlafaxine	3.465	3703712	4688.0	363.3	20936124	10.000
Zaleplon	4.168	1290074	1074.3	3343.7	3468465	10.000
Zolpidem	3.430	4175683	1810.5	547.9	22274124	10.000
Zopiclone	3.382	350865	1693.5	472.2	1901624	10.000

**AM# 26: THC and Metabolites Screen in Blood by LC-MS/MS**Extraction Date: 3-24-2020Analyst: 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:** 32420 **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

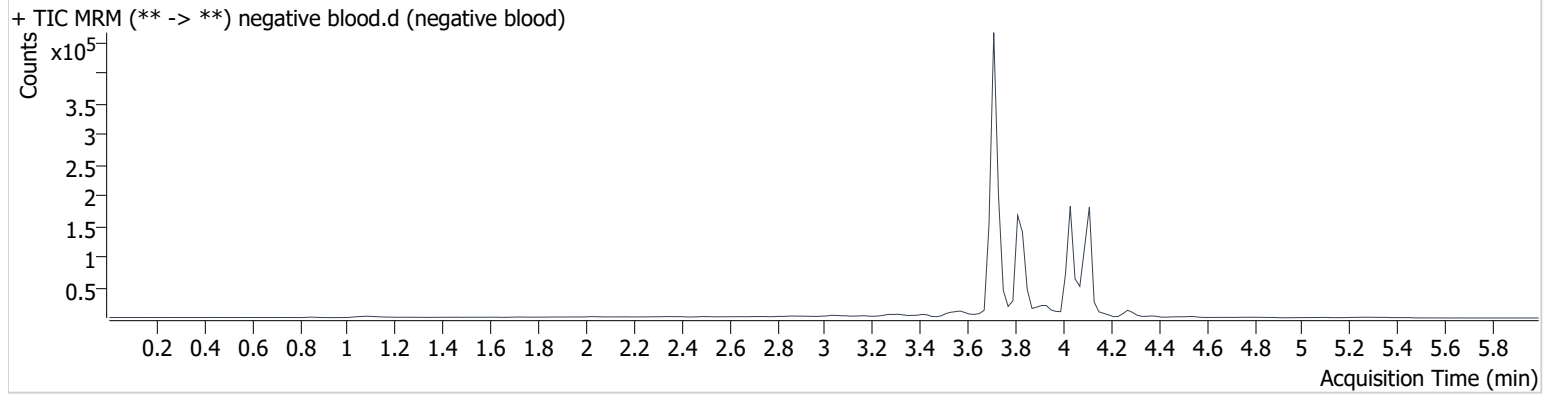
COMMENTS:

# AM #26 Cannabinoids Screen Results

**Batch results** D:\MassHunter\Data\2020 Data\am 25-26 3-24-20\QuantResults\thcs.batch.bin  
**Calibration Last Update** 3/25/2020 8:16:32 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 screen.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>	3/24/2020 6:58:50 PM		
<b>Sample Info.</b>			

## Sample Chromatogram



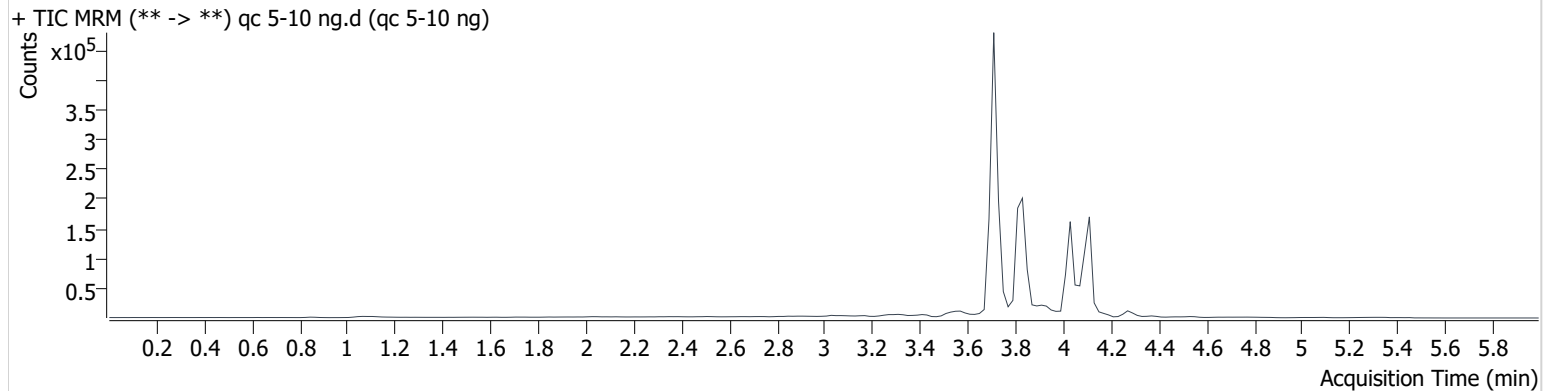
BW

# AM #26 Cannabinoids Screen Results

**Batch results** D:\MassHunter\Data\2020 Data\am 25-26 3-24-20\QuantResults\thcs.batch.bin  
**Calibration Last Update** 3/25/2020 8:16:32 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>QC 5-15 ng</b>
<b>Acq. Method</b>	am 26 cann screen.m	<b>Operator</b>	Britany Wylie
<b>Sample Position</b>	P3-H1	<b>Comment</b>	BW
<b>Injection Volume</b>	5		
<b>Acq. Date-Time</b>	3/24/2020 6:52:13 PM		

## Sample Chromatogram



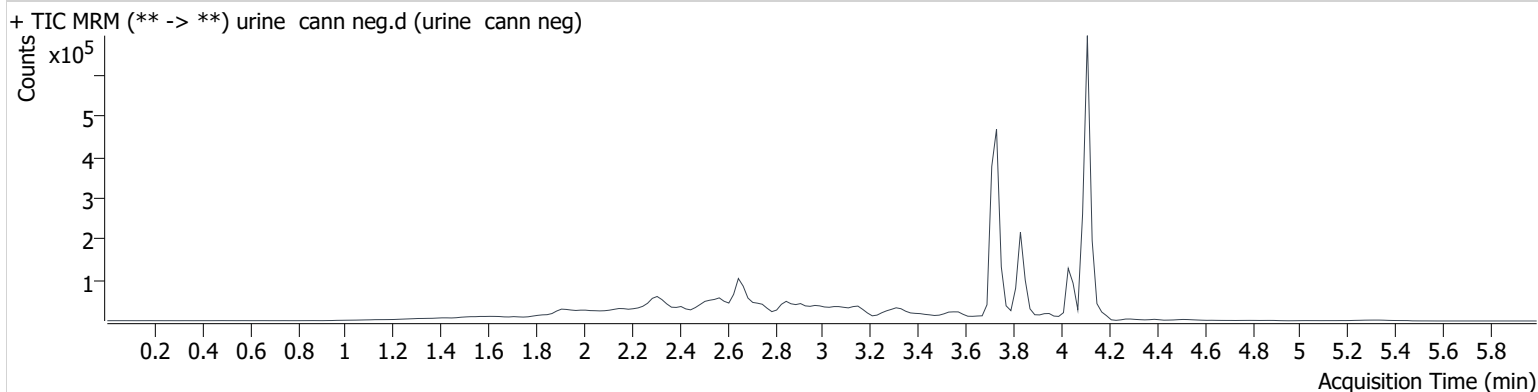
Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	4.120	24514	361360	4.453 ng/ml
THC-COOH	3.829	163603	401340	19.092 ng/ml
THC-OH	3.714	95837	985838	4.923 ng/ml

# AM #26 Cannabinoids Screen Results

**Batch results** D:\MassHunter\Data\2020 Data\am 25-26 3-24-20\QuantResults\thcs.batch.bin  
**Calibration Last Update** 3/25/2020 8:16:32 AM

<b>Instrument</b>	69679	<b>Data File</b>	urine_cann_neg.d
<b>Type</b>	Sample	<b>Sample</b>	urine_cann_neg
<b>Acq. Method</b>	am 26_cann_screen.m	<b>Operator</b>	Britany Wylie
<b>Sample Position</b>	P3-B4	<b>Comment</b>	
<b>Injection Volume</b>	5		
<b>Acq. Date-Time</b>	3/24/2020 8:57:41 PM		

**Sample Chromatogram**



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC-OH	3.814	16132	1249509	0.213 ng/ml <b>Low</b>

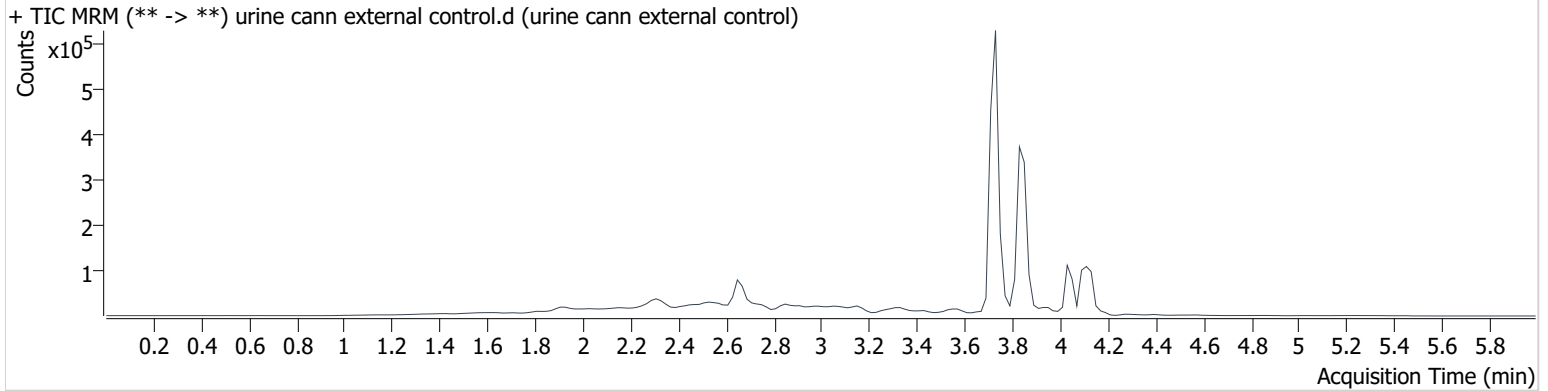
# AM #26 Cannabinoids Screen Results

**Batch results** D:\MassHunter\Data\2020 Data\am 25-26 3-24-20\QuantResults\thcs.batch.bin  
**Calibration Last Update** 3/25/2020 8:16:32 AM

<b>Instrument</b>	69679	<b>Data File</b>	urine cann external control.d
<b>Type</b>	Sample	<b>Sample</b>	urine cann external control
<b>Acq. Method</b>	am 26 cann screen.m	<b>Operator</b>	Britany Wylie
<b>Sample Position</b>	P3-C4	<b>Comment</b>	
<b>Injection Volume</b>	5		
<b>Acq. Date-Time</b>	3/24/2020 9:04:17 PM		

**Sample Info.**

### Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	4.120	20800	334716	4.096 ng/ml
THC-COOH	3.849	371132	485371	37.855 ng/ml
THC-OH	3.734	303585	1308190	12.459 ng/ml

ONLY THC-COOH evaluated in urine



**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

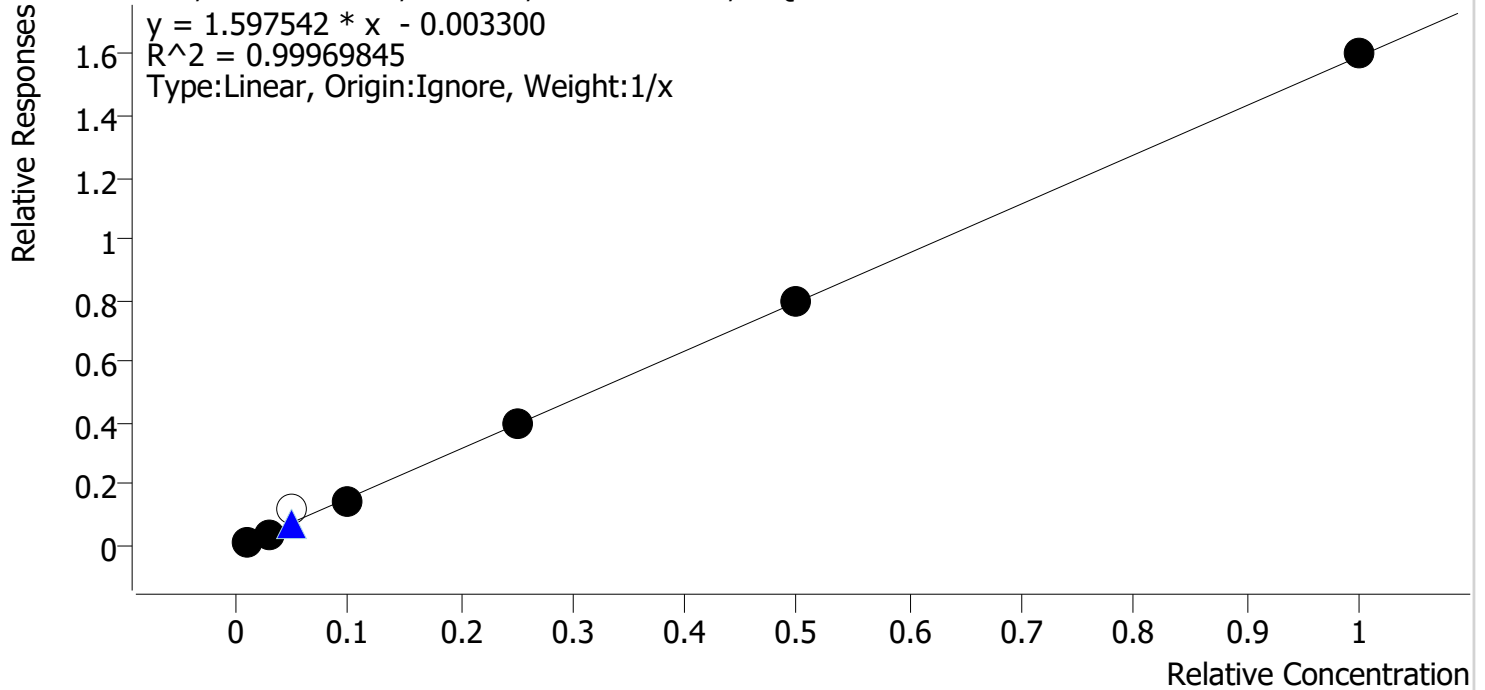
AM 27/26 urine control 400 ul working solution lot (21320) in 9600 ul urine lot (11420)

ppd 02/13/20 Exp 08/13/20 lot u81320 Concentration 30 ng/ml THC, THC-OH and 60 ng/ml C-THC by AMN

# Compound Calibration Report

**Batch results** D:\MassHunter\Data\2020 Data\am 25-26 3-24-20\QuantResults\thcs.batch.bin  
**Last Cal. Update** 3/25/2020 8:16 AM  
**Analyst Name** ISP\datastor  
**Analyte** THC **Internal Standard** THC-d3

THC - 7 Levels, 6 Levels Used, 7 Points, 6 Points Used, 1 QCs



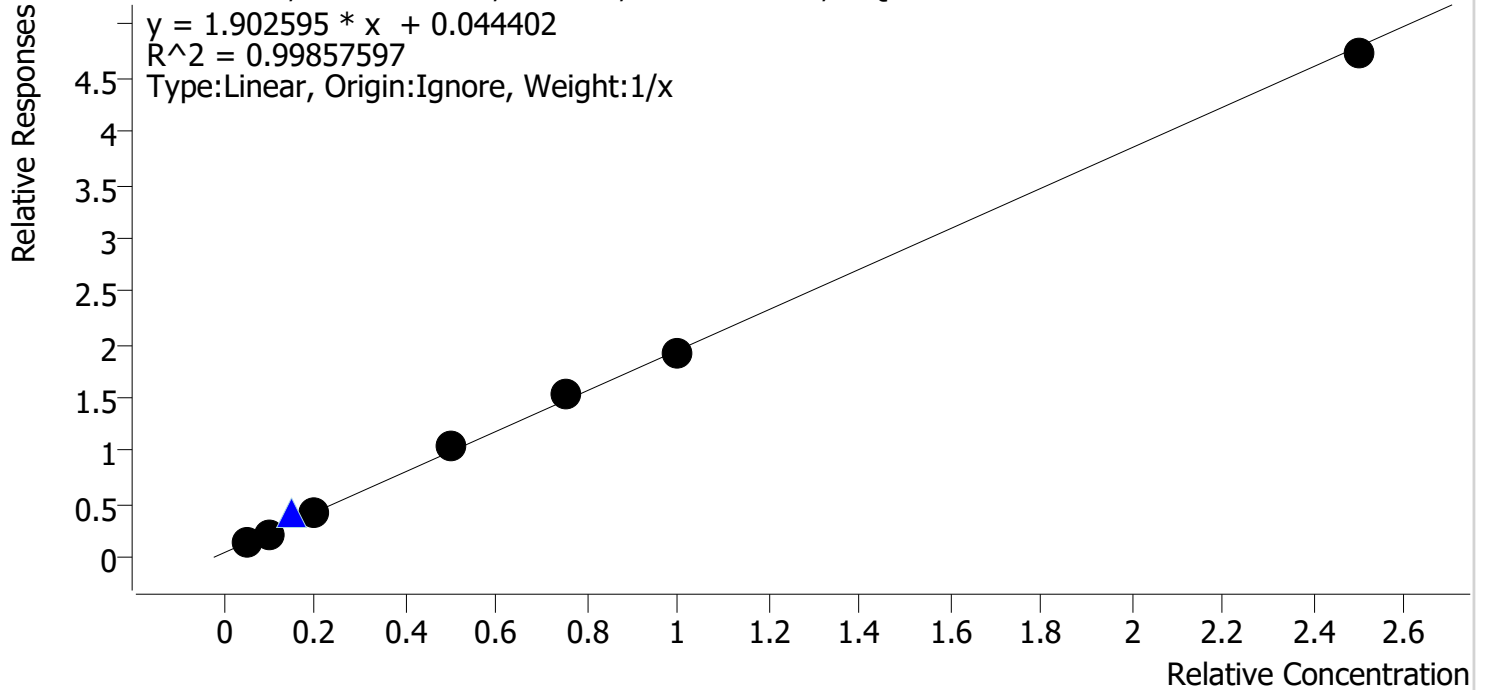
Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
check std 1ng	1	✓	1.0	1.1	110.6
cal 2	2	✓	3.0	2.8	93.3
cal 3	3	x	5.0	7.8	156.6
cal 4	4	✓	10.0	9.5	95.5
cal 5	5	✓	25.0	25.1	100.4
cal-6	6	✓	50.0	49.9	99.7
cal-7	7	✓	100.0	100.6	100.6

Cal 3 dropped- Internal standard peak cut off

# Compound Calibration Report

**Batch results** D:\MassHunter\Data\2020 Data\am 25-26 3-24-20\QuantResults\thcs.batch.bin  
**Last Cal. Update** 3/25/2020 8:16 AM  
**Analyst Name** ISP\datastor  
**Analyte** THC-COOH **Internal Standard** THC-COOH-d9

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

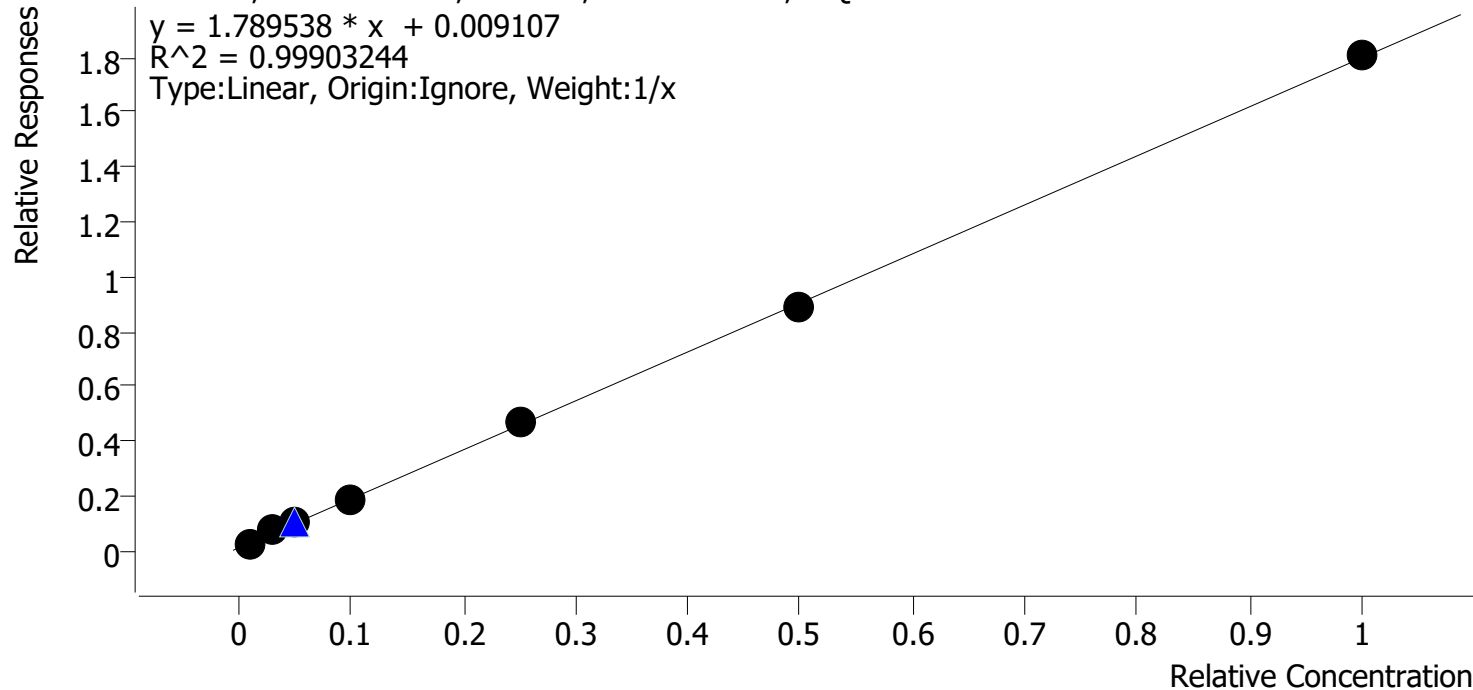


Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
check std 1ng	1	✓	5.0	5.4	107.8
cal 2	2	✓	10.0	9.0	90.0
cal 3	3	✓	20.0	19.0	95.0
cal 4	4	✓	50.0	52.1	104.2
cal 5	5	✓	75.0	79.1	105.4
cal-6	6	✓	100.0	99.0	99.0
cal-7	7	✓	250.0	246.4	98.6

# Compound Calibration Report

<b>Batch results</b>	D:\MassHunter\Data\2020 Data\am 25-26 3-24-20\QuantResults\thcs.batch.bin		
<b>Last Cal. Update</b>	3/25/2020 8:16 AM		
<b>Analyst Name</b>	ISP\datastor		
<b>Analyte</b>	THC-OH	<b>Internal Standard</b>	THC-OH-d3

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	0.8	84.1
cal 2	2	✓	3.0	3.4	112.9
cal 3	3	✓	5.0	5.4	108.3
cal 4	4	✓	10.0	9.5	94.7
cal 5	5	✓	25.0	25.3	101.4
cal-6	6	✓	50.0	49.1	98.2
cal-7	7	✓	100.0	100.4	100.4

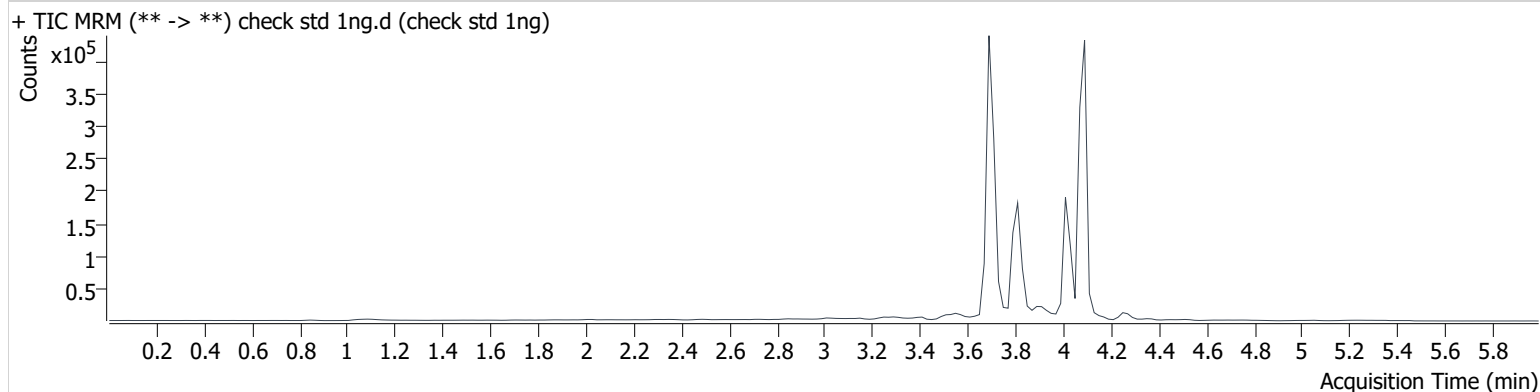
# AM #26 Cannabinoids Screen Results

**Batch results** D:\MassHunter\Data\2020 Data\am 25-26 3-24-20\QuantResults\thcs.batch.bin  
**Calibration Last Update** 3/25/2020 8:16:32 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 screen.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>	3/24/2020 5:59:27 PM		

**Sample Info.**

## Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.	
THC	4.100	13413	933855	1.106 ng/ml	Low
THC-COOH	3.809	61144	416075	5.390 ng/ml	Low
THC-OH	3.694	25140	1040884	0.841 ng/ml	Low

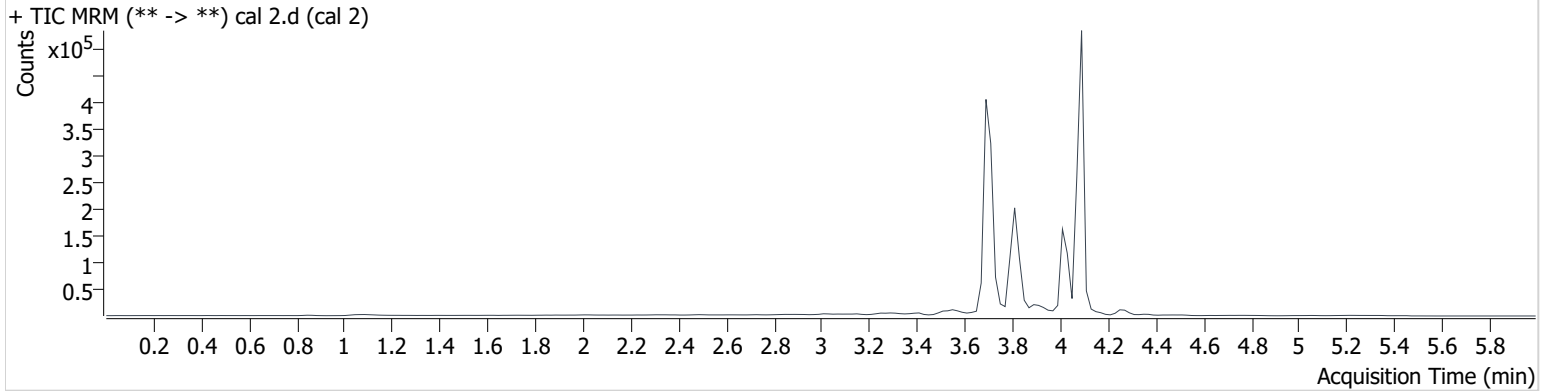
# AM #26 Cannabinoids Screen Results

**Batch results** D:\MassHunter\Data\2020 Data\am 25-26 3-24-20\QuantResults\thcs.batch.bin  
**Calibration Last Update** 3/25/2020 8:16:32 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 screen.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>	3/24/2020 6:06:05 PM		

**Sample Info.**

## Sample Chromatogram



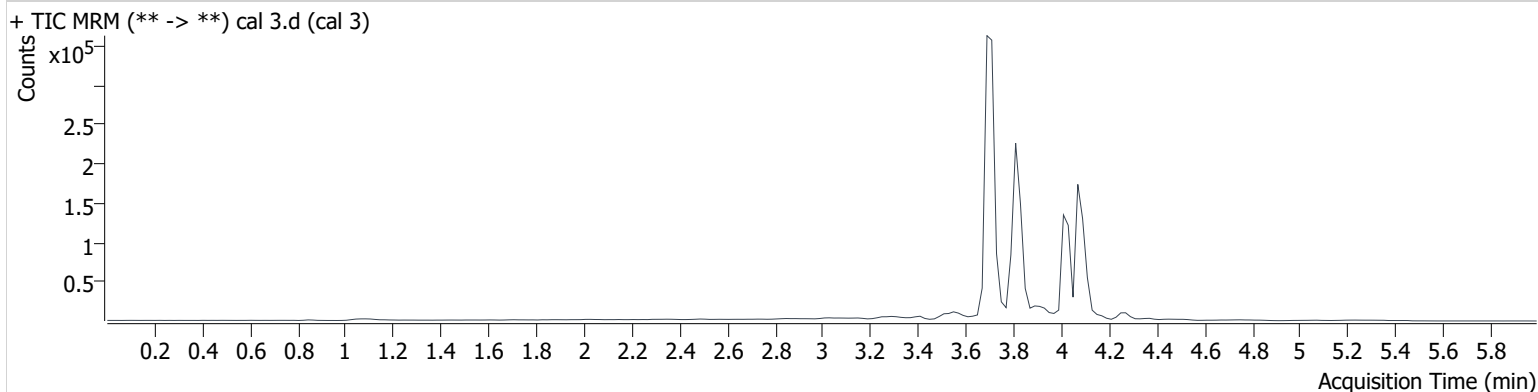
Name	RT	Resp.	ISTD Resp.	Final Conc.	
THC	4.100	39389	951551	2.798 ng/ml	Low
THC-COOH	3.829	85945	398554	9.000 ng/ml	Low
THC-OH	3.714	69726	999994	3.387 ng/ml	

# AM #26 Cannabinoids Screen Results

**Batch results** D:\MassHunter\Data\2020 Data\am 25-26 3-24-20\QuantResults\thcs.batch.bin  
**Calibration Last Update** 3/25/2020 8:16:32 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 screen.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>	3/24/2020 6:12:41 PM		

**Sample Chromatogram**



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	4.100	44079	361914	7.830 ng/ml
THC-COOH	3.829	146616	361302	18.995 ng/ml
THC-OH	3.714	100081	944188	5.414 ng/ml

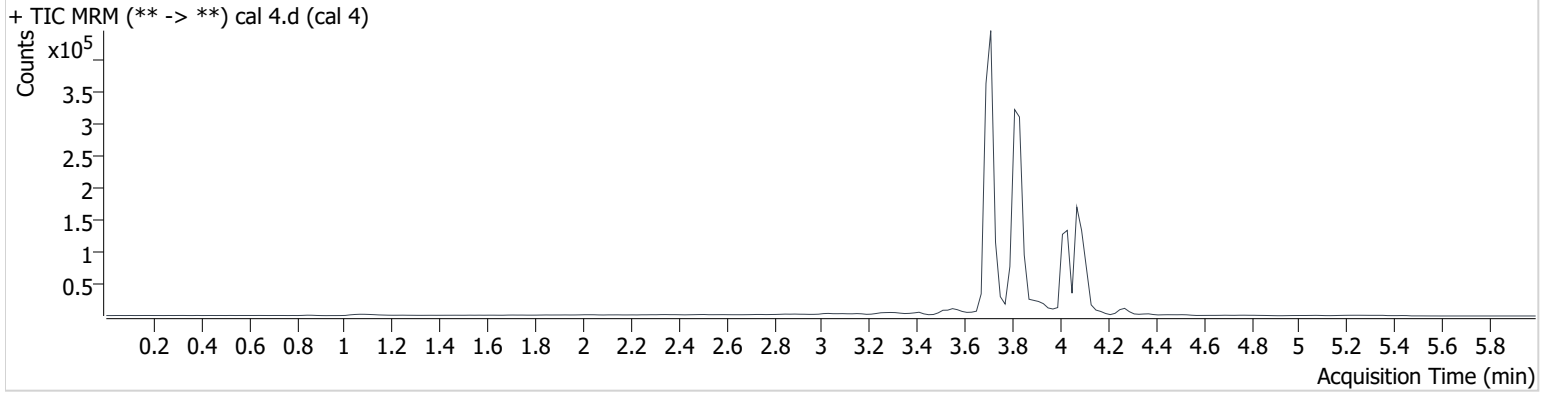
# AM #26 Cannabinoids Screen Results

**Batch results** D:\MassHunter\Data\2020 Data\am 25-26 3-24-20\QuantResults\thcs.batch.bin  
**Calibration Last Update** 3/25/2020 8:16:32 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 screen.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>	3/24/2020 6:19:17 PM		

**Sample Info.**

## Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	4.080	54085	362521	9.545 ng/ml
THC-COOH	3.829	407407	393479	52.087 ng/ml
THC-OH	3.714	176757	989994	9.468 ng/ml

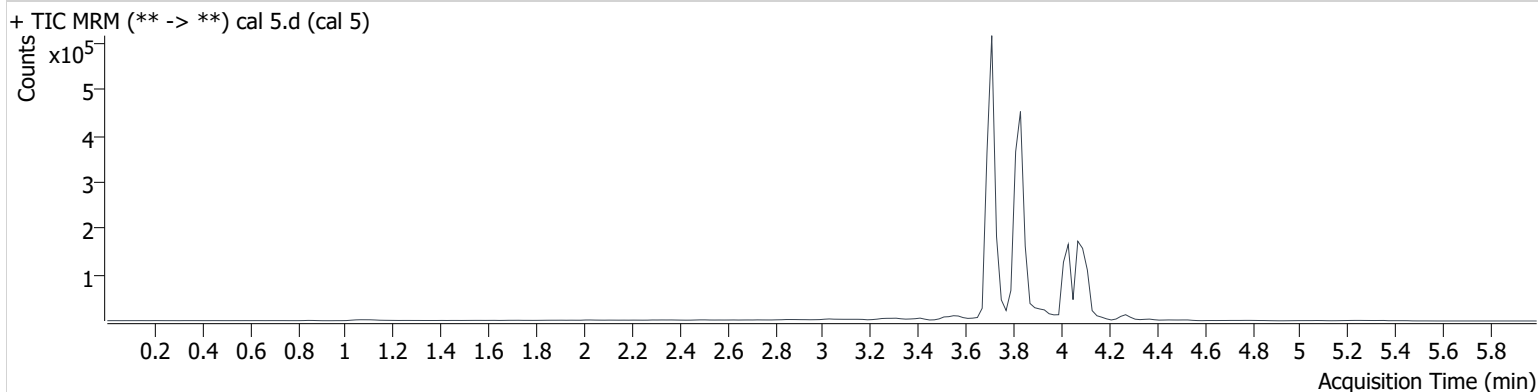


# AM #26 Cannabinoids Screen Results

**Batch results** D:\MassHunter\Data\2020 Data\am 25-26 3-24-20\QuantResults\thcs.batch.bin  
**Calibration Last Update** 3/25/2020 8:16:32 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 screen.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>	3/24/2020 6:25:53 PM		

**Sample Chromatogram**



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	4.080	130282	327514	25.107 ng/ml
THC-COOH	3.829	601651	388394	79.085 ng/ml
THC-OH	3.714	459758	993706	25.345 ng/ml

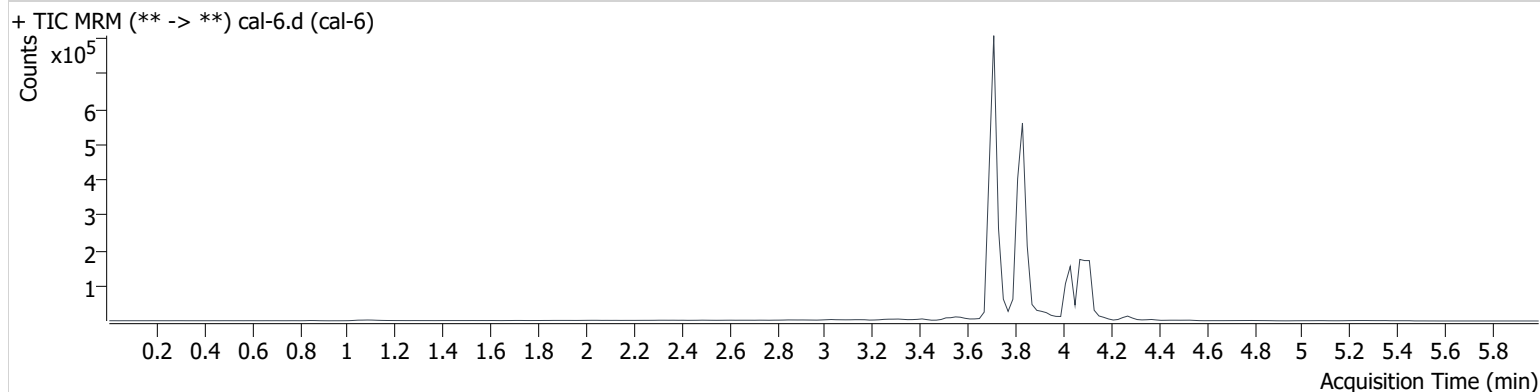
# AM #26 Cannabinoids Screen Results

**Batch results** D:\MassHunter\Data\2020 Data\am 25-26 3-24-20\QuantResults\thcs.batch.bin  
**Calibration Last Update** 3/25/2020 8:16:32 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 screen.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>	3/24/2020 6:32:31 PM		

**Sample Info.**

## Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	4.120	248493	313287	49.856 ng/ml
THC-COOH	3.829	744283	385906	99.036 ng/ml
THC-OH	3.714	849626	956640	49.120 ng/ml

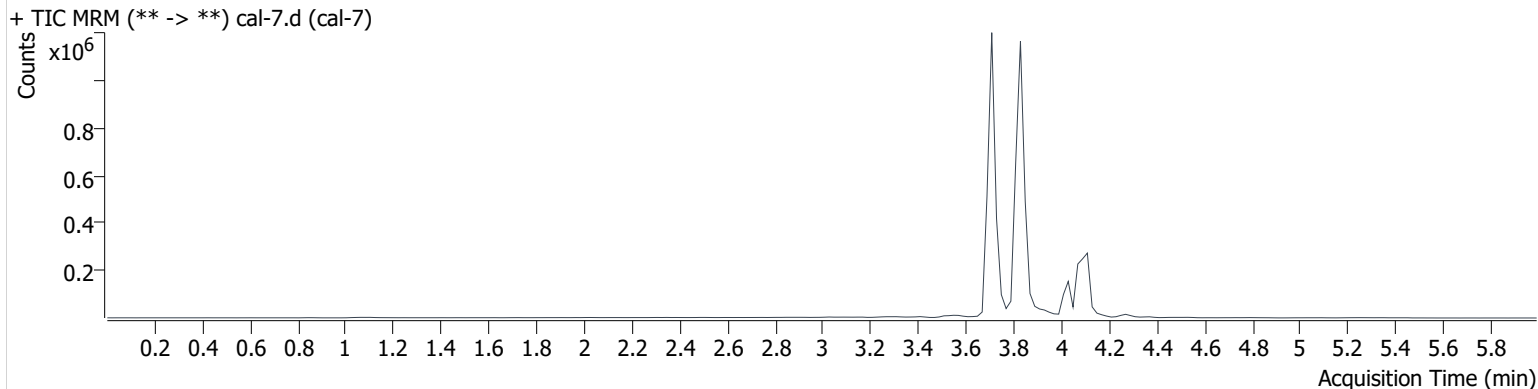
# AM #26 Cannabinoids Screen Results

**Batch results** D:\MassHunter\Data\2020 Data\am 25-26 3-24-20\QuantResults\thcs.batch.bin  
**Calibration Last Update** 3/25/2020 8:16:32 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 screen.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>	3/24/2020 6:39:07 PM		

**Sample Info.**

## Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	4.120	492963	307403	100.588 ng/ml
THC-COOH	3.829	1692602	357654	246.406 ng/ml
THC-OH	3.714	1647223	911967	100.424 ng/ml