



**Worklist: 3941**




<u>LAB CASE</u>	<u>ITEM</u>	<u>ITEM TYPE</u>	<u>DESCRIPTION</u>	
M2019-5481	3	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
M2019-5541	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
M2019-5564	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
M2019-5584	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
M2019-5642	2	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
M2020-0040	2	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2019-3618	1	UCK	AM 25/AM 26 Urine MultiDrug/THC Screen by LC-QQQ	
P2019-3736	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2019-3767	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2020-0003	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2020-0004	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2020-0046	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2020-0067	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2020-0068	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2020-0081	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2020-0082	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2020-0083	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2020-0084	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2020-0086	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2020-0098	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2020-0099	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	

**Worklist: 3941**

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<u>LAB CASE</u>	<u>ITEM</u>	<u>ITEM TYPE</u>	<u>DESCRIPTION</u>	
P2020-0102	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2020-0103	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	

**Worklist: 3955**

<u>LAB CASE</u>	<u>ITEM</u>	<u>ITEM TYPE</u>	<u>DESCRIPTION</u>	
P2019-3618	2	UCK	AM 25/AM 26 Urine MultiDrug/THC Screen by LC-QQQ	
P2019-3618	3	UCK	AM 25/AM 26 Urine MultiDrug/THC Screen by LC-QQQ	
P2019-3618	4	UCK	AM 25/AM 26 Urine MultiDrug/THC Screen by LC-QQQ	

Samples were ran with worklist 3941 \$

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

Extraction Date: 01/15/20

Analyst: Sarah Pickle

Plate lot#: 190725

Plate Expiration: 1/25/2020

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

**Mobile phase B:** 0.1% Formic Acid in MeOH

0.5M Ammonium Hydroxide

Ethyl Acetate

LC Methanol

**Blank Blood Lot:** 445283-3 **Blank Urine lot:** POC031319 **Column:** Phenomenex Phenyl Hexyl (4.6x50mm, 2.6um)

**LCMS-QQQ ID:** 069901

### 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: #42**
- 3. Place on shaking incubator at ambient temp., 900 rpm for 15 minutes. *Shaker ID: 067105*
- 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: 067104*
- 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: 067103*
- 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: P2019-3618-1 did not evaluate meprobamate and P2019-3618-4 did not evaluate 6-MAM, meprobamate, norhydrocodone, noroxycodone and oxycodone due to low internal standard responses



# Idaho State Police Forensic Services

## AM #25 Blood Multi-Drug Screen by LCMS-QQQ

**Methanol External Control Solution (Lot: 031319)**

*100 µl of 1 mg/mL stock was added to each drug to 9700 µl of LC MeOH.*

*\*Made for the AM 28 urine validation*

<i>Component</i>	<i>Source</i>	<i>Source Lot Number</i>	<i>Expiration Date</i>
Methanol (LCMS)	Fisher	184782	
O-desmethyl Tramadol	Cerilliant	FN01241702	04/30/2022
Amphetamine	Cerilliant	FE04061701	06/30/2022
Alprazolam	Cerilliant	FE07061604	07/31/2021
Prepared:	03/13/19		
Prepared By:	Tamara Salazar		
Expires:	03/13/2020		

**Blood External Control Solution (Lot: WS010820)**

*100 µl of methanol external control solution was added to 9900 µl of blood.*

*Approximately 50 ng/mL of each compound.*

<i>Component</i>	<i>Source</i>	<i>Source Lot Number</i>
Negative Blood	Hemostat	445283-3
Methanol External Control Solution		031319
Prepared:	01/08/2020	
Prepared by:	Tamara Salazar	
Expires:	03/13/2020	



# Idaho State Police Forensic Services

## AM #25 Blood and Urine Multi-Drug Screen by LCMS-QQQ

### Methanol External Control Solution (Lot: 042719)

*100 ul of 1mg/mL stock was added to each drug to 9600 ul of LC MeOH.*

<i>Component</i>	<i>Source</i>	<i>Source Lot Number</i>	<i>Expiration Date</i>
Methanol (LCMS)	Fisher	184782	
Morphine	Cerilliant	FE08141515	November 2020
Metoprolol	Cerilliant	FN06091510	July 2020
Flunitrazepam	Cerilliant	FE08051602	August 2021
Trazodone	Cerilliant	FN12151403	January 2020
Prepared:	04/27/19		
Prepared By:	Tamara Salazar		
Expires:	01/31/2020		

### Urine External Control Solution (Lot: WS111519)

*200 ul of methanol external control solution was added to 9800 ul of urine.*

*Approximately 100ng/mL of each compound.*

<i>Component</i>	<i>Source</i>	<i>Source Lot Number</i>
Negative Urine	Pocatello Lab	POC031319
Methanol External Control Solution		042719
Prepared:	11/15/19	
Prepared by:	Celena Shrum	
Expires:	01/31/2020	

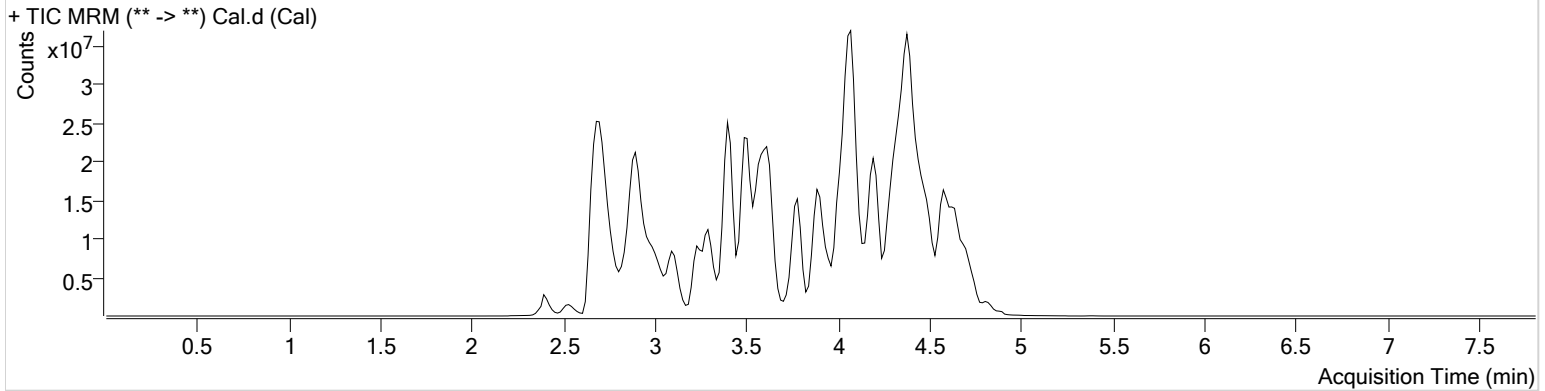
# AM #25 Multi-Drug Screen Results



**Batch results** D:\MassHunter\Data\2020\AM 25-26\011520 AM 25 26 SP\QuantResults\AM 25.batch.bin  
**Calibration Last Update** 1/17/2020 1:35:42 PM

<b>Instrument</b>	Falco	<b>Data File</b>	Cal.d
<b>Type</b>	Cal	<b>Sample</b>	Cal
<b>Acq. Method</b>	am 25 all.m	<b>Operator</b>	Sarah Pickle
<b>Sample Position</b>	P1-A1	<b>Comment</b>	
<b>Injection Volume</b>	5		
<b>Acq. Date-Time</b>	1/15/2020 5:13:42 PM		

## Sample Chromatogram



Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
6-MAM	2.951	53120	∞	2329.39	1288392	10.0000
7-aminoclonazepam	3.567	271554	95.33	147.64	1222120	10.0000
7-aminoflunitrazepam	3.780	515060	51.48	68.65	3628195	10.0000
Acetyl Fentanyl	3.885	425670	58.48	185.01	33160832	10.0000
Acetyl Norfentanyl	2.884	301673	209.95	194.26	14159489	10.0000
a-hydroxyalprazolam	4.484	184994	90.08	80.28	964360	10.0000
alpha-hydroxymidazolam	4.574	1357117	710.90	111796.31	8971388	10.0000
alpha-PVP	3.543	3566737	590.41	2225.10	17614925	10.0000
Alprazolam	4.594	1447108	∞	1329.54	4675587	10.0000
Amitriptyline	4.445	4062672	∞	137.41	9531958	10.0000
Amphetamine	2.873	2011998	∞	24275.50	6279376	10.0000
Benzoyllecgonine	3.351	1156597	845.98	229.77	5266117	10.0000
Buprenorphine	4.571	872619	2314.88	39544.89	3578294	10.0000
Bupropion	3.756	1501464	3695.19	226.99	5490699	10.0000
Carbamazepine	4.218	8118230	397.22	4200.47	42143500	10.0000
Carisprodol	4.185	1136793	25485.64	∞	6192792	10.0000
Chlordiazepoxide	4.702	622687	739.28	2062.95	17689072	10.0000
Chlorpheniramine	3.952	25642	23.21	5319.13	50893424	10.0000
Citalopram	4.069	2918650	1109.72	47286.90	13442140	10.0000
Clonazepam	4.424	726142	19.23	1166.29	1257700	10.0000
Cocaine	3.565	5688002	279.79	142.85	27339533	10.0000
Codeine	2.849	412888	43576.76	∞	2065420	10.0000
Cyclobenzaprine	4.369	2980482	156.01	181.65	10478699	10.0000
Desipramine	4.385	4387465	1248.58	440.46	26138593	10.0000
Dextromethorphan	4.092	2031224	370.12	∞	9428983	10.0000
Dextrorphan	3.386	2315215	∞	88069.97	15236212	10.0000
Diazepam	4.826	828166	382.42	861.85	4189557	10.0000
Dihydrocodeine	2.772	1149237	506.41	202.08	6218122	10.0000
Diphenhydramine	4.015	9839558	∞	∞	50893424	10.0000
Doxepin	4.167	2425649	∞	∞	16462725	10.0000
Doxylamine	3.630	11144041	16276.70	7720.04	41611651	10.0000
EDDP	4.075	2811255	∞	1297.12	19818893	10.0000
Estazolam	4.519	4586209	424.75	725.14	13598345	10.0000
Etizolam	4.619	291943	581.54	1274.89	13598345	10.0000

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# AM #25 Multi-Drug Screen Results

Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Fentanyl	4.114	314606	92.89	72463.75	19828898	10.0000
Flunitrazepam	4.547	1705537	717.07	428472.45	374050	10.0000
Fluoxetine	4.318	3836984	∞	50.18	16843999	10.0000
Flurazepam	4.189	2864307	1701351.67	532858.57	374050	10.0000
Hydrocodone	3.046	1243028	∞	292.00	8778454	10.0000
Hydromorphone	2.547	1006325	8.92	∞	3925577	10.0000
Imipramine	4.398	5506056	3078.23	∞	21134474	10.0000
Ketamine	3.511	2798440	∞	109.99	14027764	10.0000
Lamotrigine	3.585	270152	119.02	153.88	13463156	10.0000
Levamisole	2.991	3343342	∞	203.72	27339533	10.0000
Lorazepam	4.408	328106	168.95	51.00	1257700	10.0000
Maprotiline	4.445	4187706	∞	592.11	9531958	10.0000
MDA	3.008	1862059	769.47	14.96	8739062	10.0000
MDEA	3.237	4834629	1583.42	208.76	22746101	10.0000
MDMA	3.100	5280338	396383.27	∞	3734852	10.0000
Meperidine	3.586	2726489	∞	969.62	13463156	10.0000
Meprobamate	3.636	520256	661.21	95.21	2347392	10.0000
Methadone	4.379	6130768	503.93	722.12	26766646	10.0000
Methamphetamine	2.979	2603651	∞	∞	15820786	10.0000
Methocarbamol	3.541	843921	297.44	∞	13463156	10.0000
Methylphenidate	3.496	9774601	∞	∞	40998086	10.0000
Metoprolol	3.431	678298	271.49	915.33	13463156	10.0000
Midazolam	4.743	780791	925.48	370.77	8970910	10.0000
Mirtazapine	3.968	3781909	149.80	232.88	13463156	10.0000
Mitragynine	4.219	321502	266051.98	26587.73	16462725	10.0000
Morphine	2.397	189833	322.99	1251.87	89692	10.0000
Norbuprenorphine	3.851	62678	27096.40	32690.42	323180	10.0000
Nordiazepam	4.676	1424270	806.99	233.34	4839542	10.0000
Norfentanyl	3.312	6138725	706.57	359.32	26199007	10.0000
Norhydrocodone	2.957	31790	95.42	∞	1081112	10.0000
Normeperidine	3.589	1957032	522.20	72.87	7042578	10.0000
Noroxycodone	2.894	1060769	∞	∞	3375168	10.0000
Nortriptyline	4.432	1721899	331449.31	154.31	4112472	10.0000
O-desmethyl-tramadol	2.898	8651561	∞	249.41	40546525	10.0000
Olanzapine	3.978	418675	51.07	30.07	346598	10.0000
Oxazepam	4.489	2061327	468.92	136.37	13055829	10.0000
Oxycodone	2.937	2416965	∞	260.53	10694105	10.0000
Oxymorphone	2.393	1770197	∞	∞	5904215	10.0000
Paroxetine	4.391	288327	∞	246.32	9547348	10.0000
Phenazepam	4.619	1178860	291962.98	395.50	5621275	10.0000
Phencyclidine	3.909	5352682	5838.67	1200.66	23967651	10.0000
Phentermine	3.131	1319632	100.23	∞	15952375	10.0000
Phenytoin	4.109	69716	55.11	206.86	346598	10.0000
Promethazine	4.351	9300342	∞	727.07	36006546	10.0000
Pseudoephedrine	2.704	42538068	22022.22	24477.52	107457060	10.0000
Quetiapine	4.465	3510585	∞	272971.97	4468936	10.0000
Sertraline	4.579	1849699	101995.99	∞	9547348	10.0000
Sufentanil	4.450	293101	457.94	602.75	20008682	10.0000
Tapentadol	3.421	4207122	2075.97	805.30	21878208	10.0000
Temazepam	4.641	3122018	∞	213.86	15441466	10.0000
Tramadol	3.416	9848884	∞	72.50	40572431	10.0000
Trazodone	4.634	6183659	2429.91	2597.85	27549782	10.0000
Venlafaxine	3.781	7643835	1554.68	340.44	37707375	10.0000
Zaleplon	4.334	2354811	324.62	190.51	5455494	10.0000
Zolpidem	4.302	8783439	359.20	494.29	42192646	10.0000
Zopiclone	4.174	393549	1882181.10	948.96	2201817	10.0000



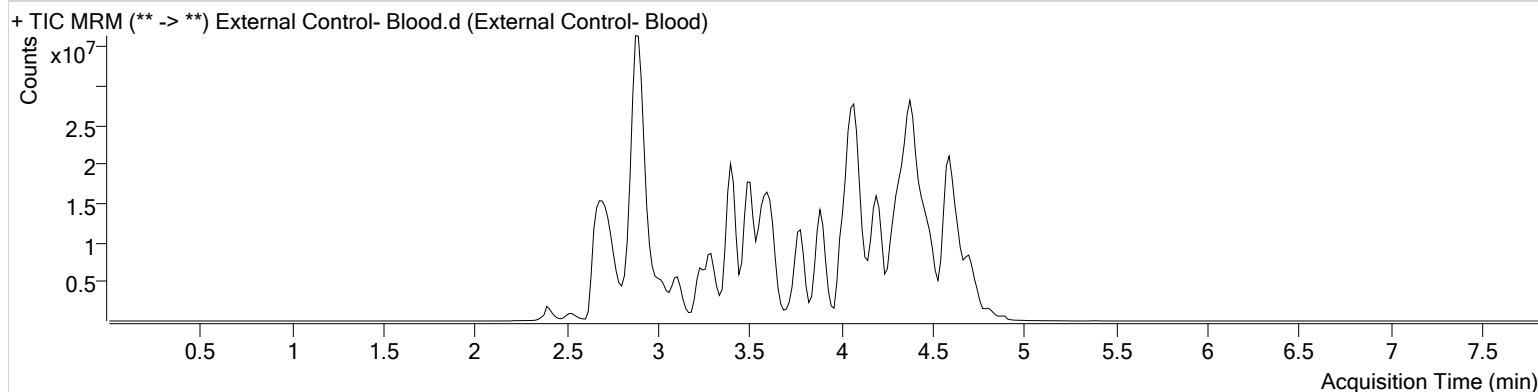
# AM #25 Multi-Drug Screen Results



**Batch results** D:\MassHunter\Data\2020\AM 25-26\011520 AM 25 26 SP\QuantResults\AM 25.batch.bin  
**Calibration Last Update** 1/17/2020 1:35:42 PM

<b>Instrument</b>	Falco	<b>Data File</b>	External Control- Blood.d
<b>Type</b>	Sample	<b>Sample</b>	External Control- Blood
<b>Acq. Method</b>	am 25 all.m	<b>Operator</b>	Sarah Pickle
<b>Sample Position</b>	P1-H4	<b>Comment</b>	
<b>Injection Volume</b>	5		
<b>Acq. Date-Time</b>	1/15/2020 5:30:31 PM		
<b>Sample Info.</b>			

## Sample Chromatogram



Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Alprazolam	4.594	17262050	∞	∞	4508532	123.7065
Amphetamine	2.873	16383211	∞	17968.93	5369681	95.2225
O-desmethyl-tramadol	2.898	53209225	∞	3964.56	38314162	65.0859

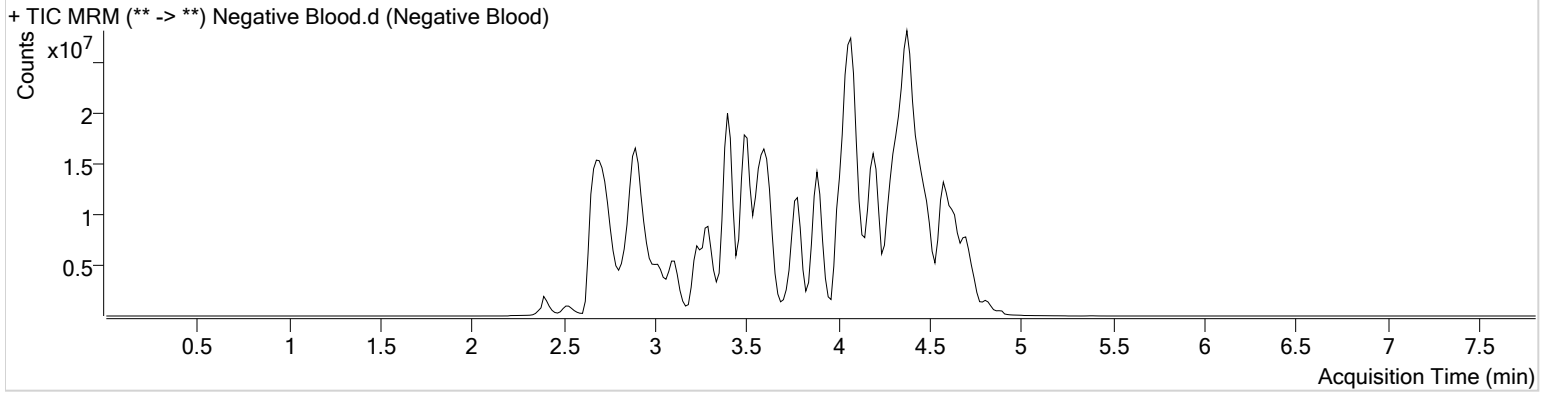
# AM #25 Multi-Drug Screen Results



**Batch results** D:\MassHunter\Data\2020\AM 25-26\011520 AM 25 26 SP\QuantResults\AM 25.batch.bin  
**Calibration Last Update** 1/17/2020 1:35:42 PM

<b>Instrument</b>	Falco	<b>Data File</b>	Negative Blood.d
<b>Type</b>	Sample	<b>Sample</b>	Negative Blood
<b>Acq. Method</b>	am 25 all.m	<b>Operator</b>	Sarah Pickle
<b>Sample Position</b>	P1-C1	<b>Comment</b>	
<b>Injection Volume</b>	5		
<b>Acq. Date-Time</b>	1/15/2020 5:22:10 PM		
<b>Sample Info.</b>			

## Sample Chromatogram



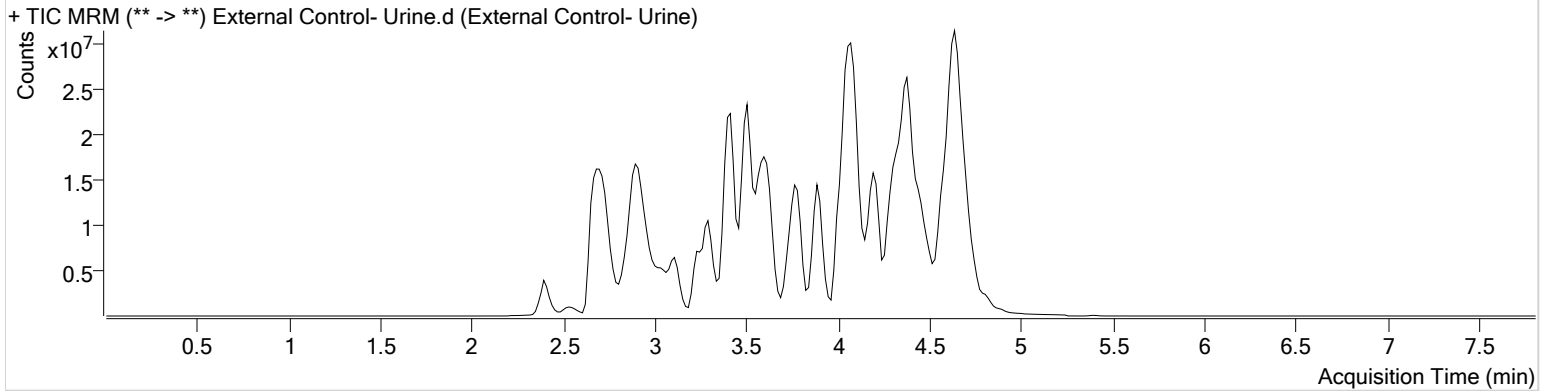
# AM #25 Multi-Drug Screen Results



**Batch results** D:\MassHunter\Data\2020\AM 25-26\011520 AM 25 26 SP\QuantResults\AM 25.batch.bin  
**Calibration Last Update** 1/17/2020 1:35:42 PM

<b>Instrument</b>	Falco	<b>Data File</b>	External Control- Urine.d
<b>Type</b>	Sample	<b>Sample</b>	External Control- Urine
<b>Acq. Method</b>	am 25 all.m	<b>Operator</b>	Sarah Pickle
<b>Sample Position</b>	P1-C4	<b>Comment</b>	
<b>Injection Volume</b>	5		
<b>Acq. Date-Time</b>	1/15/2020 5:47:12 PM		

## Sample Chromatogram



Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Flunitrazepam	4.547	8456969	4029.73	218.31	137786	134.6108
Metoprolol	3.431	8065667	948.91	782.03	14516649	110.2809
Morphine	2.397	2628716	∞	28998.57	92912	133.6752
Trazodone	4.634	66537755	12850.54	∞	27953715	106.0477

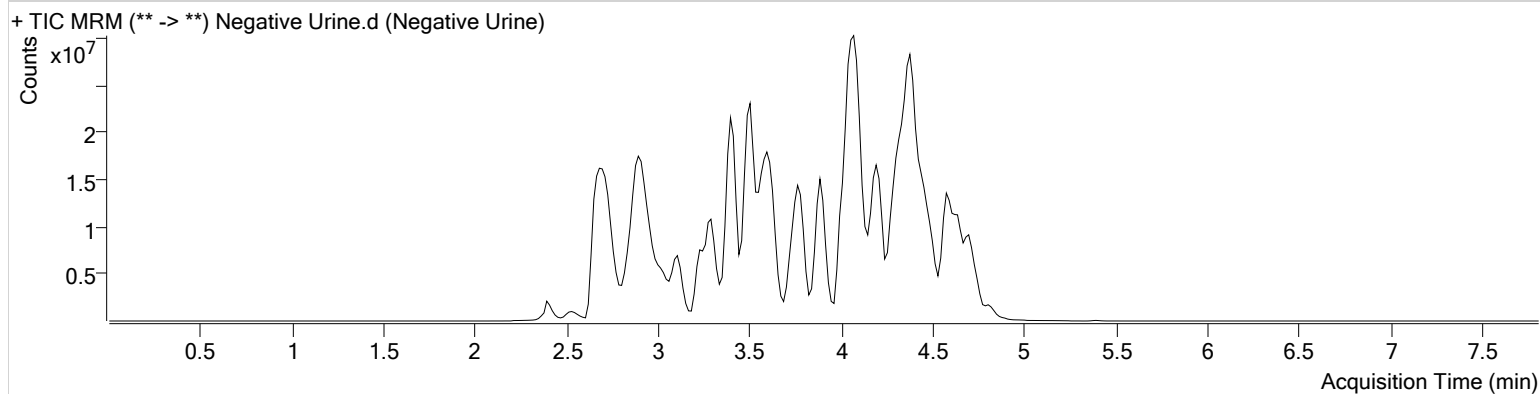
# AM #25 Multi-Drug Screen Results



**Batch results** D:\MassHunter\Data\2020\AM 25-26\011520 AM 25 26 SP\QuantResults\AM 25.batch.bin  
**Calibration Last Update** 1/17/2020 1:35:42 PM

<b>Instrument</b>	Falco	<b>Data File</b>	Negative Urine.d
<b>Type</b>	Sample	<b>Sample</b>	Negative Urine
<b>Acq. Method</b>	am 25 all.m	<b>Operator</b>	Sarah Pickle
<b>Sample Position</b>	P1-B4	<b>Comment</b>	
<b>Injection Volume</b>	5		
<b>Acq. Date-Time</b>	1/15/2020 5:38:51 PM		
<b>Sample Info.</b>			

## Sample Chromatogram



# AM# 26: Screening of THC and Metabolites in Blood and Urine by LC-MS/MS

Extraction Date: 01/15/20  
 Plate lot#: 190716

Analyst: Sarah Pickle  
 Plate Expiration: 01/16/2020

**Mobile phase A:** 0.1% Formic Acid in LCMS Water  
**Blank Blood Lot:** 445283-3  
**LCMS-QQQ ID:** 069901

**Mobile phase B:** 0.1% Formic acid in Acetonitrile  
**Column:** Phenomenex Phenyl Hexyl (4.6x50mm, 2.6um)  
**Blank Urine Lot:** POC031319

## 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 1.5mL urine to blank plate, add 250µl 1N KOH. Shake and incubate at 40 degrees for 15 minutes.  
 Using a calibrated pipette, add **1000µl blood and urine (if applicable) (calibrated pipette)** into the appropriate wells of analytical (standards) plate. **Pipette ID: #3382167**
- 3. Place on shaking incubator at ambient temp., 900rpm for 15 minutes. *Shaker ID: 067105*
- 4. Pipette **500µL 0.1% formic acid in water blood sample, 500 µL saturated phosphate buffer in urine** in wells of analytical plate.
- 5. Place on shaking incubator at ambient temp., 900rpm for 15 minutes.
- 6. Transfer **800µL 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: 067104
- 8. Wait 5 minutes.
- 9. Add **2.25mL MTBE. (Add in 3 increments of 750uL)**
- 10. Wait 5 minutes.
- 11. Apply positive pressure for approx. 15 seconds. **(10-15 PSI- Selector to the left).**
- 12. Add **2.25mL Hexane. (Add in 3 increments of 750uL)**
- 13. Wait 5 minutes.
- 14. Apply positive pressure for approx. 15 seconds. **(10-15 PSI- Selector to the left).**
- 15. Remove plate containing eluate. Place on SPE Dry and evaporate to dryness at approx. 35°C.  
*SPE Dry ID: 067103*
- 16. Reconstitute in **100µL 100% MeOH** and heat seal plate with foil. Place in autosampler and run worklist.

## Post-Analytic

- 1. Create batch and process data.
- 2. Make any necessary integration changes, Curve weighting of Linear 1/x with r<sup>2</sup> values ≥0.98 for each analyte
- 3. RT +/- 3% or 0.100 min, whichever is greater, +/- 20% Accuracy for greater than (+/- 30% for 10ng/ml or less).
- 4. Case sample response for THC and OH-THC 3ng/mL (quantitative), Carboxy-THC: 10ng/mL (qualitative only) will be reported. Samples with a THC or OH-THC response over 50 ng/mL will be reported out as greater than 50 ng/mL.
- 5. Did all QCs pass for each analyte? (if not, describe in comments section)
- 6. Enter QCs into control charting.
- 7. Central File Packet to include: LIMS Worklist, Method Checklist, Calibration and Control Reports

COMMENTS: THC curve range: 3-50 (calibrator 7 dropped due to peak cut off), Carboxy-THC curve range: 5-250, THC-OH curve range: 3-100.



# Idaho State Police Forensic Services

## AM #26 Screening of THC and Metabolites in Blood and Urine by LCMS-QQQ

**Methanol External Control Solution (Lot: WS041619)**

*10 ul of 1mg/mL THC, 100 ul of 100 ug/mL THC-OH, C-THC in 9790 ul MeOH  
Approximate concentration 1ug/mL.*

<i>Component</i>	<i>Source</i>	<i>Source Lot Number</i>	<i>Expiration Date</i>
Methanol (LCMS)	Fisher	184782	
THC	Cerilliant	FE09101501	11/30/2020
C-THC	Cerilliant	FE07171501	09/30/2020
THC-OH	Cerilliant	FE01121503	01/31/2020
Prepared:	04/16/2019		
Prepared By:	Tamara Salazar		
Expires:	01/31/2020		

**Urine External Control Solution (Lot: 111519)**

*200 ul of methanol external control solution was added to 9900 ul of urine.  
Approximately 20ng/mL of each compound.*

<i>Component</i>	<i>Source</i>	<i>Source Lot Number</i>
Negative Urine	Pocatello Lab	POC031319
Methanol External Control Solution	-	WS041619
Prepared:	11/15/19	
Prepared by:	Celena Shrum	
Expires:	01/31/2020	

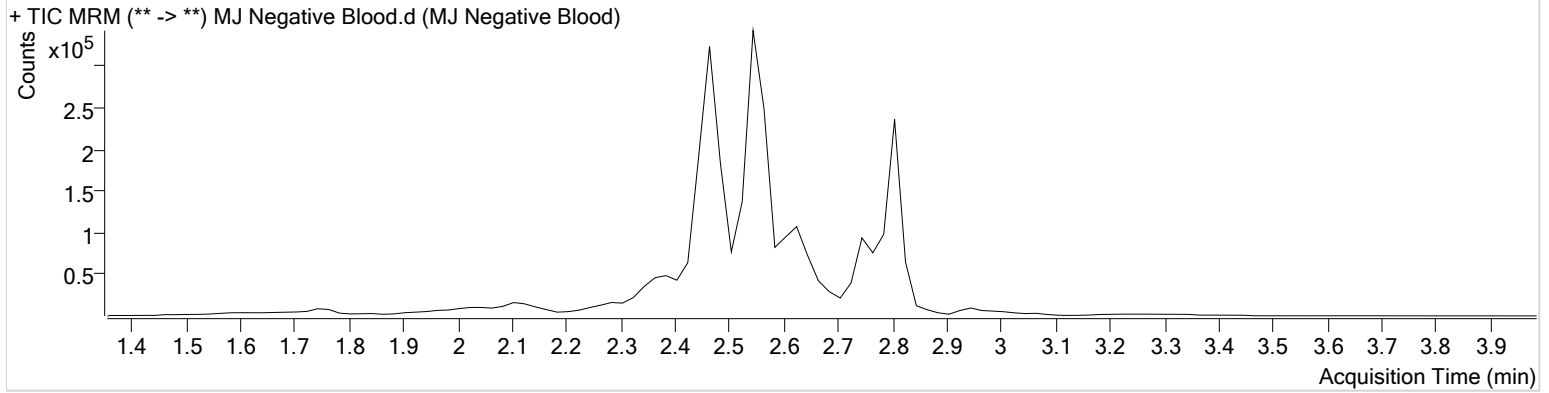


# AM #26 Cannabinoids Screen Results

**Batch results** D:\MassHunter\Data\2020\AM 25-26\011520 AM 25 26 SP\QuantResults\AM 26.batch.bin  
**Calibration Last Update** 1/17/2020 1:40:36 PM

<b>Instrument</b>	Falco	<b>Data File</b>	MJ Negative Blood.d
<b>Type</b>	Sample	<b>Sample</b>	MJ Negative Blood
<b>Acq. Method</b>	am 26 test.m	<b>Operator</b>	Sarah Pickle
<b>Sample Position</b>	P3-A2	<b>Comment</b>	
<b>Injection Volume</b>	10		
<b>Acq. Date-Time</b>	1/15/2020 1:39:22 PM		
<b>Sample Info.</b>			

## Sample Chromatogram



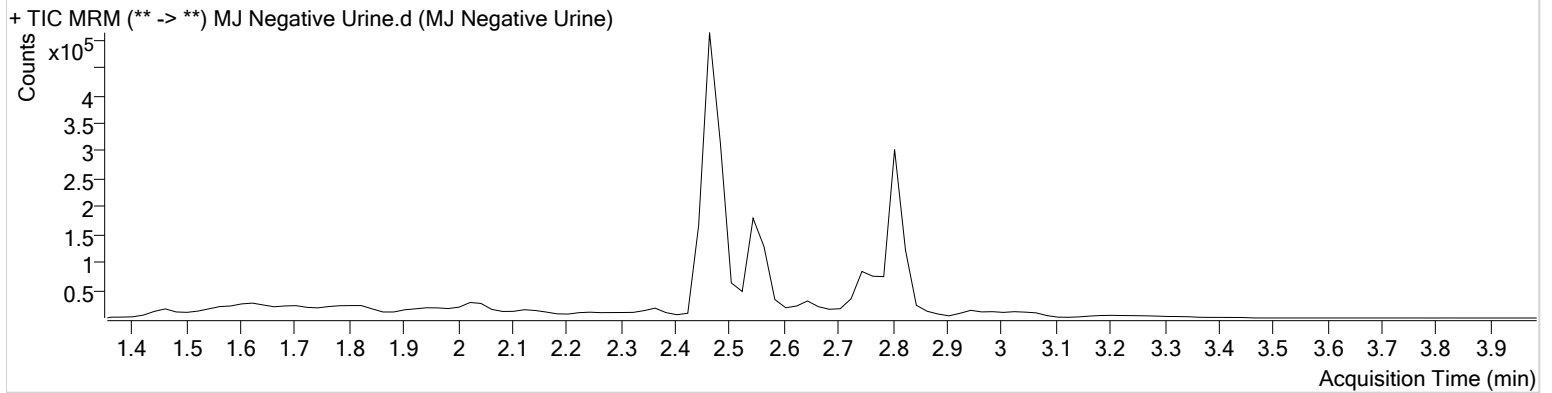
# AM #26 Cannabinoids Screen Results



**Batch results** D:\MassHunter\Data\2020\AM 25-26\011520 AM 25 26 SP\QuantResults\AM 26.batch.bin  
**Calibration Last Update** 1/17/2020 1:40:36 PM

<b>Instrument</b>	Falco	<b>Data File</b>	MJ Negative Urine.d
<b>Type</b>	Sample	<b>Sample</b>	MJ Negative Urine
<b>Acq. Method</b>	am 26 test.m	<b>Operator</b>	Sarah Pickle
<b>Sample Position</b>	P3-H4	<b>Comment</b>	
<b>Injection Volume</b>	10		
<b>Acq. Date-Time</b>	1/15/2020 1:45:54 PM		
<b>Sample Info.</b>			

## Sample Chromatogram





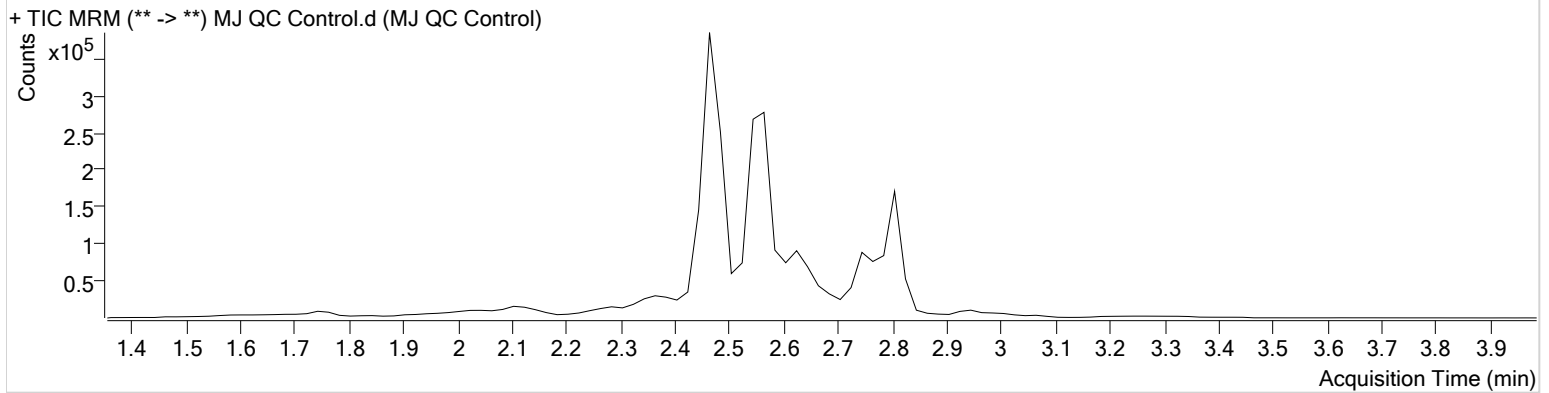
# AM #26 Cannabinoids Screen Results



**Batch results** D:\MassHunter\Data\2020\AM 25-26\011520 AM 25 26 SP\QuantResults\AM 26.batch.bin  
**Calibration Last Update** 1/17/2020 1:40:36 PM

<b>Instrument</b>	Falco	<b>Data File</b>	MJ QC Control.d
<b>Type</b>	Sample	<b>Sample</b>	MJ QC Control
<b>Acq. Method</b>	am 26 test.m	<b>Operator</b>	Sarah Pickle
<b>Sample Position</b>	P3-H1	<b>Comment</b>	
<b>Injection Volume</b>	10		
<b>Acq. Date-Time</b>	1/15/2020 1:26:20 PM		
<b>Sample Info.</b>			

## Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	2.819	8435	261277	4.5267 ng/ml
THC-COOH	2.565	111303	431730	15.9120 ng/ml
THC-OH	2.471	53657	823250	5.3825 ng/ml

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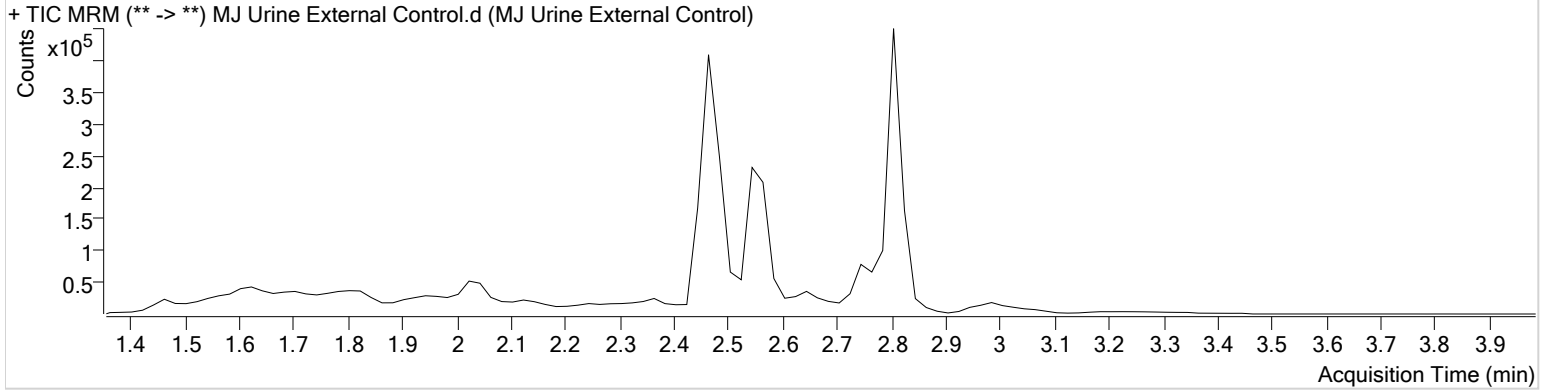


# AM #26 Cannabinoids Screen Results

**Batch results** D:\MassHunter\Data\2020\AM 25-26\011520 AM 25 26 SP\QuantResults\AM 26.batch.bin  
**Calibration Last Update** 1/17/2020 1:40:36 PM

<b>Instrument</b>	Falco	<b>Data File</b>	MJ Urine External Control.d
<b>Type</b>	Sample	<b>Sample</b>	MJ Urine External Control
<b>Acq. Method</b>	am 26 test.m	<b>Operator</b>	Sarah Pickle
<b>Sample Position</b>	P3-A5	<b>Comment</b>	
<b>Injection Volume</b>	10		
<b>Acq. Date-Time</b>	1/15/2020 1:52:26 PM		

**Sample Chromatogram**

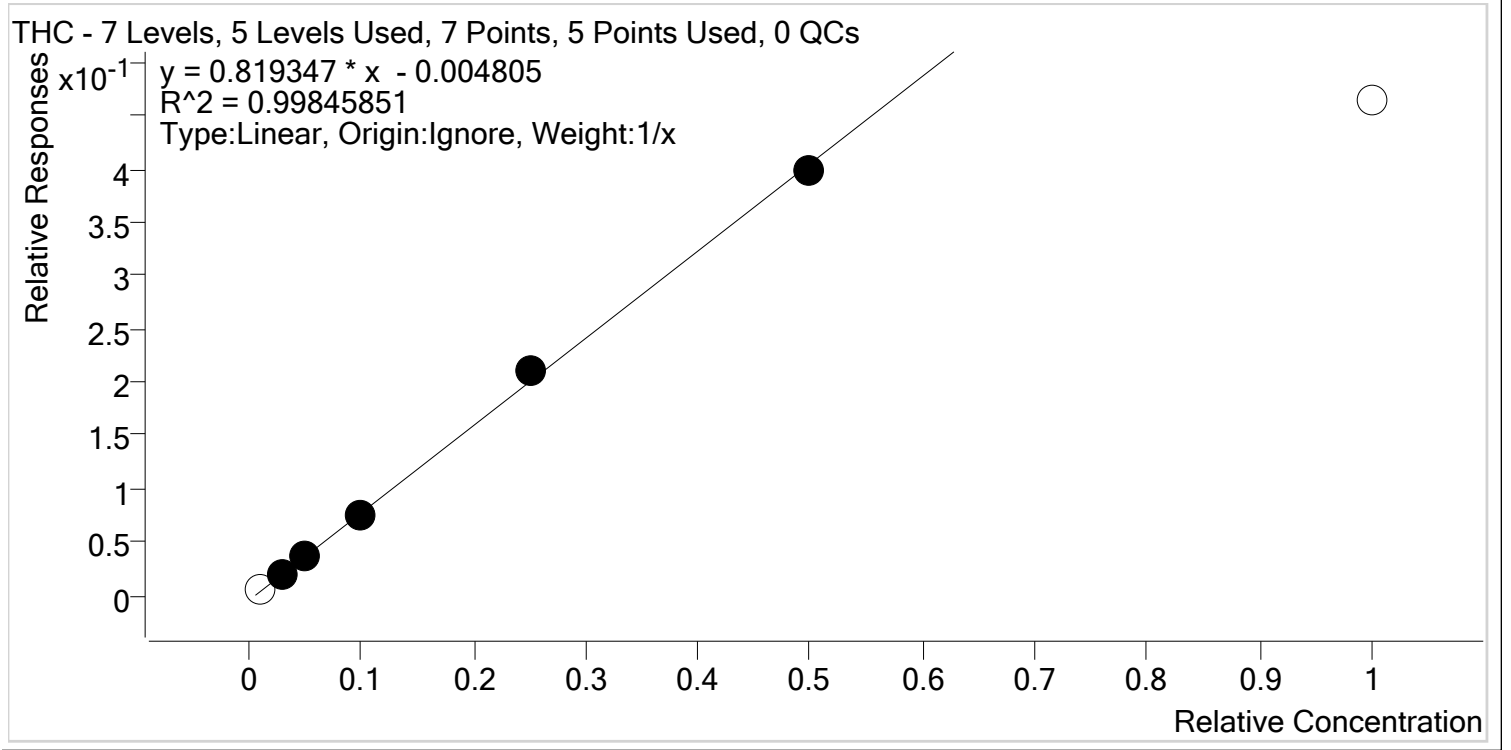


Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	2.819	15738	734412	3.2019 ng/ml
THC-COOH	2.565	67023	455617	9.3582 ng/ml
THC-OH	2.471	54553	985611	4.5797 ng/ml



# AM #26 Cannabinoids Screen Calibration Curve Report

**Batch results** D:\MassHunter\Data\2020\AM 25-26\011520 AM 25 26 SP\QuantResults\AM 26.batch.bin  
**Last Cal. Update** 1/17/2020 1:40 PM  
**Analyst Name** ISP\Datastor  
**Analyte** THC **Internal Standard** THC-d3



Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
MJ Cal 1	1	x	1.0	1.3	134.5
MJ Cal 2	2	✓	3.0	2.9	96.8
MJ Cal 3	3	✓	5.0	5.2	103.2
MJ Cal 4	4	✓	10.0	9.7	97.3
MJ Cal 5	5	✓	25.0	26.2	104.7
MJ Cal 6	6	✓	50.0	49.0	98.1
MJ Cal 7	7	x	100.0	57.2	57.2

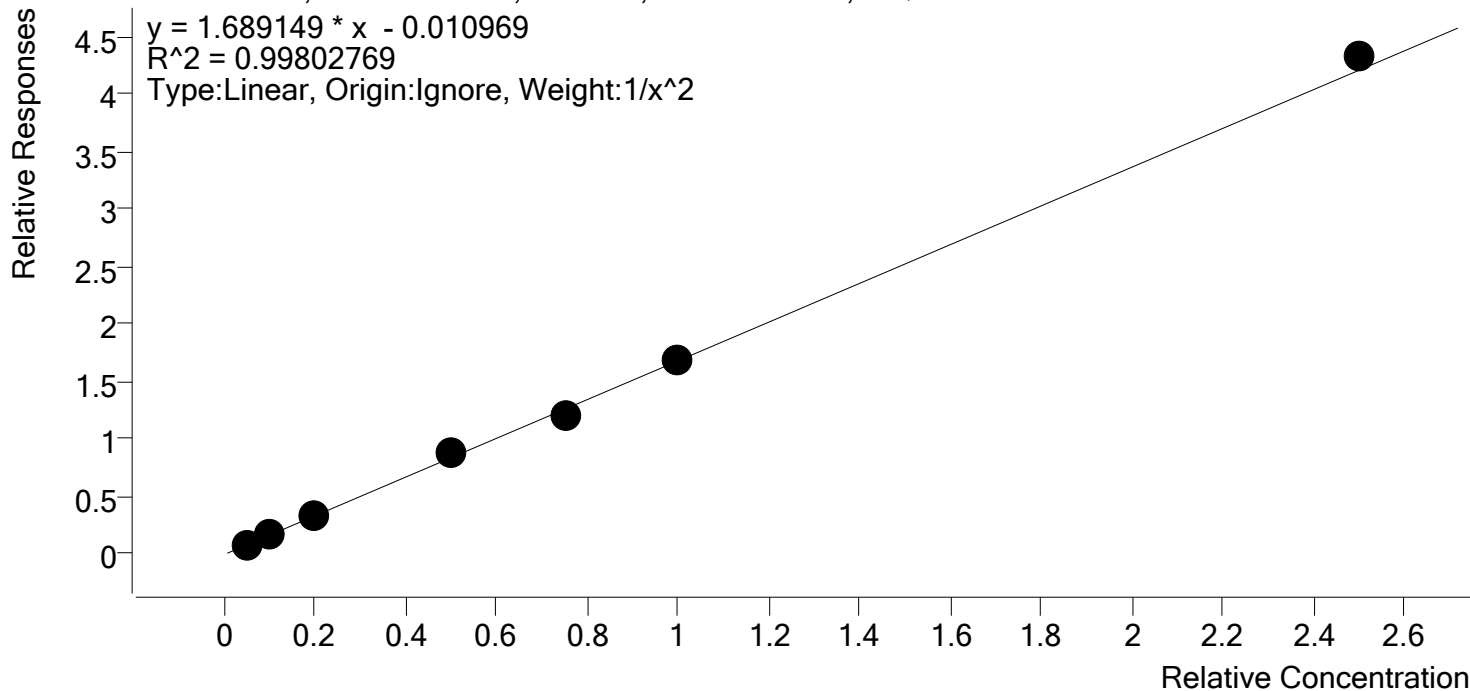
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# AM #26 Cannabinoids Screen Calibration Curve Report

**Batch results** D:\MassHunter\Data\2020\AM 25-26\011520 AM 25 26 SP\QuantResults\AM 26.batch.bin  
**Last Cal. Update** 1/17/2020 1:40 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



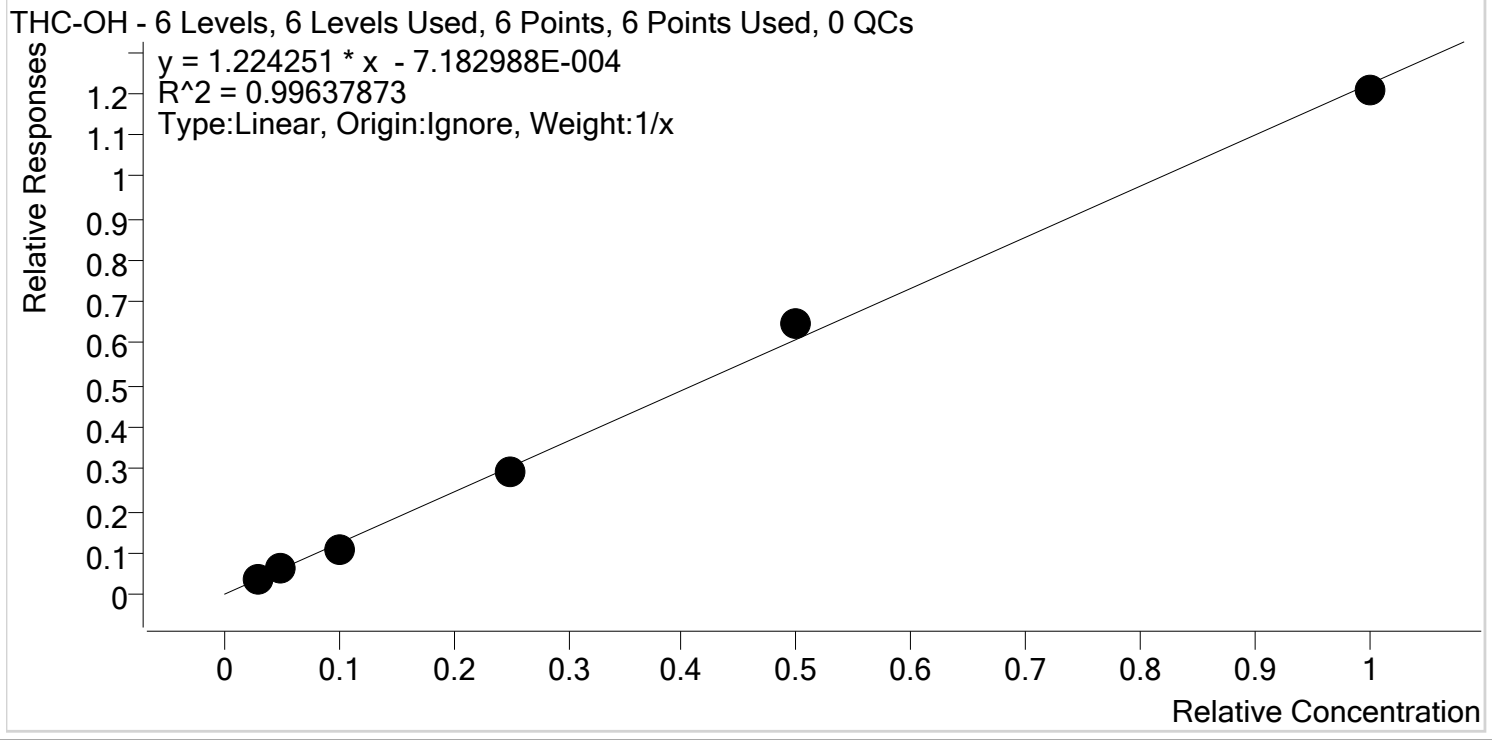
Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
MJ Cal 1	1	✓	5.0	5.1	101.1
MJ Cal 2	2	✓	10.0	10.0	99.6
MJ Cal 3	3	✓	20.0	19.1	95.4
MJ Cal 4	4	✓	50.0	52.4	104.9
MJ Cal 5	5	✓	75.0	71.3	95.1
MJ Cal 6	6	✓	100.0	101.2	101.2
MJ Cal 7	7	✓	250.0	257.0	102.8

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# AM #26 Cannabinoids Screen Calibration Curve Report

**Batch results** D:\MassHunter\Data\2020\AM 25-26\011520 AM 25 26 SP\QuantResults\AM 26.batch.bin  
**Last Cal. Update** 1/17/2020 1:40 PM  
**Analyst Name** ISP\Datastor  
**Analyte** THC-OH **Internal Standard** THC-OH-d3



Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
MJ Cal 2	2	✓	3.0	3.1	103.7
MJ Cal 3	3	✓	5.0	5.4	108.7
MJ Cal 4	4	✓	10.0	8.7	87.5
MJ Cal 5	5	✓	25.0	23.7	94.7
MJ Cal 6	6	✓	50.0	53.4	106.8
MJ Cal 7	7	✓	100.0	98.7	98.7

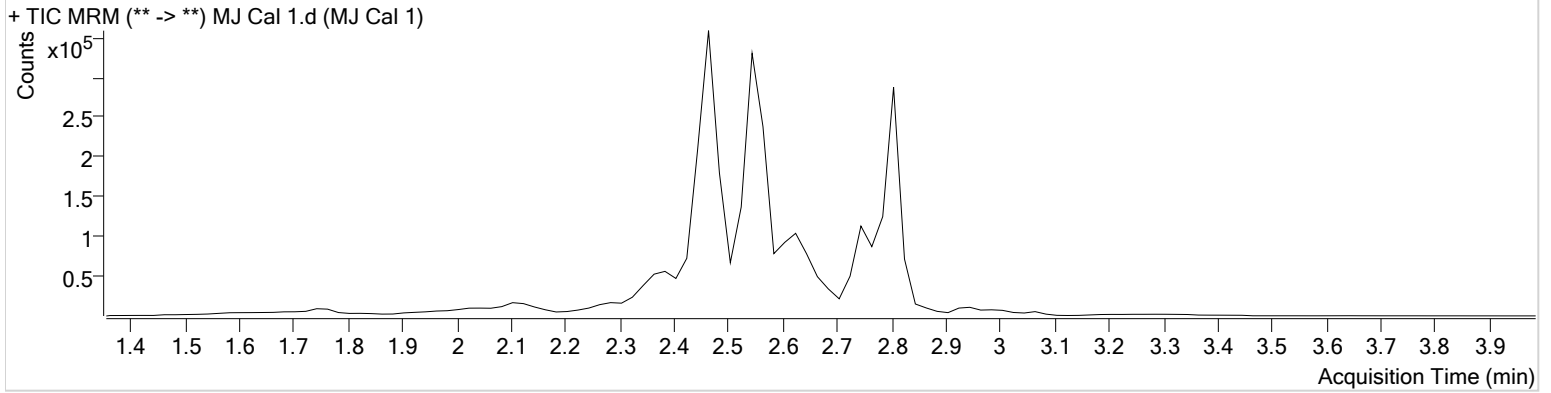
# AM #26 Cannabinoids Screen Results



**Batch results** D:\MassHunter\Data\2020\AM 25-26\011520 AM 25 26 SP\QuantResults\AM 26.batch.bin  
**Calibration Last Update** 1/17/2020 1:40:36 PM

<b>Instrument</b>	Falco	<b>Data File</b>	MJ Cal 1.d
<b>Type</b>	Cal	<b>Sample</b>	MJ Cal 1
<b>Acq. Method</b>	am 26 test.m	<b>Operator</b>	Sarah Pickle
<b>Sample Position</b>	P3-A1	<b>Comment</b>	
<b>Injection Volume</b>	10		
<b>Acq. Date-Time</b>	1/15/2020 12:40:36 PM		

## Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.	
THC	2.819	3163	508694	1.3453 ng/ml	<b>Low</b>
THC-COOH	2.565	36641	492444	5.0543 ng/ml	



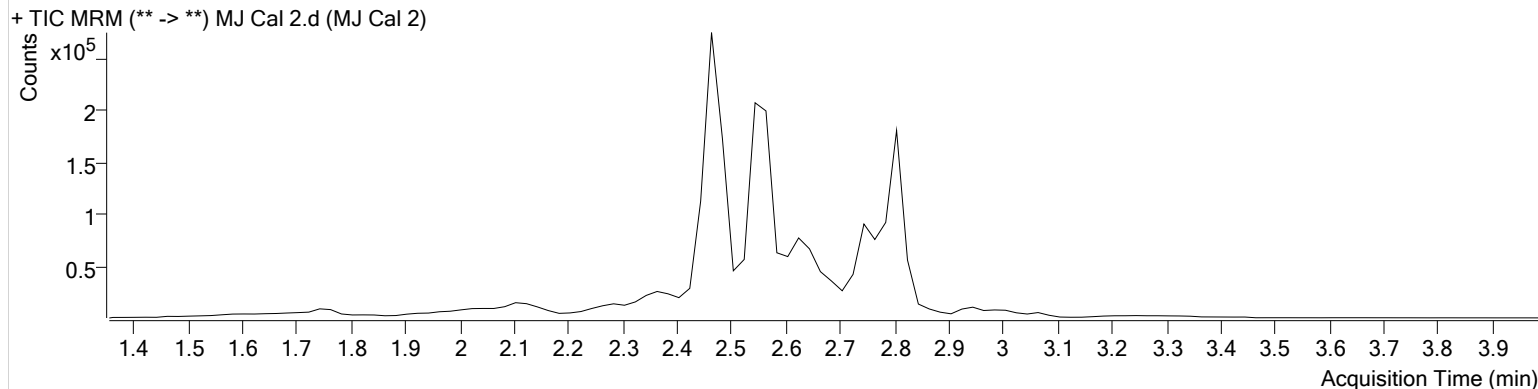
# AM #26 Cannabinoids Screen Results

**Batch results** D:\MassHunter\Data\2020\AM 25-26\011520 AM 25 26 SP\QuantResults\AM 26.batch.bin  
**Calibration Last Update** 1/17/2020 1:40:36 PM

<b>Instrument</b>	Falco	<b>Data File</b>	MJ Cal 2.d
<b>Type</b>	Cal	<b>Sample</b>	MJ Cal 2
<b>Acq. Method</b>	am 26 test.m	<b>Operator</b>	Sarah Pickle
<b>Sample Position</b>	P3-B1	<b>Comment</b>	
<b>Injection Volume</b>	10		
<b>Acq. Date-Time</b>	1/15/2020 12:47:17 PM		

**Sample Info.**

## Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.	
THC	2.819	6189	325995	2.9033 ng/ml	<b>Low</b>
THC-COOH	2.565	53582	340851	9.9559 ng/ml	
THC-OH	2.471	25760	689518	3.1102 ng/ml	



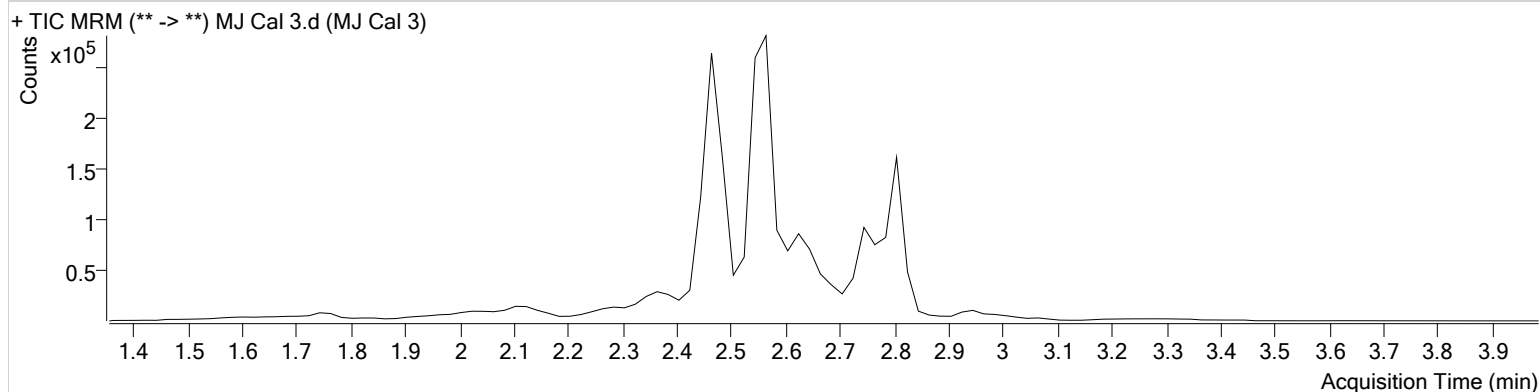
# AM #26 Cannabinoids Screen Results

**Batch results** D:\MassHunter\Data\2020\AM 25-26\011520 AM 25 26 SP\QuantResults\AM 26.batch.bin  
**Calibration Last Update** 1/17/2020 1:40:36 PM

<b>Instrument</b>	Falco	<b>Data File</b>	MJ Cal 3.d
<b>Type</b>	Cal	<b>Sample</b>	MJ Cal 3
<b>Acq. Method</b>	am 26 test.m	<b>Operator</b>	Sarah Pickle
<b>Sample Position</b>	P3-C1	<b>Comment</b>	
<b>Injection Volume</b>	10		
<b>Acq. Date-Time</b>	1/15/2020 12:53:48 PM		

**Sample Info.**

## Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	2.819	9107	243024	5.1601 ng/ml
THC-COOH	2.565	119515	383724	19.0884 ng/ml
THC-OH	2.471	37123	563840	5.4367 ng/ml



# AM #26 Cannabinoids Screen Results

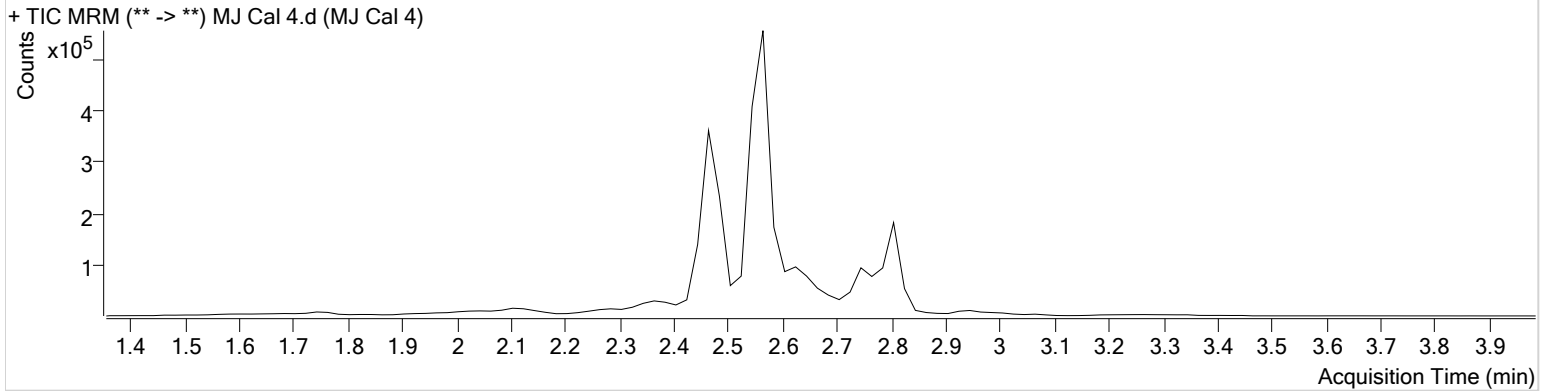


**Batch results** D:\MassHunter\Data\2020\AM 25-26\011520 AM 25 26 SP\QuantResults\AM 26.batch.bin  
**Calibration Last Update** 1/17/2020 1:40:36 PM

<b>Instrument</b>	Falco	<b>Data File</b>	MJ Cal 4.d
<b>Type</b>	Cal	<b>Sample</b>	MJ Cal 4
<b>Acq. Method</b>	am 26 test.m	<b>Operator</b>	Sarah Pickle
<b>Sample Position</b>	P3-D1	<b>Comment</b>	
<b>Injection Volume</b>	10		
<b>Acq. Date-Time</b>	1/15/2020 1:00:18 PM		

**Sample Info.**

## Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	2.819	19717	263243	9.7277 ng/ml
THC-COOH	2.565	356238	407193	52.4426 ng/ml
THC-OH	2.471	77229	725858	8.7495 ng/ml

# AM #26 Cannabinoids Screen Results

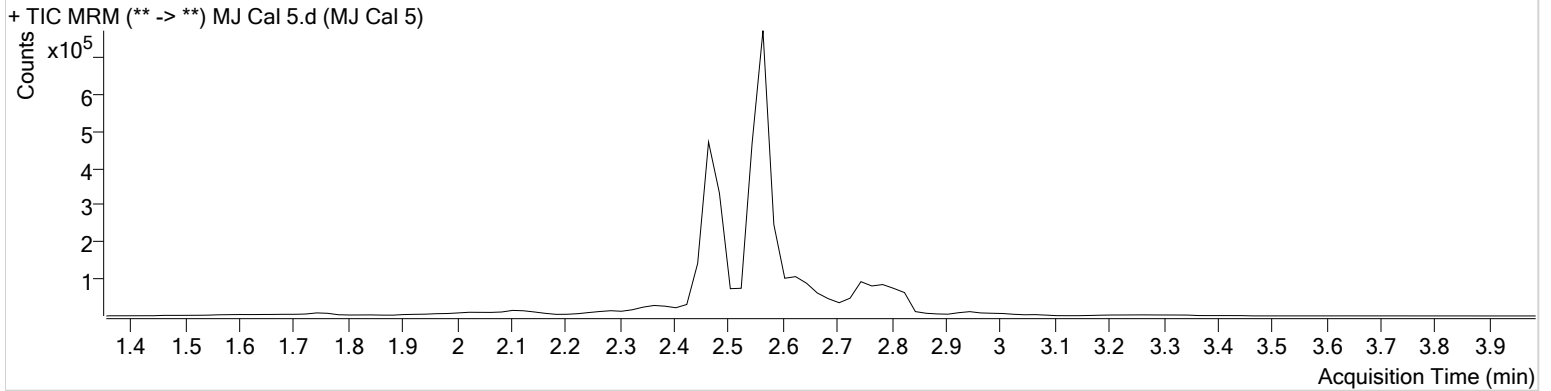


**Batch results** D:\MassHunter\Data\2020\AM 25-26\011520 AM 25 26 SP\QuantResults\AM 26.batch.bin  
**Calibration Last Update** 1/17/2020 1:40:36 PM

<b>Instrument</b>	Falco	<b>Data File</b>	MJ Cal 5.d
<b>Type</b>	Cal	<b>Sample</b>	MJ Cal 5
<b>Acq. Method</b>	am 26 test.m	<b>Operator</b>	Sarah Pickle
<b>Sample Position</b>	P3-E1	<b>Comment</b>	
<b>Injection Volume</b>	10		
<b>Acq. Date-Time</b>	1/15/2020 1:06:48 PM		

**Sample Info.**

## Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	2.839	27105	129346	26.1626 ng/ml
THC-COOH	2.565	505032	423237	71.2921 ng/ml
THC-OH	2.471	235968	816260	23.6719 ng/ml

# AM #26 Cannabinoids Screen Results

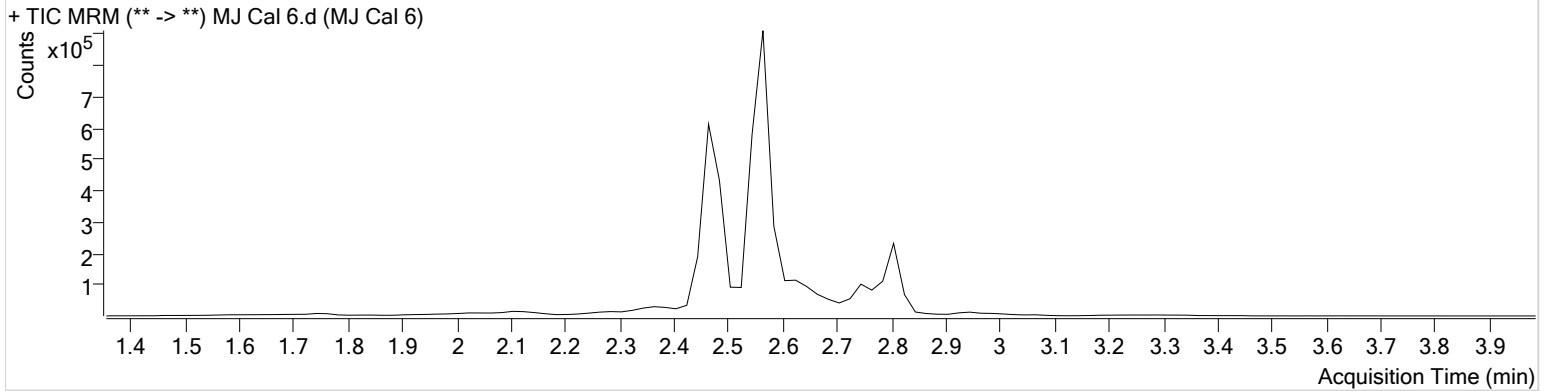


**Batch results** D:\MassHunter\Data\2020\AM 25-26\011520 AM 25 26 SP\QuantResults\AM 26.batch.bin  
**Calibration Last Update** 1/17/2020 1:40:36 PM

<b>Instrument</b>	Falco	<b>Data File</b>	MJ Cal 6.d
<b>Type</b>	Cal	<b>Sample</b>	MJ Cal 6
<b>Acq. Method</b>	am 26 test.m	<b>Operator</b>	Sarah Pickle
<b>Sample Position</b>	P3-F1	<b>Comment</b>	
<b>Injection Volume</b>	10		
<b>Acq. Date-Time</b>	1/15/2020 1:13:19 PM		

**Sample Info.**

## Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	2.819	101429	255454	49.0462 ng/ml
THC-COOH	2.565	675504	397849	101.1668 ng/ml
THC-OH	2.471	540668	828282	53.3777 ng/ml

# AM #26 Cannabinoids Screen Results

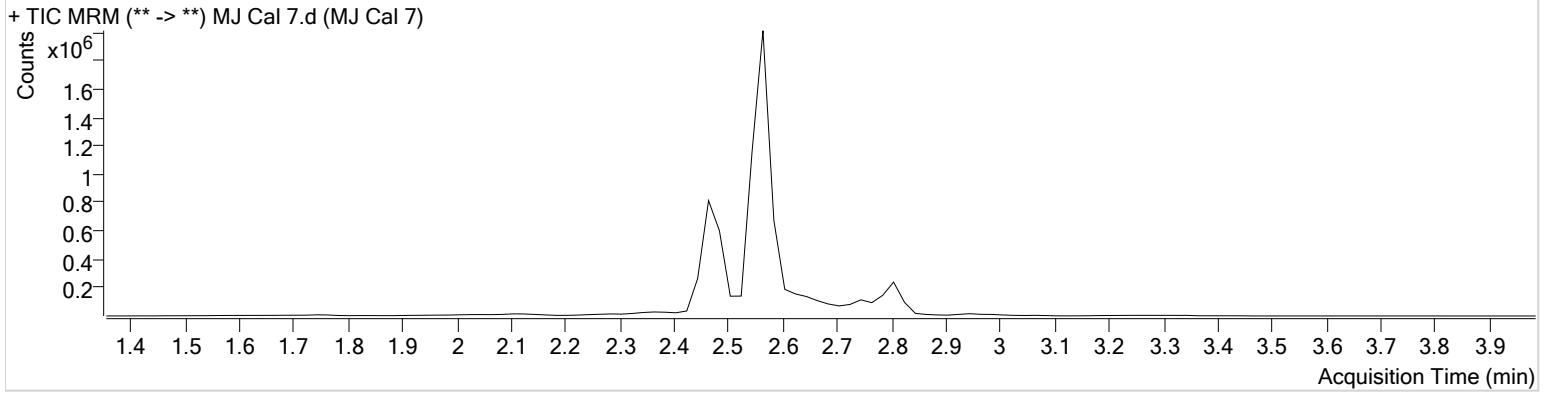


**Batch results** D:\MassHunter\Data\2020\AM 25-26\011520 AM 25 26 SP\QuantResults\AM 26.batch.bin  
**Calibration Last Update** 1/17/2020 1:40:36 PM

<b>Instrument</b>	Falco	<b>Data File</b>	MJ Cal 7.d
<b>Type</b>	Cal	<b>Sample</b>	MJ Cal 7
<b>Acq. Method</b>	am 26 test.m	<b>Operator</b>	Sarah Pickle
<b>Sample Position</b>	P3-G1	<b>Comment</b>	
<b>Injection Volume</b>	10		
<b>Acq. Date-Time</b>	1/15/2020 1:19:49 PM		

**Sample Info.**

## Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	2.799	120829	260538	57.1884 ng/ml
THC-COOH	2.565	1678344	387579	257.0108 ng/ml
THC-OH	2.471	1051486	871117	98.6540 ng/ml