










784

**REVIEWED**  
By Sarah Collins at 1:54 pm, Nov 01, 2022









10/25/2022

**Worklist: 6144**

<u>LAB CASE</u>	<u>ITEM</u>	<u>ITEM TYPE</u>	<u>DESCRIPTION</u>	
M2022-3820	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
M2022-3820	2	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
M2022-3940	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
M2022-3941	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
M2022-4086	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
M2022-4087	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
M2022-4205	2	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
M2022-4211	2	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
M2022-4332	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
M2022-4347	3	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2022-3132	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2022-3133	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2022-3137	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2022-3138	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2022-3139	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2022-3140	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2022-3143	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2022-3175	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2022-3205	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2022-3208	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2022-3211	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	

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**Worklist: 6144**

<u>LAB CASE</u>	<u>ITEM</u>	<u>ITEM TYPE</u>	<u>DESCRIPTION</u>	
P2022-3215	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2022-3217	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2022-3237	2	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2022-3242	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2022-3245	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2022-3247	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2022-3256	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2022-3283	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	

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**Worklist: 6145**

<u>LAB CASE</u>	<u>ITEM</u>	<u>ITEM TYPE</u>	<u>DESCRIPTION</u>
P2022-3257	1	BCK	AM 25 Blood Multi-Drug Screen by LC-QQQ



\*Only run on AM 25 due to limited sample

7/21

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

Extraction Date: 10/26/2022

Plate lot#: 220315

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

**Blank Blood Lot:** Lampire 22B52015-1

**LCMS-QQQ ID:** 069901

Analyst: Amber Gerheart

Plate Retest Date: 9/15/2022 – okay with external control

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

**Blank Urine Lot:** N/A

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

### 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:** In blank well, add 250µL urine, 40µL BG Turbo, and 100µL Instant Buffer I. Place on plate shaker for 5 minutes.
- 3. Using a calibrated pipette, pipette **250µL blood and urine** (if applicable) into wells of analytical (standards) plate.  
**Pipette ID: 42**
- 4. Place on shaking incubator at ambient temp., 900rpm for 15 minutes. **Skipped per deviation**
- 5. Pipette **250µL 0.5 M ammonium hydroxide** in wells of analytical plate.
- 6. Place on shaking incubator at ambient temp., 900rpm for 15 minutes.
- 7. Transfer **200-450µL of blood+base and urine+base (if applicable)** mixture to corresponding wells of SLE+ plate.  
Amount transferred: 300µL
- 8. 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).**
- 9. Wait 5 minutes.
- 10. Add **900uL ethyl acetate.**
- 11. Wait 5 minutes.
- 12. Apply positive pressure for approx. 15 seconds. **(10-15 PSI- Selector to the left).**
- 13. Add **900uL ethyl acetate.**
- 14. Wait 5 minutes.
- 15. Apply positive pressure for approx. 15 seconds. **(10-15 PSI- Selector to the left).**
- 16. Remove plate containing eluate. Place on SPE Dry and evaporate to dryness at approx. 35°C.
- 17. **Add 50µL 1% HCl in MeOH to wells and place plate cover on plate before drying. This step is required for urine samples, but optional for blood samples.**
- 18. Reconstitute in **100µL 20% 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 of 5 or greater or 2-5 for discretionary range.
- 4. Did all QCs pass for each analyte? If no, describe issue in comments (below).
- 5. Central File Packet to include: LIMS Worklist, Method Checklist, Calibration and Control Reports

COMMENTS:

**Idaho State Police  
Forensic Services**

**Request for Departure from an Analytical Method or Quality Standard**

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Deviation Number (assigned by QM): TOX-22-01

Date of Request: **2/3/2022**

Requestor/Discipline: Celena Shrum/Toxicology

Analytical Method/Quality Standard, Revision #: AM #25, AM #28, AM #29, Revision 13

Temporary or Permanent Deviation: Permanent

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**Scope of Deviation** (record specific information, e.g. affected programs, evidence types, expected end date; etc): Deviation will remain in place until the change is made in the next method revision.

**Deviation Request** (Describe detailed instructions of the changes being made; include reference to specific section number(s) in the method manual): 4.1.4 (Place plate on shaking incubator at approximately 900 rpm for approximately 15 minutes) of AM #25, AM # 28, and AM #29 is being removed. The removal of this step was tested in the validation “Addition of Compounds/Modifications for the MDS” (approved on 2/2/2022) and it was determined that that step is not necessary and can be removed.

**Technical Justification for Analytical Method Deviations:** Refer to validation “Addition of Compounds/Modifications for the MDS” (approved on 2/2/2022)

**Technical Review**

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Departure approved  
Comments:

Departure Not Approved  
Comments:

Approver: Rachel Cutler  
Title: Laboratory Manager



Date: 2/10/2022

**Quality Review**

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Quality Approver: Jason Crowe  
Title: Quality Manager  
Date: 2/10/2022



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	1	2	3	4	5	6	7	8	9	10	11	12
A	IS + QC_1	M2022-4086-1	P2022-3137-1	P2022-3211-1	P2022-3283-1	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample
B	IS + QC_1	M2022-4087-1	P2022-3138-1	P2022-3215-1	P2022-3257-1	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample
C	Blood Negative	M2022-4205-2	P2022-3139-1	P2022-3217-1	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample
D	Blood External	M2022-4211-2	P2022-3140-1	P2022-3237-2	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample
E	M2022-3820-1	M2022-4332-1	P2022-3143-1	P2022-3242-1	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample
F	M2022-3820-2	M2022-4347-3	P2022-3175-1	P2022-3245-1	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample
G	M2022-3940-1	P2022-3132-1	P2022-3205-1	P2022-3247-1	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + QC_1
H	M2022-3941-1	P2022-3133-1	P2022-3208-1	P2022-3256-1	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + QC_1

All wells to contain 60 µl of residual DMSO

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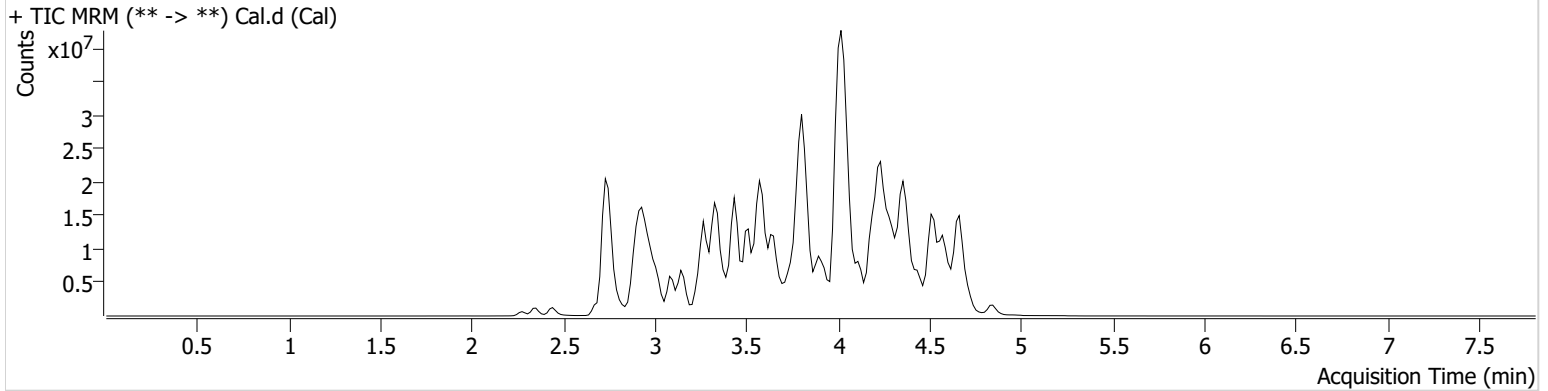


# AM #25 Multi-Drug Screen Results

**Batch results** D:\MassHunter\Data\2022\AM 25-26\102622 AM 25 26 AG\QuantResults\AM 25.batch.bin  
**Calibration Last Update** 11/1/2022 11:43:09 AM

<b>Instrument</b>	Falco (069901)	<b>Data File</b>	Cal.d
<b>Type</b>	Cal	<b>Sample</b>	Cal
<b>Acq. Method</b>	AM 25 MDS.m	<b>Operator</b>	Amber Gerheart
<b>Sample Position</b>	P2-B1	<b>Comment</b>	
<b>Injection Volume</b>	5		
<b>Acq. Date-Time</b>	10/26/2022 3:23:48 PM		

**Sample Chromatogram**



Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
10-OH-Carbamazepine	3.793	4926737	166.22	783.73	25081825	10.0000
6-MAM	2.880	96543	37330.70	721.91	2641472	10.0000
7-aminoclonazepam	3.590	2233319	445.61	1191.62	8497498	10.0000
7-aminoflunitrazepam	3.790	3055370	829.52	492.67	8497498	10.0000
9-Hydroxyrisperidone	3.813	11596920	231598.96	332.50	37259317	10.0000
Acetyl Fentanyl	3.771	720231	190.54	505267.84	39082761	10.0000
Acetyl Norfentanyl	2.919	627065	879.57	479.98	39082761	10.0000
a-hydroxyalprazolam	4.510	471334	159.99	625.46	8497498	10.0000
alpha-hydroxymidazolam	4.570	3450860	617.34	284.23	8497498	10.0000
Alpha-PHP	3.794	3525376	13062.38	786.64	39082761	10.0000
alpha-PVP	3.518	4556874	1314.42	253.43	7061488	10.0000
Alprazolam	4.605	4482263	1215.39	422.00	30016923	10.0000
Amitriptyline	4.393	2699370	290.90	375.89	9440249	10.0000
Amphetamine	2.923	2379867	1702.42	2706.71	7061488	10.0000
Benzoyllecgonine	3.405	260587	64.31	1107.98	467100	10.0000
Brompheniramine	4.018	193435	127.60	624.26	47892034	10.0000
Buprenorphine	4.243	1150846	73809.84	153934.23	4420163	10.0000
Bupropion	3.732	1070829	1273.01	278.60	4266181	10.0000
Carbamazepine	4.242	15605803	330.70	1294.21	550230	10.0000
Carisoprodol	4.241	2777196	251923.34	82.62	10223968	10.0000
Chlordiazepoxide	4.714	2127481	494.51	976.85	30016923	10.0000
Chlorpheniramine	3.930	12641195	819.32	34.70	47892034	10.0000
Chlorpromazine	4.572	2525308	803083.39	5049.66	10641377	10.0000
Citalopram	4.048	5379285	8032.17	418.81	47892034	10.0000
Clomipramine	4.589	3842854	2323.01	2856.99	47892034	10.0000
Clonazepam	4.450	2540250	404.93	431.10	30016923	10.0000
Clonazolam	4.369	2219887	∞	359363.35	30016923	10.0000
Clozapine	4.186	6989427	2212.91	2015.04	23211715	10.0000
Cocaehtylene	3.772	7466335	3227746.25	2178.82	37048969	10.0000
Cocaine	3.573	8783672	1132.20	3638.42	37048969	10.0000
Codeine	2.778	737780	3271.06	567.28	14861082	10.0000
Cyclobenzaprine	4.317	4928493	557.51	114.41	9440249	10.0000
Desipramine	4.348	8087779	1707.48	599.40	9440249	10.0000
Dextromethorphan	4.053	3328673	2930.10	1192.37	18145419	10.0000

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# AM #25 Multi-Drug Screen Results



Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Dextrophan	3.377	4715889	1162.10	426.43	18145419	10.0000
Diazepam	4.853	2375245	775.18	1130.12	30016923	10.0000
Dihydrocodeine	2.731	1626798	994.41	1677.66	14861082	10.0000
Diphenhydramine	4.008	13618045	1958.25	2078.42	47892034	10.0000
DMT	2.982	955782	2823.42	915.24	18145419	10.0000
Doxepin	4.115	3744969	668.34	122.56	31116256	10.0000
Doxylamine	3.652	20224234	32335.97	220.01	18145419	10.0000
Duloxetine	4.298	77734	14460.83	7627.67	1205344	10.0000
EDDP	4.069	526864	469.46	2851.18	1280898	10.0000
Estazolam	4.529	9001706	986.75	2442.41	30016923	10.0000
Etizolam	4.616	448780	299730.15	926050.76	30016923	10.0000
Fentanyl	3.985	442643	123.37	486.69	23976297	10.0000
Flualprazolam	4.478	2076461	1729867.92	3631.95	30016923	10.0000
Flunitrazepam	4.558	3420938	3805.21	636.99	30016923	10.0000
Fluorofentanyl	4.030	682094	116.80	439.51	23976297	10.0000
Fluoxetine	4.313	3258673	1418.64	381.11	3642273	10.0000
Flurazepam	4.106	5692539	3006.96	377.99	30016923	10.0000
Hydrocodone	2.976	2655852	912.73	387.53	14861082	10.0000
Hydromorphone	2.444	2061952	26691.45	1104.18	442922	10.0000
Hydroxyzine	4.430	5278723	1413.28	691.05	47892034	10.0000
Imipramine	4.361	10169186	4500.29	989.83	9440249	10.0000
Ketamine	3.410	3782009	1126.25	84.68	18078618	10.0000
Lamotrigine	3.546	417867	350.78	1554.91	47892034	10.0000
Levamisole	2.935	4231682	1134.70	313.20	37048969	10.0000
Levetiracetam	2.692	1736186	371.24	716.67	47892034	10.0000
Lorazepam	4.449	952062	214.72	105.08	30016923	10.0000
Maprotiline	4.393	2136015	748.95	309.76	9440249	10.0000
MDA	3.028	5673333	3495.58	301.55	9700057	10.0000
MDEA	3.242	8094126	765.36	427.54	9700057	10.0000
MDMA	3.089	10863947	1567.07	1232.54	9700057	10.0000
Meperidine	3.593	3909732	1284.09	419.49	18145419	10.0000
Meprobamate	3.704	2088541	1220.65	133.84	10223968	10.0000
Methadone	4.359	10744107	18085.01	∞	1280898	10.0000
Methamphetamine	3.014	2138179	1667.10	1069662.00	9700057	10.0000
Methocarbamol	3.609	643376	288.65	130.01	1280898	10.0000
Methylphenidate	3.518	21429073	862.98	511.58	16374089	10.0000
Metoprolol	3.438	1491553	2183.14	1033.91	18145419	10.0000
Midazolam	4.679	1284778	463544.04	567.33	30016923	10.0000
Mirtazapine	3.746	5093759	1530.53	7401.76	18145419	10.0000
Mitragynine	4.106	809352	592554.36	778909.90	18145419	10.0000
Morphine	2.278	436323	∞	1236.76	442922	10.0000
Norbuprenorphine	3.813	160914	167110.61	88375.85	4420163	10.0000
Nordiazepam	4.701	3086131	644017.51	248.64	30016923	10.0000
Norfentanyl	3.348	11716756	1441.92	503.83	39082761	10.0000
Norhydrocodone	2.931	161128	188.84	914.58	442922	10.0000
Norketamine	3.442	952168	334.63	3238.48	18078618	10.0000
Normeperidine	3.610	4455020	605.76	388.57	47892034	10.0000
Noroxycodone	2.899	2400550	∞	425.49	18078618	10.0000
Nortriptyline	4.395	1977729	951.91	129.25	9440249	10.0000
O-desmethyl-tramadol	2.933	15771096	16316.17	220.29	47892034	10.0000
O-desmethylvenlafaxine	3.268	2940450	831.37	12.10	13497547	10.0000
Olanzapine	3.711	1602037	608689.35	93.96	550230	10.0000
Oxazepam	4.515	4091131	372.89	111.51	23035440	10.0000
Oxycodone	2.912	4338663	1226.81	660.85	18078618	10.0000
Oxymorphone	2.350	2472626	549.57	497.13	442922	10.0000
Paroxetine	4.309	560578	192.94	372.27	3642273	10.0000
Phenazepam	4.646	3596814	46300.83	554.04	30016923	10.0000
Phencyclidine	3.902	7925547	1378.26	74.58	18145419	10.0000
Phentermine	3.168	1487898	131.35	29.73	16374089	10.0000
Phenytion	4.149	989052	762.48	159.74	550230	10.0000

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# AM #25 Multi-Drug Screen Results

Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Primidone	3.503	2489397	1291.83	963.29	550230	10.0000
Promethazine	4.284	12793968	835.35	463.05	47892034	10.0000
Pseudoephedrine	2.738	55214628	507.31	14700.39	9700057	10.0000
Quetiapine	4.291	6622496	1666.82	2249.08	41395638	10.0000
Risperidone	3.998	10278773	34000.35	404.65	37259317	10.0000
Sertraline	4.528	766195	278285.98	978.35	3642273	10.0000
Sufentanil	4.260	344518	997.96	274.63	39082761	10.0000
Tapentadol	3.457	9962345	1548.37	625.91	18078618	10.0000
Temazepam	4.668	7890876	470.76	89.32	30016923	10.0000
Topiramate	3.877	114654	103372.96	58349.79	494169	10.0000
Tramadol	3.438	31085097	2525.76	82.89	47892034	10.0000
Trazodone	4.261	8748865	1645.25	1612.05	31116256	10.0000
Venlafaxine	3.806	12622957	504.90	400.38	3642273	10.0000
Zaleplon	4.344	4338699	575.71	1033.53	41395638	10.0000
Zolpidem	4.035	13003866	6958.08	2675.38	41395638	10.0000
Zopiclone	3.891	1308230	2192.49	427543.11	5784288	10.0000

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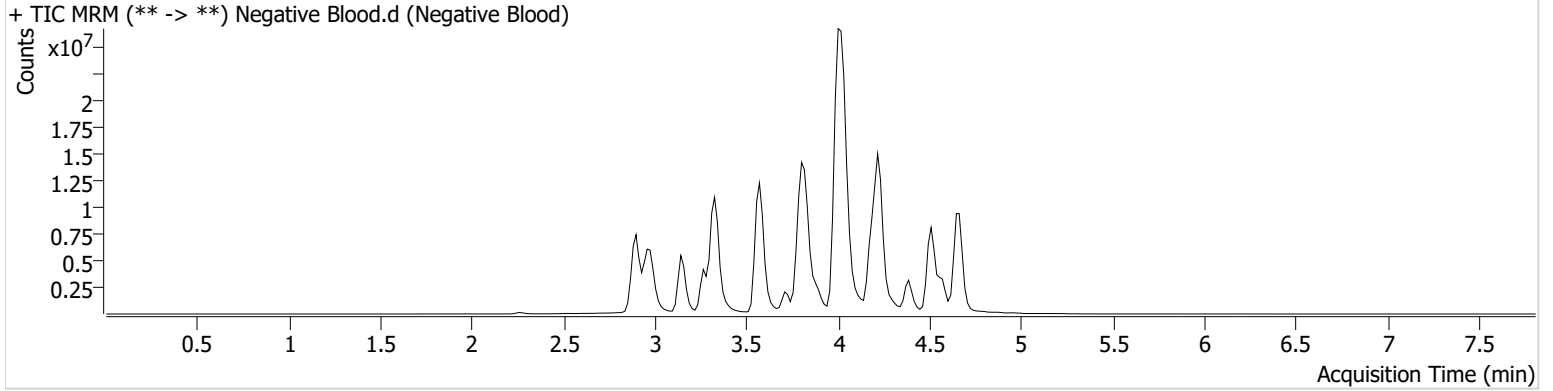


# AM #25 Multi-Drug Screen Results

**Batch results** D:\MassHunter\Data\2022\AM 25-26\102622 AM 25 26 AG\QuantResults\AM 25.batch.bin  
**Calibration Last Update** 11/1/2022 11:43:09 AM

<b>Instrument</b>	Falco (069901)	<b>Data File</b>	Negative Blood.d
<b>Type</b>	Sample	<b>Sample</b>	Negative Blood
<b>Acq. Method</b>	AM 25 MDS.m	<b>Operator</b>	Amber Gerheart
<b>Sample Position</b>	P2-C1	<b>Comment</b>	
<b>Injection Volume</b>	5		
<b>Acq. Date-Time</b>	10/26/2022 3:32:24 PM		
<b>Sample Info.</b>			

## Sample Chromatogram



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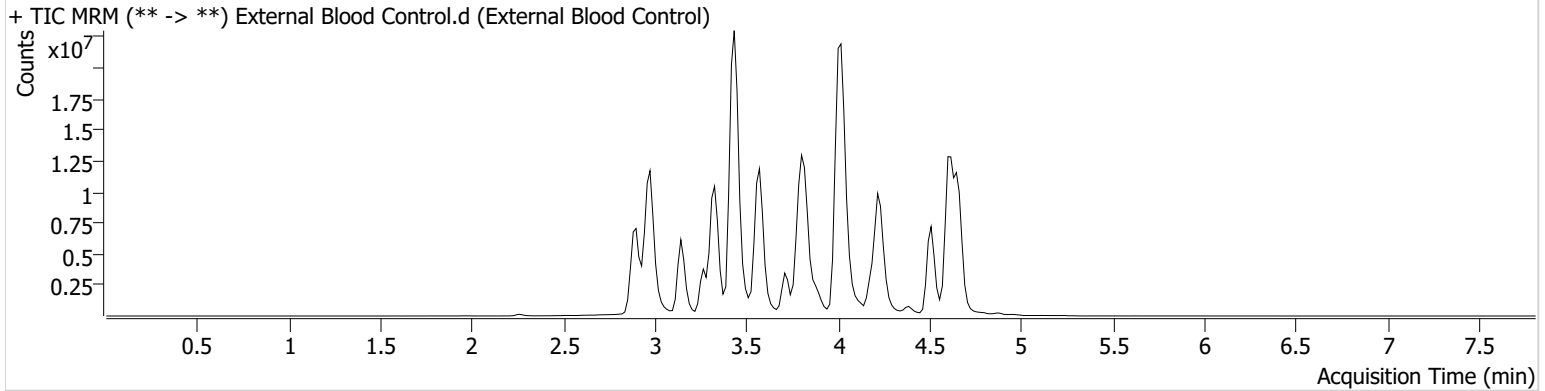


# AM #25 Multi-Drug Screen Results

**Batch results** D:\MassHunter\Data\2022\AM 25-26\102622 AM 25 26 AG\QuantResults\AM 25.batch.bin  
**Calibration Last Update** 11/1/2022 11:43:09 AM

<b>Instrument</b>	Falco (069901)	<b>Data File</b>	External Blood Control.d
<b>Type</b>	Sample	<b>Sample</b>	External Blood Control
<b>Acq. Method</b>	AM 25 MDS.m	<b>Operator</b>	Amber Gerheart
<b>Sample Position</b>	P2-D1	<b>Comment</b>	
<b>Injection Volume</b>	5		
<b>Acq. Date-Time</b>	10/26/2022 3:40:51 PM		

**Sample Chromatogram**



Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Alprazolam	4.605	20751447	1252.39	1695.10	30443391	45.6483
Buprenorphine	4.243	3390592	636789.61	225549.27	1988810	65.4792
Hydrocodone	2.976	10225492	1759.29	1319.45	12017607	47.6116
Tramadol	3.438	79733792	5384.89	204.67	36360774	33.7847



# Idaho State Police Forensic Services

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## AM #25 Blood Multi-Drug Screen by LCMS-QQQ And AM #28 Blood Multi-Drug Confirmatory Analysis by LCMS-QQQ---Panel 1

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### Methanol External Control Solution (Lot: 042222)

100  $\mu$ L of 1mg/mL stock was added to each drug to 9600  $\mu$ L of LC MeOH.

<i>Component</i>	<i>Source</i>	<i>Source Lot Number</i>	<i>Expiration Date</i>
Methanol (LCMS)	Fisher	215245	N/A
Tramadol	Cerilliant	FE10051901	12/31/2024
Hydrocodone	Cerilliant	FE04241902	09/30/2024
Alprazolam	Cerilliant	FE06102008	06/30/2025
Buprenorphine	Cerilliant	FE03191903	06/31/2024
Prepared:	04/22/2022		
Expires:	04/22/2023		
Prepared By:	Celena Shrum		


### Blood External Control Solution (Lot: WS101322)

50  $\mu$ L of methanol external control solution was added to 9950  $\mu$ L of blood.

Approximately 50 ng/mL of each compound.

<i>Component</i>	<i>Source</i>	<i>Source Lot Number</i>
Negative Blood	Lampire	22B52015-1
Methanol External Control Solution		042222
Prepared:	10/13/2022	
Expires:	04/22/2023	
Prepared by:	Celena Shrum	

This preparation sheet was updated on 4/13/2023 as the incorrect preparation sheet was originally attached.

 4/13/2023

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

**Extraction Date:** 10/26/2022

**Analyst:** Amber Gerheart

**Plate lot#:** 220802

**Plate Retest Date:** 2/2/2023

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

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

**Blank Blood Lot:** Lampire 22B52015-1

**Blank Urine Lot:** N/A

**LCMS-QQ ID:** 069901

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

## 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.
- 3. Using a calibrated pipette, add **1000µl blood and urine (if applicable) (calibrated pipette)** into the appropriate wells of analytical (standards) plate. **Pipette ID: 16**
- 4. Place on shaking incubator at ambient temp., 900rpm for 15 minutes.
- 5. Pipette **500µL 0.1% formic acid in water blood sample, 500 µL saturated phosphate buffer in urine** in wells of analytical plate.
- 6. Place on shaking incubator at ambient temp., 900rpm for 15 minutes.
- 7. Transfer **700-800µL of blood+acid or urine+acid** mixture to corresponding wells of SLE+ plate. Amount transferred: 800µL
- 8. 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)*
- 9. Wait 5 minutes.
- 10. Add **2.25mL MTBE. (Add in 3 increments of 750uL)**
- 11. Wait 5 minutes.
- 12. Apply positive pressure for approx. 15 seconds. *(10-15 PSI- Selector to the left).*
- 13. Add **2.25mL Hexane. (Add in 3 increments of 750uL)**
- 14. Wait 5 minutes.
- 15. Apply positive pressure for approx. 15 seconds. *(10-15 PSI- Selector to the left).*
- 16. Remove plate containing eluate. Place on SPE Dry and evaporate to dryness at approx. 35°C.
- 17. 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, R<sup>2</sup> values ≥0.98 for each analyte
- 3. RT +/- 2% or 0.100 min, whichever is greater
- 4. Confirmation testing on case samples with a response for THC and OH-THC of 3ng/mL or greater and/or Carboxy-THC at 10ng/mL or greater (analyst discretion between 5-10ng/mL) may be pursued.
- 5. Did all QCs pass for each analyte? (if not, describe in comments section)
- 6. Central File Packet to include: LIMS Worklist, Method Checklist, Calibration and Control Reports

## COMMENTS:

Instrument stopped four times during run due to pressuring out. Line was replaced to remove clog and run continued with no issues.

Curve Range THC 1-50 ng/mL

THC Cal 8 dropped due to accuracy

11/1/2022

Cal 7

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	1	2	3	4	5	6
A	IS + Cal. 1	IS + QC_1	M2022-4205-2	P2022-3139-1	P2022-3217-1	IS + QC_1
B	IS + Cal. 2	Blood Negative	M2022-4211-2	P2022-3140-1	P2022-3237-2	IS + Cal. 7
C	IS + Cal. 3	M2022-3820-1	M2022-4332-1	P2022-3143-1	P2022-3242-1	IS + Cal. 6
D	IS + Cal. 4	M2022-3820-2	M2022-4347-3	P2022-3175-1	P2022-3245-1	IS + Cal. 5
E	IS + Cal. 5	M2022-3940-1	P2022-3132-1	P2022-3205-1	P2022-3247-1	IS + Cal. 4
F	IS + Cal. 6	M2022-3941-1	P2022-3133-1	P2022-3208-1	P2022-3256-1	IS + Cal. 3
G	IS + Cal. 7	M2022-4086-1	P2022-3137-1	P2022-3211-1	P2022-3283-1	IS + Cal. 2
H	IS + QC_1	M2022-4087-1	P2022-3138-1	P2022-3215-1	IS + QC_1	IS + Cal. 1

All wells to contain 100 µl of residual DMSO

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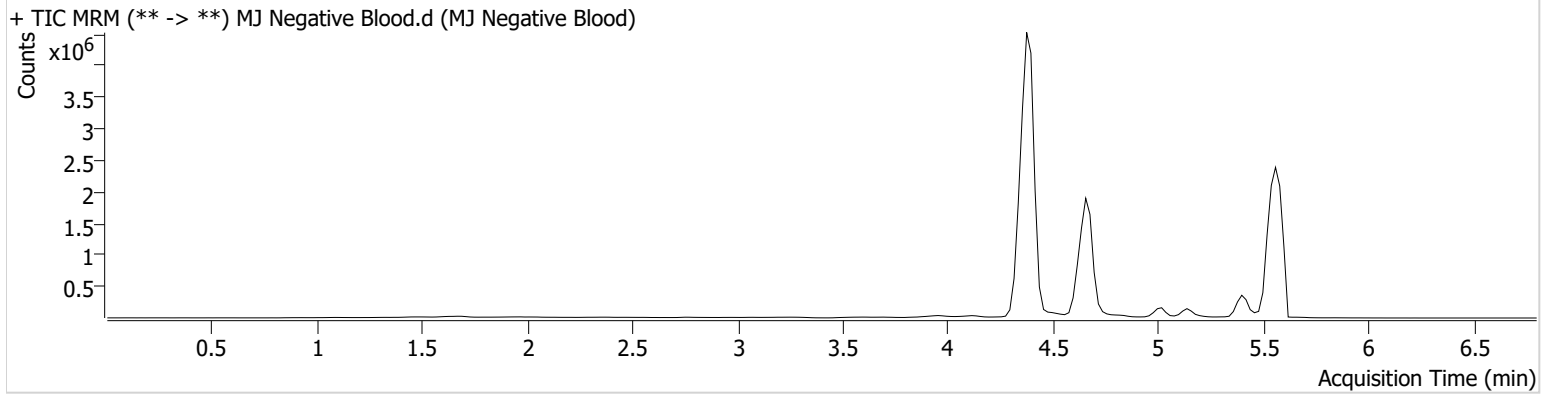


# AM #26 Cannabinoids Screen Results

**Batch results** D:\MassHunter\Data\2022\AM 25-26\102622 AM 25 26 AG\QuantResults\AM 26.batch.bin  
**Calibration Last Update** 11/1/2022 11:57:20 AM

<b>Instrument</b>	Falco (069901)	<b>Data File</b>	MJ Negative Blood.d
<b>Type</b>	Sample	<b>Sample</b>	MJ Negative Blood
<b>Acq. Method</b>	AM 26 THC.m	<b>Operator</b>	Amber Gerheart
<b>Sample Position</b>	P1-B2	<b>Comment</b>	
<b>Injection Volume</b>	10		
<b>Acq. Date-Time</b>	10/26/2022 10:05:10 PM		
<b>Sample Info.</b>			

## Sample Chromatogram



7191

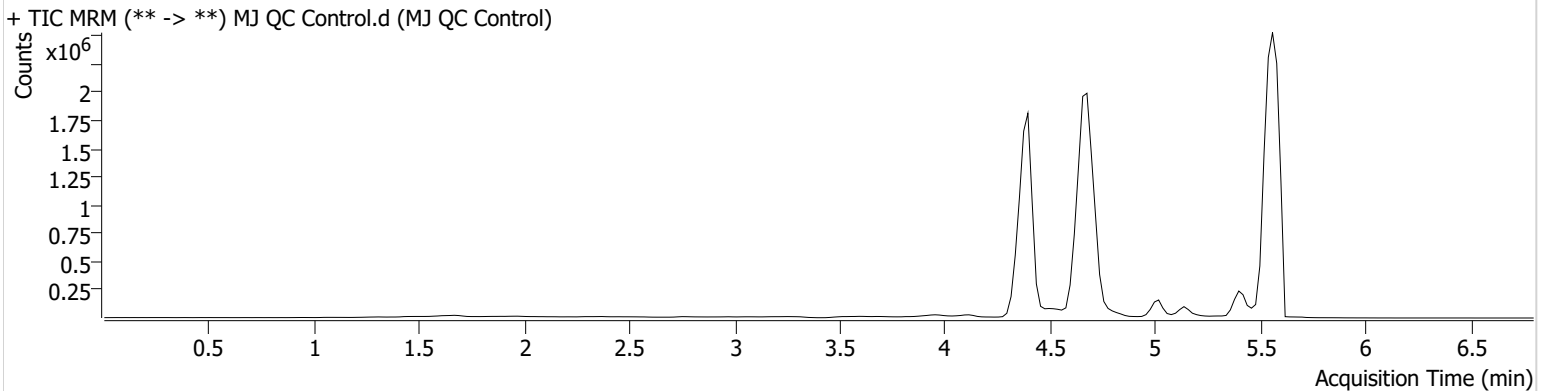


# AM #26 Cannabinoids Screen Results

**Batch results** D:\MassHunter\Data\2022\AM 25-26\102622 AM 25 26 AG\QuantResults\AM 26.batch.bin  
**Calibration Last Update** 11/1/2022 11:57:20 AM

**Instrument** Falco (069901) **Data File** MJ QC Control.d  
**Type** QC **Sample** MJ QC Control  
**Acq. Method** AM 26 THC.m **Operator** Amber Gerheart  
**Sample Position** P1-H1 **Comment**  
**Injection Volume** 10  
**Acq. Date-Time** 10/26/2022 9:50:00 PM  
**Sample Info.**

### Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	5.610	9133	186534	5.7796 ng/ml
THC-COOH	4.696	1426241	6911944	14.8799 ng/ml
THC-OH	4.402	71733	7715203	4.7737 ng/ml



719

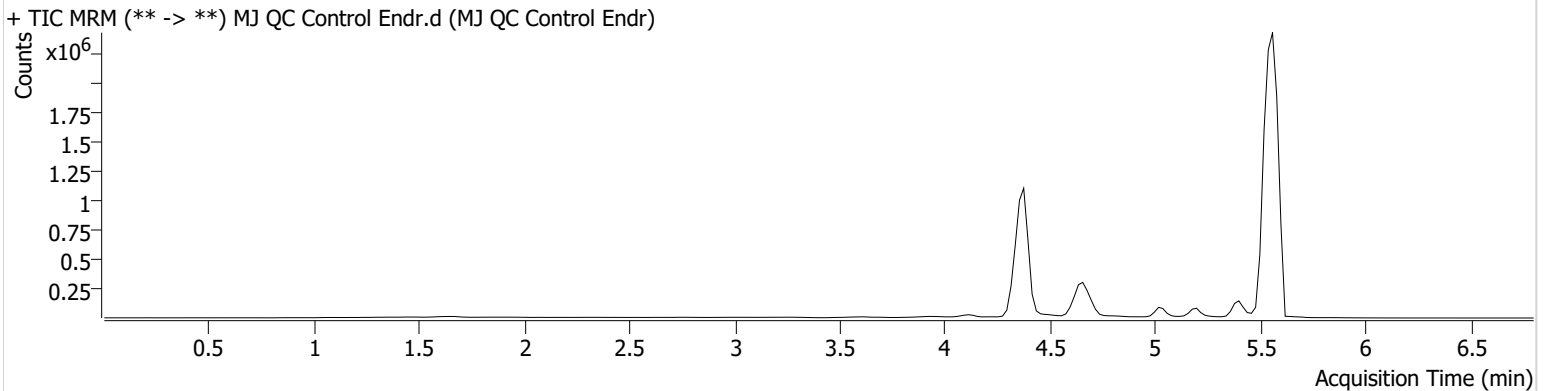


# AM #26 Cannabinoids Screen Results

**Batch results** D:\MassHunter\Data\2022\AM 25-26\102622 AM 25 26 AG\QuantResults\AM 26.batch.bin  
**Calibration Last Update** 11/1/2022 11:57:20 AM

**Instrument** Falco (069901) **Data File** MJ QC Control Endr.d  
**Type** QC **Sample** MJ QC Control Endr  
**Acq. Method** AM 26 THC.m **Operator** Amber Gerheart  
**Sample Position** P1-H1 **Comment** Reinjected due to MeOH evaporating before end injection.  
**Injection Volume** 10 Reconstituted and reinjected.  
**Acq. Date-Time** 10/27/2022 5:28:18 PM  
**Sample Info.**

### Sample Chromatogram



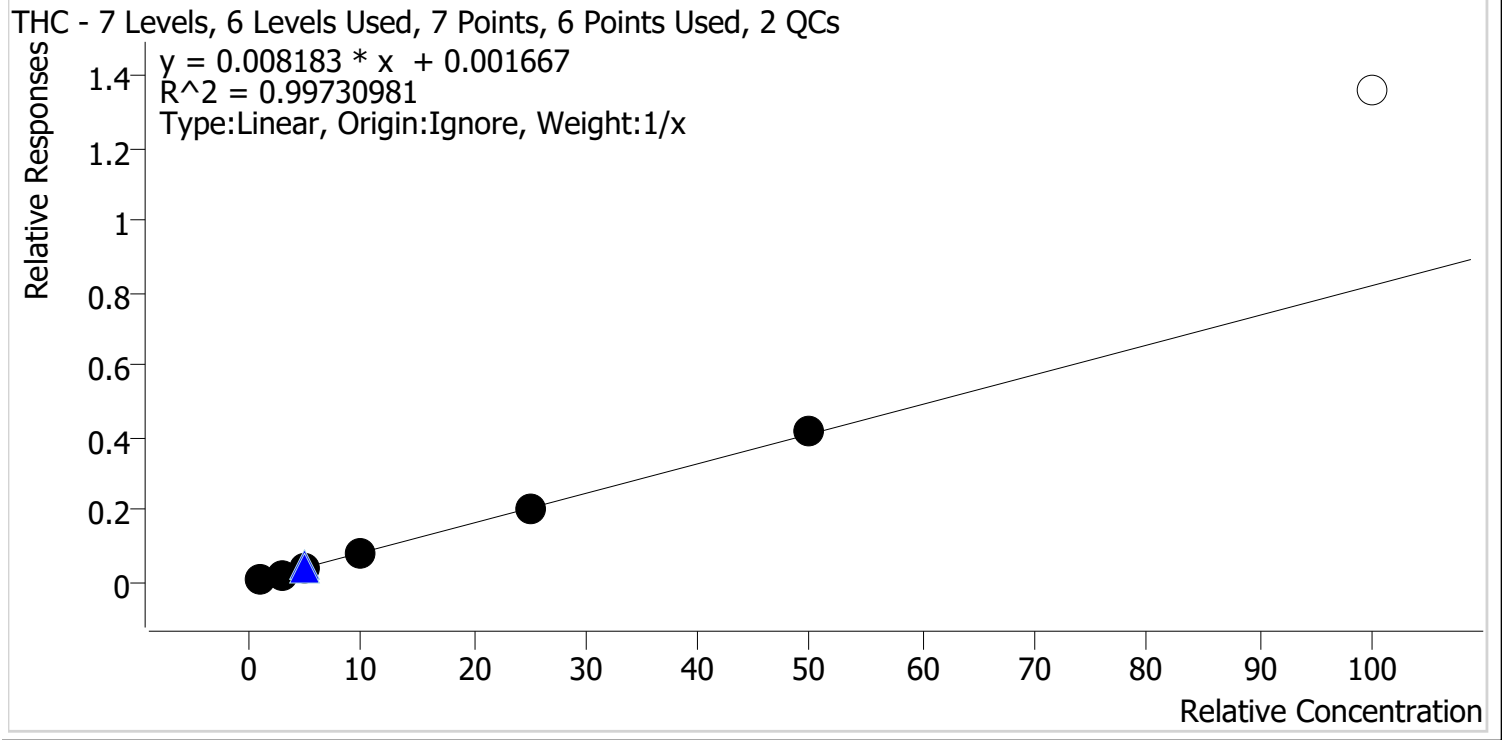
Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	5.530	11952	319235	4.3718 ng/ml
THC-COOH	4.676	203298	979332	14.9656 ng/ml
THC-OH	4.382	36994	4392070	4.3461 ng/ml

719



# AM #26 Cannabinoids Screen Calibration Curve Report

**Batch results** D:\MassHunter\Data\2022\AM 25-26\102622 AM 25 26 AG\QuantResults\AM 26.batch.bin  
**Last Cal. Update** 11/1/2022 11:57 AM  
**Analyst Name** ISP\datastor  
**Analyte** THC **Internal Standard** THC-D3



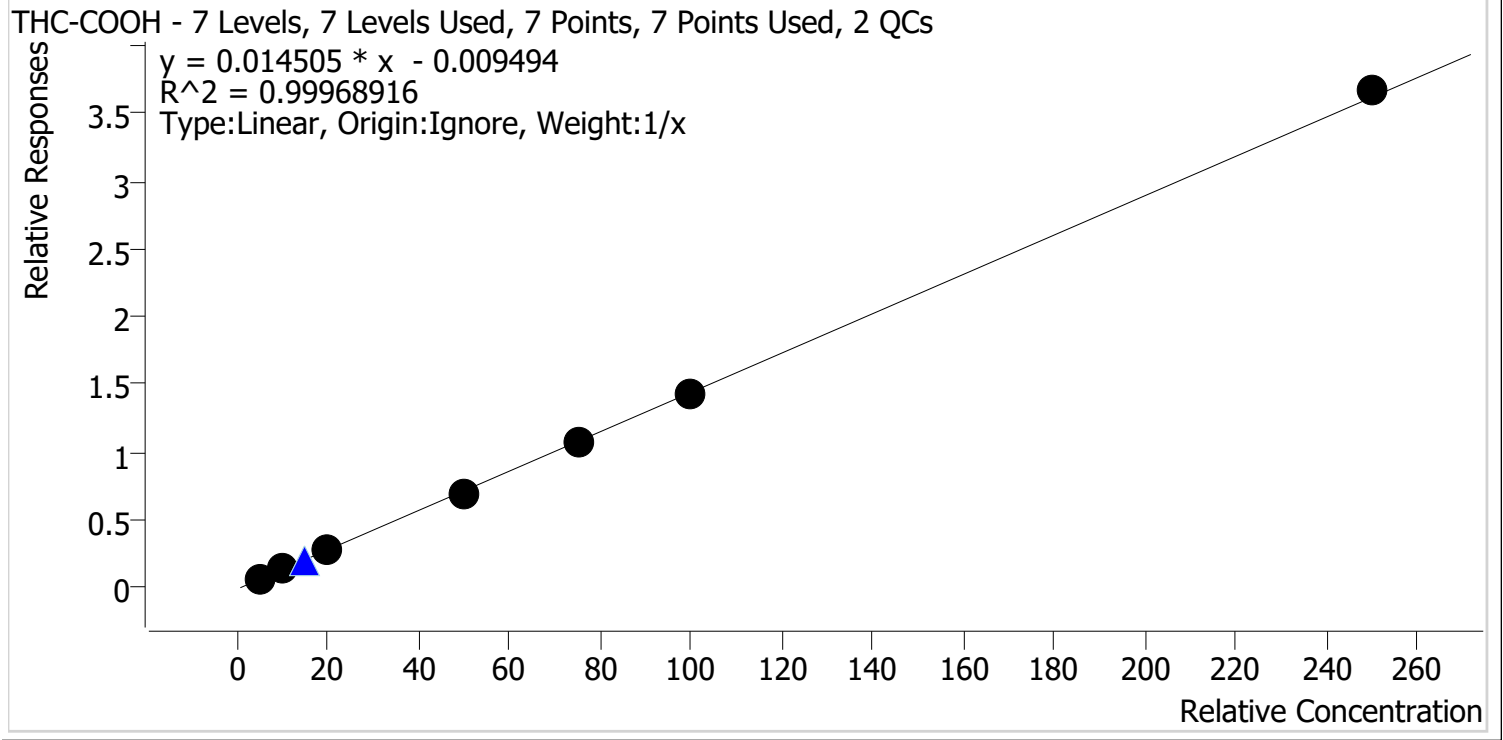
Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
MJ Cal 1	1	✓	1.0	1.2	124.8
MJ Cal 2	2	✓	3.0	2.5	83.6
MJ Cal 3	3	✓	5.0	4.6	93.0
MJ Cal 4	4	✓	10.0	9.6	96.0
MJ Cal 5	5	✓	25.0	25.3	101.2
MJ Cal 6	6	✓	50.0	50.7	101.4
MJ Cal 7	7	x	100.0	165.7	165.7

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# AM #26 Cannabinoids Screen Calibration Curve Report

**Batch results** D:\MassHunter\Data\2022\AM 25-26\102622 AM 25 26 AG\QuantResults\AM 26.batch.bin  
**Last Cal. Update** 11/1/2022 11:57 AM  
**Analyst Name** ISP\datastor  
**Analyte** THC-COOH **Internal Standard** THC-COOH-D9



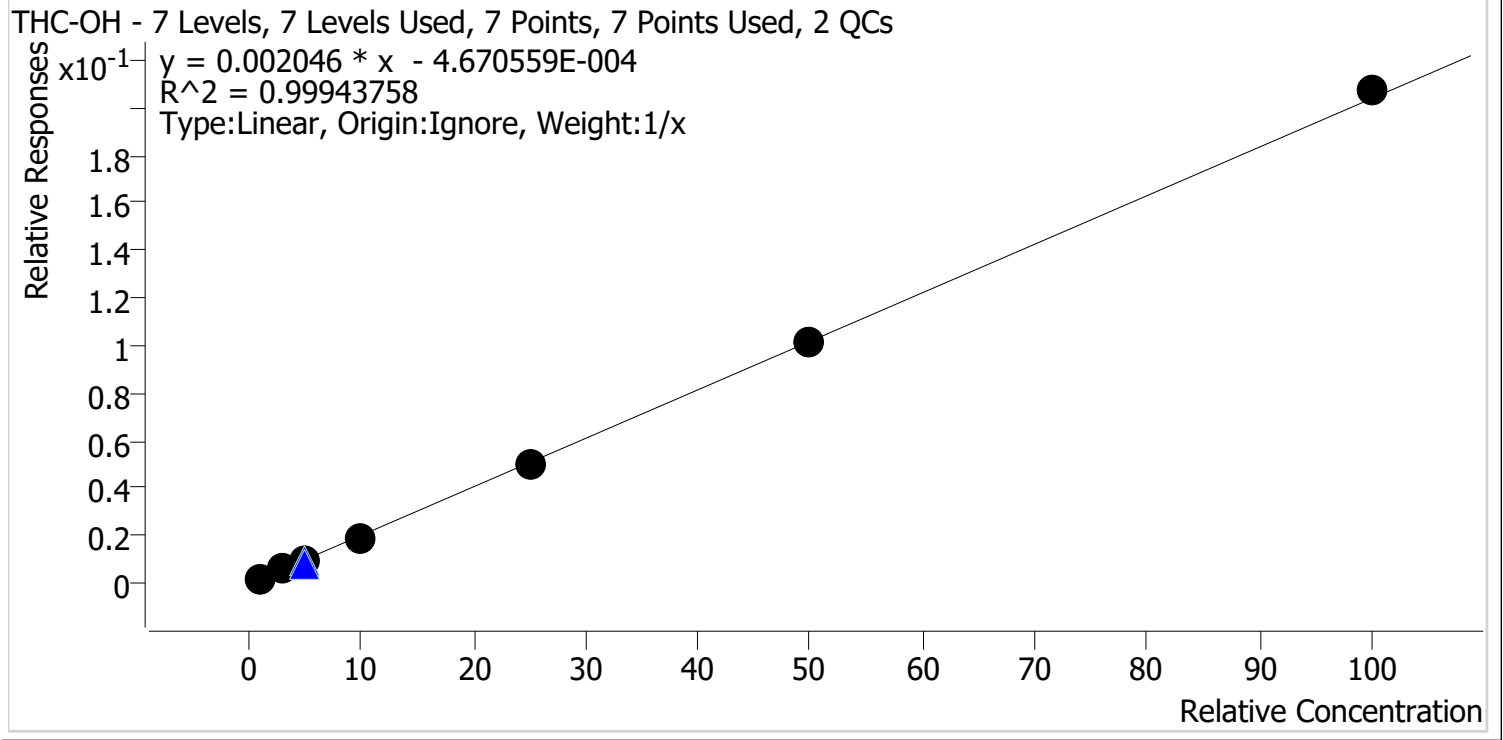
Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
MJ Cal 1	1	✓	5.0	5.2	104.9
MJ Cal 2	2	✓	10.0	10.1	100.9
MJ Cal 3	3	✓	20.0	19.5	97.6
MJ Cal 4	4	✓	50.0	48.9	97.8
MJ Cal 5	5	✓	75.0	74.0	98.7
MJ Cal 6	6	✓	100.0	98.8	98.8
MJ Cal 7	7	✓	250.0	253.4	101.4

719



# AM #26 Cannabinoids Screen Calibration Curve Report

**Batch results** D:\MassHunter\Data\2022\AM 25-26\102622 AM 25 26 AG\QuantResults\AM 26.batch.bin  
**Last Cal. Update** 11/1/2022 11:57 AM  
**Analyst Name** ISP\datastor  
**Analyte** THC-OH **Internal Standard** THC-OH-D3



Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
MJ Cal 1	1	✓	1.0	1.1	107.8
MJ Cal 2	2	✓	3.0	3.0	100.4
MJ Cal 3	3	✓	5.0	5.0	100.0
MJ Cal 4	4	✓	10.0	9.3	93.3
MJ Cal 5	5	✓	25.0	24.5	97.8
MJ Cal 6	6	✓	50.0	49.5	99.0
MJ Cal 7	7	✓	100.0	101.6	101.6

719

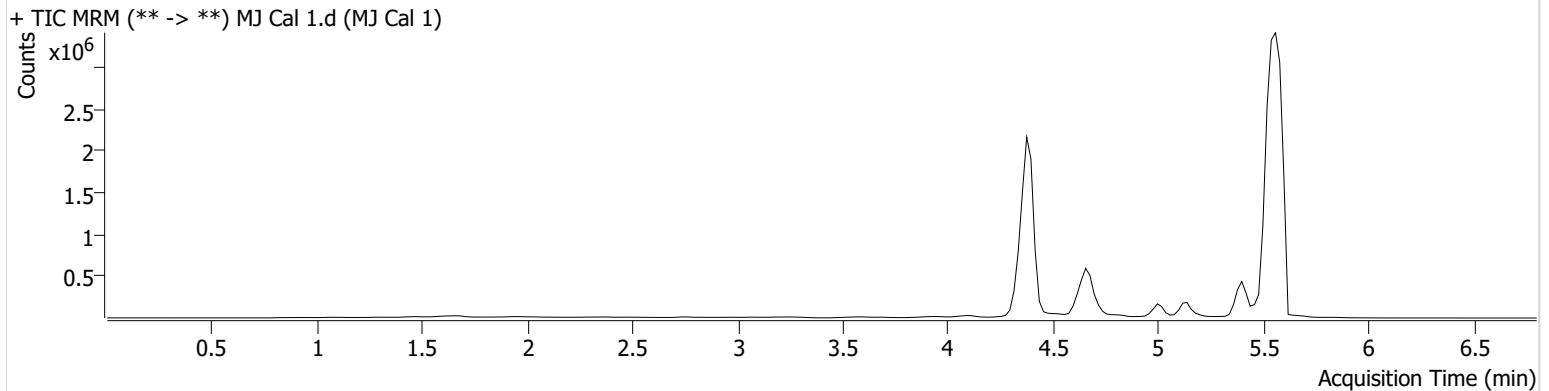


# AM #26 Cannabinoids Screen Results

**Batch results** D:\MassHunter\Data\2022\AM 25-26\102622 AM 25 26 AG\QuantResults\AM 26.batch.bin  
**Calibration Last Update** 11/1/2022 11:57:20 AM

**Instrument** Falco (069901) **Data File** MJ Cal 1.d  
**Type** Cal **Sample** MJ Cal 1  
**Acq. Method** AM 26 THC.m **Operator** Amber Gerheart  
**Sample Position** P1-A1 **Comment**  
**Injection Volume** 10  
**Acq. Date-Time** 10/26/2022 8:56:50 PM  
**Sample Info.**

### Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.	
THC	5.610	4541	382180	1.2482 ng/ml	Low
THC-COOH	4.696	162488	2441519	5.2426 ng/ml	
THC-OH	4.402	15324	8812404	1.0784 ng/ml	Low

719

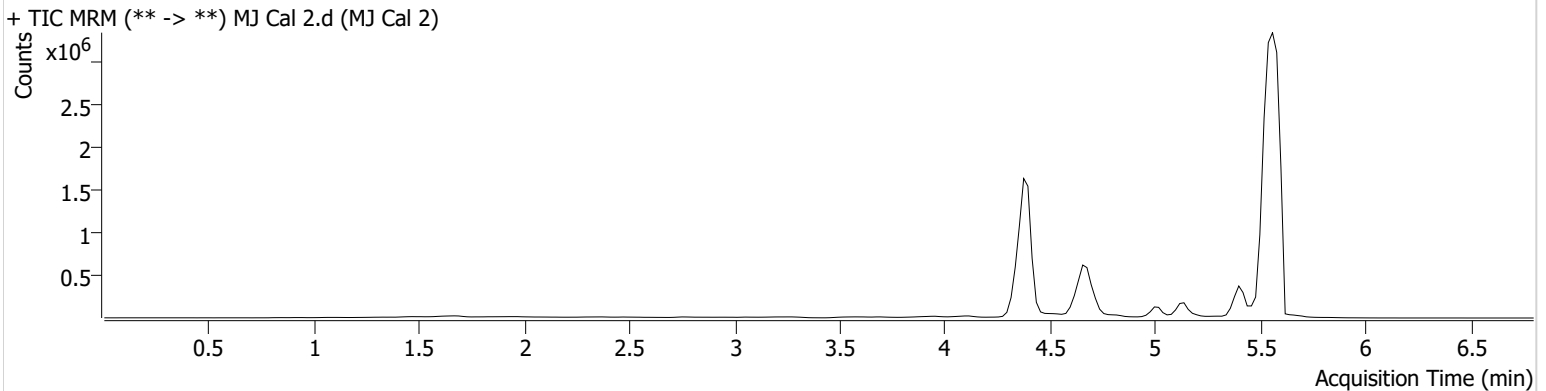


# AM #26 Cannabinoids Screen Results

**Batch results** D:\MassHunter\Data\2022\AM 25-26\102622 AM 25 26 AG\QuantResults\AM 26.batch.bin  
**Calibration Last Update** 11/1/2022 11:57:20 AM

**Instrument** Falco (069901) **Data File** MJ Cal 2.d  
**Type** Cal **Sample** MJ Cal 2  
**Acq. Method** AM 26 THC.m **Operator** Amber Gerheart  
**Sample Position** P1-B1 **Comment**  
**Injection Volume** 10  
**Acq. Date-Time** 10/26/2022 9:04:34 PM  
**Sample Info.**

### Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.	
THC	5.610	15245	687123	2.5077 ng/ml	<b>Low</b>
THC-COOH	4.696	318024	2324330	10.0872 ng/ml	
THC-OH	4.402	37588	6601614	3.0118 ng/ml	

719

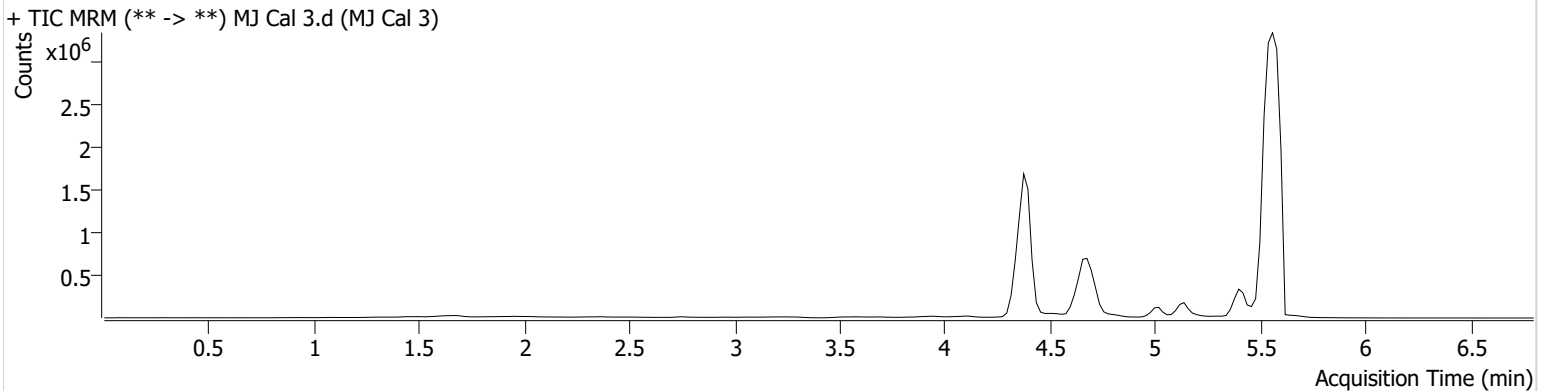


# AM #26 Cannabinoids Screen Results

**Batch results** D:\MassHunter\Data\2022\AM 25-26\102622 AM 25 26 AG\QuantResults\AM 26.batch.bin  
**Calibration Last Update** 11/1/2022 11:57:20 AM

**Instrument** Falco (069901) **Data File** MJ Cal 3.d  
**Type** Cal **Sample** MJ Cal 3  
**Acq. Method** AM 26 THC.m **Operator** Amber Gerheart  
**Sample Position** P1-C1 **Comment**  
**Injection Volume** 10  
**Acq. Date-Time** 10/26/2022 9:12:09 PM  
**Sample Info.**

### Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	5.610	23072	581115	4.6483 ng/ml
THC-COOH	4.696	610889	2232706	19.5171 ng/ml
THC-OH	4.402	64128	6571185	4.9992 ng/ml

719

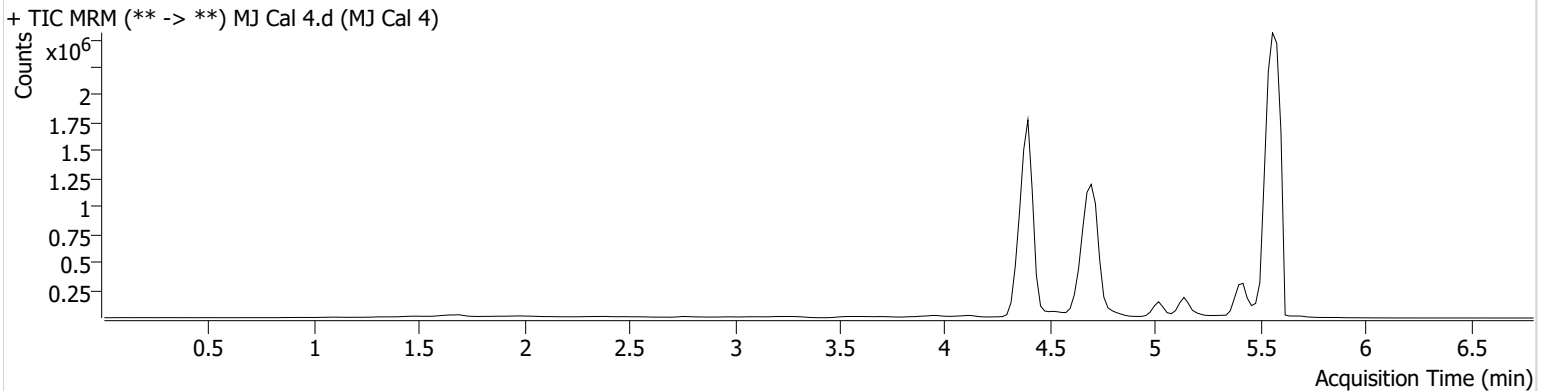


# AM #26 Cannabinoids Screen Results

**Batch results** D:\MassHunter\Data\2022\AM 25-26\102622 AM 25 26 AG\QuantResults\AM 26.batch.bin  
**Calibration Last Update** 11/1/2022 11:57:20 AM

**Instrument** Falco (069901) **Data File** MJ Cal 4.d  
**Type** Cal **Sample** MJ Cal 4  
**Acq. Method** AM 26 THC.m **Operator** Amber Gerheart  
**Sample Position** P1-D1 **Comment**  
**Injection Volume** 10  
**Acq. Date-Time** 10/26/2022 9:19:43 PM  
**Sample Info.**

### Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	5.610	31857	397060	9.6014 ng/ml
THC-COOH	4.696	1591786	2275493	48.8804 ng/ml
THC-OH	4.402	125033	6715876	9.3299 ng/ml



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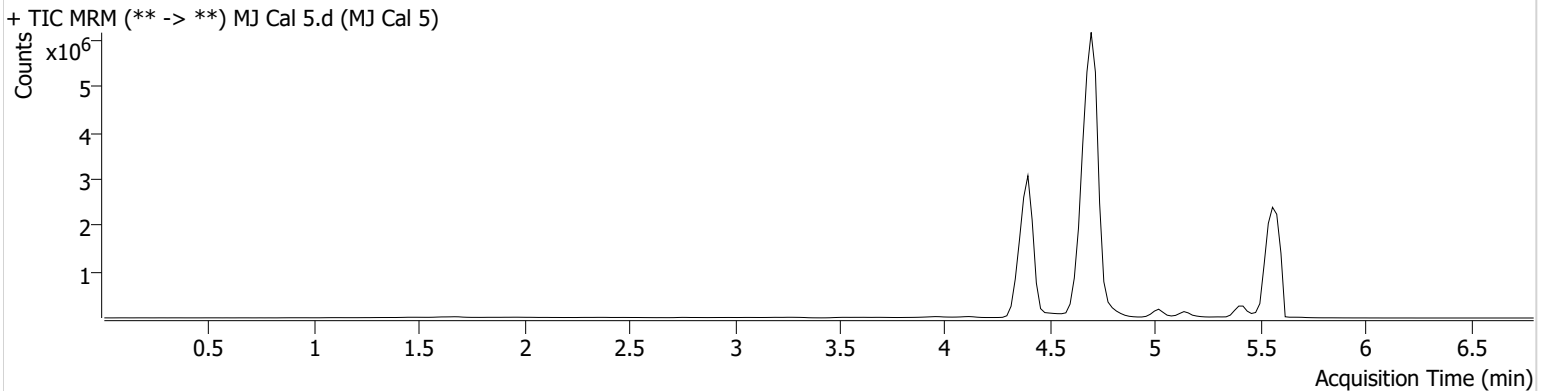


# AM #26 Cannabinoids Screen Results

**Batch results** D:\MassHunter\Data\2022\AM 25-26\102622 AM 25 26 AG\QuantResults\AM 26.batch.bin  
**Calibration Last Update** 11/1/2022 11:57:20 AM

**Instrument** Falco (069901) **Data File** MJ Cal 5.d  
**Type** Cal **Sample** MJ Cal 5  
**Acq. Method** AM 26 THC.m **Operator** Amber Gerheart  
**Sample Position** P1-E1 **Comment**  
**Injection Volume** 10  
**Acq. Date-Time** 10/26/2022 9:27:17 PM  
**Sample Info.**

### Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	5.610	75623	362218	25.3103 ng/ml
THC-COOH	4.696	8862338	8324620	74.0475 ng/ml
THC-OH	4.402	492343	9933593	24.4584 ng/ml

719

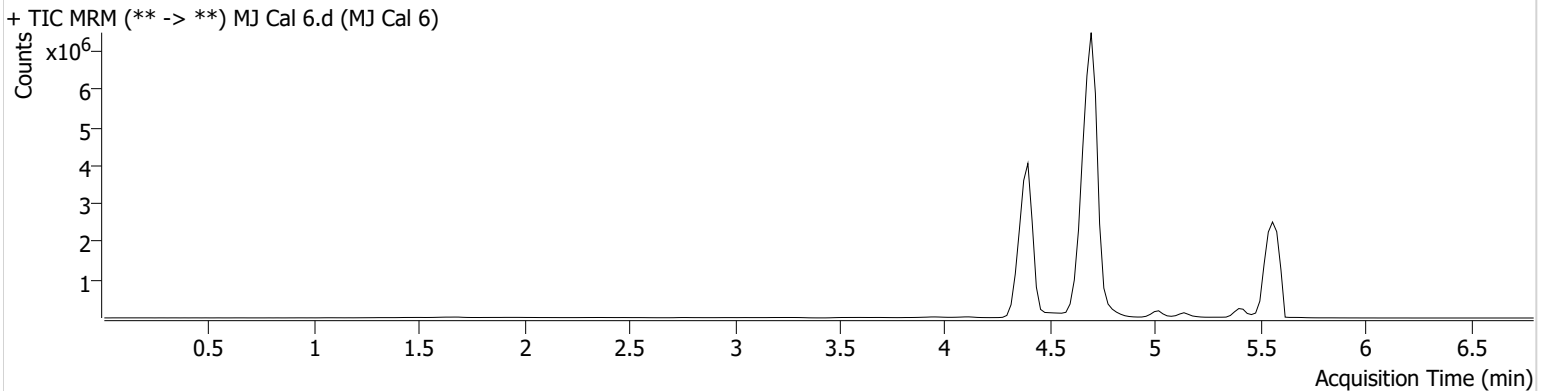


# AM #26 Cannabinoids Screen Results

**Batch results** D:\MassHunter\Data\2022\AM 25-26\102622 AM 25 26 AG\QuantResults\AM 26.batch.bin  
**Calibration Last Update** 11/1/2022 11:57:20 AM

**Instrument** Falco (069901) **Data File** MJ Cal 6.d  
**Type** Cal **Sample** MJ Cal 6  
**Acq. Method** AM 26 THC.m **Operator** Amber Gerheart  
**Sample Position** P1-F1 **Comment**  
**Injection Volume** 10  
**Acq. Date-Time** 10/26/2022 9:34:51 PM  
**Sample Info.**

### Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	5.610	120811	290130	50.6841 ng/ml
THC-COOH	4.696	10873395	7633977	98.8485 ng/ml
THC-OH	4.402	999794	9915299	49.5227 ng/ml

719

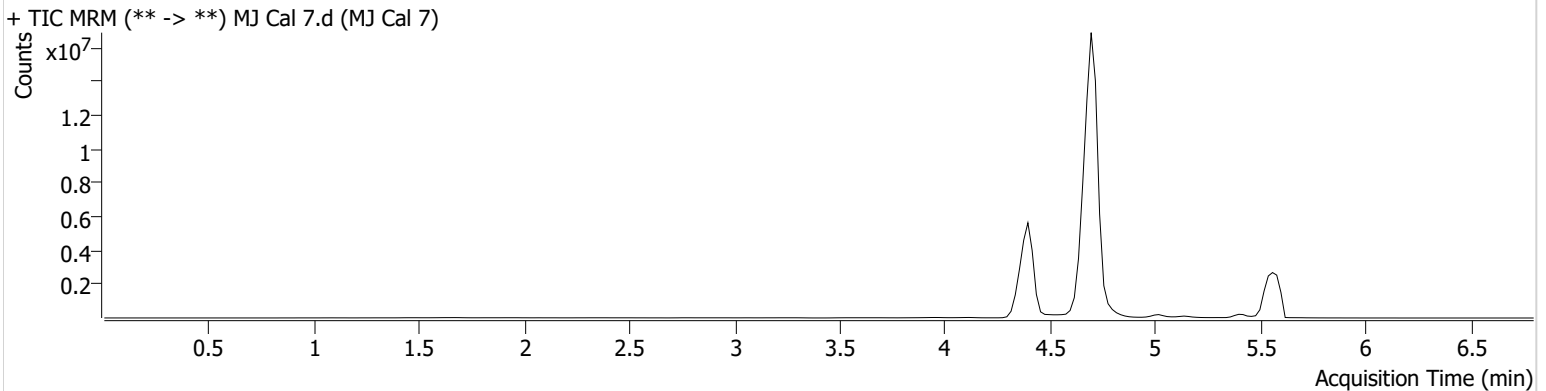


# AM #26 Cannabinoids Screen Results

**Batch results** D:\MassHunter\Data\2022\AM 25-26\102622 AM 25 26 AG\QuantResults\AM 26.batch.bin  
**Calibration Last Update** 11/1/2022 11:57:20 AM

**Instrument** Falco (069901) **Data File** MJ Cal 7.d  
**Type** Cal **Sample** MJ Cal 7  
**Acq. Method** AM 26 THC.m **Operator** Amber Gerheart  
**Sample Position** P1-G1 **Comment**  
**Injection Volume** 10  
**Acq. Date-Time** 10/26/2022 9:42:24 PM  
**Sample Info.**

### Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	5.610	198075	145917	165.6867 ng/ml
THC-COOH	4.696	25824215	7044563	253.3768 ng/ml
THC-OH	4.402	1874680	9040759	101.5996 ng/ml