









Worklist: 6481

<u>LAB CASE</u>	<u>ITEM</u>	<u>ITEM TYPE</u>	<u>DESCRIPTION</u>	
M2023-0917	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
M2023-3224	2	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
M2023-3260	3	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
M2023-3300	2	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
M2023-3361	3	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
M2023-3394	3	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2023-1946	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2023-1956	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2023-1958	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2023-1973	1	CBUK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2023-1992	2	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2023-2029	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2023-2048	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2023-2049	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2023-2123	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2023-2134	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2023-2320	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2023-2348	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2023-2349	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2023-2350	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2023-2352	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	

<u>LAB CASE</u>	<u>ITEM</u>	<u>ITEM TYPE</u>	<u>DESCRIPTION</u>	
P2023-2370	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2023-2373	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2023-2383	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2023-2396	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2023-2404	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2023-2406	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2023-2409	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2023-2431	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	

**Idaho State Police
Forensic Services**

Request for Departure from an Analytical Method or Quality Standard

Deviation Number (assigned by QM): ISP DEV TOX-23-01

Date of Request: **8/31/2023**

Requestor/Discipline: Celena Shrum and Sarah Collins/Toxicology

Analytical Method/Quality Standard, Revision #: AM #24, Revision 17

Temporary or Permanent Deviation: Permanent

Scope of Deviation (record specific information, e.g. affected programs, evidence types, expected end date; etc): Deviation is specific for this particular instance and as such does not have an end date.

Deviation Request (Describe detailed instructions of the changes being made; include reference to specific section number(s) in the method manual):

AM #24 states: 4.2.1.5.1 NOTE: A successful checktune must have been run within one week prior to running case samples for LC/MS/MS. A successful transmission tune must have been run within one week prior to running cases and a successful mass calibration must be run prior to the start of the run. A system tune should be performed when the transmission and/or calibration check dictates the need.

We are requesting to use the data for the AM #25 and #26 runs that were injected starting on 8/28/23 and ran through 8/29/23 even though a checktune was not run within the 7 days prior to the injection of the samples. Checktunes were run on 8/21/23 and 8/30/23 and both passed.

Technical Justification for Analytical Method Deviations:

An autotune optimizes the instrument and then the checktune is used to determine if anything has changed since the autotune that would indicate that it is running less than optimally. The calibrators, controls, and ISTD's demonstrated that the instrument was working properly at the time that the samples were run. The checktunes prior to and after the runs were passing, which would also indicate that the instrument was running optimally. Additionally, it has been determined that this requirement is going to be removed in the next method revision and replaced with a suggested guideline about when autotunes and checktunes should be performed.

Technical Review

Departure approved

Comments:

Departure Not Approved

Comments:



Approver: Rachel Cutler
Title: Pocatello Laboratory Manager

Date: 8/31/23

Quality Review



Quality Approver: Tina Mattox
Title: Lab Improvement Manager

Date: 9/1/2023

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

Extraction Date: 08/28/2023

Plate lot#: 230712

Mobile phase A: 10mM Amm Form

Instant Buffer I

Blank Blood Lot: Lampire 23A52594

LCMS-QQQ ID: 069901

Analyst: Celena Shrum

Plate Retest Date: 1/12/2024

Mobile phase B: 0.1% Formic Acid in MeOH

Ethyl Acetate LC Methanol

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. Using a calibrated pipette, pipette **250µL blood** into wells of analytical (standards) plate. **Pipette ID: 16**
- 3. Pipette **250µL 0.5 M ammonium hydroxide** in wells of analytical plate.
- 4. Place on shaking incubator at ambient temp., 900rpm for 15 minutes.
- 5. Transfer **200-450µL of blood+base and** mixture to corresponding wells of SLE+ plate.
Amount transferred: 250µl
- 6. 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
- 7. Wait 5 minutes.
- 8. Add **900uL ethyl acetate**.
- 9. Wait 5 minutes.
- 10. Apply positive pressure for approx. 15 seconds. *(10-15 PSI- Selector to the left).*
- 11. Add **900uL ethyl acetate**.
- 12. Wait 5 minutes.
- 13. Apply positive pressure for approx. 15 seconds. *(10-15 PSI- Selector to the left).*
- 14. Remove plate containing eluate.
- 15. Add 50µl of 1% HCl in MeOH to all wells in the run and place ACT cover on top of plate prior to drying.
- 16. Place on SPE Dry and evaporate to dryness at approx. 35°C.
- 17. 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: P2023-1718-1 and P2023-2004-1 were also included in the run. The samples ran after the AM 26 samples and did not inject until 8/29.23. The last checktune was run on 8/21/23 which is outside the 7-day window per AM #24 section 4.2.1.5.1. A successful checktune was run on 8/30/23. A deviation was issued to use the data.

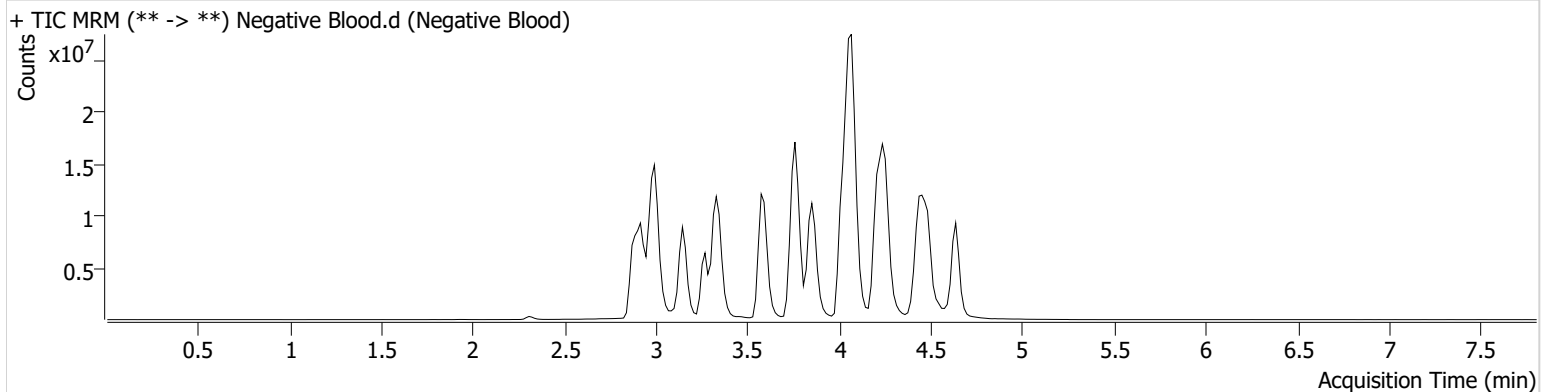
AM #25 Multi-Drug Screen. Results



Batch results D:\MassHunter\Data\2023\AM 25 26\082823 AM 25 26 CS\QuantResults\AM 25 review.batch.bin
Calibration Last Update 9/11/2023 7:33:26 AM

Instrument	Falco (069901)	Data File	Negative Blood.d
Type	Sample	Sample	Negative Blood
Acq. Method	AM 25 MDS_new compounds 081023.m	Operator	Celena Shrum
Sample Position	P2-C5	Comment	Only drugs and concentrations listed on the laboratory report itself are appropriate to be used for interpretation purposes. Any drugs or values included in the notes but not included on the report are used by laboratory personnel to make determinations/reach conclusions within the confines of the methods.
Injection Volume	5		
Acq. Date-Time	8/29/2023 10:48:02 AM		
Sample Info.			

Sample Chromatogram



AM #25 Multi-Drug Screen. Results

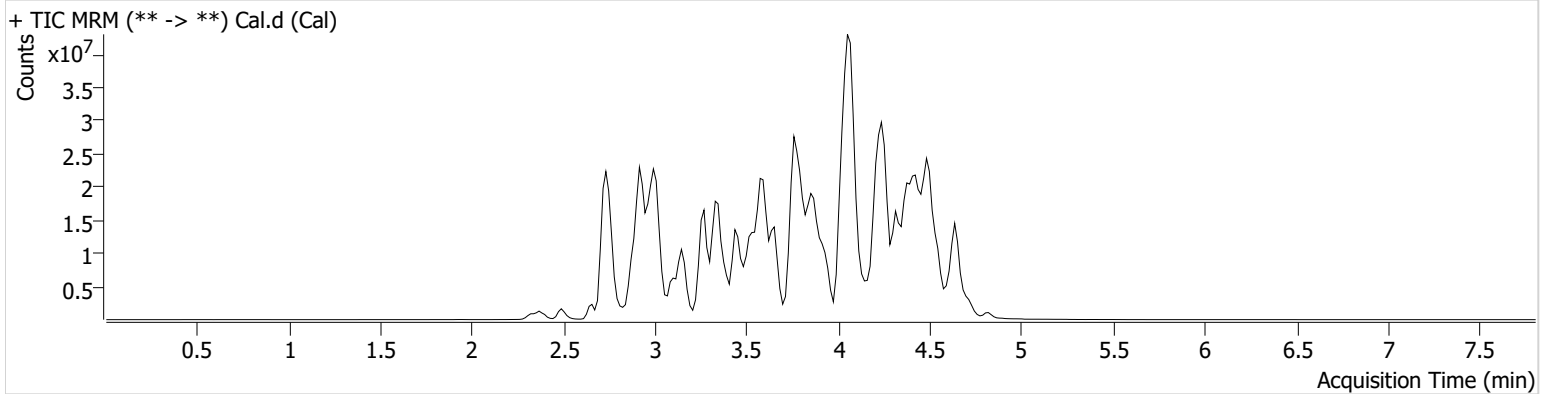


Batch results D:\MassHunter\Data\2023\AM 25 26\082823 AM 25 26 CS\QuantResults\AM 25 review.batch.bin
Calibration Last Update 9/11/2023 7:33:26 AM

Instrument Falco (069901) **Data File** Cal.d
Type Cal **Sample** Cal
Acq. Method AM 25 MDS_new compounds 081023.m **Operator** Celena Shrum
Sample Position P2-A1 **Comment**
Injection Volume 5
Acq. Date-Time 8/29/2023 10:39:28 AM
Sample Info.

Only drugs and concentrations listed on the laboratory report itself are appropriate to be used for interpretation purposes. Any drugs or values included in the notes but not included on the report are used by laboratory personnel to make determinations/reach conclusions within the confines of the methods.

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
10-OH-Carbamazepine	3.765	4864038	98.02	118.5	943.52	31563910	10.0000 ng/ml
6-MAM	2.912	82683	30586.37	81.1	30041.73	2425440	10.0000 ng/ml
7-aminoclonazepam	3.577	1358331	360.44	82.8	232.24	7249833	10.0000 ng/ml
7-aminoflunitrazepam	3.777	2760289	1227.56	20.5	234.96	7249833	10.0000 ng/ml
9-Hydroxyrisperidone	3.846	12625365	618.82	2.6	67437.80	39995624	10.0000 ng/ml
Acetyl Fentanyl	3.835	630739	374.81	77.5	192029.88	41273825	10.0000 ng/ml
Acetyl Norfentanyl	2.921	710975	974.94	48.9	450.06	41273825	10.0000 ng/ml
a-hydroxyalprazolam	4.498	463509	129.01	52.3	183.90	7249833	10.0000 ng/ml
alpha-hydroxymidazolam	4.558	2172406	333.17	55.3	229.49	7249833	10.0000 ng/ml
Alpha-PHP	3.827	7621701	52897.00	33.2	2681.61	41273825	10.0000 ng/ml
alpha-PVP	3.551	11179211	1915.67	46.9	1735.09	23817928	10.0000 ng/ml
Alprazolam	4.624	789055	60.38	79.8	18.28	22701622	10.0000 ng/ml
Amitriptyline	4.412	3807638	804.64	65.7	175.14	11416283	10.0000 ng/ml
Amphetamine	2.925	6398095	1067.80	241.5	442.43	23817928	10.0000 ng/ml
Benzoylcegonine	3.392	168162	31.28	20.1	335.02	679251	10.0000 ng/ml
Bromazolam	4.665	1183538	4786.47	129.4	4366.75	22701622	10.0000 ng/ml
Brompheniramine	4.036	141755	504.74	1034.5	237.47	52851569	10.0000 ng/ml
Buprenorphine	4.462	124758	60.06	12.6	15448.39	4514296	10.0000 ng/ml
Bupropion	3.766	9019320	1360.78	61.8	1017.99	31475915	10.0000 ng/ml
Carbamazepine	4.214	15729624	1859.83	90.6	1067.55	958887	10.0000 ng/ml
Carisoprodol	4.212	1798278	4468.61	61.5	155.64	11821536	10.0000 ng/ml
Chlordiazepoxide	4.702	2421474	486.41	72.3	1337.16	22701622	10.0000 ng/ml
Chlorpheniramine	3.948	13468456	1587.41	0.2	28.61	19874536	10.0000 ng/ml
Chlorpromazine	4.607	2123229	1244872.89	123.4	727.30	9318519	10.0000 ng/ml
Citalopram	4.066	4314144	973.76	34.7	12459.70	52851569	10.0000 ng/ml
Clomipramine	4.623	2631063	5099.68	82.2	5102.62	52851569	10.0000 ng/ml
Clonazepam	4.422	2135657	526.23	32.1	326631.77	958887	10.0000 ng/ml
Clonazolam	4.342	2015736	1540.83	29.4	187132.09	22701622	10.0000 ng/ml
Clonazepam	4.251	7975363	1827.81	72.3	2075.64	31033210	10.0000 ng/ml
Cocaethylene	3.790	9867198	3638565.93	41.1	2330.19	35552364	10.0000 ng/ml

Cal

Generated at 7:34 AM on 9/11/2023

AM #25 Multi-Drug Screen. Results



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
Cocaine	3.590	8213894	360390.81	19.2	1075.91	35552364	10.0000 ng/ml
Codeine	2.825	707376	2673.06	90.5	992.60	15359306	10.0000 ng/ml
Cyclobenzaprine	4.335	5774196	1682.96	8.0	283.21	11416283	10.0000 ng/ml
Desipramine	4.366	10820317	1841.35	39.3	3316.81	11416283	10.0000 ng/ml
Dextromethorphan	4.072	3550379	705.61	75.9	259541.50	19874536	10.0000 ng/ml
Dextrorphan	3.394	4659842	1164.68	48.5	1116345.47	19874536	10.0000 ng/ml
Diazepam	4.826	1441496	661.44	89.4	353.01	22701622	10.0000 ng/ml
Dihydrocodeine	2.763	2038792	4213.75	54.8	954.68	15359306	10.0000 ng/ml
Diphenhydramine	4.026	19703228	1959845.55	26.8	681.73	52851569	10.0000 ng/ml
DMT	2.983	353363	916.76	198.5	2465.75	19874536	10.0000 ng/ml
Doxepin	4.133	4367682	2265.11	40.9	186.16	38235183	10.0000 ng/ml
Doxylamine	3.654	18466176	10877.41	94.3	303.56	19874536	10.0000 ng/ml
Duloxetine	4.317	201655	9572.87	892.5	17292.18	2273992	10.0000 ng/ml
EDDP	4.071	1255287	385.42	52.4	802.90	7106868	10.0000 ng/ml
Etazolam	4.517	9364863	1316.07	49.0	268.28	22701622	10.0000 ng/ml
Etizolam	4.619	119441	33018.31	384.4	715.31	22701622	10.0000 ng/ml
Fentanyl	4.050	378781	78.77	73.8	13965.67	28039067	10.0000 ng/ml
Flualprazolam	4.467	1059506	426128.44	153.2	1206.56	22701622	10.0000 ng/ml
Flunitrazepam	4.531	3746542	1086.20	34.6	2865.57	22701622	10.0000 ng/ml
Fluorofentanyl	4.095	880468	∞	92.6	722.06	28039067	10.0000 ng/ml
Fluoxetine	4.316	5458809	4574.68	6.8	165.43	10459728	10.0000 ng/ml
Flurazepam	4.155	5240087	795.30	24.2	133650.10	22701622	10.0000 ng/ml
Hydrocodone	3.023	2580241	2116.95	37.0	513.07	15359306	10.0000 ng/ml
Hydromorphone	2.491	2589799	2574.31	74.1	3644.49	926336	10.0000 ng/ml
Hydroxyzine	4.464	4044121	824.68	80.1	926.43	31033210	10.0000 ng/ml
Imipramine	4.380	10718066	1558.73	60.0	1360.73	11416283	10.0000 ng/ml
Ketamine	3.504	6624967	1114.50	37.2	193.57	22239700	10.0000 ng/ml
Lamotrigine	3.594	437828	225.30	84.2	91.63	52851569	10.0000 ng/ml
Levamisole	2.982	6046331	1265.55	83.0	1306.40	35552364	10.0000 ng/ml
Levetiracetam	2.664	2235817	723.20	193.4	616.45	52851569	10.0000 ng/ml
Lorazepam	4.422	624536	205.14	264.6	195.87	22701622	10.0000 ng/ml
Maprotiline	4.412	2823330	401.71	67.8	763057.01	11416283	10.0000 ng/ml
MDA	3.030	4140602	2824.89	39.2	470.75	40884659	10.0000 ng/ml
MDEA	3.244	7774881	568.18	51.4	2223.71	40884659	10.0000 ng/ml
MDMA	3.106	9817798	1083.31	47.9	427.56	40884659	10.0000 ng/ml
Meperidine	3.610	4593898	3194.79	52.2	482.59	19874536	10.0000 ng/ml
Meprobamate	3.675	1528658	1097.69	22.4	203.48	11821536	10.0000 ng/ml
Methadone	4.377	12686118	1613.42	40.0	682.30	7106868	10.0000 ng/ml
Methamphetamine	3.016	9765176	1212.87	39.9	1196.54	40884659	10.0000 ng/ml
Methocarbamol	3.580	672067	43329.27	82.8	370.62	7106868	10.0000 ng/ml
Methylphenidate	3.519	20960496	1269.94	22.3	440.99	27977732	10.0000 ng/ml
Metoprolol	3.455	1149568	438.18	103.7	1978040.66	19874536	10.0000 ng/ml
Midazolam	4.729	1170189	462.74	89.7	30877.94	22701622	10.0000 ng/ml
Mirtazapine	3.886	6022320	30841.52	228.7	2649.20	19874536	10.0000 ng/ml
Mitragynine	4.170	880443	298077.01	203.4	571.80	19874536	10.0000 ng/ml
Morphine	2.324	585804	∞	79.9	500.60	926336	10.0000 ng/ml
Norbuprenorphine	3.831	93201	7538.63	119.2	282.70	4514296	10.0000 ng/ml
Nordiazepam	4.674	2185732	2585.36	66.7	614.20	22701622	10.0000 ng/ml
Norfentanyl	3.350	13508120	15534.29	35.4	1966.87	41273825	10.0000 ng/ml
Norhydrocodone	2.948	302909	140.83	43.8	45020.79	926336	10.0000 ng/ml
Norketamine	3.582	836338	619.42	492.1	3710.56	22239700	10.0000 ng/ml
Normeperidine	3.612	5155030	259324.54	60.8	287.17	52851569	10.0000 ng/ml
Noroxycodone	2.900	2120635	∞	29.1	653.59	22239700	10.0000 ng/ml
Nortriptyline	4.398	2914633	965659.06	65.1	446.59	11416283	10.0000 ng/ml
O-desmethyl-tramadol	2.934	14304142	32498.39	5.1	515.17	52851569	10.0000 ng/ml
O-desmethylvenlafaxine	3.270	3056241	848.16	637.7	31585.98	19481466	10.0000 ng/ml
Olanzapine	3.790	2166380	984040.74	56.2	4827.55	958887	10.0000 ng/ml
Oxazepam	4.502	3424378	3537.29	78.7	329.18	24187474	10.0000 ng/ml
Oxycodone	2.929	5595325	399.55	26.4	2128.95	22239700	10.0000 ng/ml



AM #25 Multi-Drug Screen. Results

Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
Oxymorphone	2.366	2690130	∞	35.1	60948.08	926336	10.0000 ng/ml
Paroxetine	4.328	838401	204.20	50.3	251067.08	10459728	10.0000 ng/ml
Phenazepam	4.634	1352541	336440.42	68.6	∞	22701622	10.0000 ng/ml
Phencyclidine	3.919	10764042	1086101.96	56.1	396.18	19874536	10.0000 ng/ml
Phentermine	3.170	2063250	154.03	8.2	61.97	27977732	10.0000 ng/ml
Phenytoin	4.120	2209613	4257.21	77.7	520.94	958887	10.0000 ng/ml
Primidone	3.490	2342734	1023922.55	90.2	208.36	958887	10.0000 ng/ml
Promethazine	4.318	15025032	791.27	29.6	391.22	52851569	10.0000 ng/ml
Pseudoephedrine	2.740	61379262	79200.30	45.3	45819.56	40884659	10.0000 ng/ml
Quetiapine	4.402	6865737	54455.12	54.3	482026.41	47938818	10.0000 ng/ml
Risperidone	4.047	11343500	3098138.78	10.8	910.60	39995624	10.0000 ng/ml
Sertraline	4.547	1814138	1718.23	106.4	1487.28	10459728	10.0000 ng/ml
Sufentanil	4.371	417688	102475.25	83.1	1216.62	41273825	10.0000 ng/ml
Tapentadol	3.459	7514804	1942.44	35.2	1584.64	22239700	10.0000 ng/ml
Temazepam	4.640	5475189	4150.63	29.4	150.30	22701622	10.0000 ng/ml
Topiramate	3.849	81631	94.49	38.4	91.49	321710	10.0000 ng/ml
Tramadol	3.440	26274270	1429.62	1.6	133.20	52851569	10.0000 ng/ml
Trazodone	4.495	13065854	3065.86	60.7	2216.49	38235183	10.0000 ng/ml
Venlafaxine	3.808	10805045	2806.56	27.5	428.70	19481466	10.0000 ng/ml
Xylazine	3.397	5131821	3582.94	44.3	292.13	22239700	10.0000 ng/ml
Zaleplon	4.332	4465565	3748.89	73.5	9490.69	47938818	10.0000 ng/ml
Zolpidem	4.239	16285412	6336.63	28.5	2801.20	47938818	10.0000 ng/ml
Zopiclone	4.093	1245503	144038.77	60.7	342523.90	5857167	10.0000 ng/ml

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

Extraction Date: 08/28/2023

Plate lot#: 220802

Mobile phase A: 10mM Amm Form

Blank Blood Lot: Lampire 23A52594

LCMS-QQQ ID: 069901

Analyst: Celena Shrum

Plate Retest Date: 07/23/2023- external control used

Mobile phase B: 0.1% Formic Acid in MeOH

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 (if applicable): 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 or 1000µl hydrolyzed urine** into the appropriate wells of analytical (standards) plate. **Pipette ID: #42**
- 4. Place on shaking incubator at ambient temp., 900rpm for 15 minutes.
- 5. Pipette **500µL 0.1% formic acid in water to blood samples and 500µl of saturated phosphate buffer to urine samples** to the appropriate wells of the analytical plate.
- 6. Place on shaking incubator at ambient temp., 900rpm for 15 minutes.
- 7. Transfer **800µL of blood+acid mixture or urine+acid** to corresponding wells of SLE+ plate.
- 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)** Manifold ID: 067104
- 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. **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, R² 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: Some of the samples did not inject until 8/29.23. The last checktune was run on 8/21/23 which is outside the 7-day window per AM #24 section 4.2.1.5.1. A successful checktune was run on 8/30/23. A deviation was issued to use the data.

	1	2	3	4	5	6
a	cal 1ng	QC 2	M2023-3394-3	P2023-2049-1	P2023-2373-1	
b	cal 3 ng	Blood NC	P2023-1946-1	P2023-2123-1	P2023-2383-1	
c	cal 5 ng	External Control	P2023-1956-1	P2023-2320-1	P2023-2396-1	
d	cal 10ng	M2023-0917-1	P2023-1958-1	P2023-2348-1	P2023-2404-1	
e	cal 25 ng	M2023-3224-2	P2023-1973-1	P2023-2349-1	P2023-2406-1	
f	cal 50 ng	M2023-3260-3	P2023-1992-2	P2023-2350-1	P2023-2409-1	
g	cal 100 ng	M2023-3300-2	P2023-2029-1	P2023-2352-1	P2023-2431-1	
h	QC 1	M2023-3361-3	P2023-2048-1	P2023-2370-1		



**Idaho State Police
Forensic Services**

**AM #26 Screening of THC and Metabolites and AM #27
Confirmation of THC and Metabolites Blood External
Control Prep Sheet**

Methanol External Control Solution (Lot: WS101322)

100 µL of 100 µg/mL C-THC in 9900 µL MeOH

Approximate concentration 1ug/mL.

<i>Component</i>	<i>Source</i>	<i>Source Lot Number</i>	<i>Expiration Date</i>
Methanol (LCMS)	Fisher	215245	-
C-THC	Cerilliant	FE08011801	08/31/2023
Prepared:	10/13/2022		
Expires:	08/31/2023		
Prepared By:	Celena Shrum		

Blood External Control Solution (Lot: 071423)

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

Approximately 20ng/mL

<i>Component</i>	<i>Source</i>	<i>Source Lot Number</i>
Negative Blood	Lampire	23A52594
Methanol External Control Solution	-	WS101322
Prepared:	07/14/2023	
Expires:	08/31/2023	
Prepared by:	Celena Shrum	

AM #26 Cannabinoids Screen Results



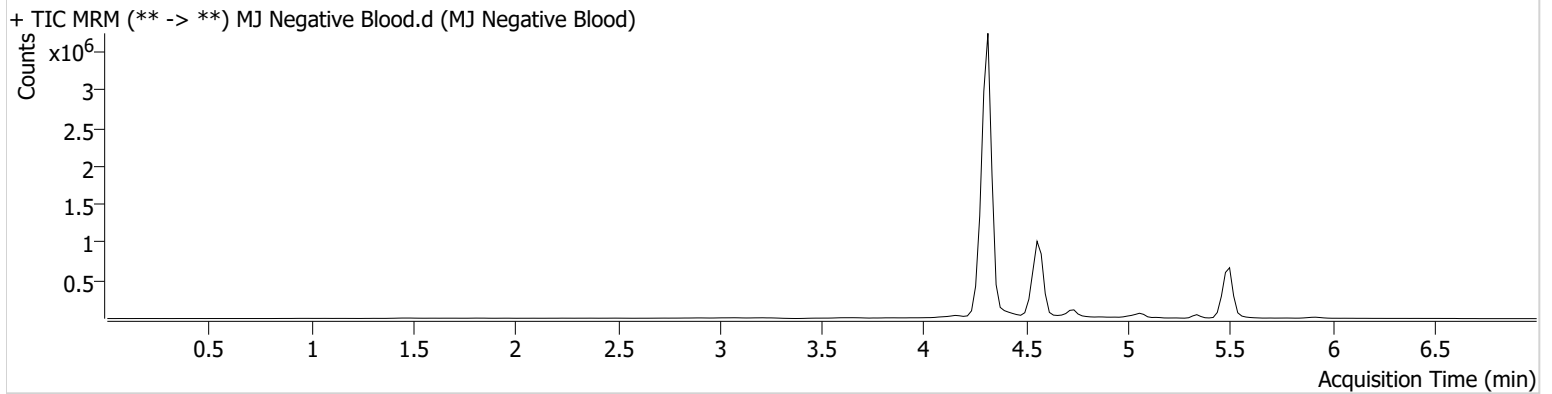
Batch results D:\MassHunter\Data\2023\AM 25 26\082823 AM 25 26 CS\QuantResults\AM 26.batch.bin
Calibration Last Update 8/29/2023 10:56:13 AM

Instrument Falco (069901)
Type Sample
Acq. Method AM 26 THC.m
Sample Position P1-B2
Injection Volume 10
Acq. Date-Time 8/28/2023 3:17:40 PM
Sample Info.

Data File MJ Negative Blood.d
Sample MJ Negative Blood
Operator Celena Shrum
Comment

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Sample Chromatogram





AM #26 Cannabinoids Screen Results

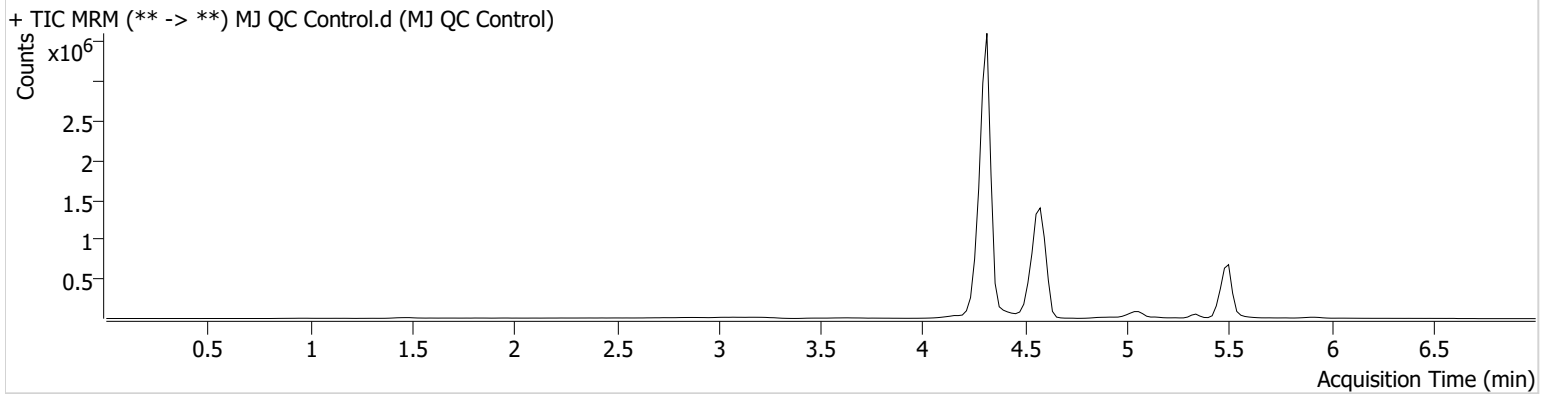
Batch results D:\MassHunter\Data\2023\AM 25 26\082823 AM 25 26 CS\QuantResults\AM 26.batch.bin
Calibration Last Update 8/29/2023 10:56:13 AM

Instrument Falco (069901)
Type QC
Acq. Method AM 26 THC.m
Sample Position P1-H1
Injection Volume 10
Acq. Date-Time 8/28/2023 3:02:30 PM
Sample Info.

Data File MJ QC Control.d
Sample MJ QC Control
Operator Celena Shrum
Comment

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Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.489	8310	∞	113.8	∞	255663	4.4471 ng/ml
THC-COOH	4.596	892610	∞	155.2	∞	4598268	12.1180 ng/ml
THC-OH	4.322	108184	1045.61	780.2	∞	13132087	4.5488 ng/ml



AM #26 Cannabinoids Screen Results

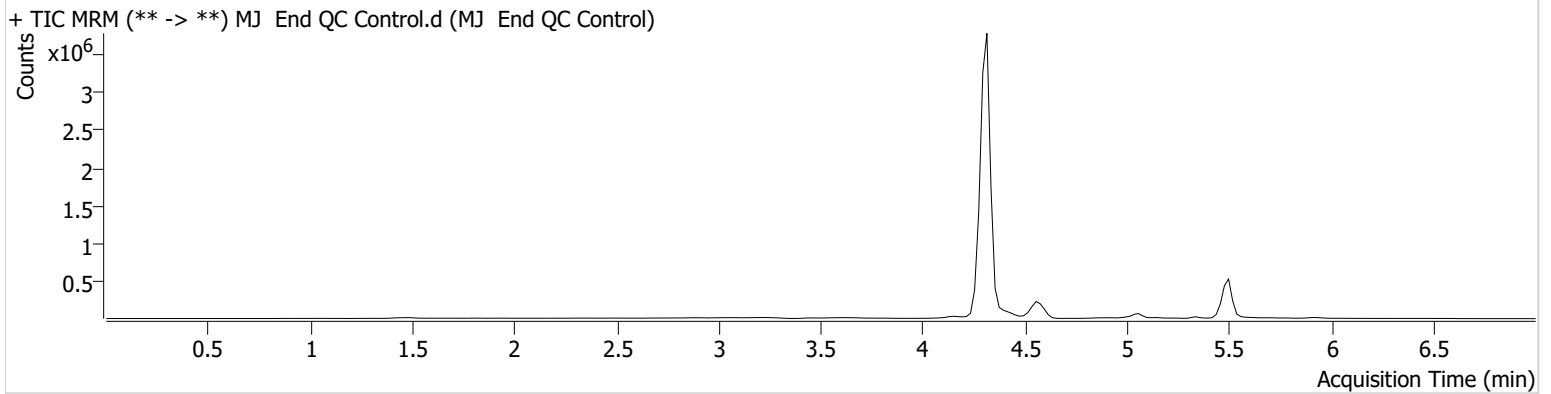
Batch results D:\MassHunter\Data\2023\AM 25 26\082823 AM 25 26 CS\QuantResults\AM 26.batch.bin
Calibration Last Update 8/29/2023 10:56:13 AM

Instrument Falco (069901)
Type QC
Acq. Method AM 26 THC.m
Sample Position P1-A2
Injection Volume 10
Acq. Date-Time 8/29/2023 10:05:03 AM
Sample Info.

Data File MJ End QC Control.d
Sample MJ End QC Control
Operator Celena Shrum
Comment

Only drugs and concentrations listed on the laboratory report itself are appropriate to be used for interpretation purposes. Any drugs or values included in the notes but not included on the report are used by laboratory personnel to make determinations/reach conclusions within the confines of the methods.

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.469	6674	∞	103.7	∞	226943	4.0022 ng/ml
THC-COOH	4.596	115432	45.99	159.8	740.69	689707	10.3333 ng/ml
THC-OH	4.322	103403	∞	771.5	∞	12680490	4.5039 ng/ml

AM #26 Cannabinoids Screen Results



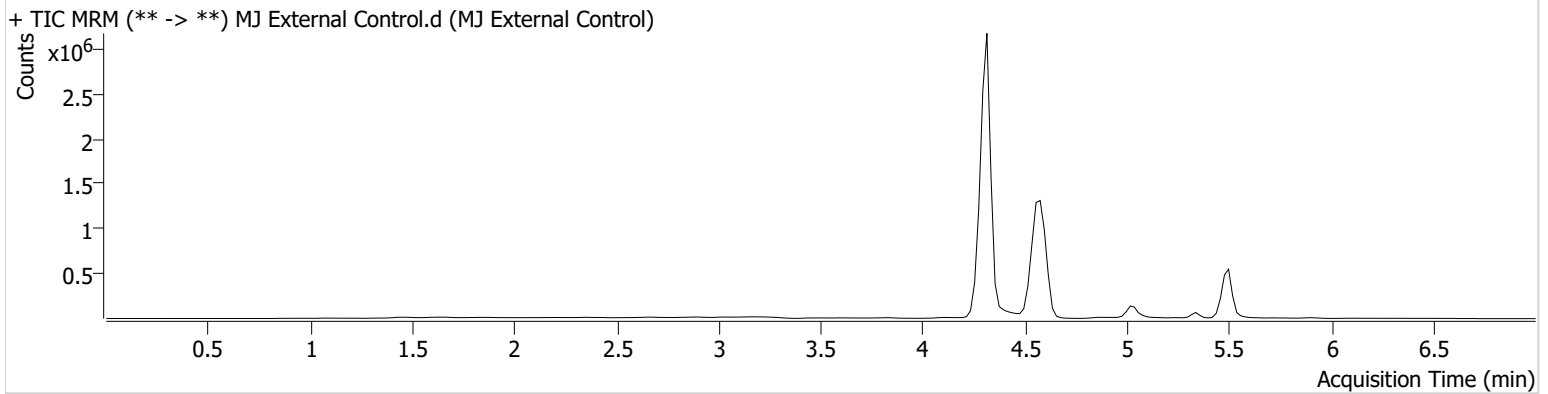
Batch results D:\MassHunter\Data\2023\AM 25 26\082823 AM 25 26 CS\QuantResults\AM 26.batch.bin
Calibration Last Update 8/29/2023 10:56:13 AM

Instrument Falco (069901)
Type Sample
Acq. Method AM 26 THC.m
Sample Position P1-C2
Injection Volume 10
Acq. Date-Time 8/28/2023 3:25:14 PM
Sample Info.

Data File MJ External Control.d
Sample MJ External Control
Operator Celena Shrum
Comment

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Sample Chromatogram

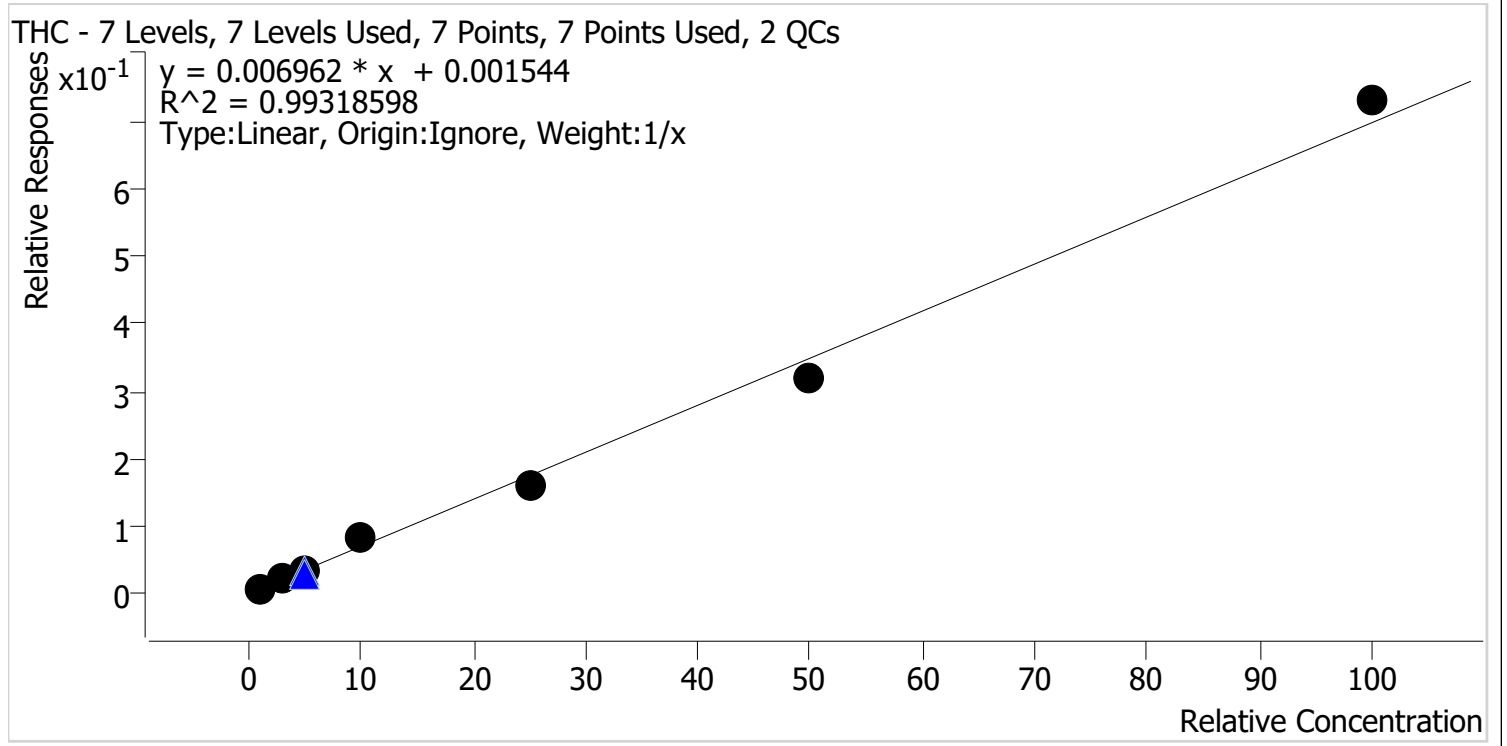


Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC-COOH	4.596	803314	∞	155.0	∞	4420254	11.2919 ng/ml



AM #26 Cannabinoids Screen Calibration Curve Report

Batch results D:\MassHunter\Data\2023\AM 25 26\082823 AM 25 26 CS\QuantResults\AM 26.batch.bin
Last Cal. Update 8/29/2023 10:56 AM
Analyst Name ISP\Datastor
Analyte THC **Internal Standard** THC-D3

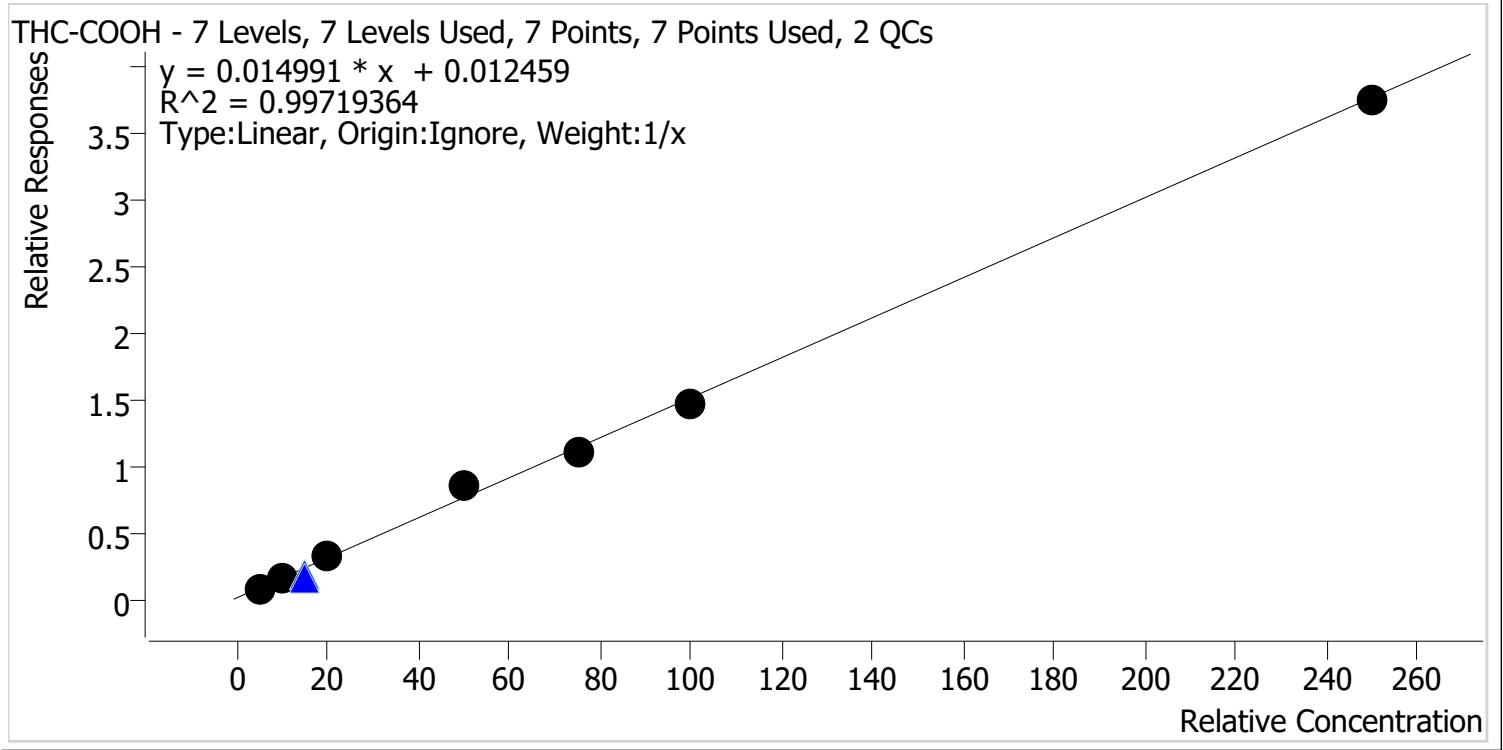


Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
MJ Cal 1	1	✓	1.0	1.0	100.3
MJ Cal 2	2	✓	3.0	2.9	97.5
MJ Cal 3	3	✓	5.0	4.8	95.0
MJ Cal 4	4	✓	10.0	11.9	119.4
MJ Cal 5	5	✓	25.0	22.9	91.4
MJ Cal 6	6	✓	50.0	45.9	91.7
MJ Cal 7	7	✓	100.0	104.7	104.7



AM #26 Cannabinoids Screen Calibration Curve Report

Batch results D:\MassHunter\Data\2023\AM 25 26\082823 AM 25 26 CS\QuantResults\AM 26.batch.bin
Last Cal. Update 8/29/2023 10:56 AM
Analyst Name ISP\Datastor
Analyte THC-COOH **Internal Standard** THC-COOH-D9



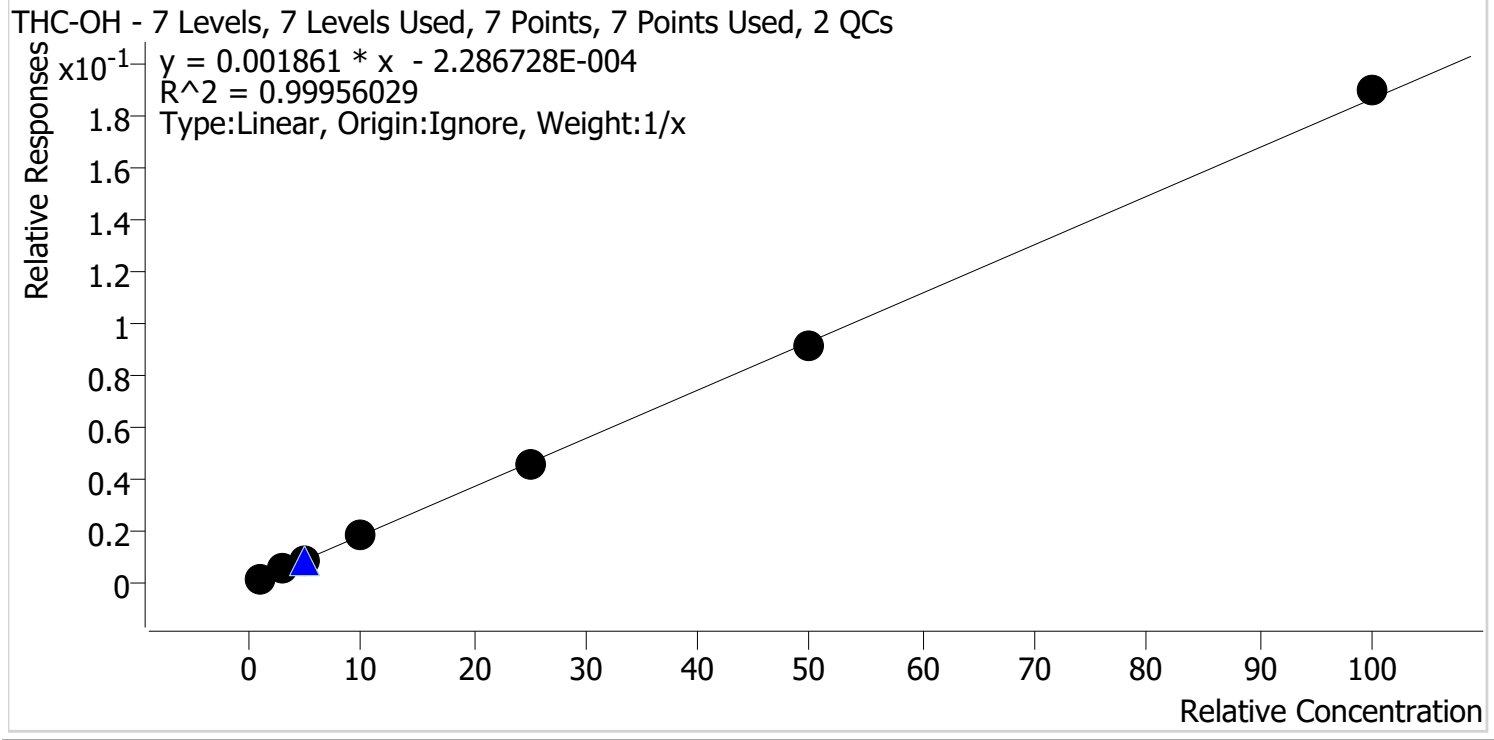
Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
MJ Cal 1	1	✓	5.0	4.4	88.8
MJ Cal 2	2	✓	10.0	10.0	99.9
MJ Cal 3	3	✓	20.0	21.1	105.6
MJ Cal 4	4	✓	50.0	56.3	112.5
MJ Cal 5	5	✓	75.0	72.1	96.2
MJ Cal 6	6	✓	100.0	97.6	97.6
MJ Cal 7	7	✓	250.0	248.5	99.4

CS



AM #26 Cannabinoids Screen Calibration Curve Report

Batch results D:\MassHunter\Data\2023\AM 25 26\082823 AM 25 26 CS\QuantResults\AM 26.batch.bin
Last Cal. Update 8/29/2023 10:56 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	108.0
MJ Cal 2	2	✓	3.0	3.0	99.1
MJ Cal 3	3	✓	5.0	4.9	97.2
MJ Cal 4	4	✓	10.0	9.8	98.0
MJ Cal 5	5	✓	25.0	24.4	97.6
MJ Cal 6	6	✓	50.0	49.2	98.3
MJ Cal 7	7	✓	100.0	101.7	101.7



AM #26 Cannabinoids Screen Results

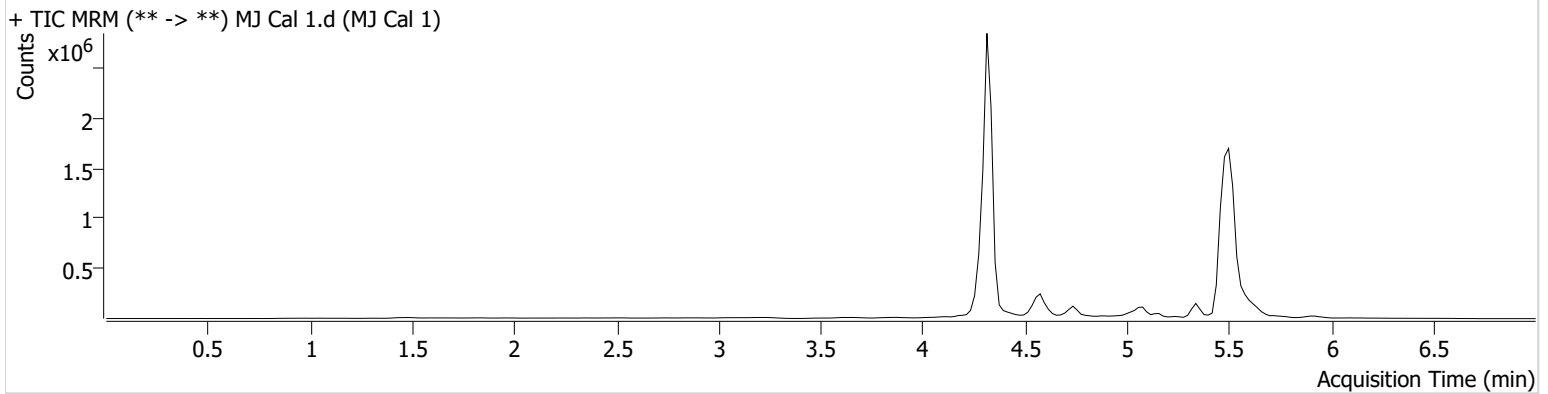
Batch results D:\MassHunter\Data\2023\AM 25 26\082823 AM 25 26 CS\QuantResults\AM 26.batch.bin
Calibration Last Update 8/29/2023 10:56:13 AM

Instrument Falco (069901)
Type Cal
Acq. Method AM 26 THC.m
Sample Position P1-A1
Injection Volume 10
Acq. Date-Time 8/28/2023 2:09:17 PM
Sample Info.

Data File MJ Cal 1.d
Sample MJ Cal 1
Operator Celena Shrum
Comment

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Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.530	6185	∞	396.9 High	∞	725214	1.0032 ng/ml
THC-COOH	4.616	68673	∞	159.9	∞	868675	4.4424 ng/ml
THC-OH	4.342	16936	∞	940.4	∞	9506121	1.0800 ng/ml

AM #26 Cannabinoids Screen Results



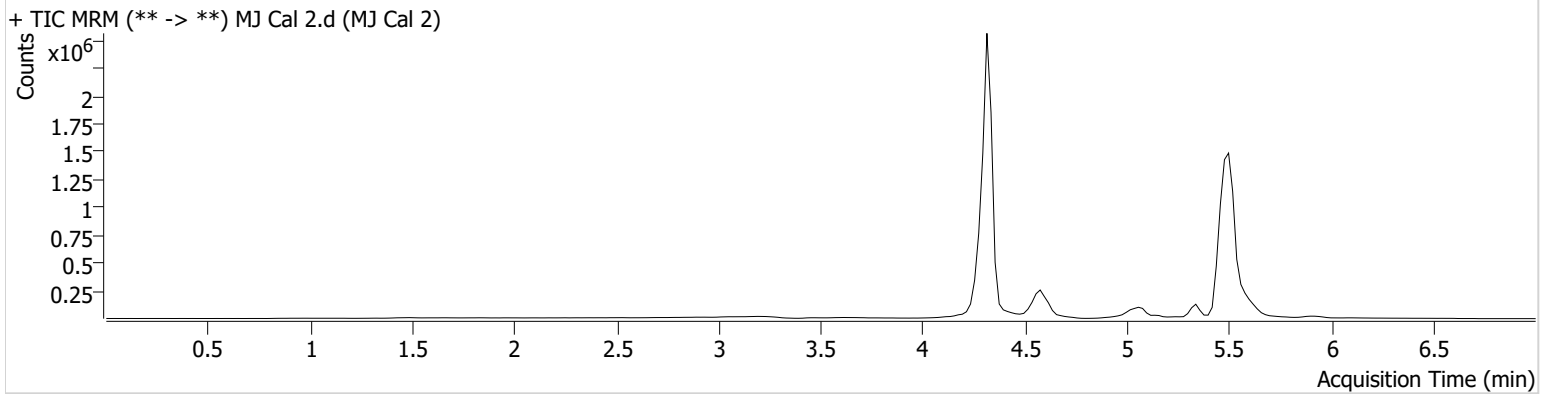
Batch results D:\MassHunter\Data\2023\AM 25 26\082823 AM 25 26 CS\QuantResults\AM 26.batch.bin
Calibration Last Update 8/29/2023 10:56:13 AM

Instrument Falco (069901)
Type Cal
Acq. Method AM 26 THC.m
Sample Position P1-B1
Injection Volume 10
Acq. Date-Time 8/28/2023 2:17:01 PM
Sample Info.

Data File MJ Cal 2.d
Sample MJ Cal 2
Operator Celena Shrum
Comment

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Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.530	16508	∞	168.0 High	∞	753545	2.9249 ng/ml
THC-COOH	4.616	146730	∞	165.9	∞	904633	9.9887 ng/ml
THC-OH	4.322	47075	115.01	826.6	∞	8870267	2.9741 ng/ml

AM #26 Cannabinoids Screen Results



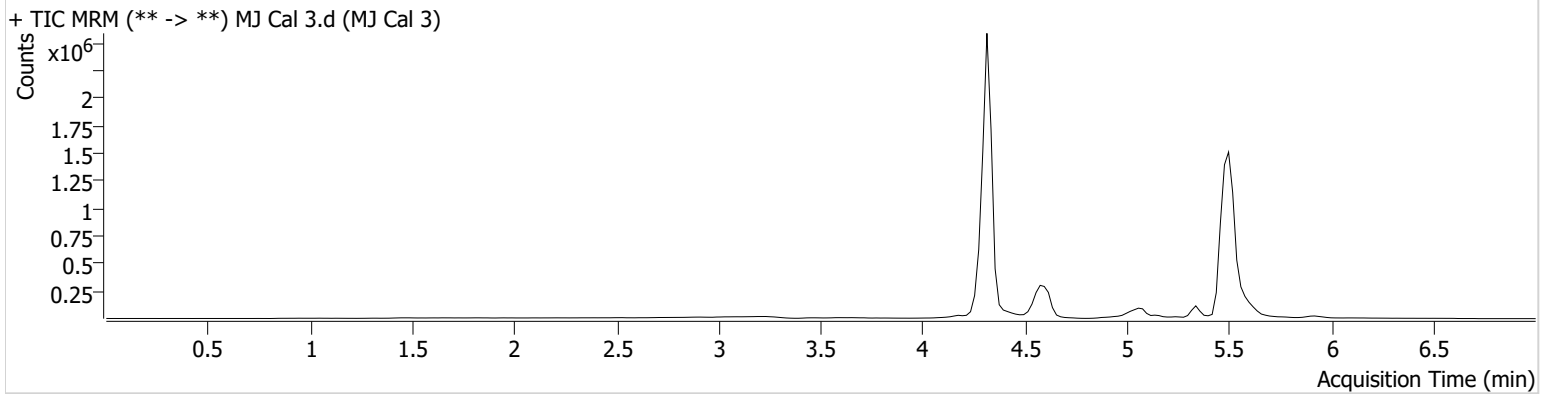
Batch results D:\MassHunter\Data\2023\AM 25 26\082823 AM 25 26 CS\QuantResults\AM 26.batch.bin
Calibration Last Update 8/29/2023 10:56:13 AM

Instrument Falco (069901)
Type Cal
Acq. Method AM 26 THC.m
Sample Position P1-C1
Injection Volume 10
Acq. Date-Time 8/28/2023 2:24:35 PM
Sample Info.

Data File MJ Cal 3.d
Sample MJ Cal 3
Operator Celena Shrum
Comment

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Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.469	25363	∞	102.0	∞	732725	4.7502 ng/ml
THC-COOH	4.616	282108	671.74	159.3	∞	857530	21.1140 ng/ml
THC-OH	4.322	71583	∞	800.6	∞	8121768	4.8581 ng/ml



AM #26 Cannabinoids Screen Results

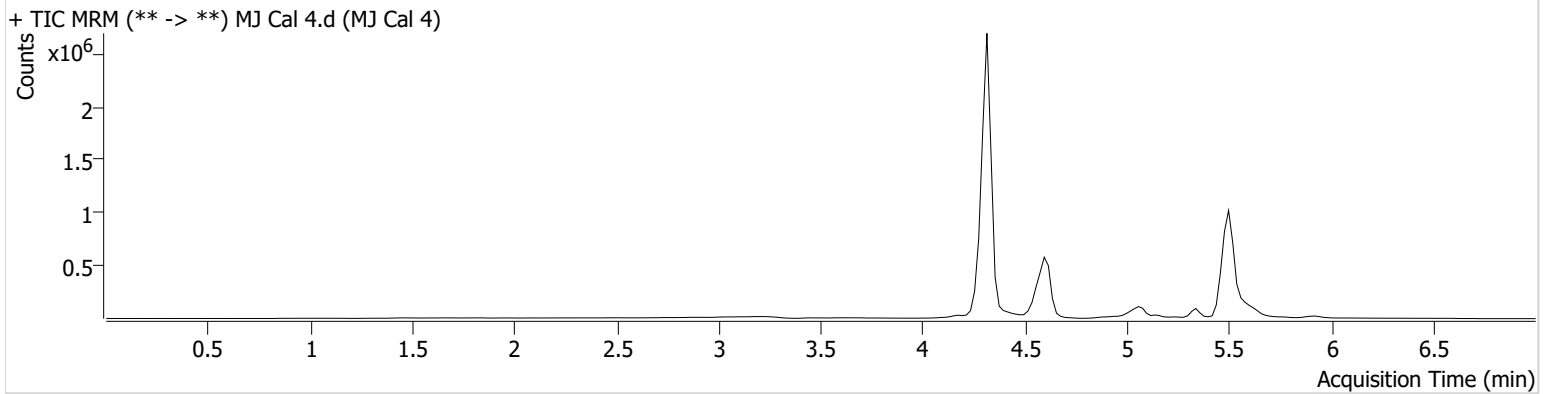
Batch results D:\MassHunter\Data\2023\AM 25 26\082823 AM 25 26 CS\QuantResults\AM 26.batch.bin
Calibration Last Update 8/29/2023 10:56:13 AM

Instrument Falco (069901)
Type Cal
Acq. Method AM 26 THC.m
Sample Position P1-D1
Injection Volume 10
Acq. Date-Time 8/28/2023 2:32:10 PM
Sample Info.

Data File MJ Cal 4.d
Sample MJ Cal 4
Operator Celena Shrum
Comment

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Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.469	31013	∞	68.5 Low	∞	366394	11.9367 ng/ml
THC-COOH	4.596	711777	287.34	154.6	∞	831488	56.2719 ng/ml
THC-OH	4.322	142831	184.45	777.7	∞	7925837	9.8047 ng/ml



AM #26 Cannabinoids Screen Results

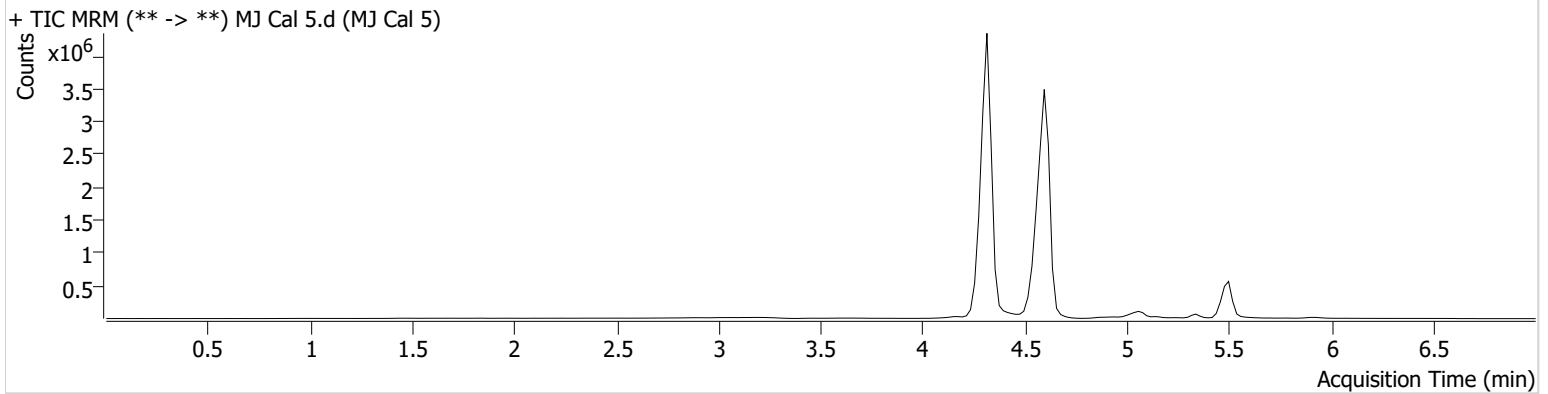
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Calibration Last Update 8/29/2023 10:56:13 AM

Instrument Falco (069901)
Type Cal
Acq. Method AM 26 THC.m
Sample Position P1-E1
Injection Volume 10
Acq. Date-Time 8/28/2023 2:39:43 PM
Sample Info.

Data File MJ Cal 5.d
Sample MJ Cal 5
Operator Celena Shrum
Comment

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Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.489	33824	195.34	40.9 Low	∞	210552	22.8532 ng/ml
THC-COOH	4.596	4326970	∞	154.3	∞	3956289	72.1259 ng/ml
THC-OH	4.322	525318	∞	755.4	∞	11622807	24.4052 ng/ml



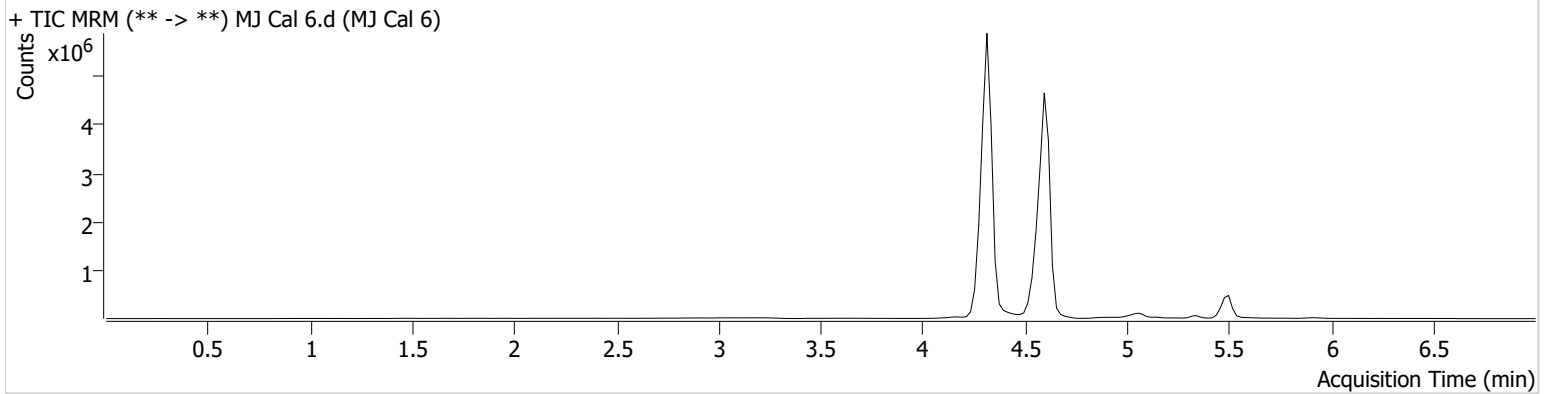
AM #26 Cannabinoids Screen Results

Batch results D:\MassHunter\Data\2023\AM 25 26\082823 AM 25 26 CS\QuantResults\AM 26.batch.bin
Calibration Last Update 8/29/2023 10:56:13 AM

Instrument Falco (069901) **Data File** MJ Cal 6.d
Type Cal **Sample** MJ Cal 6
Acq. Method AM 26 THC.m **Operator** Celena Shrum
Sample Position P1-F1 **Comment**
Injection Volume 10
Acq. Date-Time 8/28/2023 2:47:17 PM
Sample Info.

Only drugs and concentrations listed on the laboratory report itself are appropriate to be used for interpretation purposes. Any drugs or values included in the notes but not included on the report are used by laboratory personnel to make determinations/reach conclusions within the confines of the methods.

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.489	60686	∞	31.2 Low	∞	189145	45.8647 ng/ml
THC-COOH	4.596	5930372	2465.64	152.6	1351.18	4018982	97.6011 ng/ml
THC-OH	4.322	1128624	∞	750.0	∞	12366854	49.1536 ng/ml



AM #26 Cannabinoids Screen Results

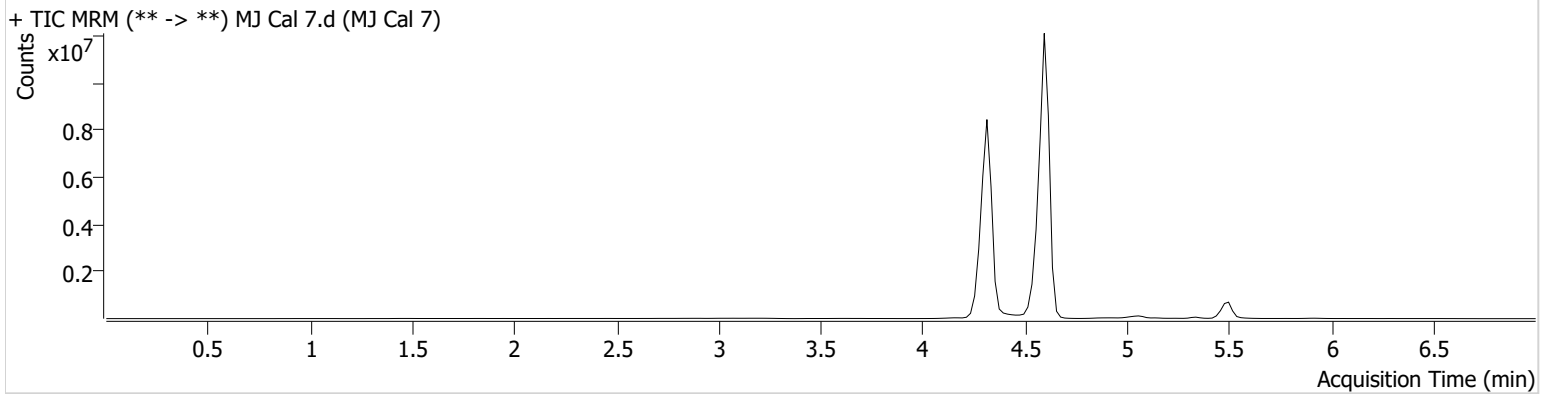
Batch results D:\MassHunter\Data\2023\AM 25 26\082823 AM 25 26 CS\QuantResults\AM 26.batch.bin
Calibration Last Update 8/29/2023 10:56:13 AM

Instrument Falco (069901)
Type Cal
Acq. Method AM 26 THC.m
Sample Position P1-G1
Injection Volume 10
Acq. Date-Time 8/28/2023 2:54:52 PM
Sample Info.

Data File MJ Cal 7.d
Sample MJ Cal 7
Operator Celena Shrum
Comment

Only drugs and concentrations listed on the laboratory report itself are appropriate to be used for interpretation purposes. Any drugs or values included in the notes but not included on the report are used by laboratory personnel to make determinations/reach conclusions within the confines of the methods.

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.469	177947	∞	28.9 Low	∞	243692	104.6670 ng/ml
THC-COOH	4.596	15368155	∞	159.1	∞	4112379	248.4560 ng/ml
THC-OH	4.322	2268332	∞	772.1	∞	11994599	101.7243 ng/ml