REVIEWED
By Anne Nord at 11:26 am, Jan 29, 2024

TS 1/19/2024

Worklist: 6654

LAB_CASE	ITEM	ITEM_TYPE	DESCRIPTION
M2023-4964	2	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ
M2023-5459	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ
M2023-5482	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ
M2024-0083	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ
M2024-0106	3	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ
M2024-0107	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ
M2024-0108	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ
M2024-0131	3	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ
P2023-3826	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ
P2023-3833	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ
P2023-3833	2	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ
P2023-3834	1	BLOOD	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ
P2023-3837	1	BLOOD	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ
P2023-3838	1	BLOOD	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ
P2023-3838	2	BLOOD	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ
P2023-3839	1	BLOOD	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ
P2023-3861	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ
P2023-3880	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ
P2023-3958	2	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ
P2024-0026	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ
P2024-0039	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ

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Worklist: 6654

LAB_CASE	ITEM	ITEM_TYPE	DESCRIPTION
P2024-0040	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ
P2024-0041	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ
P2024-0042	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ
P2024-0048	4	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ
P2024-0050	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ
P2024-0051	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ
P2024-0052	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ
P2024-0053	1	COBCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ

TS

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

Extraction Date: 01/22/2024
Analyst: Tamara Salazar
Plate lot#: 230712
Plate Retest Date: 01/12/2024 – external control needed
Mobile phase A: 10mM Amm Form in LCMS Water
Mobile phase B: 0.1% Formic Acid in MeOH
Blank Blood Lot: Lampire 23E52981
Blank Urine Lot:
LCMS-QQQ 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: 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 or 250µL hydrolyzed urine in wells of analytical (standards) plate.
Pipette ID: 42
☒ 4. Pipette **250µL 0.5 M ammonium hydroxide** in wells of analytical plate.
☒ 5. Place on shaking incubator at ambient temp., 900rpm for 15 minutes.
☒ 6. Transfer **200-450µL of blood+base and urine+base (if applicable)** mixture to corresponding wells of SLE+ plate.
Amount transferred: *250uL*
☒ 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).
☒ 8. Wait 5 minutes.
☒ 9. Add **900uL ethyl acetate.**
☒ 10. Wait 5 minutes.
☒ 11. Apply positive pressure for approx. 15 seconds. ***(10-15 PSI- Selector to the left).***
☒ 12. Add **900uL ethyl acetate.**
☒ 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.
☒ 16. 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.
☒ 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: Plate was past re-test date. An external blood control was included with the run.

TS

	1	2	3	4	5	6	7	8	9	10	11	12
A	IS + Cal. 1	M2023-5482-1	P2023-3833-2	P2023-3958-2	P2024-0051-1	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample
B	IS + Cal. 1	M2024-0083-1	P2023-3834-1	P2024-0026-1	P2024-0052-1	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample
C	IS + Control 1	M2024-0106-3	P2023-3837-1	P2024-0039-1	P2024-0053-1	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample
D	IS + Control 1	M2024-0107-1	P2023-3838-1	P2024-0040-1	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample
E	Neg Blood	M2024-0108-1	P2023-3838-2	P2024-0041-1	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Control 1
F	External Control	M2024-0131-3	P2023-3839-1	P2024-0042-1	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Control 1
G	M2023-4964-2	P2023-3826-1	P2023-3861-1	P2024-0048-4	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Cal. 1
H	M2023-5459-1	P2023-3833-1	P2023-3880-1	P2024-0050-1	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Cal. 1

All wells to contain 60 µl of residual DMSO

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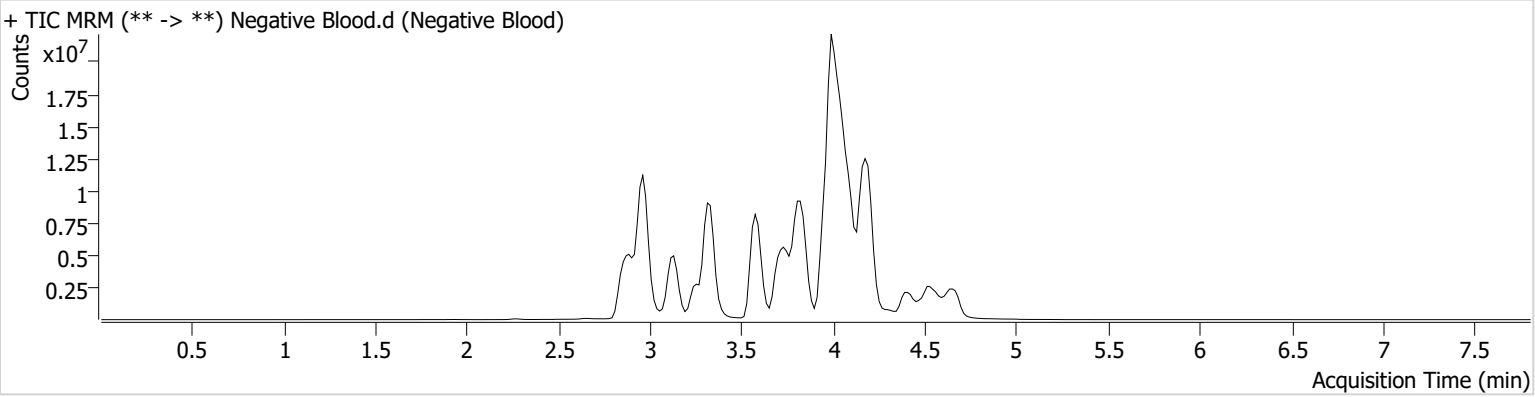
AM #25 Multi-Drug Screen. Results

Batch results	D:\MassHunter\Data\2024\AM 25 26\012224 AM 25 26 TS\QuantResults\AM 25.batch.bin
Calibration Last Update	1/29/2024 10:57:05 AM

Instrument	Falco (069901)	**Data File**	Negative Blood.d
Type	Sample	**Sample**	Negative Blood
Acq. Method	AM 25 MDS.m	**Operator**	Tamara Salazar
Sample Position	P4-E1	**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	1/22/2024 5:49:52 PM		
Sample Info.			

Sample Chromatogram



TS

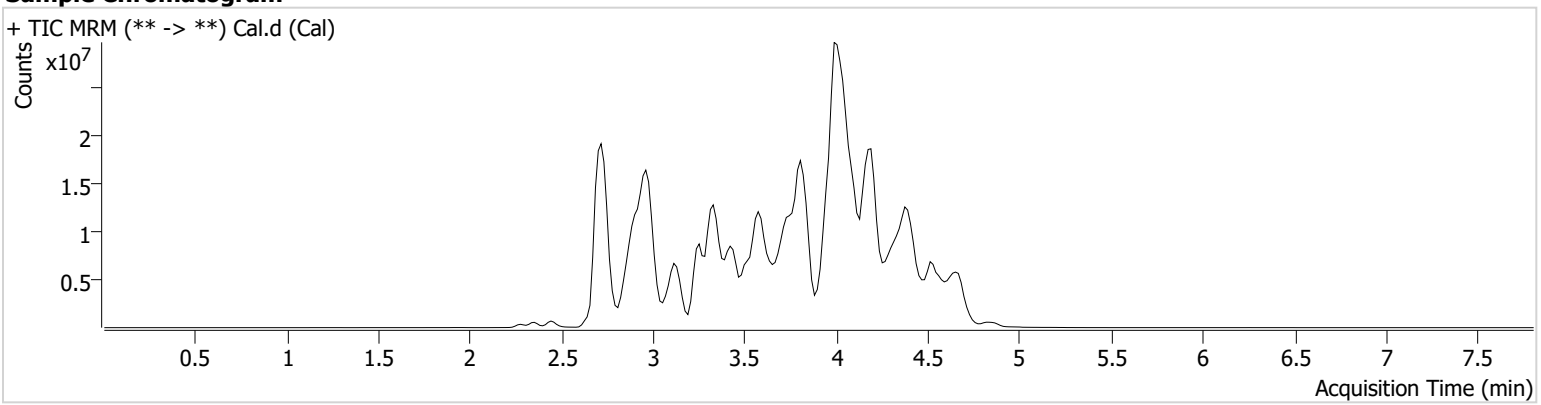
AM #25 Multi-Drug Screen. Results

Batch results D:\MassHunter\Data\2024\AM 25 26\012224 AM 25 26 TS\QuantResults\AM 25.batch.bin
Calibration Last Update 1/29/2024 10:57:05 AM

Instrument Falco (069901)
Type Cal
Acq. Method AM 25 MDS.m
Sample Position P4-A1
Injection Volume 5
Acq. Date-Time 1/22/2024 5:41:15 PM
Sample Info.

Data File Cal.d
Sample Cal
Operator Tamara Salazar
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.
10-OH-Carbamazepine	3.765	2332303	228.42	106.6	341.25	15035943	10.0000 ng/ml
6-MAM	2.897	55244	14.53	75.0	15223.07	1940687	10.0000 ng/ml
7-aminoclonazepam	3.607	1186083	20802.91	77.1	368893.80	5526479	10.0000 ng/ml
7-aminoflunitrazepam	3.807	2604605	310.21	22.3	136888.84	5526479	10.0000 ng/ml
9-Hydroxyrisperidone	3.815	7713567	2034422.30	2.6	733.10	39110425	10.0000 ng/ml
Acetyl Fentanyl	3.774	411593	2763.28	79.2	115005.86	38904061	10.0000 ng/ml
Acetyl Norfentanyl	2.905	454618	614.92	35.3	41.24	38904061	10.0000 ng/ml
a-hydroxyalprazolam	4.498	165092	44.64	59.6	207.67	5526479	10.0000 ng/ml
alpha-hydroxymidazolam	4.543	1019308	167.84	55.8	59.97	5526479	10.0000 ng/ml
Alpha-PHP	3.796	4775713	20483.99	34.8	1005.30	38904061	10.0000 ng/ml
alpha-PVP	3.520	6765571	3337506.41	46.9	348.79	16056962	10.0000 ng/ml
Alprazolam	4.639	773754	50.09	136.8	69.40	11084803	10.0000 ng/ml
Amitriptyline	4.396	3456762	850.31	63.6	391.91	9942733	10.0000 ng/ml
Amphetamine	2.894	3845999	1037.59	221.8	3367.69	16056962	10.0000 ng/ml
Benzoylecgonine	3.392	105718	64398.46	34.0	17918.50	538488	10.0000 ng/ml
Bromazolam	4.680	626257	2359.08	132.3	8932.26	11084803	10.0000 ng/ml
Brompheniramine	4.021	149632	13825.13	804.5	345165.04	62925613	10.0000 ng/ml
Buprenorphine	4.185	66763	3001.91	14.9	5919.55	3111850	10.0000 ng/ml
Bupropion	3.719	5629038	1758.06	62.8	736.11	22761863	10.0000 ng/ml
Carbamazepine	4.229	9120841	∞	91.1	1265.41	132187	10.0000 ng/ml
Carisoprodol	4.212	1048864	160024.11	68.7	67.02	6712842	10.0000 ng/ml
Chlordiazepoxide	4.718	838864	588.04	133.6	279.62	11084803	10.0000 ng/ml
Chlorpheniramine	3.932	8101560	917.44	0.3	22.37	14546666	10.0000 ng/ml
Chlorpromazine	4.591	2699979	579939.08	118.2	3645515.58	11022020	10.0000 ng/ml
Citalopram	4.051	3569385	347.41	33.4	297.06	62925613	10.0000 ng/ml
Clomipramine	4.623	3022252	2448.23	83.6	3087.79	62925613	10.0000 ng/ml
Clonazepam	4.422	823033	213.97	30.7	∞	132187	10.0000 ng/ml
Clonazolam	4.357	1260928	502796.31	31.6	139596.69	11084803	10.0000 ng/ml
Clozapine	4.174	4954154	1226.79	75.8	1324.76	23348535	10.0000 ng/ml
Cocaethylene	3.790	4972242	2140084.64	47.8	1476.67	30228490	10.0000 ng/ml

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AM #25 Multi-Drug Screen. Results

Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
Cocaine	3.575	4932375	671.35	20.7	647906.10	30228490	10.0000 ng/ml
Codeine	2.779	438606	13426.10	92.1	1420.41	8539153	10.0000 ng/ml
Cyclobenzaprine	4.335	4116763	383.26	8.5	53.73	9942733	10.0000 ng/ml
Desipramine	4.351	8002732	1185.44	42.1	543.55	9942733	10.0000 ng/ml
Dextromethorphan	4.072	2723904	782953.34	82.5	400.12	14546666	10.0000 ng/ml
Dextrorphan	3.379	3091611	1071.63	55.4	619.21	14546666	10.0000 ng/ml
Diazepam	4.841	1277880	713.71	90.4	336.36	11084803	10.0000 ng/ml
Dihydrocodeine	2.747	1311971	826.26	60.5	928.17	8539153	10.0000 ng/ml
Diphenhydramine	4.026	12540250	1634.31	29.0	1162.08	62925613	10.0000 ng/ml
DMT	2.983	430984	920.12	144.1	1200.58	14546666	10.0000 ng/ml
Doxepin	4.133	2876250	246.79	43.0	118.64	31209630	10.0000 ng/ml
Doxylamine	3.654	10287128	4267.71	92.4	5463.68	14546666	10.0000 ng/ml
Duloxetine	4.301	190305	184877.75	800.8	1004.13	1993731	10.0000 ng/ml
EDDP	4.087	875730	1252.56	48.5	94721.04	4594033	10.0000 ng/ml
Estazolam	4.517	2875889	401.31	52.3	4074.64	11084803	10.0000 ng/ml
Etizolam	4.666	227409	226079.93	355.0	239748.24	11084803	10.0000 ng/ml
Fentanyl	4.019	325092	318.96	70.7	26479.27	24294958	10.0000 ng/ml
Flualprazolam	4.482	760262	283686.88	130.0	261068.80	11084803	10.0000 ng/ml
Flunitrazepam	4.531	862069	416.26	37.9	179.09	11084803	10.0000 ng/ml
Fluorofentanyl	4.033	654340	94683.39	78.4	1265.10	24294958	10.0000 ng/ml
Fluoxetine	4.316	4684682	549115.35	6.9	2824.38	6877279	10.0000 ng/ml
Flurazepam	4.125	3356796	333.80	23.2	391.59	11084803	10.0000 ng/ml
Hydrocodone	2.977	1336365	715.30	38.7	1779.43	8539153	10.0000 ng/ml
Hydromorphone	2.445	1288022	12459.03	77.0	2122.00	252312	10.0000 ng/ml
Hydroxyzine	4.433	3450642	1558.52	79.2	552.52	23348535	10.0000 ng/ml
Imipramine	4.365	8077901	1160.21	64.5	802.89	9942733	10.0000 ng/ml
Ketamine	3.381	4089638	2258.63	36.0	80.70	13113256	10.0000 ng/ml
Lamotrigine	3.518	364970	3959.93	80.8	6713.79	62925613	10.0000 ng/ml
Levamisole	2.936	3194622	1738.60	85.8	431.19	30228490	10.0000 ng/ml
Levetiracetam	2.664	2547881	716.76	57.6	235.77	62925613	10.0000 ng/ml
Lorazepam	4.422	262448	75.08	272.8	43.83	11084803	10.0000 ng/ml
Maprotiline	4.396	2444269	∞	74.8	892.55	9942733	10.0000 ng/ml
MDA	3.015	2487374	1098.17	41.7	170.90	38870147	10.0000 ng/ml
MDEA	3.244	5590230	576.49	52.2	311.84	38870147	10.0000 ng/ml
MDMA	3.090	6321679	604.44	50.3	340.85	38870147	10.0000 ng/ml
Meperidine	3.580	2461542	7065.94	61.2	221.53	14546666	10.0000 ng/ml
Meprobamate	3.675	531965	240.00	22.3	40.42	6712842	10.0000 ng/ml
Methadone	4.392	7208419	4498.63	48.7	3558.86	4594033	10.0000 ng/ml
Methamphetamine	3.001	7192217	284.00	40.4	301.48	38870147	10.0000 ng/ml
Methocarbamol	3.565	206751	11040.46	86.5	1948.41	4594033	10.0000 ng/ml
Methylphenidate	3.519	12612062	1075.62	22.7	94.78	20006508	10.0000 ng/ml
Metoprolol	3.455	1055202	163.57	96.7	605.05	14546666	10.0000 ng/ml
Midazolam	4.667	674201	245.07	88.2	316.92	11084803	10.0000 ng/ml
Mirtazapine	3.748	3713562	824.46	197.1	1344.95	14546666	10.0000 ng/ml
Mitragynine	4.140	620056	214626.89	232.1	466341.83	14546666	10.0000 ng/ml
Morphine	2.279	271829	14136.70	90.9	168.85	252312	10.0000 ng/ml
Norbuprenorphine	3.816	77410	147324.64	112.5	41352.20	3111850	10.0000 ng/ml
Nordiazepam	4.705	1090837	4353.69	57.6	144.27	11084803	10.0000 ng/ml
Norfentanyl	3.335	8121253	19953.33	38.1	1060.95	38904061	10.0000 ng/ml
Norhydrocodone	2.933	173353	59.93	41.8	336.59	252312	10.0000 ng/ml
Norketamine	3.397	759191	114.13	498.3	1389.70	13113256	10.0000 ng/ml
Normeperidine	3.612	2140373	157.20	79.1	122.98	62925613	10.0000 ng/ml
Noroxycodone	2.900	1208497	73.81	28.1	∞	13113256	10.0000 ng/ml
Nortriptyline	4.398	2691592	497497.81	70.8	228.62	9942733	10.0000 ng/ml
O-desmethyl-tramadol	2.919	9122662	1207.11	6.0	375.91	62925613	10.0000 ng/ml
O-desmethylvenlafaxine	3.255	1994310	788.17	593.8	4.88	11404082	10.0000 ng/ml
Olanzapine	3.651	1564792	1775.18	52.1	942.58	132187	10.0000 ng/ml
Oxazepam	4.487	1334568	668.55	70.4	110.36	9871944	10.0000 ng/ml
Oxycodone	2.914	2908395	372.08	27.2	1072.22	13113256	10.0000 ng/ml

TS

AM #25 Multi-Drug Screen. Results

Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
Oxymorphone	2.351	1313377	238.85	41.5	424.75	252312	10.0000 ng/ml
Paroxetine	4.328	727947	291.71	48.8	2653.19	6877279	10.0000 ng/ml
Phenazepam	4.650	1057227	200022.76	68.7	280977.86	11084803	10.0000 ng/ml
Phencyclidine	3.935	6384881	953.88	63.7	606.49	14546666	10.0000 ng/ml
Phentermine	3.154	1569363	211.08	7.1	34.77	20006508	10.0000 ng/ml
Phenytoin	4.120	270940	1692.38	86.5	91.01	132187	10.0000 ng/ml
Primidone	3.475	554998	204553.48	93.9	49.91	132187	10.0000 ng/ml
Promethazine	4.287	10642857	1946.21	31.3	188.87	62925613	10.0000 ng/ml
Pseudoephedrine	2.737	70476556	952.25	32.6	28643.03	38870147	10.0000 ng/ml
Quetiapine	4.279	5112542	688615.72	54.1	∞	45995696	10.0000 ng/ml
Risperidone	4.021	6558297	863415.12	12.4	259.24	39110425	10.0000 ng/ml
Sertraline	4.532	1245340	17448.21	108.1	1096.32	6877279	10.0000 ng/ml
Sufentanil	4.263	281179	111104.88	84.9	21775.62	38904061	10.0000 ng/ml
Tapentadol	3.444	5859809	769.61	35.6	2417.36	13113256	10.0000 ng/ml
Temazepam	4.671	2479786	3243.47	30.2	85.60	11084803	10.0000 ng/ml
Topiramate	3.834	30645	9909.36	43.3	5588.64	119606	10.0000 ng/ml
Tramadol	3.440	19041987	∞	1.8	12.79	62925613	10.0000 ng/ml
Trazodone	4.207	7295143	2757.07	63.0	950.69	31209630	10.0000 ng/ml
Venlafaxine	3.808	6860258	650.79	28.5	313.14	11404082	10.0000 ng/ml
Xylazine	3.382	2025764	248155.47	44.5	88.11	13113256	10.0000 ng/ml
Zaleplon	4.348	1398676	9294.48	69.2	185.11	45995696	10.0000 ng/ml
Zolpidem	3.975	8544003	1377332.17	27.6	452752.32	45995696	10.0000 ng/ml
Zopiclone	3.847	321211	87422.23	58.3	31804.28	1558759	10.0000 ng/ml

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Idaho State Police Forensic Services

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

Methanol External Control Solution (Lot: 072123)

100 µL of 1mg/mL stock of each drug was added to 9800 µL of LC MeOH.

Component	***Source***	***Source Lot Number***	***Expiration Date***
Methanol (LCMS)	Fisher	220776	N/A
Tramadol	Cerilliant	FE10051901	12/31/2024
Alprazolam	Cerilliant	FE06102008	06/30/2025
Prepared:	07/21/2023		
Expires:	07/21/2024		
Prepared By:	Tamara Salazar		

Blood External Control Solution (Lot: WS072123)

100 µL of methanol external control solution was added to 9900 µL of blood. Approximately 100 ng/mL of each compound.

Component	***Source***	***Source Lot Number***
Negative Blood	Lampire	23A52594
Methanol External Control Solution		072123
Prepared:	07/21/2023	
Expires:	07/21/2024	
Prepared by:	Tamara Salazar	

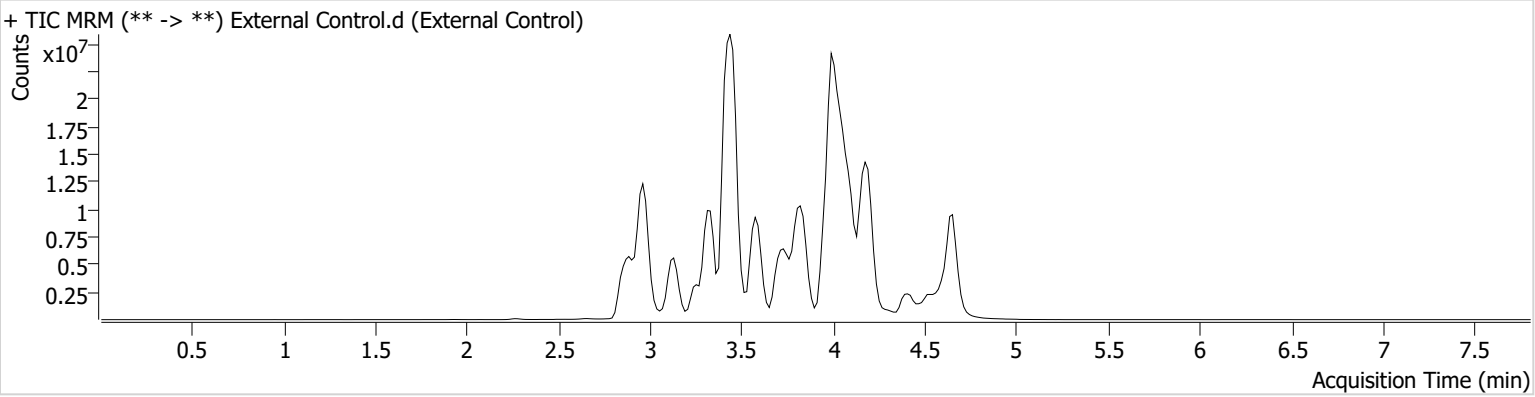
TS

AM #25 Multi-Drug Screen. Results

Batch results D:\MassHunter\Data\2024\AM 25 26\012224 AM 25 26 TS\QuantResults\AM 25.batch.bin
Calibration Last Update 1/29/2024 10:57:05 AM

Instrument	Falco (069901)	**Data File**	External Control.d
Type	Sample	**Sample**	External Control
Acq. Method	AM 25 MDS.m	**Operator**	Tamara Salazar
Sample Position	P4-F1	**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	1/22/2024 5:58:18 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
Alprazolam	4.654	15469200	212.43	92.0 **Low**	284.18	10995724	201.5437 ng/ml
Tramadol	3.445	132436742	∞	2.6 **High**	299.55	65589244	66.7254 ng/ml

TS

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

Extraction Date: 01/22/2024
Plate lot#: 231212
Mobile phase A: 10mM Amm Form in LCMS Water
Blank Blood Lot: Lampire 23E52981
LCMS-QQQ ID: 069901

Analyst: Tamara Salazar
Plate Retest Date: 06/12/2024
Mobile phase B: 0.1% Formic acid in MeOH
Blank Urine Lot:
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, pipette 1000µL blood or 1000µL hydrolyzed urine in wells of analytical (standards) plate. Pipette ID: 42
☒ 4. Place on shaking incubator at ambient temp., 900rpm for 15 minutes.
☒ 5. Add **500µL of 0.1% formic acid in water to blood samples, and 500µL of saturated phosphate buffer to urine samples** in the wells of the 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*: 750 µL*
☒ 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^2 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:. THC 3-100 – calibrator 1 dropped due to poor chromatography.

The case numbers on the instrument worklist shifted up one position starting at case number P2023-3838-2. The samples injected properly but were labeled as the incorrect case number. The case numbers will be corrected on the data print-outs.

TS

	1	2	3	4	5	6
A	IS + Cal. 1	IS + QC_1	M2024-0108-1	P2023-3838-2	P2024-0041-1	IS + QC_1
B	IS + Cal. 2	Neg Blood	M2024-0131-3	P2023-3839-1	P2024-0042-1	IS + Cal. 7
C	IS + Cal. 3	M2023-4964-2	P2023-3826-1	P2023-3861-1	P2024-0048-4	IS + Cal. 6
D	IS + Cal. 4	M2023-5459-1	P2023-3833-1	P2023-3880-1	P2024-0050-1	IS + Cal. 5
E	IS + Cal. 5	M2023-5482-1	P2023-3833-2	P2023-3958-2	P2024-0051-1	IS + Cal. 4
F	IS + Cal. 6	M2024-0083-1	P2023-3834-1	P2024-0026-1	P2024-0052-1	IS + Cal. 3
G	IS + Cal. 7	M2024-0106-3	P2023-3837-1	P2024-0039-1	P2024-0053-1	IS + Cal. 2
H	IS + QC_1	M2024-0107-1	P2023-3838-1	P2024-0040-1	IS + QC_1	IS + Cal. 1

All wells to contain 100 µl of residual DMSO

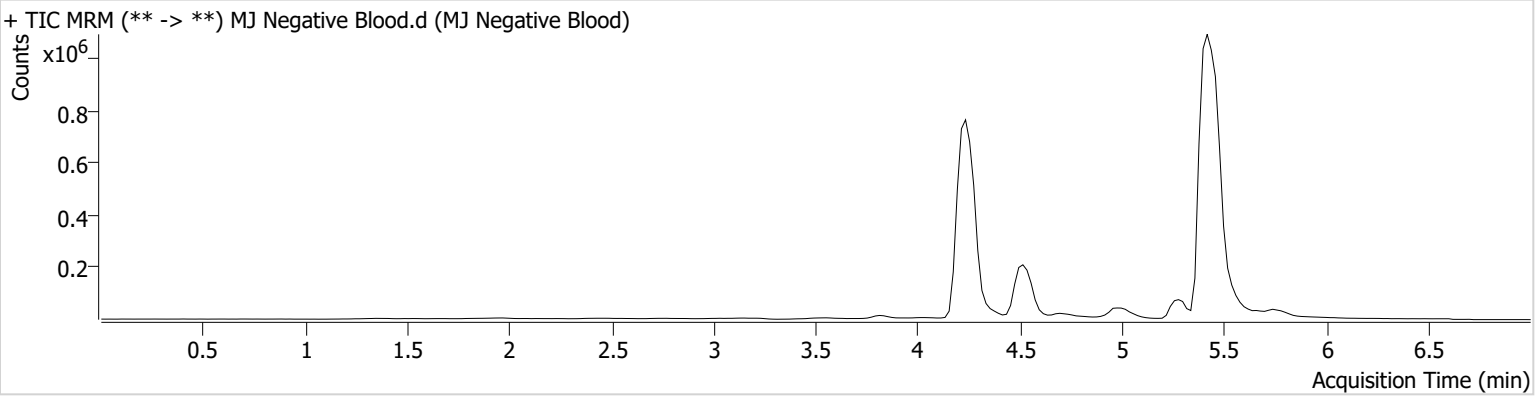
TS

AM #26 Cannabinoids Screen Results

Batch results D:\MassHunter\Data\2024\AM 25 26\012224 AM 25 26 TS\QuantResults\AM 26.batch.bin
Calibration Last Update 1/23/2024 7:56:26 AM

Instrument	Falco (069901)	**Data File**	MJ Negative Blood.d
Type	Sample	**Sample**	MJ Negative Blood
Acq. Method	AM 26 THC.m	**Operator**	Tamara Salazar
Sample Position	P3-B2	**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	10		
Acq. Date-Time	1/22/2024 1:09:07 PM		
Sample Info.			

Sample Chromatogram



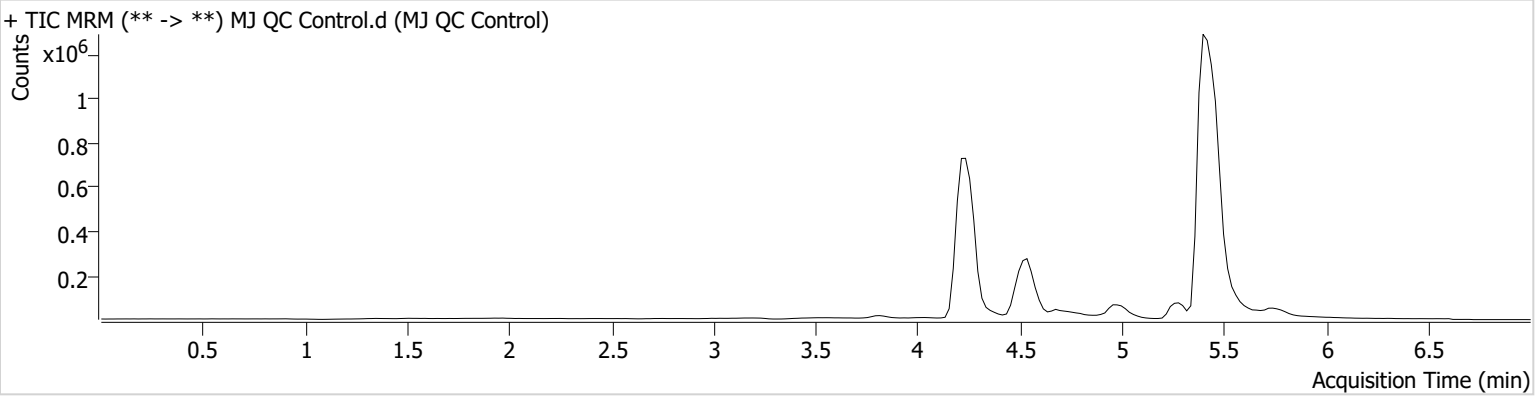
TS

AM #26 Cannabinoids Screen Results

Batch results D:\MassHunter\Data\2024\AM 25 26\012224 AM 25 26 TS\QuantResults\AM 26.batch.bin
Calibration Last Update 1/23/2024 7:56:26 AM

Instrument	Falco (069901)	**Data File**	MJ QC Control.d
Type	QC	**Sample**	MJ QC Control
Acq. Method	AM 26 THC.m	**Operator**	Tamara Salazar
Sample Position	P3-H1	**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	10		
Acq. Date-Time	1/22/2024 12:53:56 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.369	6546	26.86	321.5 **High**	∞	167601	5.6053 ng/ml
THC-COOH	4.536	229933	∞	187.3	∞	1071186	14.8926 ng/ml
THC-OH	4.242	39833	∞	967.9	∞	4061797	4.9241 ng/ml

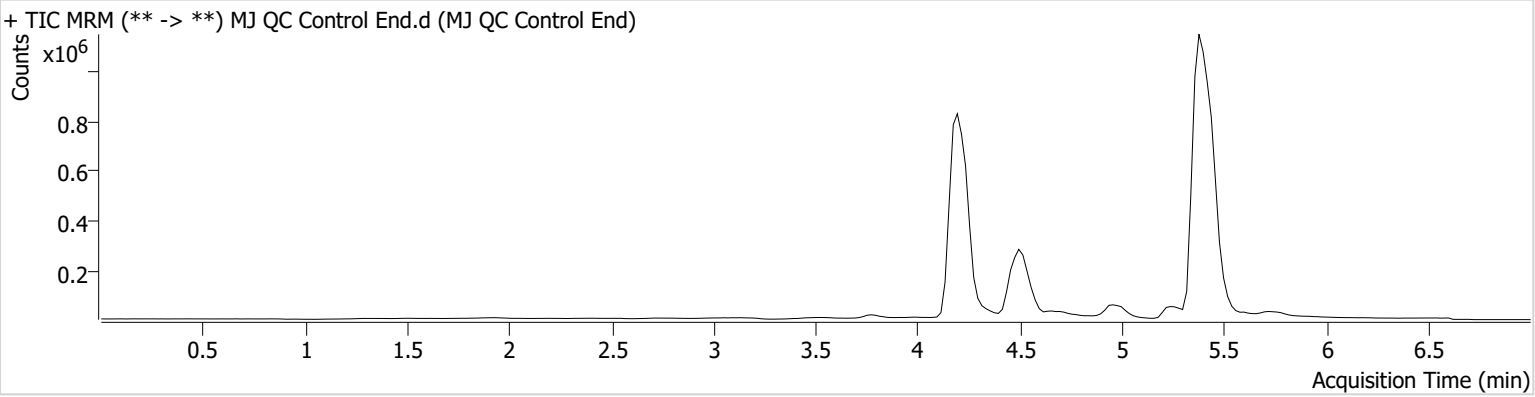
TS

AM #26 Cannabinoids Screen Results

Batch results D:\MassHunter\Data\2024\AM 25 26\012224 AM 25 26 TS\QuantResults\AM 26.batch.bin
Calibration Last Update 1/23/2024 7:56:26 AM

Instrument	Falco (069901)	**Data File**	MJ QC Control End.d
Type	QC	**Sample**	MJ QC Control End
Acq. Method	AM 26 THC.m	**Operator**	Tamara Salazar
Sample Position	P3-H1	**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	10		
Acq. Date-Time	1/22/2024 5:06:50 PM		
Sample Info.			

Sample Chromatogram

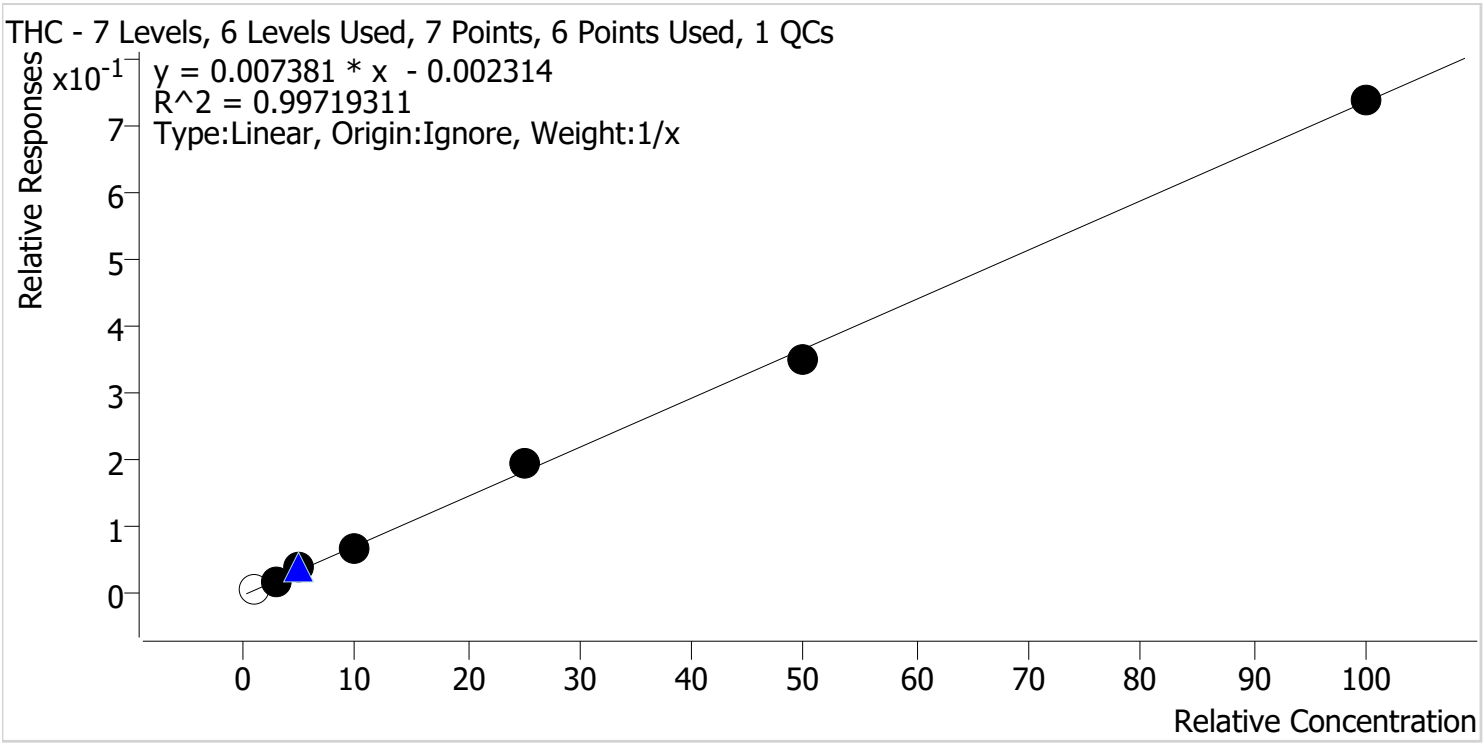


Name	RT	Resp.	S/N	Ratio		S/N	ISTD Resp.	Final Conc.
THC	5.349	5930	∞	331.0	**High**	14.91	203895	4.2544 ng/ml
THC-COOH	4.516	243777	991.33	163.9		∞	1173019	14.4429 ng/ml
THC-OH	4.202	44368	∞	1013.0		∞	4702855	4.7416 ng/ml

TS

AM #26 Cannabinoids Screen Calibration Curve Report

Batch results	D:\MassHunter\Data\2024\AM 25 26\012224 AM 25 26 TS\QuantResults\AM 26.batch.bin
Last Cal. Update	1/23/2024 7:56 AM
Analyst Name	ISP\datastor
Analyte	THC
Internal Standard	THC-D3

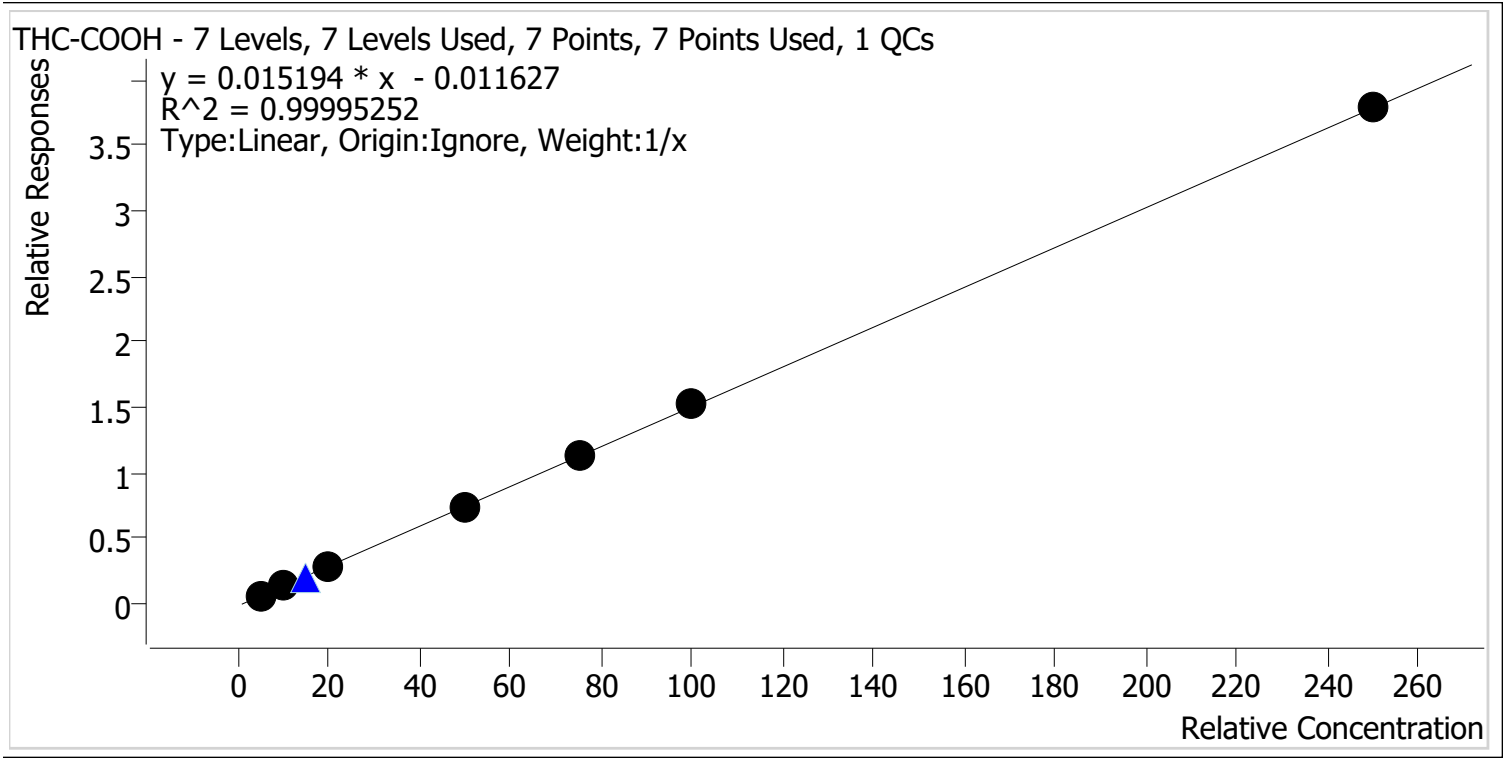


Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
MJ Cal 1	1	✗	1.0	1.4	135.3
MJ Cal 2	2	✔	3.0	2.5	84.6
MJ Cal 3	3	✔	5.0	5.8	115.4
MJ Cal 4	4	✔	10.0	9.7	96.6
MJ Cal 5	5	✔	25.0	26.8	107.0
MJ Cal 6	6	✔	50.0	48.1	96.1
MJ Cal 7	7	✔	100.0	100.2	100.2

TS

AM #26 Cannabinoids Screen Calibration Curve Report

Batch results	D:\MassHunter\Data\2024\AM 25 26\012224 AM 25 26 TS\QuantResults\AM 26.batch.bin
Last Cal. Update	1/23/2024 7:56 AM
Analyst Name	ISP\datastor
Analyte	THC-COOH
Internal Standard	THC-COOH-D9

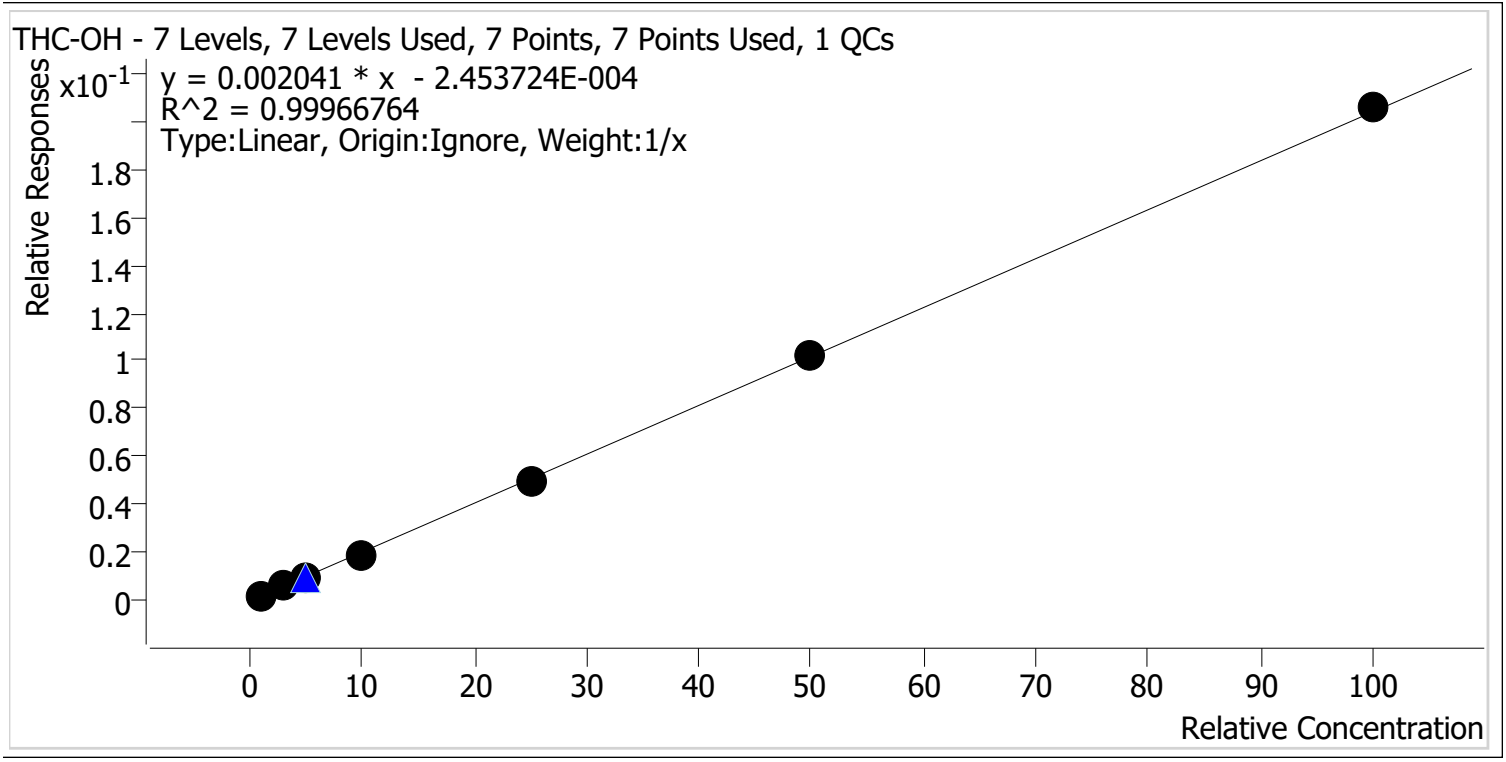


Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
MJ Cal 1	1	✔	5.0	5.1	101.0
MJ Cal 2	2	✔	10.0	10.0	99.9
MJ Cal 3	3	✔	20.0	20.0	100.2
MJ Cal 4	4	✔	50.0	49.2	98.4
MJ Cal 5	5	✔	75.0	74.8	99.7
MJ Cal 6	6	✔	100.0	100.7	100.7
MJ Cal 7	7	✔	250.0	250.2	100.1

TS

AM #26 Cannabinoids Screen Calibration Curve Report

Batch results	D:\MassHunter\Data\2024\AM 25 26\012224 AM 25 26 TS\QuantResults\AM 26.batch.bin
Last Cal. Update	1/23/2024 7:56 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	108.1
MJ Cal 2	2	✔	3.0	3.0	101.6
MJ Cal 3	3	✔	5.0	4.8	95.9
MJ Cal 4	4	✔	10.0	9.5	94.9
MJ Cal 5	5	✔	25.0	24.6	98.5
MJ Cal 6	6	✔	50.0	50.1	100.2
MJ Cal 7	7	✔	100.0	100.8	100.8

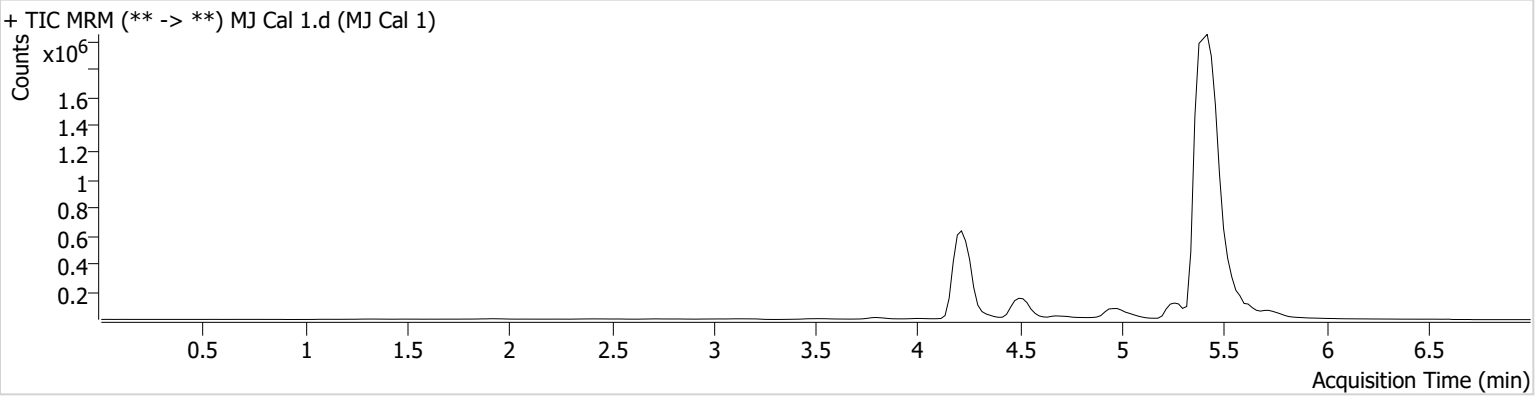
TS

AM #26 Cannabinoids Screen Results

Batch results D:\MassHunter\Data\2024\AM 25 26\012224 AM 25 26 TS\QuantResults\AM 26.batch.bin
Calibration Last Update 1/23/2024 7:56:26 AM

Instrument	Falco (069901)	**Data File**	MJ Cal 1.d
Type	Cal	**Sample**	MJ Cal 1
Acq. Method	AM 26 THC.m	**Operator**	Tamara Salazar
Sample Position	P3-A1	**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	10		
Acq. Date-Time	1/22/2024 12:00:46 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.349	1863	2.17 **Low**	2074.1 **High**	∞	242798	1.3531 ng/ml
THC-COOH	4.536	50204	37.45	239.0 **High**	∞	771104	5.0502 ng/ml
THC-OH	4.222	7327	∞	2022.8 **High**	∞	3736891	1.0806 ng/ml

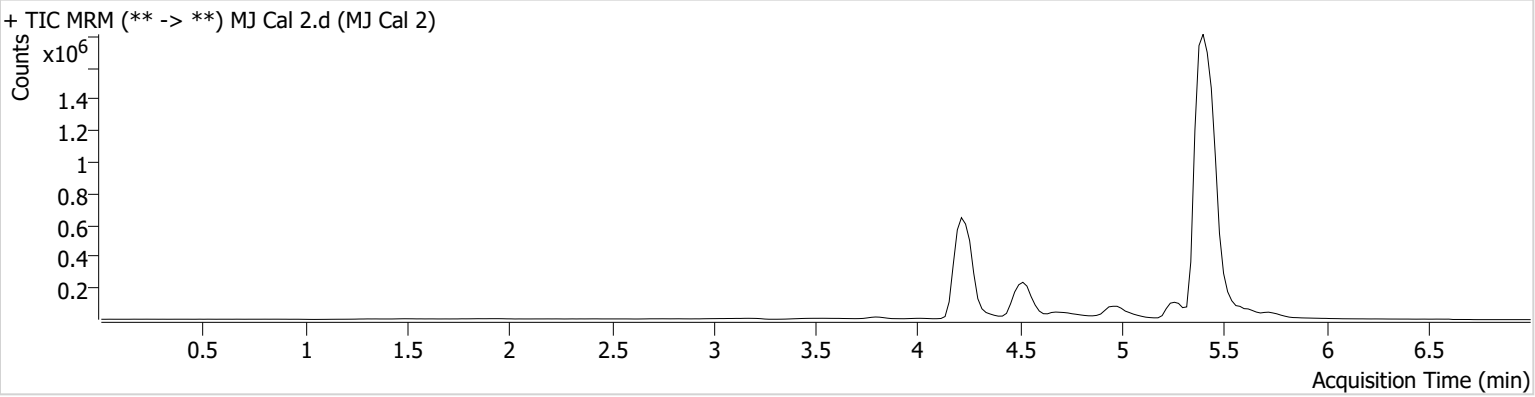
TS

AM #26 Cannabinoids Screen Results

Batch results D:\MassHunter\Data\2024\AM 25 26\012224 AM 25 26 TS\QuantResults\AM 26.batch.bin
Calibration Last Update 1/23/2024 7:56:26 AM

Instrument	Falco (069901)	**Data File**	MJ Cal 2.d
Type	Cal	**Sample**	MJ Cal 2
Acq. Method	AM 26 THC.m	**Operator**	Tamara Salazar
Sample Position	P3-B1	**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	10		
Acq. Date-Time	1/22/2024 12:08:30 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.369	6366	31.46	426.7 **High**	∞	387507	2.5395 ng/ml
THC-COOH	4.536	148511	∞	202.7	∞	1059844	9.9875 ng/ml
THC-OH	4.222	22194	∞	1160.6	∞	3713393	3.0480 ng/ml

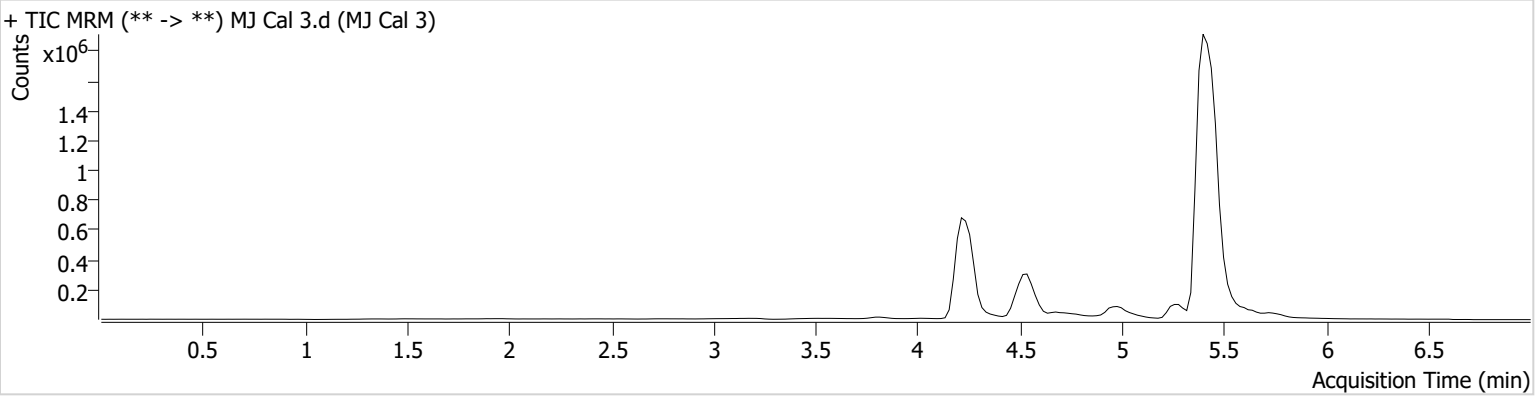
TS

AM #26 Cannabinoids Screen Results

Batch results D:\MassHunter\Data\2024\AM 25 26\012224 AM 25 26 TS\QuantResults\AM 26.batch.bin
Calibration Last Update 1/23/2024 7:56:26 AM

Instrument	Falco (069901)	**Data File**	MJ Cal 3.d
Type	Cal	**Sample**	MJ Cal 3
Acq. Method	AM 26 THC.m	**Operator**	Tamara Salazar
Sample Position	P3-C1	**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	10		
Acq. Date-Time	1/22/2024 12:16:05 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.369	12546	∞	257.6 **High**	∞	311654	5.7680 ng/ml
THC-COOH	4.536	309739	385.43	187.6	∞	1057554	20.0412 ng/ml
THC-OH	4.242	35689	∞	1009.6	∞	3741274	4.7932 ng/ml

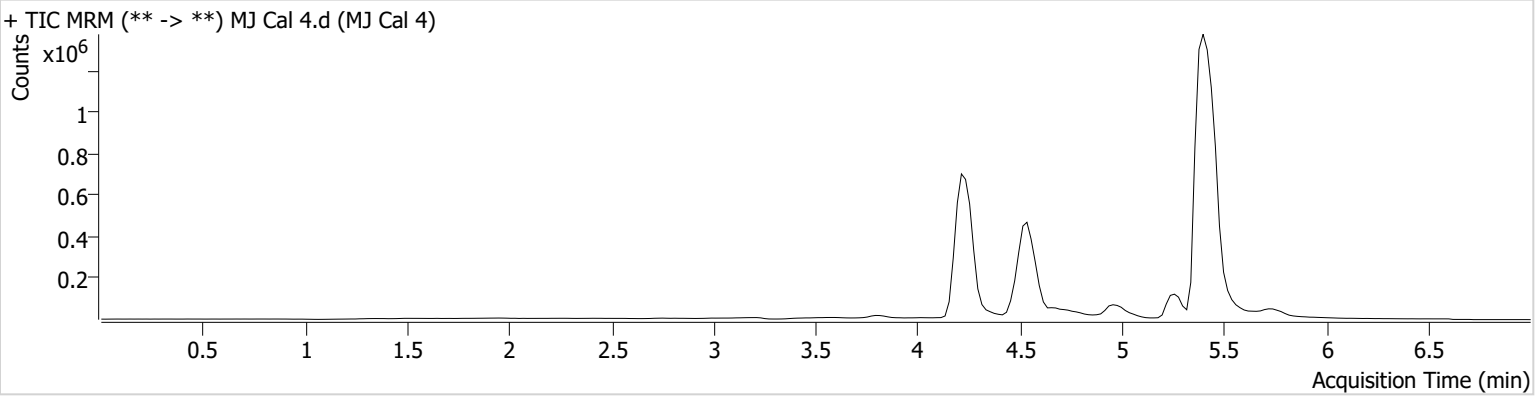
TS

AM #26 Cannabinoids Screen Results

Batch results D:\MassHunter\Data\2024\AM 25 26\012224 AM 25 26 TS\QuantResults\AM 26.batch.bin
Calibration Last Update 1/23/2024 7:56:26 AM

Instrument	Falco (069901)	**Data File**	MJ Cal 4.d
Type	Cal	**Sample**	MJ Cal 4
Acq. Method	AM 26 THC.m	**Operator**	Tamara Salazar
Sample Position	P3-D1	**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	10		
Acq. Date-Time	1/22/2024 12:23:39 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.369	17843	∞	141.2	∞	258555	9.6641 ng/ml
THC-COOH	4.536	714344	541.08	173.8	∞	970333	49.2169 ng/ml
THC-OH	4.242	66562	∞	912.9	∞	3480471	9.4885 ng/ml

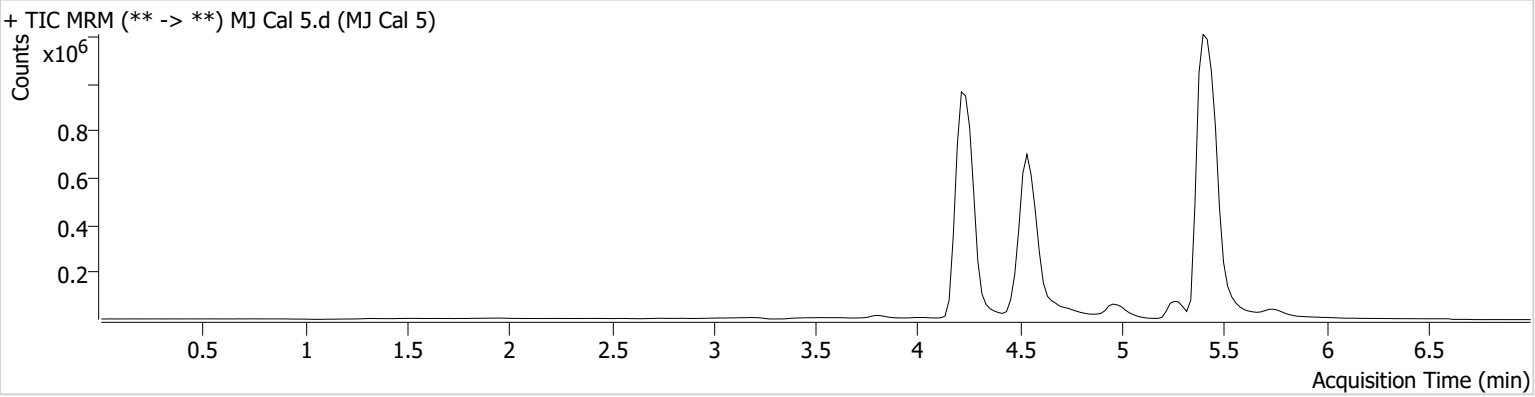
TS

AM #26 Cannabinoids Screen Results

Batch results D:\MassHunter\Data\2024\AM 25 26\012224 AM 25 26 TS\QuantResults\AM 26.batch.bin
Calibration Last Update 1/23/2024 7:56:26 AM

Instrument	Falco (069901)	**Data File**	MJ Cal 5.d
Type	Cal	**Sample**	MJ Cal 5
Acq. Method	AM 26 THC.m	**Operator**	Tamara Salazar
Sample Position	P3-E1	**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	10		
Acq. Date-Time	1/22/2024 12:31:14 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio		S/N	ISTD Resp.	Final Conc.
THC	5.369	47679	64.97	60.6	Low	∞	244316	26.7549 ng/ml
THC-COOH	4.536	1178983	∞	175.8		372.74	1048392	74.7780 ng/ml
THC-OH	4.242	201317	∞	799.4	Low	∞	4023939	24.6279 ng/ml

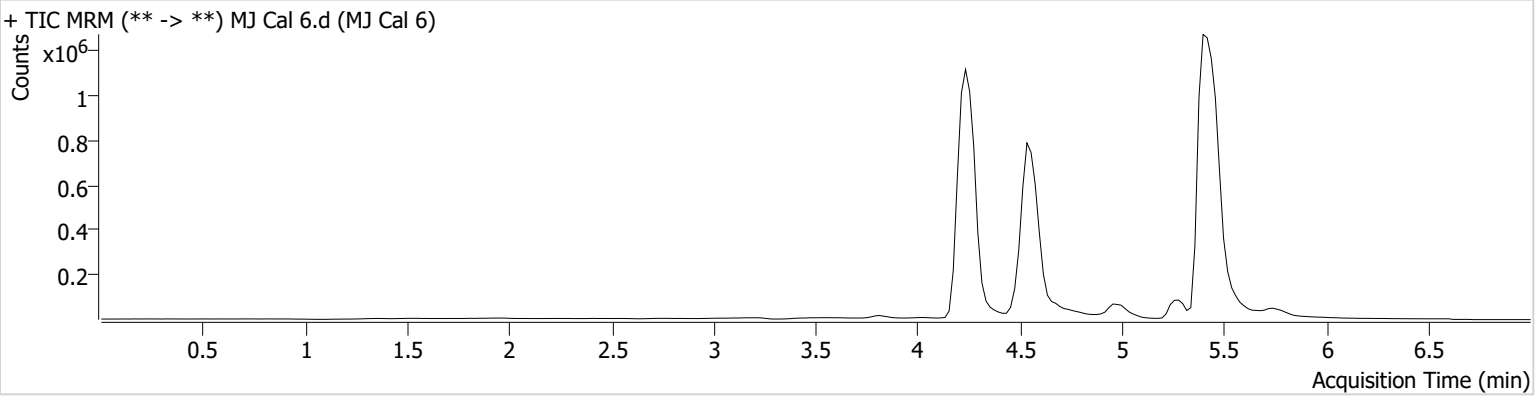
TS

AM #26 Cannabinoids Screen Results

Batch results D:\MassHunter\Data\2024\AM 25 26\012224 AM 25 26 TS\QuantResults\AM 26.batch.bin
Calibration Last Update 1/23/2024 7:56:26 AM

Instrument	Falco (069901)	**Data File**	MJ Cal 6.d
Type	Cal	**Sample**	MJ Cal 6
Acq. Method	AM 26 THC.m	**Operator**	Tamara Salazar
Sample Position	P3-F1	**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	10		
Acq. Date-Time	1/22/2024 12:38:48 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.389	61544	∞	56.4 **Low**	∞	174658	48.0562 ng/ml
THC-COOH	4.536	1391971	∞	173.2	∞	916926	100.6775 ng/ml
THC-OH	4.242	352489	∞	781.4 **Low**	∞	3453595	50.1175 ng/ml

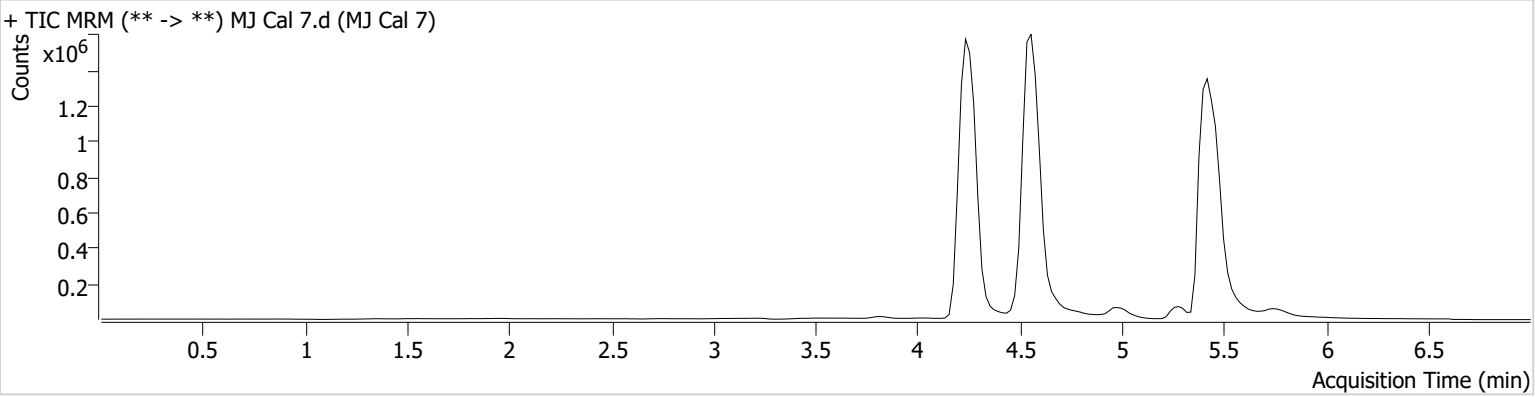
TS

AM #26 Cannabinoids Screen Results

Batch results D:\MassHunter\Data\2024\AM 25 26\012224 AM 25 26 TS\QuantResults\AM 26.batch.bin
Calibration Last Update 1/23/2024 7:56:26 AM

Instrument	Falco (069901)	**Data File**	MJ Cal 7.d
Type	Cal	**Sample**	MJ Cal 7
Acq. Method	AM 26 THC.m	**Operator**	Tamara Salazar
Sample Position	P3-G1	**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	10		
Acq. Date-Time	1/22/2024 12:46:22 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.389	84932	∞	53.3 **Low**	∞	115187	100.2173 ng/ml
THC-COOH	4.556	3235985	∞	169.8	∞	853666	250.2486 ng/ml
THC-OH	4.242	681039	∞	768.8 **Low**	∞	3312154	100.8444 ng/ml