REVIEWED
By Tamara Salazar at 10:15 am, Apr 11, 2024

4/10/2024

Worklist: 6761

LAB_CASE	ITEM	ITEM_TYPE	DESCRIPTION
M2024-1205	2	BCK	AM 27 Blood THC Quant by LC-QQQ
P2024-0707	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2024-0898	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2024-0904	2	BCK	AM 27 Blood THC Quant by LC-QQQ
P2024-0910	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2024-0919	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2024-0924	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2024-0932	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2024-0935	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2024-0936	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2024-0967	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2024-0976	1	BCK	AM 27 Blood THC Quant by LC-QQQ

AM# 27: Quantitation of THC and Metabolites in Blood and Urine by LC-MS/MS

Extraction Date: 04/10/2024
Analyst: Celena Shrum
Plate lot#: 231212
Plate Retest Date: 06/12/2024
Mobile phase A: 0.1% Formic Acid in LCMS Water
Mobile phase B: 0.1% Formic acid in Acetonitrile
Blank Blood Lot: Lampire 23A52595
Column: UCT Selectra DA 100 x 2.1mm 3um
LCMS-QQQ ID: 069901

Pre-Analytic:

☒ 1. Check levels of mobile phases and needle wash refill as needed. Ensure waste is not full.
☒ 2. Ensure correct column is installed and begin mobile phase flow allow to equilibrate ~ 30 minutes.

Analytic:

☒ 1. Remove standards, plate, controls, and samples from cold storage. Allow to reach room temperature.
☐ 2. Urine hydrolysis (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 the 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 or 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, Curve weighting of Linear 1/x with r^2 values ≥0.98 for each analyte
☒ 3. RT +/- 3% or 0.100 min, whichever is greater, +/- 20% Accuracy for greater than (+/- 30% for 10ng/ml or less). Ion ratios must be within +/- 20% of the averaged calibrators
☒ 4. Case sample response for THC 1ng/mL and OH-THC 3ng/mL (quantitative), Carboxy-THC: 5ng/mL (qualitative only) will be reported. Samples with a THC or OH-THC response over 50 ng/mL will be reported out as greater than 50 ng/mL. THC concentrations of 1-3ng/mL will be reported qualitatively.
☒ 5. Did all QCs pass for each analyte? (if not, describe in comments section)
☒ 6. Enter QCs into control charting.
☒ 7. Central File Packet to include: LIMS Worklist, Method Checklist, Calibration and Control Reports

COMMENTS:

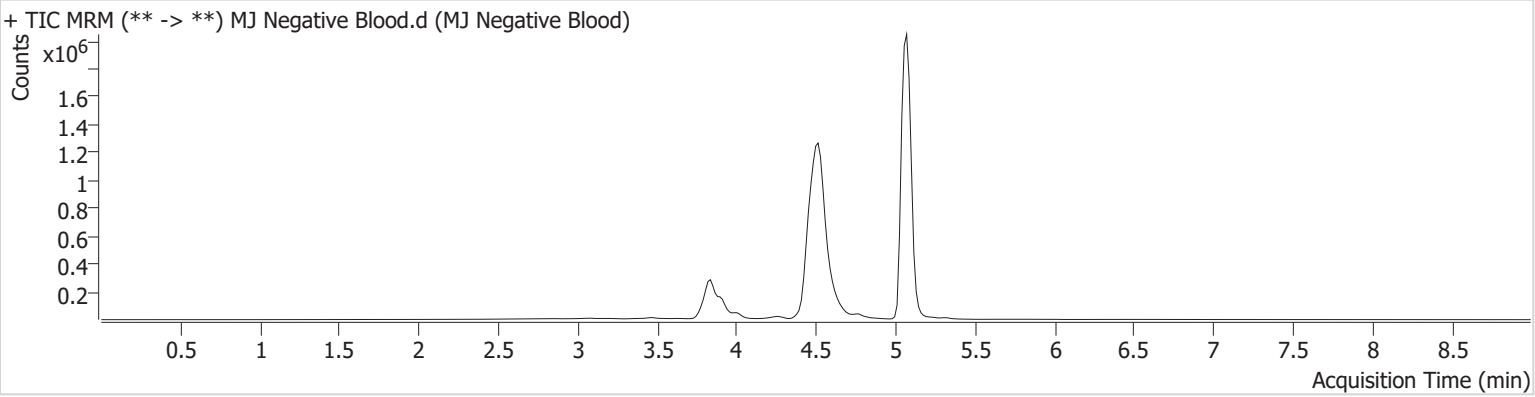
	1	2	3	4	5	6
A	IS + Cal. 1	QC2	P2024-0924-1			
B	IS + Cal. 2	NEG Blood	P2024-0932-1			
C	IS + Cal. 3	M2024-1205-2	P2024-0935-1			
D	IS + Cal. 4	P2024-0707-1	P2024-0936-1			
E	IS + Cal. 5	P2024-0898-1	P2024-0967-1			
F	IS + Cal. 6	P2024-0904-2	P2024-0976-1			
G	IS + Cal. 7	P2024-0910-1				
H	QC1	P2024-0919-1				

AM #27 Cannabinoids Quant. Results

Batch results	D:\MassHunter\Data\2024\AM 27 28\041024 AM 27 28 CS\QuantResults\AM 27.batch.bin
Calibration Last Update	4/11/2024 9:42:59 AM

Instrument	Falco (069901)	**Data File**	MJ Negative Blood.d
Type	Sample	**Sample**	MJ Negative Blood
Acq. Method	AM 27 Agilent Method.m	**Operator**	Celena Shrum
Sample Position	P1-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	4/10/2024 4:04:58 PM		
Sample Info.			

Sample Chromatogram



AM #27 Cannabinoids Quant. Results

Batch results D:\MassHunter\Data\2024\AM 27 28\041024 AM 27 28 CS\QuantResults\AM 27.batch.bin
Calibration Last Update 4/11/2024 9:42:59 AM

Instrument	Falco (069901)	**Data File**	MJ QC Control Blood.d
Type	QC	**Sample**	MJ QC Control Blood
Acq. Method	AM 27 Agilent Method.m	**Operator**	Celena Shrum
Sample Position	P1-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.
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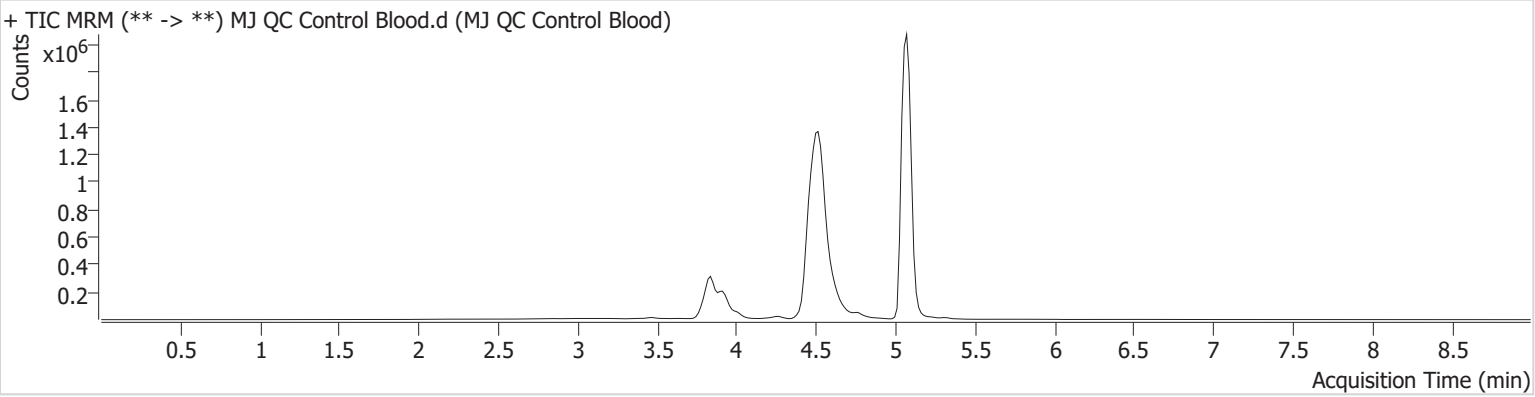
Sample Info.			

Sample Chromatogram



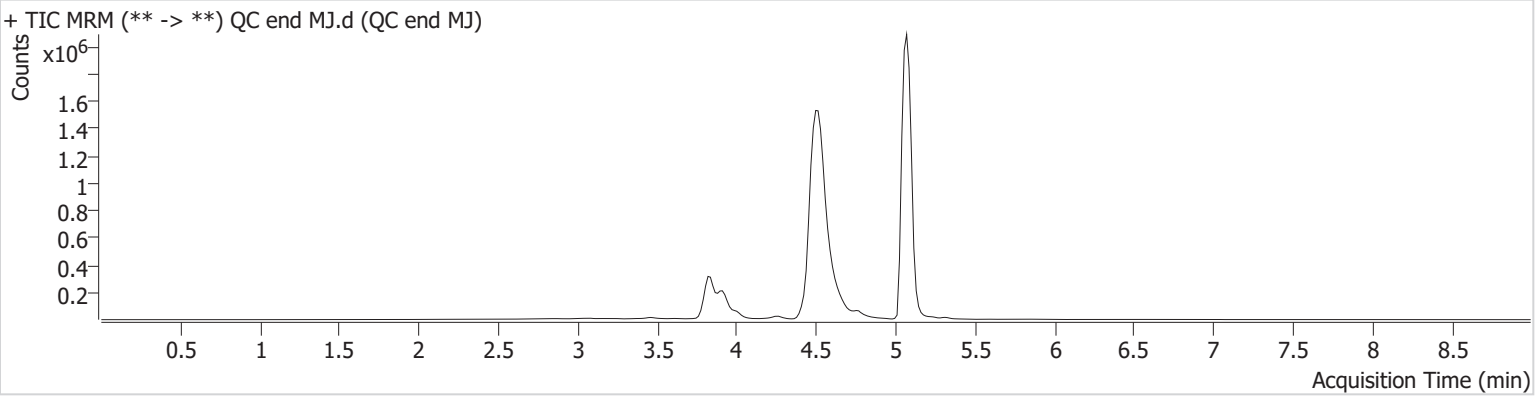
Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.075	365340	∞	24.6	∞	8304668	5.0144 ng/ml
THC-COOH	3.924	46314	∞	225.0	377.15	494636	14.2815 ng/ml
THC-OH	3.835	118871	∞	12.6	∞	1367821	5.0063 ng/ml

AM #27 Cannabinoids Quant. Results

Batch results D:\MassHunter\Data\2024\AM 27 28\041024 AM 27 28 CS\QuantResults\AM 27.batch.bin
Calibration Last Update 4/11/2024 9:42:59 AM

Instrument	Falco (069901)	**Data File**	QC end MJ.d
Type	QC	**Sample**	QC end MJ
Acq. Method	AM 27 Agilent Method.m	**Operator**	Celena Shrum
Sample Position	P1-A2	**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	4/10/2024 9:45:33 PM		
Sample Info.			

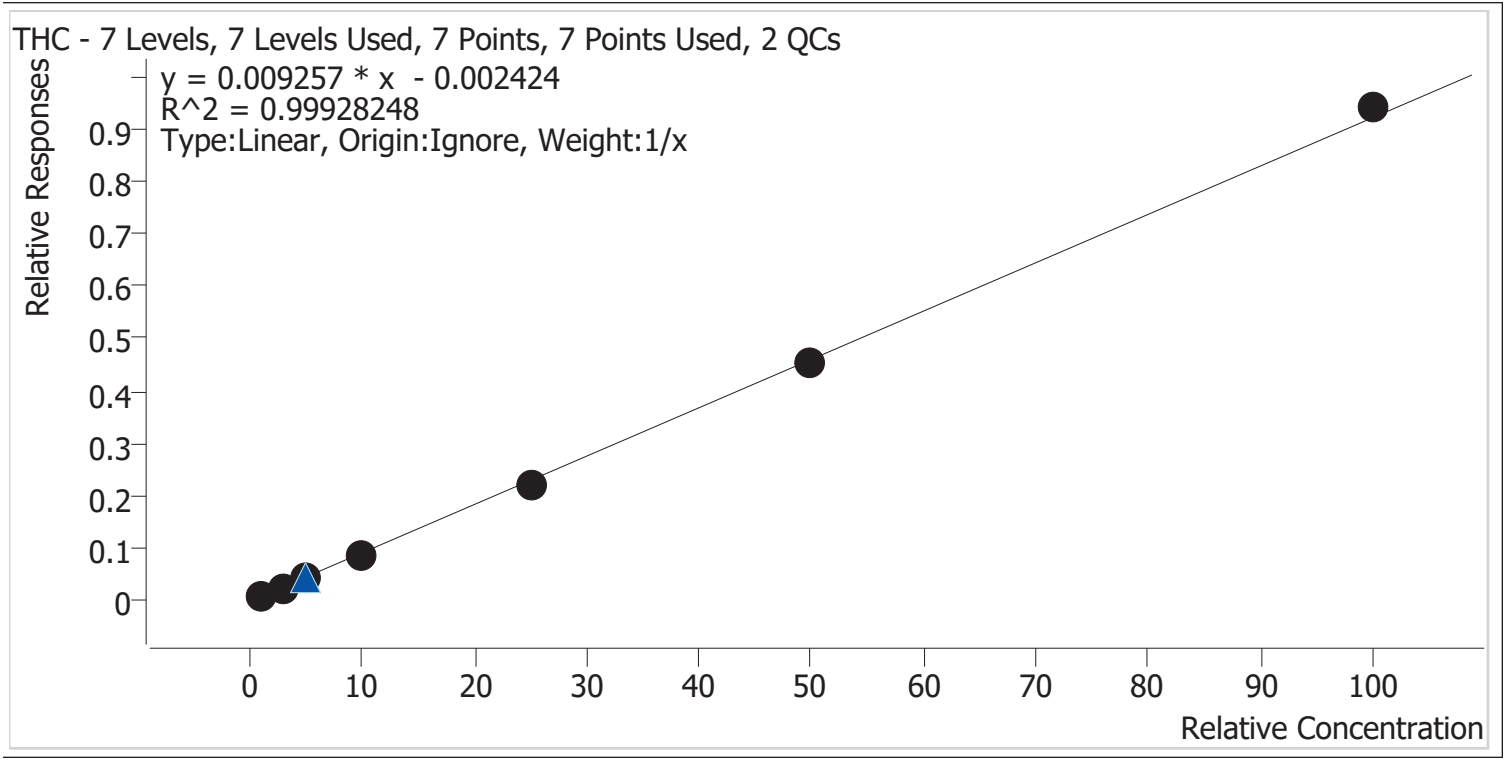
Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.075	359963	∞	25.4	∞	8244618	4.9785 ng/ml
THC-COOH	3.924	47087	∞	211.6	∞	502869	14.2823 ng/ml
THC-OH	3.835	113987	∞	12.9	∞	1325033	4.9555 ng/ml

AM #27 Cannabinoids Quant. Calibration Curve Report

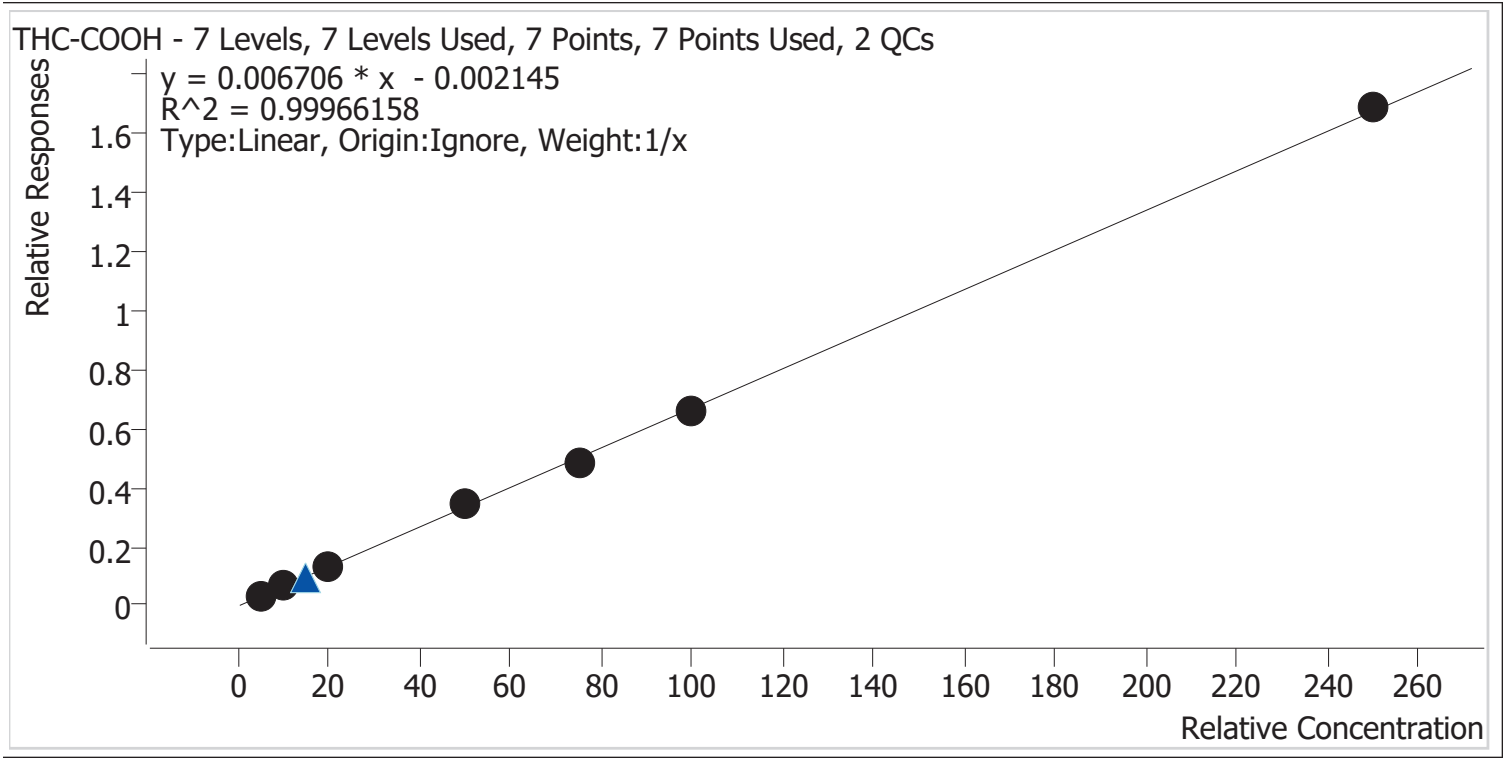
Batch results	D:\MassHunter\Data\2024\AM 27 28\041024 AM 27 28 CS\QuantResults\AM 27.batch.bin
Last Cal. Update	4/11/2024 9:42 AM
Analyst Name	ISP\datastor
Analyte	THC
Internal Standard	THC-D3



Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
Cal 1 MJ	1	✓	1.0	1.1	113.0
Cal 2 MJ	2	✓	3.0	2.9	96.6
Cal 3 MJ	3	✓	5.0	4.8	95.9
Cal 4 MJ	4	✓	10.0	9.7	97.3
Cal 5 MJ	5	✓	25.0	24.1	96.5
Cal 6 MJ	6	✓	50.0	49.3	98.5
Cal 7 MJ	7	✓	100.0	102.0	102.0

AM #27 Cannabinoids Quant. Calibration Curve Report

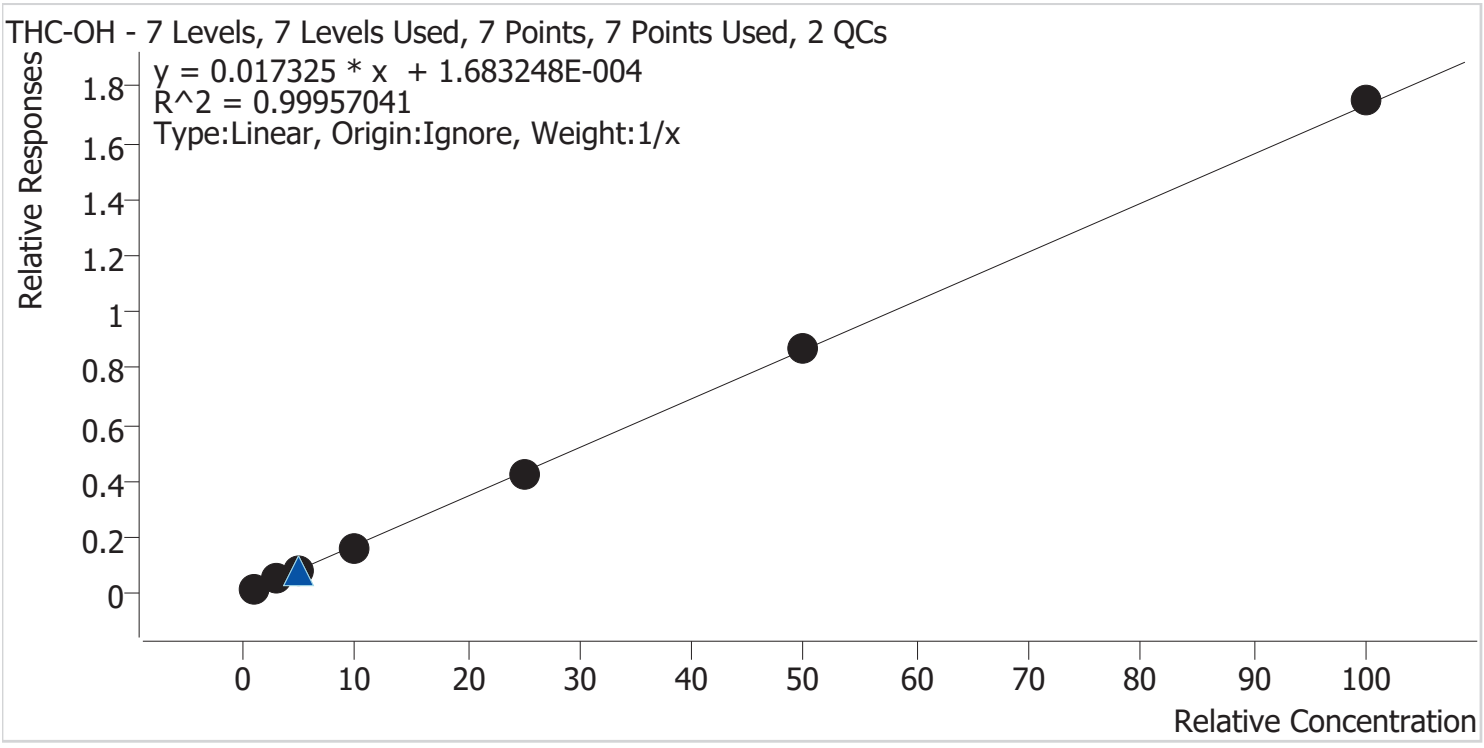
Batch results	D:\MassHunter\Data\2024\AM 27 28\041024 AM 27 28 CS\QuantResults\AM 27.batch.bin
Last Cal. Update	4/11/2024 9:42 AM
Analyst Name	ISP\datastor
Analyte	THC-COOH
Internal Standard	THC-COOH-D9



Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
Cal 1 MJ	1	✓	5.0	5.2	104.4
Cal 2 MJ	2	✓	10.0	9.7	97.1
Cal 3 MJ	3	✓	20.0	19.7	98.4
Cal 4 MJ	4	✓	50.0	51.4	102.7
Cal 5 MJ	5	✓	75.0	73.2	97.6
Cal 6 MJ	6	✓	100.0	98.9	98.9
Cal 7 MJ	7	✓	250.0	251.9	100.8

AM #27 Cannabinoids Quant. Calibration Curve Report

Batch results	D:\MassHunter\Data\2024\AM 27 28\041024 AM 27 28 CS\QuantResults\AM 27.batch.bin
Last Cal. Update	4/11/2024 9:42 AM
Analyst Name	ISP\datastor
Analyte	THC-OH
Internal Standard	THC-OH-D3



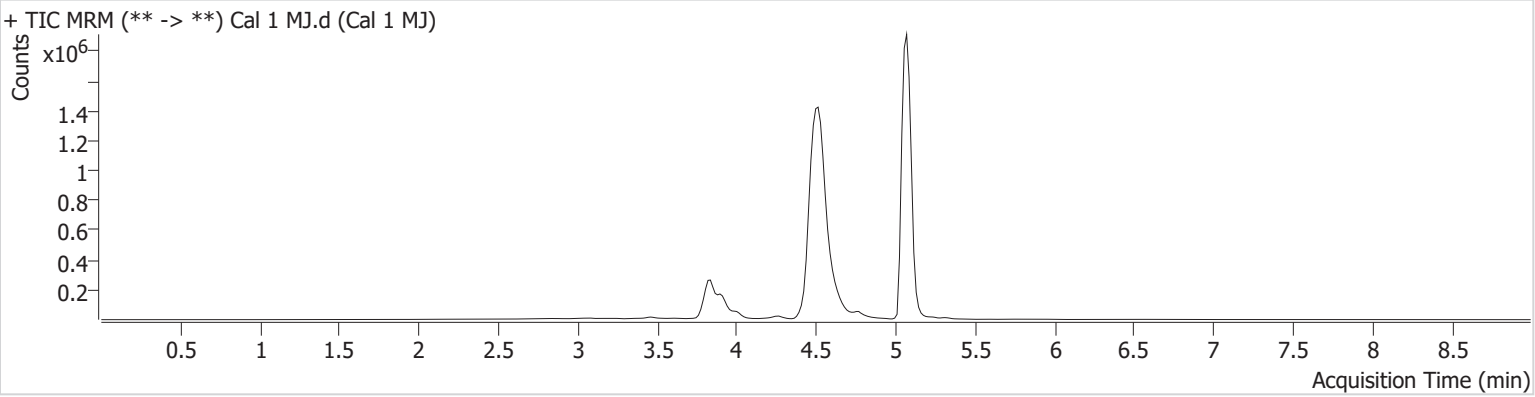
Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
Cal 1 MJ	1	✓	1.0	1.1	111.5
Cal 2 MJ	2	✓	3.0	2.9	97.5
Cal 3 MJ	3	✓	5.0	4.9	97.0
Cal 4 MJ	4	✓	10.0	9.5	95.0
Cal 5 MJ	5	✓	25.0	24.4	97.5
Cal 6 MJ	6	✓	50.0	50.3	100.6
Cal 7 MJ	7	✓	100.0	100.9	100.9

AM #27 Cannabinoids Quant. Results

Batch results D:\MassHunter\Data\2024\AM 27 28\041024 AM 27 28 CS\QuantResults\AM 27.batch.bin
Calibration Last Update 4/11/2024 9:42:59 AM

Instrument	Falco (069901)	**Data File**	Cal 1 MJ.d
Type	Cal	**Sample**	Cal 1 MJ
Acq. Method	AM 27 Agilent Method.m	**Operator**	Celena Shrum
Sample Position	P1-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	4/10/2024 1:35:21 PM		
Sample Info.			

Sample Chromatogram



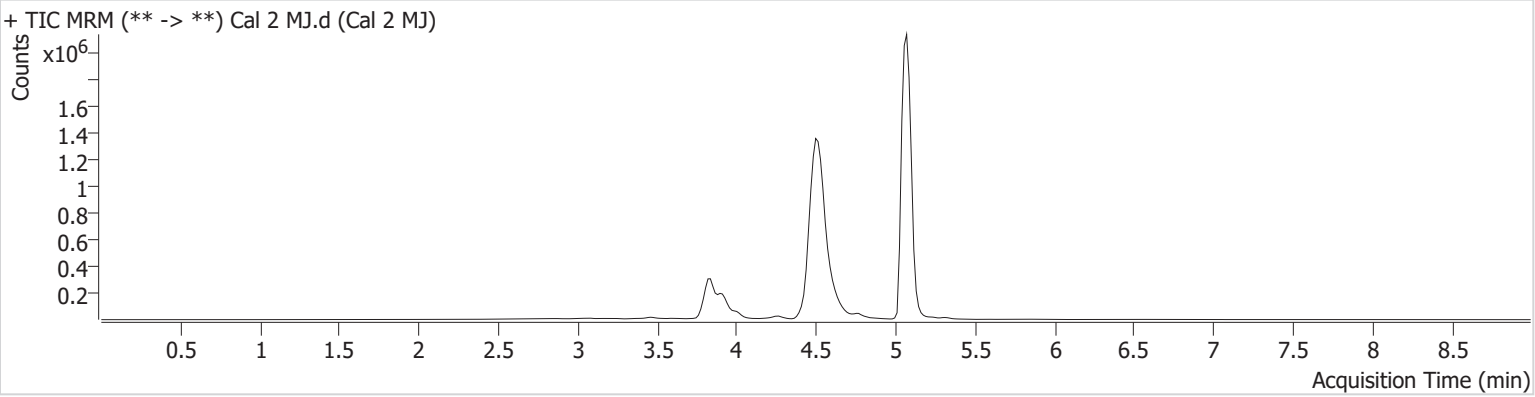
Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.075	62228	∞	26.9	∞	7740062	1.1304 ng/ml
THC-COOH	3.924	15502	2832.50	197.3	∞	471585	5.2215 ng/ml
THC-OH	3.835	24233	∞	12.1	12.27	1243781	1.1148 ng/ml

AM #27 Cannabinoids Quant. Results

Batch results D:\MassHunter\Data\2024\AM 27 28\041024 AM 27 28 CS\QuantResults\AM 27.batch.bin
Calibration Last Update 4/11/2024 9:42:59 AM

Instrument	Falco (069901)	**Data File**	Cal 2 MJ.d
Type	Cal	**Sample**	Cal 2 MJ
Acq. Method	AM 27 Agilent Method.m	**Operator**	Celena Shrum
Sample Position	P1-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	4/10/2024 1:48:37 PM		
Sample Info.			

Sample Chromatogram



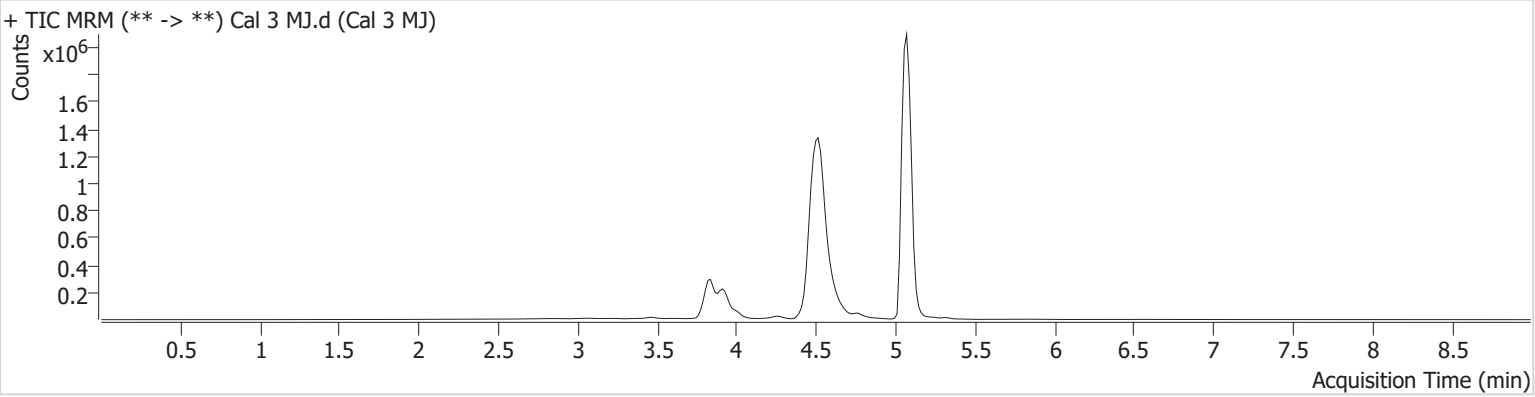
Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.075	212046	∞	25.4	69.11	8686804	2.8989 ng/ml
THC-COOH	3.924	32046	∞	211.7	389.31	508685	9.7135 ng/ml
THC-OH	3.835	69429	∞	12.4	157.69	1366022	2.9239 ng/ml

AM #27 Cannabinoids Quant. Results

Batch results D:\MassHunter\Data\2024\AM 27 28\041024 AM 27 28 CS\QuantResults\AM 27.batch.bin
Calibration Last Update 4/11/2024 9:42:59 AM

Instrument	Falco (069901)	**Data File**	Cal 3 MJ.d
Type	Cal	**Sample**	Cal 3 MJ
Acq. Method	AM 27 Agilent Method.m	**Operator**	Celena Shrum
Sample Position	P1-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	4/10/2024 2:01:43 PM		
Sample Info.			

Sample Chromatogram



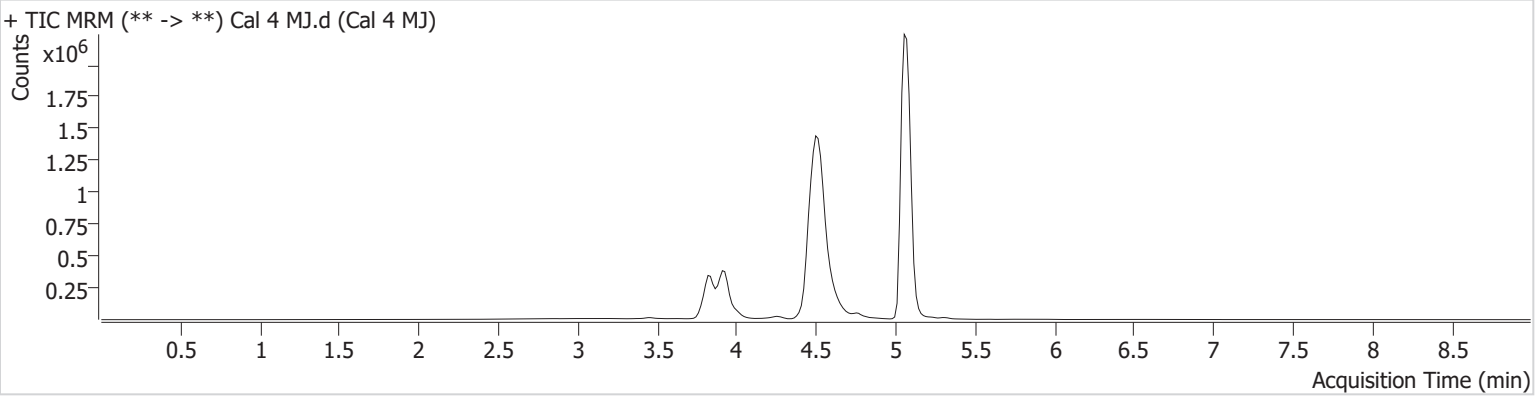
Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.075	346326	2308.00	24.5	237.94	8251755	4.7959 ng/ml
THC-COOH	3.924	62009	∞	212.4	3574.69	477409	19.6873 ng/ml
THC-OH	3.835	107240	∞	12.4	∞	1273202	4.8518 ng/ml

AM #27 Cannabinoids Quant. Results

Batch results D:\MassHunter\Data\2024\AM 27 28\041024 AM 27 28 CS\QuantResults\AM 27.batch.bin
Calibration Last Update 4/11/2024 9:42:59 AM

Instrument	Falco (069901)	**Data File**	Cal 4 MJ.d
Type	Cal	**Sample**	Cal 4 MJ
Acq. Method	AM 27 Agilent Method.m	**Operator**	Celena Shrum
Sample Position	P1-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	4/10/2024 2:33:04 PM		
Sample Info.			

Sample Chromatogram



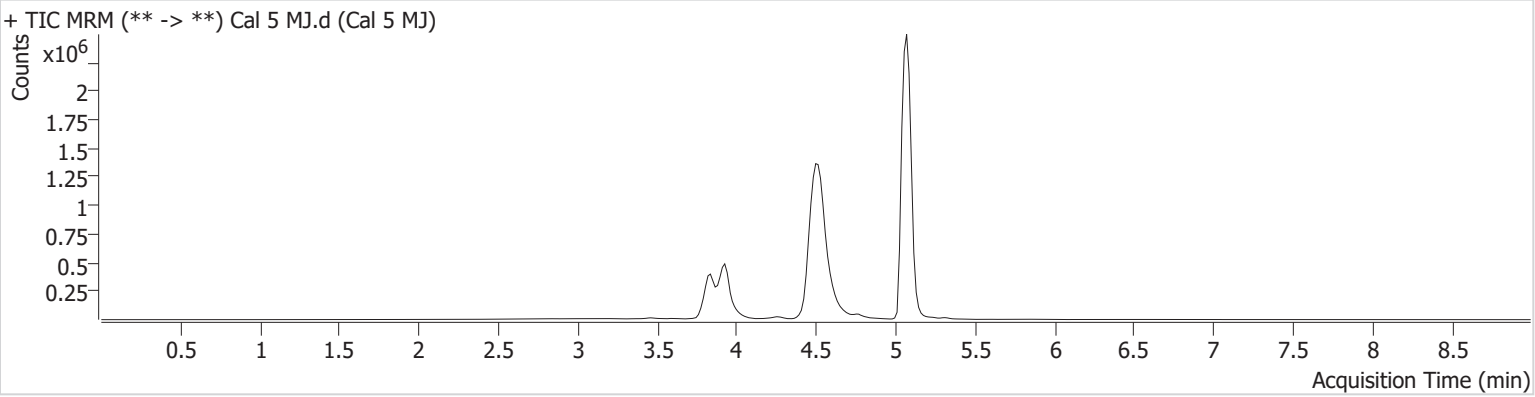
Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.075	747633	∞	24.8	∞	8530338	9.7302 ng/ml
THC-COOH	3.924	174024	∞	202.9	1084.45	508276	51.3729 ng/ml
THC-OH	3.835	229019	∞	12.7	∞	1390230	9.4985 ng/ml

AM #27 Cannabinoids Quant. Results

Batch results D:\MassHunter\Data\2024\AM 27 28\041024 AM 27 28 CS\QuantResults\AM 27.batch.bin
Calibration Last Update 4/11/2024 9:42:59 AM

Instrument	Falco (069901)	**Data File**	Cal 5 MJ.d
Type	Cal	**Sample**	Cal 5 MJ
Acq. Method	AM 27 Agilent Method.m	**Operator**	Celena Shrum
Sample Position	P1-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	4/10/2024 2:46:20 PM		
Sample Info.			

Sample Chromatogram



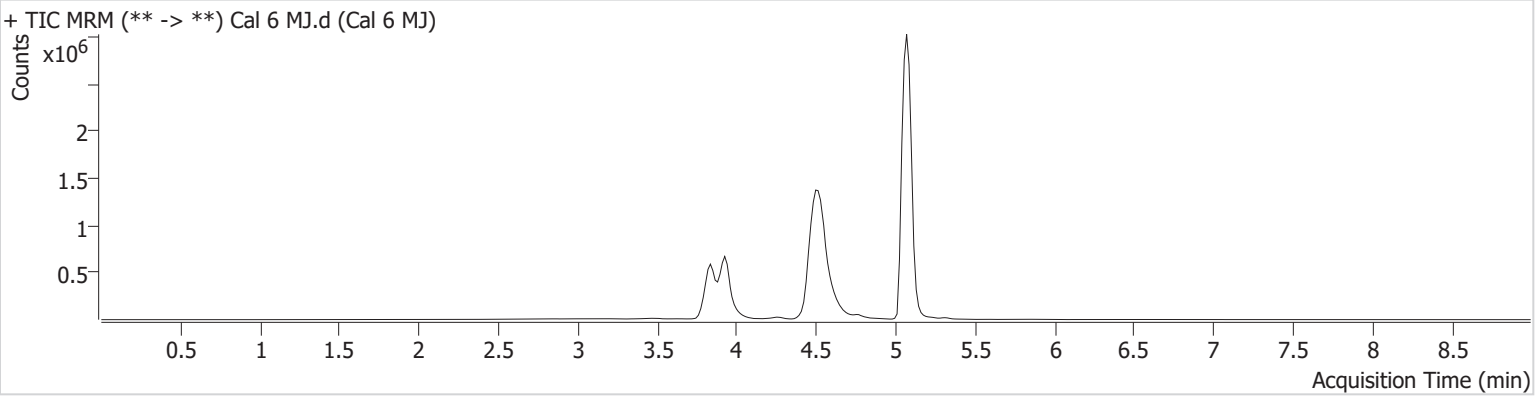
Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.075	1795559	∞	25.1	∞	8126149	24.1326 ng/ml
THC-COOH	3.924	228030	2673.02	227.2	4911.03	466435	73.2174 ng/ml
THC-OH	3.835	542577	∞	13.1	911.01	1284431	24.3720 ng/ml

AM #27 Cannabinoids Quant. Results

Batch results D:\MassHunter\Data\2024\AM 27 28\041024 AM 27 28 CS\QuantResults\AM 27.batch.bin
Calibration Last Update 4/11/2024 9:42:59 AM

Instrument	Falco (069901)	**Data File**	Cal 6 MJ.d
Type	Cal	**Sample**	Cal 6 MJ
Acq. Method	AM 27 Agilent Method.m	**Operator**	Celena Shrum
Sample Position	P1-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	4/10/2024 2:59:25 PM		
Sample Info.			

Sample Chromatogram



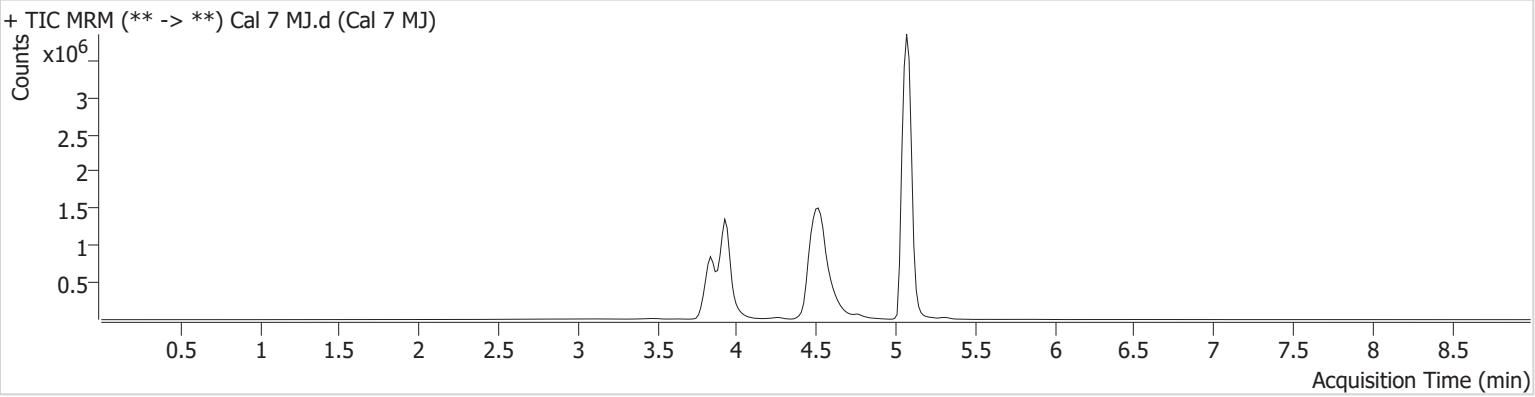
Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.075	3641470	∞	25.5	∞	8027530	49.2675 ng/ml
THC-COOH	3.924	324634	∞	228.5	∞	491250	98.8580 ng/ml
THC-OH	3.835	1232372	∞	13.1	∞	1413710	50.3051 ng/ml

AM #27 Cannabinoids Quant. Results

Batch results D:\MassHunter\Data\2024\AM 27 28\041024 AM 27 28 CS\QuantResults\AM 27.batch.bin
Calibration Last Update 4/11/2024 9:42:59 AM

Instrument	Falco (069901)	**Data File**	Cal 7 MJ.d
Type	Cal	**Sample**	Cal 7 MJ
Acq. Method	AM 27 Agilent Method.m	**Operator**	Celena Shrum
Sample Position	P1-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	4/10/2024 3:12:29 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.075	6907385	∞	25.1	∞	7331468	102.0445 ng/ml
THC-COOH	3.924	769528	∞	214.3	∞	456047	251.9294 ng/ml
THC-OH	3.835	2402223	∞	13.2	3018.69	1373567	100.9338 ng/ml