REVIEWED
By Sarah Collins at 9:12 am, Apr 19, 2024

Worklist: 6777

LAB_CASE	ITEM	ITEM_TYPE	DESCRIPTION
M2024-1175	1	BCK	AM 27 Blood THC Quant by LC-QQQ
M2024-1275	1	BCK	AM 27 Blood THC Quant by LC-QQQ
M2024-1472	2	BCK	AM 27 Blood THC Quant by LC-QQQ
P2024-0746	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2024-0820	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2024-0870	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2024-1021	2	BCK	AM 27 Blood THC Quant by LC-QQQ
P2024-1036	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2024-1053	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2024-1056	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2024-1083	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2024-1088	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2024-1090	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2024-1095	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2024-1112	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2024-1115	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: 04/17/2024
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*
☒ 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, 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:

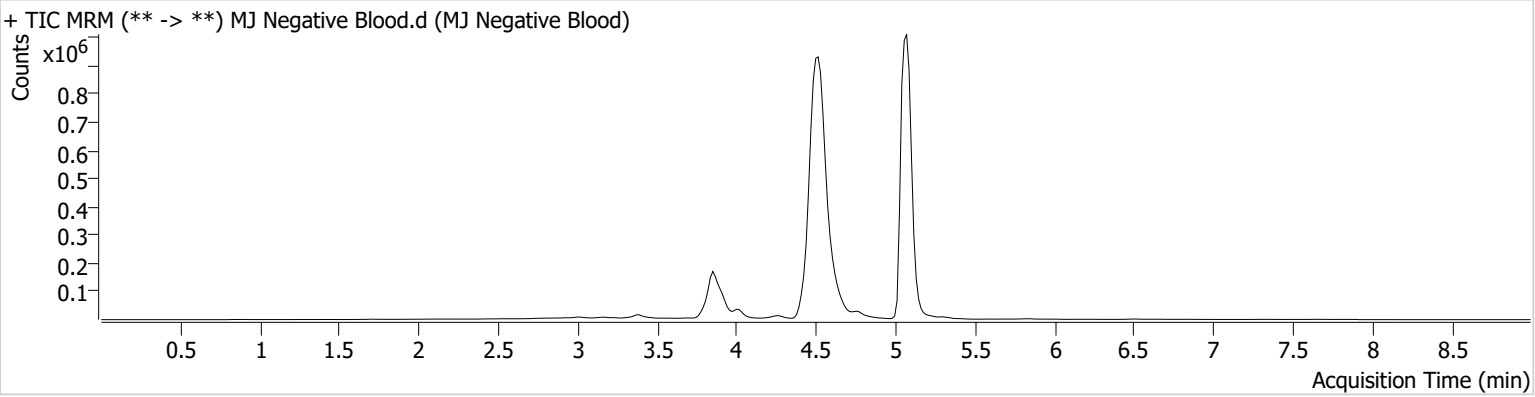
	1	2	3	4	5	6
a				M2024-1472-2	P2024-1083-1	QC 1
b				P2024-0746-1	P2024-1088-1	cal 100 ng
c				P2024-0820-1	P2024-1090-1	cal 50 ng
d				P2024-0870-1	P2024-1095-1	cal 25 ng
e				P2024-1021-2	P2024-1112-1	cal 10ng
f				P2024-1036-1	P2024-1115-1	cal 5 ng
g			M2024-1175-1	P2024-1053-1	NEG Blood	cal 3 ng
h			M2024-1275-1	P2024-1056-1	QC 2	cal 1ng

AM #27 Cannabinoids Quant. Results

Batch results D:\MassHunter\Data\2024\AM 27 28\041724 AM 27 28 CS\QuantResults\AM 27.batch.bin
Calibration Last Update 4/18/2024 1:52:08 PM

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-G5	**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	4/17/2024 3:45:04 PM		
Sample Info.			

Sample Chromatogram

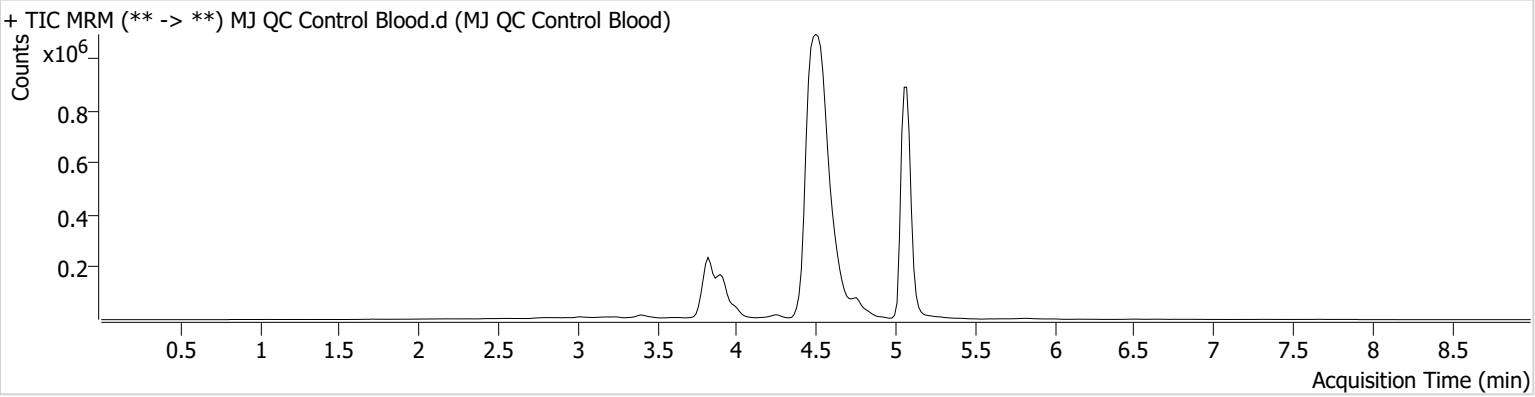


AM #27 Cannabinoids Quant. Results

Batch results D:\MassHunter\Data\2024\AM 27 28\041724 AM 27 28 CS\QuantResults\AM 27.batch.bin
Calibration Last Update 4/18/2024 1:52:08 PM

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-A6	**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	4/17/2024 3:18:52 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.075	162156	∞	26.0	∞	3668264	5.0297 ng/ml
THC-COOH	3.909	44446	∞	193.0	∞	394524	14.6062 ng/ml
THC-OH	3.820	93438	∞	13.7	234.11	1008553	4.9270 ng/ml

AM #27 Cannabinoids Quant. Results

Batch results D:\MassHunter\Data\2024\AM 27 28\041724 AM 27 28 CS\QuantResults\AM 27.batch.bin
Calibration Last Update 4/18/2024 1:52:08 PM

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-H5	**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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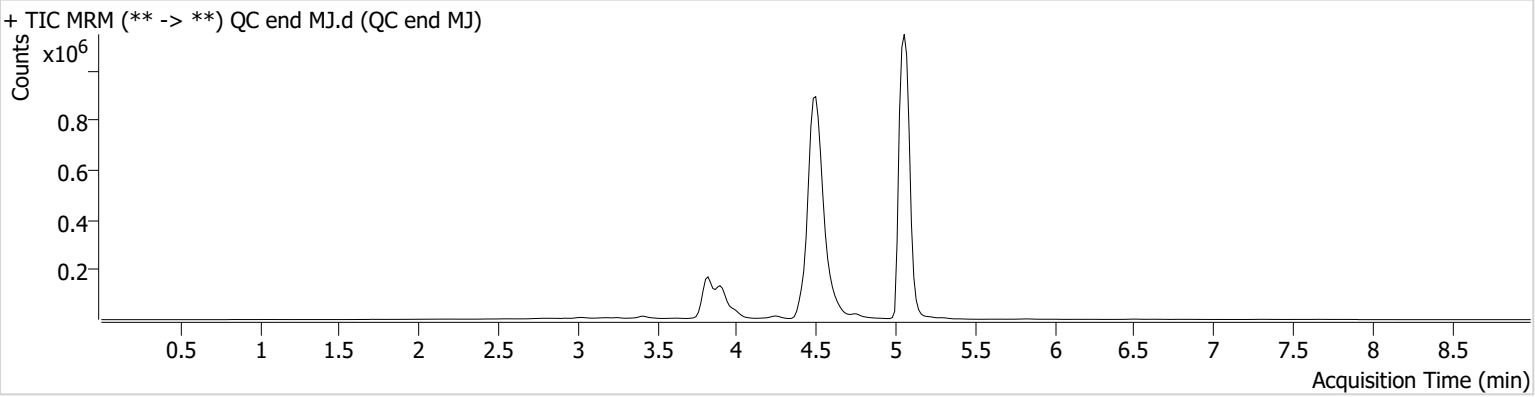
Acq. Date-Time	4/17/2024 11:10:31 PM		
Sample Info.			

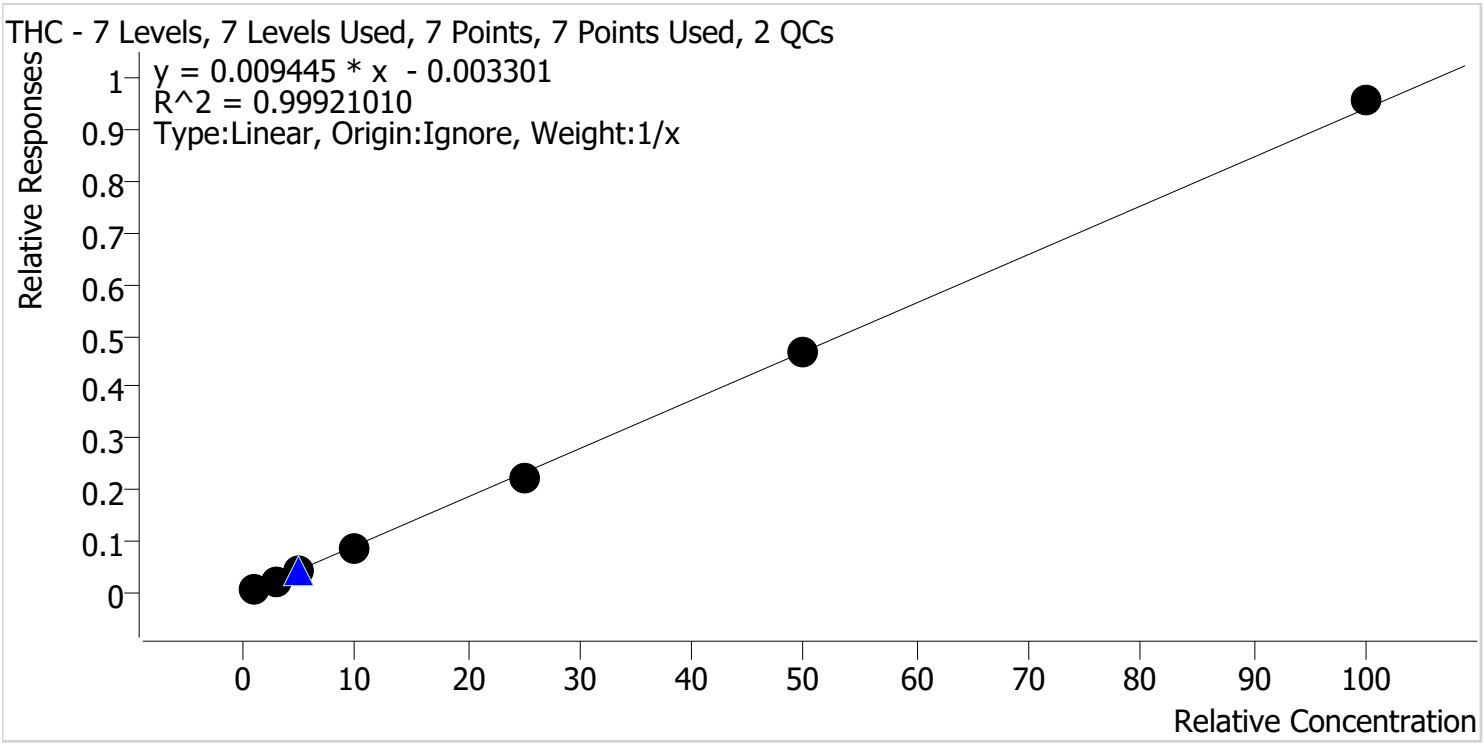
Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.075	210812	2613.80	25.5	∞	4982205	4.8293 ng/ml
THC-COOH	3.909	33798	791.29	196.0	∞	318629	13.8295 ng/ml
THC-OH	3.820	71092	∞	12.6	331.04	722325	5.2309 ng/ml

AM #27 Cannabinoids Quant. Calibration Curve Report

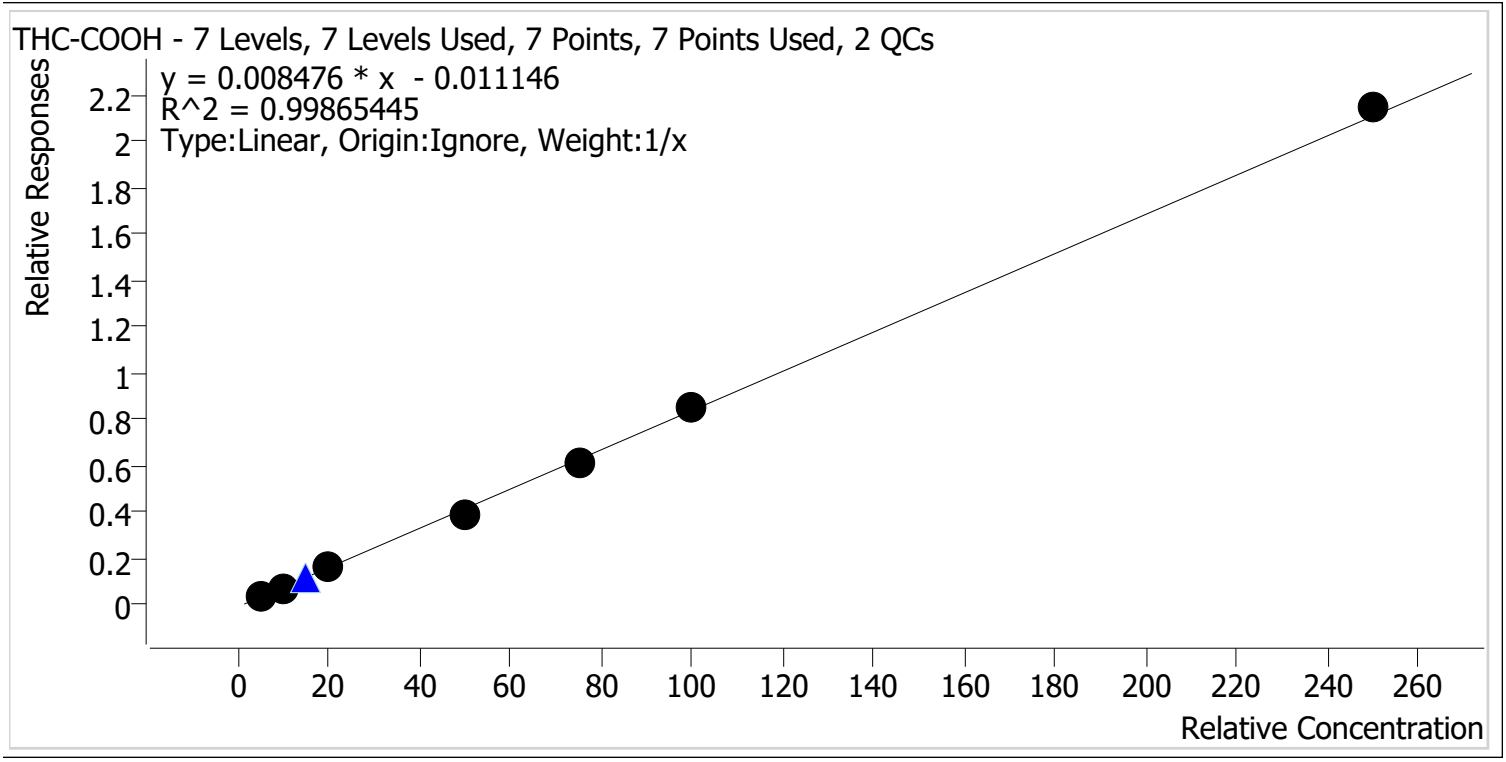
Batch results	D:\MassHunter\Data\2024\AM 27 28\041724 AM 27 28 CS\QuantResults\AM 27.batch.bin
Last Cal. Update	4/18/2024 1:52 PM
Analyst Name	ISP\datastor
Analyte	THC
Internal Standard	THC-D3



Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
Cal 1 MJ	1	✔	1.0	1.2	115.7
Cal 2 MJ	2	✔	3.0	2.9	96.4
Cal 3 MJ	3	✔	5.0	4.7	95.0
Cal 4 MJ	4	✔	10.0	9.5	95.2
Cal 5 MJ	5	✔	25.0	24.0	96.0
Cal 6 MJ	6	✔	50.0	50.1	100.1
Cal 7 MJ	7	✔	100.0	101.6	101.6

AM #27 Cannabinoids Quant. Calibration Curve Report

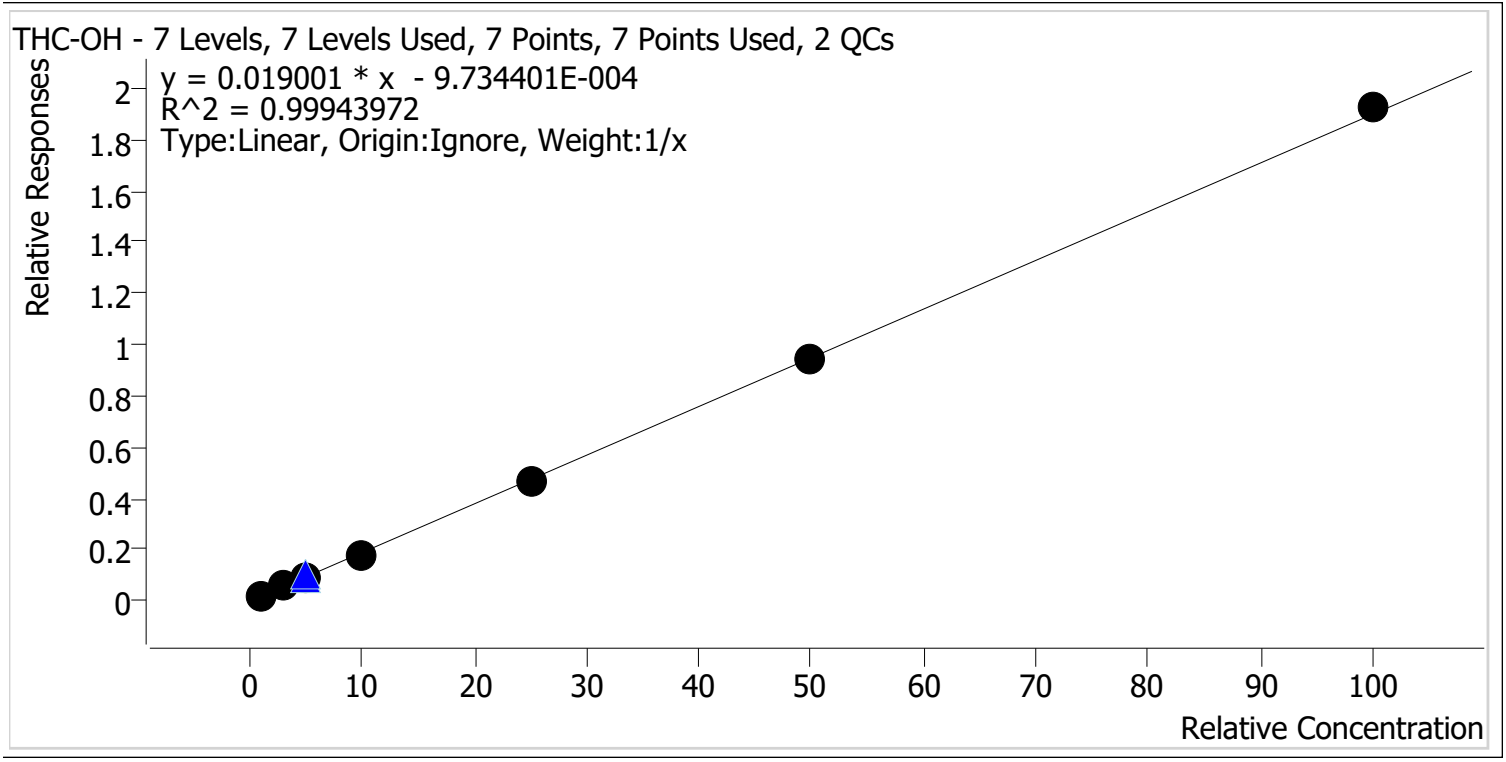
Batch results	D:\MassHunter\Data\2024\AM 27 28\041724 AM 27 28 CS\QuantResults\AM 27.batch.bin
Last Cal. Update	4/18/2024 1:52 PM
Analyst Name	ISP\datastor
Analyte	THC-COOH
Internal Standard	THC-COOH-D9



Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
Cal 1 MJ	1	✔	5.0	5.6	111.6
Cal 2 MJ	2	✔	10.0	9.7	97.2
Cal 3 MJ	3	✔	20.0	19.6	98.2
Cal 4 MJ	4	✔	50.0	46.1	92.3
Cal 5 MJ	5	✔	75.0	73.1	97.5
Cal 6 MJ	6	✔	100.0	101.4	101.4
Cal 7 MJ	7	✔	250.0	254.3	101.7

AM #27 Cannabinoids Quant. Calibration Curve Report

Batch results	D:\MassHunter\Data\2024\AM 27 28\041724 AM 27 28 CS\QuantResults\AM 27.batch.bin
Last Cal. Update	4/18/2024 1:52 PM
Analyst Name	ISP\datastor
Analyte	THC-OH
Internal Standard	THC-OH-D3



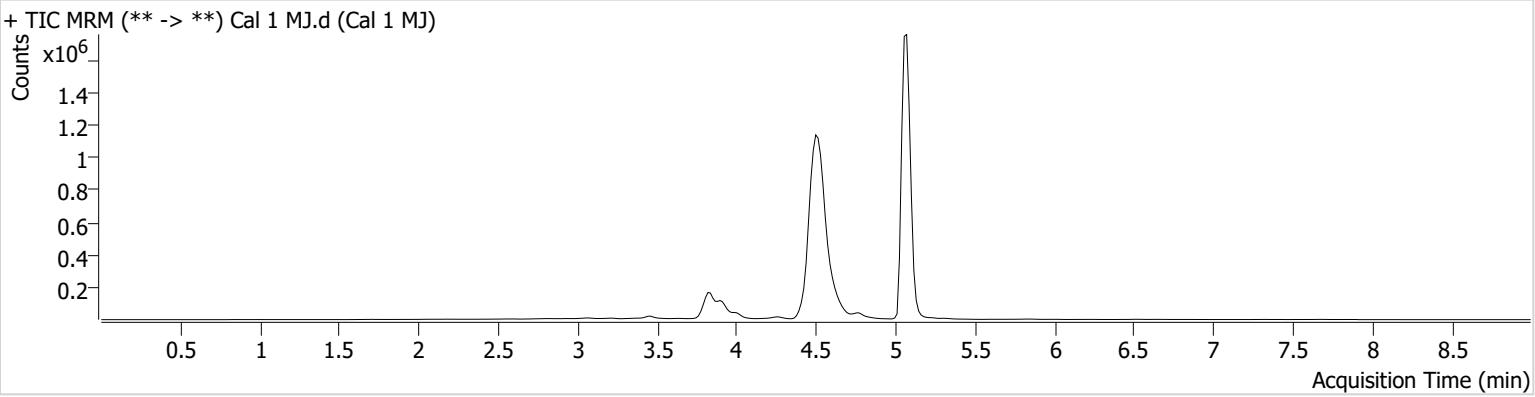
Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
Cal 1 MJ	1	✔	1.0	1.1	113.6
Cal 2 MJ	2	✔	3.0	3.0	98.9
Cal 3 MJ	3	✔	5.0	4.6	92.4
Cal 4 MJ	4	✔	10.0	9.5	95.2
Cal 5 MJ	5	✔	25.0	24.9	99.4
Cal 6 MJ	6	✔	50.0	49.6	99.1
Cal 7 MJ	7	✔	100.0	101.3	101.3

AM #27 Cannabinoids Quant. Results

Batch results D:\MassHunter\Data\2024\AM 27 28\041724 AM 27 28 CS\QuantResults\AM 27.batch.bin
Calibration Last Update 4/18/2024 1:52:08 PM

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-H6	**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	4/17/2024 1:15:16 PM		
Sample Info.			

Sample Chromatogram



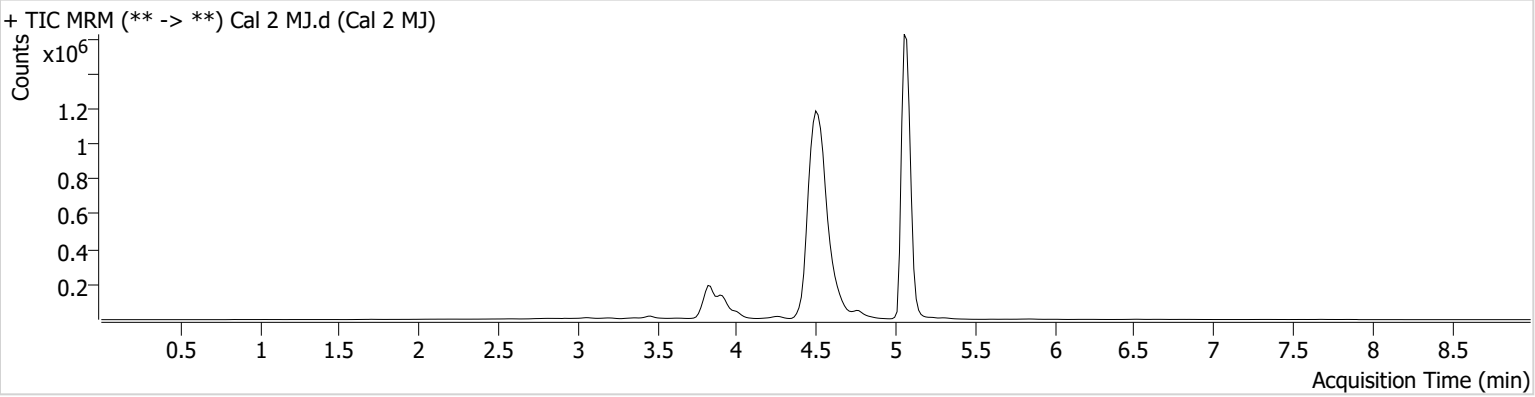
Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.075	51687	781.13	26.7	∞	6779056	1.1568 ng/ml
THC-COOH	3.924	11677	1239.39	201.1	∞	322909	5.5814 ng/ml
THC-OH	3.835	15687	31.95	12.1	15.40	761269	1.1357 ng/ml

AM #27 Cannabinoids Quant. Results

Batch results D:\MassHunter\Data\2024\AM 27 28\041724 AM 27 28 CS\QuantResults\AM 27.batch.bin
Calibration Last Update 4/18/2024 1:52:08 PM

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-G6	**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	4/17/2024 1:28:32 PM		
Sample Info.			

Sample Chromatogram



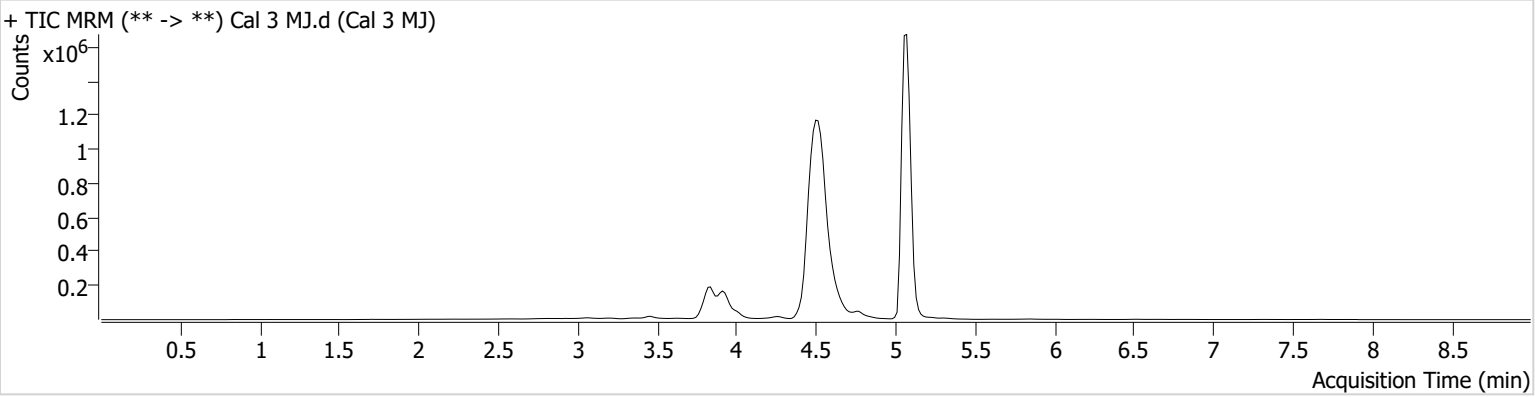
Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.075	148787	∞	24.9	∞	6193164	2.8931 ng/ml
THC-COOH	3.924	25330	301.29	193.0	413.61	355525	9.7207 ng/ml
THC-OH	3.835	48268	∞	12.9	63.31	871624	2.9656 ng/ml

AM #27 Cannabinoids Quant. Results

Batch results D:\MassHunter\Data\2024\AM 27 28\041724 AM 27 28 CS\QuantResults\AM 27.batch.bin
Calibration Last Update 4/18/2024 1:52:08 PM

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-F6	**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	4/17/2024 1:41:39 PM		
Sample Info.			

Sample Chromatogram



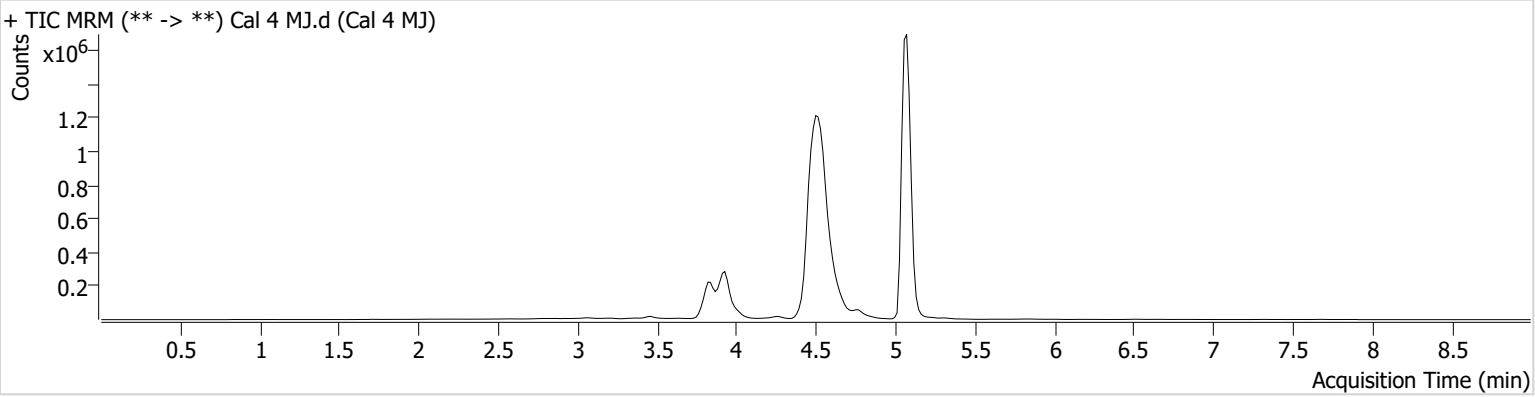
Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.075	264537	∞	24.4	∞	6367235	4.7482 ng/ml
THC-COOH	3.924	53325	∞	193.6	∞	343406	19.6352 ng/ml
THC-OH	3.835	73178	∞	13.5	∞	842550	4.6221 ng/ml

AM #27 Cannabinoids Quant. Results

Batch results D:\MassHunter\Data\2024\AM 27 28\041724 AM 27 28 CS\QuantResults\AM 27.batch.bin
Calibration Last Update 4/18/2024 1:52:08 PM

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-E6	**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	4/17/2024 1:54:44 PM		
Sample Info.			

Sample Chromatogram



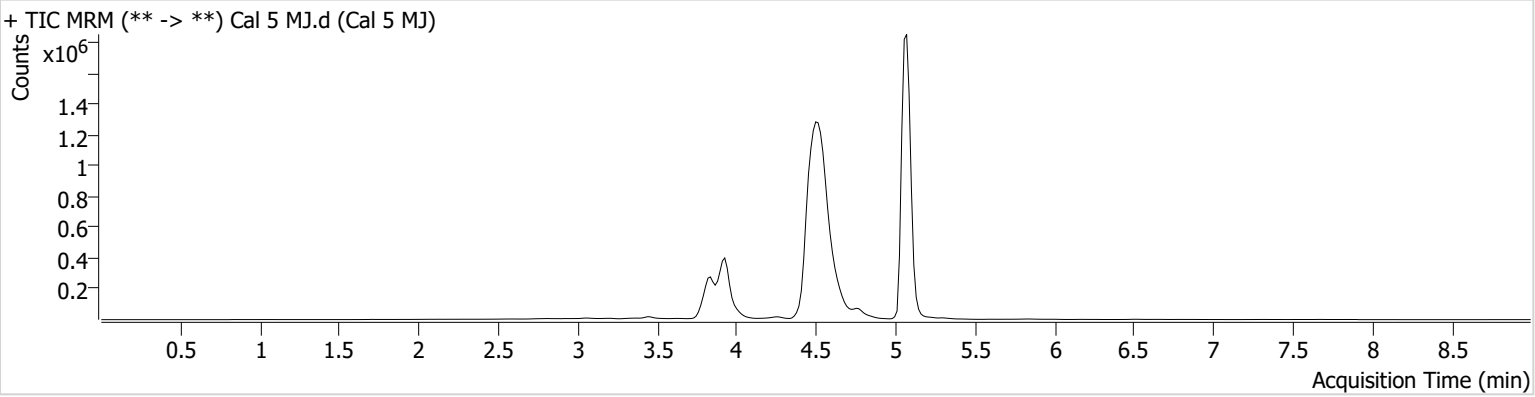
Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.075	526043	1874.54	24.5	∞	6074636	9.5178 ng/ml
THC-COOH	3.924	132935	1583.95	192.9	∞	349861	46.1433 ng/ml
THC-OH	3.835	159358	∞	13.4	∞	885346	9.5240 ng/ml

AM #27 Cannabinoids Quant. Results

Batch results D:\MassHunter\Data\2024\AM 27 28\041724 AM 27 28 CS\QuantResults\AM 27.batch.bin
Calibration Last Update 4/18/2024 1:52:08 PM

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-D6	**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	4/17/2024 2:26:21 PM		
Sample Info.			

Sample Chromatogram



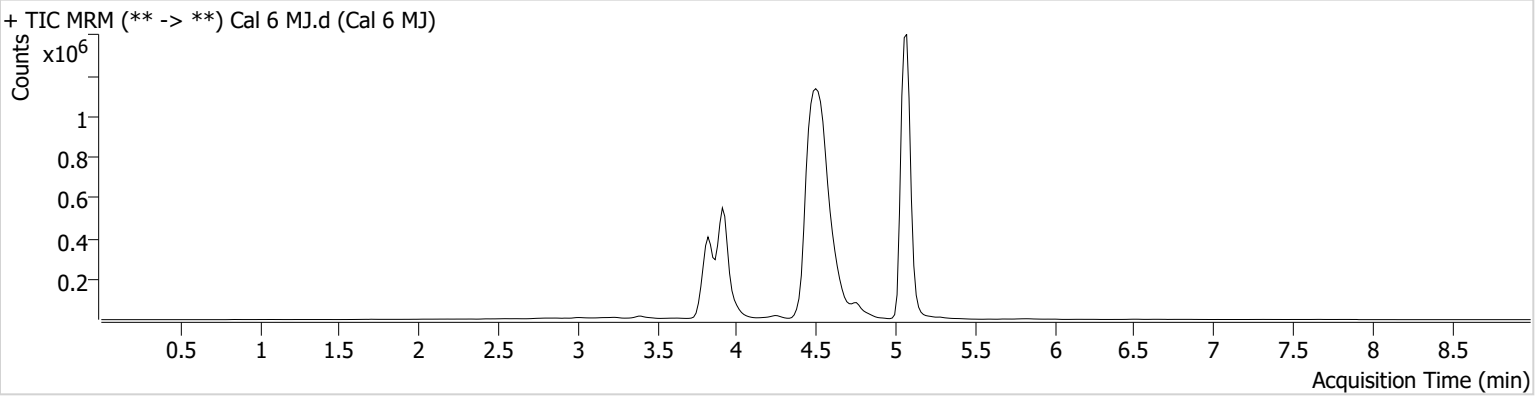
Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.075	1292926	∞	25.5	∞	5787258	24.0026 ng/ml
THC-COOH	3.924	220766	∞	183.6	∞	362586	73.1491 ng/ml
THC-OH	3.835	422202	∞	13.8	177.95	895564	24.8620 ng/ml

AM #27 Cannabinoids Quant. Results

Batch results D:\MassHunter\Data\2024\AM 27 28\041724 AM 27 28 CS\QuantResults\AM 27.batch.bin
Calibration Last Update 4/18/2024 1:52:08 PM

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-C6	**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	4/17/2024 2:39:35 PM		
Sample Info.			

Sample Chromatogram



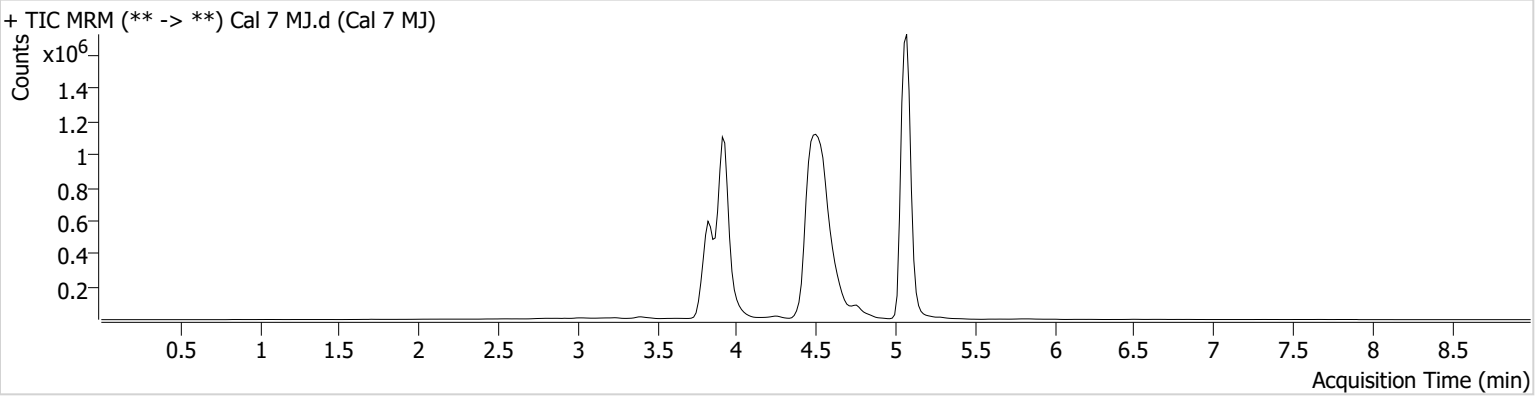
Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.075	1756668	∞	25.9	∞	3741746	50.0549 ng/ml
THC-COOH	3.909	304290	∞	186.5	15359.02	358569	101.4357 ng/ml
THC-OH	3.820	901643	∞	13.9	727.56	958562	49.5541 ng/ml

AM #27 Cannabinoids Quant. Results

Batch results D:\MassHunter\Data\2024\AM 27 28\041724 AM 27 28 CS\QuantResults\AM 27.batch.bin
Calibration Last Update 4/18/2024 1:52:08 PM

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-B6	**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	4/17/2024 2:52:41 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.075	3204483	∞	26.0	∞	3349922	101.6266 ng/ml
THC-COOH	3.909	707668	∞	184.3	∞	329977	254.3345 ng/ml
THC-OH	3.820	1809708	∞	13.8	∞	940326	101.3365 ng/ml