REVIEWED
By Tamara Salazar at 4:15 pm, Jan 29, 2024

1/29/2024

Worklist: 6666

LAB_CASE	ITEM	ITEM_TYPE	DESCRIPTION
M2023-5537	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2023-4040	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2024-0074	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2024-0082	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2024-0084	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2024-0088	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2024-0143	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: 01/26/2024
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 23E52981
Column: Phenomenex Phenyl Hexyl (4.6x50mm, 2.6um)
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	P2024-0143-1			
B	IS + Cal. 2	NEG Blood	P2024-0074-1			
C	IS + Cal. 3	M2023-5537-1	P2024-0082-1			
D	IS + Cal. 4	P2023-4040-1				
E	IS + Cal. 5	P2024-0074-1*				
F	IS + Cal. 6	P2024-0082-1*				
G	IS + Cal. 7	P2024-0084-1				
H	QC1	P2024-0088-1				

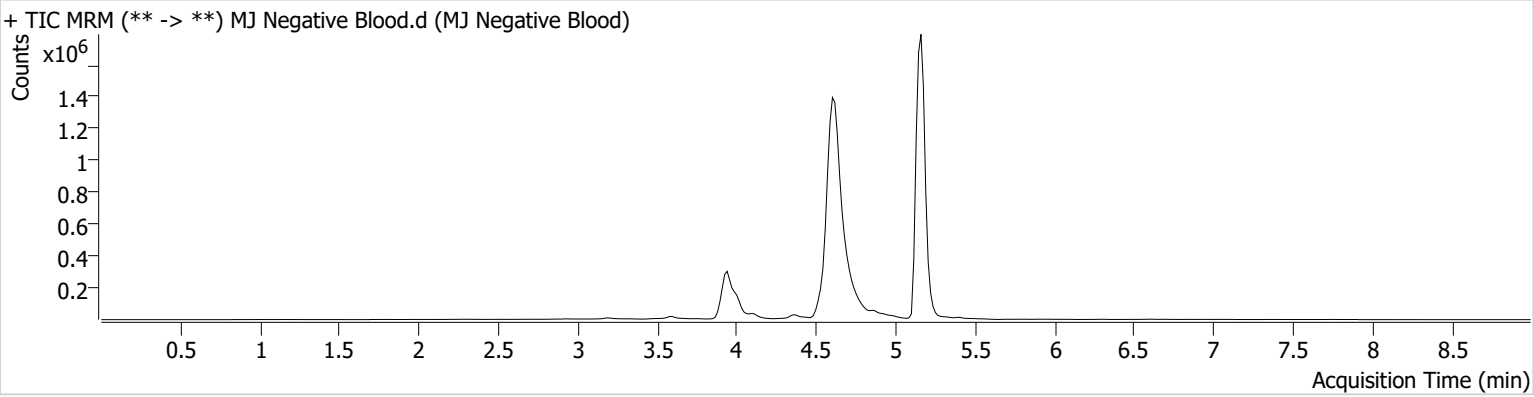
*Moved during SLE portion of the extraction due to blood clots

AM #27 Cannabinoids Quant. Results

Batch results D:\MassHunter\Data\2024\AM 27 28\012624 AM 27 28 CS\QuantResults\AM 27.batch.bin
Calibration Last Update 1/29/2024 1:27:05 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-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	1/26/2024 2:39:13 PM		
Sample Info.			

Sample Chromatogram

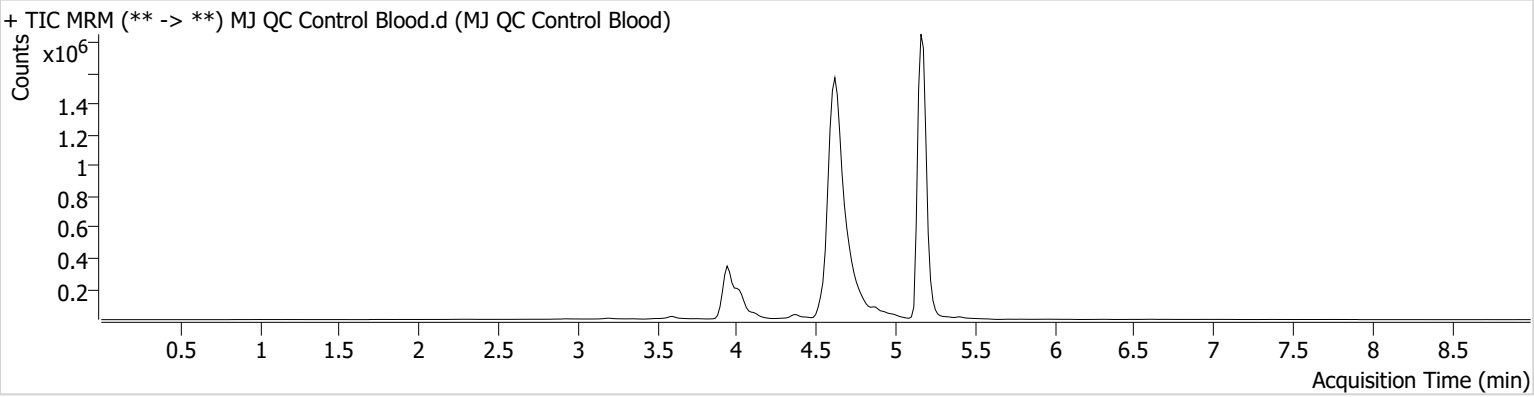


AM #27 Cannabinoids Quant. Results

Batch results D:\MassHunter\Data\2024\AM 27 28\012624 AM 27 28 CS\QuantResults\AM 27.batch.bin
Calibration Last Update 1/29/2024 1:27:05 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-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	1/26/2024 2:13:00 PM		
Sample Info.			

Sample Chromatogram



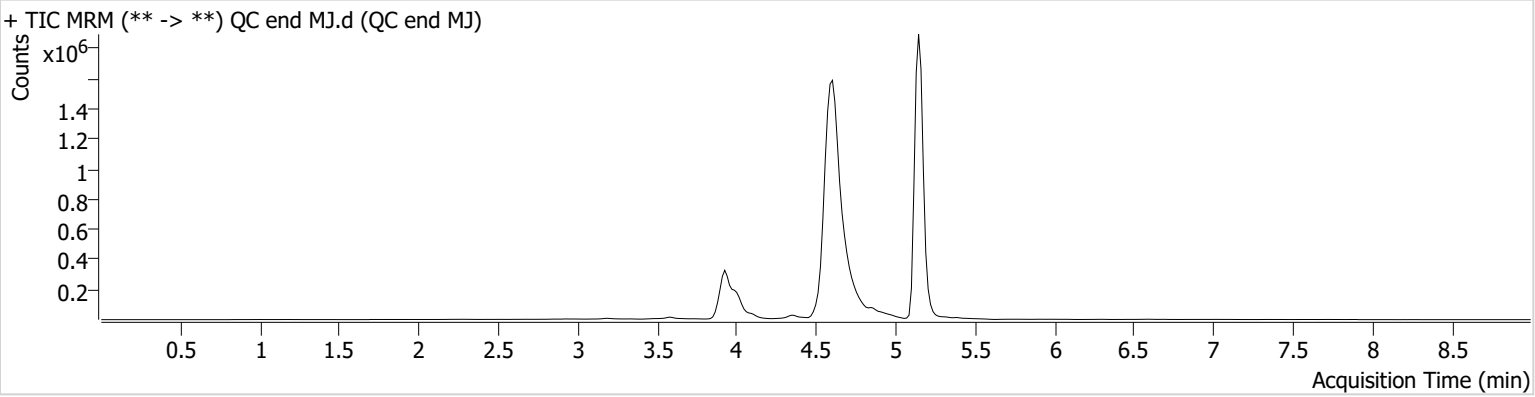
Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.180	310711	∞	24.8	∞	6723838	5.1436 ng/ml
THC-COOH	4.030	39763	173.88	236.4	1045.70	431978	14.3671 ng/ml
THC-OH	3.956	87707	∞	15.4	∞	1300842	5.0314 ng/ml

AM #27 Cannabinoids Quant. Results

Batch results D:\MassHunter\Data\2024\AM 27 28\012624 AM 27 28 CS\QuantResults\AM 27.batch.bin
Calibration Last Update 1/29/2024 1:27:05 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-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	1/26/2024 6:08:56 PM		
Sample Info.			

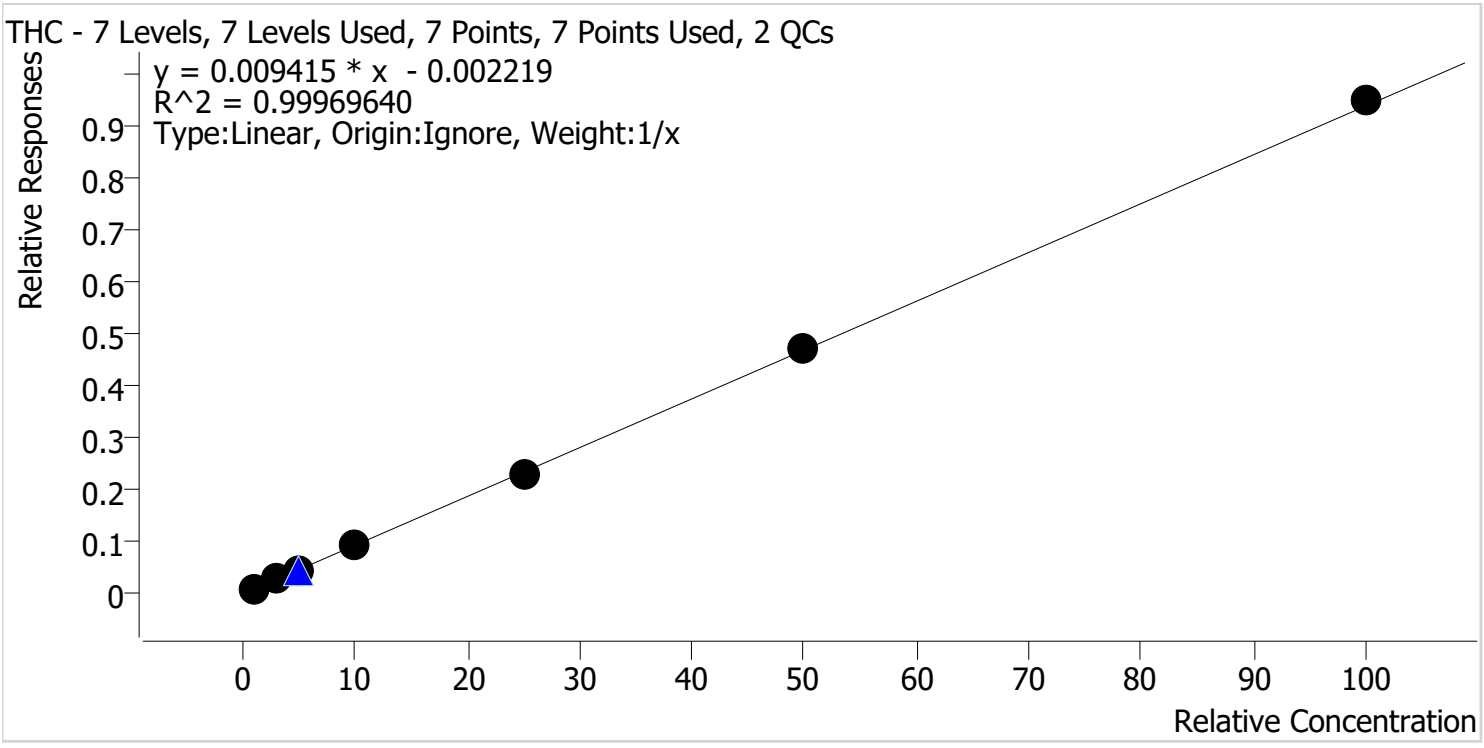
Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.150	307724	∞	24.7	∞	6730579	5.0915 ng/ml
THC-COOH	4.015	39676	213.03	232.3	∞	423491	14.6098 ng/ml
THC-OH	3.926	70714	∞	16.0	∞	1183410	4.5190 ng/ml

AM #27 Cannabinoids Quant. Calibration Curve Report

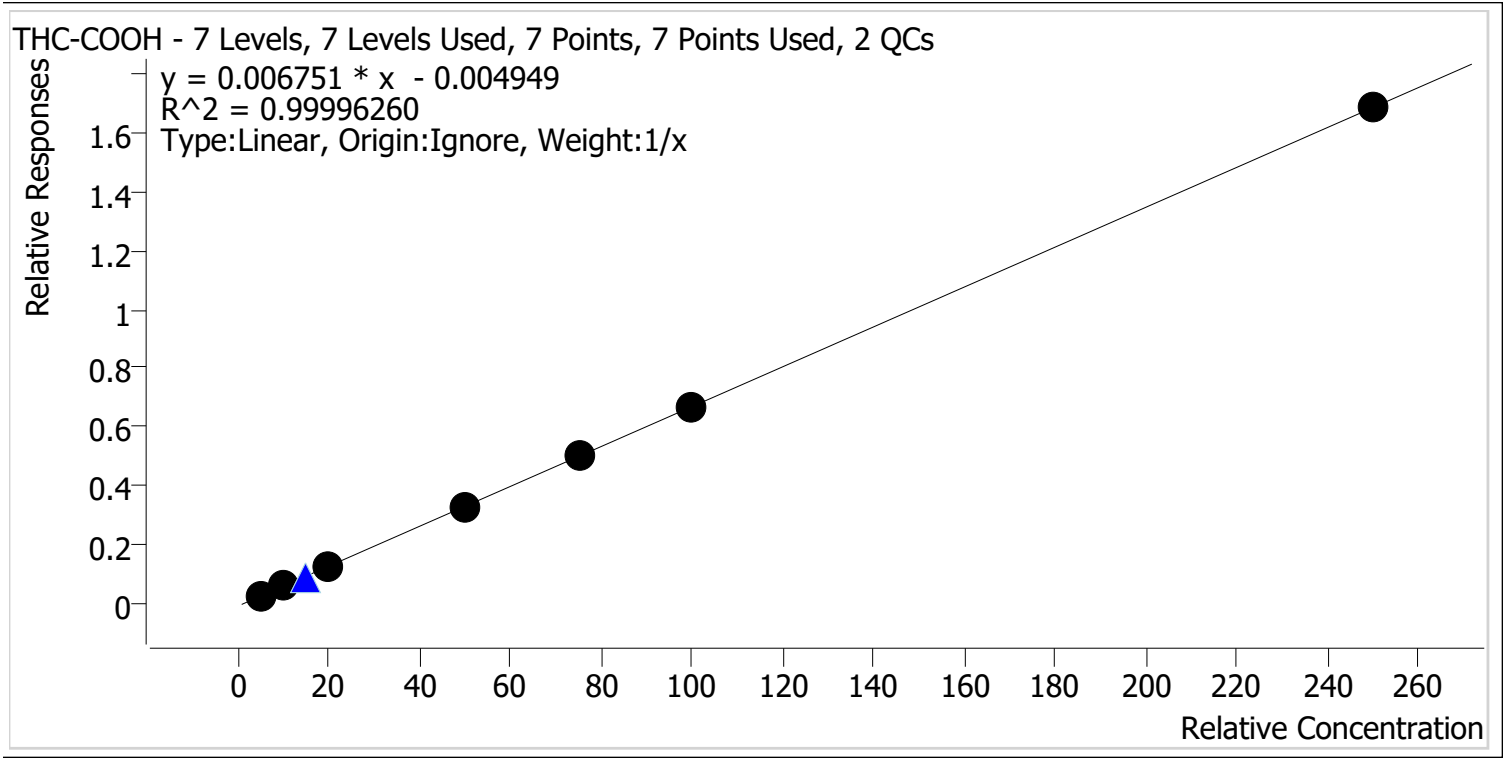
Batch results	D:\MassHunter\Data\2024\AM 27 28\012624 AM 27 28 CS\QuantResults\AM 27.batch.bin
Last Cal. Update	1/29/2024 1:27 PM
Analyst Name	ISP\datastor
Analyte	THC
Internal Standard	THC-D3



Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
Cal 1 MJ	1	✔	1.0	1.1	109.5
Cal 2 MJ	2	✔	3.0	2.9	97.3
Cal 3 MJ	3	✔	5.0	4.9	97.3
Cal 4 MJ	4	✔	10.0	9.8	97.5
Cal 5 MJ	5	✔	25.0	24.3	97.3
Cal 6 MJ	6	✔	50.0	50.0	99.9
Cal 7 MJ	7	✔	100.0	101.1	101.1

AM #27 Cannabinoids Quant. Calibration Curve Report

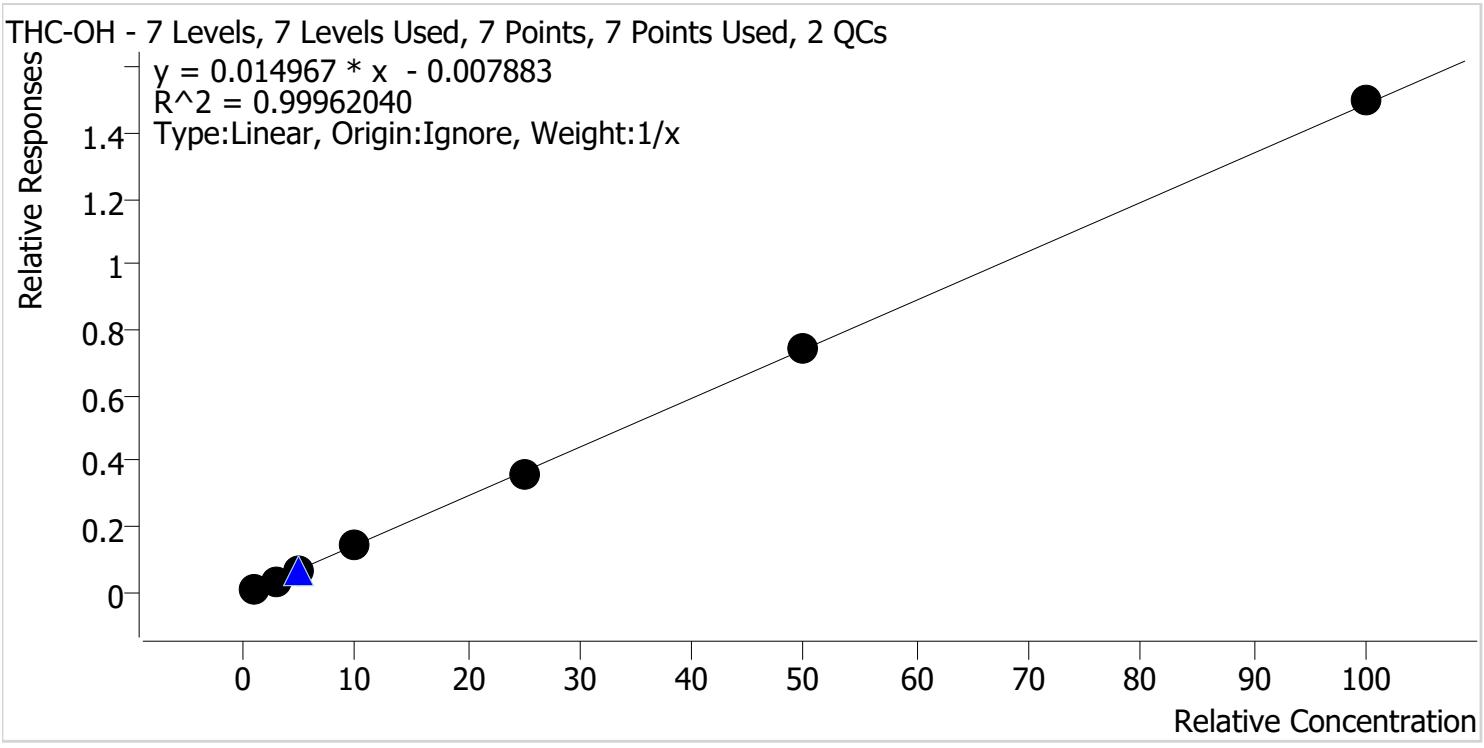
Batch results	D:\MassHunter\Data\2024\AM 27 28\012624 AM 27 28 CS\QuantResults\AM 27.batch.bin
Last Cal. Update	1/29/2024 1:27 PM
Analyst Name	ISP\datastor
Analyte	THC-COOH
Internal Standard	THC-COOH-D9



Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
Cal 1 MJ	1	✔	5.0	5.1	102.2
Cal 2 MJ	2	✔	10.0	9.9	99.4
Cal 3 MJ	3	✔	20.0	19.6	98.2
Cal 4 MJ	4	✔	50.0	49.7	99.4
Cal 5 MJ	5	✔	75.0	75.4	100.5
Cal 6 MJ	6	✔	100.0	100.3	100.3
Cal 7 MJ	7	✔	250.0	249.9	100.0

AM #27 Cannabinoids Quant. Calibration Curve Report

Batch results D:\MassHunter\Data\2024\AM 27 28\012624 AM 27 28 CS\QuantResults\AM 27.batch.bin
Last Cal. Update 1/29/2024 1:27 PM
Analyst Name ISP\datastor
Analyte THC-OH **Internal Standard** THC-OH-D3



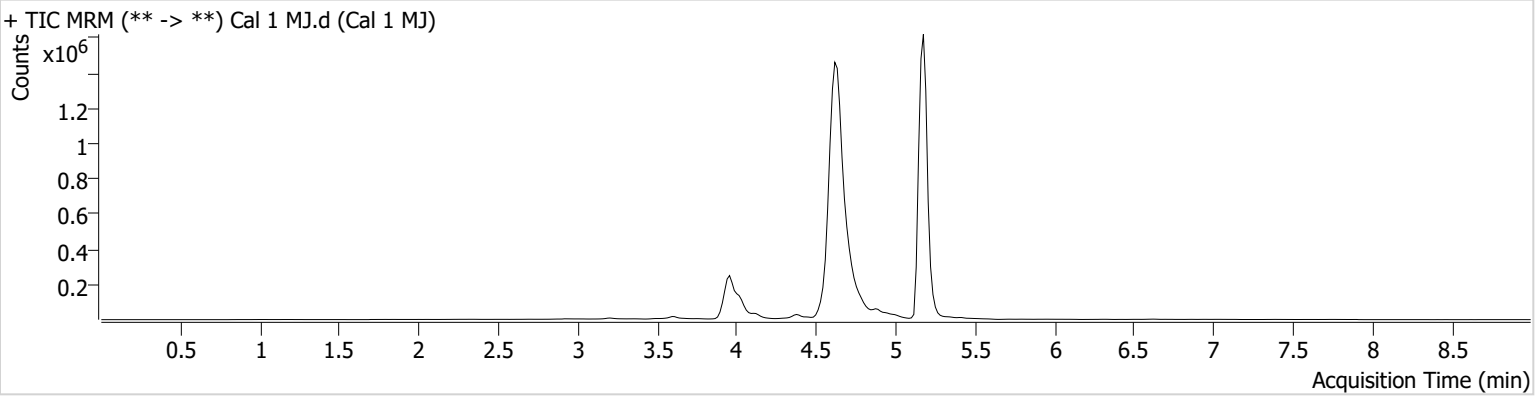
Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
Cal 1 MJ	1	✔	1.0	1.1	111.4
Cal 2 MJ	2	✔	3.0	2.8	94.0
Cal 3 MJ	3	✔	5.0	4.9	97.0
Cal 4 MJ	4	✔	10.0	9.9	99.4
Cal 5 MJ	5	✔	25.0	24.2	96.8
Cal 6 MJ	6	✔	50.0	50.4	100.7
Cal 7 MJ	7	✔	100.0	100.7	100.7

AM #27 Cannabinoids Quant. Results

Batch results D:\MassHunter\Data\2024\AM 27 28\012624 AM 27 28 CS\QuantResults\AM 27.batch.bin
Calibration Last Update 1/29/2024 1:27:05 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-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	1/26/2024 12:27:59 PM		
Sample Info.			

Sample Chromatogram



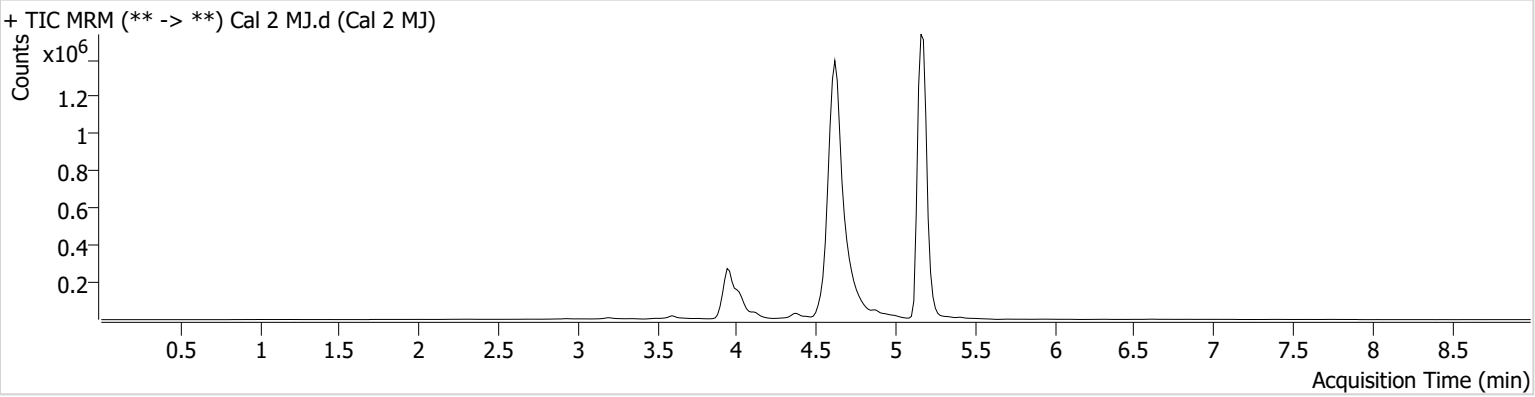
Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.180	48558	∞	27.6	∞	6001758	1.0949 ng/ml
THC-COOH	4.045	10293	215.16	231.6	175.69	348212	5.1113 ng/ml
THC-OH	3.956	8956	∞	19.2	41.13	1019276	1.1138 ng/ml

AM #27 Cannabinoids Quant. Results

Batch results D:\MassHunter\Data\2024\AM 27 28\012624 AM 27 28 CS\QuantResults\AM 27.batch.bin
Calibration Last Update 1/29/2024 1:27:05 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-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	1/26/2024 12:41:15 PM		
Sample Info.			

Sample Chromatogram



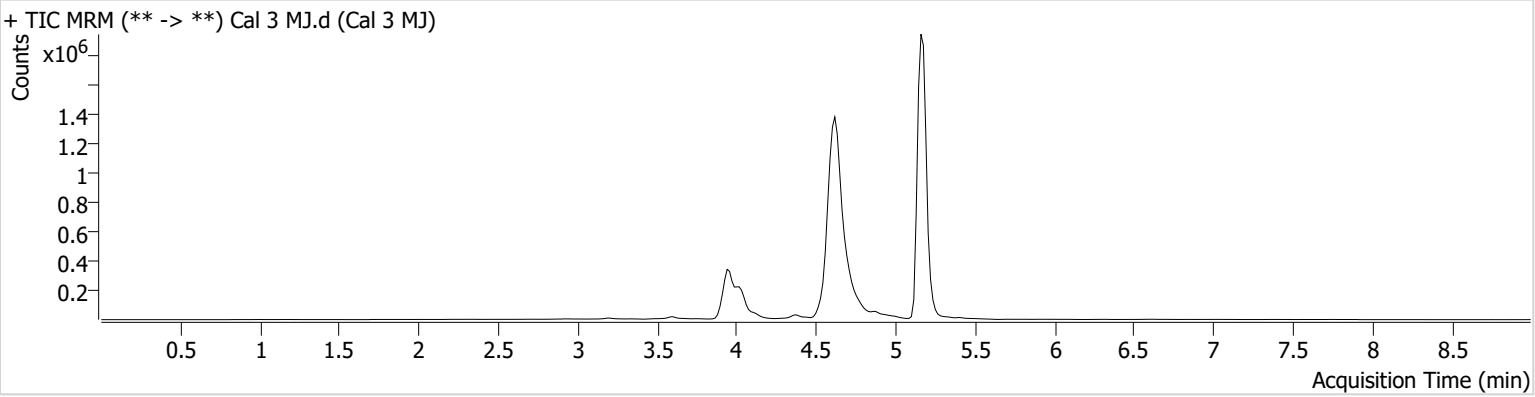
Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.180	152251	∞	24.8	∞	6023734	2.9201 ng/ml
THC-COOH	4.030	22855	1054.04	223.3	790.25	367484	9.9448 ng/ml
THC-OH	3.956	36973	∞	17.6	∞	1076563	2.8213 ng/ml

AM #27 Cannabinoids Quant. Results

Batch results D:\MassHunter\Data\2024\AM 27 28\012624 AM 27 28 CS\QuantResults\AM 27.batch.bin
Calibration Last Update 1/29/2024 1:27:05 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-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	1/26/2024 12:54:21 PM		
Sample Info.			

Sample Chromatogram



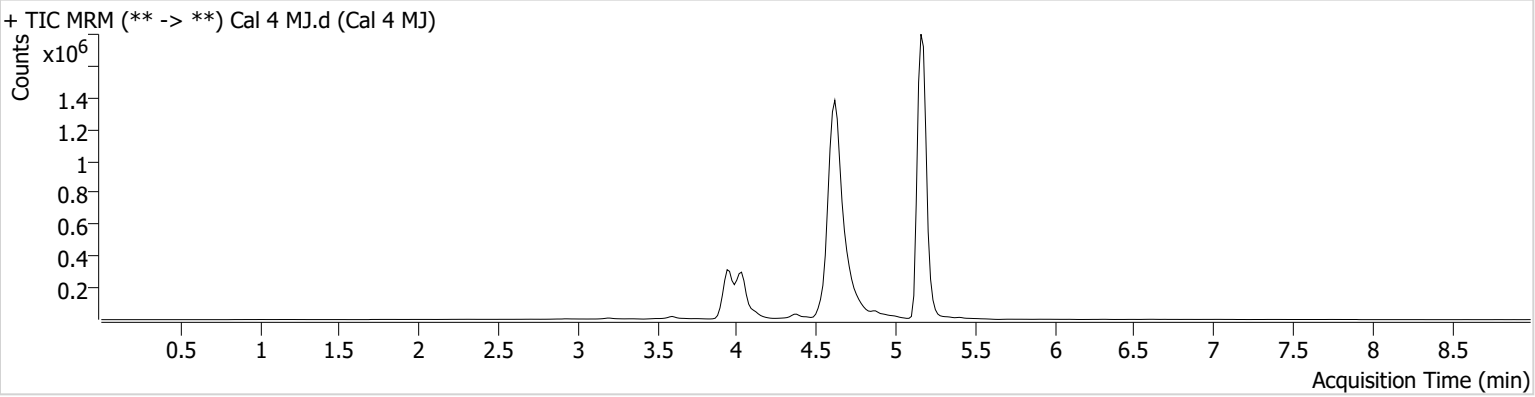
Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.180	314054	∞	24.3	∞	7203048	4.8663 ng/ml
THC-COOH	4.030	57640	308.44	237.2	∞	451707	19.6334 ng/ml
THC-OH	3.956	85056	∞	15.7	∞	1314340	4.8504 ng/ml

AM #27 Cannabinoids Quant. Results

Batch results D:\MassHunter\Data\2024\AM 27 28\012624 AM 27 28 CS\QuantResults\AM 27.batch.bin
Calibration Last Update 1/29/2024 1:27:05 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-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	1/26/2024 1:07:28 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.180	575142	∞	24.5	∞	6419356	9.7514 ng/ml
THC-COOH	4.030	124948	4414.62	228.9	528.14	378086	49.6820 ng/ml
THC-OH	3.956	158383	∞	15.0	∞	1124669	9.9356 ng/ml

AM #27 Cannabinoids Quant. Results

Batch results D:\MassHunter\Data\2024\AM 27 28\012624 AM 27 28 CS\QuantResults\AM 27.batch.bin
Calibration Last Update 1/29/2024 1:27:05 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-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		
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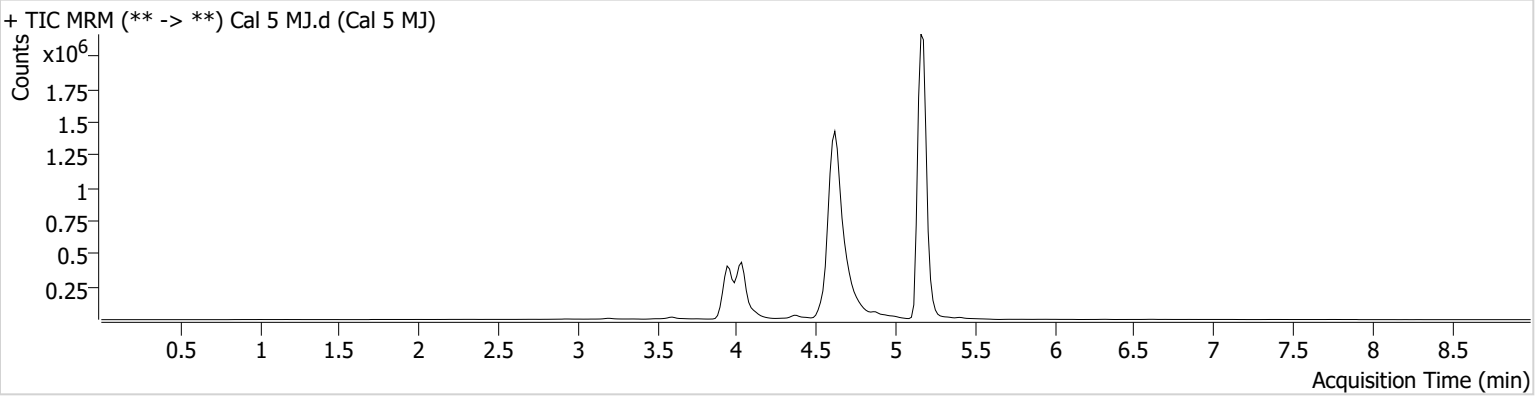
Sample Info.			

Sample Chromatogram



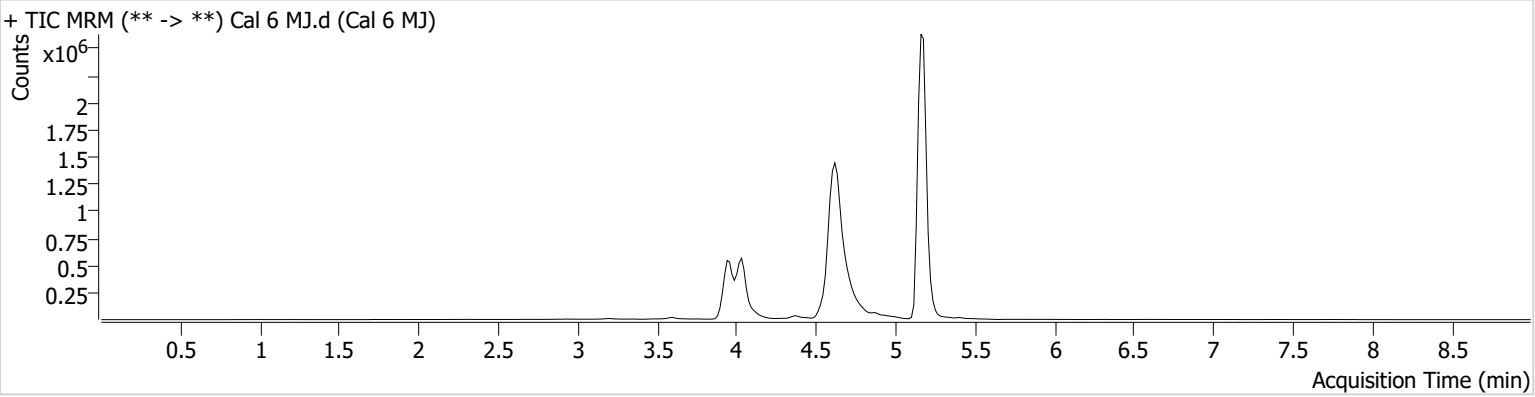
Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.180	1484502	13380.22	24.8	∞	6543426	24.3311 ng/ml
THC-COOH	4.030	197297	∞	229.8	∞	391555	75.3664 ng/ml
THC-OH	3.956	422257	∞	15.3	∞	1192289	24.1887 ng/ml

AM #27 Cannabinoids Quant. Results

Batch results D:\MassHunter\Data\2024\AM 27 28\012624 AM 27 28 CS\QuantResults\AM 27.batch.bin
Calibration Last Update 1/29/2024 1:27:05 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-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	1/26/2024 1:33:42 PM		
Sample Info.			

Sample Chromatogram



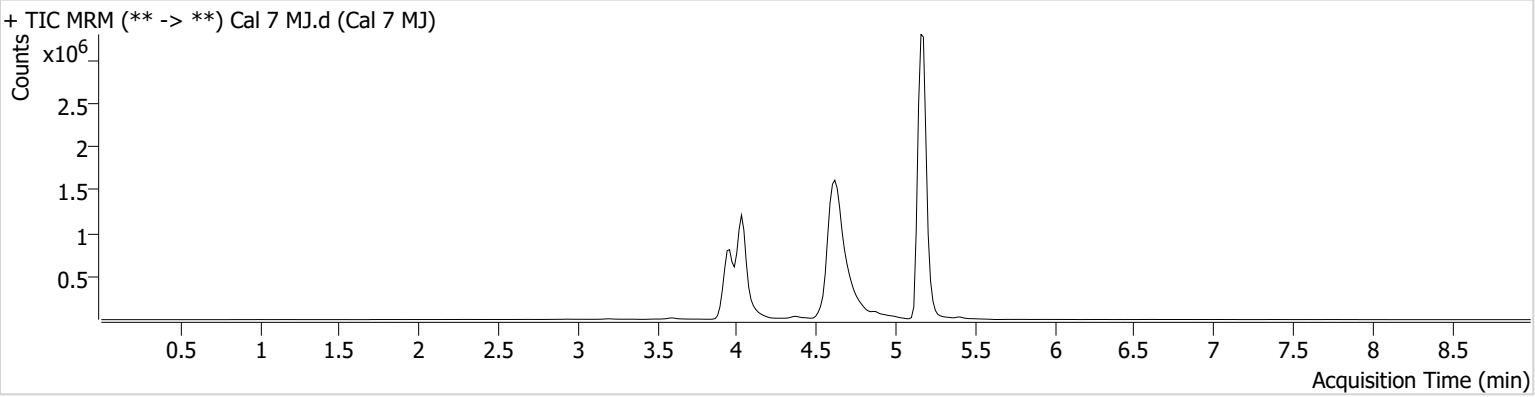
Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.180	2997198	∞	25.0	∞	6400644	49.9695 ng/ml
THC-COOH	4.030	262456	750.15	232.9	3000.21	390293	100.3354 ng/ml
THC-OH	3.956	909308	∞	15.0	∞	1218798	50.3732 ng/ml

AM #27 Cannabinoids Quant. Results

Batch results D:\MassHunter\Data\2024\AM 27 28\012624 AM 27 28 CS\QuantResults\AM 27.batch.bin
Calibration Last Update 1/29/2024 1:27:05 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-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	1/26/2024 1:46:48 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.180	5491919	∞	25.5	∞	5784837	101.0666 ng/ml
THC-COOH	4.030	638088	5582.32	233.1	17104.91	379271	249.9266 ng/ml
THC-OH	3.956	1853060	∞	15.3	∞	1235717	100.7171 ng/ml