

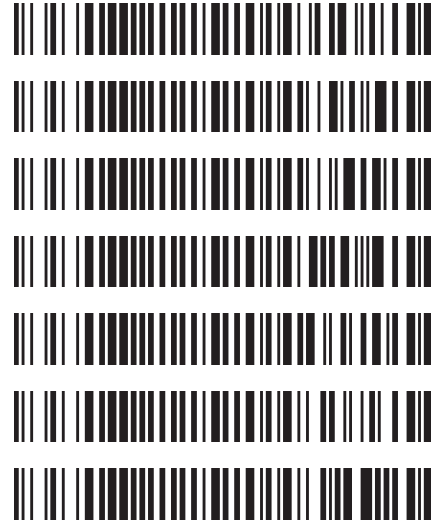
REVIEWED
By Tamara Salazar at 1:40 pm, Dec 09, 2024

9

12/9/2024

Worklist: 6991

<u>LAB CASE</u>	<u>ITEM</u>	<u>ITEM TYPE</u>	<u>DESCRIPTION</u>
P2024-3325	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2024-3366	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2024-3375	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2024-3465	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2024-3491	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2024-3563	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2024-3564	1	BCK	AM 27 Blood THC Quant by LC-QQQ



9

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

Extraction Date: 12/06/2024

Plate lot#: 240919

Mobile phase A: 0.1% Formic Acid in LCMS Water

Blank Blood Lot: Lampire 24C52817

LCMS-QQQ ID: 069901

Analyst: Celena Shrum

Plate Retest Date: 03/19/2025

Mobile phase B: 0.1% Formic acid in Acetonitrile

Column: UCT Selectra DA 100 x 2.1mm 3um

Blank Urine Lot: Blood Only Run

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. 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.
- 5. Place on shaking incubator at ambient temp., 900rpm for 15 minutes.
- 6. Transfer **800µL of blood+acid mixture or urine+acid** to corresponding wells of SLE+ plate.
- 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)** Manifold ID: 067104
- 8. Wait 5 minutes.
- 9. Add **2.25mL MTBE. (Add in 3 increments of 750uL)**
- 10. Wait 5 minutes.
- 11. Apply positive pressure for approx. 15 seconds. **(10-15 PSI- Selector to the left).**
- 12. Add **2.25mL Hexane. (Add in 3 increments of 750uL)**
- 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.
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	QC1	P2024-3563-1			
B	IS + Cal. 2	QC2	P2024-3564-1			
C	IS + Cal. 3	NEG Control				
D	IS + Cal. 4	P2024-3325-1				
E	IS + Cal. 5	P2024-3366-1				
F	IS + Cal. 6	P2024-3375-1				
G	IS + Cal. 7	P2024-3465-1				
H	QC1	P2024-3491-1				

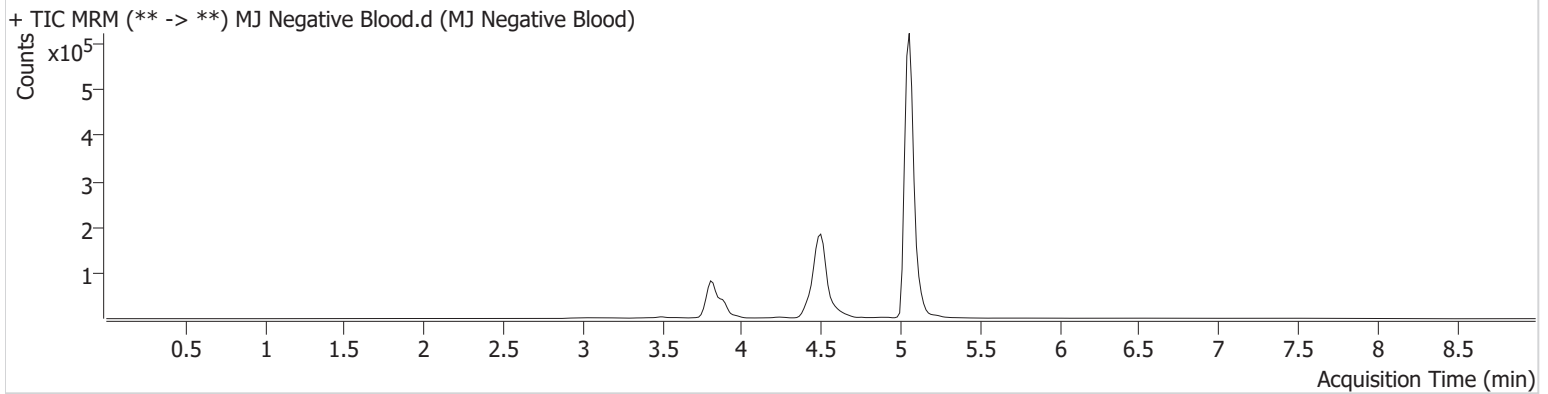
AM #27 Cannabinoids Quant. Results



Batch results D:\MassHunter\Data\2024\AM 27 28\120624 AM 27 28 CS\QuantResults\AM 27.batch.bin
Calibration Last Update 12/9/2024 8:08:54 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-C2	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	12/6/2024 3:56:31 PM		
Sample Info.			

Sample Chromatogram



AM #27 Cannabinoids Quant. Results

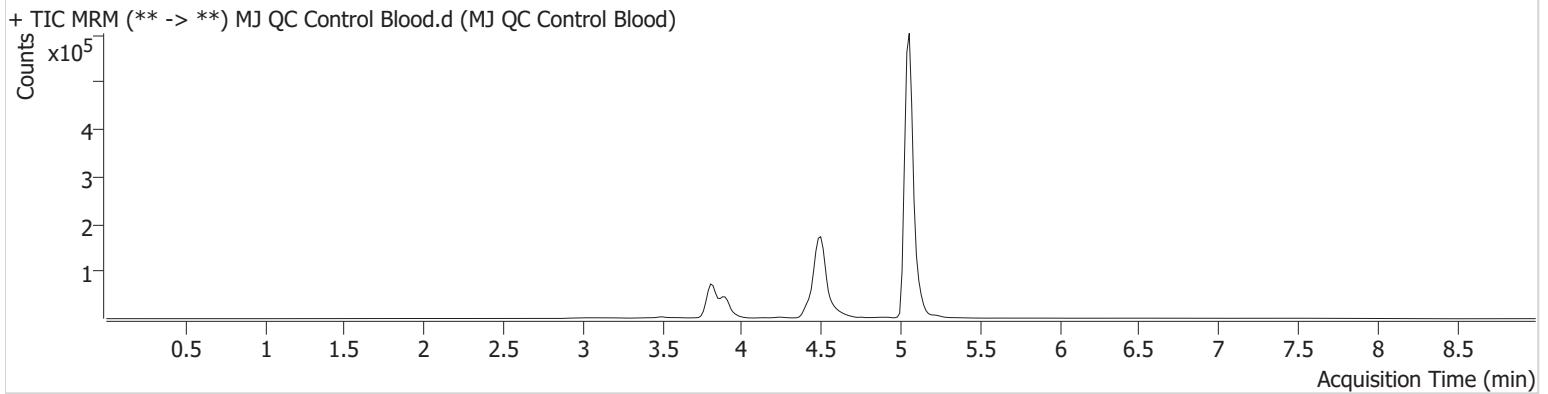


Batch results D:\MassHunter\Data\2024\AM 27 28\120624 AM 27 28 CS\QuantResults\AM 27.batch.bin
Calibration Last Update 12/9/2024 8:08:54 AM

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**
Injection Volume 10
Acq. Date-Time 12/6/2024 3:30:20 PM
Sample Info.

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Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.060	94353	4232.50	26.0	418.33	2037305	4.9525 ng/ml
THC-COOH	3.909	11615	204.73	209.2	1751.07	110228	14.5951 ng/ml
THC-OH	3.820	24863	549.32	13.7	103.45	281076	5.1764 ng/ml

AM #27 Cannabinoids Quant. Results

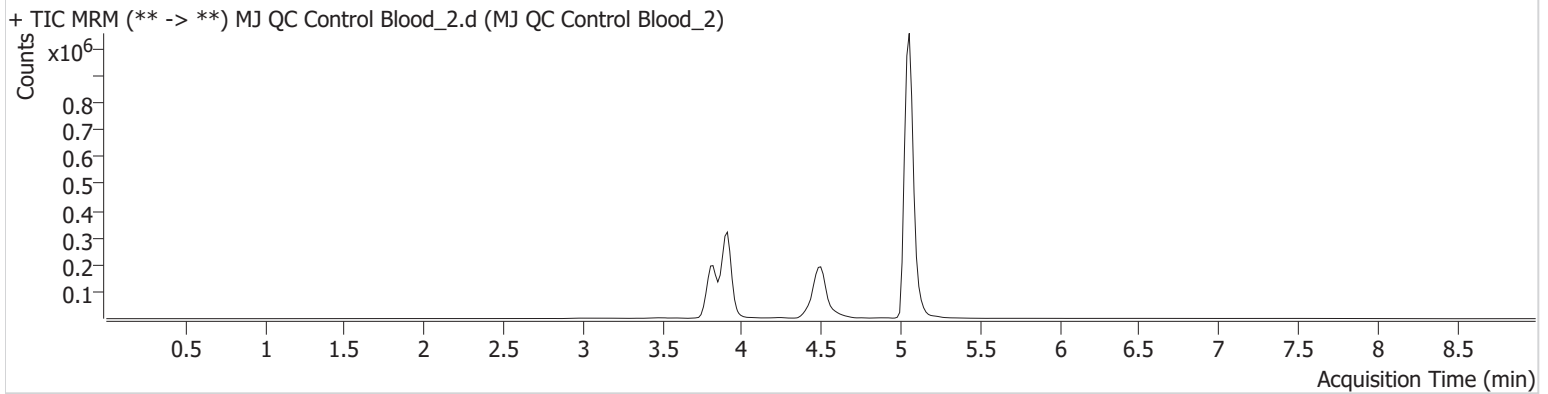


Batch results D:\MassHunter\Data\2024\AM 27 28\120624 AM 27 28 CS\QuantResults\AM 27.batch.bin
Calibration Last Update 12/9/2024 8:08:54 AM

Instrument Falco (069901) **Data File** MJ QC Control Blood_2.d
Type QC **Sample** MJ QC Control Blood_2
Acq. Method AM 27 Agilent Method.m **Operator** Celena Shrum
Sample Position P1-B2 **Comment**
Injection Volume 10
Acq. Date-Time 12/6/2024 7:26:05 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

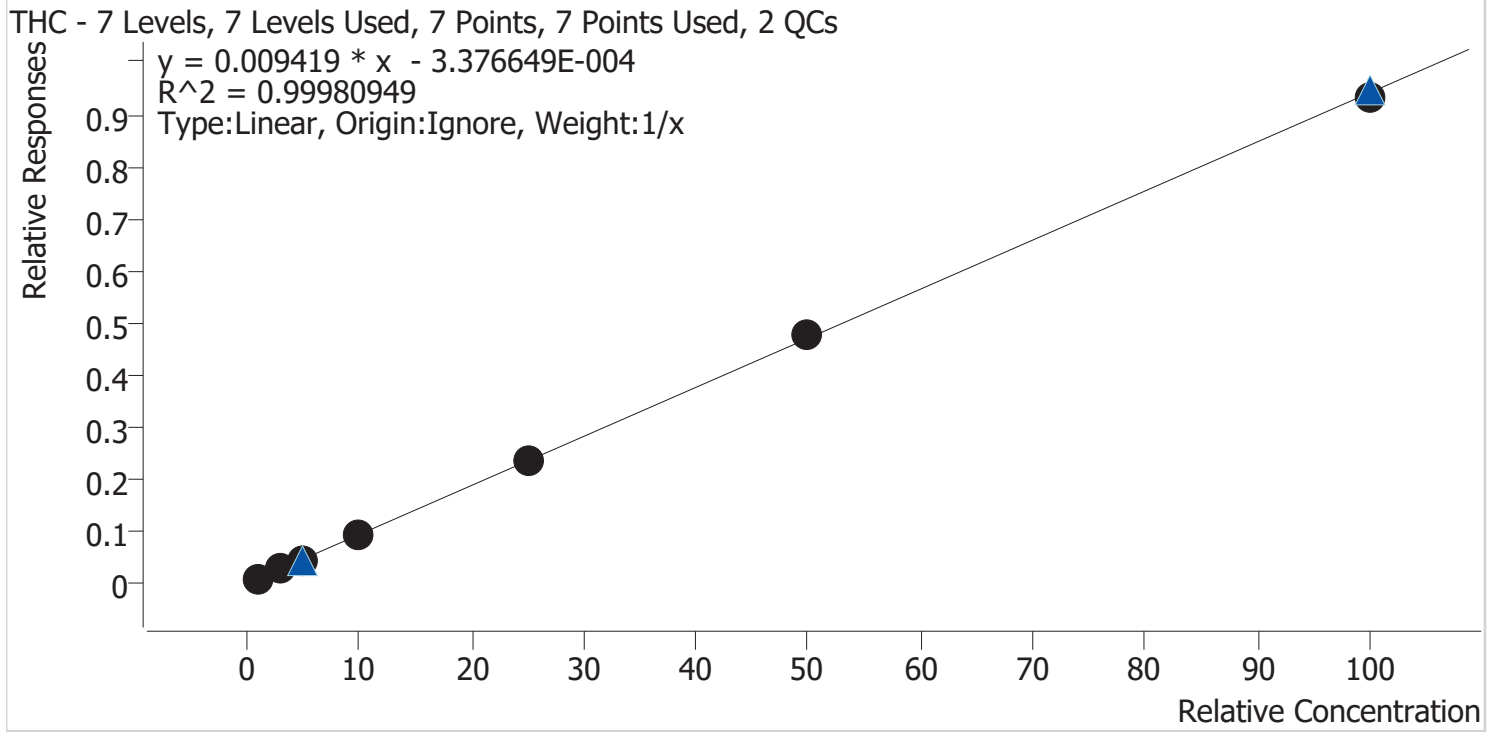


Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.060	1714129	43556.26	25.8	∞	1813220	100.3977 ng/ml
THC-COOH	3.909	187057	3803.83	210.9	7737.16	106936	248.6935 ng/ml
THC-OH	3.820	513055	∞	14.1	1867.85	307152	100.1340 ng/ml



AM #27 Cannabinoids Quant. Calibration Curve Report

Batch results D:\MassHunter\Data\2024\AM 27 28\120624 AM 27 28 CS\QuantResults\AM 27.batch.bin
Last Cal. Update 12/9/2024 8:08 AM
Analyst Name ISP\datastor
Analyte THC **Internal Standard** THC-D3

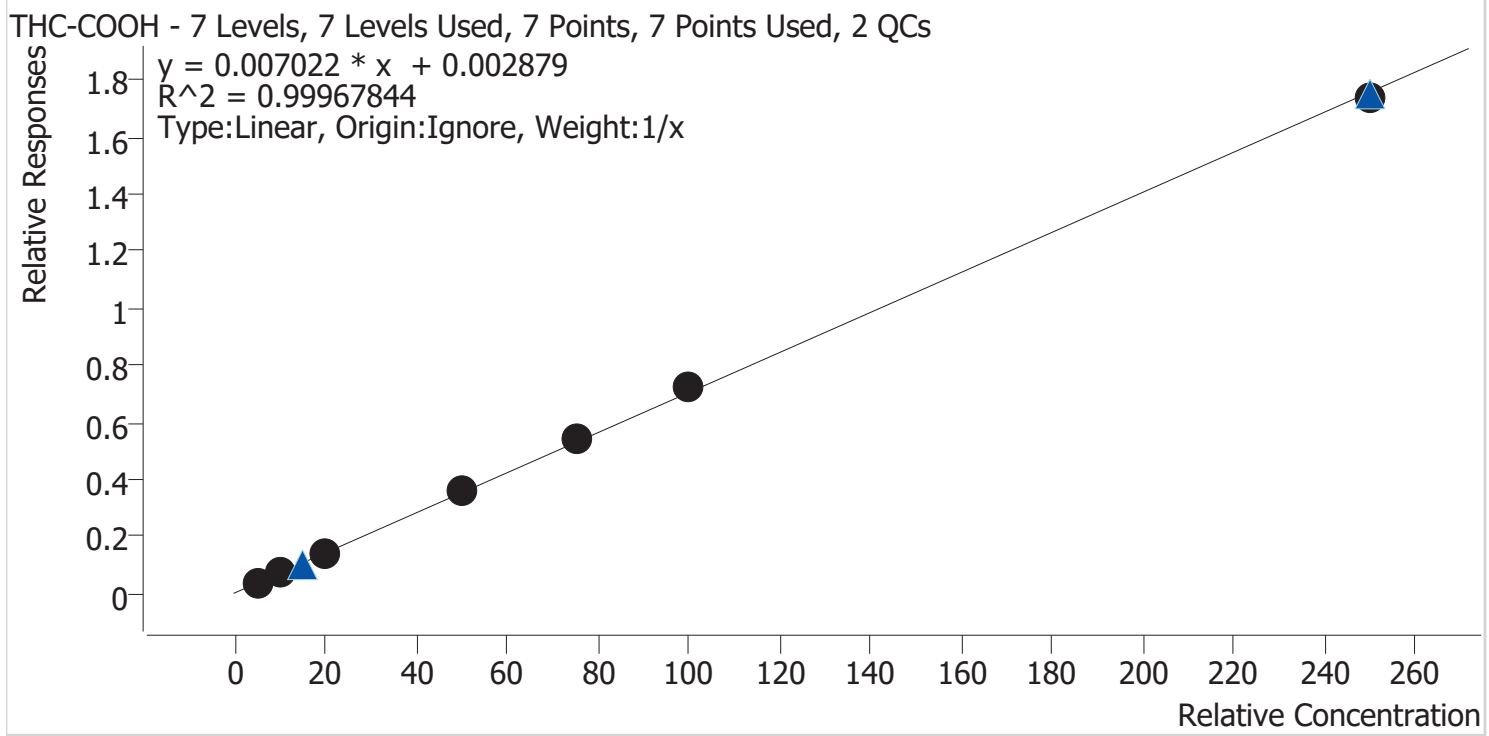


Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
Cal 1 MJ	1	✓	1.0	1.0	101.9
Cal 2 MJ	2	✓	3.0	2.9	98.3
Cal 3 MJ	3	✓	5.0	4.9	98.4
Cal 4 MJ	4	✓	10.0	9.9	99.2
Cal 5 MJ	5	✓	25.0	25.4	101.5
Cal 6 MJ	6	✓	50.0	50.8	101.6
Cal 7 MJ	7	✓	100.0	99.0	99.0



AM #27 Cannabinoids Quant. Calibration Curve Report

Batch results D:\MassHunter\Data\2024\AM 27 28\120624 AM 27 28 CS\QuantResults\AM 27.batch.bin
Last Cal. Update 12/9/2024 8:08 AM
Analyst Name ISP\datastor
Analyte THC-COOH **Internal Standard** THC-COOH-D9



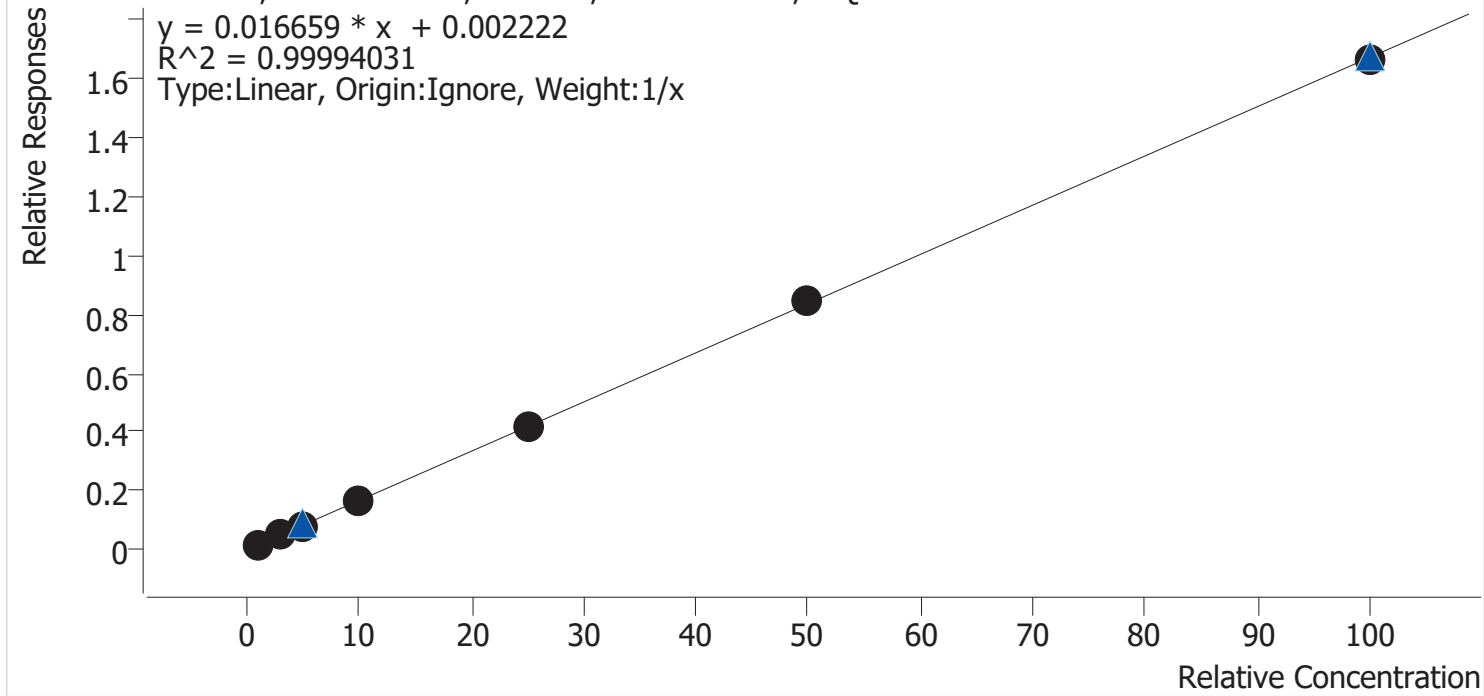
Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
Cal 1 MJ	1	✓	5.0	5.0	99.2
Cal 2 MJ	2	✓	10.0	9.7	96.9
Cal 3 MJ	3	✓	20.0	20.1	100.6
Cal 4 MJ	4	✓	50.0	50.5	101.0
Cal 5 MJ	5	✓	75.0	76.3	101.8
Cal 6 MJ	6	✓	100.0	101.9	101.9
Cal 7 MJ	7	✓	250.0	246.5	98.6



AM #27 Cannabinoids Quant. Calibration Curve Report

Batch results D:\MassHunter\Data\2024\AM 27 28\120624 AM 27 28 CS\QuantResults\AM 27.batch.bin
Last Cal. Update 12/9/2024 8:08 AM
Analyst Name ISP\datastor
Analyte THC-OH **Internal Standard** THC-OH-D3

THC-OH - 7 Levels, 7 Levels Used, 7 Points, 7 Points Used, 2 QCs



Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
Cal 1 MJ	1	✓	1.0	1.0	100.8
Cal 2 MJ	2	✓	3.0	2.9	97.8
Cal 3 MJ	3	✓	5.0	5.0	100.4
Cal 4 MJ	4	✓	10.0	10.1	100.6
Cal 5 MJ	5	✓	25.0	25.0	99.8
Cal 6 MJ	6	✓	50.0	50.5	101.0
Cal 7 MJ	7	✓	100.0	99.5	99.5

AM #27 Cannabinoids Quant. Results



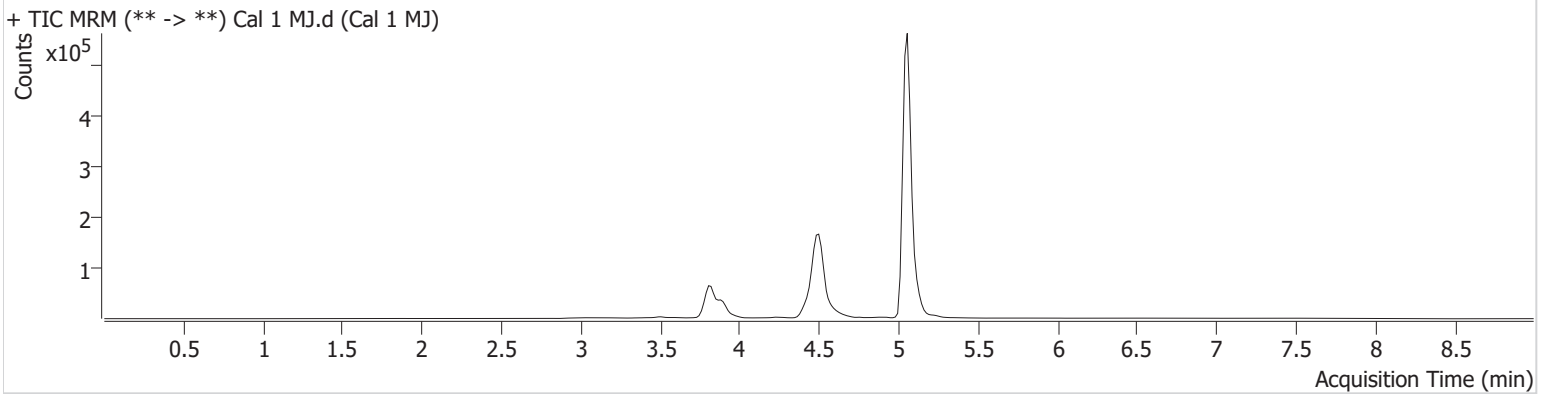
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Calibration Last Update 12/9/2024 8:08:54 AM

Instrument Falco (069901)
Type Cal
Acq. Method AM 27 Agilent Method.m
Sample Position P1-A1
Injection Volume 10
Acq. Date-Time 12/6/2024 1:45:25 PM
Sample Info.

Data File Cal 1 MJ.d
Sample Cal 1 MJ
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	5.060	18183	250.33	26.5	∞	1962969	1.0192 ng/ml
THC-COOH	3.909	3927	154.15	208.5	379.57	104137	4.9601 ng/ml
THC-OH	3.820	5159	85.25	12.7	35.12	271354	1.0079 ng/ml

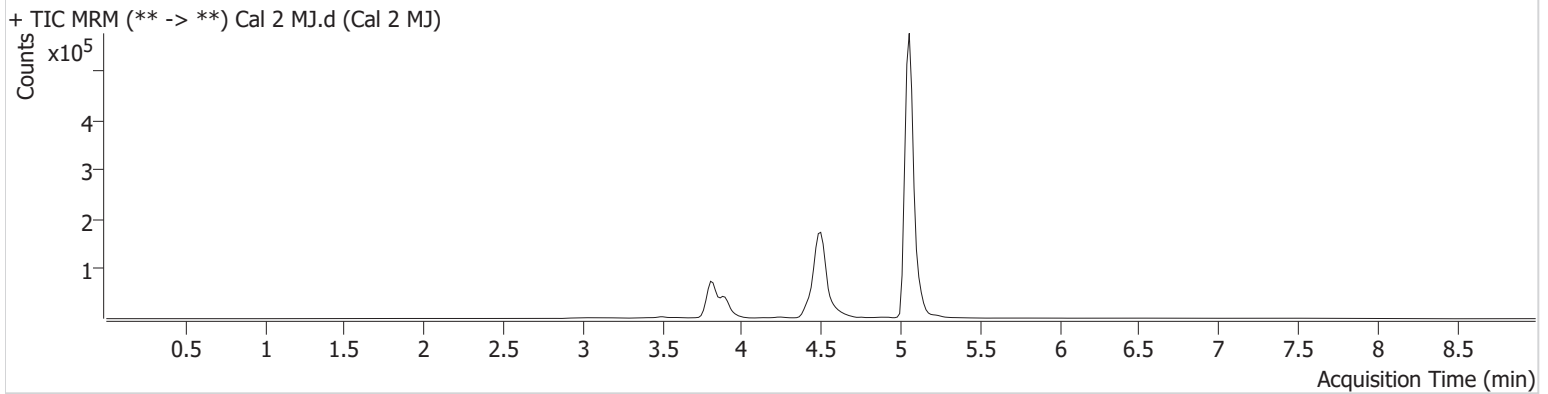
AM #27 Cannabinoids Quant. Results



Batch results D:\MassHunter\Data\2024\AM 27 28\120624 AM 27 28 CS\QuantResults\AM 27.batch.bin
Calibration Last Update 12/9/2024 8:08:54 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	12/6/2024 1:58:40 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.060	54961	925.68	25.9	187.50	2002409	2.9497 ng/ml
THC-COOH	3.909	8319	548.22	215.4	383.91	117264	9.6930 ng/ml
THC-OH	3.820	15461	∞	14.2	92.01	302489	2.9348 ng/ml

AM #27 Cannabinoids Quant. Results

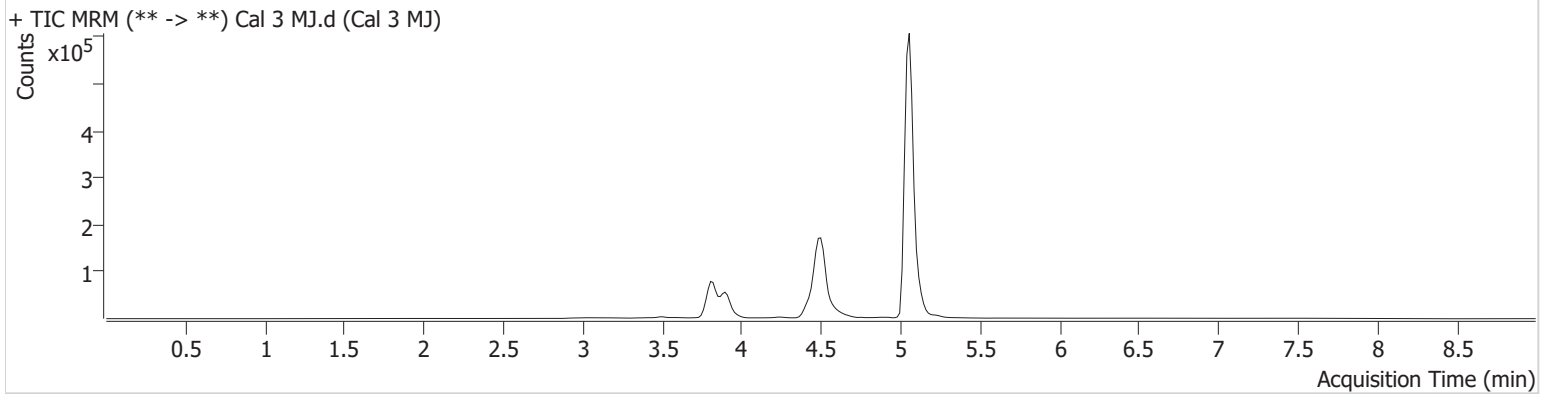


Batch results D:\MassHunter\Data\2024\AM 27 28\120624 AM 27 28 CS\QuantResults\AM 27.batch.bin
Calibration Last Update 12/9/2024 8:08:54 AM

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**
Injection Volume 10
Acq. Date-Time 12/6/2024 2:11:46 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	5.060	96907	5256.35	26.2	∞	2106297	4.9202 ng/ml
THC-COOH	3.909	16927	537.99	212.7	917.82	117385	20.1248 ng/ml
THC-OH	3.820	26705	∞	13.5	108.08	310943	5.0221 ng/ml

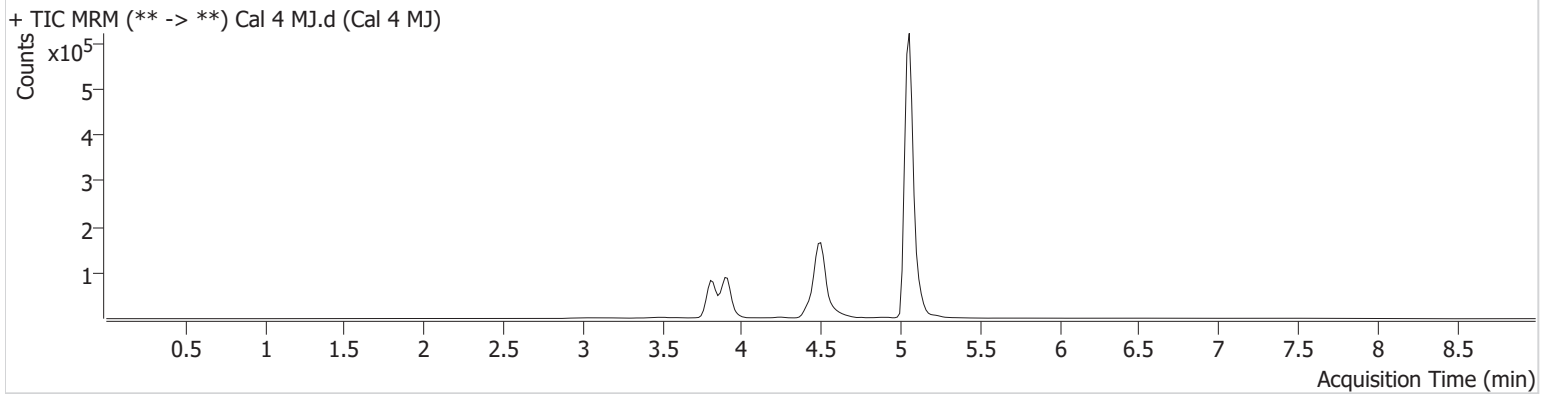
AM #27 Cannabinoids Quant. Results



Batch results D:\MassHunter\Data\2024\AM 27 28\120624 AM 27 28 CS\QuantResults\AM 27.batch.bin
Calibration Last Update 12/9/2024 8:08:54 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	12/6/2024 2:24:50 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.060	186732	4525.65	25.4	∞	2005533	9.9206 ng/ml
THC-COOH	3.909	40043	1777.69	212.1	2417.23	112054	50.4797 ng/ml
THC-OH	3.820	50010	∞	13.9	406.87	294603	10.0564 ng/ml

AM #27 Cannabinoids Quant. Results

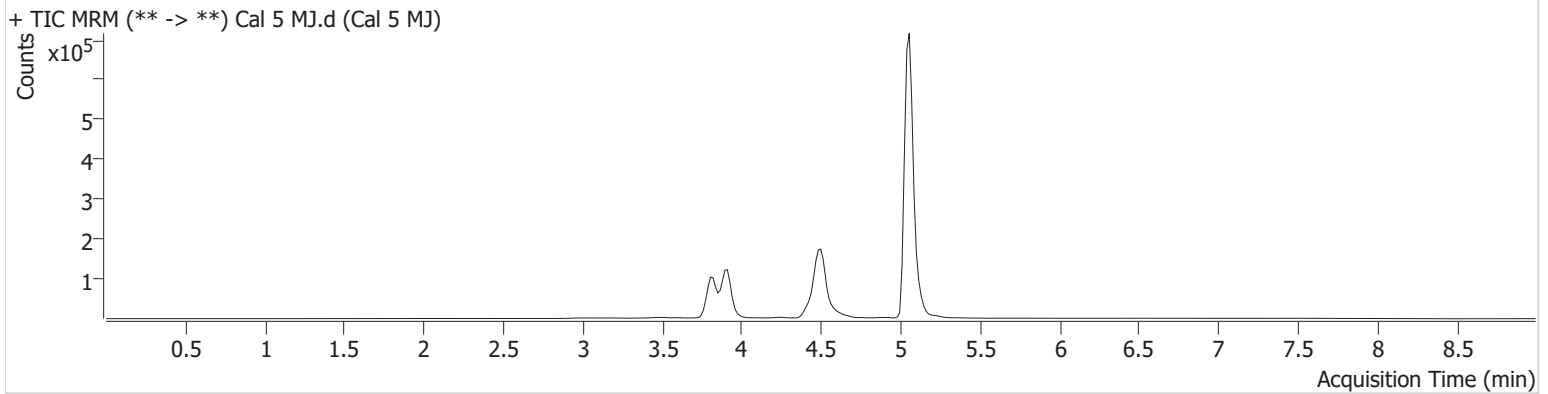


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Calibration Last Update 12/9/2024 8:08:54 AM

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**
Injection Volume 10
Acq. Date-Time 12/6/2024 2:37:57 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	5.060	488366	∞	24.4	∞	2045281	25.3853 ng/ml
THC-COOH	3.909	60712	978.31	216.7	3292.68	112670	76.3249 ng/ml
THC-OH	3.820	128374	∞	14.1	686.95	307071	24.9616 ng/ml

AM #27 Cannabinoids Quant. Results

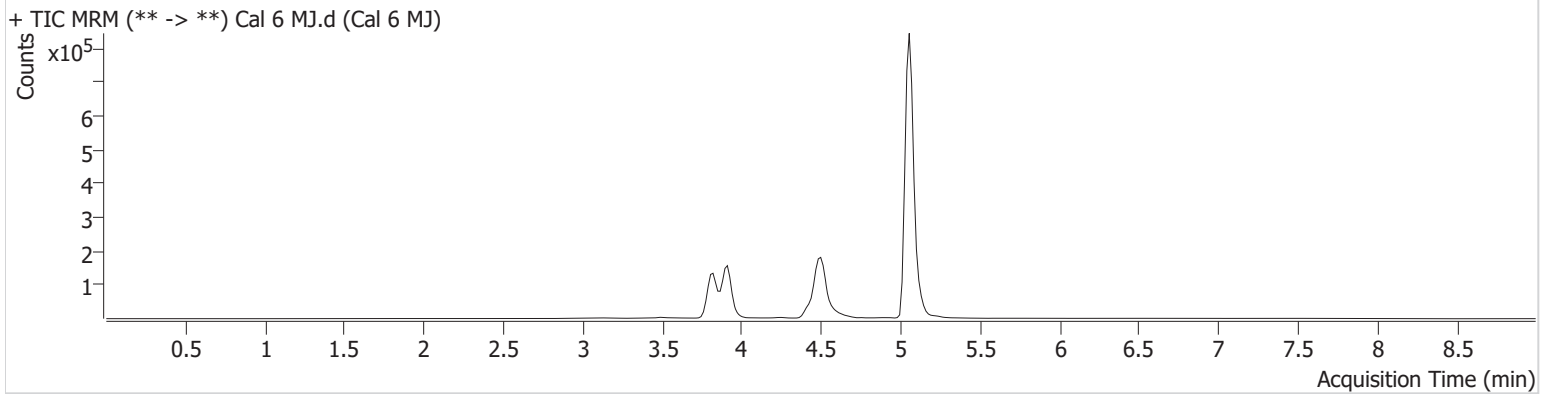


Batch results D:\MassHunter\Data\2024\AM 27 28\120624 AM 27 28 CS\QuantResults\AM 27.batch.bin
Calibration Last Update 12/9/2024 8:08:54 AM

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**
Injection Volume 10
Acq. Date-Time 12/6/2024 2:51:02 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	5.060	913607	24064.78	24.9	∞	1910833	50.7948 ng/ml
THC-COOH	3.909	78566	2397.12	214.7	7276.51	109337	101.9188 ng/ml
THC-OH	3.820	248150	∞	14.0	2128.05	294078	50.5191 ng/ml

AM #27 Cannabinoids Quant. Results

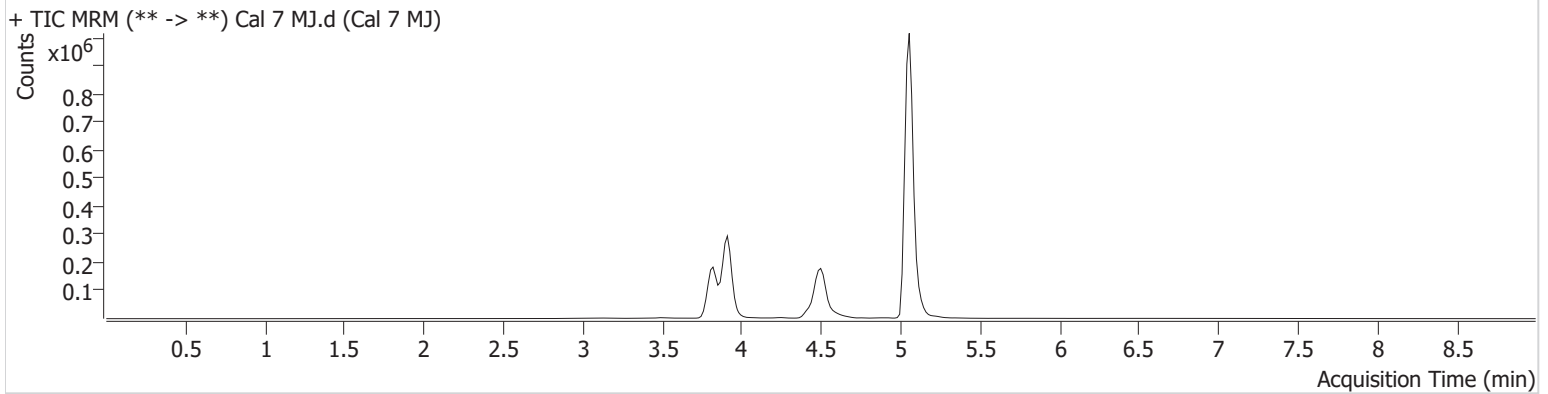


Batch results D:\MassHunter\Data\2024\AM 27 28\120624 AM 27 28 CS\QuantResults\AM 27.batch.bin
Calibration Last Update 12/9/2024 8:08:54 AM

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**
Injection Volume 10
Acq. Date-Time 12/6/2024 3:04:08 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	5.060	1577446	33480.24	25.1	2953.95	1692029	99.0101 ng/ml
THC-COOH	3.909	166980	5884.86	210.7	11345.47	96307	246.4988 ng/ml
THC-OH	3.820	456261	3931.57	14.2	6032.91	274894	99.4982 ng/ml