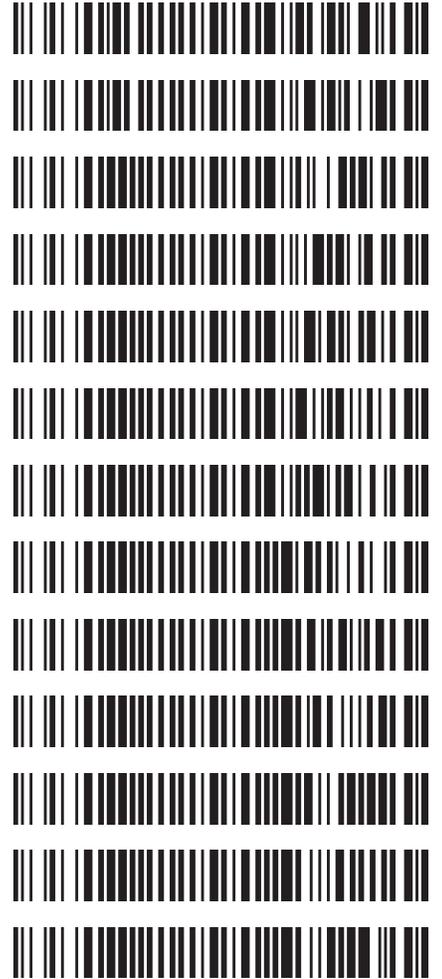




**Worklist: 6747**

<u>LAB CASE</u>	<u>ITEM</u>	<u>ITEM TYPE</u>	<u>DESCRIPTION</u>
M2024-0512	1	BCK	AM 27 Blood THC Quant by LC-QQQ
M2024-0778	2	BCK	AM 27 Blood THC Quant by LC-QQQ
P2024-0458	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2024-0509	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2024-0517	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2024-0551	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2024-0559	2	BCK	AM 27 Blood THC Quant by LC-QQQ
P2024-0566	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2024-0576	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2024-0587	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2024-0629	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2024-0672	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2024-0675	1	BCK	AM 27 Blood THC Quant by LC-QQQ



2

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

Extraction Date: 03/14/2024

Plate lot#: 231212

Mobile phase A: 0.1% Formic Acid in LCMS Water

Blank Blood Lot: Lampire 23E52981

LCMS-QQQ ID: 069901

Analyst: Celena Shrum

Plate Retest Date: 06/12/2024

Mobile phase B: 0.1% Formic acid in Acetonitrile

Column: UCT Selectra DA 100 x 2.1mm 3um

## 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  $\geq 0.98$  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: The instrument ran out of mobile phase, so new mobile phase was made (on 3/15/24) and the negative control was reinjected prior to restarting the run.

Curve limits: THC-OH 3-100 Cal 1 dropped due to ratio

g

	1	2	3	4	5	6
a					P2024-0551-1	QC 1
b				P2024-0675-1	P2024-0517-1	cal 100 ng
c				P2024-0672-1	P2024-0509-1	cal 50 ng
d				P2024-0629-1	P2024-0458-1	cal 25 ng
e				P2024-0587-1	M2024-0778-2	cal 10ng
f				P2024-0576-1	M2024-0512-1	cal 5 ng
g				P2024-0566-1	NEG Blood	cal 3 ng
h				P2024-0559-2	QC 2	cal 1ng

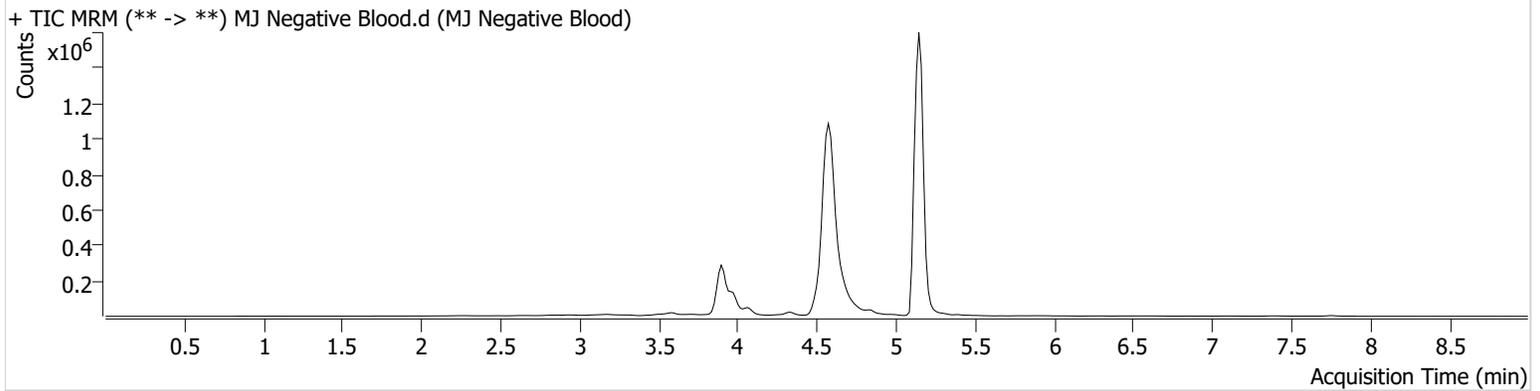


# AM #27 Cannabinoids Quant. Results

**Batch results** D:\MassHunter\Data\2024\AM 27 28\031424 AM 27 28 CS\QuantResults\AM 27.batch.bin  
**Calibration Last Update** 3/28/2024 11:20:24 AM

<b>Instrument</b>	Falco (069901)	<b>Data File</b>	MJ Negative Blood.d
<b>Type</b>	Sample	<b>Sample</b>	MJ Negative Blood
<b>Acq. Method</b>	AM 27 Agilent Method.m	<b>Operator</b>	Celena Shrum
<b>Sample Position</b>	P1-G5	<b>Comment</b>	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.
<b>Injection Volume</b>	10		
<b>Acq. Date-Time</b>	3/14/2024 6:08:46 PM		
<b>Sample Info.</b>			

## Sample Chromatogram





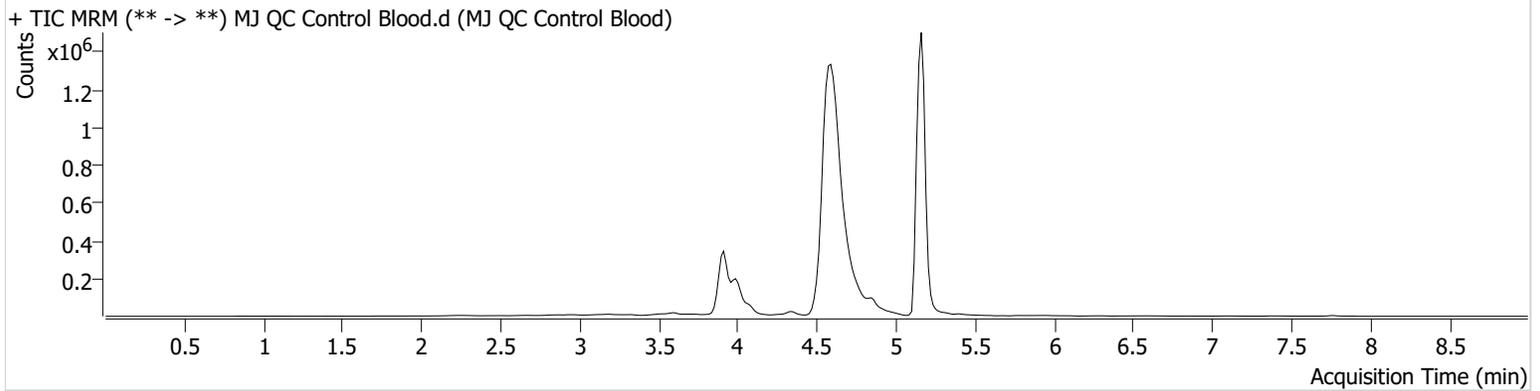
# AM #27 Cannabinoids Quant. Results

**Batch results** D:\MassHunter\Data\2024\AM 27 28\031424 AM 27 28 CS\QuantResults\AM 27.batch.bin  
**Calibration Last Update** 3/28/2024 11:20:24 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-A6 **Comment**  
**Injection Volume** 10  
**Acq. Date-Time** 3/14/2024 5:42:32 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	5.165	230080	1323.50	26.6	327.19	5277397	4.8374 ng/ml
THC-COOH	4.000	38744	260.21	237.3	707.72	434247	14.3650 ng/ml
THC-OH	3.911	113600	∞	12.3	∞	1341711	5.1392 ng/ml

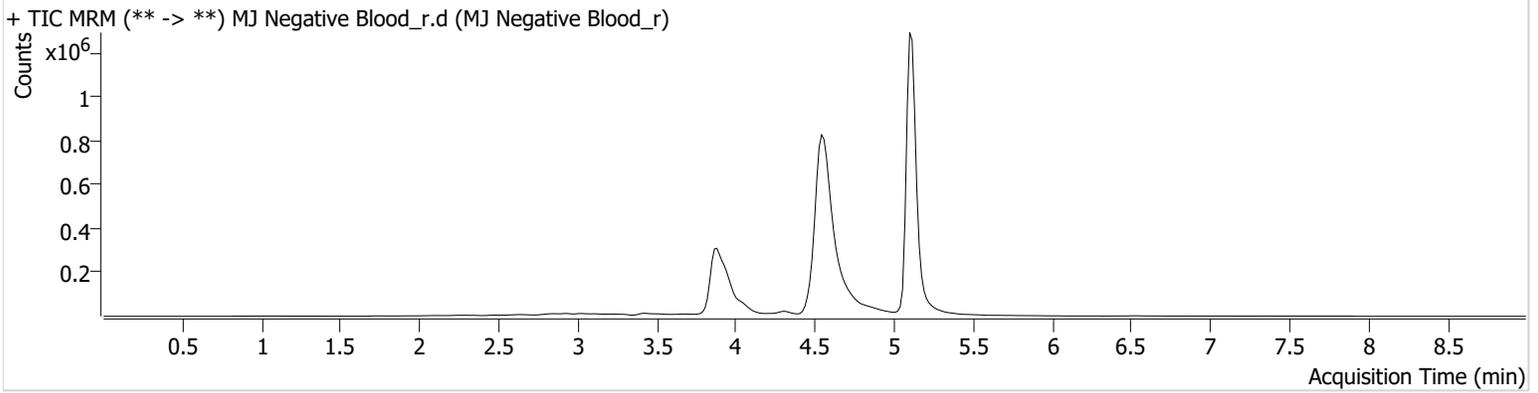


# AM #27 Cannabinoids Quant. Results

**Batch results** D:\MassHunter\Data\2024\AM 27 28\031424 AM 27 28 CS\QuantResults\AM 27.batch.bin  
**Calibration Last Update** 3/28/2024 11:20:24 AM

<b>Instrument</b>	Falco (069901)	<b>Data File</b>	MJ Negative Blood_r.d
<b>Type</b>	Sample	<b>Sample</b>	MJ Negative Blood_r
<b>Acq. Method</b>	AM 27 Agilent Method.m	<b>Operator</b>	Celena Shrum
<b>Sample Position</b>	P1-G5	<b>Comment</b>	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.
<b>Injection Volume</b>	10		
<b>Acq. Date-Time</b>	3/15/2024 9:02:04 AM		
<b>Sample Info.</b>			

## Sample Chromatogram





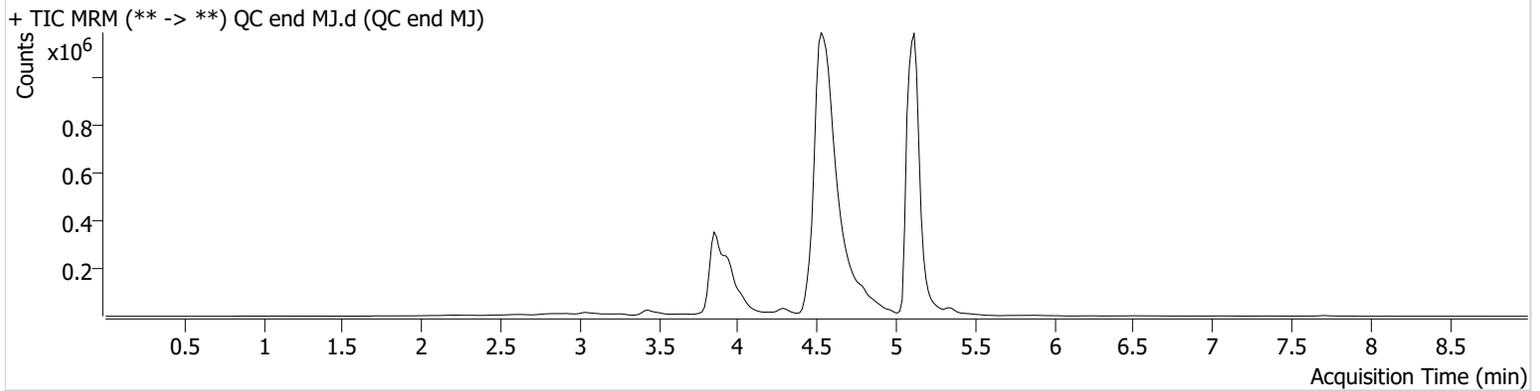
# AM #27 Cannabinoids Quant. Results

**Batch results** D:\MassHunter\Data\2024\AM 27 28\031424 AM 27 28 CS\QuantResults\AM 27.batch.bin  
**Calibration Last Update** 3/28/2024 11:20:24 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-H5 **Comment**  
**Injection Volume** 10  
**Acq. Date-Time** 3/15/2024 1:55:15 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	5.120	271040	∞	22.3	∞	6281764	4.7907 ng/ml
THC-COOH	3.954	50949	∞	229.9	∞	558359	14.6739 ng/ml
THC-OH	3.865	116262	∞	14.7	∞	1685602	4.2197 ng/ml

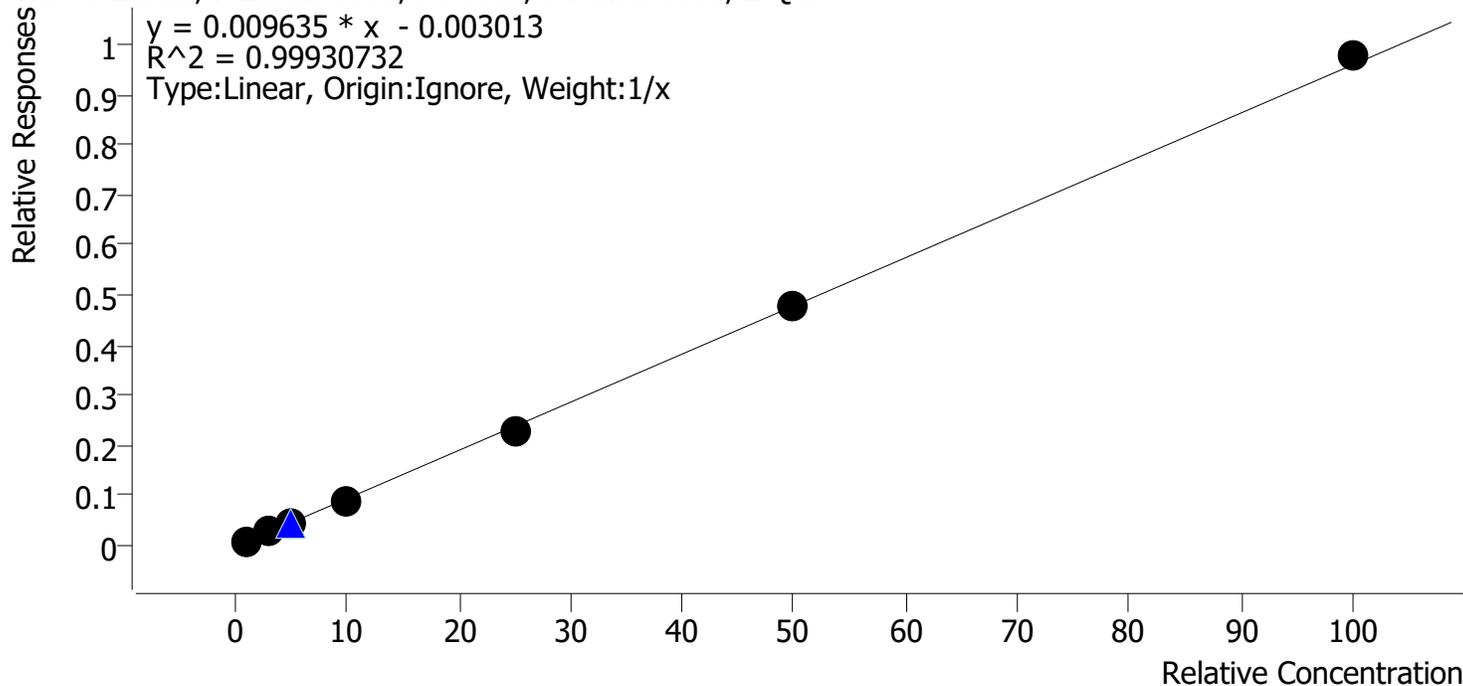
2



# AM #27 Cannabinoids Quant. Calibration Curve Report

**Batch results** D:\MassHunter\Data\2024\AM 27 28\031424 AM 27 28 CS\QuantResults\AM 27.batch.bin  
**Last Cal. Update** 3/28/2024 11:20 AM  
**Analyst Name** ISP\datastor  
**Analyte** THC **Internal Standard** THC-D3

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



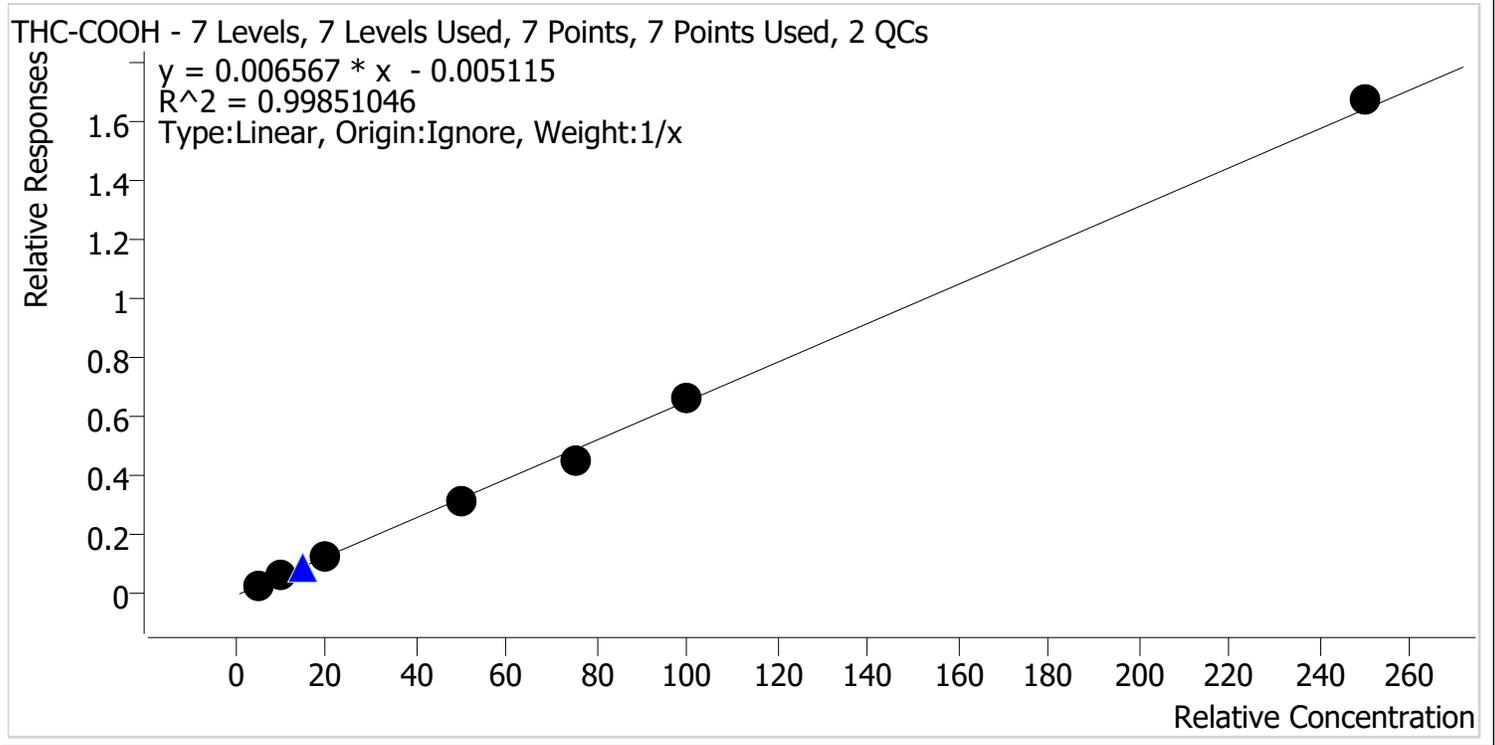
Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
Cal 1 MJ	1	✓	1.0	1.1	113.9
Cal 2 MJ	2	✓	3.0	2.9	97.5
Cal 3 MJ	3	✓	5.0	4.8	95.4
Cal 4 MJ	4	✓	10.0	9.5	95.5
Cal 5 MJ	5	✓	25.0	24.2	96.7
Cal 6 MJ	6	✓	50.0	49.7	99.3
Cal 7 MJ	7	✓	100.0	101.8	101.8

29



# AM #27 Cannabinoids Quant. Calibration Curve Report

**Batch results** D:\MassHunter\Data\2024\AM 27 28\031424 AM 27 28 CS\QuantResults\AM 27.batch.bin  
**Last Cal. Update** 3/28/2024 11:20 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	104.7
Cal 2 MJ	2	✓	10.0	10.3	102.7
Cal 3 MJ	3	✓	20.0	19.7	98.3
Cal 4 MJ	4	✓	50.0	49.3	98.6
Cal 5 MJ	5	✓	75.0	69.3	92.4
Cal 6 MJ	6	✓	100.0	101.4	101.4
Cal 7 MJ	7	✓	250.0	254.8	101.9

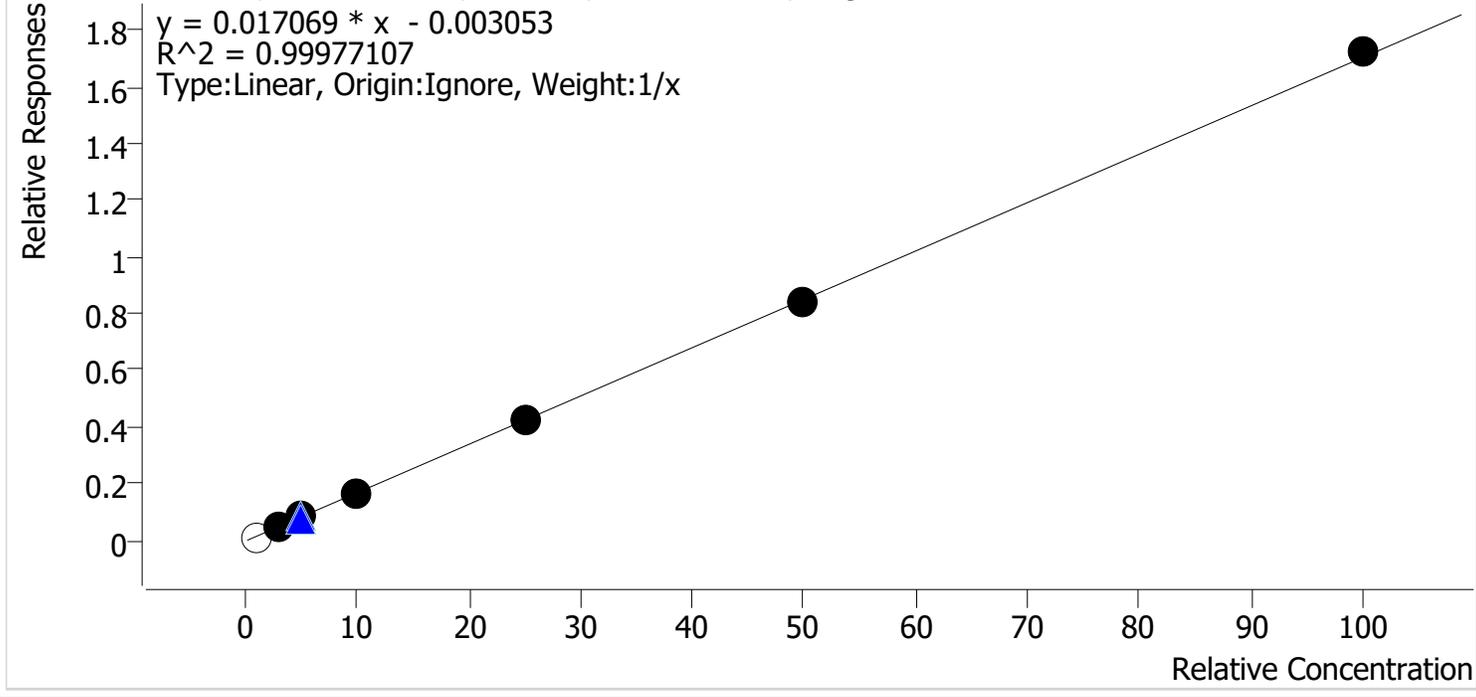
9



# AM #27 Cannabinoids Quant. Calibration Curve Report

**Batch results** D:\MassHunter\Data\2024\AM 27 28\031424 AM 27 28 CS\QuantResults\AM 27.batch.bin  
**Last Cal. Update** 3/28/2024 11:20 AM  
**Analyst Name** ISP\datastor  
**Analyte** THC-OH **Internal Standard** THC-OH-D3

THC-OH - 7 Levels, 6 Levels Used, 7 Points, 6 Points Used, 2 QCs



Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
Cal 1 MJ	1	x	1.0	0.8	79.2
Cal 2 MJ	2	✓	3.0	3.1	103.2
Cal 3 MJ	3	✓	5.0	5.0	99.5
Cal 4 MJ	4	✓	10.0	9.9	98.8
Cal 5 MJ	5	✓	25.0	24.8	99.1
Cal 6 MJ	6	✓	50.0	49.2	98.4
Cal 7 MJ	7	✓	100.0	101.1	101.1



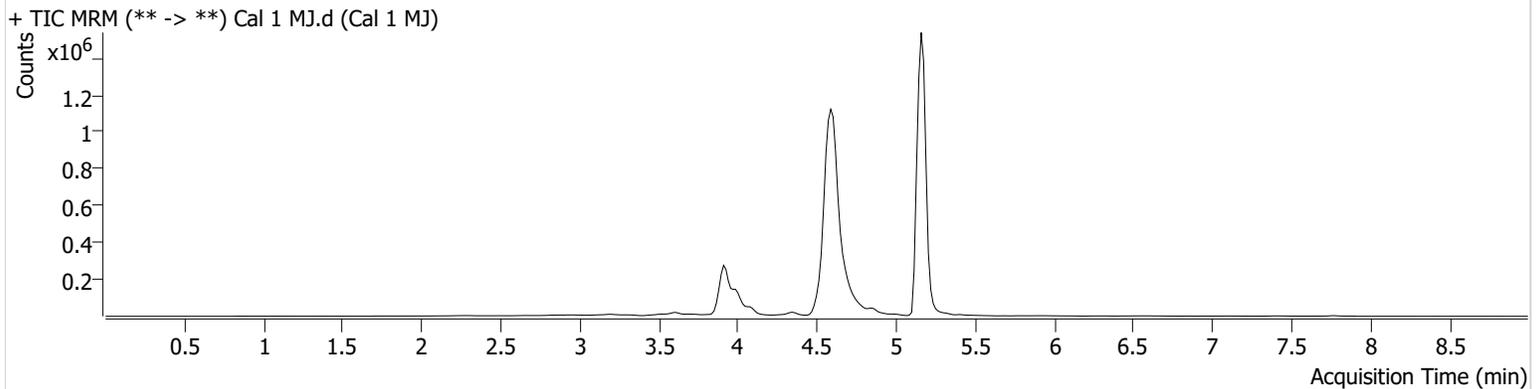
# AM #27 Cannabinoids Quant. Results

**Batch results** D:\MassHunter\Data\2024\AM 27 28\031424 AM 27 28 CS\QuantResults\AM 27.batch.bin  
**Calibration Last Update** 3/28/2024 11:20:24 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-H6 **Comment**  
**Injection Volume** 10  
**Acq. Date-Time** 3/14/2024 3:57:32 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	5.180	46153	∞	30.4	∞	5798814	1.1387 ng/ml
THC-COOH	4.015	11190	100.64	236.0	∞	382565	5.2329 ng/ml
THC-OH	3.926	12049	∞	22.4 <b>High</b>	66.43	1151105	0.7921 ng/ml



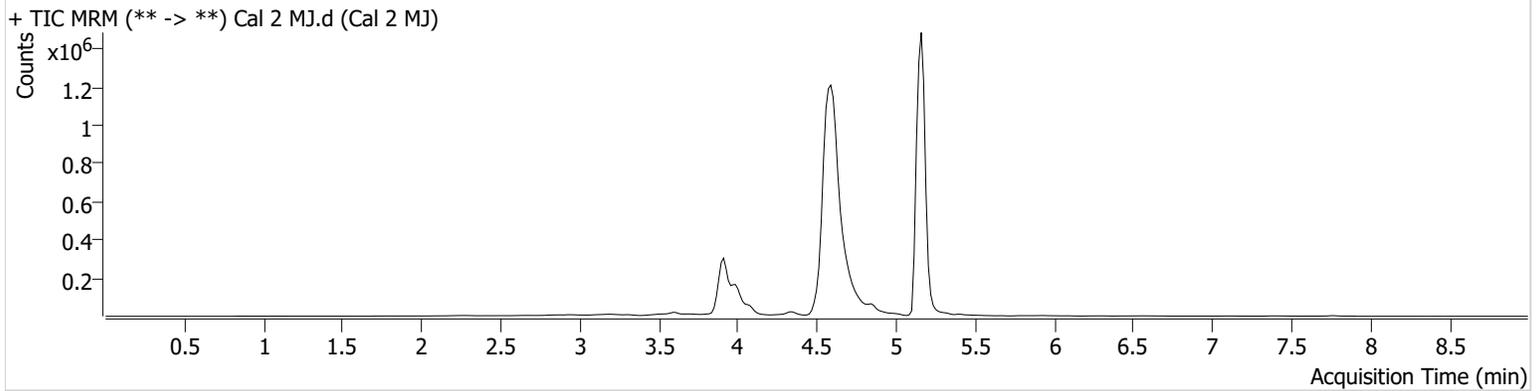
# AM #27 Cannabinoids Quant. Results

**Batch results** D:\MassHunter\Data\2024\AM 27 28\031424 AM 27 28 CS\QuantResults\AM 27.batch.bin  
**Calibration Last Update** 3/28/2024 11:20:24 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-G6 **Comment**  
**Injection Volume** 10  
**Acq. Date-Time** 3/14/2024 4:10:47 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	5.165	136616	∞	26.8	∞	5428029	2.9248 ng/ml
THC-COOH	4.000	25147	∞	219.2	∞	403536	10.2680 ng/ml
THC-OH	3.911	61574	∞	11.5	∞	1236779	3.0956 ng/ml



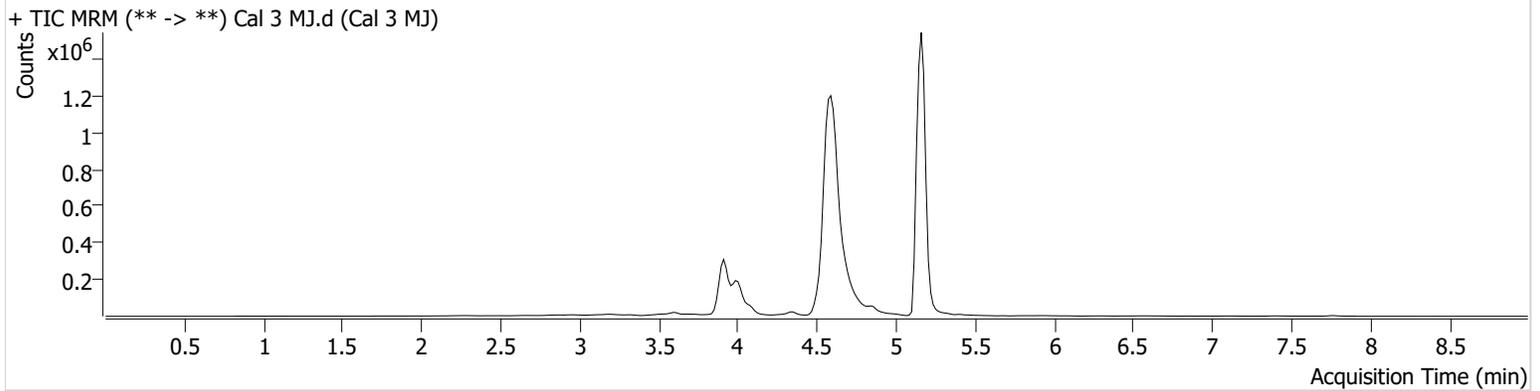
# AM #27 Cannabinoids Quant. Results

**Batch results** D:\MassHunter\Data\2024\AM 27 28\031424 AM 27 28 CS\QuantResults\AM 27.batch.bin  
**Calibration Last Update** 3/28/2024 11:20:24 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-F6 **Comment**  
**Injection Volume** 10  
**Acq. Date-Time** 3/14/2024 4:23:53 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	5.165	239774	∞	26.1	∞	5583599	4.7695 ng/ml
THC-COOH	4.015	48411	301.66	227.7	∞	390543	19.6548 ng/ml
THC-OH	3.911	97634	∞	12.3	∞	1192641	4.9749 ng/ml



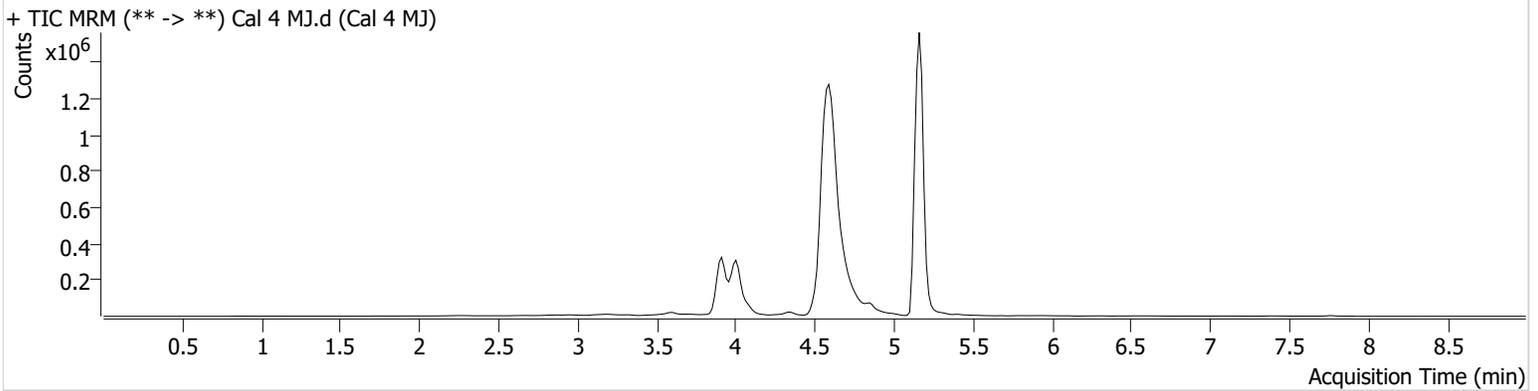
# AM #27 Cannabinoids Quant. Results

**Batch results** D:\MassHunter\Data\2024\AM 27 28\031424 AM 27 28 CS\QuantResults\AM 27.batch.bin  
**Calibration Last Update** 3/28/2024 11:20:24 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-E6 **Comment**  
**Injection Volume** 10  
**Acq. Date-Time** 3/14/2024 4:36:59 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	5.165	466498	∞	25.1	∞	5243545	9.5460 ng/ml
THC-COOH	4.000	121734	∞	226.0	∞	382008	49.3045 ng/ml
THC-OH	3.911	194971	∞	12.3	∞	1177929	9.8760 ng/ml



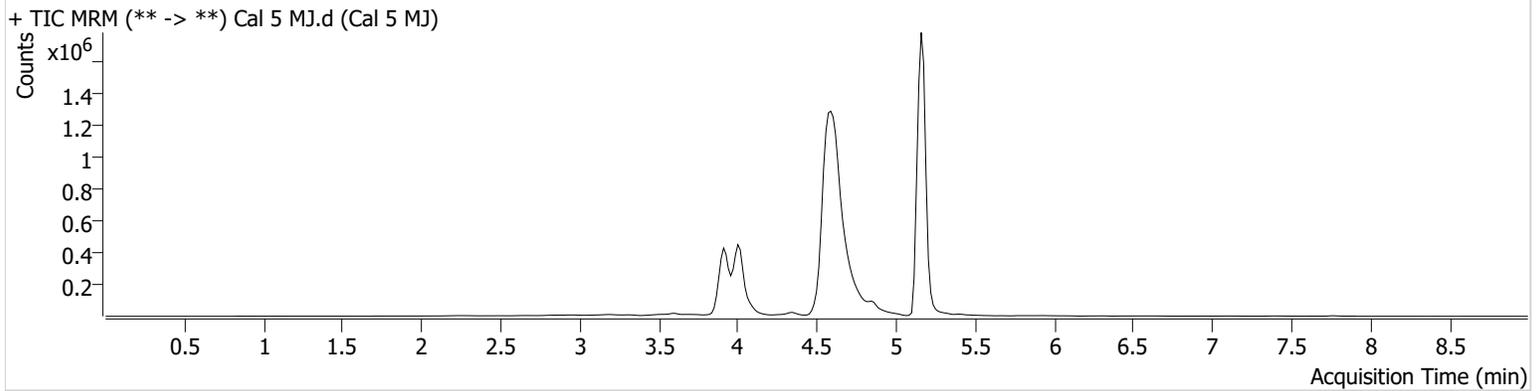
# AM #27 Cannabinoids Quant. Results

**Batch results** D:\MassHunter\Data\2024\AM 27 28\031424 AM 27 28 CS\QuantResults\AM 27.batch.bin  
**Calibration Last Update** 3/28/2024 11:20:24 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-D6 **Comment**  
**Injection Volume** 10  
**Acq. Date-Time** 3/14/2024 4:50:05 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	5.165	1175028	∞	24.9	∞	5111712	24.1696 ng/ml
THC-COOH	4.015	181212	4577.64	246.8	∞	402624	69.3150 ng/ml
THC-OH	3.911	542587	∞	13.0	∞	1292366	24.7754 ng/ml



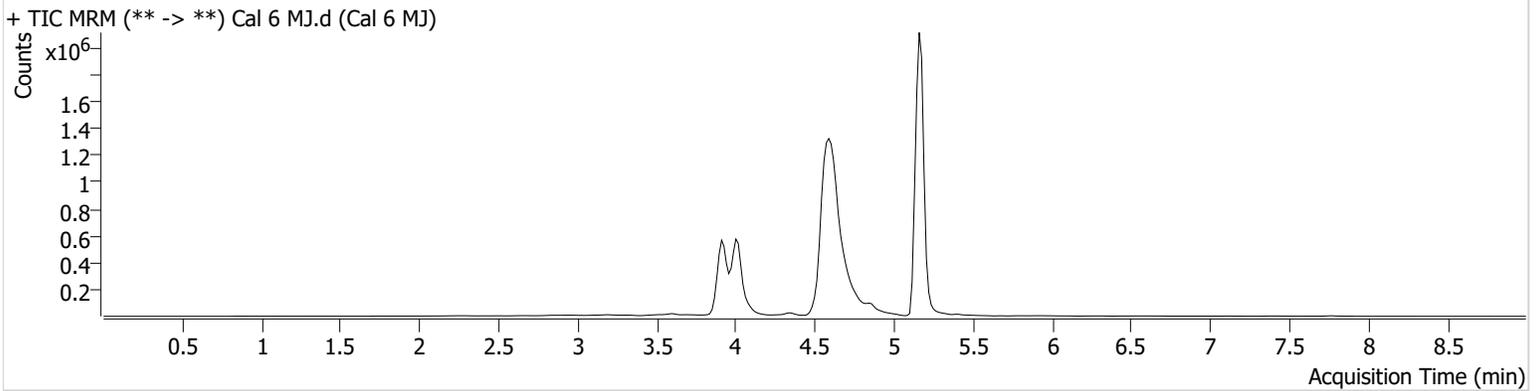
# AM #27 Cannabinoids Quant. Results

**Batch results** D:\MassHunter\Data\2024\AM 27 28\031424 AM 27 28 CS\QuantResults\AM 27.batch.bin  
**Calibration Last Update** 3/28/2024 11:20:24 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-C6 **Comment**  
**Injection Volume** 10  
**Acq. Date-Time** 3/14/2024 5:03:12 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	5.165	2316398	∞	25.3	∞	4872082	49.6564 ng/ml
THC-COOH	4.000	266901	∞	225.9	∞	403732	101.4466 ng/ml
THC-OH	3.926	1070655	∞	13.2	∞	1280182	49.1757 ng/ml



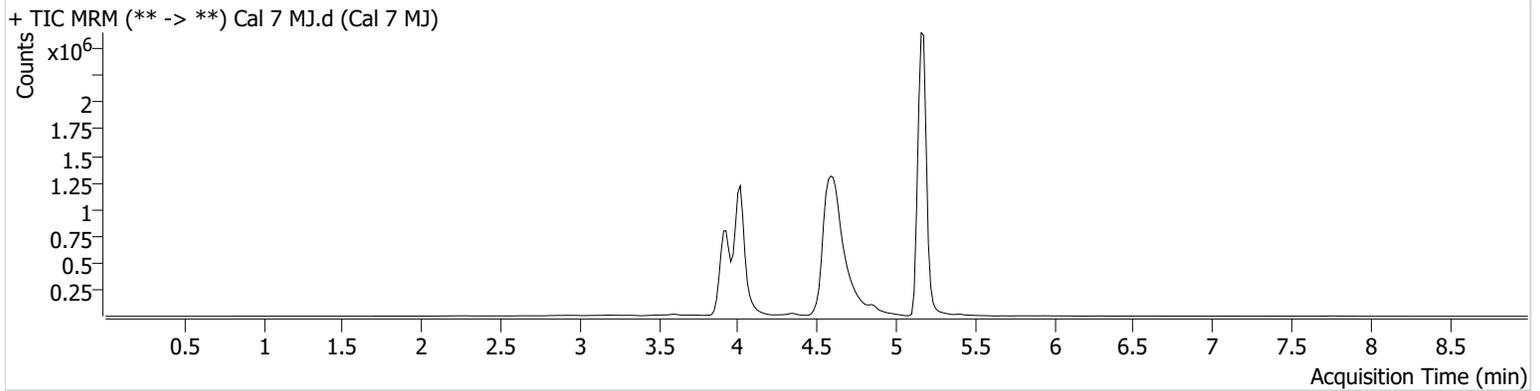
# AM #27 Cannabinoids Quant. Results

**Batch results** D:\MassHunter\Data\2024\AM 27 28\031424 AM 27 28 CS\QuantResults\AM 27.batch.bin  
**Calibration Last Update** 3/28/2024 11:20:24 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-B6 **Comment**  
**Injection Volume** 10  
**Acq. Date-Time** 3/14/2024 5:16:19 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	5.180	4423637	∞	25.4	∞	4523993	101.7950 ng/ml
THC-COOH	4.015	637727	6124.76	226.1	10189.59	382326	254.7781 ng/ml
THC-OH	3.926	2157824	∞	13.1	1142.47	1252604	101.1024 ng/ml