

**Worklist: 5768**

<u>LAB CASE</u>	<u>ITEM</u>	<u>ITEM TYPE</u>	<u>DESCRIPTION</u>	
M2022-1072	1	BCK	AM 27 Blood THC Quant by LC-QQQ	
M2022-1073	1	BCK	AM 27 Blood THC Quant by LC-QQQ	
M2022-1074	1	BCK	AM 27 Blood THC Quant by LC-QQQ	
M2022-1081	3	BCK	AM 27 Blood THC Quant by LC-QQQ	
M2022-1195	4	BCK	AM 27 Blood THC Quant by LC-QQQ	
M2022-1195	5	BCK	AM 27 Blood THC Quant by LC-QQQ	
M2022-1252	2	BCK	AM 27 Blood THC Quant by LC-QQQ	
M2022-1298	2	BCK	AM 27 Blood THC Quant by LC-QQQ	
P2021-4010	1	BCK	AM 27 Blood THC Quant by LC-QQQ	
P2022-0880	1	BCK	AM 27 Blood THC Quant by LC-QQQ	
P2022-0881	1	BCK	AM 27 Blood THC Quant by LC-QQQ	
P2022-0901	1	BCK	AM 27 Blood THC Quant by LC-QQQ	
P2022-0904	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: 04/07/2022

Analyst: Celena Shrum

Plate lot#: 220309

Plate Retest Date: 09/09/2022

**Mobile phase A:** 0.1% Formic Acid in LCMS Water

**Mobile phase B:** 0.1% Formic acid in Acetonitrile

**Blank Blood Lot:** Lampire 20L20725

**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. Using a calibrated pipette, add **1000µl blood and urine (if applicable) (calibrated pipette)** into the appropriate wells of analytical (standards) plate. **Pipette ID: #42**
- 3. Place on shaking incubator at ambient temp., 900rpm for 15 minutes.
- 4. Pipette **500µL 0.1% formic acid in water blood sample** of analytical plate.
- 5. Place on shaking incubator at ambient temp., 900rpm for 15 minutes.
- 6. Transfer **800µL of blood+acid or urine+acid** mixture 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)**
- 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.
- 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<sup>2</sup> 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.
- 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	cal 1ng	QC 2	M2022-1252-2			
b	cal 3 ng	Blood NEG	M2022-1298-2			
c	cal 5 ng	M2022-1072-1	P2021-4010-1			
d	cal 10ng	M2022-1073-1	P2022-0880-1			
e	cal 25 ng	M2022-1074-1	P2022-0881-1			
f	cal 50 ng	M2022-1081-3	P2022-0901-1			
g	cal 100 ng	M2022-1195-4	P2022-0904-1			
h	QC 1	M2022-1195-5				

CS

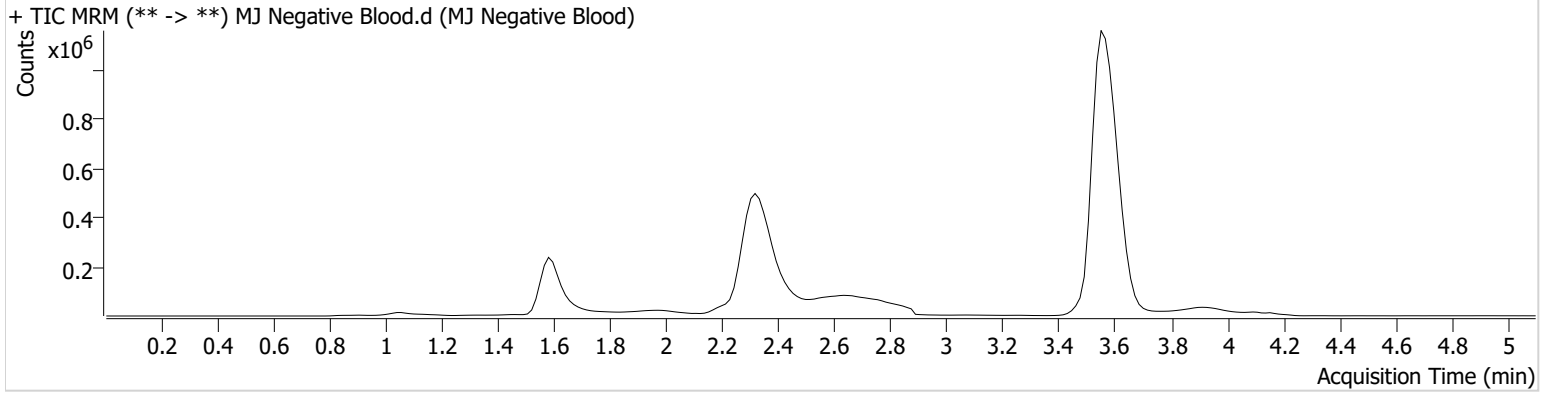


# AM #27 Cannabinoid Quant. Results

**Batch results** D:\MassHunter\Data\2022\AM 27-28\040722 AM 27 28 CS\QuantResults\AM 27.batch.bin  
**Calibration Last Update** 4/14/2022 7:09:27 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 THCQ.m	<b>Operator</b>	Celena Shrum
<b>Sample Position</b>	P5-B2	<b>Comment</b>	
<b>Injection Volume</b>	10		
<b>Acq. Date-Time</b>	4/7/2022 2:29:42 PM		
<b>Sample Info.</b>			

## Sample Chromatogram



# AM #27 Cannabinoid Quant. Results

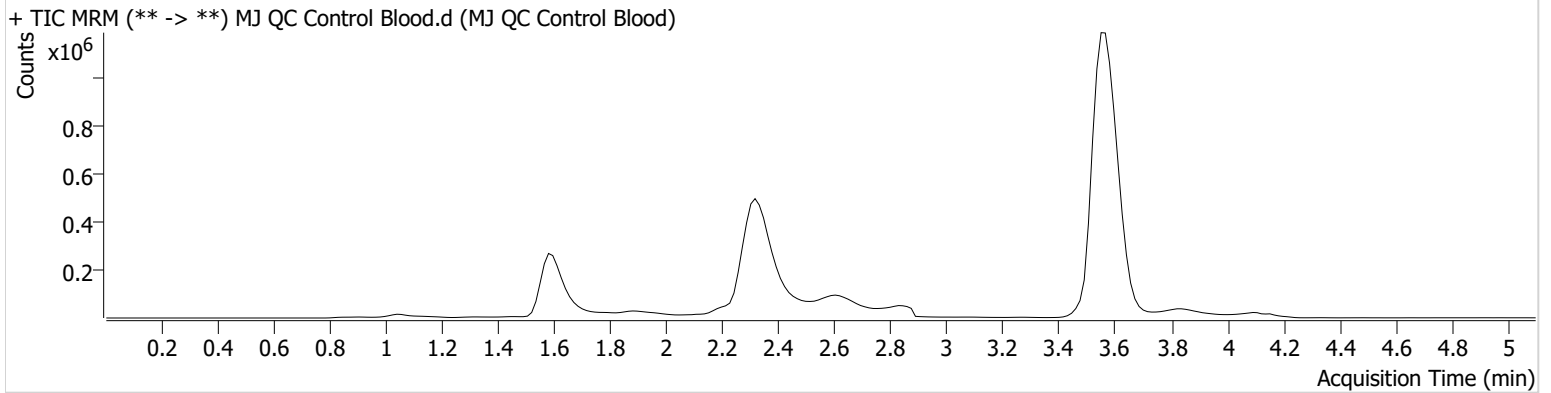


**Batch results** D:\MassHunter\Data\2022\AM 27-28\040722 AM 27 28 CS\QuantResults\AM 27.batch.bin  
**Calibration Last Update** 4/14/2022 7:09:27 AM

<b>Instrument</b>	Falco (069901)	<b>Data File</b>	MJ QC Control Blood.d
<b>Type</b>	QC	<b>Sample</b>	MJ QC Control Blood
<b>Acq. Method</b>	AM 27 THCQ.m	<b>Operator</b>	Celena Shrum
<b>Sample Position</b>	P5-H1	<b>Comment</b>	
<b>Injection Volume</b>	10		
<b>Acq. Date-Time</b>	4/7/2022 2:14:28 PM		

**Sample Info.**

## Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC-OH	1.588	83107	∞	13.1	108.16	873587	5.3715 ng/ml
THC-COOH	1.625	119012	∞	53.7	547.31	268781	15.5112 ng/ml
THC	3.570	320143	∞	26.5	∞	7203095	4.7420 ng/ml

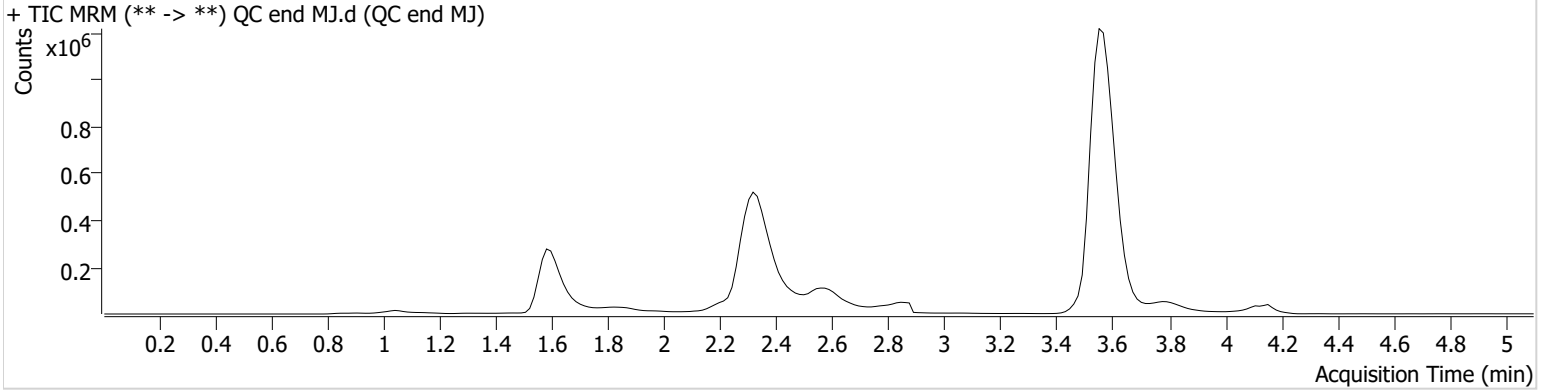


# AM #27 Cannabinoid Quant. Results

**Batch results** D:\MassHunter\Data\2022\AM 27-28\040722 AM 27 28 CS\QuantResults\AM 27.batch.bin  
**Calibration Last Update** 4/14/2022 7:09:27 AM

<b>Instrument</b>	Falco (069901)	<b>Data File</b>	QC end MJ.d
<b>Type</b>	QC	<b>Sample</b>	QC end MJ
<b>Acq. Method</b>	AM 27 THCQ.m	<b>Operator</b>	Celena Shrum
<b>Sample Position</b>	P5-A2	<b>Comment</b>	
<b>Injection Volume</b>	10		
<b>Acq. Date-Time</b>	4/7/2022 6:02:54 PM		

## Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC-OH	1.588	88695	204.66	12.7	346.45	852482	5.9213 ng/ml
THC-COOH	1.625	122731	∞	56.8	∞	289599	14.7927 ng/ml
THC	3.570	321392	∞	26.0	376.73	7272414	4.7161 ng/ml

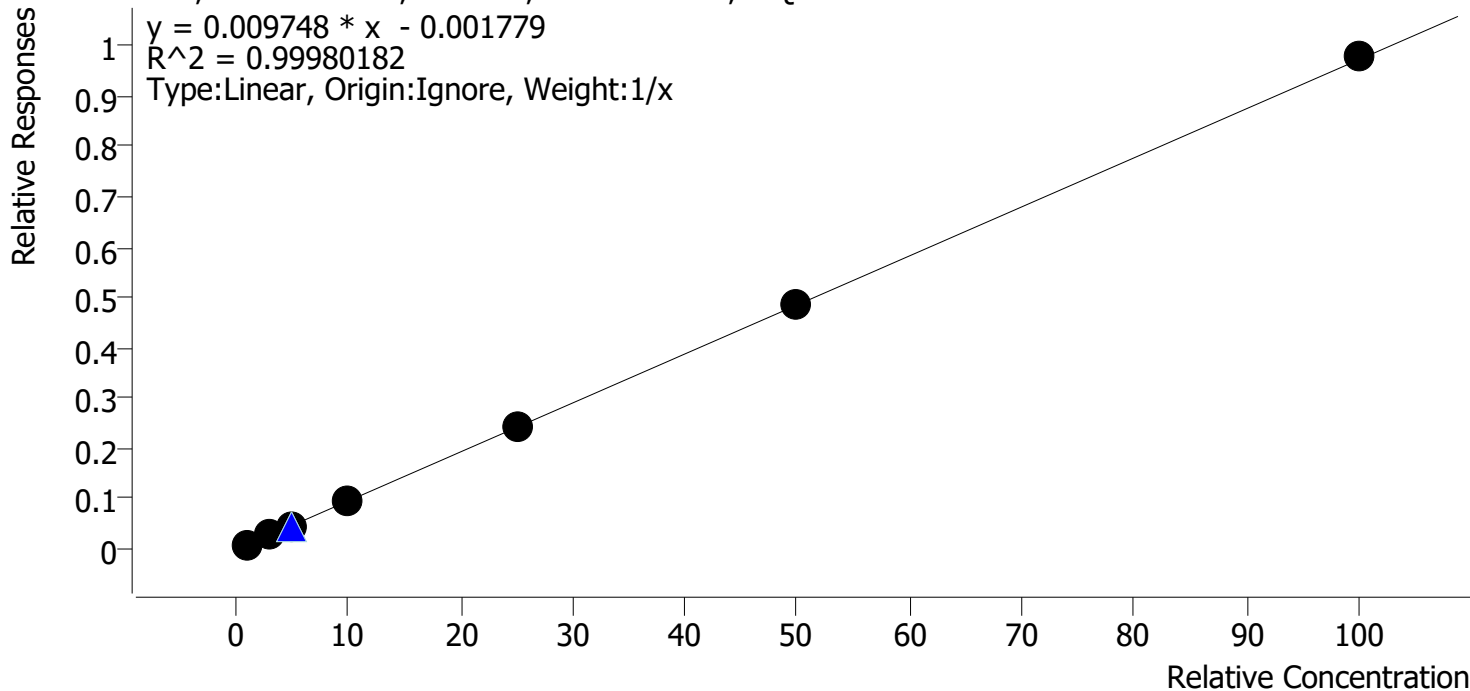
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# AM #27 Cannabinoids Quant. Calibration Curve Report

**Batch results** D:\MassHunter\Data\2022\AM 27-28\040722 AM 27 28 CS\QuantResults\AM 27.batch.bin  
**Last Cal. Update** 4/14/2022 7:09 AM  
**Analyst Name** ISP\Datastor  
**Analyte** THC **Internal Standard** THC-D3

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

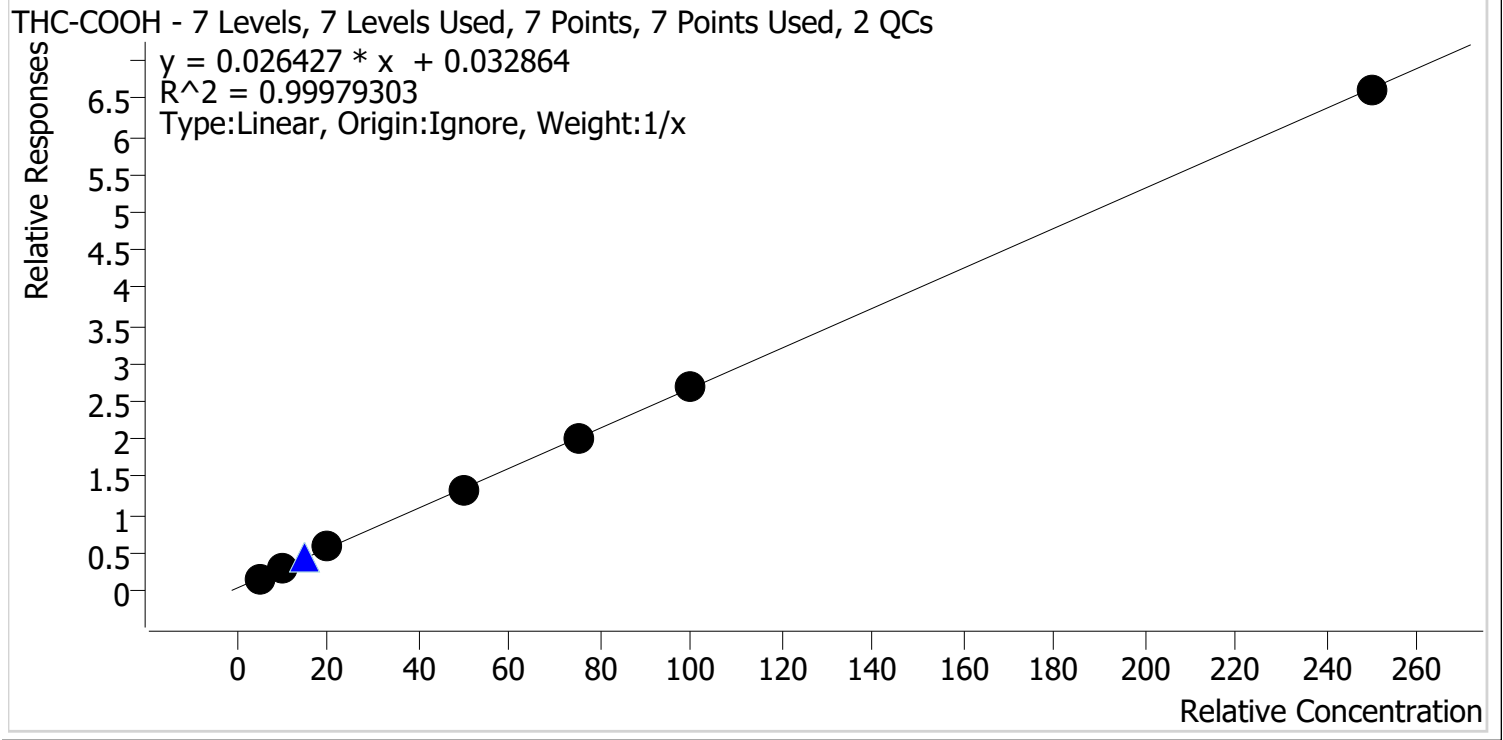


Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
Cal 1 MJ	1	✓	1.0	1.1	109.2
Cal 2 MJ	2	✓	3.0	2.9	98.2
Cal 3 MJ	3	✓	5.0	4.8	95.4
Cal 4 MJ	4	✓	10.0	9.7	97.1
Cal 5 MJ	5	✓	25.0	24.9	99.4
Cal 6 MJ	6	✓	50.0	50.0	100.1
Cal 7 MJ	7	✓	100.0	100.6	100.6



# AM #27 Cannabinoids Quant. Calibration Curve Report

**Batch results** D:\MassHunter\Data\2022\AM 27-28\040722 AM 27 28 CS\QuantResults\AM 27.batch.bin  
**Last Cal. Update** 4/14/2022 7:09 AM  
**Analyst Name** ISP\Datastor  
**Analyte** THC-COOH **Internal Standard** THC-COOH-D9



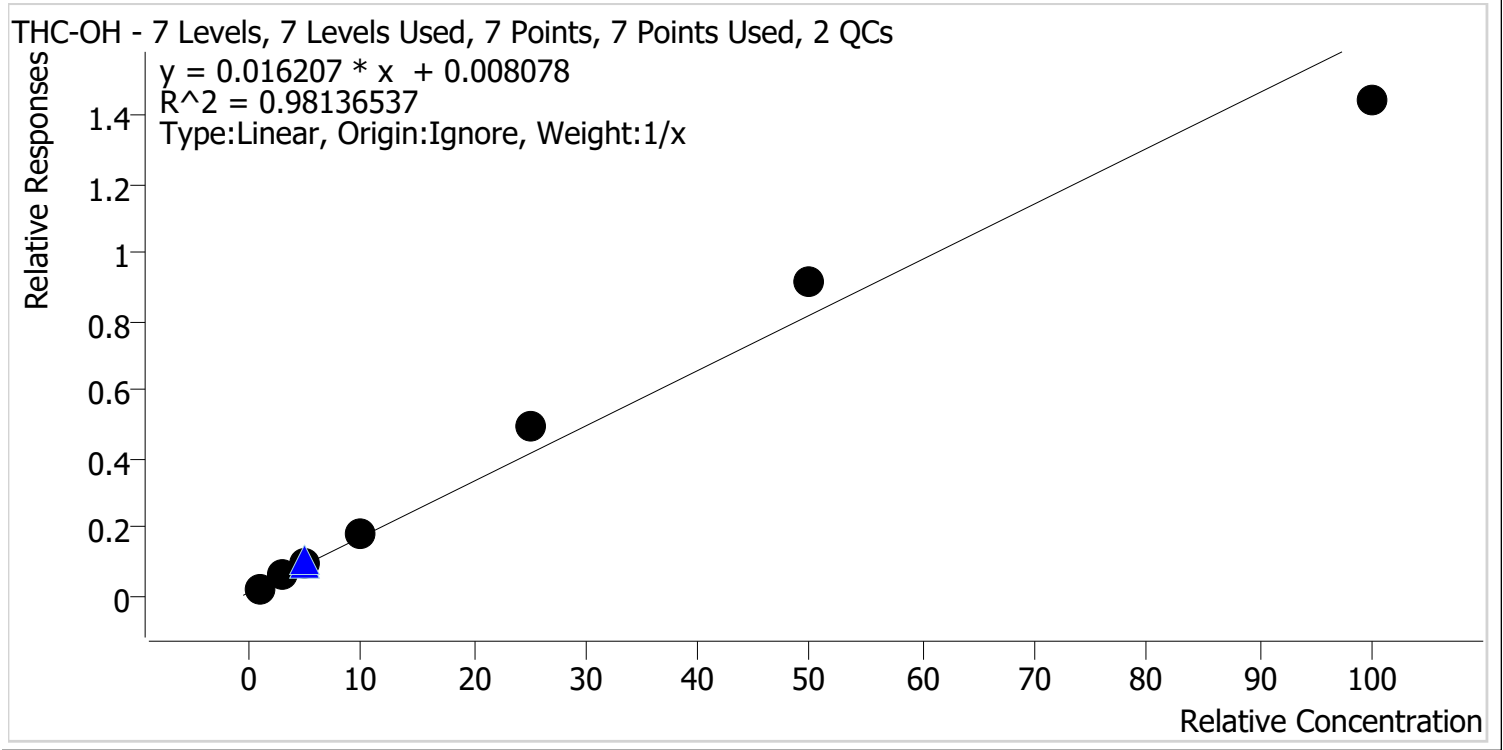
Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
Cal 1 MJ	1	✓	5.0	4.6	92.7
Cal 2 MJ	2	✓	10.0	10.5	105.3
Cal 3 MJ	3	✓	20.0	20.4	102.2
Cal 4 MJ	4	✓	50.0	49.7	99.3
Cal 5 MJ	5	✓	75.0	75.0	100.1
Cal 6 MJ	6	✓	100.0	100.9	100.9
Cal 7 MJ	7	✓	250.0	248.8	99.5





# AM #27 Cannabinoids Quant. Calibration Curve Report

**Batch results** D:\MassHunter\Data\2022\AM 27-28\040722 AM 27 28 CS\QuantResults\AM 27.batch.bin  
**Last Cal. Update** 4/14/2022 7:09 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	0.7	70.3
Cal 2 MJ	2	✓	3.0	3.1	102.0
Cal 3 MJ	3	✓	5.0	5.1	101.3
Cal 4 MJ	4	✓	10.0	10.6	106.1
Cal 5 MJ	5	✓	25.0	29.8	119.3
Cal 6 MJ	6	✓	50.0	56.2	112.4
Cal 7 MJ	7	✓	100.0	88.5	88.5

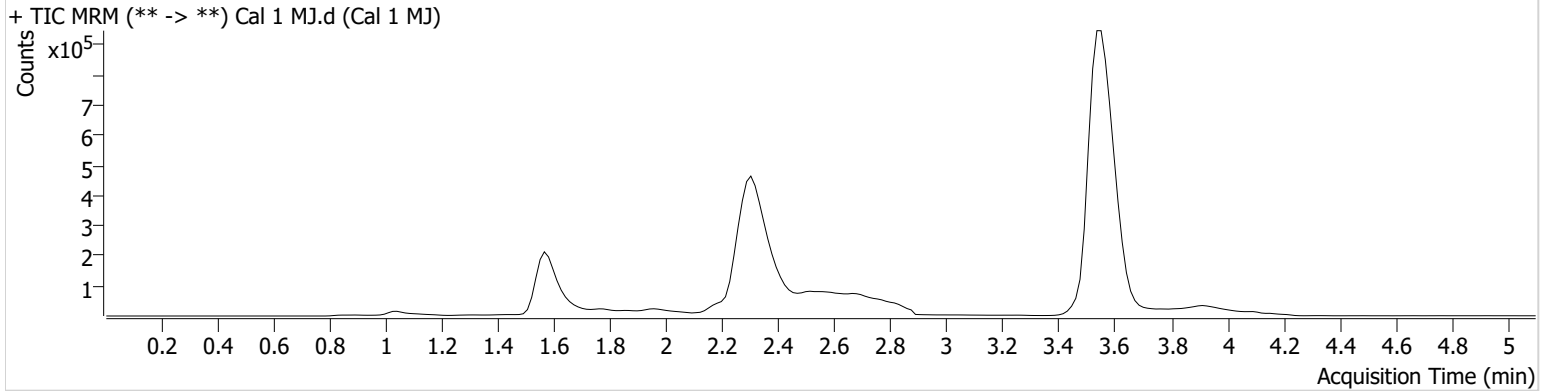
# AM #27 Cannabinoid Quant. Results



**Batch results** D:\MassHunter\Data\2022\AM 27-28\040722 AM 27 28 CS\QuantResults\AM 27.batch.bin  
**Calibration Last Update** 4/14/2022 7:09:27 AM

<b>Instrument</b>	Falco (069901)	<b>Data File</b>	Cal 1 MJ.d
<b>Type</b>	Cal	<b>Sample</b>	Cal 1 MJ
<b>Acq. Method</b>	AM 27 THCQ.m	<b>Operator</b>	Celena Shrum
<b>Sample Position</b>	P5-A1	<b>Comment</b>	
<b>Injection Volume</b>	10		
<b>Acq. Date-Time</b>	4/7/2022 1:13:29 PM		

**Sample Chromatogram**



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC-OH	1.633	17472	∞	11.6	10.77	897338	0.7030 ng/ml <b>Low</b>
THC-COOH	1.610	35799	∞	48.3	∞	230371	4.6365 ng/ml <b>Low</b>
THC	3.555	54438	∞	27.2	∞	6141432	1.0918 ng/ml

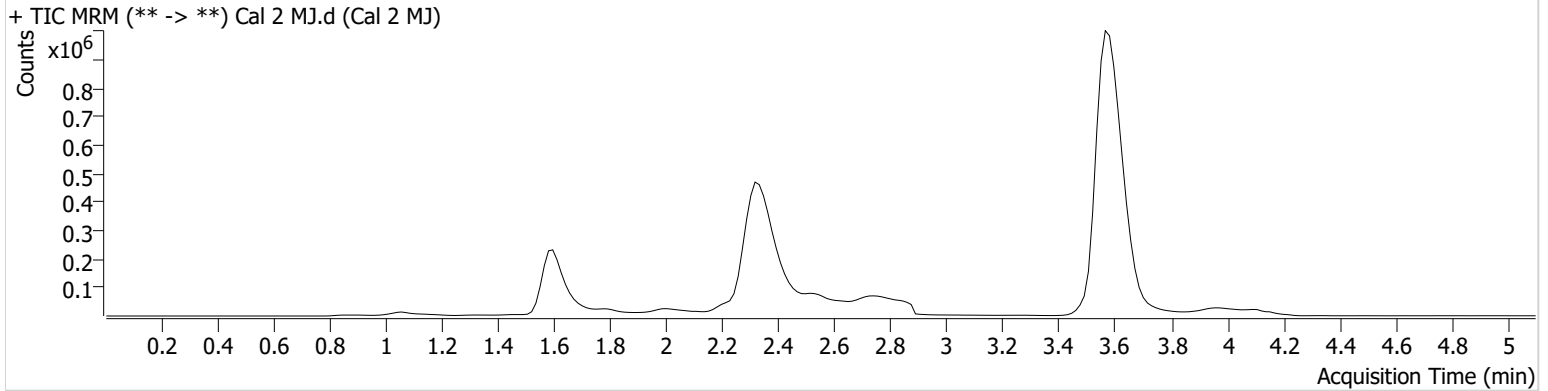


# AM #27 Cannabinoid Quant. Results

**Batch results** D:\MassHunter\Data\2022\AM 27-28\040722 AM 27 28 CS\QuantResults\AM 27.batch.bin  
**Calibration Last Update** 4/14/2022 7:09:27 AM

<b>Instrument</b>	Falco (069901)	<b>Data File</b>	Cal 2 MJ.d
<b>Type</b>	Cal	<b>Sample</b>	Cal 2 MJ
<b>Acq. Method</b>	AM 27 THCQ.m	<b>Operator</b>	Celena Shrum
<b>Sample Position</b>	P5-B1	<b>Comment</b>	
<b>Injection Volume</b>	10		
<b>Acq. Date-Time</b>	4/7/2022 1:21:15 PM		

## Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC-OH	1.588	41757	∞	13.2	82.61	723941	3.0606 ng/ml
THC-COOH	1.625	73017	∞	50.0	444.51	234647	10.5313 ng/ml
THC	3.586	174854	1839.94	27.8	∞	6487914	2.9473 ng/ml

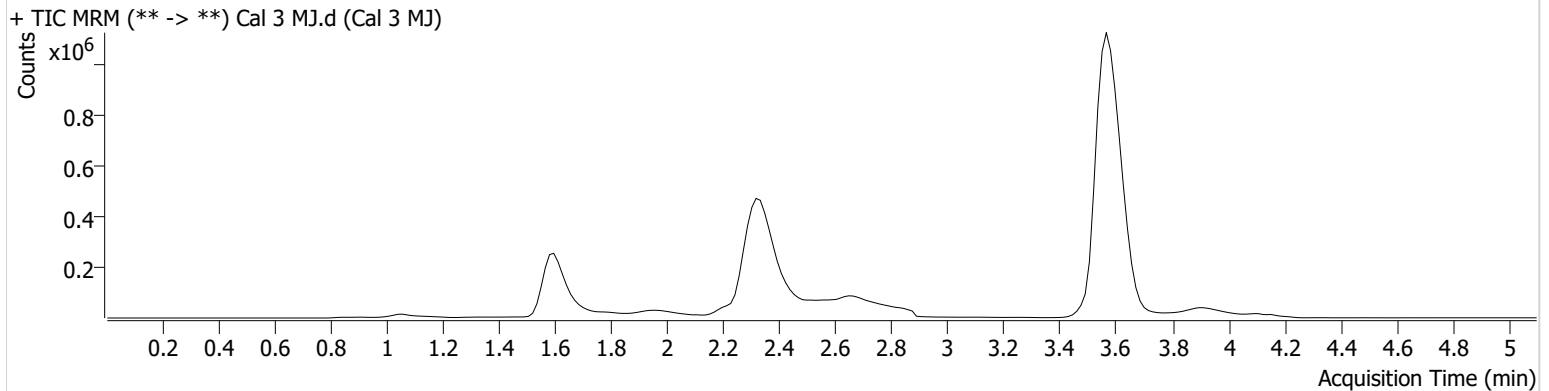
# AM #27 Cannabinoid Quant. Results



**Batch results** D:\MassHunter\Data\2022\AM 27-28\040722 AM 27 28 CS\QuantResults\AM 27.batch.bin  
**Calibration Last Update** 4/14/2022 7:09:27 AM

<b>Instrument</b>	Falco (069901)	<b>Data File</b>	Cal 3 MJ.d
<b>Type</b>	Cal	<b>Sample</b>	Cal 3 MJ
<b>Acq. Method</b>	AM 27 THCQ.m	<b>Operator</b>	Celena Shrum
<b>Sample Position</b>	P5-C1	<b>Comment</b>	
<b>Injection Volume</b>	10		
<b>Acq. Date-Time</b>	4/7/2022 1:28:51 PM		

## Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC-OH	1.588	70787	∞	13.3	157.30	784910	5.0662 ng/ml
THC-COOH	1.625	141638	∞	54.3	565.81	247278	20.4305 ng/ml
THC	3.586	304148	∞	26.4	∞	6802536	4.7692 ng/ml

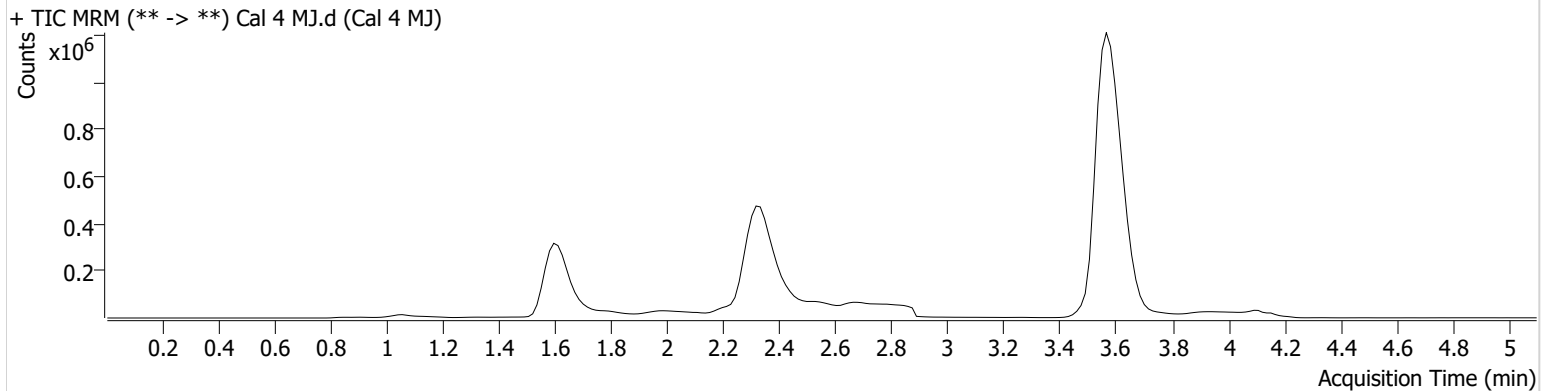
# AM #27 Cannabinoid Quant. Results



**Batch results** D:\MassHunter\Data\2022\AM 27-28\040722 AM 27 28 CS\QuantResults\AM 27.batch.bin  
**Calibration Last Update** 4/14/2022 7:09:27 AM

<b>Instrument</b>	Falco (069901)	<b>Data File</b>	Cal 4 MJ.d
<b>Type</b>	Cal	<b>Sample</b>	Cal 4 MJ
<b>Acq. Method</b>	AM 27 THCQ.m	<b>Operator</b>	Celena Shrum
<b>Sample Position</b>	P5-D1	<b>Comment</b>	
<b>Injection Volume</b>	10		
<b>Acq. Date-Time</b>	4/7/2022 1:36:27 PM		

## Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC-OH	1.603	142172	839.63	13.8	1082.72	789432	10.6139 ng/ml
THC-COOH	1.625	342688	∞	59.6	∞	254722	49.6633 ng/ml
THC	3.586	666310	∞	25.8	543.78	7172481	9.7125 ng/ml

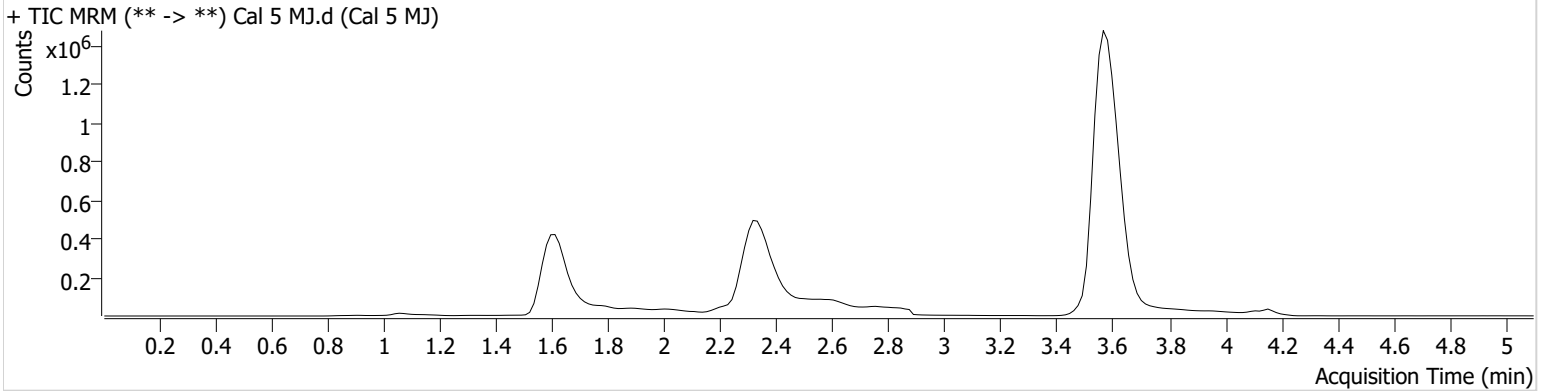
# AM #27 Cannabinoid Quant. Results



**Batch results** D:\MassHunter\Data\2022\AM 27-28\040722 AM 27 28 CS\QuantResults\AM 27.batch.bin  
**Calibration Last Update** 4/14/2022 7:09:27 AM

<b>Instrument</b>	Falco (069901)	<b>Data File</b>	Cal 5 MJ.d
<b>Type</b>	Cal	<b>Sample</b>	Cal 5 MJ
<b>Acq. Method</b>	AM 27 THCQ.m	<b>Operator</b>	Celena Shrum
<b>Sample Position</b>	P5-E1	<b>Comment</b>	
<b>Injection Volume</b>	10		
<b>Acq. Date-Time</b>	4/7/2022 1:44:03 PM		

## Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC-OH	1.588	388227	∞	13.7	1131.88	789923	29.8270 ng/ml
THC-COOH	1.625	557475	∞	59.7	∞	276499	75.0479 ng/ml
THC	3.586	1793617	∞	25.3	∞	7458241	24.8532 ng/ml

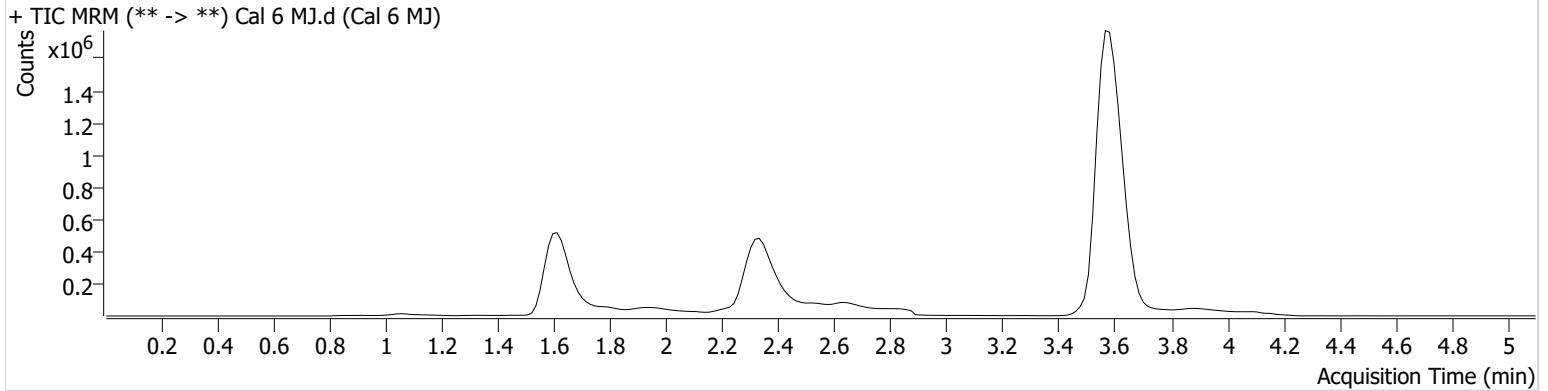
# AM #27 Cannabinoid Quant. Results



**Batch results** D:\MassHunter\Data\2022\AM 27-28\040722 AM 27 28 CS\QuantResults\AM 27.batch.bin  
**Calibration Last Update** 4/14/2022 7:09:27 AM

<b>Instrument</b>	Falco (069901)	<b>Data File</b>	Cal 6 MJ.d
<b>Type</b>	Cal	<b>Sample</b>	Cal 6 MJ
<b>Acq. Method</b>	AM 27 THCQ.m	<b>Operator</b>	Celena Shrum
<b>Sample Position</b>	P5-F1	<b>Comment</b>	
<b>Injection Volume</b>	10		
<b>Acq. Date-Time</b>	4/7/2022 1:51:38 PM		

## Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC-OH	1.603	729709	1965.17	14.1	1822.48	794324	56.1853 ng/ml
THC-COOH	1.625	699395	∞	60.3	4416.06	259104	100.8959 ng/ml
THC	3.586	3528932	∞	25.4	∞	7263122	50.0259 ng/ml

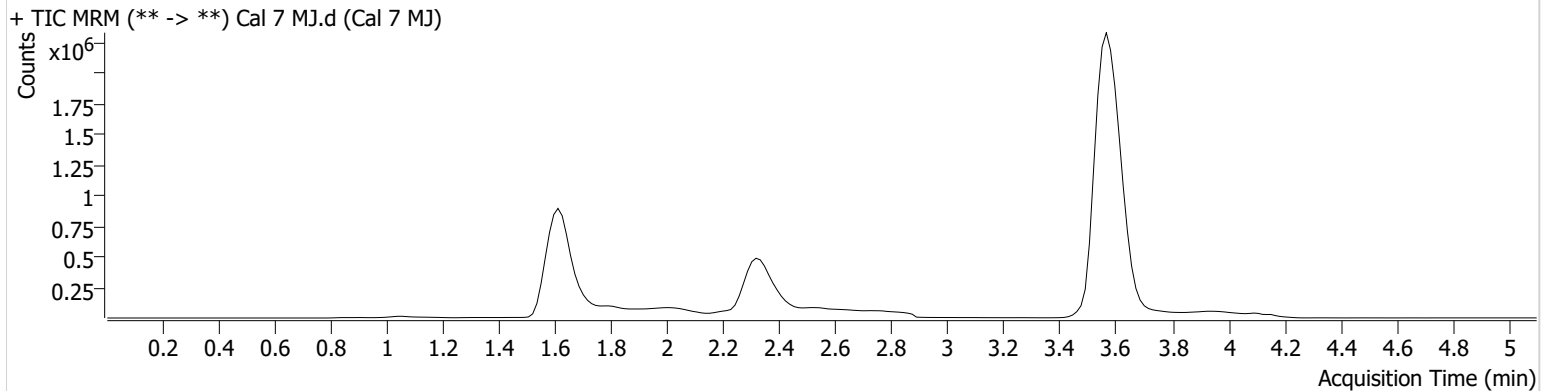
# AM #27 Cannabinoid Quant. Results



**Batch results** D:\MassHunter\Data\2022\AM 27-28\040722 AM 27 28 CS\QuantResults\AM 27.batch.bin  
**Calibration Last Update** 4/14/2022 7:09:27 AM

<b>Instrument</b>	Falco (069901)	<b>Data File</b>	Cal 7 MJ.d
<b>Type</b>	Cal	<b>Sample</b>	Cal 7 MJ
<b>Acq. Method</b>	AM 27 THCQ.m	<b>Operator</b>	Celena Shrum
<b>Sample Position</b>	P5-G1	<b>Comment</b>	
<b>Injection Volume</b>	10		
<b>Acq. Date-Time</b>	4/7/2022 1:59:14 PM		

## Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC-OH	1.588	1417662	∞	14.2	∞	982384	88.5442 ng/ml
THC-COOH	1.625	1604215	∞	61.7	18974.8	242773	248.7946 ng/ml
THC	3.570	6797126	∞	25.6	∞	6943897	100.6001 ng/ml