

REVIEWED

By Tamara Salazar at 3:54 pm, Mar 01, 2024



2/29/2024

Worklist: 6702

<u>LAB CASE</u>	<u>ITEM</u>	<u>ITEM TYPE</u>	<u>DESCRIPTION</u>
C2024-0161	2	BCK	AM 27 Blood THC Quant by LC-QQQ
C2024-0180	1	BCK	AM 27 Blood THC Quant by LC-QQQ
C2024-0234	1	BCK	AM 27 Blood THC Quant by LC-QQQ
C2024-0307	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: 2/28/24

Plate lot#: 231212

Mobile phase A: 0.1% Formic Acid in LCMS Water

Blank Blood Lot: 23J52629

Column: UCT Selectra DA 100 x 2.1mm 3um

Analyst: Anne Nord

Plate Retest Date: 6/12/24

Mobile phase B: 0.1% Formic acid in Acetonitrile

Blank Urine Lot: [Click here to enter text.](#)

LCMS-QQQ ID: 69679

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: add 1.5mL urine to blank plate, add 250µl 1N KOH. Shake and incubate at 40 degrees for 15 minutes.** Using a calibrated pipette, add **1000µl blood and urine (if applicable) (calibrated pipette)** into the appropriate wells of analytical (standards) plate. **Pipette ID: I41142J**
- 3. Place on shaking incubator at ambient temp., 900rpm for 15 minutes.
- 4. Add **500µL of 0.1% formic acid in water to blood samples,** and **500µL of saturated phosphate buffer to urine samples** in the wells of the analytical plate.
- 5. Place on shaking incubator at ambient temp., 900rpm for 15 minutes.
- 6. Transfer **700-800µL of blood+acid or urine+acid** mixture to corresponding wells of SLE+ plate. Amount transferred: **800 µL** (C2024-0161-2 initial well clogged 700 ul transfered)
- 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^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. Did all QCs pass for each analyte? (if not, describe in comments section)
- 5. Enter QCs into control charting.
- 6. Central File Packet to include: LIMS Worklist, Method Checklist, Calibration and Control Reports

COMMENTS: *Mikel Buffaloe hands of the analyst*



	1	2	3	4	5	6
a	cal 1	Internal control (blood)				
b	cal 2	negative blood				
c	cal 3	0161-2 mixing plate				
d	cal 4	0180-1				
e	cal 5	0234-1				
f	cal 6	0307-1				
g	cal 7	0161-2 SLE & injection				
h	Internal control (blood)					

Plate position 3

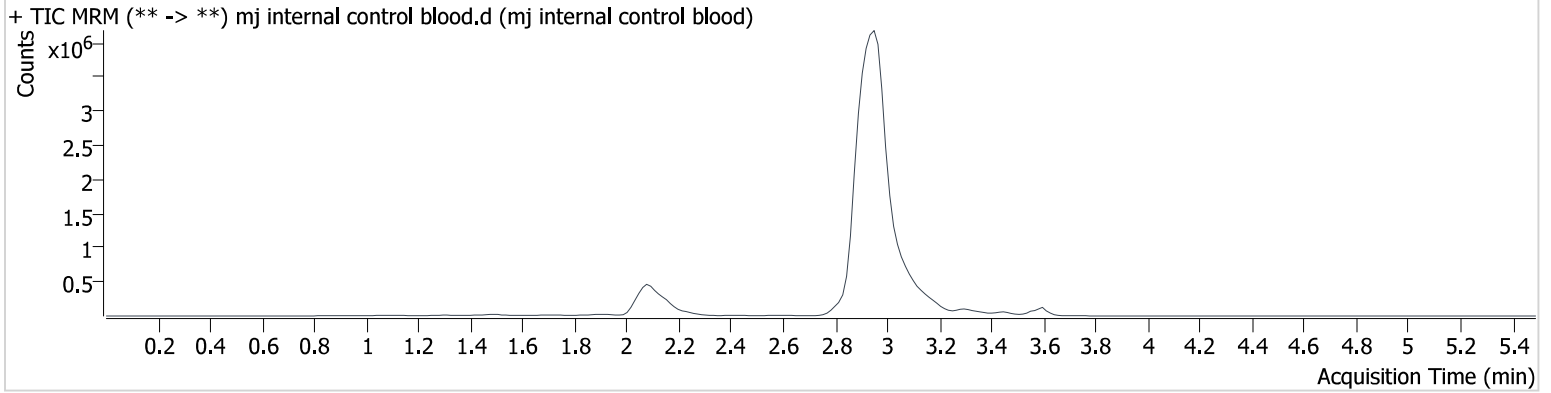
c2024-____-__

AM #27 Cannabinoids

Batch results D:\MassHunter\Data\2024\am 27-28\022824\QuantResults\am27.batch.bin
Calibration Last Update 2/29/2024 9:01:31 AM

Instrument 69679 **Data File** mj internal control blood.d
Type QC **Sample** mj internal control blood
Acq. Method thc quant 50 50.m **Operator** Anne Nord
Sample Position P3-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 2/28/2024 5:26:19 PM
Sample Info.

Sample Chromatogram



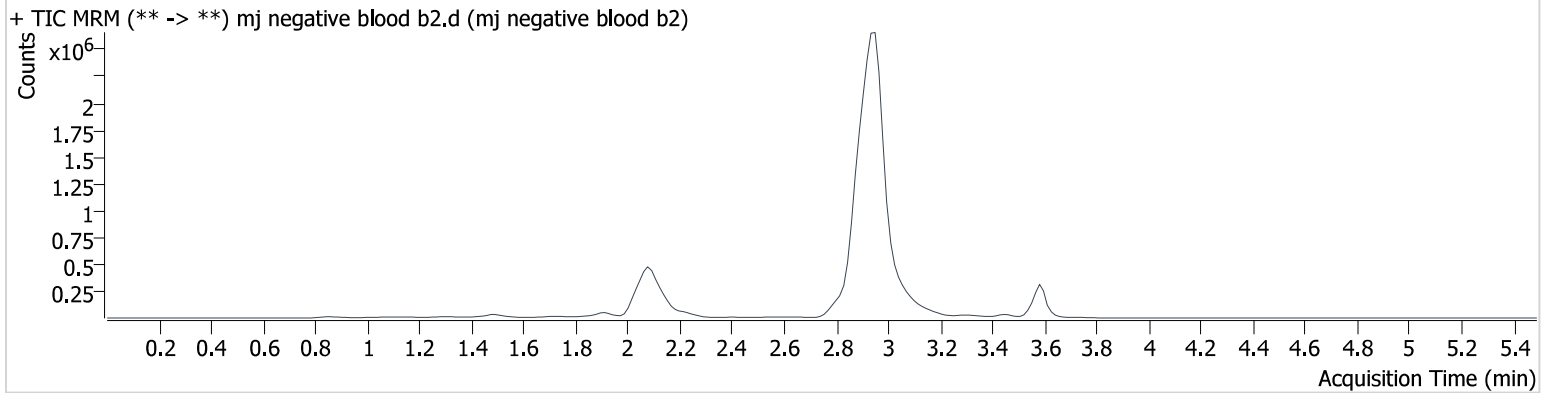
Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC-OH	2.081	29262	3478.1	807.51	∞	1829802	5.054 ng/ml
THC-COOH	2.152	48920	76478.3	282.03	166.7	704784	14.057 ng/ml
THC	3.603	42509	1399.3	24.42	∞	309235	4.634 ng/ml

AM #27 Cannabinoids

Batch results D:\MassHunter\Data\2024\am 27-28\022824\QuantResults\am27.batch.bin
Calibration Last Update 2/29/2024 9:01:31 AM

Instrument	69679	Data File	mj negative blood b2.d
Type	Sample	Sample	mj negative blood b2
Acq. Method	thc quant 50 50.m	Operator	Anne Nord
Sample Position	P3-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	2/28/2024 5:32:53 PM		
Sample Info.			

Sample Chromatogram

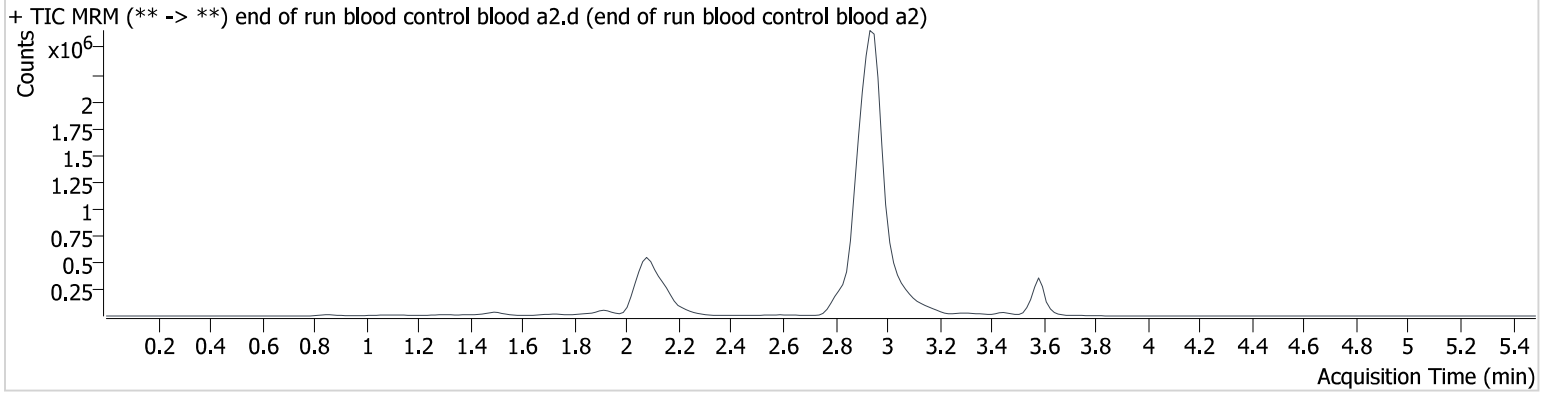


AM #27 Cannabinoids

Batch results D:\MassHunter\Data\2024\am 27-28\022824\QuantResults\am27.batch.bin
Calibration Last Update 2/29/2024 9:01:31 AM

Instrument 69679 **Data File** end of run blood control blood a2.d
Type QC **Sample** end of run blood control blood a2
Acq. Method thc quant 50 50.m **Operator** Anne Nord
Sample Position P3-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 2/28/2024 6:32:17 PM
Sample Info.

Sample Chromatogram

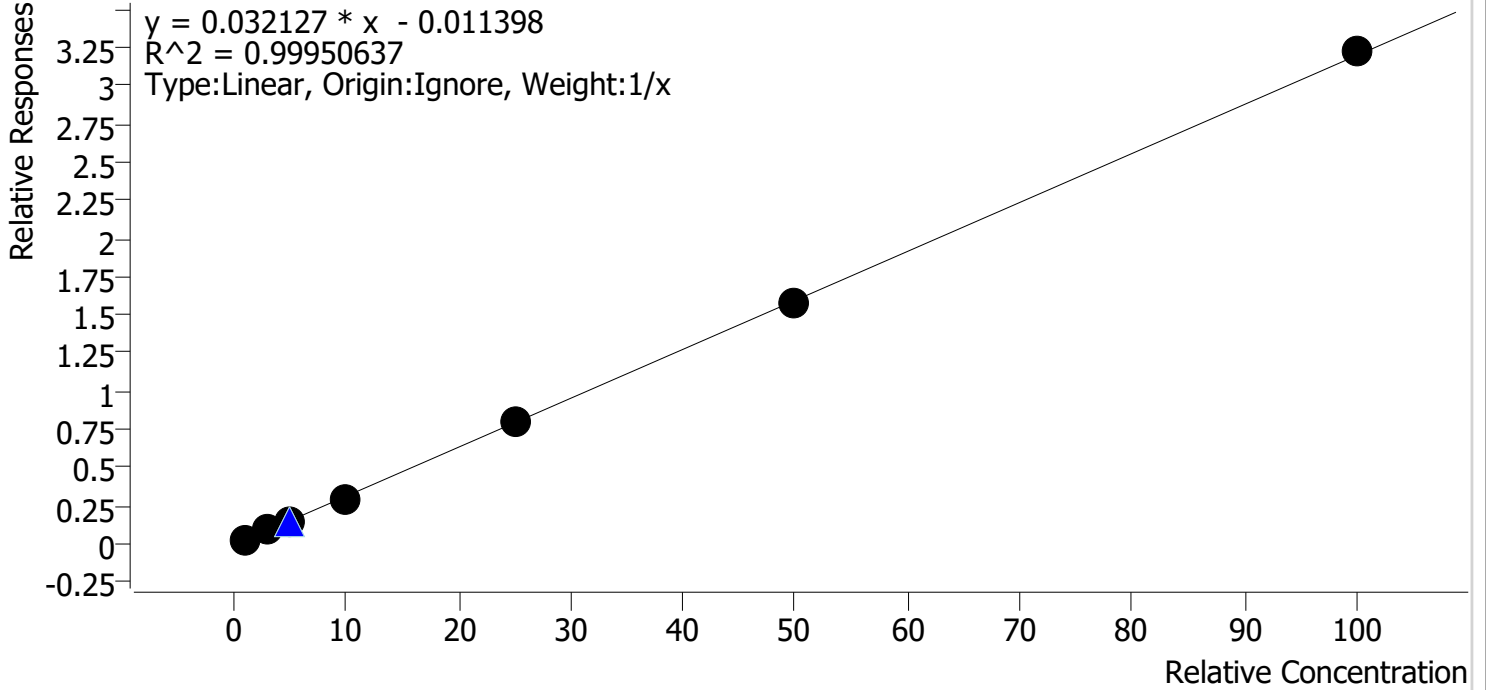


Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC-OH	2.081	34125	2508.9	837.57	∞	2228864	4.858 ng/ml
THC-COOH	2.152	59190	2707.3	276.88	169.3	807341	14.772 ng/ml
THC	3.588	115608	3600.3	25.51	10511.7	800288	4.851 ng/ml

Compound Calibration Report

Batch results D:\MassHunter\Data\2024\am 27-28\022824\QuantResults\am27.batch.bin
Last Cal. Update 2/29/2024 9:01 AM
Analyst Name ISP\datastor
Analyte THC Internal Standard THC-d3

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

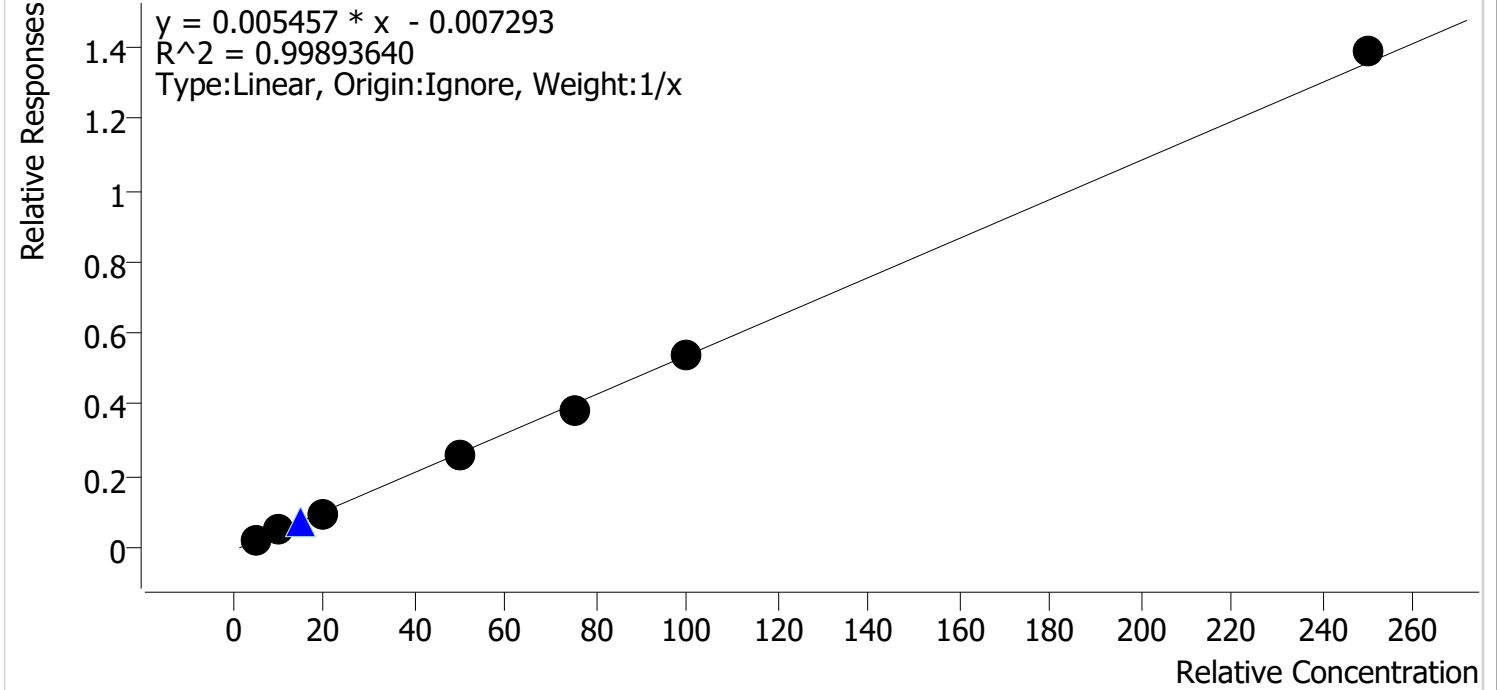


Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
mj cal 1	1	✓	1.0	1.1	112.5
mj cal 2	2	✓	3.0	2.9	96.4
mj cal 3	3	✓	5.0	4.8	95.0
mj cal 4	4	✓	10.0	9.4	94.4
mj cal 5	5	✓	25.0	25.5	101.9
mj cal 6	6	✓	50.0	49.6	99.1
mj cal 7	7	✓	100.0	100.8	100.8

Compound Calibration Report

Batch results D:\MassHunter\Data\2024\am 27-28\022824\QuantResults\am27.batch.bin
Last Cal. Update 2/29/2024 9:01 AM
Analyst Name ISP\datastor
Analyte THC-COOH **Internal Standard** THC-COOH-d9

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

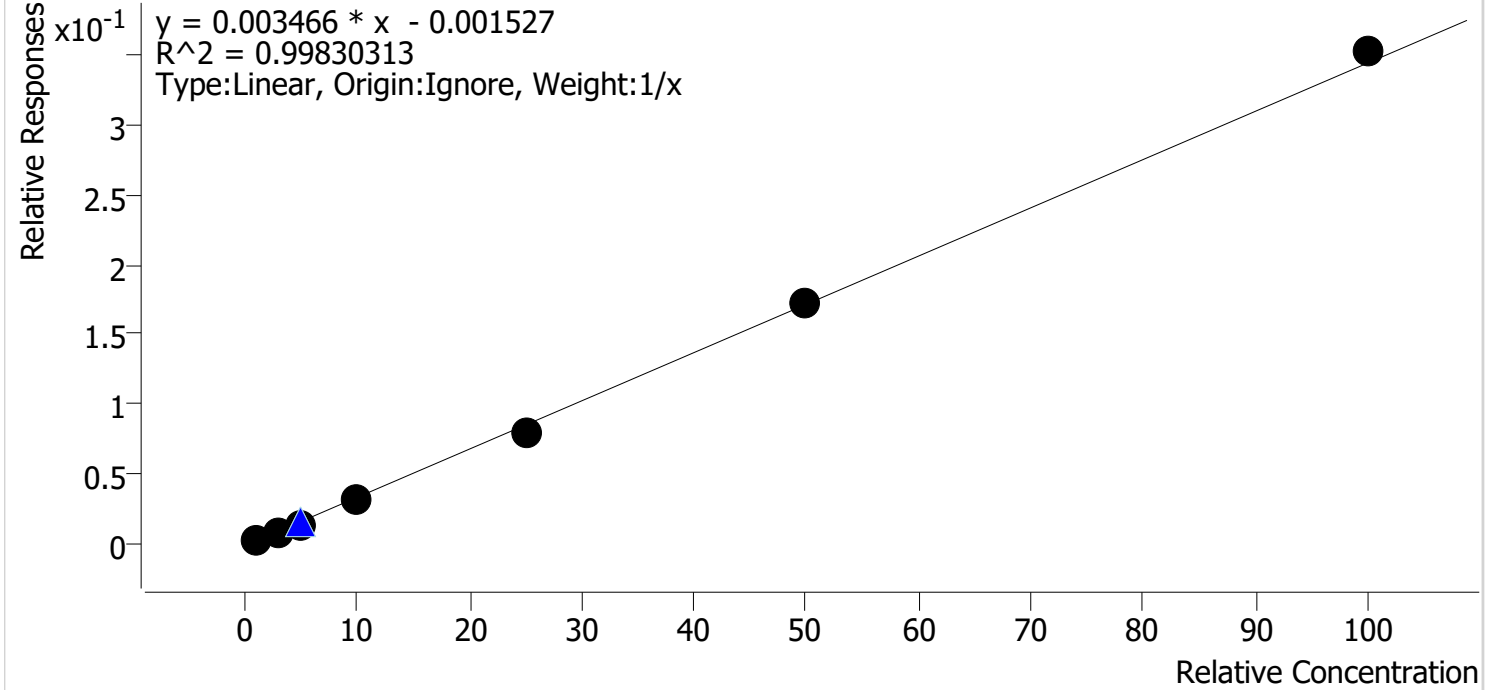


Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
mj cal 1	1	✓	5.0	5.5	109.8
mj cal 2	2	✓	10.0	10.1	101.2
mj cal 3	3	✓	20.0	19.0	94.8
mj cal 4	4	✓	50.0	48.1	96.2
mj cal 5	5	✓	75.0	72.2	96.3
mj cal 6	6	✓	100.0	99.3	99.3
mj cal 7	7	✓	250.0	255.7	102.3

Compound Calibration Report

Batch results D:\MassHunter\Data\2024\am 27-28\022824\QuantResults\am27.batch.bin
Last Cal. Update 2/29/2024 9:01 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



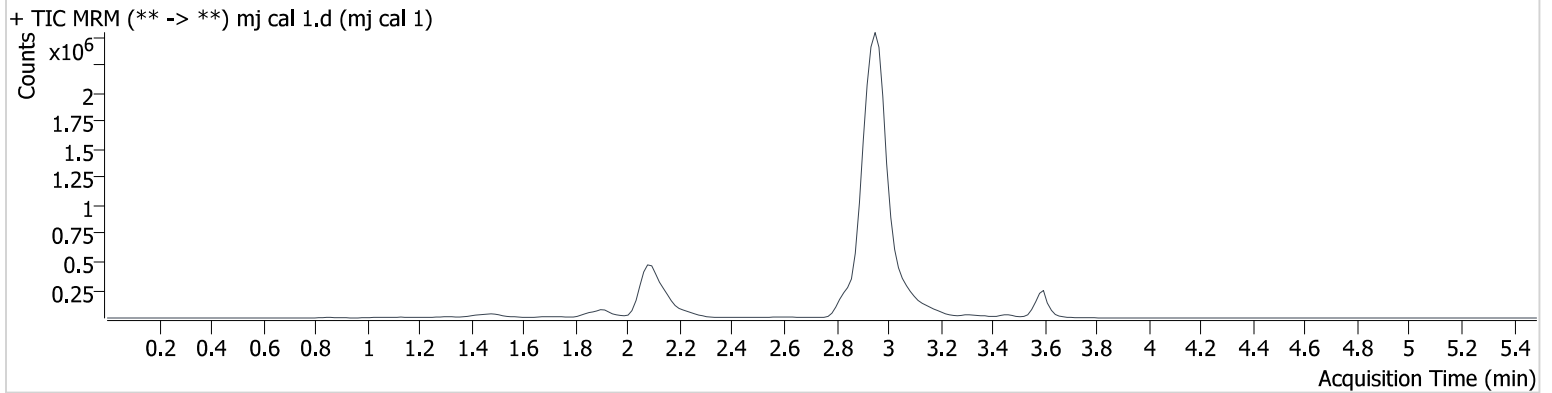
Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
mj cal 1	1	✓	1.0	1.2	123.2
mj cal 2	2	✓	3.0	2.9	96.5
mj cal 3	3	✓	5.0	4.5	90.7
mj cal 4	4	✓	10.0	9.2	92.3
mj cal 5	5	✓	25.0	23.7	94.8
mj cal 6	6	✓	50.0	50.1	100.2
mj cal 7	7	✓	100.0	102.3	102.3

AM #27 Cannabinoids

Batch results D:\MassHunter\Data\2024\am 27-28\022824\QuantResults\am27.batch.bin
Calibration Last Update 2/29/2024 9:01:31 AM

Instrument	69679	Data File	mj cal 1.d
Type	Cal	Sample	mj cal 1
Acq. Method	thc quant 50 50.m	Operator	Anne Nord
Sample Position	P3-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	2/28/2024 4:33:27 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.	
THC-OH	2.081	5778	49.4	780.99	∞	2107269	1.232 ng/ml	Low
THC-COOH	2.167	15796	73.3	310.52	52731.9	697078	5.490 ng/ml	
THC	3.603	15012	2011.8	26.41	∞	606908	1.125 ng/ml	

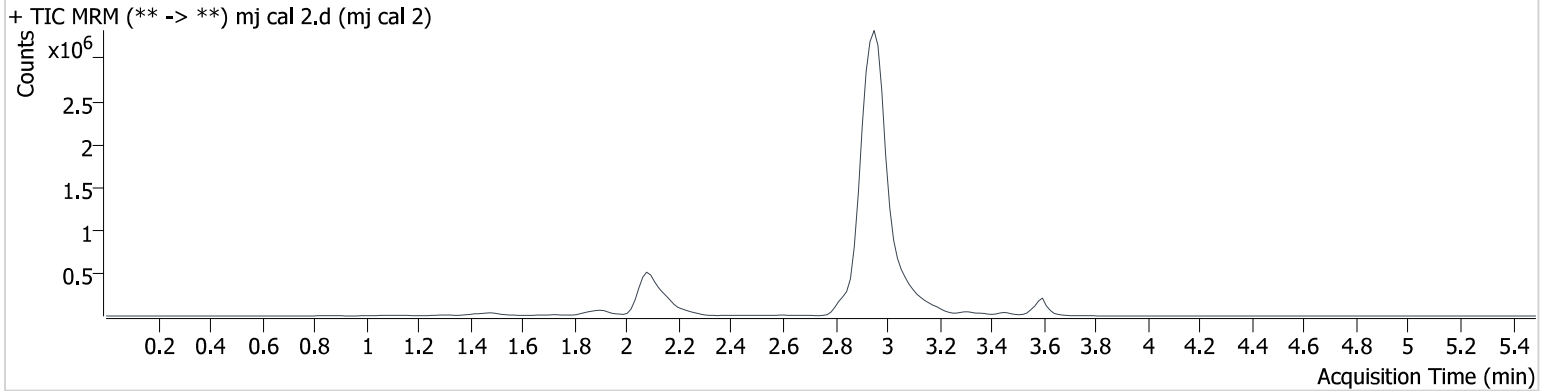
AM #27 Cannabinoids

Batch results D:\MassHunter\Data\2024\am 27-28\022824\QuantResults\am27.batch.bin
Calibration Last Update 2/29/2024 9:01:31 AM

Instrument 69679
Type Cal
Acq. Method thc quant 50 50.m
Sample Position P3-B1
Injection Volume 10
Acq. Date-Time 2/28/2024 4:40:11 PM
Sample Info.

Data File mj cal 2.d
Sample mj cal 2
Operator Anne Nord
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-OH	2.081	17683	∞	832.99	∞	2078387	2.895 ng/ml	Low
THC-COOH	2.152	33641	52902.8	276.43	2074.4	701872	10.120 ng/ml	
THC	3.603	40233	1623.7	23.89	∞	493740	2.891 ng/ml	

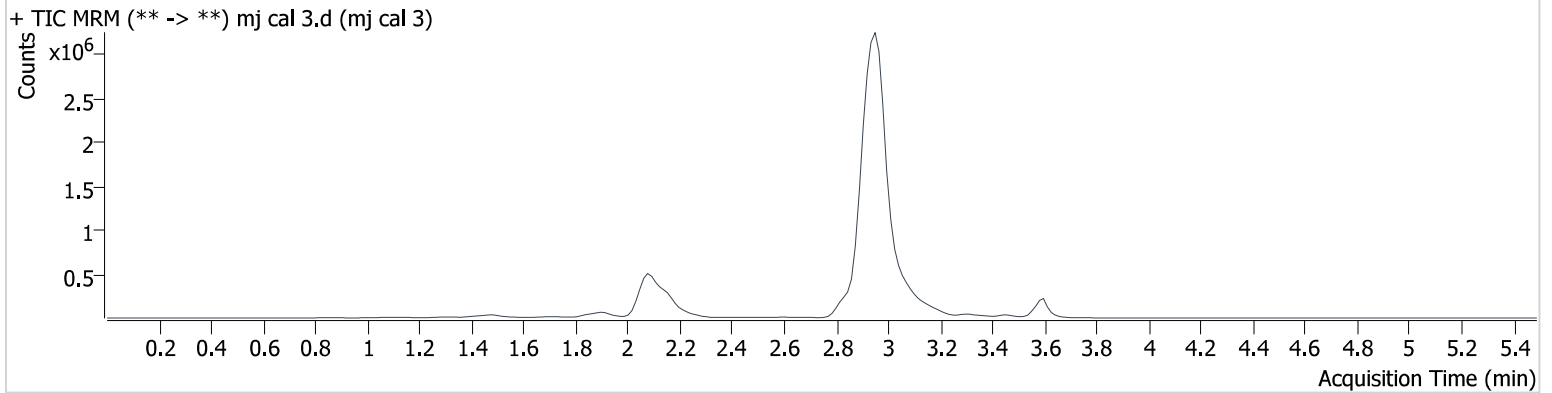
AM #27 Cannabinoids

Batch results D:\MassHunter\Data\2024\am 27-28\022824\QuantResults\am27.batch.bin
Calibration Last Update 2/29/2024 9:01:31 AM

Instrument 69679
Type Cal
Acq. Method thc quant 50 50.m
Sample Position P3-C1
Injection Volume 10
Acq. Date-Time 2/28/2024 4:46:46 PM
Sample Info.

Data File mj cal 3.d
Sample mj cal 3
Operator Anne Nord
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-OH	2.081	27866	∞	884.38	∞	1962412	4.537 ng/ml
THC-COOH	2.152	67172	492.5	278.32	522.6	698273	18.966 ng/ml
THC	3.603	72111	19598.4	24.47	2148.9	510429	4.752 ng/ml

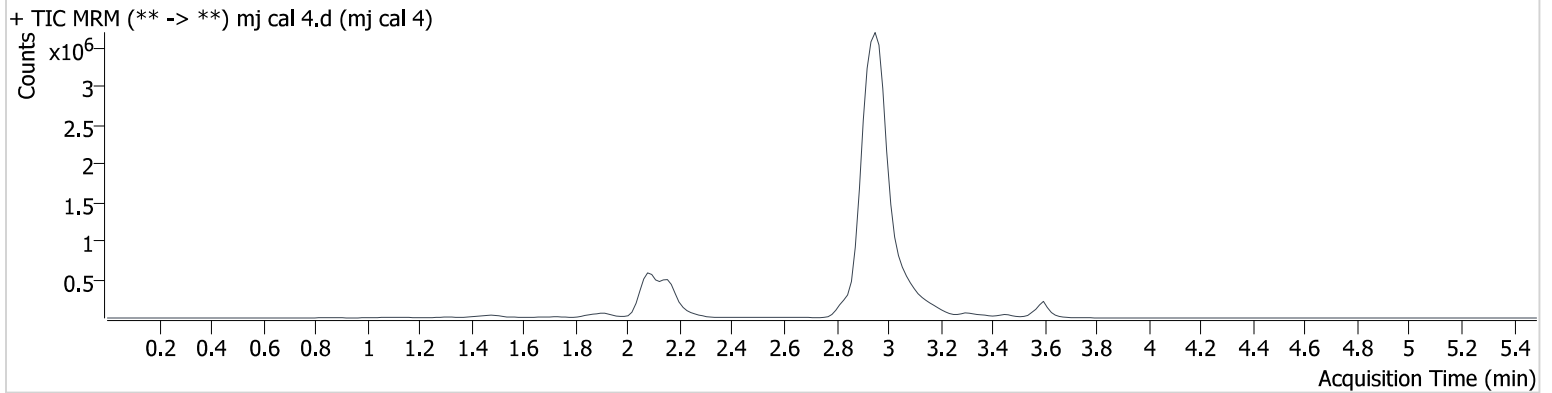
AM #27 Cannabinoids

Batch results D:\MassHunter\Data\2024\am 27-28\022824\QuantResults\am27.batch.bin
Calibration Last Update 2/29/2024 9:01:31 AM

Instrument 69679
Type Cal
Acq. Method thc quant 50 50.m
Sample Position P3-D1
Injection Volume 10
Acq. Date-Time 2/28/2024 4:53:23 PM
Sample Info.

Data File mj cal 4.d
Sample mj cal 4
Operator Anne Nord
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-OH	2.081	61032	4517.2	851.32	1714.4	2003299	9.230 ng/ml
THC-COOH	2.152	178236	3719.0	269.82	992373	698256	48.116 ng/ml
THC	3.603	125547	2031.8	24.84	∞	430341	9.436 ng/ml

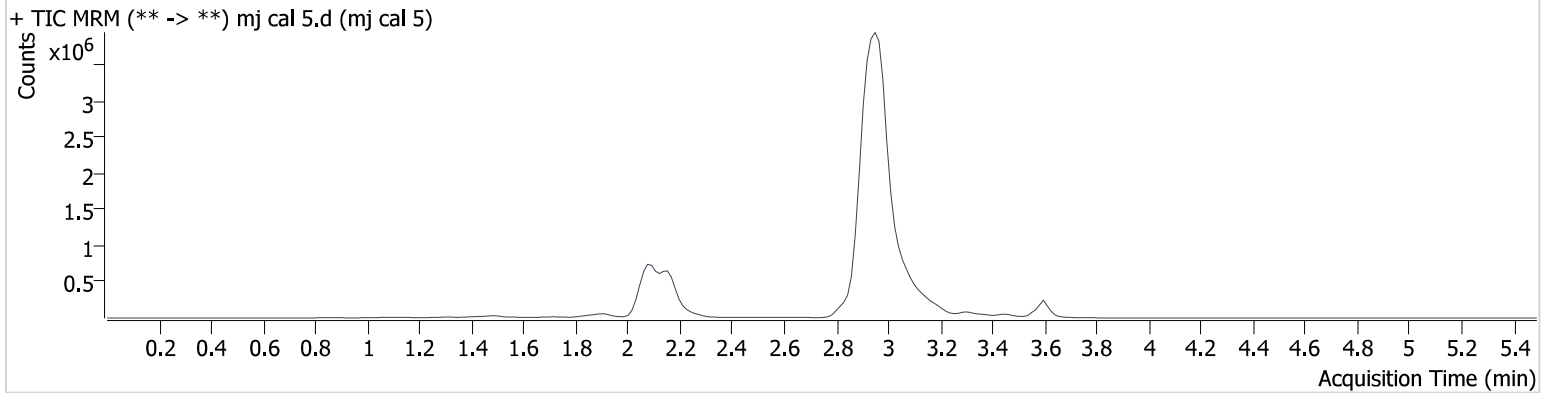
AM #27 Cannabinoids

Batch results D:\MassHunter\Data\2024\am 27-28\022824\QuantResults\am27.batch.bin
Calibration Last Update 2/29/2024 9:01:31 AM

Instrument 69679
Type Cal
Acq. Method thc quant 50 50.m
Sample Position P3-E1
Injection Volume 10
Acq. Date-Time 2/28/2024 4:59:59 PM
Sample Info.

Data File mj cal 5.d
Sample mj cal 5
Operator Anne Nord
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-OH	2.081	153535	∞	879.64	1532.5	1904163	23.703 ng/ml
THC-COOH	2.152	260112	222.6	278.74	118451	672288	72.242 ng/ml
THC	3.603	282467	4313.0	22.52	∞	350165	25.463 ng/ml

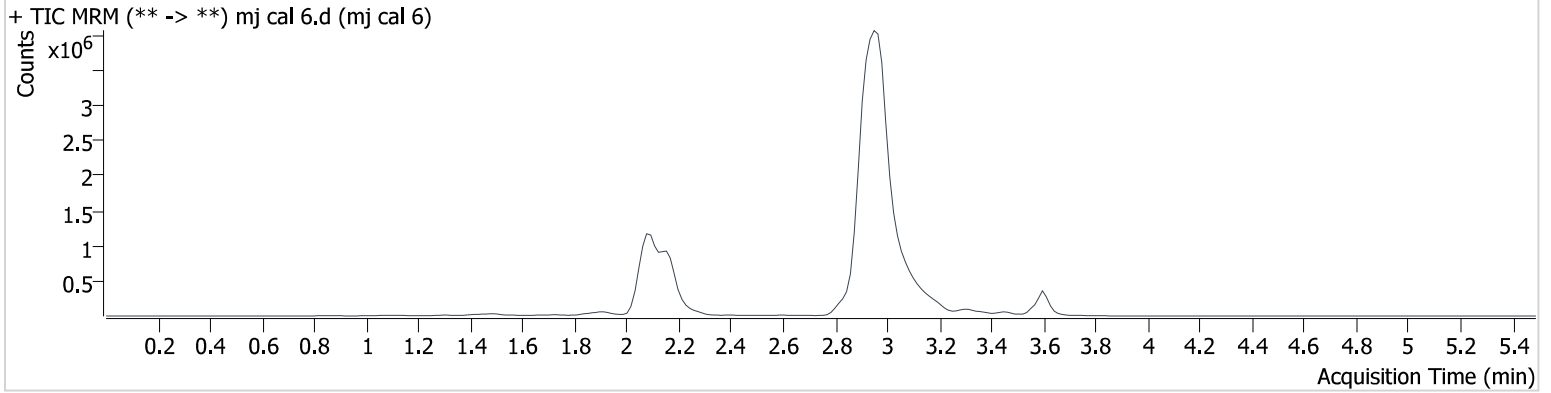
AM #27 Cannabinoids

Batch results D:\MassHunter\Data\2024\am 27-28\022824\QuantResults\am27.batch.bin
Calibration Last Update 2/29/2024 9:01:31 AM

Instrument 69679
Type Cal
Acq. Method thc quant 50 50.m
Sample Position P3-F1
Injection Volume 10
Acq. Date-Time 2/28/2024 5:06:33 PM
Sample Info.

Data File mj cal 6.d
Sample mj cal 6
Operator Anne Nord
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-OH	2.081	363327	∞	835.59	∞	2111812	50.077 ng/ml
THC-COOH	2.152	396491	911.3	265.91	1662.4	741536	99.325 ng/ml
THC	3.603	584008	30163.7	23.81	∞	369319	49.575 ng/ml

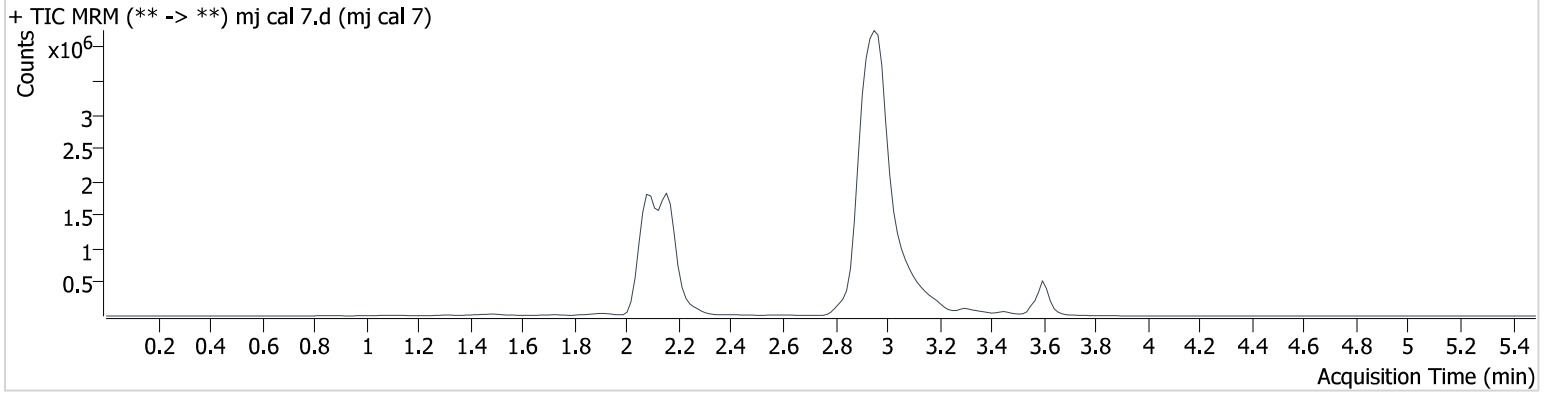
AM #27 Cannabinoids

Batch results D:\MassHunter\Data\2024\am 27-28\022824\QuantResults\am27.batch.bin
Calibration Last Update 2/29/2024 9:01:31 AM

Instrument 69679
Type Cal
Acq. Method thc quant 50 50.m
Sample Position P3-G1
Injection Volume 10
Acq. Date-Time 2/28/2024 5:13:08 PM
Sample Info.

Data File mj cal 7.d
Sample mj cal 7
Operator Anne Nord
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-OH	2.081	714576	∞	820.36	∞	2023464	102.326 ng/ml
THC-COOH	2.152	928497	2231167.2	264.23	109623	668848	255.742 ng/ml
THC	3.603	1051986	∞	24.25	3095.2	326127	100.758 ng/ml