7/25/2024

Worklist: 6883

REVIEWED
By Britany Wylie at 6:48 am, Jul 26, 2024

LAB_CASE	ITEM	ITEM_TYPE	DESCRIPTION
C2024-1121	1	BCK	AM 27 Blood THC Quant by LC-QQQ
C2024-1226	1	BCK	AM 27 Blood THC Quant by LC-QQQ
C2024-1283	1	BCK	AM 27 Blood THC Quant by LC-QQQ
C2024-1300	1	UCK	AM 27 Urine Cannabinoids Confirmation by LC-QQQ
C2024-1336	1	BCK	AM 27 Blood THC Quant by LC-QQQ

Also extracted and run with this worklist

C2024-1120-1

C2024-1181-1

C2024-1188-3

C2024-1197-1

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

Extraction Date: 07/23/2024
Plate lot#: 240513
Mobile phase A: 0.1% Formic Acid in LCMS Water
Blank Blood Lot: 24C52042
Column: UCT Selectra DA 100 x 2.1mm 3um

Analyst: Anne Nord
Plate Retest Date: 11/13/2024
Mobile phase B: 0.1% Formic acid in Acetonitrile
Blank Urine Lot: 6524
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. Using a calibrated pipette, pipette 1000µL blood or 1000µL urine in wells of analytical (standards) plate. **Pipette ID: K52558G**
☒ 3. Urine hydrolysis add **100 ul BG turbo, and 200 ul BG turbo buffer** to the urine samples in wells of the analytical plate.
☒ 4. Add **500µL of 0.1% formic acid in water** 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: **750 µL**
☒ 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 75401 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: *The samples were extracted on 7/23/24 they were placed in the freezer and run on 7/24/24*

Hydroxy-THC was not evaluated for the urine samples due to an interfering peak.

	1	2	3	4	5	6
a	cal 1	Internal control urine	1181-1			
b	cal 2	negative blood	1188-3			
c	cal 3	1121-1	1197-1			
d	cal 4	1226-1	1300-1			
e	cal 5	1283-1				
f	cal 6	1336-1				
g	cal 7	negative urine				
h	Internal control (blood)	1120-1				

Plate position 3

c2024-____-_

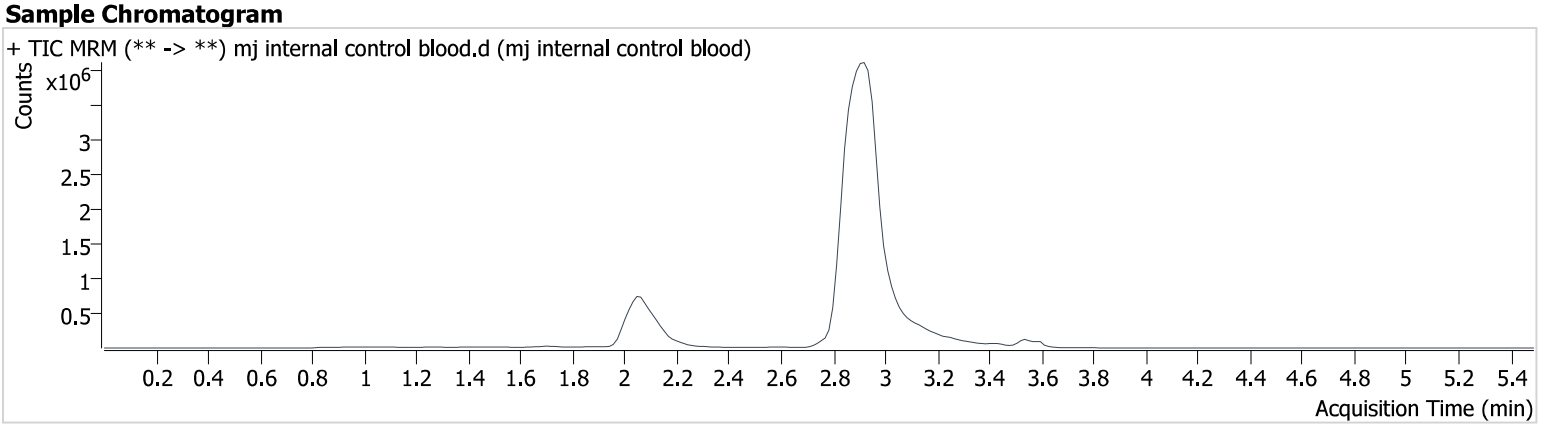
AM #27 Cannabinoids

Batch results D:\MassHunter\Data\2024\am 27-28\072324\QuantResults\am 27.batch.bin
Calibration Last Update 7/25/2024 9:57:58 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**	
Injection Volume	10		
Acq. Date-Time	7/24/2024 6:50:49 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



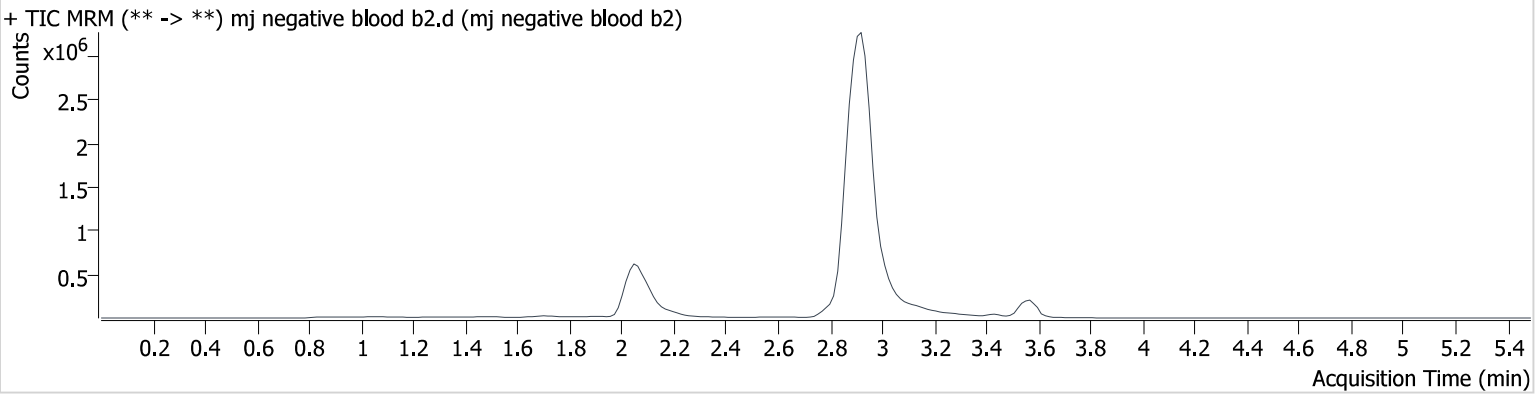
Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC-OH	2.051	42842	∞	838.83	677.0	3170550	4.364 ng/ml
THC-COOH	2.122	85694	1240.1	278.72	157.0	1177145	14.930 ng/ml
THC	3.588	51618	∞	24.35	∞	477379	4.389 ng/ml

AM #27 Cannabinoids

Batch results D:\MassHunter\Data\2024\am 27-28\072324\QuantResults\am 27.batch.bin
Calibration Last Update 7/25/2024 9:57:58 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	7/24/2024 6:57:23 PM		
Sample Info.			

Sample Chromatogram



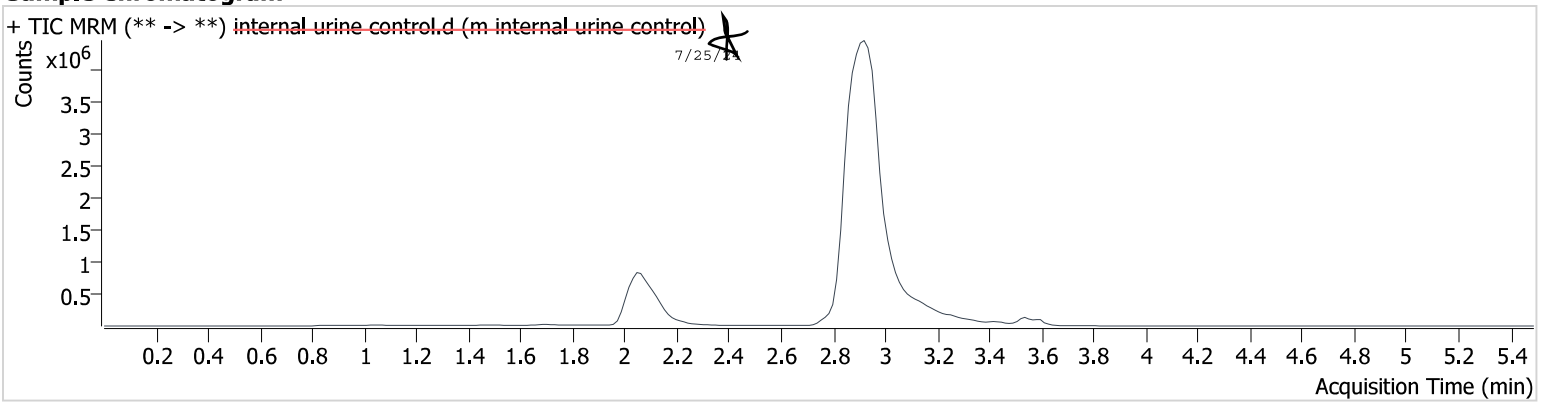
AM #27 Cannabinoids

Batch results D:\MassHunter\Data\2024\am 27-28\072324\QuantResults\am 27.batch.bin
Calibration Last Update 7/25/2024 9:57:58 AM

Instrument	69679	**Data File**	internal urine control.d
Type	QC	**Sample**	~~m internal urine control~~ 7/25/24
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	7/24/2024 9:22:29 PM		
Sample Info.			

Internal blood control
End of run.

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC-OH	2.051	46759	175.0	844.63	∞	3455017	4.371 ng/ml
THC-COOH	2.122	97299	467.0	283.68	18930.8	1333077	14.966 ng/ml
THC	3.588	58716	∞	24.30	164.8	518983	4.580 ng/ml

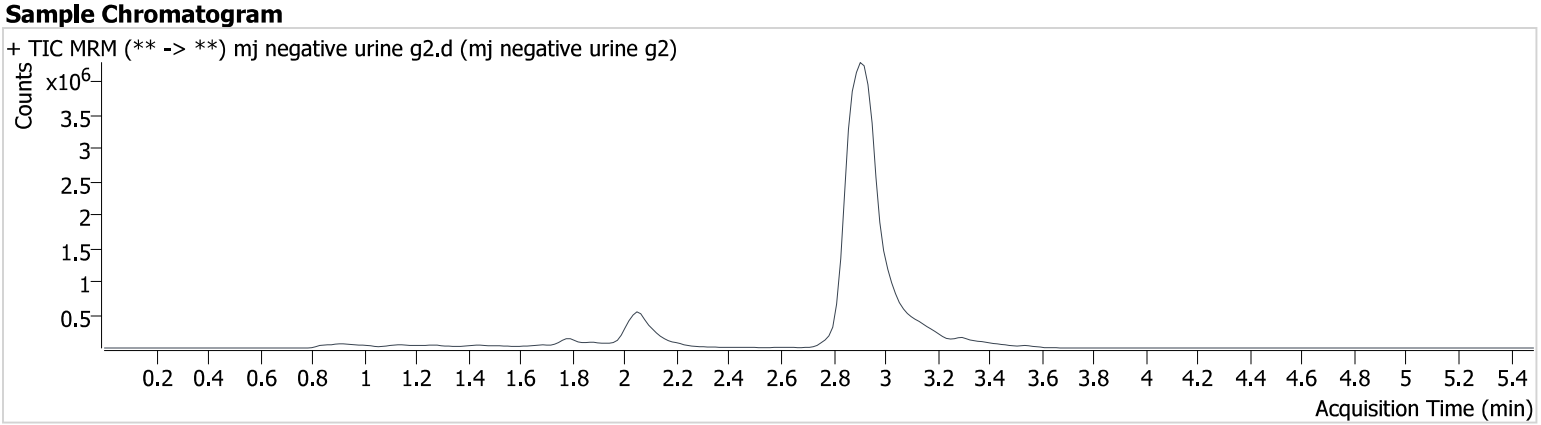
This is the internal blood control was named wrong in worklist.

AM #27 Cannabinoids

Batch results	D:\MassHunter\Data\2024\am 27-28\072324\QuantResults\am 27.batch.bin
Calibration Last Update	7/25/2024 9:57:58 AM

Instrument	69679	**Data File**	mj negative urine g2.d
Type	Sample	**Sample**	mj negative urine g2
Acq. Method	thc quant 50 50.m	**Operator**	Anne Nord
Sample Position	P3-G2	**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	7/24/2024 8:03:20 PM		
Sample Info.			

Sample Chromatogram



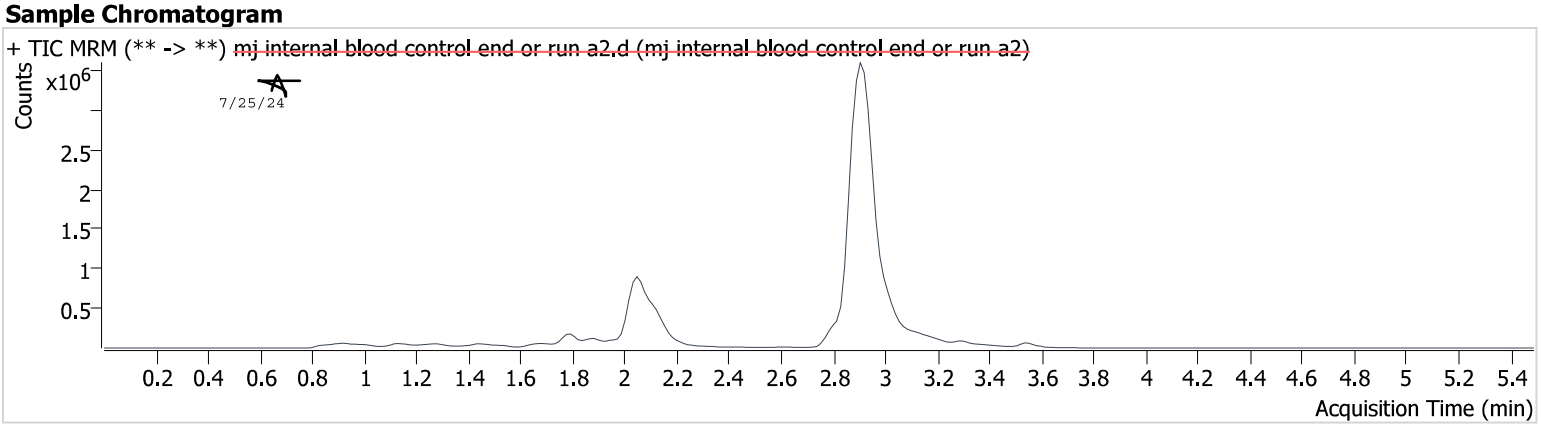
Hydroxy-THC was not evaluated for urines in this run.

AM #27 Cannabinoids

Batch results D:\MassHunter\Data\2024\am 27-28\072324\QuantResults\am 27.batch.bin
Calibration Last Update 7/25/2024 9:57:58 AM

Instrument	69679	**Data File**	mj internal blood control end or run a2.d
Type	QC	**Sample**	~~mj internal blood control end or run a2~~ Internal urine control
Acq. Method	thc quant 50 50.m	**Operator**	Anne Nord 7/25/24
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	7/24/2024 9:29:04 PM		
Sample Info.			

Sample Chromatogram



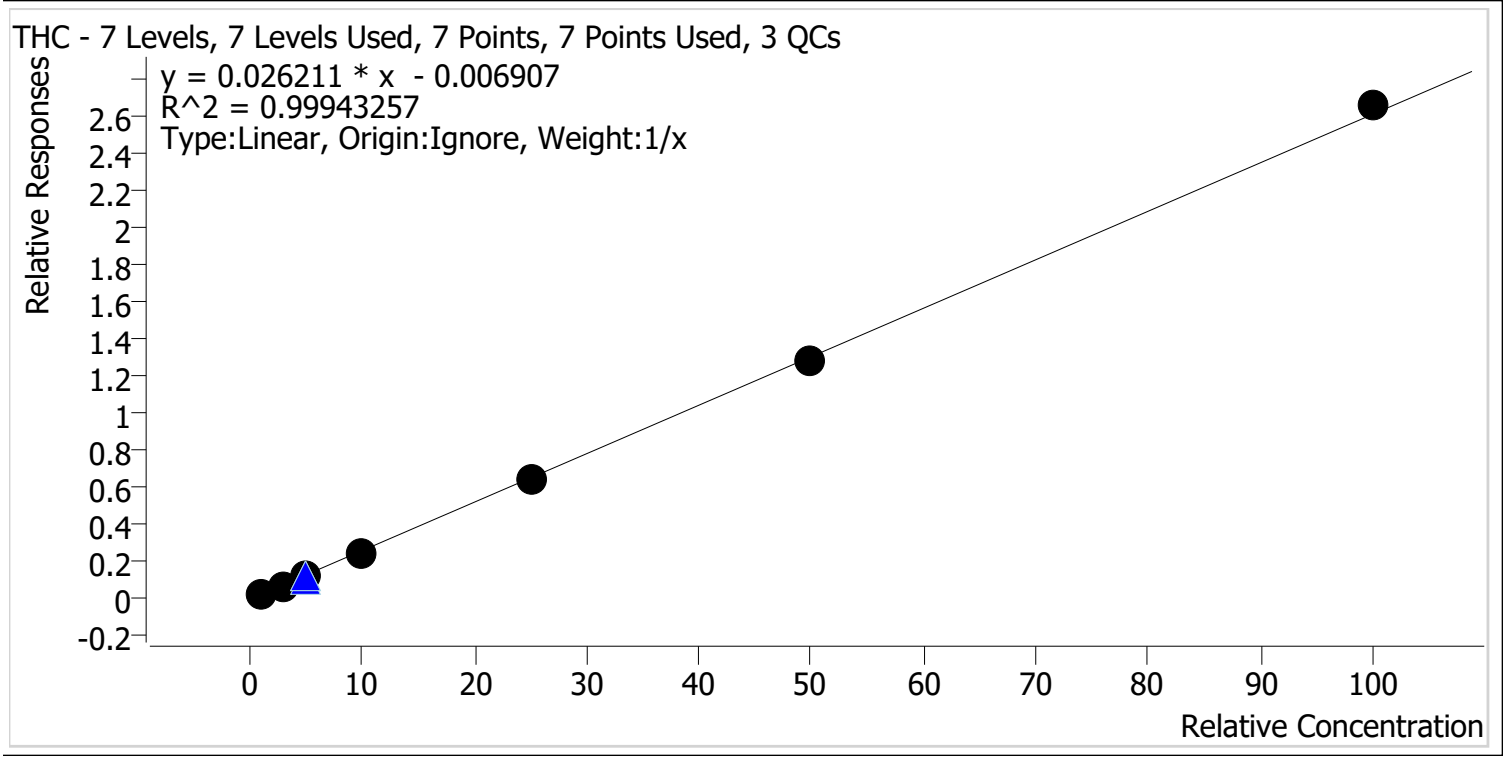
Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC-COOH	2.122	96715	167650.0	282.06	253139.3	1180776	16.642 ng/ml
THC	3.558	25964	∞	29.43	∞	229871	4.573 ng/ml

Hydroxy-THC was not evaluated for urines in this run.

This sample is the internal urine control, the name was typed wrong in the worklist.

Compound Calibration Report

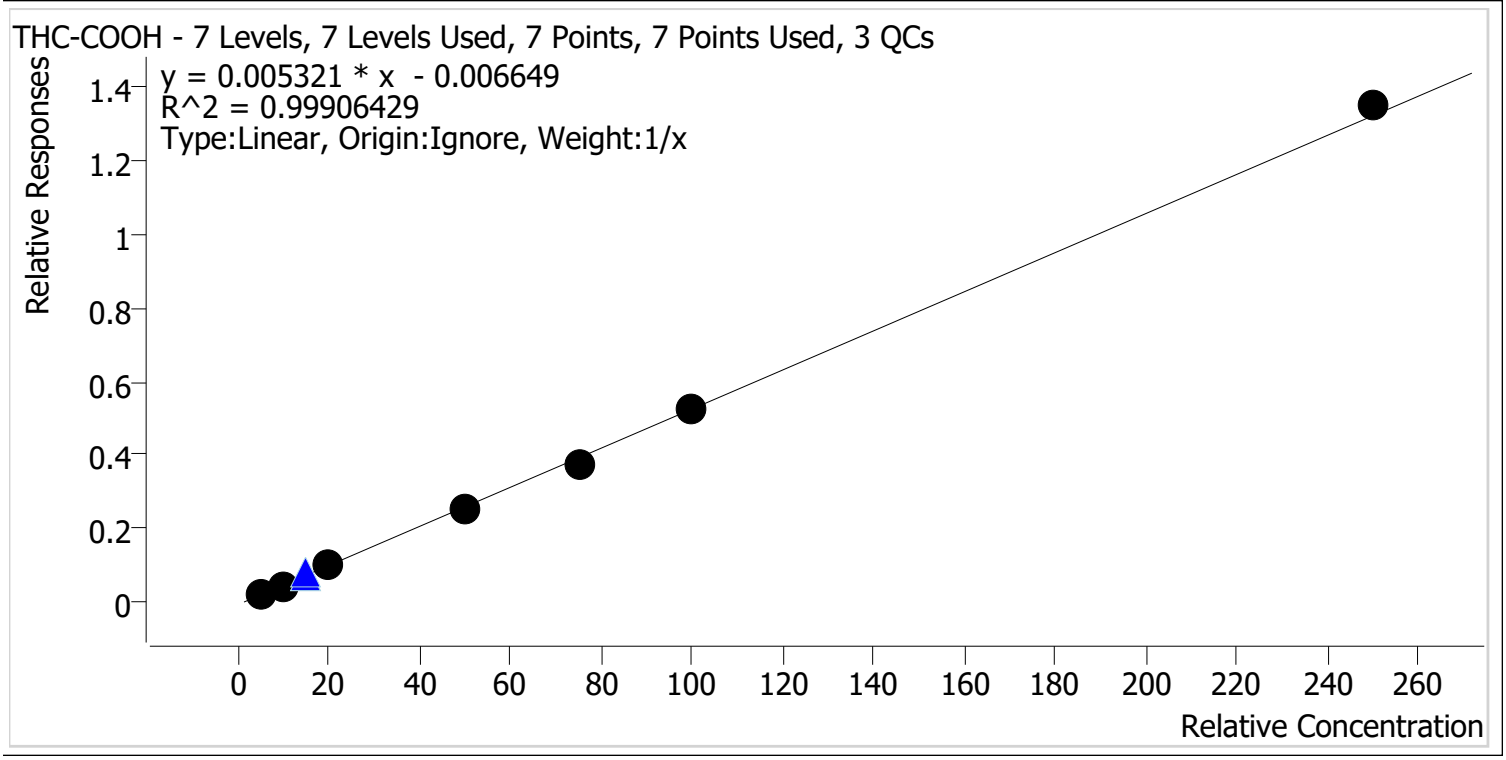
Batch results	D:\MassHunter\Data\2024\am 27-28\072324\QuantResults\am 27.batch.bin
Last Cal. Update	7/25/2024 9:57 AM
Analyst Name	ISP\datastor
Analyte	THC
Internal Standard	THC-d3



Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
mj cal 1	1	✔	1.0	1.1	111.9
mj cal 2	2	✔	3.0	2.9	96.7
mj cal 3	3	✔	5.0	4.9	97.2
mj cal 4	4	✔	10.0	9.5	95.2
mj cal 5	5	✔	25.0	24.8	99.1
mj cal 6	6	✔	50.0	49.1	98.1
mj cal 7	7	✔	100.0	101.7	101.7

Compound Calibration Report

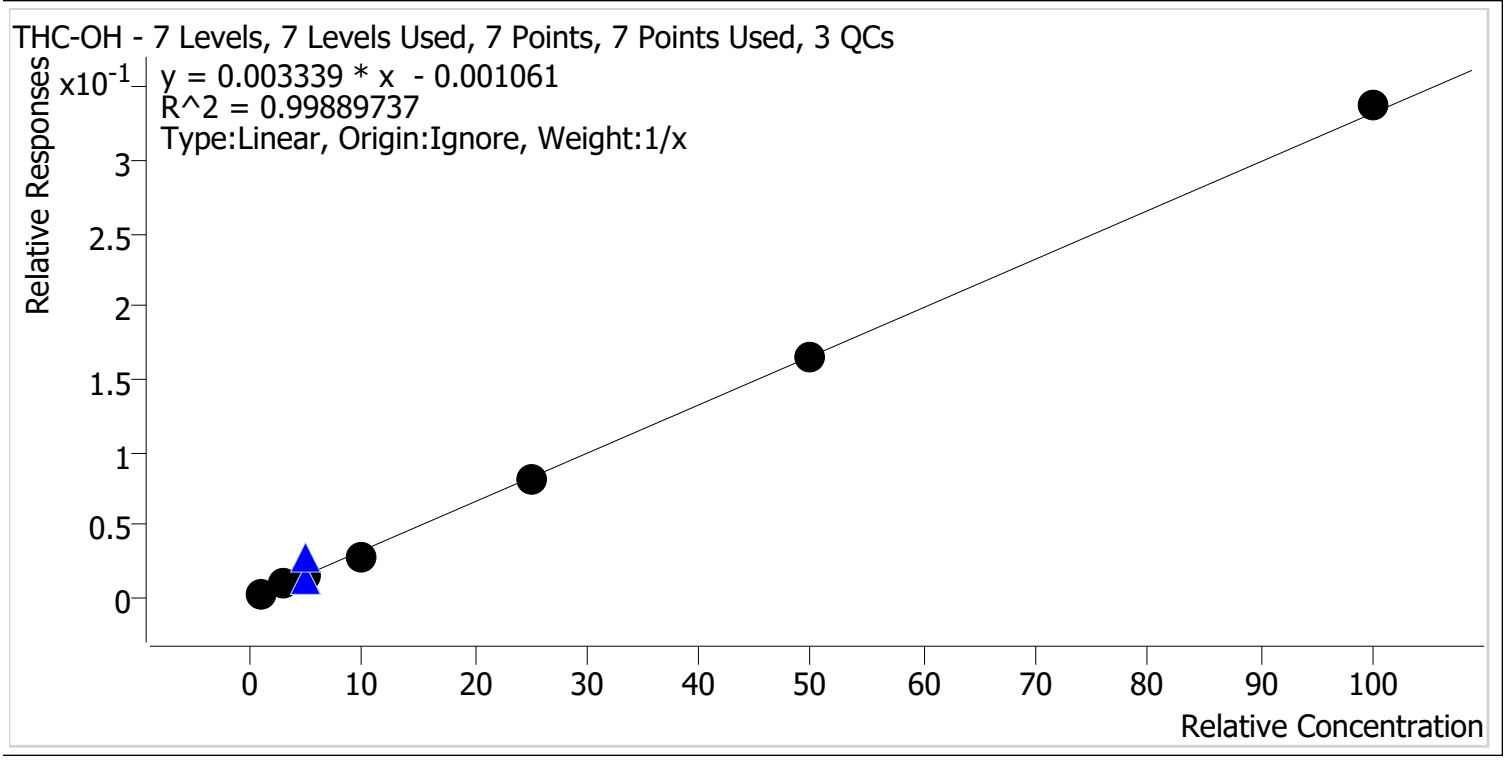
Batch results	D:\MassHunter\Data\2024\am 27-28\072324\QuantResults\am 27.batch.bin
Last Cal. Update	7/25/2024 9:57 AM
Analyst Name	ISP\datastor
Analyte	THC-COOH
Internal Standard	THC-COOH-d9



Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
mj cal 1	1	✔	5.0	5.5	110.0
mj cal 2	2	✔	10.0	9.8	98.2
mj cal 3	3	✔	20.0	19.5	97.3
mj cal 4	4	✔	50.0	48.4	96.9
mj cal 5	5	✔	75.0	71.8	95.7
mj cal 6	6	✔	100.0	99.9	99.9
mj cal 7	7	✔	250.0	255.1	102.1

Compound Calibration Report

Batch results	D:\MassHunter\Data\2024\am 27-28\072324\QuantResults\am 27.batch.bin
Last Cal. Update	7/25/2024 9:57 AM
Analyst Name	ISP\datastor
Analyte	THC-OH
Internal Standard	THC-OH-d3



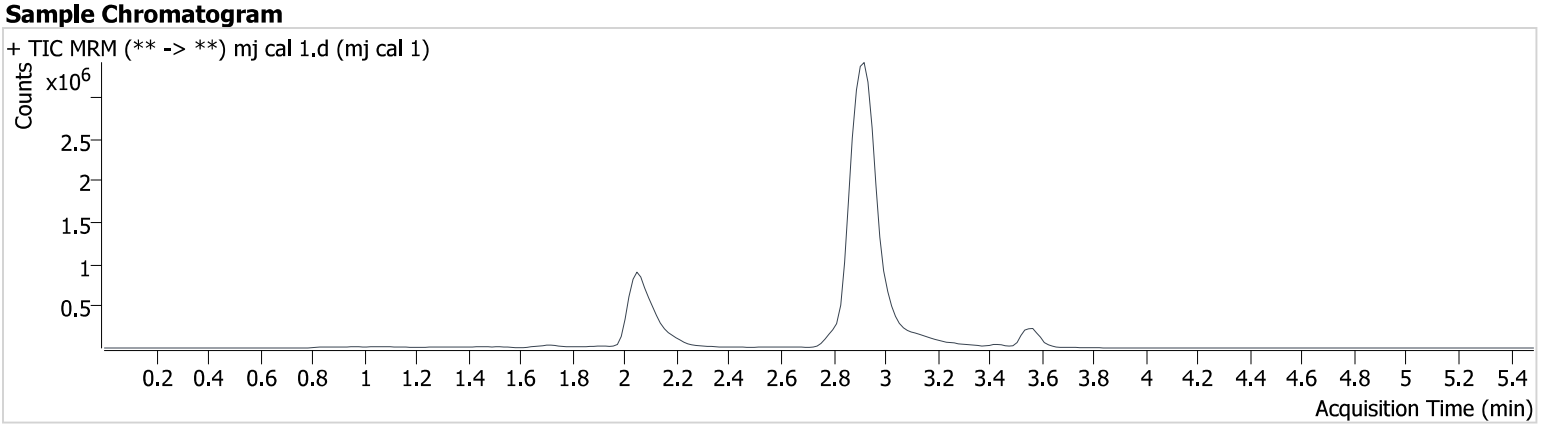
Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
mj cal 1	1	✔	1.0	1.1	112.3
mj cal 2	2	✔	3.0	3.0	98.9
mj cal 3	3	✔	5.0	5.0	100.8
mj cal 4	4	✔	10.0	8.9	89.0
mj cal 5	5	✔	25.0	24.3	97.1
mj cal 6	6	✔	50.0	50.2	100.3
mj cal 7	7	✔	100.0	101.5	101.5

AM #27 Cannabinoids

Batch results D:\MassHunter\Data\2024\am 27-28\072324\QuantResults\am 27.batch.bin
Calibration Last Update 7/25/2024 9:57:58 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	7/24/2024 6:04:34 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.	
THC-OH	2.051	10681	190.9	703.38	∞	3972144	1.123 ng/ml	Low
THC-COOH	2.122	32528	218.0	273.67	140.8	1437320	5.502 ng/ml	
THC	3.573	20658	∞	22.16	∞	921565	1.119 ng/ml	

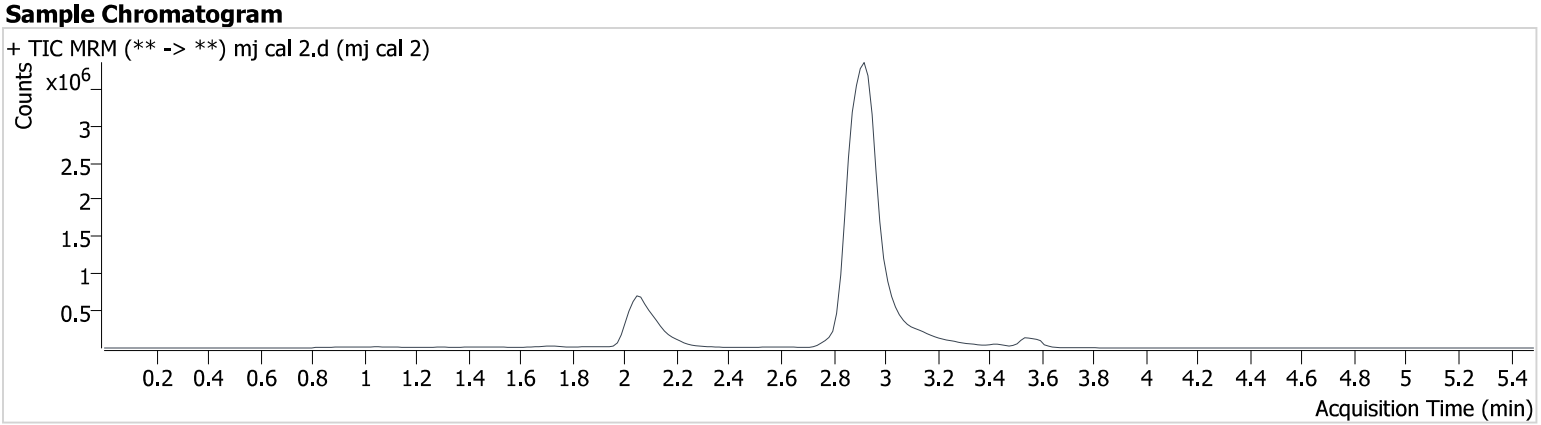
AM #27 Cannabinoids

Batch results D:\MassHunter\Data\2024\am 27-28\072324\QuantResults\am 27.batch.bin
Calibration Last Update 7/25/2024 9:57:58 AM

Instrument	69679	**Data File**	mj cal 2.d
Type	Cal	**Sample**	mj cal 2
Acq. Method	thc quant 50 50.m	**Operator**	Anne Nord
Sample Position	P3-B1	**Comment**	
Injection Volume	10		
Acq. Date-Time	7/24/2024 6:11:18 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



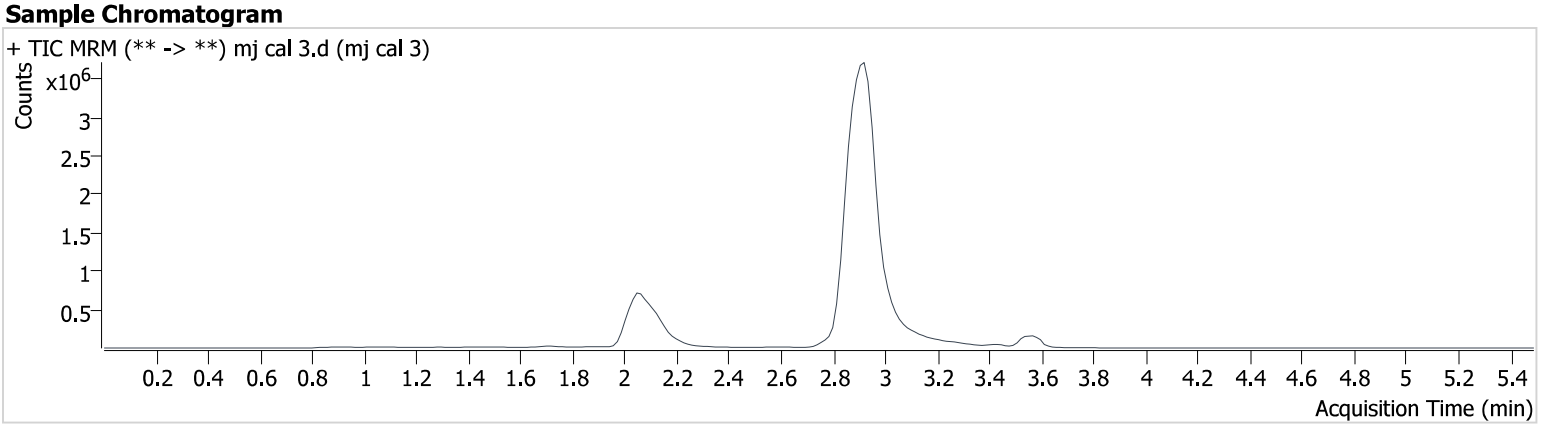
Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.	
THC-OH	2.066	27003	∞	701.91	∞	3052176	2.967 ng/ml	Low
THC-COOH	2.122	52629	35.4	277.68	49.3	1154069	9.820 ng/ml	
THC	3.588	36868	∞	24.71	44.2	533536	2.900 ng/ml	

AM #27 Cannabinoids

Batch results D:\MassHunter\Data\2024\am 27-28\072324\QuantResults\am 27.batch.bin
Calibration Last Update 7/25/2024 9:57:58 AM

Instrument	69679	**Data File**	mj cal 3.d
Type	Cal	**Sample**	mj cal 3
Acq. Method	thc quant 50 50.m	**Operator**	Anne Nord
Sample Position	P3-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	7/24/2024 6:17:53 PM		
Sample Info.			

Sample Chromatogram



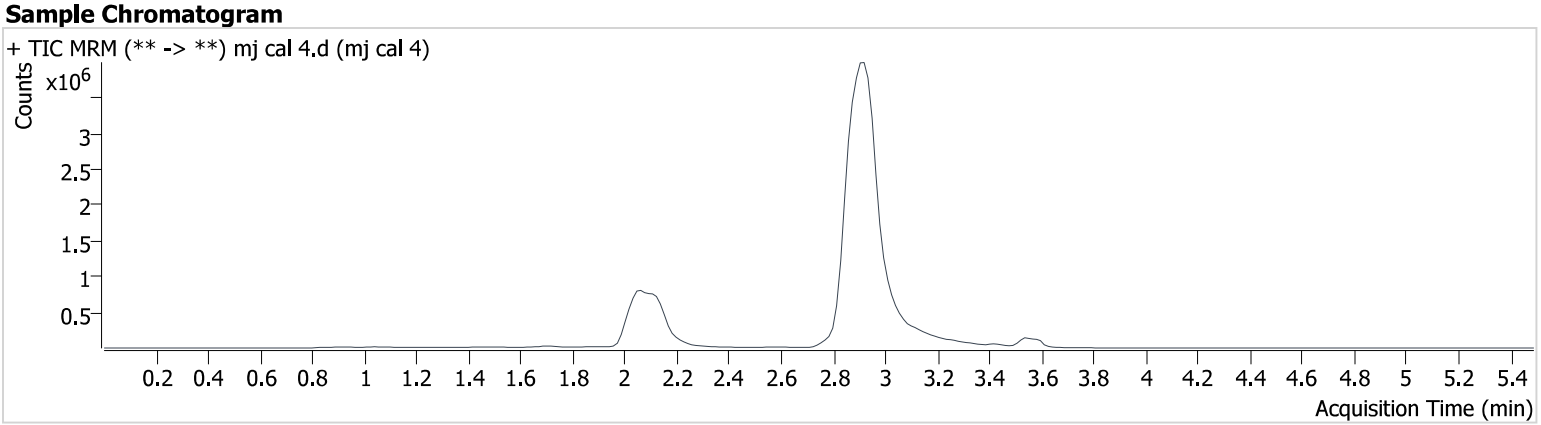
Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC-OH	2.051	46819	∞	705.71	∞	2967715	5.042 ng/ml
THC-COOH	2.122	111199	1606.6	271.45	97.7	1147963	19.453 ng/ml
THC	3.573	72090	∞	22.17	∞	598110	4.862 ng/ml

AM #27 Cannabinoids

Batch results D:\MassHunter\Data\2024\am 27-28\072324\QuantResults\am 27.batch.bin
Calibration Last Update 7/25/2024 9:57:58 AM

Instrument	69679	**Data File**	mj cal 4.d
Type	Cal	**Sample**	mj cal 4
Acq. Method	thc quant 50 50.m	**Operator**	Anne Nord
Sample Position	P3-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	7/24/2024 6:24:29 PM		
Sample Info.			

Sample Chromatogram



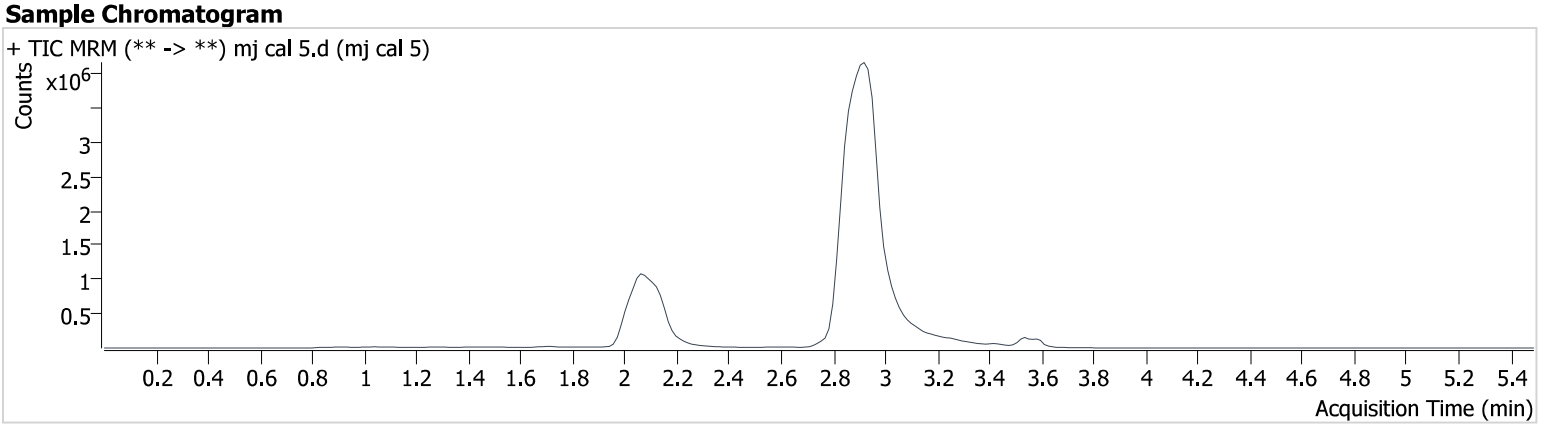
Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC-OH	2.051	82600	855.8	843.20	∞	2882956	8.898 ng/ml
THC-COOH	2.122	274792	394014.8	275.54	27255.2	1094639	48.426 ng/ml
THC	3.588	117461	∞	28.20	∞	484005	9.522 ng/ml

AM #27 Cannabinoids

Batch results D:\MassHunter\Data\2024\am 27-28\072324\QuantResults\am 27.batch.bin
Calibration Last Update 7/25/2024 9:57:58 AM

Instrument	69679	**Data File**	mj cal 5.d
Type	Cal	**Sample**	mj cal 5
Acq. Method	thc quant 50 50.m	**Operator**	Anne Nord
Sample Position	P3-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		
Acq. Date-Time	7/24/2024 6:31:05 PM		
Sample Info.			

Sample Chromatogram



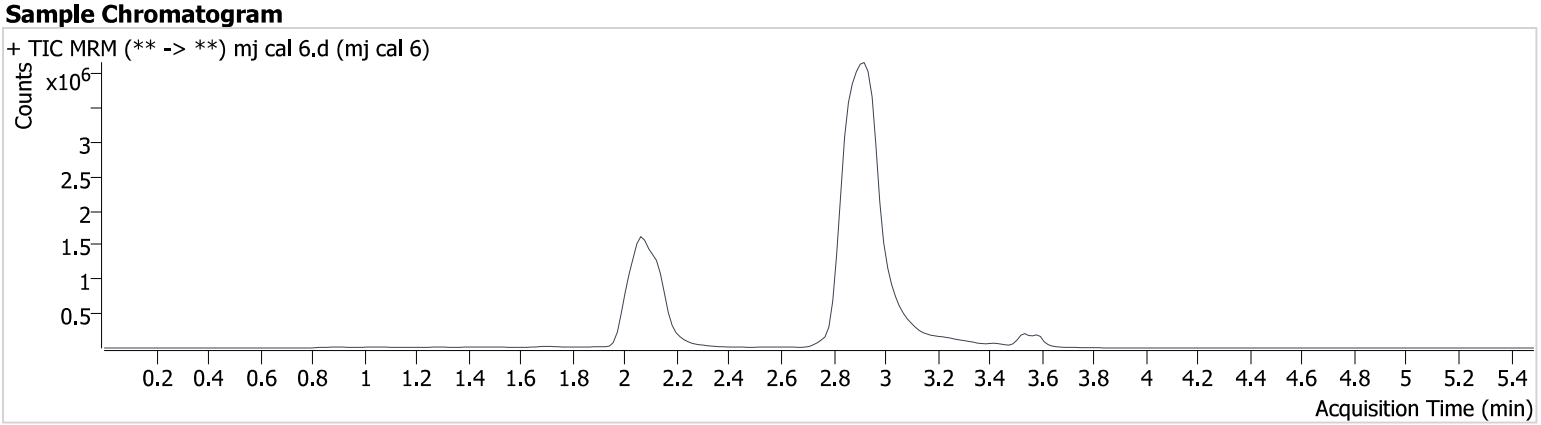
Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC-OH	2.051	227130	2133.9	815.84	5446.9	2838961	24.277 ng/ml
THC-COOH	2.122	404750	1207.4	271.68	33780.1	1078368	71.785 ng/ml
THC	3.588	258730	∞	25.04	∞	402671	24.777 ng/ml

AM #27 Cannabinoids

Batch results D:\MassHunter\Data\2024\am 27-28\072324\QuantResults\am 27.batch.bin
Calibration Last Update 7/25/2024 9:57:58 AM

Instrument	69679	**Data File**	mj cal 6.d
Type	Cal	**Sample**	mj cal 6
Acq. Method	thc quant 50 50.m	**Operator**	Anne Nord
Sample Position	P3-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	7/24/2024 6:37:39 PM		
Sample Info.			

Sample Chromatogram



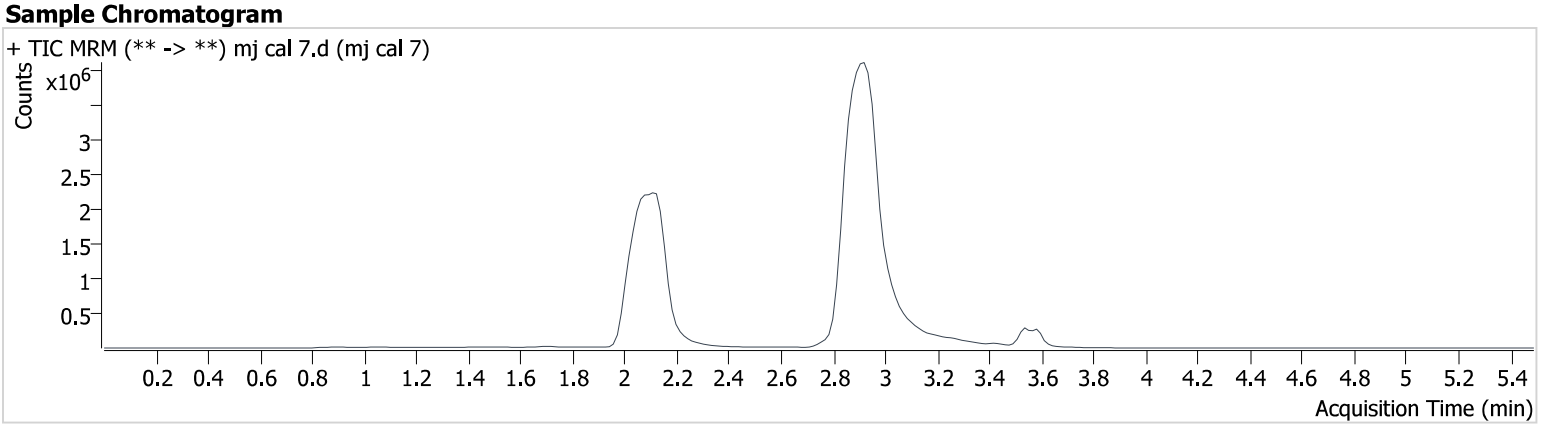
Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC-OH	2.051	502247	∞	808.65	∞	3018022	50.154 ng/ml
THC-COOH	2.122	609642	849279.5	271.06	582295.8	1161720	99.869 ng/ml
THC	3.588	555450	∞	24.34	20585.9	434176	49.072 ng/ml

AM #27 Cannabinoids

Batch results D:\MassHunter\Data\2024\am 27-28\072324\QuantResults\am 27.batch.bin
Calibration Last Update 7/25/2024 9:57:58 AM

Instrument	69679	**Data File**	mj cal 7.d
Type	Cal	**Sample**	mj cal 7
Acq. Method	thc quant 50 50.m	**Operator**	Anne Nord
Sample Position	P3-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	7/24/2024 6:44:15 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC-OH	2.051	812273	8257.9	854.04	∞	2403167	101.538 ng/ml
THC-COOH	2.122	1229842	10588.2	266.89	100390 0.9	910293	255.146 ng/ml
THC	3.588	915905	428.6	26.05	∞	344324	101.748 ng/ml