10/29/2024

REVIEWED
By Britany Wylie at 1:53 pm, Oct 30, 2024

Worklist: 6962

LAB_CASE	ITEM	ITEM_TYPE	DESCRIPTION	
C2024-1882	1	BCK	AM 27 Blood THC Quant by LC-QQQ	
C2024-1975	1	BCK	AM 27 Blood THC Quant by LC-QQQ	
C2024-2002	1	BCK	AM 27 Blood THC Quant by LC-QQQ	
C2024-2021	1	BCK	AM 27 Blood THC Quant by LC-QQQ	
C2024-2029	1	UCK	AM 27 Urine Cannabinoids Confirmation by LC-QQQ	
C2024-2043	1	AVK	AM 27 Blood THC Quant by LC-QQQ	
C2024-2062	1	BCK	AM 27 Blood THC Quant by LC-QQQ	
C2024-2069	1	BCK	AM 27 Blood THC Quant by LC-QQQ	
C2024-2099	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: 10/29/24
Plate lot#: 240513
Mobile phase A: 0.1% Formic Acid in LCMS Water
Blank Blood Lot: 24C52043
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 end of run blood control did not inject it was re-constituted and injected 10/30/24*

Curve limitations: THC 3-100 cal 1 dropped due to poor response, qualifier ion indistinguishable from baseline.

	1	2	3	4	5	6
a	cal 1	Internal control urine	2069-1			
b	cal 2	negative blood	2099-1			
c	cal 3	1882-1	negative urine			
d	cal 4	1975-1	2029-1			
e	cal 5	2002-1				
f	cal 6	2021-1				
g	cal 7	2043-1				
h	Internal control (blood)	2062-1				

Plate position 3

c2024-____-_

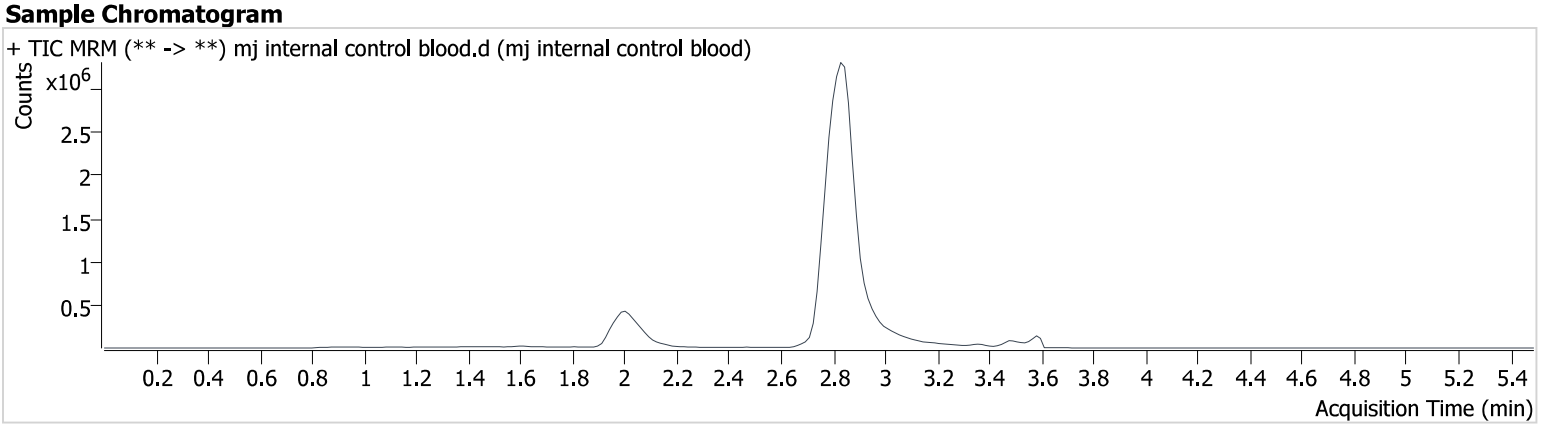
AM #27 Cannabinoids

Batch results D:\MassHunter\Data\2024\am 27-28\102924\QuantResults\am 27.batch.bin
Calibration Last Update 10/30/2024 10:07:08 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	10/29/2024 6:10:12 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-OH	1.991	26029	90.1	900.28	278.4	1705872	4.506 ng/ml
THC-COOH	2.062	46825	531.8	281.79	270.4	725142	15.149 ng/ml
THC	3.483	30363	219.6	23.87	204.7	233437	5.217 ng/ml

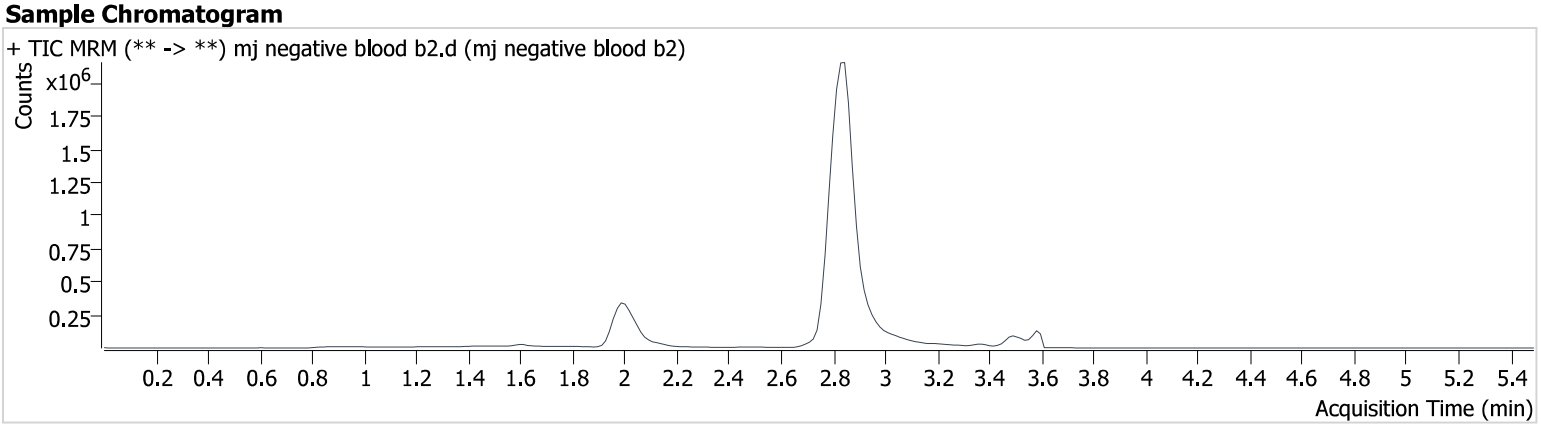
AM #27 Cannabinoids

Batch results D:\MassHunter\Data\2024\am 27-28\102924\QuantResults\am 27.batch.bin
Calibration Last Update 10/30/2024 10:07:08 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**	
Injection Volume	10		
Acq. Date-Time	10/29/2024 6:16:46 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

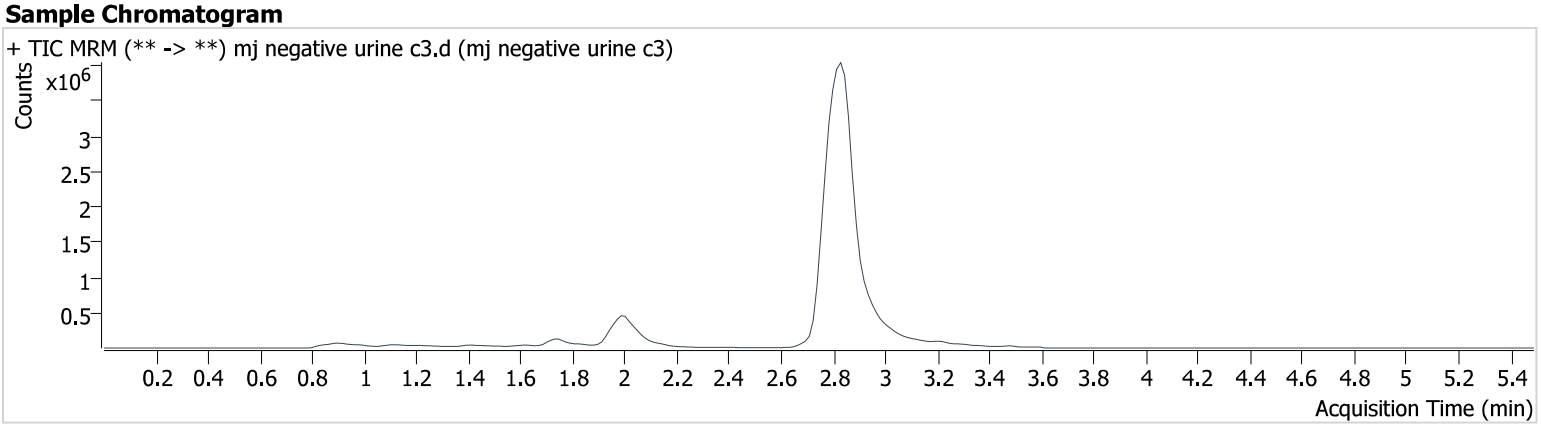


AM #27 Cannabinoids

Batch results D:\MassHunter\Data\2024\am 27-28\102924\QuantResults\am 27.batch.bin
Calibration Last Update 10/30/2024 10:07:08 AM

Instrument	69679	**Data File**	mj negative urine c3.d
Type	Sample	**Sample**	mj negative urine c3
Acq. Method	thc quant 50 50.m	**Operator**	Anne Nord
Sample Position	P3-C3	**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	10/29/2024 8:15:35 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC-OH	1.825 **Low**	28100	73.1	837.77	∞	2142166	3.916 ng/ml

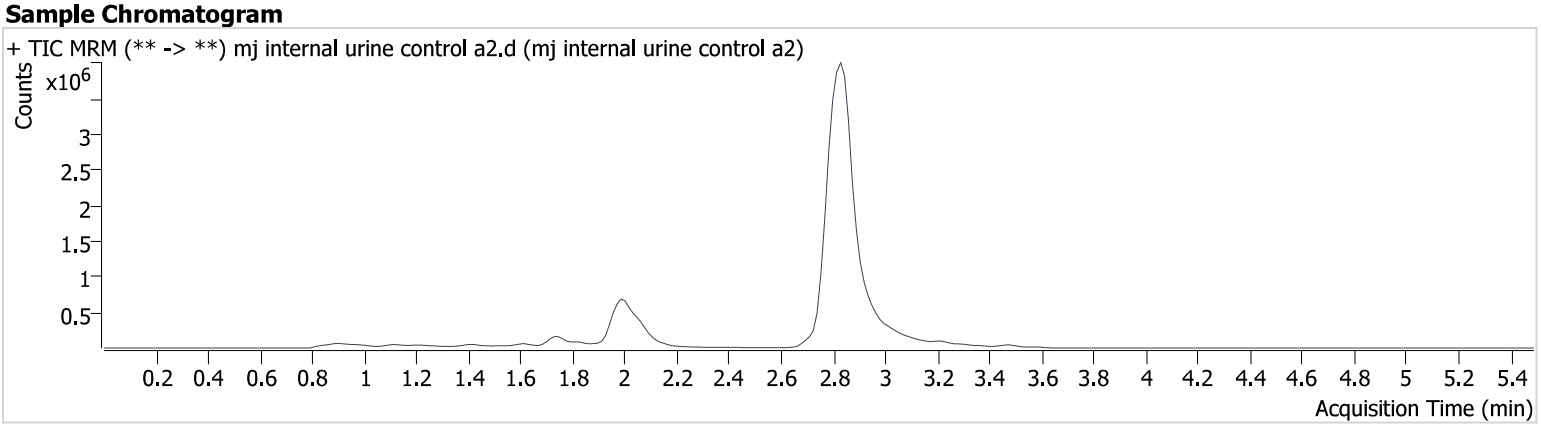
Negative for THC-OH peak is outside accepted retention time window.

AM #27 Cannabinoids

Batch results D:\MassHunter\Data\2024\am 27-28\102924\QuantResults\am 27.batch.bin
Calibration Last Update 10/30/2024 10:07:08 AM

Instrument	69679	**Data File**	mj internal urine control a2.d
Type	QC	**Sample**	mj internal urine control 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	10/29/2024 8:35:23 PM		
Sample Info.			

Sample Chromatogram



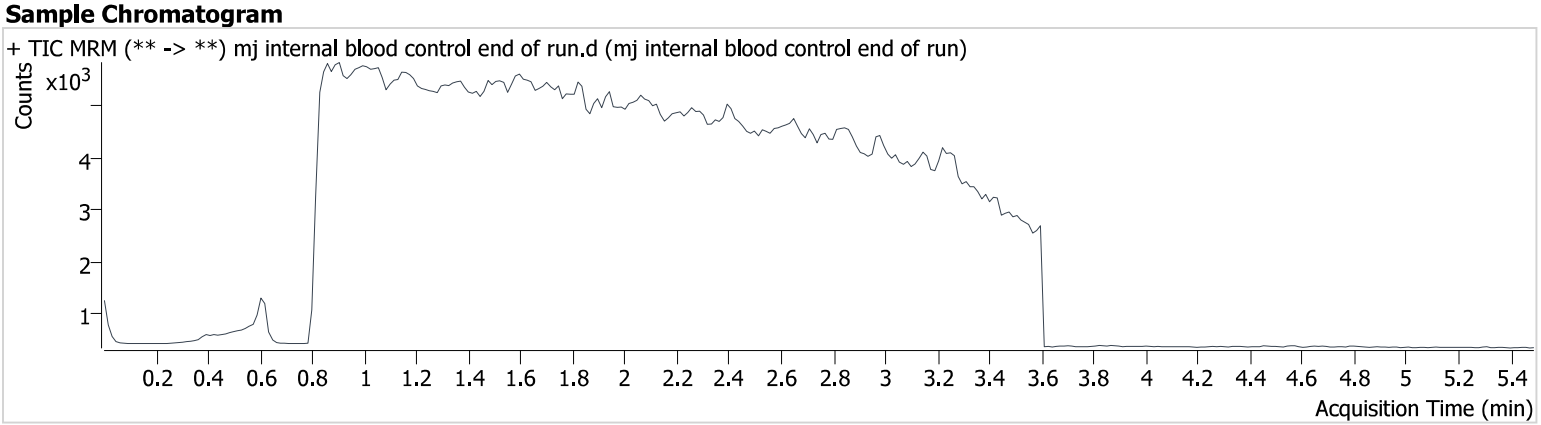
Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC-OH	1.991	74880	∞	900.96	2069.8	2692805	7.966 ng/ml
THC-COOH	2.062	67851	236.7	261.68	84.1	1032319	15.378 ng/ml
THC	3.498	17586	135.7	25.39	16.9	159638	4.529 ng/ml

AM #27 Cannabinoids

Batch results D:\MassHunter\Data\2024\am 27-28\102924\QuantResults\am 27.batch.bin
Calibration Last Update 10/30/2024 10:07:08 AM

Instrument	69679	**Data File**	mj internal blood control end of run.d
Type	QC	**Sample**	mj internal blood control end of run
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	10/29/2024 8:41:59 PM		
Sample Info.			

Sample Chromatogram



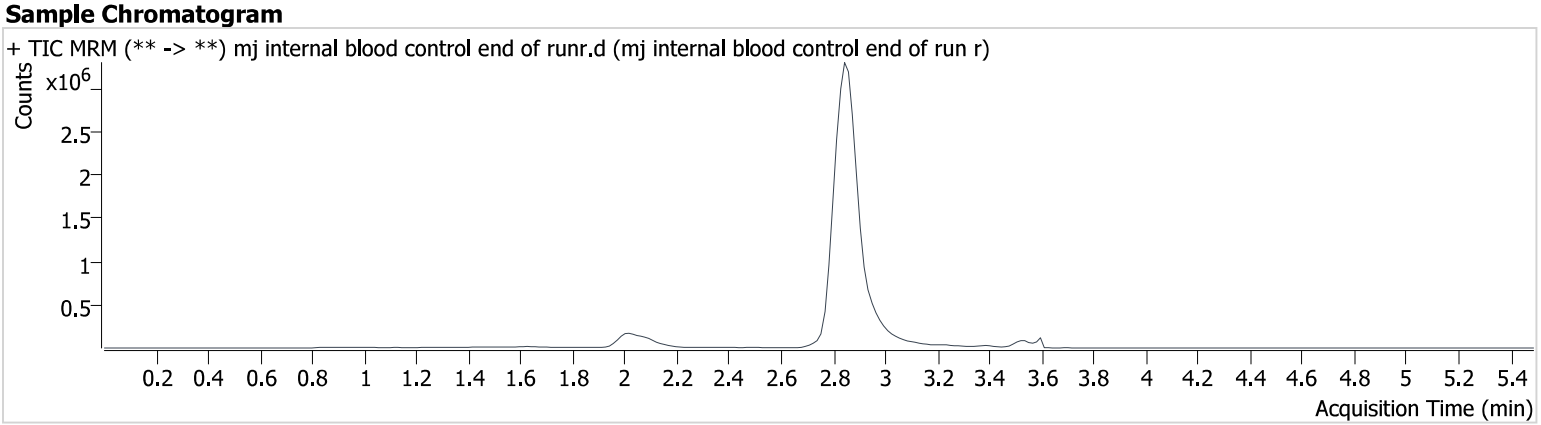
sample did not inject, it was reconstituted and injected the next morning.

AM #27 Cannabinoids

Batch results D:\MassHunter\Data\2024\am 27-28\102924\QuantResults\am 27.batch.bin
Calibration Last Update 10/30/2024 10:07:08 AM

Instrument	69679	**Data File**	mj internal blood control end of runr.d
Type	QC	**Sample**	mj internal blood control end of run r
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	10/30/2024 9:17:29 AM		
Sample Info.			

Sample Chromatogram

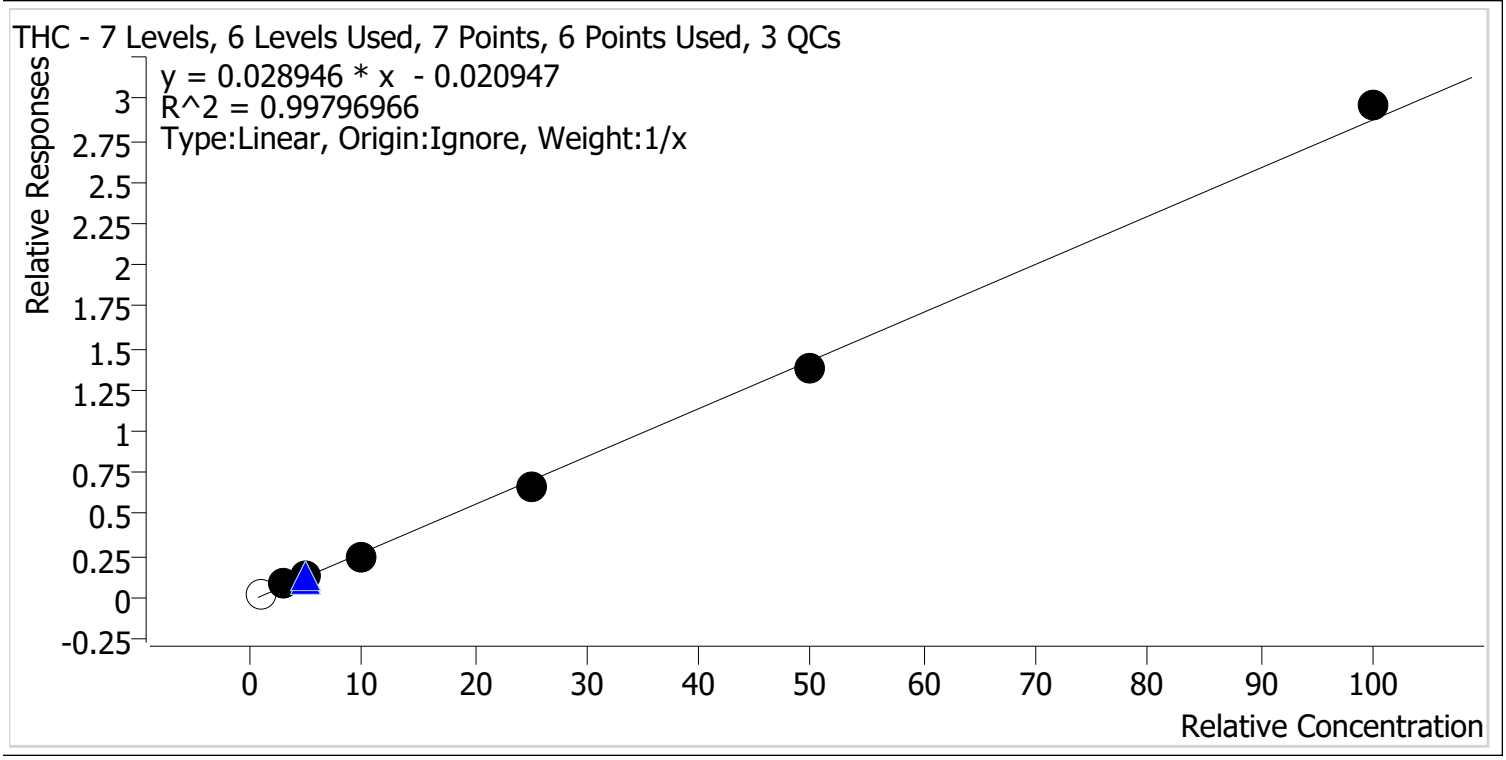


Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC-OH	2.006	10838	59.4	741.01	∞	634134	5.011 ng/ml
THC-COOH	2.092	21677	335.4	276.29	90.2	349048	14.659 ng/ml
THC	3.543	20319	367.1	26.18	228.2	145569	5.546 ng/ml

re-constituted and injected 10/30/24

Compound Calibration Report

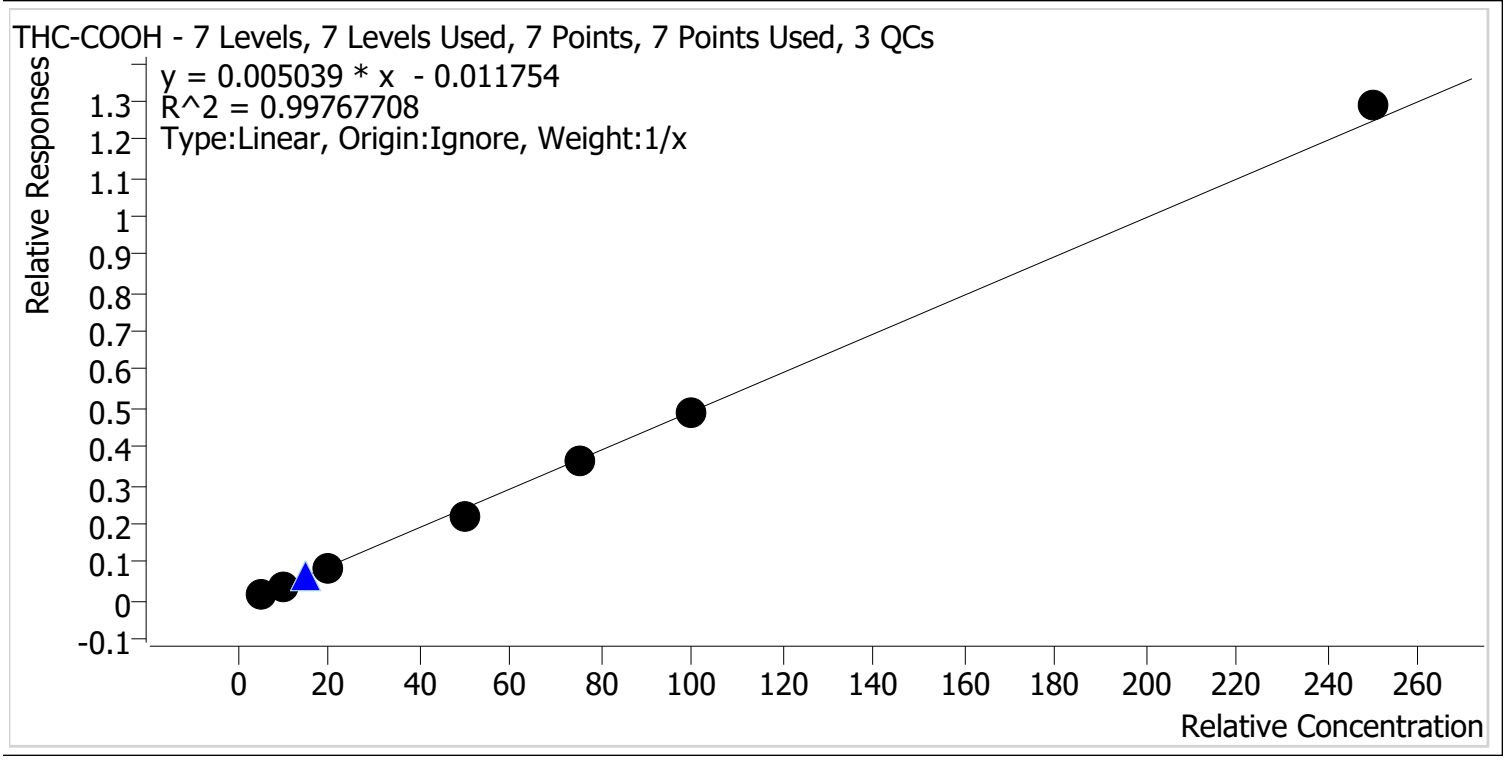
Batch results	D:\MassHunter\Data\2024\am 27-28\102924\QuantResults\am 27.batch.bin
Last Cal. Update	10/30/2024 10:07 AM
Analyst Name	ISP\datastor
Analyte	THC
Internal Standard	THC-d3



Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
mj cal 1	1	✗	1.0	1.5	150.8
mj cal 2	2	✔	3.0	3.3	110.6
mj cal 3	3	✔	5.0	5.1	102.4
mj cal 4	4	✔	10.0	9.1	90.9
mj cal 5	5	✔	25.0	24.1	96.3
mj cal 6	6	✔	50.0	48.4	96.9
mj cal 7	7	✔	100.0	103.0	103.0

Compound Calibration Report

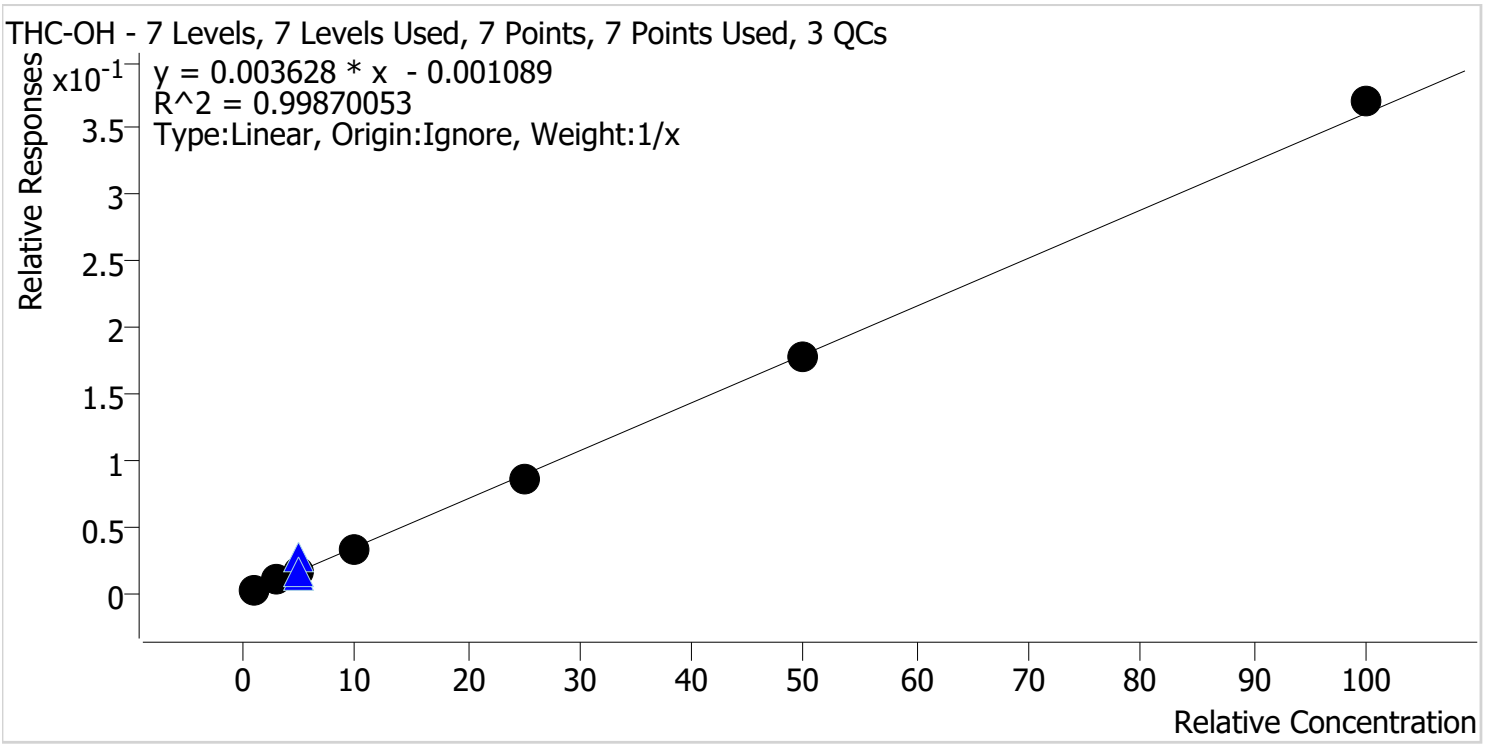
Batch results	D:\MassHunter\Data\2024\am 27-28\102924\QuantResults\am 27.batch.bin
Last Cal. Update	10/30/2024 10:07 AM
Analyst Name	ISP\datastor
Analyte	THC-COOH
Internal Standard	THC-COOH-d9



Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
mj cal 1	1	✔	5.0	5.8	115.4
mj cal 2	2	✔	10.0	10.0	100.4
mj cal 3	3	✔	20.0	18.7	93.4
mj cal 4	4	✔	50.0	45.6	91.1
mj cal 5	5	✔	75.0	73.6	98.2
mj cal 6	6	✔	100.0	98.4	98.4
mj cal 7	7	✔	250.0	257.9	103.2

Compound Calibration Report

Batch results	D:\MassHunter\Data\2024\am 27-28\102924\QuantResults\am 27.batch.bin
Last Cal. Update	10/30/2024 10:07 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	1.2	117.9
mj cal 2	2	✔	3.0	3.0	99.3
mj cal 3	3	✔	5.0	4.6	91.7
mj cal 4	4	✔	10.0	9.4	94.1
mj cal 5	5	✔	25.0	23.9	95.5
mj cal 6	6	✔	50.0	49.6	99.1
mj cal 7	7	✔	100.0	102.4	102.4

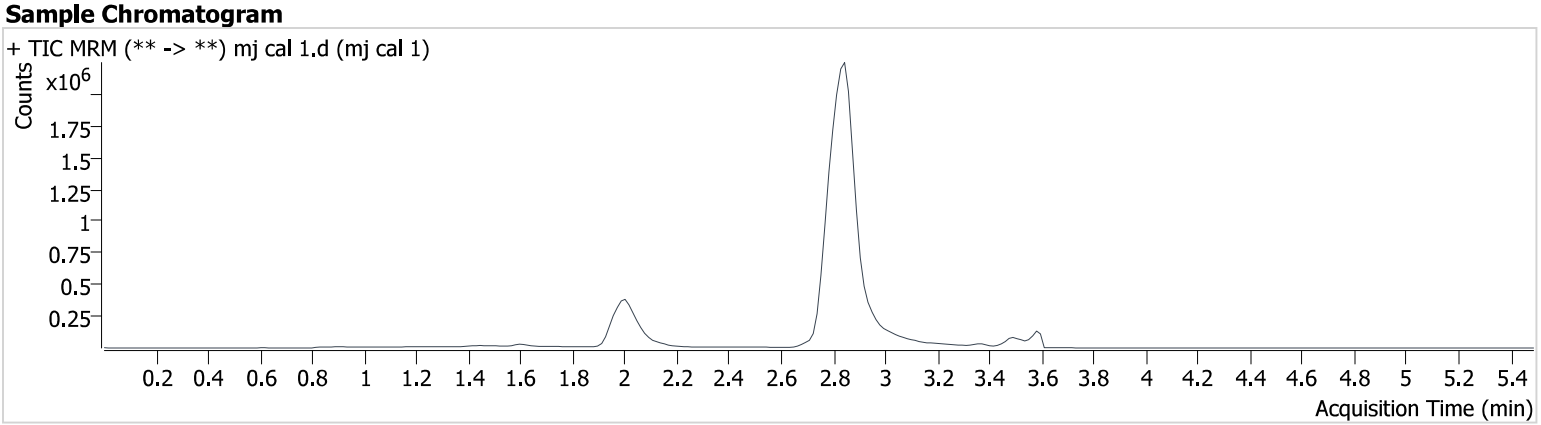
AM #27 Cannabinoids

Batch results D:\MassHunter\Data\2024\am 27-28\102924\QuantResults\am 27.batch.bin
Calibration Last Update 10/30/2024 10:07:08 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**	
Injection Volume	10		
Acq. Date-Time	10/29/2024 5:23:59 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



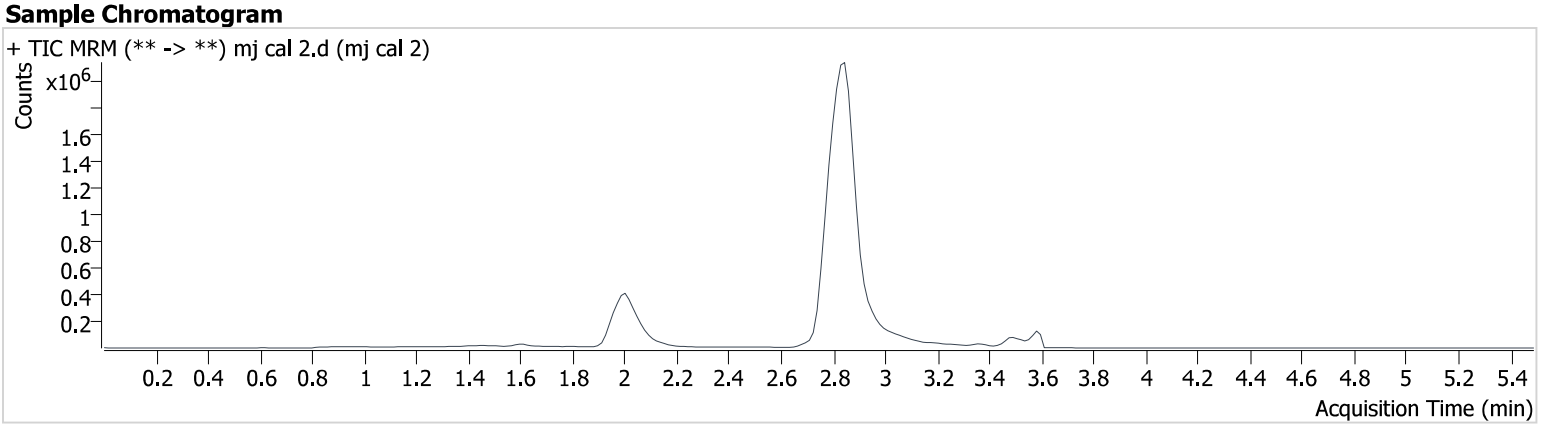
Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.	
THC-OH	2.006	5394	71.5	647.41	28.1	1692364	1.179 ng/ml	Low
THC-COOH	2.062	12034	69.8	252.75	30.7	695065	5.769 ng/ml	
THC	3.498	5295	18.3	106.95 **High**	52.3	233318	1.508 ng/ml	

AM #27 Cannabinoids

Batch results D:\MassHunter\Data\2024\am 27-28\102924\QuantResults\am 27.batch.bin
Calibration Last Update 10/30/2024 10:07:08 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**	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	10/29/2024 5:30:43 PM		
Sample Info.			

Sample Chromatogram



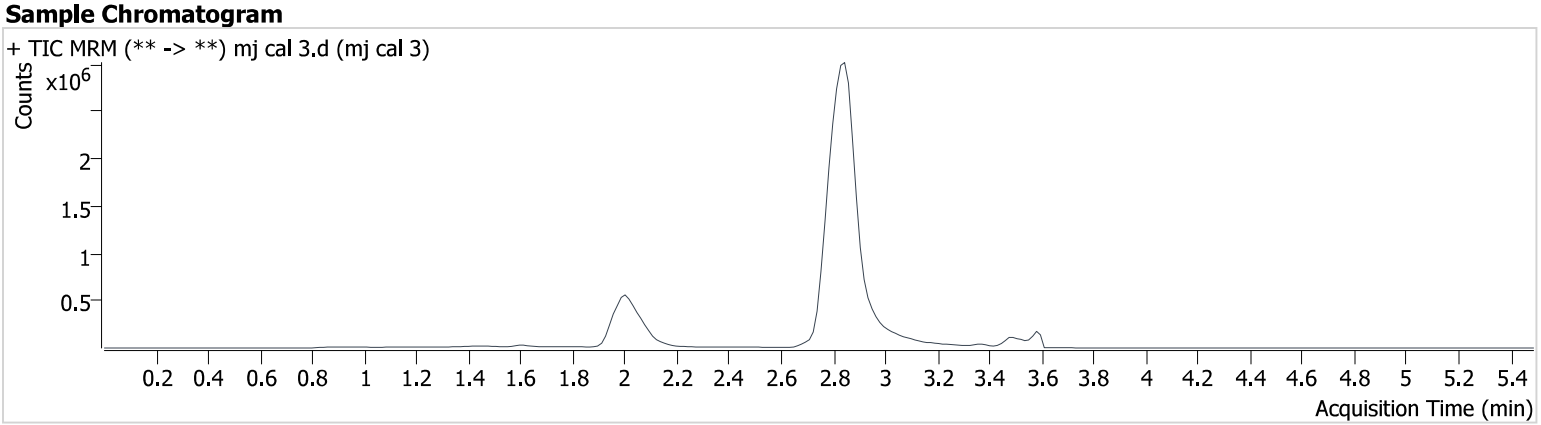
Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.	
THC-OH	2.006	16769	158.3	741.92	∞	1726488	2.978 ng/ml	Low
THC-COOH	2.062	25036	44291.3	269.27	255.8	645114	10.035 ng/ml	
THC	3.513	16515	348.9	30.33	71.2	219991	3.317 ng/ml	

AM #27 Cannabinoids

Batch results D:\MassHunter\Data\2024\am 27-28\102924\QuantResults\am 27.batch.bin
Calibration Last Update 10/30/2024 10:07:08 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	10/29/2024 5:37:19 PM		
Sample Info.			

Sample Chromatogram



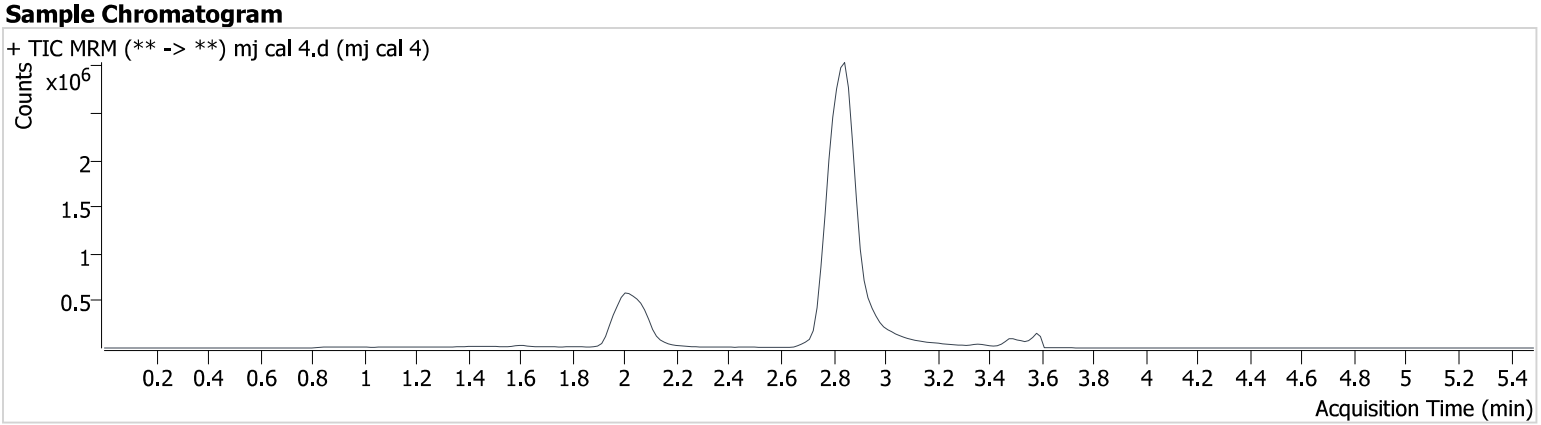
Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC-OH	2.006	35079	227.1	877.74	∞	2255980	4.587 ng/ml
THC-COOH	2.062	70929	267.6	288.84	749.4	861304	18.677 ng/ml
THC	3.528	45782	478.5	26.41	21.2	359912	5.118 ng/ml

AM #27 Cannabinoids

Batch results D:\MassHunter\Data\2024\am 27-28\102924\QuantResults\am 27.batch.bin
Calibration Last Update 10/30/2024 10:07:08 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	10/29/2024 5:43:54 PM		
Sample Info.			

Sample Chromatogram



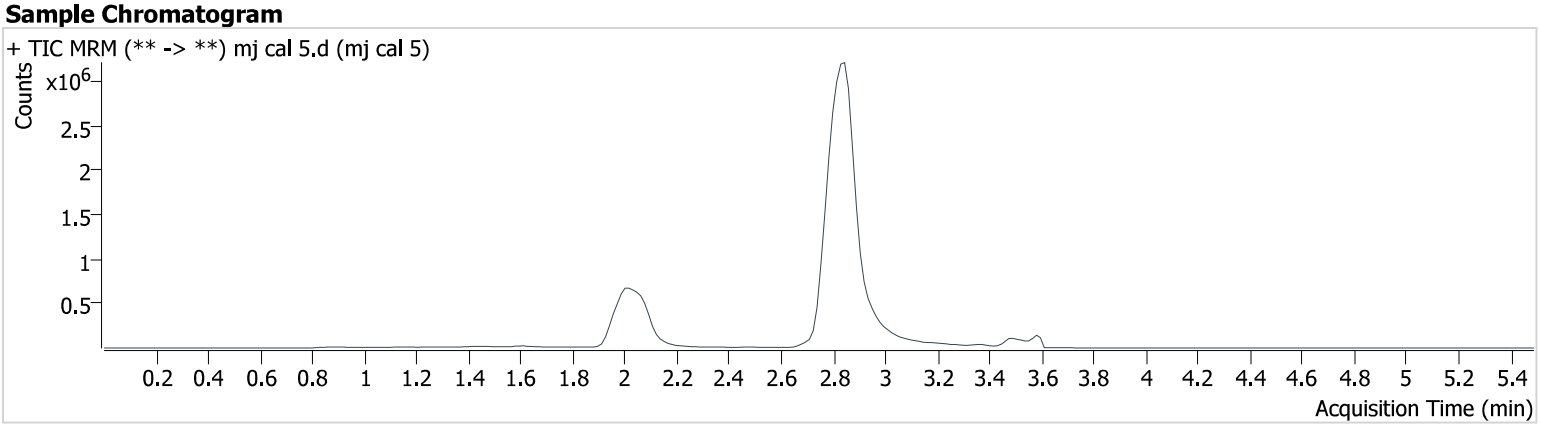
Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC-OH	2.006	65807	2203.3	851.31	277.4	1990386	9.415 ng/ml
THC-COOH	2.062	179344	275.3	276.15	2172.7	823613	45.551 ng/ml
THC	3.528	65937	458.5	24.77	46.4	272289	9.090 ng/ml

AM #27 Cannabinoids

Batch results D:\MassHunter\Data\2024\am 27-28\102924\QuantResults\am 27.batch.bin
Calibration Last Update 10/30/2024 10:07:08 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	10/29/2024 5:50:30 PM		
Sample Info.			

Sample Chromatogram



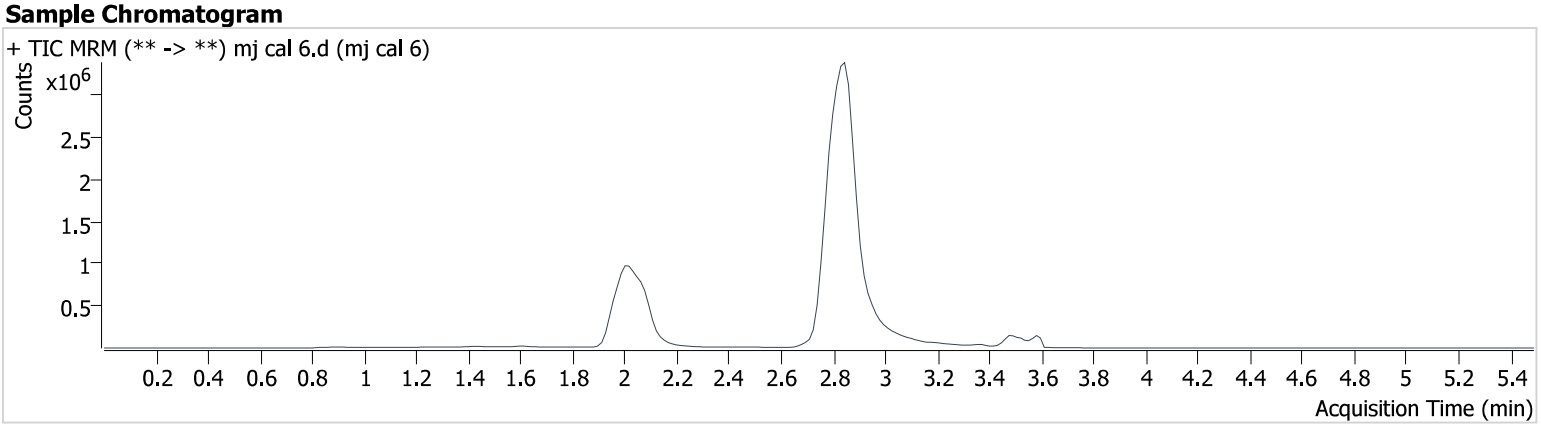
Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC-OH	2.006	140199	361.3	868.76	∞	1640232	23.863 ng/ml
THC-COOH	2.062	255475	392914.1	271.94	86897.9	711138	73.633 ng/ml
THC	3.498	159361	1422.4	24.26	87.5	235660	24.085 ng/ml

AM #27 Cannabinoids

Batch results D:\MassHunter\Data\2024\am 27-28\102924\QuantResults\am 27.batch.bin
Calibration Last Update 10/30/2024 10:07:08 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	10/29/2024 5:57:04 PM		
Sample Info.			

Sample Chromatogram



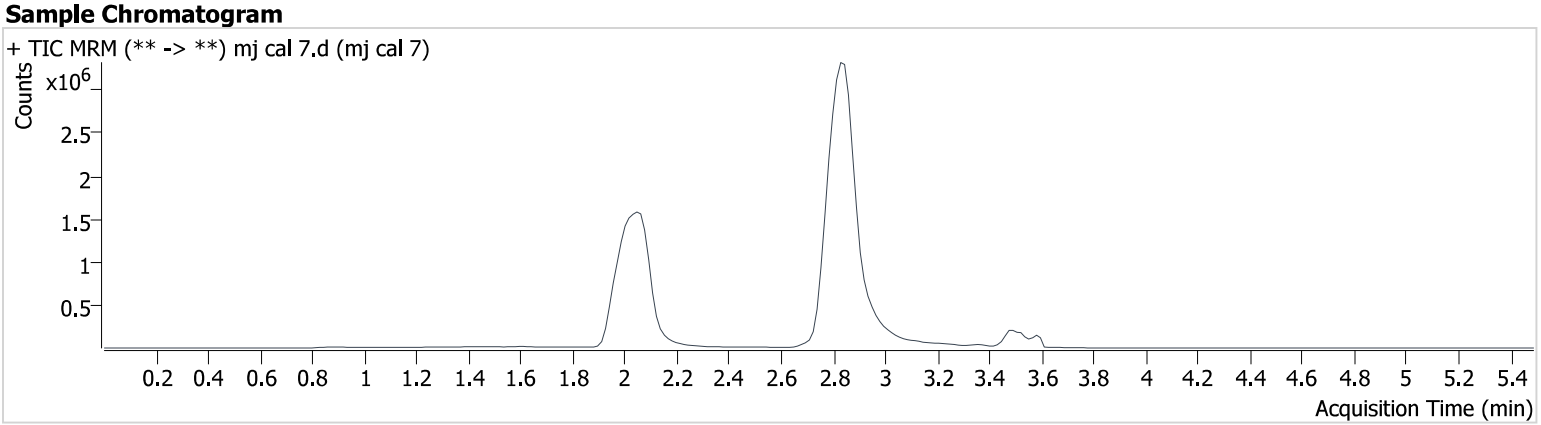
Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC-OH	2.006	309651	4250.5	836.87	∞	1733059	49.555 ng/ml
THC-COOH	2.062	354984	1416.3	265.53	14848.8	733069	98.441 ng/ml
THC	3.483	329848	1432.9	24.29	1062.7	238819	48.439 ng/ml

AM #27 Cannabinoids

Batch results D:\MassHunter\Data\2024\am 27-28\102924\QuantResults\am 27.batch.bin
Calibration Last Update 10/30/2024 10:07:08 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	10/29/2024 6:03:38 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC-OH	2.006	549492	2933.9	829.78	∞	1483292	102.424 ng/ml
THC-COOH	2.062	838802	1663616.3	258.12	243325 2.3	651423	257.893 ng/ml
THC	3.483	631204	18410.7	23.70	17971. 7	213311	102.951 ng/ml