



10/3/2024

Worklist: 6947**REVIEWED***By Britany Wylie at 11:51 am, Oct 03, 2024*

<u>LAB CASE</u>	<u>ITEM</u>	<u>ITEM TYPE</u>	<u>DESCRIPTION</u>
C2024-1695	1	BCK	AM 27 Blood THC Quant by LC-QQQ
C2024-1713	1	BCK	AM 27 Blood THC Quant by LC-QQQ
C2024-1868	1	BCK	AM 27 Blood THC Quant by LC-QQQ
C2024-1870	2	BCK	AM 27 Blood THC Quant by LC-QQQ
C2024-1884	1	BCK	AM 27 Blood THC Quant by LC-QQQ
C2024-1893	1	BCK	AM 27 Blood THC Quant by LC-QQQ
C2024-1901	1	BCK	AM 27 Blood THC Quant by LC-QQQ
C2024-1927	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: 10/1/24

Plate lot#: 240513

Mobile phase A: 0.1% Formic Acid in LCMS Water

Blank Blood Lot: 24C52043 (blood only run)

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:

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: *Mikel Buffaloe was hands of the analyst for this extraction.*

C2024-1893 did not inject on 10/1/24 that sample and an internal blood control were reconstituted and injected on 10/2/24. The wrong well position was designated for that internal blood control. The well position was corrected, and the internal blood control was re-injected that injection was evaluated.

THC - curve limitations 3-100 cal 1 dropped due to poor response, poor peak shape.



	1	2	3	4	5	6
a	cal 1	Internal control blood	1901-1			
b	cal 2	negative blood	1927-1			
c	cal 3	1695-1				
d	cal 4	1713-1				
e	cal 5	1868-1				
f	cal 6	1870-2				
g	cal 7	1884-1				
h	Internal control (blood)	1893-1				

Plate position 3

c2024-____-__

AM #27 Cannabinoids

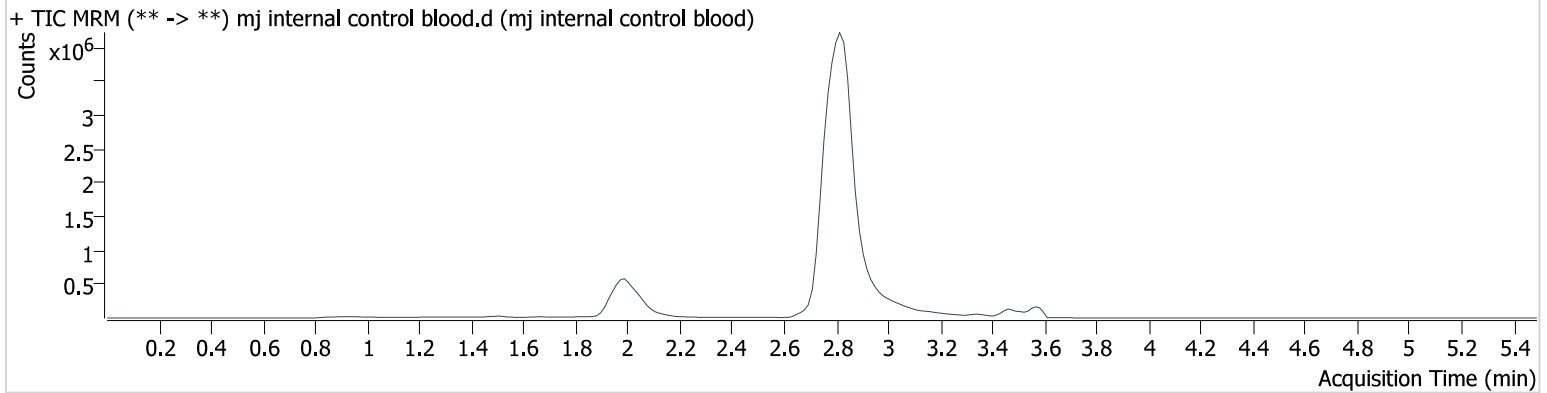
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Calibration Last Update 10/2/2024 11:20:35 AM

Instrument 69679
Type QC
Acq. Method thc quant 50 50.m
Sample Position P3-H1
Injection Volume 10
Acq. Date-Time 10/1/2024 4:57:24 PM
Sample Info.

Data File mj internal control blood.d
Sample mj internal control blood
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	1.976	35684	339.2	780.39	∞	2331970	4.770 ng/ml
THC-COOH	2.047	65670	185.1	245.36	835.0	1053495	13.146 ng/ml
THC	3.468	55892	∞	21.90	∞	446597	5.180 ng/ml



AM #27 Cannabinoids

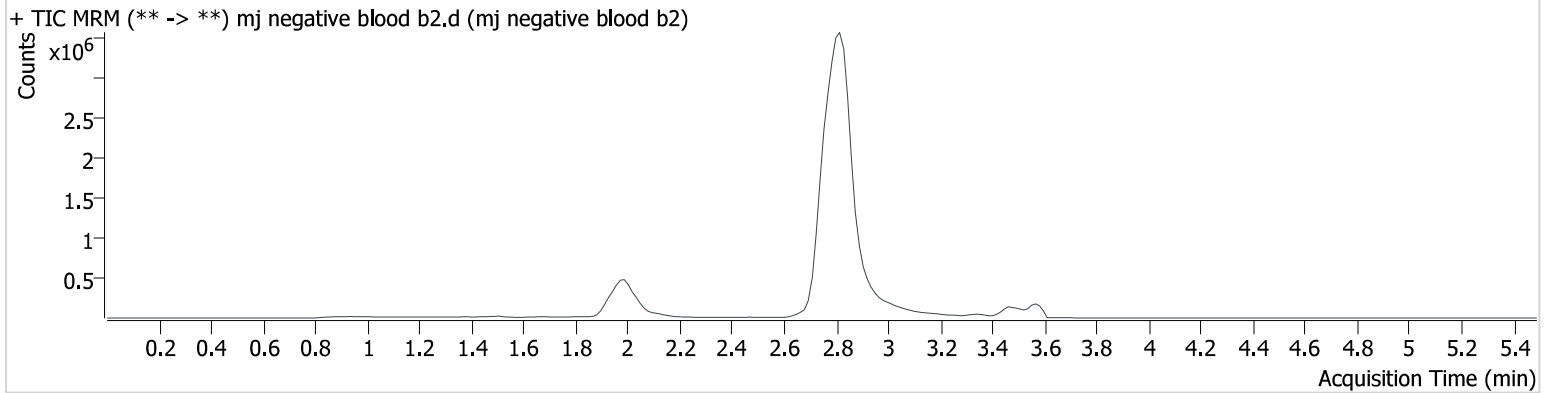
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Calibration Last Update 10/2/2024 11:20:35 AM

Instrument 69679
Type Sample
Acq. Method thc quant 50 50.m
Sample Position P3-B2
Injection Volume 10
Acq. Date-Time 10/1/2024 5:03:58 PM
Sample Info.

Data File mj negative blood b2.d
Sample mj negative blood b2
Operator Anne Nord
Comment

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Sample Chromatogram



AM #27 Cannabinoids

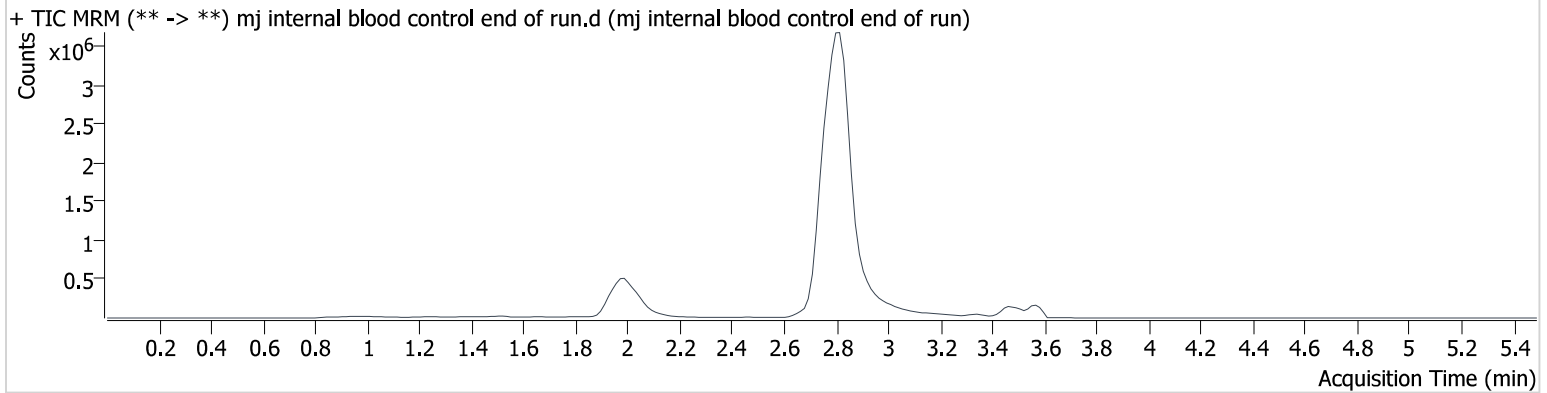
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Calibration Last Update 10/2/2024 11:20:35 AM

Instrument 69679
Type QC
Acq. Method thc quant 50 50.m
Sample Position P3-A2
Injection Volume 10
Acq. Date-Time 10/1/2024 6:56:08 PM
Sample Info.

Data File mj internal blood control end of run.d
Sample mj internal blood control end of run
Operator Anne Nord
Comment

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Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC-OH	1.991	27907	246.2	884.29	247.6	2030662	4.333 ng/ml
THC-COOH	2.047	61486	316.0	273.60	836.4	942712	13.728 ng/ml
THC	3.498	60835	∞	19.30	∞	495437	5.098 ng/ml

AM #27 Cannabinoids

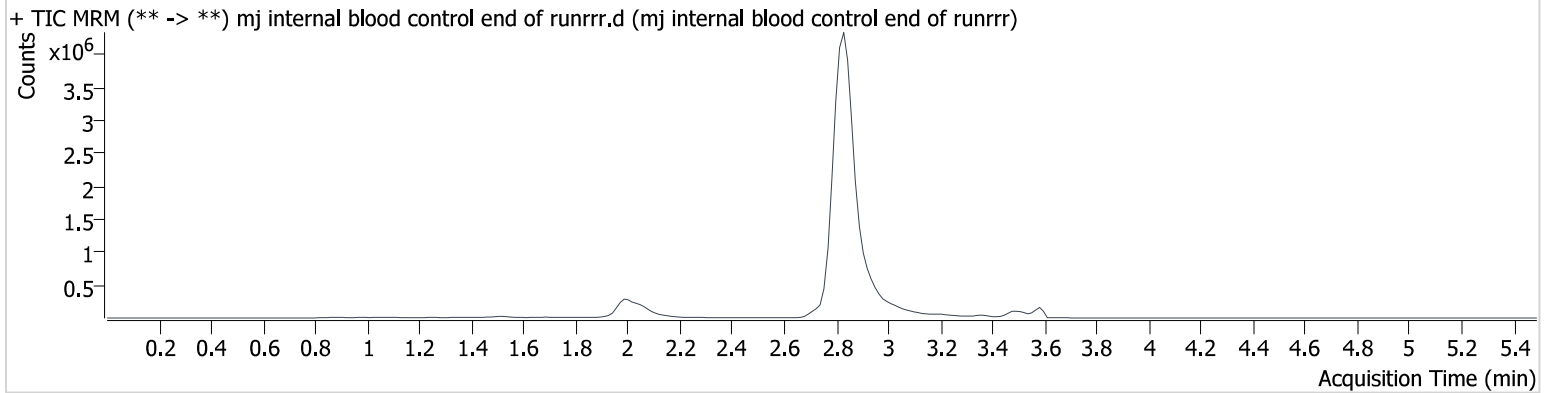
Batch results D:\MassHunter\Data\2024\am 27-28\100124\QuantResults\thc.batch.bin
Calibration Last Update 10/2/2024 11:20:35 AM

Instrument 69679
Type QC
Acq. Method thc quant 50 50.m
Sample Position P3-H1
Injection Volume 10
Acq. Date-Time 10/2/2024 9:46:21 AM
Sample Info.

Data File mj internal blood control end of runrrr.d
Sample mj internal blood control end of runrrr
Operator Anne Nord
Comment

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Sample Chromatogram

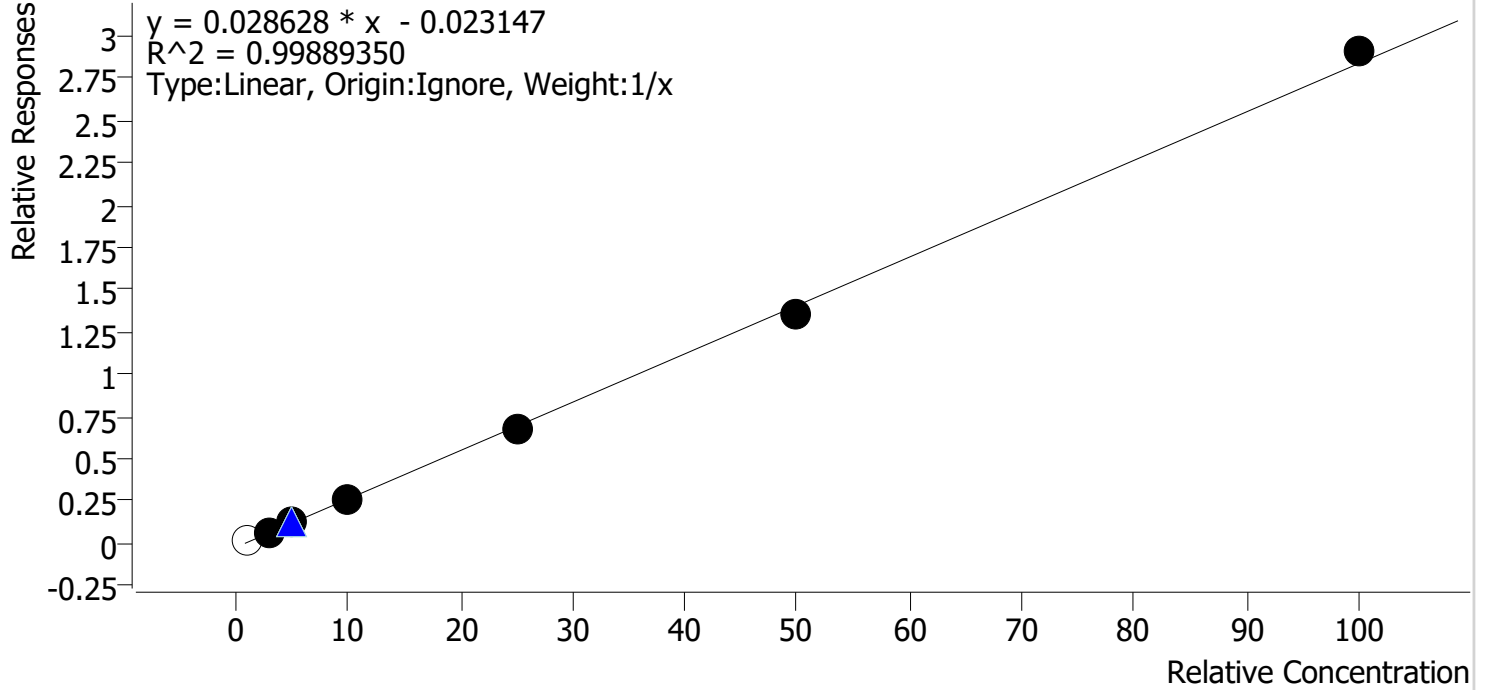


Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC-OH	1.991	16104	∞	819.66	∞	952233	5.220 ng/ml
THC-COOH	2.062	34853	585.7	270.82	496.7	502324	14.568 ng/ml
THC	3.498	35996	∞	25.35	92.1	286984	5.190 ng/ml

Compound Calibration Report

Batch results D:\MassHunter\Data\2024\am 27-28\100124\QuantResults\thc.batch.bin
Last Cal. Update 10/2/2024 11:20 AM
Analyst Name ISP\datastor
Analyte THC **Internal Standard** THC-d3

THC - 7 Levels, 6 Levels Used, 7 Points, 6 Points Used, 3 QCs

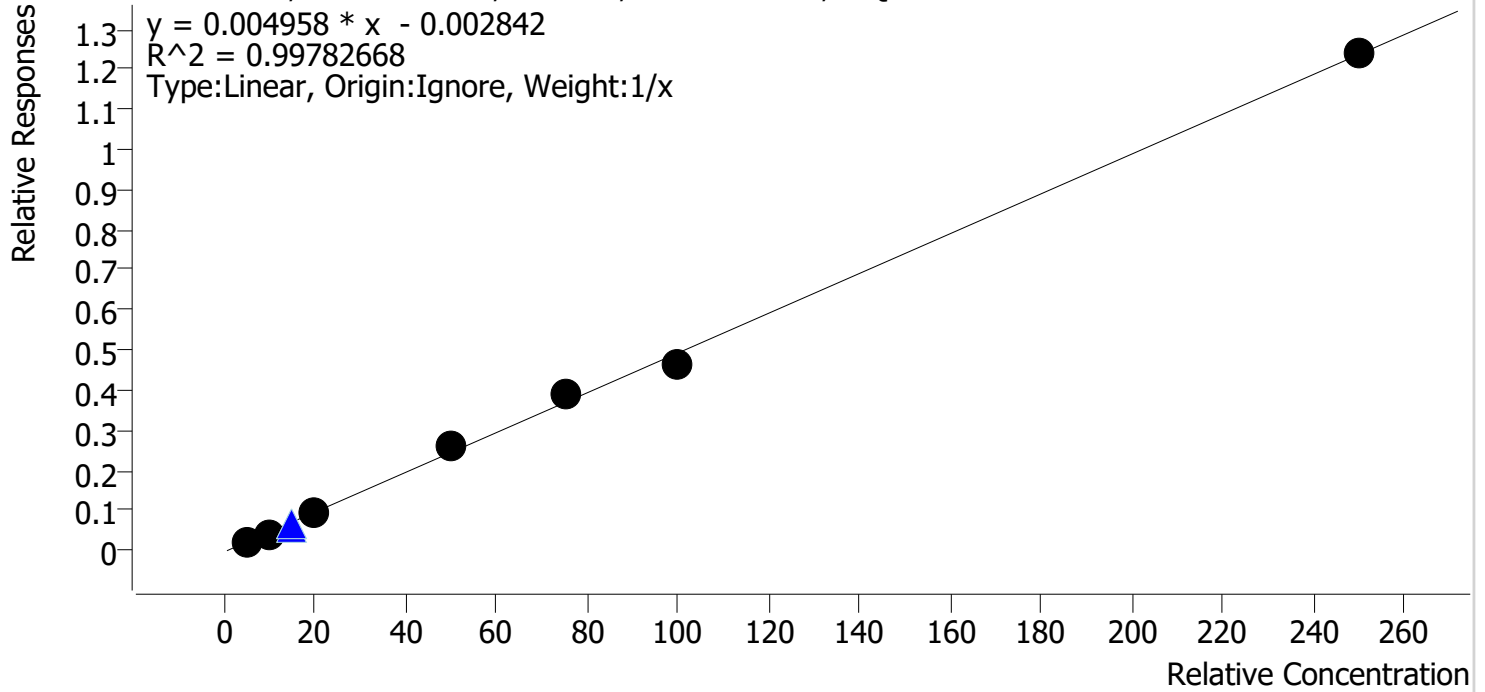


Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
mj cal 1	1	x	1.0	1.6	157.4
mj cal 2	2	✓	3.0	3.2	106.2
mj cal 3	3	✓	5.0	5.1	101.5
mj cal 4	4	✓	10.0	9.6	96.0
mj cal 5	5	✓	25.0	24.2	96.9
mj cal 6	6	✓	50.0	48.5	97.0
mj cal 7	7	✓	100.0	102.4	102.4

Compound Calibration Report

Batch results D:\MassHunter\Data\2024\am 27-28\100124\QuantResults\thc.batch.bin
Last Cal. Update 10/2/2024 11:20 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, 3 QCs

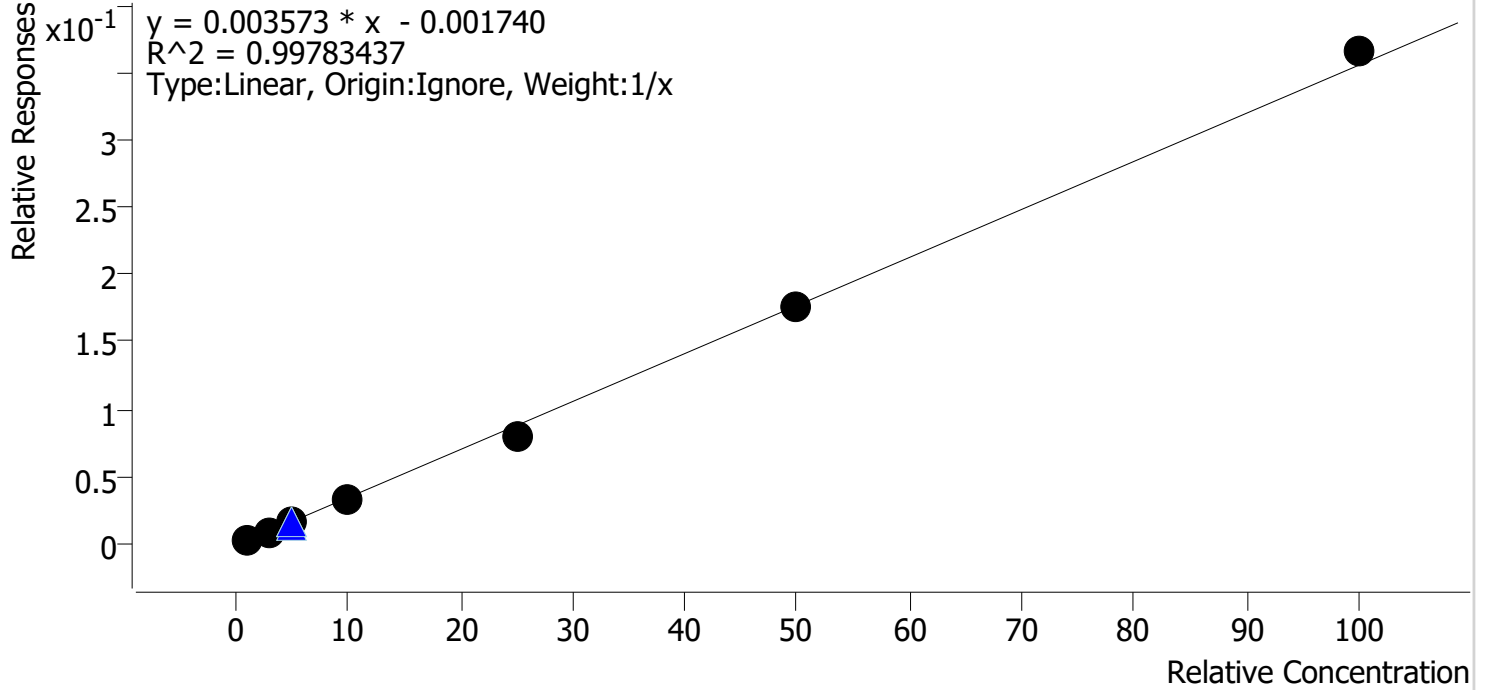


Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
mj cal 1	1	✓	5.0	5.1	102.1
mj cal 2	2	✓	10.0	9.3	92.6
mj cal 3	3	✓	20.0	20.1	100.7
mj cal 4	4	✓	50.0	53.2	106.4
mj cal 5	5	✓	75.0	78.4	104.5
mj cal 6	6	✓	100.0	93.5	93.5
mj cal 7	7	✓	250.0	250.4	100.2

Compound Calibration Report

Batch results D:\MassHunter\Data\2024\am 27-28\100124\QuantResults\thc.batch.bin
Last Cal. Update 10/2/2024 11:20 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, 3 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	2.8	94.8
mj cal 3	3	✓	5.0	4.7	94.1
mj cal 4	4	✓	10.0	9.3	92.7
mj cal 5	5	✓	25.0	23.1	92.3
mj cal 6	6	✓	50.0	50.1	100.1
mj cal 7	7	✓	100.0	102.8	102.8

AM #27 Cannabinoids

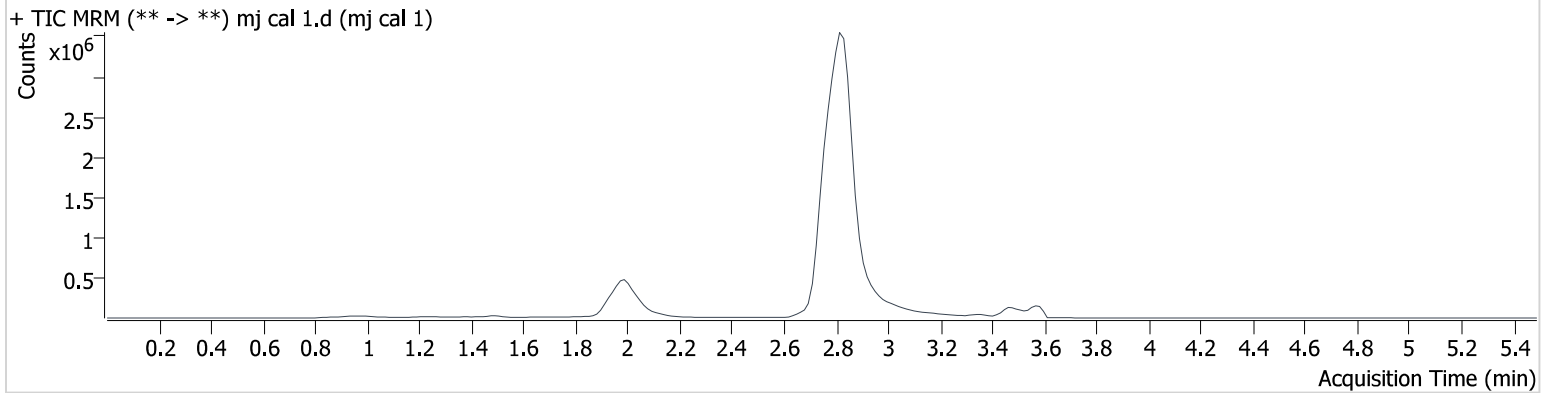
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Calibration Last Update 10/2/2024 11:20:35 AM

Instrument 69679
Type Cal
Acq. Method thc quant 50 50.m
Sample Position P3-A1
Injection Volume 10
Acq. Date-Time 10/1/2024 4:11:08 PM
Sample Info.

Data File mj cal 1.d
Sample mj cal 1
Operator Anne Nord
Comment

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Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.	
THC-OH	1.991	5928	∞	701.84	∞	2228195	1.232 ng/ml	Low
THC-COOH	2.047	18574	223.1	267.36	66.8	826869	5.104 ng/ml	
THC	3.513	10312	∞	9.56 Low	∞	470702	1.574 ng/ml	

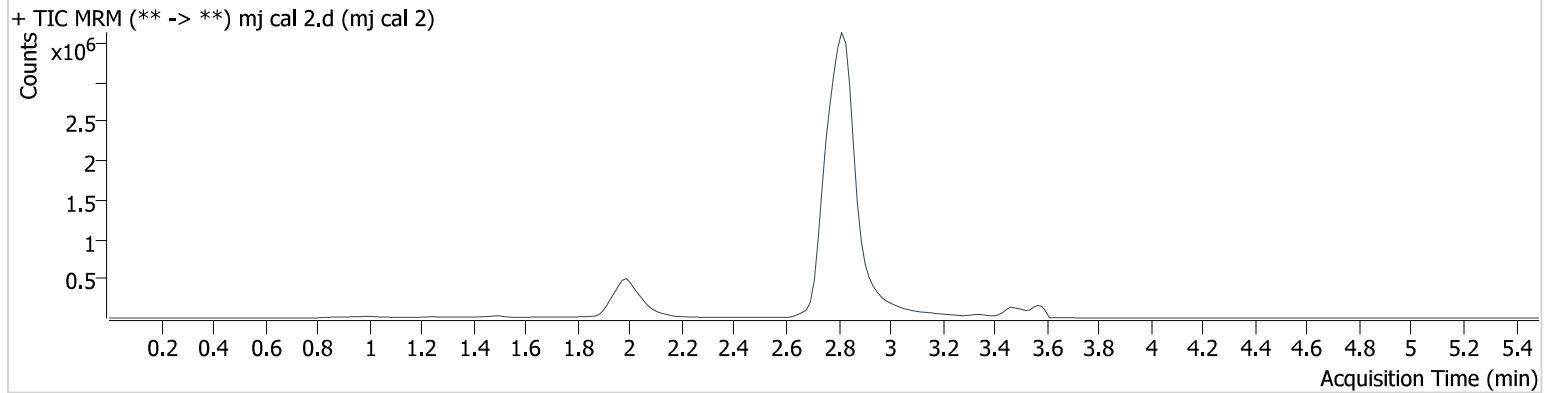
AM #27 Cannabinoids

Batch results D:\MassHunter\Data\2024\am 27-28\100124\QuantResults\thc.batch.bin
Calibration Last Update 10/2/2024 11:20:35 AM

Instrument 69679
Type Cal
Acq. Method thc quant 50 50.m
Sample Position P3-B1
Injection Volume 10
Acq. Date-Time 10/1/2024 4:17:52 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	1.991	17936	33.0	760.14	∞	2128864	2.845 ng/ml	Low
THC-COOH	2.047	35795	39.9	306.58	337.5	831014	9.261 ng/ml	
THC	3.513	32675	∞	26.45	∞	479890	3.187 ng/ml	

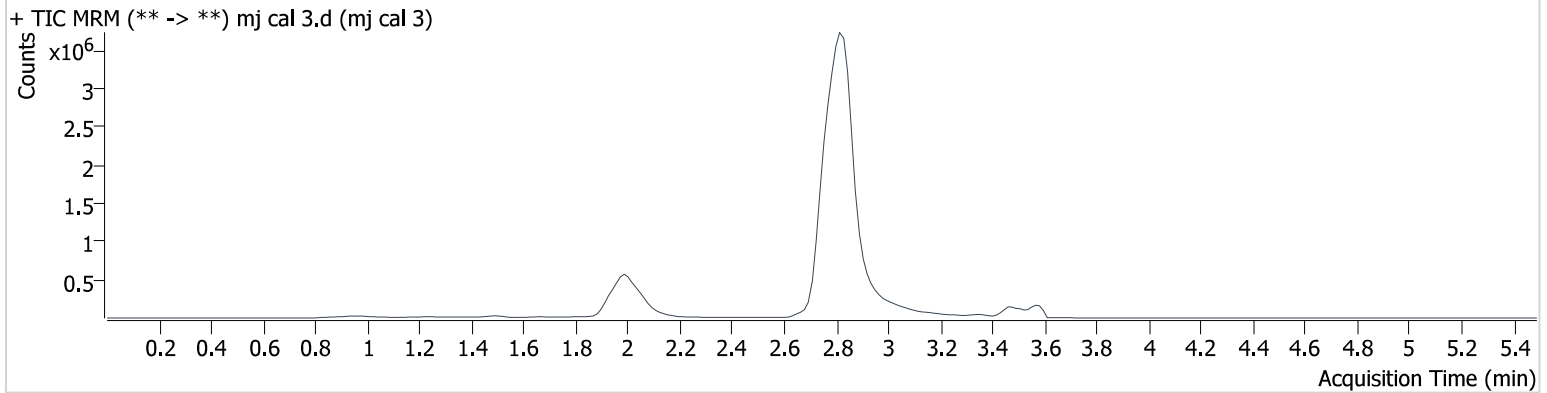
AM #27 Cannabinoids

Batch results D:\MassHunter\Data\2024\am 27-28\100124\QuantResults\thc.batch.bin
Calibration Last Update 10/2/2024 11:20:35 AM

Instrument 69679
Type Cal
Acq. Method thc quant 50 50.m
Sample Position P3-C1
Injection Volume 10
Acq. Date-Time 10/1/2024 4:24:29 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	1.991	35558	∞	854.10	∞	2359997	4.704 ng/ml
THC-COOH	2.047	84872	157620.6	283.48	498.6	874644	20.145 ng/ml
THC	3.513	61589	∞	26.89	∞	504350	5.074 ng/ml

AM #27 Cannabinoids

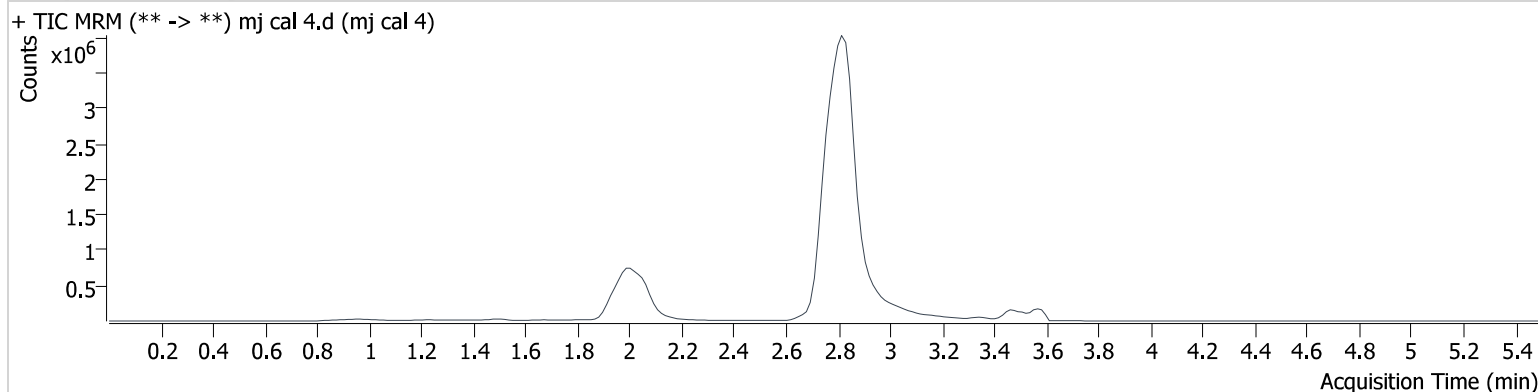
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Calibration Last Update 10/2/2024 11:20:35 AM

Instrument 69679
Type Cal
Acq. Method thc quant 50 50.m
Sample Position P3-D1
Injection Volume 10
Acq. Date-Time 10/1/2024 4:31:05 PM
Sample Info.

Data File mj cal 4.d
Sample mj cal 4
Operator Anne Nord
Comment

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Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC-OH	1.991	79961	∞	870.13	∞	2548776	9.267 ng/ml
THC-COOH	2.047	254257	941.2	270.15	245.4	974252	53.211 ng/ml
THC	3.513	128520	∞	23.92	369.2	510852	9.596 ng/ml

AM #27 Cannabinoids

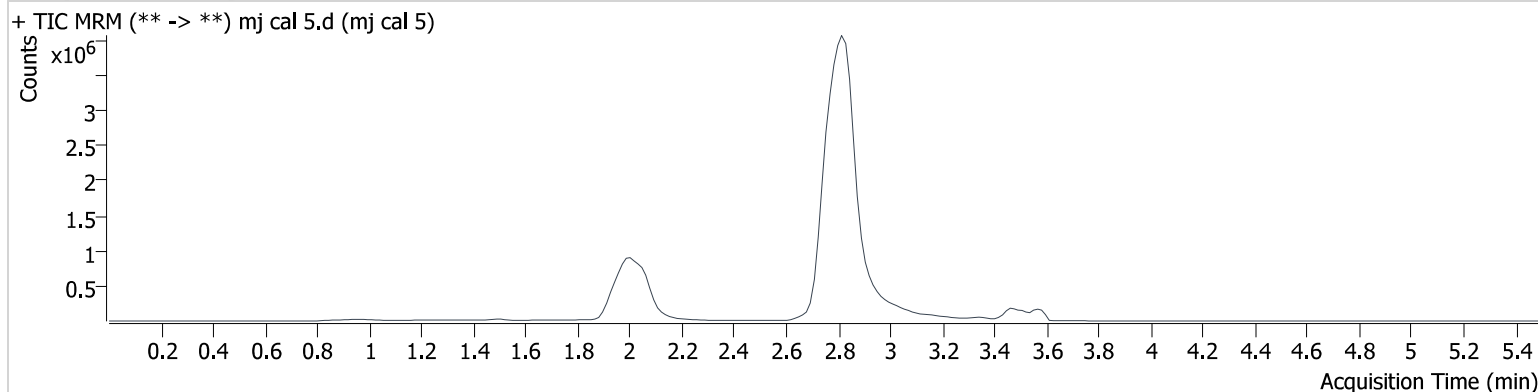
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Calibration Last Update 10/2/2024 11:20:35 AM

Instrument 69679
Type Cal
Acq. Method thc quant 50 50.m
Sample Position P3-E1
Injection Volume 10
Acq. Date-Time 10/1/2024 4:37:40 PM
Sample Info.

Data File mj cal 5.d
Sample mj cal 5
Operator Anne Nord
Comment

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Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC-OH	1.991	187560	∞	862.01	∞	2323241	23.081 ng/ml
THC-COOH	2.047	339529	2120.7	281.82	6921.0	880068	78.388 ng/ml
THC	3.513	305899	∞	23.37	∞	456218	24.230 ng/ml

AM #27 Cannabinoids

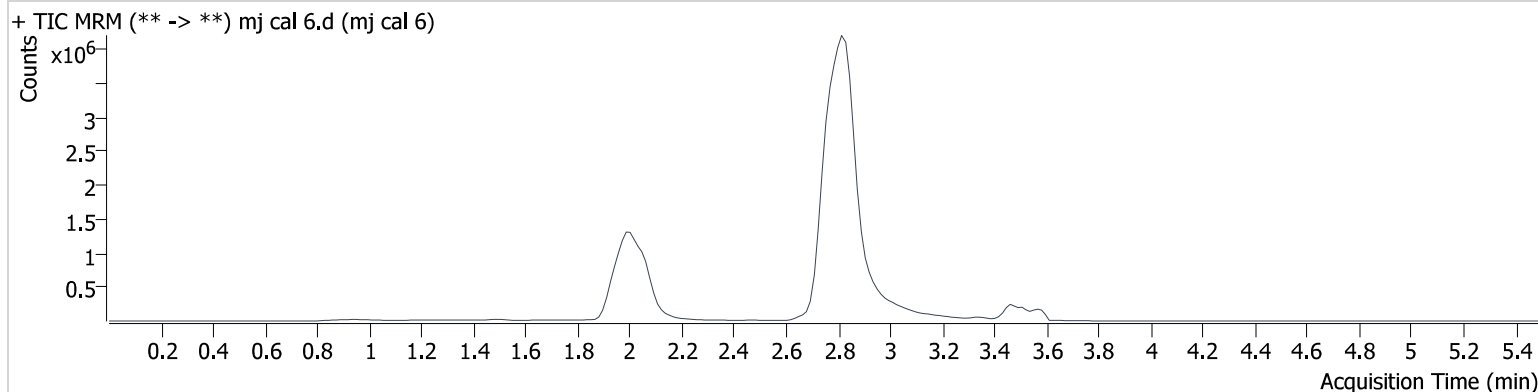
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Instrument 69679
Type Cal
Acq. Method thc quant 50 50.m
Sample Position P3-F1
Injection Volume 10
Acq. Date-Time 10/1/2024 4:44:16 PM
Sample Info.

Data File mj cal 6.d
Sample mj cal 6
Operator Anne Nord
Comment

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Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC-OH	1.991	420247	∞	821.44	∞	2371896	50.073 ng/ml
THC-COOH	2.047	481339	2589.5	271.58	1277.9	1044911	93.485 ng/ml
THC	3.468	612435	∞	24.21	1611.0	448663	48.490 ng/ml

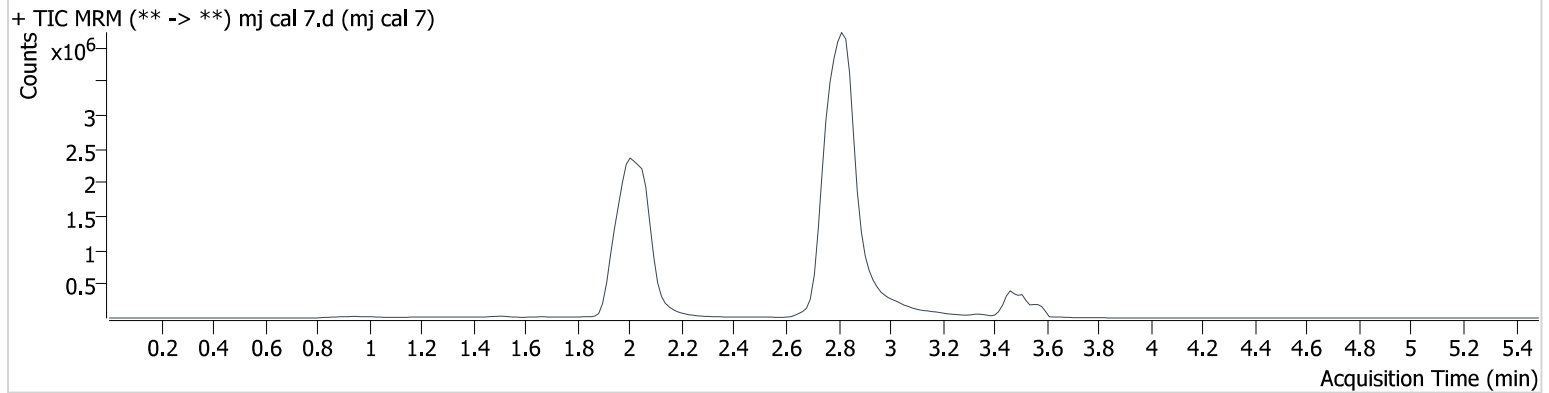
AM #27 Cannabinoids

Batch results D:\MassHunter\Data\2024\am 27-28\100124\QuantResults\thc.batch.bin
Calibration Last Update 10/2/2024 11:20:35 AM

Instrument 69679
Type Cal
Acq. Method thc quant 50 50.m
Sample Position P3-G1
Injection Volume 10
Acq. Date-Time 10/1/2024 4:50:50 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	1.991	899437	∞	806.67	∞	2460340	102.799 ng/ml
THC-COOH	2.047	1248930	1867196.5	265.29	511381 8.1	1008293	250.406 ng/ml
THC	3.468	1353461	∞	24.82	2845.0	465261	102.423 ng/ml