

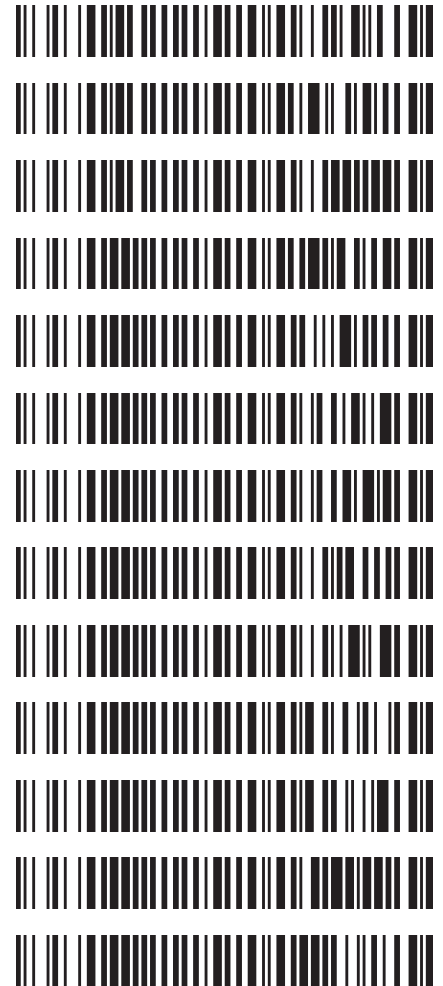
REVIEWED*By Sarah Collins at 2:28 pm, Aug 20, 2024*

cg

8/19/2024

Worklist: 6901

<u>LAB CASE</u>	<u>ITEM</u>	<u>ITEM TYPE</u>	<u>DESCRIPTION</u>
M2024-2739	6	BCK	AM 27 Blood THC Quant by LC-QQQ
M2024-2887	1	BCK	AM 27 Blood THC Quant by LC-QQQ
M2024-3026	6	BCK	AM 27 Blood THC Quant by LC-QQQ
P2024-1881	2	BCK	AM 27 Blood THC Quant by LC-QQQ
P2024-2258	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2024-2275	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2024-2276	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2024-2291	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2024-2298	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2024-2406	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2024-2407	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2024-2416	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2024-2428	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: 08/15/2024

Plate lot#: 240513

Mobile phase A: 0.1% Formic Acid in LCMS Water

Blank Blood Lot: Lampire 24C52816

LCMS-QQQ ID: 069901

Analyst: Celena Shrum

Plate Retest Date: 11/13/2024

Mobile phase B: 0.1% Formic acid in Acetonitrile

Column: UCT Selectra DA 100 x 2.1mm 3um

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 (if applicable): add 1.5mL urine to blank plate, add 250µl 1N KOH. Shake and incubate at 40 degrees for 15 minutes.
- ☒ 3. Using a calibrated pipette, add **1000µl blood or 1000µl hydrolyzed urine** into the appropriate wells of the analytical (standards) plate. **Pipette ID: #42**
- ☒ 4. Add **500µL of 0.1% formic acid in water to blood samples or 500µl of saturated phosphate buffer to urine samples** to the appropriate wells of the analytical plate.
- ☒ 5. Place on shaking incubator at ambient temp., 900rpm for 15 minutes.
- ☒ 6. Transfer **800µL of blood+acid mixture or urine+acid** 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) Manifold ID: 067104
- ☒ 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.
SPE Dry ID: 067103
- ☒ 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. 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. THC concentrations of 1-3ng/mL will be reported qualitatively.
- ☒ 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:

9

	1	2	3	4	5	6
A	IS + Cal. 1	QC2	P2024-2291-1			
B	IS + Cal. 2	NEG Blood	P2024-2298-1			
C	IS + Cal. 3	M2024-2739-6	P2024-2406-1			
D	IS + Cal. 4	M2024-2887-1	P2024-2407-1			
E	IS + Cal. 5	M2024-3026-6	P2024-2416-1			
F	IS + Cal. 6	P2024-2258-1	P2024-2428-1			
G	IS + Cal. 7	P2024-2275-1	P2024-1881-2			
H	QC1	P2024-2276-1				

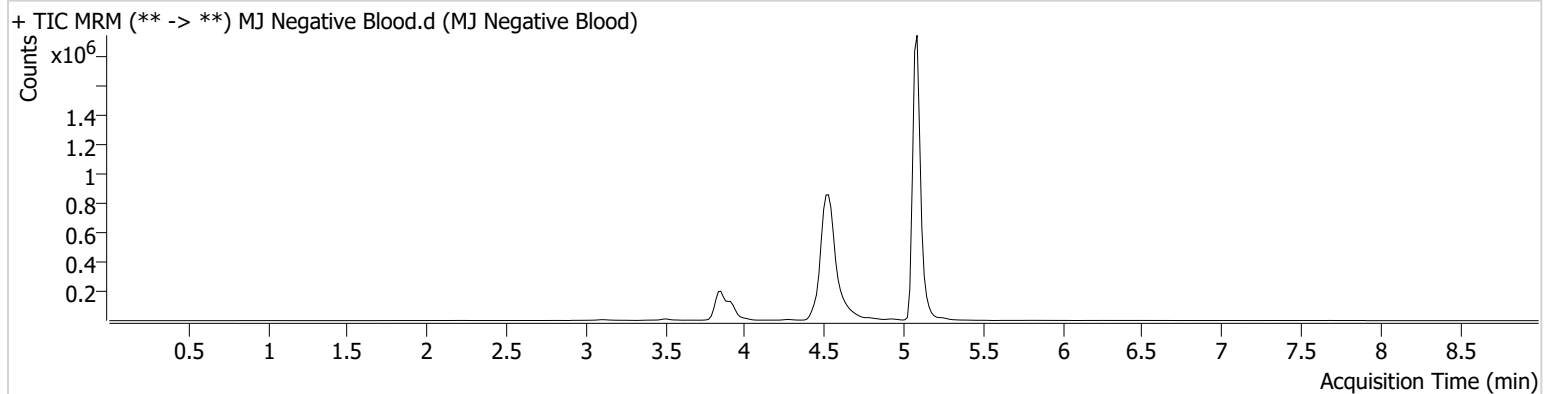
AM #27 Cannabinoids Quant. Results



Batch results D:\MassHunter\Data\2024\AM 27 28\081524 AM 27 28 CS\QuantResults\AM 27.batch.bin
Calibration Last Update 8/20/2024 11:22:06 AM

Instrument	Falco (069901)	Data File	MJ Negative Blood.d
Type	Sample	Sample	MJ Negative Blood
Acq. Method	AM 27 Agilent Method.m	Operator	Celena Shrum
Sample Position	P1-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	8/15/2024 8:05:54 PM		
Sample Info.			

Sample Chromatogram



AM #27 Cannabinoids Quant. Results



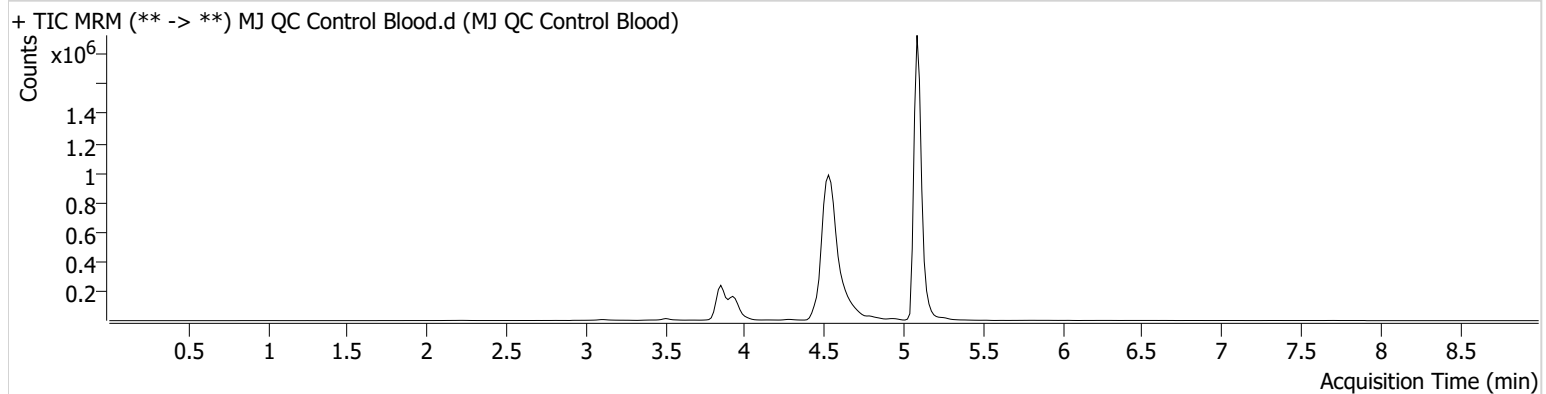
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Instrument Falco (069901)
Type QC
Acq. Method AM 27 Agilent Method.m
Sample Position P1-H1
Injection Volume 10
Acq. Date-Time 8/15/2024 7:39:43 PM
Sample Info.

Data File MJ QC Control Blood.d
Sample MJ QC Control Blood
Operator Celena Shrum
Comment

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Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.090	266842	∞	26.9	∞	5789330	4.9855 ng/ml
THC-COOH	3.939	33926	1376.00	244.2	∞	392362	14.8102 ng/ml
THC-OH	3.850	71543	780.66	13.4	199.36	905986	5.0371 ng/ml

AM #27 Cannabinoids Quant. Results



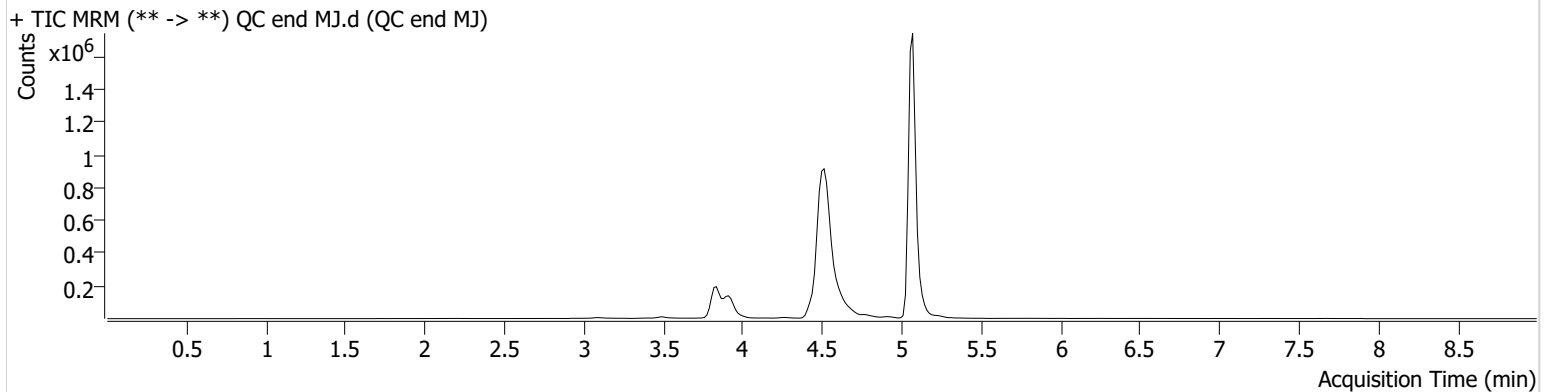
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Calibration Last Update 8/20/2024 11:22:06 AM

Instrument Falco (069901)
Type QC
Acq. Method AM 27 Agilent Method.m
Sample Position P1-A2
Injection Volume 10
Acq. Date-Time 8/16/2024 2:12:49 AM
Sample Info.

Data File QC end MJ.d
Sample QC end MJ
Operator Celena Shrum
Comment

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Sample Chromatogram

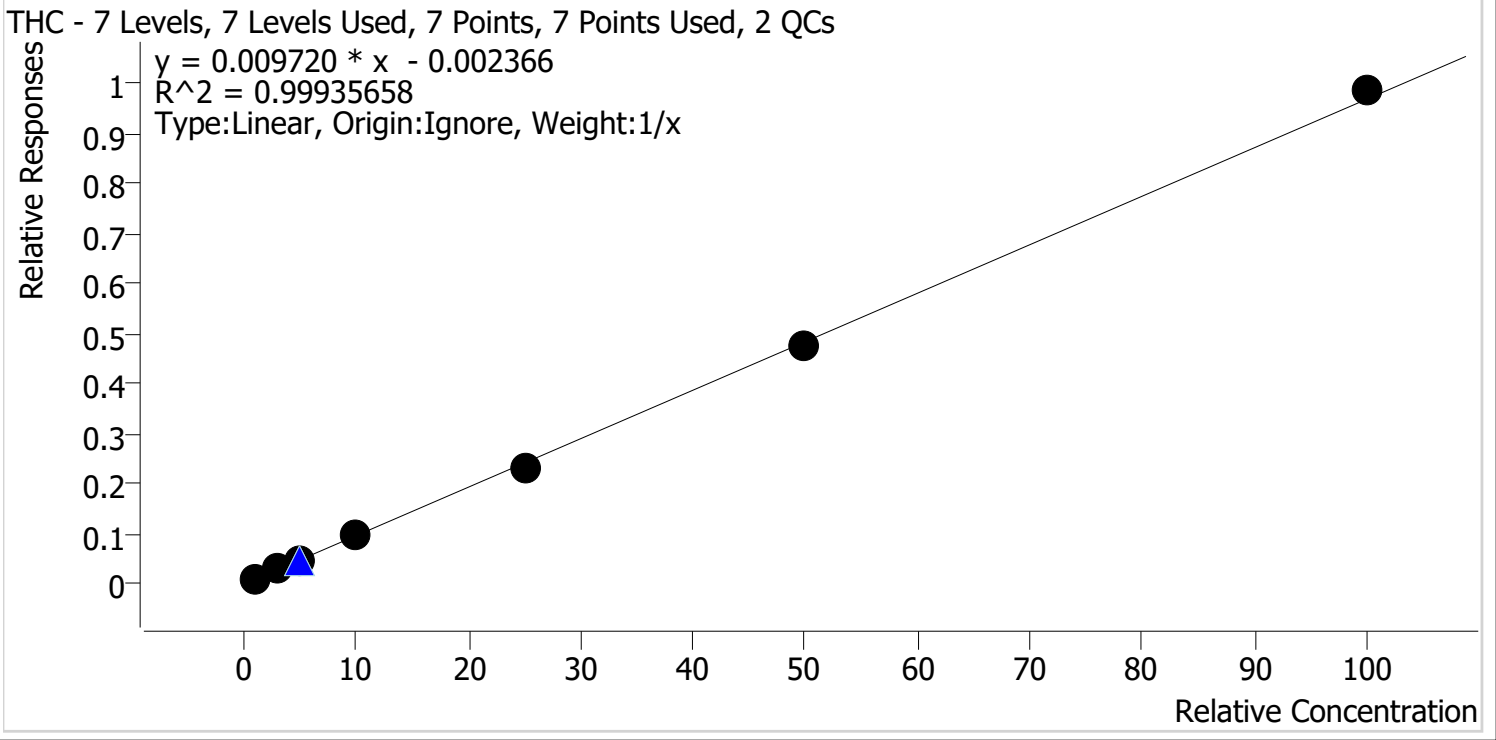


Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.075	242901	∞	26.0	∞	5197053	5.0520 ng/ml
THC-COOH	3.924	29126	662.26	236.2	1367.31	334948	14.8901 ng/ml
THC-OH	3.835	58377	∞	13.6	791.88	757166	4.9212 ng/ml



AM #27 Cannabinoids Quant. Calibration Curve Report

Batch results D:\MassHunter\Data\2024\AM 27 28\081524 AM 27 28 CS\QuantResults\AM 27.batch.bin
Last Cal. Update 8/20/2024 11:22 AM
Analyst Name ISP\Datastor
Analyte THC **Internal Standard** THC-D3



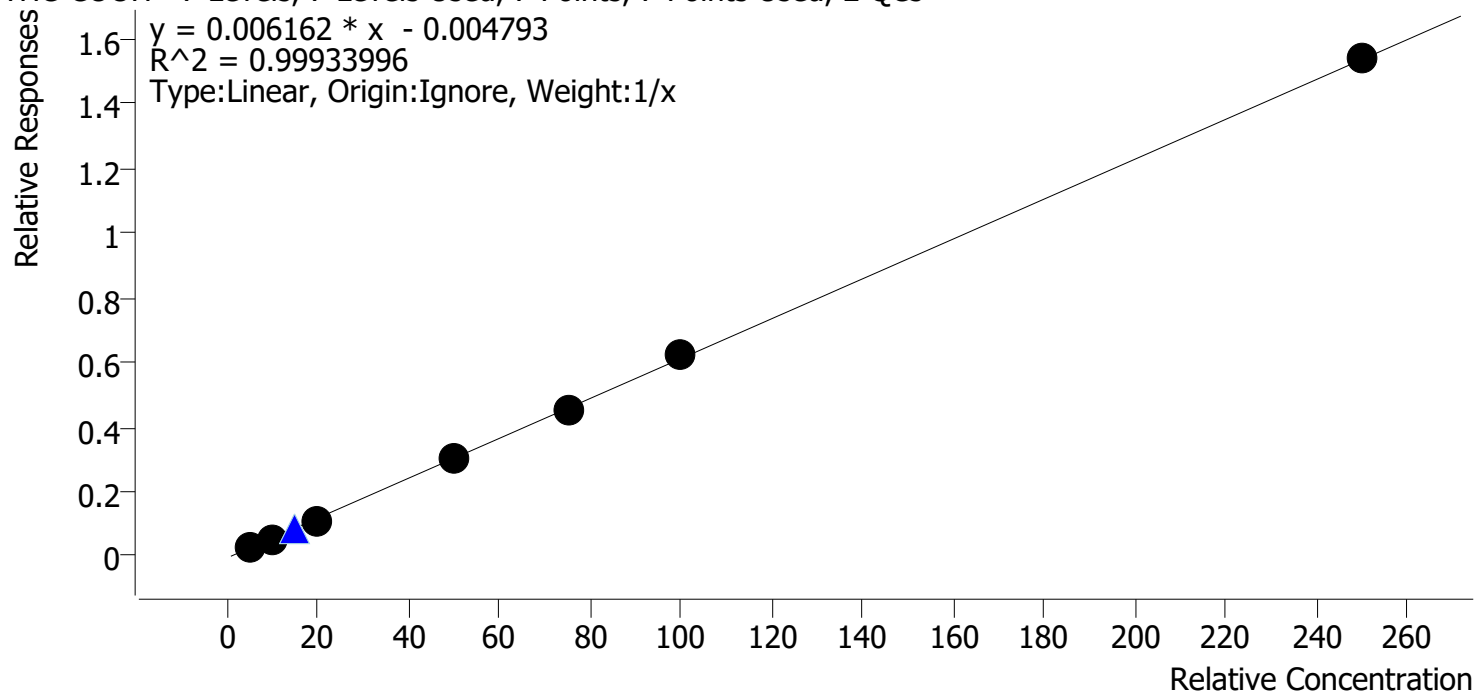
Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
Cal 1 MJ	1	✓	1.0	1.1	112.3
Cal 2 MJ	2	✓	3.0	3.0	98.8
Cal 3 MJ	3	✓	5.0	4.6	92.3
Cal 4 MJ	4	✓	10.0	9.9	99.0
Cal 5 MJ	5	✓	25.0	24.2	97.0
Cal 6 MJ	6	✓	50.0	49.4	98.8
Cal 7 MJ	7	✓	100.0	101.7	101.7



AM #27 Cannabinoids Quant. Calibration Curve Report

Batch results D:\MassHunter\Data\2024\AM 27 28\081524 AM 27 28 CS\QuantResults\AM 27.batch.bin
Last Cal. Update 8/20/2024 11:22 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

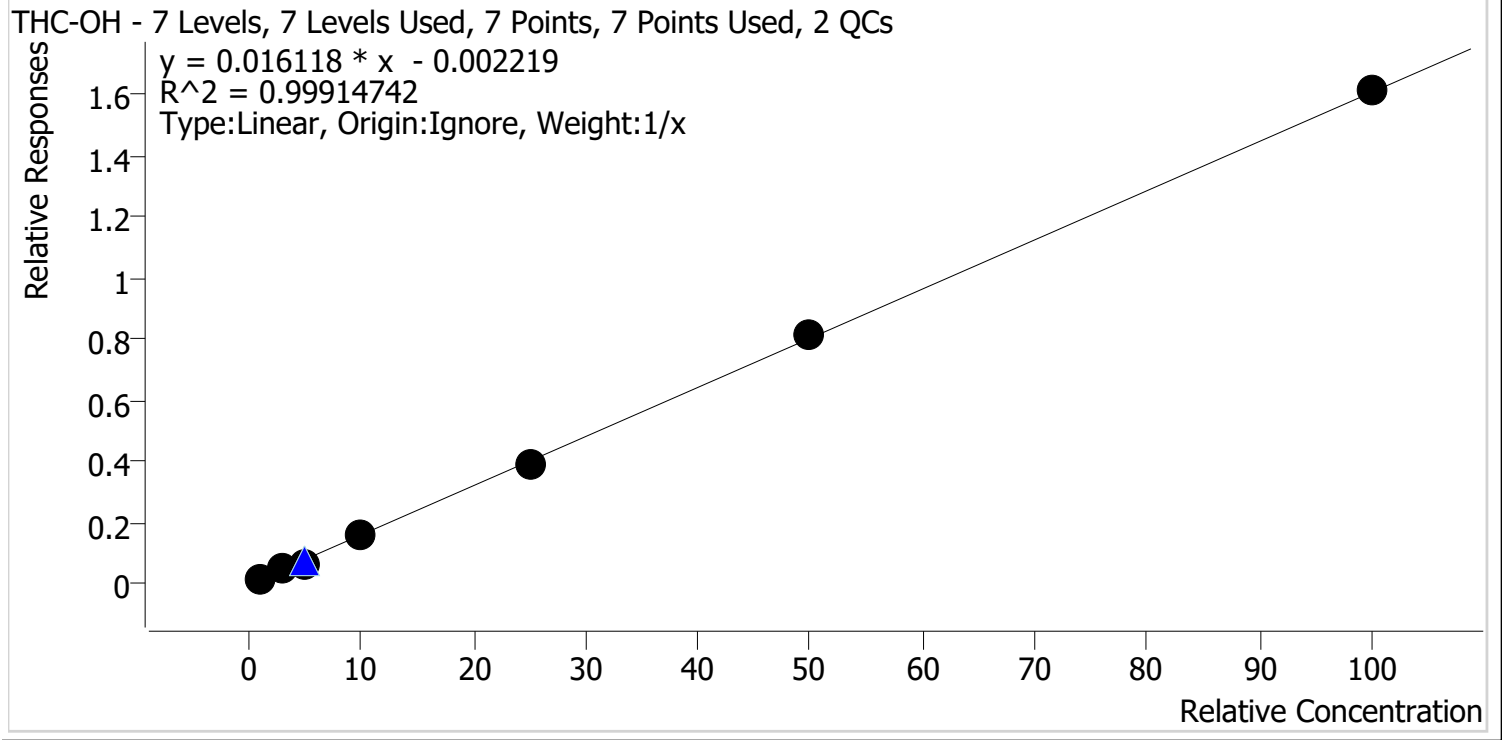


Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
Cal 1 MJ	1	✓	5.0	5.6	111.4
Cal 2 MJ	2	✓	10.0	9.6	95.9
Cal 3 MJ	3	✓	20.0	18.2	91.2
Cal 4 MJ	4	✓	50.0	50.3	100.6
Cal 5 MJ	5	✓	75.0	74.7	99.6
Cal 6 MJ	6	✓	100.0	101.2	101.2
Cal 7 MJ	7	✓	250.0	250.4	100.2



AM #27 Cannabinoids Quant. Calibration Curve Report

Batch results D:\MassHunter\Data\2024\AM 27 28\081524 AM 27 28 CS\QuantResults\AM 27.batch.bin
Last Cal. Update 8/20/2024 11:22 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	1.1	109.3
Cal 2 MJ	2	✓	3.0	3.2	105.4
Cal 3 MJ	3	✓	5.0	4.2	85.0
Cal 4 MJ	4	✓	10.0	10.0	100.4
Cal 5 MJ	5	✓	25.0	24.7	98.7
Cal 6 MJ	6	✓	50.0	50.5	101.0
Cal 7 MJ	7	✓	100.0	100.3	100.3

AM #27 Cannabinoids Quant. Results



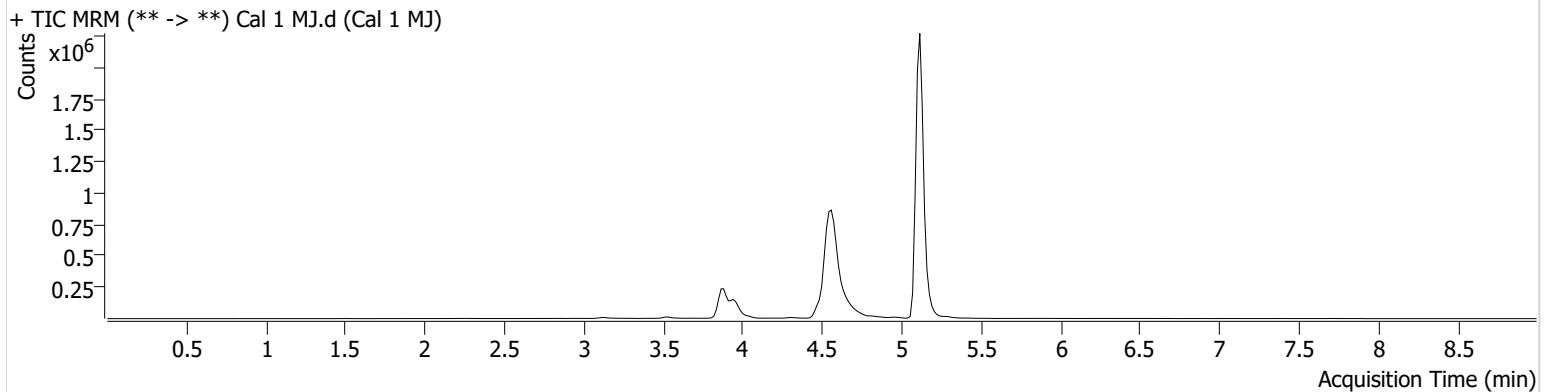
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Calibration Last Update 8/20/2024 11:22:06 AM

Instrument Falco (069901)
Type Cal
Acq. Method AM 27 Agilent Method.m
Sample Position P1-A1
Injection Volume 10
Acq. Date-Time 8/15/2024 5:54:47 PM
Sample Info.

Data File Cal 1 MJ.d
Sample Cal 1 MJ
Operator Celena Shrum
Comment

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Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.120	63099	4175.23	27.9	48.13	7377031	1.1235 ng/ml
THC-COOH	3.969	12745	238.08	238.6	∞	431659	5.5695 ng/ml
THC-OH	3.881	14594	∞	11.1	21.31	947923	1.0929 ng/ml

AM #27 Cannabinoids Quant. Results



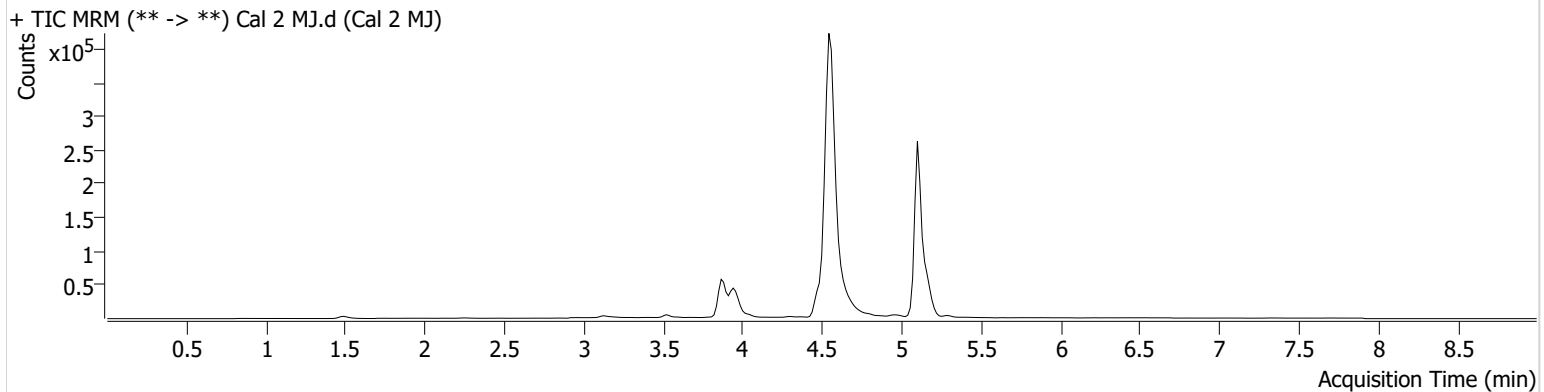
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Calibration Last Update 8/20/2024 11:22:06 AM

Instrument Falco (069901)
Type Cal
Acq. Method AM 27 Agilent Method.m
Sample Position P1-B1
Injection Volume 10
Acq. Date-Time 8/15/2024 6:08:02 PM
Sample Info.

Data File Cal 2 MJ.d
Sample Cal 2 MJ
Operator Celena Shrum
Comment

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Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.105	19576	337.54	31.4	∞	739997	2.9651 ng/ml
THC-COOH	3.969	6173	129.84	228.2	349.81	113688	9.5903 ng/ml
THC-OH	3.881	9793	130.50	11.9	28.73	200811	3.1635 ng/ml

AM #27 Cannabinoids Quant. Results



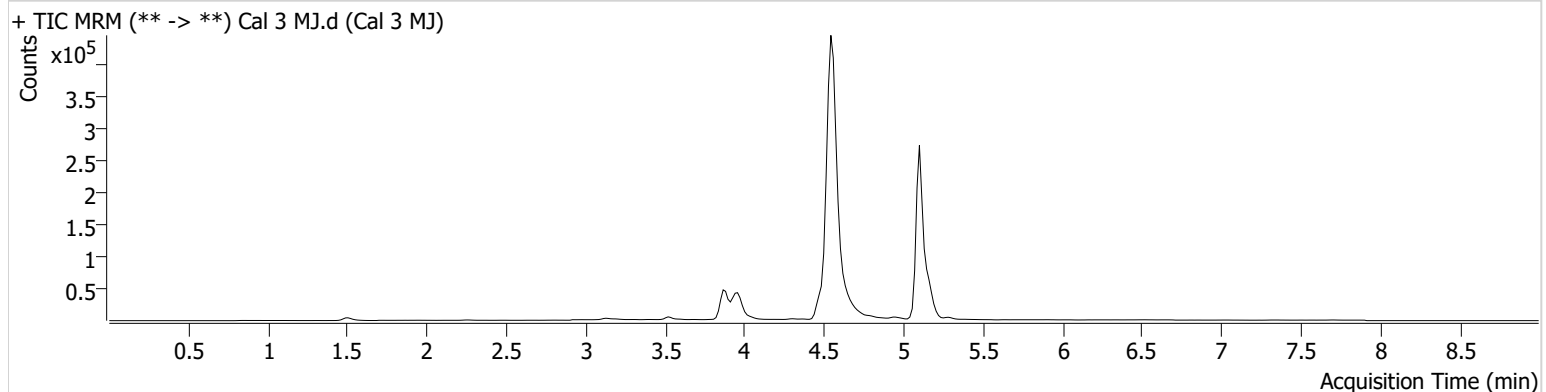
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Type Cal
Acq. Method AM 27 Agilent Method.m
Sample Position P1-C1
Injection Volume 10
Acq. Date-Time 8/15/2024 6:21:08 PM
Sample Info.

Data File Cal 3 MJ.d
Sample Cal 3 MJ
Operator Celena Shrum
Comment

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Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.105	31859	598.88	28.3	∞	749688	4.6156 ng/ml
THC-COOH	3.969	10205	410.69	233.8	1713.31	94879	18.2335 ng/ml
THC-OH	3.881	10667	73.26	15.1	43.04	161023	4.2479 ng/ml

AM #27 Cannabinoids Quant. Results



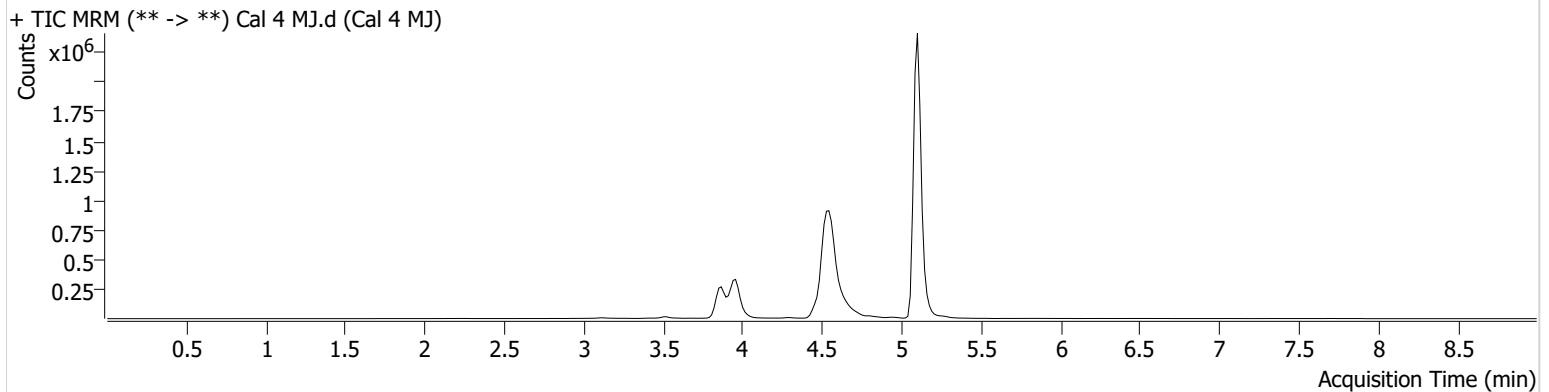
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Type Cal
Acq. Method AM 27 Agilent Method.m
Sample Position P1-D1
Injection Volume 10
Acq. Date-Time 8/15/2024 6:34:12 PM
Sample Info.

Data File Cal 4 MJ.d
Sample Cal 4 MJ
Operator Celena Shrum
Comment

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Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.105	662073	5967.13	25.9	∞	7056133	9.8969 ng/ml
THC-COOH	3.954	134858	2768.82	229.6	∞	442145	50.2774 ng/ml
THC-OH	3.865	155250	1323.14	13.6	692.31	973140	10.0359 ng/ml

AM #27 Cannabinoids Quant. Results



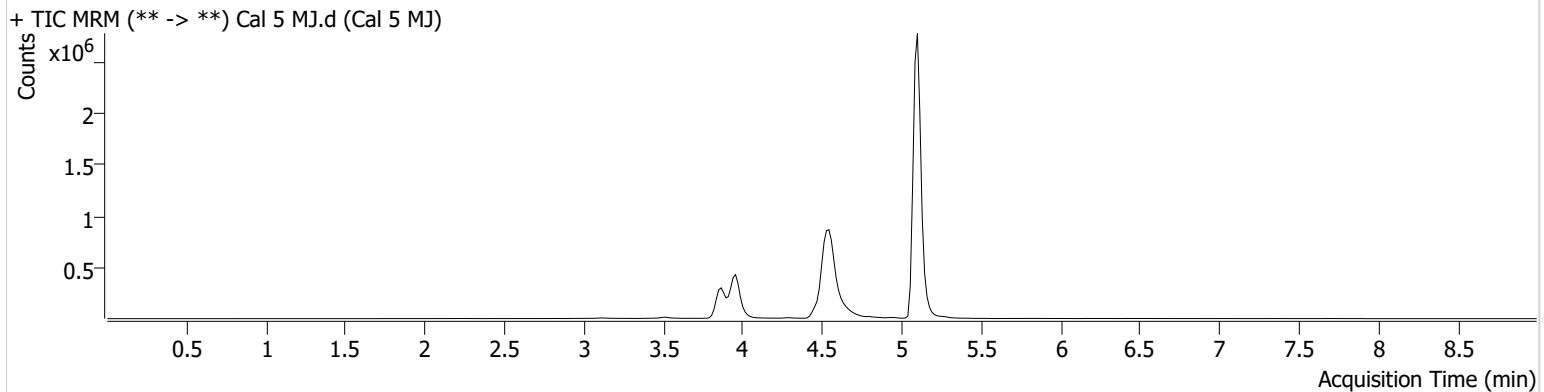
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Type Cal
Acq. Method AM 27 Agilent Method.m
Sample Position P1-E1
Injection Volume 10
Acq. Date-Time 8/15/2024 6:47:19 PM
Sample Info.

Data File Cal 5 MJ.d
Sample Cal 5 MJ
Operator Celena Shrum
Comment

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Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.105	1677288	∞	26.4	∞	7191408	24.2393 ng/ml
THC-COOH	3.954	186131	∞	231.4	7872.29	408556	74.7139 ng/ml
THC-OH	3.865	349717	3277.29	14.2	∞	884610	24.6658 ng/ml

AM #27 Cannabinoids Quant. Results



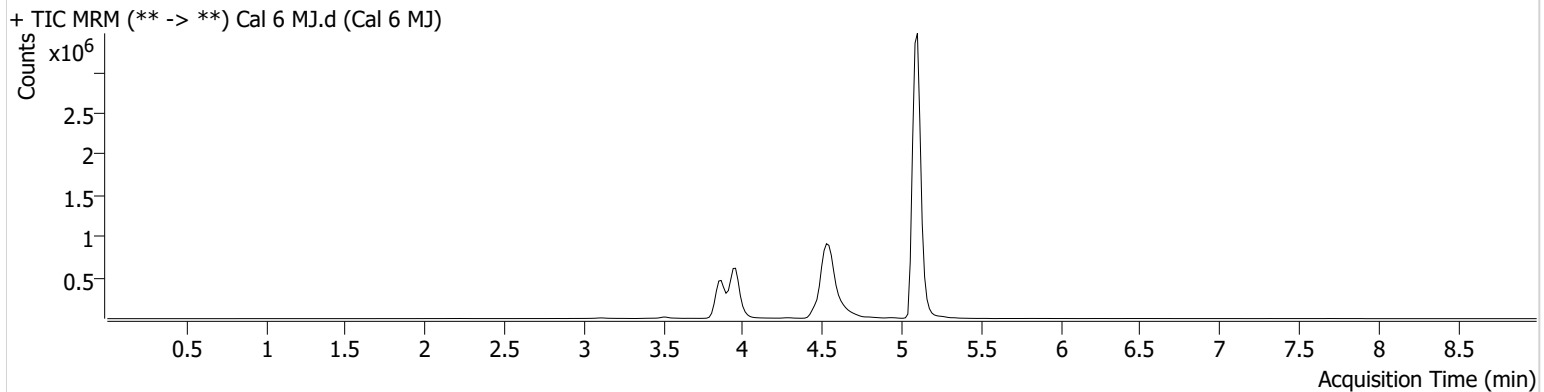
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Calibration Last Update 8/20/2024 11:22:06 AM

Instrument Falco (069901)
Type Cal
Acq. Method AM 27 Agilent Method.m
Sample Position P1-F1
Injection Volume 10
Acq. Date-Time 8/15/2024 7:00:23 PM
Sample Info.

Data File Cal 6 MJ.d
Sample Cal 6 MJ
Operator Celena Shrum
Comment

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Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.105	3703584	∞	26.4	∞	7748222	49.4204 ng/ml
THC-COOH	3.954	289289	∞	233.8	7444.32	467512	101.1996 ng/ml
THC-OH	3.865	871860	∞	13.9	1919.64	1074309	50.4897 ng/ml

AM #27 Cannabinoids Quant. Results



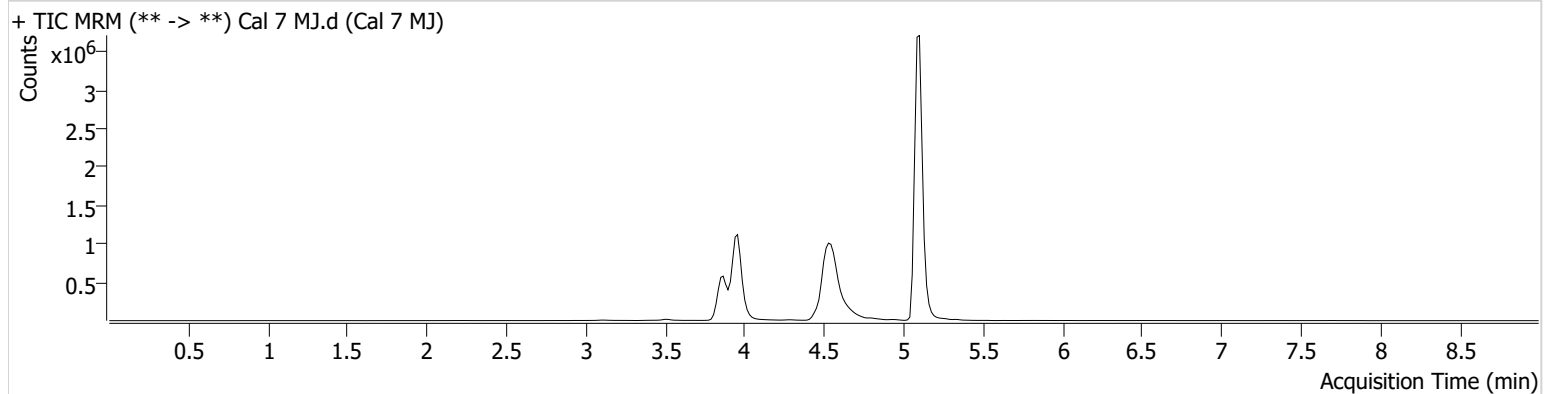
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Type Cal
Acq. Method AM 27 Agilent Method.m
Sample Position P1-G1
Injection Volume 10
Acq. Date-Time 8/15/2024 7:13:29 PM
Sample Info.

Data File Cal 7 MJ.d
Sample Cal 7 MJ
Operator Celena Shrum
Comment

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Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.105	5609703	∞	26.0	∞	5686344	101.7393 ng/ml
THC-COOH	3.954	587855	21219.92	233.0	∞	382163	250.4157 ng/ml
THC-OH	3.865	1467764	∞	14.1	∞	909143	100.3044 ng/ml