


REVIEWED

By Tamara Salazar at 8:44 am, Feb 13, 2023



1/18/2023

Worklist: 6217

<u>LAB_CASE</u>	<u>ITEM</u>	<u>ITEM_TYPE</u>	<u>DESCRIPTION</u>	
C2022-2873	1	BCK	AM 27 Blood THC Quant by LC-QQQ	
M2022-5034	2	BCK	AM 27 Blood THC Quant by LC-QQQ	
M2022-5081	1	BCK	AM 27 Blood THC Quant by LC-QQQ	
M2022-5164	1	BCK	AM 27 Blood THC Quant by LC-QQQ	
M2022-5337	1	BCK	AM 27 Blood THC Quant by LC-QQQ	
P2022-3756	1	BCK	AM 27 Blood THC Quant by LC-QQQ	
P2022-3856	1	BCK	AM 27 Blood THC Quant by LC-QQQ	
P2022-3884	1	BCK	AM 27 Blood THC Quant by LC-QQQ	
P2022-3885	1	BCK	AM 27 Blood THC Quant by LC-QQQ	
P2022-3900	1	BCK	AM 27 Blood THC Quant by LC-QQQ	
P2022-3918	1	BCK	AM 27 Blood THC Quant by LC-QQQ	
P2022-3928	1	BCK	AM 27 Blood THC Quant by LC-QQQ	
P2022-3929	1	BCK	AM 27 Blood THC Quant by LC-QQQ	
P2022-3930	1	BCK	AM 27 Blood THC Quant by LC-QQQ	
P2023-0027	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: 1/19/2023

Plate lot#: 220802

Mobile phase A: 0.1% Formic Acid in LCMS Water

Blank Blood Lot: Lampire 22B52015-2

LCMS-QQQ ID: 069901

Analyst: Amber Gerheart

Plate Retest Date: 02/02/2023

Mobile phase B: 0.1% Formic acid in Acetonitrile

Column: UCT Selectra DA 100 x 2.1mm 3um

Blank Urine Lot: N/A

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: 42**
- 3. Place on shaking incubator at ambient temp., 900rpm for 15 minutes.
- 4. Pipette **500µL 0.1% formic acid in water blood sample, 500 µL saturated phosphate buffer in urine** in wells of 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
- 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
- 2/9/2023

COMMENTS: THC-OH not evaluated due to potential interfering peak

AS

	1	2	3	4	5	6
A	IS + Cal. 1	IS + QC_1 END	P2022-3756-1	P2022-3930-1	IS + Sample	IS + QC_1
B	IS + Cal. 2	Blood Negative	P2022-3856-1	P2023-0027-1	IS + Sample	IS + Cal. 7
C	IS + Cal. 3		P2022-3884-1	IS + Sample	IS + Sample	IS + Cal. 6
D	IS + Cal. 4	C2022-2873-1	P2022-3885-1	IS + Sample	IS + Sample	IS + Cal. 5
E	IS + Cal. 5	M2022-5034-2	P2022-3900-1	IS + Sample	IS + Sample	IS + Cal. 4
F	IS + Cal. 6	M2022-5081-1	P2022-3918-1	IS + Sample	IS + Sample	IS + Cal. 3
G	IS + Cal. 7	M2022-5164-1	P2022-3928-1	IS + Sample	IS + Sample	IS + Cal. 2
H	IS + QC_1	M2022-5337-1	P2022-3929-1	IS + Sample	IS + QC_1	IS + Cal. 1

All wells to contain 100 µl of residual DMSO

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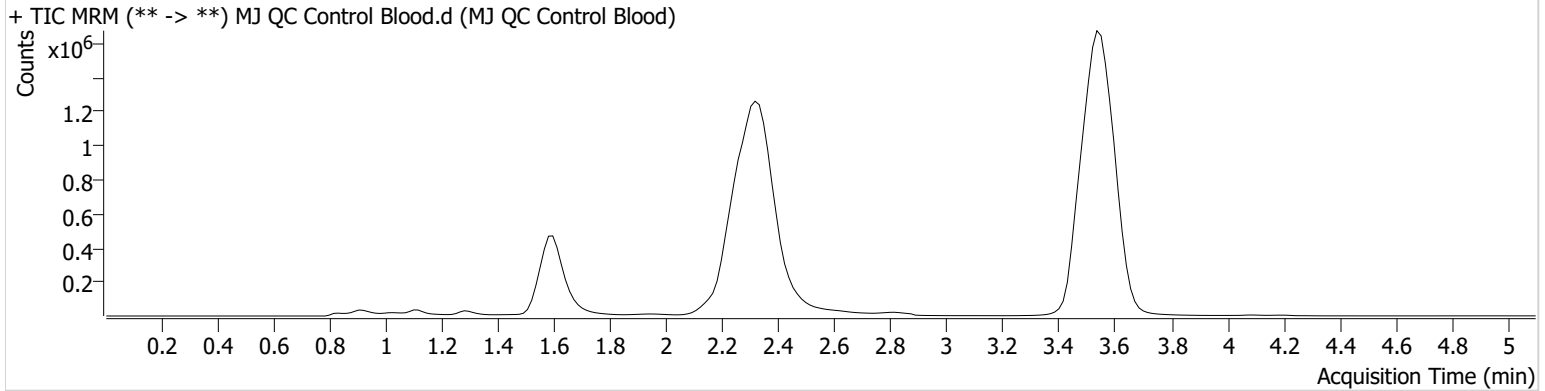


AM #27 Cannabinoid Quant. Results

Batch results G:\TOX\Pocatello\Falco\2023\AM 27 28\011923 AM 27 28 AG\QuantResults\AM 27.batch.bin
Calibration Last Update 2/6/2023 5:14:43 PM

Instrument	Falco (069901)	Data File	MJ QC Control Blood.d
Type	QC	Sample	MJ QC Control Blood
Acq. Method	AM 27 THCQ.m	Operator	Amber Gerheart
Sample Position	P1-H1	Comment	
Injection Volume	10		
Acq. Date-Time	1/19/2023 4:00:14 PM		

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC-OH	1.605	18613	301.56	886.7	10.26	1825906	5.0394 ng/ml
THC-COOH	1.614	39724	619.33	235.1	922.58	472333	14.5854 ng/ml
THC	3.555	597490	2465.83	24.6	∞	13176146	4.9696 ng/ml

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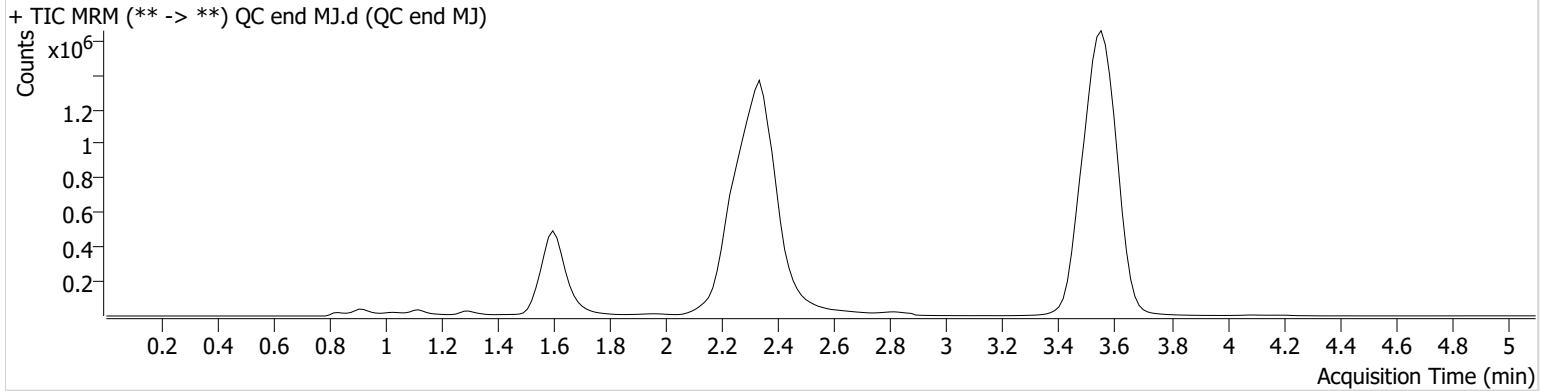


AM #27 Cannabinoid Quant. Results

Batch results G:\TOX\Pocatello\Falco\2023\AM 27 28\011923 AM 27 28 AG\QuantResults\AM 27.batch.bin
Calibration Last Update 2/6/2023 5:14:43 PM

Instrument	Falco (069901)	Data File	QC end MJ.d
Type	QC	Sample	QC end MJ
Acq. Method	AM 27 THCQ.m	Operator	Amber Gerheart
Sample Position	P1-A2	Comment	
Injection Volume	10		
Acq. Date-Time	1/19/2023 8:19:02 PM		

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC-OH	1.605	18920	∞	868.5	∞	1935608	4.8254 ng/ml
THC-COOH	1.629	41973	802.20	237.1	771.96	496375	14.6609 ng/ml
THC	3.570	605814	2910.35	24.3	308.55	13395653	4.9569 ng/ml

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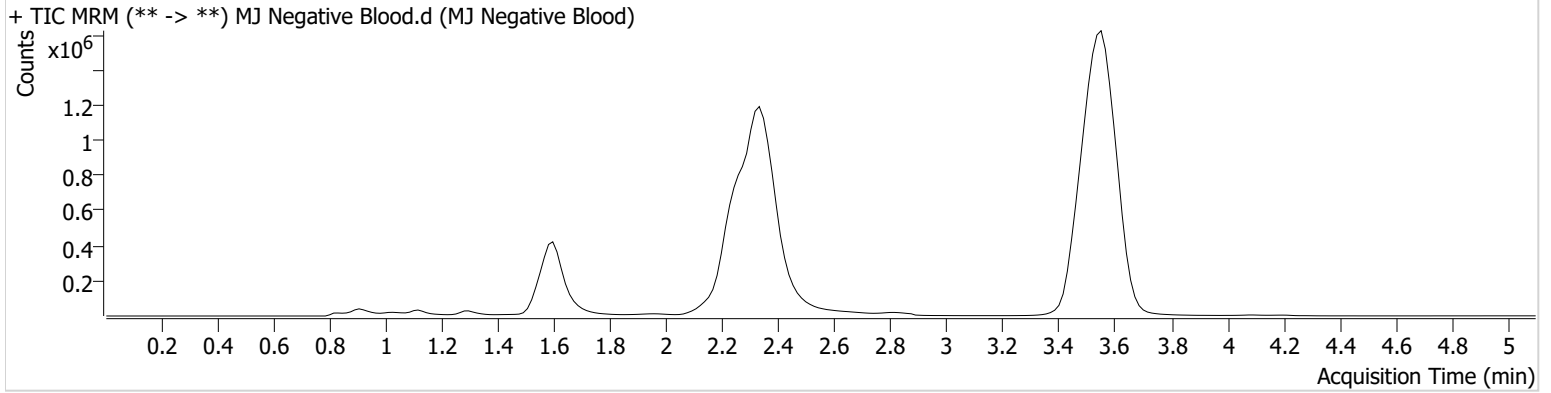


AM #27 Cannabinoid Quant. Results

Batch results G:\TOX\Pocatello\Falco\2023\AM 27 28\011923 AM 27 28 AG\QuantResults\AM 27.batch.bin
Calibration Last Update 2/6/2023 5:14:43 PM

Instrument	Falco (069901)	Data File	MJ Negative Blood.d
Type	Sample	Sample	MJ Negative Blood
Acq. Method	AM 27 THCQ.m	Operator	Amber Gerheart
Sample Position	P1-B2	Comment	
Injection Volume	10		
Acq. Date-Time	1/19/2023 4:15:27 PM		
Sample Info.			

Sample Chromatogram



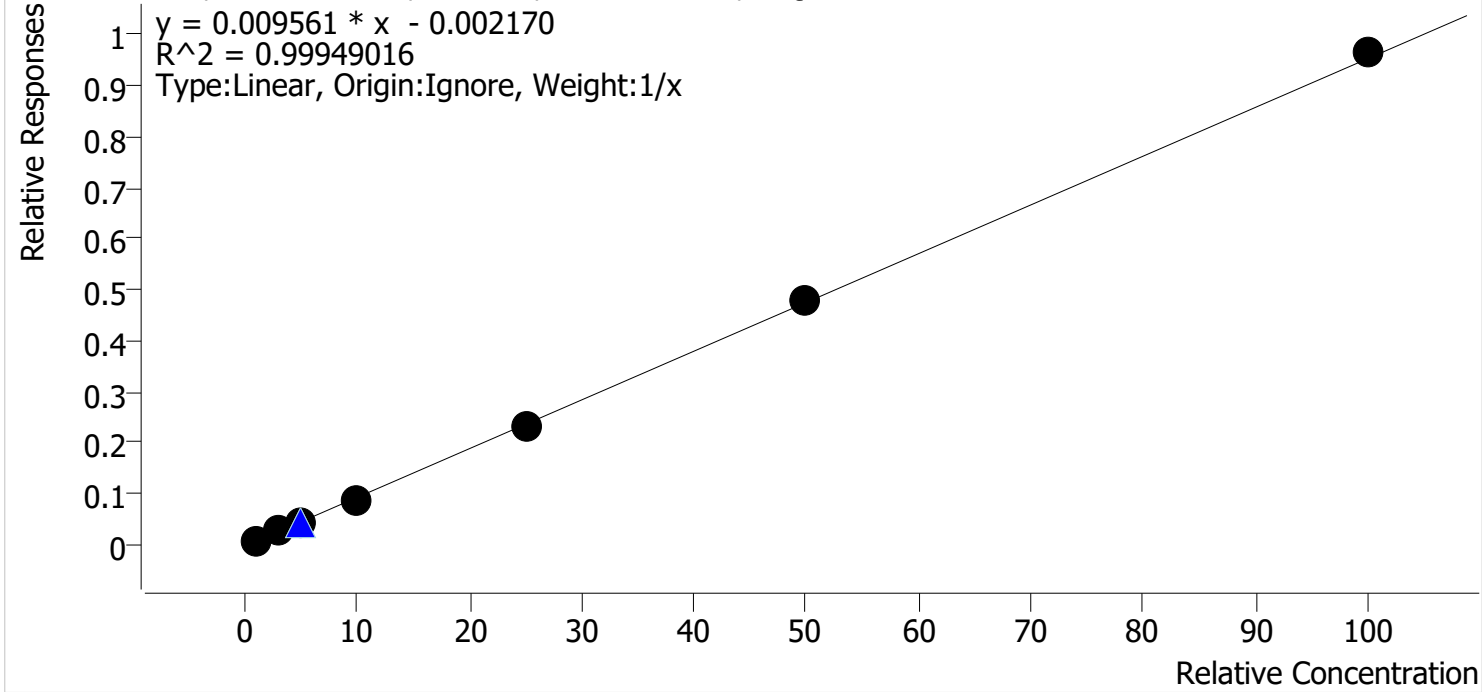
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AM #27 Cannabinoids Quant. Calibration Curve Report

Batch results G:\TOX\Pocatello\Falco\2023\AM 27 28\011923 AM 27 28 AG\QuantResults\AM 27.batch.bin
Last Cal. Update 2/6/2023 5:14 PM
Analyst Name ISP\agerheart
Analyte THC **Internal Standard** THC-D3

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



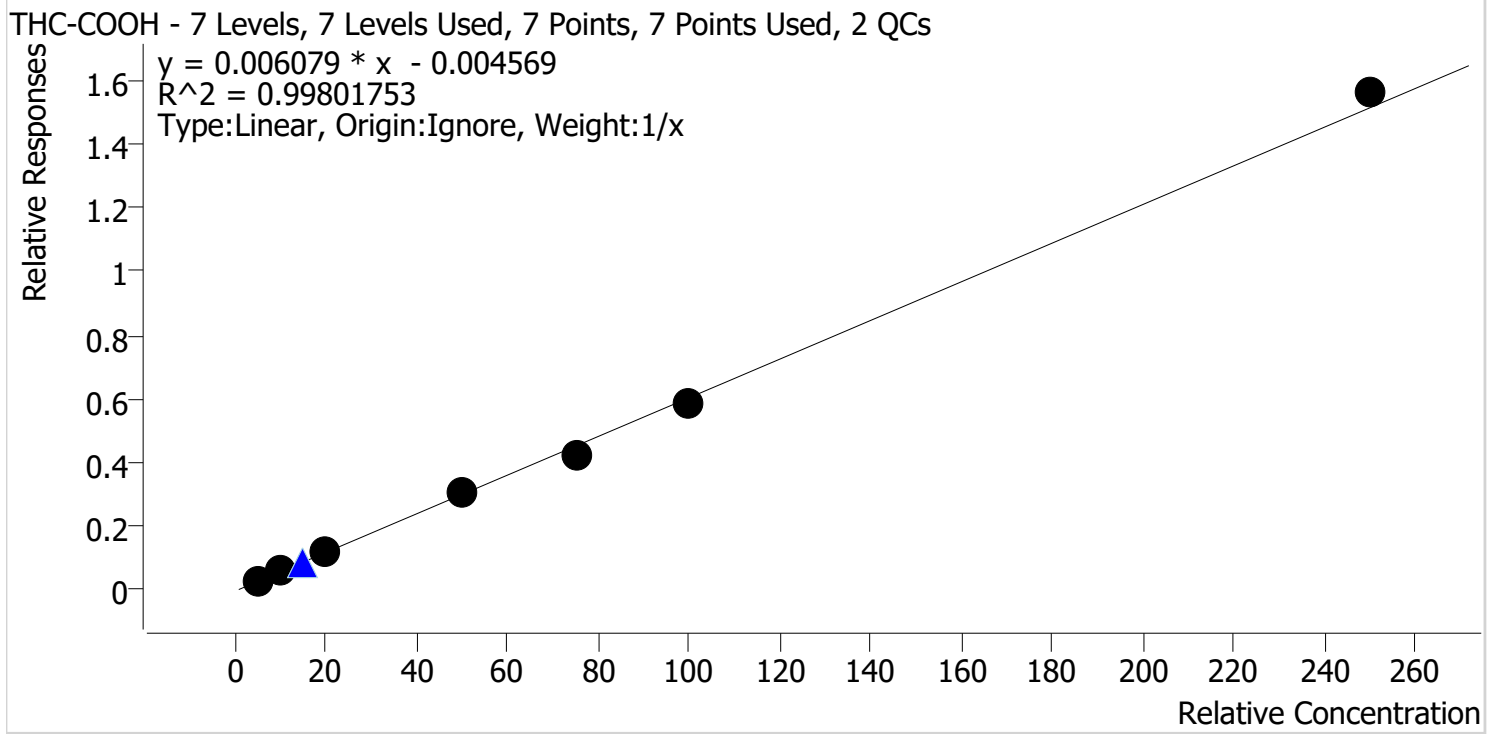
Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
Cal 1 MJ	1	✓	1.0	1.1	112.4
Cal 2 MJ	2	✓	3.0	3.0	99.3
Cal 3 MJ	3	✓	5.0	4.7	94.3
Cal 4 MJ	4	✓	10.0	9.5	94.9
Cal 5 MJ	5	✓	25.0	24.4	97.8
Cal 6 MJ	6	✓	50.0	50.0	100.1
Cal 7 MJ	7	✓	100.0	101.2	101.2

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AM #27 Cannabinoids Quant. Calibration Curve Report

Batch results G:\TOX\Pocatello\Falco\2023\AM 27 28\011923 AM 27 28 AG\QuantResults\AM 27.batch.bin
Last Cal. Update 2/6/2023 5:14 PM
Analyst Name ISP\agerheart
Analyte THC-COOH **Internal Standard** THC-COOH-D9



Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
Cal 1 MJ	1	✓	5.0	5.3	106.7
Cal 2 MJ	2	✓	10.0	10.0	99.6
Cal 3 MJ	3	✓	20.0	19.9	99.4
Cal 4 MJ	4	✓	50.0	50.9	101.8
Cal 5 MJ	5	✓	75.0	70.0	93.3
Cal 6 MJ	6	✓	100.0	96.2	96.2
Cal 7 MJ	7	✓	250.0	257.8	103.1

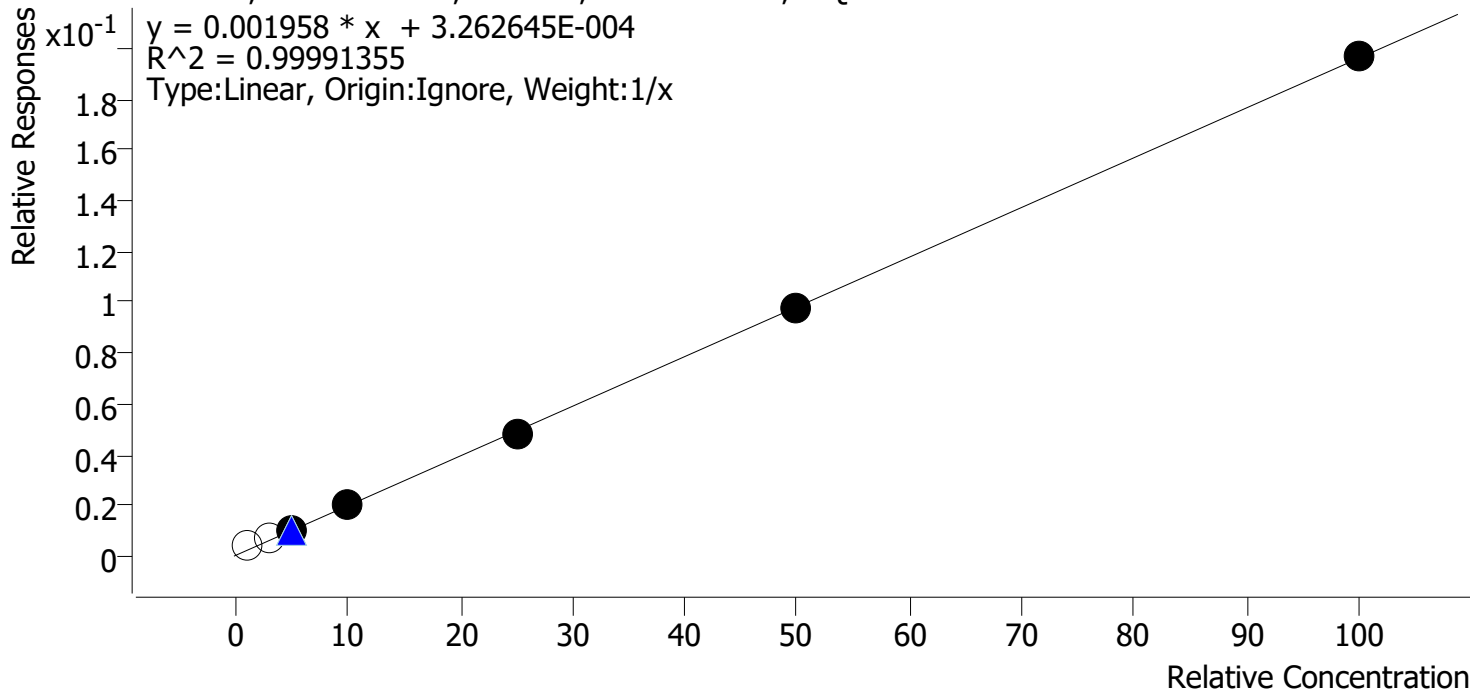
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AM #27 Cannabinoids Quant. Calibration Curve Report

Batch results G:\TOX\Pocatello\Falco\2023\AM 27 28\011923 AM 27 28 AG\QuantResults\AM 27.batch.bin
Last Cal. Update 2/6/2023 5:14 PM
Analyst Name ISP\agerheart
Analyte THC-OH **Internal Standard** THC-OH-D3

THC-OH - 7 Levels, 5 Levels Used, 7 Points, 5 Points Used, 2 QCs



Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
Cal 1 MJ	1	x	1.0	2.1	213.5
Cal 2 MJ	2	x	3.0	3.3	109.3
Cal 3 MJ	3	✓	5.0	5.1	102.4
Cal 4 MJ	4	✓	10.0	9.9	98.6
Cal 5 MJ	5	✓	25.0	24.7	98.6
Cal 6 MJ	6	✓	50.0	50.1	100.2
Cal 7 MJ	7	✓	100.0	100.3	100.3

Compound not evaluated due to potential interfering compound

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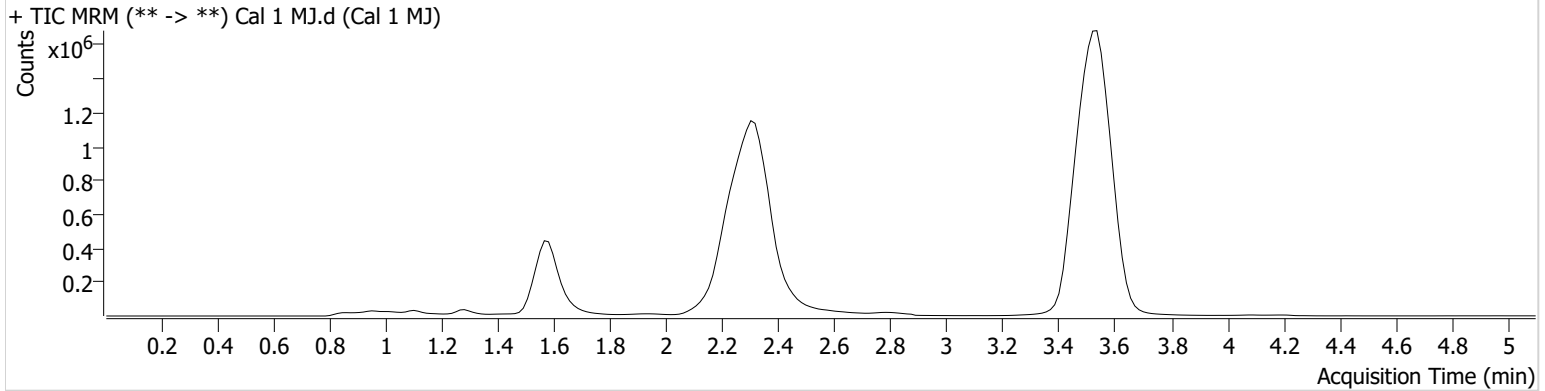


AM #27 Cannabinoid Quant. Results

Batch results G:\TOX\Pocatello\Falco\2023\AM 27 28\011923 AM 27 28 AG\QuantResults\AM 27.batch.bin
Calibration Last Update 2/6/2023 5:14:43 PM

Instrument	Falco (069901)	Data File	Cal 1 MJ.d
Type	Cal	Sample	Cal 1 MJ
Acq. Method	AM 27 THCQ.m	Operator	Amber Gerheart
Sample Position	P1-A1	Comment	
Injection Volume	10		
Acq. Date-Time	1/19/2023 2:59:14 PM		

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC-OH	1.635	8748	38.09	1460.2 High	∞	1941186	2.1348 ng/ml Low
THC-COOH	1.614	14208	∞	238.8	297.96	509965	5.3343 ng/ml
THC	3.540	125958	973.74	27.5	118.98	14685512	1.1240 ng/ml

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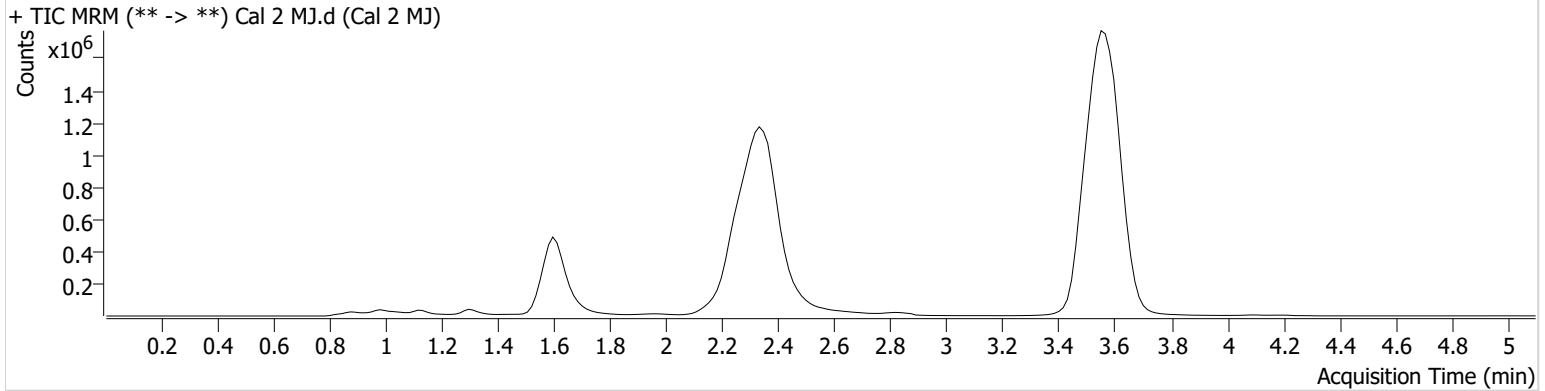


AM #27 Cannabinoid Quant. Results

Batch results G:\TOX\Pocatello\Falco\2023\AM 27 28\011923 AM 27 28 AG\QuantResults\AM 27.batch.bin
Calibration Last Update 2/6/2023 5:14:43 PM

Instrument	Falco (069901)	Data File	Cal 2 MJ.d
Type	Cal	Sample	Cal 2 MJ
Acq. Method	AM 27 THCQ.m	Operator	Amber Gerheart
Sample Position	P1-B1	Comment	
Injection Volume	10		
Acq. Date-Time	1/19/2023 3:07:00 PM		

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC-OH	1.605	13326	128.02	1304.4 High	∞	1974902	3.2795 ng/ml
THC-COOH	1.629	28187	371.09	239.9	812.36	503654	9.9575 ng/ml
THC	3.586	391740	∞	25.0	401.97	14889788	2.9786 ng/ml

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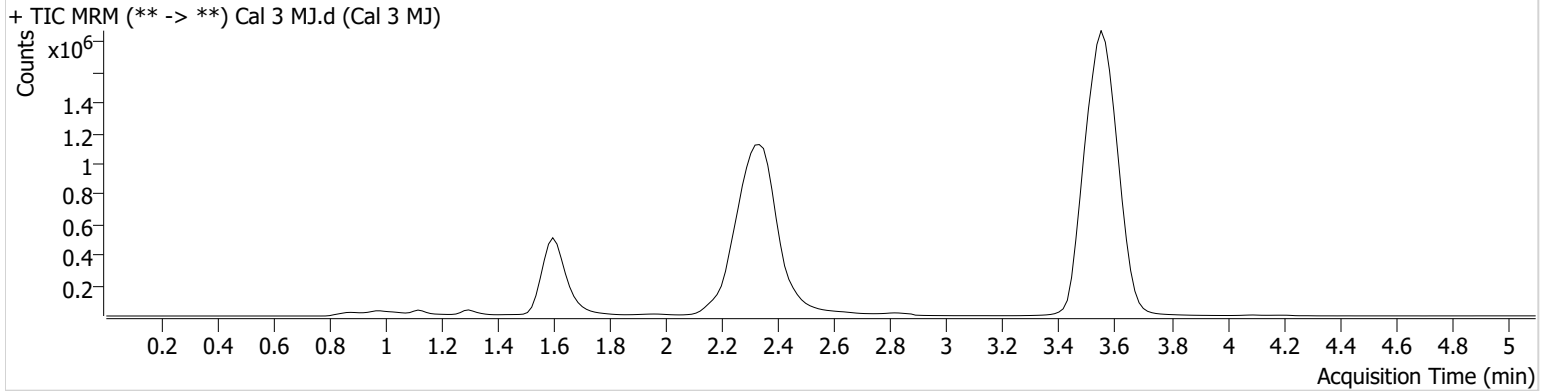


AM #27 Cannabinoid Quant. Results

Batch results G:\TOX\Pocatello\Falco\2023\AM 27 28\011923 AM 27 28 AG\QuantResults\AM 27.batch.bin
Calibration Last Update 2/6/2023 5:14:43 PM

Instrument	Falco (069901)	Data File	Cal 3 MJ.d
Type	Cal	Sample	Cal 3 MJ
Acq. Method	AM 27 THCQ.m	Operator	Amber Gerheart
Sample Position	P1-C1	Comment	
Injection Volume	10		
Acq. Date-Time	1/19/2023 3:14:36 PM		

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC-OH	1.605	19564	417.69	1136.6	∞	1890822	5.1176 ng/ml
THC-COOH	1.629	55841	313.28	239.0	1055.31	480324	19.8748 ng/ml
THC	3.570	629181	4197.05	25.6	218.70	14656250	4.7168 ng/ml

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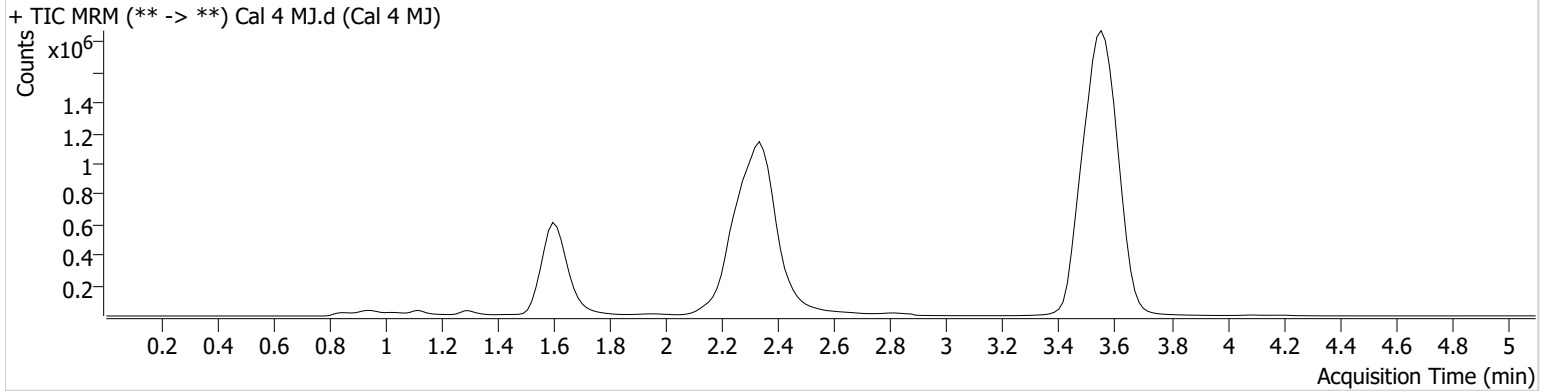


AM #27 Cannabinoid Quant. Results

Batch results G:\TOX\Pocatello\Falco\2023\AM 27 28\011923 AM 27 28 AG\QuantResults\AM 27.batch.bin
Calibration Last Update 2/6/2023 5:14:43 PM

Instrument	Falco (069901)	Data File	Cal 4 MJ.d
Type	Cal	Sample	Cal 4 MJ
Acq. Method	AM 27 THCQ.m	Operator	Amber Gerheart
Sample Position	P1-D1	Comment	
Injection Volume	10		
Acq. Date-Time	1/19/2023 3:22:12 PM		

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC-OH	1.605	37729	506.23	1013.7	∞	1921941	9.8588 ng/ml
THC-COOH	1.629	147985	∞	233.9	968.13	485459	50.8944 ng/ml
THC	3.570	1324510	7947.37	24.4	342.81	14951073	9.4923 ng/ml

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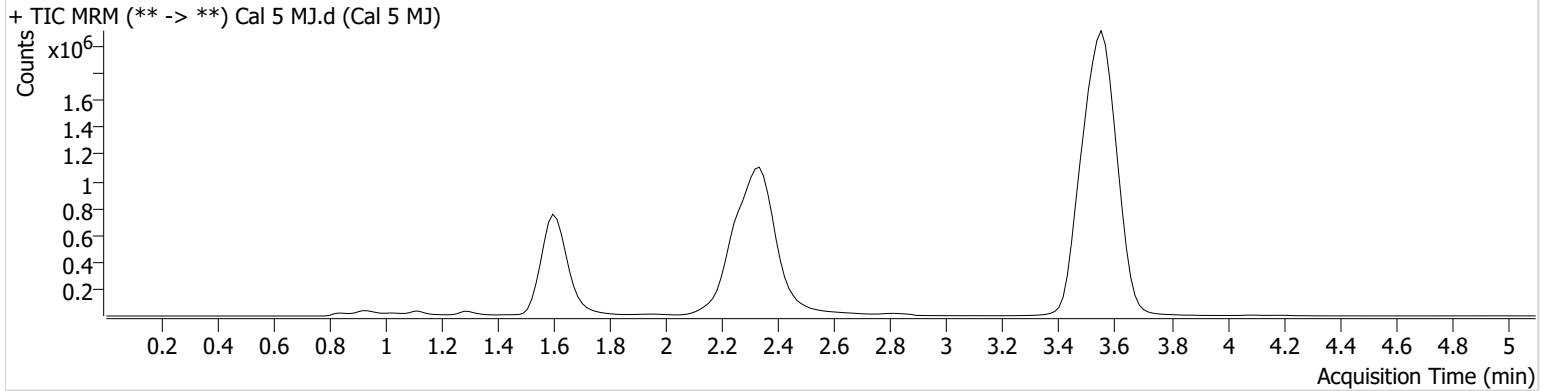


AM #27 Cannabinoid Quant. Results

Batch results G:\TOX\Pocatello\Falco\2023\AM 27 28\011923 AM 27 28 AG\QuantResults\AM 27.batch.bin
Calibration Last Update 2/6/2023 5:14:43 PM

Instrument	Falco (069901)	Data File	Cal 5 MJ.d
Type	Cal	Sample	Cal 5 MJ
Acq. Method	AM 27 THCQ.m	Operator	Amber Gerheart
Sample Position	P1-E1	Comment	
Injection Volume	10		
Acq. Date-Time	1/19/2023 3:29:48 PM		

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC-OH	1.605	91717	∞	896.8	∞	1887335	24.6517 ng/ml
THC-COOH	1.629	217606	1502.26	235.0	4522.06	517144	69.9671 ng/ml
THC	3.570	3323591	∞	24.5	∞	14355343	24.4415 ng/ml

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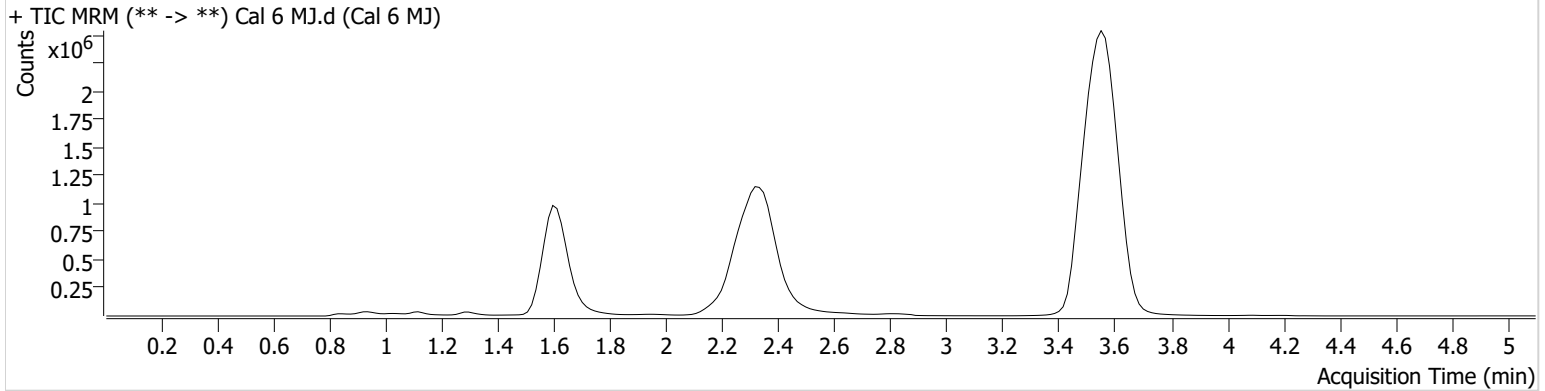


AM #27 Cannabinoid Quant. Results

Batch results G:\TOX\Pocatello\Falco\2023\AM 27 28\011923 AM 27 28 AG\QuantResults\AM 27.batch.bin
Calibration Last Update 2/6/2023 5:14:43 PM

Instrument	Falco (069901)	Data File	Cal 6 MJ.d
Type	Cal	Sample	Cal 6 MJ
Acq. Method	AM 27 THCQ.m	Operator	Amber Gerheart
Sample Position	P1-F1	Comment	
Injection Volume	10		
Acq. Date-Time	1/19/2023 3:37:23 PM		

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC-OH	1.605	183472	3534.91	864.7	∞	1864738	50.0818 ng/ml
THC-COOH	1.629	285046	1022.69	232.8	5601.56	491422	96.1637 ng/ml
THC	3.570	6510804	37366.04	24.9	∞	13668685	50.0454 ng/ml

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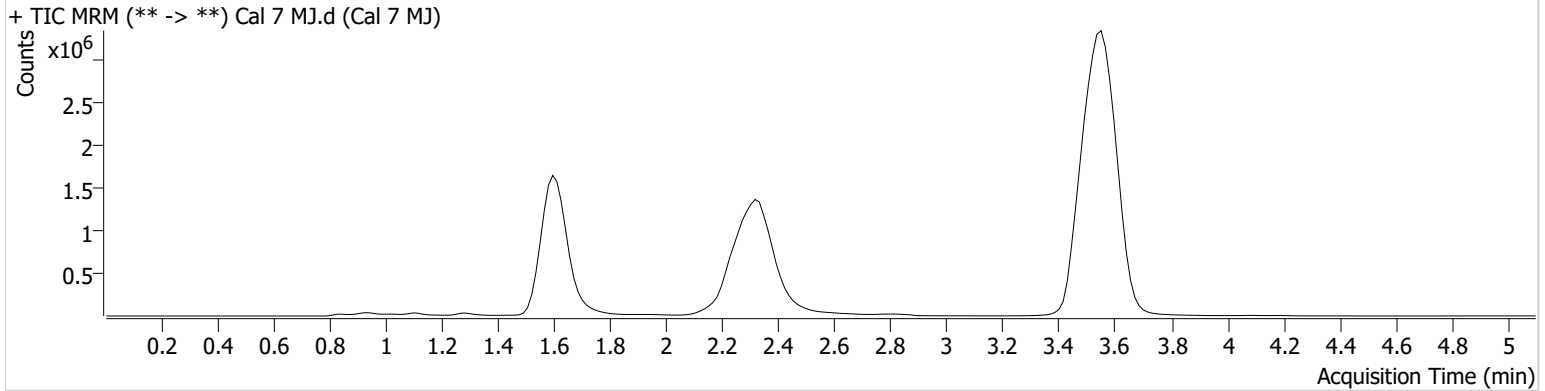


AM #27 Cannabinoid Quant. Results

Batch results G:\TOX\Pocatello\Falco\2023\AM 27 28\011923 AM 27 28 AG\QuantResults\AM 27.batch.bin
Calibration Last Update 2/6/2023 5:14:43 PM

Instrument	Falco (069901)	Data File	Cal 7 MJ.d
Type	Cal	Sample	Cal 7 MJ
Acq. Method	AM 27 THCQ.m	Operator	Amber Gerheart
Sample Position	P1-G1	Comment	
Injection Volume	10		
Acq. Date-Time	1/19/2023 3:45:01 PM		

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC-OH	1.590	364720	6087.43	844.7	∞	1854176	100.2901 ng/ml
THC-COOH	1.614	680058	∞	236.5	8525.09	435172	257.8082 ng/ml
THC	3.555	12693966	∞	24.8	6624.25	13148266	101.2014 ng/ml