

REVIEWED
By Sarah Collins at 1:01 pm, Jan 06, 2023

TS 1/5/2023

REVIEWED
By Sarah Collins at 3:13 pm, Jan 06, 2023

Worklist: 6209

<u>LAB CASE</u>	<u>ITEM</u>	<u>ITEM TYPE</u>	<u>DESCRIPTION</u>	
M2022-4759	1	BCK	AM 27 Blood THC Quant by LC-QQQ	
M2022-5008	1	BCK	AM 27 Blood THC Quant by LC-QQQ	
M2022-5112	2	BCK	AM 27 Blood THC Quant by LC-QQQ	
P2020-3377	1	BCK	AM 27 Blood THC Quant by LC-QQQ	
P2022-3668	1	BCK	AM 27 Blood THC Quant by LC-QQQ	
P2022-3717	1	BCK	AM 27 Blood THC Quant by LC-QQQ	
P2022-3732	1	BCK	AM 27 Blood THC Quant by LC-QQQ	
P2022-3769	1	BCK	AM 27 Blood THC Quant by LC-QQQ	
P2022-3774	1	BCK	AM 27 Blood THC Quant by LC-QQQ	
P2022-3777	1	BCK	AM 27 Blood THC Quant by LC-QQQ	
P2022-3779	1	BCK	AM 27 Blood THC Quant by LC-QQQ	
P2022-3837	1	BCK	AM 27 Blood THC Quant by LC-QQQ	
P2022-3839	1	BCK	AM 27 Blood THC Quant by LC-QQQ	
P2022-3840	1	BCK	AM 27 Blood THC Quant by LC-QQQ	

Case sample P2022-3665-1 was mistakenly left off of Worklist 6209. A corrected version of the worklist was generated and added to end of this file.

01/06/2023

TS

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

Extraction Date: 01/04/2023

Analyst: Tamara Salazar

Plate lot#: 220802

Plate Retest Date: 02/02/2023

Mobile phase A: 0.1% Formic Acid in LCMS Water

Mobile phase B: 0.1% Formic acid in Acetonitrile

Blank Blood Lot: Lampire 22B52015-2

Blank Urine Lot: N/A

Column: UCT Selectra DA 100 x 2.1mm 3um

LCMS-QQQ ID: 069901

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.
- 3. Using a calibrated pipette, add **1000µl blood and urine (if applicable) (calibrated pipette)** into the appropriate wells of analytical (standards) plate. **Pipette ID: 42**
- 4. Place on shaking incubator at ambient temp., 900rpm for 15 minutes.
- 5. Add **500µL of 0.1% formic acid in water to blood samples, and 500µL of saturated phosphate buffer to urine samples** in the wells of the analytical plate.
- 6. Place on shaking incubator at ambient temp., 900rpm for 15 minutes.
- 7. Transfer **700-800µL of blood+acid or urine+acid** mixture to corresponding wells of SLE+ plate. Amount transferred: 750µL
- 8. 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*)
- 9. Wait 5 minutes.
- 10. Add **2.25mL MTBE. (Add in 3 increments of 750uL)**
- 11. Wait 5 minutes.
- 12. Apply positive pressure for approx. 15 seconds. (*10-15 PSI- Selector to the left*).
- 13. Add **2.25mL Hexane. (Add in 3 increments of 750uL)**
- 14. Wait 5 minutes.
- 15. Apply positive pressure for approx. 15 seconds. (*10-15 PSI- Selector to the left*).
- 16. Remove plate containing eluate. Place on SPE Dry and evaporate to dryness at approx. 35°C.
- 17. 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 samples with calculated concentrations for THC at 1ng/mL or greater and OH-THC at 3ng/mL or greater may be reported quantitatively (blood only). Calculated concentrations for carboxy-THC of 5ng/mL may be reported qualitatively. Samples with a THC or OH-THC response over 50 ng/mL will be reported out as greater than 50 ng/mL. 02/09/2023 TS~~
- 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: THC-COOH: 10-250; calibrator 1 dropped due to ratio
THC-OH not evaluated due to possible co-eluting peak.

TS

	1	2	3	4	5	6
A	IS + Cal. 1	IS + QC_1	P2022-3717-1	P2022-3840-1	IS + Sample	IS + QC_1
B	IS + Cal. 2	Neg Blood	P2022-3732-1	IS + Sample	IS + Sample	IS + Cal. 7
C	IS + Cal. 3	M2022-4759-1	P2022-3769-1	IS + Sample	IS + Sample	IS + Cal. 6
D	IS + Cal. 4	M2022-5008-1	P2022-3774-1	IS + Sample	IS + Sample	IS + Cal. 5
E	IS + Cal. 5	M2022-5112-2	P2022-3777-1	IS + Sample	IS + Sample	IS + Cal. 4
F	IS + Cal. 6	P2020-3377-1	P2022-3779-1	IS + Sample	IS + Sample	IS + Cal. 3
G	IS + Cal. 7	P2022-3665-1	P2022-3837-1	IS + Sample	IS + Sample	IS + Cal. 2
H	IS + QC_1	P2022-3668-1	P2022-3839-1	IS + Sample	IS + QC_1	IS + Cal. 1

All wells to contain 100 µl of residual DMSO

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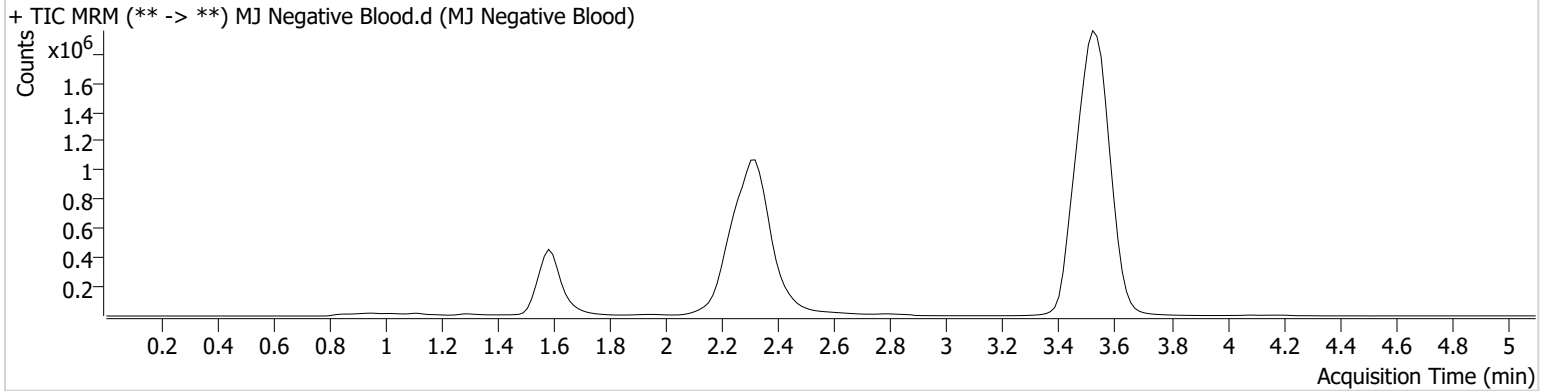


AM #27 Cannabinoid Quant. Results

Batch results G:\TOX\Pocatello\Falco\2023\AM 27 28\010423 AM 27 TS\QuantResults\AM 27_for printing.batch.bin
Calibration Last Update 1/5/2023 10:19:26 AM

Instrument	Falco (069901)	Data File	MJ Negative Blood.d
Type	Sample	Sample	MJ Negative Blood
Acq. Method	AM 27 THCQ.m	Operator	Tamara Salazar
Sample Position	P1-B2	Comment	
Injection Volume	10		
Acq. Date-Time	1/4/2023 1:18:52 PM		
Sample Info.			

Sample Chromatogram



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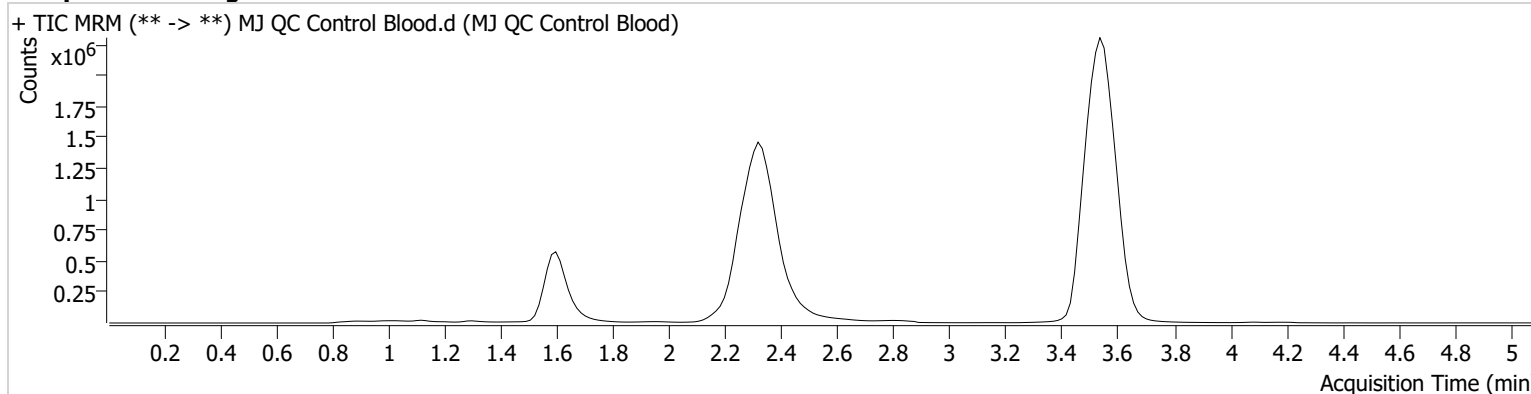


AM #27 Cannabinoid Quant. Results

Batch results G:\TOX\Pocatello\Falco\2023\AM 27 28\010423 AM 27 TS\QuantResults\AM 27_for printing.batch.bin
Calibration Last Update 1/5/2023 10:19:26 AM

Instrument	Falco (069901)	Data File	MJ QC Control Blood.d
Type	QC	Sample	MJ QC Control Blood
Acq. Method	AM 27 THCQ.m	Operator	Tamara Salazar
Sample Position	P1-H1	Comment	
Injection Volume	10		
Acq. Date-Time	1/4/2023 1:03:39 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC-COOH	1.625	245660	1088.20	44.1	∞	555270	15.3760 ng/ml
THC	3.555	765811	2797.39	24.3	∞	16701172	4.9922 ng/ml

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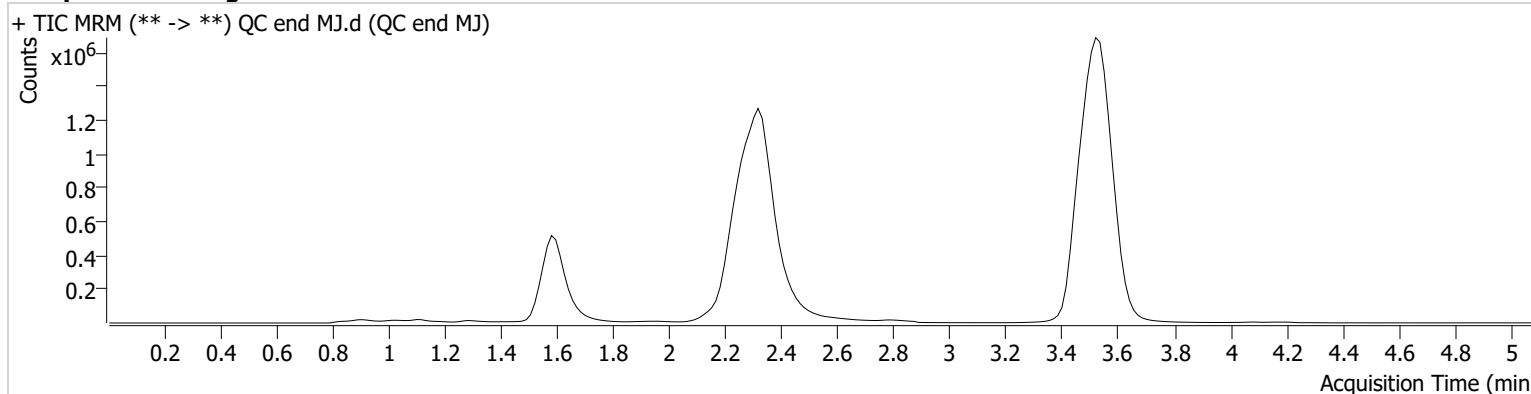


AM #27 Cannabinoid Quant. Results

Batch results G:\TOX\Pocatello\Falco\2023\AM 27 28\010423 AM 27 TS\QuantResults\AM 27_for printing.batch.bin
Calibration Last Update 1/5/2023 10:19:26 AM

Instrument	Falco (069901)	Data File	QC end MJ.d
Type	QC	Sample	QC end MJ
Acq. Method	AM 27 THCQ.m	Operator	Tamara Salazar
Sample Position	P1-A2	Comment	
Injection Volume	10		
Acq. Date-Time	1/4/2023 5:22:33 PM		

Sample Chromatogram



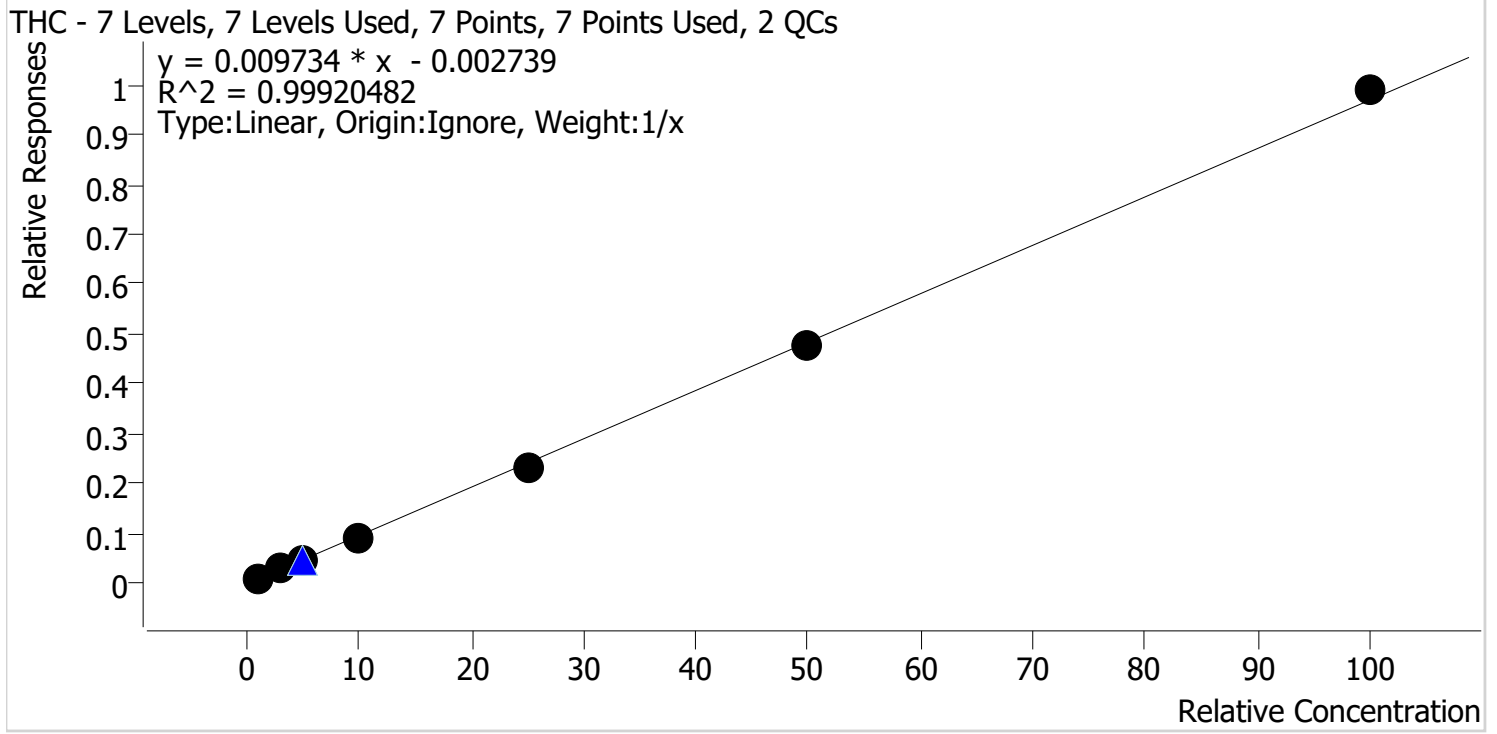
Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC-COOH	1.625	208857	∞	47.2	∞	515249	13.9002 ng/ml
THC	3.540	590854	∞	25.0	12051.4 6	12965562	4.9632 ng/ml

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AM #27 Cannabinoids Quant. Calibration Curve Report

Batch results G:\TOX\Pocatello\Falco\2023\AM 27 28\010423 AM 27 TS\QuantResults\AM 27_for printing.batch.bin
Last Cal. Update 1/5/2023 10:19 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	114.3
Cal 2 MJ	2	✓	3.0	2.9	98.2
Cal 3 MJ	3	✓	5.0	4.7	93.5
Cal 4 MJ	4	✓	10.0	9.7	96.6
Cal 5 MJ	5	✓	25.0	24.1	96.4
Cal 6 MJ	6	✓	50.0	49.5	98.9
Cal 7 MJ	7	✓	100.0	102.0	102.0

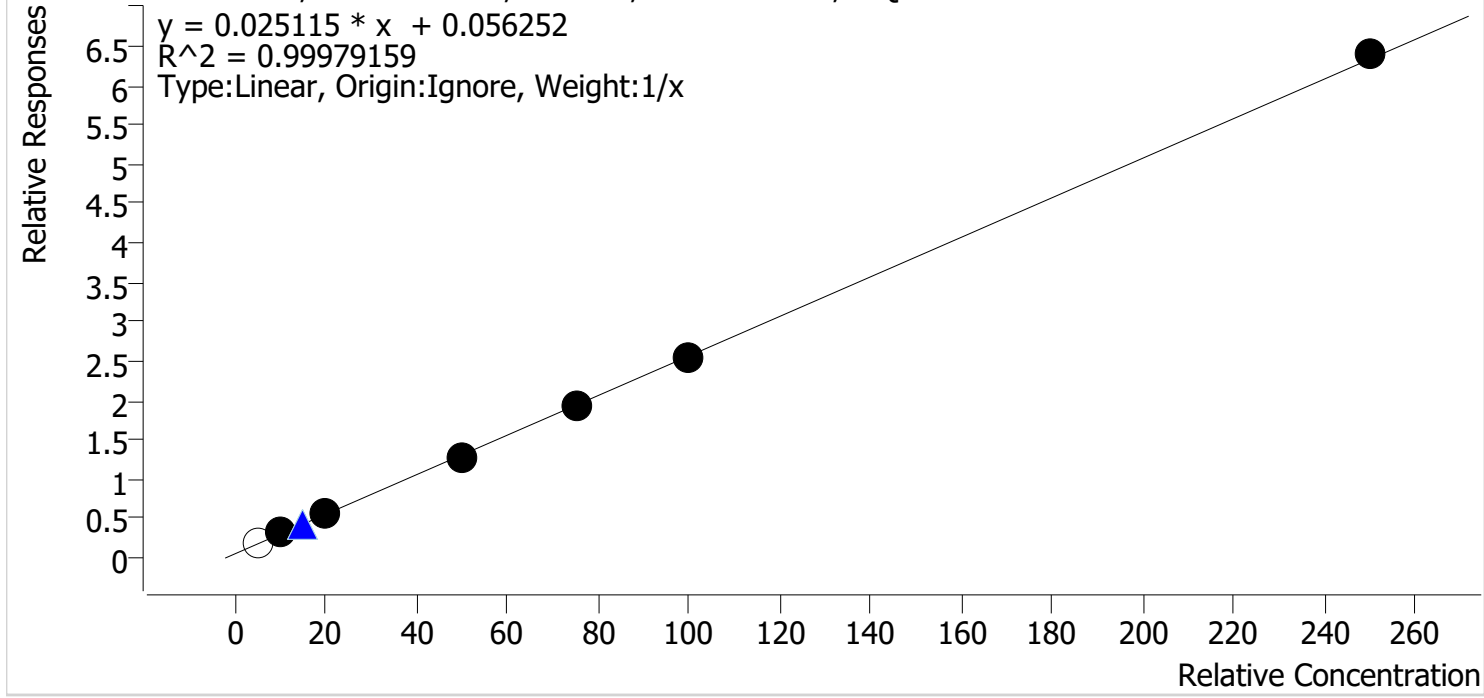
TS



AM #27 Cannabinoids Quant. Calibration Curve Report

Batch results G:\TOX\Pocatello\Falco\2023\AM 27 28\010423 AM 27 TS\QuantResults\AM 27_for printing.batch.bin
Last Cal. Update 1/5/2023 10:19 AM
Analyst Name ISP\Datastor
Analyte THC-COOH **Internal Standard** THC-COOH-D9

THC-COOH - 7 Levels, 6 Levels Used, 7 Points, 6 Points Used, 2 QCs



Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
Cal 1 MJ	1	x	5.0	5.7	114.2
Cal 2 MJ	2	✓	10.0	10.2	102.1
Cal 3 MJ	3	✓	20.0	20.1	100.6
Cal 4 MJ	4	✓	50.0	49.2	98.4
Cal 5 MJ	5	✓	75.0	74.5	99.3
Cal 6 MJ	6	✓	100.0	98.5	98.5
Cal 7 MJ	7	✓	250.0	252.4	101.0

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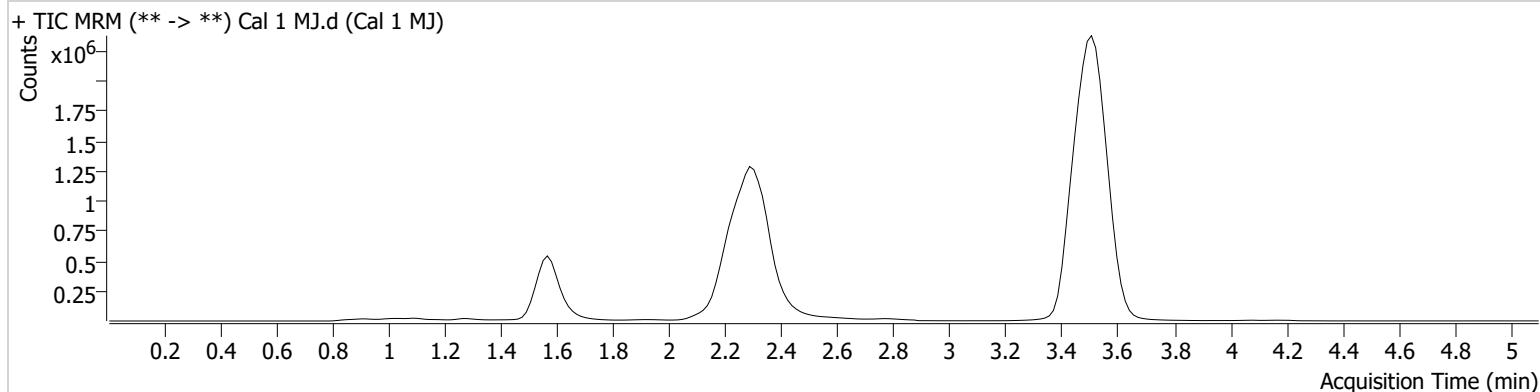


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Batch results G:\TOX\Pocatello\Falco\2023\AM 27 28\010423 AM 27 TS\QuantResults\AM 27_for printing.batch.bin
Calibration Last Update 1/5/2023 10:19:26 AM

Instrument	Falco (069901)	Data File	Cal 1 MJ.d
Type	Cal	Sample	Cal 1 MJ
Acq. Method	AM 27 THCQ.m	Operator	Tamara Salazar
Sample Position	P1-A1	Comment	
Injection Volume	10		
Acq. Date-Time	1/4/2023 12:02:41 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC-COOH	1.610	122938	∞	33.0 Low	151.25	615798	5.7093 ng/ml
THC	3.525	164179	617.87	26.7	475.64	19586866	1.1426 ng/ml

TS

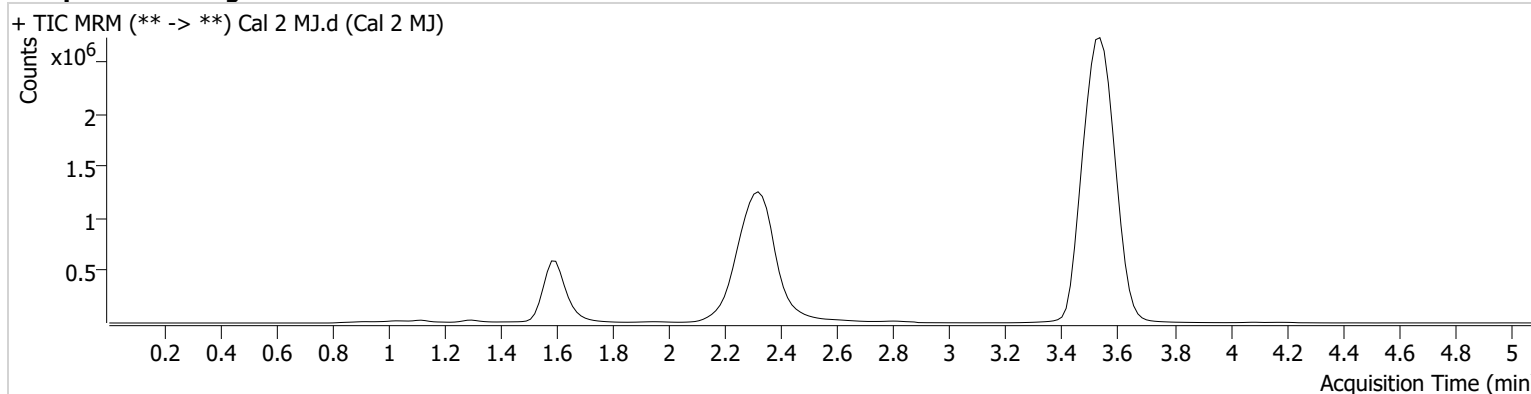


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Batch results G:\TOX\Pocatello\Falco\2023\AM 27 28\010423 AM 27 TS\QuantResults\AM 27_for printing.batch.bin
Calibration Last Update 1/5/2023 10:19:26 AM

Instrument	Falco (069901)	Data File	Cal 2 MJ.d
Type	Cal	Sample	Cal 2 MJ
Acq. Method	AM 27 THCQ.m	Operator	Tamara Salazar
Sample Position	P1-B1	Comment	
Injection Volume	10		
Acq. Date-Time	1/4/2023 12:10:27 PM		

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC-COOH	1.625	188787	179.86	42.4	387.43	603637	10.2130 ng/ml
THC	3.555	550193	∞	24.8	∞	21201491	2.9475 ng/ml

TS

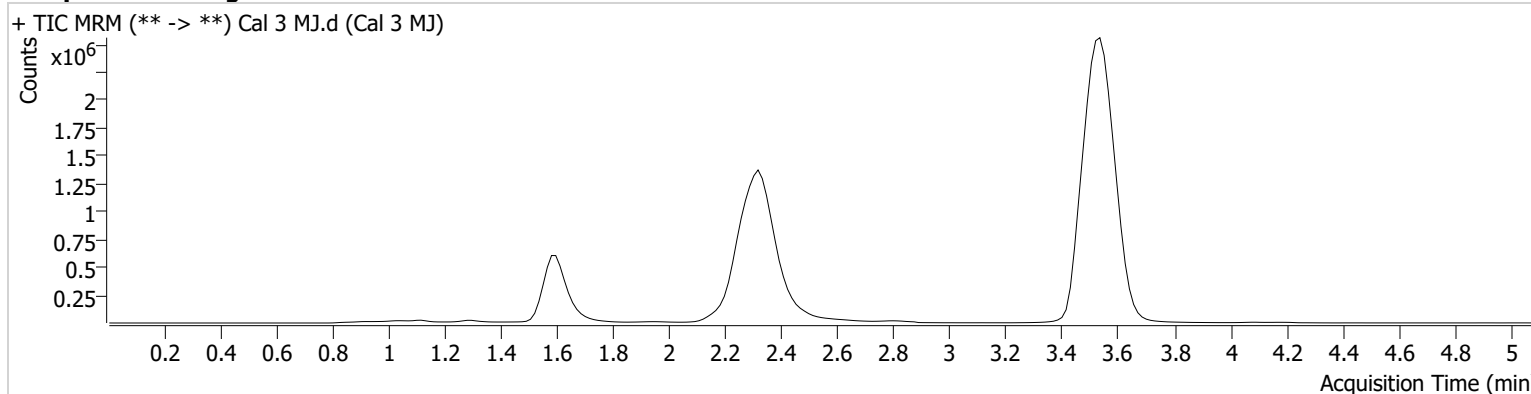


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Batch results G:\TOX\Pocatello\Falco\2023\AM 27 28\010423 AM 27 TS\QuantResults\AM 27_for printing.batch.bin
Calibration Last Update 1/5/2023 10:19:26 AM

Instrument	Falco (069901)	Data File	Cal 3 MJ.d
Type	Cal	Sample	Cal 3 MJ
Acq. Method	AM 27 THCQ.m	Operator	Tamara Salazar
Sample Position	P1-C1	Comment	
Injection Volume	10		
Acq. Date-Time	1/4/2023 12:18:03 PM		

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC-COOH	1.625	327553	∞	47.9	∞	583171	20.1247 ng/ml
THC	3.555	824945	∞	25.4	456.04	19284101	4.6763 ng/ml

TS

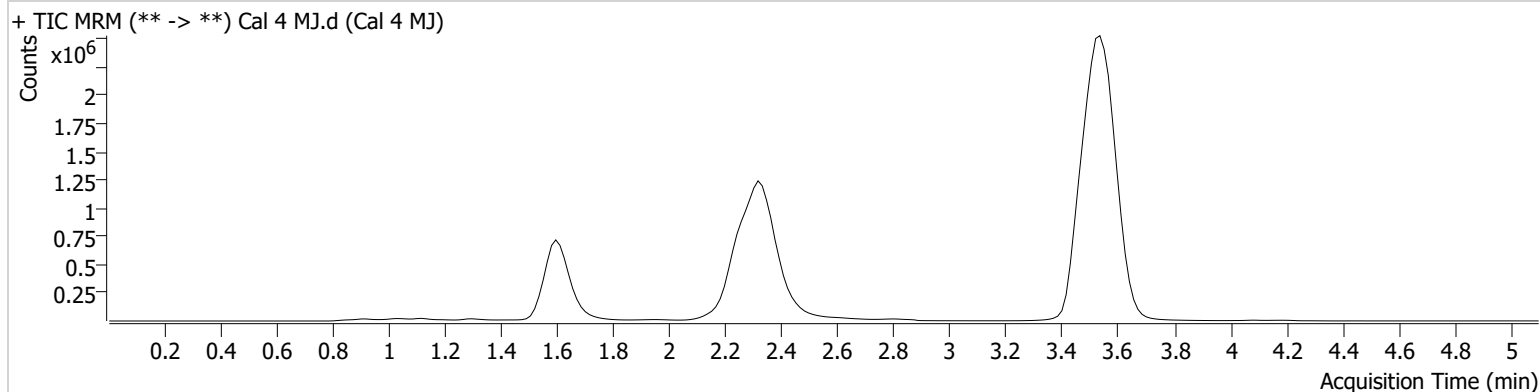


AM #27 Cannabinoid Quant. Results

Batch results G:\TOX\Pocatello\Falco\2023\AM 27 28\010423 AM 27 TS\QuantResults\AM 27_for printing.batch.bin
Calibration Last Update 1/5/2023 10:19:26 AM

Instrument	Falco (069901)	Data File	Cal 4 MJ.d
Type	Cal	Sample	Cal 4 MJ
Acq. Method	AM 27 THCQ.m	Operator	Tamara Salazar
Sample Position	P1-D1	Comment	
Injection Volume	10		
Acq. Date-Time	1/4/2023 12:25:38 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC-COOH	1.625	739063	1762.80	54.6	∞	571871	49.2186 ng/ml
THC	3.555	1753014	∞	24.5	∞	19200318	9.6613 ng/ml

TS

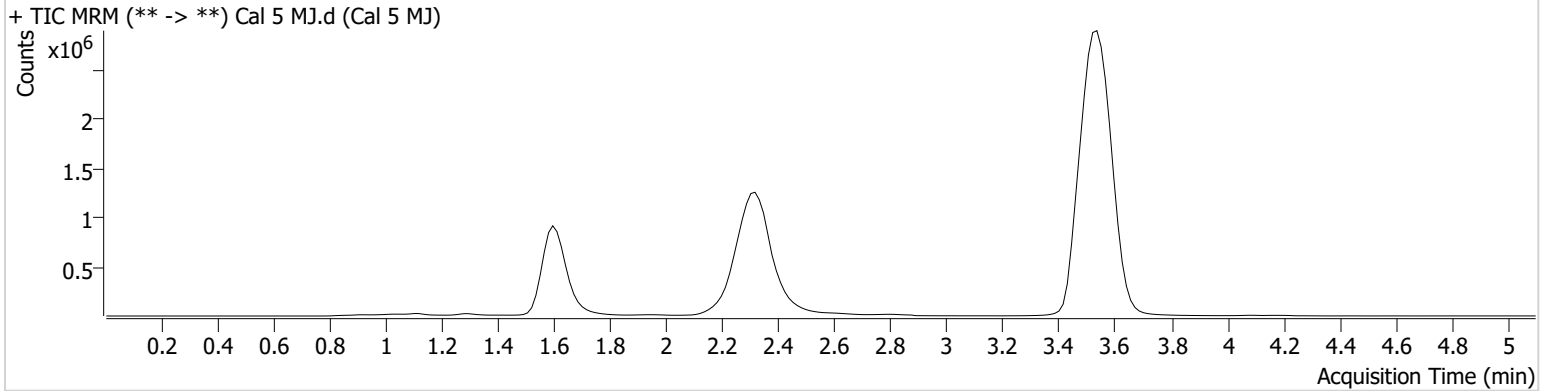


AM #27 Cannabinoid Quant. Results

Batch results G:\TOX\Pocatello\Falco\2023\AM 27 28\010423 AM 27 TS\QuantResults\AM 27_for printing.batch.bin
Calibration Last Update 1/5/2023 10:19:26 AM

Instrument	Falco (069901)	Data File	Cal 5 MJ.d
Type	Cal	Sample	Cal 5 MJ
Acq. Method	AM 27 THCQ.m	Operator	Tamara Salazar
Sample Position	P1-E1	Comment	
Injection Volume	10		
Acq. Date-Time	1/4/2023 12:33:14 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC-COOH	1.625	1046784	∞	53.8	3175.11	543159	74.4968 ng/ml
THC	3.540	4097047	∞	24.4	2321.91	1766670	24.1066 ng/ml

TS

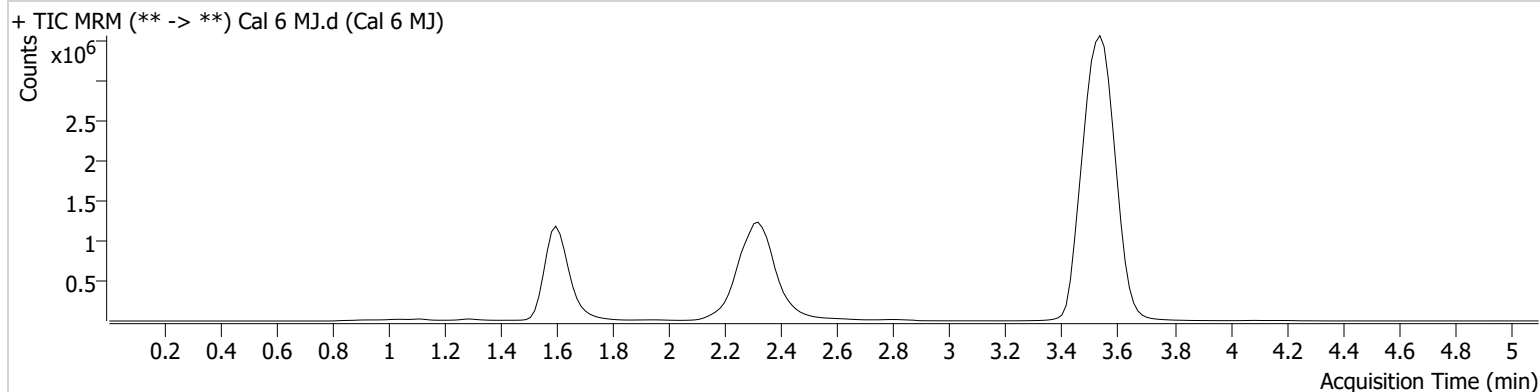


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Batch results G:\TOX\Pocatello\Falco\2023\AM 27 28\010423 AM 27 TS\QuantResults\AM 27_for printing.batch.bin
Calibration Last Update 1/5/2023 10:19:26 AM

Instrument	Falco (069901)	Data File	Cal 6 MJ.d
Type	Cal	Sample	Cal 6 MJ
Acq. Method	AM 27 THCQ.m	Operator	Tamara Salazar
Sample Position	P1-F1	Comment	
Injection Volume	10		
Acq. Date-Time	1/4/2023 12:40:51 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC-COOH	1.625	1388044	∞	57.0	∞	548612	98.5023 ng/ml
THC	3.555	8717427	∞	24.9	∞	18209841	49.4629 ng/ml

TS

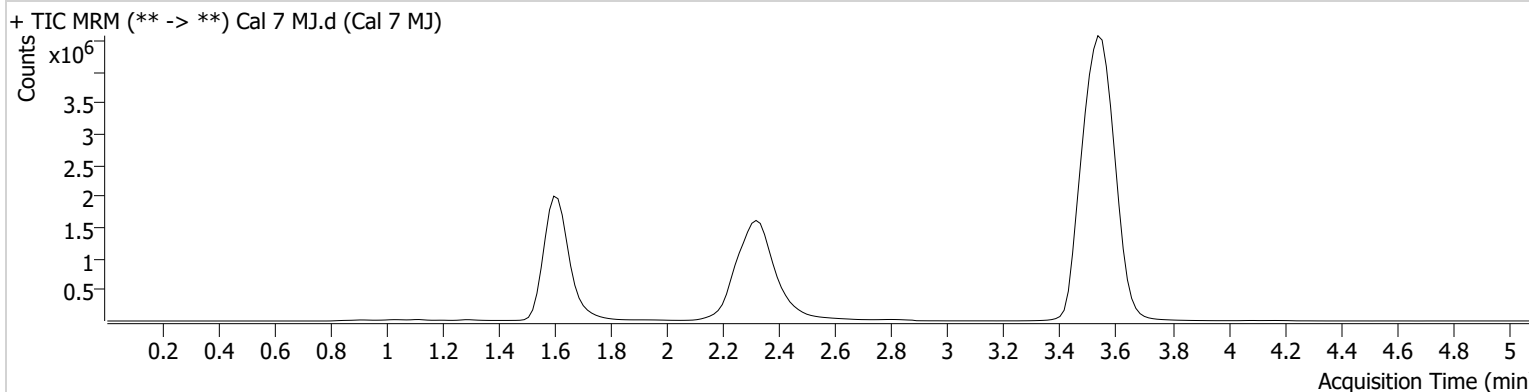


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Batch results G:\TOX\Pocatello\Falco\2023\AM 27 28\010423 AM 27 TS\QuantResults\AM 27_for printing.batch.bin
Calibration Last Update 1/5/2023 10:19:26 AM

Instrument	Falco (069901)	Data File	Cal 7 MJ.d
Type	Cal	Sample	Cal 7 MJ
Acq. Method	AM 27 THCQ.m	Operator	Tamara Salazar
Sample Position	P1-G1	Comment	
Injection Volume	10		
Acq. Date-Time	1/4/2023 12:48:27 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC-COOH	1.625	3304195	∞	56.1	17166.5 4	516578	252.4447 ng/ml
THC	3.555	16628352	∞	24.4	8947.22	16794048	102.0029 ng/ml

01/06/2023

Worklist: 6209

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M2022-4759	1	BCK	AM 27 Blood THC Quant by LC-QQQ
M2022-5008	1	BCK	AM 27 Blood THC Quant by LC-QQQ
M2022-5112	2	BCK	AM 27 Blood THC Quant by LC-QQQ
P2020-3377	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2022-3665	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2022-3668	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2022-3685	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2022-3717	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2022-3732	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2022-3769	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2022-3774	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2022-3777	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2022-3779	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2022-3837	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2022-3839	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2022-3840	1	BCK	AM 27 Blood THC Quant by LC-QQQ

