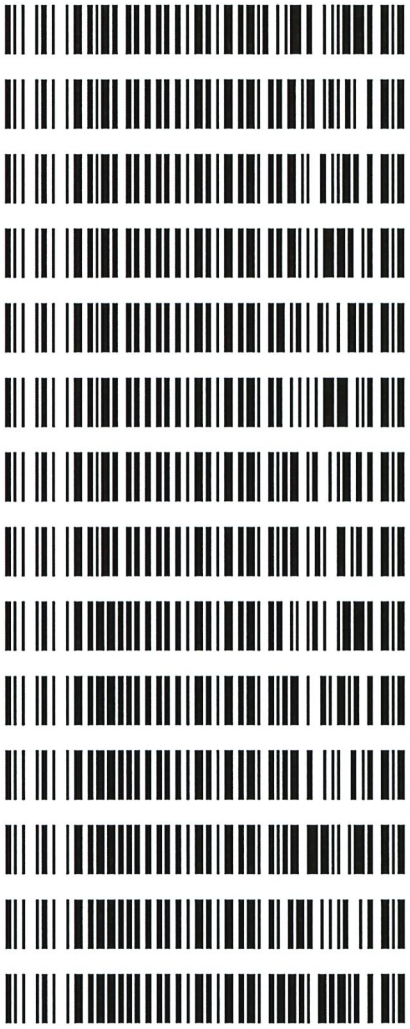
REVIEWED
By Anne Nord at 12:43 pm, Jul 16, 2020

TS 7/10/2020

Worklist: 4353

LAB_CASE	ITEM	ITEM_TYPE	DESCRIPTION
M2020-2000	2	BCK	AM 27 Blood THC Quant by LC-QQQ
M2020-2163	2	BCK	AM 27 Blood THC Quant by LC-QQQ
M2020-2166	1	BCK	AM 27 Blood THC Quant by LC-QQQ
M2020-2216	1	BCK	AM 27 Blood THC Quant by LC-QQQ
M2020-2252	1	BCK	AM 27 Blood THC Quant by LC-QQQ
M2020-2272	1	BCK	AM 27 Blood THC Quant by LC-QQQ
M2020-2366	3	BCK	AM 27 Blood THC Quant by LC-QQQ
M2020-2374	2	BCK	AM 27 Blood THC Quant by LC-QQQ
P2020-1891	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2020-1899	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2020-1900	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2020-1901	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2020-1925	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2020-1952	1	BCK	AM 27 Blood THC Quant by LC-QQQ



TS

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

Extraction Date: 07/14/2020
Plate lot#: IDP-108-200303

Analyst: Tamara Salazar
Plate Expiration: 09/03/2020

Mobile phase A: 0.1% Formic Acid in LCMS Water
MTBE LCMS Methanol
Blank Blood Lot: Hemostat 445283-4
LCMS-QQQ ID: 069901

Mobile phase B: 0.1% Formic acid in Acetonitrile
Hexane
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.
☒ 3. Create worklist:

Analytic:

☒ 1. Remove standards, plate, controls, and samples from cold storage. Allow to reach room temperature.
☒ 2. Pipette **1000µL blood (calibrated pipette) Pipette ID: 42** in wells of analytical (standards) plate.
☒ 3. Place on shaking incubator at ambient temp., 900rpm for 15 minutes.
☒ 4. Pipette **500µL 0.1% formic acid in water for blood samples** in wells of analytical plate.
☒ 5. Place on shaking incubator at ambient temp., 900rpm for 15 minutes.
☒ 6. Transfer **800µL of blood+acid** mixture 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)***
☒ 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. Case sample response for THC 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.
☒ 5. Did all QCs pass for each analyte? Y / N
☒ 6 Enter QCs into control charting.
☒ 7 Central File Packet to include: LIMS Worklist, Method Checklist, Calibration and Control Reports

COMMENTS: *Curves limited: THC-OH 3-100*

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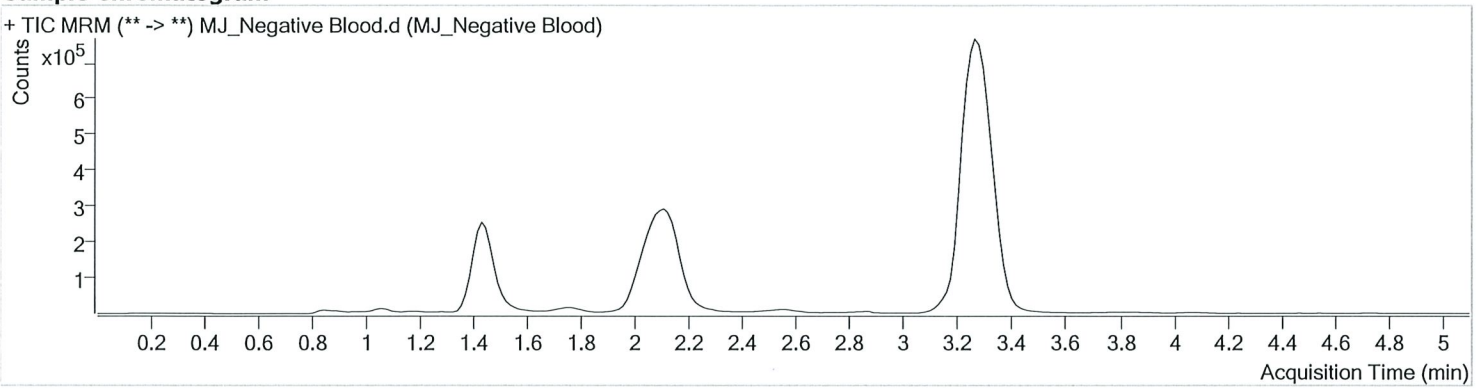
AM #27 Cannabinoid Quant. Results

Batch results	D:\MassHunter\Data\2020\AM 27-28\071420 AM 27 28 TS\QuantResults\AM 27.batch.bin
Calibration Last Update	7/16/2020 10:03:27 AM

Instrument	Falco	**Data File**	MJ_Negative Blood.d
Type	Sample	**Sample**	MJ_Negative Blood
Acq. Method	AM 27 THC quant.m	**Operator**	Tamara Salazar
Sample Position	P3-H5	**Comment**	
Injection Volume	10		
Acq. Date-Time	7/14/2020 1:09:50 PM		
Sample Info.			

Sample Chromatogram



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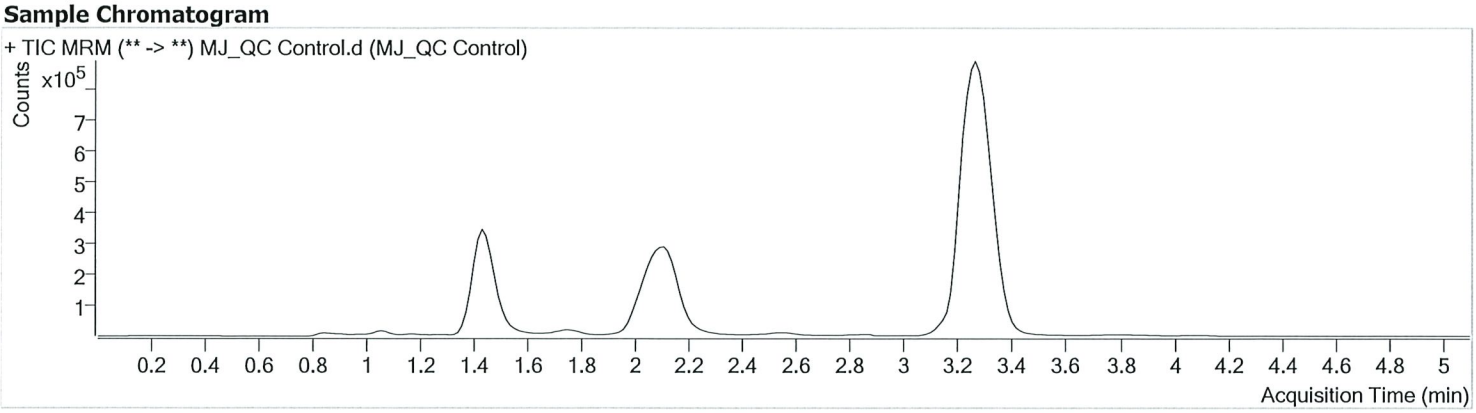
AM #27 Cannabinoid Quant. Results

Batch results D:\MassHunter\Data\2020\AM 27-28\071420 AM 27 28 TS\QuantResults\AM 27.batch.bin
Calibration Last Update 7/16/2020 10:03:27 AM

Instrument	Falco	**Data File**	MJ_QC Control.d
Type	Sample	**Sample**	MJ_QC Control
Acq. Method	AM 27 THC quant.m	**Operator**	Tamara Salazar
Sample Position	P3-A6	**Comment**	
Injection Volume	10		
Acq. Date-Time	7/14/2020 12:54:39 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.	
THC-OH	1.453	171528	∞	9.0	64.75	1162691	4.3019	ng/ml
THC-COOH	1.459	136630	∞	56.4	∞	411156	15.0220	ng/ml
THC	3.285	266619	∞	27.8	224.90	6830524	4.2433	ng/ml

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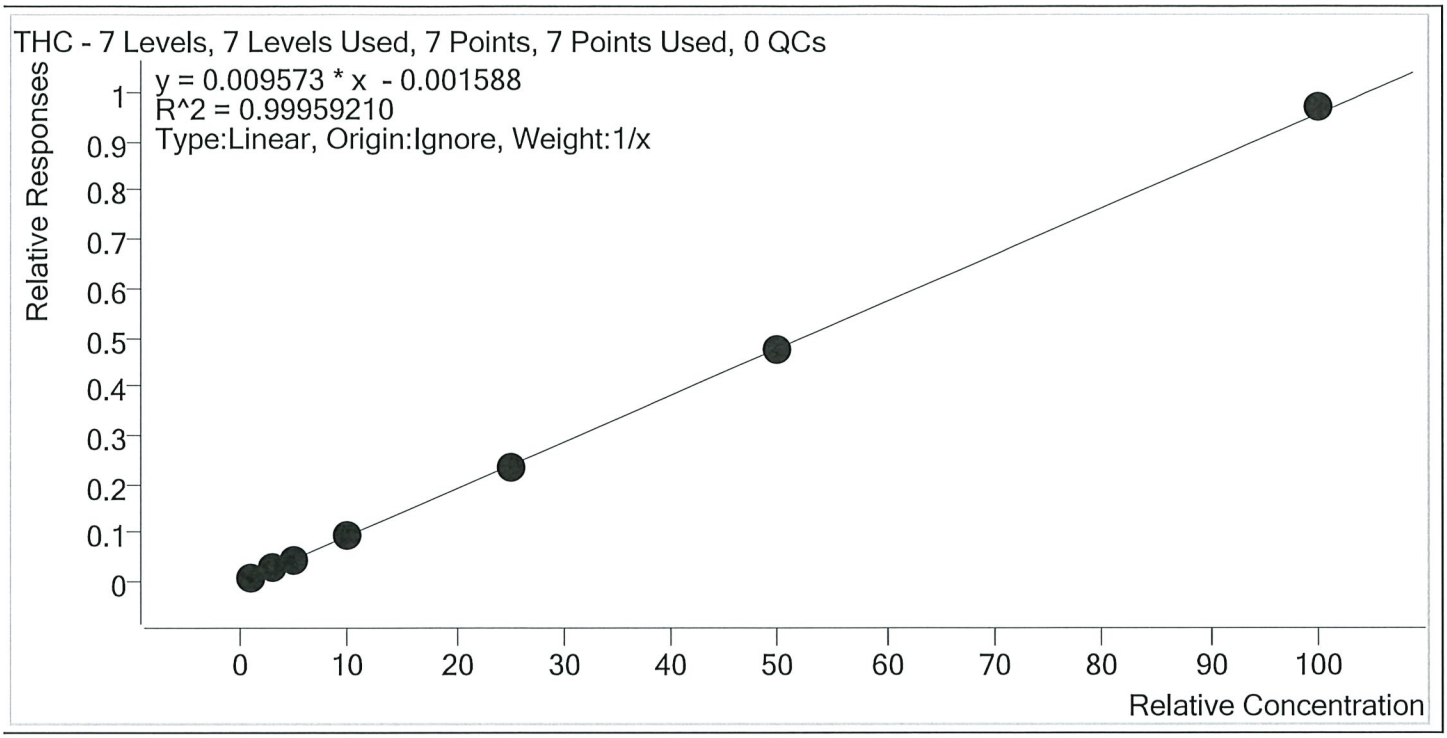
AM #27 Cannabinoids Quant. Calibration Curve Report

Batch results	D:\MassHunter\Data\2020\AM 27-28\071420 AM 27 28 TS\QuantResults\AM 27.batch.bin
Last Cal. Update	7/16/2020 9:30 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	1.1	111.5
MJ_Cal 2	2	✓	3.0	2.9	96.7
MJ_Cal 3	3	✓	5.0	4.8	96.2
MJ_Cal 4	4	✓	10.0	9.7	97.5
MJ_Cal 5	5	✓	25.0	24.4	97.5
MJ_Cal 6	6	✓	50.0	49.6	99.3
MJ_Cal 7	7	✓	100.0	101.4	101.4

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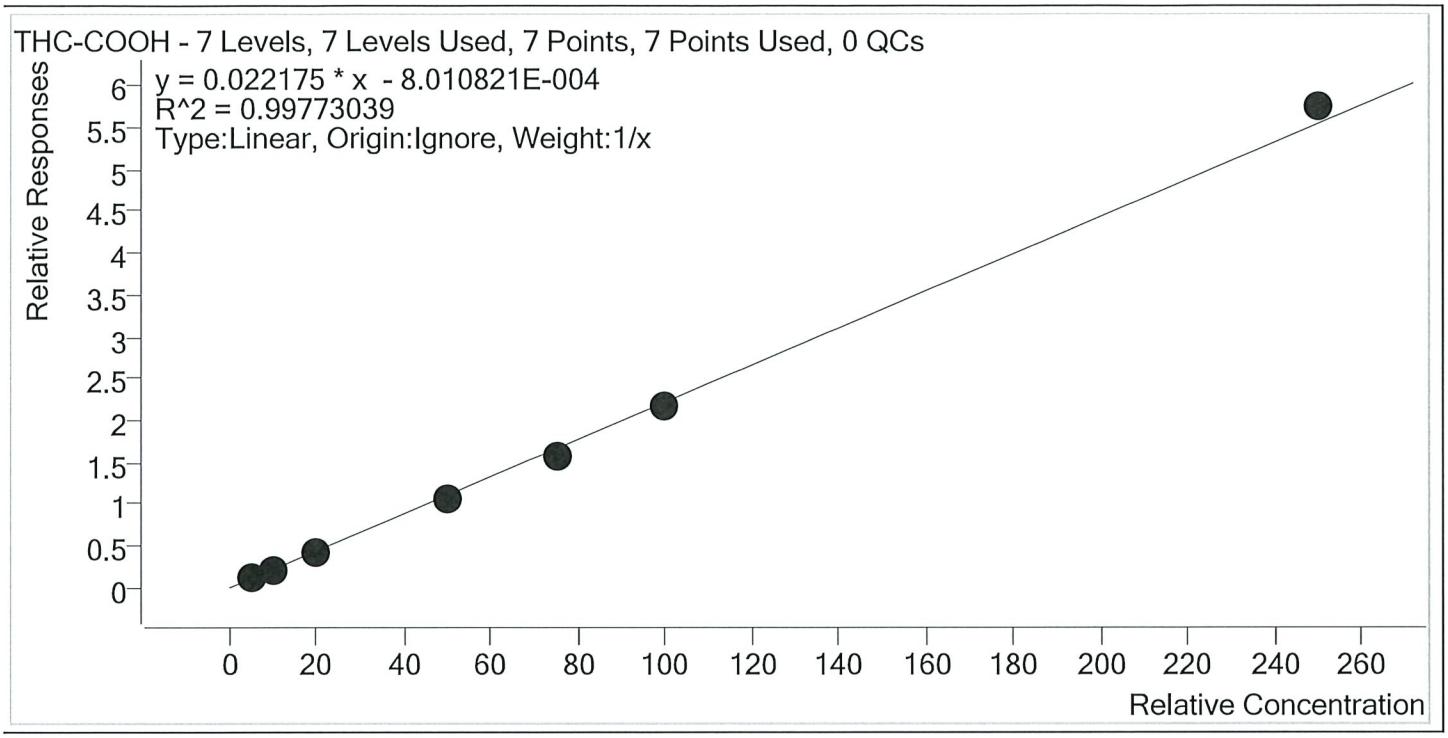
AM #27 Cannabinoids Quant. Calibration Curve Report

Batch results	D:\MassHunter\Data\2020\AM 27-28\071420 AM 27 28 TS\QuantResults\AM 27.batch.bin		
Last Cal. Update	7/16/2020 9:30 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	116.7
MJ_Cal 2	2	✓	10.0	9.5	95.4
MJ_Cal 3	3	✓	20.0	19.2	96.0
MJ_Cal 4	4	✓	50.0	48.3	96.6
MJ_Cal 5	5	✓	75.0	71.1	94.8
MJ_Cal 6	6	✓	100.0	97.0	97.0
MJ_Cal 7	7	✓	250.0	259.1	103.6

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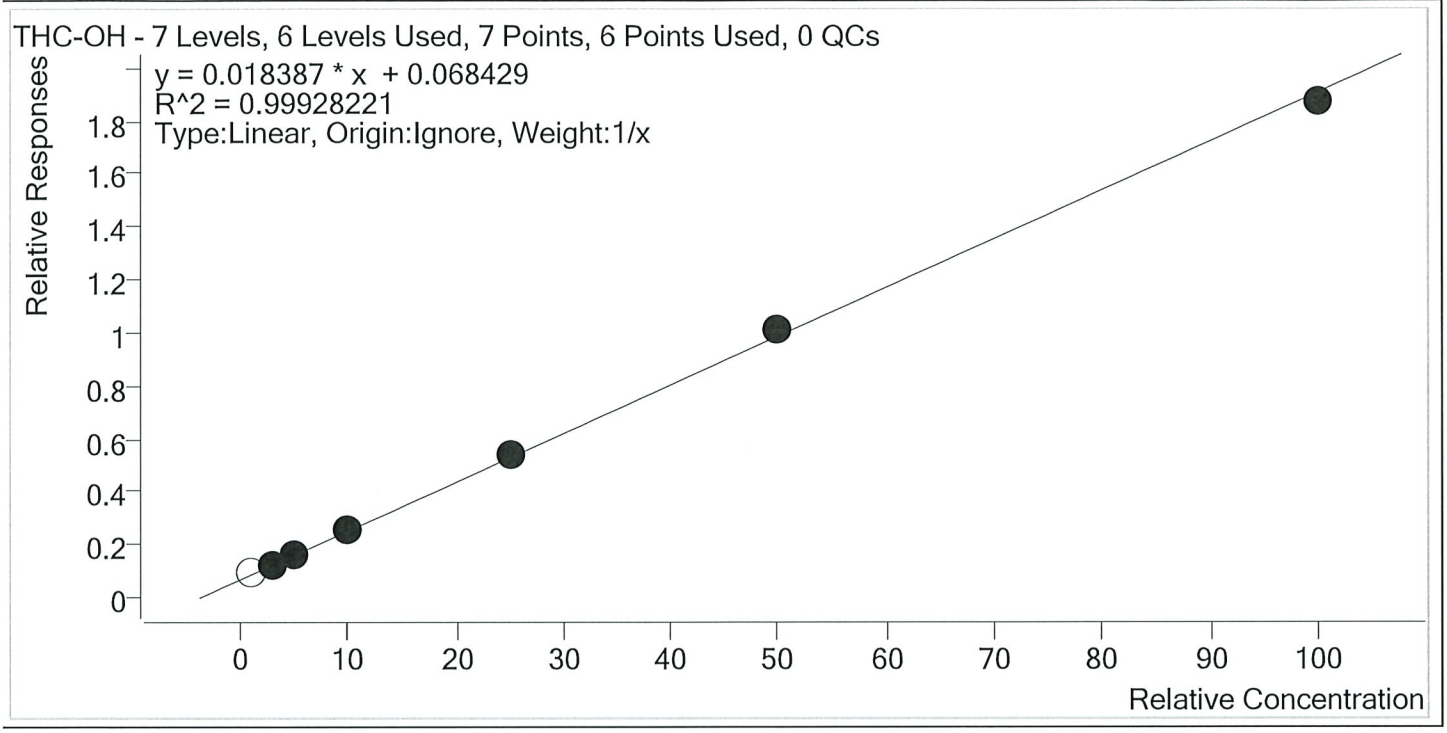
AM #27 Cannabinoids Quant. Calibration Curve Report

Batch results	D:\MassHunter\Data\2020\AM 27-28\071420 AM 27 28 TS\QuantResults\AM 27.batch.bin
Last Cal. Update	7/16/2020 9:30 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	1.7	167.6
MJ_Cal 2	2	✓	3.0	2.8	94.8
MJ_Cal 3	3	✓	5.0	5.1	102.6
MJ_Cal 4	4	✓	10.0	10.0	99.9
MJ_Cal 5	5	✓	25.0	25.4	101.4
MJ_Cal 6	6	✓	50.0	51.6	103.1
MJ_Cal 7	7	✓	100.0	98.1	98.1

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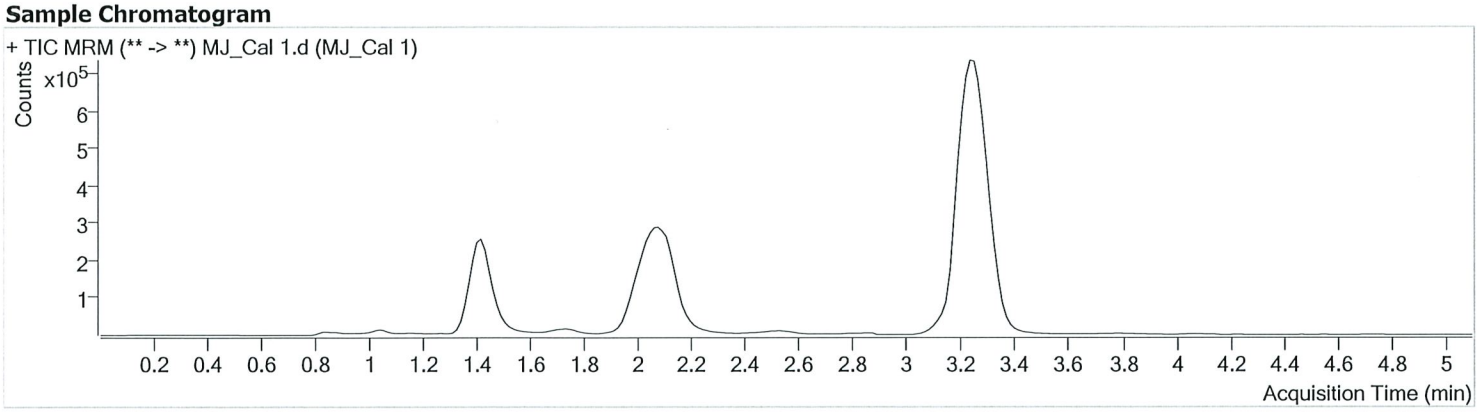
AM #27 Cannabinoid Quant. Results

Batch results D:\MassHunter\Data\2020\AM 27-28\071420 AM 27 28 TS\QuantResults\AM 27.batch.bin
Calibration Last Update 7/16/2020 10:03:27 AM

Instrument	Falco	**Data File**	MJ_Cal 1.d
Type	Cal	**Sample**	MJ_Cal 1
Acq. Method	AM 27 THC quant.m	**Operator**	Tamara Salazar
Sample Position	P3-H6	**Comment**	
Injection Volume	10		
Acq. Date-Time	7/14/2020 11:53:46 AM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.	
THC-OH	1.468	98559	∞	3.9 **Low**	17.38	993100	1.6760	ng/ml **Low**
THC-COOH	1.444	45601	∞	48.0	∞	354735	5.8333	ng/ml
THC	3.254	53653	393.77	28.6	∞	5907189	1.1146	ng/ml **Low**

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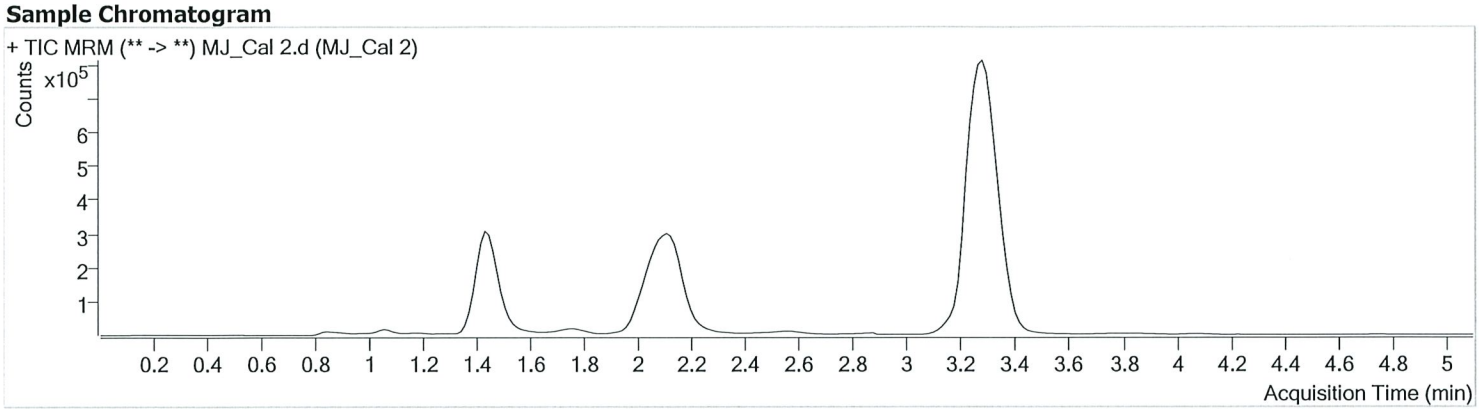
AM #27 Cannabinoid Quant. Results

Batch results D:\MassHunter\Data\2020\AM 27-28\071420 AM 27 28 TS\QuantResults\AM 27.batch.bin
Calibration Last Update 7/16/2020 10:03:27 AM

Instrument	Falco	**Data File**	MJ_Cal 2.d
Type	Cal	**Sample**	MJ_Cal 2
Acq. Method	AM 27 THC quant.m	**Operator**	Tamara Salazar
Sample Position	P3-G6	**Comment**	
Injection Volume	10		
Acq. Date-Time	7/14/2020 12:01:30 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.	
THC-OH	1.498	136486	∞	8.7	∞	1130666	2.8436	ng/ml **Low**
THC-COOH	1.474	82601	∞	55.8	647.95	392090	9.5365	ng/ml
THC	3.300	167915	584.94	28.5	160.07	6414070	2.9005	ng/ml **Low**

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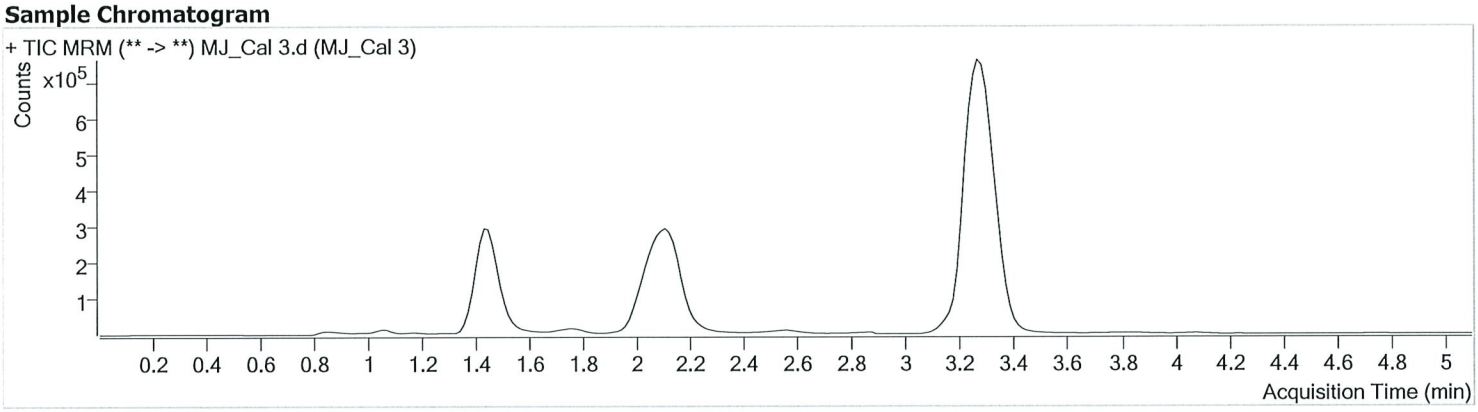
AM #27 Cannabinoid Quant. Results

Batch results D:\MassHunter\Data\2020\AM 27-28\071420 AM 27 28 TS\QuantResults\AM 27.batch.bin
Calibration Last Update 7/16/2020 10:03:27 AM

Instrument	Falco	**Data File**	MJ_Cal 3.d
Type	Cal	**Sample**	MJ_Cal 3
Acq. Method	AM 27 THC quant.m	**Operator**	Tamara Salazar
Sample Position	P3-F6	**Comment**	
Injection Volume	10		
Acq. Date-Time	7/14/2020 12:09:05 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.	
THC-OH	1.453	163310	∞	9.2	∞	1003146	5.1325	ng/ml
THC-COOH	1.474	151890	∞	56.9	∞	357286	19.2077	ng/ml
THC	3.285	256838	782.38	25.5	385.31	5779938	4.8076	ng/ml

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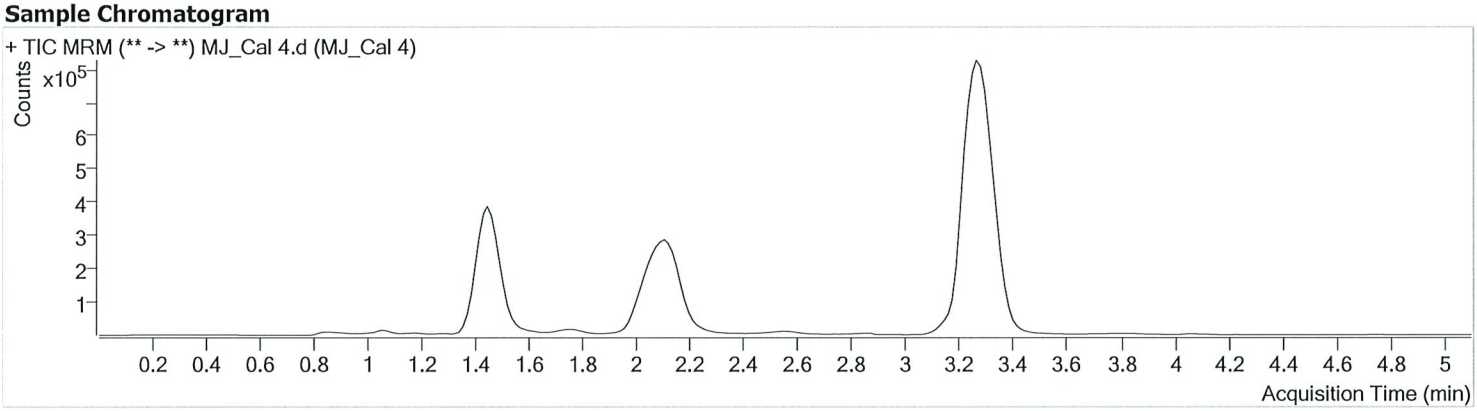
AM #27 Cannabinoid Quant. Results

Batch results D:\MassHunter\Data\2020\AM 27-28\071420 AM 27 28 TS\QuantResults\AM 27.batch.bin
Calibration Last Update 7/16/2020 10:03:27 AM

Instrument	Falco	**Data File**	MJ_Cal 4.d
Type	Cal	**Sample**	MJ_Cal 4
Acq. Method	AM 27 THC quant.m	**Operator**	Tamara Salazar
Sample Position	P3-E6	**Comment**	
Injection Volume	10		
Acq. Date-Time	7/14/2020 12:16:40 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.	
THC-OH	1.453	254987	∞	11.1	128.71	1011583	9.9876	ng/ml
THC-COOH	1.474	388553	∞	59.7	∞	363233	48.2762	ng/ml
THC	3.285	544245	2965.69	25.9	∞	5933834	9.7468	ng/ml

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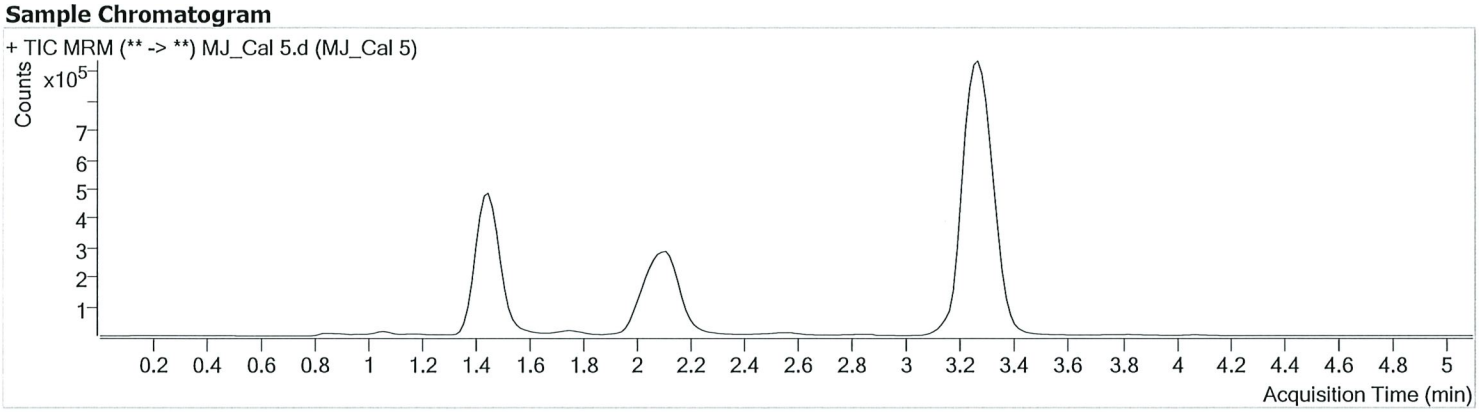
AM #27 Cannabinoid Quant. Results

Batch results D:\MassHunter\Data\2020\AM 27-28\071420 AM 27 28 TS\QuantResults\AM 27.batch.bin
Calibration Last Update 7/16/2020 10:03:27 AM

Instrument	Falco	**Data File**	MJ_Cal 5.d
Type	Cal	**Sample**	MJ_Cal 5
Acq. Method	AM 27 THC quant.m	**Operator**	Tamara Salazar
Sample Position	P3-D6	**Comment**	
Injection Volume	10		
Acq. Date-Time	7/14/2020 12:24:17 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.	
THC-OH	1.438	544773	∞	11.1	∞	1018774	25.3612	ng/ml
THC-COOH	1.459	565101	∞	63.3	∞	358684	71.0849	ng/ml
THC	3.270	1348697	13393.22	25.6	1701.38	5817083	24.3850	ng/ml

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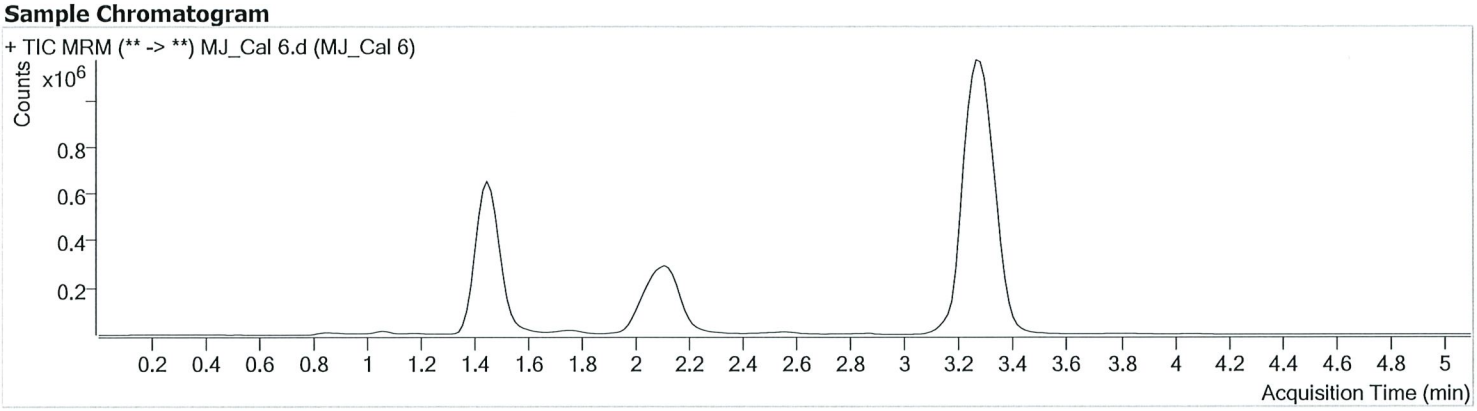
AM #27 Cannabinoid Quant. Results

Batch results D:\MassHunter\Data\2020\AM 27-28\071420 AM 27 28 TS\QuantResults\AM 27.batch.bin
Calibration Last Update 7/16/2020 10:03:27 AM

Instrument	Falco	**Data File**	MJ_Cal 6.d
Type	Cal	**Sample**	MJ_Cal 6
Acq. Method	AM 27 THC quant.m	**Operator**	Tamara Salazar
Sample Position	P3-C6	**Comment**	
Injection Volume	10		
Acq. Date-Time	7/14/2020 12:31:52 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.	
THC-OH	1.438	1064375	∞	12.3	∞	1047016	51.5677	ng/ml
THC-COOH	1.474	782293	∞	58.9	∞	363992	96.9578	ng/ml
THC	3.285	2844505	3553.33	25.9	1018.24	6005047	49.6470	ng/ml

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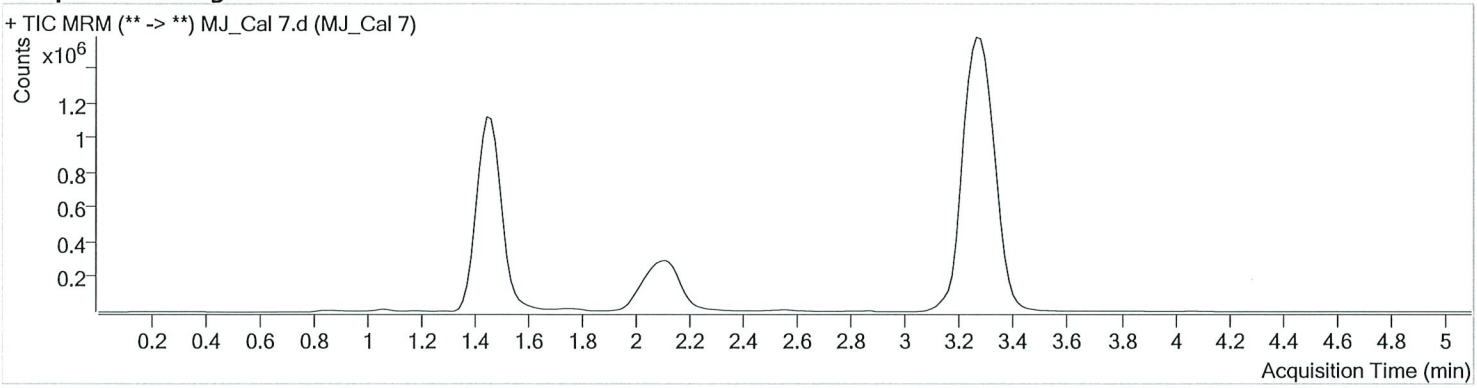
AM #27 Cannabinoid Quant. Results

Batch results D:\MassHunter\Data\2020\AM 27-28\071420 AM 27 28 TS\QuantResults\AM 27.batch.bin
Calibration Last Update 7/16/2020 10:03:27 AM

Instrument	Falco	**Data File**	MJ_Cal 7.d
Type	Cal	**Sample**	MJ_Cal 7
Acq. Method	AM 27 THC quant.m	**Operator**	Tamara Salazar
Sample Position	P3-B6	**Comment**	
Injection Volume	10		
Acq. Date-Time	7/14/2020 12:39:27 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.	
THC-OH	1.438	1919878	∞	12.8	2066.60	1025420	98.1074	ng/ml
THC-COOH	1.474	1969237	∞	56.7	∞	342790	259.1037	ng/ml
THC	3.285	5744816	∞	25.9	∞	5927964	101.3984	ng/ml