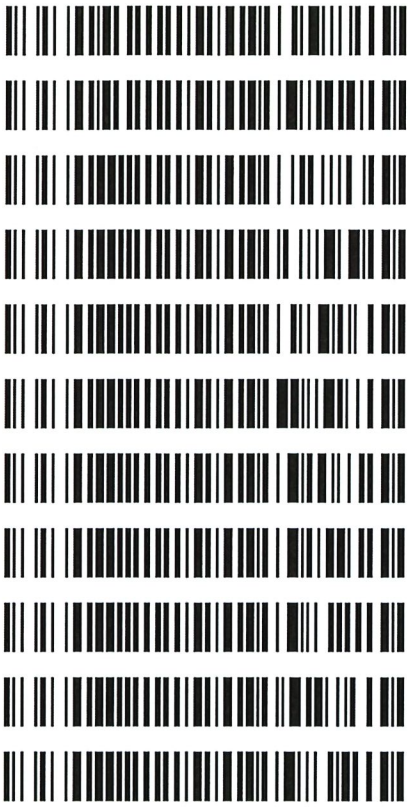
REVIEWED
By Sarah Pickle at 2:33 pm, Jun 08, 2020

TS 6/4/2020

Worklist: 4286

LAB_CASE	ITEM	ITEM_TYPE	DESCRIPTION
M2020-1905	2	BCK	AM 27 Blood THC Quant by LC-QQQ
M2020-2008	2	BCK	AM 27 Blood THC Quant by LC-QQQ
P2020-1523	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2020-1560	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2020-1586	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2020-1604	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2020-1623	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2020-1624	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2020-1627	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2020-1634	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2020-1657	1	BCK	AM 27 Blood THC Quant by LC-QQQ



TD

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

Extraction Date: 06/05/2020 Analyst: Tamara Salazar
Plate lot#: IDP-108-200303 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. *Shaker ID: 067105*
☒ 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)*** 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 and OH-THC 3ng/mL (quantitative), Carboxy-THC: 10ng/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 5-100 (reported qualitatively)*

Calibrator 2 was reinjected due to possible interferring peak. 6/8/2020 TD

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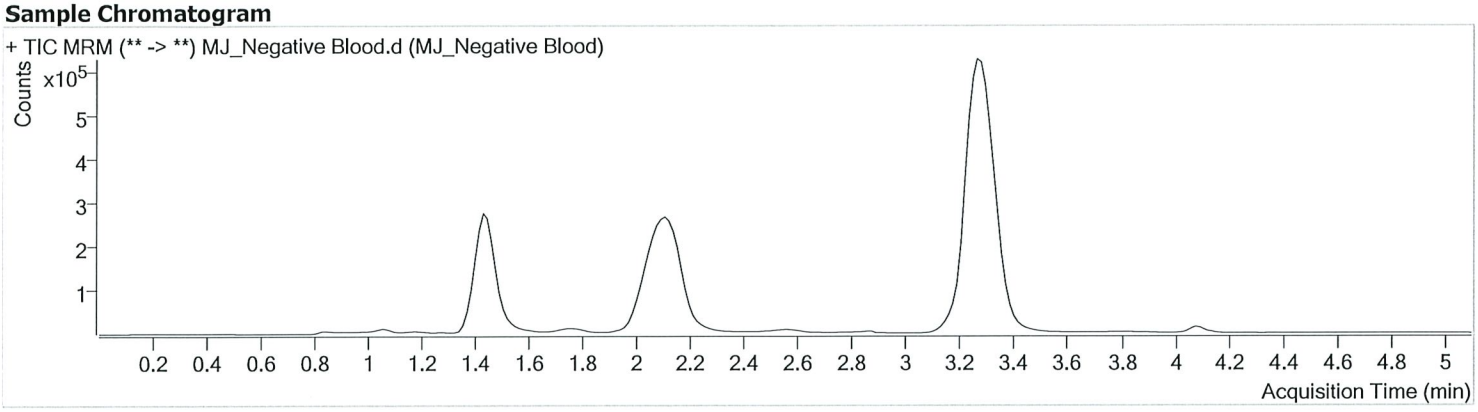
AM #27 Cannabinoid Quant. Results

Batch results D:\MassHunter\Data\2020\AM 27-28\060520 AM 27 28 wklst 4286 4287 TS\QuantResults\AM 27 TS.batch.bin
Calibration Last Update 6/8/2020 9:37:32 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	6/5/2020 1:00:08 PM		
Sample Info.			

Sample Chromatogram

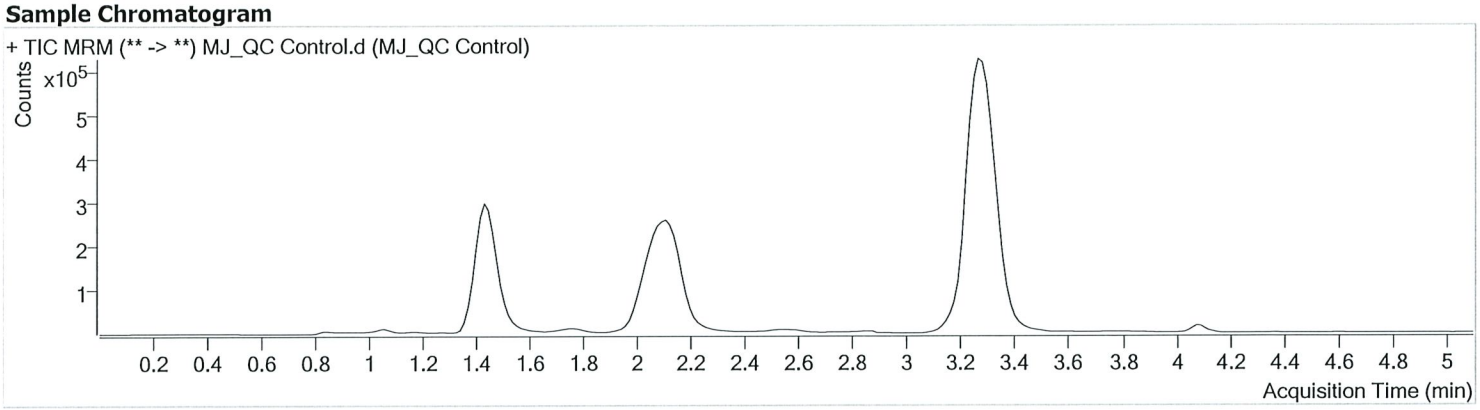


AM #27 Cannabinoid Quant. Results

Batch results D:\MassHunter\Data\2020\AM 27-28\060520 AM 27 28 wklst 4286 4287 TS\QuantResults\AM 27 TS.batch.bin
Calibration Last Update 6/8/2020 9:37:32 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	6/5/2020 12:44:56 PM		
Sample Info.			

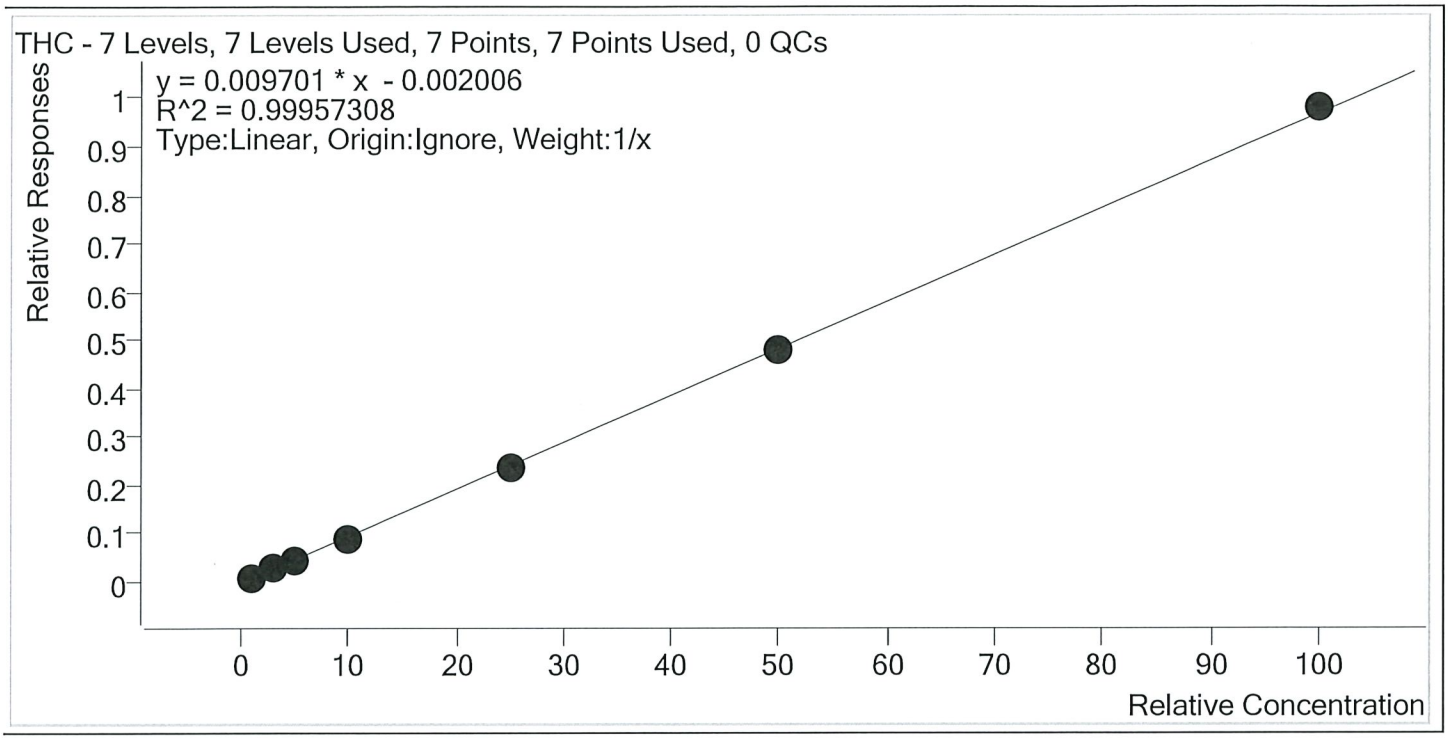
Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.	
THC-OH	1.453	133467	∞	9.6	168.35	1061423	4.2875	ng/ml
THC-COOH	1.474	113595	∞	55.0	∞	324863	15.7352	ng/ml
THC	3.285	183321	1029.84	27.8	∞	4584231	4.3290	ng/ml

AM #27 Cannabinoids Quant. Calibration Curve Report

Batch results	D:\MassHunter\Data\2020\AM 27-28\060520 AM 27 28 wklst 4286 4287 TS\QuantResults\AM 27 TS.batch.bin
Last Cal. Update	6/8/2020 9:37 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_r	2	✓	3.0	2.9	96.8
MJ_Cal 3	3	✓	5.0	4.9	97.8
MJ_Cal 4	4	✓	10.0	9.5	95.1
MJ_Cal 5	5	✓	25.0	24.4	97.8
MJ_Cal 6	6	✓	50.0	49.9	99.9
MJ_Cal 7	7	✓	100.0	101.2	101.2

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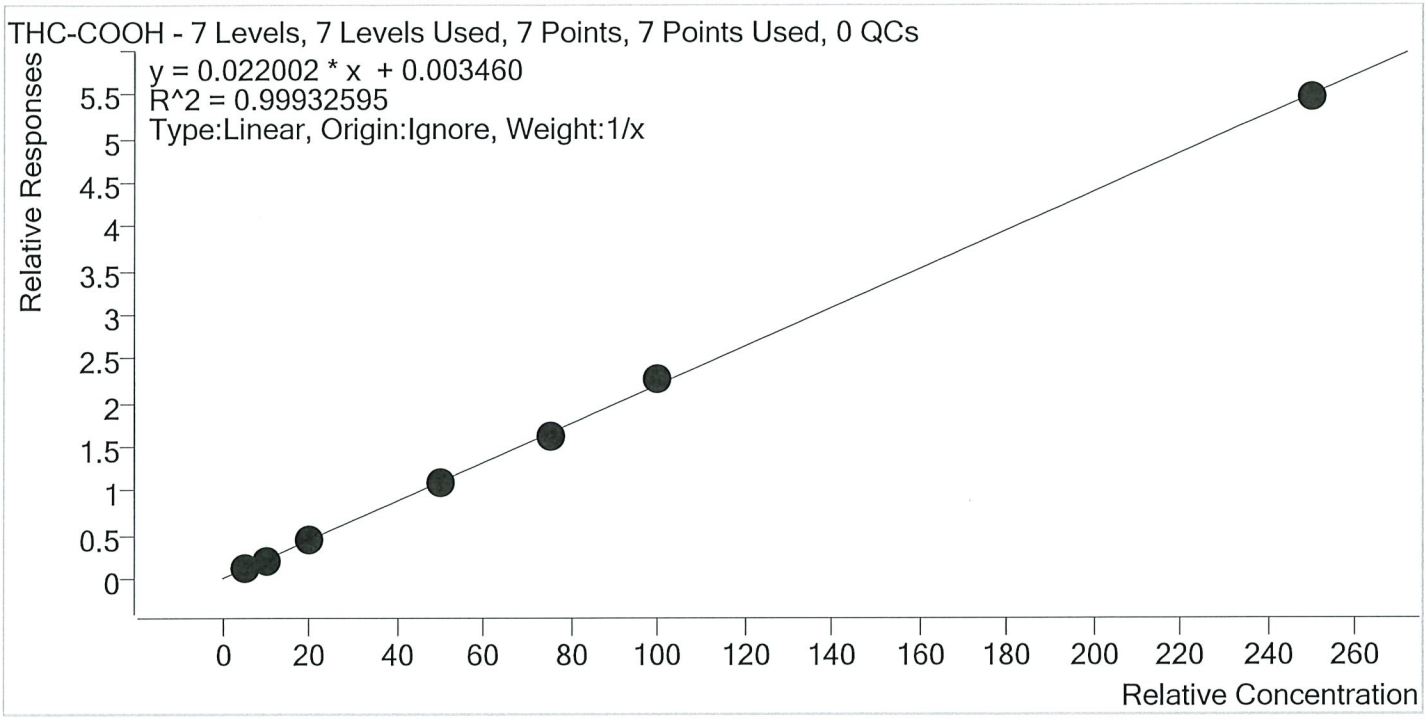
AM #27 Cannabinoids Quant. Calibration Curve Report

Batch results	D:\MassHunter\Data\2020\AM 27-28\060520 AM 27 28 wklst 4286 4287 TS\QuantResults\AM 27 TS.batch.bin
Last Cal. Update	6/8/2020 9:37 AM
Analyst Name	ISP\Datastor
Analyte	THC-COOH
Internal Standard	THC-COOH-D9

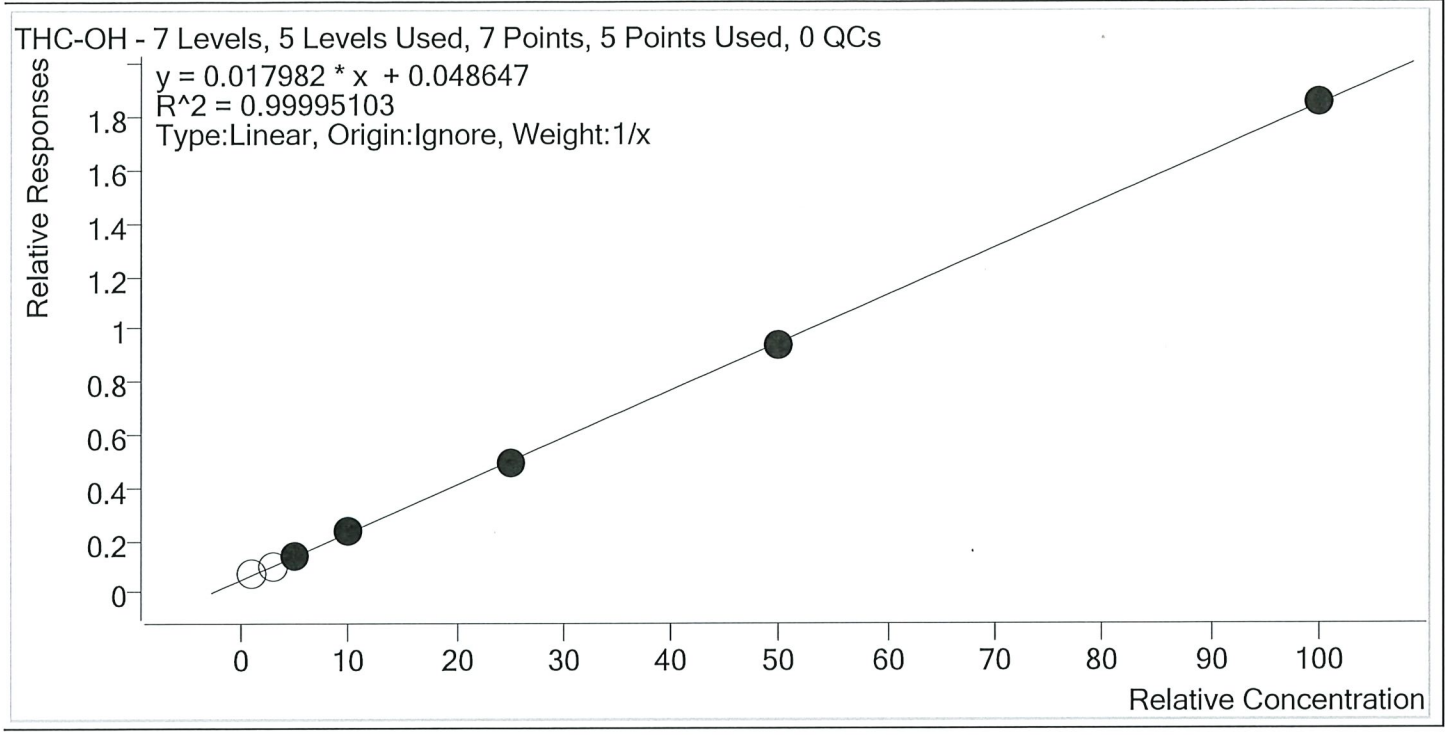


Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
MJ_Cal 1	1	✓	5.0	5.4	108.2
MJ_Cal 2_r	2	✓	10.0	9.4	93.7
MJ_Cal 3	3	✓	20.0	19.4	97.1
MJ_Cal 4	4	✓	50.0	49.8	99.6
MJ_Cal 5	5	✓	75.0	73.7	98.3
MJ_Cal 6	6	✓	100.0	103.7	103.7
MJ_Cal 7	7	✓	250.0	248.5	99.4

TS

AM #27 Cannabinoids Quant. Calibration Curve Report

Batch results	D:\MassHunter\Data\2020\AM 27-28\060520 AM 27 28 wklst 4286 4287 TS\QuantResults\AM 27 TS.batch.bin
Last Cal. Update	6/8/2020 9:37 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	1.5	148.9
MJ_Cal 2_r	2	×	3.0	2.9	97.8
MJ_Cal 3	3	✓	5.0	5.0	99.5
MJ_Cal 4	4	✓	10.0	10.1	101.2
MJ_Cal 5	5	✓	25.0	24.9	99.8
MJ_Cal 6	6	✓	50.0	49.6	99.2
MJ_Cal 7	7	✓	100.0	100.4	100.4

* Compound reported qualitatively. 6/8/2020 - TS

Generated at 9:39 AM on 6/8/2020

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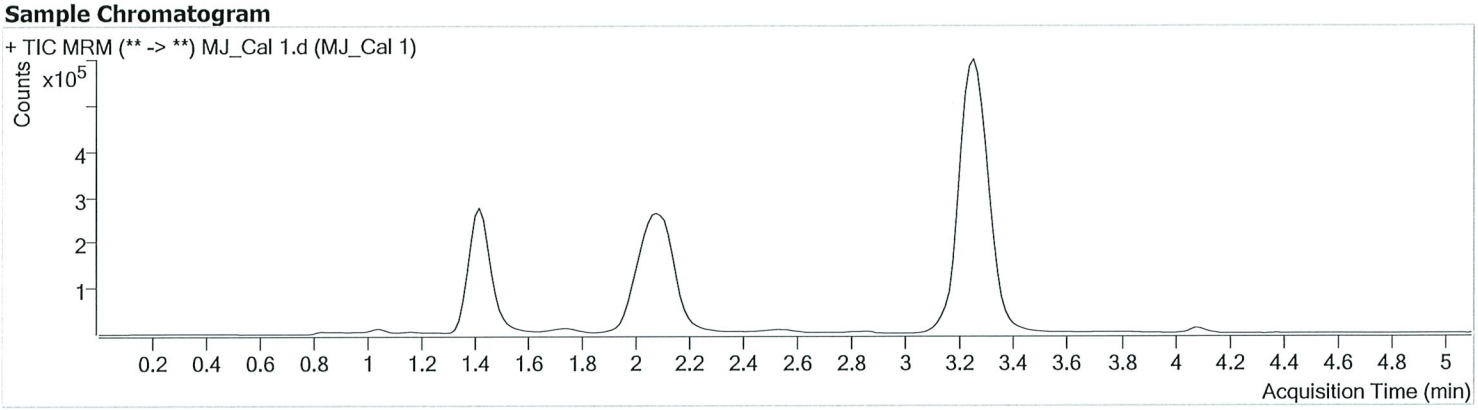
AM #27 Cannabinoid Quant. Results

Batch results D:\MassHunter\Data\2020\AM 27-28\060520 AM 27 28 wklst 4286 4287 TS\QuantResults\AM 27 TS.batch.bin
Calibration Last Update 6/8/2020 9:37:32 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	6/5/2020 11:44:05 AM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.	
THC-OH	1.483	83077	∞	5.3 **Low**	14.10	1101584	1.4887	ng/ml **Low**
THC-COOH	1.459	40779	∞	50.2	225.89	333033	5.4079	ng/ml **Low**
THC	3.254	40398	281.50	30.6	103.38	4583293	1.1154	ng/ml **Low**

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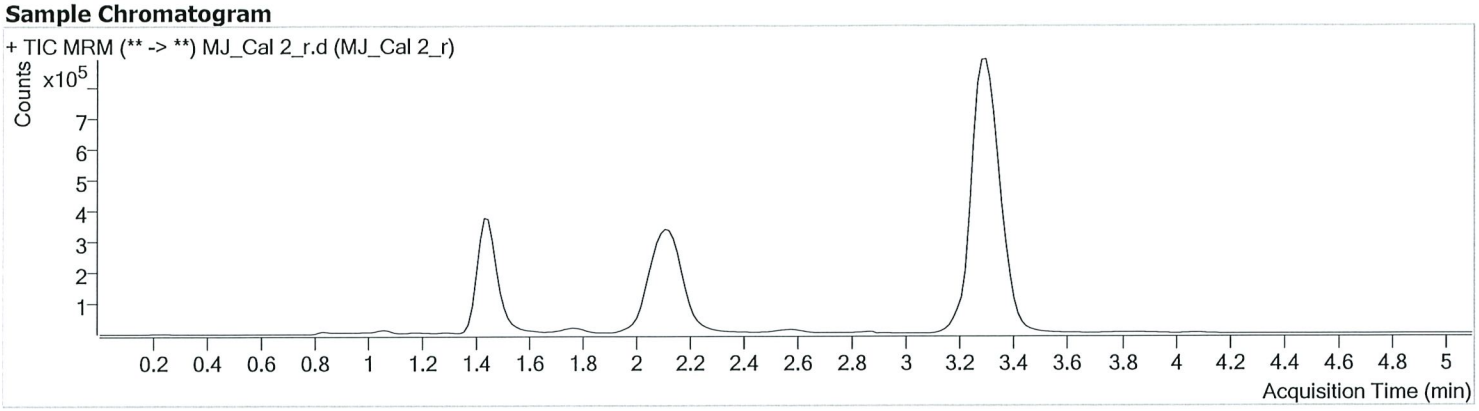
AM #27 Cannabinoid Quant. Results

Batch results D:\MassHunter\Data\2020\AM 27-28\060520 AM 27 28 wklst 4286 4287 TS\QuantResults\AM 27 TS.batch.bin
Calibration Last Update 6/8/2020 9:37:32 AM

Instrument	Falco	**Data File**	MJ_Cal 2_r.d
Type	Cal	**Sample**	MJ_Cal 2_r
Acq. Method	AM 27 THC quant.m	**Operator**	Tamara Salazar
Sample Position	P3-G6	**Comment**	
Injection Volume	10		
Acq. Date-Time	6/5/2020 4:02:18 PM		
Sample Info.			

Sample Chromatogram



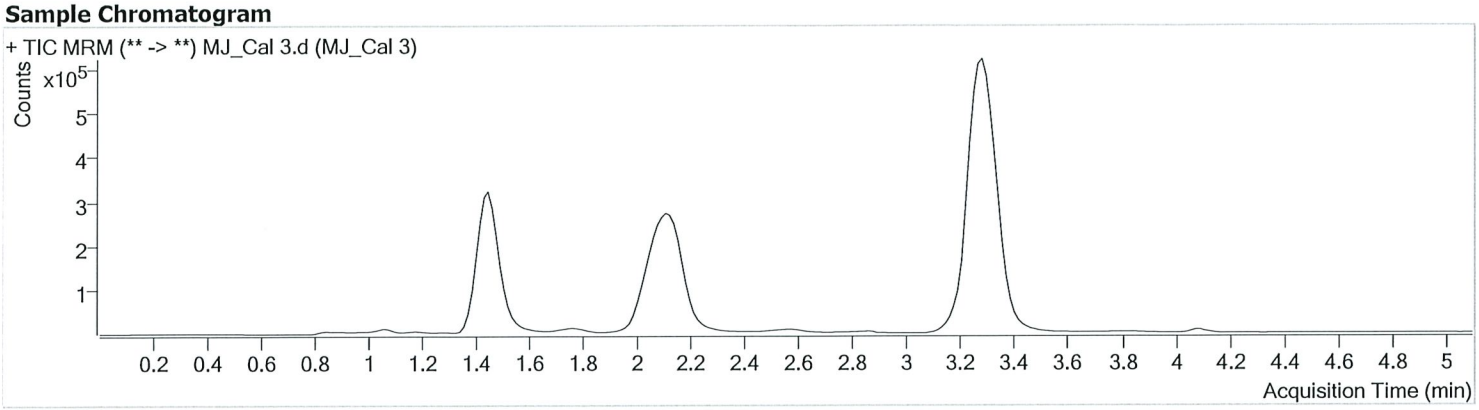
Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.	
THC-OH	1.483	133667	∞	8.0 **Low**	∞	1317998	2.9346	ng/ml **Low**
THC-COOH	1.474	81304	∞	59.3	340.63	387856	9.3701	ng/ml **Low**
THC	3.300	169782	472.74	28.9	201.51	6489533	2.9037	ng/ml **Low**

AM #27 Cannabinoid Quant. Results

Batch results D:\MassHunter\Data\2020\AM 27-28\060520 AM 27 28 wklst 4286 4287 TS\QuantResults\AM 27 TS.batch.bin
Calibration Last Update 6/8/2020 9:37:32 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	6/5/2020 11:59:24 AM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.	
THC-OH	1.453	155088	∞	10.0	172.37	1123099	4.9740	ng/ml
THC-COOH	1.474	144437	∞	58.2	∞	335400	19.4153	ng/ml
THC	3.285	204129	1253.98	27.0	120.17	4494454	4.8885	ng/ml

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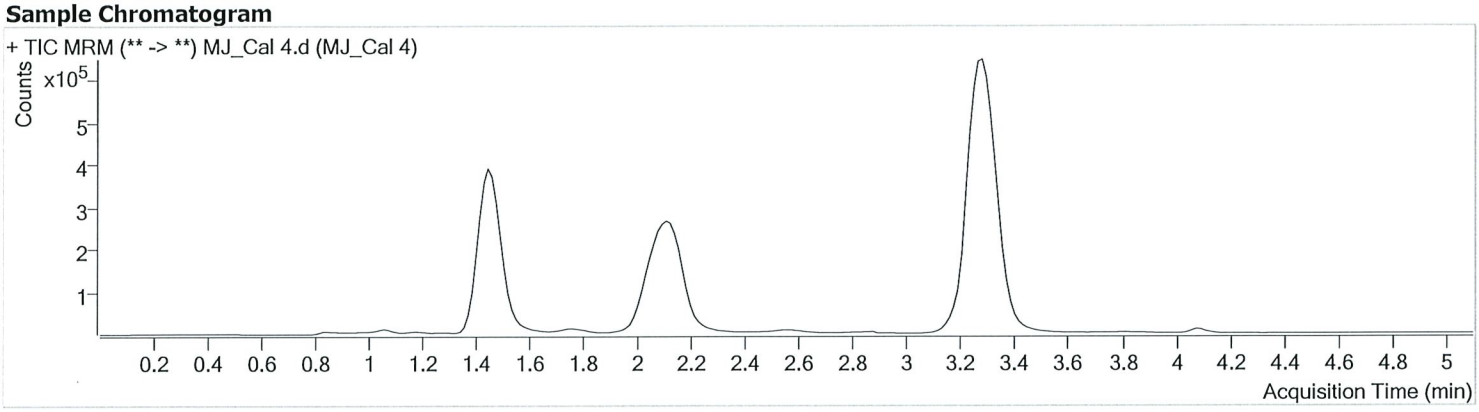
AM #27 Cannabinoid Quant. Results

Batch results D:\MassHunter\Data\2020\AM 27-28\060520 AM 27 28 wklst 4286 4287 TS\QuantResults\AM 27 TS.batch.bin
Calibration Last Update 6/8/2020 9:37:32 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	6/5/2020 12:06:59 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.	
THC-OH	1.453	252553	∞	10.6	677.13	1095369	10.1167	ng/ml
THC-COOH	1.474	358576	∞	60.4	2767.13	326201	49.8031	ng/ml
THC	3.285	400903	1129.99	27.5	423.34	4444103	9.5058	ng/ml

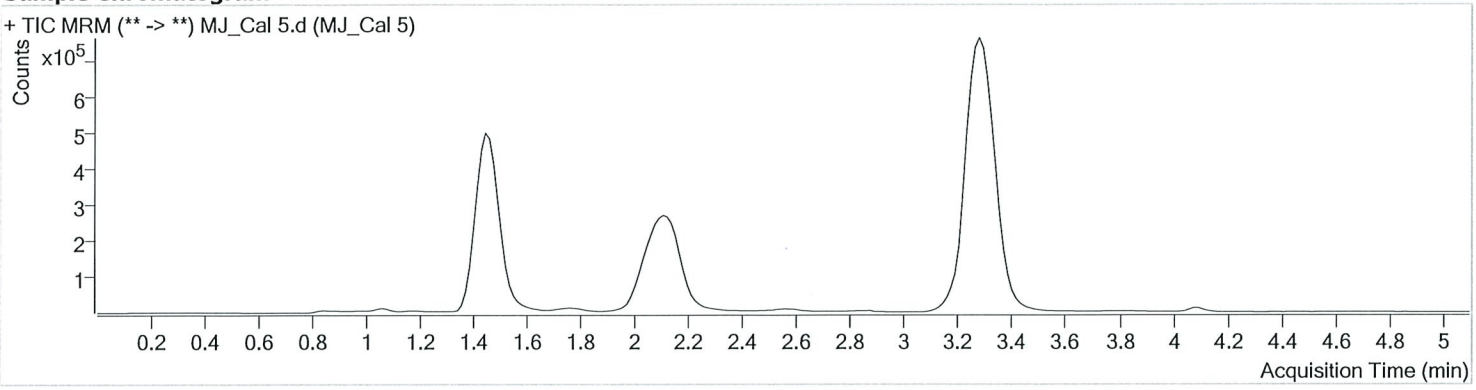
TS

AM #27 Cannabinoid Quant. Results

Batch results	D:\MassHunter\Data\2020\AM 27-28\060520 AM 27 28 wklst 4286 4287 TS\QuantResults\AM 27 TS.batch.bin
Calibration Last Update	6/8/2020 9:37:32 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	6/5/2020 12:14:33 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.	
THC-OH	1.453	554023	∞	12.2	977.13	1114243	24.9458	ng/ml
THC-COOH	1.474	540239	∞	63.2	∞	332317	73.7290	ng/ml
THC	3.300	1059827	7231.64	25.5	661.35	4507796	24.4422	ng/ml

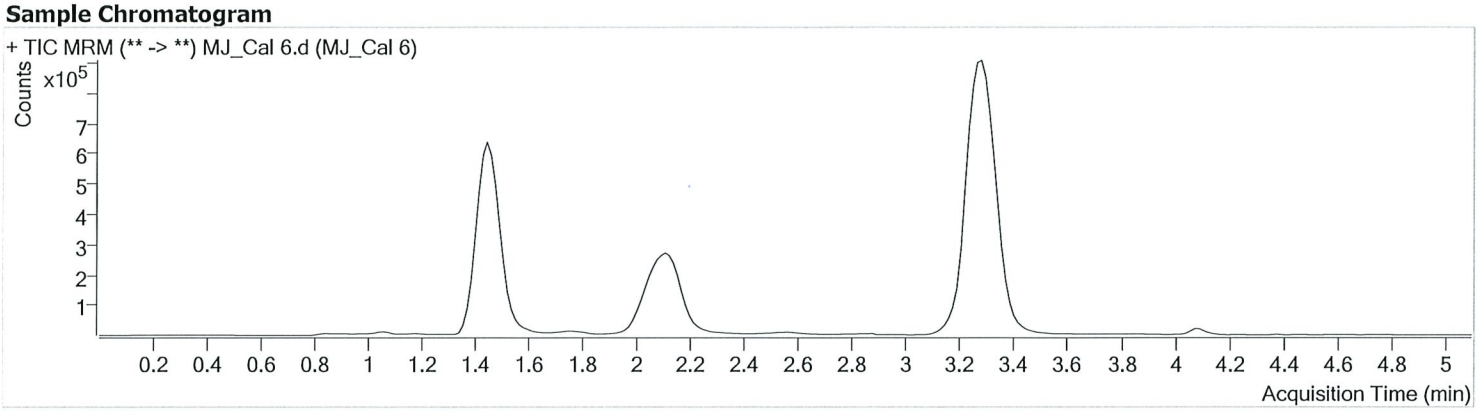
TS

AM #27 Cannabinoid Quant. Results

Batch results D:\MassHunter\Data\2020\AM 27-28\060520 AM 27 28 wklst 4286 4287 TS\QuantResults\AM 27 TS.batch.bin
Calibration Last Update 6/8/2020 9:37:32 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	6/5/2020 12:22:09 PM		
Sample Info.			

Sample Chromatogram



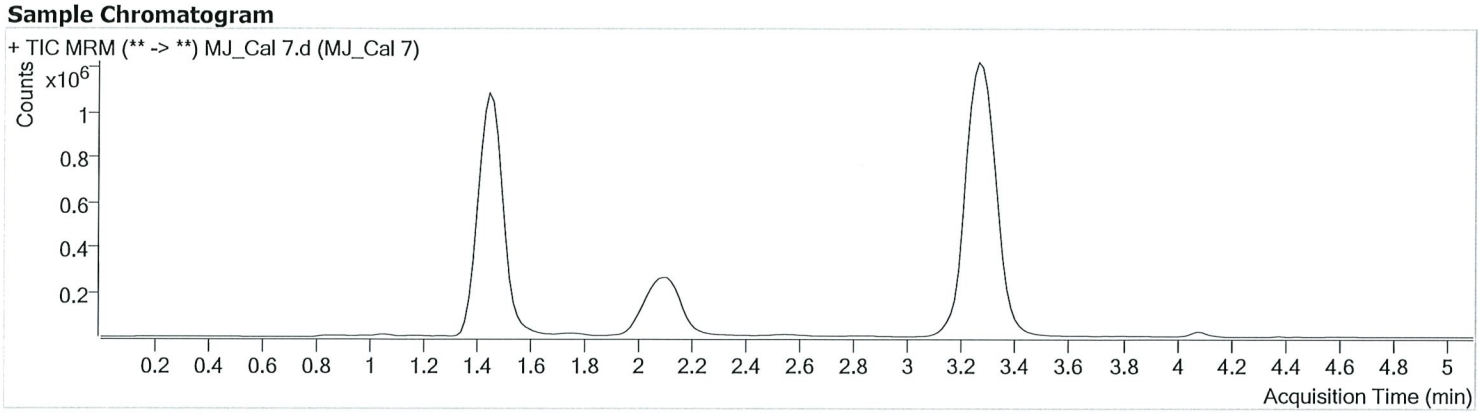
Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.	
THC-OH	1.438	1022520	∞	13.0	1372.46	1087026	49.6061	ng/ml
THC-COOH	1.474	739884	∞	57.3	∞	323660	103.7400	ng/ml
THC	3.285	2120869	3455.28	25.7	1634.55	4396649	49.9314	ng/ml

AM #27 Cannabinoid Quant. Results

Batch results	D:\MassHunter\Data\2020\AM 27-28\060520 AM 27 28 wklst 4286 4287 TS\QuantResults\AM 27 TS.batch.bin
Calibration Last Update	6/8/2020 9:37:32 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	6/5/2020 12:29:45 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.	
THC-OH	1.438	1989883	∞	13.5	1828.30	1073716	100.3575	ng/ml
THC-COOH	1.474	1687922	∞	60.8	∞	308476	248.5347	ng/ml
THC	3.285	4290222	50868.11	26.0	∞	4378357	101.2130	ng/ml