REVIEWED
By Sarah Pickle at 10:58 am, Aug 28, 2020

8/28/2020

TS

Worklist: 4463

LAB_CASE	ITEM	ITEM_TYPE	DESCRIPTION
M2020-3036	1	BCK	AM 27 Blood THC Quant by LC-QQQ
M2020-3037	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2020-1980	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2020-2273	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2020-2495	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2020-2504	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2020-2506	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2020-2510	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: 08/27/2020 Analyst: Tamara Salazar
Plate lot#: IDP-108-200303 Plate Expiration: 09/03/2020

Mobile phase A: 0.1% Formic Acid in LCMS Water **Mobile phase B:** 0.1% Formic acid in Acetonitrile
MTBE LCMS Methanol Hexane
Blank Blood Lot: Hemostat 445283-4 **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. 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*

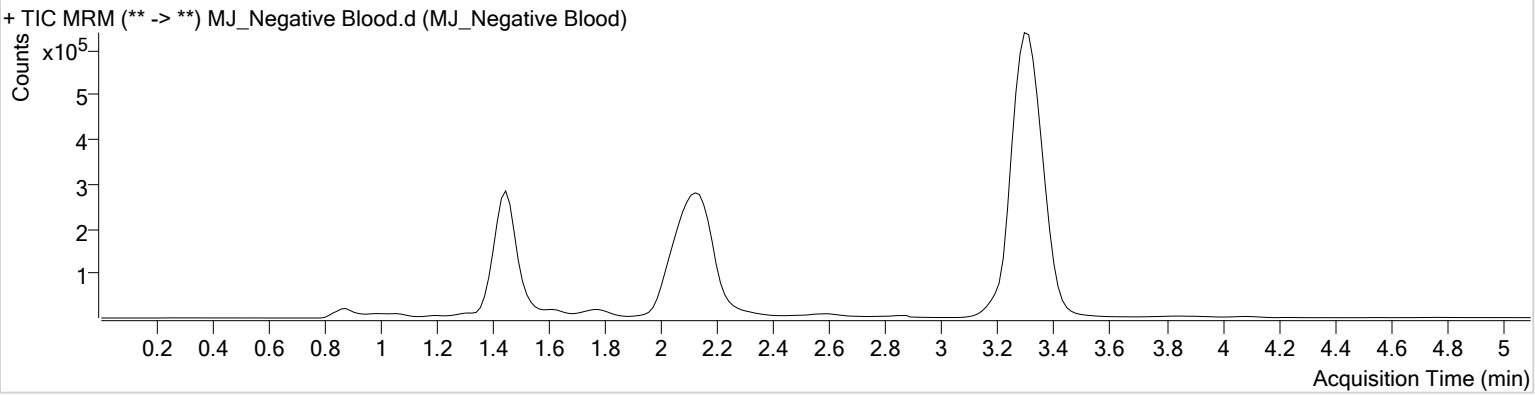
TS

AM #27 Cannabinoid Quant. Results

Batch results	D:\MassHunter\Data\2020\AM 27-28\082720 AM 27 AM 28 P1 and P2 TS\QuantResults\AM 27_THCQ.batch.bin
Calibration Last Update	8/28/2020 10:27:05 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-A2	**Comment**	
Injection Volume	10		
Acq. Date-Time	8/27/2020 3:02:35 PM		
Sample Info.			

Sample Chromatogram



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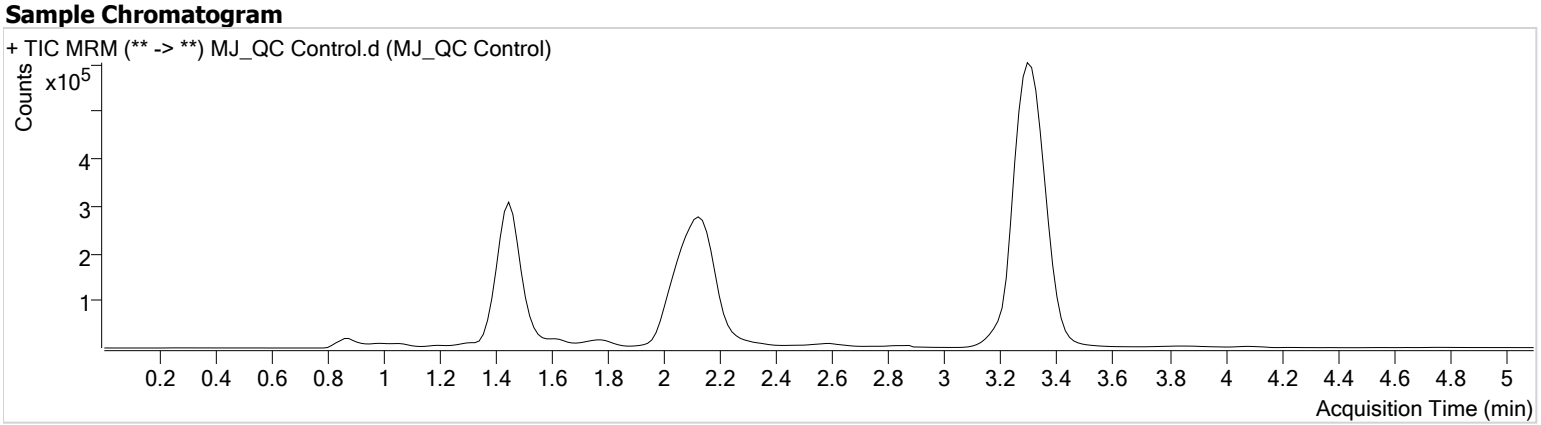
AM #27 Cannabinoid Quant. Results

Batch results D:\MassHunter\Data\2020\AM 27-28\082720 AM 27 AM 28 P1 and P2 TS\QuantResults\AM 27_THCQ.batch.bin
Calibration Last Update 8/28/2020 10:27:05 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-H1	**Comment**	
Injection Volume	10		
Acq. Date-Time	8/27/2020 2:47:24 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.	
THC-OH	1.468	154233	∞	8.5	217.97	1100631	4.2483	ng/ml
THC-COOH	1.474	119917	∞	58.4	∞	342261	15.1403	ng/ml
THC	3.315	181493	303.18	29.7	100.76	4605121	4.3151	ng/ml

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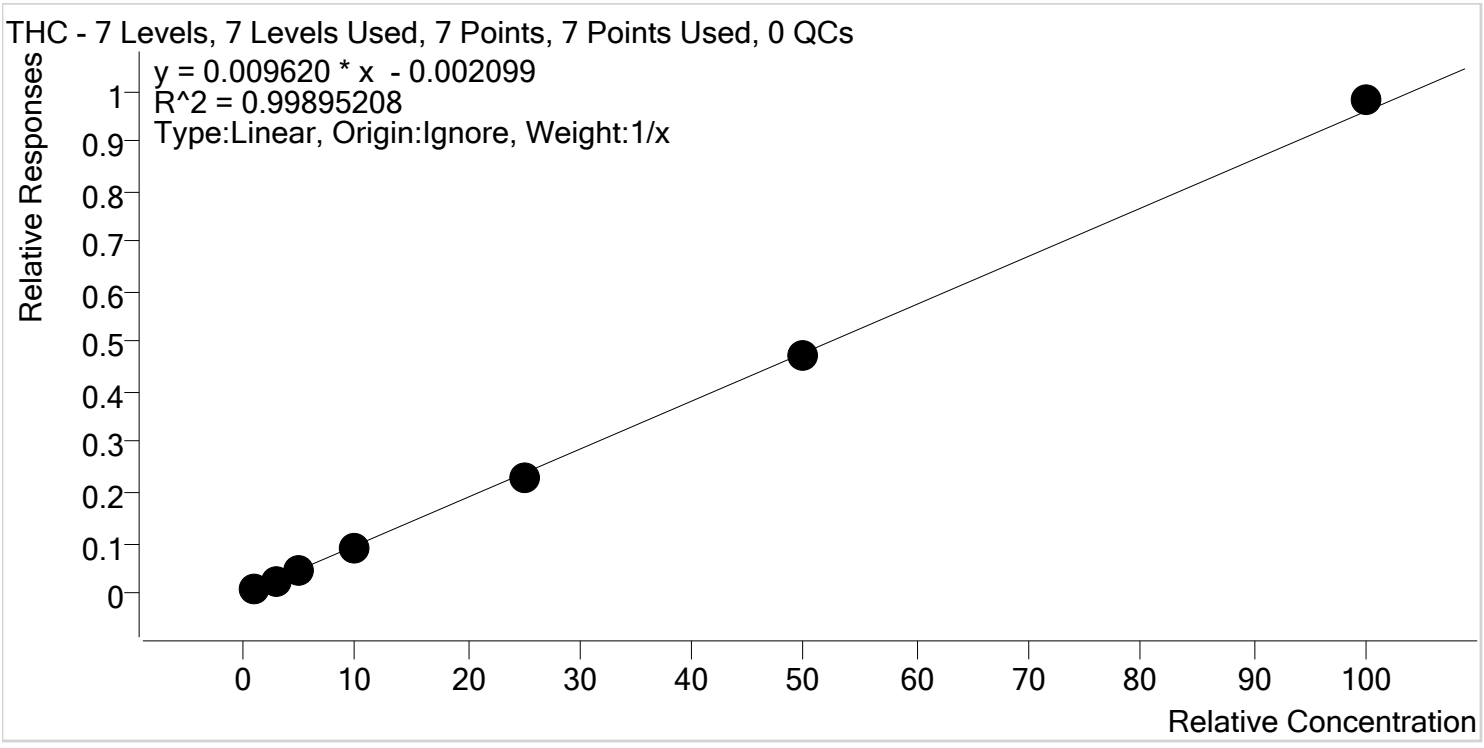
AM #27 Cannabinoids Quant. Calibration Curve Report

Batch results	D:\MassHunter\Data\2020\AM 27-28\082720 AM 27 AM 28 P1 and P2 TS\QuantResults\AM 27_THCQ.batch.bin
Last Cal. Update	8/28/2020 10:27 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	1.2	117.1
MJ_Cal 2	2	✔	3.0	2.9	96.2
MJ_Cal 3	3	✔	5.0	4.8	95.6
MJ_Cal 4	4	✔	10.0	9.3	93.3
MJ_Cal 5	5	✔	25.0	24.2	96.7
MJ_Cal 6	6	✔	50.0	49.4	98.7
MJ_Cal 7	7	✔	100.0	102.3	102.3

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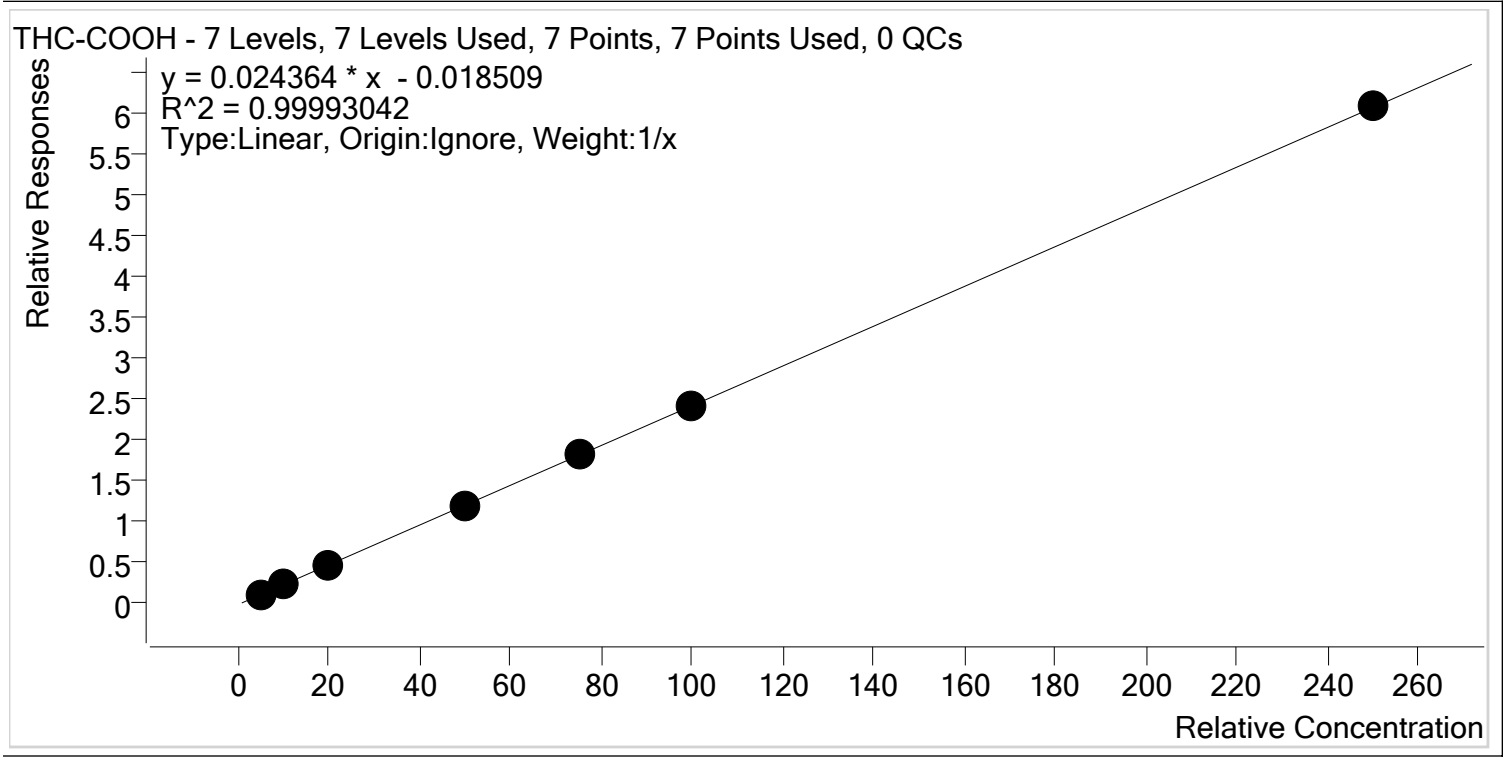
AM #27 Cannabinoids Quant. Calibration Curve Report

Batch results D:\MassHunter\Data\2020\AM 27-28\082720 AM 27 AM 28 P1 and P2 TS\QuantResults\AM 27_THCQ.batch.bin

Last Cal. Update 8/28/2020 10:27 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	5.1	101.5
MJ_Cal 2	2	✔	10.0	9.9	99.4
MJ_Cal 3	3	✔	20.0	20.1	100.5
MJ_Cal 4	4	✔	50.0	49.0	97.9
MJ_Cal 5	5	✔	75.0	75.3	100.4
MJ_Cal 6	6	✔	100.0	100.0	100.0
MJ_Cal 7	7	✔	250.0	250.6	100.2

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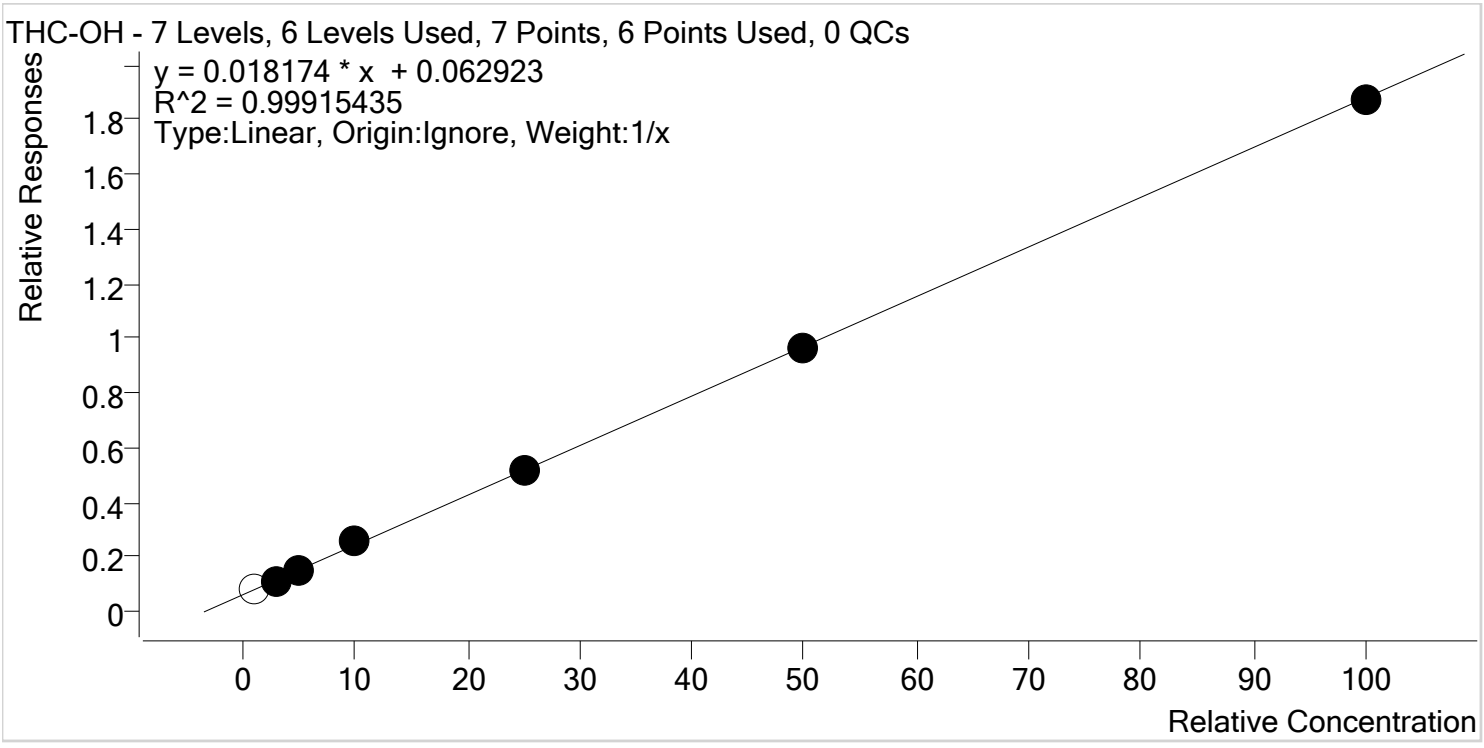
AM #27 Cannabinoids Quant. Calibration Curve Report

Batch results	D:\MassHunter\Data\2020\AM 27-28\082720 AM 27 AM 28 P1 and P2 TS\QuantResults\AM 27_THCQ.batch.bin
Last Cal. Update	8/28/2020 10:27 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	1.3	128.4
MJ_Cal 2	2	✔	3.0	2.7	91.3
MJ_Cal 3	3	✔	5.0	5.0	99.6
MJ_Cal 4	4	✔	10.0	11.0	109.6
MJ_Cal 5	5	✔	25.0	25.2	100.7
MJ_Cal 6	6	✔	50.0	49.7	99.4
MJ_Cal 7	7	✔	100.0	99.5	99.5

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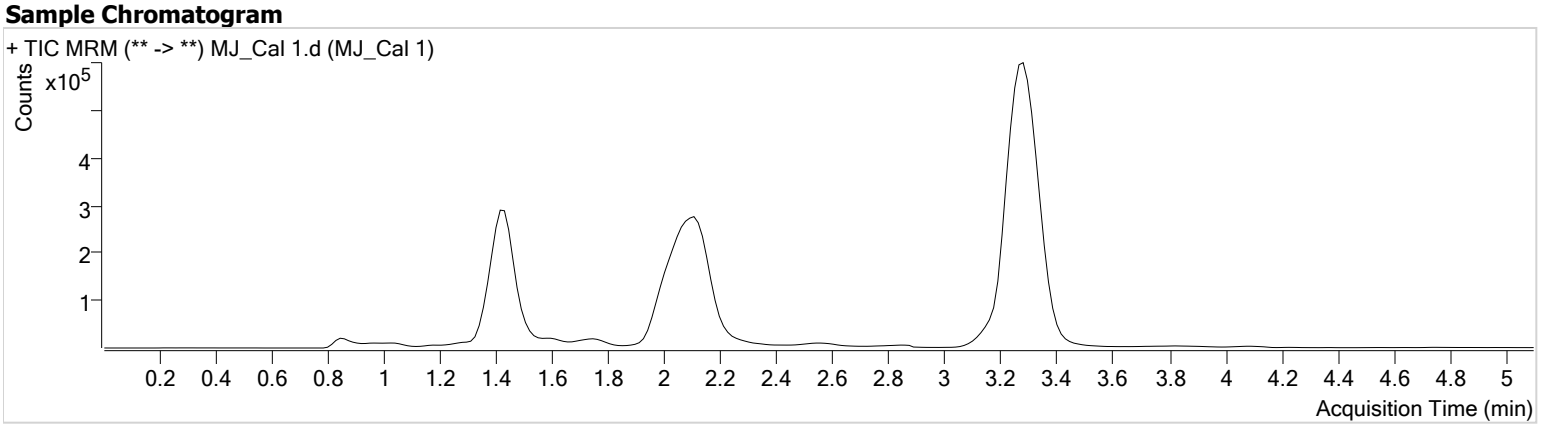
AM #27 Cannabinoid Quant. Results

Batch results	D:\MassHunter\Data\2020\AM 27-28\082720 AM 27 AM 28 P1 and P2 TS\QuantResults\AM 27_THCQ.batch.bin
Calibration Last Update	8/28/2020 10:27:05 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-A1	**Comment**	
Injection Volume	10		
Acq. Date-Time	8/27/2020 1:46:37 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.	
THC-OH	1.483	106016	∞	5.5 **Low**	∞	1228953	1.2844	ng/ml **Low**
THC-COOH	1.459	39754	∞	57.3	∞	377954	5.0769	ng/ml
THC	3.285	45264	∞	29.3	23.26	4938277	1.1710	ng/ml **Low**

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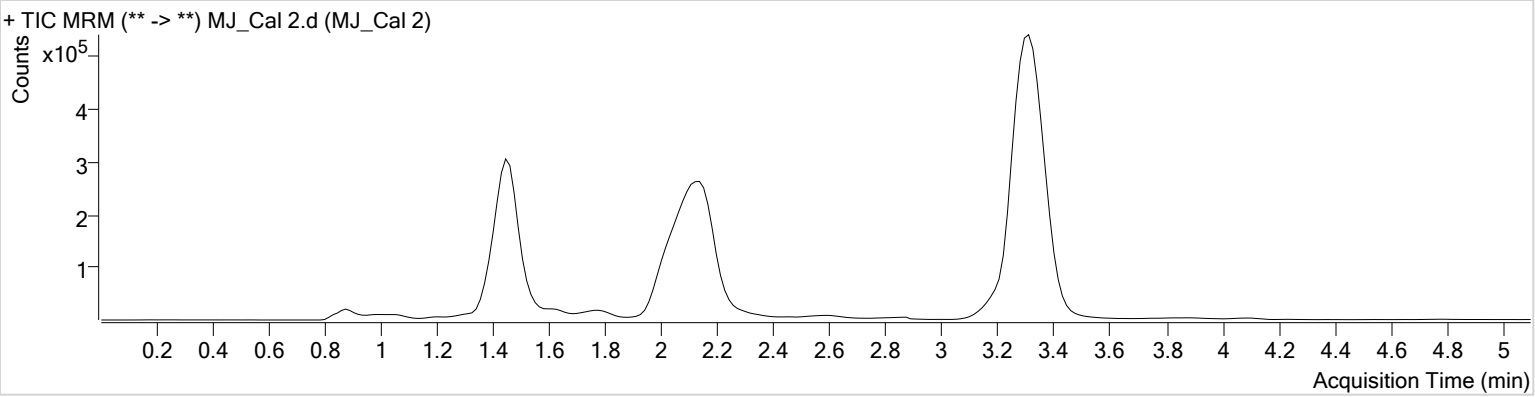
AM #27 Cannabinoid Quant. Results

Batch results D:\MassHunter\Data\2020\AM 27-28\082720 AM 27 AM 28 P1 and P2 TS\QuantResults\AM 27_THCQ.batch.bin
Calibration Last Update 8/28/2020 10:27:05 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-B1	**Comment**	
Injection Volume	10		
Acq. Date-Time	8/27/2020 1:54:21 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.		
THC-OH	1.483	137831	∞	8.5	220.03	1222972	2.7390	ng/ml	Low
THC-COOH	1.489	82399	∞	58.8	∞	368529	9.9368	ng/ml	
THC	3.330	112792	417.67	26.7	121.81	4396474	2.8851	ng/ml	Low

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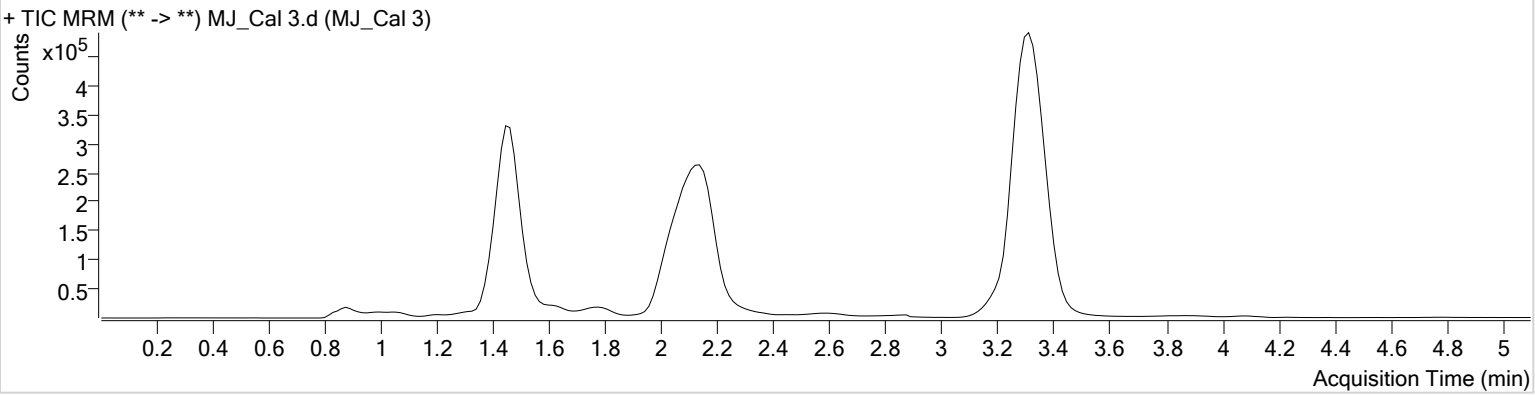
AM #27 Cannabinoid Quant. Results

Batch results D:\MassHunter\Data\2020\AM 27-28\082720 AM 27 AM 28 P1 and P2 TS\QuantResults\AM 27_THCQ.batch.bin
Calibration Last Update 8/28/2020 10:27:05 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-C1	**Comment**	
Injection Volume	10		
Acq. Date-Time	8/27/2020 2:01:55 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.	
THC-OH	1.468	182998	∞	9.0	∞	1192591	4.9810	ng/ml
THC-COOH	1.489	168655	∞	59.3	∞	357943	20.0990	ng/ml
THC	3.315	171121	714.50	26.7	112.40	3898395	4.7812	ng/ml

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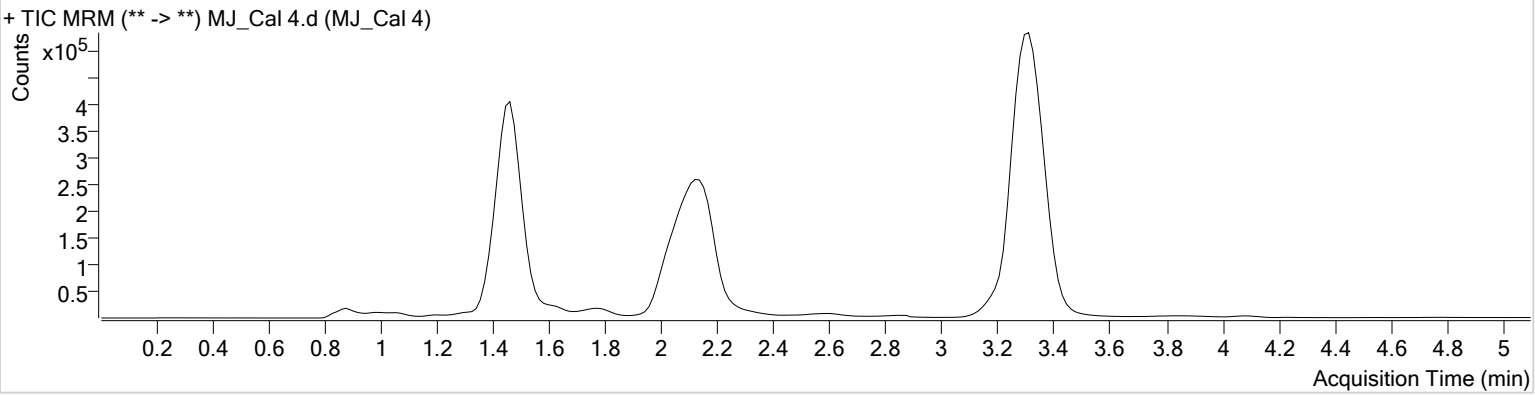
AM #27 Cannabinoid Quant. Results

Batch results	D:\MassHunter\Data\2020\AM 27-28\082720 AM 27 AM 28 P1 and P2 TS\QuantResults\AM 27_THCQ.batch.bin
Calibration Last Update	8/28/2020 10:27:05 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-D1	**Comment**	
Injection Volume	10		
Acq. Date-Time	8/27/2020 2:09:30 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.	
THC-OH	1.453	309042	∞	9.3	∞	1179431	10.9555	ng/ml
THC-COOH	1.474	414808	∞	59.5	∞	353285	48.9520	ng/ml
THC	3.315	352274	4289.02	26.0	246.00	4016963	9.3345	ng/ml

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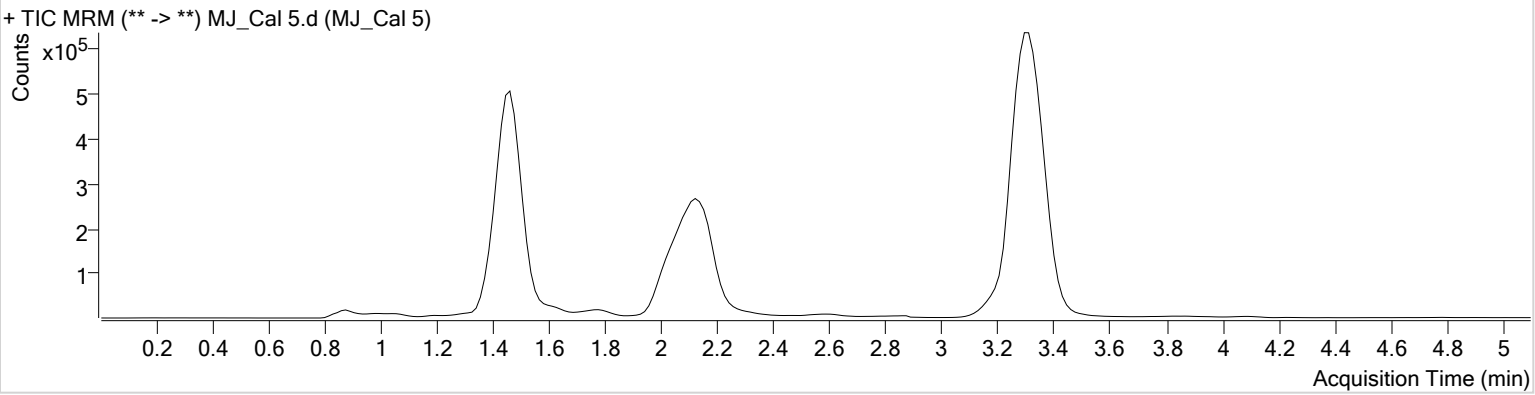
AM #27 Cannabinoid Quant. Results

Batch results D:\MassHunter\Data\2020\AM 27-28\082720 AM 27 AM 28 P1 and P2 TS\QuantResults\AM 27_THCQ.batch.bin
Calibration Last Update 8/28/2020 10:27:05 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-E1	**Comment**	
Injection Volume	10		
Acq. Date-Time	8/27/2020 2:17:04 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.	
THC-OH	1.453	607278	∞	11.7	480.21	1167030	25.1703	ng/ml
THC-COOH	1.474	626585	∞	60.2	∞	344862	75.3341	ng/ml
THC	3.315	948665	1754.83	25.2	1488.96	4114299	24.1874	ng/ml

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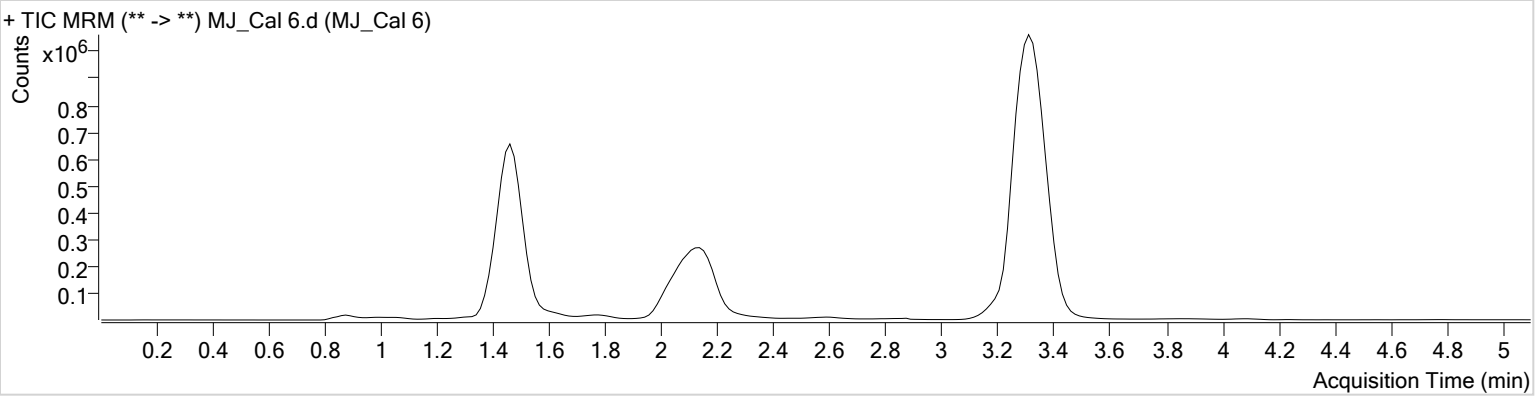
AM #27 Cannabinoid Quant. Results

Batch results D:\MassHunter\Data\2020\AM 27-28\082720 AM 27 AM 28 P1 and P2 TS\QuantResults\AM 27_THCQ.batch.bin
Calibration Last Update 8/28/2020 10:27:05 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-F1	**Comment**	
Injection Volume	10		
Acq. Date-Time	8/27/2020 2:24:38 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.	
THC-OH	1.453	1124676	∞	12.4	∞	1164300	49.6895	ng/ml
THC-COOH	1.489	825990	∞	60.1	∞	341570	100.0143	ng/ml
THC	3.330	2593448	∞	25.1	2463.28	5484863	49.3711	ng/ml

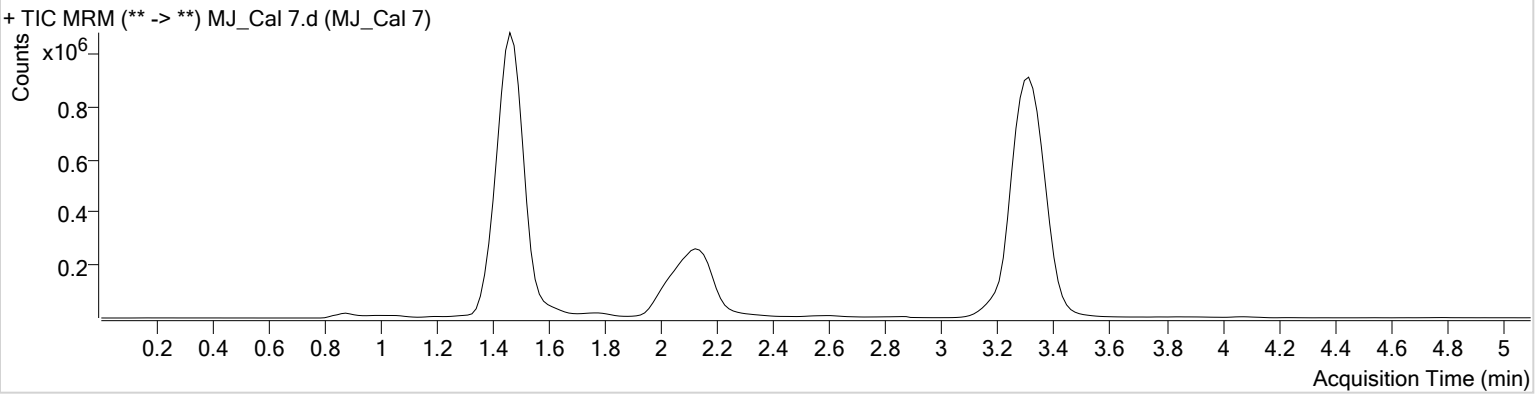
TS

AM #27 Cannabinoid Quant. Results

Batch results D:\MassHunter\Data\2020\AM 27-28\082720 AM 27 AM 28 P1 and P2 TS\QuantResults\AM 27_THCQ.batch.bin
Calibration Last Update 8/28/2020 10:27:05 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-G1	**Comment**	
Injection Volume	10		
Acq. Date-Time	8/27/2020 2:32:13 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.	
THC-OH	1.453	2044380	∞	12.6	∞	1092918	99.4647	ng/ml
THC-COOH	1.489	1910789	∞	62.3	∞	313927	250.5868	ng/ml
THC	3.315	3460094	∞	25.9	∞	3524573	102.2696	ng/ml