REVIEWED
By Sarah Pickle at 10:43 am, Dec 23, 2019

12/18/2019

15

Worklist: 3896

LAB_CASE	ITEM	ITEM_TYPE	DESCRIPTION
M2019-3507	3	BCK	AM 27 Blood THC Quant by LC-QQQ
M2019-4718	2	BCK	AM 27 Blood THC Quant by LC-QQQ
M2019-4835	2	BCK	AM 27 Blood THC Quant by LC-QQQ
M2019-5191	1	BCK	AM 27 Blood THC Quant by LC-QQQ
M2019-5282	2	BCK	AM 27 Blood THC Quant by LC-QQQ
P2019-3530	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2019-3532	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2019-3534	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2019-3592	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2019-3631	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2019-3644	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2019-3645	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2019-3677	1	BCK	AM 27 Blood THC Quant by LC-QQQ

AM# 27: Quantitation of THC and Metabolites in Blood by LC-MS/MS 15

Extraction Date: 12/19/19
Plate lot#: IDP-108-190716

Analyst: Tamara Salazar
Plate Expiration: 01/16/2020

Mobile phase A: 0.1% Formic Acid in LCMS Water
MTBE LCMS Methanol
Blank Blood Lot: Hemostat 445283-3
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/urine (calibrated pipette) Pipette ID: 16** 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, 500µl saturated phosphate buffer for urine 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.
Worklist path: *D:\MassHunter\Data\2019\AM 27\121919 THCQ wklst 3896 TS*
Batch Name: *THCQ TS*
☒ 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

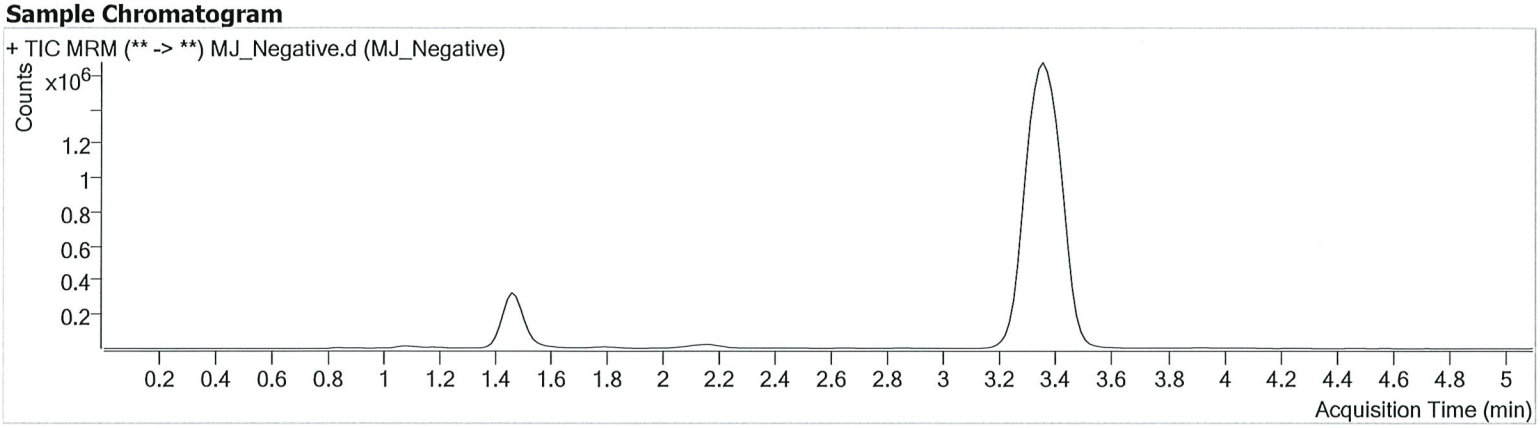
COMMENTS: *Curves limited: THC-OH 3-100*

AM #27 Cannabinoid Quant. Results

Batch results D:\MassHunter\Data\2019\AM 27\121919 THCQ wklst 3896 TS\QuantResults\THCQ TS.batch.bin
Calibration Last Update 12/23/2019 8:26:42 AM

Instrument	Falco	**Data File**	MJ_Negative.d
Type	Sample	**Sample**	MJ_Negative
Acq. Method	AM 27 THC quant.m	**Operator**	Tamara Salazar
Sample Position	P3-A2	**Comment**	
Injection Volume	10		
Acq. Date-Time	12/19/2019 12:29:08 PM		
Sample Info.			

Sample Chromatogram



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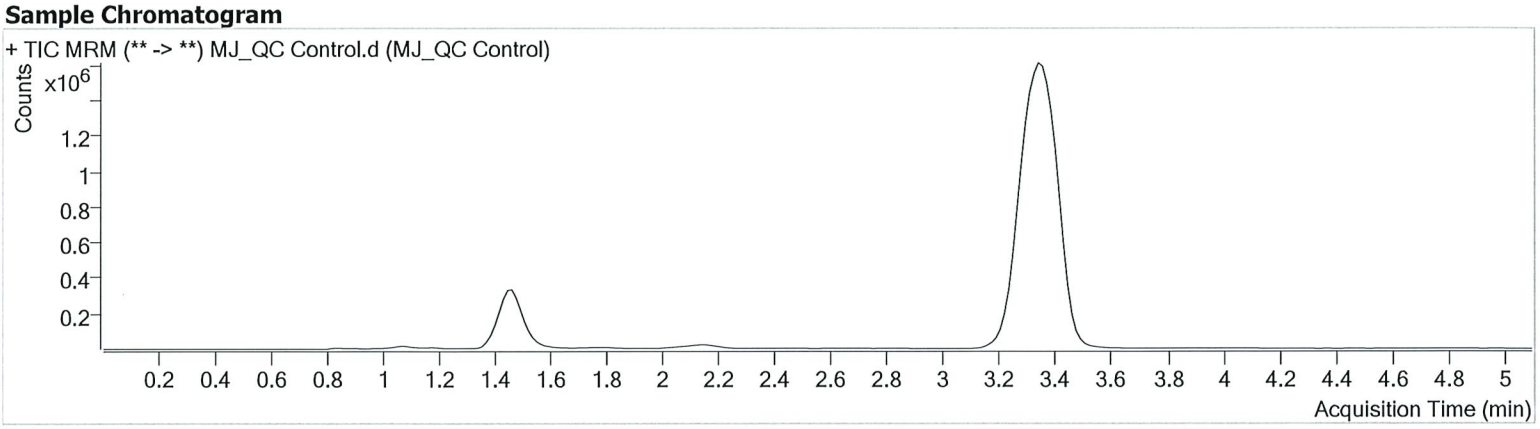
AM #27 Cannabinoid Quant. Results

Batch results D:\MassHunter\Data\2019\AM 27\121919 THCQ wklst 3896 TS\QuantResults\THCQ TS.batch.bin
Calibration Last Update 12/23/2019 8:26:42 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	12/19/2019 12:13:57 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.	
THC-OH	1.468	126422	∞	10.1	273.50	1319100	5.0611	ng/ml
THC-COOH	1.489	136041	1490.25	58.8	812.86	396868	13.4940	ng/ml
THC	3.360	489934	1800.60	26.2	232.67	14548920	4.3386	ng/ml

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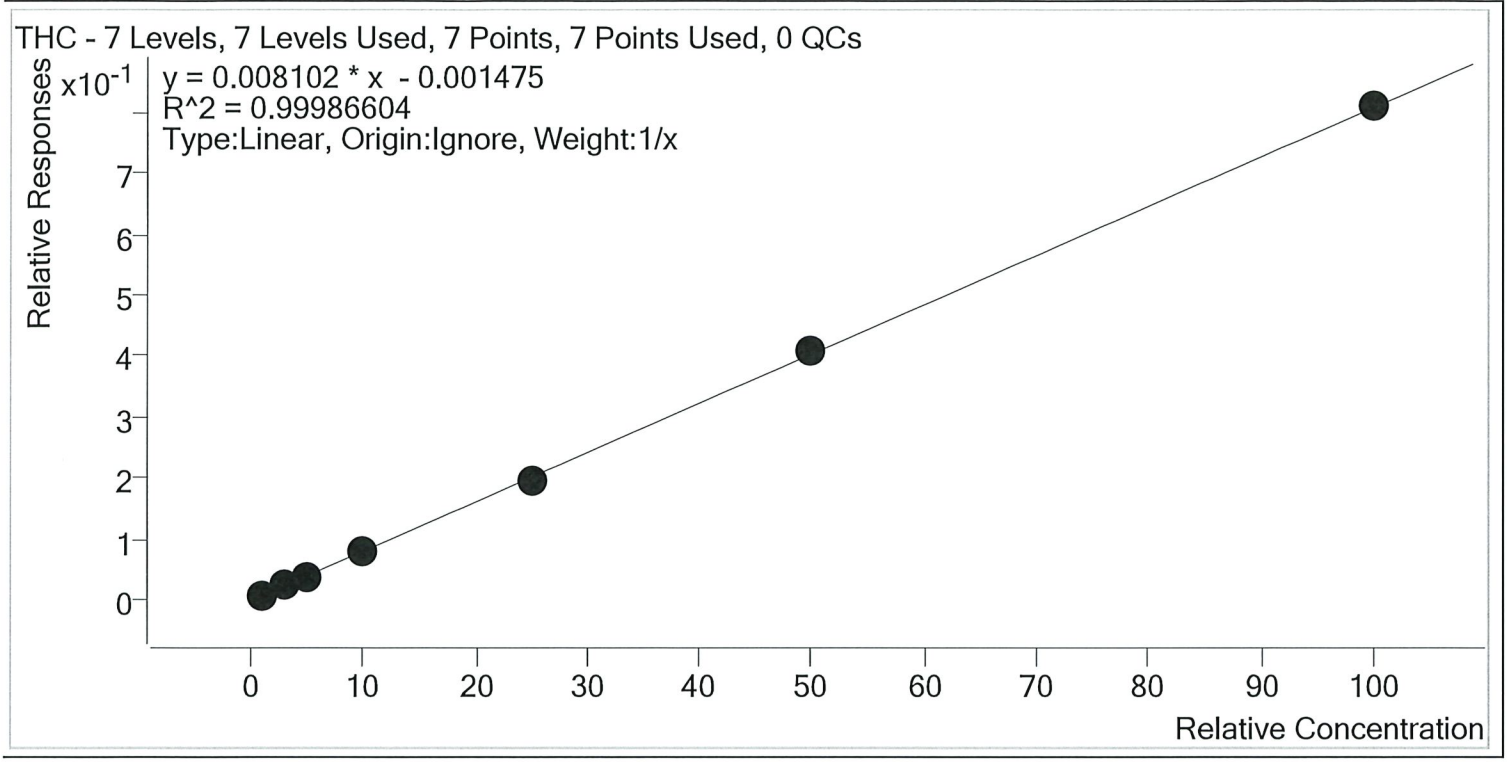
AM #27 Cannabinoids Quant. Calibration Curve Report

Batch results D:\MassHunter\Data\2019\AM 27\121919 THCQ wklst 3896 TS\QuantResults\THCQ TS.batch.bin
Last Cal. Update 12/23/2019 8:26 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	107.2
MJ_Cal 2	2	✓	3.0	2.9	97.4
MJ_Cal 3	3	✓	5.0	4.8	96.6
MJ_Cal 4	4	✓	10.0	9.9	99.2
MJ_Cal 5	5	✓	25.0	24.6	98.5
MJ_Cal 6	6	✓	50.0	50.3	100.7
MJ_Cal 7	7	✓	100.0	100.3	100.3

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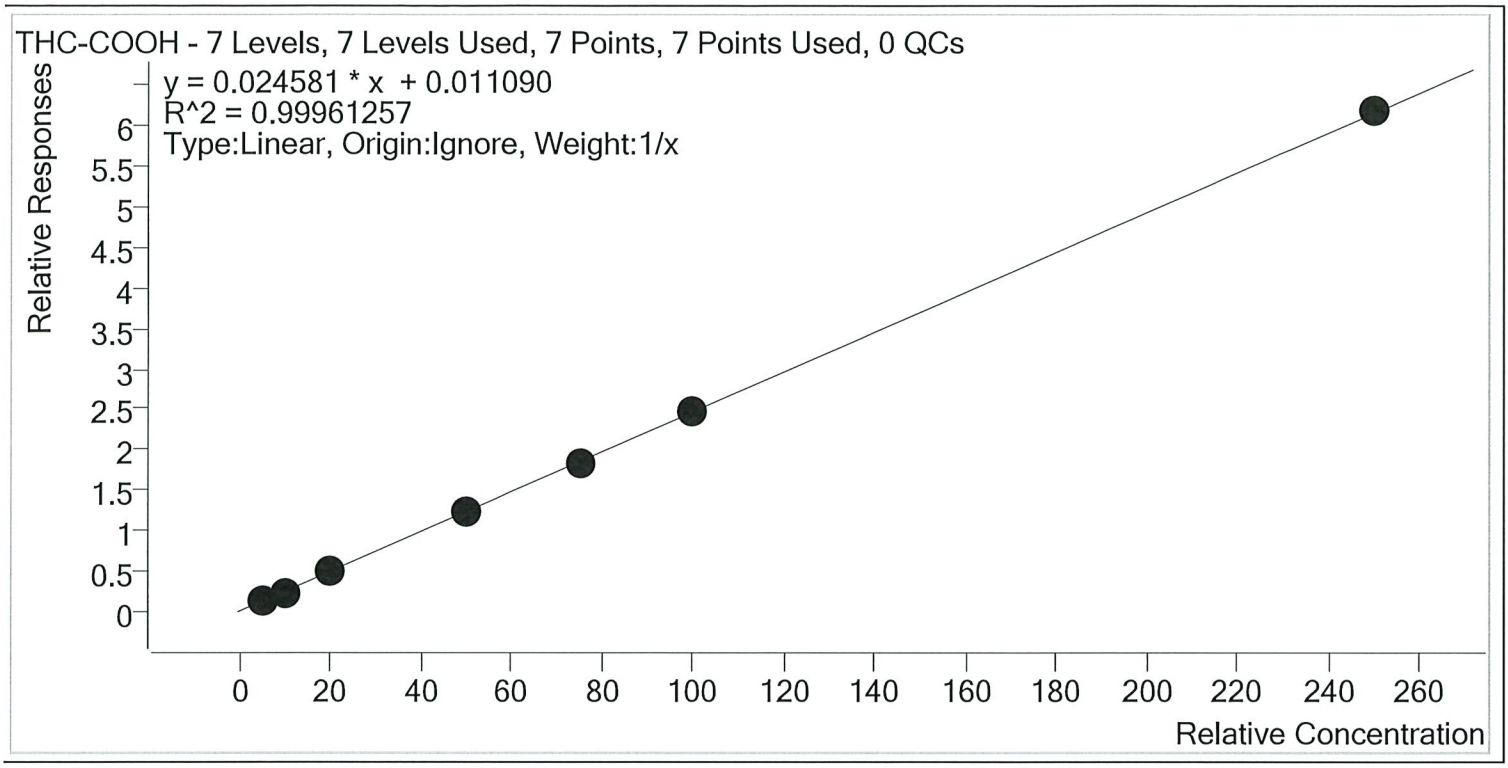
AM #27 Cannabinoids Quant. Calibration Curve Report

Batch results D:\MassHunter\Data\2019\AM 27\121919 THCQ wklst 3896 TS\QuantResults\THCQ TS.batch.bin
Last Cal. Update 12/23/2019 8:26 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	108.6
MJ_Cal 2	2	✓	10.0	9.1	91.1
MJ_Cal 3	3	✓	20.0	20.4	101.8
MJ_Cal 4	4	✓	50.0	49.3	98.6
MJ_Cal 5	5	✓	75.0	74.1	98.8
MJ_Cal 6	6	✓	100.0	100.6	100.6
MJ_Cal 7	7	✓	250.0	251.1	100.4

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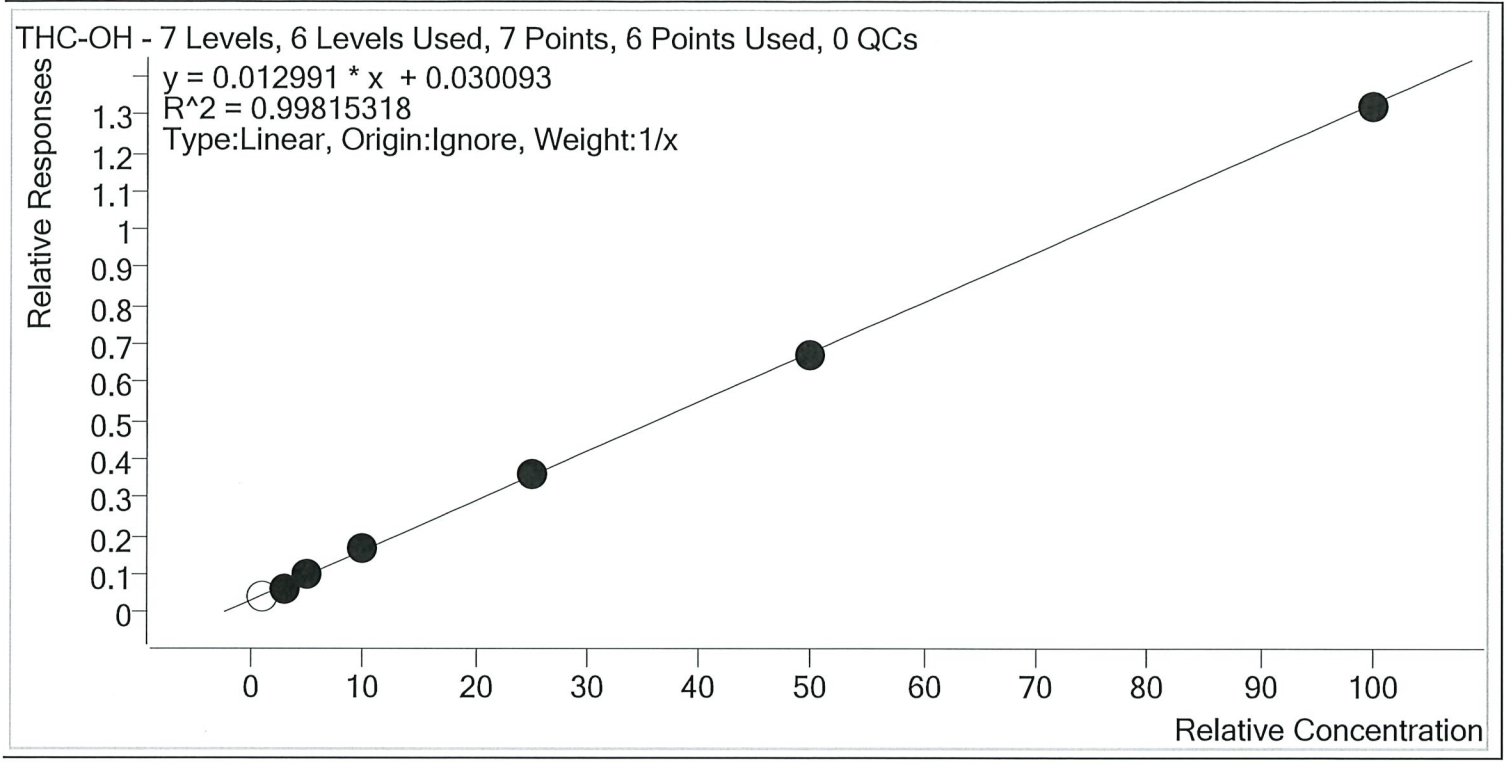
AM #27 Cannabinoids Quant. Calibration Curve Report

Batch results D:\MassHunter\Data\2019\AM 27\121919 THCQ wklst 3896 TS\QuantResults\THCQ TS.batch.bin
Last Cal. Update 12/23/2019 8:26 AM
Analyst Name ISP\Datastor
Analyte THC-OH **Internal Standard** THC-OH-D3



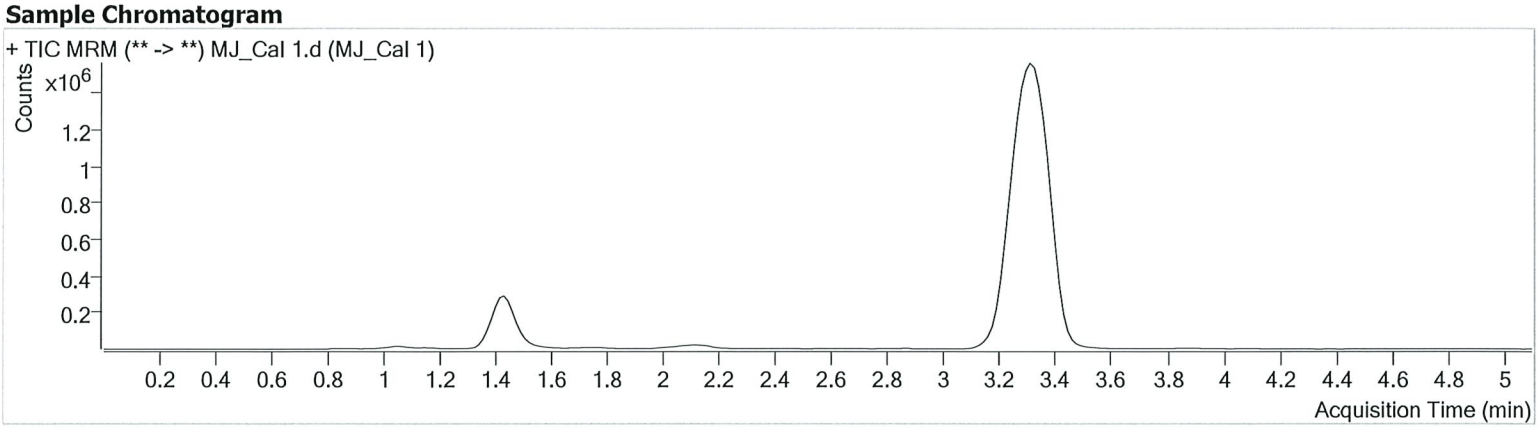
Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
MJ_Cal 1	1	×	1.0	0.9	90.4
MJ_Cal 2	2	✓	3.0	2.4	80.6
MJ_Cal 3	3	✓	5.0	5.6	112.1
MJ_Cal 4	4	✓	10.0	10.7	106.7
MJ_Cal 5	5	✓	25.0	25.7	102.7
MJ_Cal 6	6	✓	50.0	49.3	98.7
MJ_Cal 7	7	✓	100.0	99.3	99.3

AM #27 Cannabinoid Quant. Results

Batch results D:\MassHunter\Data\2019\AM 27\121919 THCQ wklst 3896 TS\QuantResults\THCQ TS.batch.bin
Calibration Last Update 12/23/2019 8:26:42 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	12/19/2019 11:13:10 AM		
Sample Info.			

Sample Chromatogram



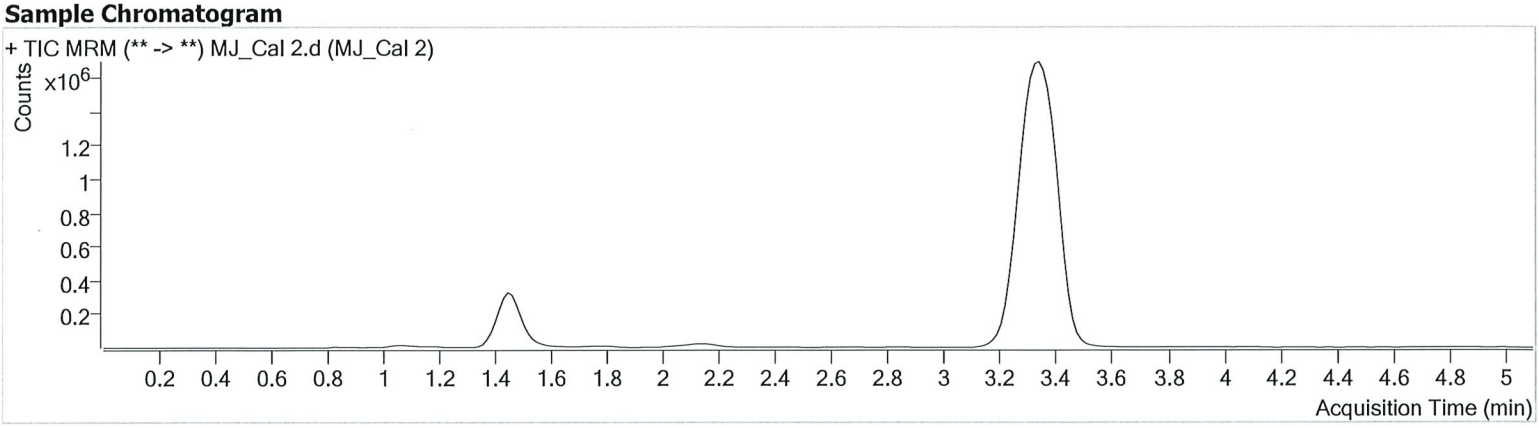
Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.	
THC-OH	1.483	52906	∞	5.5 **Low**	13.27	1264642	0.9039	ng/ml **Low**
THC-COOH	1.474	55388	∞	47.8	370.47	383183	5.4292	ng/ml **Low**
THC	3.330	106838	347.73	29.4	∞	14810585	1.0725	ng/ml **Low**

AM #27 Cannabinoid Quant. Results

Batch results D:\MassHunter\Data\2019\AM 27\121919 THCQ wklst 3896 TS\QuantResults\THCQ TS.batch.bin
Calibration Last Update 12/23/2019 8:26:42 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	12/19/2019 11:20:55 AM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.	
THC-OH	1.468	82282	∞	9.3	100.71	1338015	2.4173	ng/ml **Low**
THC-COOH	1.489	94531	∞	58.3	617.89	402151	9.1116	ng/ml **Low**
THC	3.360	348098	1447.80	27.5	1584.47	15683368	2.9217	ng/ml **Low**

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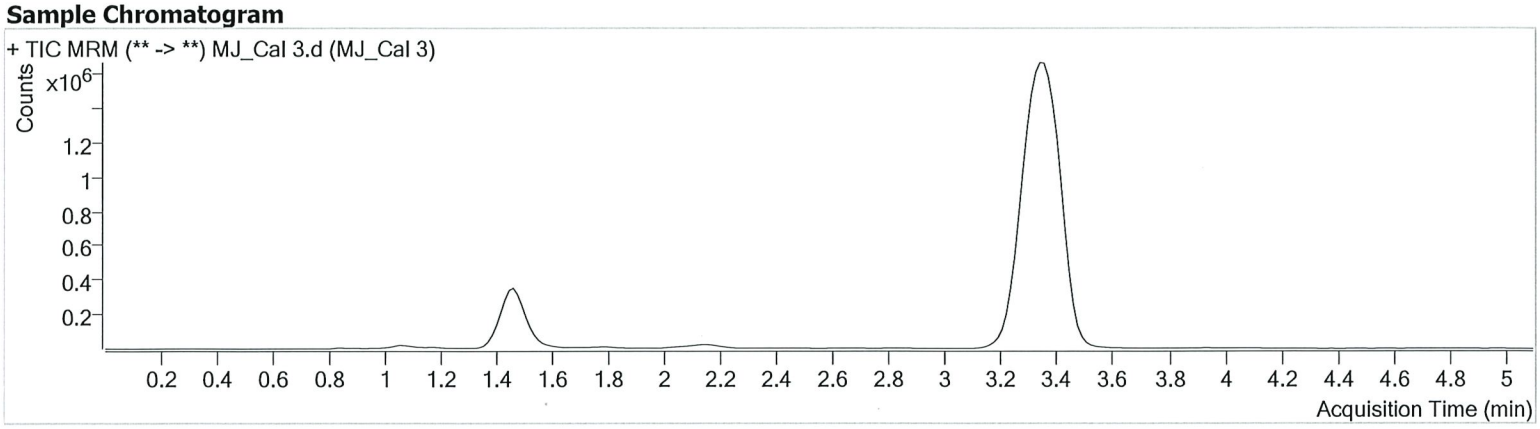
AM #27 Cannabinoid Quant. Results

Batch results D:\MassHunter\Data\2019\AM 27\121919 THCQ wklst 3896 TS\QuantResults\THCQ TS.batch.bin
Calibration Last Update 12/23/2019 8:26:42 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	12/19/2019 11:28:29 AM		
Sample Info.			

Sample Chromatogram



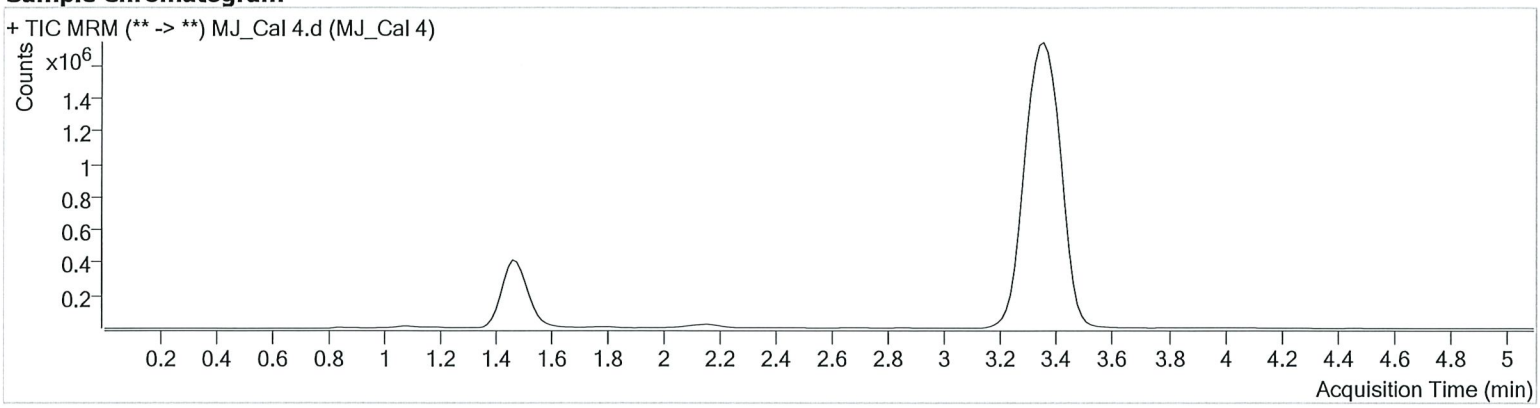
Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.	
THC-OH	1.468	139458	∞	9.6	257.16	1355146	5.6054	ng/ml
THC-COOH	1.504	204629	∞	56.4	1021.76	399940	20.3635	ng/ml
THC	3.360	574690	∞	27.3	∞	15254630	4.8322	ng/ml

AM #27 Cannabinoid Quant. Results

Batch results	D:\MassHunter\Data\2019\AM 27\121919 THCQ wklst 3896 TS\QuantResults\THCQ TS.batch.bin
Calibration Last Update	12/23/2019 8:26:42 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	12/19/2019 11:36:03 AM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.	
THC-OH	1.468	213146	∞	10.6	214.02	1263913	10.6652	ng/ml
THC-COOH	1.504	460287	720.21	59.8	1369.05	376248	49.3170	ng/ml
THC	3.375	1128066	1545.62	26.8	555.39	14292592	9.9241	ng/ml

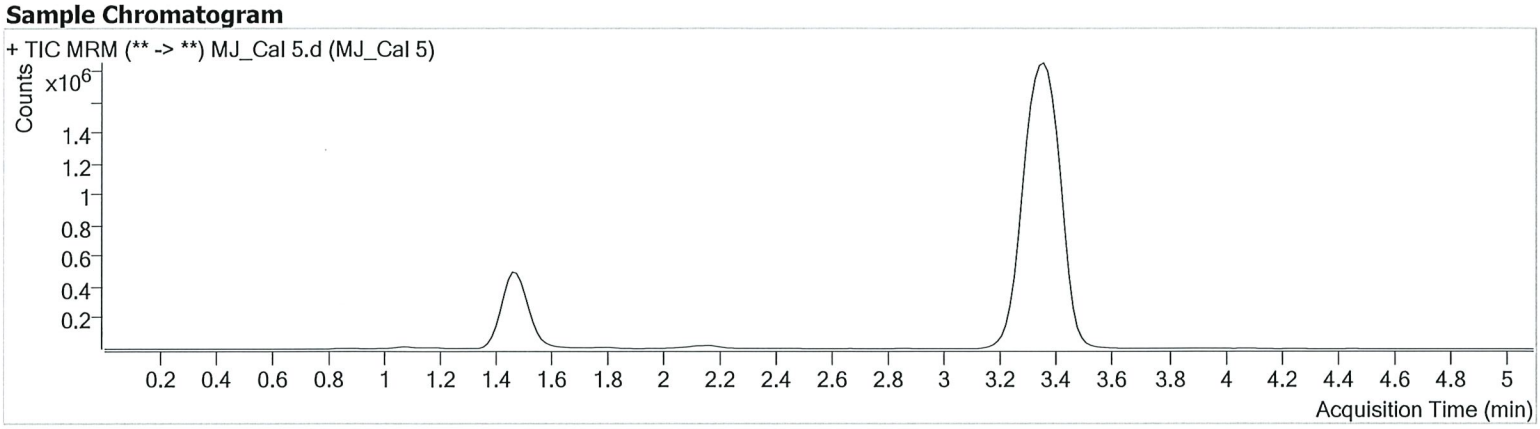
AM #27 Cannabinoid Quant. Results

TS

Batch results D:\MassHunter\Data\2019\AM 27\121919 THCQ wklst 3896 TS\QuantResults\THCQ TS.batch.bin
Calibration Last Update 12/23/2019 8:26:42 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	12/19/2019 11:43:38 AM		
Sample Info.			

Sample Chromatogram



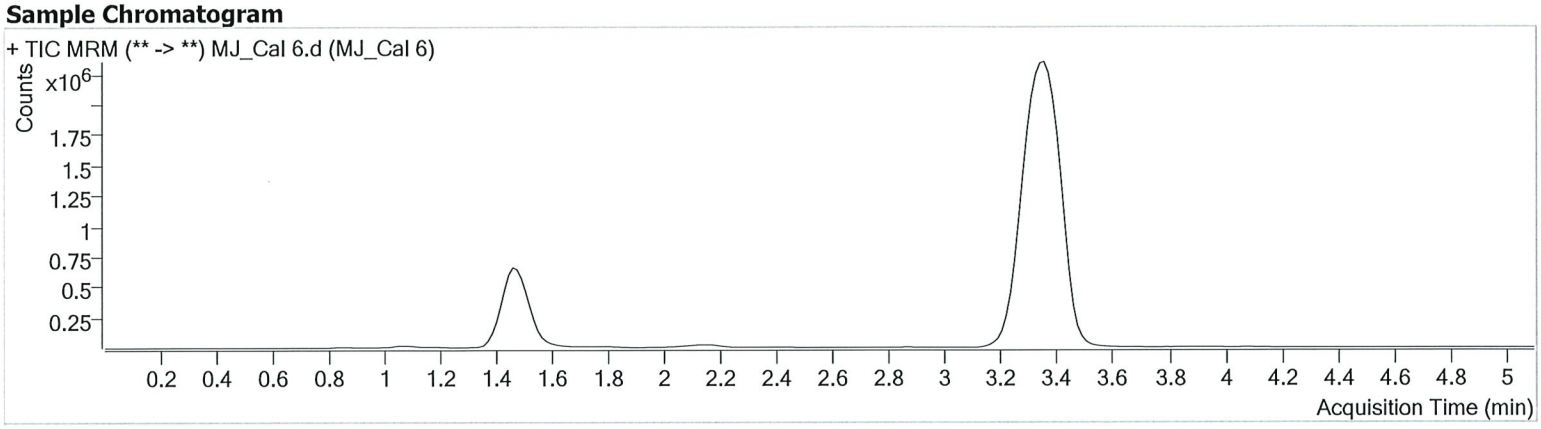
Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.	
THC-OH	1.468	453484	∞	12.2	∞	1247278	25.6715	ng/ml
THC-COOH	1.504	676116	∞	59.9	∞	368817	74.1264	ng/ml
THC	3.360	2716737	6480.73	26.2	∞	13716928	24.6286	ng/ml

AM #27 Cannabinoid Quant. Results

Batch results D:\MassHunter\Data\2019\AM 27\121919 THCQ wklst 3896 TS\QuantResults\THCQ TS.batch.bin
Calibration Last Update 12/23/2019 8:26:42 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	12/19/2019 11:51:12 AM		
Sample Info.			

Sample Chromatogram



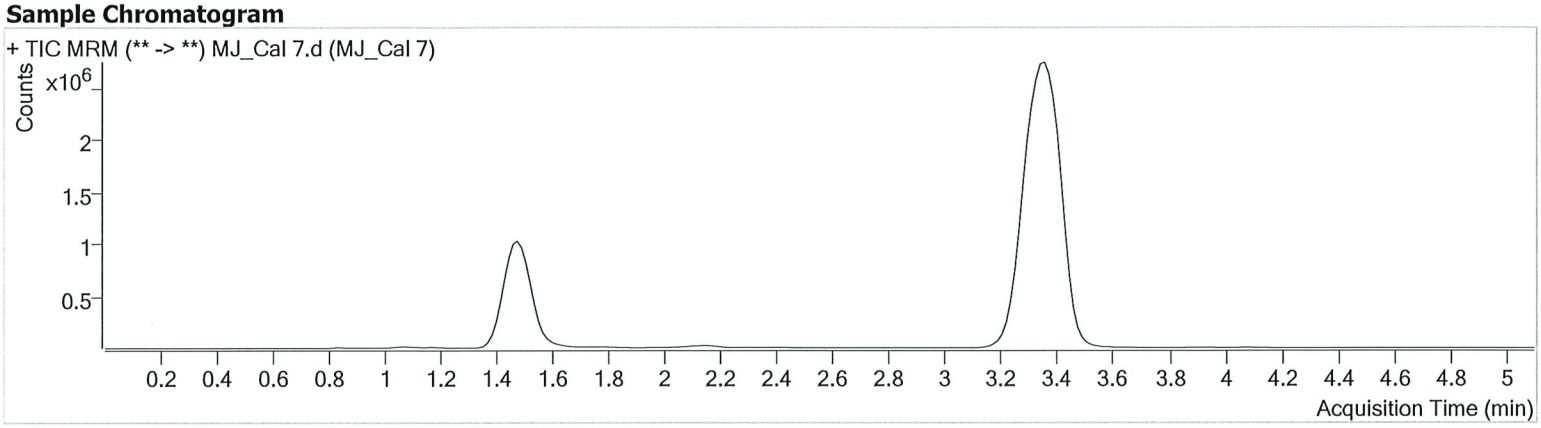
Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.	
THC-OH	1.453	893956	∞	13.6	2173.48	1332262	49.3370	ng/ml
THC-COOH	1.504	957304	∞	59.5	3884.17	385448	100.5863	ng/ml
THC	3.360	6017696	6661.18	26.5	1464.70	14808336	50.3412	ng/ml

AM #27 Cannabinoid Quant. Results

Batch results D:\MassHunter\Data\2019\AM 27\121919 THCQ wklst 3896 TS\QuantResults\THCQ TS.batch.bin
Calibration Last Update 12/23/2019 8:26:42 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	12/19/2019 11:58:47 AM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.	
THC-OH	1.453	1558020	∞	13.7	4549.52	1180231	99.3036	ng/ml
THC-COOH	1.489	2053668	∞	60.3	∞	332171	251.0659	ng/ml
THC	3.360	10225274	9082.27	26.9	∞	12608882	100.2798	ng/ml