

REVIEWED

By Tamara Salazar at 11:15 am, Dec 01, 2020

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11/30/2020

Worklist: 4638

<u>LAB CASE</u>	<u>ITEM</u>	<u>ITEM TYPE</u>	<u>DESCRIPTION</u>	
M2020-4436	1	BCK	AM 27 Blood THC Quant by LC-QQQ	
M2020-4577	2	BCK	AM 27 Blood THC Quant by LC-QQQ	
P2020-2452	1	BCK	AM 27 Blood THC Quant by LC-QQQ	
P2020-3448	1	BCK	AM 27 Blood THC Quant by LC-QQQ	
P2020-3456	1	BCK	AM 27 Blood THC Quant by LC-QQQ	
P2020-3457	1	BCK	AM 27 Blood THC Quant by LC-QQQ	
P2020-3462	1	BCK	AM 27 Blood THC Quant by LC-QQQ	
P2020-3463	1	BCK	AM 27 Blood THC Quant by LC-QQQ	
P2020-3480	1	BCK	AM 27 Blood THC Quant by LC-QQQ	
P2020-3505	1	BCK	AM 27 Blood THC Quant by LC-QQQ	
P2020-3507	1	BCK	AM 27 Blood THC Quant by LC-QQQ	
P2020-3522	1	BCK	AM 27 Blood THC Quant by LC-QQQ	
P2020-3523	1	BCK	AM 27 Blood THC Quant by LC-QQQ	
P2020-3524	1	BCK	AM 27 Blood THC Quant by LC-QQQ	

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

Extraction Date: 11/25/20
Plate lot#: IDP-108-2-200723

Analyst: Sarah Pickle
Plate Expiration: 01/23/21

Mobile phase A: 0.1% Formic Acid in LCMS Water
MTBE LCMS Methanol

Mobile phase B: 0.1% Formic acid in Acetonitrile
Hexane

Blank Blood Lot: Lampire 20L20725 **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 **1000 µL blood (calibrated pipette)** in wells of analytical (standards) plate. **Pipette ID: 3382167**
- 3. Place on shaking incubator at ambient temp., 900rpm for 15 minutes.
- 4. Pipette **500 µL 0.1% formic acid in LCMS water** in wells of analytical plate.
- 5. Place on shaking incubator at ambient temp., 900rpm for 15 minutes.
- 6. Transfer **800 µL 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 85-95 PSI- Selector to the right)
- 8. Wait 5 minutes.
- 9. Add **2.25 mL MTBE. (Add in 3 increments of 750 µL)**
- 10. Wait 5 minutes.
- 11. Apply positive pressure for approx. 15 seconds. *(12-15 PSI- Selector to the left).*
- 12. Add **2.25 mL Hexane. (Add in 3 increments of 750 µL)**
- 13. Wait 5 minutes.
- 14. Apply positive pressure for approx. 15 seconds. *(12-15 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 **100 µL 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 r² 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:

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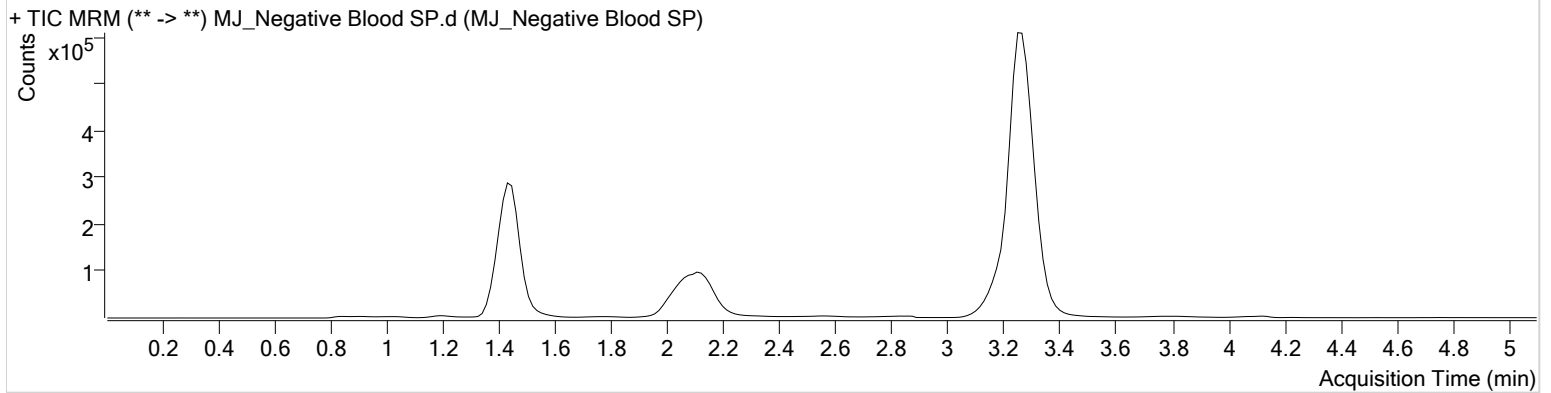


AM #27 Cannabinoid Quant. Results

Batch results D:\MassHunter\Data\2020\AM 27-28\112520 AM 27 28 SJ SP\QuantResults\AM 27 SP.batch.bin
Calibration Last Update 11/30/2020 10:13:34 AM

Instrument	Instrument 1	Data File	MJ_Negative Blood SP.d
Type	Sample	Sample	MJ_Negative Blood SP
Acq. Method	AM 27 THCQ.m	Operator	Sarah Pickle
Sample Position	P4-A2	Comment	
Injection Volume	10		
Acq. Date-Time	11/26/2020 1:56:15 PM		
Sample Info.			

Sample Chromatogram



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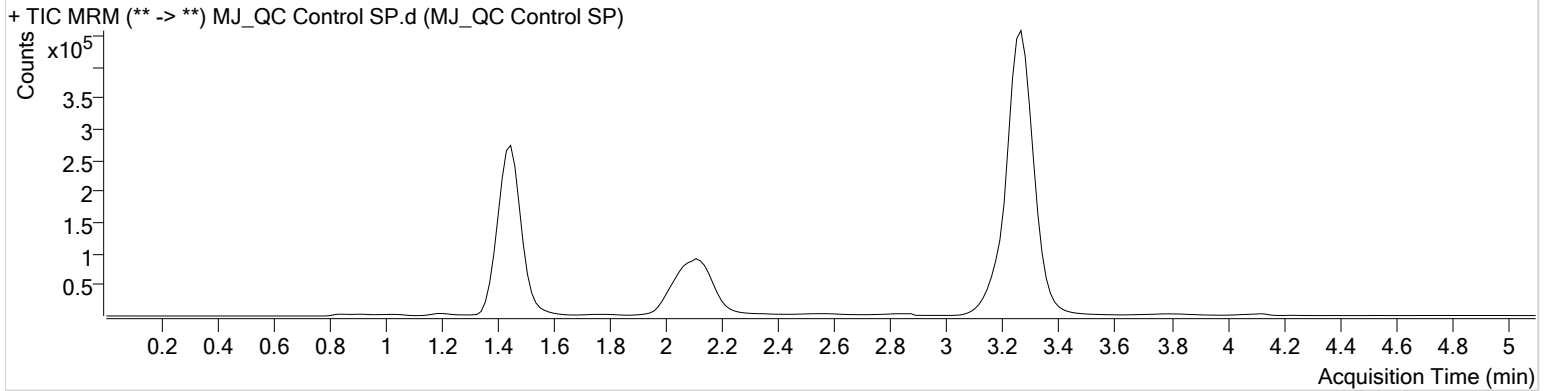


AM #27 Cannabinoid Quant. Results

Batch results D:\MassHunter\Data\2020\AM 27-28\112520 AM 27 28 SJ SP\QuantResults\AM 27 SP.batch.bin
Calibration Last Update 11/30/2020 10:13:34 AM

Instrument	Instrument 1	Data File	MJ_QC Control SP.d
Type	Sample	Sample	MJ_QC Control SP
Acq. Method	AM 27 THCQ.m	Operator	Sarah Pickle
Sample Position	P4-H1	Comment	
Injection Volume	10		
Acq. Date-Time	11/26/2020 1:41:05 PM		

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC-OH	1.438	68973	546.07	12.9	227.85	951965	4.6694 ng/ml
THC-COOH	1.474	126351	∞	64.2	∞	329935	15.2436 ng/ml
THC	3.270	130797	990.21	30.9	308.79	3037295	4.6030 ng/ml

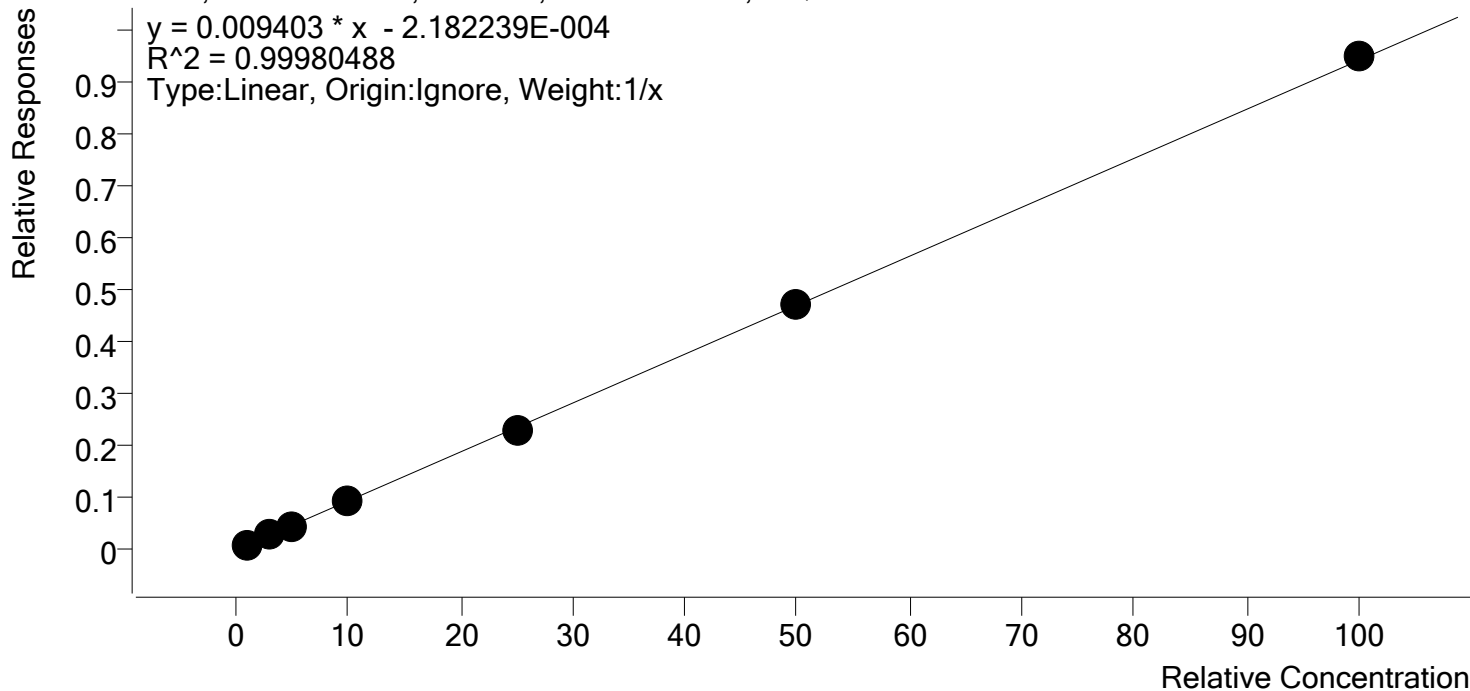
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AM #27 Cannabinoids Quant. Calibration Curve Report

Batch results D:\MassHunter\Data\2020\AM 27-28\112520 AM 27 28 SJ SP\QuantResults\AM 27 SP.batch.bin
Last Cal. Update 11/30/2020 10:13 AM
Analyst Name ISP\datastor
Analyte THC **Internal Standard** THC-D3

THC - 7 Levels, 7 Levels Used, 7 Points, 7 Points Used, 0 QCs



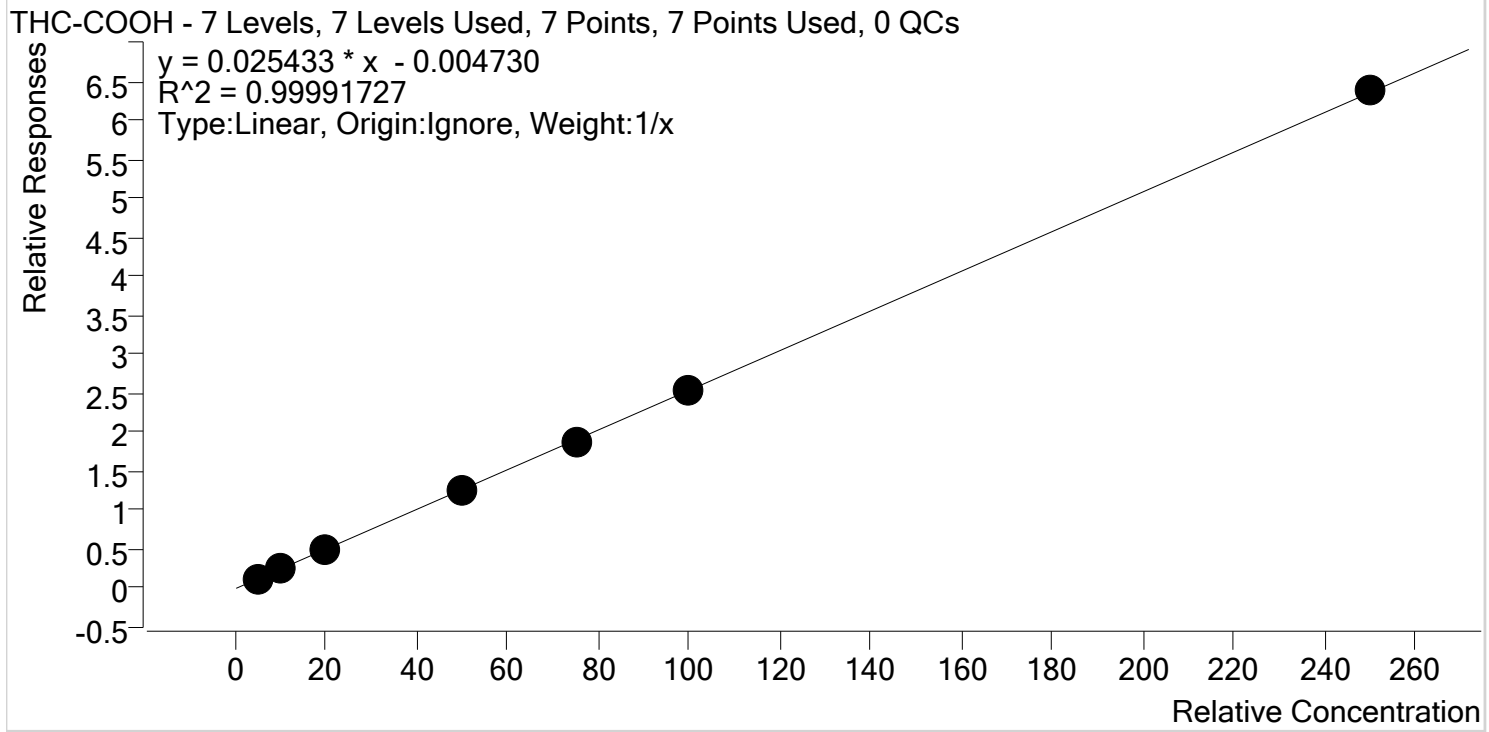
Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
MJ_Cal 1 SP	1	✓	1.0	1.1	106.2
MJ_Cal 2 SP	2	✓	3.0	3.0	99.7
MJ_Cal 3 SP	3	✓	5.0	4.9	98.3
MJ_Cal 4 SP	4	✓	10.0	9.7	96.9
MJ_Cal 5 SP	5	✓	25.0	24.5	97.9
MJ_Cal 6 SP	6	✓	50.0	50.1	100.3
MJ_Cal 7 SP	7	✓	100.0	100.7	100.7

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AM #27 Cannabinoids Quant. Calibration Curve Report

Batch results D:\MassHunter\Data\2020\AM 27-28\112520 AM 27 28 SJ SP\QuantResults\AM 27 SP.batch.bin
Last Cal. Update 11/30/2020 10:13 AM
Analyst Name ISP\datastor
Analyte THC-COOH **Internal Standard** THC-COOH-D9



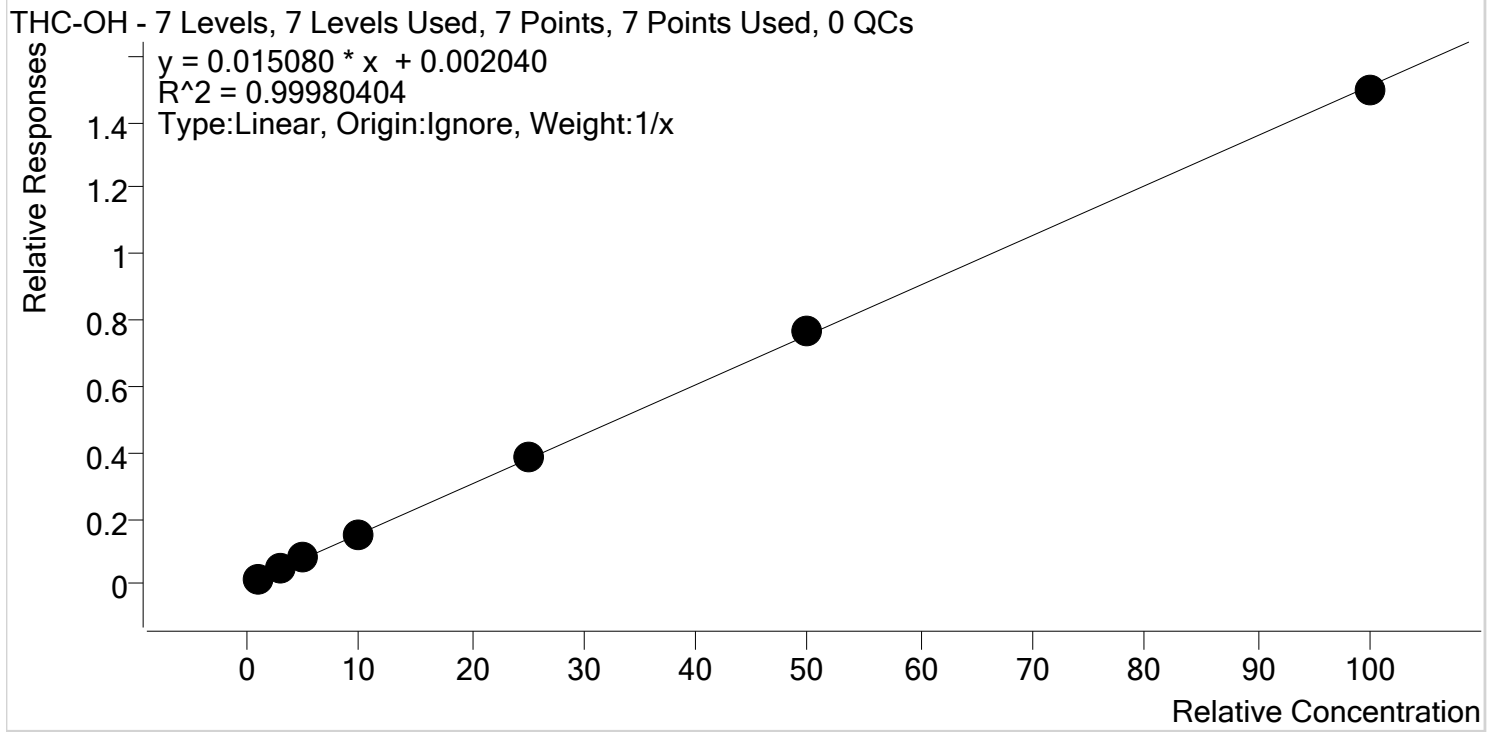
Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
MJ_Cal 1 SP	1	✓	5.0	5.0	100.7
MJ_Cal 2 SP	2	✓	10.0	10.1	101.4
MJ_Cal 3 SP	3	✓	20.0	20.0	99.8
MJ_Cal 4 SP	4	✓	50.0	49.0	98.0
MJ_Cal 5 SP	5	✓	75.0	74.5	99.3
MJ_Cal 6 SP	6	✓	100.0	100.4	100.4
MJ_Cal 7 SP	7	✓	250.0	251.0	100.4

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AM #27 Cannabinoids Quant. Calibration Curve Report

Batch results D:\MassHunter\Data\2020\AM 27-28\112520 AM 27 28 SJ SP\QuantResults\AM 27 SP.batch.bin
Last Cal. Update 11/30/2020 10:13 AM
Analyst Name ISP\datastor
Analyte THC-OH **Internal Standard** THC-OH-D3



Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
MJ_Cal 1 SP	1	✓	1.0	1.0	102.6
MJ_Cal 2 SP	2	✓	3.0	2.9	96.5
MJ_Cal 3 SP	3	✓	5.0	5.0	100.0
MJ_Cal 4 SP	4	✓	10.0	9.9	99.0
MJ_Cal 5 SP	5	✓	25.0	25.3	101.2
MJ_Cal 6 SP	6	✓	50.0	50.8	101.7
MJ_Cal 7 SP	7	✓	100.0	99.0	99.0

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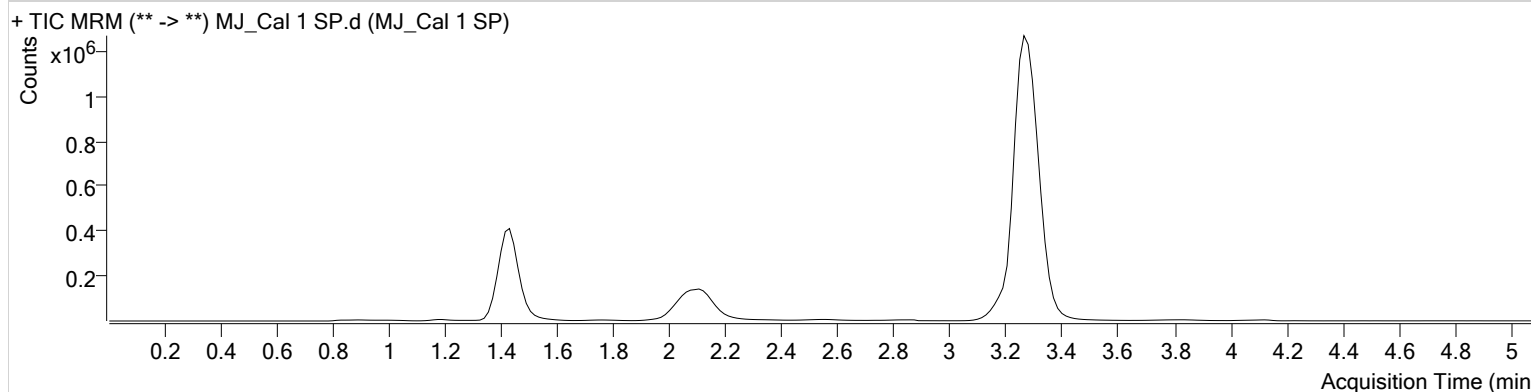


AM #27 Cannabinoid Quant. Results

Batch results D:\MassHunter\Data\2020\AM 27-28\112520 AM 27 28 SJ SP\QuantResults\AM 27 SP.batch.bin
Calibration Last Update 11/30/2020 10:13:34 AM

Instrument	Instrument 1	Data File	MJ_Cal 1 SP.d
Type	Cal	Sample	MJ_Cal 1 SP
Acq. Method	AM 27 THCQ.m	Operator	Sarah Pickle
Sample Position	P4-A1	Comment	
Injection Volume	10		
Acq. Date-Time	11/26/2020 12:40:17 PM		

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC-OH	1.438	26093	∞	11.9	28.08	1490090	1.0260 ng/ml Low
THC-COOH	1.459	60035	∞	62.5	∞	486681	5.0363 ng/ml
THC	3.285	78130	950.42	31.2	126.79	7995815	1.0624 ng/ml Low

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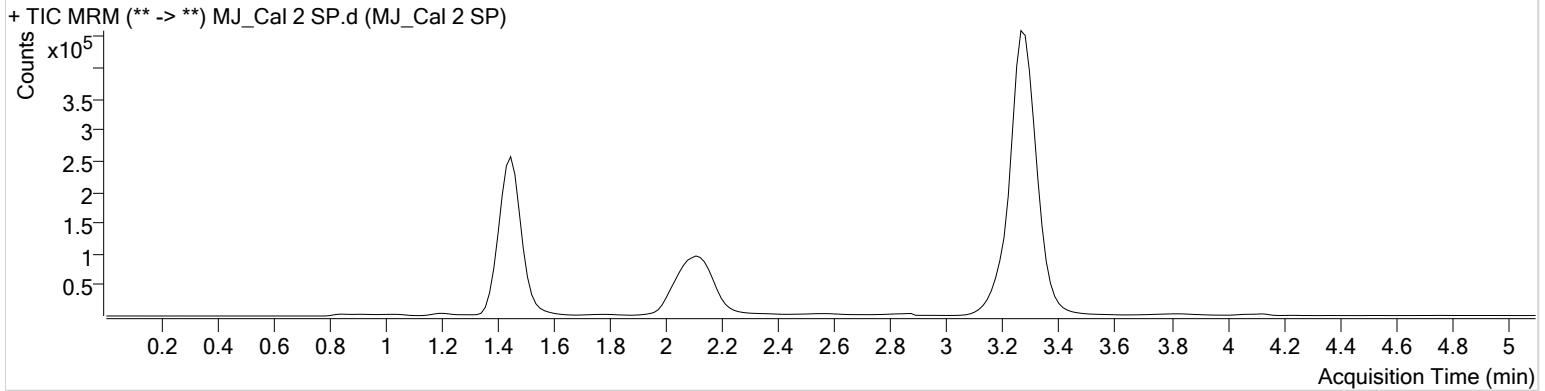


AM #27 Cannabinoid Quant. Results

Batch results D:\MassHunter\Data\2020\AM 27-28\112520 AM 27 28 SJ SP\QuantResults\AM 27 SP.batch.bin
Calibration Last Update 11/30/2020 10:13:34 AM

Instrument	Instrument 1	Data File	MJ_Cal 2 SP.d
Type	Cal	Sample	MJ_Cal 2 SP
Acq. Method	AM 27 THCQ.m	Operator	Sarah Pickle
Sample Position	P4-B1	Comment	
Injection Volume	10		
Acq. Date-Time	11/26/2020 12:48:01 PM		

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC-OH	1.453	41682	∞	14.1	∞	912545	2.8937 ng/ml Low
THC-COOH	1.474	81733	∞	59.5	∞	322930	10.1377 ng/ml
THC	3.270	84288	771.69	29.0	162.79	3021101	2.9903 ng/ml Low

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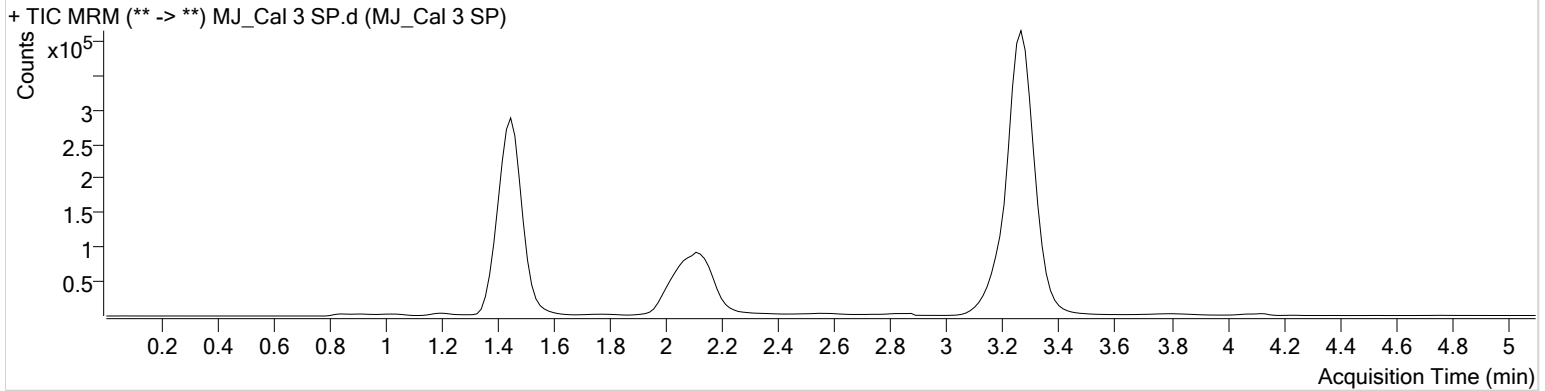


AM #27 Cannabinoid Quant. Results

Batch results D:\MassHunter\Data\2020\AM 27-28\112520 AM 27 28 SJ SP\QuantResults\AM 27 SP.batch.bin
Calibration Last Update 11/30/2020 10:13:34 AM

Instrument	Instrument 1	Data File	MJ_Cal 3 SP.d
Type	Cal	Sample	MJ_Cal 3 SP
Acq. Method	AM 27 THCQ.m	Operator	Sarah Pickle
Sample Position	P4-C1	Comment	
Injection Volume	10		
Acq. Date-Time	11/26/2020 12:55:35 PM		

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC-OH	1.438	75483	∞	13.5	71.44	975040	4.9985 ng/ml
THC-COOH	1.474	170870	∞	64.1	∞	339693	19.9642 ng/ml
THC	3.270	128034	519.20	29.0	81.41	2783182	4.9156 ng/ml

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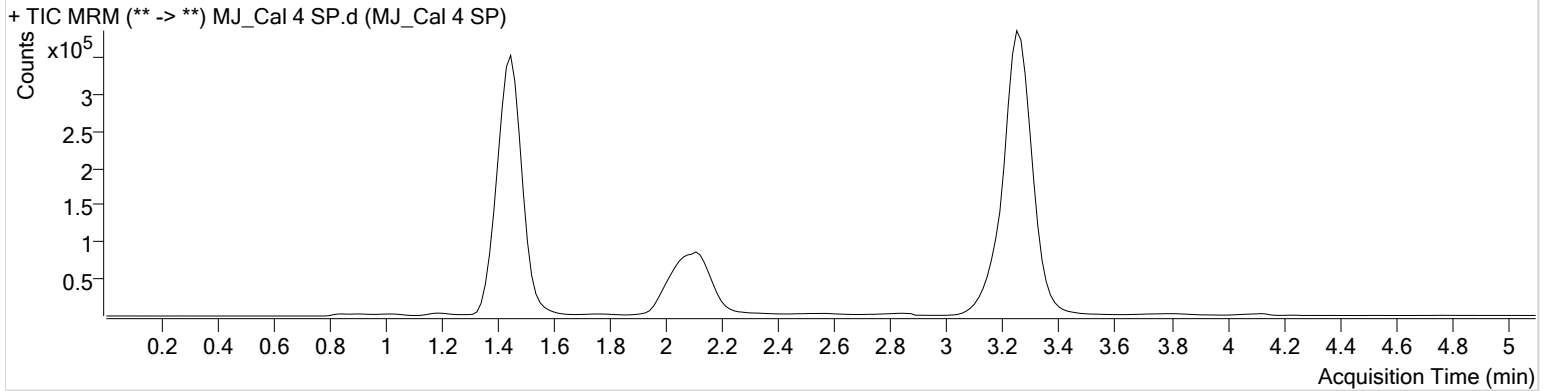


AM #27 Cannabinoid Quant. Results

Batch results D:\MassHunter\Data\2020\AM 27-28\112520 AM 27 28 SJ SP\QuantResults\AM 27 SP.batch.bin
Calibration Last Update 11/30/2020 10:13:34 AM

Instrument	Instrument 1	Data File	MJ_Cal 4 SP.d
Type	Cal	Sample	MJ_Cal 4 SP
Acq. Method	AM 27 THCQ.m	Operator	Sarah Pickle
Sample Position	P4-D1	Comment	
Injection Volume	10		
Acq. Date-Time	11/26/2020 1:03:11 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC-OH	1.438	140489	∞	13.5	∞	927953	9.9046 ng/ml
THC-COOH	1.459	395898	∞	65.3	∞	318968	48.9888 ng/ml
THC	3.254	231351	714.38	29.5	168.08	2545124	9.6903 ng/ml

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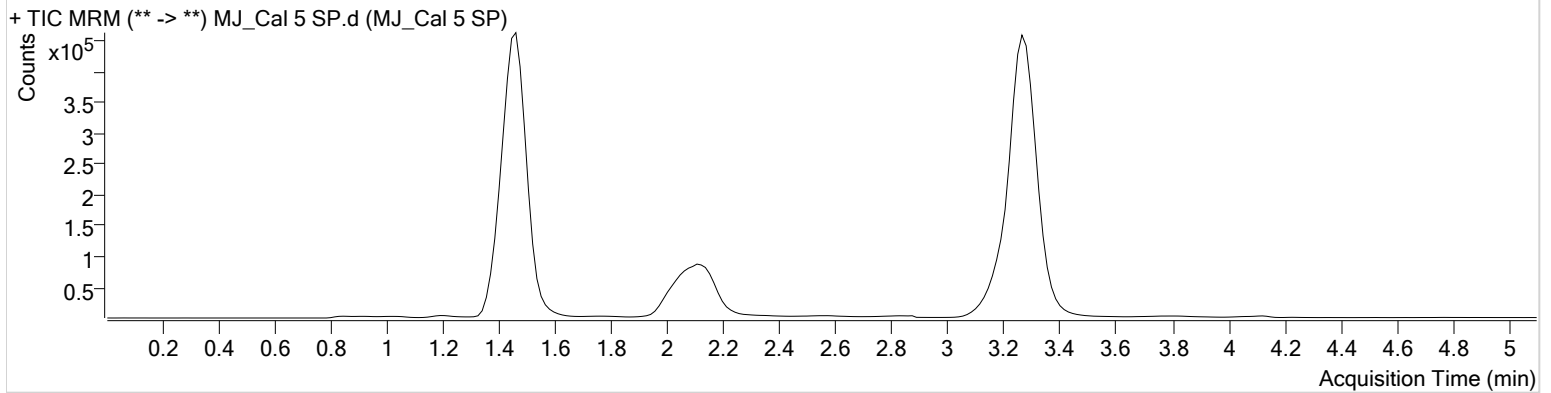


AM #27 Cannabinoid Quant. Results

Batch results D:\MassHunter\Data\2020\AM 27-28\112520 AM 27 28 SJ SP\QuantResults\AM 27 SP.batch.bin
Calibration Last Update 11/30/2020 10:13:34 AM

Instrument	Instrument 1	Data File	MJ_Cal 5 SP.d
Type	Cal	Sample	MJ_Cal 5 SP
Acq. Method	AM 27 THCQ.m	Operator	Sarah Pickle
Sample Position	P4-E1	Comment	
Injection Volume	10		
Acq. Date-Time	11/26/2020 1:10:45 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC-OH	1.453	372602	∞	12.8	601.03	971203	25.3064 ng/ml
THC-COOH	1.474	622289	∞	65.4	5231.27	329375	74.4724 ng/ml
THC	3.270	602681	1780.23	27.7	567.52	2622264	24.4657 ng/ml

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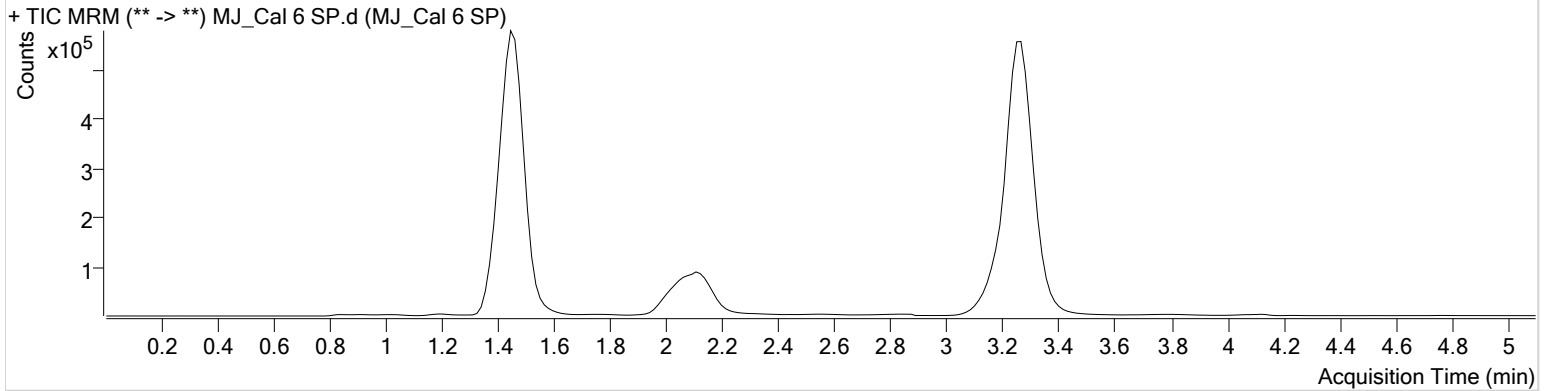
AM #27 Cannabinoid Quant. Results

Batch results D:\MassHunter\Data\2020\AM 27-28\112520 AM 27 28 SJ SP\QuantResults\AM 27 SP.batch.bin
Calibration Last Update 11/30/2020 10:13:34 AM

Instrument	Instrument 1	Data File	MJ_Cal 6 SP.d
Type	Cal	Sample	MJ_Cal 6 SP
Acq. Method	AM 27 THCQ.m	Operator	Sarah Pickle
Sample Position	P4-F1	Comment	
Injection Volume	10		
Acq. Date-Time	11/26/2020 1:18:20 PM		

Sample Info.

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC-OH	1.438	723206	∞	13.1	2239.24	940914	50.8357 ng/ml
THC-COOH	1.474	799237	∞	64.9	∞	313574	100.4035 ng/ml
THC	3.270	1205046	2233.59	27.8	6069.41	2557606	50.1310 ng/ml

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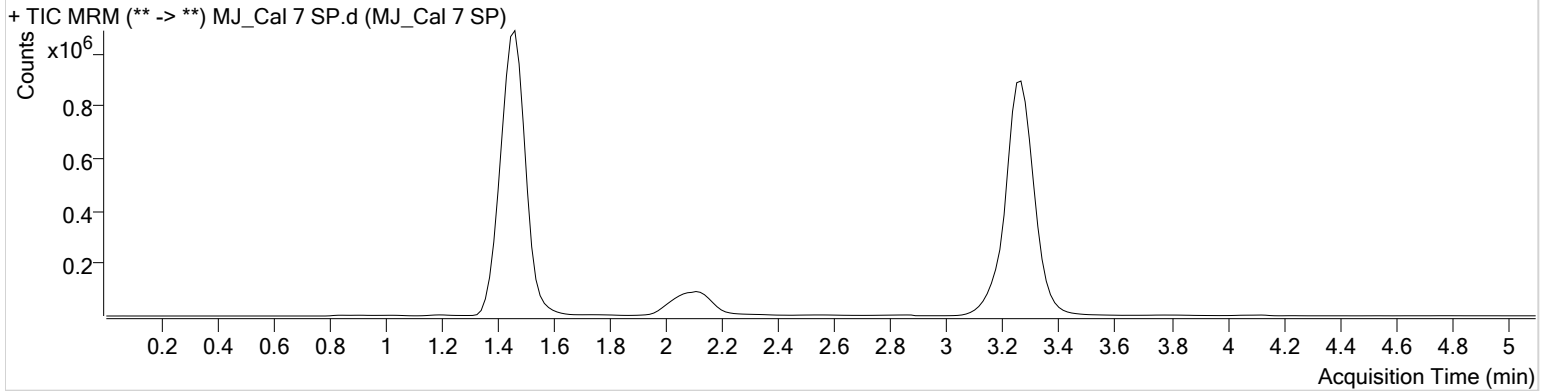


AM #27 Cannabinoid Quant. Results

Batch results D:\MassHunter\Data\2020\AM 27-28\112520 AM 27 28 SJ SP\QuantResults\AM 27 SP.batch.bin
Calibration Last Update 11/30/2020 10:13:34 AM

Instrument	Instrument 1	Data File	MJ_Cal 7 SP.d
Type	Cal	Sample	MJ_Cal 7 SP
Acq. Method	AM 27 THCQ.m	Operator	Sarah Pickle
Sample Position	P4-G1	Comment	
Injection Volume	10		
Acq. Date-Time	11/26/2020 1:25:55 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC-OH	1.438	1441684	∞	13.8	3320.40	964049	99.0351 ng/ml
THC-COOH	1.474	1973711	∞	66.1	∞	309417	250.9971 ng/ml
THC	3.270	2774131	5078.56	28.8	∞	2929139	100.7447 ng/ml