

Worklist: 4691

<u>LAB CASE</u>	<u>ITEM</u>	<u>ITEM TYPE</u>	<u>DESCRIPTION</u>
P2020-3562	1	BCK	AM 27 Blood THC Quant by LC-QQQ
P2020-3606	1	BCK	AM 27 Blood THC Quant by LC-QQQ



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

TS

Extraction Date: 12/22/2020

Plate lot#: IDP-108-200723

Mobile phase A: 0.1% Formic Acid in LCMS Water

Blank Blood Lot: Lampire 20L20725

LCMS-QQQ ID: 069901

Analyst: Tamara Salazar

Plate Expiration: 01/23/21

Mobile phase B: 0.1% Formic acid in Acetonitrile

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.

Analytic:

- 1. Remove standards, plate, controls, and samples from cold storage. Allow to reach room temperature.
- 2. Urine hydrolysis: add 1.5mL urine to blank plate, add 250µl 1N KOH. Shake and incubate at 40 degrees for 15 minutes. Using a calibrated pipette, add **1000µl blood and urine (if applicable) (calibrated pipette)** into the appropriate wells of analytical (standards) plate. **Pipette ID: 42**
- 3. Place on shaking incubator at ambient temp., 900rpm for 15 minutes.
- 4. Pipette **500µL 0.1% formic acid in water blood sample, 500 µL saturated phosphate buffer in urine** in wells of analytical plate.
- 5. Place on shaking incubator at ambient temp., 900rpm for 15 minutes.
- 6. Transfer **700-800µL of blood+acid or urine+acid** mixture to corresponding wells of SLE+ plate. Amount transferred: 800uL
- 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 1ng/mL (quantitative), 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? (if not, describe in comments section)
- 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

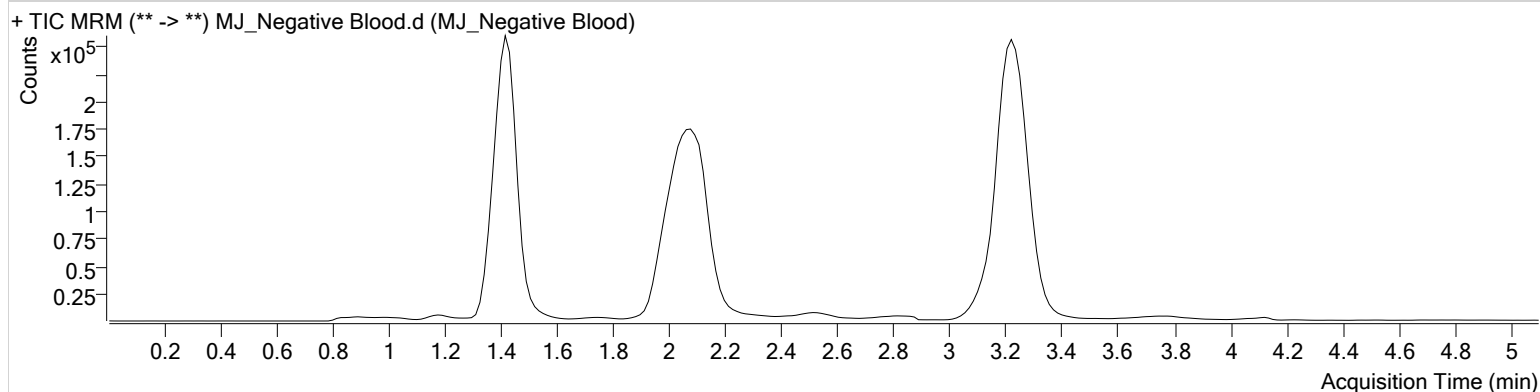


AM #27 Cannabinoid Quant. Results

Batch results D:\MassHunter\Data\2020\AM 27-28\122220 AM 27 TS\QuantResults\AM 27 TS.batch.bin
Calibration Last Update 12/23/2020 7:56:24 AM

Instrument Type	Instrument 1 Sample	Data File	MJ_Negative Blood.d
Acq. Method	AM 27 THCQ.m	Sample	MJ_Negative Blood
Sample Position	P1-H5	Operator	Tamara Salazar
Injection Volume	10	Comment	
Acq. Date-Time	12/22/2020 4:22:05 PM		
Sample Info.			

Sample Chromatogram



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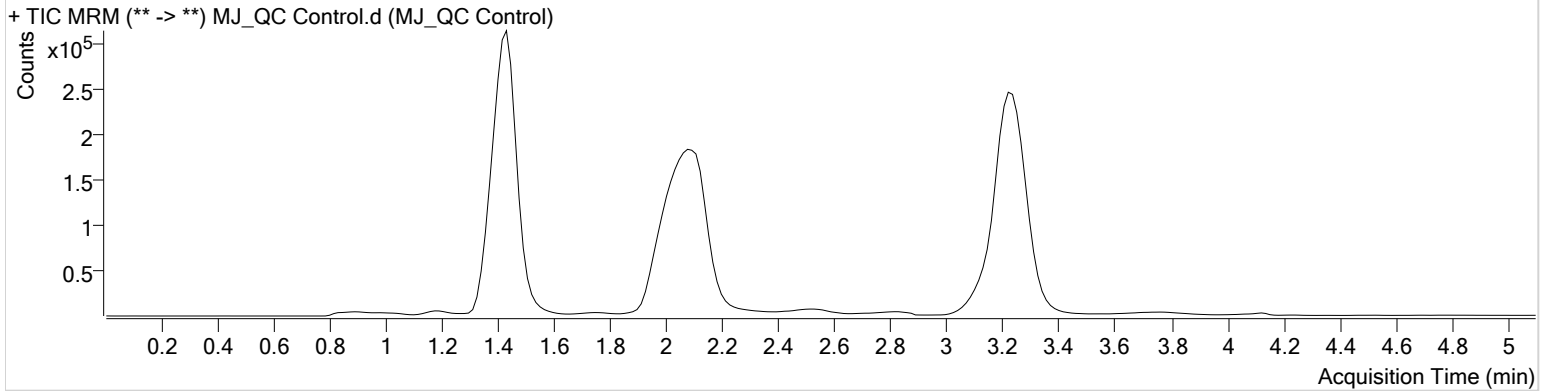


AM #27 Cannabinoid Quant. Results

Batch results D:\MassHunter\Data\2020\AM 27-28\122220 AM 27 TS\QuantResults\AM 27 TS.batch.bin
Calibration Last Update 12/23/2020 7:56:24 AM

Instrument	Instrument 1	Data File	MJ_QC Control.d
Type	Sample	Sample	MJ_QC Control
Acq. Method	AM 27 THCQ.m	Operator	Tamara Salazar
Sample Position	P1-A6	Comment	
Injection Volume	10		
Acq. Date-Time	12/22/2020 4:06:51 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC-OH	1.438	93467	∞	13.0	∞	1238784	4.6431 ng/ml
THC-COOH	1.459	135844	∞	57.9	∞	351930	15.1302 ng/ml
THC	3.239	81125	∞	26.3	350.34	1945402	4.5621 ng/ml

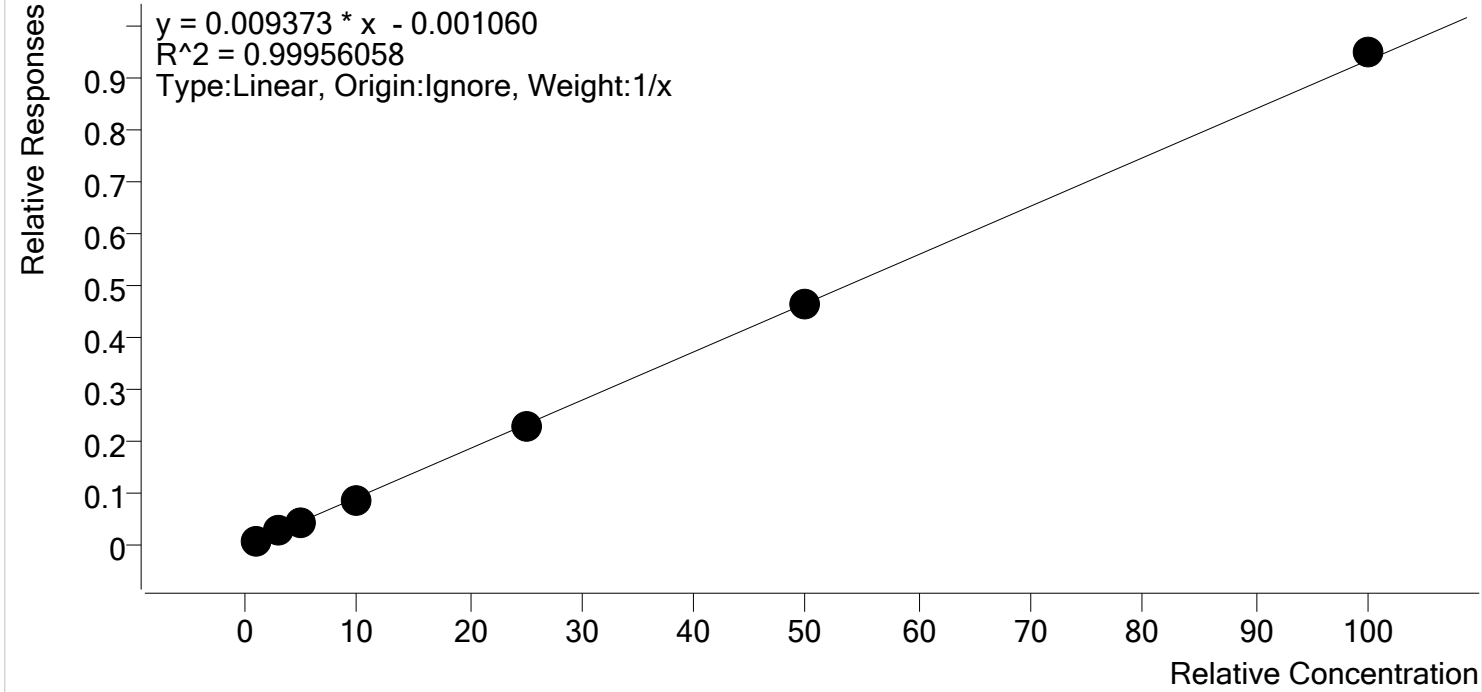
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AM #27 Cannabinoids Quant. Calibration Curve Report

Batch results D:\MassHunter\Data\2020\AM 27-28\122220 AM 27 TS\QuantResults\AM 27 TS.batch.bin
Last Cal. Update 12/23/2020 7:56 AM
Analyst Name ISP\Datastor
Analyte THC **Internal Standard** THC-D3

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



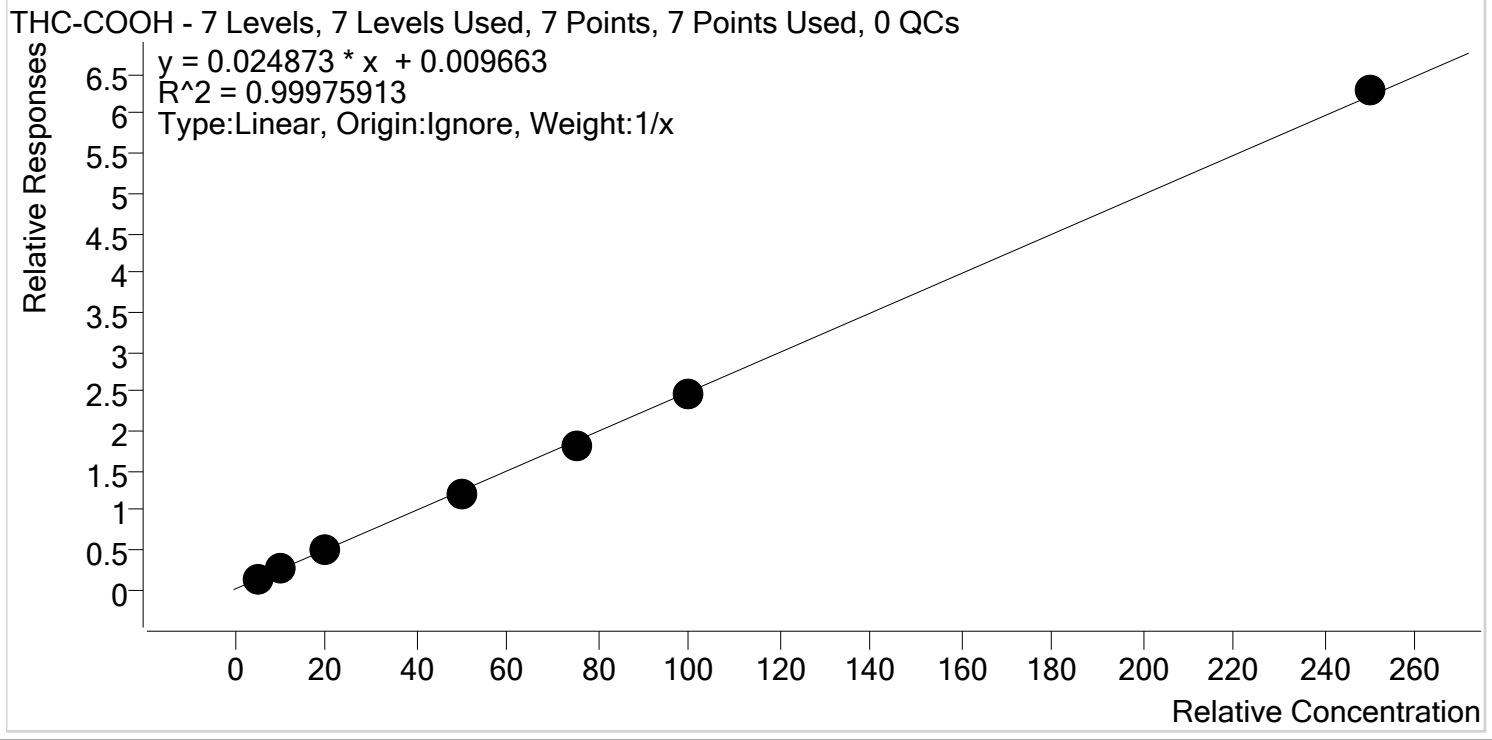
Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
MJ_Cal 1	1	✓	1.0	1.1	108.2
MJ_Cal 2	2	✓	3.0	2.9	98.3
MJ_Cal 3	3	✓	5.0	5.0	99.6
MJ_Cal 4	4	✓	10.0	9.6	96.2
MJ_Cal 5	5	✓	25.0	24.3	97.1
MJ_Cal 6	6	✓	50.0	49.5	99.0
MJ_Cal 7	7	✓	100.0	101.6	101.6

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AM #27 Cannabinoids Quant. Calibration Curve Report

Batch results D:\MassHunter\Data\2020\AM 27-28\122220 AM 27 TS\QuantResults\AM 27 TS.batch.bin
Last Cal. Update 12/23/2020 7:56 AM
Analyst Name ISP\Datastor
Analyte THC-COOH **Internal Standard** THC-COOH-D9



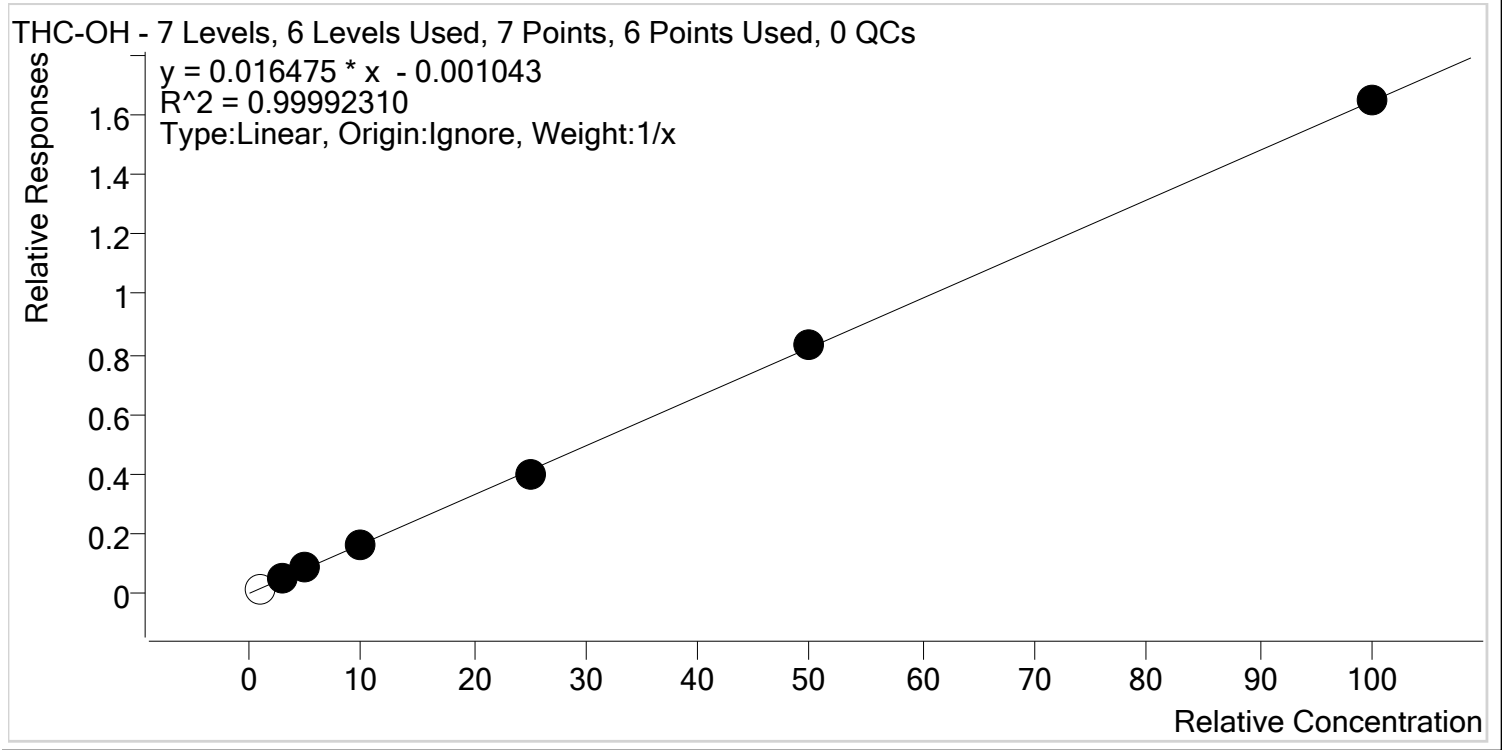
Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
MJ_Cal 1	1	✓	5.0	5.2	103.4
MJ_Cal 2	2	✓	10.0	10.0	100.0
MJ_Cal 3	3	✓	20.0	20.0	100.1
MJ_Cal 4	4	✓	50.0	48.9	97.7
MJ_Cal 5	5	✓	75.0	73.5	98.0
MJ_Cal 6	6	✓	100.0	99.8	99.8
MJ_Cal 7	7	✓	250.0	252.7	101.1



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AM #27 Cannabinoids Quant. Calibration Curve Report

Batch results D:\MassHunter\Data\2020\AM 27-28\122220 AM 27 TS\QuantResults\AM 27 TS.batch.bin
 Last Cal. Update 12/23/2020 7:56 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	x	1.0	1.0	99.0
MJ_Cal 2	2	✓	3.0	3.0	100.1
MJ_Cal 3	3	✓	5.0	5.1	101.6
MJ_Cal 4	4	✓	10.0	9.9	99.3
MJ_Cal 5	5	✓	25.0	24.6	98.3
MJ_Cal 6	6	✓	50.0	50.3	100.6
MJ_Cal 7	7	✓	100.0	100.1	100.1

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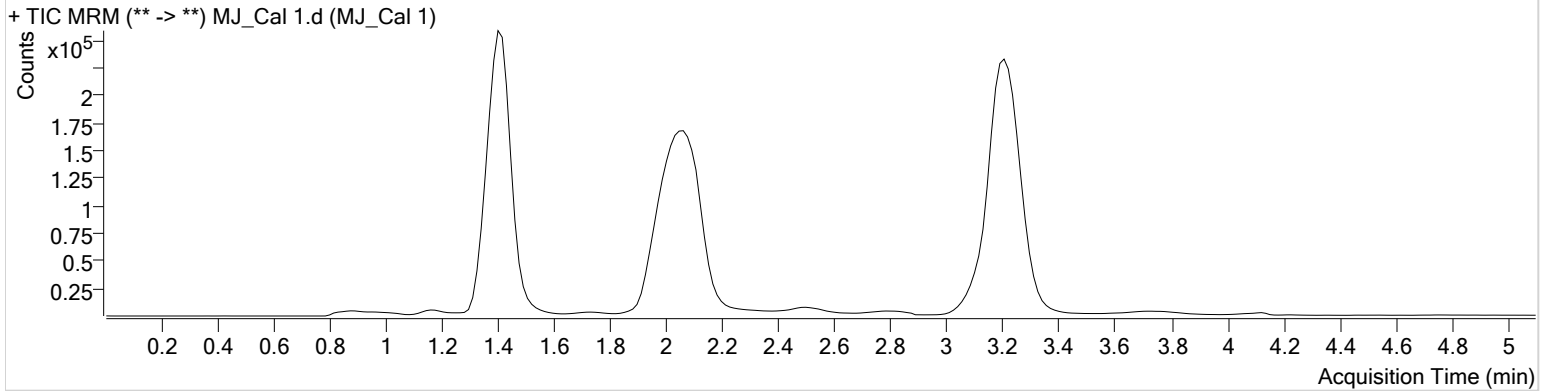
AM #27 Cannabinoid Quant. Results

Batch results D:\MassHunter\Data\2020\AM 27-28\122220 AM 27 TS\QuantResults\AM 27 TS.batch.bin
Calibration Last Update 12/23/2020 7:56:24 AM

Instrument Instrument 1
Type Cal
Acq. Method AM 27 THCQ.m
Sample Position P1-H6
Injection Volume 10
Acq. Date-Time 12/22/2020 3:05:57 PM
Sample Info.

Data File MJ_Cal 1.d
Sample MJ_Cal 1
Operator Tamara Salazar
Comment

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC-OH	1.423	17289	54.89	14.9	22.42	1132984	0.9896 ng/ml Low
THC-COOH	1.444	45355	∞	52.4	∞	328030	5.1704 ng/ml
THC	3.209	17382	40.84	29.2	70.70	1913136	1.0824 ng/ml

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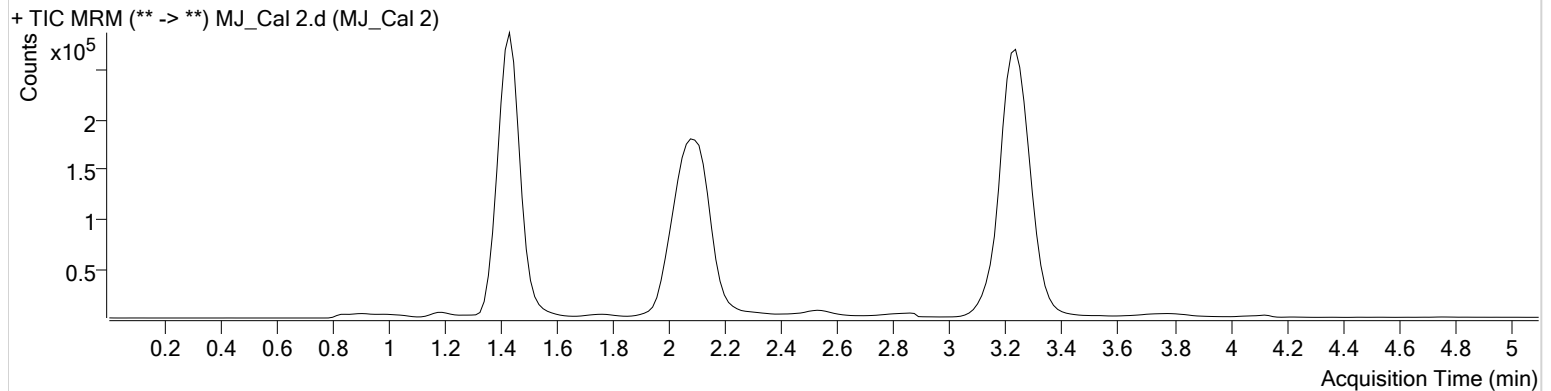
AM #27 Cannabinoid Quant. Results

Batch results D:\MassHunter\Data\2020\AM 27-28\122220 AM 27 TS\QuantResults\AM 27 TS.batch.bin
Calibration Last Update 12/23/2020 7:56:24 AM

Instrument Instrument 1
Type Cal
Acq. Method AM 27 THCQ.m
Sample Position P1-G6
Injection Volume 10
Acq. Date-Time 12/22/2020 3:13:42 PM
Sample Info.

Data File MJ_Cal 2.d
Sample MJ_Cal 2
Operator Tamara Salazar
Comment

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC-OH	1.438	52826	∞	12.0	∞	1090784	3.0030 ng/ml
THC-COOH	1.459	80986	∞	55.2	1039.98	313474	9.9982 ng/ml
THC	3.239	53573	∞	31.9	∞	2016192	2.9479 ng/ml

TS

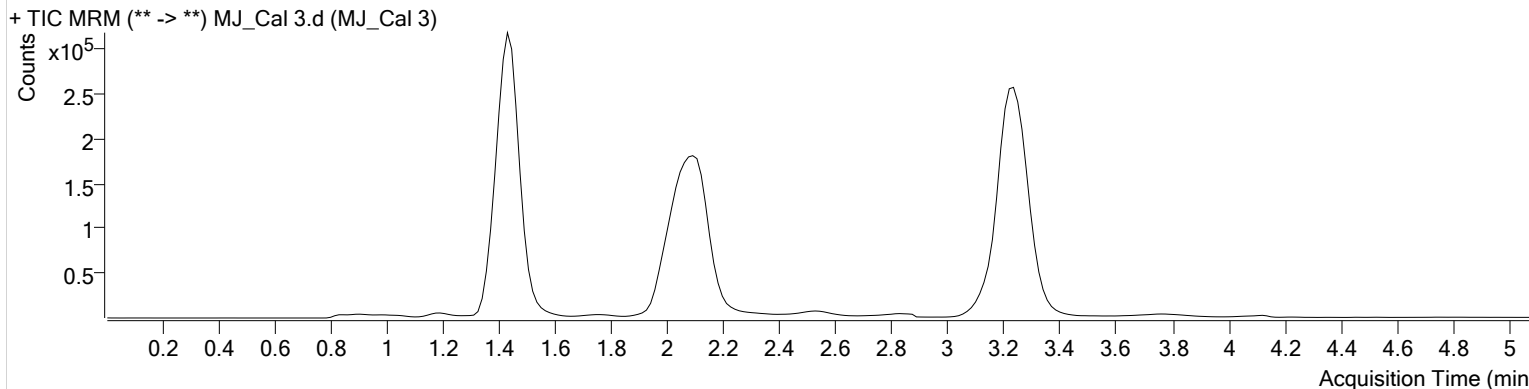


AM #27 Cannabinoid Quant. Results

Batch results D:\MassHunter\Data\2020\AM 27-28\122220 AM 27 TS\QuantResults\AM 27 TS.batch.bin
Calibration Last Update 12/23/2020 7:56:24 AM

Instrument	Instrument 1	Data File	MJ_Cal 3.d
Type	Cal	Sample	MJ_Cal 3
Acq. Method	AM 27 THCQ.m	Operator	Tamara Salazar
Sample Position	P1-F6	Comment	
Injection Volume	10		
Acq. Date-Time	12/22/2020 3:21:17 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC-OH	1.438	93525	∞	12.8	∞	1131313	5.0813 ng/ml
THC-COOH	1.459	164393	489.47	60.2	1856.01	323927	20.0151 ng/ml
THC	3.239	88034	∞	27.3	50.76	1930662	4.9778 ng/ml

TS

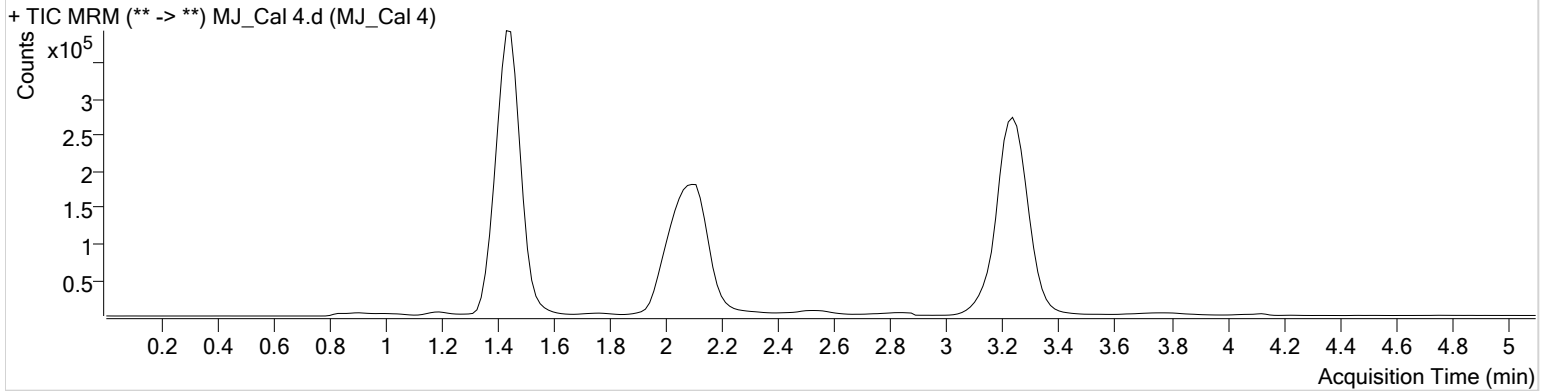


AM #27 Cannabinoid Quant. Results

Batch results D:\MassHunter\Data\2020\AM 27-28\122220 AM 27 TS\QuantResults\AM 27 TS.batch.bin
Calibration Last Update 12/23/2020 7:56:24 AM

Instrument	Instrument 1	Data File	MJ_Cal 4.d
Type	Cal	Sample	MJ_Cal 4
Acq. Method	AM 27 THCQ.m	Operator	Tamara Salazar
Sample Position	P1-E6	Comment	
Injection Volume	10		
Acq. Date-Time	12/22/2020 3:28:52 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC-OH	1.438	187829	∞	12.7	553.78	1155978	9.9261 ng/ml
THC-COOH	1.459	397841	∞	62.6	∞	324756	48.8634 ng/ml
THC	3.254	175686	∞	25.3	∞	1970664	9.6244 ng/ml

TS



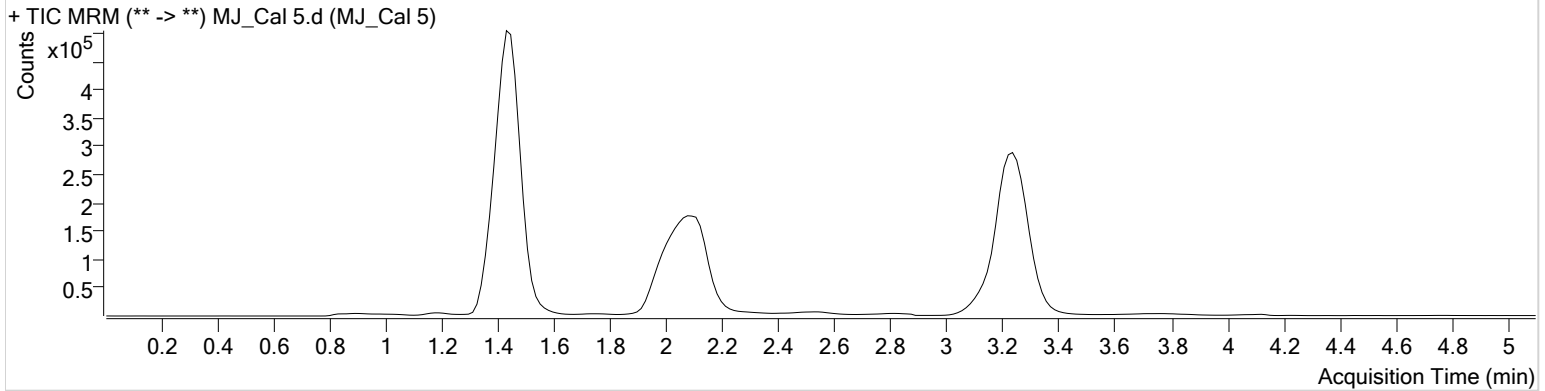
AM #27 Cannabinoid Quant. Results

Batch results D:\MassHunter\Data\2020\AM 27-28\122220 AM 27 TS\QuantResults\AM 27 TS.batch.bin
Calibration Last Update 12/23/2020 7:56:24 AM

Instrument Instrument 1
Type Cal
Acq. Method AM 27 THCQ.m
Sample Position P1-D6
Injection Volume 10
Acq. Date-Time 12/22/2020 3:36:27 PM
Sample Info.

Data File MJ_Cal 5.d
Sample MJ_Cal 5
Operator Tamara Salazar
Comment

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC-OH	1.438	486879	∞	12.9	∞	1205590	24.5769 ng/ml
THC-COOH	1.459	623552	2186.74	61.6	10430.0	339426	73.4697 ng/ml
THC	3.239	429893	∞	24.7	∞	1898636	24.2697 ng/ml

TS

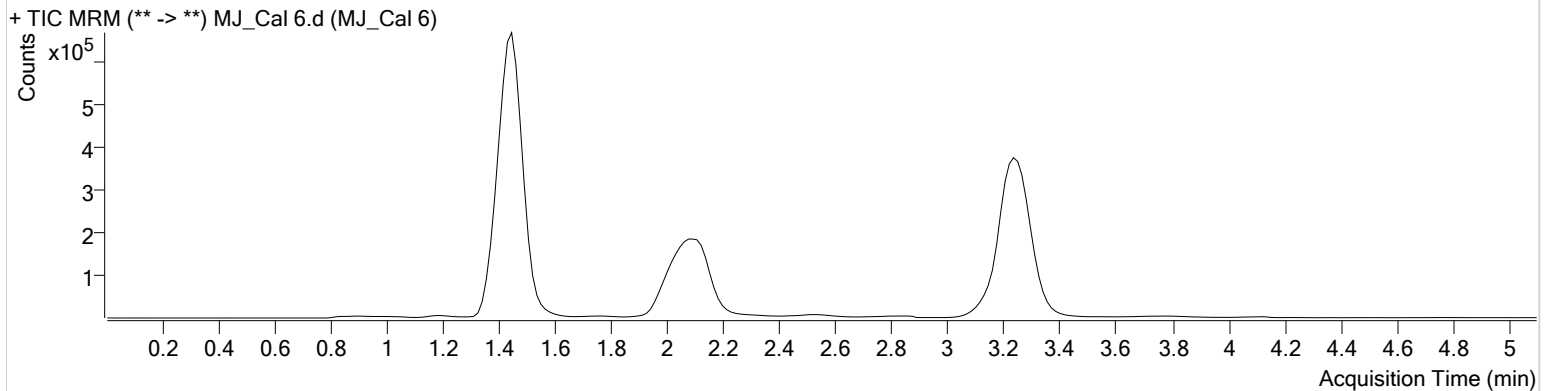


AM #27 Cannabinoid Quant. Results

Batch results D:\MassHunter\Data\2020\AM 27-28\122220 AM 27 TS\QuantResults\AM 27 TS.batch.bin
Calibration Last Update 12/23/2020 7:56:24 AM

Instrument	Instrument 1	Data File	MJ_Cal 6.d
Type	Cal	Sample	MJ_Cal 6
Acq. Method	AM 27 THCQ.m	Operator	Tamara Salazar
Sample Position	P1-C6	Comment	
Injection Volume	10		
Acq. Date-Time	12/22/2020 3:44:03 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC-OH	1.438	984804	∞	12.9	1682.55	1190039	50.2946 ng/ml
THC-COOH	1.459	822342	∞	61.4	∞	330130	99.7585 ng/ml
THC	3.239	890133	∞	24.3	∞	1922064	49.5219 ng/ml

TS

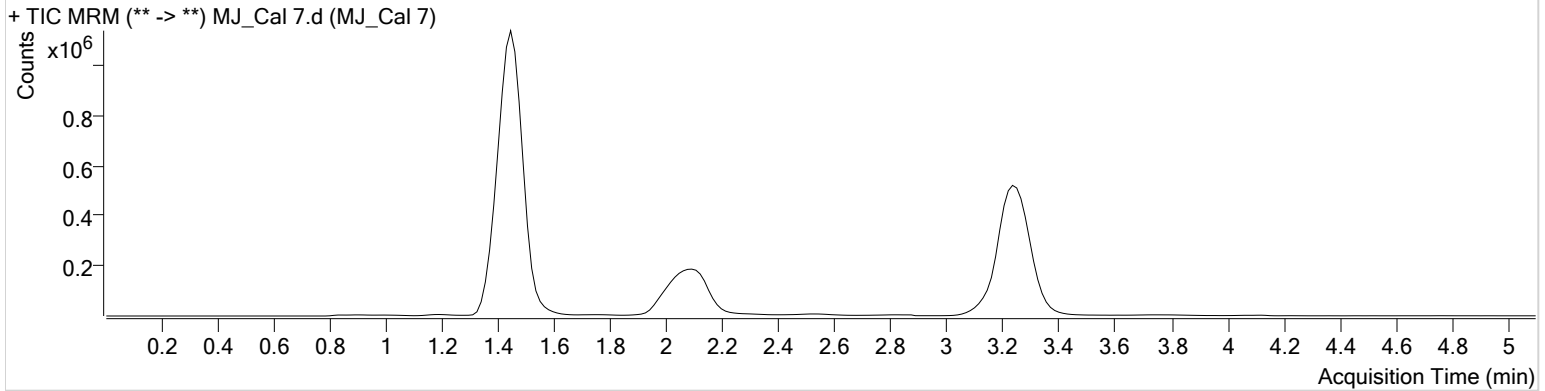


AM #27 Cannabinoid Quant. Results

Batch results D:\MassHunter\Data\2020\AM 27-28\122220 AM 27 TS\QuantResults\AM 27 TS.batch.bin
Calibration Last Update 12/23/2020 7:56:24 AM

Instrument	Instrument 1	Data File	MJ_Cal 7.d
Type	Cal	Sample	MJ_Cal 7
Acq. Method	AM 27 THCQ.m	Operator	Tamara Salazar
Sample Position	P1-B6	Comment	
Injection Volume	10		
Acq. Date-Time	12/22/2020 3:51:38 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC-OH	1.438	1876229	2763.03	13.0	4610.95	1138239	100.1182 ng/ml
THC-COOH	1.459	1933504	∞	62.2	22537.1 7	307115	252.7247 ng/ml
THC	3.254	1855515	∞	24.2	∞	1951079	101.5759 ng/ml