






















REVIEWED

By Anne Nord at 2:46 pm, Nov 12, 2020

11/6/2020 *BW*

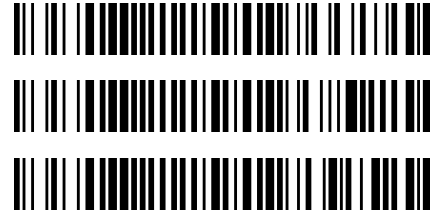
Worklist: 4598

<u>LAB CASE</u>	<u>ITEM</u>	<u>ITEM TYPE</u>	<u>DESCRIPTION</u>	
C2020-1973	1	UCK	AM 30 Urine THC Screen by LC-QTOF	
C2020-1991	2	UCK	AM 30 Urine THC Screen by LC-QTOF	
C2020-1999	1	UCK	AM 30 Urine THC Screen by LC-QTOF	
C2020-2043	1	UCK	AM 30 Urine THC Screen by LC-QTOF	
C2020-2054	1	UCK	AM 30 Urine THC Screen by LC-QTOF	
C2020-2074	1	UCK	AM 30 Urine THC Screen by LC-QTOF	
C2020-2092	1	UCK	AM 30 Urine THC Screen by LC-QTOF	
C2020-2110	1	UCK	AM 30 Urine THC Screen by LC-QTOF	
C2020-2111	1	UCK	AM 30 Urine THC Screen by LC-QTOF	
C2020-2113	3	UCK	AM 30 Urine THC Screen by LC-QTOF	
C2020-2114	1	UCK	AM 30 Urine THC Screen by LC-QTOF	
C2020-2120	1	BCK	AM 30 Blood THC Screen by LC-QTOF	
C2020-2120	2	UCK	AM 30 Urine THC Screen by LC-QTOF	
C2020-2129	2	UCK	AM 30 Urine THC Screen by LC-QTOF	
C2020-2140	1	BCK	AM 30 Blood THC Screen by LC-QTOF	
C2020-2149	1	BCK	AM 30 Blood THC Screen by LC-QTOF	
C2020-2154	1	UCK	AM 30 Urine THC Screen by LC-QTOF	
C2020-2192	1	BCK	AM 30 Blood THC Screen by LC-QTOF	
P2020-3117	1	BCK	AM 30 Blood THC Screen by LC-QTOF	
P2020-3146	1	BCK	AM 30 Blood THC Screen by LC-QTOF	
P2020-3147	1	BCK	AM 30 Blood THC Screen by LC-QTOF	

Worklist: 4598

BW

<u>LAB CASE</u>	<u>ITEM</u>	<u>ITEM TYPE</u>	<u>DESCRIPTION</u>
P2020-3147	2	UCK	AM 30 Urine THC Screen by LC-QTOF
P2020-3197	1	UCK	AM 30 Urine THC Screen by LC-QTOF
P2020-3211	1	BCK	AM 30 Blood THC Screen by LC-QTOF



AM# 30: THC and Metabolites Screen in Blood by LC-QTOF

Extraction Date: 11/4/2020
Plate lot#: 200723

Analyst: Britany Wylie
Plate Expiration: 1-23-2021

Mobile phase A: 0.1% Formic acid in Water
0.1% Formic Acid in Water
1N KOH Saturated Phosphate Buffer

Mobile phase B: 0.1% Formic acid in MeOH
MTBE Hexane

Blank Blood Lot: 20G20792

Urine Blank: 10120

Column: Phenomenex Phenyl Hexyl (4.6x50mm: 2.6 um)

LCMS-QTOF ID: 70044

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 1.5 ml urine to blank plate, add 250 ul 1N KOH mix and incubate at 40 degrees for 15 minutes.
Pipette **1000 µL blood (calibrated pipette)** in wells of analytical (standards) plate. **Pipette ID: K52558g**
Pipette 1000 ul urine to analytical (standards) plate.
- 3. Place on shaking incubator at ambient temp., 900 rpm for 15 minutes.
- 4. Pipette **500 µL 0.1% formic acid in blood** wells **500 ul saturated phosphate buffer in urine** wells of analytical plate.
- 5. Place on shaking incubator at ambient temp., 900 rpm for 15 minutes.
- 6. Transfer **800 µL of blood acid or urine 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: 66792
- 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. 10-15 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. 10-15 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.
SPE Dry ID: 66819
- 16. Reconstitute in **100 µL 100% LCMS MeOH** and heat seal plate with foil. Place in autosampler and run worklist.

Post-Analytic

- 1. Create batch and process data.
- 2. Calculated sample concentration of 3 ng/mL or greater for THC and THC-OH, a calculated sample concentration of 10 ng/mL or greater for Carboxy-THC.
- 3. Retention time within +/- 2% or +/-0.100 min whichever is greater of the average retention time of the calibrators.
- 4. Did all QCs pass for each analyte? Yes
- 5. Central File Packet to include: LIMS Worklist, Method Checklist, Calibration and Control Reports

COMMENTS: *samples were ran on the QTOF due to variability in low end calibrators only c-THC was evaluated, the samples were ran on the QTOF and then reconstituted and run on the LCQQQ.*

Hydroxy-THC and THC not evaluated in this run. Low response and variability in the lower end calibrators.

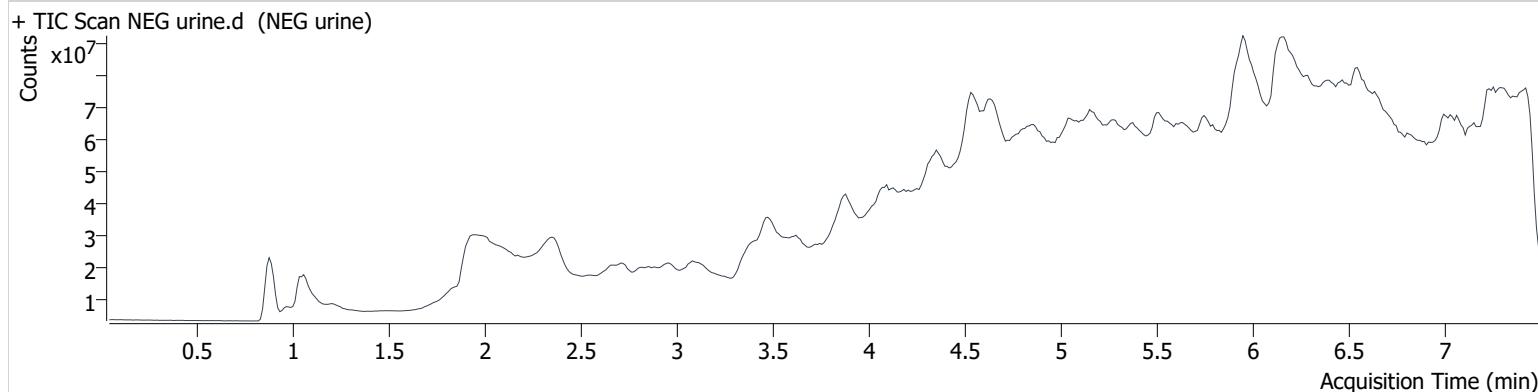
AM #30 Cannabinoids

Batch results D:\MassHunter\Data\2020\am 30\11420\QuantResults\thcs_qtof.batch.bin
Calibration Last Update 11/6/2020 11:31:15 AM

Instrument	70044	Data File	NEG urine.d
Type	Sample	Sample	NEG urine
Acq. Method	THC Screen 1122.m	Operator	Britany Wylie
Sample Position	P2-A2	Comment	
Injection Volume	10		
Acq. Date-Time	11/4/2020 4:27:05 PM		

Sample Info.

Sample Chromatogram



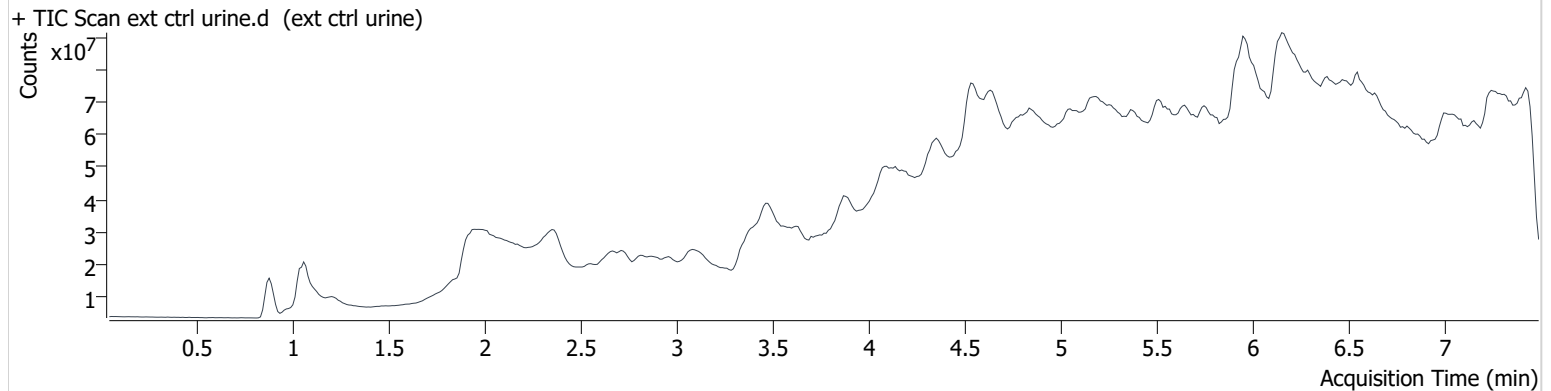
Name	RT	Resp.	Mass Accuracy	Mass Abundance Score	ISTD Resp.	Final Conc.
THC-COOH	6.602	15309	-8.47	86.9	2124383	0.7098 ng/ml ^{<5} <10

AM #30 Cannabinoids

Batch results D:\MassHunter\Data\2020\am 30\11420\QuantResults\thcs qtof.batch.bin
Calibration Last Update 11/6/2020 11:31:15 AM

Instrument	70044	Data File	ext ctrl urine.d
Type	Sample	Sample	ext ctrl urine
Acq. Method	THC Screen 1122.m	Operator	Britany Wylie
Sample Position	P2-B2	Comment	
Injection Volume	10		
Acq. Date-Time	11/4/2020 4:36:39 PM		

Sample Chromatogram



Name	RT	Resp.	Mass Accuracy	Mass Abundance Score	ISTD Resp.	Final Conc.
THC-COOH	6.613	787962	-0.18	83.5	1799934	41.5956 ng/ml

Toxicology AM method 27/26 external prep information

BW

working solution 15 ug/ml in meoh C-THC, THC-OH, 7.5 ug/ml THC

Stock solution 1mg/ml 7.5 ul each THC, 100 ug/ml 150 ul C-THC, 150 ul THC-OH in 9692.5 ul meOH

Ppd 8/26/20 Exp: 7/1/21 lot 82620 by AMN

Drug	lot	expiration
C-THC	FE01061702	3/1/2022
THC-OH	FE07221601	7/1/2021
THC	FE01041701	3/1/2022

AM 27/26 blood control 100 ul working solution lot () in 9900 ul blood lot ()

		Concentration 7.5 ng/ml THC, 15 ng/ml C-THC, THC-OH	
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AM 27/26 urine control 400 ul working solution lot (82620) in 9600 ul urine

out of use

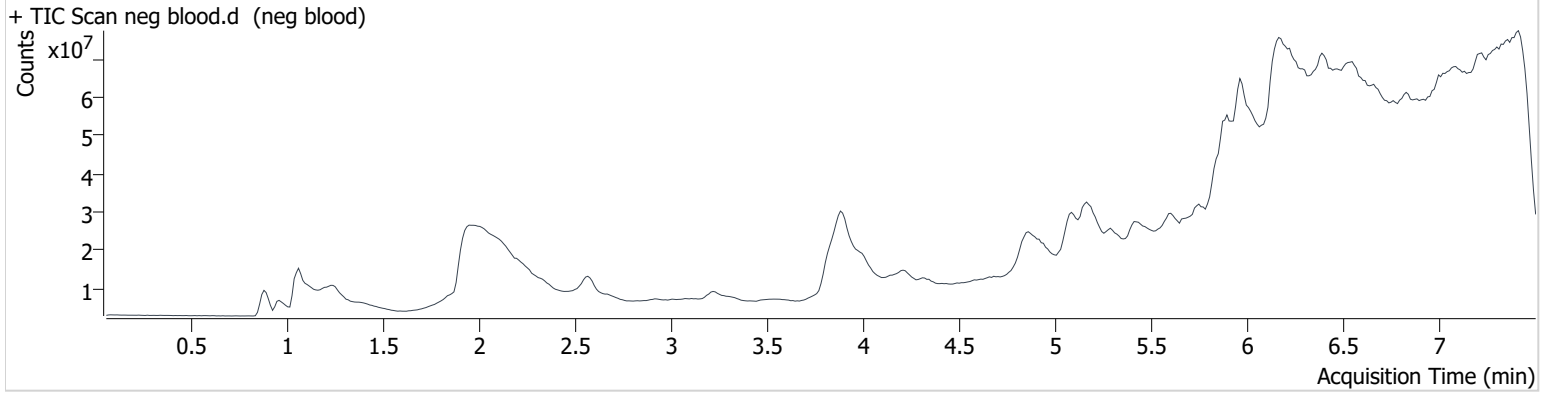
ppd 8/26/20 Exp 7/1/21 neg urine lot 73020	lot u82620	Concentration 30 ng/ml THC, and 60 ng/ml C-THC, THC-OH	by amn	10/4/2020
ppd 10/5/20 Exp 7/1/21 neg urine lot 10120	lot 10520	Concentration 30 ng/ml THC, and 60 ng/ml C-THC, THC-OH	by amn	

AM #30 Cannabinoids

Batch results D:\MassHunter\Data\2020\am 30\11420\QuantResults\thcs qtof.batch.bin
Calibration Last Update 11/6/2020 11:31:15 AM

Instrument	70044	Data File	neg blood.d
Type	Sample	Sample	neg blood
Acq. Method	THC Screen 1122.m	Operator	Britany Wylie
Sample Position	P2-C4	Comment	
Injection Volume	10		
Acq. Date-Time	11/4/2020 7:19:41 PM		

Sample Chromatogram



Name	RT	Resp.	Mass Accuracy	Mass Abundance Score	ISTD Resp.	Final Conc.
THC-COOH	6.611	103448	-5.58	0.0	1905010	5.1820 ng/ml <small>*neg due to mass score <70</small> <10

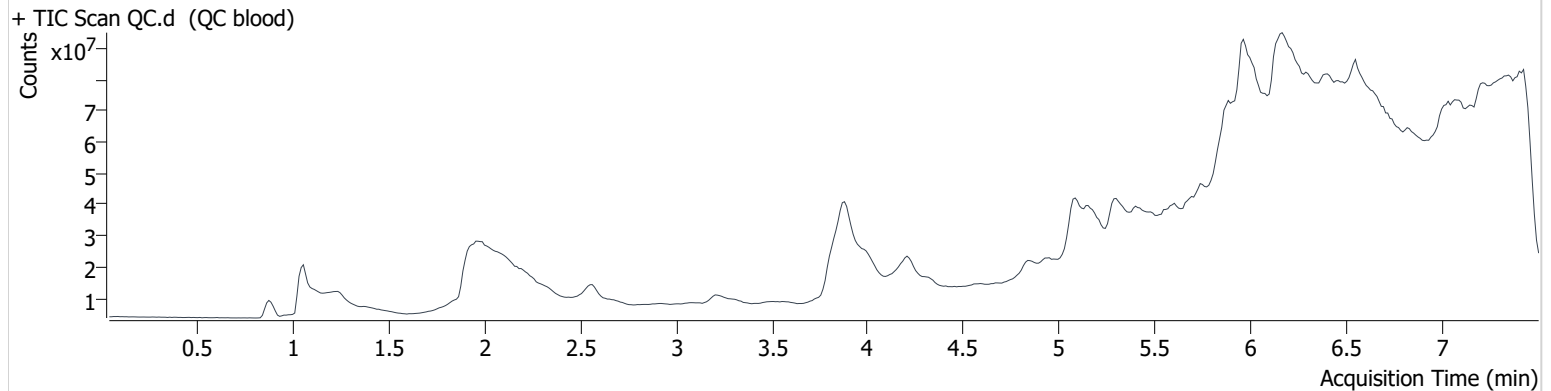
BW

AM #30 Cannabinoids

Batch results D:\MassHunter\Data\2020\am 30\11420\QuantResults\thcs_qtof.batch.bin
Calibration Last Update 11/6/2020 11:31:15 AM

Instrument	70044	Data File	QC.d
Type	QC	Sample	QC blood
Acq. Method	THC Screen 1122.m	Operator	Britany Wylie
Sample Position	P2-H1	Comment	
Injection Volume	10		
Acq. Date-Time	11/4/2020 4:17:28 PM		

Sample Chromatogram



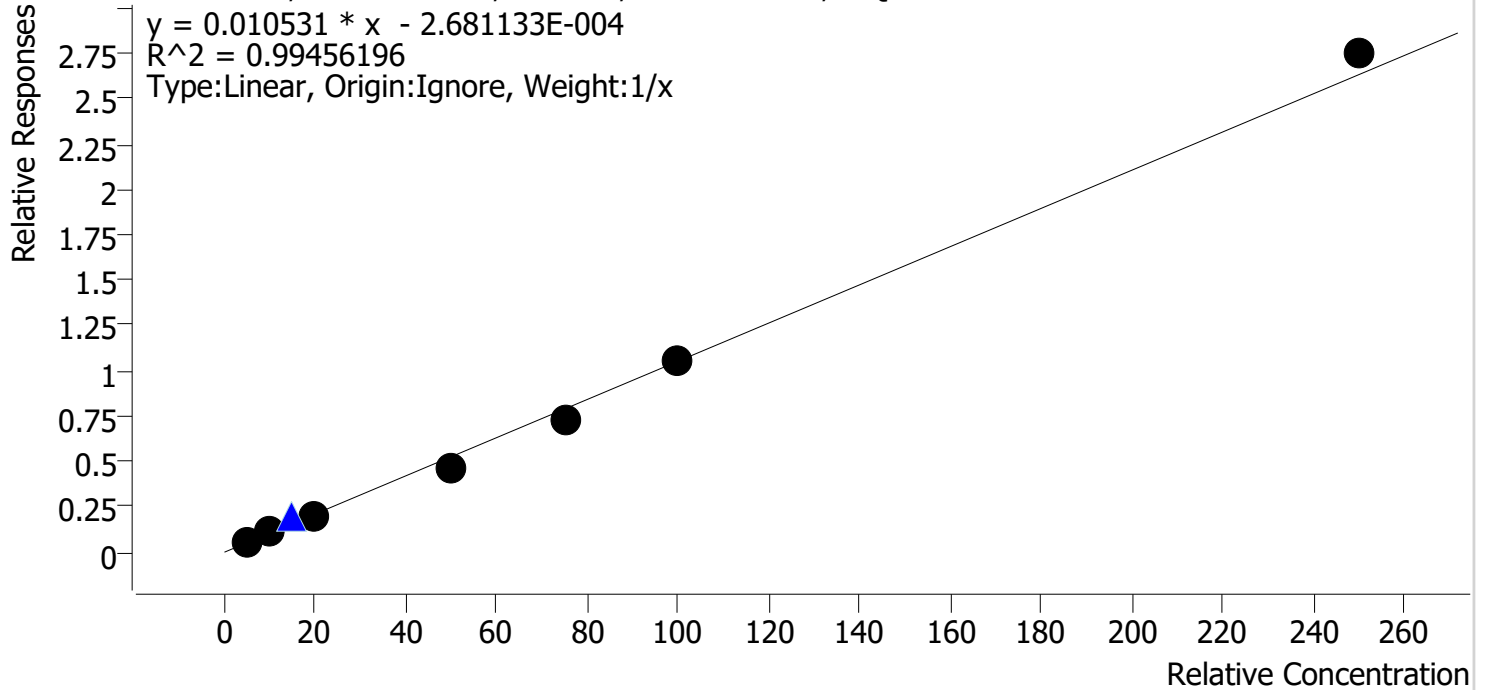
Name	RT	Resp.	Mass Accuracy	Mass Abundance Score	ISTD Resp.	Final Conc.
THC-COOH	6.610	459630	-0.25	82.9	2389893	18.2880 ng/ml

Compound Calibration Report

Batch results D:\MassHunter\Data\2020\am 30\11420\QuantResults\thcs qtof.batch.bin
Last Cal. Update 11/6/2020 11:31 AM
Analyst Name ISP\datastor
Analyte THC-COOH

Internal Standard THC-COOH-D9

THC-COOH - 7 Levels, 7 Levels Used, 7 Points, 7 Points Used, 1 QCs



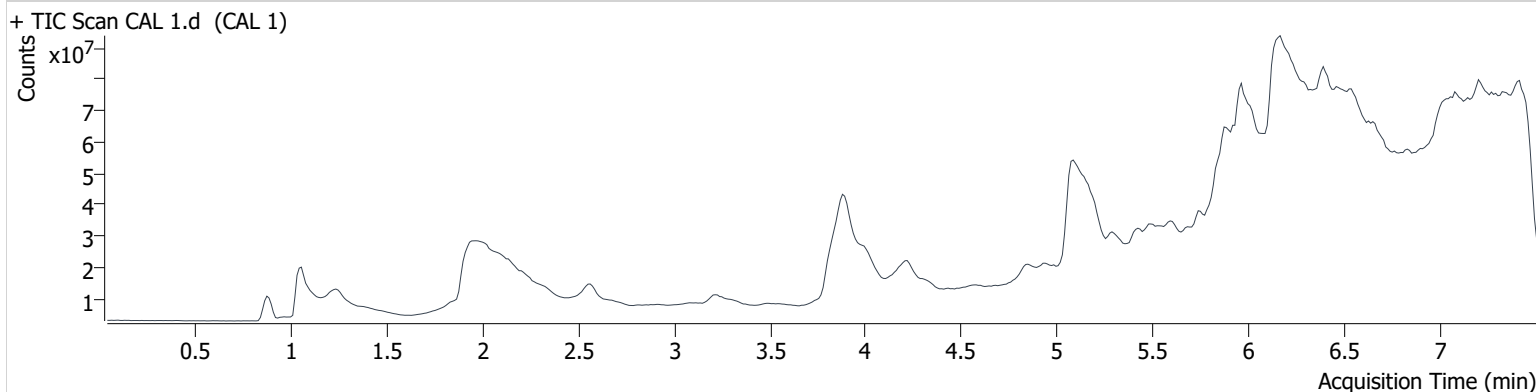
Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
CAL 1	1	✓	5.0	5.5	110.2
CAL 2	2	✓	10.0	11.5	114.6
CAL 3	3	✓	20.0	17.8	89.0
CAL 4	4	✓	50.0	44.6	89.2
CAL 5	5	✓	75.0	68.7	91.6
CAL 6	6	✓	100.0	101.0	101.0
CAL 7	7	✓	250.0	260.9	104.4

AM #30 Cannabinoids

Batch results D:\MassHunter\Data\2020\am 30\11420\QuantResults\thcs_qtof.batch.bin
Calibration Last Update 11/6/2020 11:31:15 AM

Instrument	70044	Data File	CAL 1.d
Type	Cal	Sample	CAL 1
Acq. Method	THC Screen 1122.m	Operator	Britany Wylie
Sample Position	P2-A1	Comment	
Injection Volume	10		
Acq. Date-Time	11/4/2020 3:10:13 PM		

Sample Chromatogram



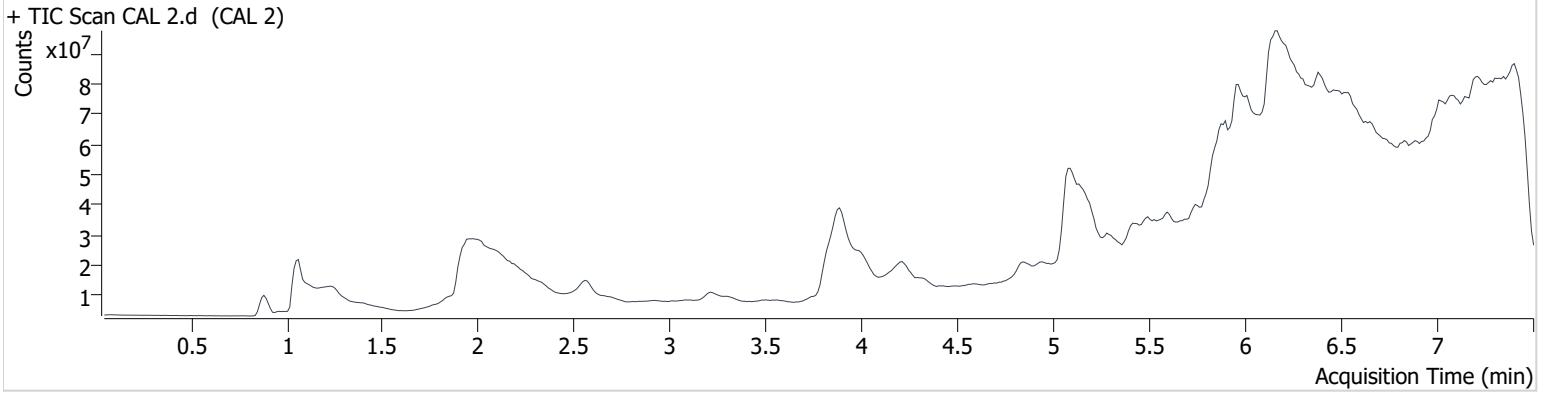
Name	RT	Resp.	Mass Accuracy	Mass Abundance Score	ISTD Resp.	Final Conc.
THC-COOH	6.610	117922	-4.83	53.3	2040790	5.5124 ng/ml

AM #30 Cannabinoids

Batch results D:\MassHunter\Data\2020\am 30\11420\QuantResults\thcs qtof.batch.bin
Calibration Last Update 11/6/2020 11:31:15 AM

Instrument 70044 **Data File** CAL 2.d
Type Cal **Sample** CAL 2
Acq. Method THC Screen 1122.m **Operator** Britany Wylie
Sample Position P2-B1 **Comment**
Injection Volume 10
Acq. Date-Time 11/4/2020 3:19:57 PM
Sample Info.

Sample Chromatogram



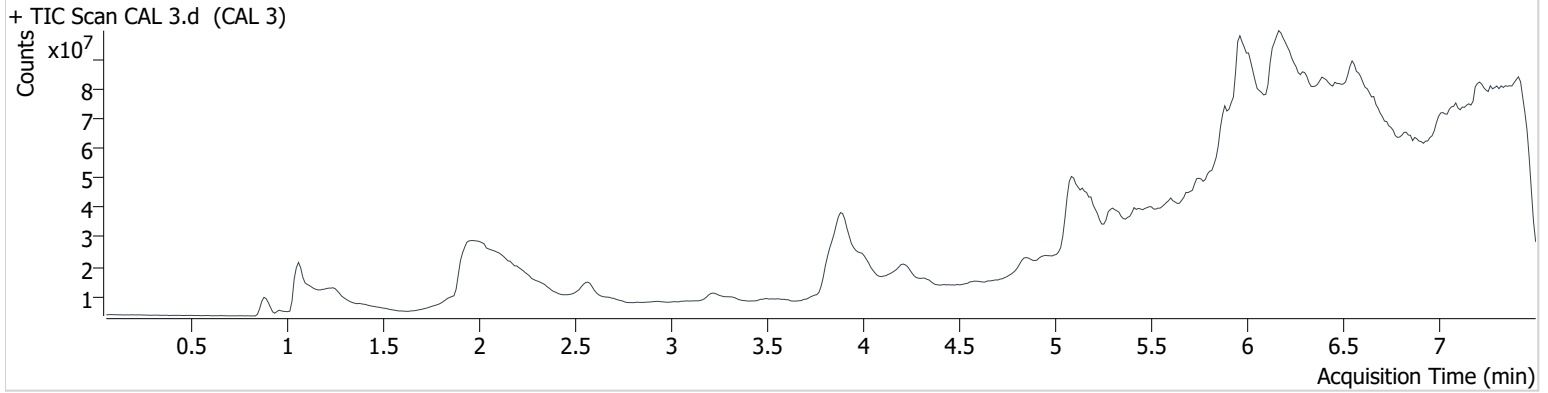
Name	RT	Resp.	Mass Accuracy	Mass Abundance Score	ISTD Resp.	Final Conc.
THC-COOH	6.612	153806	-2.86	72.8	1277339	11.4595 ng/ml

AM #30 Cannabinoids

Batch results D:\MassHunter\Data\2020\am 30\11420\QuantResults\thcs qtof.batch.bin
Calibration Last Update 11/6/2020 11:31:15 AM

Instrument 70044 **Data File** CAL 3.d
Type Cal **Sample** CAL 3
Acq. Method THC Screen 1122.m **Operator** Britany Wylie
Sample Position P2-C1 **Comment**
Injection Volume 10
Acq. Date-Time 11/4/2020 3:29:33 PM
Sample Info.

Sample Chromatogram



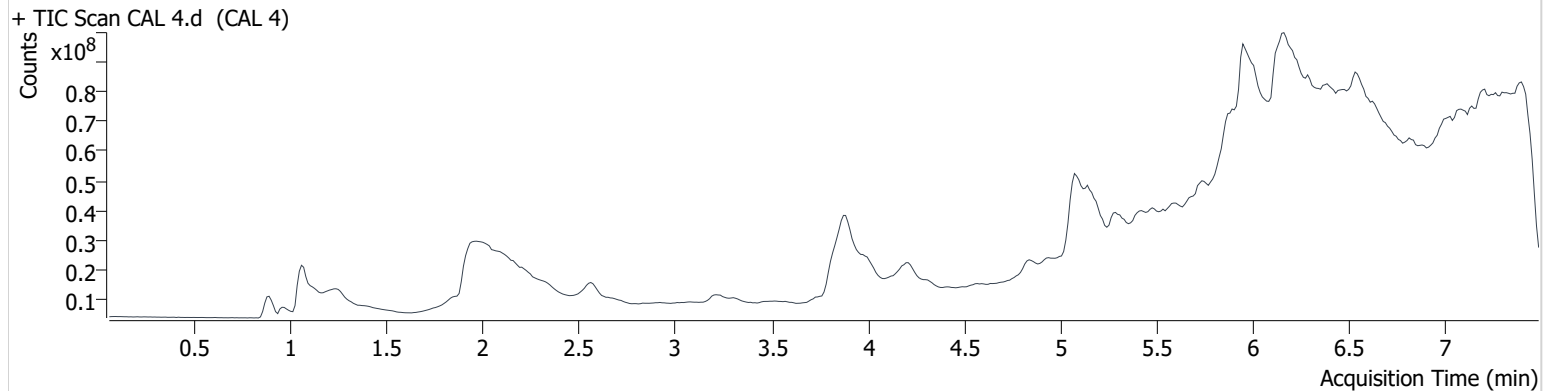
Name	RT	Resp.	Mass Accuracy	Mass Abundance Score	ISTD Resp.	Final Conc.
THC-COOH	6.617	429072	1.46	86.1	2292134	17.8010 ng/ml

AM #30 Cannabinoids

Batch results D:\MassHunter\Data\2020\am 30\11420\QuantResults\thcs qtof.batch.bin
Calibration Last Update 11/6/2020 11:31:15 AM

Instrument	70044	Data File	CAL 4.d
Type	Cal	Sample	CAL 4
Acq. Method	THC Screen 1122.m	Operator	Britany Wylie
Sample Position	P2-D1	Comment	
Injection Volume	10		
Acq. Date-Time	11/4/2020 3:39:08 PM		

Sample Chromatogram



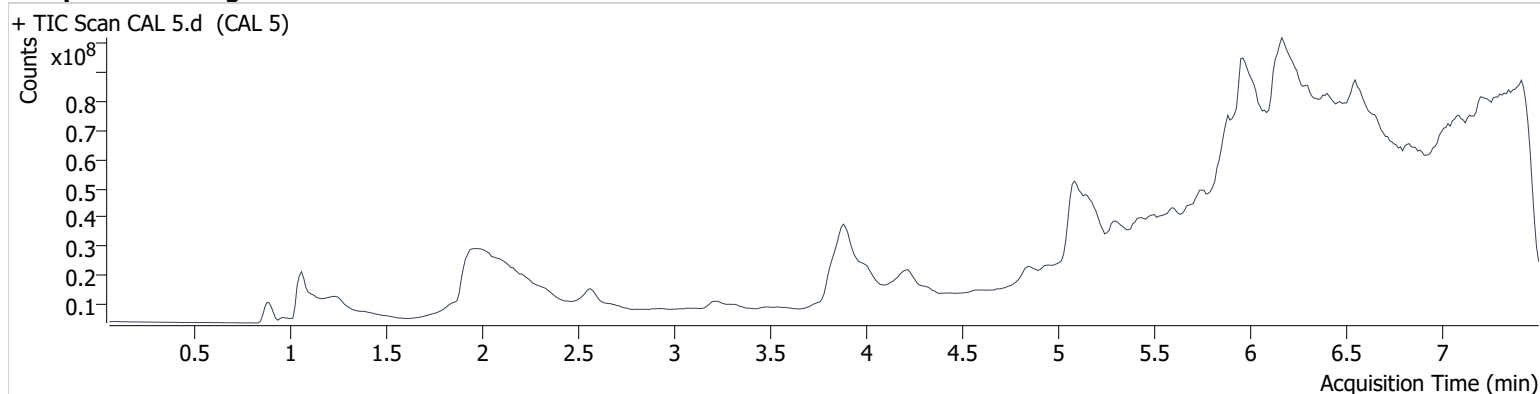
Name	RT	Resp.	Mass Accuracy	Mass Abundance Score	ISTD Resp.	Final Conc.
THC-COOH	6.615	1096637	2.27	89.6	2336001	44.6036 ng/ml

AM #30 Cannabinoids

Batch results D:\MassHunter\Data\2020\am 30\11420\QuantResults\thcs qtof.batch.bin
Calibration Last Update 11/6/2020 11:31:15 AM

Instrument	70044	Data File	CAL 5.d
Type	Cal	Sample	CAL 5
Acq. Method	THC Screen 1122.m	Operator	Britany Wylie
Sample Position	P2-E1	Comment	
Injection Volume	10		
Acq. Date-Time	11/4/2020 3:48:44 PM		

Sample Chromatogram



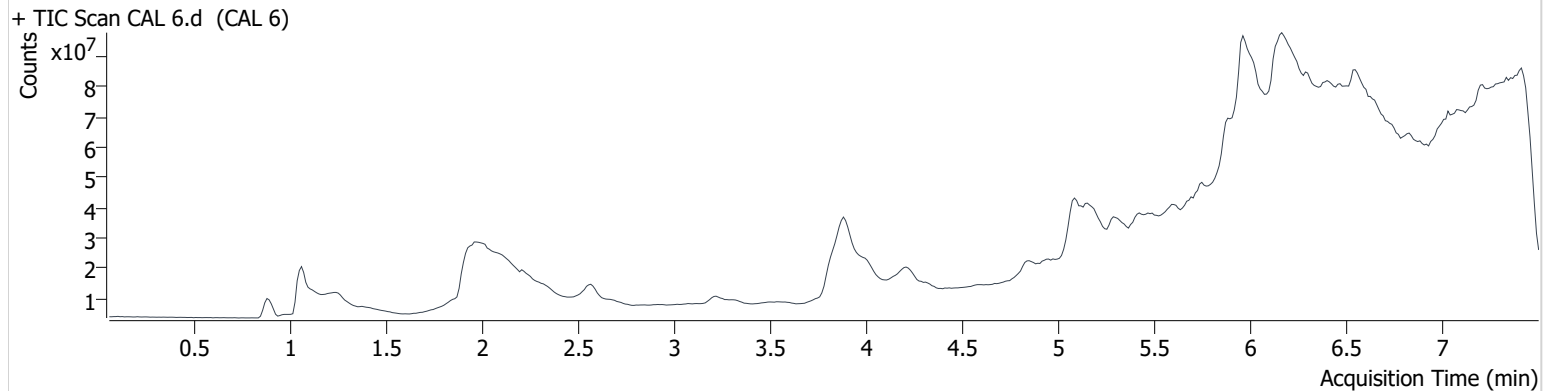
Name	RT	Resp.	Mass Accuracy	Mass Abundance Score	ISTD Resp.	Final Conc.
THC-COOH	6.619	1640698	3.22	93.4	2269789	68.6652 ng/ml

AM #30 Cannabinoids

Batch results D:\MassHunter\Data\2020\am 30\11420\QuantResults\thcs qtof.batch.bin
Calibration Last Update 11/6/2020 11:31:15 AM

Instrument	70044	Data File	CAL 6.d
Type	Cal	Sample	CAL 6
Acq. Method	THC Screen 1122.m	Operator	Britany Wylie
Sample Position	P2-F1	Comment	
Injection Volume	10		
Acq. Date-Time	11/4/2020 3:58:17 PM		

Sample Chromatogram



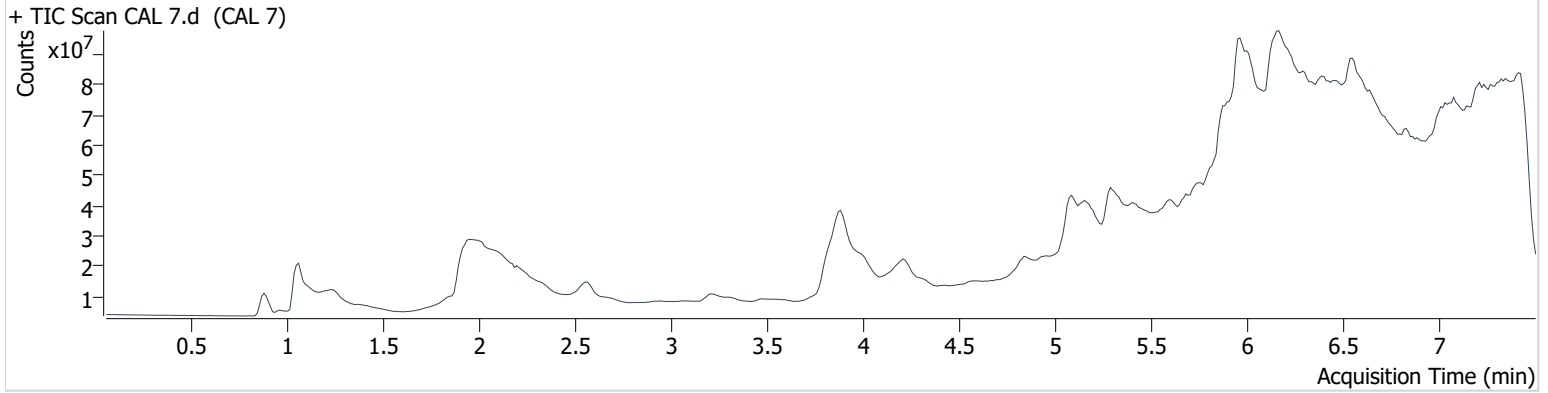
Name	RT	Resp.	Mass Accuracy	Mass Abundance Score	ISTD Resp.	Final Conc.
THC-COOH	6.618	2659854	2.72	96.4	2501050	101.0130 ng/ml

AM #30 Cannabinoids

Batch results D:\MassHunter\Data\2020\am 30\11420\QuantResults\thcs qtof.batch.bin
Calibration Last Update 11/6/2020 11:31:15 AM

Instrument 70044 **Data File** CAL 7.d
Type Cal **Sample** CAL 7
Acq. Method THC Screen 1122.m **Operator** Britany Wylie
Sample Position P2-G1 **Comment**
Injection Volume 10
Acq. Date-Time 11/4/2020 4:07:54 PM
Sample Info.

Sample Chromatogram



Name	RT	Resp.	Mass Accuracy	Mass Abundance Score	ISTD Resp.	Final Conc.
THC-COOH	6.610	6699796	2.11	98.6	2438298	260.9453 ng/ml