7/22/2024

Worklist: 6877

LAB_CASE	ITEM	ITEM_TYPE	DESCRIPTION	
M2024-2676	1	BCK	AM 27 Blood THC Quant by LC-QQQ	|||||||||||
M2024-2773	2	BCK	AM 27 Blood THC Quant by LC-QQQ	|||||||||||
P2024-1886	1	BCK	AM 27 Blood THC Quant by LC-QQQ	|||||||||||
P2024-1958	1	BCK	AM 27 Blood THC Quant by LC-QQQ	|||||||||||
P2024-2019	1	BCK	AM 27 Blood THC Quant by LC-QQQ	|||||||||||
P2024-2023	1	BCK	AM 27 Blood THC Quant by LC-QQQ	|||||||||||
P2024-2032	1	BCK	AM 27 Blood THC Quant by LC-QQQ	|||||||||||
P2024-2073	1	BCK	AM 27 Blood THC Quant by LC-QQQ	|||||||||||
P2024-2084	2	BCK	AM 27 Blood THC Quant by LC-QQQ	|||||||||||
P2024-2143	1	BCK	AM 27 Blood THC Quant by LC-QQQ	|||||||||||
P2024-2154	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

Extraction Date: 07/19/2024   Analyst: Celena Shrum
Plate lot#: 240513   Plate Retest Date: 11/13/2024
Mobile phase A: 0.1% Formic Acid in LCMS Water   **Mobile phase B:** 0.1% Formic acid in Acetonitrile
Blank Blood Lot: Lampire 24C52816   **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. Urine hydrolysis (if applicable): add 1.5mL urine to blank plate, add 250μl 1N KOH. Shake and incubate at 40 degrees for 15 minutes.
☒ 3. Using a calibrated pipette, add **1000μl blood or 1000μl hydrolyzed urine** into the appropriate wells of the analytical (standards) plate. **Pipette ID: #42**
☒ 4. Place on shaking incubator at ambient temp., 900rpm for 15 minutes.
☒ 5. Add **500μL of 0.1% formic acid in water to blood samples or 500μl of saturated phosphate buffer to urine samples** to the appropriate wells of the analytical plate.
☒ 6. Place on shaking incubator at ambient temp., 900rpm for 15 minutes.
☒ 7. Transfer **800μL of blood+acid mixture or urine+acid** to corresponding wells of SLE+ plate.
☒ 8. 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
☒ 9. Wait 5 minutes.
☒ 10. Add **2.25mL MTBE. (*Add in 3 increments of 750uL*)**
☒ 11. Wait 5 minutes.
☒ 12. Apply positive pressure for approx. 15 seconds. *(10-15 PSI- Selector to the left)*.
☒ 13. Add **2.25mL Hexane. (*Add in 3 increments of 750uL*)**
☒ 14. Wait 5 minutes.
☒ 15. Apply positive pressure for approx. 15 seconds. *(10-15 PSI- Selector to the left)*.
☒ 16. Remove plate containing eluate. Place on SPE Dry and evaporate to dryness at approx. 35°C. *SPE Dry ID: 067103*
☒ 17. 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 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. THC concentrations of 1-3ng/mL will be reported qualitatively.
☒ 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: Cal 5 did not inject properly (low ISTD responses) so it was reinjected on 7/22/24 with no issues.

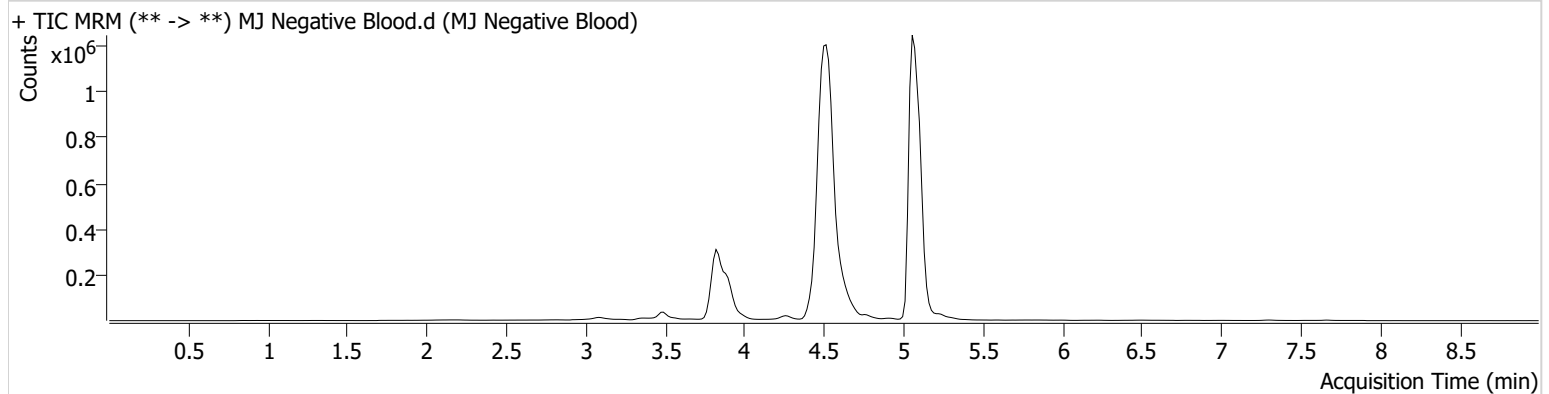|	1	2	3	4	5	6
A	IS + Cal. 1	QC2	P2024-2032-1			
B	IS + Cal. 2	NEG Blood	P2024-2073-1			
C	IS + Cal. 3	M2024-2676-1	P2024-2084-2			
D	IS + Cal. 4	M2024-2773-2	P2024-2143-1			
E	IS + Cal. 5	P2024-1886-1	P2024-2154-1			
F	IS + Cal. 6	P2024-1958-1				
G	IS + Cal. 7	P2024-2019-1				
H	QC1	P2024-2023-1				

AM #27 Cannabinoids Quant. Results

Batch results   D:\MassHunter\Data\2024\AM 27 28\071924 AM 27 28 CS\QuantResults\AM 27.batch.bin
Calibration Last Update   7/25/2024 11:18:43 AM

Instrument	Falco (069901)	**Data File**	MJ Negative Blood.d
Type	Sample	**Sample**	MJ Negative Blood
Acq. Method	AM 27 Agilent Method.m	**Operator**	Celena Shrum
Sample Position	P1-B2	**Comment**	Only drugs and concentrations listed on the laboratory report itself are appropriate to be used for interpretation purposes. Any drugs or values included in the notes but not included on the report are used by laboratory personnel to make determinations/reach conclusions within the confines of the methods.
Injection Volume	10		
Acq. Date-Time	7/19/2024 5:14:12 PM		
Sample Info.			

Sample Chromatogram
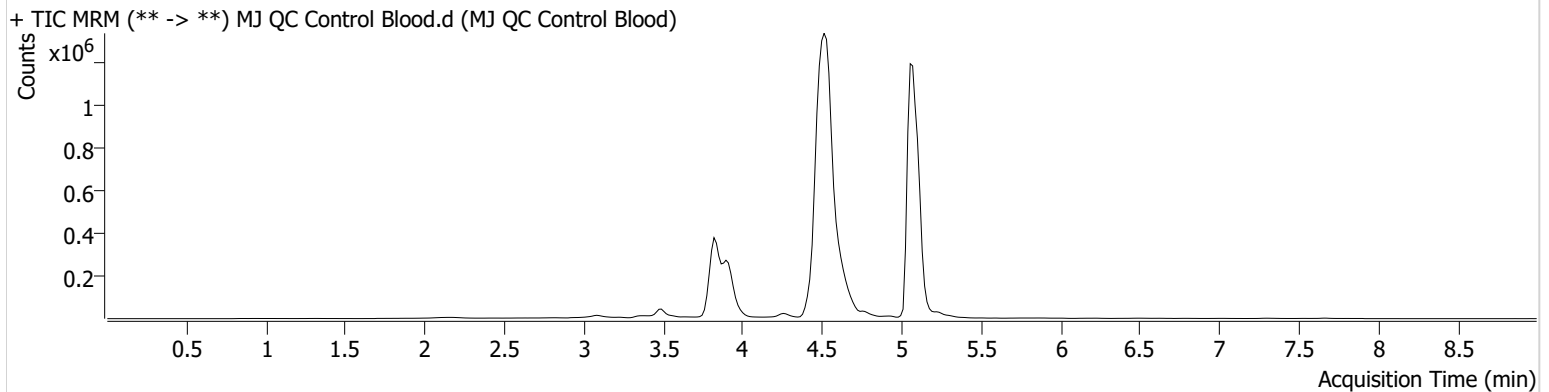
AM #27 Cannabinoids Quant. Results

Batch results   D:\MassHunter\Data\2024\AM 27 28\071924 AM 27 28 CS\QuantResults\AM 27.batch.bin
Calibration Last Update   7/25/2024 11:18:43 AM

Instrument	Falco (069901)	**Data File**	MJ QC Control Blood.d
Type	QC	**Sample**	MJ QC Control Blood
Acq. Method	AM 27 Agilent Method.m	**Operator**	Celena Shrum
Sample Position	P1-H1	**Comment**	Only drugs and concentrations listed on the laboratory report itself are appropriate to be used for interpretation purposes. Any drugs or values included in the notes but not included on the report are used by laboratory personnel to make determinations/reach conclusions within the confines of the methods.
Injection Volume	10		
Acq. Date-Time	7/19/2024 4:47:58 PM		
Sample Info.			

Sample Chromatogram

+ TIC MRM (** -> **) MJ QC Control Blood.d (MJ QC Control Blood)

Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.075	249393	586.95	25.6	∞	5270657	5.0001 ng/ml
THC-COOH	3.924	58561	315.39	239.4	1533.18	683456	14.7132 ng/ml
THC-OH	3.835	120456	∞	12.2	291.40	1568756	4.8850 ng/ml

AM #27 Cannabinoids Quant. Results

Batch results   D:\MassHunter\Data\2024\AM 27 28\071924 AM 27 28 CS\QuantResults\AM 27.batch.bin
Calibration Last Update   7/25/2024 11:18:43 AM

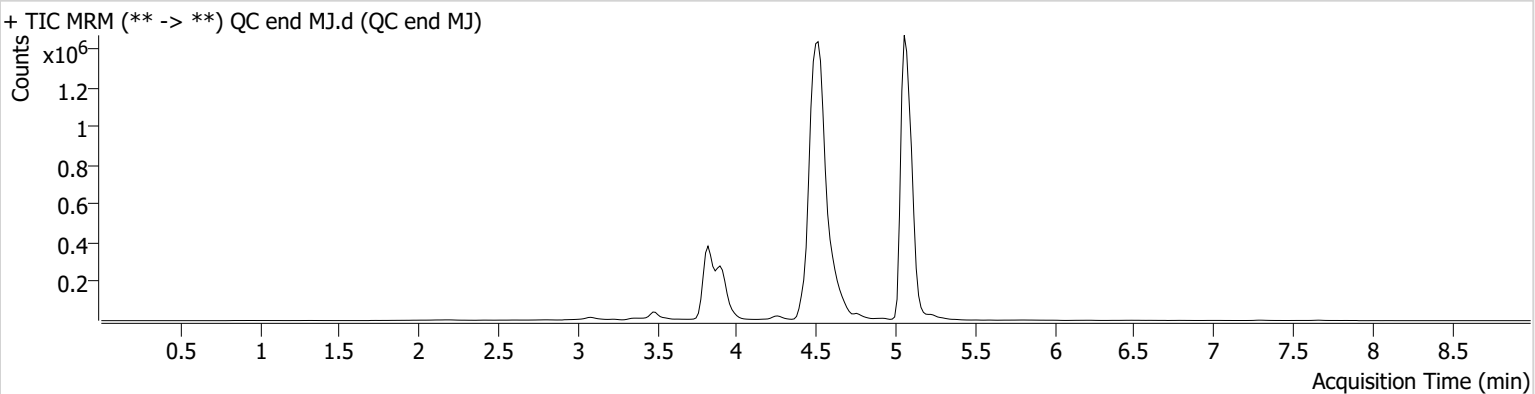|			
Instrument	Falco (069901)	**Data File**	QC end MJ.d
Type	QC	**Sample**	QC end MJ
Acq. Method	AM 27 Agilent Method.m	**Operator**	Celena Shrum
Sample Position	P1-A2	**Comment**	Only drugs and concentrations listed on the laboratory
Injection Volume	10		report itself are appropriate to be used for
Acq. Date-Time	7/19/2024 10:28:50 PM		interpretation purposes. Any drugs or values included
Sample Info.			in the notes but not included on the report are used by
			laboratory personnel to make determinations/reach
			conclusions within the confines of the methods.

Sample Chromatogram

+ TIC MRM (** -> **) QC end MJ.d (QC end MJ)

Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.075	292746	∞	24.7	∞	6185366	5.0012 ng/ml
THC-COOH	3.909	58874	∞	245.8	∞	702961	14.3943 ng/ml
THC-OH	3.820	117037	∞	13.1	∞	1565768	4.7568 ng/ml

AM #27 Cannabinoids Quant. Calibration Curve Report

Batch results   D:\MassHunter\Data\2024\AM 27 28\071924 AM 27 28 CS\QuantResults\AM 27.batch.bin
Last Cal. Update   7/25/2024 11:18 AM
Analyst Name   ISP\Datastor
Analyte   THC   **Internal Standard**   THC-D3

THC - 7 Levels, 7 Levels Used, 7 Points, 7 Points Used, 2 QCs

$y = 0.010037 * x - 0.002867$
$R^2 = 0.99938076$
Type:Linear, Origin:Ignore, Weight:1/x

Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
Cal 1 MJ	1	✔	1.0	1.1	111.0
Cal 2 MJ	2	✔	3.0	2.9	98.3
Cal 3 MJ	3	✔	5.0	4.7	95.0
Cal 4 MJ	4	✔	10.0	9.8	98.2
Cal 5 MJ_r	5	✔	25.0	24.4	97.6
Cal 6 MJ	6	✔	50.0	49.0	98.0
Cal 7 MJ	7	✔	100.0	102.0	102.0

AM #27 Cannabinoids Quant. Calibration Curve Report

Batch results   D:\MassHunter\Data\2024\AM 27 28\071924 AM 27 28 CS\QuantResults\AM 27.batch.bin
Last Cal. Update 7/25/2024 11:18 AM
Analyst Name   ISP\Datastor
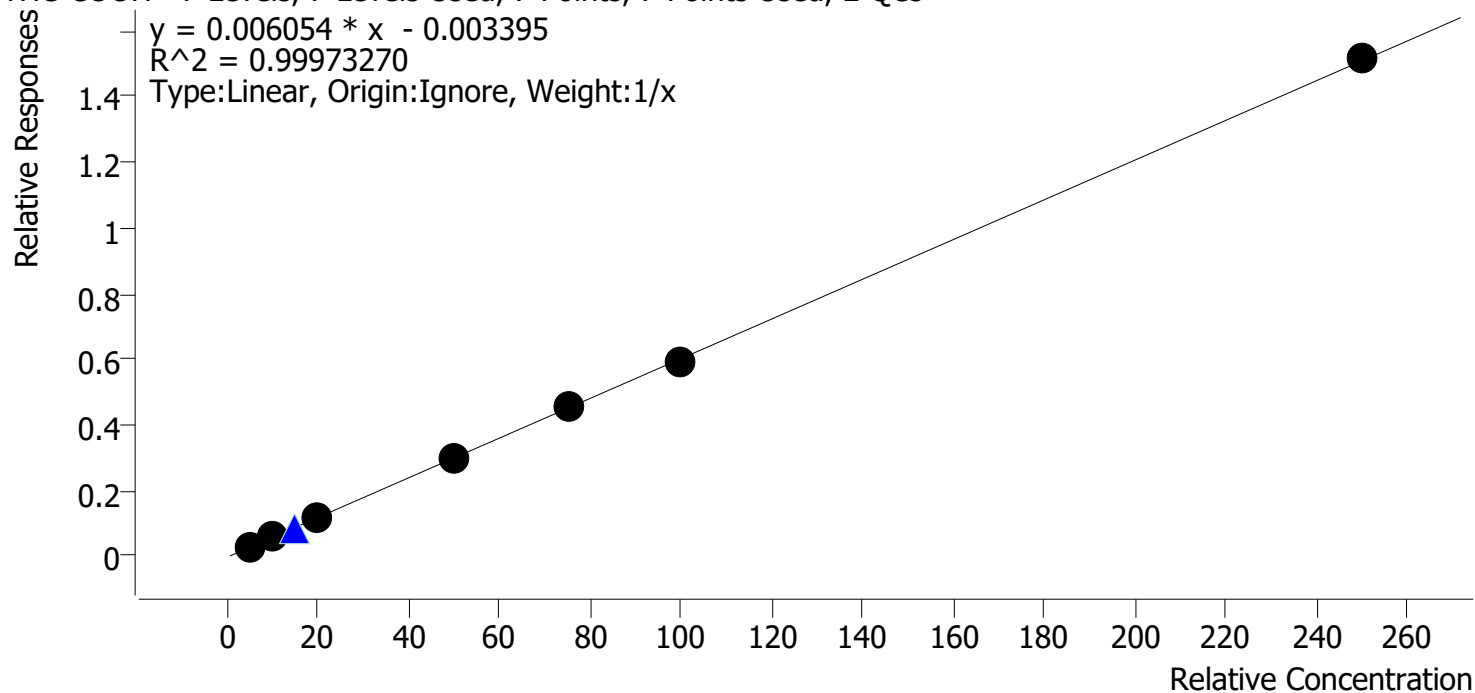**Analyte**   THC-COOH   **Internal Standard**   THC-COOH-D9

THC-COOH - 7 Levels, 7 Levels Used, 7 Points, 7 Points Used, 2 QCs

$y = 0.006054 * x - 0.003395$
$R^2 = 0.99973270$
Type:Linear, Origin:Ignore, Weight:1/x

Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
Cal 1 MJ	1	✔	5.0	5.2	104.8
Cal 2 MJ	2	✔	10.0	9.8	97.7
Cal 3 MJ	3	✔	20.0	19.5	97.5
Cal 4 MJ	4	✔	50.0	49.7	99.3
Cal 5 MJ_r	5	✔	75.0	76.6	102.1
Cal 6 MJ	6	✔	100.0	98.2	98.2
Cal 7 MJ	7	✔	250.0	251.1	100.4

AM #27 Cannabinoids Quant. Calibration Curve Report

Batch results   D:\MassHunter\Data\2024\AM 27 28\071924 AM 27 28 CS\QuantResults\AM 27.batch.bin
Last Cal. Update 7/25/2024 11:18 AM
Analyst Name   ISP\Datastor
Analyte   THC-OH   **Internal Standard**   THC-OH-D3
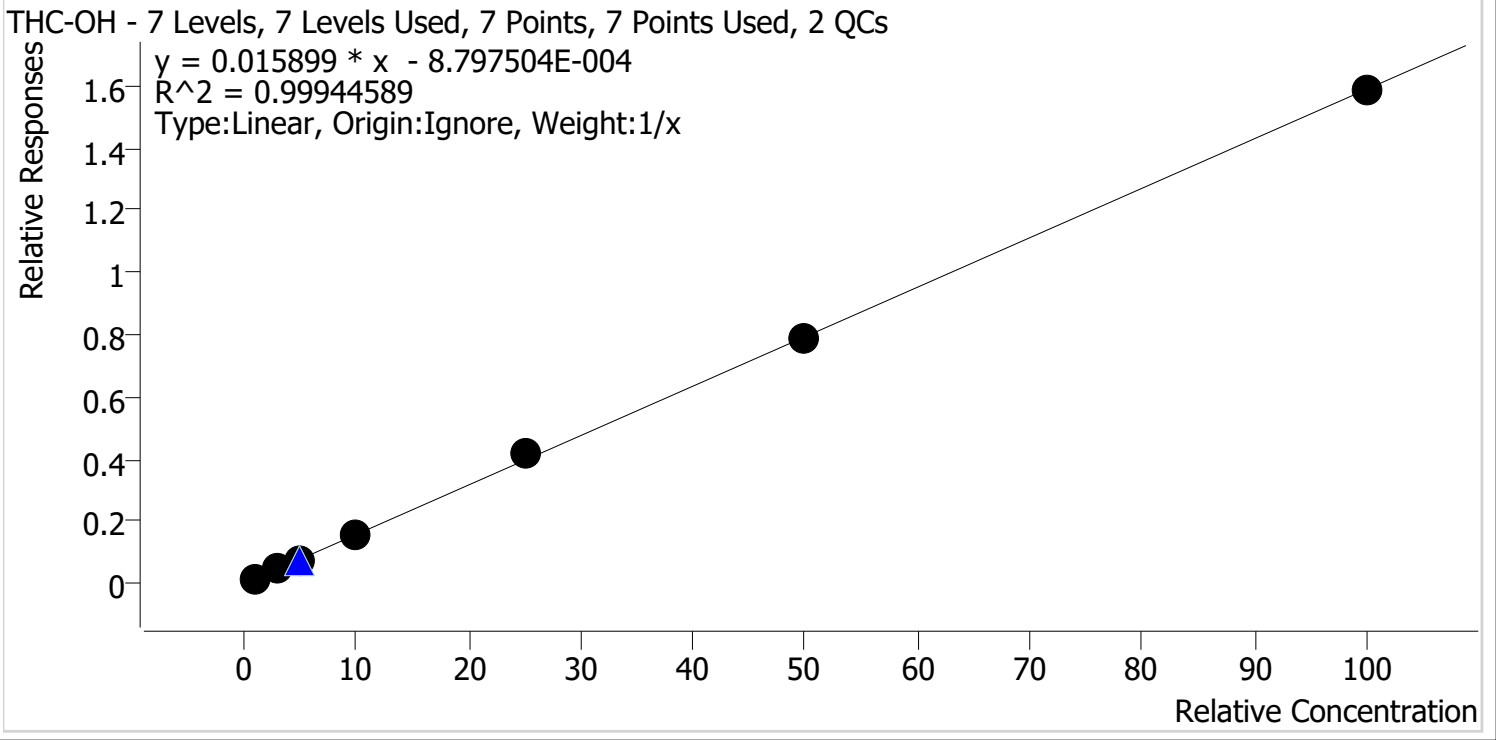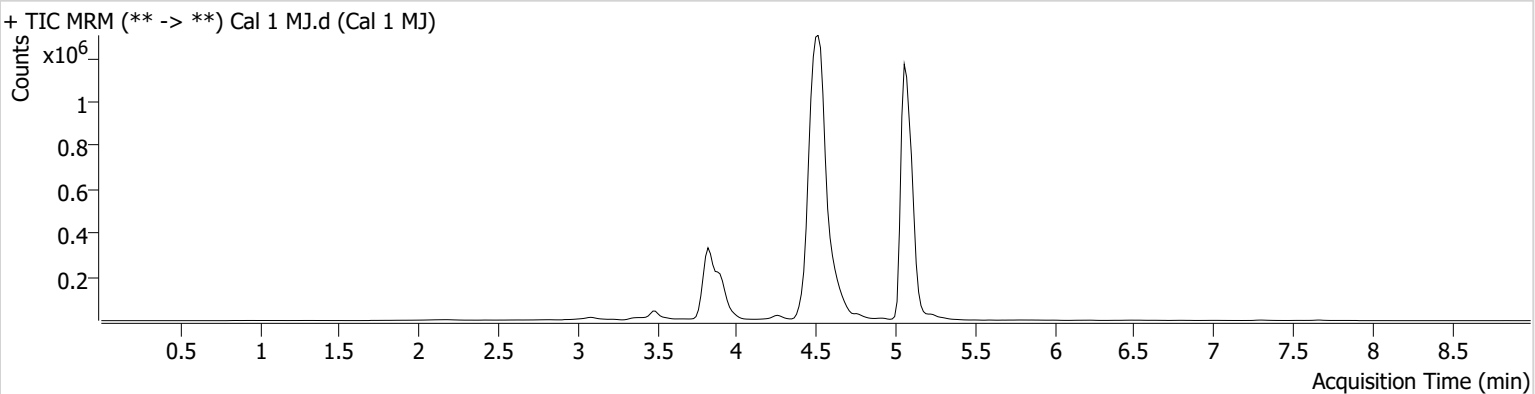
THC-OH - 7 Levels, 7 Levels Used, 7 Points, 7 Points Used, 2 QCs

$y = 0.015899 * x - 8.797504E\text{-}004$
$R^2 = 0.99944589$
Type:Linear, Origin:Ignore, Weight:1/x

Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
Cal 1 MJ	1	✔	1.0	1.1	108.1
Cal 2 MJ	2	✔	3.0	2.9	96.2
Cal 3 MJ	3	✔	5.0	4.8	95.5
Cal 4 MJ	4	✔	10.0	9.6	96.3
Cal 5 MJ_r	5	✔	25.0	26.2	104.7
Cal 6 MJ	6	✔	50.0	49.8	99.5
Cal 7 MJ	7	✔	100.0	99.7	99.7

AM #27 Cannabinoids Quant. Results

Batch results   D:\MassHunter\Data\2024\AM 27 28\071924 AM 27 28 CS\QuantResults\AM 27.batch.bin
Calibration Last Update   7/25/2024 11:18:43 AM

Instrument	Falco (069901)	**Data File**	Cal 1 MJ.d
Type	Cal	**Sample**	Cal 1 MJ
Acq. Method	AM 27 Agilent Method.m	**Operator**	Celena Shrum
Sample Position	P1-A1	**Comment**	Only drugs and concentrations listed on the laboratory
Injection Volume	10		report itself are appropriate to be used for
Acq. Date-Time	7/19/2024 3:02:54 PM		interpretation purposes. Any drugs or values included
Sample Info.			in the notes but not included on the report are used by
			laboratory personnel to make determinations/reach
			conclusions within the confines of the methods.

Sample Chromatogram

+ TIC MRM (** -> **) Cal 1 MJ.d (Cal 1 MJ)

Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.075	43684	250.57	28.8	∞	5278983	1.1102 ng/ml
THC-COOH	3.924	18489	136.97	237.9	∞	652836	5.2385 ng/ml
THC-OH	3.835	24341	∞	10.9	30.03	1492746	1.0810 ng/ml

AM #27 Cannabinoids Quant. Results

Batch results   D:\MassHunter\Data\2024\AM 27 28\071924 AM 27 28 CS\QuantResults\AM 27.batch.bin
Calibration Last Update   7/25/2024 11:18:43 AM

Instrument	Falco (069901)	**Data File**	Cal 2 MJ.d
Type	Cal	**Sample**	Cal 2 MJ
Acq. Method	AM 27 Agilent Method.m	**Operator**	Celena Shrum
Sample Position	P1-B1	**Comment**	Only drugs and concentrations listed on the laboratory report itself are appropriate to be used for interpretation purposes. Any drugs or values included in the notes but not included on the report are used by laboratory personnel to make determinations/reach conclusions within the confines of the methods.
Injection Volume	10		
Acq. Date-Time	7/19/2024 3:16:10 PM		
Sample Info.			

Sample Chromatogram

+ TIC MRM (** -> **) Cal 2 MJ.d (Cal 2 MJ)

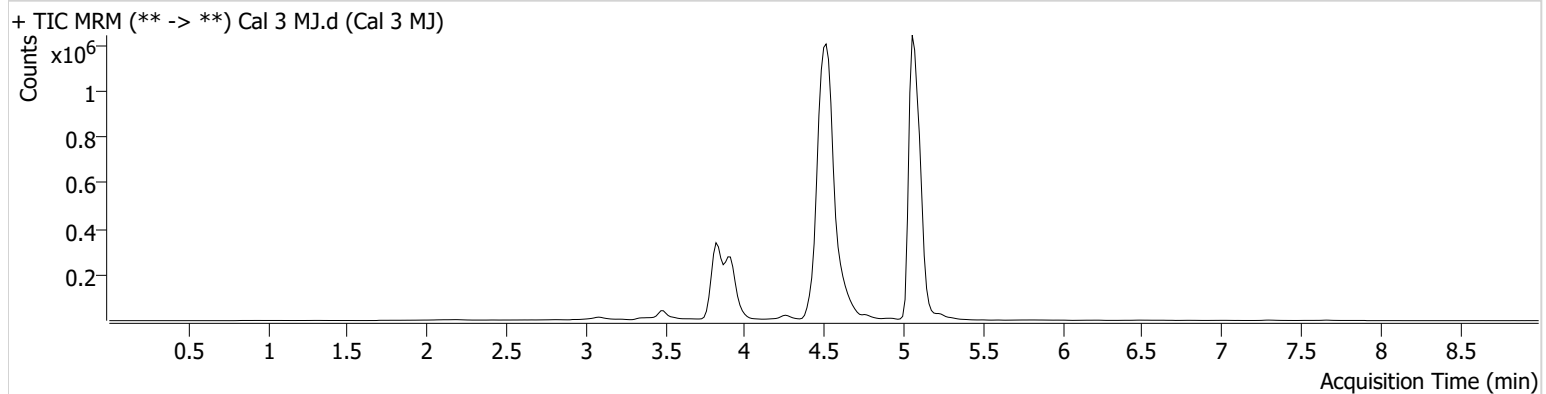| Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.075	142474	412.37	26.0	∞	5332915	2.9475 ng/ml
THC-COOH	3.924	35320	∞	243.5	1758.62	633454	9.7703 ng/ml
THC-OH	3.835	65232	∞	13.1	311.02	1450000	2.8850 ng/ml

AM #27 Cannabinoids Quant. Results

Batch results   D:\MassHunter\Data\2024\AM 27 28\071924 AM 27 28 CS\QuantResults\AM 27.batch.bin
Calibration Last Update   7/25/2024 11:18:43 AM

Instrument	Falco (069901)	**Data File**	Cal 3 MJ.d
Type	Cal	**Sample**	Cal 3 MJ
Acq. Method	AM 27 Agilent Method.m	**Operator**	Celena Shrum
Sample Position	P1-C1	**Comment**	Only drugs and concentrations listed on the laboratory report itself are appropriate to be used for interpretation purposes. Any drugs or values included in the notes but not included on the report are used by laboratory personnel to make determinations/reach conclusions within the confines of the methods.
Injection Volume	10		
Acq. Date-Time	7/19/2024 3:29:16 PM		
Sample Info.			

Sample Chromatogram

+ TIC MRM (** -> **) Cal 3 MJ.d (Cal 3 MJ)

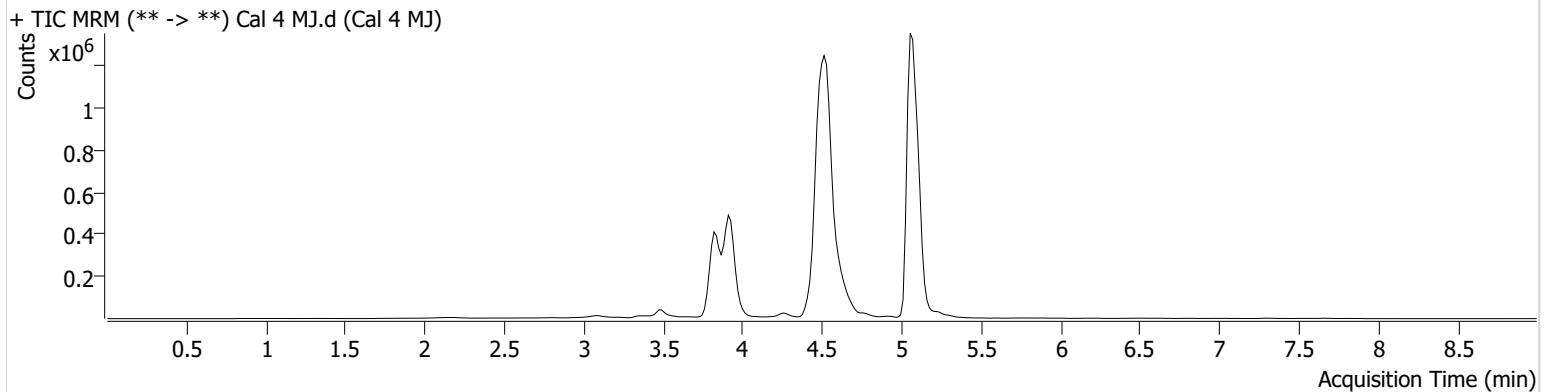| Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.075	241572	∞	25.3	∞	5393290	4.7484 ng/ml
THC-COOH	3.924	73961	∞	241.8	∞	645158	19.4961 ng/ml
THC-OH	3.835	106817	∞	12.9	96.47	1423745	4.7743 ng/ml

AM #27 Cannabinoids Quant. Results

Batch results   D:\MassHunter\Data\2024\AM 27 28\071924 AM 27 28 CS\QuantResults\AM 27.batch.bin
Calibration Last Update   7/25/2024 11:18:43 AM

Instrument	Falco (069901)	**Data File**	Cal 4 MJ.d
Type	Cal	**Sample**	Cal 4 MJ
Acq. Method	AM 27 Agilent Method.m	**Operator**	Celena Shrum
Sample Position	P1-D1	**Comment**	Only drugs and concentrations listed on the laboratory report itself are appropriate to be used for interpretation purposes. Any drugs or values included in the notes but not included on the report are used by laboratory personnel to make determinations/reach conclusions within the confines of the methods.
Injection Volume	10		
Acq. Date-Time	7/19/2024 3:42:23 PM		
Sample Info.			

Sample Chromatogram

+ TIC MRM (** -> **) Cal 4 MJ.d (Cal 4 MJ)

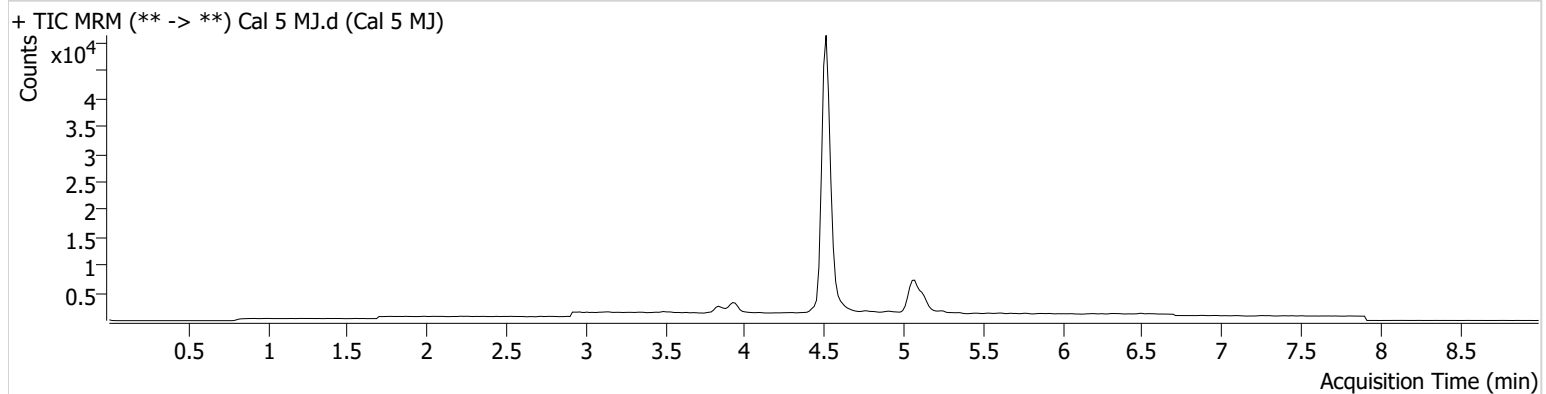| Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.075	540085	6831.33	24.4	∞	5642890	9.8217 ng/ml
THC-COOH	3.924	202717	5751.65	231.9	3245.53	681925	49.6618 ng/ml
THC-OH	3.835	243643	∞	12.9	∞	1599799	9.6346 ng/ml

AM #27 Cannabinoids Quant. Results

Batch results   D:\MassHunter\Data\2024\AM 27 28\071924 AM 27 28 CS\QuantResults\AM 27.batch.bin
Calibration Last Update   7/25/2024 11:18:43 AM

Instrument	Falco (069901)	**Data File**	Cal 5 MJ.d
Type	Sample	**Sample**	Cal 5 MJ
Acq. Method	AM 27 Agilent Method.m	**Operator**	Celena Shrum
Sample Position	P1-E1	**Comment**	Only drugs and concentrations listed on the laboratory
Injection Volume	10		report itself are appropriate to be used for
Acq. Date-Time	7/19/2024 3:55:29 PM		interpretation purposes. Any drugs or values included
Sample Info.			in the notes but not included on the report are used by
			laboratory personnel to make determinations/reach
			conclusions within the confines of the methods.

Sample Chromatogram

+ TIC MRM (** -> **) Cal 5 MJ.d (Cal 5 MJ)

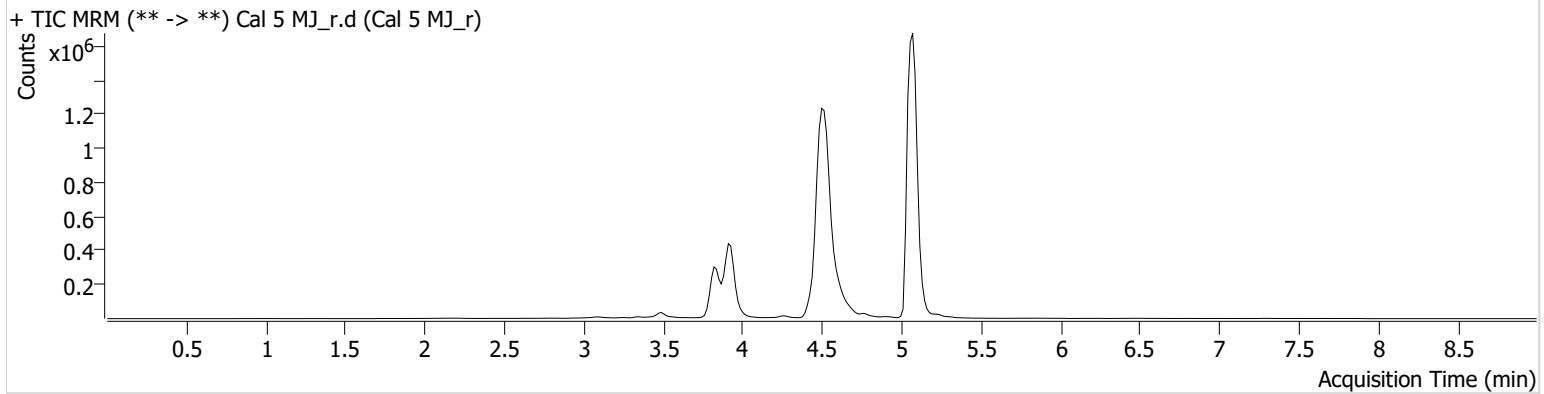| Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.075	3196	15.59	23.3	2.40 **Low**	13989	23.0522 ng/ml
THC-COOH	3.939	646	8.67 **Low**	251.0	16.25	1623	66.2811 ng/ml

AM #27 Cannabinoids Quant. Results

Batch results   D:\MassHunter\Data\2024\AM 27 28\071924 AM 27 28 CS\QuantResults\AM 27.batch.bin
Calibration Last Update 7/25/2024 11:18:43 AM

Instrument	Falco (069901)	**Data File**	Cal 5 MJ_r.d
Type	Cal	**Sample**	Cal 5 MJ_r
Acq. Method	AM 27 Agilent Method.m	**Operator**	Celena Shrum
Sample Position	P1-E1	**Comment**	Only drugs and concentrations listed on the laboratory report itself are appropriate to be used for interpretation purposes. Any drugs or values included in the notes but not included on the report are used by laboratory personnel to make determinations/reach conclusions within the confines of the methods.
Injection Volume	10		
Acq. Date-Time	7/22/2024 9:25:16 AM		
Sample Info.			

Sample Chromatogram

+ TIC MRM (** -> **) Cal 5 MJ_r.d (Cal 5 MJ_r)

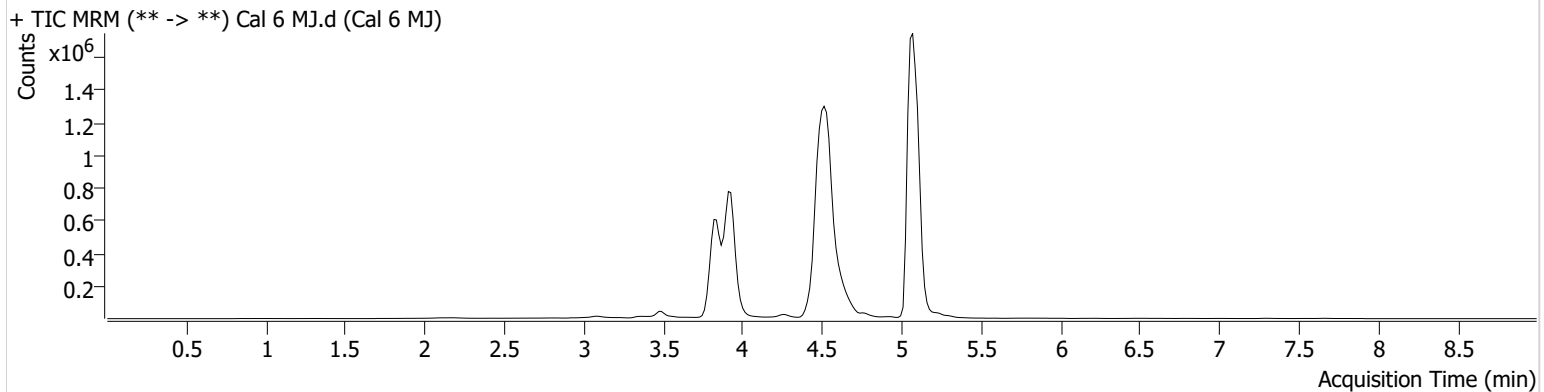| Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.075	1304811	11443.57	26.3	∞	5393896	24.3876 ng/ml
THC-COOH	3.924	199232	4637.43	219.1	5418.75	432820	76.5916 ng/ml
THC-OH	3.835	364855	∞	13.3	∞	878680	26.1727 ng/ml

AM #27 Cannabinoids Quant. Results

Batch results   D:\MassHunter\Data\2024\AM 27 28\071924 AM 27 28 CS\QuantResults\AM 27.batch.bin
Calibration Last Update 7/25/2024 11:18:43 AM

Instrument	Falco (069901)	**Data File**	Cal 6 MJ.d
Type	Cal	**Sample**	Cal 6 MJ
Acq. Method	AM 27 Agilent Method.m	**Operator**	Celena Shrum
Sample Position	P1-F1	**Comment**	*Only drugs and concentrations listed on the laboratory report itself are appropriate to be used for interpretation purposes. Any drugs or values included in the notes but not included on the report are used by laboratory personnel to make determinations/reach conclusions within the confines of the methods.*
Injection Volume	10		
Acq. Date-Time	7/19/2024 4:08:36 PM		
Sample Info.			

Sample Chromatogram

+ TIC MRM (** -> **) Cal 6 MJ.d (Cal 6 MJ)

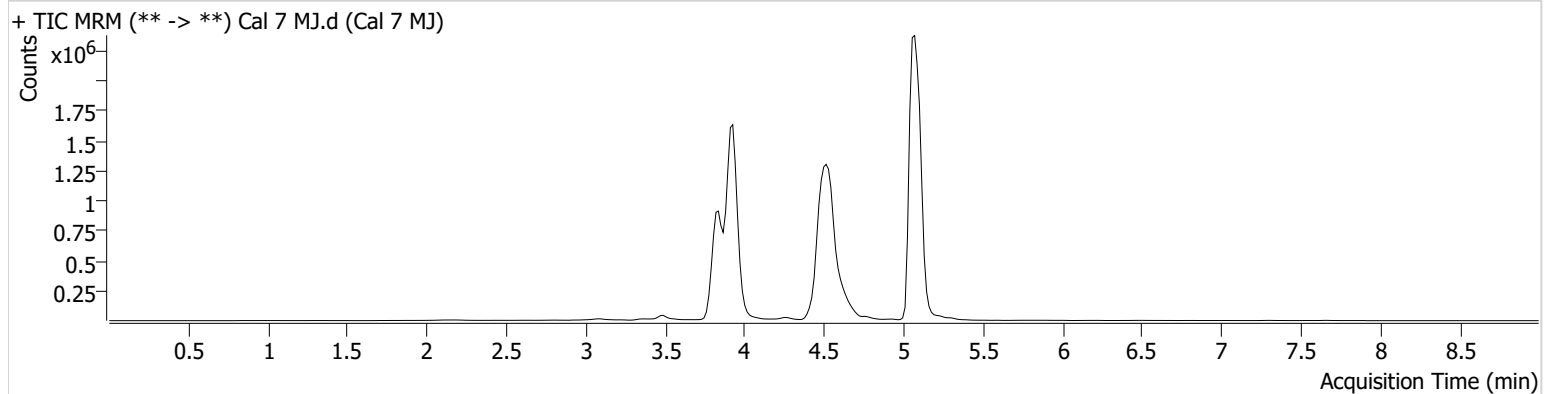| Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.075	2513119	∞	26.2	657.87	5138791	49.0114 ng/ml
THC-COOH	3.924	377111	∞	242.7	∞	638125	98.1725 ng/ml
THC-OH	3.835	1201452	∞	13.6	∞	1520317	49.7618 ng/ml

AM #27 Cannabinoids Quant. Results

Batch results   D:\MassHunter\Data\2024\AM 27 28\071924 AM 27 28 CS\QuantResults\AM 27.batch.bin
Calibration Last Update   7/25/2024 11:18:43 AM

Instrument	Falco (069901)	**Data File**	Cal 7 MJ.d
Type	Cal	**Sample**	Cal 7 MJ
Acq. Method	AM 27 Agilent Method.m	**Operator**	Celena Shrum
Sample Position	P1-G1	**Comment**	Only drugs and concentrations listed on the laboratory report itself are appropriate to be used for interpretation purposes. Any drugs or values included in the notes but not included on the report are used by laboratory personnel to make determinations/reach conclusions within the confines of the methods.
Injection Volume	10		
Acq. Date-Time	7/19/2024 4:21:42 PM		
Sample Info.			

Sample Chromatogram

+ TIC MRM (** -> **) Cal 7 MJ.d (Cal 7 MJ)

Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.075	5210762	∞	26.0	∞	5105516	101.9732 ng/ml
THC-COOH	3.924	915150	∞	233.1	∞	603404	251.0692 ng/ml
THC-OH	3.835	2510388	5146.19	13.4	∞	1584779	99.6906 ng/ml