7/9/2024

Worklist: 6863

LAB_CASE	ITEM	ITEM_TYPE	DESCRIPTION	
M2024-2261	1	BCK	AM 27 Blood THC Quant by LC-QQQ	
P2024-1711	1	BCK	AM 27 Blood THC Quant by LC-QQQ	
P2024-1819	1	BCK	AM 27 Blood THC Quant by LC-QQQ	
P2024-1829	1	BCK	AM 27 Blood THC Quant by LC-QQQ	
P2024-1894	1	BCK	AM 27 Blood THC Quant by LC-QQQ	
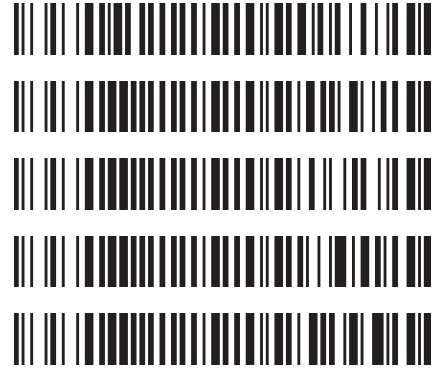
AM# 27: Quantitation of THC and Metabolites in Blood and Urine by LC-MS/MS

Extraction Date: 07/08/2024　　　　　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: A sample from a previous batch was included in this run (P2024-1711-1). P2024-1894-1, P2024-1829-1, and P2024-1819-1 were reinjected due to the data files being corrupted.

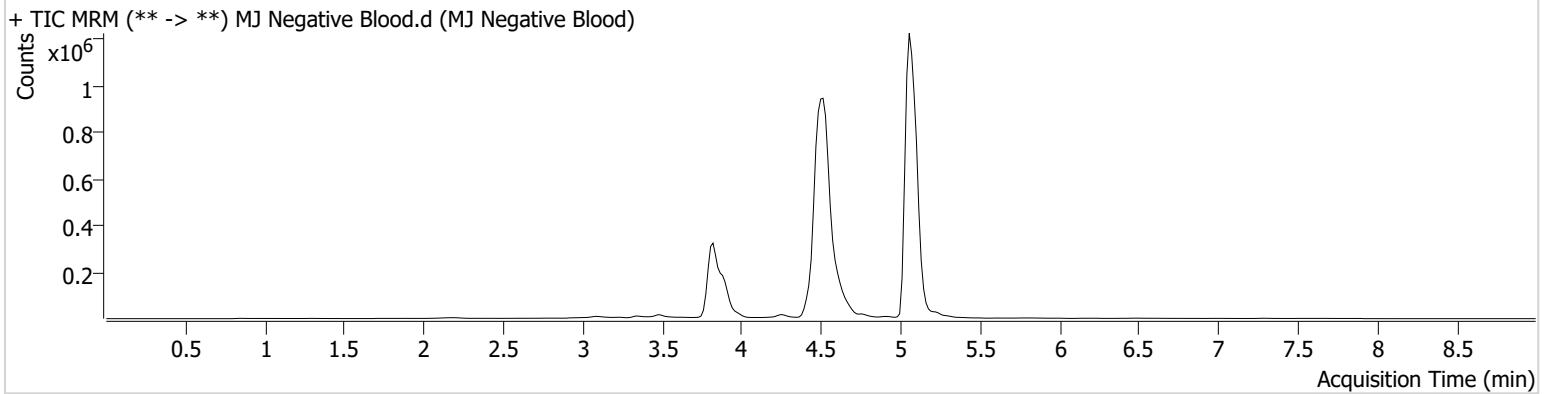|	1	2	3	4	5	6
a						QC 1
b					P2024-1711-1	cal 100 ng
c					M2024-2261-1	cal 50 ng
d					P2024-1819-1	cal 25 ng
e					P2024-1829-1	cal 10ng
f					P2024-1894-1	cal 5 ng
g					NEG Blood	cal 3 ng
h					QC 2	cal 1ng

AM #27 Cannabinoids Quant. Results

Batch results   D:\MassHunter\Data\2024\AM 27 28\070824 AM 27 28 CS\QuantResults\AM 27.batch.bin
Calibration Last Update 7/11/2024 12:42:31 PM

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-G5	**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	7/8/2024 3:26:47 PM		
Sample Info.			

Sample Chromatogram

+ TIC MRM (** -> **) MJ Negative Blood.d (MJ Negative Blood)
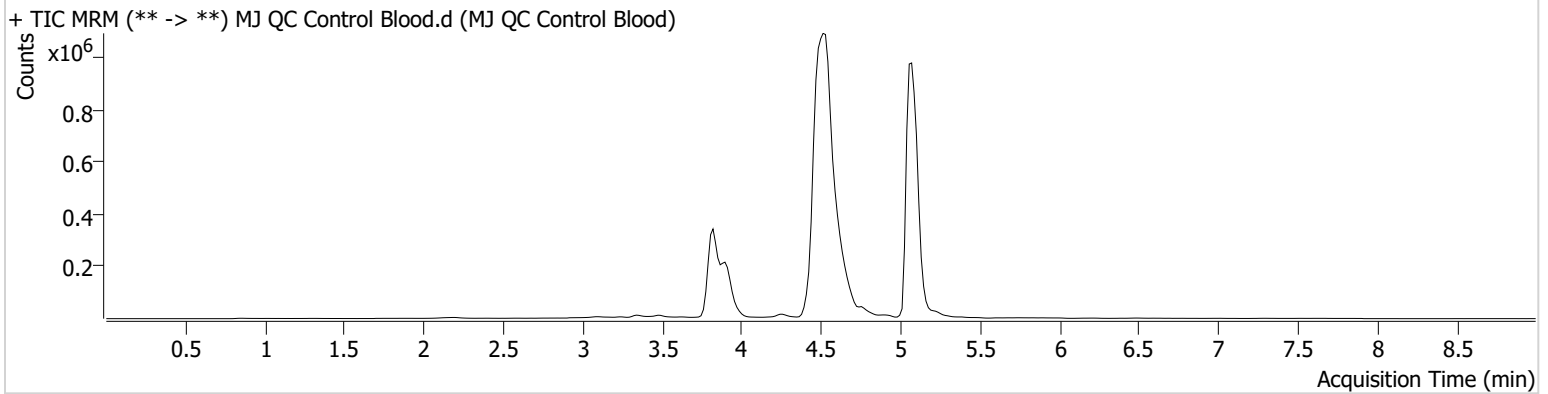
AM #27 Cannabinoids Quant. Results

Batch results   D:\MassHunter\Data\2024\AM 27 28\070824 AM 27 28 CS\QuantResults\AM 27.batch.bin
Calibration Last Update   7/11/2024 12:42:31 PM

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-A6	**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	7/8/2024 3:00:34 PM		
Sample Info.			

Sample Chromatogram

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

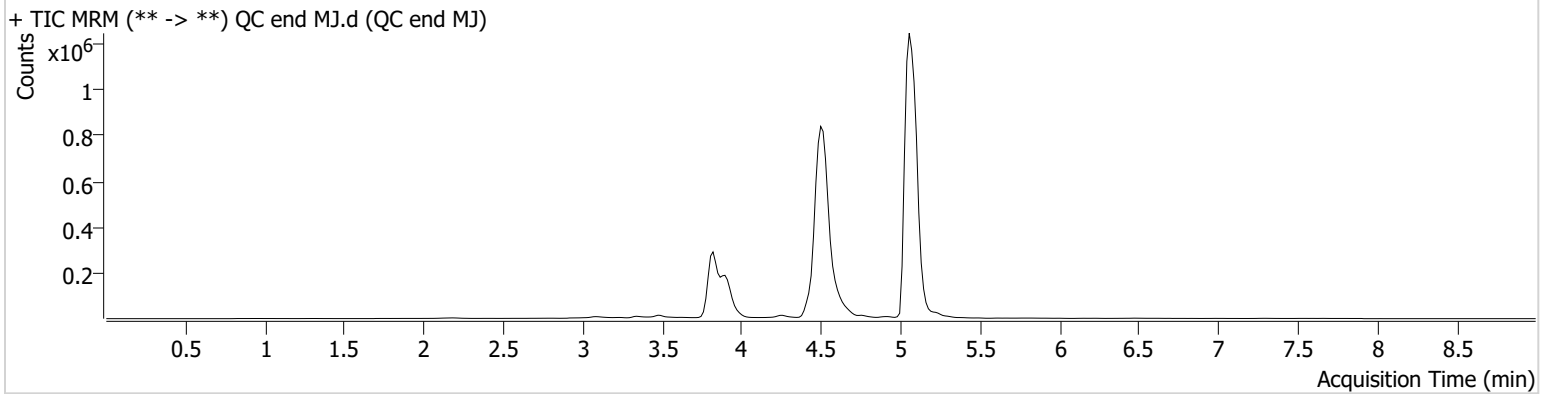| Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.075	212334	783.90	24.9	∞	4276865	5.0668 ng/ml
THC-COOH	3.909	48102	1187.87	212.7	∞	519064	15.0310 ng/ml
THC-OH	3.820	110050	115.84	13.1	∞	1365389	4.7746 ng/ml

AM #27 Cannabinoids Quant. Results

Batch results   D:\MassHunter\Data\2024\AM 27 28\070824 AM 27 28 CS\QuantResults\AM 27.batch.bin
Calibration Last Update   7/11/2024 12:42:31 PM

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-H5	**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	7/8/2024 6:04:09 PM		
Sample Info.			

Sample Chromatogram

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

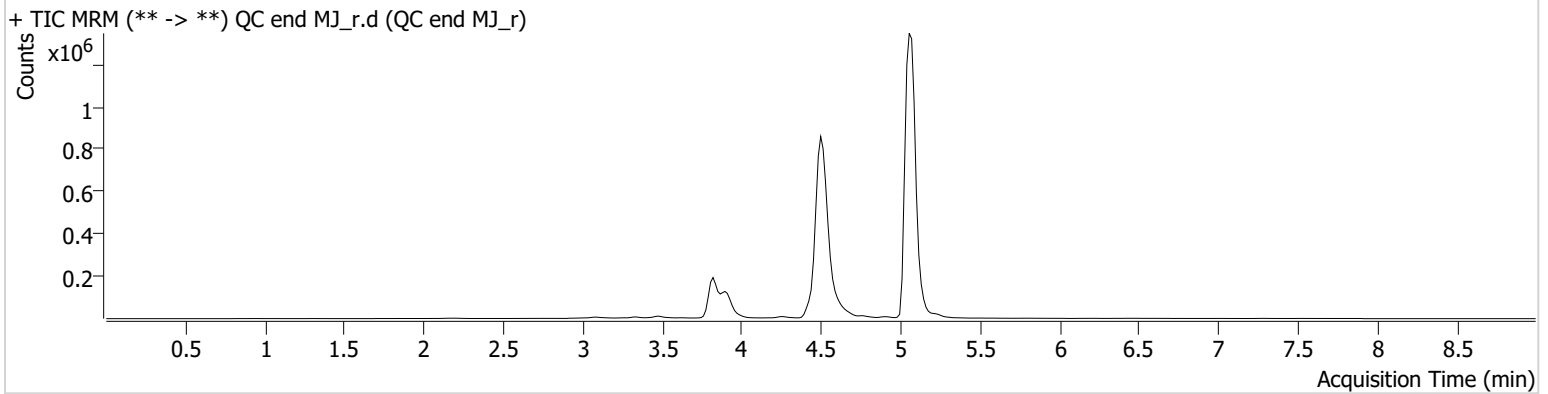| Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.075	266814	∞	25.1	∞	5707222	4.7843 ng/ml
THC-COOH	3.909	42136	593.51	210.9	580.72	465466	14.7000 ng/ml
THC-OH	3.820	92284	∞	13.4	∞	1158175	4.7202 ng/ml

AM #27 Cannabinoids Quant. Results

Batch results   D:\MassHunter\Data\2024\AM 27 28\070824 AM 27 28 CS\QuantResults\AM 27.batch.bin
Calibration Last Update   7/11/2024 12:42:31 PM

Instrument	Falco (069901)	**Data File**	QC end MJ_r.d
Type	QC	**Sample**	QC end MJ_r
Acq. Method	AM 27 Agilent Method.m	**Operator**	Celena Shrum
Sample Position	P1-H5	**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	7/9/2024 11:56:32 AM		
Sample Info.			

Sample Chromatogram

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

| Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.075	245891	∞	26.4	∞	5479832	4.6011 ng/ml
THC-COOH	3.909	27110	376.28	227.3	∞	315154	14.0060 ng/ml
THC-OH	3.820	55278	∞	13.4	180.61	727591	4.5008 ng/ml

AM #27 Cannabinoids Quant. Calibration Curve Report

Batch results   D:\MassHunter\Data\2024\AM 27 28\070824 AM 27 28 CS\QuantResults\AM 27.batch.bin

Last Cal. Update   7/11/2024 12:42 PM

Analyst Name   ISP\Datastor

Analyte   THC   **Internal Standard**   THC-D3

THC - 7 Levels, 7 Levels Used, 7 Points, 7 Points Used, 3 QCs

$y = 0.010255 * x - 0.002313$

$R^2 = 0.99990245$

Type:Linear, Origin:Ignore, Weight:1/x
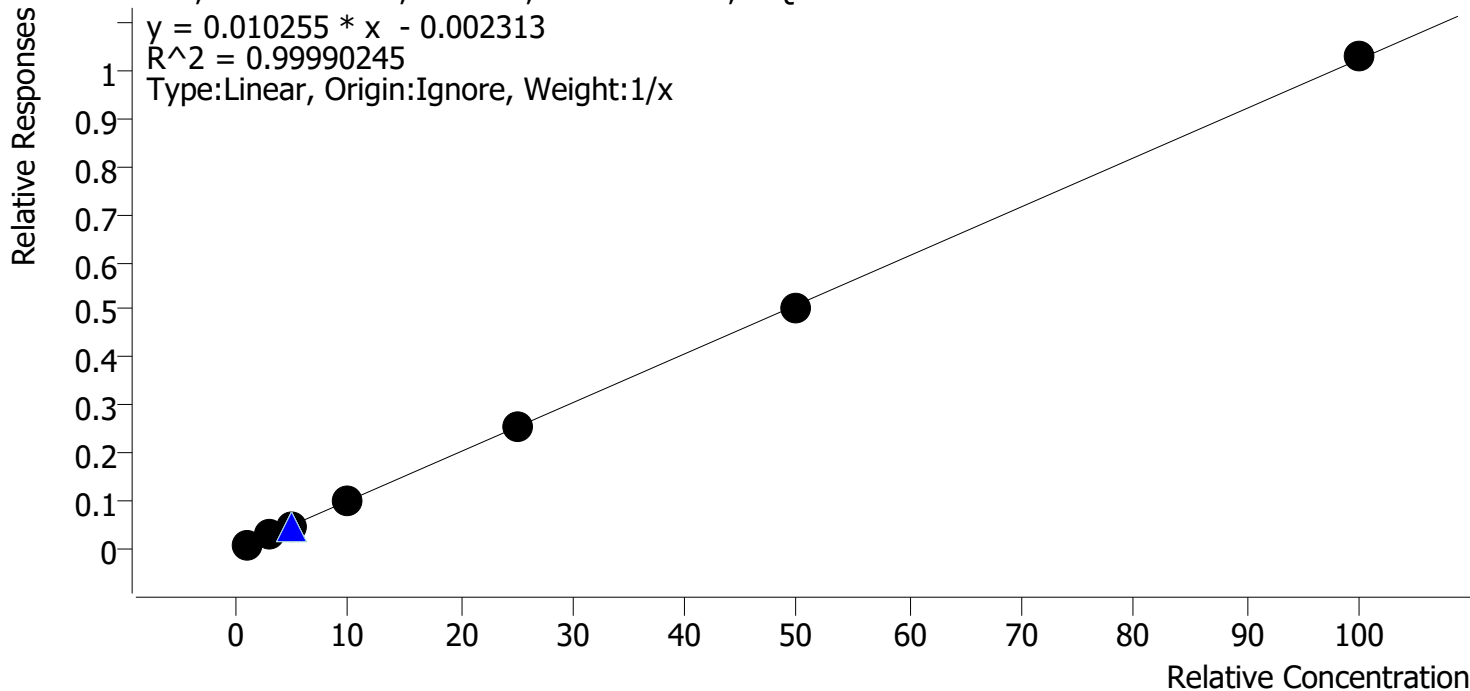
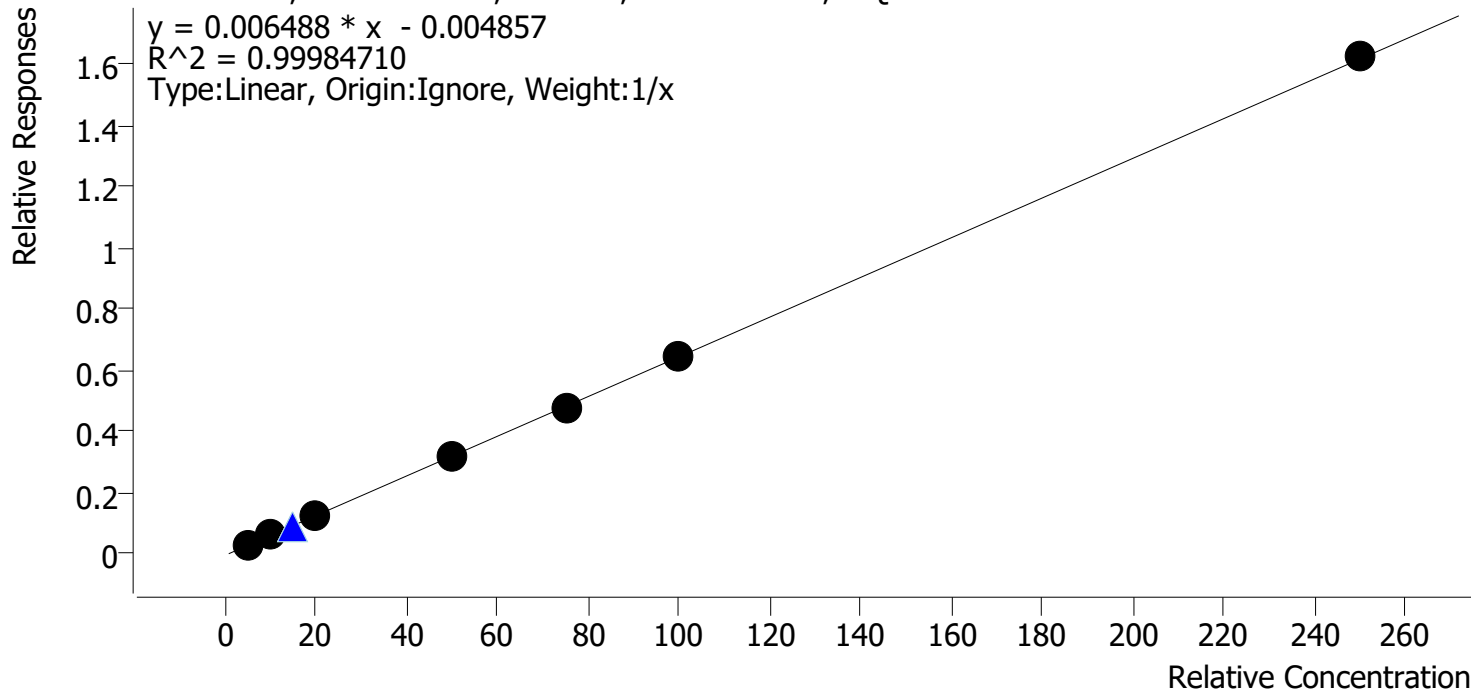| Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
Cal 1 MJ	1	✔	1.0	1.0	104.6
Cal 2 MJ	2	✔	3.0	3.0	98.7
Cal 3 MJ	3	✔	5.0	4.9	97.8
Cal 4 MJ	4	✔	10.0	9.9	98.6
Cal 5 MJ	5	✔	25.0	25.2	100.7
Cal 6 MJ	6	✔	50.0	49.5	99.0
Cal 7 MJ	7	✔	100.0	100.6	100.6

AM #27 Cannabinoids Quant. Calibration Curve Report

Batch results   D:\MassHunter\Data\2024\AM 27 28\070824 AM 27 28 CS\QuantResults\AM 27.batch.bin
Last Cal. Update   7/11/2024 12:42 PM
Analyst Name   ISP\Datastor
Analyte   THC-COOH   **Internal Standard**   THC-COOH-D9

THC-COOH - 7 Levels, 7 Levels Used, 7 Points, 7 Points Used, 3 QCs

$y = 0.006488 * x - 0.004857$
$R^2 = 0.99984710$
Type:Linear, Origin:Ignore, Weight:1/x

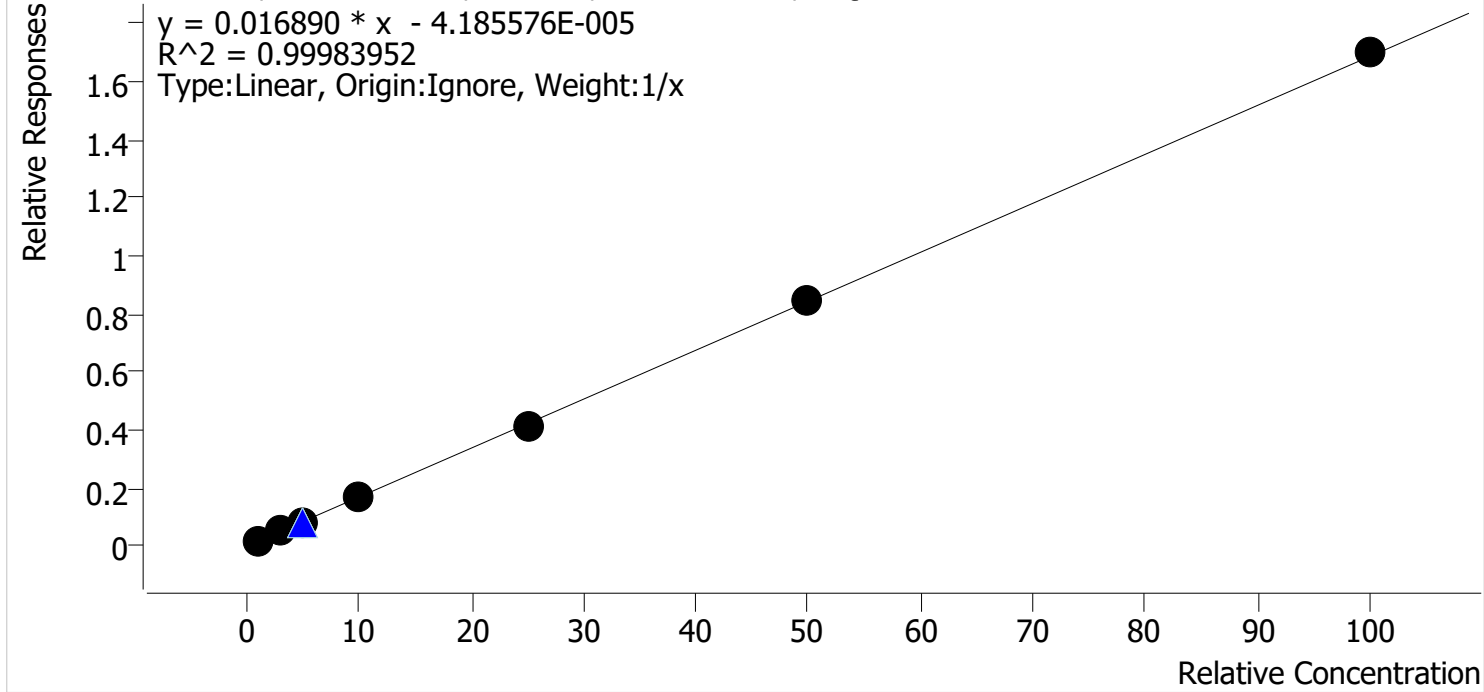| Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
Cal 1 MJ	1	✔	5.0	5.3	106.0
Cal 2 MJ	2	✔	10.0	9.8	98.0
Cal 3 MJ	3	✔	20.0	19.3	96.5
Cal 4 MJ	4	✔	50.0	49.8	99.5
Cal 5 MJ	5	✔	75.0	74.4	99.2
Cal 6 MJ	6	✔	100.0	100.3	100.3
Cal 7 MJ	7	✔	250.0	251.2	100.5

AM #27 Cannabinoids Quant. Calibration Curve Report

Batch results   D:\MassHunter\Data\2024\AM 27 28\070824 AM 27 28 CS\QuantResults\AM 27.batch.bin
Last Cal. Update   7/11/2024 12:42 PM
Analyst Name   ISP\Datastor
Analyte   THC-OH   **Internal Standard**   THC-OH-D3

THC-OH - 7 Levels, 7 Levels Used, 7 Points, 7 Points Used, 3 QCs
y = 0.016890 * x - 4.185576E-005
R^2 = 0.99983952
Type:Linear, Origin:Ignore, Weight:1/x

| Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
Cal 1 MJ	1	✔	1.0	1.1	107.3
Cal 2 MJ	2	✔	3.0	3.0	98.5
Cal 3 MJ	3	✔	5.0	4.9	97.4
Cal 4 MJ	4	✔	10.0	9.8	97.6
Cal 5 MJ	5	✔	25.0	24.6	98.5
Cal 6 MJ	6	✔	50.0	50.0	99.9
Cal 7 MJ	7	✔	100.0	100.8	100.8

AM #27 Cannabinoids Quant. Results

Batch results   D:\MassHunter\Data\2024\AM 27 28\070824 AM 27 28 CS\QuantResults\AM 27.batch.bin
Calibration Last Update   7/11/2024 12:42:31 PM

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-H6	**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	7/8/2024 1:15:30 PM		
Sample Info.			

Sample Chromatogram

+ TIC MRM (** -> **) Cal 1 MJ.d (Cal 1 MJ)
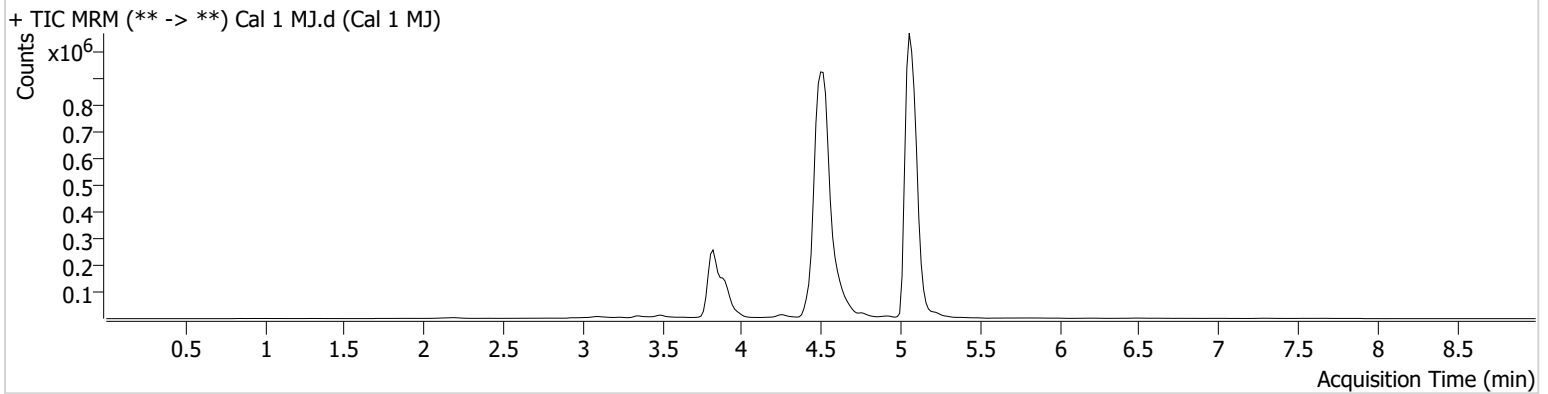
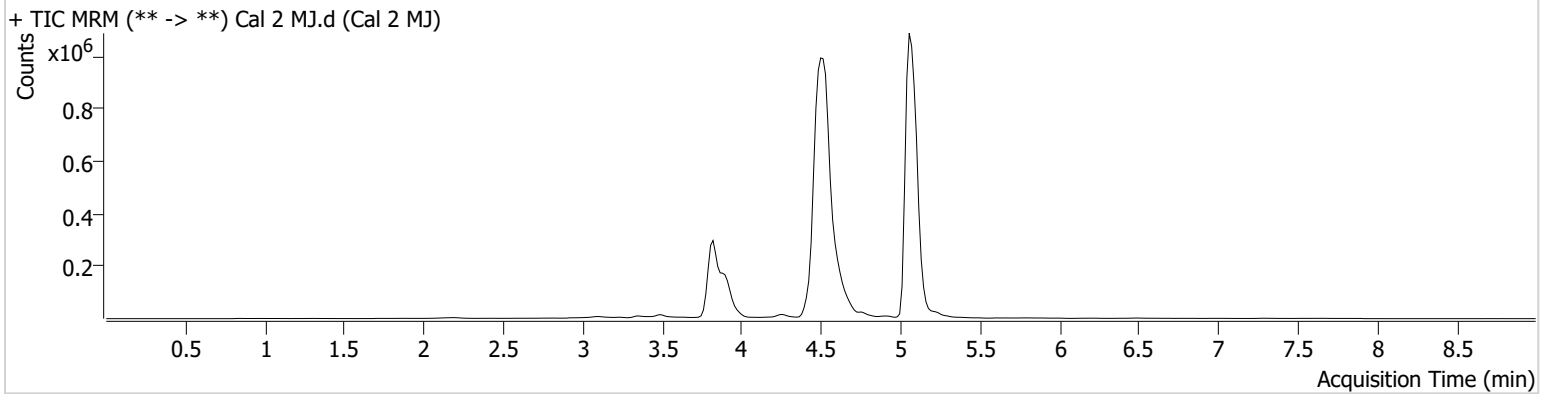| Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.075	41314	∞	28.9	∞	4909955	1.0460 ng/ml
THC-COOH	3.909	12593	102.68	206.9	515.10	426184	5.3025 ng/ml
THC-OH	3.820	19629	∞	11.7	12.54	1085525	1.0731 ng/ml

AM #27 Cannabinoids Quant. Results

Batch results   D:\MassHunter\Data\2024\AM 27 28\070824 AM 27 28 CS\QuantResults\AM 27.batch.bin
Calibration Last Update   7/11/2024 12:42:31 PM

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-G6	**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	7/8/2024 1:28:45 PM		
Sample Info.			

Sample Chromatogram

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

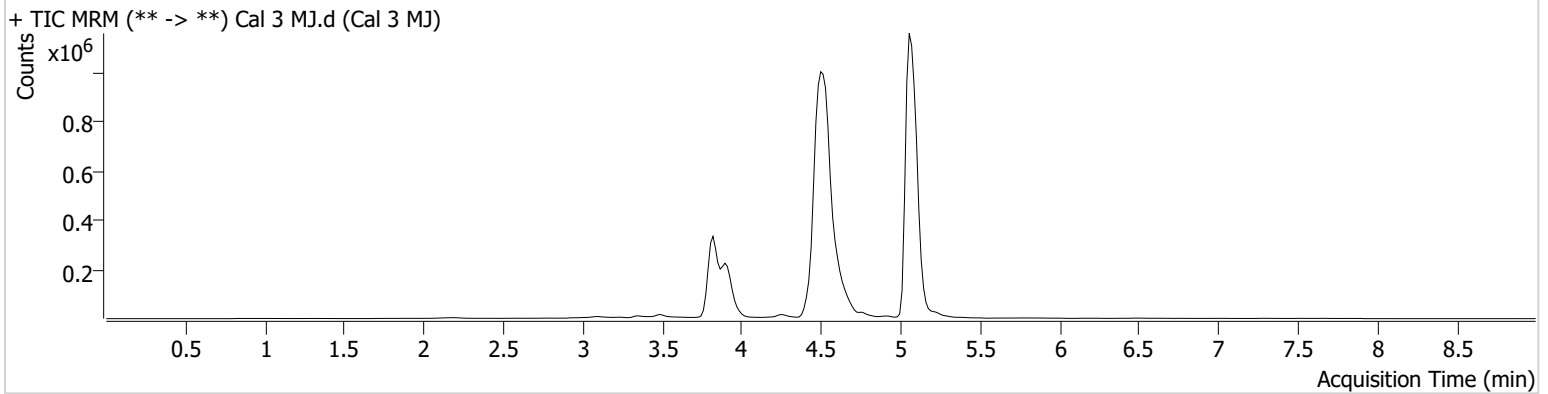| Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.075	136851	689.19	25.5	∞	4876913	2.9619 ng/ml
THC-COOH	3.909	26504	72.09	213.6	1048.85	451168	9.8025 ng/ml
THC-OH	3.820	60642	∞	13.0	299.02	1216168	2.9548 ng/ml

Batch results   D:\MassHunter\Data\2024\AM 27 28\070824 AM 27 28 CS\QuantResults\AM 27.batch.bin
Calibration Last Update   7/11/2024 12:42:31 PM

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-F6	**Comment**	Only drugs and concentrations listed on the laboratory
Injection Volume	10		report itself are appropriate to be used for
Acq. Date-Time	7/8/2024 1:41:52 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 3 MJ.d (Cal 3 MJ)

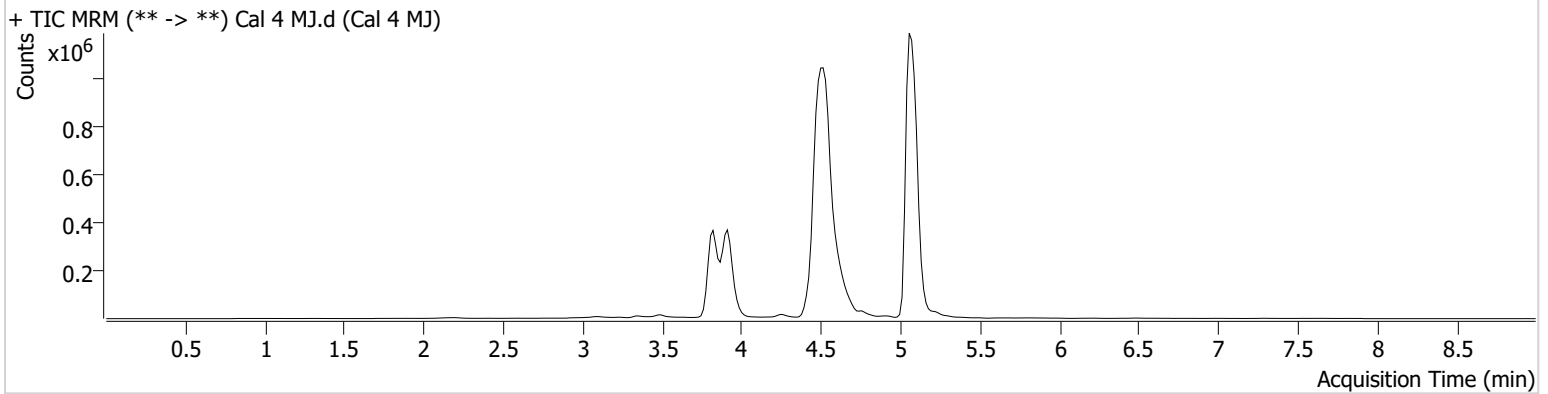| Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.075	240879	∞	24.7	∞	5034938	4.8907 ng/ml
THC-COOH	3.909	60011	284.32	215.9	988.13	498616	19.2976 ng/ml
THC-OH	3.820	108728	∞	13.7	374.46	1322532	4.8700 ng/ml

AM #27 Cannabinoids Quant. Results

Batch results   D:\MassHunter\Data\2024\AM 27 28\070824 AM 27 28 CS\QuantResults\AM 27.batch.bin
Calibration Last Update   7/11/2024 12:42:31 PM

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-E6	**Comment**	Only drugs and concentrations listed on the laboratory
Injection Volume	10		report itself are appropriate to be used for
Acq. Date-Time	7/8/2024 1:54:59 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 4 MJ.d (Cal 4 MJ)

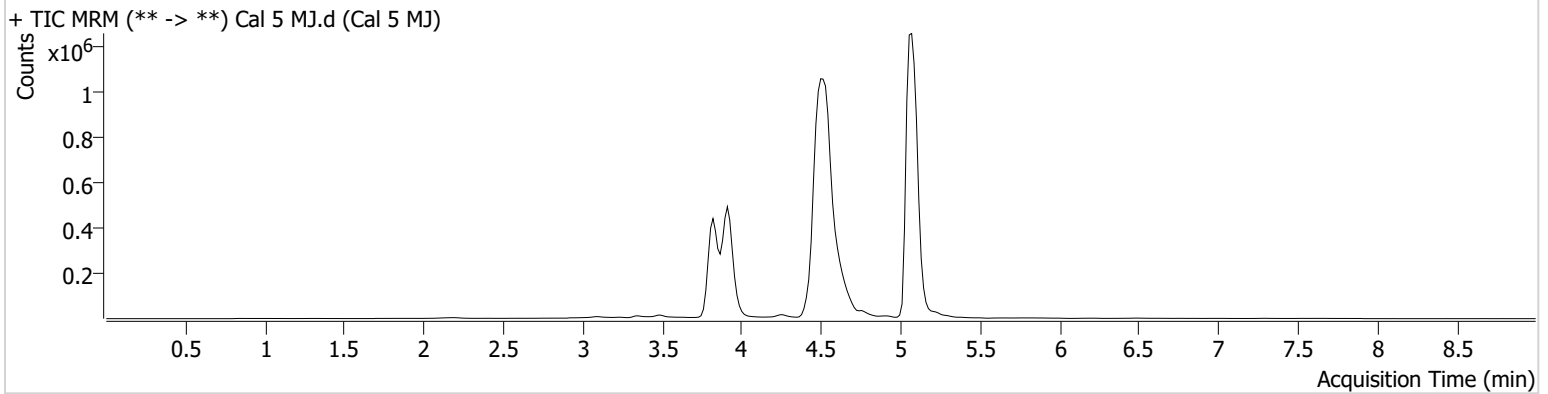| Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.075	483241	∞	25.8	∞	4891021	9.8600 ng/ml
THC-COOH	3.909	158739	3089.89	209.7	1149.84	499241	49.7525 ng/ml
THC-OH	3.820	223046	928.95	13.4	290.10	1352880	9.7639 ng/ml

AM #27 Cannabinoids Quant. Results

Batch results   D:\MassHunter\Data\2024\AM 27 28\070824 AM 27 28 CS\QuantResults\AM 27.batch.bin
Calibration Last Update   7/11/2024 12:42:31 PM

Instrument	Falco (069901)	**Data File**	Cal 5 MJ.d
Type	Cal	**Sample**	Cal 5 MJ
Acq. Method	AM 27 Agilent Method.m	**Operator**	Celena Shrum
Sample Position	P1-D6	**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	7/8/2024 2:08:05 PM		
Sample Info.			

Sample Chromatogram

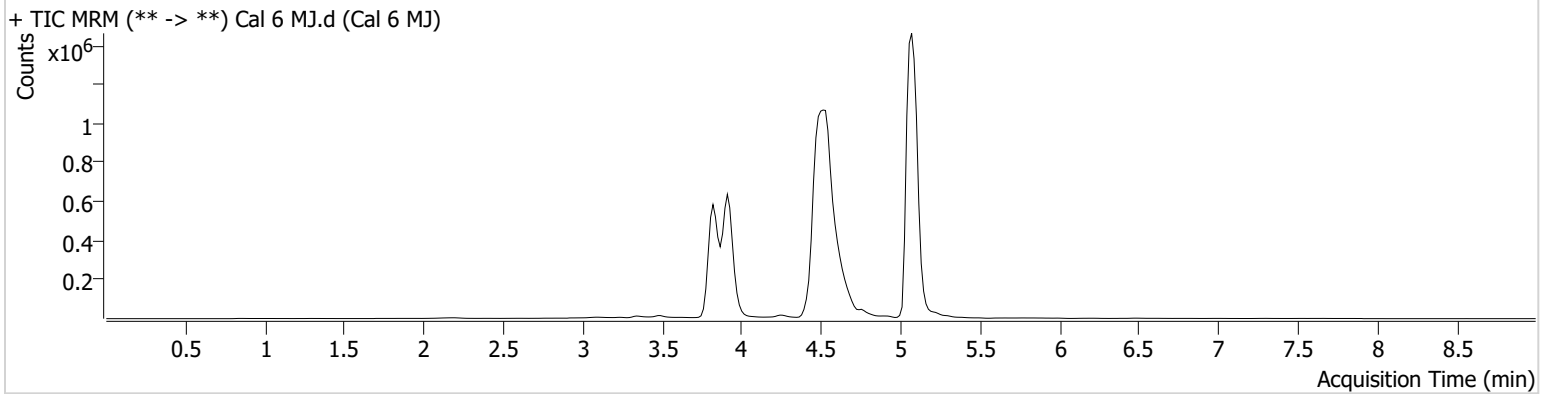| Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.075	1133686	∞	26.2	∞	4432283	25.1675 ng/ml
THC-COOH	3.909	231638	∞	210.7	∞	484691	74.4037 ng/ml
THC-OH	3.820	547670	∞	13.7	∞	1317336	24.6175 ng/ml

AM #27 Cannabinoids Quant. Results

Batch results   D:\MassHunter\Data\2024\AM 27 28\070824 AM 27 28 CS\QuantResults\AM 27.batch.bin
Calibration Last Update 7/11/2024 12:42:31 PM

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-C6	**Comment**	Only drugs and concentrations listed on the laboratory
Injection Volume	10		report itself are appropriate to be used for
Acq. Date-Time	7/8/2024 2:21:14 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 6 MJ.d (Cal 6 MJ)

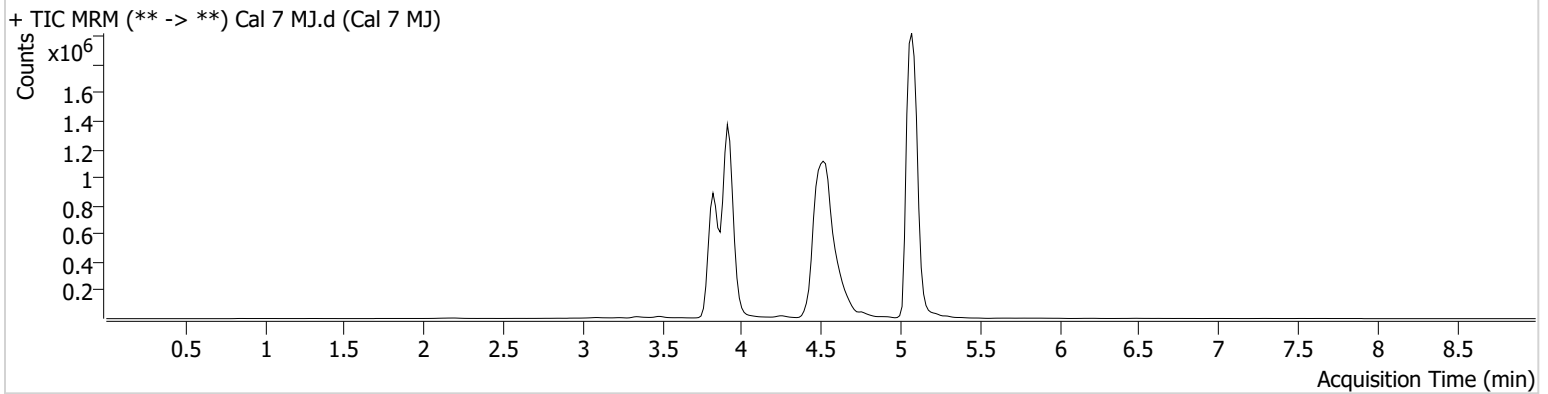| Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.075	2060690	∞	27.4	∞	4077423	49.5079 ng/ml
THC-COOH	3.909	313435	3870.99	211.4	∞	485475	100.2519 ng/ml
THC-OH	3.820	1127434	∞	13.8	4286.22	1335983	49.9677 ng/ml

Batch results D:\MassHunter\Data\2024\AM 27 28\070824 AM 27 28 CS\QuantResults\AM 27.batch.bin
Calibration Last Update 7/11/2024 12:42:31 PM

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-B6	**Comment**	Only drugs and concentrations listed on the laboratory
Injection Volume	10		report itself are appropriate to be used for
Acq. Date-Time	7/8/2024 2:34:21 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 7 MJ.d (Cal 7 MJ)

Name	RT	Resp.	S/N	Ratio	S/N	ISTD Resp.	Final Conc.
THC	5.075	4162683	∞	27.8	∞	4045406	100.5660 ng/ml
THC-COOH	3.909	775563	∞	209.5	∞	477276	251.1894 ng/ml
THC-OH	3.820	2352464	∞	13.8	6925.80	1382461	100.7530 ng/ml