

cg

REVIEWED
By Sarah Pickle at 9:59 am, Apr 24, 2020

Worklist: 4177

<u>LAB_CASE</u>	<u>ITEM</u>	<u>ITEM_TYPE</u>	<u>DESCRIPTION</u>	
M2020-0358	3	UCK	AM 25/AM 26 Urine MultiDrug/THC Screen by LC-QQQ	
M2020-0981	4	UCK	AM 25/AM 26 Urine MultiDrug/THC Screen by LC-QQQ	
M2020-1307	5	UCK	AM 25/AM 26 Urine MultiDrug/THC Screen by LC-QQQ	
M2020-1307	6	UCK	AM 25/AM 26 Urine MultiDrug/THC Screen by LC-QQQ	
M2020-1307	7	UCK	AM 25/AM 26 Urine MultiDrug/THC Screen by LC-QQQ	
M2020-1307	8	UCK	AM 25/AM 26 Urine MultiDrug/THC Screen by LC-QQQ	
P2020-0781	1	UCK	AM 25/AM 26 Urine MultiDrug/THC Screen by LC-QQQ	
P2020-1001	1	UCK	AM 25/AM 26 Urine MultiDrug/THC Screen by LC-QQQ	
P2020-1027	1	UCK	AM 25/AM 26 Urine MultiDrug/THC Screen by LC-QQQ	
P2020-1042	1	UCK	AM 25/AM 26 Urine MultiDrug/THC Screen by LC-QQQ	
P2020-1085	1	UCK	AM 25/AM 26 Urine MultiDrug/THC Screen by LC-QQQ	
P2020-1135	1	UCK	AM 25/AM 26 Urine MultiDrug/THC Screen by LC-QQQ	

**Idaho State Police
Forensic Services
Toxicology Discipline**

Request for Departure from an Analytical Method

Date of Request

01/13/2020

Forensic Scientist

Celena Shrum

Analytical Methods

Toxicology AM #25, Toxicology AM #26/27, and AM #28

Deviation

The expiration dates listed for the current batch of PinPoint ToxBox extraction plates are as follows:

- *MDS (batch IDP-107-190725)- Expiration is 1/25/2020
- *THC (batch IDP-108-190716)- Expiration is 1/16/2020
- *MDQ P1 (batch IDP-111-190729)- Expiration is 1/29/2020
- *MDQ P2 (batch IDP-112-190730)- Expiration is 1/30/2020

I am issuing a deviation to allow for the use of the remaining plates of these batches. The controls will be used to evaluate if the plate is working as intended. In addition, at least one external control must be included for each run.



Date: 01/13/2020

Celena Shrum

Toxicology Discipline Lead

AM# 25: Multi-Drug Screen in Blood by LC-MS/MS

Extraction Date: 04/17/2020

Analyst: Celena Shrum

Plate lot#: 190725

Plate Expiration: 1/25/2020- Deviation in place

Mobile phase A: 10mM Amm Form
0.5M Ammonium Hydroxide

Mobile phase B: 0.1% Formic Acid in MeOH
Ethyl Acetate LC Methanol

Blank Blood Lot: 445283-3

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

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: In blank well, add 250µL urine, 40µL BG Turbo, and 100µL 500mM sodium phosphate buffer. Place on plate shaker for 5 minutes.
- 3. Using a calibrated pipette, pipette **250µL blood and urine** (if applicable) into wells of analytical (standards) plate.
Pipette ID: #42
- 4. Place on shaking incubator at ambient temp., 900rpm for 15 minutes.
- 5. Pipette **250µL 0.5M ammonium hydroxide** in wells of analytical plate.
- 6. Place on shaking incubator at ambient temp., 900rpm for 15 minutes.
- 7. Transfer **300µL of blood+base** mixture 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 **900uL ethyl acetate**.
- 11. Wait 5 minutes.
- 12. Apply positive pressure for approx. 15 seconds. *(10-15 PSI- Selector to the left).*
- 13. Add **900uL ethyl acetate**.
- 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. If run contains urine, add 50µL 1% HCl in MeOH to wells and place plate cover on plate before drying. *SPE Dry ID: 067103*
- 17. Reconstitute in **100µL 100% LC MeOH** and heat seal plate with foil. Place in autosampler and run worklist.

Post-Analytic

- 1. Open quantitation software and create a new quantitation batch.
- 2. Make necessary changes to integration limits
- 3. Evaluate samples, S/N of primary transition >5 and S/N of secondary transition >3 or evaluation of peak symmetry and resolution. Within +/- 2% or 0.1 min RT of administrative control. Calculated concentration of 5 or greater or 2-5 for discretionary range.
- 4. Did all QCs pass for each analyte? If no, describe issue in comments (below).
- 5. Central File Packet to include: LIMS Worklist, Method Checklist, Calibration and Control Reports

COMMENTS: The extraction was done on 04/17/20 but there was drift/contamination seen in the urine negative control and urine external control. The extraction was redone on 04/20/20 with no issues. P2020-1027 was not evaluated for MDA due to poor ISTD response. Zopiclone not evaluated due to poor ISTD response. M2020-0981-4 was inadvertently missed being injected on 4/20/20 so it was injected on 4/22/20. There was poor ISTD response for a few of the compounds, so it was reinjected and the responses looked much better.

AM #25 Multi-Drug Screen Results

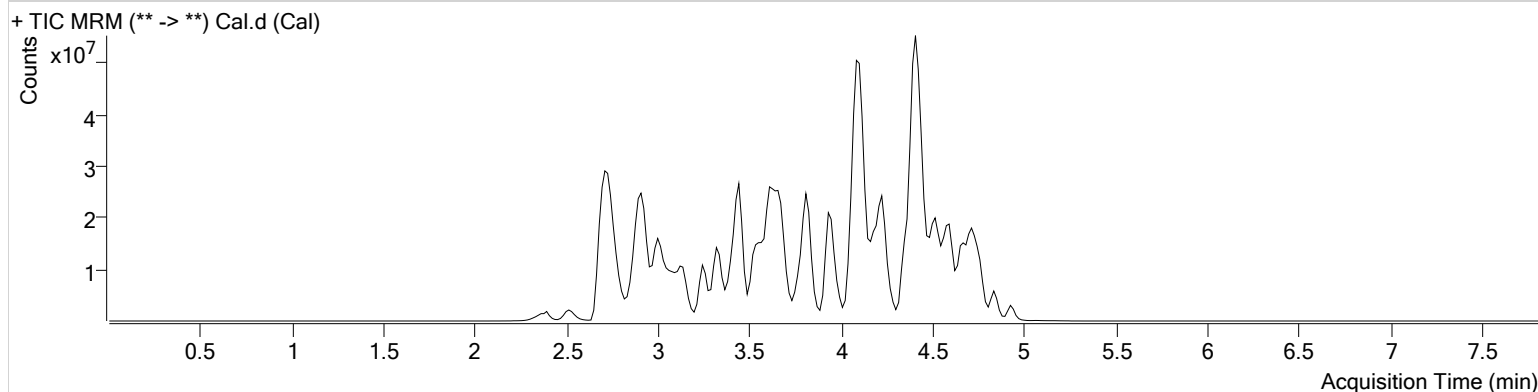


Batch results D:\MassHunter\Data\2020\AM 25-26\AM 25-26 041720 CS\042020 re-extract\QuantResults\AM 25.batch.bin
Calibration Last Update 4/23/2020 2:22:11 PM

Instrument Falco
Type Cal
Acq. Method am 25 all.m
Sample Position P1-H7
Injection Volume 5
Acq. Date-Time 4/20/2020 1:37:06 PM
Sample Info.

Data File Cal.d
Sample Cal
Operator Celena Shrum
Comment

Sample Chromatogram



Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
6-MAM	2.966	18589	47.37	6.79	362785	10.0000
7-aminoclonazepam	3.582	1109881	234.44	760.03	4939672	10.0000
7-aminoflunitrazepam	3.782	2236021	258.69	116.14	15706028	10.0000
Acetyl Fentanyl	3.947	490396	∞	∞	31228315	10.0000
Acetyl Norfentanyl	2.900	375202	∞	∞	18931666	10.0000
a-hydroxyalprazolam	4.515	222101	30.02	52.59	1304229	10.0000
alpha-hydroxymidazolam	4.591	1387588	614.13	83788.63	9176095	10.0000
alpha-PVP	3.589	4705291	7478.72	2631.06	22850127	10.0000
Alprazolam	4.610	1676803	∞	∞	5869531	10.0000
Amitriptyline	4.492	4116317	201.17	51.46	12332805	10.0000
Amphetamine	2.904	4194347	∞	∞	11267525	10.0000
Benzoylcegonine	3.367	1039868	783270.49	76.99	4672466	10.0000
Buprenorphine	4.816	1122213	5186.21	51199.64	4175038	10.0000
Bupropion	3.833	6457177	647.82	952.82	20576859	10.0000
Carbamazepine	4.234	9250248	439.01	1617.20	37979773	10.0000
Carisoprodol	4.233	1430234	1641.96	111.06	7273287	10.0000
Chlordiazepoxide	4.734	690141	114.77	∞	18489188	10.0000
Chlorpheniramine	3.983	26903	21.44	∞	43178474	10.0000
Citalopram	4.085	2259875	2788.46	12575.26	10878026	10.0000
Clonazepam	4.455	1257080	29.37	9099.22	2146280	10.0000
Cocaine	3.611	4988877	∞	373.71	24113165	10.0000
Codeine	2.880	360869	12194.09	3467.17	1835800	10.0000
Cyclobenzaprine	4.400	3019906	1944.13	∞	10598855	10.0000
Desipramine	4.417	4805518	∞	20081.69	26661335	10.0000
Dextromethorphan	4.139	2687340	87402.77	3040.70	12536033	10.0000
Dextrorphan	3.401	3018799	480.82	738.62	19722763	10.0000
Diazepam	4.859	2157733	462.99	728.12	10226540	10.0000
Dihydrocodeine	2.787	1058594	828.67	∞	5672922	10.0000
Diphenhydramine	4.063	9473346	∞	332.09	43178474	10.0000
Doxepin	4.199	2820545	1334.37	6.07	17986573	10.0000
Doxylamine	3.675	13204155	4673.08	∞	47350632	10.0000
EDDP	4.107	5060944	465.63	235885.85	32684342	10.0000
Estazolam	4.535	5749416	630.83	2098.78	17175700	10.0000
Etizolam	4.636	264443	167693.75	74900.44	17175700	10.0000

Cal

AM #25 Multi-Drug Screen Results



Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Fentanyl	4.192	380523	∞	∞	24590731	10.0000
Flunitrazepam	4.563	2620314	1479.89	∞	595856	10.0000
Fluoxetine	4.365	4736272	1204738.49	156.98	20218693	10.0000
Flurazepam	4.267	3497300	1597468.39	469202.95	595856	10.0000
Hydrocodone	3.091	1649811	96.15	233.53	11324240	10.0000
Hydromorphone	2.533	1397915	∞	∞	5564311	10.0000
Imipramine	4.445	7249784	∞	∞	25717328	10.0000
Ketamine	3.634	4161464	645.87	132.51	18926541	10.0000
Lamotrigine	3.617	284971	1063.39	∞	15051375	10.0000
Levamisole	3.053	4090974	2261.74	∞	24113165	10.0000
Lorazepam	4.439	479153	1069.09	136.37	2146280	10.0000
Maprotiline	4.415	836720	39.76	96451.83	12332805	10.0000
MDA	3.024	2853614	481.38	127.09	13069086	10.0000
MDEA	3.268	5559243	3180.28	334.03	25746755	10.0000
MDMA	3.115	6173044	657807.00	62.89	4148901	10.0000
Meperidine	3.648	3215367	∞	1297.86	15051375	10.0000
Meprobamate	3.667	599228	237.99	274.10	2694227	10.0000
Methadone	4.425	7022294	∞	1054.54	27759612	10.0000
Methamphetamine	3.025	5862807	1533.38	3076.46	30163564	10.0000
Methocarbamol	3.572	647868	771.66	∞	15051375	10.0000
Methylphenidate	3.542	7408275	∞	21.51	31249383	10.0000
Metoprolol	3.446	692880	217309.79	364155.70	15051375	10.0000
Midazolam	4.775	849787	998.90	1551.29	9880696	10.0000
Mirtazapine	4.109	2347937	56.31	2391.87	15051375	10.0000
Mitragynine	4.266	368022	1683.25	368658.09	17986573	10.0000
Morphine	2.353	275102	1132.23	2468.82	151799	10.0000
Norbuprenorphine	3.852	98812	66986.59	68931.78	524140	10.0000
Nordiazepam	4.708	1616972	∞	∞	5734820	10.0000
Norfentanyl	3.343	7906425	917.02	1529.57	31803042	10.0000
Norhydrocodone	2.942	40457	44.40	44.78	1349984	10.0000
Normeperidine	3.620	2296608	∞	∞	8597107	10.0000
Noroxycodone	2.894	1203723	221.12	164.88	3908718	10.0000
Nortriptyline	4.448	2598003	474883.32	1253.79	5849624	10.0000
O-desmethyl-tramadol	2.929	9044501	∞	271.15	41289453	10.0000
Olanzapine	3.902	733441	296.02	82.93	613070	10.0000
Oxazepam	4.521	2662944	449.27	206.24	17785630	10.0000
Oxycodone	2.952	2826455	347.77	∞	12367256	10.0000
Oxymorphone	2.393	1578269	∞	∞	4937649	10.0000
Paroxetine	4.376	600152	269260.73	89557.47	10542318	10.0000
Phenazepam	4.651	1696663	1083279.81	2824.00	7802387	10.0000
Phencyclidine	3.955	6373140	596.31	436.56	27562119	10.0000
Phentermine	3.162	1600783	∞	∞	21846536	10.0000
Phenytoin	4.141	155216	1081.41	143.16	613070	10.0000
Promethazine	4.398	8862401	25234.48	472.25	34160649	10.0000
Pseudoephedrine	2.719	49200165	3475.25	5650.89	104920484	10.0000
Quetiapine	4.589	3913100	1304.90	1449930.66	5802295	10.0000
Sertraline	4.596	2094224	153905.55	218.15	10542318	10.0000
Sufentanil	4.574	373420	162785.56	∞	23810126	10.0000
Tapentadol	3.452	4628614	5045.91	866.90	23801573	10.0000
Temazepam	4.673	4548053	∞	236.71	21632735	10.0000
Tramadol	3.447	11267276	1526.11	70.39	41736095	10.0000
Trazodone	4.743	8390810	599.87	364589.34	32471608	10.0000
Venlafaxine	3.828	8209889	666909.97	587.92	38504823	10.0000
Zaleplon	4.350	2897668	452.43	403.49	7750505	10.0000
Zolpidem	4.411	8605025	231.49	804.66	36912576	10.0000
Zopiclone	4.282	3271	538.80	12.94	7674	10.0000 *

*Not evaluated.



Idaho State Police Forensic Services

AM #25 Blood Multi-Drug Screen by LCMS-QQQ And AM #28 Blood Multi-Drug Confirmatory Analysis by LCMS-QQQ---Panel 1

Methanol External Control Solution (Lot: 031820)

100 µL of 1mg/mL stock was added to each drug to 9700 µL of LC MeOH.

<i>Component</i>	<i>Source</i>	<i>Source Lot Number</i>	<i>Expiration Date</i>
Methanol (LCMS)	Fisher	193068	
O-desmethyl Tramadol	Cerilliant	FN01241702	04/30/2022
Amphetamine	Cerilliant	FE04061701	06/30/2022
Alprazolam	Cerilliant	FE07061604	07/31/2021
Prepared:	03/18/20		
Prepared By:	Sarah Pickle		
Expires:	03/18/21		

Blood External Control Solution (Lot: WS031820)

*100 µL of methanol external control solution was added to 9900 µL of blood.
Approximately 100 ng/mL of each compound.*

<i>Component</i>	<i>Source</i>	<i>Source Lot Number</i>
Negative Blood	Hemostat	445283-3
Methanol External Control Solution		031820
Prepared:	03/18/20	
Prepared by:	Sarah Pickle	
Expires:	03/18/21	



Idaho State Police Forensic Services

AM #25 Blood and Urine Multi-Drug Screen by LCMS-QQQ

Methanol External Control Solution (Lot: 042719)

100 ul of 1mg/mL stock was added to each drug to 9600 ul of LC MeOH.

<i>Component</i>	<i>Source</i>	<i>Source Lot Number</i>	<i>Expiration Date</i>
Methanol (LCMS)	Fisher	184782	
Morphine	Cerilliant	FE08141515	November 2020
Metoprolol	Cerilliant	FN06091510	July 2020
Flunitrazepam	Cerilliant	FE08051602	August 2021
Trazodone	Cerilliant	FN12151403	January 2020
Prepared:	04/27/19		
Prepared By:	Tamara Salazar		
Expires:	Per AM 21 reference materials used for qualitative purposes do not have an expiration date.		

Urine External Control Solution (Lot: WS111519)

200 ul of methanol external control solution was added to 9800 ul of urine.

Approximately 100ng/mL of each compound.

<i>Component</i>	<i>Source</i>	<i>Source Lot Number</i>
Negative Urine	Pocatello Lab	POC031319
Methanol External Control Solution		042719
Prepared:	11/15/19	
Prepared by:	Celena Shrum	
Expires:	Per AM 21 reference materials used for qualitative purposes do not have an expiration date.	

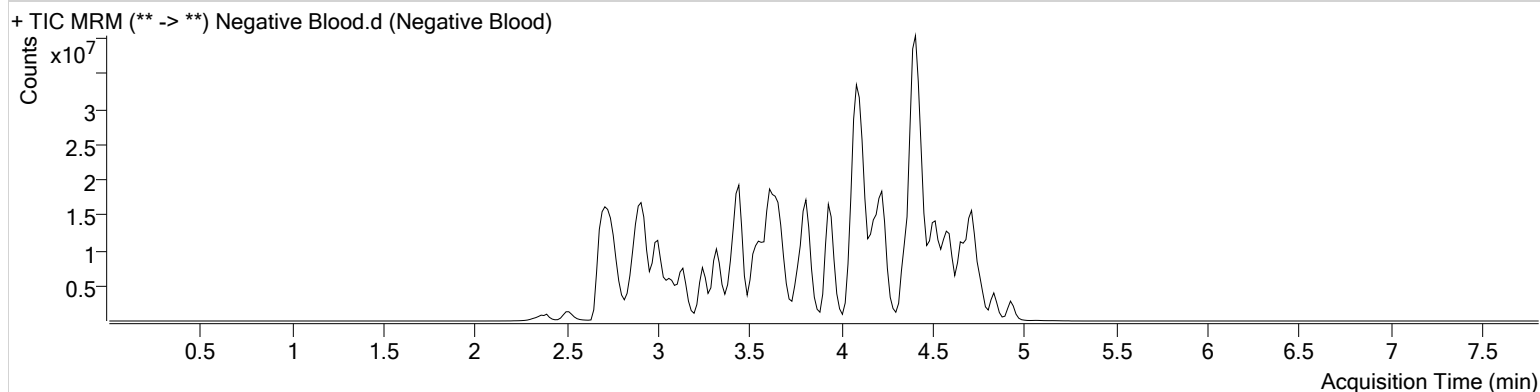
AM #25 Multi-Drug Screen Results



Batch results D:\MassHunter\Data\2020\AM 25-26\AM 25-26 041720 CS\042020 re-extract\QuantResults\AM 25.batch.bin
Calibration Last Update 4/23/2020 11:00:10 AM

Instrument	Falco	Data File	Negative Blood.d
Type	Sample	Sample	Negative Blood
Acq. Method	am 25 all.m	Operator	Celena Shrum
Sample Position	P1-F7	Comment	
Injection Volume	5		
Acq. Date-Time	4/20/2020 1:45:34 PM		
Sample Info.			

Sample Chromatogram



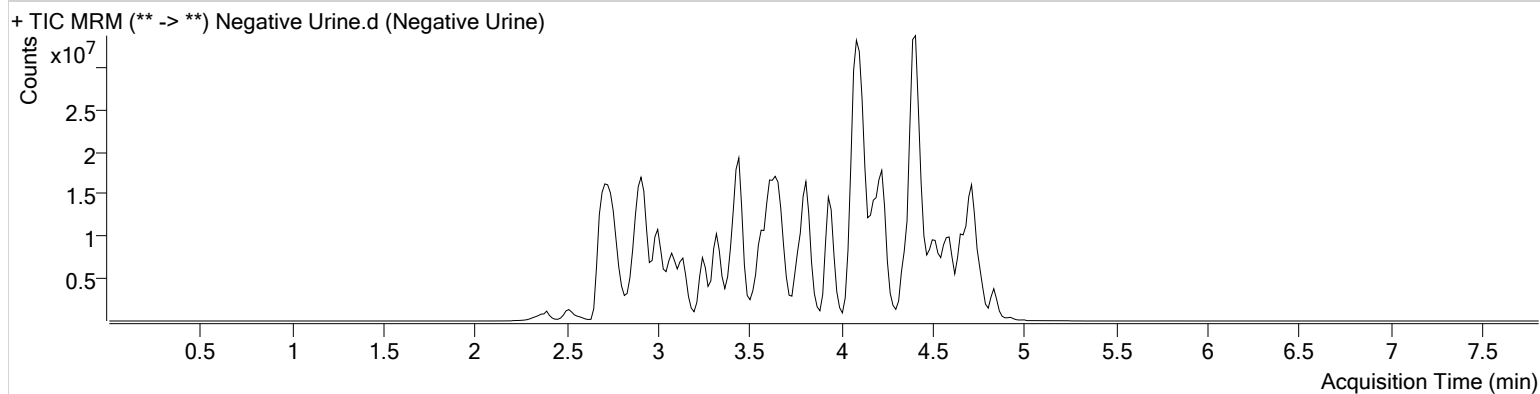
AM #25 Multi-Drug Screen Results



Batch results D:\MassHunter\Data\2020\AM 25-26\AM 25-26 041720 CS\042020 re-extract\QuantResults\AM 25.batch.bin
Calibration Last Update 4/23/2020 11:00:10 AM

Instrument	Falco	Data File	Negative Urine.d
Type	Sample	Sample	Negative Urine
Acq. Method	am 25 all.m	Operator	Celena Shrum
Sample Position	P1-D7	Comment	
Injection Volume	5		
Acq. Date-Time	4/20/2020 2:02:13 PM		
Sample Info.			

Sample Chromatogram



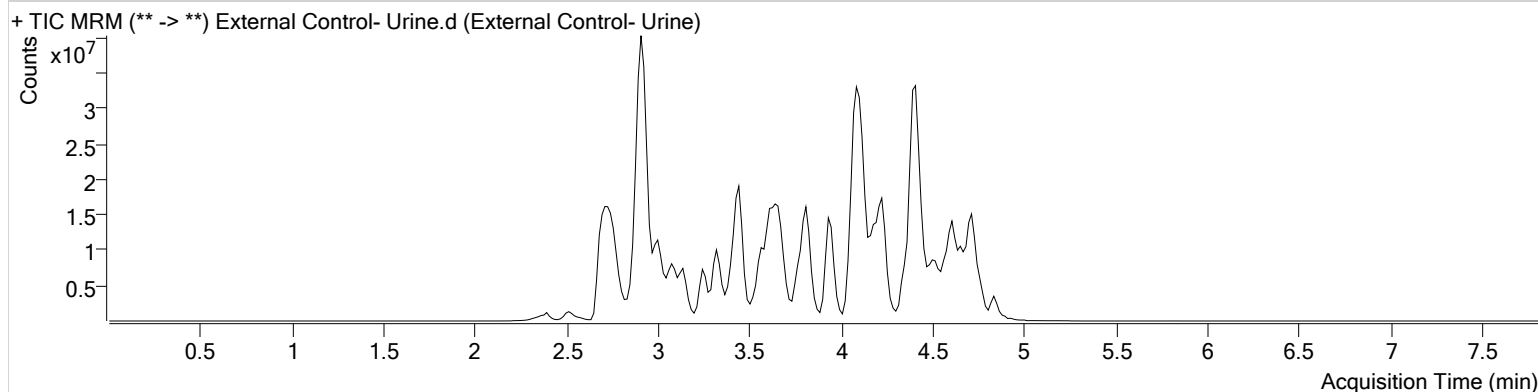
AM #25 Multi-Drug Screen Results



Batch results D:\MassHunter\Data\2020\AM 25-26\AM 25-26 041720 CS\042020 re-extract\QuantResults\AM 25.batch.bin
Calibration Last Update 4/23/2020 11:00:10 AM

Instrument	Falco	Data File	External Control- Urine.d
Type	Sample	Sample	External Control- Urine
Acq. Method	am 25 all.m	Operator	Celena Shrum
Sample Position	P1-C7	Comment	
Injection Volume	5		
Acq. Date-Time	4/20/2020 2:10:34 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Alprazolam	4.610	10827907	∞	19246.85	4437846	85.4070
Amphetamine	2.904	19402424	∞	16431.64	7789522	66.9128
O-desmethyl-tramadol	2.929	40353282	∞	1447.32	36596928	50.3372

AM# 26: Screening of THC and Metabolites in Blood and Urine by LC-MS/MS

Extraction Date: 04/17/2020
Plate lot#: IDP-108-2-200303

Analyst: Celena Shrum
Plate Expiration: 09/30/2020

Mobile phase A: 0.1% Formic Acid in LCMS Water
Blank Blood Lot: 445283-3
LCMS-QQQ ID: 069901

Mobile phase B: 0.1% Formic acid in Acetonitrile
Column: Phenomenex Phenyl Hexyl (4.6x50mm, 2.6um)
Blank Urine Lot: POC031319

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 **800µL 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: 067104
- 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.
SPE Dry ID: 067103
- 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 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).
- 4. Case sample response for THC and OH-THC 3ng/mL (quantitative), Carboxy-THC: 10ng/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: THC curve range: 1-100, Carboxy-THC curve range: 5-250, THC-OH curve range: 3-100.



Idaho State Police Forensic Services

AM #26 Screening of THC and Metabolites in Blood and Urine by LCMS-QQQ

Methanol External Control Solution (Lot: WS021320)

100 ul of 100 ug/mL C-THC in 9900 ul MeOH

Approximate concentration 1ug/mL.

<i>Component</i>	<i>Source</i>	<i>Source Lot Number</i>	<i>Expiration Date</i>
Methanol (LCMS)	Fisher	193941	
C-THC	Cerilliant	FE07171501	09/30/2020
Prepared:	02/13/2020		
Prepared By:	Celena Shrum		
Expires:	02/13/2020		

Urine External Control Solution (Lot: 021320)

200 ul of methanol external control solution was added to 9800 ul of urine.

Approximately 20ng/mL

<i>Component</i>	<i>Source</i>	<i>Source Lot Number</i>
Negative Urine	Pocatello Lab	POC031319
Methanol External Control Solution	-	WS021320
Prepared:	02/13/2020	
Prepared by:	Celena Shrum	
Expires:	09/30/2020	

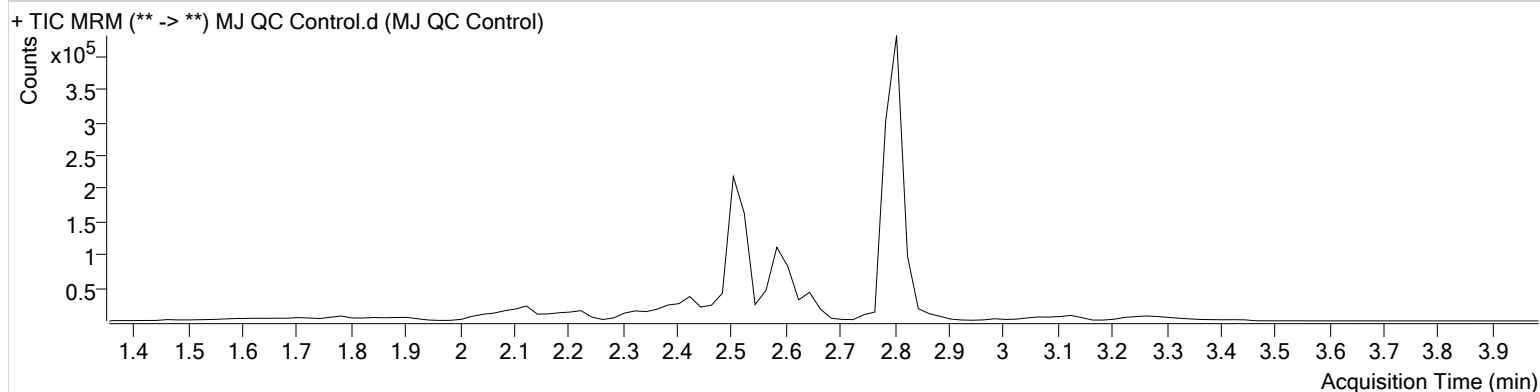
AM #26 Cannabinoids Screen Results



Batch results D:\MassHunter\Data\2020\AM 25-26\AM 25-26 041720 CS\QuantResults\AM 26.batch.bin
Calibration Last Update 4/23/2020 2:12:54 PM

Instrument	Falco	Data File	MJ QC Control.d
Type	Sample	Sample	MJ QC Control
Acq. Method	am 26 test.m	Operator	Celena Shrum
Sample Position	P3-H1	Comment	
Injection Volume	10		
Acq. Date-Time	4/17/2020 2:04:14 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	2.839	527	10167	5.6712 ng/ml
THC-COOH	2.605	32020	139654	15.9674 ng/ml
THC-OH	2.512	26576	431402	5.0918 ng/ml

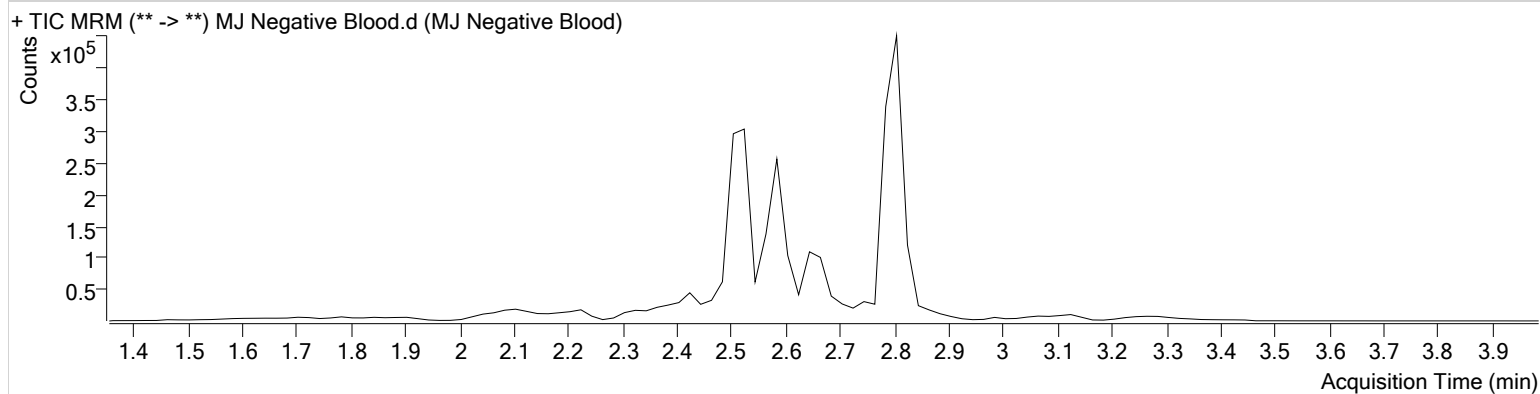
AM #26 Cannabinoids Screen Results



Batch results D:\MassHunter\Data\2020\AM 25-26\AM 25-26 041720 CS\QuantResults\AM 26.batch.bin
Calibration Last Update 4/23/2020 12:45:23 PM

Instrument	Falco	Data File	MJ Negative Blood.d
Type	Sample	Sample	MJ Negative Blood
Acq. Method	am 26 test.m	Operator	Celena Shrum
Sample Position	P3-A2	Comment	
Injection Volume	10		
Acq. Date-Time	4/17/2020 2:17:17 PM		
Sample Info.			

Sample Chromatogram



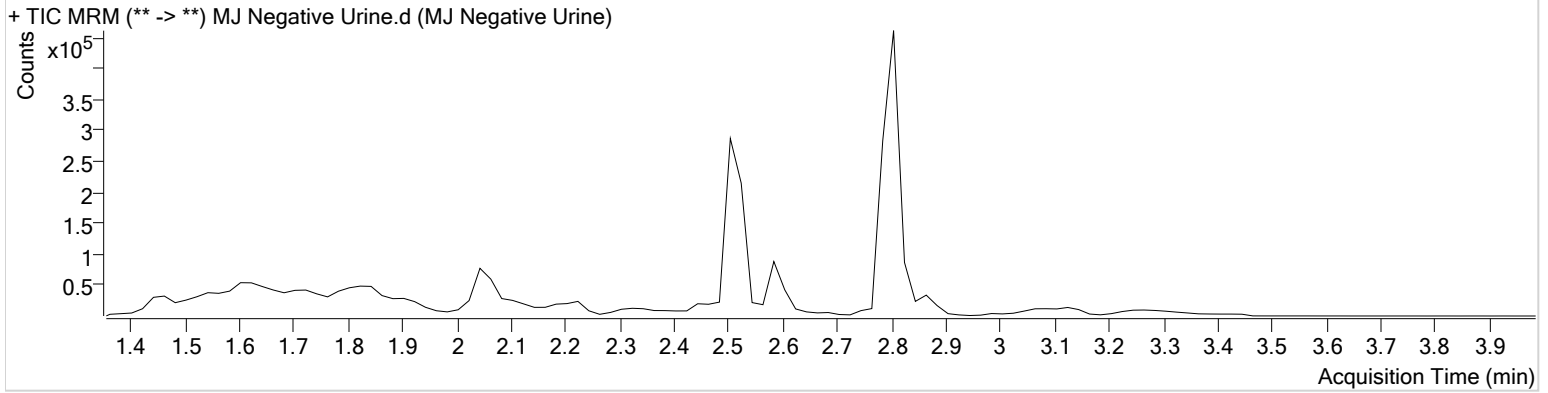
AM #26 Cannabinoids Screen Results



Batch results D:\MassHunter\Data\2020\AM 25-26\AM 25-26 041720 CS\QuantResults\AM 26.batch.bin
Calibration Last Update 4/23/2020 12:45:23 PM

Instrument	Falco	Data File	MJ Negative Urine.d
Type	Sample	Sample	MJ Negative Urine
Acq. Method	am 26 test.m	Operator	Celena Shrum
Sample Position	P3-B2	Comment	
Injection Volume	10		
Acq. Date-Time	4/17/2020 2:23:49 PM		
Sample Info.			

Sample Chromatogram



AM #26 Cannabinoids Screen Results

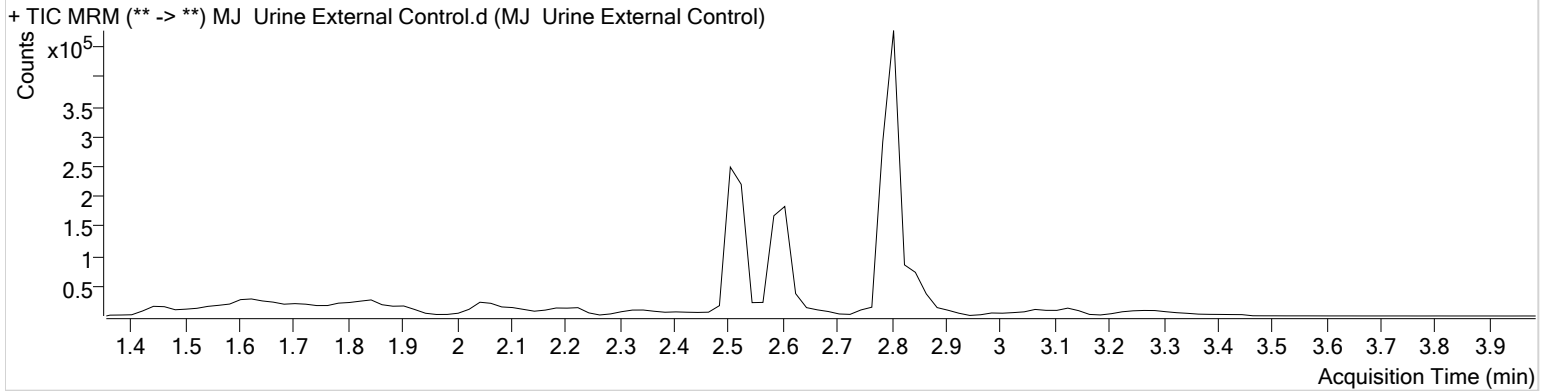


Batch results D:\MassHunter\Data\2020\AM 25-26\AM 25-26 041720 CS\QuantResults\AM 26.batch.bin
Calibration Last Update 4/23/2020 12:45:23 PM

Instrument	Falco	Data File	MJ Urine External Control.d
Type	Sample	Sample	MJ Urine External Control
Acq. Method	am 26 test.m	Operator	Celena Shrum
Sample Position	P3-C2	Comment	
Injection Volume	10		
Acq. Date-Time	4/17/2020 2:30:21 PM		

Sample Info.

Sample Chromatogram

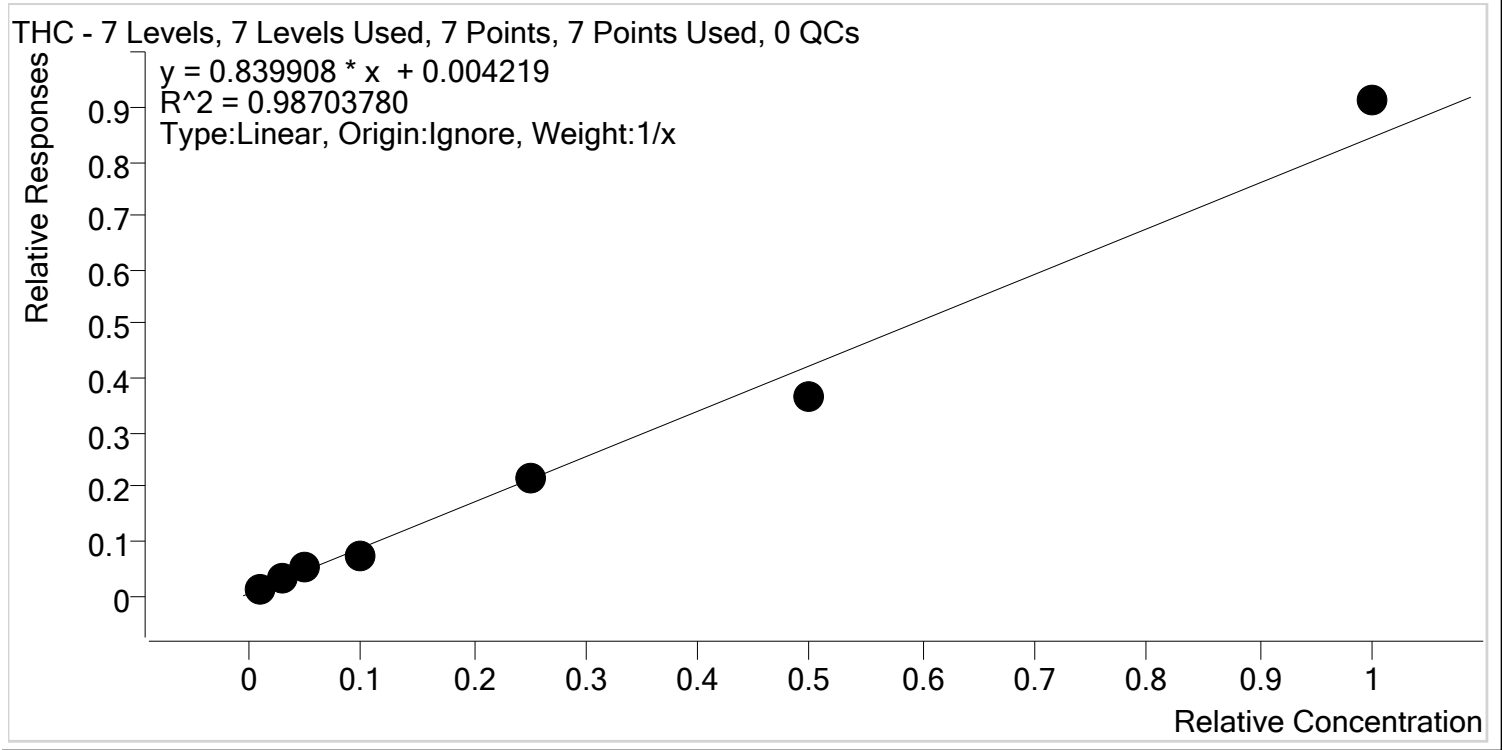


Name	RT	Resp.	ISTD Resp.	Final Conc.
THC-COOH	2.605	114559	166438	46.4873 ng/ml



AM #26 Cannabinoids Screen Calibration Curve Report

Batch results D:\MassHunter\Data\2020\AM 25-26\AM 25-26 041720 CS\QuantResults\AM 26.batch.bin
Last Cal. Update 4/23/2020 12:45 PM
Analyst Name ISP\Datastor
Analyte THC **Internal Standard** THC-d3

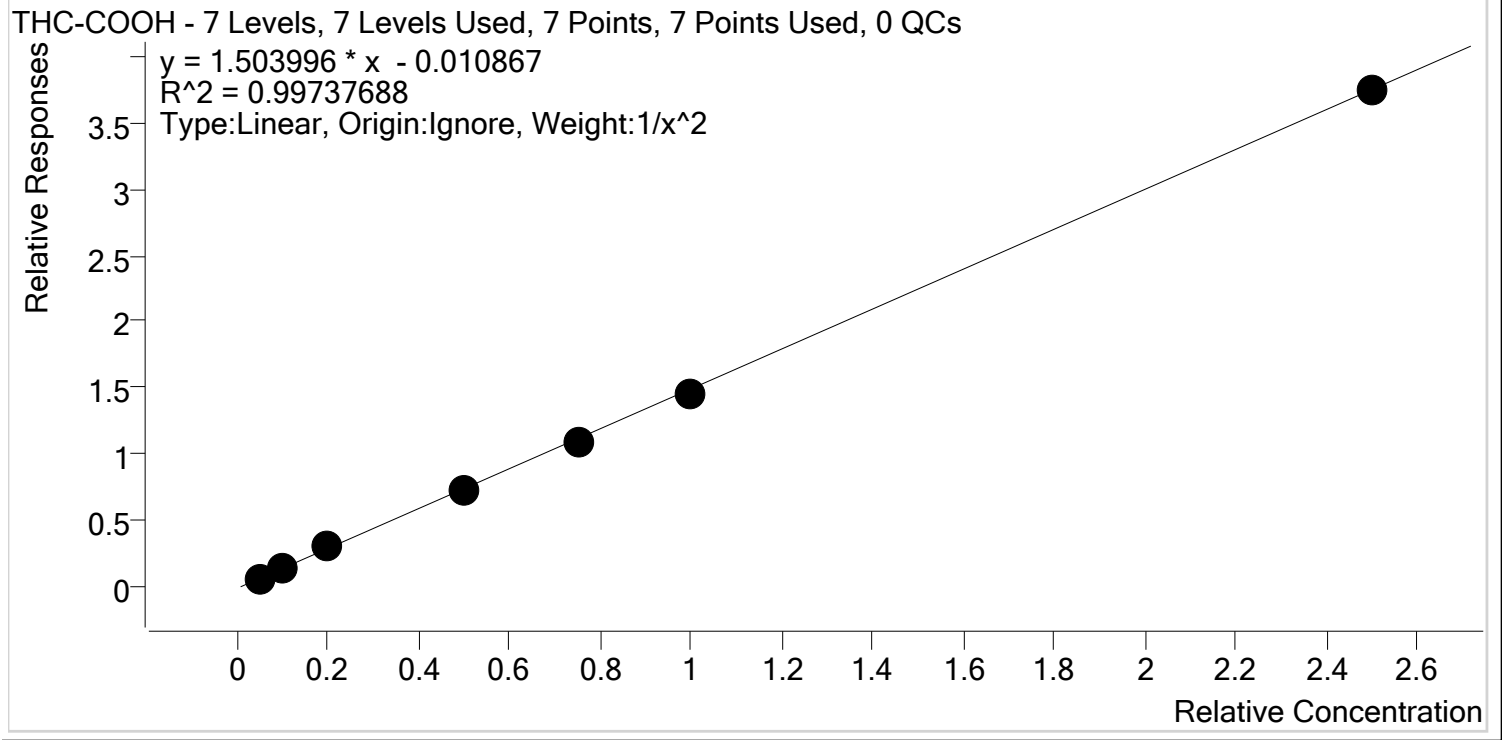


Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
MJ Cal 1	1	✓	1.0	1.1	107.4
MJ Cal 2	2	✓	3.0	3.0	99.8
MJ Cal 3	3	✓	5.0	5.9	118.2
MJ Cal 4	4	✓	10.0	8.1	80.9
MJ Cal 5	5	✓	25.0	24.9	99.7
MJ Cal 6	6	✓	50.0	43.0	86.0
MJ Cal 7	7	✓	100.0	108.0	108.0



AM #26 Cannabinoids Screen Calibration Curve Report

Batch results D:\MassHunter\Data\2020\AM 25-26\AM 25-26 041720 CS\QuantResults\AM 26.batch.bin
Last Cal. Update 4/23/2020 12:45 PM
Analyst Name ISP\Datastor
Analyte THC-COOH **Internal Standard** THC-COOH-d9

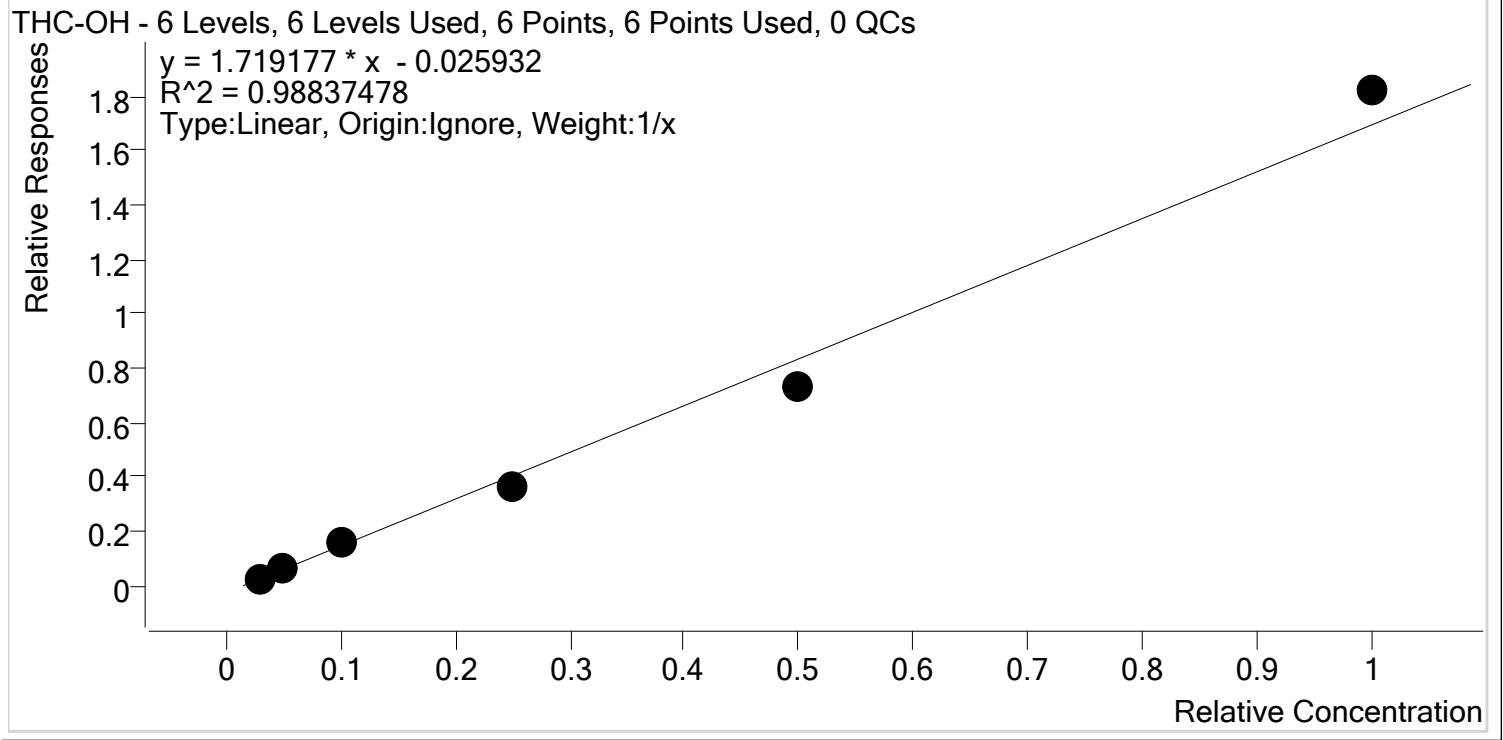


Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
MJ Cal 1	1	✓	5.0	4.8	95.7
MJ Cal 2	2	✓	10.0	10.8	107.8
MJ Cal 3	3	✓	20.0	20.7	103.4
MJ Cal 4	4	✓	50.0	48.9	97.8
MJ Cal 5	5	✓	75.0	73.8	98.3
MJ Cal 6	6	✓	100.0	97.2	97.2
MJ Cal 7	7	✓	250.0	249.4	99.8



AM #26 Cannabinoids Screen Calibration Curve Report

Batch results D:\MassHunter\Data\2020\AM 25-26\AM 25-26 041720 CS\QuantResults\AM 26.batch.bin
Last Cal. Update 4/23/2020 12:45 PM
Analyst Name ISP\Datastor
Analyte THC-OH **Internal Standard** THC-OH-d3



Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
MJ Cal 2	2	✓	3.0	3.0	101.1
MJ Cal 3	3	✓	5.0	5.1	102.2
MJ Cal 4	4	✓	10.0	11.2	111.8
MJ Cal 5	5	✓	25.0	22.4	89.5
MJ Cal 6	6	✓	50.0	44.0	88.0
MJ Cal 7	7	✓	100.0	107.3	107.3

AM #26 Cannabinoids Screen Results

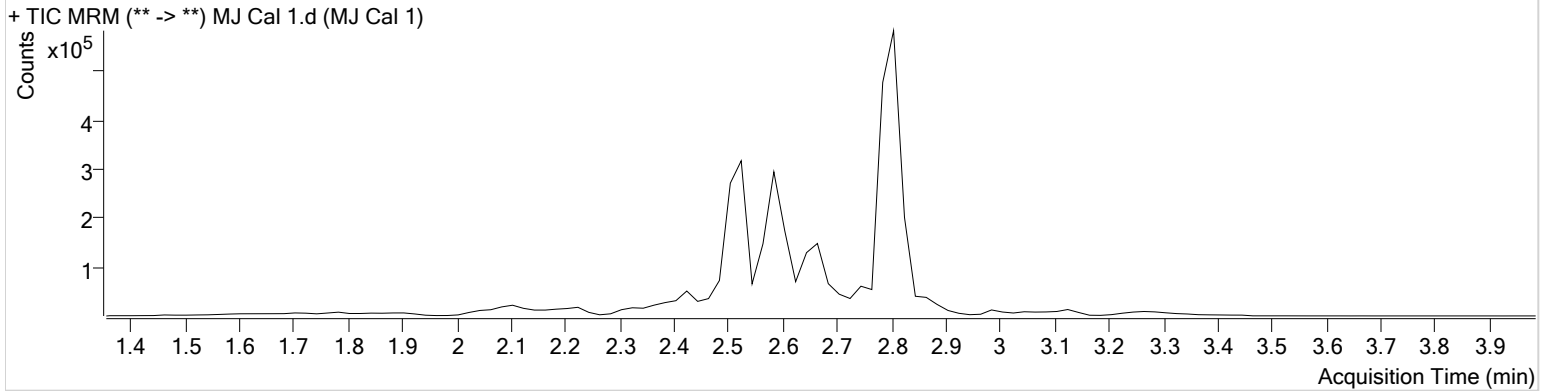


Batch results D:\MassHunter\Data\2020\AM 25-26\AM 25-26 041720 CS\QuantResults\AM 26.batch.bin
Calibration Last Update 4/23/2020 12:45:23 PM

Instrument	Falco	Data File	MJ Cal 1.d
Type	Cal	Sample	MJ Cal 1
Acq. Method	am 26 test.m	Operator	Celena Shrum
Sample Position	P3-A1	Comment	
Injection Volume	10		
Acq. Date-Time	4/17/2020 1:18:32 PM		

Sample Info.

Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.	
THC	2.879	302	22799	1.0740 ng/ml	Low
THC-COOH	2.605	23264	380596	4.7867 ng/ml	Low

AM #26 Cannabinoids Screen Results

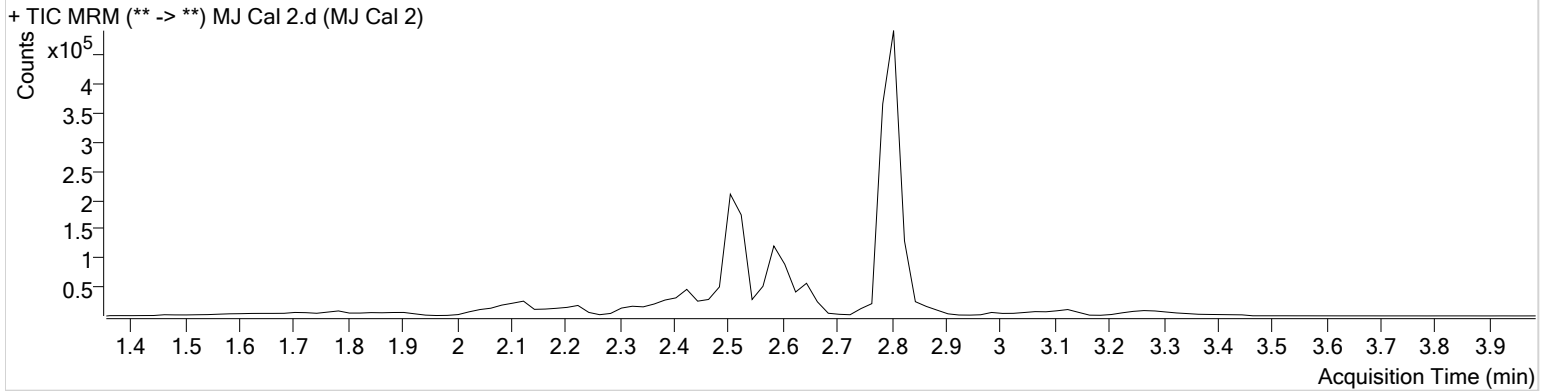


Batch results D:\MassHunter\Data\2020\AM 25-26\AM 25-26 041720 CS\QuantResults\AM 26.batch.bin
Calibration Last Update 4/23/2020 12:45:23 PM

Instrument	Falco	Data File	MJ Cal 2.d
Type	Cal	Sample	MJ Cal 2
Acq. Method	am 26 test.m	Operator	Celena Shrum
Sample Position	P3-B1	Comment	
Injection Volume	10		
Acq. Date-Time	4/17/2020 1:25:12 PM		

Sample Info.

Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.	
THC	2.879	380	12943	2.9951 ng/ml	Low
THC-COOH	2.605	25917	171341	10.7796 ng/ml	
THC-OH	2.512	11715	446914	3.0331 ng/ml	

AM #26 Cannabinoids Screen Results

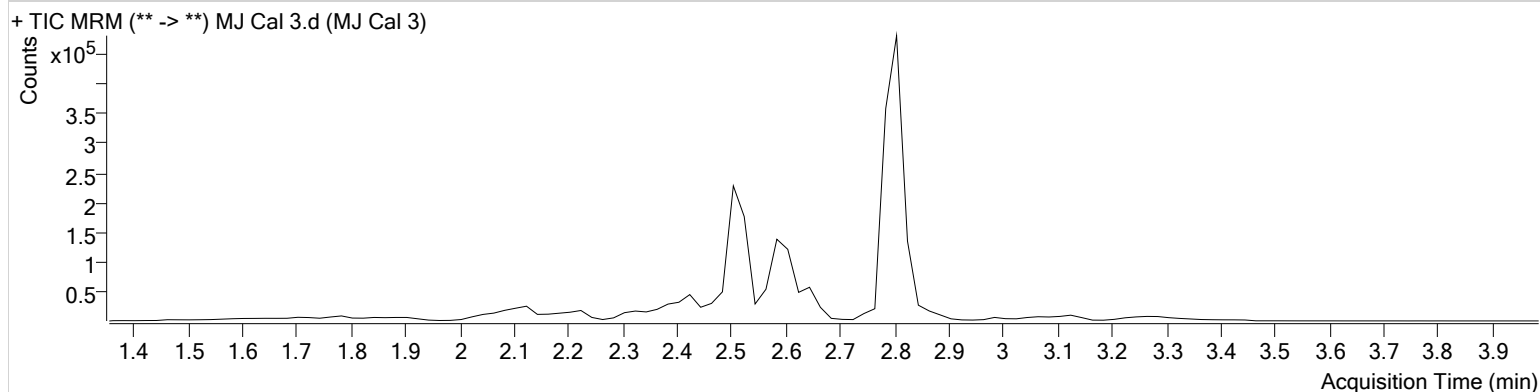


Batch results D:\MassHunter\Data\2020\AM 25-26\AM 25-26 041720 CS\QuantResults\AM 26.batch.bin
Calibration Last Update 4/23/2020 12:45:23 PM

Instrument	Falco	Data File	MJ Cal 3.d
Type	Cal	Sample	MJ Cal 3
Acq. Method	am 26 test.m	Operator	Celena Shrum
Sample Position	P3-C1	Comment	
Injection Volume	10		
Acq. Date-Time	4/17/2020 1:31:42 PM		

Sample Info.

Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	2.839	732	13584	5.9116 ng/ml
THC-COOH	2.605	51505	171619	20.6768 ng/ml
THC-OH	2.512	28030	452407	5.1124 ng/ml

AM #26 Cannabinoids Screen Results

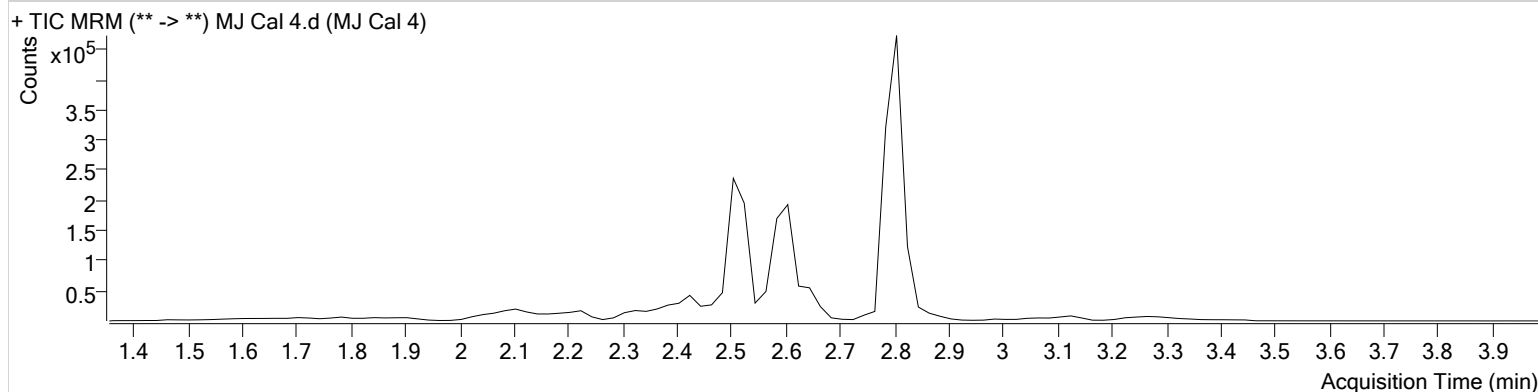


Batch results D:\MassHunter\Data\2020\AM 25-26\AM 25-26 041720 CS\QuantResults\AM 26.batch.bin
Calibration Last Update 4/23/2020 12:45:23 PM

Instrument	Falco	Data File	MJ Cal 4.d
Type	Cal	Sample	MJ Cal 4
Acq. Method	am 26 test.m	Operator	Celena Shrum
Sample Position	P3-D1	Comment	
Injection Volume	10		
Acq. Date-Time	4/17/2020 1:38:14 PM		

Sample Info.

Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	2.839	829	11493	8.0861 ng/ml
THC-COOH	2.605	113797	157124	48.8776 ng/ml
THC-OH	2.532	74299	446760	11.1820 ng/ml

AM #26 Cannabinoids Screen Results

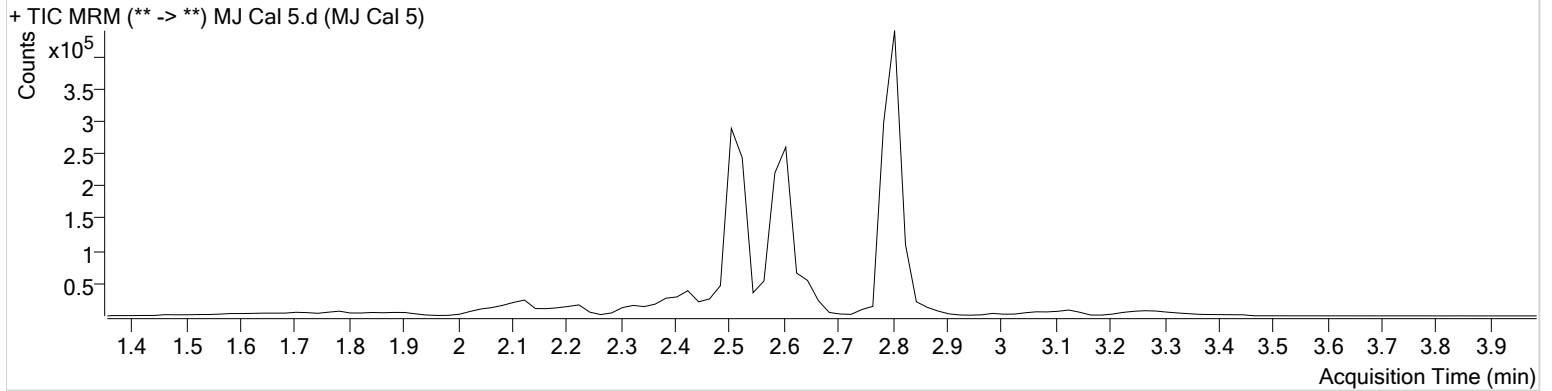


Batch results D:\MassHunter\Data\2020\AM 25-26\AM 25-26 041720 CS\QuantResults\AM 26.batch.bin
Calibration Last Update 4/23/2020 12:45:23 PM

Instrument	Falco	Data File	MJ Cal 5.d
Type	Cal	Sample	MJ Cal 5
Acq. Method	am 26 test.m	Operator	Celena Shrum
Sample Position	P3-E1	Comment	
Injection Volume	10		
Acq. Date-Time	4/17/2020 1:44:44 PM		

Sample Info.

Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	2.879	2302	10780	24.9187 ng/ml
THC-COOH	2.605	172437	156973	73.7622 ng/ml
THC-OH	2.512	161190	449074	22.3870 ng/ml

AM #26 Cannabinoids Screen Results

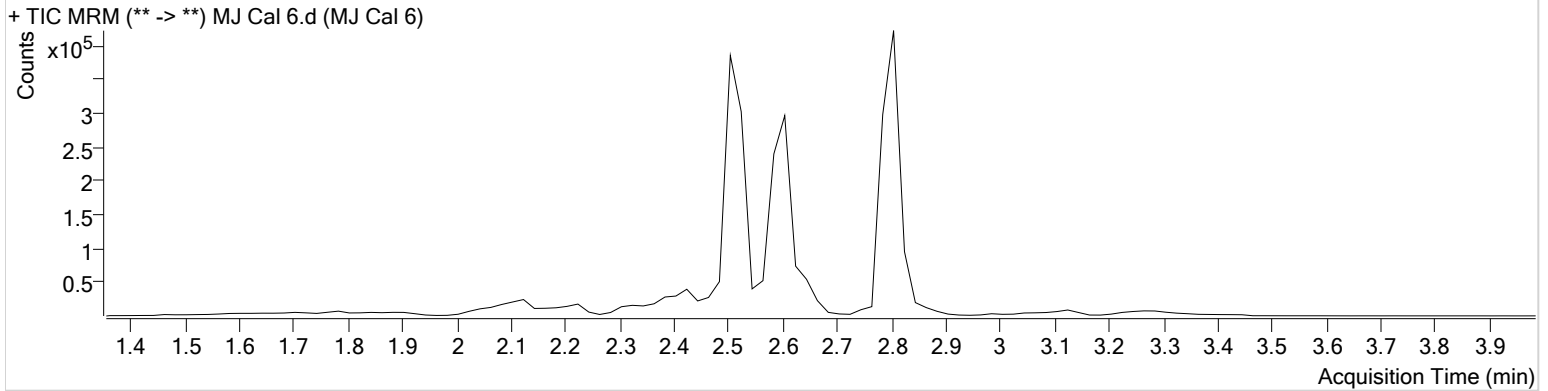


Batch results D:\MassHunter\Data\2020\AM 25-26\AM 25-26 041720 CS\QuantResults\AM 26.batch.bin
Calibration Last Update 4/23/2020 12:45:23 PM

Instrument	Falco	Data File	MJ Cal 6.d
Type	Cal	Sample	MJ Cal 6
Acq. Method	am 26 test.m	Operator	Celena Shrum
Sample Position	P3-F1	Comment	
Injection Volume	10		
Acq. Date-Time	4/17/2020 1:51:14 PM		

Sample Info.

Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	2.839	3699	10128	42.9789 ng/ml
THC-COOH	2.605	208792	143884	97.2067 ng/ml
THC-OH	2.512	320685	439031	43.9961 ng/ml

AM #26 Cannabinoids Screen Results

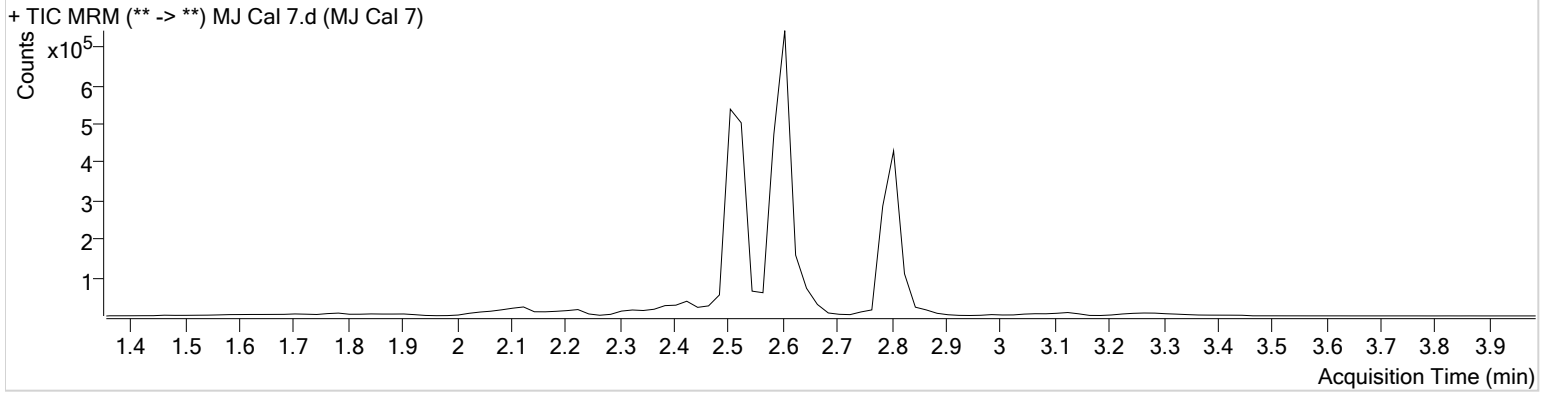


Batch results D:\MassHunter\Data\2020\AM 25-26\AM 25-26 041720 CS\QuantResults\AM 26.batch.bin
Calibration Last Update 4/23/2020 12:45:23 PM

Instrument	Falco	Data File	MJ Cal 7.d
Type	Cal	Sample	MJ Cal 7
Acq. Method	am 26 test.m	Operator	Celena Shrum
Sample Position	P3-G1	Comment	
Injection Volume	10		
Acq. Date-Time	4/17/2020 1:57:44 PM		

Sample Info.

Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	2.879	9594	10524	108.0356 ng/ml
THC-COOH	2.605	569158	152156	249.4342 ng/ml
THC-OH	2.532	818509	450085	107.2895 ng/ml