

Worklist: 5704







REVIEWED

By Britany Wylie at 2:53 pm, Apr 06, 2022

<u>LAB CASE</u>	<u>ITEM</u>	<u>ITEM TYPE</u>	<u>DESCRIPTION</u>	
M2021-5359	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
M2021-5406	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
M2021-5486	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
M2022-0899	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
M2022-0948	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
M2022-0961	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
M2022-0972	2	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
M2022-0990	3	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
M2022-0991	3	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
M2022-0993	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2021-3233	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2022-0547	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2022-0550	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2022-0565	2	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2022-0671	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2022-0672	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2022-0682	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2022-0687	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2022-0717	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2022-0719	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2022-0752	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	

Worklist: 5704

TS

<u>LAB CASE</u>	<u>ITEM</u>	<u>ITEM TYPE</u>	<u>DESCRIPTION</u>	
P2022-0794	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2022-0821	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2022-0822	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2022-0834	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2022-0844	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2022-0859	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	

**Idaho State Police
Forensic Services**

Request for Departure from an Analytical Method or Quality Standard

Deviation Number (assigned by QM): TOX-22-01

Date of Request: **2/3/2022**

Requestor/Discipline: Celena Shrum/Toxicology

Analytical Method/Quality Standard, Revision #: AM #25, AM #28, AM #29, Revision 13

Temporary or Permanent Deviation: Permanent

Scope of Deviation (record specific information, e.g. affected programs, evidence types, expected end date; etc): Deviation will remain in place until the change is made in the next method revision.

Deviation Request (Describe detailed instructions of the changes being made; include reference to specific section number(s) in the method manual): 4.1.4 (Place plate on shaking incubator at approximately 900 rpm for approximately 15 minutes) of AM #25, AM # 28, and AM #29 is being removed. The removal of this step was tested in the validation “Addition of Compounds/Modifications for the MDS” (approved on 2/2/2022) and it was determined that that step is not necessary and can be removed.

Technical Justification for Analytical Method Deviations: Refer to validation “Addition of Compounds/Modifications for the MDS” (approved on 2/2/2022)

Technical Review

Departure approved
Comments:

Departure Not Approved
Comments:

Approver: Rachel Cutler
Title: Laboratory Manager



Date: 2/10/2022

Quality Review

Quality Approver: Jason Crowe
Title: Quality Manager
Date: 2/10/2022



**Idaho State Police
Forensic Services**

Request for Departure from an Analytical Method or Quality Standard

Deviation Number (assigned by QM): TOX-22-02

Date of Request:

03/02/2022

Requestor/Discipline:

Celena Shrum/Toxicology

Analytical Method/Quality Standard, Revision #:

Toxicology AM #25, AM #26, and AM #27, Revision 13

Temporary or Permanent Deviation:

Permanent

Scope of Deviation (record specific information, e.g. affected programs, evidence types, expected end date; etc):

Deviation will remain in place until the change is made in the next method revision.

Deviation Request (Describe detailed instructions of the changes being made; include reference to specific section number(s) in the method manual):

Toxicology AM #25 3.3.1.1 Internal standards are prepared by the ToxBox plate manufacturer and contained on the 96 well plate. If the run contains urine samples, a positive external urine control must also be run.

Toxicology AM #26 3.3.2 A negative control will be run with each extraction. If the run contains urine samples, a negative urine control and external positive urine control must also be included.

Toxicology AM #27 3.3.2 A negative control will be run with each extraction. If the run contains urine samples, a negative urine control and positive external urine control will also be included in the run.

The deviation is to include the option of using an internal urine control in lieu of an external urine control.

Technical Justification for Analytical Method Deviations:

Internal controls serve the same purpose as external controls but also helps to avoid the possible issues that can occur with using external controls (incorrect spiking, incorrect preparation, evaporation of compounds, etc.). If these errors occur, runs need to be repeated and this wastes time, sample, and supplies.

Technical Review

Departure approved
Comments:

Departure Not Approved
Comments:



Approver: Rachel Cutler
Title: Lab Manager

Date: 3/2/22

Quality Review

Quality Approver: Jason Crowe
Title: Quality Manager
Date: 3/2/2022



	1	2	3	4	5	6	7	8	9	10	11	12
A	Neg Urine											
B	Urine Ext											
C	P2022-0593-1											
D												
E												
F												
G												
H												

Urine Hydrolysis Plate Map

	1	2	3	4	5	6	7	8	9	10	11	12
A	IS + Cal. 1	M2022-0961-1	P2022-0565-2	P2022-0794-1	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample
B	IS + Cal. 1	M2022-0972-2	P2022-0671-1	P2022-0821-1	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample
C	Neg Blood	M2022-0990-3	P2022-0672-1	P2022-0822-1	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample
D	M2021-5359-1	M2022-0991-3	P2022-0682-1	P2022-0834-1	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample
E	M2021-5406-1	M2022-0993-1	P2022-0687-1	P2022-0844-1	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample
F	M2021-5486-1	P2021-3233-1	P2022-0717-1	P2022-0859-1	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample
G	M2022-0899-1	P2022-0547-1	P2022-0719-1	Neg Urine	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Cal. 1
H	M2022-0948-1	P2022-0550-1	P2022-0752-1	Urine Ext	P2022-0593-1	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Cal. 1

All wells to contain 60 µl of residual DMSO

Analytical Plate Map

	1	2	3	4	5	6	7	8	9	10	11	12
A	IS + Cal. 1	M2022-0961-1	P2022-0565-2	P2022-0794-1								
B		M2022-0972-2	P2022-0671-1	P2022-0821-1								
C	Neg Blood	M2022-0990-3	P2022-0672-1	P2022-0822-1								
D	M2021-5359-1	M2022-0991-3	P2022-0682-1	P2022-0834-1								
E	M2021-5406-1	M2022-0993-1	P2022-0687-1	P2022-0844-1								
F	M2021-5486-1	P2021-3233-1	P2022-0717-1	P2022-0859-1								
G	M2022-0899-1	P2022-0547-1	P2022-0719-1		Neg Urine							
H	M2022-0948-1	P2022-0550-1	P2022-0752-1		Urine Ext	P2022-0593-1						

All wells to contain 60 µl of residual DMSO

SLE/Catcher Plate Map

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

Extraction Date: 03/30/2022

Plate lot#: IDP-120-211015

Mobile phase A: 10mM Amm Form

Instant Buffer I

Blank Blood Lot: Lampire 22B52016-2

LCMS-QQQ ID: 069901

Analyst: Tamara Salazar

Plate Re-Test Date: 04/15/2022

Mobile phase B: 0.1% Formic Acid in MeOH

Ethyl Acetate LC Methanol

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

Blank Urine: N/A

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 Instant Buffer I. 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. (Skipped per deviation)~~
- 5. Pipette **250µL 0.5 M ammonium hydroxide** in wells of analytical plate.
- 6. Place on shaking incubator at ambient temp., 900rpm for 15 minutes.
- 7. Transfer **200-450µL of blood+base and urine+base (if applicable)** mixture to corresponding wells of SLE+ plate.
Amount transferred: 300µL
- 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).
- 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.
- 17. Reconstitute in **100µL 20% 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: Instrument stopped on case sample P2022-0593-1 due to insufficient mobile phase. There was enough mobile phase to finish the run, but I did not update mobile phase levels in the acquisition software. The mobile phase levels were updated and the run was completed without issue.

Case sample P2022-0593-1 from worklist 5692 was also run with this batch.

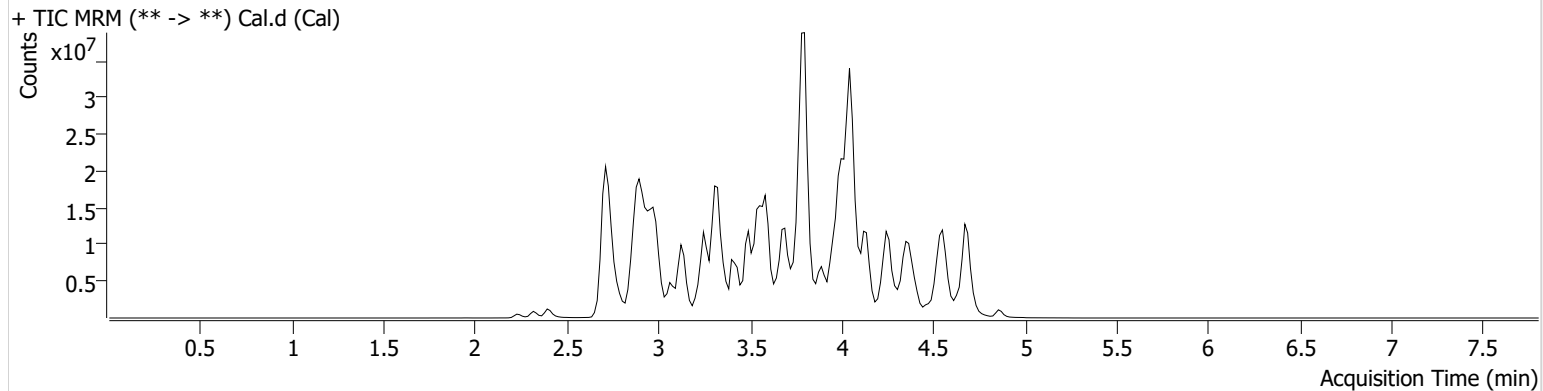


AM #25 Multi-Drug Screen Results

Batch results D:\MassHunter\Data\2022\AM 25-26\033022 AM 25 26 TS\QuantResults\AM 25.batch.bin
Calibration Last Update 3/31/2022 11:28:55 AM

Instrument	Falco (069901)	Data File	Cal.d
Type	Cal	Sample	Cal
Acq. Method	AM 25 MDS.m	Operator	Tamara Salazar
Sample Position	P2-A1	Comment	
Injection Volume	5		
Acq. Date-Time	3/30/2022 5:25:11 PM		

Sample Chromatogram



Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
6-MAM	2.847	69365	41285.46	41565.68	2218208	10.0000
7-aminoclonazepam	3.586	1076775	1112.35	138.46	4443962	10.0000
7-aminoflunitrazepam	3.801	1402959	363.97	845.38	4443962	10.0000
Acetyl Fentanyl	3.736	388291	233.13	202997.85	36661867	10.0000
Acetyl Norfentanyl	2.901	512082	2794.64	587.09	36661867	10.0000
a-hydroxyalprazolam	4.536	278953	182.73	399.71	4443962	10.0000
alpha-hydroxymidazolam	4.550	2358896	260.44	523.85	4443962	10.0000
Alpha-PHP	3.760	3990726	22574.63	809.14	36661867	10.0000
alpha-PVP	3.500	6642495	661.66	1049.78	23459983	10.0000
Alprazolam	4.631	3075954	877.24	337.26	25278251	10.0000
Amitriptyline	4.374	1461059	192.59	412.50	5640599	10.0000
Amphetamine	2.905	5597635	953.31	2280.02	16280421	10.0000
Benzoylcegonine	3.402	342384	1486.79	48828.36	671552	10.0000
Brompheniramine	3.998	119005	255.77	456019.27	44735550	10.0000
Buprenorphine	4.055	654615	7641.45	179411.57	2544051	10.0000
Bupropion	3.698	6075364	1972.39	578.47	23459983	10.0000
Carbamazepine	4.269	12306480	∞	∞	732479	10.0000
Carisoprodol	4.252	1780422	1552792.07	261.00	10892693	10.0000
Chlordiazepoxide	4.679	1044195	577.88	1716.30	25278251	10.0000
Chlorpheniramine	3.910	8634814	16893.11	8.93	44735550	10.0000
Citalopram	4.044	3408026	595.43	854376.55	44735550	10.0000
Clomipramine	4.568	1835299	27610.38	9896.26	44735550	10.0000
Clonazepam	4.476	1405966	14900.79	196.95	25278251	10.0000
Clonazolam	4.395	1623425	518730.29	279578.34	25278251	10.0000
Cocaehtylene	3.752	6074104	8104365.31	4892.65	31950423	10.0000
Cocaine	3.538	6537024	5847.86	6861.18	31950423	10.0000
Codeine	2.744	513499	5351.67	797.18	13352289	10.0000
Cyclobenzaprine	4.297	2574391	920.97	128.54	5640599	10.0000
Desipramine	4.344	4036631	2379.40	617.47	5640599	10.0000
Dextromethorphan	4.034	2229210	975.37	839.89	12792853	10.0000
Dextrorphan	3.358	3324984	941.25	825438.09	12792853	10.0000
Diazepam	4.864	1414310	625.85	1084.93	25278251	10.0000
Dihydrocodeine	2.713	1207733	615.52	339.57	13352289	10.0000
Diphenhydramine	4.004	12100528	1776.81	1025.29	44735550	10.0000

Cal

TS

AM #25 Multi-Drug Screen Results



Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Doxepin	4.110	2437448	392.09	168.37	19774207	10.0000
Doxylamine	3.587	12993692	11556.40	463.91	12792853	10.0000
EDDP	4.048	1887868	4695.51	179.92	4553423	10.0000
Estazolam	4.556	5907226	877.61	6006.05	25278251	10.0000
Etizolam	4.641	311150	200019.75	537628.03	25278251	10.0000
Fentanyl	3.950	253579	489.32	7674.48	20112398	10.0000
Flualprazolam	4.504	1115332	971659.52	769256.25	25278251	10.0000
Flunitrazepam	4.584	2686003	589.00	920133.55	25278251	10.0000
Fluoxetine	4.308	1921949	1270.28	140.86	2550332	10.0000
Flurazepam	4.071	3194669	368575.56	588.92	25278251	10.0000
Hydrocodone	2.927	2031843	2976.35	1391.24	13352289	10.0000
Hydromorphone	2.396	1893313	626.69	14685.51	436876	10.0000
Imipramine	4.342	5434834	1082.11	2407.17	5640599	10.0000
Ketamine	3.329	4680665	983.31	249.94	16368682	10.0000
Lamotrigine	3.497	412825	590.68	3589.55	44735550	10.0000
Levamisole	2.902	3872429	5413.64	825.65	31950423	10.0000
Levetiracetam	2.690	2024157	1625.26	1192.05	44735550	10.0000
Lorazepam	4.460	453001	281.67	∞	25278251	10.0000
Maprotiline	4.374	1041982	122.78	440.16	5640599	10.0000
MDA	3.010	4296109	296.88	52.46	35978822	10.0000
MDEA	3.224	6130440	888.32	406.97	35978822	10.0000
MDMA	3.071	8130168	648.42	2328.68	35978822	10.0000
Meperidine	3.559	3282633	580.02	514.46	12792853	10.0000
Meprobamate	3.700	1199425	315.34	85.10	10892693	10.0000
Methadone	4.354	6437116	1398.10	372.99	4553423	10.0000
Methamphetamine	2.996	9021189	681.15	3035.52	35978822	10.0000
Methocarbamol	3.606	633808	352.69	387.63	4553423	10.0000
Methylphenidate	3.499	14274834	1703.53	310.78	27388799	10.0000
Metoprolol	3.434	869042	350.42	1997.83	12792853	10.0000
Midazolam	4.505	776779	2265.80	766.93	25278251	10.0000
Mirtazapine	3.649	3267989	1976.52	2395.07	12792853	10.0000
Mitragynine	4.086	507815	422378.18	986515.56	12792853	10.0000
Morphine	2.230	376165	303.22	192.69	436876	10.0000
Norbuprenorphine	3.794	94602	71264.94	51563.22	2544051	10.0000
Nordiazepam	4.727	1766999	2255.78	413.64	25278251	10.0000
Norfentanyl	3.330	9320974	35170.95	1549.12	36661867	10.0000
Norhydrocodone	2.914	129743	71.18	85.24	436876	10.0000
Norketamine	3.315	868476	671.60	2368.52	16368682	10.0000
Normeperidine	3.591	4106493	2092.34	716.03	44735550	10.0000
Noroxycodone	2.881	1423245	∞	883.71	16368682	10.0000
Nortriptyline	4.390	1159288	948111.11	171.85	5640599	10.0000
O-desmethyl-tramadol	2.915	10171801	42447.40	1980.72	44735550	10.0000
Olanzapine	3.353	2539742	735497.37	5944.72	732479	10.0000
Oxazepam	4.541	2428717	424.84	170.56	11110192	10.0000
Oxycodone	2.894	3442338	∞	446.84	16368682	10.0000
Oxymorphone	2.317	1781974	766.76	627.27	436876	10.0000
Paroxetine	4.305	225548	208.09	712.94	2550332	10.0000
Phenazepam	4.672	2492794	1044753.87	737882.22	25278251	10.0000
Phencyclidine	3.883	7127975	16078.73	492.14	12792853	10.0000
Phentermine	3.149	2197008	328.06	113.43	27388799	10.0000
Phenytoin	4.160	1260266	922.83	503.03	732479	10.0000
Promethazine	4.264	6633877	1587758.83	816.77	44735550	10.0000
Pseudoephedrine	2.721	60585096	69206.44	2472.46	35978822	10.0000
Quetiapine	4.210	4396027	1355.00	2153.61	36897258	10.0000
Sertraline	4.524	484755	148832.03	1971.33	2550332	10.0000
Sufentanil	4.210	188364	1259.56	1737.34	36661867	10.0000
Tapentadol	3.439	6379391	880.49	676.38	16368682	10.0000
Temazepam	4.694	4886258	1102.08	181.87	25278251	10.0000
Tramadol	3.419	11930243	885.82	35.72	44735550	10.0000
Trazodone	4.057	5100012	2538957.06	553.66	19774207	10.0000

Cal

TS



AM #25 Multi-Drug Screen Results

Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Venlafaxine	3.787	6645143	306.72	385.94	2550332	10.0000
Zaleplon	4.371	1911330	421.74	601.11	36897258	10.0000
Zolpidem	3.800	8589021	1583.22	487.38	36897258	10.0000
Zopiclone	3.734	1162995	151597.97	396738.81	5557121	10.0000

TS

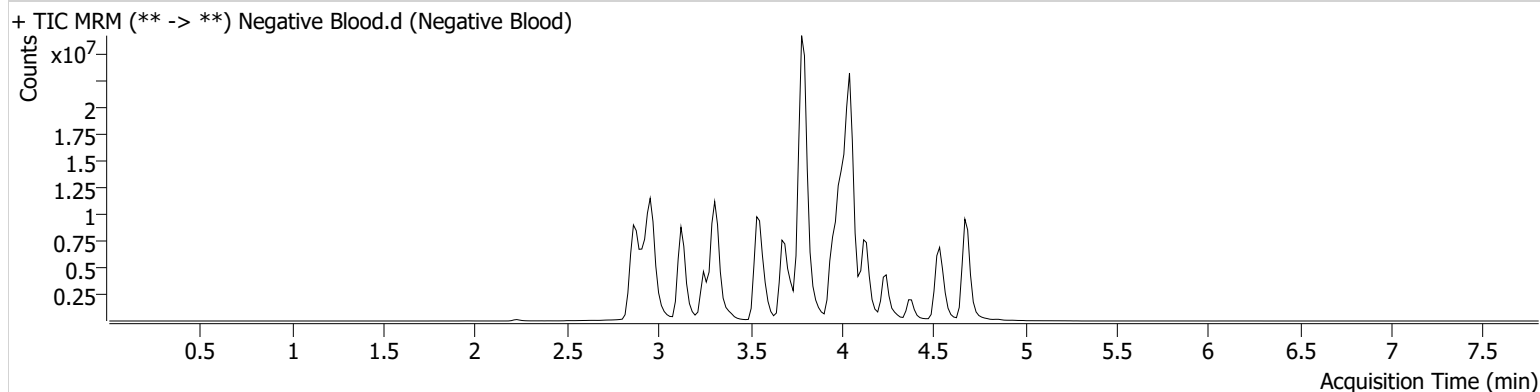


AM #25 Multi-Drug Screen Results

Batch results D:\MassHunter\Data\2022\AM 25-26\033022 AM 25 26 TS\QuantResults\AM 25.batch.bin
Calibration Last Update 3/31/2022 11:28:55 AM

Instrument	Falco (069901)	Data File	Negative Blood.d
Type	Sample	Sample	Negative Blood
Acq. Method	AM 25 MDS.m	Operator	Tamara Salazar
Sample Position	P2-C1	Comment	
Injection Volume	5		
Acq. Date-Time	3/30/2022 5:33:45 PM		
Sample Info.			

Sample Chromatogram





Idaho State Police Forensic Services

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

Methanol External Control Solution (Lot: 120320)

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	197468	
O-desmethyl Tramadol	Cerilliant	FN01241702	04/30/2022
Amphetamine	Cerilliant	FE04061701	06/30/2022
Alprazolam	Cerilliant	FE07061604	07/31/2021
Prepared:	12/03/2020		
Prepared By:	Celena Shrum		

Urine External Control Solution (Lot: WS032122)

100 µL of methanol external control solution was added to 9900 µL of urine.

Approximately 100 ng/mL of each compound.

<i>Component</i>	<i>Source</i>	<i>Source Lot Number</i>
Negative Urine	Pocatello Lab	POC021022
Methanol External Control Solution		120320
Prepared:	03/21/22	
Prepared by:	Tamara Salazar	

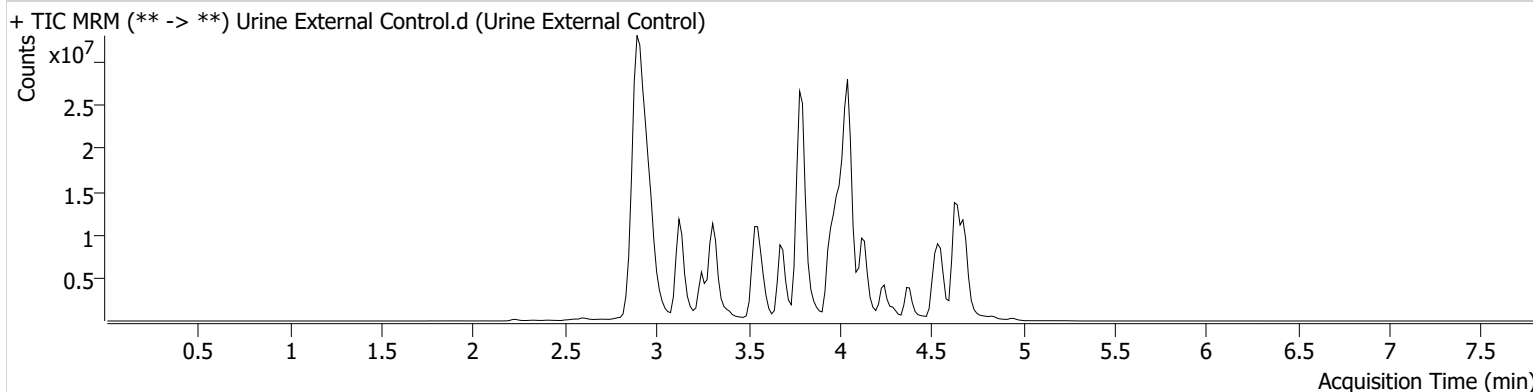


AM #25 Multi-Drug Screen Results

Batch results D:\MassHunter\Data\2022\AM 25-26\033022 AM 25 26 TS\QuantResults\AM 25.batch.bin
Calibration Last Update 3/31/2022 11:28:55 AM

Instrument	Falco (069901)	Data File	Urine External Control.d
Type	Sample	Sample	Urine External Control
Acq. Method	AM 25 MDS.m	Operator	Tamara Salazar
Sample Position	P2-H5	Comment	
Injection Volume	5		
Acq. Date-Time	3/30/2022 5:42:09 PM		

Sample Chromatogram



Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Alprazolam	4.631	21073701	2051.78	585.47	27718651	62.4793
Amphetamine	2.905	28389506	883.09	661.76	14354738	57.5206
Methamphetamine	2.996	2264654	200.51	150.72	38083372	2.3716
O-desmethyl-tramadol	2.915	43870300	34497.27	781.71	49262259	39.1662

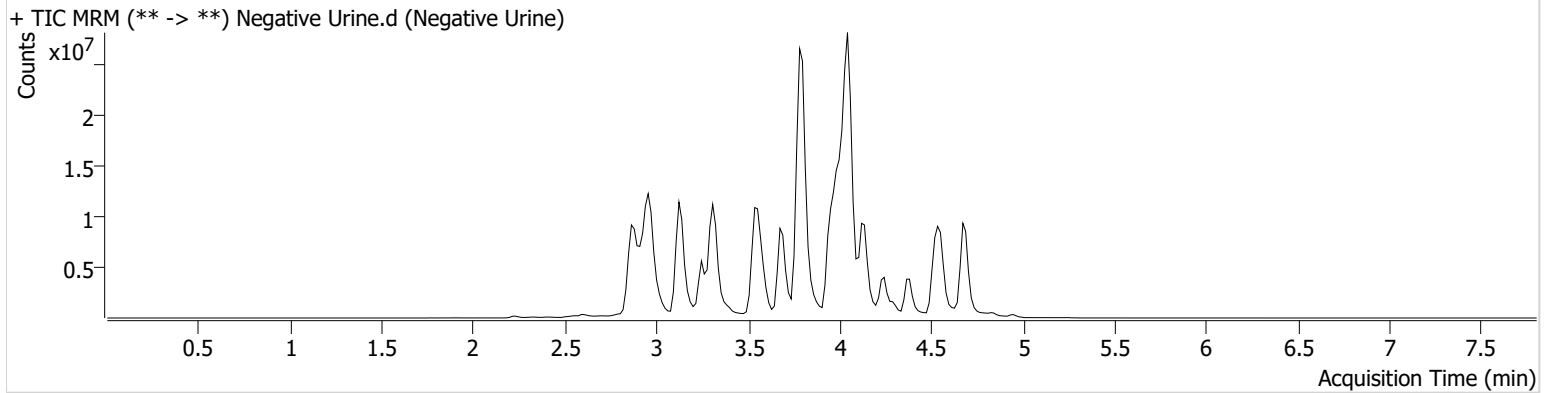


AM #25 Multi-Drug Screen Results

Batch results D:\MassHunter\Data\2022\AM 25-26\033022 AM 25 26 TS\QuantResults\AM 25.batch.bin
Calibration Last Update 3/31/2022 11:28:55 AM

Instrument	Falco (069901)	Data File	Negative Urine.d
Type	Sample	Sample	Negative Urine
Acq. Method	AM 25 MDS.m	Operator	Tamara Salazar
Sample Position	P2-G5	Comment	
Injection Volume	5		
Acq. Date-Time	3/30/2022 5:50:33 PM		
Sample Info.			

Sample Chromatogram



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

Extraction Date: 03/30/2022

Analyst: Tamara Salazar

Plate lot#: IDP-108-3-211018

Plate Re-Test Date: 04-18-2022

Mobile phase A: 10mM Amm Form

Mobile phase B: 0.1% Formic Acid in MeOH

Blank Blood Lot: Lampire 22B52016-2

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

LCMS-QQQ ID: 069901

Blank Urine: N/A

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: 750µL
- 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, R² values ≥0.98 for each analyte
- 3. RT +/- 2% or 0.100 min, whichever is greater
- 4. Confirmation testing on case samples with a response for THC and OH-THC of 3ng/mL or greater and/or Carboxy-THC at 10ng/mL or greater (analyst discretion between 5-10ng/mL) may be pursued.
- 5. Did all QCs pass for each analyte? (if not, describe in comments section)
- 6. Central File Packet to include: LIMS Worklist, Method Checklist, Calibration and Control Reports

COMMENTS: Cal 1 reinjected due to poor chromatography on THC-OH and THC.

THC 3-100--- Cal 1 dropped for THC due to poor chromatography.

Calibrator 4 dropped for THC-COOH and THC-OH due to peak top cutting off.

	1	2	3	4	5	6
A	IS + Cal. 1	IS + QC_1	M2022-0972-2	P2022-0671-1	P2022-0821-1	IS + QC_1
B	IS + Cal. 2	Neg Blood	M2022-0990-3	P2022-0672-1	P2022-0822-1	IS + Cal. 7
C	IS + Cal. 3	M2021-5359-1	M2022-0991-3	P2022-0682-1	P2022-0834-1	IS + Cal. 6
D	IS + Cal. 4	M2021-5406-1	M2022-0993-1	P2022-0687-1	P2022-0844-1	IS + Cal. 5
E	IS + Cal. 5	M2021-5486-1	P2021-3233-1	P2022-0717-1	P2022-0859-1	IS + Cal. 4
F	IS + Cal. 6	M2022-0899-1	P2022-0547-1	P2022-0719-1	IS + Sample	IS + Cal. 3
G	IS + Cal. 7	M2022-0948-1	P2022-0550-1	P2022-0752-1	IS + Sample	IS + Cal. 2
H	IS + QC_1	M2022-0961-1	P2022-0565-2	P2022-0794-1	IS + QC_1	IS + Cal. 1

All wells to contain 100 μ l of residual DMSO

TS

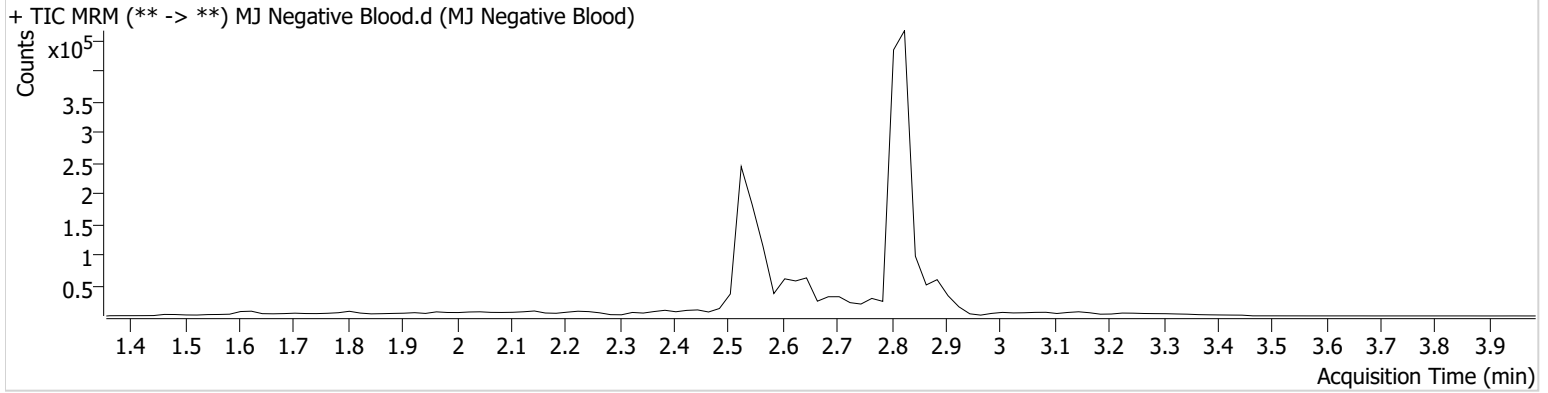


AM #26 Cannabinoids Screen Results

Batch results D:\MassHunter\Data\2022\AM 25-26\033022 AM 25 26 TS\QuantResults\AM 26.batch.bin
Calibration Last Update 4/5/2022 10:22:19 AM

Instrument	Falco (069901)	Data File	MJ Negative Blood.d
Type	Sample	Sample	MJ Negative Blood
Acq. Method	AM 26 THCS.m	Operator	Tamara Salazar
Sample Position	P1-B2	Comment	
Injection Volume	10		
Acq. Date-Time	3/30/2022 1:30:51 PM		
Sample Info.			

Sample Chromatogram



TS

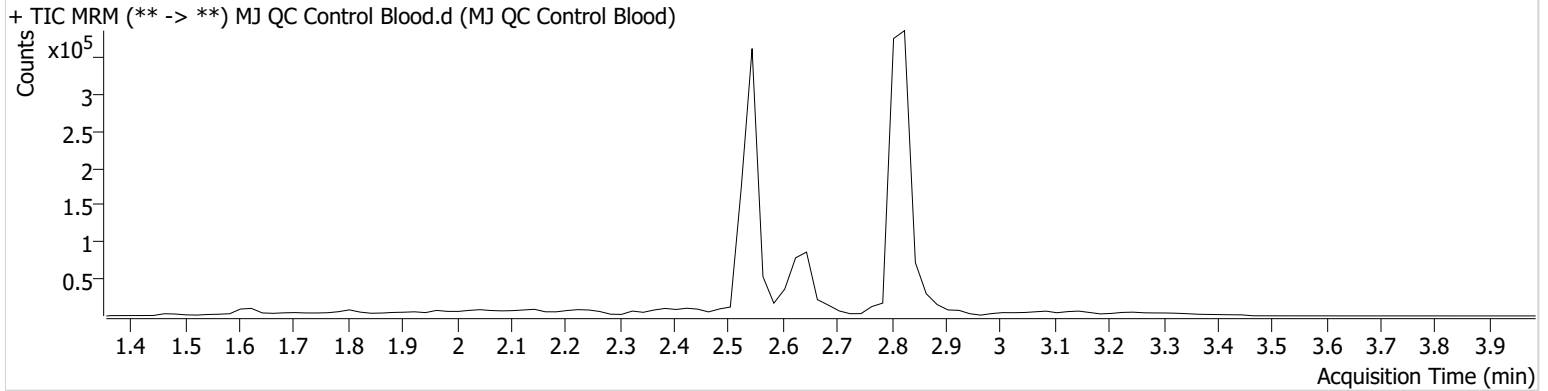


AM #26 Cannabinoids Screen Results

Batch results D:\MassHunter\Data\2022\AM 25-26\033022 AM 25 26 TS\QuantResults\AM 26.batch.bin
Calibration Last Update 4/5/2022 10:22:19 AM

Instrument	Falco (069901)	Data File	MJ QC Control Blood.d
Type	QC	Sample	MJ QC Control Blood
Acq. Method	AM 26 THCS.m	Operator	Tamara Salazar
Sample Position	P1-H1	Comment	
Injection Volume	10		
Acq. Date-Time	3/30/2022 1:17:42 PM		

Sample Chromatogram



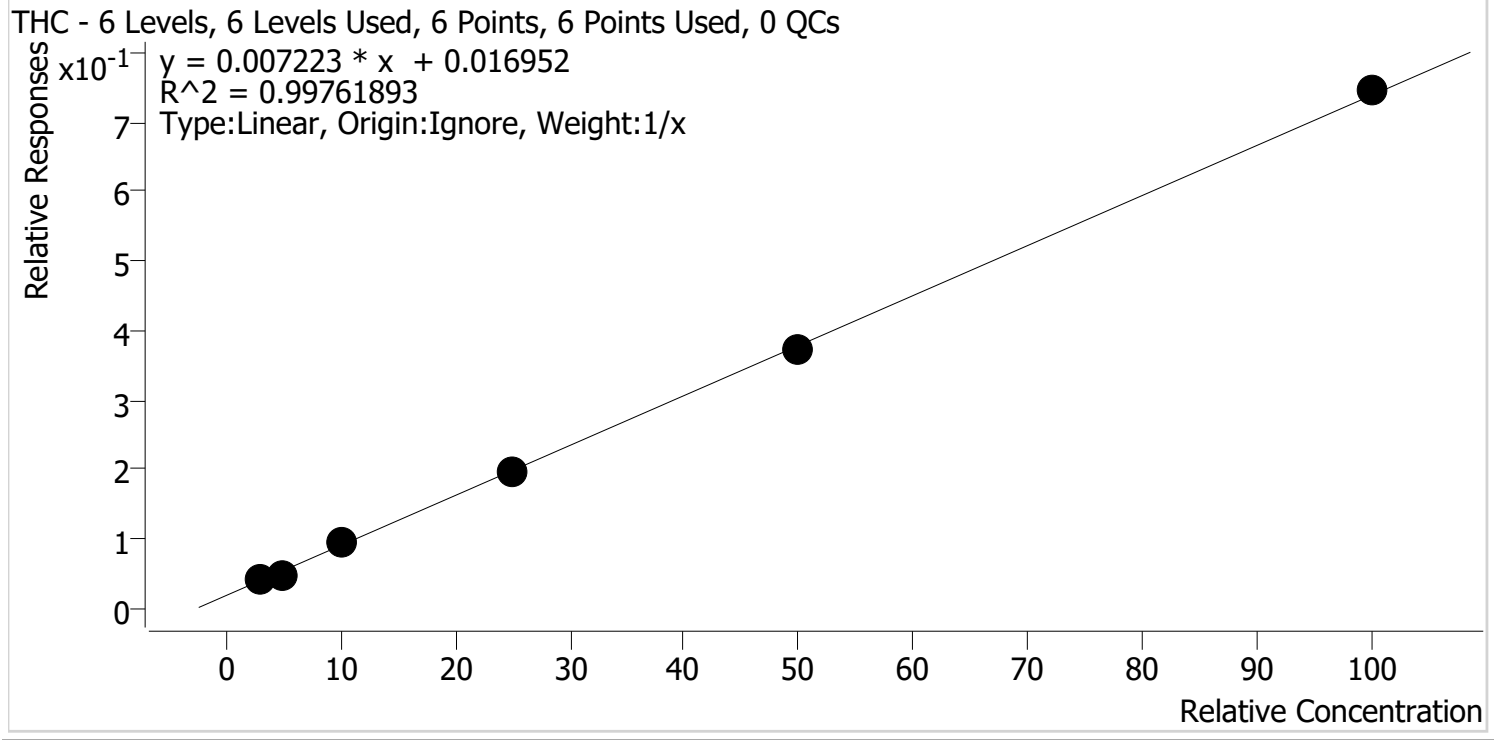
Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	2.859	875	15217	5.6150 ng/ml
THC-COOH	2.627	43512	89198	17.1758 ng/ml
THC-OH	2.554	5554	676320	4.4324 ng/ml

TS



AM #26 Cannabinoids Screen Calibration Curve Report

Batch results D:\MassHunter\Data\2022\AM 25-26\033022 AM 25 26 TS\QuantResults\AM 26.batch.bin
 Last Cal. Update 4/5/2022 10:22 AM
 Analyst Name ISP\Datastor
 Analyte THC Internal Standard THC-D3



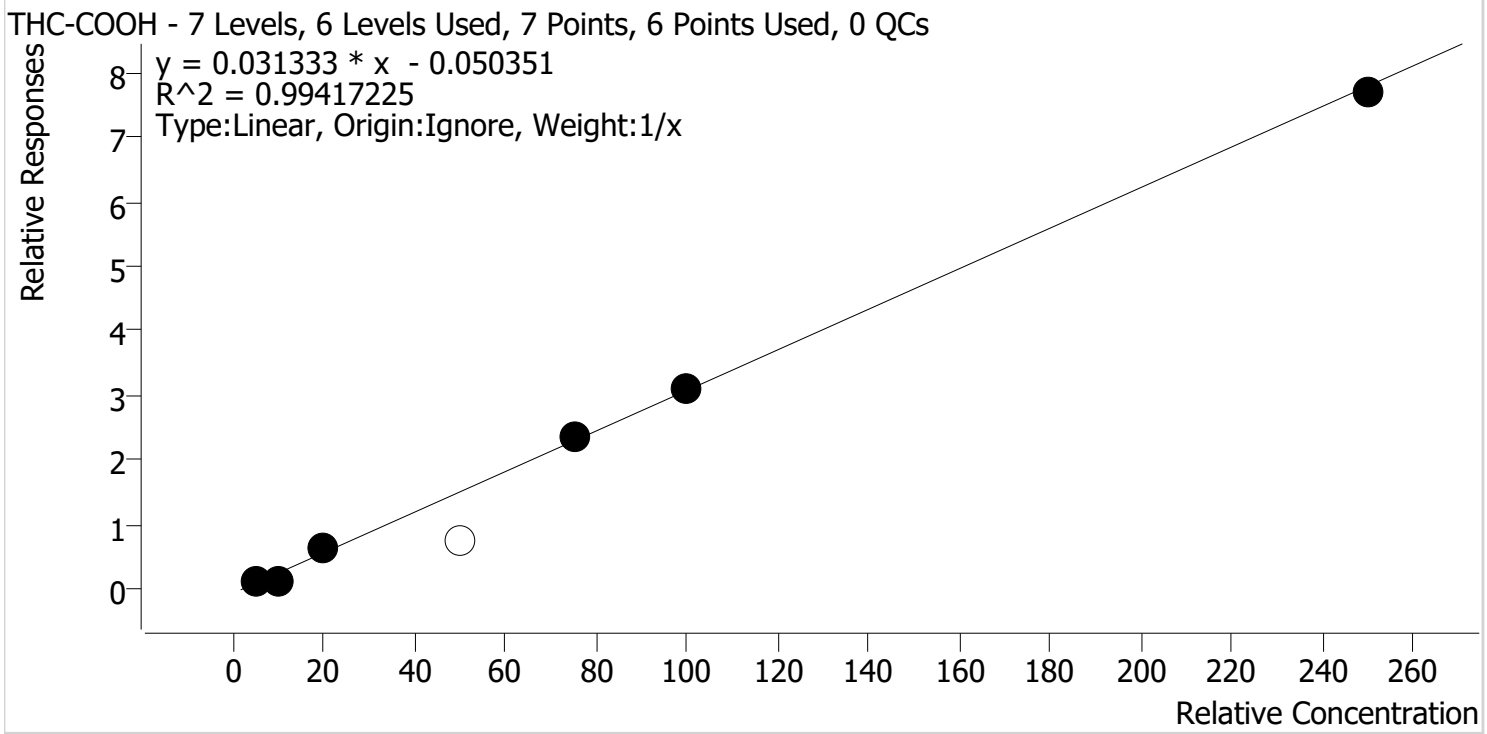
Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
MJ Cal 2	2	✓	3.0	3.4	113.5
MJ Cal 3	3	✓	5.0	4.0	80.3
MJ Cal 4	4	✓	10.0	10.8	108.0
MJ Cal 5	5	✓	25.0	24.7	98.9
MJ Cal 6	6	✓	50.0	49.1	98.3
MJ Cal 7	7	✓	100.0	100.9	100.9

TS



AM #26 Cannabinoids Screen Calibration Curve Report

Batch results D:\MassHunter\Data\2022\AM 25-26\033022 AM 25 26 TS\QuantResults\AM 26.batch.bin
Last Cal. Update 4/5/2022 10:22 AM
Analyst Name ISP\Datastor
Analyte THC-COOH **Internal Standard** THC-COOH-D9



Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
MJ Cal 1_r	1	✓	5.0	6.4	127.8
MJ Cal 2	2	✓	10.0	6.1	61.4
MJ Cal 3	3	✓	20.0	21.4	106.9
MJ Cal 4	4	x	50.0	26.3	52.7
MJ Cal 5	5	✓	75.0	77.7	103.5
MJ Cal 6	6	✓	100.0	101.7	101.7
MJ Cal 7	7	✓	250.0	246.7	98.7

Calibrator 4 dropped due to peak cutting off.

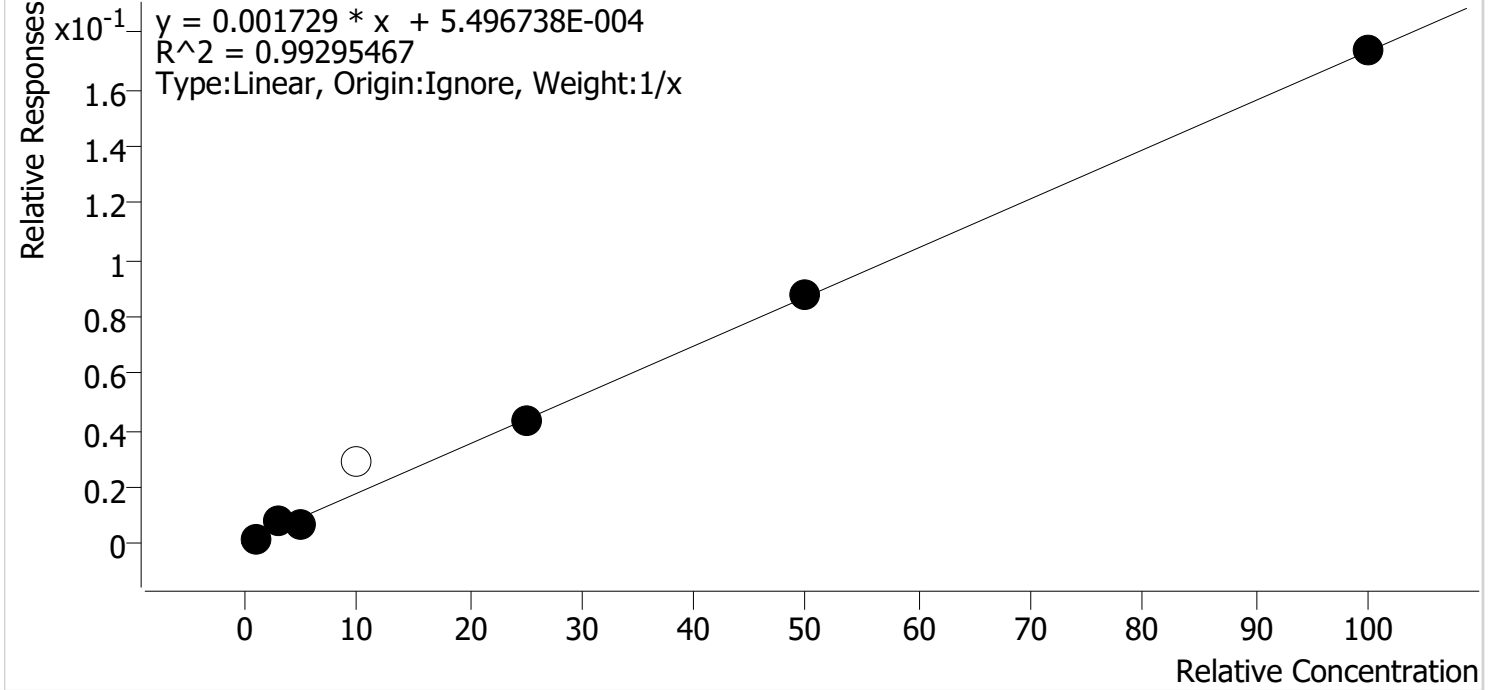


TS

AM #26 Cannabinoids Screen Calibration Curve Report

Batch results D:\MassHunter\Data\2022\AM 25-26\033022 AM 25 26 TS\QuantResults\AM 26.batch.bin
 Last Cal. Update 4/5/2022 10:22 AM
 Analyst Name ISP\Datastor
 Analyte THC-OH Internal Standard THC-OH-D3

THC-OH - 7 Levels, 6 Levels Used, 7 Points, 6 Points Used, 0 QCs



Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
MJ Cal 1_r	1	✓	1.0	0.7	71.4
MJ Cal 2	2	✓	3.0	4.6	152.0
MJ Cal 3	3	✓	5.0	3.9	78.2
MJ Cal 4	4	x	10.0	16.5	164.9
MJ Cal 5	5	✓	25.0	24.4	97.8
MJ Cal 6	6	✓	50.0	50.2	100.4
MJ Cal 7	7	✓	100.0	100.2	100.2

Calibrator 4 dropped due to peak cutting off.



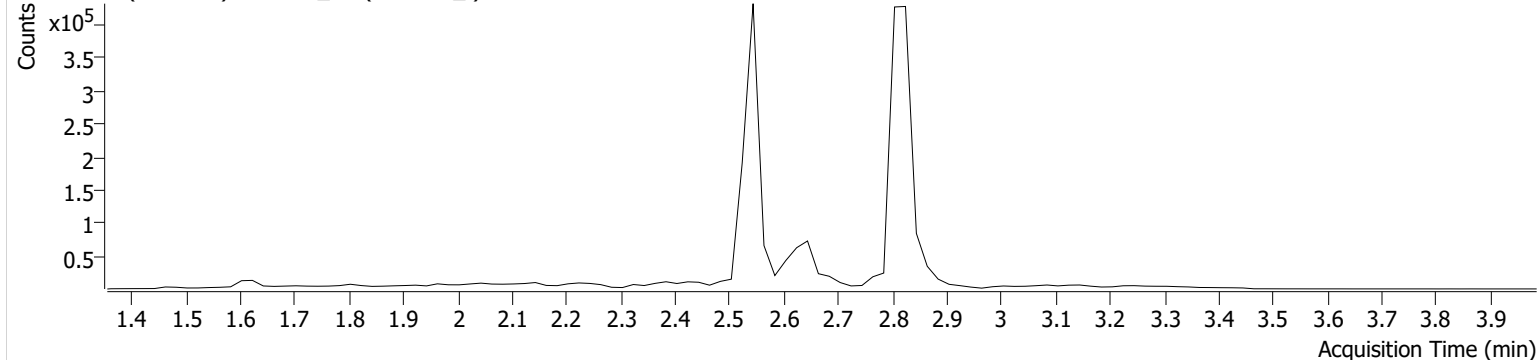
AM #26 Cannabinoids Screen Results

Batch results D:\MassHunter\Data\2022\AM 25-26\033022 AM 25 26 TS\QuantResults\AM 26.batch.bin
Calibration Last Update 4/5/2022 10:22:19 AM

Instrument	Falco (069901)	Data File	MJ Cal 1_r.d
Type	Cal	Sample	MJ Cal 1_r
Acq. Method	AM 26 THCS.m	Operator	Tamara Salazar
Sample Position	P1-A1	Comment	
Injection Volume	10		
Acq. Date-Time	3/30/2022 1:57:34 PM		
Sample Info.			

Sample Chromatogram

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



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC-COOH	2.627	17332	115658	6.3897 ng/ml
THC-OH	2.554	1502	841542	0.7145 ng/ml Low

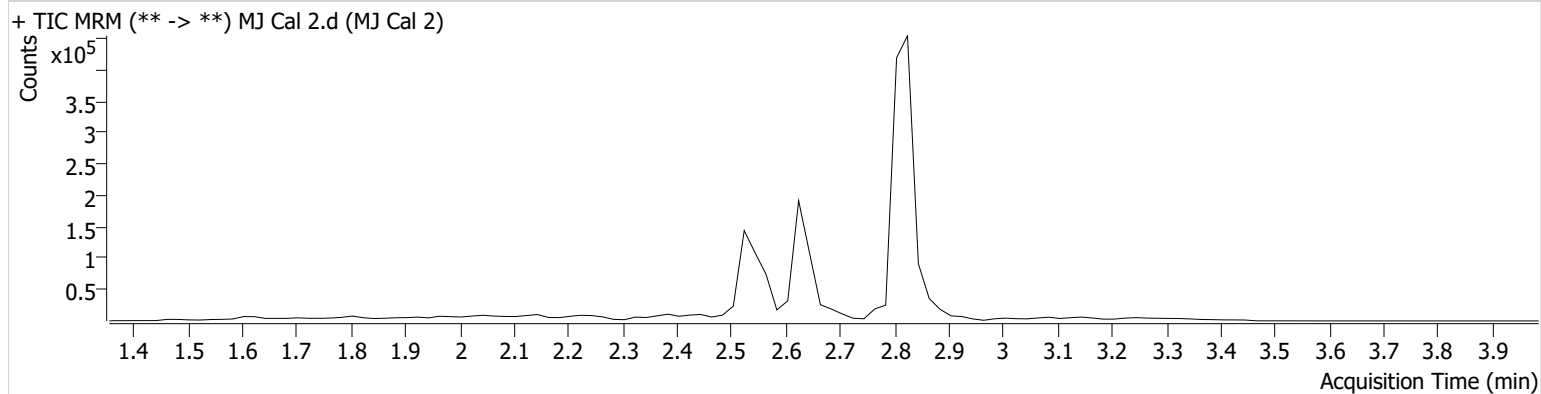


AM #26 Cannabinoids Screen Results

Batch results D:\MassHunter\Data\2022\AM 25-26\033022 AM 25 26 TS\QuantResults\AM 26.batch.bin
Calibration Last Update 4/5/2022 10:22:19 AM

Instrument	Falco (069901)	Data File	MJ Cal 2.d
Type	Cal	Sample	MJ Cal 2
Acq. Method	AM 26 THCS.m	Operator	Tamara Salazar
Sample Position	P1-B1	Comment	
Injection Volume	10		
Acq. Date-Time	3/30/2022 12:38:19 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	2.859	678	16328	3.4051 ng/ml
THC-COOH	2.647	37491	263987	6.1396 ng/ml
THC-OH	2.554	3504	415395	4.5612 ng/ml

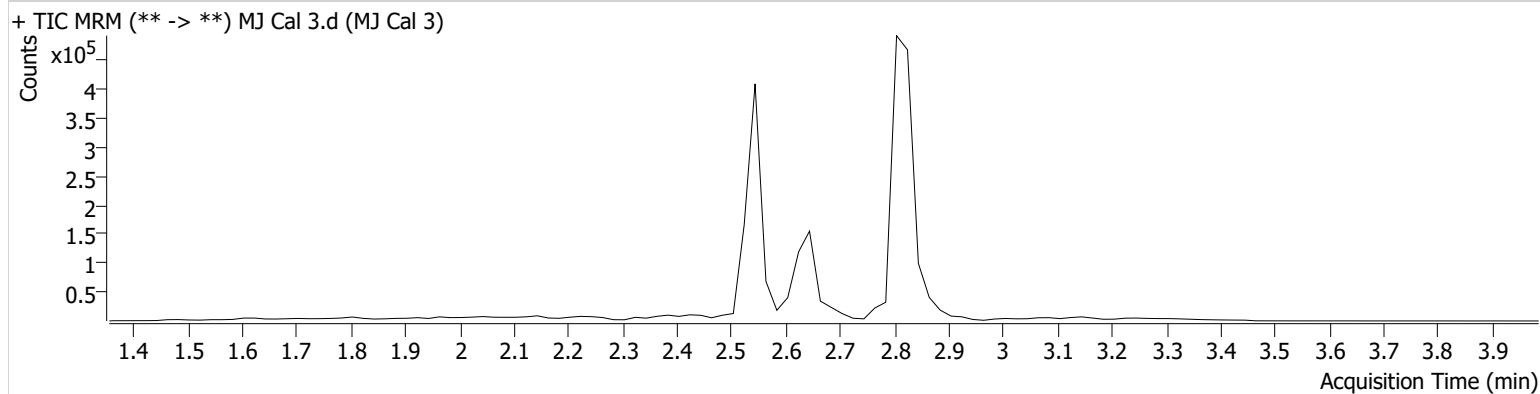


AM #26 Cannabinoids Screen Results

Batch results D:\MassHunter\Data\2022\AM 25-26\033022 AM 25 26 TS\QuantResults\AM 26.batch.bin
Calibration Last Update 4/5/2022 10:22:19 AM

Instrument	Falco (069901)	Data File	MJ Cal 3.d
Type	Cal	Sample	MJ Cal 3
Acq. Method	AM 26 THCS.m	Operator	Tamara Salazar
Sample Position	P1-C1	Comment	
Injection Volume	10		
Acq. Date-Time	3/30/2022 12:44:53 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	2.859	951	20680	4.0170 ng/ml
THC-COOH	2.647	83978	135602	21.3721 ng/ml
THC-OH	2.554	5726	783848	3.9078 ng/ml

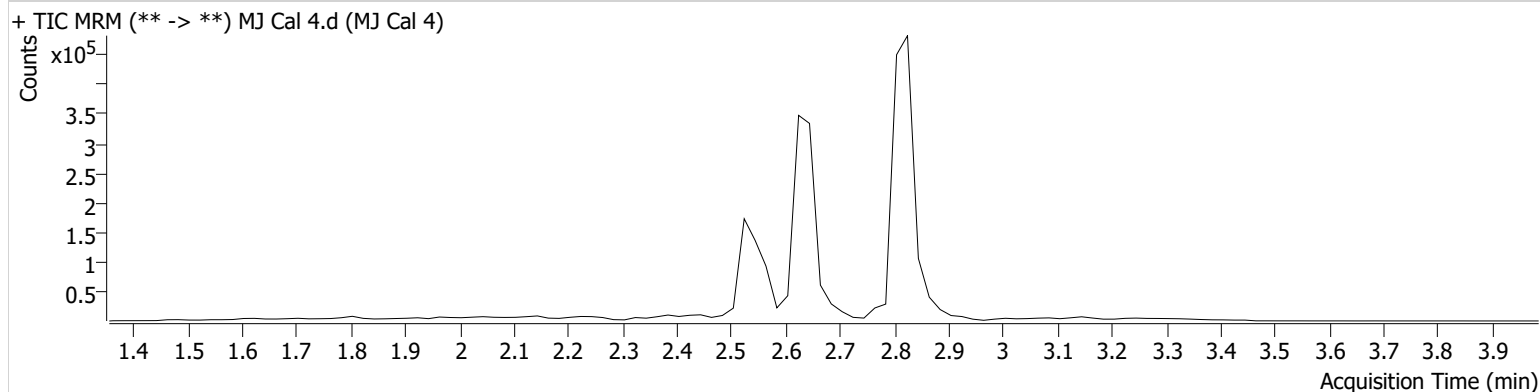


AM #26 Cannabinoids Screen Results

Batch results D:\MassHunter\Data\2022\AM 25-26\033022 AM 25 26 TS\QuantResults\AM 26.batch.bin
Calibration Last Update 4/5/2022 10:22:19 AM

Instrument	Falco (069901)	Data File	MJ Cal 4.d
Type	Cal	Sample	MJ Cal 4
Acq. Method	AM 26 THCS.m	Operator	Tamara Salazar
Sample Position	P1-D1	Comment	
Injection Volume	10		
Acq. Date-Time	3/30/2022 12:51:27 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	2.859	1645	17317	10.8040 ng/ml
THC-COOH	2.647	221058	285272	26.3383 ng/ml
THC-OH	2.554	13638	469465	16.4859 ng/ml

TS

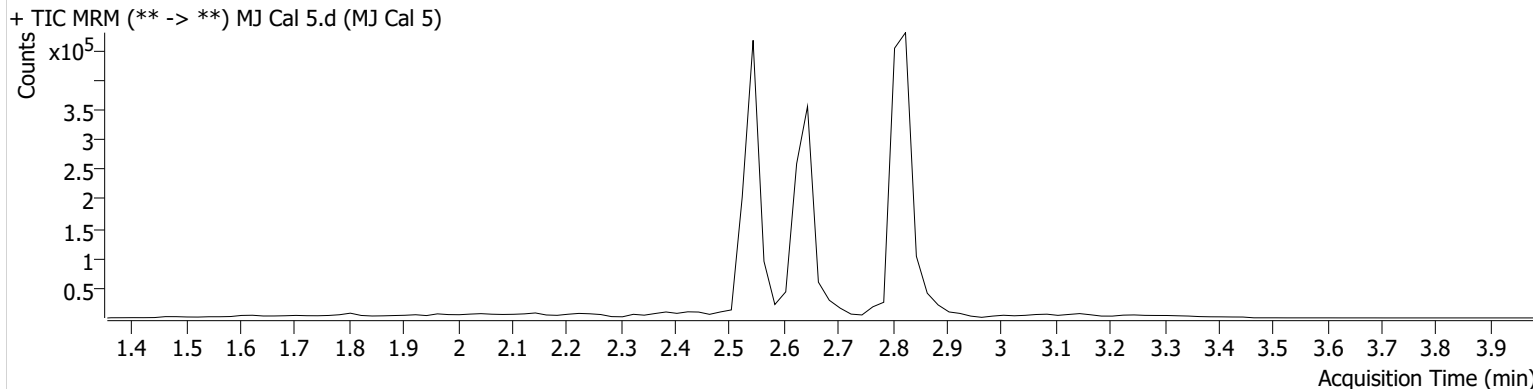


AM #26 Cannabinoids Screen Results

Batch results D:\MassHunter\Data\2022\AM 25-26\033022 AM 25 26 TS\QuantResults\AM 26.batch.bin
Calibration Last Update 4/5/2022 10:22:19 AM

Instrument	Falco (069901)	Data File	MJ Cal 5.d
Type	Cal	Sample	MJ Cal 5
Acq. Method	AM 26 THCS.m	Operator	Tamara Salazar
Sample Position	P1-E1	Comment	
Injection Volume	10		
Acq. Date-Time	3/30/2022 12:58:01 PM		

Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	2.859	3567	18236	24.7360 ng/ml
THC-COOH	2.647	265372	111359	77.6624 ng/ml
THC-OH	2.554	34373	803025	24.4413 ng/ml

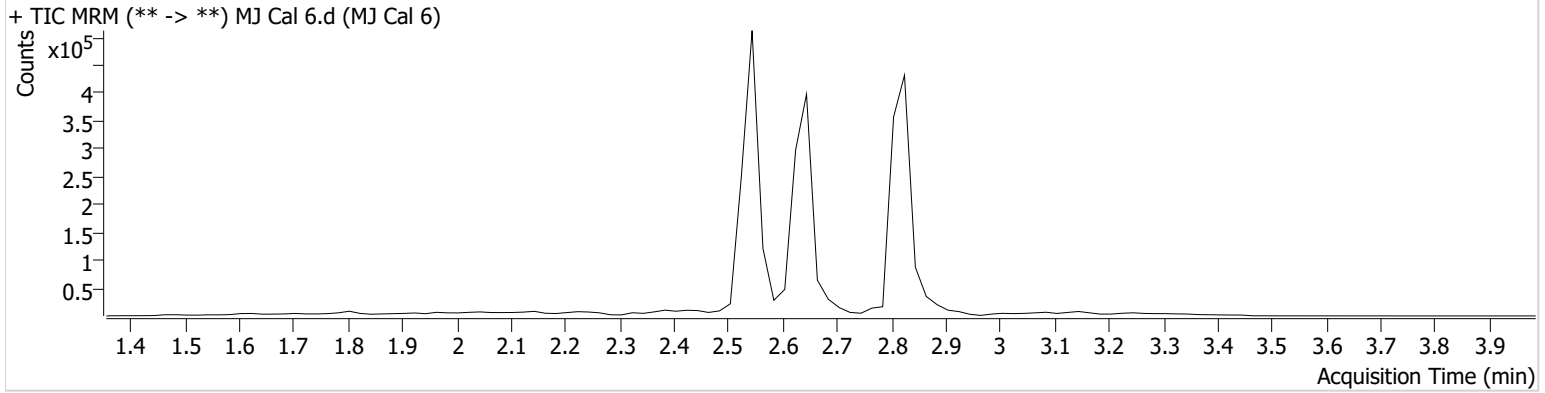


AM #26 Cannabinoids Screen Results

Batch results D:\MassHunter\Data\2022\AM 25-26\033022 AM 25 26 TS\QuantResults\AM 26.batch.bin
Calibration Last Update 4/5/2022 10:22:19 AM

Instrument	Falco (069901)	Data File	MJ Cal 6.d
Type	Cal	Sample	MJ Cal 6
Acq. Method	AM 26 THCS.m	Operator	Tamara Salazar
Sample Position	P1-F1	Comment	
Injection Volume	10		
Acq. Date-Time	3/30/2022 1:04:34 PM		

Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	2.859	5884	15823	49.1353 ng/ml
THC-COOH	2.647	306632	97764	101.7079 ng/ml
THC-OH	2.554	69184	791867	50.2185 ng/ml

TS

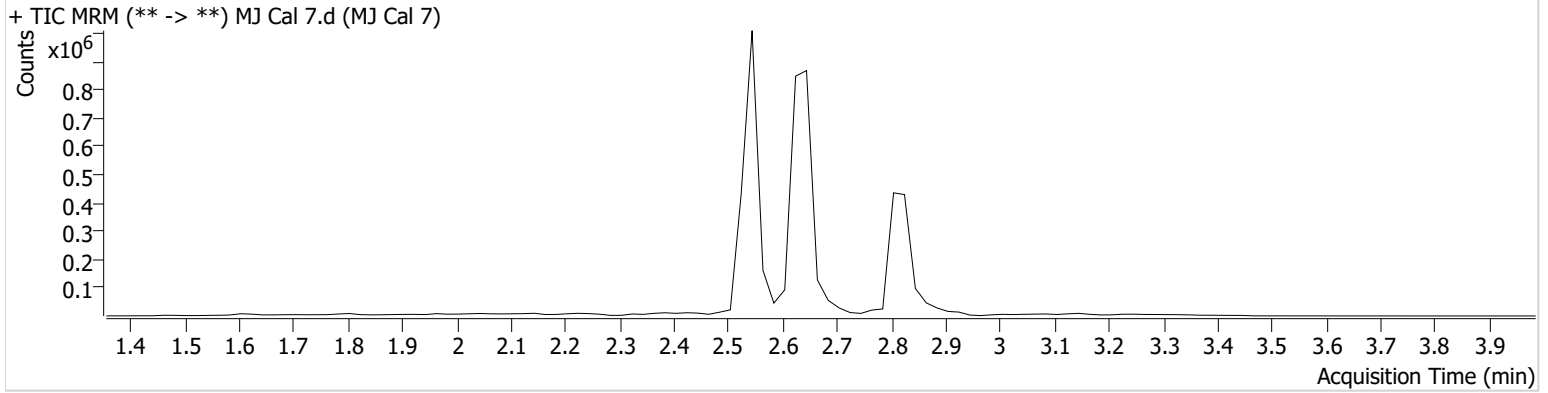


AM #26 Cannabinoids Screen Results

Batch results D:\MassHunter\Data\2022\AM 25-26\033022 AM 25 26 TS\QuantResults\AM 26.batch.bin
Calibration Last Update 4/5/2022 10:22:19 AM

Instrument	Falco (069901)	Data File	MJ Cal 7.d
Type	Cal	Sample	MJ Cal 7
Acq. Method	AM 26 THCS.m	Operator	Tamara Salazar
Sample Position	P1-G1	Comment	
Injection Volume	10		
Acq. Date-Time	3/30/2022 1:11:09 PM		

Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	2.859	14634	19623	100.9026 ng/ml
THC-COOH	2.627	829981	108065	246.7283 ng/ml
THC-OH	2.554	140310	807759	100.1568 ng/ml