

REVIEWED

By Tamara Salazar at 2:10 pm, Jun 24, 2021



6/15/2021

Worklist: 5049

<u>LAB CASE</u>	<u>ITEM</u>	<u>ITEM TYPE</u>	<u>DESCRIPTION</u>	
M2021-2240	3	UCK	AM 25/AM 26 Urine MultiDrug/THC Screen by LC-QQQ	
M2021-2241	3	UCK	AM 25/AM 26 Urine MultiDrug/THC Screen by LC-QQQ	
M2021-2266	2	UCK	AM 25/AM 26 Urine MultiDrug/THC Screen by LC-QQQ	
M2021-2350	5	UCK	AM 25/AM 26 Urine MultiDrug/THC Screen by LC-QQQ	
M2021-2516	3	UCK	AM 25/AM 26 Urine MultiDrug/THC Screen by LC-QQQ	
P2021-1666	1	UCK	AM 25/AM 26 Urine MultiDrug/THC Screen by LC-QQQ	
P2021-1726	1	UCK	AM 25/AM 26 Urine MultiDrug/THC Screen by LC-QQQ	
P2021-1762	1	UCK	AM 25/AM 26 Urine MultiDrug/THC Screen by LC-QQQ	
P2021-1860	1	UCK	AM 25/AM 26 Urine MultiDrug/THC Screen by LC-QQQ	
P2021-1861	3	UCK	AM 25/AM 26 Urine MultiDrug/THC Screen by LC-QQQ	
P2021-1983	1	UCK	AM 25/AM 26 Urine MultiDrug/THC Screen by LC-QQQ	

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

Extraction Date: 6/15/2021

Plate lot#: 201206

Mobile phase A: 10mM Amm Form
Instant Buffer I

Blank Blood Lot: Lampire 20L20723

LCMS-QQ ID: 069901

Analyst: Amber Gerheart

Plate Retest Date: 6/6/2021

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

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: 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.
- 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:

Plate was re-tested using an external control as per the analytical method.

	1	2	3	4	5	6	7	8	9	10
A	IS + Cal. 1	M2021-2266-2	P2021-1983-1	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample
B	IS + Cal. 1	M2021-2350-5	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample
C	Blood Negative	M2021-2516-3	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample
D	Blood External	P2021-1666-1	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample
E	Urine Negative	P2021-1726-1	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample
F	Urine External	P2021-1762-1	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample
G	M2021-2240-3	P2021-1860-1	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample
H	M2021-2241-3	P2021-1861-3	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample

All wells to contain 60 µl of residual DMSO

11	12
IS + Sample	IS + Sample
IS + Sample	IS + Sample
IS + Sample	IS + Sample
IS + Sample	IS + Sample
IS + Sample	IS + Sample
IS + Sample	IS + Sample
IS + Sample	IS + Cal. 1
IS + Sample	IS + Cal. 1

AM

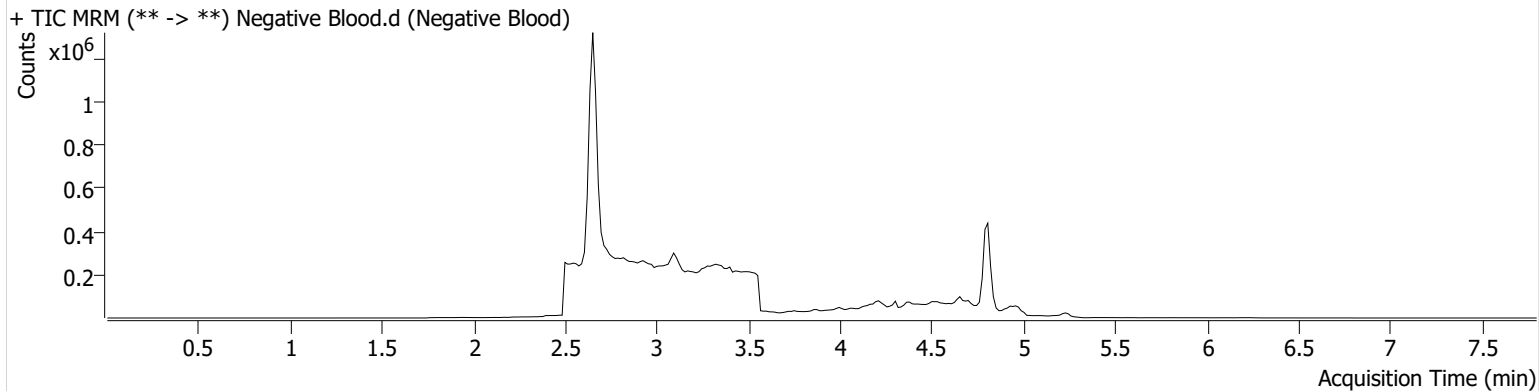
AM #25 Multi-Drug Screen Results



Batch results D:\MassHunter\Data\2021\AM 25-26\061521 AM 25 26 AG\QuantResults\AM 25.batch.bin
Calibration Last Update 6/22/2021 11:23:36 AM

Instrument	Falco (069901)	Data File	Negative Blood.d
Type	Sample	Sample	Negative Blood
Acq. Method	AM 25 MDS.m	Operator	Amber Gerheart
Sample Position	P1-C1	Comment	
Injection Volume	5		
Acq. Date-Time	6/15/2021 5:54:10 PM		
Sample Info.			

Sample Chromatogram



Reinjected due to incorrect plate well position.

AM

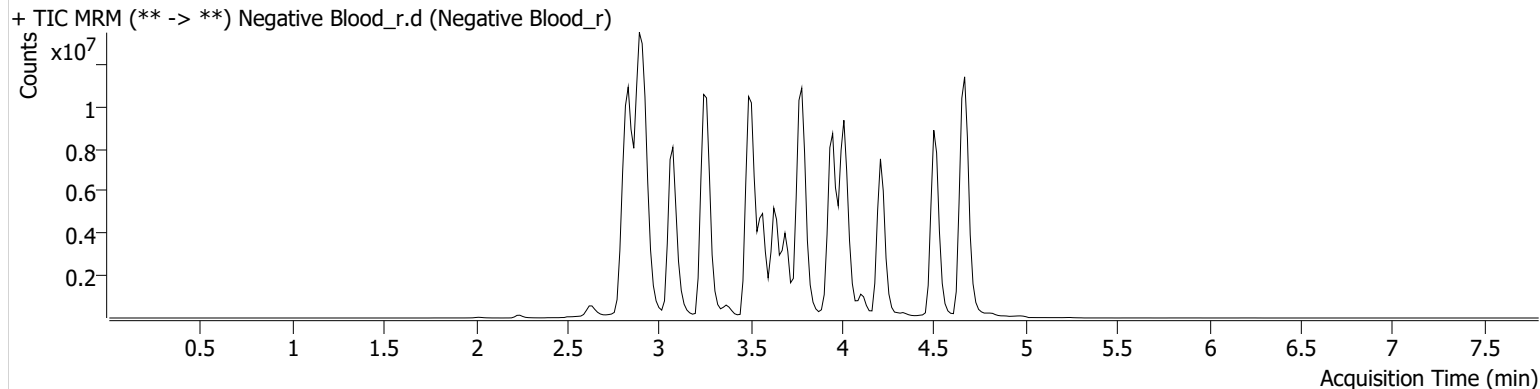
AM #25 Multi-Drug Screen Results



Batch results D:\MassHunter\Data\2021\AM 25-26\061521 AM 25 26 AG\QuantResults\AM 25.batch.bin
Calibration Last Update 6/22/2021 11:23:36 AM

Instrument	Falco (069901)	Data File	Negative Blood_r.d
Type	Sample	Sample	Negative Blood_r
Acq. Method	AM 25 MDS.m	Operator	Amber Gerheart
Sample Position	P2-C1	Comment	
Injection Volume	5		
Acq. Date-Time	6/16/2021 9:31:42 AM		

Sample Chromatogram



Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Methamphetamine	2.950	3943316	411.91	217.73	32111115	4.3975



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: 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		
Expires:	07/31/2021		

Blood External Control Solution (Lot: WS060421)

*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	Lampire	20L20723
Methanol External Control Solution		120320
Prepared:	06/04/2021	
Prepared by:	Celena Shrum	
Expires:	07/31/2021	

AM

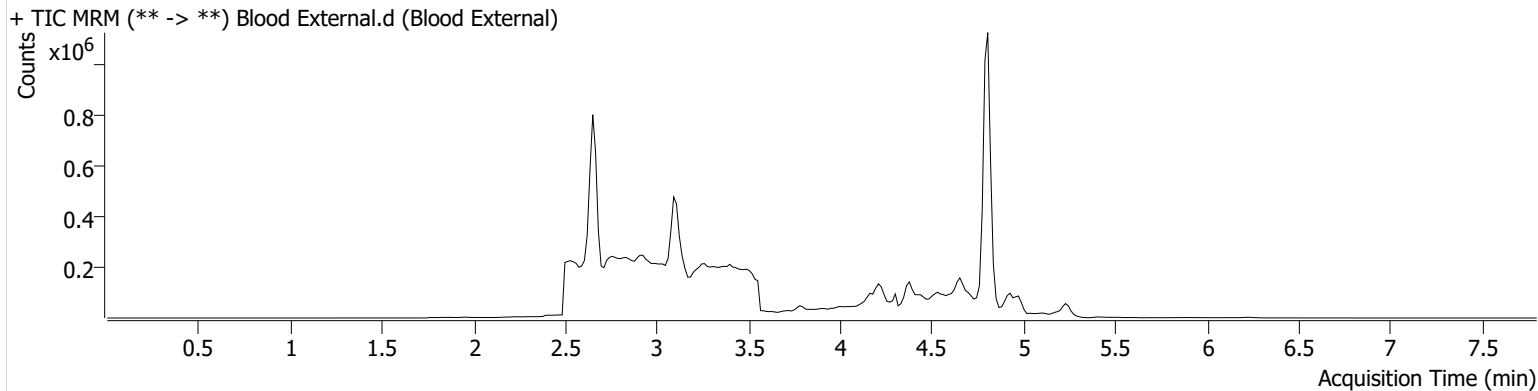
AM #25 Multi-Drug Screen Results



Batch results D:\MassHunter\Data\2021\AM 25-26\061521 AM 25 26 AG\QuantResults\AM 25.batch.bin
Calibration Last Update 6/22/2021 11:23:36 AM

Instrument	Falco (069901)	Data File	Blood External.d
Type	Sample	Sample	Blood External
Acq. Method	AM 25 MDS.m	Operator	Amber Gerheart
Sample Position	P1-D1	Comment	
Injection Volume	5		
Acq. Date-Time	6/15/2021 6:02:52 PM		
Sample Info.			

Sample Chromatogram



Reinjected due to incorrect plate well position.

AM

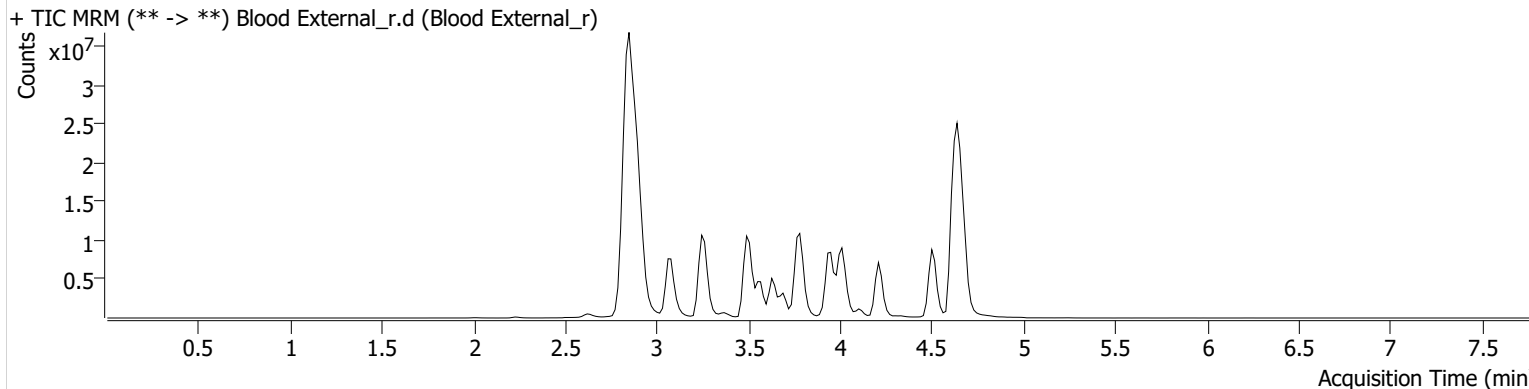
AM #25 Multi-Drug Screen Results



Batch results D:\MassHunter\Data\2021\AM 25-26\061521 AM 25 26 AG\QuantResults\AM 25.batch.bin
Calibration Last Update 6/22/2021 11:23:36 AM

Instrument	Falco (069901)	Data File	Blood External_r.d
Type	Sample	Sample	Blood External_r
Acq. Method	AM 25 MDS.m	Operator	Amber Gerheart
Sample Position	P2-D1	Comment	
Injection Volume	5		
Acq. Date-Time	6/16/2021 9:40:18 AM		

Sample Chromatogram



Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Alprazolam	4.626	39321210	4435.74	877.77	39381287	63.9484
Amphetamine	2.844	29193441	6634.06	55943.43	11487608	71.4443
O-desmethyl-tramadol	2.869	48276582	70511.97	1005.82	25233570	46.4896

AM

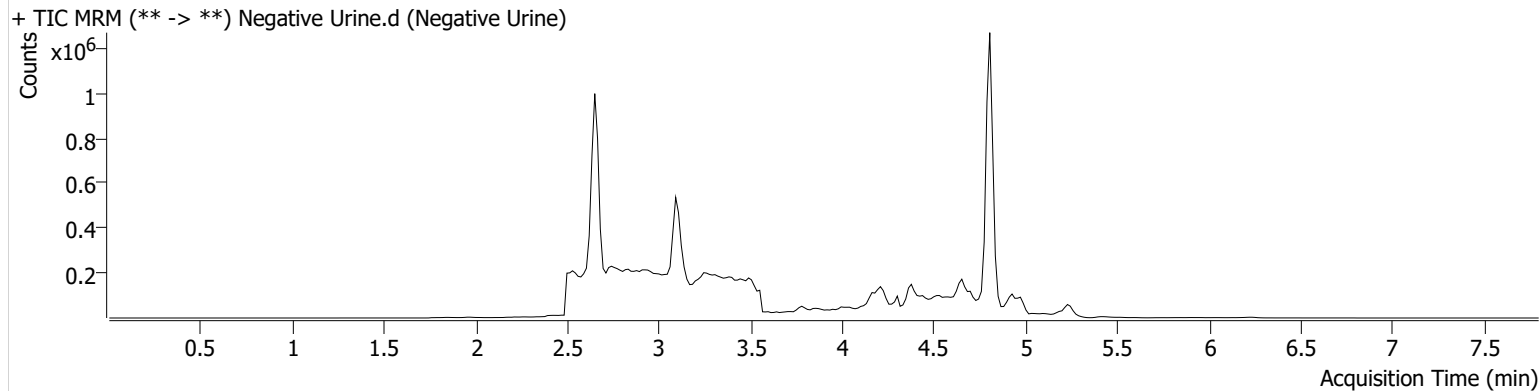
AM #25 Multi-Drug Screen Results



Batch results D:\MassHunter\Data\2021\AM 25-26\061521 AM 25 26 AG\QuantResults\AM 25.batch.bin
Calibration Last Update 6/22/2021 11:23:36 AM

Instrument	Falco (069901)	Data File	Negative Urine.d
Type	Sample	Sample	Negative Urine
Acq. Method	AM 25 MDS.m	Operator	Amber Gerheart
Sample Position	P1-E1	Comment	
Injection Volume	5		
Acq. Date-Time	6/15/2021 6:11:18 PM		
Sample Info.			

Sample Chromatogram



Reinjected due to incorrect plate well position.

AM

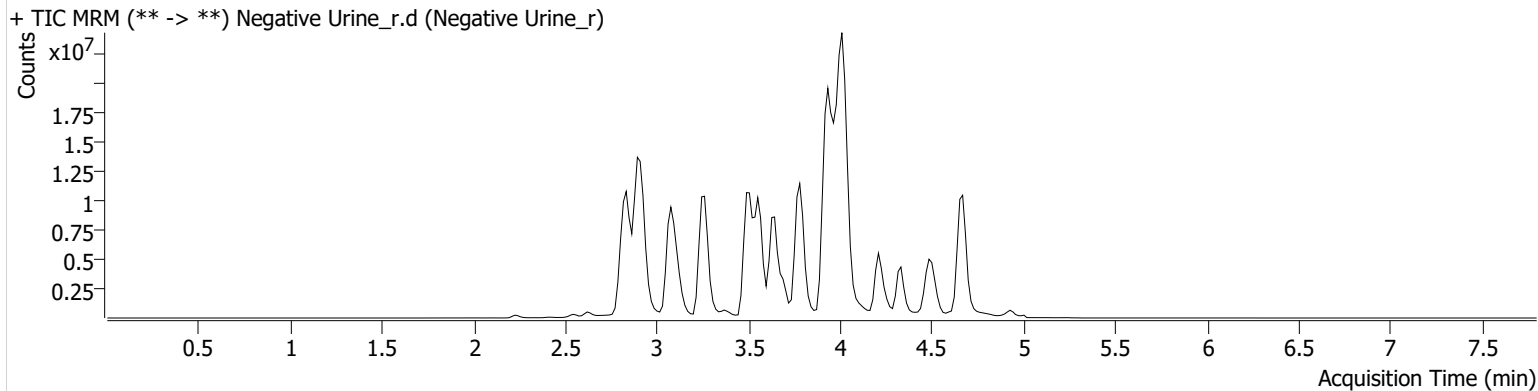
AM #25 Multi-Drug Screen Results



Batch results D:\MassHunter\Data\2021\AM 25-26\061521 AM 25 26 AG\QuantResults\AM 25.batch.bin
Calibration Last Update 6/22/2021 11:23:36 AM

Instrument	Falco (069901)	Data File	Negative Urine_r.d
Type	Sample	Sample	Negative Urine_r
Acq. Method	AM 25 MDS.m	Operator	Amber Gerheart
Sample Position	P2-E1	Comment	
Injection Volume	5		
Acq. Date-Time	6/16/2021 9:48:43 AM		
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		
Expires:	07/31/2021		

Urine External Control Solution (Lot: WS061521)

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

<i>Component</i>	<i>Source</i>	<i>Source Lot Number</i>
Negative Urine	Pocatello Lab	POC031319
Methanol External Control Solution		120320
Prepared:	06/15/2021	
Prepared by:	Amber Gerheart	
Expires:	07/31/2021	

AK

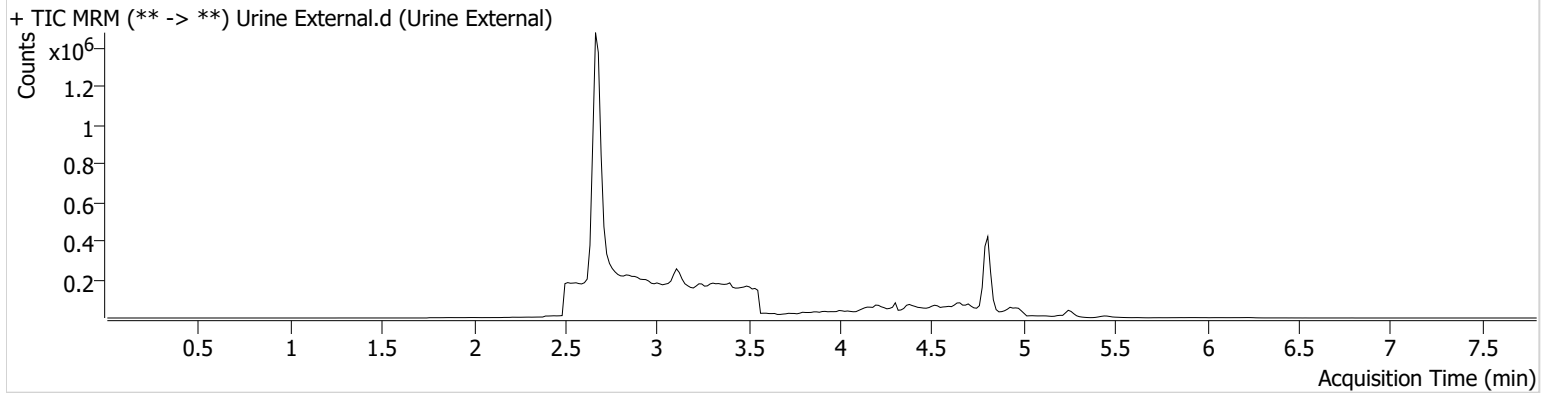
AM #25 Multi-Drug Screen Results



Batch results D:\MassHunter\Data\2021\AM 25-26\061521 AM 25 26 AG\QuantResults\AM 25.batch.bin
Calibration Last Update 6/22/2021 11:23:36 AM

Instrument	Falco (069901)	Data File	Urine External.d
Type	Sample	Sample	Urine External
Acq. Method	AM 25 MDS.m	Operator	Amber Gerheart
Sample Position	P1-F1	Comment	
Injection Volume	5		
Acq. Date-Time	6/15/2021 6:19:44 PM		
Sample Info.			

Sample Chromatogram



Reinjected due to incorrect plate well position.

AM

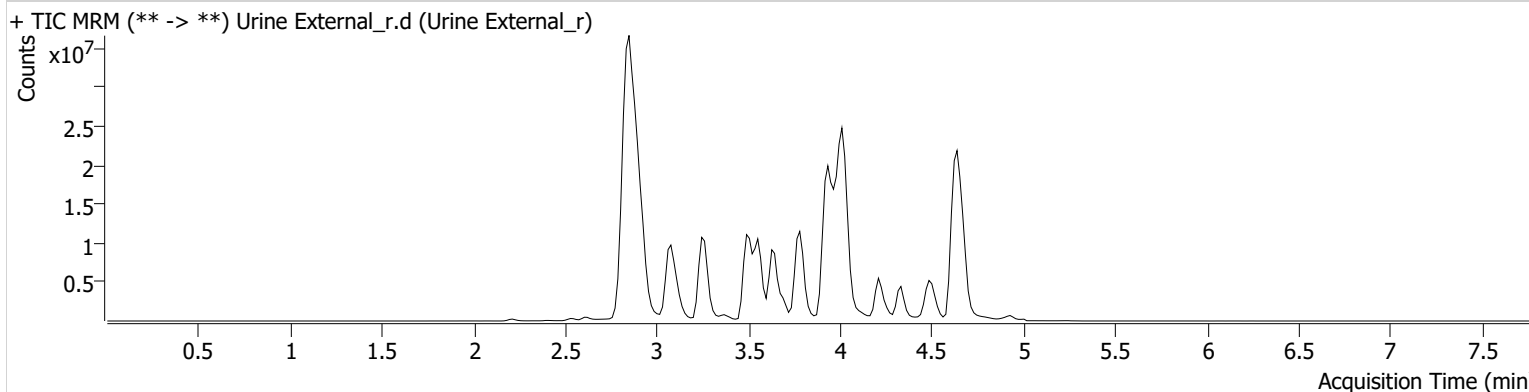
AM #25 Multi-Drug Screen Results



Batch results D:\MassHunter\Data\2021\AM 25-26\061521 AM 25 26 AG\QuantResults\AM 25.batch.bin
Calibration Last Update 6/22/2021 11:23:36 AM

Instrument	Falco (069901)	Data File	Urine External_r.d
Type	Sample	Sample	Urine External_r
Acq. Method	AM 25 MDS.m	Operator	Amber Gerheart
Sample Position	P2-F1	Comment	
Injection Volume	5		
Acq. Date-Time	6/16/2021 9:57:08 AM		

Sample Chromatogram



Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Alprazolam	4.626	32584718	5234.07	861.50	35233746	59.2308
Amphetamine	2.844	32237636	1560.89	457.31	14905717	60.8026
Methamphetamine	2.935	3906453	211.09	206.92	36374826	3.8458
O-desmethyl-tramadol	2.869	44382139	1399.16	670.99	52212982	20.6551

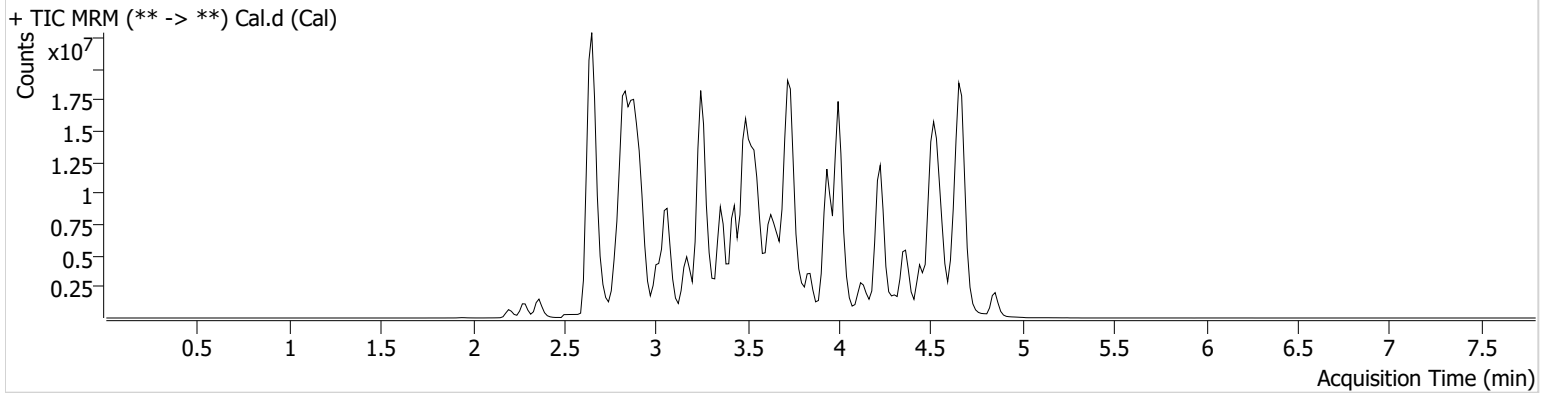
AM #25 Multi-Drug Screen Results



Batch results D:\MassHunter\Data\2021\AM 25-26\061521 AM 25 26 AG\QuantResults\AM 25.batch.bin
Calibration Last Update 6/22/2021 11:23:36 AM

Instrument	Falco (069901)	Data File	Cal.d
Type	Cal	Sample	Cal
Acq. Method	AM 25 MDS.m	Operator	Amber Gerheart
Sample Position	P2-A1	Comment	
Injection Volume	5		
Acq. Date-Time	6/15/2021 5:45:36 PM		

Sample Chromatogram



Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
6-MAM	2.801	94101	58832.11	80712.06	2957226	10.0000
7-aminoclonazepam	3.569	2555841	3372.49	621.15	10600816	10.0000
7-aminoflunitrazepam	3.783	3621185	1899.36	482.21	10600816	10.0000
Acetyl Fentanyl	3.687	119684	137.03	58128.49	34159868	10.0000
Acetyl Norfentanyl	2.840	483627	137.76	194.24	34159868	10.0000
a-hydroxyalprazolam	4.515	755100	242.87	181341.98	10600816	10.0000
alpha-hydroxymidazolam	4.529	3099260	417.36	3081.31	10600816	10.0000
Alpha-PHP	3.711	3526062	15613.18	944.34	34159868	10.0000
alpha-PVP	3.437	6486571	16591.22	498.14	11596637	10.0000
Alprazolam	4.626	5557166	887.98	710.12	35591455	10.0000
Amitriptyline	4.324	79014	13.07	13.15	445109	10.0000
Amphetamine	2.829	4124962	1127.58	480.71	11596637	10.0000
Benzoylcegonine	3.385	542493	740.63	232.92	988894	10.0000
Brompheniramine	3.933	27053	17.41	363.33	27454332	10.0000
Buprenorphine	4.006	254973	84205.08	32711.70	1177215	10.0000
Bupropion	3.635	3885572	1902249.78	1098.49	14381319	10.0000
Carbamazepine	4.234	18621045	2158.04	2311.28	1913862	10.0000
Carisoprodol	4.217	2689790	647.43	246.93	17194430	10.0000
Chlordiazepoxide	4.627	2101403	362.30	3162.79	35591455	10.0000
Chlorpheniramine	3.846	2769598	325.36	4.62 Low	27454332	10.0000
Citalopram	3.979	1353525	449.30	248.64	27454332	10.0000
Clomipramine	4.517	87369	1194.17	100.95	27454332	10.0000
Clonazepam	4.440	4087312	736.94	37780.04	35591455	10.0000
Clonazolam	4.375	3663288	1542545.14	2239545.69	35591455	10.0000
Cocaethylene	3.703	5978435	4940368.99	24922.10	34655456	10.0000
Cocaine	3.491	7753728	6837057.71	417.84	34655456	10.0000
Codeine	2.699	646406	28222.32	1198.59	15513187	10.0000
Cyclobenzaprine	4.246	170759	1216.52	486.46	445109	10.0000
Desipramine	4.278	268444	269.36	65.21	445109	10.0000
Dextromethorphan	3.985	650460	257.52	92635.79	3470921	10.0000
Dextrorphan	3.295	2931237	19146.33	2052.31	3470921	10.0000
Diazepam	4.858	2889032	919.85	1031.06	35591455	10.0000
Dihydrocodeine	2.667	1411583	657.90	528.59	15513187	10.0000
Diphenhydramine	3.940	4167994	54145.98	941.74	27454332	10.0000

Cal

AM #25 Multi-Drug Screen Results



Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Doxepin	4.044	274578	73.89	31.25	6185620	10.0000
Doxylamine	3.540	12008311	524.98	871.80	3470921	10.0000
EDDP	3.999	1356123	261.03	742.49	3131241	10.0000
Estazolam	4.535	13321751	943.75	2342.22	35591455	10.0000
Etizolam	4.636	722187	521916.13	1238905.12	35591455	10.0000
Fentanyl	3.916	45655	113.22	34376.89	3395243	10.0000
Flualprazolam	4.484	2101929	1608887.11	479681.18	35591455	10.0000
Flunitrazepam	4.564	7328622	2568.87	1904.44	35591455	10.0000
Fluoxetine	4.257	86033	743.70	3.26 Low	135231	10.0000
Flurazepam	4.022	1862588	828123.12	500883.15	35591455	10.0000
Hydrocodone	2.882	2195628	982.29	1444.83	15513187	10.0000
Hydromorphone	2.367	2325960	22740.13	1264.06	306673	10.0000
Imipramine	4.291	544534	712.53	66.70	445109	10.0000
Ketamine	3.266	5397260	4913.15	309.55	21834608	10.0000
Lamotrigine	3.419	487420	288.97	5892.53	27454332	10.0000
Levamisole	2.841	3771846	1809.72	413.48	34655456	10.0000
Levetiracetam	2.659	1880087	1096.13	1112.91	27454332	10.0000
Lorazepam	4.439	1396893	418.04	∞	35591455	10.0000
Maprotiline	4.324	57425	6.89	28.48	445109	10.0000
MDA	2.933	3649993	508.93	4.27 Low	29638049	10.0000
MDEA	3.161	5171934	1097.08	646.64	29638049	10.0000
MDMA	3.009	7105612	9887.70	286.83	29638049	10.0000
Meperidine	3.496	2597308	565.42	319.23	3470921	10.0000
Meprobamate	3.668	1530088	6206.66	228.05	17194430	10.0000
Methadone	4.303	1723068	298.55	496.48	3131241	10.0000
Methamphetamine	2.920	8276536	639.90	880.82	29638049	10.0000
Methocarbamol	3.573	1122971	868.86	86.64	3131241	10.0000
Methylphenidate	3.436	11491413	337.86	905.48	23400613	10.0000
Metoprolol	3.371	913058	438.34	588.45	3470921	10.0000
Midazolam	4.454	438700	642.57	607.04	35591455	10.0000
Mirtazapine	3.601	1230487	465.81	923.27	3470921	10.0000
Mitragynine	4.052	96337	60069.11	143879.81	3470921	10.0000
Morphine	2.201	462605	5.22	4418.51	306673	10.0000
Norbuprenorphine	3.746	36755	29433.50	31164.46	1177215	10.0000
Nordiazepam	4.692	2878184	2364750.31	1190.23	35591455	10.0000
Norfentanyl	3.252	9498992	1938.91	695.15	34159868	10.0000
Norhydrocodone	2.868	47697	551.32	840.77	306673	10.0000
Norketamine	3.252	949400	294.18	13936.22	21834608	10.0000
Normeperidine	3.528	2201369	499.06	223.62	27454332	10.0000
Noroxycodone	2.820	1603091	554.44	231.23	21834608	10.0000
Nortriptyline	4.325	48548	27558.39	9.96	445109	10.0000
O-desmethyl-tramadol	2.853	11298303	1671.07	2062.41	27454332	10.0000
Olanzapine	3.260	282385	291482.53	247.16	1913862	10.0000
Oxazepam	4.521	5968865	615.32	370.01	24385650	10.0000
Oxycodone	2.833	4430271	1605.85	510.18	21834608	10.0000
Oxymorphone	2.271	2319757	437.38	2546.59	306673	10.0000
Paroxetine	4.254	12577	28.70	7430.24	135231	10.0000
Phenazepam	4.651	4656295	66377.89	1497.10	35591455	10.0000
Phencyclidine	3.834	3877064	1885.27	1393.37	3470921	10.0000
Phentermine	3.087	2033307	333.10	12.84	23400613	10.0000
Phenytoin	4.126	3284017	827.35	6216.79	1913862	10.0000
Promethazine	4.214	621321	438.42	70.88	27454332	10.0000
Pseudoephedrine	2.660	52635120	1353.41	3235.48	29638049	10.0000
Quetiapine	4.160	1464642	182236.96	36849.30	35955254	10.0000
Sertraline	4.457	22307	13586.79	21.43	135231	10.0000
Sufentanil	4.160	24952	27158.86	91.04	34159868	10.0000
Tapentadol	3.375	7127874	902.27	639.89	21834608	10.0000
Temazepam	4.673	9554246	3050.01	187.55	35591455	10.0000
Tramadol	3.356	12873260	2210.98	241.18	27454332	10.0000
Trazodone	4.007	1322310	591.77	318.11	6185620	10.0000

Cal

AM

AM #25 Multi-Drug Screen Results



Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Venlafaxine	3.722	7865803	1334.30	213.79	135231	10.0000
Zaleplon	4.351	6909552	7384934.02	745.65	35955254	10.0000
Zolpidem	3.735	10798364	2586.11	2312.64	35955254	10.0000
Zopiclone	3.655	1505630	10444.17	446685.30	8133074	10.0000

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

Extraction Date: 6/15/2021

Analyst: Amber Gerheart

Plate lot#: 201206

Plate Retest Date: 6/6/2021

Mobile phase A: 0.1% Formic Acid in LCMS Water

Mobile phase B: 0.1% Formic acid in Acetonitrile

Blank Blood Lot: Lampire 20L20723

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

LCMS-QQQ ID: 069901

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: 16**
- 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: 800µL
- 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:

Only THC-COOH evaluated.

Plate was re-tested using an external control as per the analytical method.

	1	2	3	4	5	6
A	IS + Cal. 1	Blood Negative	M2021-2516-3	IS + Sample	IS + Sample	IS + QC_1
B	IS + Cal. 2	Blood External	P2021-1666-1	IS + Sample	IS + Sample	IS + Cal. 7
C	IS + Cal. 3	Urine Negative	P2021-1726-1	IS + Sample	IS + Sample	IS + Cal. 6
D	IS + Cal. 4	Urine External	P2021-1762-1	IS + Sample	IS + Sample	IS + Cal. 5
E	IS + Cal. 5	M2021-2240-3	P2021-1860-1	IS + Sample	IS + Sample	IS + Cal. 4
F	IS + Cal. 6	M2021-2241-3	P2021-1861-3	IS + Sample	IS + Sample	IS + Cal. 3
G	IS + Cal. 7	M2021-2266-2	P2021-1983-1	IS + Sample	IS + Sample	IS + Cal. 2
H	IS + QC_1	M2021-2350-5	IS + Sample	IS + Sample	IS + Sample	IS + Cal. 1

All wells to contain 100 µl of residual DMSO

AM

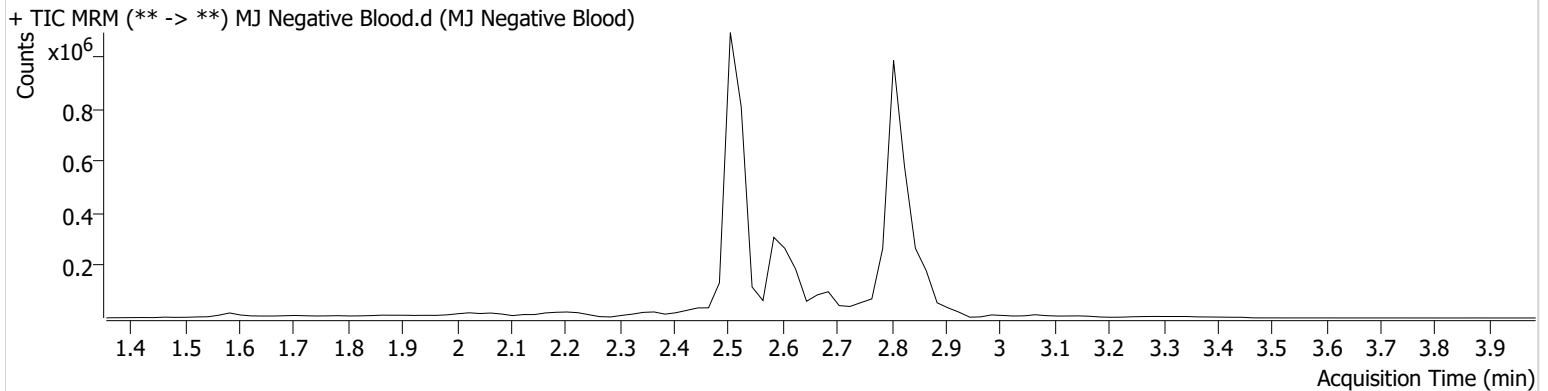
AM #26 Cannabinoids Screen Results



Batch results C:\Users\agerheart\Desktop\061521 AM 25 26 AG\QuantResults\AM 26.batch.bin
Calibration Last Update 6/16/2021 8:12:47 AM

Instrument	Falco (069901)	Data File	MJ Negative Blood.d
Type	Sample	Sample	MJ Negative Blood
Acq. Method	AM 26 THCS.m	Operator	Amber Gerheart
Sample Position	P1-A2	Comment	
Injection Volume	10		
Acq. Date-Time	6/15/2021 3:04:39 PM		

Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC-OH	2.594	10865	2431552	3.2903 ng/ml



Idaho State Police
Forensic Services

**AM #26 Screening of THC and Metabolites and AM #27
Confirmation of THC and Metabolites Blood External
Control Prep Sheet**

Methanol External Control Solution (Lot: WS03052021)

10 µL of 1mg/mL THC, 100 µL of 100 µg/mL THC-OH, C-THC in 9790 µL MeOH
Approximate concentration 1ug/mL.

<i>Component</i>	<i>Source</i>	<i>Source Lot Number</i>	<i>Expiration Date</i>
Methanol (LCMS)	Fisher	200921	
THC	Cerilliant	FE01041701	03/31/2022
C-THC	Cerilliant	FE08011801	08/31/2023
THC-OH	Cerilliant	FE07221601	07/31/2021
Prepared:	03/05/2021		
Expires:	07/31/2021		
Prepared By:	Tamara Salazar/Amber Gerheart		

Blood External Control Solution (Lot: 060421)

*100 ul of methanol external control solution was added to 9900 ul of blood.
Approximately 10ng/mL each*

<i>Component</i>	<i>Source</i>	<i>Source Lot Number</i>
Negative Blood	Lampire	20L20723
Methanol External Control Solution	-	WS03052021
Prepared:	06/04/2021	
Expires:	07/31/2021	
Prepared by:	Celena Shrum	

AM

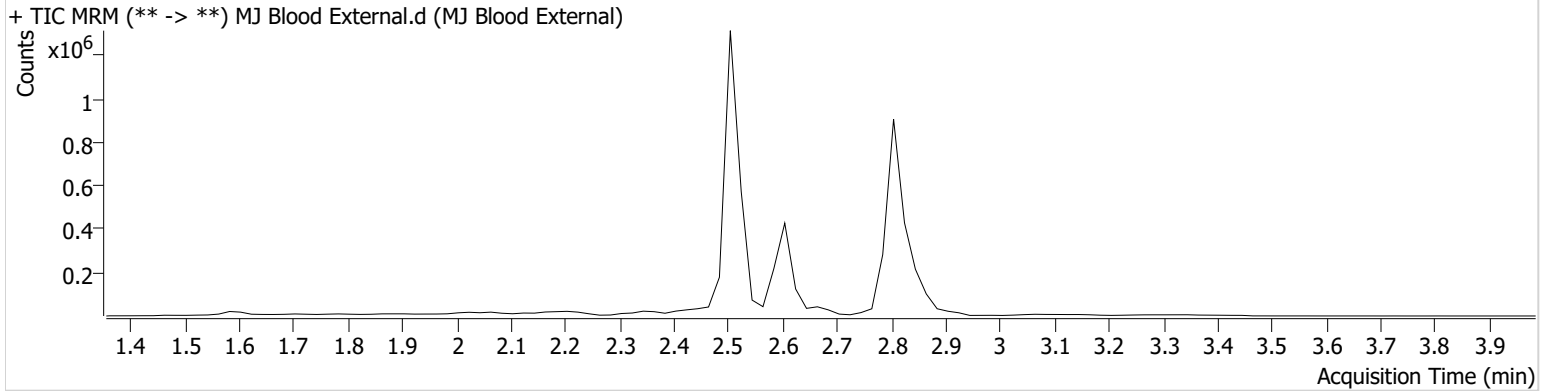
AM #26 Cannabinoids Screen Results



Batch results C:\Users\agerheart\Desktop\061521 AM 25 26 AG\QuantResults\AM 26.batch.bin
Calibration Last Update 6/16/2021 8:12:47 AM

Instrument	Falco (069901)	Data File	MJ Blood External.d
Type	Sample	Sample	MJ Blood External
Acq. Method	AM 26 THCS.m	Operator	Amber Gerheart
Sample Position	P1-B2	Comment	
Injection Volume	10		
Acq. Date-Time	6/15/2021 3:11:12 PM		

Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.	
THC	2.879	6112	235833	2.9565 ng/ml	Low
THC-COOH	2.607	74342	596892	13.1579 ng/ml	
THC-OH	2.514	29292	2203202	14.8565 ng/ml	

AM

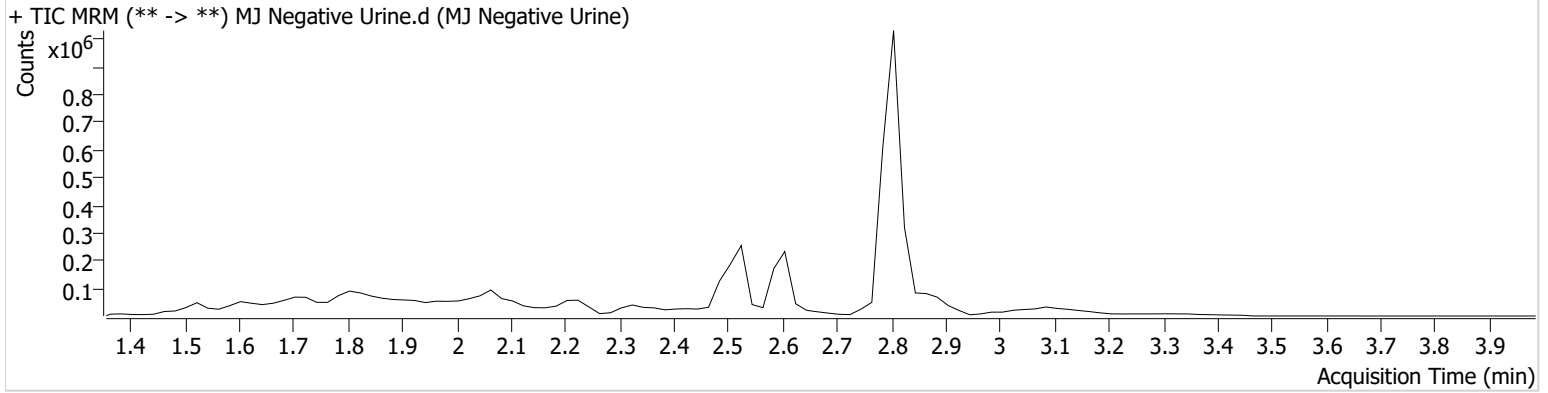
AM #26 Cannabinoids Screen Results



Batch results C:\Users\agerheart\Desktop\061521 AM 25 26 AG\QuantResults\AM 26.batch.bin
Calibration Last Update 6/16/2021 8:12:47 AM

Instrument	Falco (069901)	Data File	MJ Negative Urine.d
Type	Sample	Sample	MJ Negative Urine
Acq. Method	AM 26 THCS.m	Operator	Amber Gerheart
Sample Position	P1-C2	Comment	
Injection Volume	10		
Acq. Date-Time	6/15/2021 3:17:45 PM		
Sample Info.			

Sample Chromatogram





Idaho State Police
Forensic Services

**AM #26 Screening of THC and Metabolites and AM #27
Confirmation of THC and Metabolites Urine External
Control Prep Sheet**

Methanol External Control Solution (Lot: WS03052021)

10 µL of 1mg/mL THC, 100 µL of 100 µg/mL THC-OH, C-THC in 9790 µL MeOH

Approximate concentration 1ug/mL.

<i>Component</i>	<i>Source</i>	<i>Source Lot Number</i>	<i>Expiration Date</i>
Methanol (LCMS)	Fisher	200921	
THC	Cerilliant	FE01041701	03/31/2022
C-THC	Cerilliant	FE08011801	08/31/2023
THC-OH	Cerilliant	FE07221601	07/31/2021
Prepared:	03/05/2021		
Prepared By:	Tamara Salazar/Amber Gerheart		

Urine External Control Solution (Lot: 06152021)

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

Approximately 20ng/mL each

<i>Component</i>	<i>Source</i>	<i>Source Lot Number</i>
Negative Urine	Pocatello Lab	POC031319
Methanol External Control Solution	-	WS03052021
Prepared:	06/15/2021	
Prepared by:	Amber Gerheart	

AM

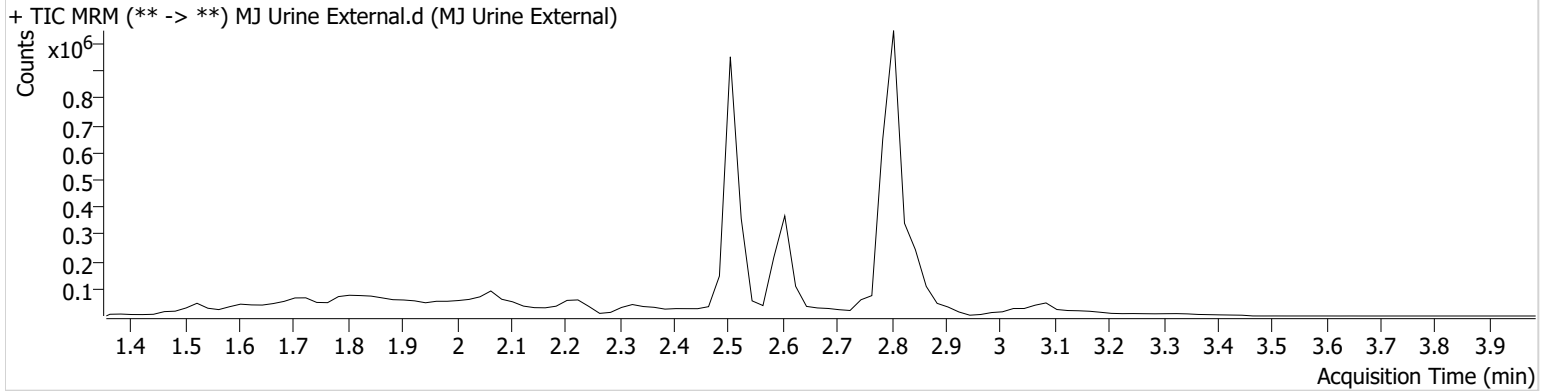
AM #26 Cannabinoids Screen Results



Batch results C:\Users\agerheart\Desktop\061521 AM 25 26 AG\QuantResults\AM 26.batch.bin
Calibration Last Update 6/16/2021 8:12:47 AM

Instrument	Falco (069901)	Data File	MJ Urine External.d
Type	Sample	Sample	MJ Urine External
Acq. Method	AM 26 THCS.m	Operator	Amber Gerheart
Sample Position	P1-D2	Comment	
Injection Volume	10		
Acq. Date-Time	6/15/2021 3:24:18 PM		

Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	2.859	31162	266274	14.3621 ng/ml
THC-COOH	2.627	64646	522967	13.0912 ng/ml
THC-OH	2.534	17901	1424635	13.8998 ng/ml

AM

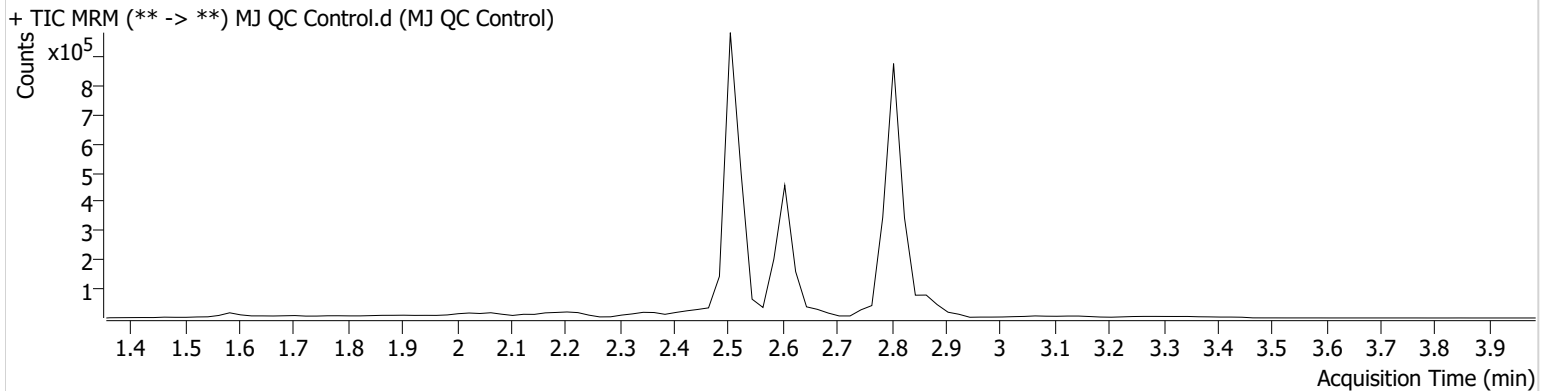
AM #26 Cannabinoids Screen Results



Batch results C:\Users\agerheart\Desktop\061521 AM 25 26 AG\QuantResults\AM 26.batch.bin
Calibration Last Update 6/16/2021 8:12:47 AM

Instrument	Falco (069901)	Data File	MJ QC Control.d
Type	Sample	Sample	MJ QC Control
Acq. Method	AM 26 THCS.m	Operator	Amber Gerheart
Sample Position	P1-H1	Comment	
Injection Volume	10		
Acq. Date-Time	6/15/2021 2:51:34 PM		

Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	2.879	2228	62060	4.2070 ng/ml
THC-COOH	2.607	110127	576181	17.9153 ng/ml
THC-OH	2.514	12170	1831203	6.1436 ng/ml

AM

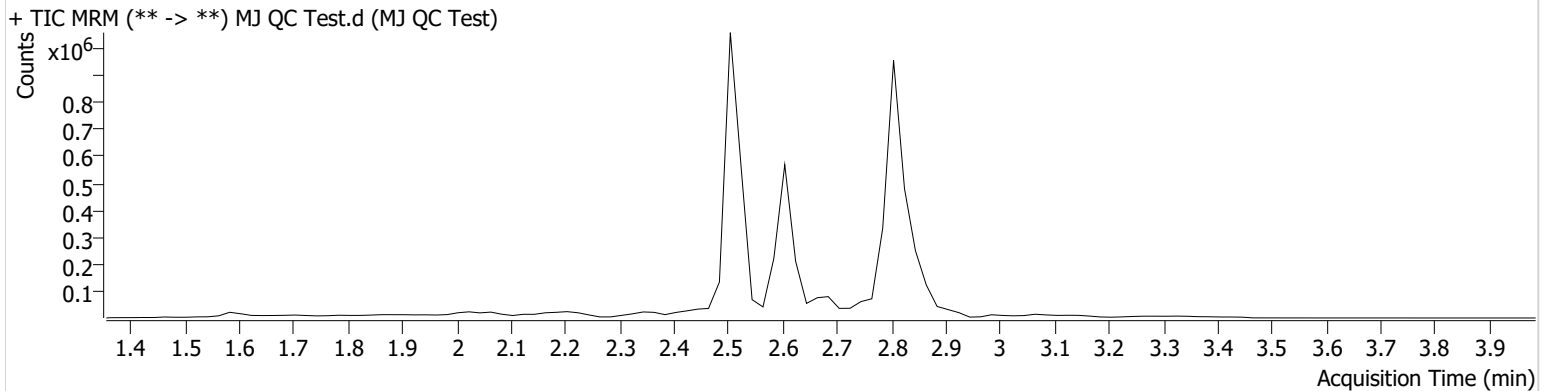
AM #26 Cannabinoids Screen Results



Batch results C:\Users\agerheart\Desktop\061521 AM 25 26 AG\QuantResults\AM 26.batch.bin
Calibration Last Update 6/16/2021 8:12:47 AM

Instrument	Falco (069901)	Data File	MJ QC Test.d
Type	Sample	Sample	MJ QC Test
Acq. Method	AM 26 THCS.m	Operator	Amber Gerheart
Sample Position	P1-H1	Comment	
Injection Volume	10		
Acq. Date-Time	6/15/2021 4:42:52 PM		

Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	2.859	8123	254161	3.7133 ng/ml
THC-COOH	2.607	136645	704651	18.1144 ng/ml
THC-OH	2.514	10131	1922242	4.3412 ng/ml

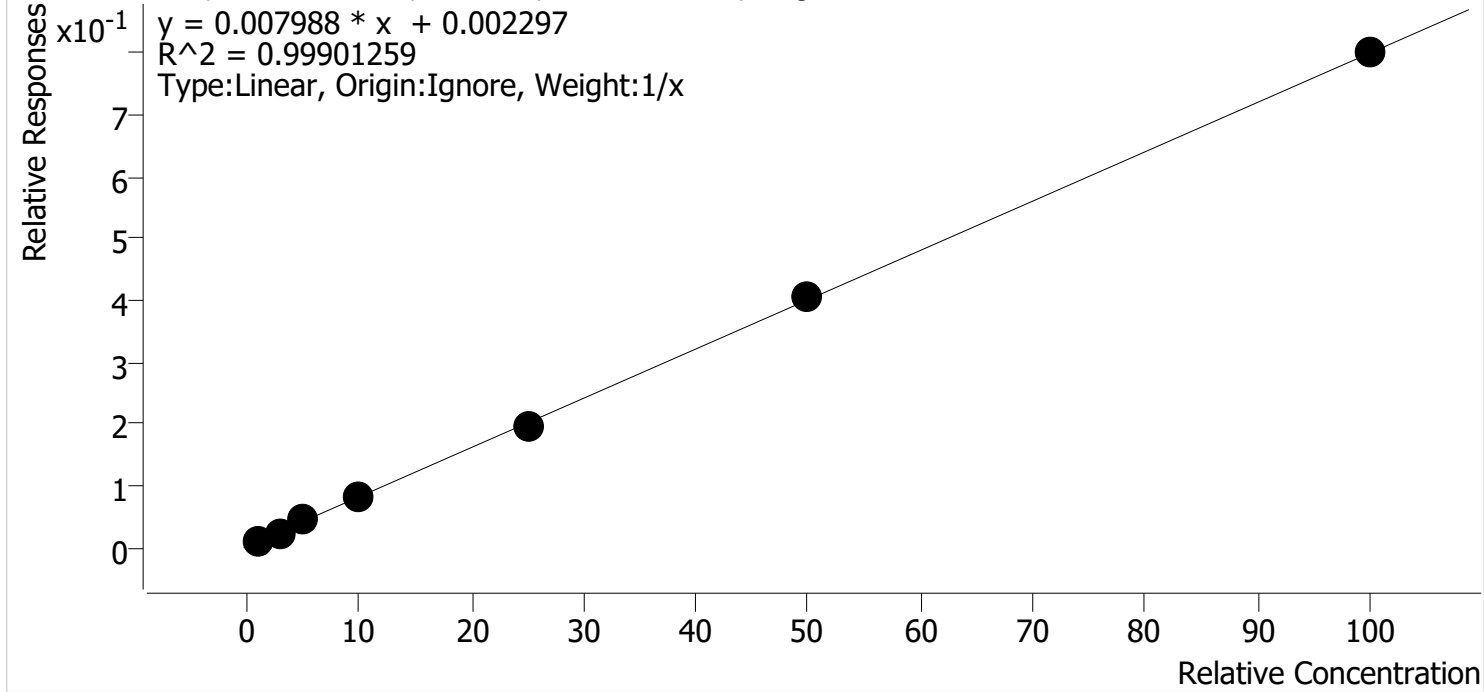
AK



AM #26 Cannabinoids Screen Calibration Curve Report

Batch results C:\Users\lagerheart\Desktop\061521 AM 25 26 AG\QuantResults\AM 26.batch.bin
Last Cal. Update 6/16/2021 8:12 AM
Analyst Name ISP\lagerheart
Analyte THC **Internal Standard** THC-D3

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



Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
MJ Cal 1	1	✓	1.0	1.1	109.4
MJ Cal 2	2	✓	3.0	2.5	82.6
MJ Cal 3	3	✓	5.0	5.4	108.1
MJ Cal 4	4	✓	10.0	10.2	101.8
MJ Cal 5	5	✓	25.0	24.3	97.0
MJ Cal 6	6	✓	50.0	50.5	101.0
MJ Cal 7	7	✓	100.0	100.1	100.1

Not evaluated due to not meeting external control requirements

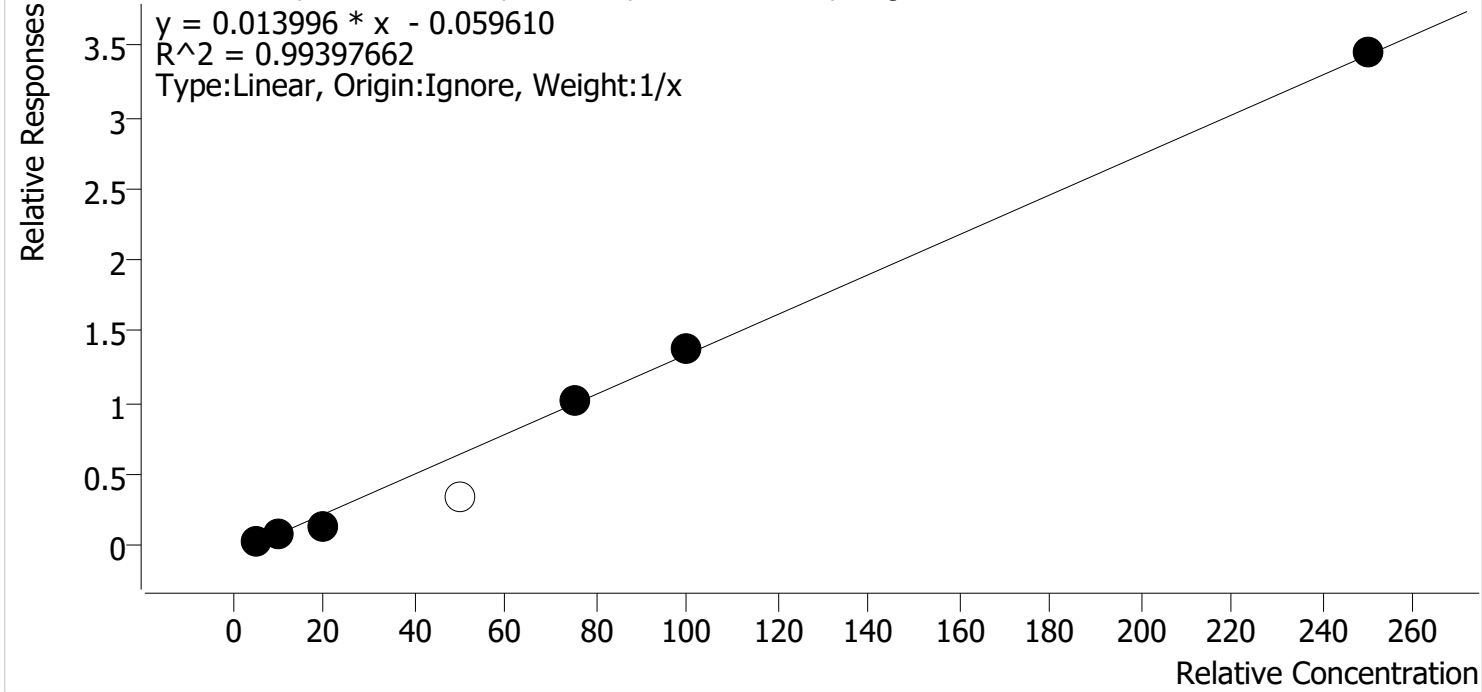
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AM #26 Cannabinoids Screen Calibration Curve Report

Batch results C:\Users\lagerheart\Desktop\061521 AM 25 26 AG\QuantResults\AM 26.batch.bin
Last Cal. Update 6/16/2021 8:12 AM
Analyst Name ISP\lagerheart
Analyte THC-COOH **Internal Standard** THC-COOH-D9

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



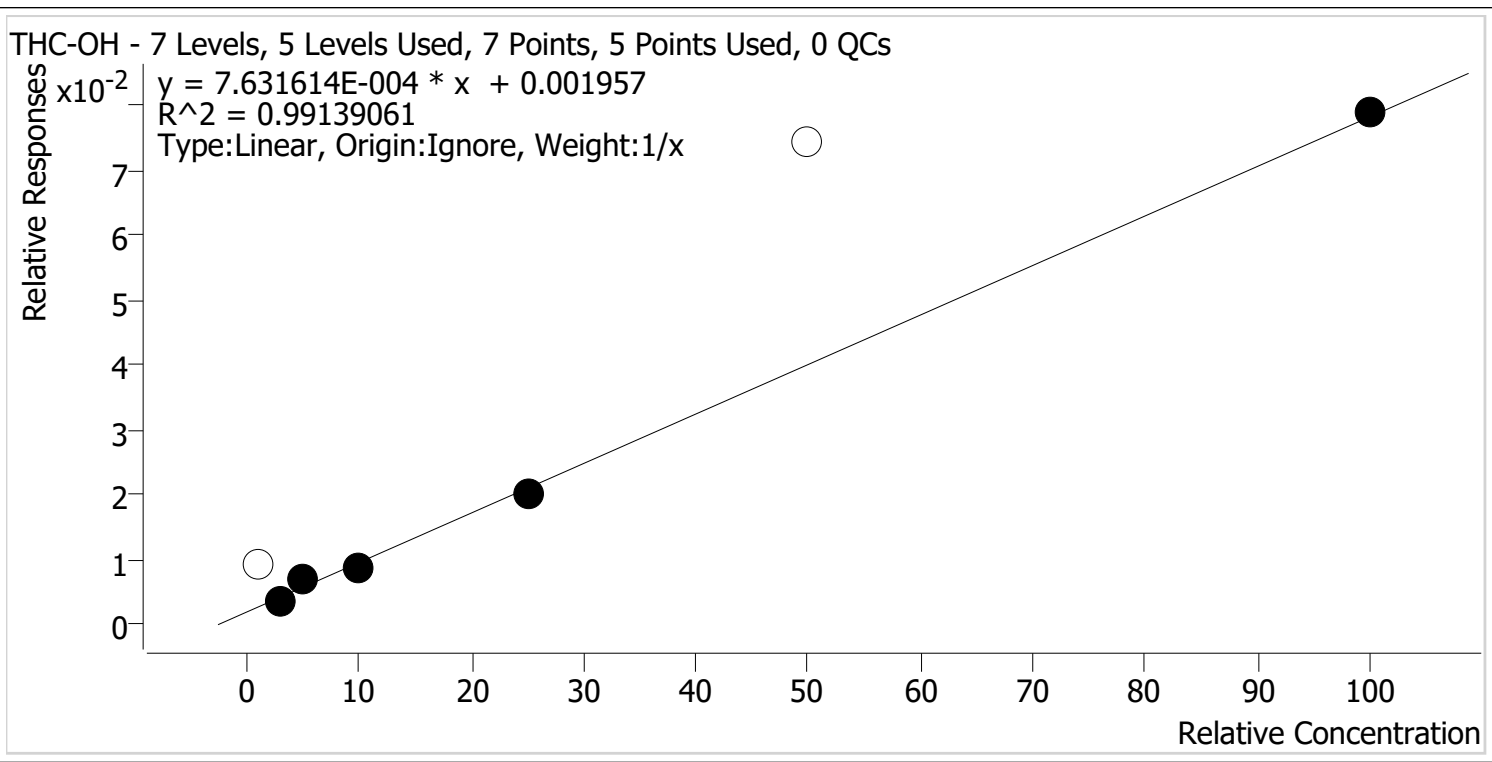
Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
MJ Cal 1	1	✓	5.0	6.6	131.6
MJ Cal 2	2	✓	10.0	9.2	91.7
MJ Cal 3	3	✓	20.0	14.4	72.1
MJ Cal 4	4	x	50.0	29.2	58.4
MJ Cal 5	5	✓	75.0	76.5	101.9
MJ Cal 6	6	✓	100.0	102.2	102.2
MJ Cal 7	7	✓	250.0	251.2	100.5

AK



AM #26 Cannabinoids Screen Calibration Curve Report

Batch results C:\Users\lagerheart\Desktop\061521 AM 25 26 AG\QuantResults\AM 26.batch.bin
Last Cal. Update 6/16/2021 8:12 AM
Analyst Name ISP\lagerheart
Analyte THC-OH **Internal Standard** THC-OH-D3



Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
MJ Cal 1	1	x	1.0	10.0	1000.6
MJ Cal 2	2	✓	3.0	2.3	76.1
MJ Cal 3	3	✓	5.0	6.8	135.6
MJ Cal 4	4	✓	10.0	9.2	91.9
MJ Cal 5	5	✓	25.0	23.9	95.7
MJ Cal 6	6	x	50.0	95.2	190.4
MJ Cal 7	7	✓	100.0	100.8	100.8

Not evaluated due to not meeting accuracy requirements

AM

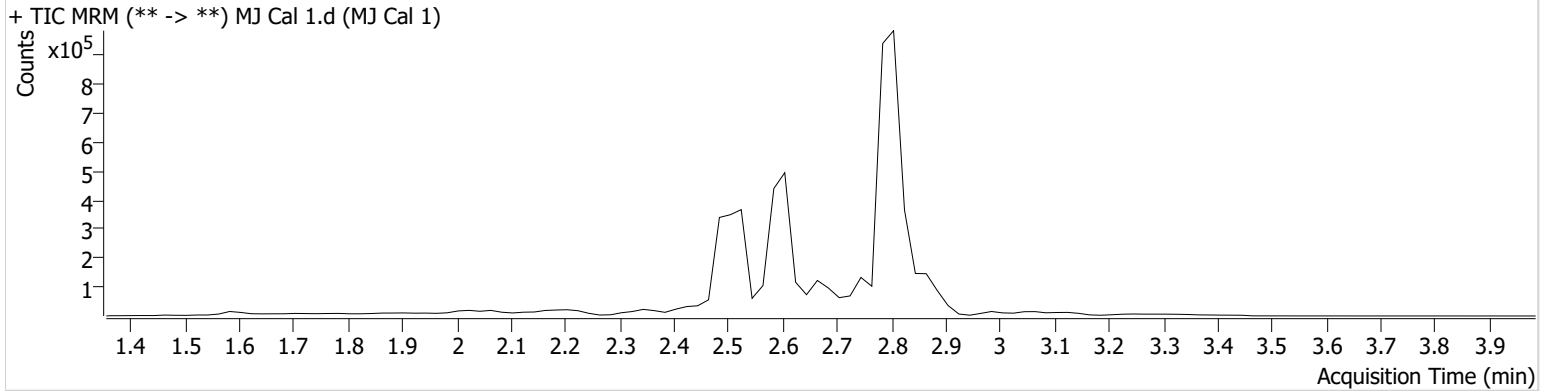
AM #26 Cannabinoids Screen Results



Batch results C:\Users\agerheart\Desktop\061521 AM 25 26 AG\QuantResults\AM 26.batch.bin
Calibration Last Update 6/16/2021 8:12:47 AM

Instrument	Falco (069901)	Data File	MJ Cal 1.d
Type	Cal	Sample	MJ Cal 1
Acq. Method	AM 26 THCS.m	Operator	Amber Gerheart
Sample Position	P1-A1	Comment	
Injection Volume	10		
Acq. Date-Time	6/15/2021 2:05:39 PM		

Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.	
THC	2.839	1187	107567	1.0939 ng/ml	Low
THC-COOH	2.587	29317	902272	6.5806 ng/ml	
THC-OH	2.594	11668	1216253	10.0056 ng/ml	

AM

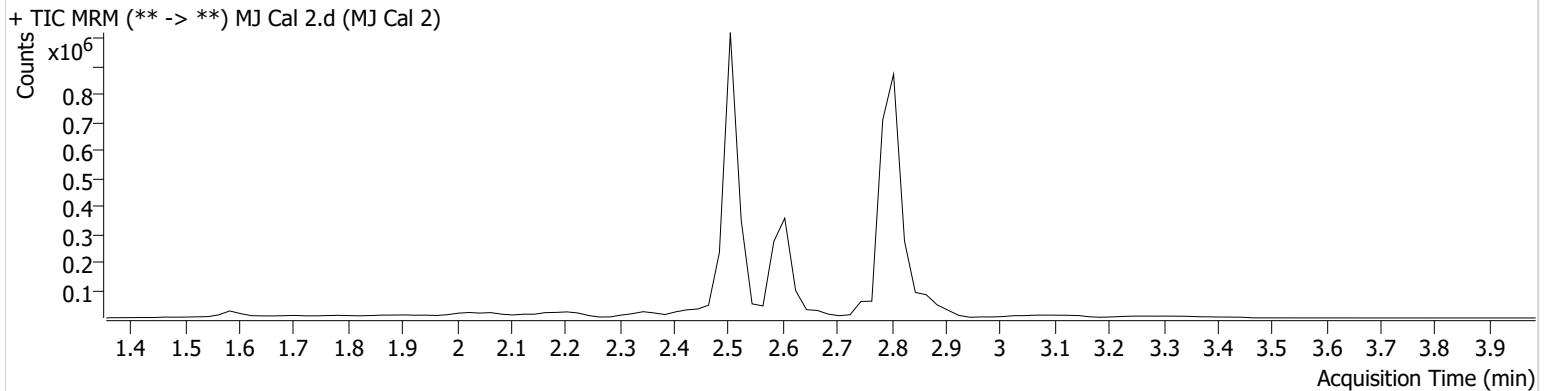
AM #26 Cannabinoids Screen Results



Batch results C:\Users\agerheart\Desktop\061521 AM 25 26 AG\QuantResults\AM 26.batch.bin
Calibration Last Update 6/16/2021 8:12:47 AM

Instrument	Falco (069901)	Data File	MJ Cal 2.d
Type	Cal	Sample	MJ Cal 2
Acq. Method	AM 26 THCS.m	Operator	Amber Gerheart
Sample Position	P1-B1	Comment	
Injection Volume	10		
Acq. Date-Time	6/15/2021 2:12:20 PM		

Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.	
THC	2.839	1236	55936	2.4776 ng/ml	Low
THC-COOH	2.627	40739	592588	9.1710 ng/ml	
THC-OH	2.514	6793	1836724	2.2815 ng/ml	Low

AM

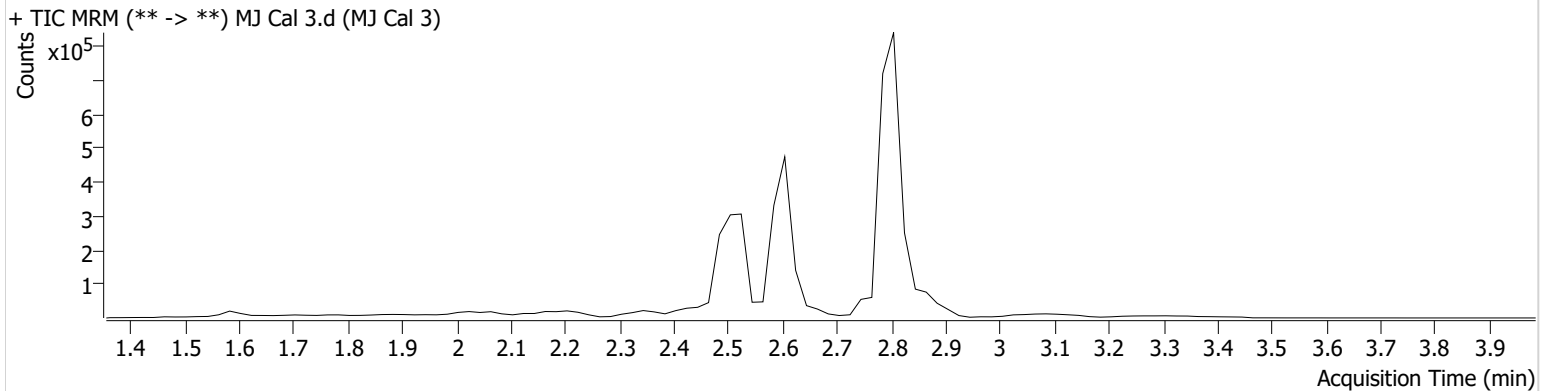
AM #26 Cannabinoids Screen Results



Batch results C:\Users\agerheart\Desktop\061521 AM 25 26 AG\QuantResults\AM 26.batch.bin
Calibration Last Update 6/16/2021 8:12:47 AM

Instrument	Falco (069901)	Data File	MJ Cal 3.d
Type	Cal	Sample	MJ Cal 3
Acq. Method	AM 26 THCS.m	Operator	Amber Gerheart
Sample Position	P1-C1	Comment	
Injection Volume	10		
Acq. Date-Time	6/15/2021 2:18:53 PM		

Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	2.839	2601	57189	5.4054 ng/ml
THC-COOH	2.627	91410	643076	14.4152 ng/ml
THC-OH	2.534	6394	896754	6.7781 ng/ml

AM

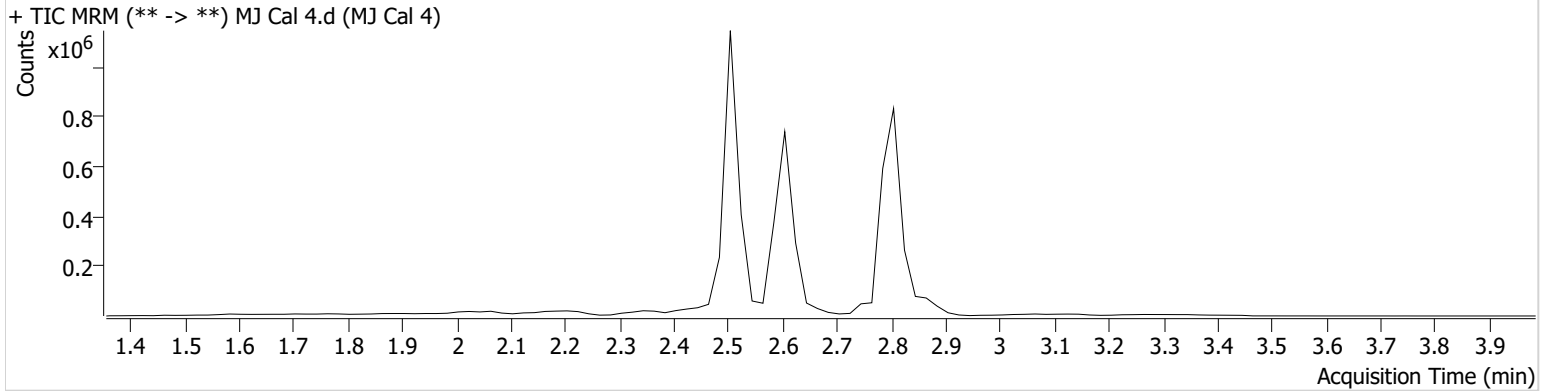
AM #26 Cannabinoids Screen Results



Batch results C:\Users\agerheart\Desktop\061521 AM 25 26 AG\QuantResults\AM 26.batch.bin
Calibration Last Update 6/16/2021 8:12:47 AM

Instrument	Falco (069901)	Data File	MJ Cal 4.d
Type	Cal	Sample	MJ Cal 4
Acq. Method	AM 26 THCS.m	Operator	Amber Gerheart
Sample Position	P1-D1	Comment	
Injection Volume	10		
Acq. Date-Time	6/15/2021 2:25:24 PM		

Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	2.879	4298	51399	10.1797 ng/ml
THC-COOH	2.627	227026	650524	29.1940 ng/ml
THC-OH	2.534	17089	1905238	9.1884 ng/ml

AM

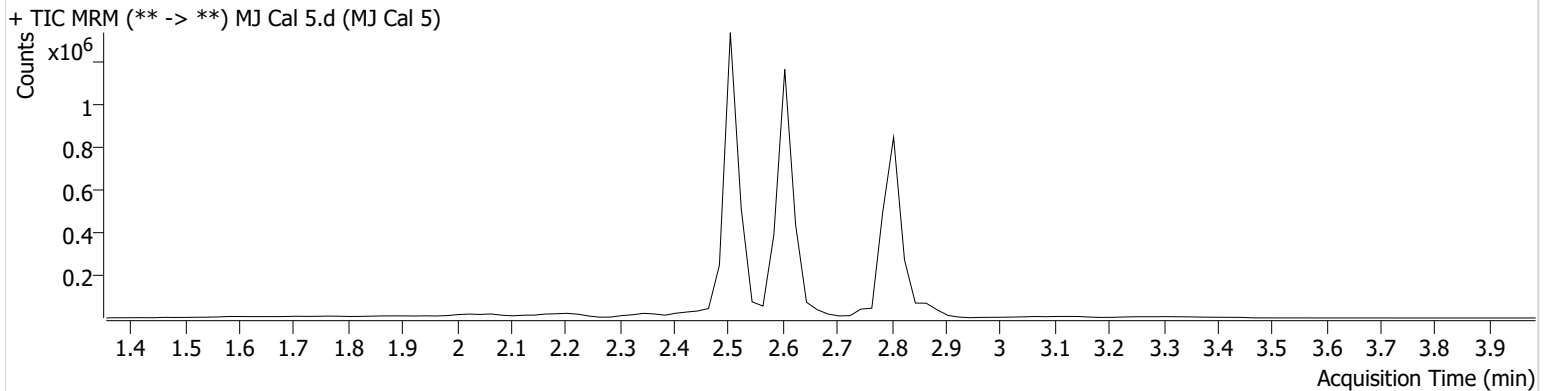
AM #26 Cannabinoids Screen Results



Batch results C:\Users\agerheart\Desktop\061521 AM 25 26 AG\QuantResults\AM 26.batch.bin
Calibration Last Update 6/16/2021 8:12:47 AM

Instrument	Falco (069901)	Data File	MJ Cal 5.d
Type	Cal	Sample	MJ Cal 5
Acq. Method	AM 26 THCS.m	Operator	Amber Gerheart
Sample Position	P1-E1	Comment	
Injection Volume	10		
Acq. Date-Time	6/15/2021 2:31:55 PM		

Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	2.879	9379	47836	24.2557 ng/ml
THC-COOH	2.607	643358	636652	76.4606 ng/ml
THC-OH	2.534	39354	1947284	23.9172 ng/ml

AM

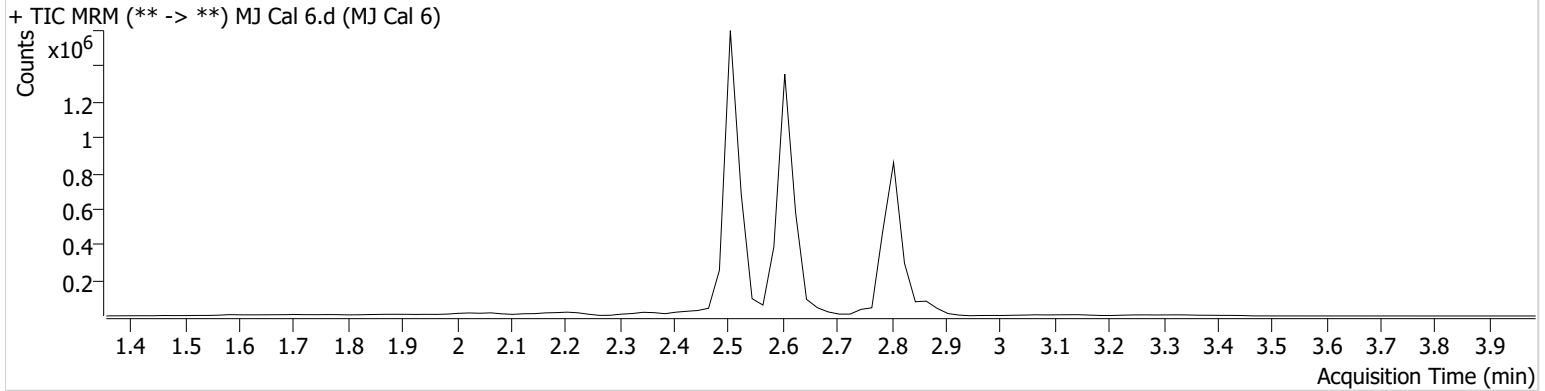
AM #26 Cannabinoids Screen Results



Batch results C:\Users\agerheart\Desktop\061521 AM 25 26 AG\QuantResults\AM 26.batch.bin
Calibration Last Update 6/16/2021 8:12:47 AM

Instrument	Falco (069901)	Data File	MJ Cal 6.d
Type	Cal	Sample	MJ Cal 6
Acq. Method	AM 26 THCS.m	Operator	Amber Gerheart
Sample Position	P1-F1	Comment	
Injection Volume	10		
Acq. Date-Time	6/15/2021 2:38:28 PM		

Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	2.879	20379	50220	50.5106 ng/ml
THC-COOH	2.607	821566	599494	102.1749 ng/ml
THC-OH	2.514	139222	1865777	95.2114 ng/ml

AM

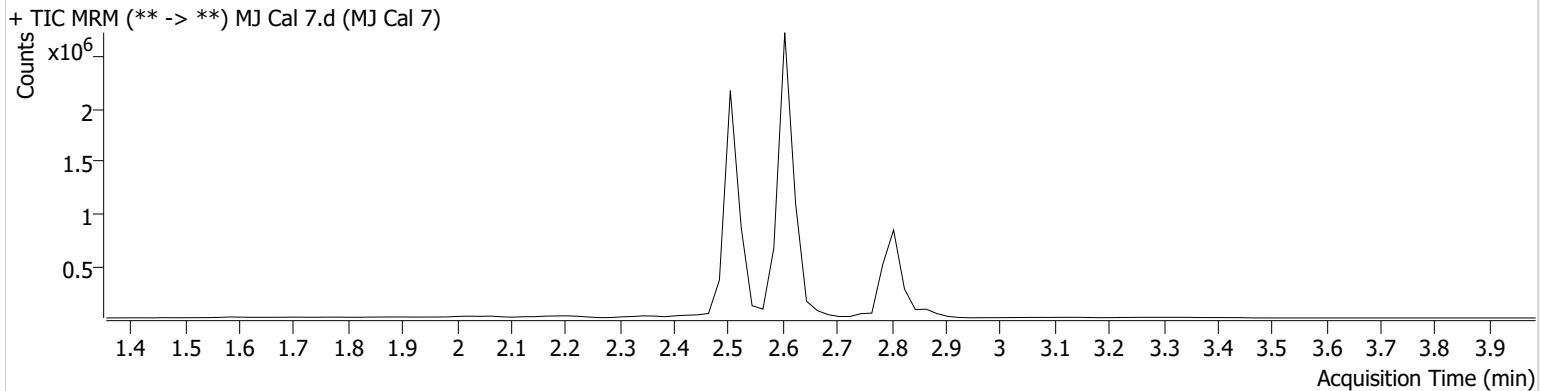
AM #26 Cannabinoids Screen Results



Batch results C:\Users\agerheart\Desktop\061521 AM 25 26 AG\QuantResults\AM 26.batch.bin
Calibration Last Update 6/16/2021 8:12:47 AM

Instrument	Falco (069901)	Data File	MJ Cal 7.d
Type	Cal	Sample	MJ Cal 7
Acq. Method	AM 26 THCS.m	Operator	Amber Gerheart
Sample Position	P1-G1	Comment	
Injection Volume	10		
Acq. Date-Time	6/15/2021 2:45:01 PM		

Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	2.879	39335	49060	100.0772 ng/ml
THC-COOH	2.607	1892427	547552	251.1978 ng/ml
THC-OH	2.534	146299	1853993	100.8348 ng/ml