

AK

2/22/2022

Worklist: 5622









Additional pages added on 3/4/2022

AK 3/4/2022

<u>LAB CASE</u>	<u>ITEM</u>	<u>ITEM TYPE</u>	<u>DESCRIPTION</u>	
M2021-5485	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
M2022-0261	2	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
M2022-0305	2	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
M2022-0325	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
M2022-0345	3	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
M2022-0386	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
M2022-0423	3	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
M2022-0442	9	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
M2022-0471	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
M2022-0506	2	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2021-4163	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2022-0056	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2022-0057	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2022-0125	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2022-0160	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2022-0283	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2022-0302	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2022-0335	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2022-0336	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2022-0344	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2022-0346	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	

Worklist: 5622

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<u>LAB CASE</u>	<u>ITEM</u>	<u>ITEM TYPE</u>	<u>DESCRIPTION</u>	
P2022-0373	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2022-0374	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2022-0389	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2022-0399	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2022-0424	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2022-0431	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2022-0464	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
P2022-0465	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	

AG

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

Extraction Date: 2/23/2022

Analyst: Amber Gerheart

Plate lot#: 211015

Plate Retest Date: 4/15/2022

Mobile phase A: 10mM Amm Form

Mobile phase B: 0.1% Formic Acid in MeOH

Instant Buffer I

Ethyl Acetate

LC Methanol

Blank Blood Lot: Lampire 22B52016-2

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

LCMS-QQQ ID: 069901

Blank Urine Lot: 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. *Step skipped per deviation
- 5. Pipette **250µL 0.5 M ammonium hydroxide** in wells of analytical pl AG 4/28/2022
- 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 due to not recognizing the plate. After discovering a chipped piece of plastic on the rim of the plate causing the issue, the plate was rotated so that the plate could be recognized. The plate positions for the instrument were updated and the run was started on 2/24/2022 with no further issues.

79

**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



79

	1	2	3	4	5	6	7	8	9	10	11	12
A	IS + QC_1	M2022-0386-1	P2022-0125-1	P2022-0373-1	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample
B	IS + QC_1	M2022-0423-3	P2022-0160-1	P2022-0374-1	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample
C	Blood Negative	M2022-0442-9	P2022-0283-1	P2022-0389-1	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample
D	M2021-5485-1	M2022-0471-1	P2022-0302-1	P2022-0399-1	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample
E	M2022-0261-2	M2022-0506-2	P2022-0335-1	P2022-0424-1	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample
F	M2022-0305-2	P2021-4163-1	P2022-0336-1	P2022-0431-1	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample
G	M2022-0325-1	P2022-0056-1	P2022-0344-1	P2022-0464-1	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + QC_1
H	M2022-0345-3	P2022-0057-1	P2022-0346-1	P2022-0465-1	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + QC_1

All wells to contain 60 µl of residual DMSO

Analytical plate positions

79

	1	2	3	4	5	6	7	8	9	10	11	12
A									P2022-0465-1	P2022-0346-1	P2022-0057-1	M2022-0345-3
B									P2022-0464-1	P2022-0344-1	P2022-0056-1	M2022-0325-1
C									P2022-0431-1	P2022-0336-1	P2021-4163-1	M2022-0305-2
D									P2022-0424-1	P2022-0335-1	M2022-0506-2	M2022-0261-2
E									P2022-0399-1	P2022-0302-1	M2022-0471-1	M2021-5485-1
F									P2022-0389-1	P2022-0283-1	M2022-0442-9	Blood Negative
G									P2022-0374-1	P2022-0160-1	M2022-0423-3	
H									P2022-0373-1	P2022-0125-1	M2022-0386-1	IS + QC_1

All wells to contain 60 µl of residual DMSO

Instrument plate positions

791

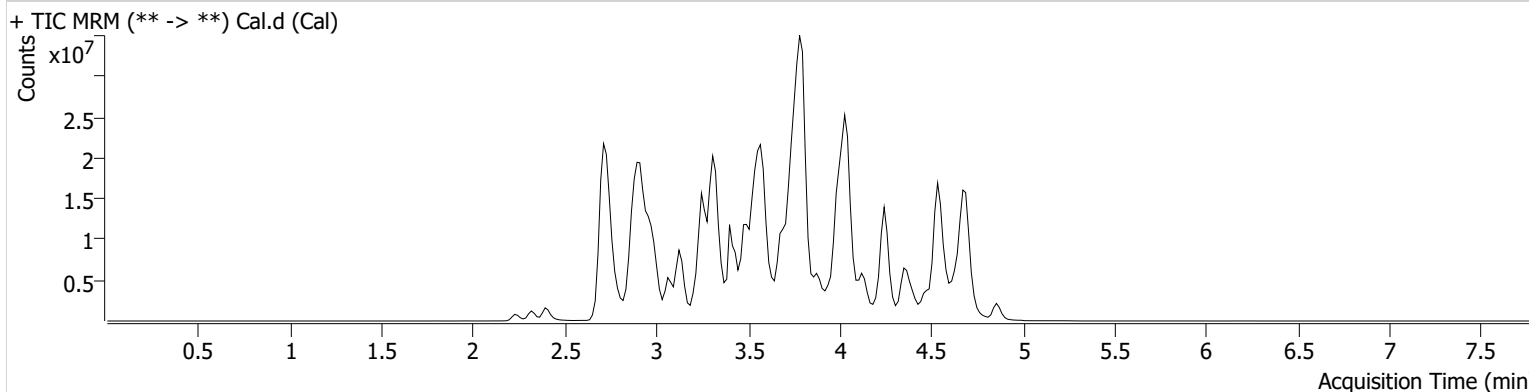


AM #25 Multi-Drug Screen Results

Batch results C:\Users\agerheart\Desktop\022322 AM 25 26 AG\QuantResults\AM 25.batch.bin
Calibration Last Update 2/25/2022 9:31:17 AM

Instrument	Falco (069901)	Data File	Cal.d
Type	Cal	Sample	Cal
Acq. Method	AM 25 MDS.m	Operator	Amber Gerheart
Sample Position	P2-H12	Comment	
Injection Volume	5		
Acq. Date-Time	2/24/2022 8:41:27 AM		

Sample Chromatogram



Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
6-MAM	2.847	92321	56876.18	75897.46	3255409	10.0000
7-aminoclonazepam	3.571	2177280	1246.36	663.63	8996645	10.0000
7-aminoflunitrazepam	3.786	3354121	621.89	282.85	8996645	10.0000
Acetyl Fentanyl	3.721	192861	229.02	92778.81	40250696	10.0000
Acetyl Norfentanyl	2.901	562163	427.71	1612.76	40250696	10.0000
a-hydroxyalprazolam	4.536	515819	170.54	481.50	8996645	10.0000
alpha-hydroxymidazolam	4.534	4226563	590.47	3449463.89	8996645	10.0000
Alpha-PHP	3.760	3931330	14616.57	15142.53	40250696	10.0000
alpha-PVP	3.484	7379882	1127.57	2808.54	9597776	10.0000
Alprazolam	4.631	5236101	455.40	1199.84	38044200	10.0000
Amitriptyline	4.374	288297	58.54	71.73	1052337	10.0000
Amphetamine	2.905	2802111	365.97	463.86	9597776	10.0000
Benzoylcegonine	3.402	336260	268.97	413.53	658954	10.0000
Brompheniramine	3.998	65275	52.43	276.57	39755185	10.0000
Buprenorphine	4.039	388308	2158.82	30697.44	1618016	10.0000
Bupropion	3.698	4515015	754.80	296.46	19564732	10.0000
Carbamazepine	4.253	21042161	∞	1429.59	889088	10.0000
Carisoprodol	4.252	2874767	761.02	275.80	16347737	10.0000
Chlordiazepoxide	4.633	1808182	425.07	650.42	38044200	10.0000
Chlorpheniramine	3.910	5045280	264.28	7.03	39755185	10.0000
Citalopram	4.044	2489207	549.90	14811.97	39755185	10.0000
Clomipramine	4.568	291186	1858.48	252.96	39755185	10.0000
Clonazepam	4.476	3778814	495.01	2015.76	38044200	10.0000
Clonazolam	4.395	3182478	1795535.75	684017.88	38044200	10.0000
Cocaethylene	3.752	7518955	7116681.19	2672.62	41279828	10.0000
Cocaine	3.538	9045467	1099.61	8006.72	41279828	10.0000
Codeine	2.744	684076	2661.66	2073.99	17263659	10.0000
Cyclobenzaprine	4.297	609112	267.68	12.65	1052337	10.0000
Desipramine	4.344	707459	171.88	81.55	1052337	10.0000
Dextromethorphan	4.034	1272039	2723.12	148.01	6736924	10.0000
Dextrorphan	3.358	3937625	1066.16	489.95	6736924	10.0000
Diazepam	4.864	3176087	763.30	972.91	38044200	10.0000
Dihydrocodeine	2.713	1791296	610.14	623.92	17263659	10.0000
Diphenhydramine	4.004	8086475	19097.51	813.09	39755185	10.0000

Cal

79



AM #25 Multi-Drug Screen Results

Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Doxepin	4.110	782376	161.69	34.24	12718498	10.0000
Doxylamine	3.587	15723964	491.58	9503.09	6736924	10.0000
EDDP	4.048	1562967	903.34	312.90	3976458	10.0000
Estazolam	4.556	11044980	584.29	747.01	38044200	10.0000
Etizolam	4.641	465222	190044.18	2159637.91	38044200	10.0000
Fentanyl	3.950	86534	38.17	436.17	7097864	10.0000
Flualprazolam	4.489	1938449	799098.57	994.79	38044200	10.0000
Flunitrazepam	4.584	5774724	1093.65	1357581.60	38044200	10.0000
Fluoxetine	4.308	311494	1207.36	87.93	374883	10.0000
Flurazepam	4.071	2600064	2262.91	276.51	38044200	10.0000
Hydrocodone	2.927	2776036	2099.65	794.91	17263659	10.0000
Hydromorphone	2.396	2648849	43104.02	1289.53	788838	10.0000
Imipramine	4.342	1326514	359.25	329.82	1052337	10.0000
Ketamine	3.329	5814746	999266.09	224.35	23186270	10.0000
Lamotrigine	3.481	528567	656.42	47987.00	39755185	10.0000
Levamisole	2.902	4738517	28393.49	3660.82	41279828	10.0000
Levetiracetam	2.690	2219973	738.62	2566.30	39755185	10.0000
Lorazepam	4.460	1078424	3670.50	260.86	38044200	10.0000
Maprotiline	4.374	198113	14.54	555.96	1052337	10.0000
MDA	3.010	4576564	818.18	84.69	26587974	10.0000
MDEA	3.224	7269065	594.49	624.68	26587974	10.0000
MDMA	3.071	9766596	1176.49	904.82	26587974	10.0000
Meperidine	3.559	3280938	1727.52	742.42	6736924	10.0000
Meprobamate	3.700	1831720	513.07	308.54	16347737	10.0000
Methadone	4.354	3751509	4806.86	265.83	3976458	10.0000
Methamphetamine	2.996	5201511	2276.99	435.16	26587974	10.0000
Methocarbamol	3.606	872246	277.40	139.64	3976458	10.0000
Methylphenidate	3.483	15379374	11585.50	93.43	23931283	10.0000
Metoprolol	3.419	1179047	304.58	1133.39	6736924	10.0000
Midazolam	4.428	1028174	1898.08	823.32	38044200	10.0000
Mirtazapine	3.634	2341920	2909.89	1639.35	6736924	10.0000
Mitragynine	4.071	258113	613987.34	400702.80	6736924	10.0000
Morphine	2.230	596196	∞	1209.05	788838	10.0000
Norbuprenorphine	3.794	61066	55553.77	49599.26	1618016	10.0000
Nordiazepam	4.727	3385726	490.23	583.70	38044200	10.0000
Norfentanyl	3.330	10543455	13773.21	341.34	40250696	10.0000
Norhydrocodone	2.914	178272	129.14	51.28	788838	10.0000
Norketamine	3.300	1076467	539.78	3610.11	23186270	10.0000
Normeperidine	3.591	3104403	500.48	119.18	39755185	10.0000
Noroxycodone	2.881	1622083	∞	64.50	23186270	10.0000
Nortriptyline	4.375	194660	105840.75	171.25	1052337	10.0000
O-desmethyl-tramadol	2.915	15371787	27147.46	423.52	39755185	10.0000
Olanzapine	3.292	575612	207704.94	297.13	889088	10.0000
Oxazepam	4.541	5064953	2198.28	297.07	22227857	10.0000
Oxycodone	2.894	4882180	1285.21	1783.49	23186270	10.0000
Oxymorphone	2.317	2584079	1642.21	404.41	788838	10.0000
Paroxetine	4.305	38966	13.08	5235.71	374883	10.0000
Phenazepam	4.656	4593069	579.86	193267.38	38044200	10.0000
Phencyclidine	3.883	6286141	775.09	554.38	6736924	10.0000
Phentermine	3.149	1711970	143.76	83.59	23931283	10.0000
Phenytoin	4.160	1505268	49345.31	481.02	889088	10.0000
Promethazine	4.264	1333973	261867.91	99.32	39755185	10.0000
Pseudoephedrine	2.736	65937592	732.36	1910.14	26587974	10.0000
Quetiapine	4.195	3462014	1075.90	16107.29	46834754	10.0000
Sertraline	4.524	71077	45012.65	48.89	374883	10.0000
Sufentanil	4.195	45209	450.76	97.61	40250696	10.0000
Tapentadol	3.439	8965647	1194.93	1778693.19	23186270	10.0000
Temazepam	4.694	8489862	699.74	221.88	38044200	10.0000
Tramadol	3.419	16059472	932.33	76.82	39755185	10.0000
Trazodone	4.026	3060338	945.42	897.85	12718498	10.0000

Cal

7/9



AM #25 Multi-Drug Screen Results

Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Venlafaxine	3.787	9090422	1346.23	398.77	374883	10.0000
Zaleplon	4.355	5465526	907.53	2670.67	46834754	10.0000
Zolpidem	3.753	12836854	1810.12	2439.82	46834754	10.0000
Zopiclone	3.703	1351377	438770.00	369.40	6533359	10.0000

79

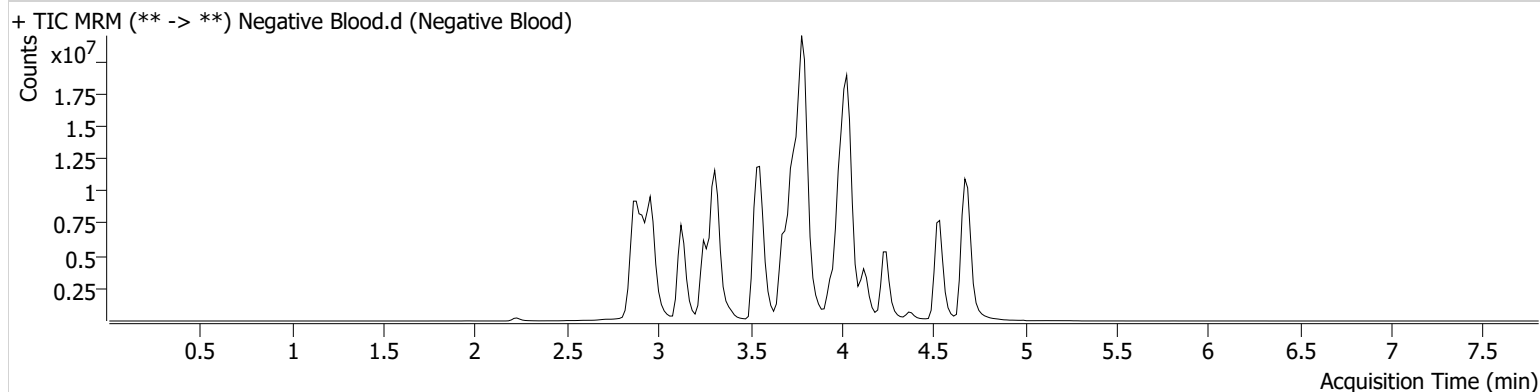


AM #25 Multi-Drug Screen Results

Batch results C:\Users\agerheart\Desktop\022322 AM 25 26 AG\QuantResults\AM 25.batch.bin
Calibration Last Update 2/25/2022 9:31:17 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	P2-F12	Comment	
Injection Volume	5		
Acq. Date-Time	2/24/2022 8:50:01 AM		
Sample Info.			

Sample Chromatogram



79

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

Extraction Date: 2/23/2022

Analyst: Amber Gerheart

Plate lot#: 211018

Plate Retest Date: 4/18/2022

Mobile phase A: 0.1% Formic Acid in LCMS Water **Mobile phase B:** 0.1% Formic acid in Acetonitrile

Blank Blood Lot: Lampire 22B52016-2

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

LCMS-QQ ID: 069901

Blank Urine Lot: 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: 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:

THC Cal 4 dropped due to accuracy.

79

	1	2	3	4	5	6
A	IS + Cal. 1	IS + QC_1	M2022-0423-3	P2022-0160-1	P2022-0374-1	IS + QC_1
B	IS + Cal. 2	Blood Negative	M2022-0442-9	P2022-0283-1	P2022-0389-1	IS + Cal. 7
C	IS + Cal. 3	M2021-5485-1	M2022-0471-1	P2022-0302-1	P2022-0399-1	IS + Cal. 6
D	IS + Cal. 4	M2022-0261-2	M2022-0506-2	P2022-0335-1	P2022-0424-1	IS + Cal. 5
E	IS + Cal. 5	M2022-0305-2	P2021-4163-1	P2022-0336-1	P2022-0431-1	IS + Cal. 4
F	IS + Cal. 6	M2022-0325-1	P2022-0056-1	P2022-0344-1	P2022-0464-1	IS + Cal. 3
G	IS + Cal. 7	M2022-0345-3	P2022-0057-1	P2022-0346-1	P2022-0465-1	IS + Cal. 2
H	IS + QC_1	M2022-0386-1	P2022-0125-1	P2022-0373-1	IS + QC_1	IS + Cal. 1

All wells to contain 100 µl of residual DMSO

79

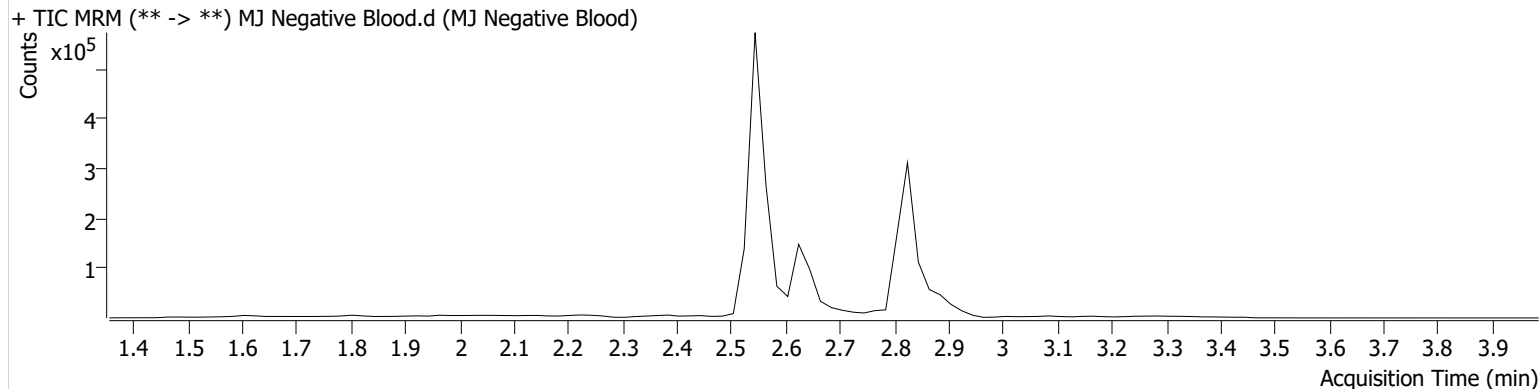


AM #26 Cannabinoids Screen Results

Batch results C:\Users\agerheart\Desktop\022322 AM 25 26 AG\QuantResults\AM 26.batch.bin
Calibration Last Update 2/25/2022 9:29:30 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-B2	Comment	
Injection Volume	10		
Acq. Date-Time	2/23/2022 4:18:34 PM		
Sample Info.			

Sample Chromatogram



79

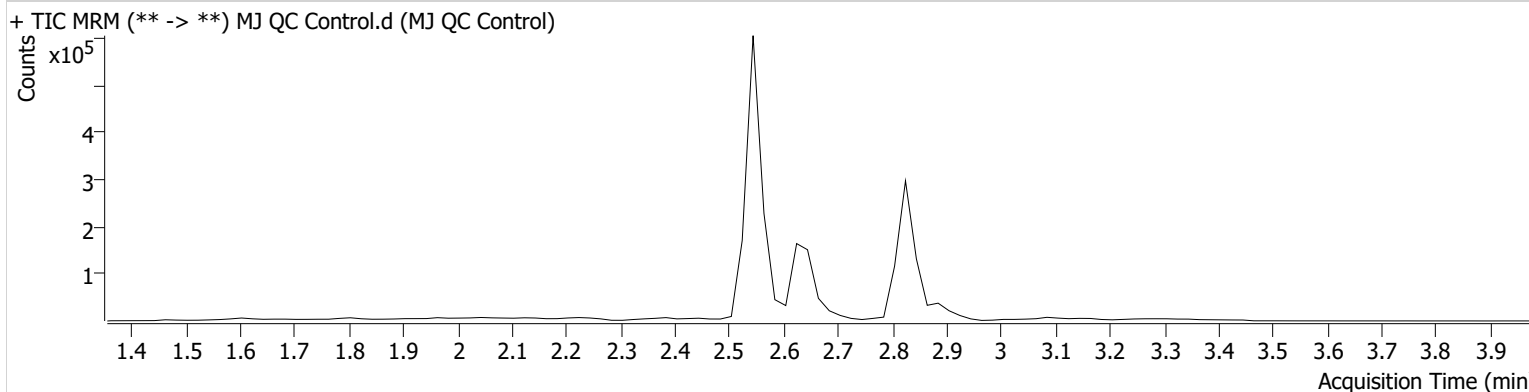


AM #26 Cannabinoids Screen Results

Batch results C:\Users\agerheart\Desktop\022322 AM 25 26 AG\QuantResults\AM 26.batch.bin
Calibration Last Update 2/25/2022 9:29:30 AM

Instrument	Falco (069901)	Data File	MJ QC Control.d
Type	QC	Sample	MJ QC Control
Acq. Method	AM 26 THCS.m	Operator	Amber Gerheart
Sample Position	P1-H1	Comment	
Injection Volume	10		
Acq. Date-Time	2/23/2022 4:05:25 PM		

Sample Chromatogram



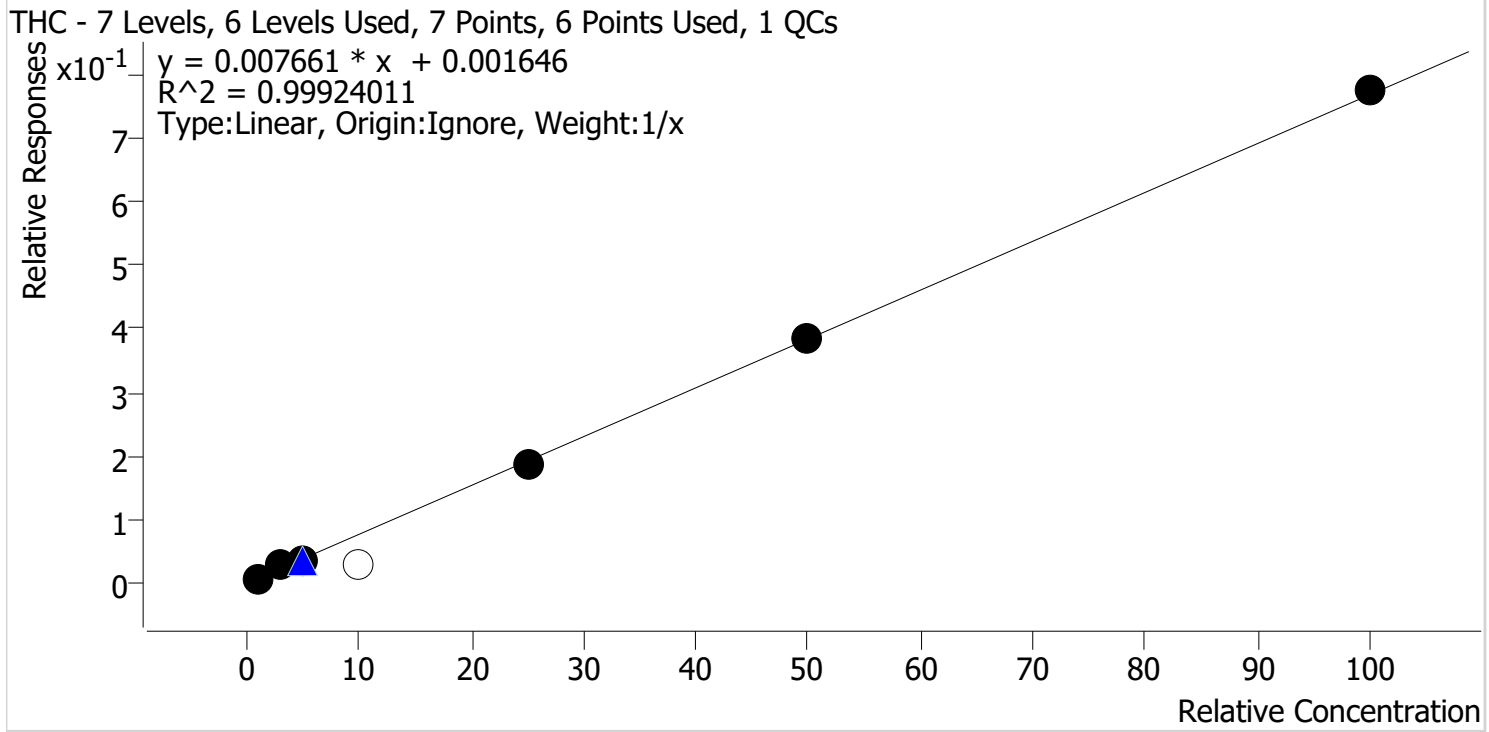
Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	2.899	1427	37943	4.6949 ng/ml
THC-COOH	2.647	58815	275899	15.1115 ng/ml
THC-OH	2.554	10720	1167788	5.3766 ng/ml

791



AM #26 Cannabinoids Screen Calibration Curve Report

Batch results C:\Users\lagerheart\Desktop\022322 AM 25 26 AG\QuantResults\AM 26.batch.bin
Last Cal. Update 2/25/2022 9:29 AM
Analyst Name ISP\lagerheart
Analyte THC **Internal Standard** THC-D3



Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
MJ Cal 1	1	✓	1.0	0.9	90.3
MJ Cal 2	2	✓	3.0	3.4	114.8
MJ Cal 3	3	✓	5.0	4.9	98.2
MJ Cal 4	4	x	10.0	3.9	38.8
MJ Cal 5	5	✓	25.0	24.0	96.0
MJ Cal 6	6	✓	50.0	49.9	99.8
MJ Cal 7	7	✓	100.0	100.8	100.8

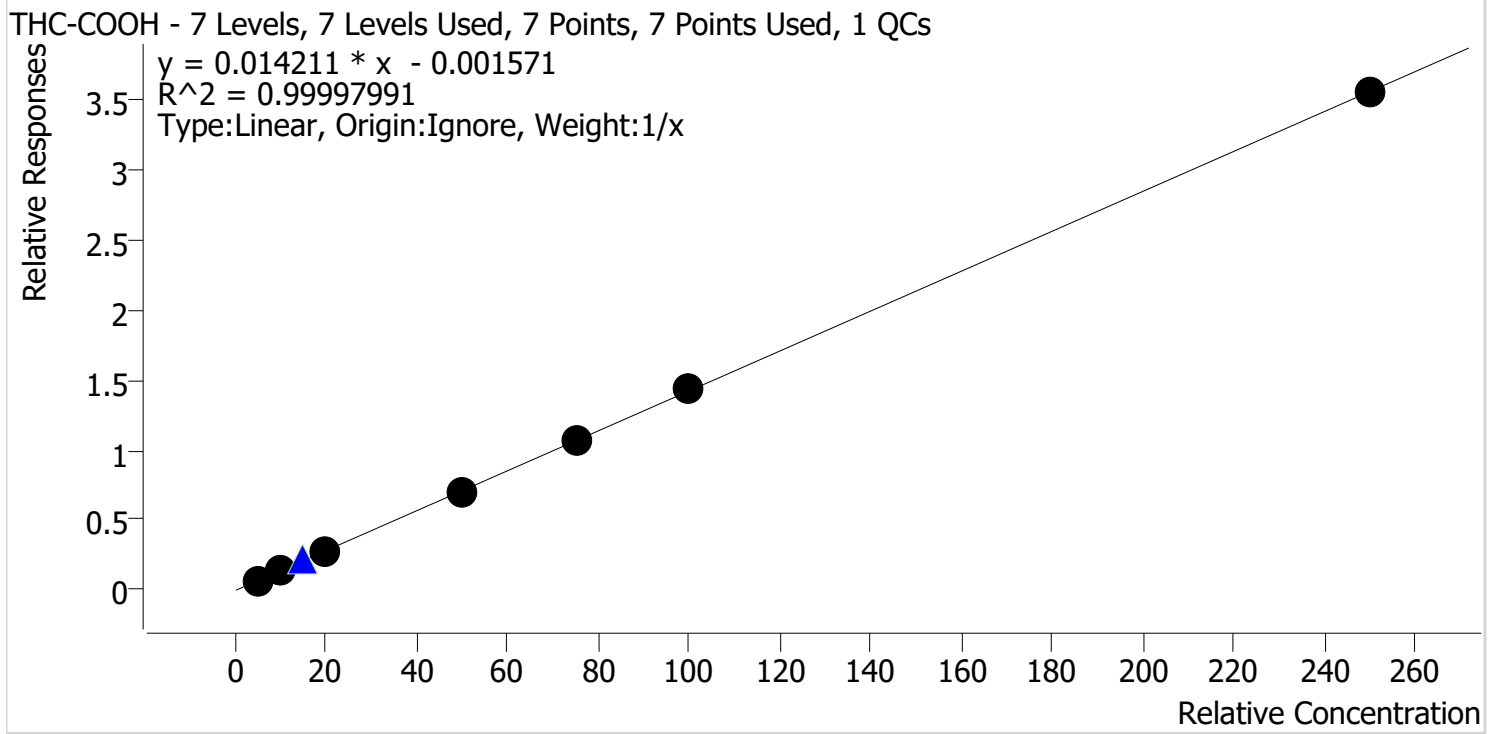
Cal 4 dropped due to accuracy

791



AM #26 Cannabinoids Screen Calibration Curve Report

Batch results C:\Users\lagerheart\Desktop\022322 AM 25 26 AG\QuantResults\AM 26.batch.bin
Last Cal. Update 2/25/2022 9:29 AM
Analyst Name ISP\lagerheart
Analyte THC-COOH **Internal Standard** THC-COOH-D9



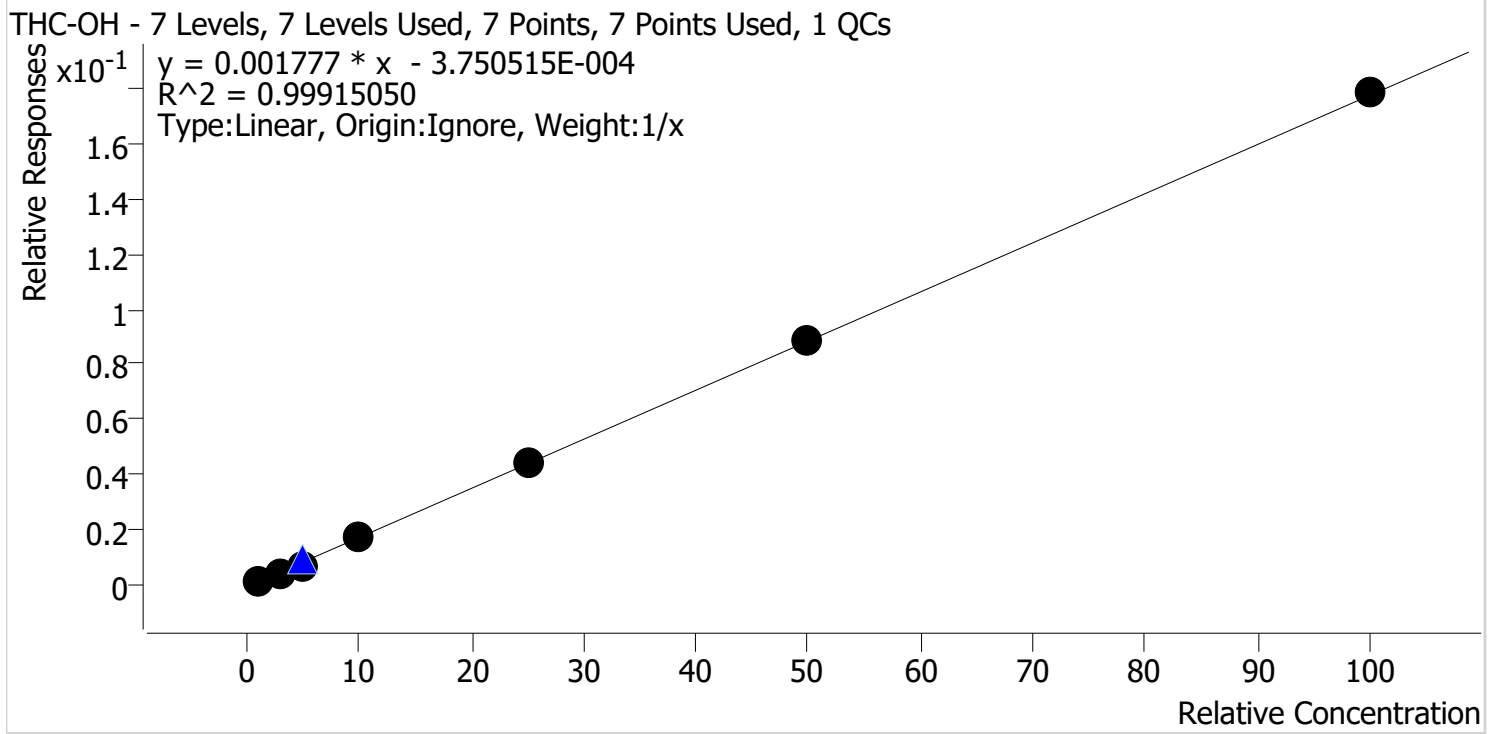
Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
MJ Cal 1	1	✓	5.0	4.9	97.9
MJ Cal 2	2	✓	10.0	10.2	101.7
MJ Cal 3	3	✓	20.0	20.0	100.1
MJ Cal 4	4	✓	50.0	50.0	100.1
MJ Cal 5	5	✓	75.0	75.1	100.2
MJ Cal 6	6	✓	100.0	100.3	100.3
MJ Cal 7	7	✓	250.0	249.4	99.8

791



AM #26 Cannabinoids Screen Calibration Curve Report

Batch results C:\Users\lagerheart\Desktop\022322 AM 25 26 AG\QuantResults\AM 26.batch.bin
Last Cal. Update 2/25/2022 9:29 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	✓	1.0	1.2	120.8
MJ Cal 2	2	✓	3.0	2.7	91.4
MJ Cal 3	3	✓	5.0	4.4	88.3
MJ Cal 4	4	✓	10.0	9.9	98.7
MJ Cal 5	5	✓	25.0	24.9	99.8
MJ Cal 6	6	✓	50.0	50.3	100.6
MJ Cal 7	7	✓	100.0	100.5	100.5

79

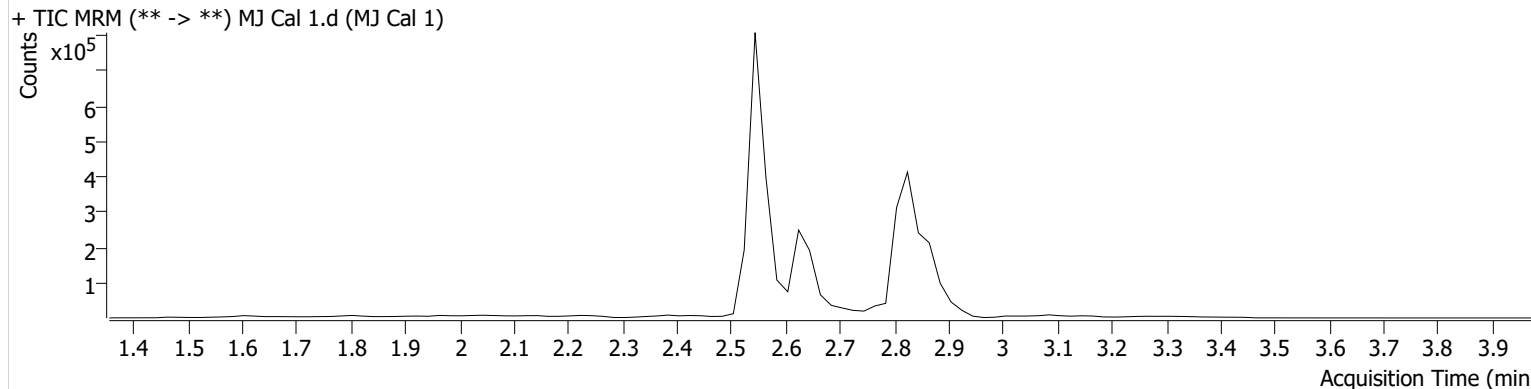


AM #26 Cannabinoids Screen Results

Batch results C:\Users\agerheart\Desktop\022322 AM 25 26 AG\QuantResults\AM 26.batch.bin
Calibration Last Update 2/25/2022 9:29:30 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	2/23/2022 3:19:15 PM		

Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.	
THC	2.879	2327	271653	0.9031 ng/ml	Low
THC-COOH	2.647	34109	501653	4.8952 ng/ml	Low
THC-OH	2.554	3189	1801116	1.2075 ng/ml	Low

79

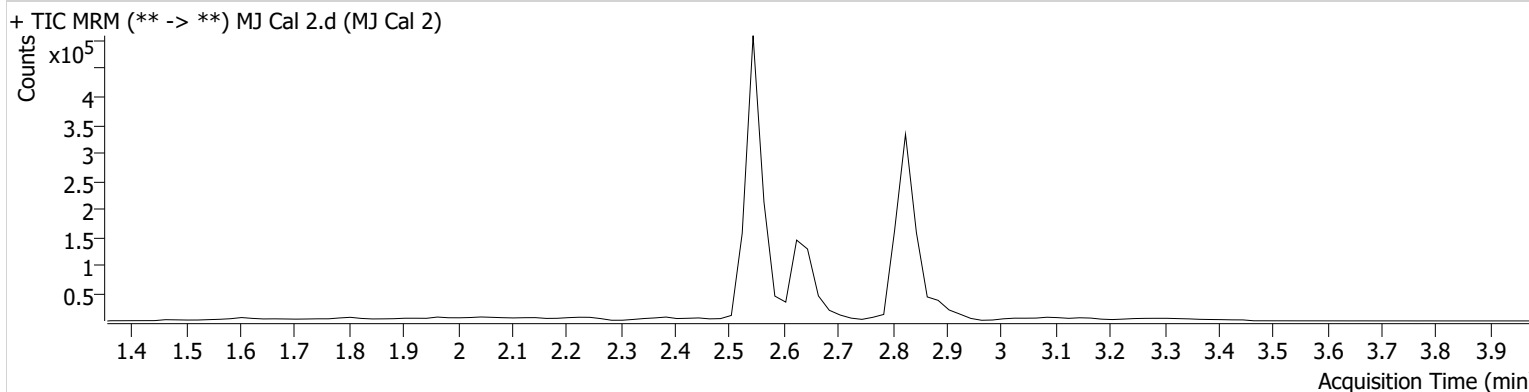


AM #26 Cannabinoids Screen Results

Batch results C:\Users\agerheart\Desktop\022322 AM 25 26 AG\QuantResults\AM 26.batch.bin
Calibration Last Update 2/25/2022 9:29:30 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	2/23/2022 3:25:58 PM		

Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	2.899	1042	37173	3.4447 ng/ml
THC-COOH	2.647	39509	276502	10.1654 ng/ml
THC-OH	2.554	4800	1067691	2.7410 ng/ml Low

79

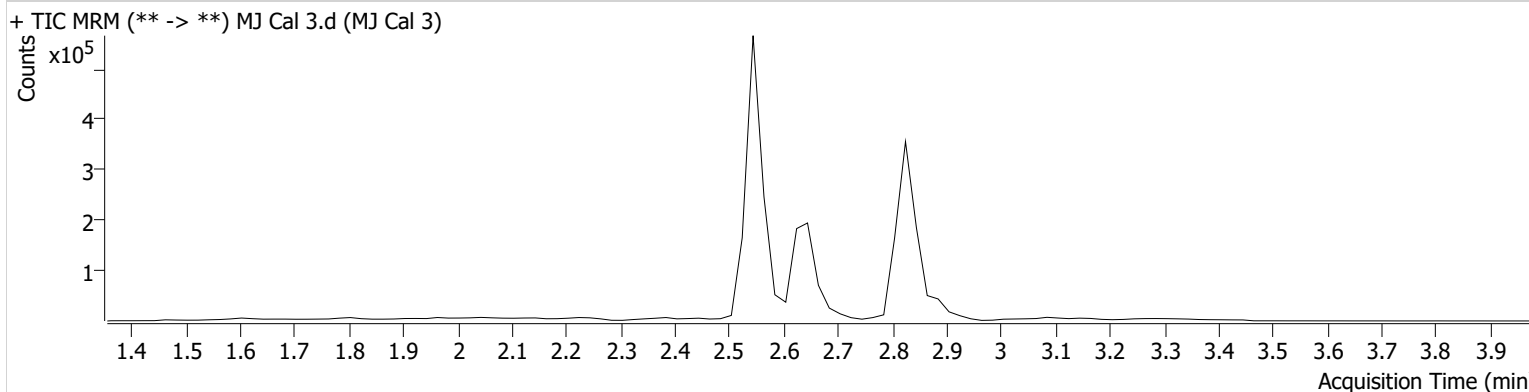


AM #26 Cannabinoids Screen Results

Batch results C:\Users\agerheart\Desktop\022322 AM 25 26 AG\QuantResults\AM 26.batch.bin
Calibration Last Update 2/25/2022 9:29:30 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	2/23/2022 3:32:32 PM		

Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	2.899	1740	44322	4.9084 ng/ml
THC-COOH	2.647	88534	313019	20.0136 ng/ml
THC-OH	2.554	8639	1156780	4.4138 ng/ml

79

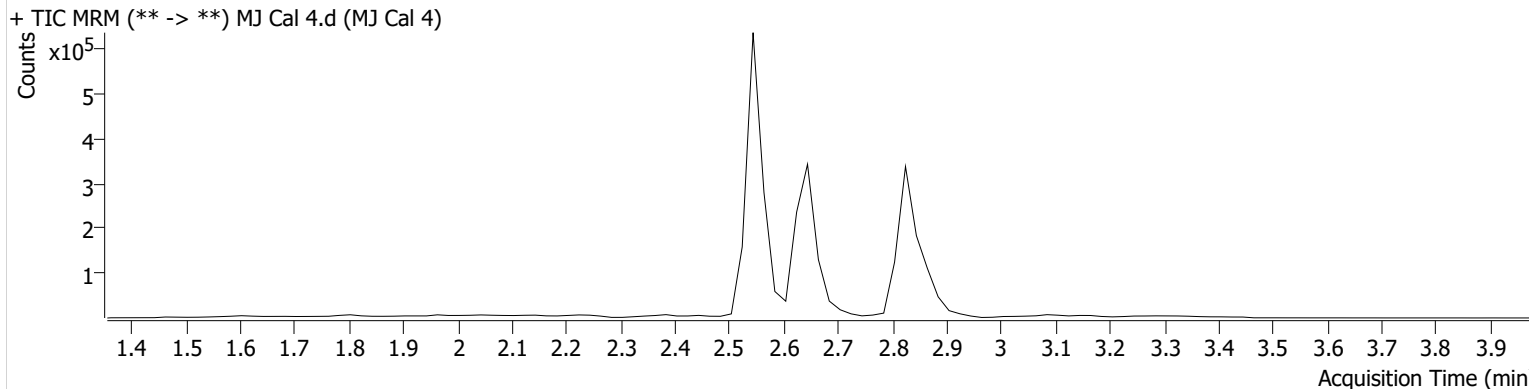


AM #26 Cannabinoids Screen Results

Batch results C:\Users\agerheart\Desktop\022322 AM 25 26 AG\QuantResults\AM 26.batch.bin
Calibration Last Update 2/25/2022 9:29:30 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	2/23/2022 3:39:07 PM		

Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	2.899	3880	123711	3.8795 ng/ml
THC-COOH	2.647	218192	307459	50.0485 ng/ml
THC-OH	2.554	20569	1197967	9.8734 ng/ml

79

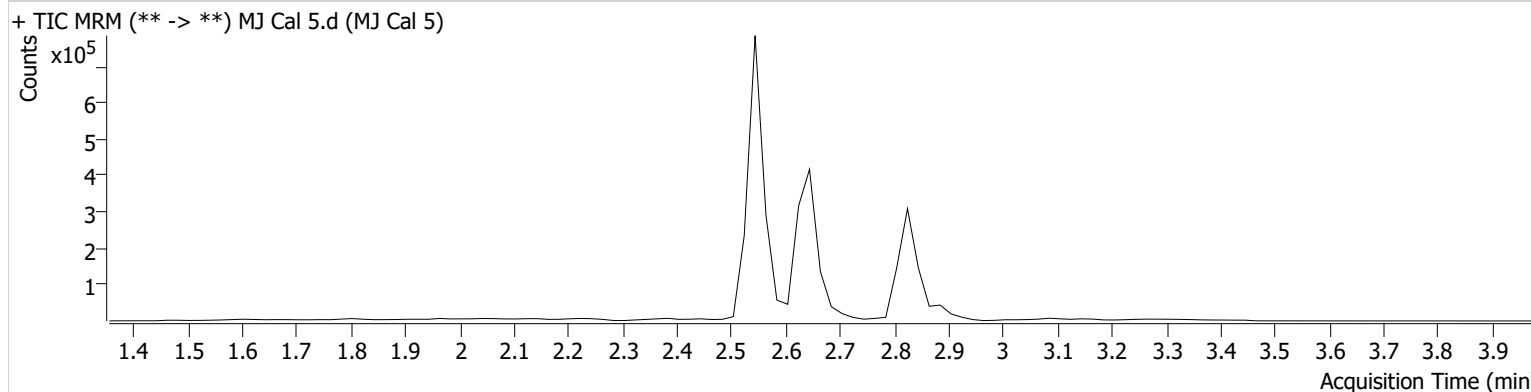


AM #26 Cannabinoids Screen Results

Batch results C:\Users\agerheart\Desktop\022322 AM 25 26 AG\QuantResults\AM 26.batch.bin
Calibration Last Update 2/25/2022 9:29:30 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	2/23/2022 3:45:43 PM		

Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	2.899	7809	42078	24.0110 ng/ml
THC-COOH	2.647	305467	286519	75.1329 ng/ml
THC-OH	2.554	52764	1200837	24.9375 ng/ml

79

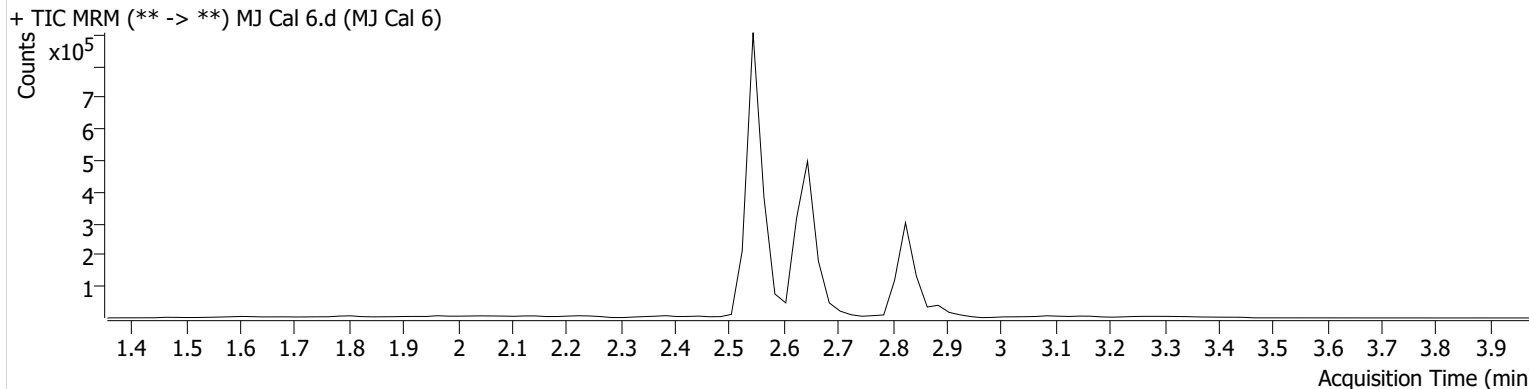


AM #26 Cannabinoids Screen Results

Batch results C:\Users\agerheart\Desktop\022322 AM 25 26 AG\QuantResults\AM 26.batch.bin
Calibration Last Update 2/25/2022 9:29:30 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	2/23/2022 3:52:16 PM		

Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	2.899	12997	33839	49.9204 ng/ml
THC-COOH	2.647	373320	262107	100.3371 ng/ml
THC-OH	2.554	97936	1100457	50.2925 ng/ml

79

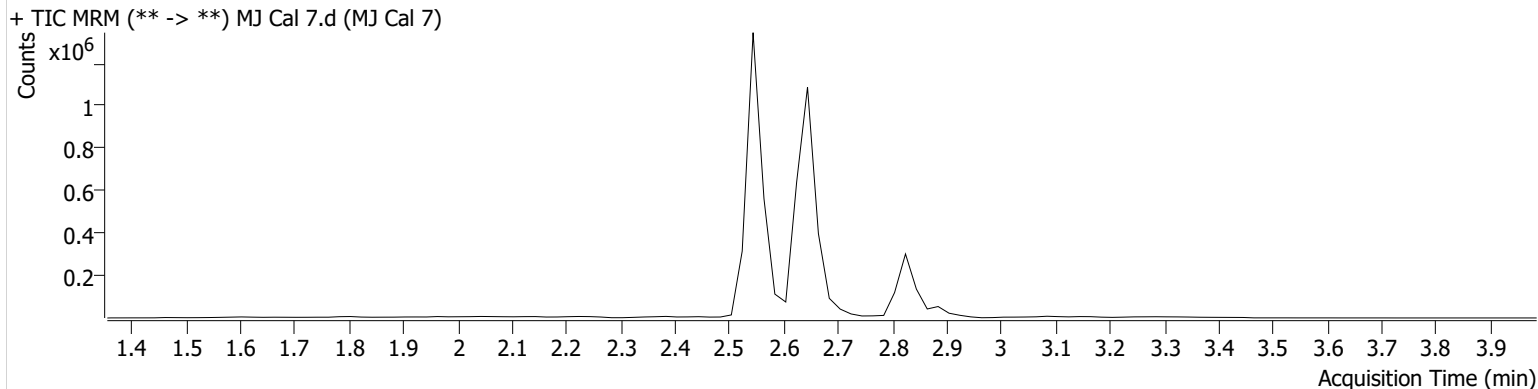


AM #26 Cannabinoids Screen Results

Batch results C:\Users\agerheart\Desktop\022322 AM 25 26 AG\QuantResults\AM 26.batch.bin
Calibration Last Update 2/25/2022 9:29:30 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	2/23/2022 3:58:52 PM		

Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	2.899	28238	36487	100.8124 ng/ml
THC-COOH	2.647	929881	262477	249.4073 ng/ml
THC-OH	2.554	202559	1136206	100.5343 ng/ml

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

Extraction Date: 3/03/2022

Plate lot#: 211015

Mobile phase A: 10mM Amm Form

Instant Buffer I

Blank Blood Lot: Lampire 22B52016-2

LCMS-QQQ ID: 069901

Analyst: Amber Gerheart

Plate Retest Date: 4/15/2022

Mobile phase B: 0.1% Formic Acid in MeOH

Ethyl Acetate

LC Methanol

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

Blank Urine Lot: 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.
- 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:

Only used for sample M2022-0471-1 analysis.

Only evaluated for citalopram.

AA

	1	2	3	4	5	6	7	8	9	10	11	12
A					Blood Negative	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample
B	IS + QC_1				M2022-0471-1	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample
C					IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample
D					IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample
E					IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample
F					IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample
G					IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + QC_1
H					IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + Sample	IS + QC_1

All wells to contain 60 µl of residual DMSO

Analytical plate positions

AA

	1	2	3	4	5	6	7	8	9	10	11	12
A					IS + QC_1							
B					Blood Negative							
C					M2022-0471-1							
D												
E												
F												
G												
H												

All wells to contain 60 µl of residual DMSO

Instrument plate positions

AA

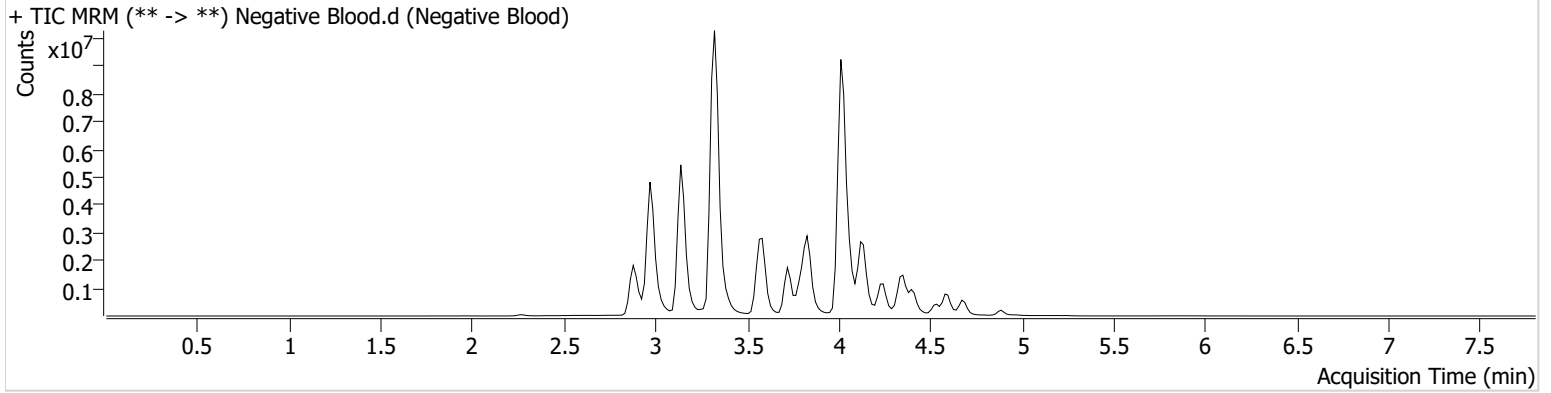


AM #25 Multi-Drug Screen Results

Batch results D:\MassHunter\Data\2022\AM 25-26\030322 AM 25 AG\QuantResults\25 citalopram.batch.bin
Calibration Last Update 3/4/2022 10:27:18 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	P2-B5	Comment	
Injection Volume	5		
Acq. Date-Time	3/3/2022 3:30:36 PM		
Sample Info.			

Sample Chromatogram



AA



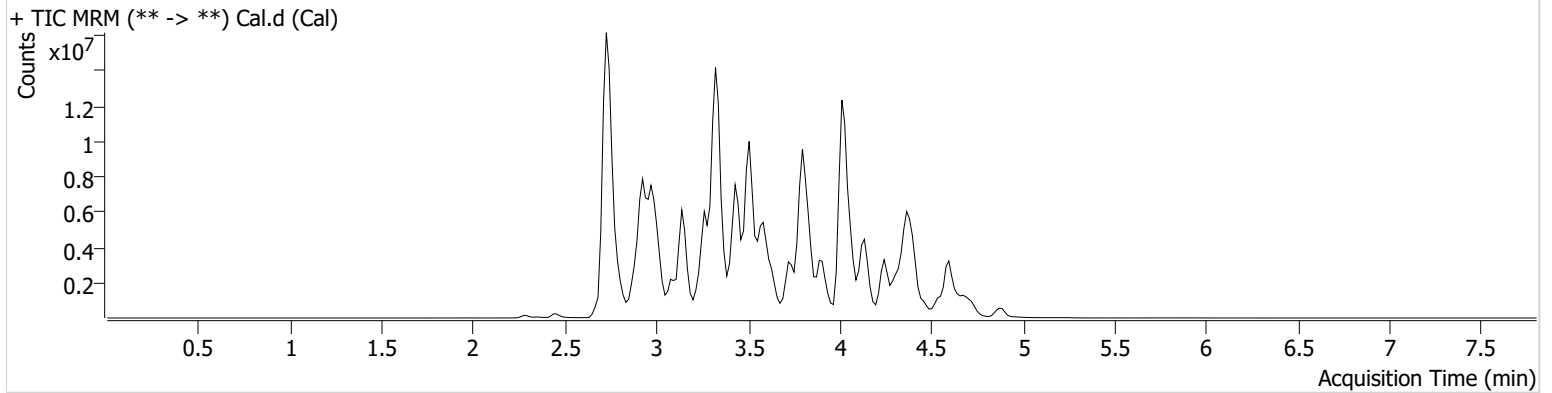
AM #25 Multi-Drug Screen Results

Batch results D:\MassHunter\Data\2022\AM 25-26\030322 AM 25 AG\QuantResults\25 citalopram.batch.bin
Calibration Last Update 3/4/2022 10:27:18 AM

Instrument	Falco (069901)	Data File	Cal.d
Type	Cal	Sample	Cal
Acq. Method	AM 25 MDS.m	Operator	Amber Gerheart
Sample Position	P2-A5	Comment	
Injection Volume	5		
Acq. Date-Time	3/3/2022 3:22:02 PM		

Sample Info.

Sample Chromatogram



Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Citalopram	4.059	2688070	1260.77	37835.62	22117912	10.0000