

















REVIEWED
By Sarah Collins at 12:29 pm, Mar 15, 2021

3/8/2021
Byylee

Worklist: 4825

<u>LAB CASE</u>	<u>ITEM</u>	<u>ITEM TYPE</u>	<u>DESCRIPTION</u>	
C2020-2618	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
C2020-2618	4	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
C2021-0345	1	UCK	AM 25/AM 26 Urine MultiDrug/THC Screen by LC-QQQ	
C2021-0360	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
C2021-0398	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
C2021-0418	1	UCK	AM 25/AM 26 Urine MultiDrug/THC Screen by LC-QQQ	
C2021-0428	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
C2021-0429	4	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
C2021-0430	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
C2021-0431	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
C2021-0454	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
C2021-0489	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
C2021-0491	1	UCK	AM 25/AM 26 Urine MultiDrug/THC Screen by LC-QQQ	
C2021-0503	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
C2021-0505	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	
C2021-0528	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ	

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

B. Wylie

Extraction Date: 3/8/2021

Analyst: Britany Wylie

Plate lot#: 200511

Plate Expiration: 11/11/2020

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

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

Blank Blood Lot: 20J20793 **Blank Urine lot:** 2121 **Column:** Phenomenex Phenyl Hexyl (4.6x50mm, 2.6um)

LCMS-QQQ ID: 69679

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 pipette: 250 ul urine in blank well, add 40 ul BG Turbo, add 100 ul 500 mm sodium phosphate buffer mix for at least five minutes ambient temperature.
Pipette **250 µL blood (calibrated pipette)** or 250 ul urine in wells of analytical (standards) plate. **Pipette ID: 1926134**
- 3. Place on shaking incubator at ambient temp., 900 rpm for 15 minutes.
- 4. Pipette **250 µL of 0.5 M ammonium hydroxide** in wells of analytical plate.
- 5. Place on shaking incubator at ambient temp., 900 rpm for 15 minutes.
- 6. Transfer **300 µL of blood or urine+base** mixture to corresponding wells of SLE+ plate.
- 7. Apply positive pressure for approx. 10-15 seconds (or until no liquid remains on top of sorbent).
(Load at 85-100 PSI- Selector to the right) Manifold ID: 66792
- 8. Wait 5 minutes.
- 9. Add **900 µL ethyl acetate.**
- 10. Wait 5 minutes.
- 11. Apply positive pressure for approx. 10-15 seconds. *(12-15 PSI- Selector to the left).*
- 12. Add **900 µL ethyl acetate.**
- 13. Wait 5 minutes.
- 14. Apply positive pressure for approx. 10-15 seconds. *(12-15 PSI- Selector to the left).*
- 15. Remove plate containing eluate. **Optional step: add 50ul 1% HCl in MeOH** Place on SPE Dry and evaporate to dryness at approx. 35°C.
SPE Dry ID: 66819
- 16. Reconstitute in **100 µL 20% LC MeOH** in LC Water 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 5 or greater or 2-5 for discretionary range.
- 4. Did all QCs pass for each analyte? (If no is it described in comments?)
- 5. Central File Packet to include: LIMS Worklist, Method Checklist, Calibration and Control Reports

COMMENTS: *Due to the extraction occurring after the expiration of the analytical plate, an external control was included with this run as specified in the analytical method. NOT EVALUATED: nortriptyline and paroxetine*

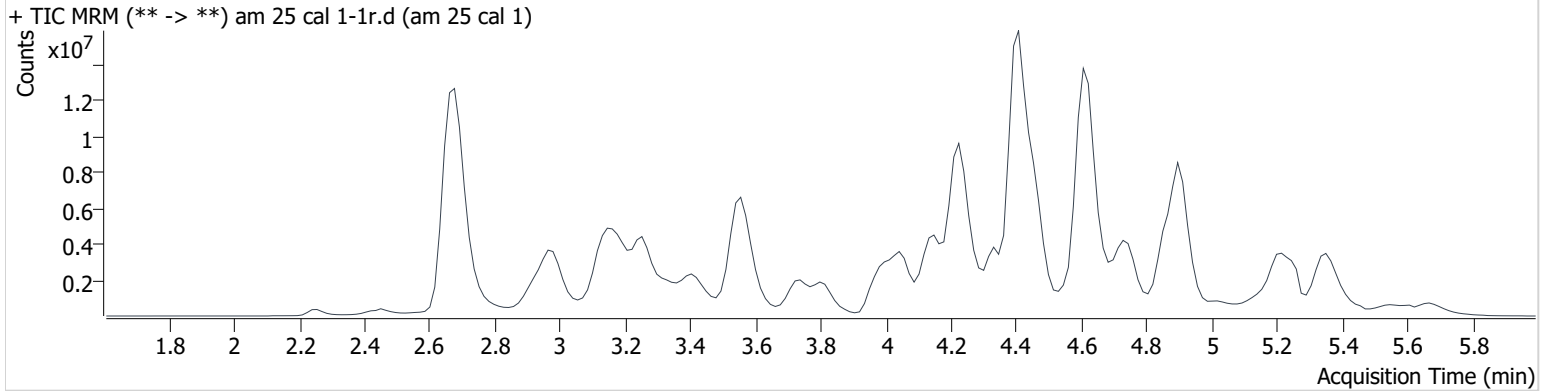
AM #25 Multi-Drug Screen Results

Bylye

Batch results D:\MassHunter\Data\2021\am 25-26\030821\QuantResults\mds.batch.bin
Calibration Last Update 3/9/2021 2:20:14 PM

Instrument	69679	Data File	am 25 cal 1-1r.d
Type	Cal	Sample	am 25 cal 1
Acq. Method	mds 826.m	Operator	Britany Wylie
Sample Position	P1-C1	Comment	
Injection Volume	2.5		
Acq. Date-Time	3/8/2021 8:10:54 PM		

Sample Chromatogram



Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
6-MAM	3.752	41653	178.6	18.4	1253331	10.000
7-aminoclonazepam	3.331	483499	197.2	195.3	1881542	10.000
7-aminoflunitrazepam	3.558	710840	270.8	215.5	1881542	10.000
Acetyl Fentanyl	4.716	304766	90.1	132794.3	20714186	10.000
Acetyl Norfentanyl	2.986	204561	723.7	110.5	20714186	10.000
a-hydroxyalprazolam	4.302	118124	135.8	92.4	1881542	10.000
alpha-hydroxymidazolam	4.409	1670794	513.7	334.8	1881542	10.000
alpha-PHP	4.572	2283783	500.9	1438.2	7088404	10.000
alpha-PVP	4.344	2958178	5851.1	101.2	7088404	10.000
Alprazolam	4.429	955288	636.9	575.7	6476684	10.000
Amitriptyline	5.345	1198327	621.4	212.8	6357106	10.000
Amphetamine	2.991	3029687	923.1	1001.6	7088404	10.000
Benzoylcegonine	3.072	104541	331.5	85.4	212605	10.000
Brompheniramine	4.778	86379	29.2	12.0	44057791	10.000
Buprenorphine	5.258	578132	2097.0	46809.1	2543886	10.000
Bupropion	4.450	2858941	1097.6	1137.7	11542905	10.000
Carbamazepine	4.007	4185104	∞	660.7	62169	10.000
Carisoprodol	3.973	631390	997.6	∞	3659596	10.000
Chlordiazepoxide	4.538	502148	363.0	529.6	6476684	10.000
Chlorpheniramine	4.646	5059179	∞	37.0	44057791	10.000
Citalopram	4.701	2226979	1056.0	2189.3	44057791	10.000
Clomipramine	5.671	1733670	2870.2	1739.0	44057791	10.000
Clonazepam	4.242	239515	195.7	173.6	6476684	10.000
Clonazolam	4.162	367211	79196.4	100911.0	6476684	10.000
Cocaehtylene	4.396	2962753	583.1	1187.7	44057791	10.000
Cocaine	4.244	3985187	19628.9	128.8	23020674	10.000
Codeine	3.755	359683	89.8	91.3	176774	10.000
Cyclobenzaprine	5.209	2755360	4207.2	133.3	6357106	10.000
Desipramine	4.739	193971	41.1	16.0	6357106	10.000
Dextromethorphan	5.195	1681660	439.0	1071.8	8437501	10.000
Dextrorphan	4.035	1951202	5167.8	1222.3	8437501	10.000
Diazepam	4.675	566960	773.3	802.8	6476684	10.000
Dihydrocodeine	3.343	735437	201.6	129.9	2259174	10.000
Diphenhydramine	4.632	6821703	13860.9	1985.6	44057791	10.000

AM #25 Multi-Drug Screen Results

Byylee

Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Doxepin	5.026	1794035	396.8	316.2	15343683	10.000
Doxylamine	4.140	6840051	36915.7	1925.4	8437501	10.000
EDDP	4.463	1075878	192.6	166.5	2259174	10.000
Estazolam	4.338	2135204	976.3	1445.9	6476684	10.000
Etizolam	4.470	95450	54760.8	487.9	6476684	10.000
Fentanyl	4.868	215252	95.6	94301.3	12728997	10.000
Flualprazolam	4.301	480546	175105.6	325304.1	6476684	10.000
Flunitrazepam	4.366	1001117	1238.1	283.1	6476684	10.000
Fluoxetine	4.795	1284501	∞	176.7	3020175	10.000
Flurazepam	4.835	2559918	1456794.7	167972.5	6476684	10.000
Hydrocodone	4.184	1101030	61.3	71.5	6708671	10.000
Hydromorphone	3.088	718570	161.5	42.9	176774	10.000
Imipramine	5.359	5459353	3082.8	988.2	6357106	10.000
Ketamine	4.251	2242387	758.2	96.4	12938944	10.000
Lamotrigine	3.424	178793	202.5	305.7	44057791	10.000
Levamisole	3.780	1477194	1549.7	306.0	8437501	10.000
Levetireacetam	2.262	445400	873.0	755.7	44057791	10.000
Lorazepam	4.210	38852	277.0	∞	6476684	10.000
Maprotiline	5.331	774943	154.2	588.9	6357106	10.000
MDA	3.216	2013359	346.3	416.5	18740907	10.000
MDEA	3.581	3158571	4414.6	3070.7	18740907	10.000
MDMA	3.413	3553511	7805.0	5376.2	18740907	10.000
Meperidine	4.342	2220433	1436.6	941.7	8437501	10.000
Meprobamate	3.366	171048	331.3	114.8	3659596	10.000
Methadone	4.916	5015245	2720.0	825.4	2259174	10.000
Methamphetamine	3.187	5987875	734.9	2249.3	18740907	10.000
Methocarbamol	3.288	131495	496.8	165.5	2259174	10.000
Methylphenidate	4.068	6527440	∞	368.8	12938944	10.000
Metoprolol	3.712	525318	415.2	2349.5	8437501	10.000
Midazolam	4.624	398135	352336.4	99956.9	6476684	10.000
Mirtazapine	4.739	2670890	474.5	848.7	8437501	10.000
Mitragynine	4.879	315962	396004.1	1218.8	8437501	10.000
Morphine	2.575	232864	441.0	143.4	176774	10.000
Norbuprenorphine	4.589	56361	216.3	11679.3	2543886	10.000
Nordiazepam	4.510	437814	1038.4	524.3	6476684	10.000
Norfentanyl	3.579	3913787	2341.0	690.9	20714186	10.000
Norhydrocodone	3.391	51361	88.1	15.1	6708671	10.000
norketamine	4.039	424370	613.1	1989.9	12938944	10.000
Normeperidine	4.022	2061139	2021.0	1496.7	44057791	10.000
Noroxycodone	3.161	721172	129.5	71.0	7926653	10.000
O-desmethyl-tramadol	2.985	4814143	7685.5	451.5	44057791	10.000
Olanzapine	4.596	1215478	869.2	1595.3	62169	10.000
Oxazepam	4.308	240205	71.4	59.2	1475844	10.000
Oxycodone	3.508	1703739	130.9	139.1	7926653	10.000
Oxymorphone	2.435	1052219	8930.9	265.7	176774	10.000
Phenazepam	4.454	474060	159930.8	1161645.2	6476684	10.000
Phencyclidine	4.435	3507233	496.9	1813.7	8437501	10.000
Phentermine	3.293	32562	8.8	612.0	12938944	10.000
Phenytoin	3.882	114289	332.5	21.2	62169	10.000
Promethazine	5.221	5836002	1281.6	740.3	44057791	10.000
Pseudoephedrine	2.686	53968447	∞	3290.3	18740907	10.000
Quetiapine	4.744	3482847	884.0	956647.0	26352943	10.000
Sertraline	5.536	566798	238172.8	314.9	3020175	10.000
Sufentanil	5.063	182270	10486.1	230.5	20714186	10.000
Tapentadol	3.733	3191062	501.6	1842.4	2259174	10.000
Temazepam	4.476	1247230	2291.2	80.1	6476684	10.000
Tramadol	3.819	5267968	338.0	33.2	44057791	10.000
Trazodone	4.912	2817326	1725.8	5084780.0	15343683	10.000
Venlafaxine	4.247	4391919	878.6	394.8	3020175	10.000
Zaleplon	4.152	864498	386.8	1481.3	26352943	10.000

AM #25 Multi-Drug Screen Results

BWylee

Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Zolpidem	4.413	5161368	30504.9	635.5	26352943	10.000
Zopiclone	4.452	270488	405.4	29796.2	1427841	10.000

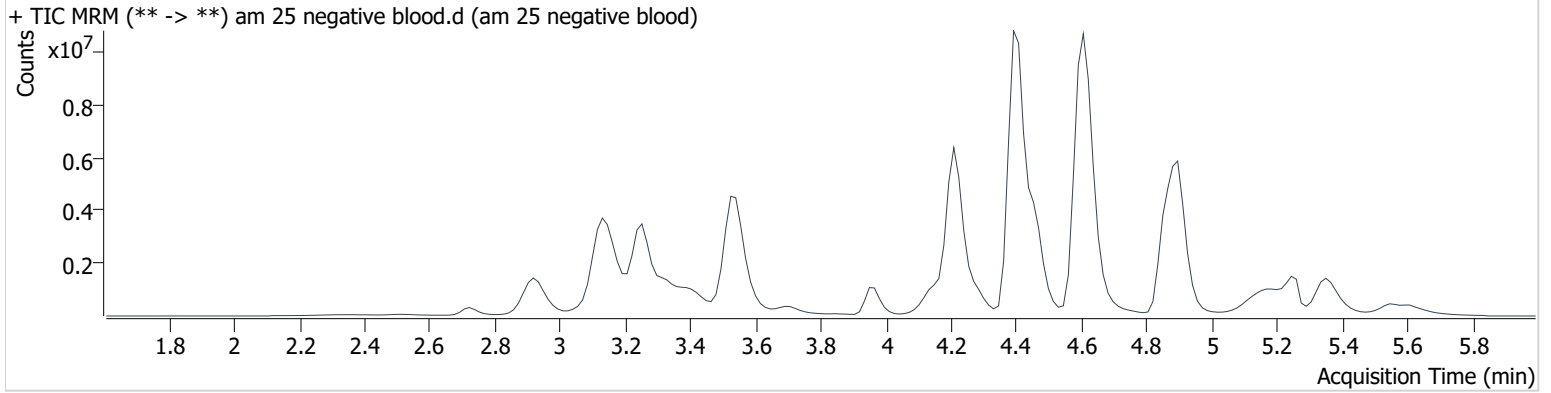
AM #25 Multi-Drug Screen Results

Wylie

Batch results D:\MassHunter\Data\2021\am 25-26\030821\QuantResults\mds.batch.bin
Calibration Last Update 3/9/2021 2:20:14 PM

Instrument	69679	Data File	am 25 negative blood.d
Type	Sample	Sample	am 25 negative blood
Acq. Method	mds 826.m	Operator	Britany Wylie
Sample Position	P1-E1	Comment	
Injection Volume	2.5		
Acq. Date-Time	3/8/2021 8:17:35 PM		
Sample Info.			

Sample Chromatogram



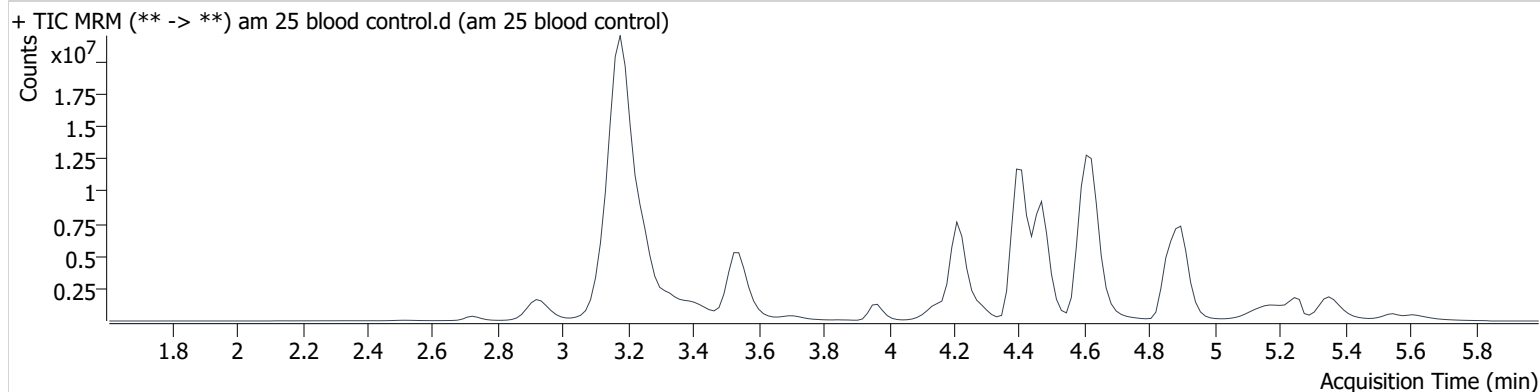
AM #25 Multi-Drug Screen Results

Wylie

Batch results D:\MassHunter\Data\2021\am 25-26\030821\QuantResults\mds.batch.bin
Calibration Last Update 3/9/2021 2:20:14 PM

Instrument	69679	Data File	am 25 blood control.d
Type	Sample	Sample	am 25 blood control
Acq. Method	mds 826.m	Operator	Britany Wylie
Sample Position	P1-F1	Comment	
Injection Volume	2.5		
Acq. Date-Time	3/8/2021 8:24:17 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Methamphetamine	3.187	47423345	4323.8	4766.1	20712273	71.661
Midazolam	4.624	4311932	2483526.6	2255857.5	7183746	97.643
Temazepam	4.476	13375102	2467.4	1342.8	7183746	96.683

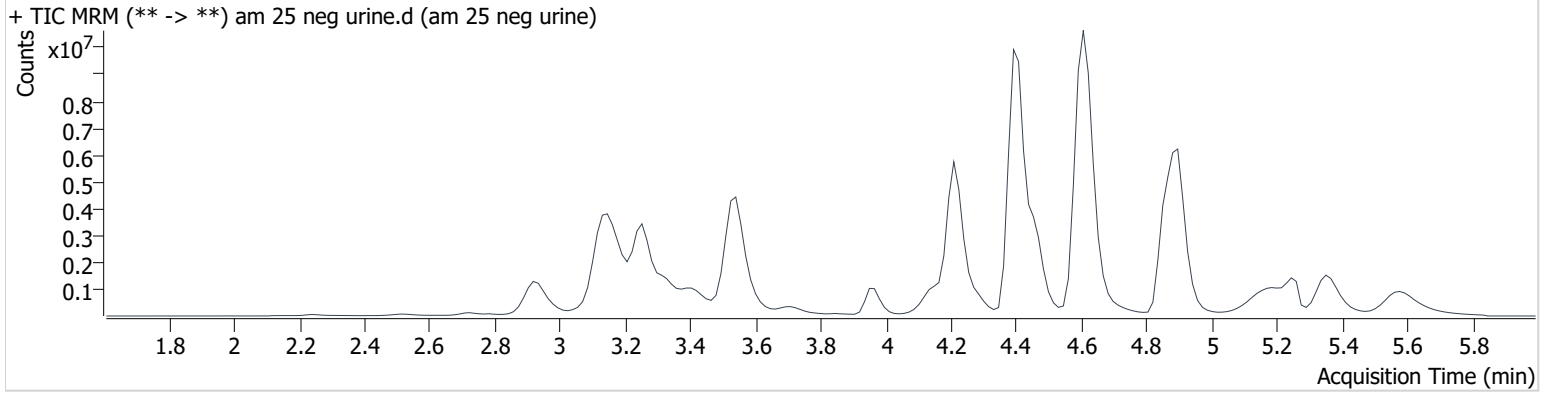
AM #25 Multi-Drug Screen Results

B. Wylie

Batch results D:\MassHunter\Data\2021\am 25-26\030821\QuantResults\mds.batch.bin
Calibration Last Update 3/9/2021 2:20:14 PM

Instrument	69679	Data File	am 25 neg urine.d
Type	Sample	Sample	am 25 neg urine
Acq. Method	mds 826.m	Operator	Britany Wylie
Sample Position	P1-D3	Comment	
Injection Volume	2.5		
Acq. Date-Time	3/8/2021 9:51:27 PM		
Sample Info.			

Sample Chromatogram



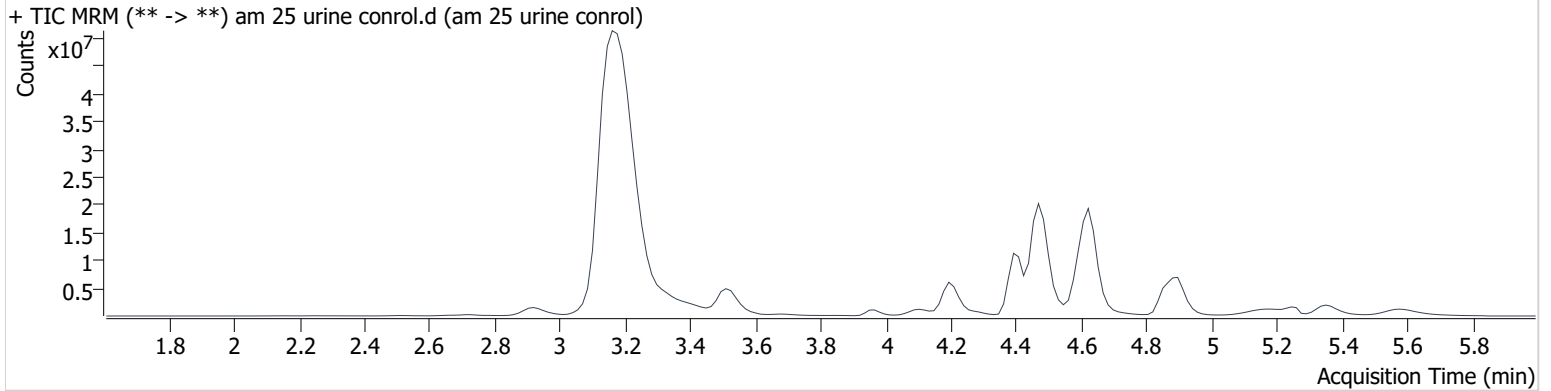
AM #25 Multi-Drug Screen Results

Wylie

Batch results D:\MassHunter\Data\2021\am 25-26\030821\QuantResults\mds.batch.bin
Calibration Last Update 3/9/2021 2:20:14 PM

Instrument	69679	Data File	am 25 urine control.d
Type	Sample	Sample	am 25 urine control
Acq. Method	mds 826.m	Operator	Britany Wylie
Sample Position	P1-E3	Comment	
Injection Volume	2.5		
Acq. Date-Time	3/8/2021 9:58:09 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Methamphetamine	3.194	124370961	18212.2	10763.4	16517244	235.667
Midazolam	4.624	19450591	5311.9	∞	5269046	600.514
Temazepam	4.476	47815479	598.0	574.8	5269046	471.240

Toxicology AM method 25/28 urine external control prep
 working solution 10000 ng/ml in meoh methamphetamine, temazepam, midazolam
 Stock solution 1mg/ml 50 ul each in 4850 ul MeOH (fisher 195629)

ppd 8/6/20: Exp: 4/1/2021 lot 4121 by baw

Drug	lot	expiration
Methamphetamine	FE08101708	10/1/2022
midazolam	FE01221602	4/1/2021
temazepam	FE04261601	5/1/2021

AM 25/28 control 500 ul working solution (4121) in 4500 ul negative urine (1000ng/mL Expected concentration)

ppd 8/6/20, exp 4/1/2021 lot u4121 negative urine 73020 by AMN

AM 25/28 Blood Control: 50ul working solution (4121) in 4950 ul neg blood (100ng/mL Expected concentration)

ppp 8/6/20, exp 4/1/21 lot b4121 neg blood 20G20792 by AMN
 ppd 3/8/21, exp 9/8/21 lot b9821 neg blood 20J20793 by BAW

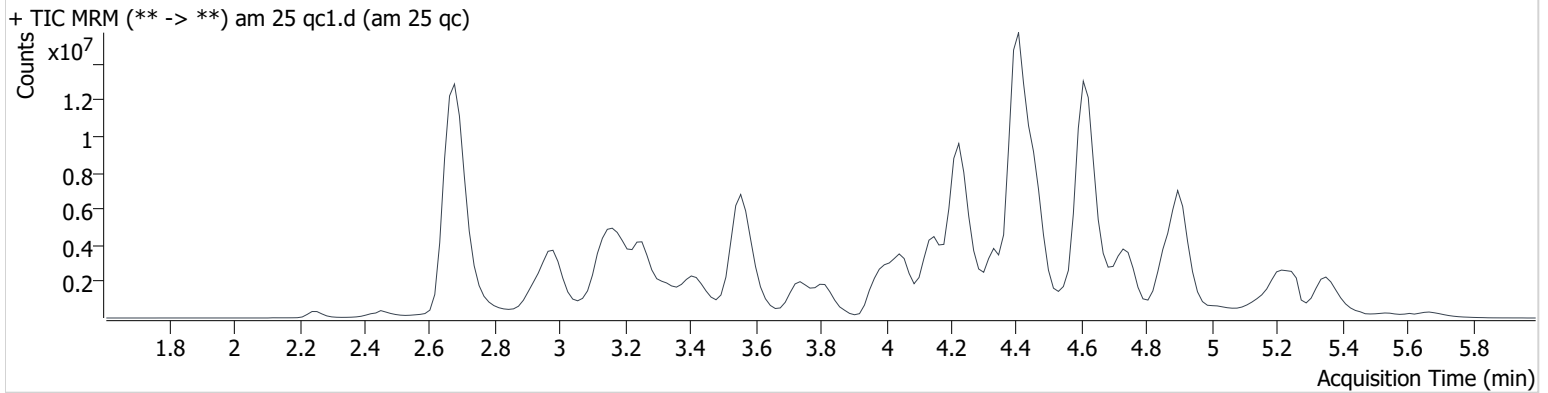
AM #25 Multi-Drug Screen Results

Wylie

Batch results D:\MassHunter\Data\2021\am 25-26\030821\QuantResults\mds.batch.bin
Calibration Last Update 3/9/2021 2:20:14 PM

Instrument	69679	Data File	am 25 qc1.d
Type	QC	Sample	am 25 qc
Acq. Method	mds 826.m	Operator	Britany Wylie
Sample Position	P1-A1	Comment	
Injection Volume	2.5		
Acq. Date-Time	3/8/2021 8:04:12 PM		

Sample Chromatogram



Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
6-MAM	3.767	43216	10861.1	18.1	1256354	10.350
7-aminoclonazepam	3.331	471699	342.3	142.5	1825367	10.056
7-aminoflunitrazepam	3.558	706485	2415.5	1993.6	1825367	10.245
Acetyl Fentanyl	4.717	260303	84.6	160666.7	20916649	8.458
Acetyl Norfentanyl	2.986	213126	589.5	66.5	20916649	10.318
a-hydroxyalprazolam	4.302	115515	39.9	36640.3	1825367	10.080
alpha-hydroxymidazolam	4.409	1651057	478.5	1135525.8	1825367	10.186
alpha-PHP	4.572	2216435	694.0	251.9	7085467	9.709
alpha-PVP	4.344	3004935	524.0	58.3	7085467	10.162
Alprazolam	4.429	971271	1116.1	634.9	6316961	10.424
Amitriptyline	5.345	716271	621.3	293.4	3819070	9.950
Amphetamine	2.991	2986514	928.2	455.6	7085467	9.862
Benzoylcegonine	3.072	428838	5281.5	135.0	225436	38.686
Brompheniramine	4.778	81219	98.2	12.2	41767865	9.918
Buprenorphine	5.258	546536	147801.4	50864.0	2389059	10.066
Bupropion	4.450	2757662	846.5	960.3	11441924	9.731
Carbamazepine	4.007	4190940	5036.5	833.8	63493	9.805
Carisoprodol	3.973	641939	1208.5	397.2	3694038	10.072
Chlordiazepoxide	4.538	491530	470.4	192.0	6316961	10.036
Chlorpheniramine	4.646	4535595	11247.4	∞	41767865	9.457
Citalopram	4.701	1975132	1792.4	1135.2	41767865	9.355
Clomipramine	5.671	797519	1420.9	931.9	41767865	4.852
Clonazepam	4.242	246544	358.7	782.3	6316961	10.554
Clonazolam	4.162	346684	151569.2	53663.8	6316961	9.680
Cocaethylene	4.396	2939410	1769.4	∞	41767865	10.465
Cocaine	4.244	4089857	13048.7	764.4	22733980	10.392
Codeine	3.755	367449	102.1	399.5	181606	9.944
Cyclobenzaprine	5.209	1707981	1032.5	85.8	3819070	10.318
Dextromethorphan	5.195	1517018	1415.9	2162.8	7581873	10.039
Dextrorphan	4.035	1954026	1791.5	70175.4	7581873	11.145
Diazepam	4.675	556727	342.5	232.9	6316961	10.068
Dihydrocodeine	3.343	746713	459.0	42.9	2062839	11.120
Diphenhydramine	4.632	6281183	7341.5	1724.7	41767865	9.712
Doxepin	5.026	1404789	769.6	180.3	12407494	9.683

AM #25 Multi-Drug Screen Results

Byylee

Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Doxylamine	4.140	6611353	5172.7	6878.1	7581873	10.756
EDDP	4.463	4014723	56038.1	127.0	2062839	40.867
Estazolam	4.338	2106437	701.9	8312.2	6316961	10.115
Etizolam	4.470	98242	80396.5	8602.7	6316961	10.553
Fentanyl	4.868	182511	234.2	52684.7	9959430	10.837
Flualprazolam	4.285	466566	2372.8	744223.2	6316961	9.955
Flunitrazepam	4.366	985942	640.1	283811.7	6316961	10.097
Fluoxetine	4.795	594238	92.8	70.1	1159033	12.055
Flurazepam	4.835	2425753	1690073.1	4396.7	6316961	9.715
Hydrocodone	4.184	1098450	138.2	94.7	6721703	9.957
Hydromorphone	3.118	760172	43.6	53.1	181606	10.297
Imipramine	5.359	3749699	2878.2	1915.0	3819070	11.433
Ketamine	4.251	2223871	325.8	258.2	12121513	10.586
Lamotrigine	3.424	175659	888.8	128870.2	41767865	10.363
Levamisole	3.780	1390644	4295.0	∞	7581873	10.476
Levetireacetam	2.262	468859	2281.7	363.5	41767865	11.104
Lorazepam	4.226	41853	193.3	41.4	6316961	11.045
Maprotiline	5.346	436804	135.4	61.7	3819070	9.382
MDA	3.216	2016920	228.0	143.3	18716655	10.031
MDEA	3.581	3118164	2104.3	5649.0	18716655	9.885
MDMA	3.413	3519042	10164.7	2143.5	18716655	9.916
Meperidine	4.342	2141579	1029.9	2874.9	7581873	10.733
Meprobamate	3.366	161889	264.3	53.5	3694038	9.376
Methadone	4.931	4408258	2832.0	129.9	2062839	9.626
Methamphetamine	3.187	6094586	546.7	533.0	18716655	10.191
Methocarbamol	3.288	109294	379.0	192.2	2062839	9.103
Methylphenidate	4.068	6558157	∞	310.6	12121513	10.725
Metoprolol	3.712	519599	573.3	610535.8	7581873	11.007
Midazolam	4.624	363239	886.1	89728.0	6316961	9.354
Mirtazapine	4.739	2358428	1424.6	1365.8	7581873	9.827
Mitragynine	4.879	264410	162522.1	378769.7	7581873	9.313
Morphine	2.590	215939	510.7	216.2	181606	9.026
Norbuprenorphine	4.589	46841	12111.0	25005.8	2389059	8.850
Nordiazepam	4.510	449039	629.3	1186.2	6316961	10.516
Norfentanyl	3.579	3915016	5256.7	914.0	20916649	9.906
Norhydrocodone	3.406	50143	83.5	21.8	6721703	9.744
norketamine	4.039	412411	253.1	7017.4	12121513	10.374
Normeperidine	4.022	1987292	2870.9	1002.8	41767865	10.170
Noroxycodone	3.161	729954	81.0	60.4	7861320	10.206
O-desmethyl-tramadol	2.985	4878768	12489.8	147.2	41767865	10.690
Olanzapine	4.596	1028974	23312.5	2007.5	63493	8.289
Oxazepam	4.308	256698	233.6	55.7	1504775	10.481
Oxycodone	3.508	1647533	122.4	45.2	7861320	9.750
Oxymorphone	2.435	1029576	1148.8	2419.1	181606	9.524
Phenazepam	4.454	463197	225916.8	119243.8	6316961	10.018
Phencyclidine	4.435	3457218	8533.7	1171.7	7581873	10.970
Phentermine	3.308	29155	10.2	161.8	12121513	9.557
Phenytoin	3.882	114739	58.6	17.5	63493	9.830
Promethazine	5.221	3821656	874.2	753.9	41767865	6.907
Pseudoephedrine	2.686	54606687	29929.5	572.7	18716655	10.131
Quetiapine	4.744	3071435	792.6	1078207.0	25896715	8.974
Sertraline	5.536	224695	205.6	266.0	1159033	10.330
Sufentanil	5.063	122706	153653.1	151.9	20916649	6.667
Tapentadol	3.749	3283950	3622.4	939.5	2062839	11.271
Temazepam	4.476	1229504	282.3	128.6	6316961	10.107
Tramadol	3.819	5282577	8577.4	117.8	41767865	10.578
Trazodone	4.912	2410250	371335.2	2119.5	12407494	10.580
Venlafaxine	4.247	4323426	7451.3	131.2	1159033	25.651
Zaleplon	4.152	864641	361.3	276.5	25896715	10.178
Zolpidem	4.413	4991114	885.0	1973.5	25896715	9.840

AM #25 Multi-Drug Screen Results

Byline

Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Zopiclone	4.452	267205	442.5	293.5	1302988	10.825

AM 25
3/8/21 WORKLIST 4825

Byylee

	1	2	3	4	5	6	7	8	9	10	11	12
A	IS + Cal. 1	360-1	503-1									
B	IS + Cal. 1	398-1	505-1									
C	IS + Cal 2	428-1	528-1									
D	IS + Cal 2	429-4	neg urine									
E	neg blood	430-1	urine ext									IS + Cal 2
F	blood external	431-1	345-1									IS + Cal 2
G	C2020-2618-1	454-1	418-1									IS + Cal. 1
H		489-1	491-1									IS + Cal. 1

All wells to contain 60 µl of residual DMSO

Case #: C2021-0____ -

AM# 26: THC and Metabolites Screen in Blood by LC-MS/MS

Wylie

Extraction Date: 3/8/2021

Analyst: Britany Wylie

Plate lot#: 201206

Plate Expiration: 6-6-2021

Mobile phase A: 10mM Ammonium Formate

Mobile phase B: 0.1% Formic acid in MeOH

0.1% Formic Acid in Water

MTBE

Hexane

1N KOH

Saturated Phosphate Buffer

Blank Blood Lot: 20J20793

Urine Blank: 2121

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

LCMS-QQQ ID: 69679

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 1.5 ml urine to blank plate, add 250 ul 1N KOH mix and incubate at 40 degrees for 15 minutes.
Pipette **1000 µL blood (calibrated pipette)** in wells of analytical (standards) plate. **Pipette ID: K52558g** Pipette 1000 ul urine to analytical (standards) plate.
- 3. Place on shaking incubator at ambient temp., 900 rpm for 15 minutes.
- 4. Pipette **500 µL 0.1% formic acid in blood** wells **500 ul saturated phosphate buffer in urine** wells of analytical plate.
- 5. Place on shaking incubator at ambient temp., 900 rpm for 15 minutes.
- 6. Transfer **800 µL of blood acid or urine acid** mixture to corresponding wells of SLE+ plate.
- 7. Apply positive pressure for approx. 10-15 seconds (or until no liquid remains on top of sorbent).
(Load at 85-100 PSI- Selector to the right) Manifold ID: 66792
- 8. Wait 5 minutes.
- 9. Add **2.25 mL MTBE** (add in 3 increments of 750 µL).
- 10. Wait 5 minutes.
- 11. Apply positive pressure for approx. 10-15 seconds. *(12-15 PSI- Selector to the left).*
- 12. Add **2.25 mL hexane** (add in 3 increments of 750 µL).
- 13. Wait 5 minutes.
- 14. Apply positive pressure for approx. 10-15 seconds. *(12-15 PSI- Selector to the left).*
- 15. Remove plate containing eluate. Place on SPE Dry and evaporate to dryness at approx. 35°C.
SPE Dry ID: 66819
- 16. Reconstitute in **100 µL 100% LCMS MeOH** and heat seal plate with foil. Place in autosampler and run worklist.

Post-Analytic

- 1. Create batch and process data.
- 2. Calculated sample concentration of 1 ng/mL or greater for THC, 3 ng/mL or greater for THC-OH, and/or 5 ng/mL or greater for Carboxy-THC.
- 3. Retention time within +/- 2% or +/-0.100 min whichever is greater of the average retention time of the calibrators.
- 4. Did all QCs pass for each analyte? Yes
- 5. Central File Packet to include: LIMS Worklist, Method Checklist, Calibration and Control Reports

COMMENTS:

Urine cases evaluated for THC-COOH only
BW

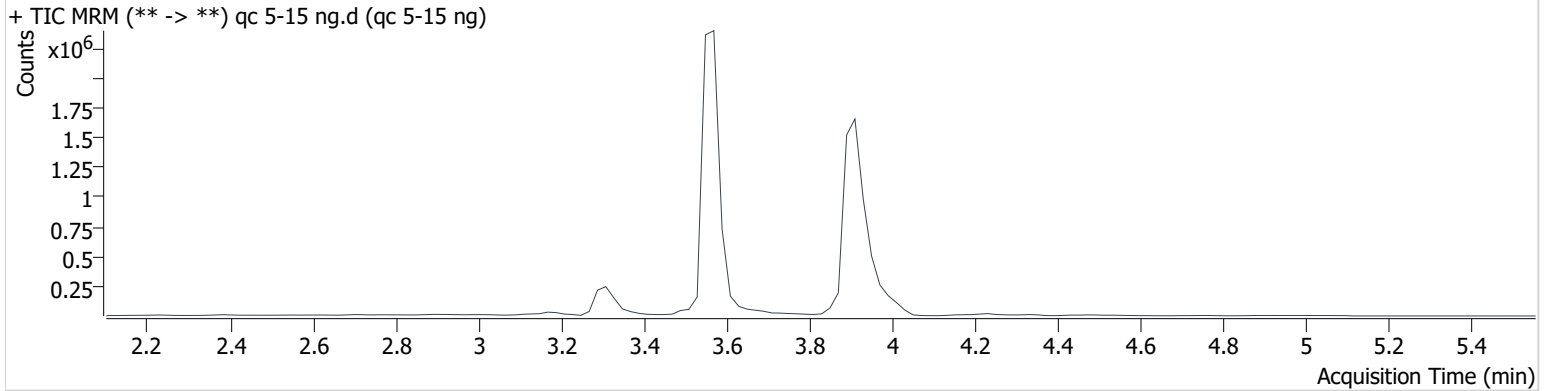
AM #26 Cannabinoids Screen Results

Byylie

Batch results D:\MassHunter\Data\2021\am 25-26\030821\QuantResults\thcs.batch.bin
Calibration Last Update 3/8/2021 8:33:45 PM

Instrument	69679	Data File	qc 5-15 ng.d
Type	QC	Sample	qc 5-15 ng
Acq. Method	am 26 cann scr 5-5-20.m	Operator	Britany Wylie
Sample Position	P3-H1	Comment	
Injection Volume	5		
Acq. Date-Time	3/8/2021 4:44:30 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	3.964	15087	473562	3.781 ng/ml
THC-COOH	3.311	128145	499727	14.555 ng/ml
THC-OH	3.578	40077	6842371	4.036 ng/ml

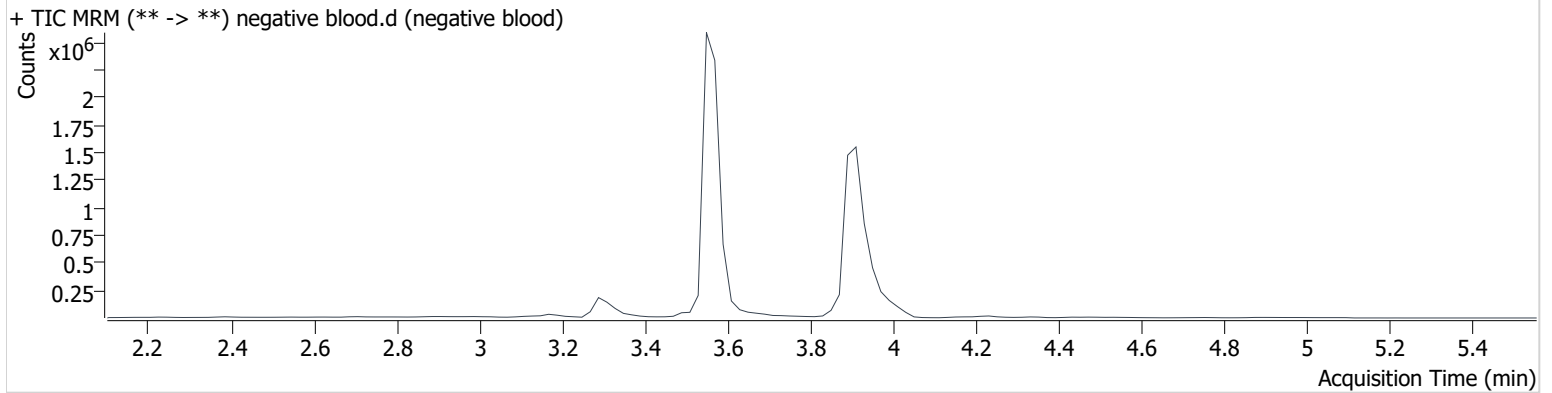
AM #26 Cannabinoids Screen Results

Wylie

Batch results D:\MassHunter\Data\2021\am 25-26\030821\QuantResults\thcs.batch.bin
Calibration Last Update 3/8/2021 8:33:45 PM

Instrument	69679	Data File	negative blood.d
Type	Sample	Sample	negative blood
Acq. Method	am 26 cann scr 5-5-20.m	Operator	Britany Wylie
Sample Position	P3-A2	Comment	
Injection Volume	5		
Acq. Date-Time	3/8/2021 4:51:06 PM		
Sample Info.			

Sample Chromatogram



AM #26 Cannabinoids Screen Results

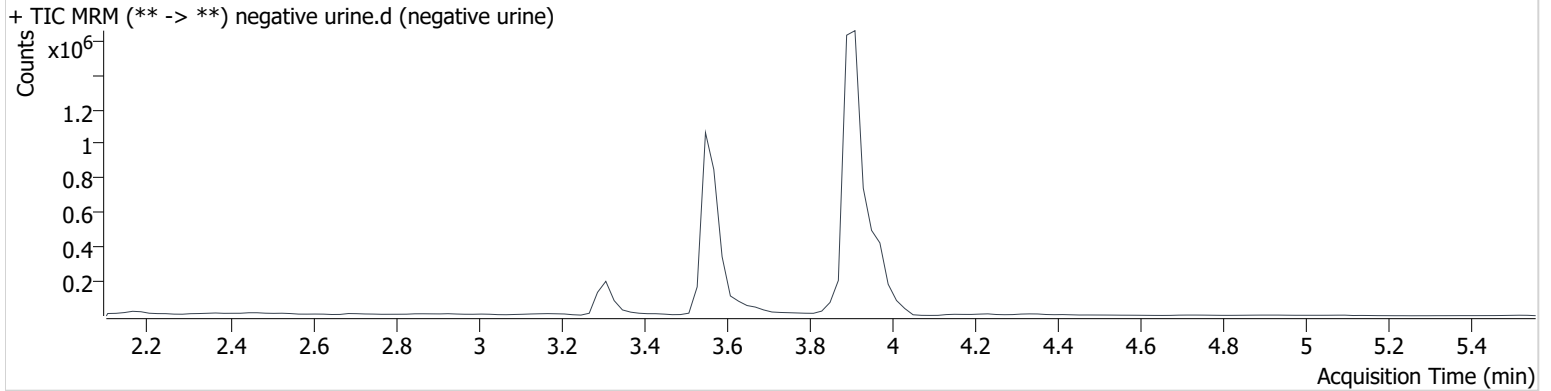
Bylye

Batch results D:\MassHunter\Data\2021\am 25-26\030821\QuantResults\thcs.batch.bin
Calibration Last Update 3/8/2021 8:33:45 PM

Instrument	69679	Data File	negative urine.d
Type	Sample	Sample	negative urine
Acq. Method	am 26 cann scr 5-5-20.m	Operator	Britany Wylie
Sample Position	P3-E3	Comment	
Injection Volume	5		
Acq. Date-Time	3/8/2021 6:03:43 PM		

Sample Info.

Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	3.984	27204	868835	3.713 ng/ml

AM #26 Cannabinoids Screen Results

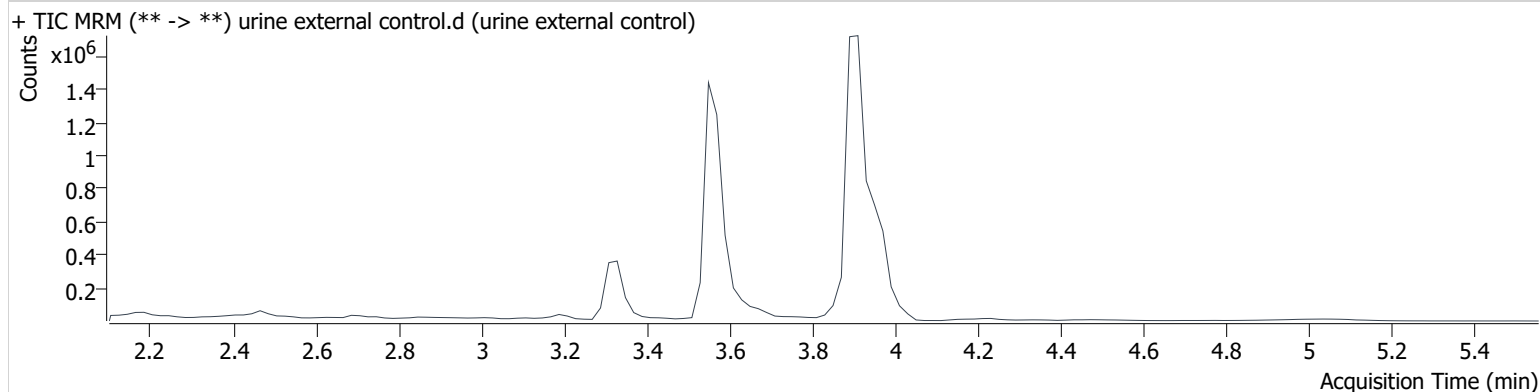
Wylie

Batch results D:\MassHunter\Data\2021\am 25-26\030821\QuantResults\thcs.batch.bin
Calibration Last Update 3/8/2021 8:33:45 PM

Instrument	69679	Data File	urine external control.d
Type	Sample	Sample	urine external control
Acq. Method	am 26 cann scr 5-5-20.m	Operator	Britany Wylie
Sample Position	P3-F3	Comment	
Injection Volume	5		
Acq. Date-Time	3/8/2021 6:10:19 PM		

Sample Info.

Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	3.964	74190	1177455	7.661 ng/ml
THC-COOH	3.331	248204	537568	27.740 ng/ml
THC-OH	3.578	179560	3086686	38.705 ng/ml

Toxicology AM method 27/26 external prep information

Byylee

working solution 15 ug/ml in meoh C-THC, THC-OH, 7.5 ug/ml THC

Stock solution 1mg/ml 7.5 ul each THC, 100 ug/ml 150 ul C-THC, 150 ul THC-OH in 9692.5 ul meOH

Ppd 8/26/20 Exp: 7/1/21 lot 82620 by AMN

Drug	lot	expiration
C-THC	FE01061702	3/1/2022
THC-OH	FE07221601	7/1/2021
THC	FE01041701	3/1/2022

AM 27/26 blood control 100 ul working solution lot () in 9900 ul blood lot ()

		Concentration 7.5 ng/ml THC, 15 ng/ml C-THC, THC-OH	
--	--	--	--

AM 27/26 urine control 400 ul working solution lot (82620) in 9600 ul urine

out of use

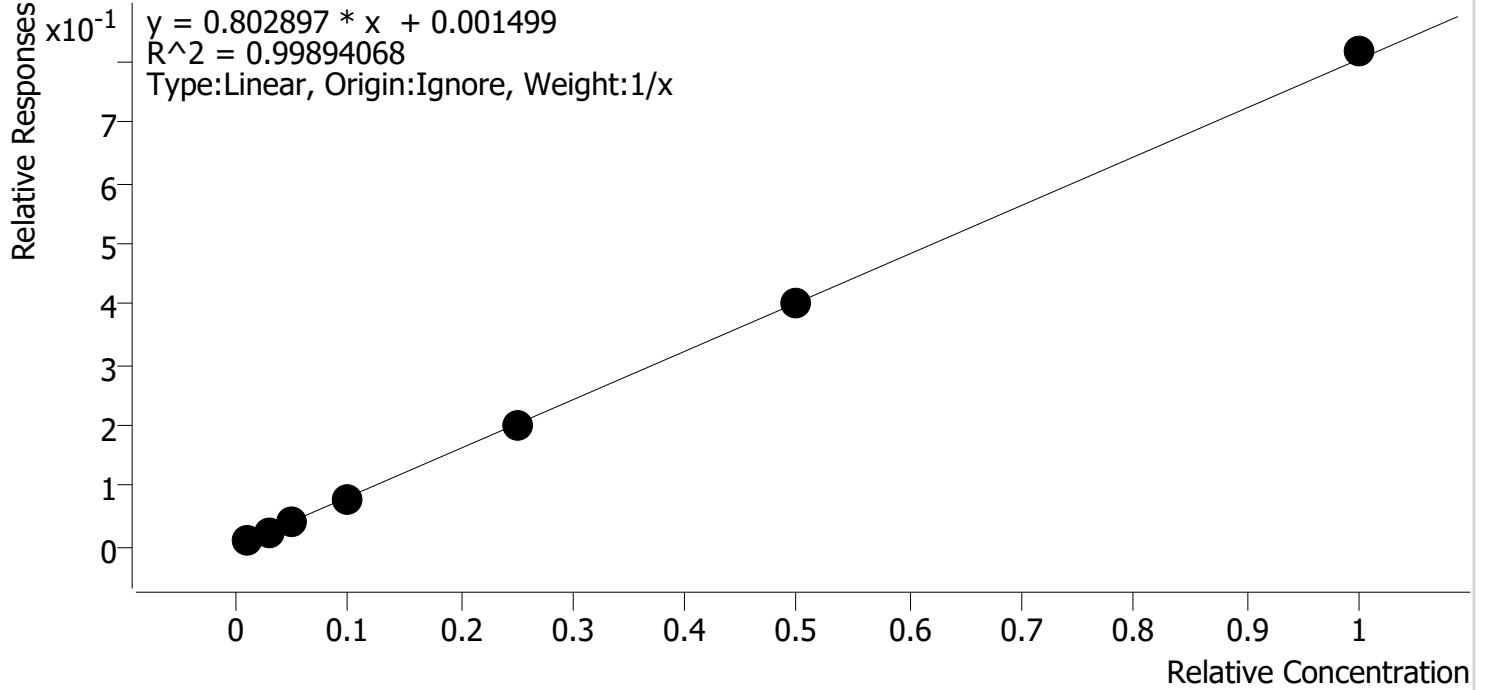
ppd 8/26/20 Exp 7/1/21 neg urine lot 73020	lot u82620	Concentration 30 ng/ml THC, and 60 ng/ml C-THC, THC-OH	by amn	10/4/2020
ppd 10/5/20 Exp 7/1/21 neg urine lot 10120	lot 10520	Concentration 30 ng/ml THC, and 60 ng/ml C-THC, THC-OH	by amn	1/12/2021
ppd 1/13/21 Exp 7/1/21 neg urine lot 10120	lot 11321	Concentration 30 ng/ml THC, and 60 ng/ml C-THC, THC-OH	by amn	

Compound Calibration Report



Batch results D:\MassHunter\Data\2021\am 25-26\030821\QuantResults\thcs.batch.bin
Last Cal. Update 3/8/2021 8:33 PM
Analyst Name ISP\datastor
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
cal 1	1	✓	1.0	1.2	123.2
cal 2	2	✓	3.0	2.7	89.0
cal 3	3	✓	5.0	4.7	94.2
cal 4	4	✓	10.0	9.4	94.3
cal 5	5	✓	25.0	24.5	98.0
cal-6	6	✓	50.0	49.9	99.8
cal-7	7	✓	100.0	101.6	101.6

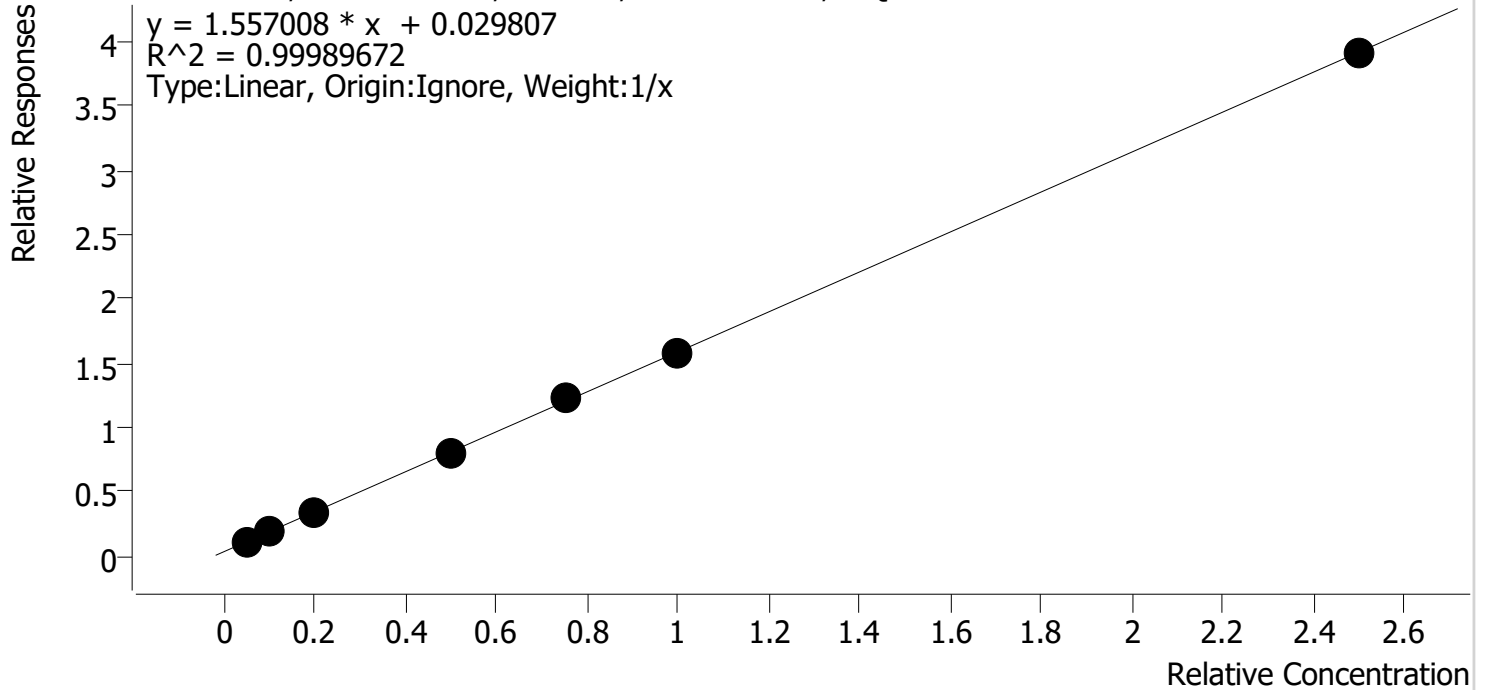
Compound Calibration Report



Batch results D:\MassHunter\Data\2021\am 25-26\030821\QuantResults\thcs.batch.bin
Last Cal. Update 3/8/2021 8:33 PM
Analyst Name ISP\datastor
Analyte THC-COOH

Internal Standard THC-COOH-d9

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



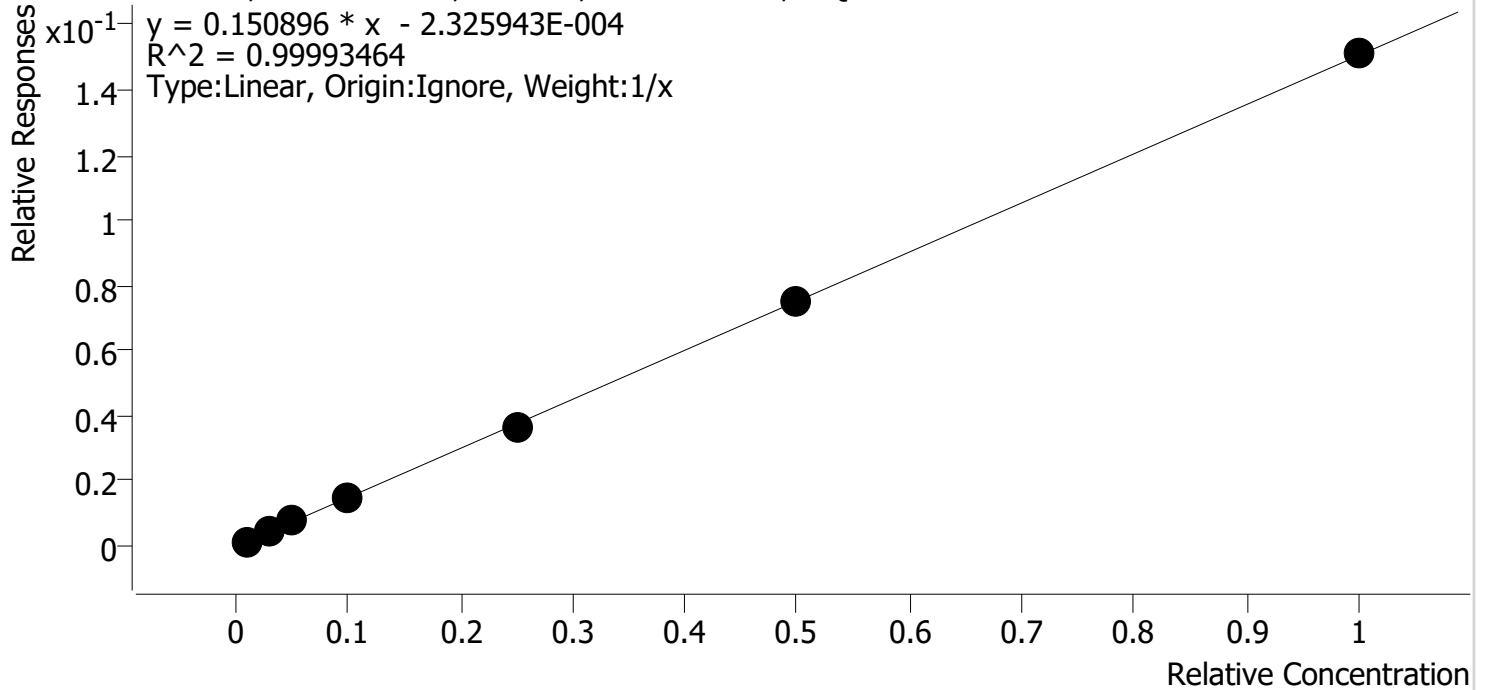
Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
cal 1	1	✓	5.0	4.9	98.0
cal 2	2	✓	10.0	10.1	101.2
cal 3	3	✓	20.0	20.1	100.4
cal 4	4	✓	50.0	49.5	99.0
cal 5	5	✓	75.0	76.5	101.9
cal-6	6	✓	100.0	99.7	99.7
cal-7	7	✓	250.0	249.2	99.7

Compound Calibration Report



Batch results D:\MassHunter\Data\2021\am 25-26\030821\QuantResults\thcs.batch.bin
Last Cal. Update 3/8/2021 8:33 PM
Analyst Name ISP\datastor
Analyte THC-OH **Internal Standard** THC-OH-d3

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



Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
cal 1	1	✓	1.0	1.0	100.4
cal 2	2	✓	3.0	3.0	98.6
cal 3	3	✓	5.0	5.1	101.6
cal 4	4	✓	10.0	10.1	100.9
cal 5	5	✓	25.0	24.6	98.3
cal-6	6	✓	50.0	49.9	99.9
cal-7	7	✓	100.0	100.3	100.3

AM #26 Cannabinoids Screen Results

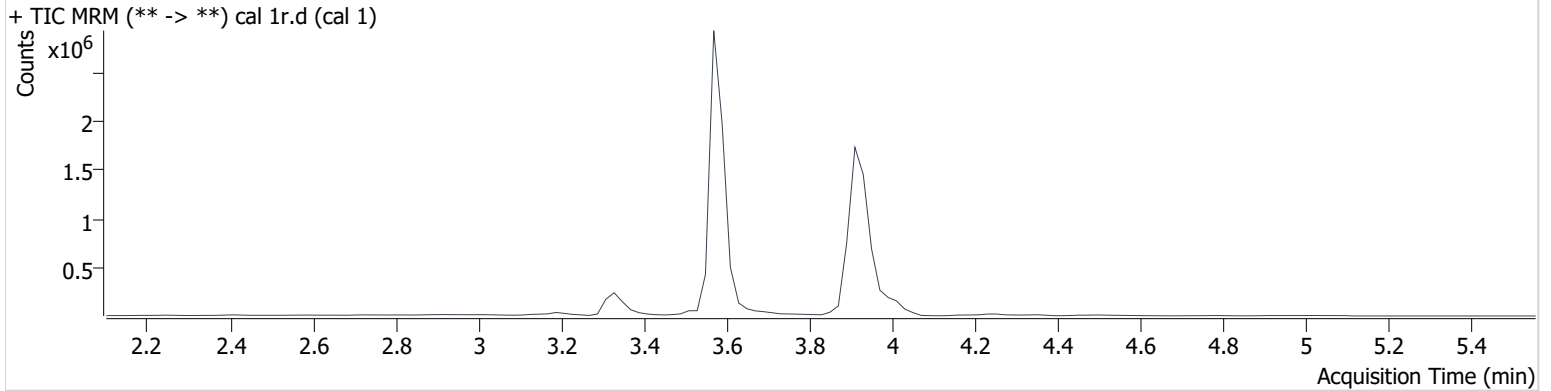
Wylie

Batch results D:\MassHunter\Data\2021\am 25-26\030821\QuantResults\thcs.batch.bin
Calibration Last Update 3/8/2021 8:33:45 PM

Instrument	69679	Data File	cal 1.r.d
Type	Cal	Sample	cal 1
Acq. Method	am 26 cann scr 5-5-20.m	Operator	Britany Wylie
Sample Position	P3-A1	Comment	
Injection Volume	5		
Acq. Date-Time	3/8/2021 3:51:46 PM		

Sample Info.

Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.	
THC	3.984	2840	249361	1.232 ng/ml	Low
THC-COOH	3.331	61006	574931	4.901 ng/ml	Low
THC-OH	3.578	9368	7308474	1.004 ng/ml	Low

AM #26 Cannabinoids Screen Results

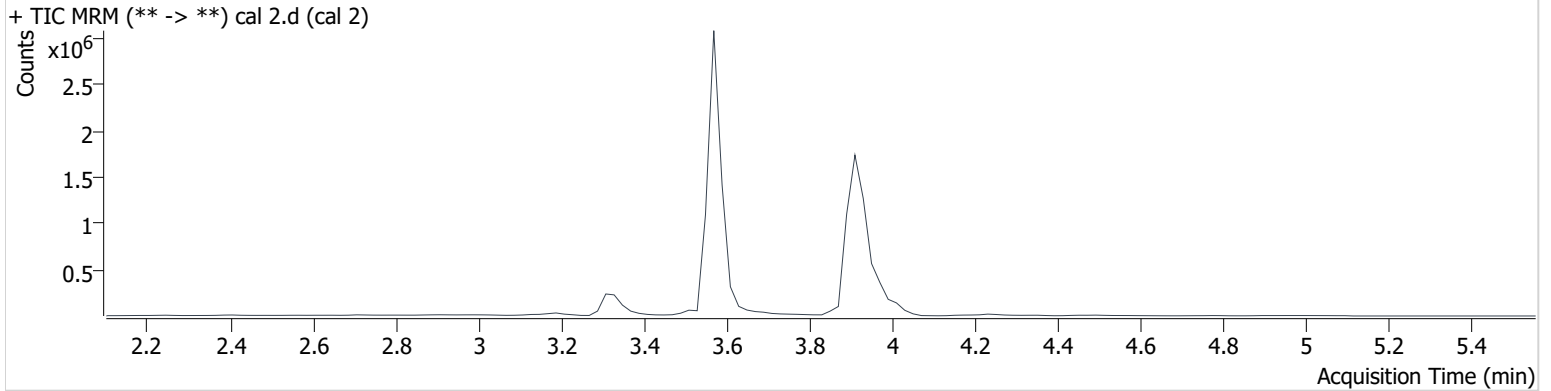
Wylie

Batch results D:\MassHunter\Data\2021\am 25-26\030821\QuantResults\thcs.batch.bin
Calibration Last Update 3/8/2021 8:33:45 PM

Instrument	69679	Data File	cal 2.d
Type	Cal	Sample	cal 2
Acq. Method	am 26 cann scr 5-5-20.m	Operator	Britany Wylie
Sample Position	P3-B1	Comment	
Injection Volume	5		
Acq. Date-Time	3/8/2021 3:58:23 PM		

Sample Info.

Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.	
THC	3.984	10881	474540	2.669 ng/ml	Low
THC-COOH	3.331	103227	551021	10.118 ng/ml	
THC-OH	3.578	30059	7103064	2.959 ng/ml	Low

AM #26 Cannabinoids Screen Results

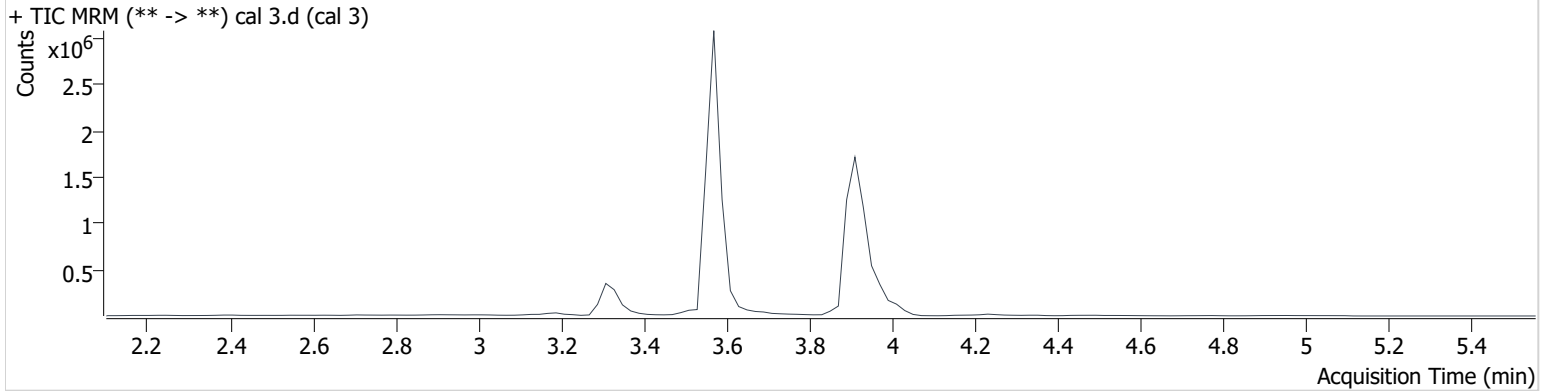
Wylie

Batch results D:\MassHunter\Data\2021\am 25-26\030821\QuantResults\thcs.batch.bin
Calibration Last Update 3/8/2021 8:33:45 PM

Instrument	69679	Data File	cal 3.d
Type	Cal	Sample	cal 3
Acq. Method	am 26 cann scr 5-5-20.m	Operator	Britany Wylie
Sample Position	P3-C1	Comment	
Injection Volume	5		
Acq. Date-Time	3/8/2021 4:04:59 PM		

Sample Info.

Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	3.984	19350	491995	4.712 ng/ml
THC-COOH	3.311	199288	581679	20.090 ng/ml
THC-OH	3.578	53308	7174953	5.078 ng/ml

AM #26 Cannabinoids Screen Results

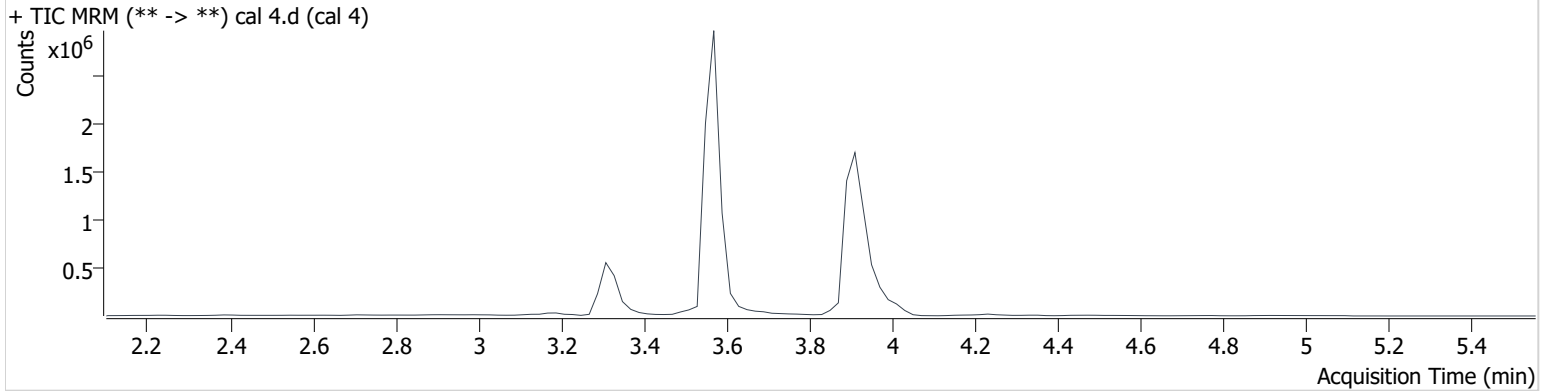
Wylie

Batch results D:\MassHunter\Data\2021\am 25-26\030821\QuantResults\thcs.batch.bin
Calibration Last Update 3/8/2021 8:33:45 PM

Instrument	69679	Data File	cal 4.d
Type	Cal	Sample	cal 4
Acq. Method	am 26 cann scr 5-5-20.m	Operator	Britany Wylie
Sample Position	P3-D1	Comment	
Injection Volume	5		
Acq. Date-Time	3/8/2021 4:11:35 PM		

Sample Info.

Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	3.984	34756	450173	9.429 ng/ml
THC-COOH	3.311	447707	559055	49.519 ng/ml
THC-OH	3.578	103819	6924127	10.091 ng/ml

AM #26 Cannabinoids Screen Results

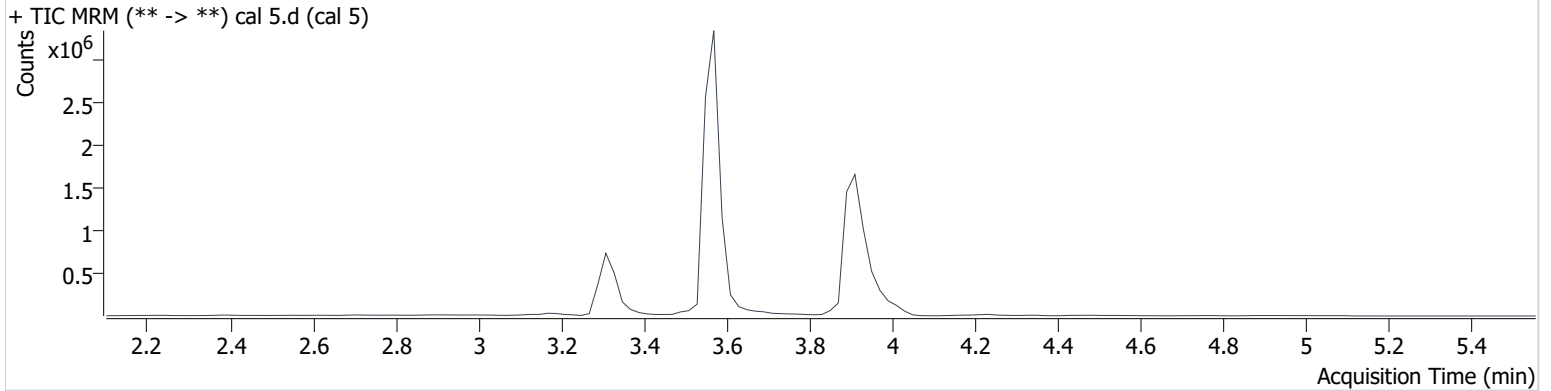
Wylie

Batch results D:\MassHunter\Data\2021\am 25-26\030821\QuantResults\thcs.batch.bin
Calibration Last Update 3/8/2021 8:33:45 PM

Instrument	69679	Data File	cal 5.d
Type	Cal	Sample	cal 5
Acq. Method	am 26 cann scr 5-5-20.m	Operator	Britany Wylie
Sample Position	P3-E1	Comment	
Injection Volume	5		
Acq. Date-Time	3/8/2021 4:18:11 PM		

Sample Info.

Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	3.984	91131	459958	24.490 ng/ml
THC-COOH	3.311	652554	534787	76.455 ng/ml
THC-OH	3.578	252267	6842827	24.585 ng/ml

AM #26 Cannabinoids Screen Results

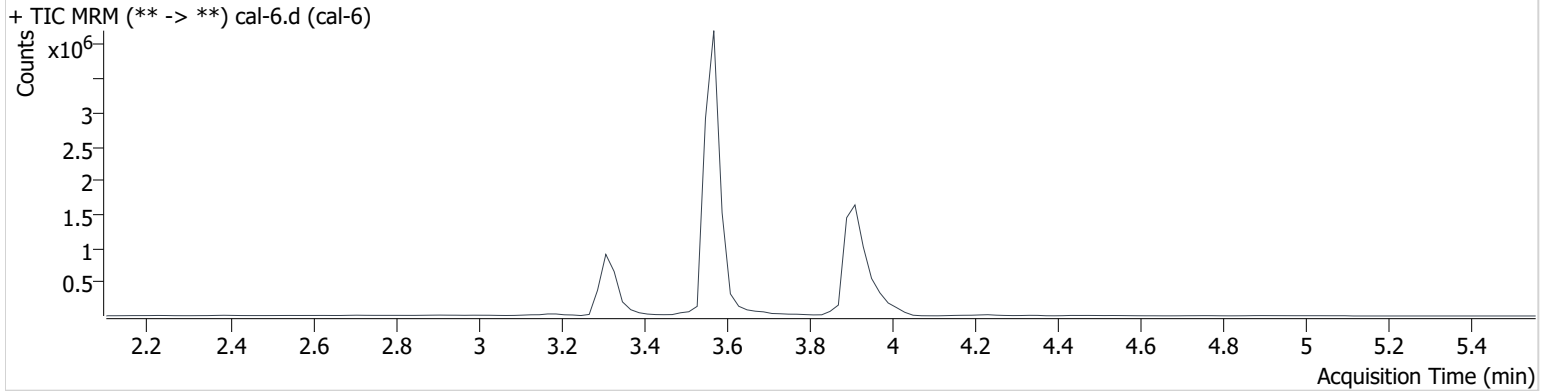
Wylie

Batch results D:\MassHunter\Data\2021\am 25-26\030821\QuantResults\thcs.batch.bin
Calibration Last Update 3/8/2021 8:33:45 PM

Instrument	69679	Data File	cal-6.d
Type	Cal	Sample	cal-6
Acq. Method	am 26 cann scr 5-5-20.m	Operator	Britany Wylie
Sample Position	P3-F1	Comment	
Injection Volume	5		
Acq. Date-Time	3/8/2021 4:24:48 PM		

Sample Info.

Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	3.984	182209	453234	49.884 ng/ml
THC-COOH	3.311	854178	539904	99.697 ng/ml
THC-OH	3.578	503528	6703318	49.934 ng/ml

AM #26 Cannabinoids Screen Results

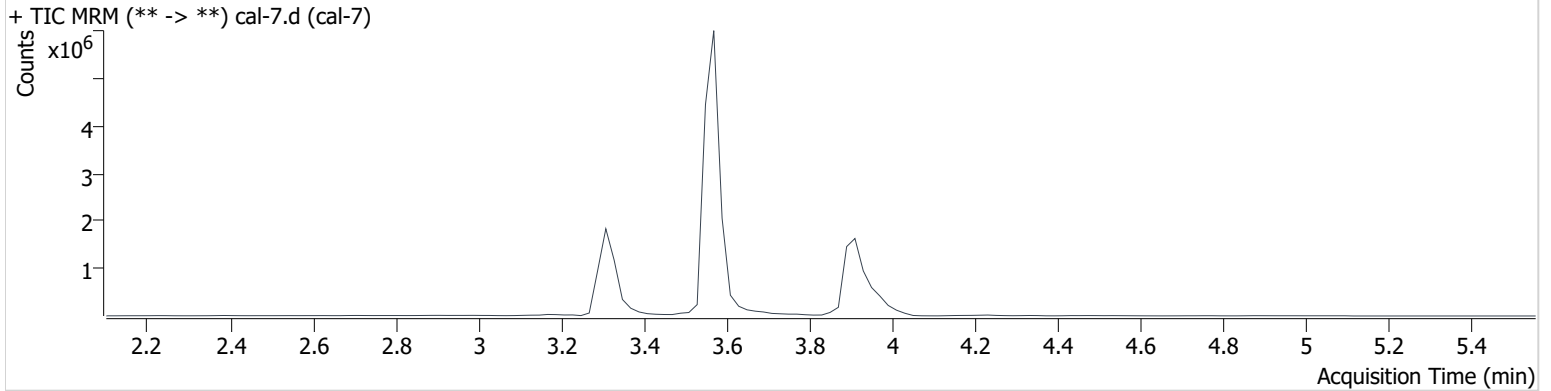
Wylie

Batch results D:\MassHunter\Data\2021\am 25-26\030821\QuantResults\thcs.batch.bin
Calibration Last Update 3/8/2021 8:33:45 PM

Instrument	69679	Data File	cal-7.d
Type	Cal	Sample	cal-7
Acq. Method	am 26 cann scr 5-5-20.m	Operator	Britany Wylie
Sample Position	P3-G1	Comment	
Injection Volume	5		
Acq. Date-Time	3/8/2021 4:31:24 PM		

Sample Info.

Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	3.984	380526	465696	101.584 ng/ml
THC-COOH	3.311	1966282	502859	249.221 ng/ml
THC-OH	3.578	1028787	6804551	100.350 ng/ml

am 26
3/8/21 WORKLIST 4825

Byylee

	1	2	3	4	5	6
A	IS + Cal. 1	neg blood	489-1	491-1		IS + QC_1
B	IS + Cal. 2	360-1	503-1	431-1 2nd		IS + Cal. 7
C	IS + Cal. 3	398-1	505-1			IS + Cal. 6
D	IS + Cal. 4	428-1	528-1			IS + Cal. 5
E	IS + Cal. 5	429-4	neg urine			IS + Cal. 4
F	IS + Cal. 6	430-1	urine ext			IS + Cal. 3
G	IS + Cal. 7	431-1- did not flow through SLE	345-1			IS + Cal. 2
H	IS + QC_1	454-1	418-1			IS + Cal. 1

All wells to contain 100 µl of residual DMSO

Case #: C2021-0 ____ - __