REVIEWED
By Sarah Pickle at 1:35 pm, Feb 25, 2020

2/18/2020

Worklist: 4006

LAB_CASE	ITEM	ITEM_TYPE	DESCRIPTION
C2020-0101	1	UCK	AM 25/AM 26 Urine MultiDrug/THC Screen by LC-QQQ
C2020-0164	1	UCK	AM 25/AM 26 Urine MultiDrug/THC Screen by LC-QQQ
C2020-0186	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ
C2020-0193	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ
C2020-0210	1	UCK	AM 25/AM 26 Urine MultiDrug/THC Screen by LC-QQQ
C2020-0211	2	UCK	AM 25/AM 26 Urine MultiDrug/THC Screen by LC-QQQ
C2020-0225	1	AVK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ
C2020-0237	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ
C2020-0238	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ
C2020-0240	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ
C2020-0267	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ
C2020-0272	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ
C2020-0284	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ
C2020-0285	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ
C2020-0300	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ
C2020-0301	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ

2/18/2020

Worklist: 4008

LAB_CASE	ITEM	ITEM_TYPE	DESCRIPTION
C2020-0308	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ

Idaho State Police
Forensic Services
Toxicology Discipline

Request for Departure from an Analytical Method

Date of Request
01/13/2020

Forensic Scientist
Celena Shrum

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

Deviation

The expiration dates listed for the current batch of PinPoint ToxBox extraction plates are as follows:
*MDS (batch IDP-107-190725)- Expiration is 1/25/2020
*THC (batch IDP-108-190716)- Expiration is 1/16/2020
*MDQ P1 (batch IDP-111-190729)- Expiration is 1/29/2020
*MDQ P2 (batch IDP-112-190730)- Expiration is 1/30/2020

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

Celena Shrum

Date: 01/13/2020
Celena Shrum
Toxicology Discipline Lead

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

Extraction Date: 2/18/20 Analyst: Britany Wylie
Plate lot#: 190725 Plate Expiration: 1/25/2020

Mobile phase A: 10mM Amm Form **Mobile phase B:** 0.1% Formic Acid in MeOH
0.5M Ammonium Hydroxide Ethyl Acetate LC Methanol
Blank Blood Lot: 20A52255 **Blank Urine lot:** 11420 **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. *Shaker ID: 66759*
☒ 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. **Urine samples add 50 ul 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 100% LC MeOH** and heat seal plate with foil. Place in autosampler and run worklist.

Post-Analytic

☒ 1. Open quantitation software and create a new quantitation batch.
☒ 2. Make necessary changes to integration limits
☒ 3. Evaluate samples, S/N of primary transition >5 and S/N of secondary transition >3 or evaluation of peak symmetry and resolution. Within +/- 2% or 0.1 min RT of administrative control. Calculated concentration 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: *slight retention time shifts with new column, as well as some interferrant with methamphetamine. Instrument was flushed with isopropanol and all samples were reconstituted and reinjected 2/19/20.*
Olanzapine not evaluated

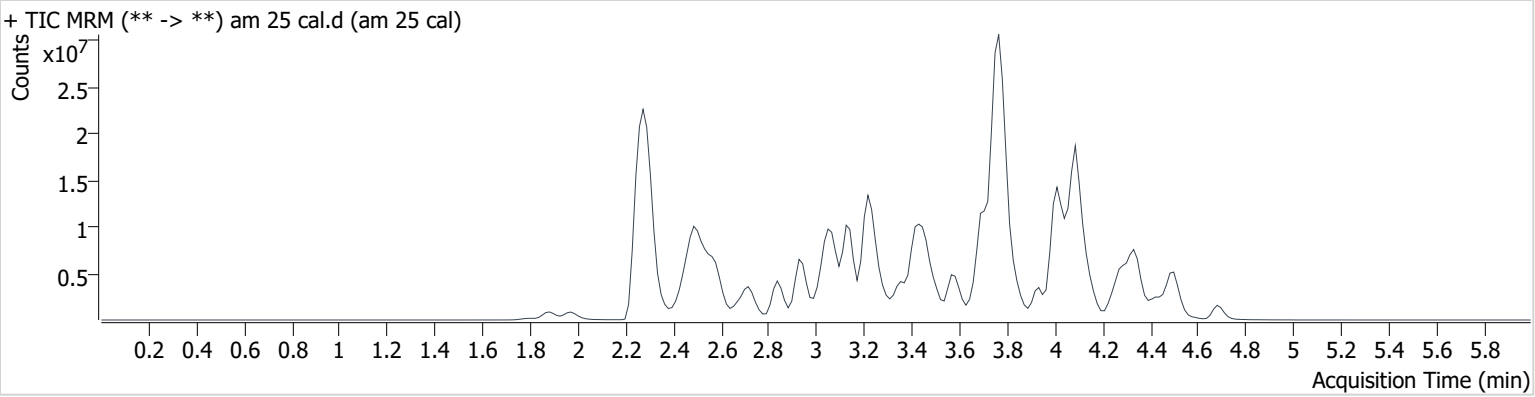
2/25/20

AM #25 Multi-Drug Screen Results

Batch results D:\MassHunter\Data\2020 Data\am 25-26 2-18-2020 reinject\QuantResults\mds reinject.batch.bin
Calibration Last Update 2/24/2020 9:42:04 AM

Instrument	69679	**Data File**	am 25 cal.d
Type	Cal	**Sample**	am 25 cal
Acq. Method	am25 short rt short.m	**Operator**	Britany Wylie
Sample Position	P2-A1	**Comment**	
Injection Volume	2.5		
Acq. Date-Time	2/19/2020 12:18:37 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
6-MAM	2.455	20242	49988.9	6264.7	703704	10.000
7-aminoclonazepam	3.282	621687	639.9	203.3	2896581	10.000
7-aminoflunitrazepam	3.525	905508	1126.6	275.9	5764838	10.000
Acetyl Fentanyl	3.429	188424	151.1	2090.4	11788286	10.000
Acetyl Norfentanyl	2.479	101447	999.7	258.4	6499374	10.000
a-hydroxyalprazolam	4.333	132971	247.6	15493.4	733073	10.000
alpha-hydroxymidazolam	4.286	787573	350.2	1080.0	4734822	10.000
alpha-PVP	3.150	1673369	2364.1	152.8	7720289	10.000
Alprazolam	4.442	1070975	127.0	689.0	3973687	10.000
Amitriptyline	4.126	1004130	147.0	269.1	3939534	10.000
Amphetamine	2.468	1336802	7196.5	901.0	4798799	10.000
Benzoylecgonine	3.081	334153	188378.1	184.6	1644084	10.000
Buprenorphine	3.748	159145	314.9	23162.6	758897	10.000
Bupropion	3.363	1823559	519.9	269.4	6821635	10.000
Carbamazepine	4.022	3631712	∞	6363.8	19218105	10.000
Carisoprodol	4.004	862348	567.0	307.0	4166205	10.000
Chlordiazepoxide	4.368	310435	37.5	211.9	7521283	10.000
Chlorpheniramine	3.605	3241108	74133.1	∞	27879133	10.000
Citalopram	3.782	1022631	332.0	495.6	4616518	10.000
Clonazepam	4.274	807601	841.0	770.0	1300628	10.000
Cocaine	3.218	2241931	13651.5	745.2	12466385	10.000
Codeine	2.337	158135	862.3	496.3	773762	10.000
Cyclobenzaprine	4.048	1712884	259.1	48.2	7229288	10.000
Desipramine	4.096	2427312	1109.5	508.2	12741788	10.000
Dextromethorphan	3.743	747980	1111.5	5938.9	3662818	10.000
Dextrorphan	3.024	1164491	659.4	1620.8	6481959	10.000
Diazepam	4.707	752390	17349.4	646.2	3716120	10.000
Dihydrocodeine	2.306	331046	429.6	539.7	1820798	10.000
Diphenhydramine	3.713	4355691	1753.7	526.3	27879133	10.000
Doxepin	3.831	1042243	413.5	187.0	5449989	10.000
Doxylamine	3.236	3624238	685.5	5539.4	17570470	10.000
EDDP	3.771	2870541	3389.5	2593.6	18720115	10.000
Estazolam	4.354	2315417	966.3	559.5	6116989	10.000
Etizolam	4.454	102825	52283.2	5222.4	6116989	10.000

AM #25 Multi-Drug Screen Results

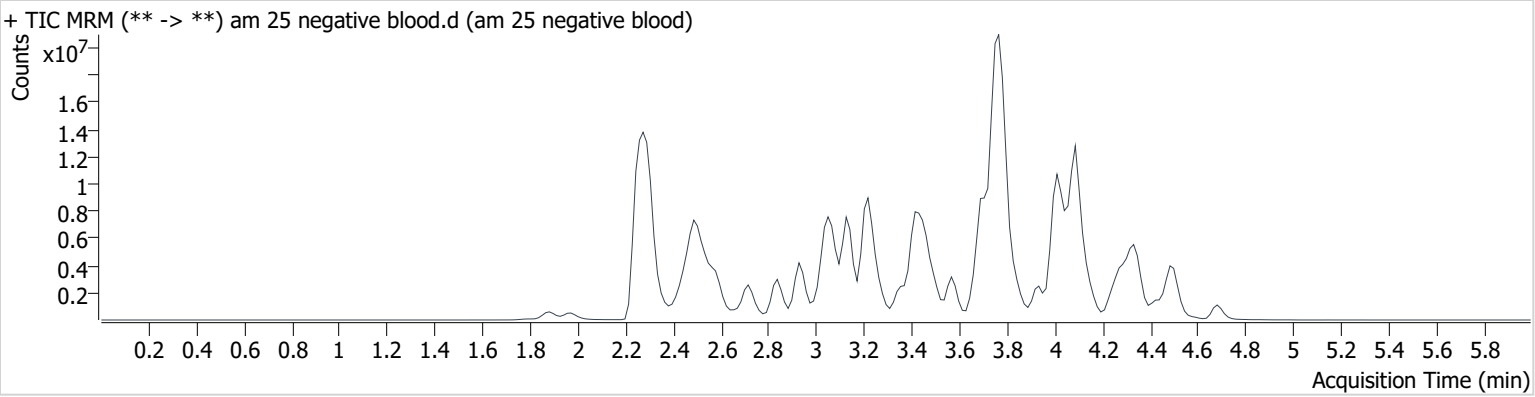
Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Fentanyl	3.674	146900	449.0	31011.8	9532559	10.000
Flunitrazepam	4.396	1424722	1109.2	236853.5	263768	10.000
Fluoxetine	4.059	1705861	399.8	114.4	7793326	10.000
Flurazepam	3.795	1113913	17135.7	111250.5	263768	10.000
Hydrocodone	2.549	606671	776.1	1360.3	3579291	10.000
Hydromorphone	1.978	595436	578.2	2642.8	2349759	10.000
Imipramine	4.094	2604500	2453.5	289.6	11017731	10.000
Ketamine	2.950	1331992	3620.9	153.9	6684713	10.000
Lamotrigine	3.146	125052	227.5	543.1	5425148	10.000
Levamisole	2.495	1112701	772.1	227.1	12466385	10.000
Lorazepam	4.243	222874	2221.7	197.3	3973687	10.000
Maprotiline	4.126	850267	93.4	456.3	3939534	10.000
MDA	2.603	1590231	2182.1	264.2	7504287	10.000
MDEA	2.861	2187371	806.7	2780.7	10592267	10.000
MDMA	2.693	2471513	926.7	471.9	1591496	10.000
Meperidine	3.223	1167887	888.7	371.5	5425148	10.000
Meprobamate	3.396	522197	864.8	210.7	2418307	10.000
Methadone	4.105	2694002	649.9	465.0	14536149	10.000
Methamphetamine	2.574	3893799	200.0	264.5	9922186	10.000
Methocarbamol	3.302	230671	232.5	228.1	5425148	10.000
Methylphenidate	3.149	3715117	616.4	3942.5	18374458	10.000
Metoprolol	3.068	311551	506.6	263236.4	5425148	10.000
Midazolam	4.087	153865	119.8	57.6	1391478	10.000
Mirtazapine	3.314	1055205	3868.6	7901.7	5425148	10.000
Mitragynine	3.824	114910	269.9	783.4	5449989	10.000
Morphine	1.800	128805	1257.9	1278.8	95224	10.000
Norbuprenorphine	3.504	35172	63.8	39.5	185680	10.000
Nordiazepam	4.524	744018	1995.5	929.1	2452612	10.000
Norfentanyl	2.951	2365415	730.6	331.7	11181289	10.000
Norhydrocodone	2.521	17711	108.7	48.5	777377	10.000
Normeperidine	3.256	1192642	585.9	712.9	4983253	10.000
Noroxycodone	2.488	410487	113.2	48.6	2324664	10.000
Nortriptyline	4.127	1178127	753.6	418.8	3128199	10.000
O-desmethyl-tramadol	2.507	2856227	2519.4	55.9	16411239	10.000
Oxazepam	4.339	1042545	624.0	145.6	6361169	10.000
Oxycodone	2.486	1095936	444.1	478.6	5356702	10.000
Oxymorphone	1.883	602856	5323.2	9890.7	2639544	10.000
Paroxetine	4.071	245581	545.4	218.0	5880658	10.000
Phenazepam	4.484	973174	2590.2	897.1	4351664	10.000
Phencyclidine	3.592	2246166	26848.2	2166.3	11265923	10.000
Phentermine	2.742	842215	165.3	47.1	9003328	10.000
Phenytoin	3.928	21931	35.1	19.3	131216	10.000
Promethazine	4.000	3324017	1583.1	437.7	13482855	10.000
Pseudoephedrine	2.284	28692837	1900.8	1047.5	77364954	10.000
Quetiapine	3.933	1288939	749.2	866.4	2026953	10.000
Sertraline	4.291	1241122	1361.3	2501.5	5880658	10.000
Sufentanil	3.932	102463	16515.6	737.4	6372053	10.000
Tapentadol	3.090	2118804	602.4	7997.1	11238325	10.000
Temazepam	4.505	1779478	1046.8	132.6	8495447	10.000
Tramadol	3.054	3543215	847.1	504.4	19887076	10.000
Trazodone	3.750	1230272	539.8	336.7	6550699	10.000
Venlafaxine	3.465	2805641	2270.5	316.5	15355623	10.000
Zaleplon	4.168	1077802	1791.5	267.0	3043328	10.000
Zolpidem	3.430	2980835	1104.9	416.1	15358901	10.000
Zopiclone	3.382	262995	952.1	334.4	1441941	10.000

AM #25 Multi-Drug Screen Results

Batch results D:\MassHunter\Data\2020 Data\am 25-26 2-18-2020 reinject\QuantResults\mds reinject.batch.bin
Calibration Last Update 2/24/2020 9:42:04 AM

Instrument	69679	**Data File**	am 25 negative blood.d
Type	Sample	**Sample**	am 25 negative blood
Acq. Method	am25 short rt short.m	**Operator**	Britany Wylie
Sample Position	P2-A2	**Comment**	
Injection Volume	2.5		
Acq. Date-Time	2/19/2020 12:25:20 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Methamphetamine	2.574	1343279	57.6		6423799	5.329 <10

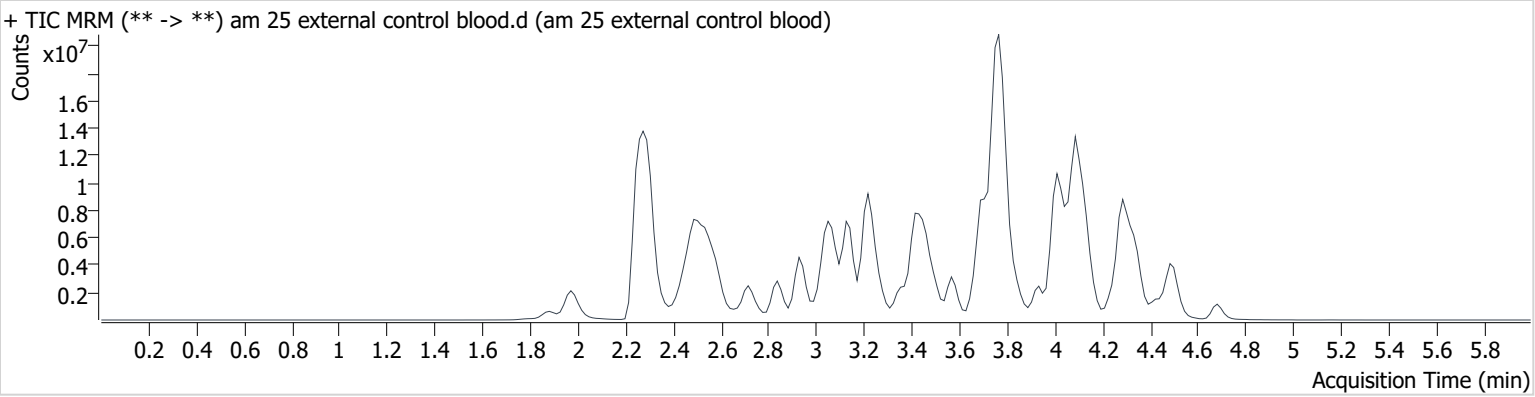
BW 2-25-20

AM #25 Multi-Drug Screen Results

Batch results D:\MassHunter\Data\2020 Data\am 25-26 2-18-2020 reinject\QuantResults\mds reinject.batch.bin
Calibration Last Update 2/24/2020 9:42:04 AM

Instrument	69679	**Data File**	am 25 external control blood.d
Type	Sample	**Sample**	am 25 external control blood
Acq. Method	am25 short rt short.m	**Operator**	Britany Wylie
Sample Position	P2-B2	**Comment**	
Injection Volume	2.5		
Acq. Date-Time	2/19/2020 12:32:03 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Hydrocodone	2.549	5445073	2895.3	4427.6	3294675	97.507
Hydromorphone	1.978	3997998	4091.2	3653.5	1958062	80.576
Methamphetamine	2.574	1543665	145.6		6449712	6.099 <10
Nortriptyline	4.127	7711523	2460.3	683.3	2745536	74.579
Sertraline	4.291	7768404	1879.0	2427.1	5297102	69.487

2-25-20

Toxicology AM method 25 blood external prep information

working solution 10000 ng/ml in meoh Hydromorphone, Hydrocodone, Nortriptyline, Sertraline
Stock solution 1mg/ml 100 ul each in 9600ul meOH

ppd 5/20/19: Exp: ~~5/20/20~~ 2-25-20 BW lot 52020 by baw
Exp: 3/1/20

Drug	lot	expiration
Hydromorphone	FE04101502	6/1/2020
Hydrocodone	FE09091505	9/1/2020
nortriptyline	FN06191503	8/1/2020
sertraline	FN01081501	3/1/2020

AM 25 control 100 ul working solution (52020) in 9900 ul neg blood

ppd 5/20/19, exp 3/1/20 lot 52019 neg blood lot 19A207P3 by BAW

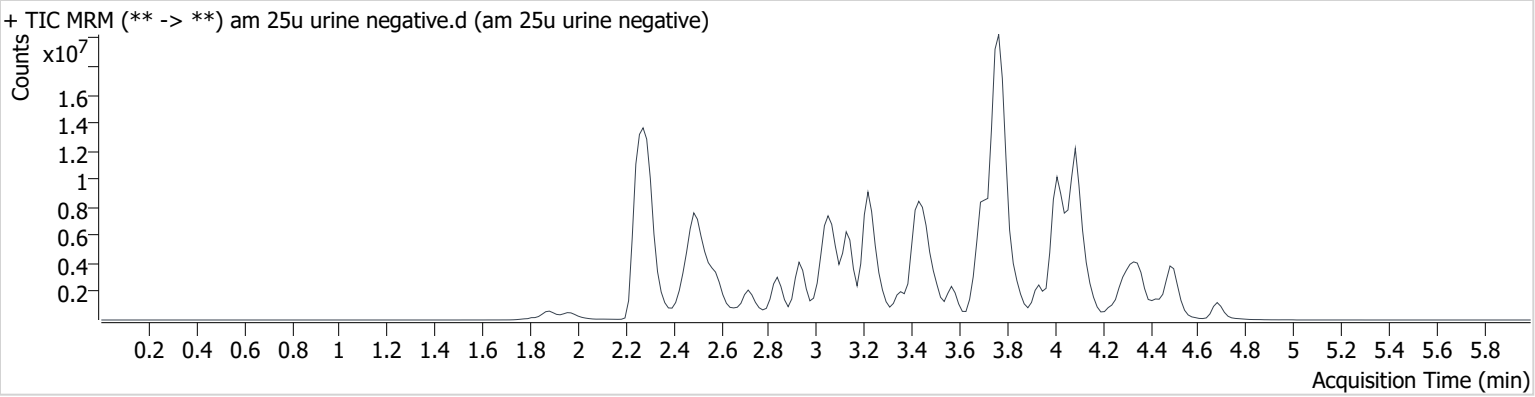
Concentration 100ng/ml hydrocodone, nortriptyline, sertraline, hydromorphone

AM #25 Multi-Drug Screen Results

Batch results	D:\MassHunter\Data\2020 Data\am 25-26 2-18-2020 reinject\QuantResults\mds reinject.batch.bin
Calibration Last Update	2/24/2020 9:42:04 AM

Instrument	69679	**Data File**	am 25u urine negative.d
Type	Sample	**Sample**	am 25u urine negative
Acq. Method	am25 short rt short.m	**Operator**	Britany Wylie
Sample Position	P2-A3	**Comment**	
Injection Volume	2.5		
Acq. Date-Time	2/19/2020 2:26:22 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Methamphetamine	2.574	1302686	89.8		5488299	6.048

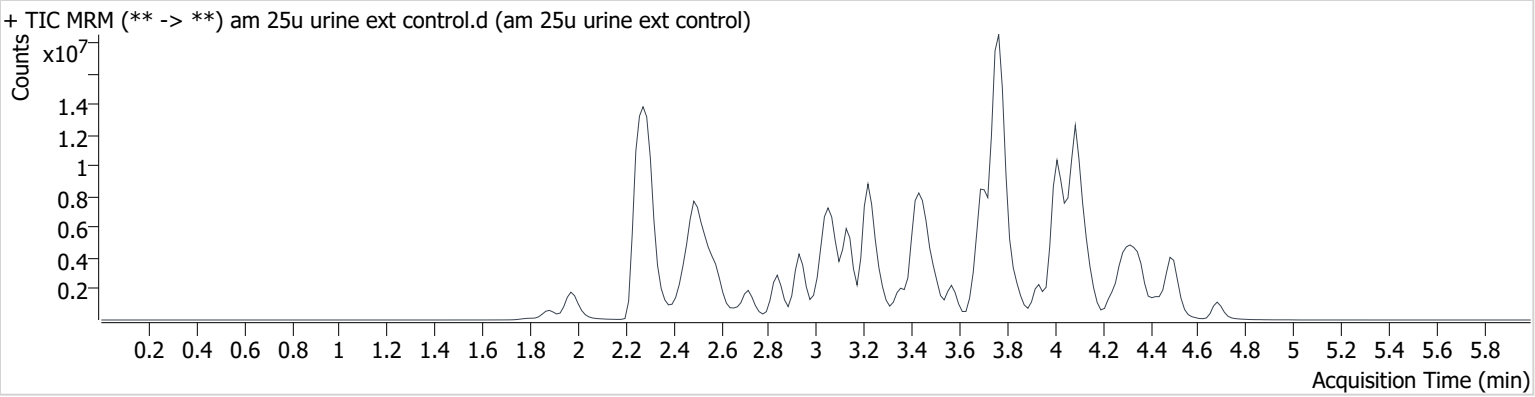
<10
BW
2-25-20

AM #25 Multi-Drug Screen Results

Batch results D:\MassHunter\Data\2020 Data\am 25-26 2-18-2020 reinject\QuantResults\mds reinject.batch.bin
Calibration Last Update 2/24/2020 9:42:04 AM

Instrument	69679	**Data File**	am 25u urine ext control.d
Type	Sample	**Sample**	am 25u urine ext control
Acq. Method	am25 short rt short.m	**Operator**	Britany Wylie
Sample Position	P2-B3	**Comment**	
Injection Volume	2.5		
Acq. Date-Time	2/19/2020 2:39:40 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Hydrocodone	2.549	3433872	2167.6	10618.8	3533261	57.339
Hydromorphone	1.978	2981335	1108.4	2133.3	2100356	56.015
Methamphetamine	2.574	1127207	∞		3598586	7.982
Nortriptyline	4.143	2432584	606434.4	1170.0	2517916	25.652
Sertraline	4.291	1126853	2005045.3	1365.9	3792756	14.077

<10 BW 2-25-20

Toxicology AM method 25 urine external control prep

working solution 10000 ng/ml in meoh Hydromorphone, Hydrocodone, Nortriptyline, Sertraline

Stock solution 1mg/ml 100 ul each in 9600ul meOH

ppd 5/20/19: Exp: ~~5/20/20~~ lot 52020 by baw

exp: 3/1/20 BW 2-25-20

Drug	lot	expiration
Hydromorphone	FE04101502	6/1/2020
Hydrocodone	FE09091505	9/1/2020
nortriptyline	FN06191503	8/1/2020
sertraline	FN01081501	3/1/2020

AM 25 control 30 ul working solution (52020) in 270 ul negative urine

ppd 10/7/19, exp 3/1/20 lot 10719 negative urine lot 8919 by AMN

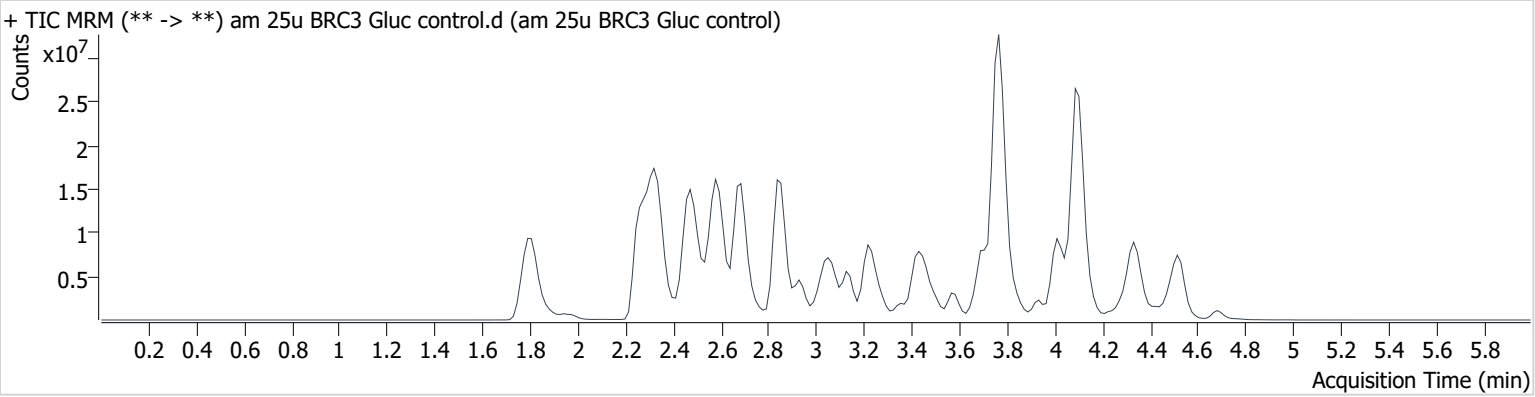
Concentration 100ng/ml hydrocodone, nortriptyline, sertraline, hydromorphone

AM #25 Multi-Drug Screen Results

Batch results D:\MassHunter\Data\2020 Data\am 25-26 2-18-2020 reinject\QuantResults\mds reinject.batch.bin
Calibration Last Update 2/24/2020 9:42:04 AM

Instrument	69679	**Data File**	am 25u BRC3 Gluc control.d
Type	Sample	**Sample**	am 25u BRC3 Gluc control
Acq. Method	am25 short rt short.m	**Operator**	Britany Wylie
Sample Position	P2-C3	**Comment**	
Injection Volume	2.5		
Acq. Date-Time	2/19/2020 2:52:57 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
6-MAM	2.455	137991	171.2	148.1	575499	83.356
a-hydroxyalprazolam	4.333	1664044	695.9	2389.5	409267	224.154
Amphetamine	2.468	12063748	2530.1	9267.7	2067143	209.497
Benzoylecgonine	3.081	283489	1122.0	161.0	1595425	8.743
Codeine	2.337	18112063	48346.5	37391.4	479023	1850.079
Dextrorphan	3.024	2679642	1910.4	484.9	4827834	30.895
EDDP	3.771	5256530	700.1	1365.4	11664194	29.389
Hydromorphone	1.811 **Low**	6979787	74229.7	5851.1	1765795	155.988
MDA	2.603	22896706	1720.5	∞	4592486	235.274
MDEA	2.861	34114465	1838.5	2429.5	7314056	225.864
MDMA	2.693	36322856	12329.5	1027.7	1155476	202.424
Methadone	4.105	41335744	910.0	16878.0	10180531	219.082
Methamphetamine	2.574	13830898	1246.4	6862.5	2553733	138.009
Morphine	1.800	14143950	108227.3	126623.4	70707	1478.850
Nordiazepam	4.539	12735034	8926.6	17882.4	1728900	242.815
Oxazepam	4.339	10174322	4467.1	551.6	2723341	227.953
Phencyclidine	3.592	2312722	1145.5	991.9	5956995	19.472

Control contains morphine glucuronide- control used to verify efficiency of glucuronidase 2/25/20
BW

BWylie

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

Extraction Date: 2-18-2020 Analyst: Britany Wylie

Plate lot#: 190716 Plate Expiration: 01/16/2020

Mobile phase A: 10mM Ammonium Formate 0.1% Formic Acid in Water **Mobile phase B:** 0.1% Formic acid in MeOH MTBE Hexane
Blank Blood Lot: 20A52255 **Urine Blank:** 11420 **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. *Shaker ID: 66759*
☒ 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 8**00 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 3 ng/mL or greater for THC and THC-OH, a calculated sample concentration of 10 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

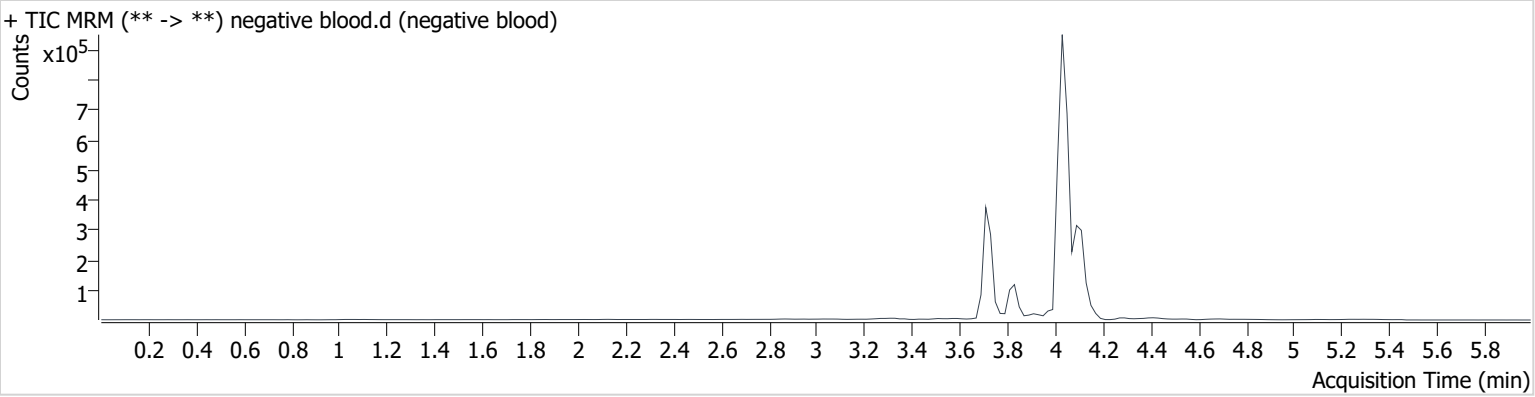
COMMENTS: *run was reconstituted and reinjected after instrument flush, data used for evaluation was from batch saved in file named 2-18-20 reinjected*

AM #26 Cannabinoids Screen Results

Batch results D:\MassHunter\Data\2020 Data\am 25-26 2-18-2020 reinject\QuantResults\thcs.batch.bin
Calibration Last Update 2/19/2020 8:39:28 PM

Instrument	69679	**Data File**	negative blood.d
Type	Sample	**Sample**	negative blood
Acq. Method	am 26 cann screen.m	**Operator**	Britany Wylie
Sample Position	P3-A2	**Comment**	
Injection Volume	5		
Acq. Date-Time	2/19/2020 5:32:10 PM		
Sample Info.			

Sample Chromatogram

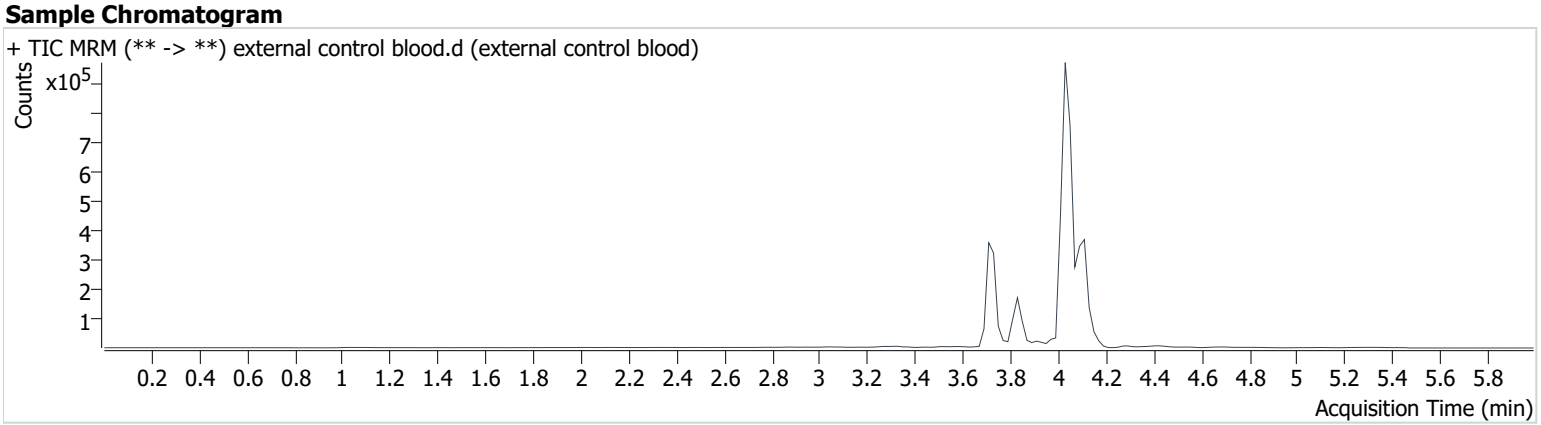


AM #26 Cannabinoids Screen Results

Batch results D:\MassHunter\Data\2020 Data\am 25-26 2-18-2020 reinject\QuantResults\thcs.batch.bin
Calibration Last Update 2/19/2020 8:39:28 PM

Instrument	69679	**Data File**	external control blood.d
Type	Sample	**Sample**	external control blood
Acq. Method	am 26 cann screen.m	**Operator**	Britany Wylie
Sample Position	P3-B2	**Comment**	
Injection Volume	5		
Acq. Date-Time	2/19/2020 5:38:46 PM		
Sample Info.			

Sample Chromatogram



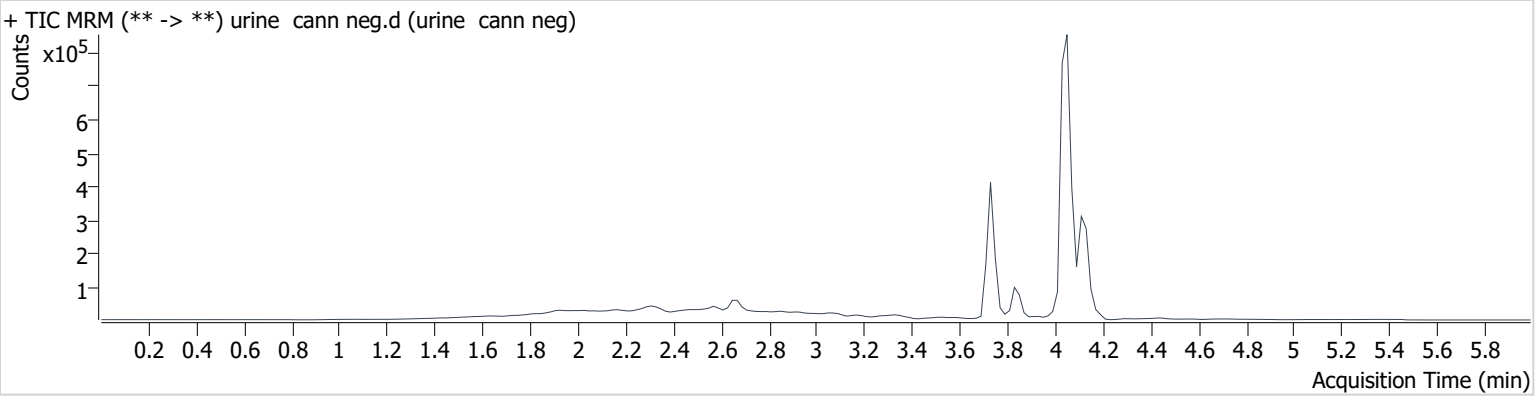
Name	RT	Resp.	ISTD Resp.	Final Conc.	
THC	4.120	78046	662731	8.065	ng/ml
THC-COOH	3.830	56273	289770	15.759	ng/ml
THC-OH	3.716	11843	927871	7.461	ng/ml

AM #26 Cannabinoids Screen Results

Batch results D:\MassHunter\Data\2020 Data\am 25-26 2-18-2020 reinject\QuantResults\thcs.batch.bin
Calibration Last Update 2/19/2020 8:39:28 PM

Instrument	69679	**Data File**	urine cann neg.d
Type	Sample	**Sample**	urine cann neg
Acq. Method	am 26 cann screen.m	**Operator**	Britany Wylie
Sample Position	P3-A4	**Comment**	
Injection Volume	5		
Acq. Date-Time	2/19/2020 7:11:10 PM		
Sample Info.			

Sample Chromatogram

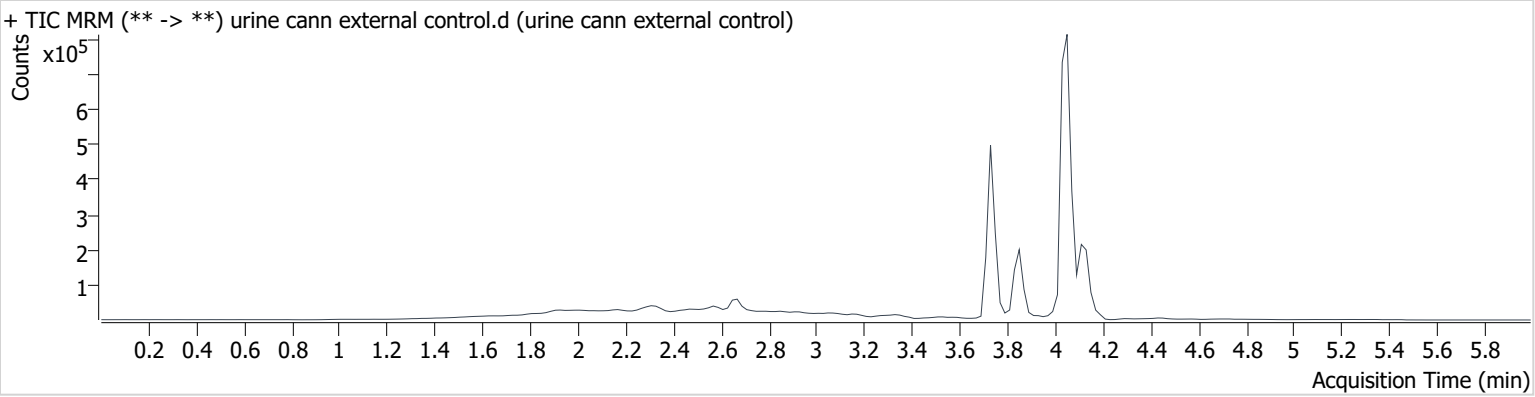


AM #26 Cannabinoids Screen Results

Batch results D:\MassHunter\Data\2020 Data\am 25-26 2-18-2020 reinject\QuantResults\thcs.batch.bin
Calibration Last Update 2/19/2020 8:39:28 PM

Instrument	69679	**Data File**	urine cann external control.d
Type	Sample	**Sample**	urine cann external control
Acq. Method	am 26 cann screen.m	**Operator**	Britany Wylie
Sample Position	P3-B4	**Comment**	
Injection Volume	5		
Acq. Date-Time	2/19/2020 7:17:47 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.	
THC	4.120	39965	398809	6.904	ng/ml
THC-COOH	3.850	122052	215496	46.536	ng/ml
THC-OH	3.736	28623	924113	17.942	ng/ml

Toxicology AM method 27/26 external prep information

working solution 1 ug/ml in meoh C-THC, THC-OH, THC

Stock solution 1mg/ml 7.5 ul each THC, 100 ug/ml 150 ul C-THC, 75 ulTHC-OH in 9767.5 ul meOH

Ppd 2/13/20 Exp: 8/13/20 lot 21320 by AMN

Drug	lot	expiration
C-THC	FE07171501	9/1/2020
THC-OH	FE07721601	7/1/2021
THC	FE001041701	3/1/2022

AM 27/26 blood control 100 ul working solution lot (91319) in 9900 ul blood lot (20A52255)

ppd 02/13/20 Exp 08/13/20 lot b81320 Concentration 7.5 ng/ml THC, THC-OH and 15 ng/ml C-TH by AMN

AM 27/26 urine control 400 ul working solution lot (21320) in 9600 ul urine lot (11420)

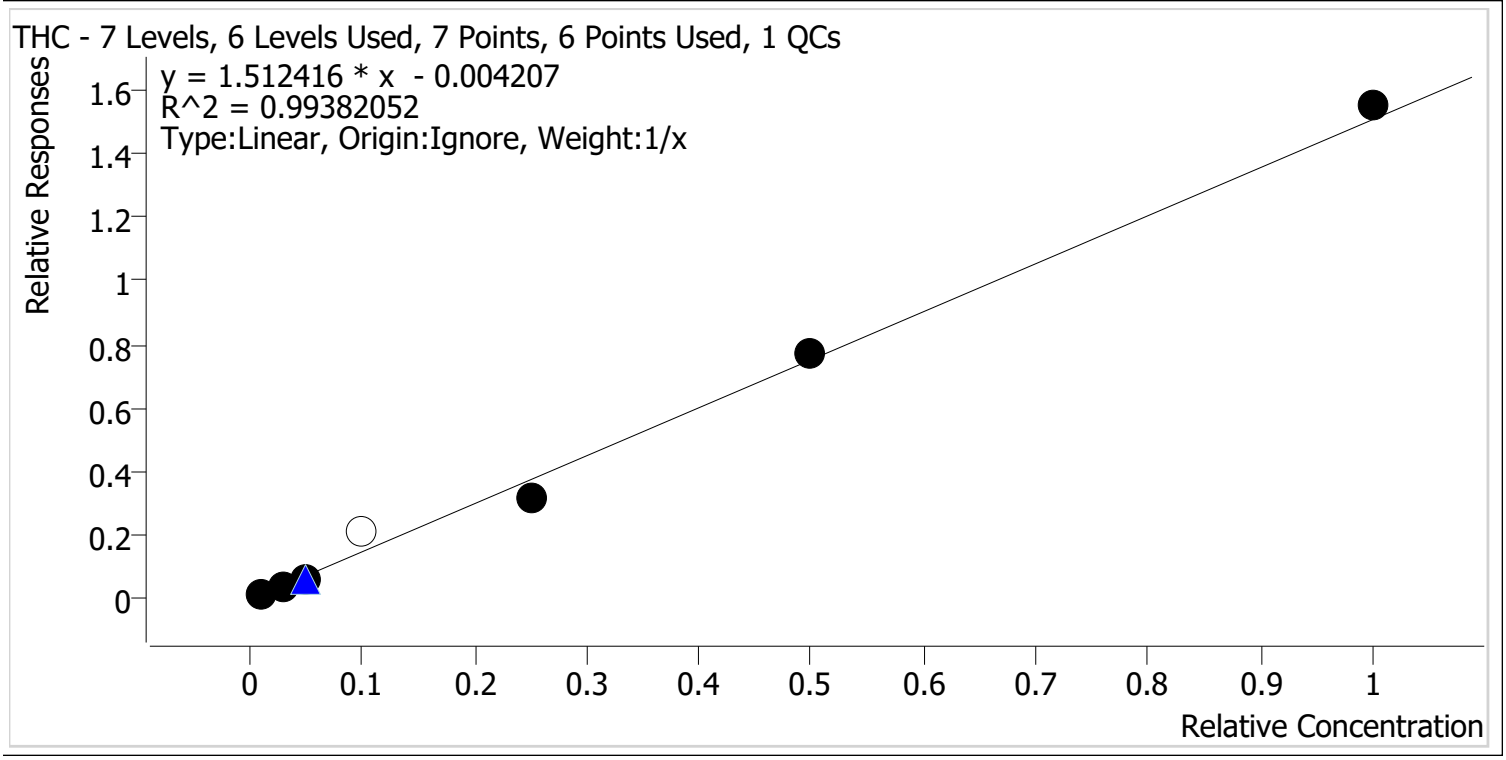
ppd 02/13/20 Exp 08/13/20 lot u81320 Concentration 30 ng/ml THC, THC-OH and 60 ng/ml C-THC by AMN

BW

2-25-20

Compound Calibration Report

Batch results	D:\MassHunter\Data\2020 Data\am 25-26 2-18-2020 reinject\QuantResults\thcs.batch.bin
Last Cal. Update	2/19/2020 8:39 PM
Analyst Name	ISP\datastor
Analyte	THC
Internal Standard	THC-d3

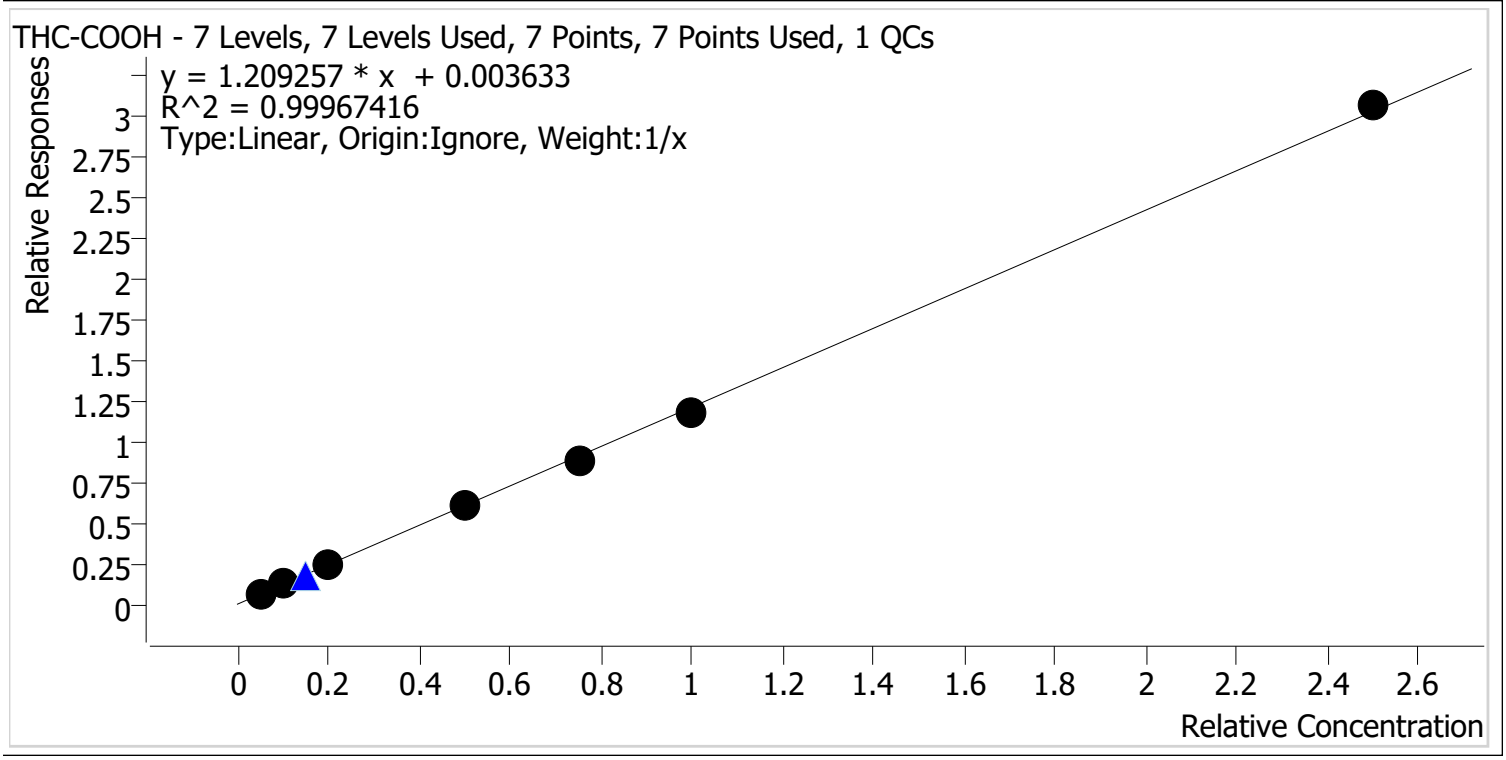


Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
check std 1ng	1	✔	1.0	1.3	127.4
cal 2	2	✔	3.0	3.1	101.8
cal 3	3	✔	5.0	4.0	80.1
cal 4	4	✗	10.0	14.2	142.5
cal 5	5	✔	25.0	21.1	84.6
cal-6	6	✔	50.0	51.6	103.3
cal-7	7	✔	100.0	102.9	102.9

Cal level 4 top of peak cut off, excluded from curve 2-25-20
BW

Compound Calibration Report

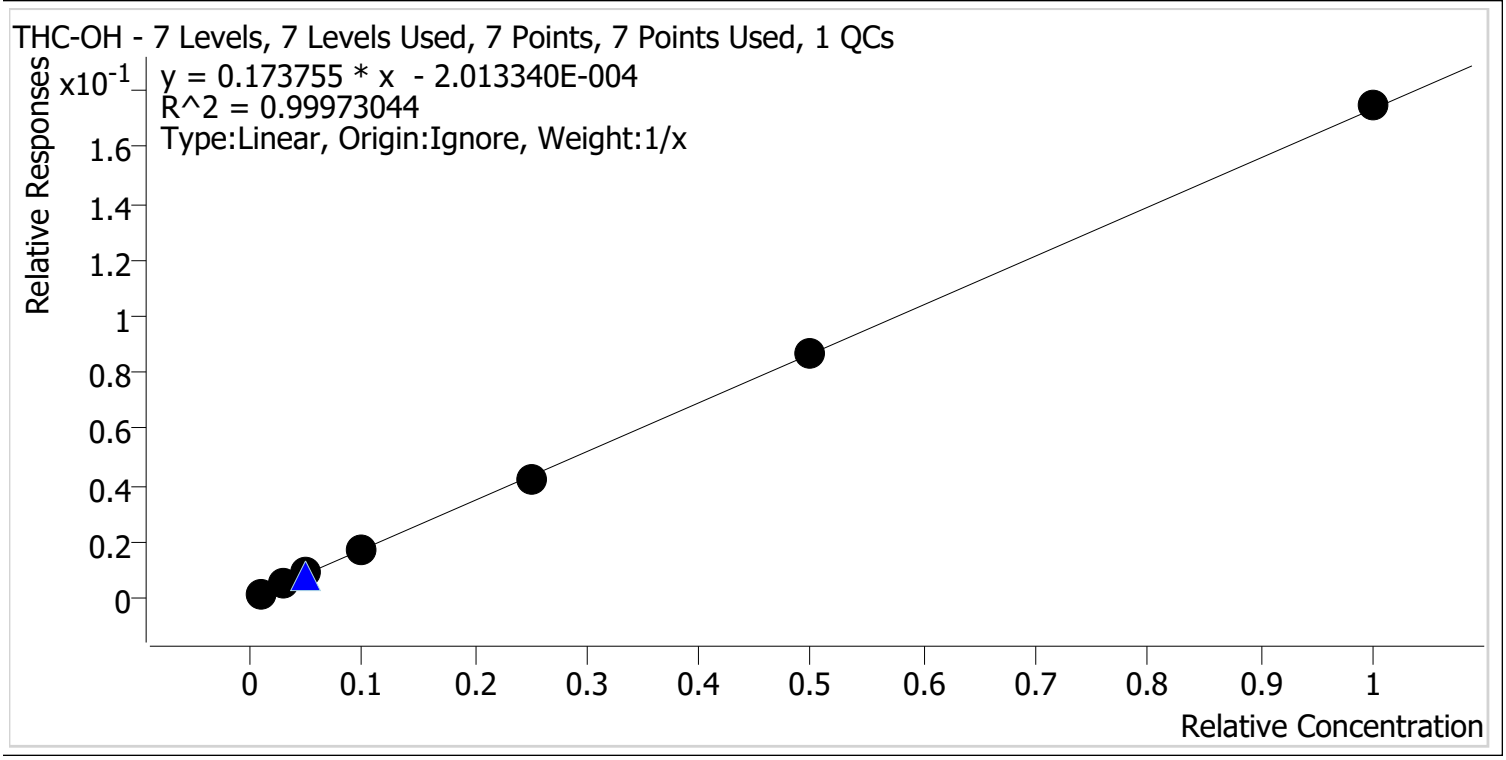
Batch results D:\MassHunter\Data\2020 Data\am 25-26 2-18-2020 reinject\QuantResults\thcs.batch.bin
Last Cal. Update 2/19/2020 8:39 PM
Analyst Name ISP\datastor
Analyte THC-COOH **Internal Standard** THC-COOH-d9



Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
check std 1ng	1	✔	5.0	5.1	102.3
cal 2	2	✔	10.0	10.0	99.8
cal 3	3	✔	20.0	19.9	99.5
cal 4	4	✔	50.0	50.7	101.4
cal 5	5	✔	75.0	73.4	97.9
cal-6	6	✔	100.0	97.9	97.9
cal-7	7	✔	250.0	253.0	101.2

Compound Calibration Report

Batch results	D:\MassHunter\Data\2020 Data\am 25-26 2-18-2020 reinject\QuantResults\thcs.batch.bin
Last Cal. Update	2/19/2020 8:39 PM
Analyst Name	ISP\datastor
Analyte	THC-OH
Internal Standard	THC-OH-d3



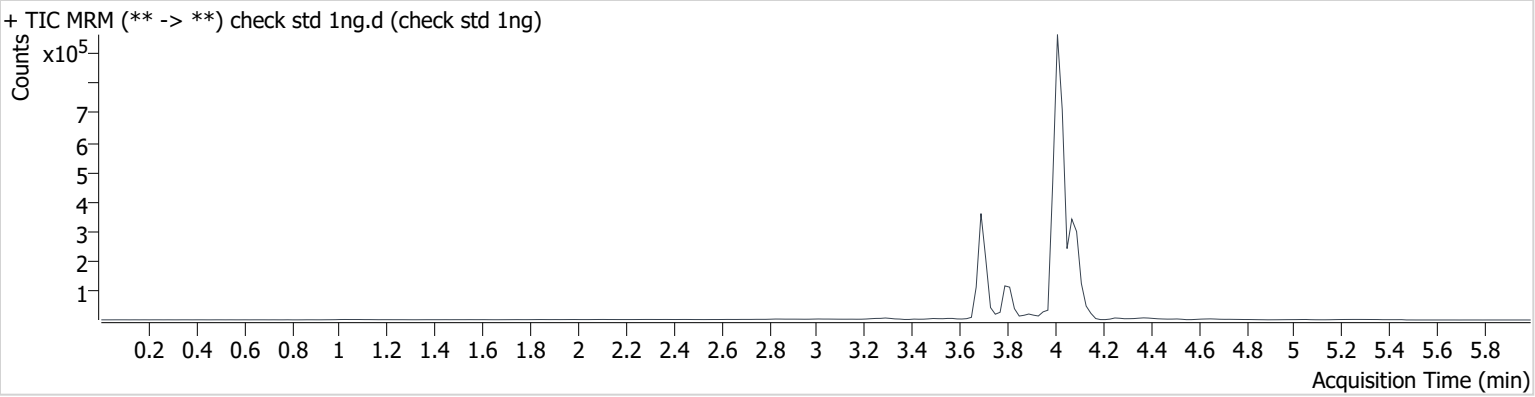
Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
check std 1ng	1	✔	1.0	1.0	98.3
cal 2	2	✔	3.0	3.1	103.6
cal 3	3	✔	5.0	5.1	102.4
cal 4	4	✔	10.0	9.8	98.2
cal 5	5	✔	25.0	24.1	96.6
cal-6	6	✔	50.0	50.1	100.3
cal-7	7	✔	100.0	100.7	100.7

AM #26 Cannabinoids Screen Results

Batch results D:\MassHunter\Data\2020 Data\am 25-26 2-18-2020 reinject\QuantResults\thcs.batch.bin
Calibration Last Update 2/19/2020 8:39:28 PM

Instrument	69679	**Data File**	check std 1ng.d
Type	Cal	**Sample**	check std 1ng
Acq. Method	am 26 cann screen.m	**Operator**	Britany Wylie
Sample Position	P3-A1	**Comment**	
Injection Volume	5		
Acq. Date-Time	2/19/2020 4:32:50 PM		
Sample Info.			

Sample Chromatogram



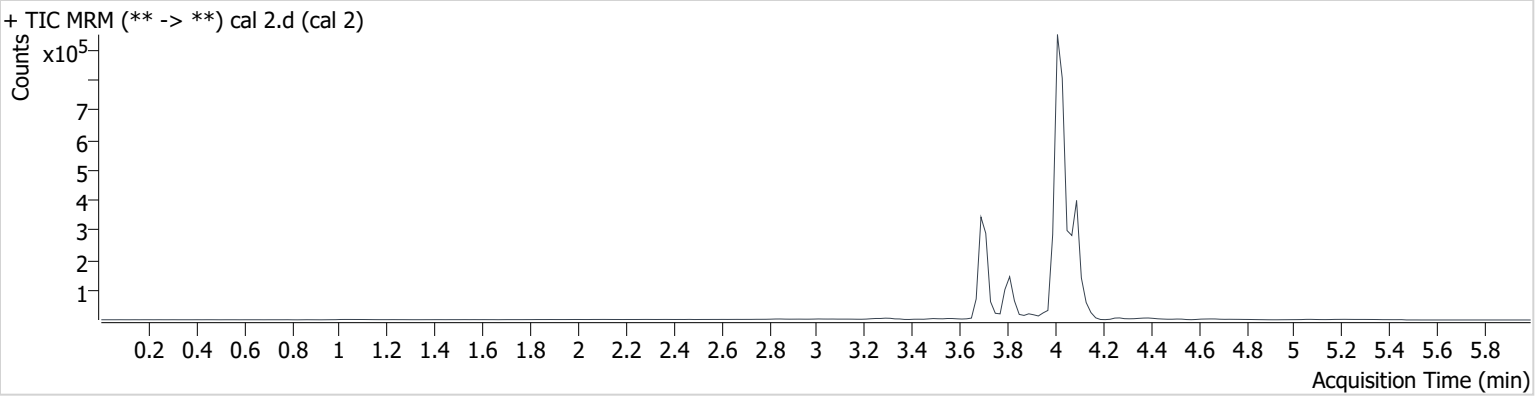
Name	RT	Resp.	ISTD Resp.	Final Conc.		
THC	4.080	9647	640758	1.274	ng/ml	**Low**
THC-COOH	3.810	18350	280198	5.115	ng/ml	**Low**
THC-OH	3.696	1326	880846	0.983	ng/ml	**Low**

AM #26 Cannabinoids Screen Results

Batch results D:\MassHunter\Data\2020 Data\am 25-26 2-18-2020 reinject\QuantResults\thcs.batch.bin
Calibration Last Update 2/19/2020 8:39:28 PM

Instrument	69679	**Data File**	cal 2.d
Type	Cal	**Sample**	cal 2
Acq. Method	am 26 cann screen.m	**Operator**	Britany Wylie
Sample Position	P3-B1	**Comment**	
Injection Volume	5		
Acq. Date-Time	2/19/2020 4:39:28 PM		
Sample Info.			

Sample Chromatogram



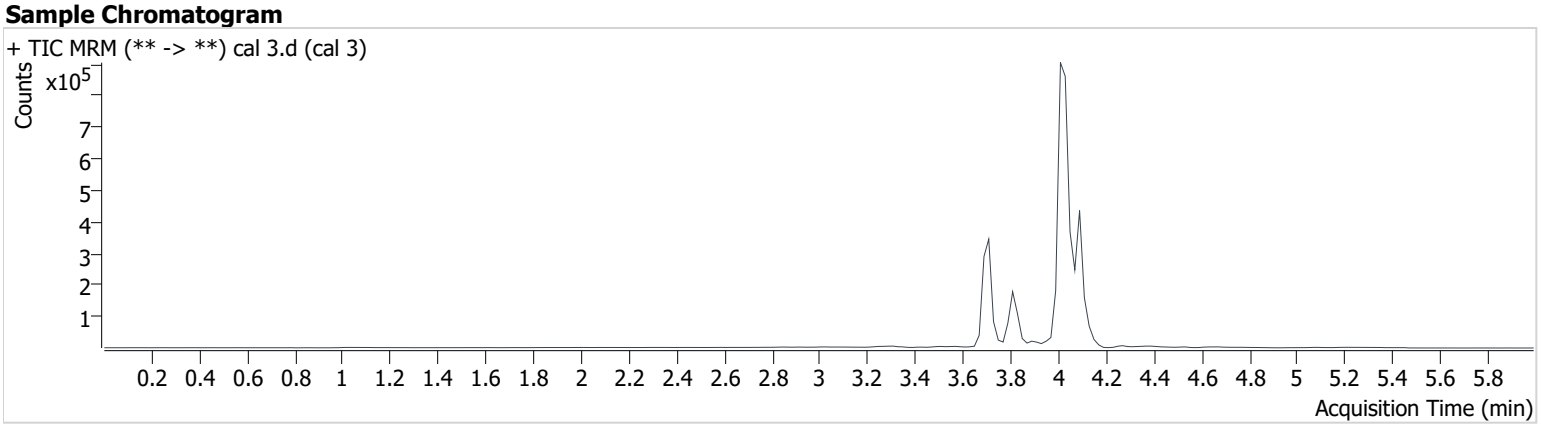
Name	RT	Resp.	ISTD Resp.	Final Conc.		
THC	4.100	28592	681291	3.053	ng/ml	
THC-COOH	3.810	34858	280389	9.980	ng/ml	**Low**
THC-OH	3.696	4731	910182	3.107	ng/ml	

AM #26 Cannabinoids Screen Results

Batch results D:\MassHunter\Data\2020 Data\am 25-26 2-18-2020 reinject\QuantResults\thcs.batch.bin
Calibration Last Update 2/19/2020 8:39:28 PM

Instrument	69679	**Data File**	cal 3.d
Type	Cal	**Sample**	cal 3
Acq. Method	am 26 cann screen.m	**Operator**	Britany Wylie
Sample Position	P3-C1	**Comment**	
Injection Volume	5		
Acq. Date-Time	2/19/2020 4:46:04 PM		
Sample Info.			

Sample Chromatogram



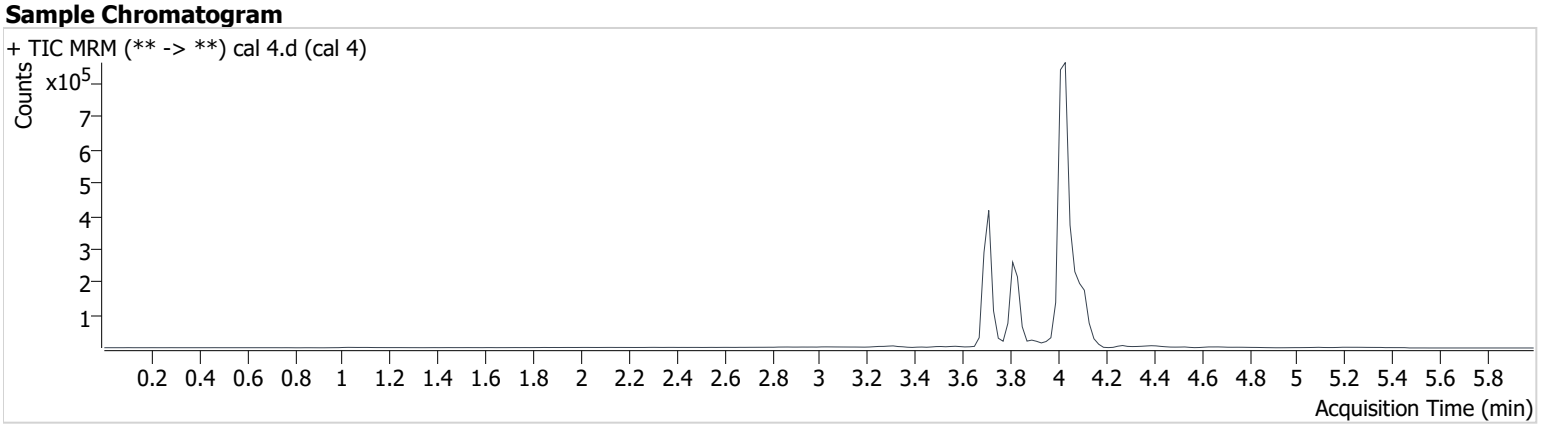
Name	RT	Resp.	ISTD Resp.	Final Conc.	
THC	4.100	38282	679050	4.006	ng/ml
THC-COOH	3.810	68135	278907	19.902	ng/ml
THC-OH	3.716	7654	880138	5.121	ng/ml

AM #26 Cannabinoids Screen Results

Batch results D:\MassHunter\Data\2020 Data\am 25-26 2-18-2020 reinject\QuantResults\thcs.batch.bin
Calibration Last Update 2/19/2020 8:39:28 PM

Instrument	69679	**Data File**	cal 4.d
Type	Cal	**Sample**	cal 4
Acq. Method	am 26 cann screen.m	**Operator**	Britany Wylie
Sample Position	P3-D1	**Comment**	
Injection Volume	5		
Acq. Date-Time	2/19/2020 4:52:40 PM		
Sample Info.			

Sample Chromatogram



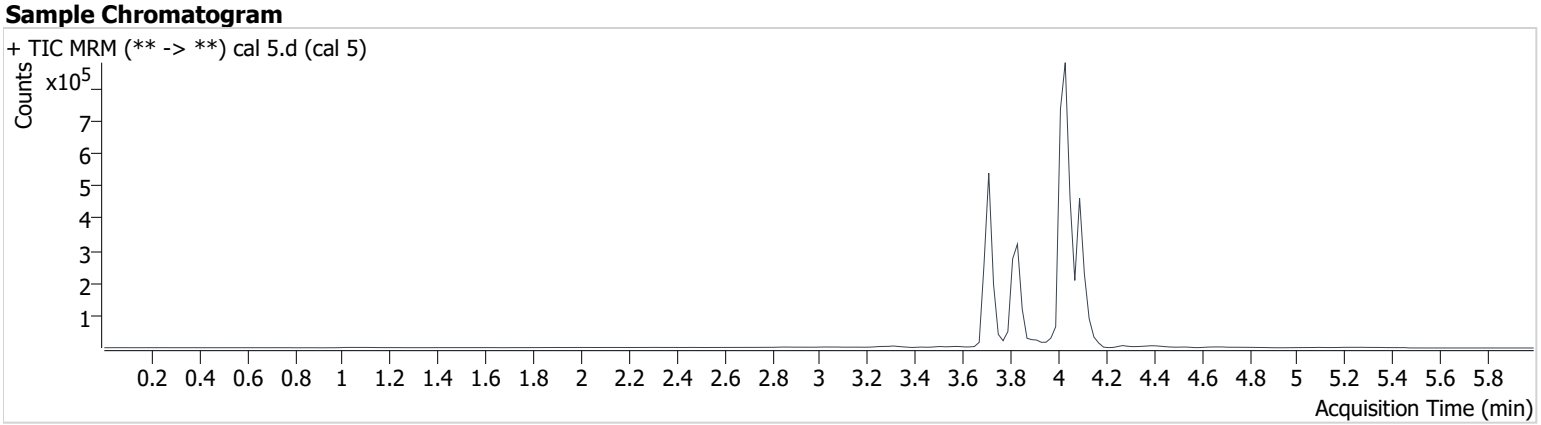
Name	RT	Resp.	ISTD Resp.	Final Conc.	
THC	4.100	75666	358148	14.247	ng/ml
THC-COOH	3.830	168927	273934	50.696	ng/ml
THC-OH	3.716	15513	919883	9.822	ng/ml

AM #26 Cannabinoids Screen Results

Batch results D:\MassHunter\Data\2020 Data\am 25-26 2-18-2020 reinject\QuantResults\thcs.batch.bin
Calibration Last Update 2/19/2020 8:39:28 PM

Instrument	69679	**Data File**	cal 5.d
Type	Cal	**Sample**	cal 5
Acq. Method	am 26 cann screen.m	**Operator**	Britany Wylie
Sample Position	P3-E1	**Comment**	
Injection Volume	5		
Acq. Date-Time	2/19/2020 4:59:15 PM		
Sample Info.			

Sample Chromatogram



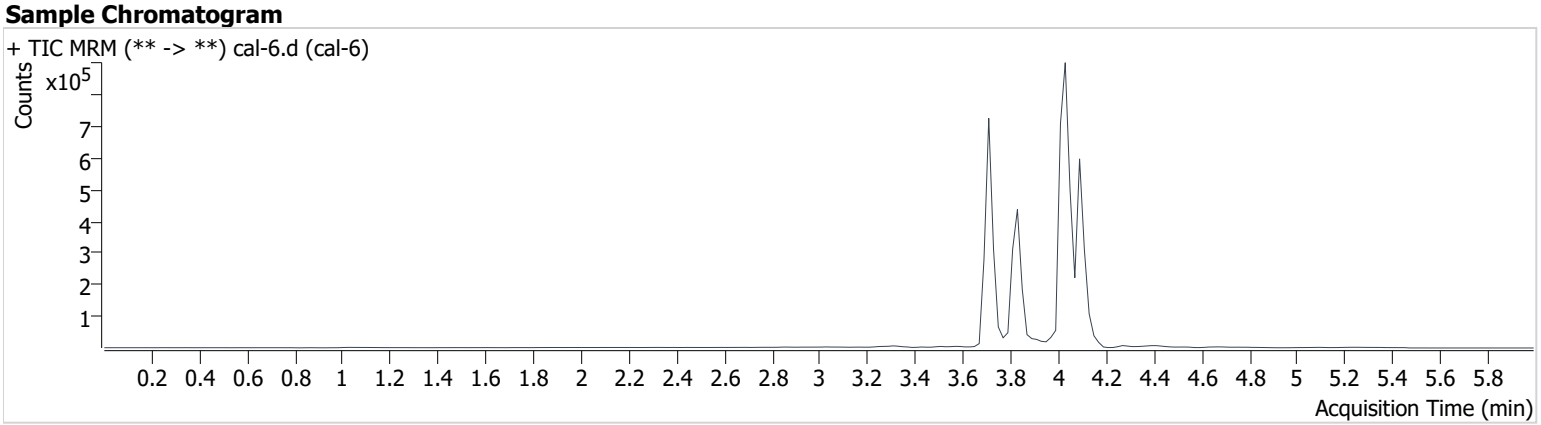
Name	RT	Resp.	ISTD Resp.	Final Conc.	
THC	4.100	189803	601383	21.146	ng/ml
THC-COOH	3.830	244849	274607	73.434	ng/ml
THC-OH	3.716	38580	924031	24.145	ng/ml

AM #26 Cannabinoids Screen Results

Batch results D:\MassHunter\Data\2020 Data\am 25-26 2-18-2020 reinject\QuantResults\thcs.batch.bin
Calibration Last Update 2/19/2020 8:39:28 PM

Instrument	69679	**Data File**	cal-6.d
Type	Cal	**Sample**	cal-6
Acq. Method	am 26 cann screen.m	**Operator**	Britany Wylie
Sample Position	P3-F1	**Comment**	
Injection Volume	5		
Acq. Date-Time	2/19/2020 5:05:51 PM		
Sample Info.			

Sample Chromatogram



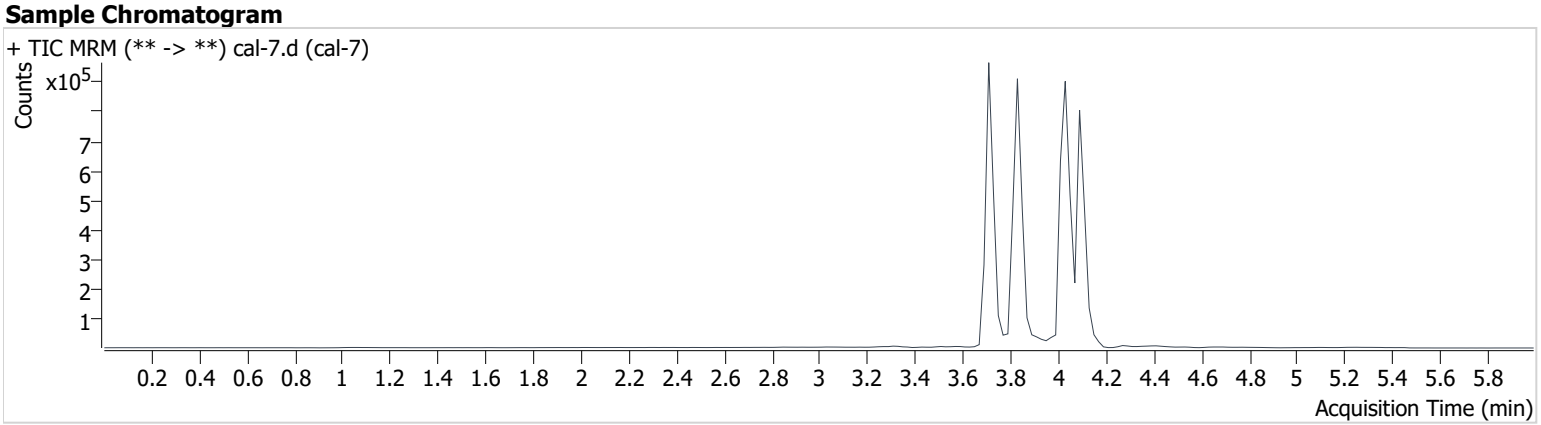
Name	RT	Resp.	ISTD Resp.	Final Conc.	
THC	4.100	454123	584561	51.644	ng/ml
THC-COOH	3.830	343620	289410	97.885	ng/ml
THC-OH	3.716	82563	949879	50.140	ng/ml

AM #26 Cannabinoids Screen Results

Batch results D:\MassHunter\Data\2020 Data\am 25-26 2-18-2020 reinject\QuantResults\thcs.batch.bin
Calibration Last Update 2/19/2020 8:39:28 PM

Instrument	69679	**Data File**	cal-7.d
Type	Cal	**Sample**	cal-7
Acq. Method	am 26 cann screen.m	**Operator**	Britany Wylie
Sample Position	P3-G1	**Comment**	
Injection Volume	5		
Acq. Date-Time	2/19/2020 5:12:27 PM		
Sample Info.			

Sample Chromatogram



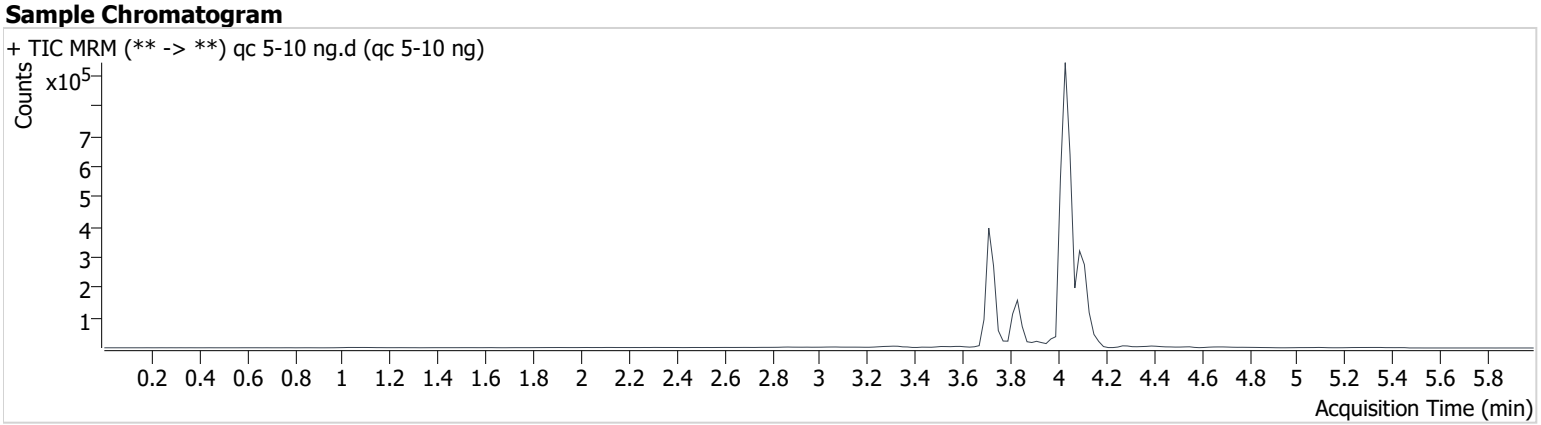
Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	4.100	839838	541227	102.878 ng/ml
THC-COOH	3.830	803015	262173	252.989 ng/ml
THC-OH	3.716	157064	898840	100.683 ng/ml

AM #26 Cannabinoids Screen Results

Batch results D:\MassHunter\Data\2020 Data\am 25-26 2-18-2020 reinject\QuantResults\thcs.batch.bin
Calibration Last Update 2/19/2020 8:39:28 PM

Instrument	69679	**Data File**	qc 5-10 ng.d
Type	QC	**Sample**	qc 5-10 ng
Acq. Method	am 26 cann screen.m	**Operator**	Britany Wylie
Sample Position	P3-H1	**Comment**	
Injection Volume	5		
Acq. Date-Time	2/19/2020 5:25:33 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.	
THC	4.100	36223	572052	4.465	ng/ml
THC-COOH	3.830	50225	283646	14.342	ng/ml
THC-OH	3.716	7583	953290	4.694	ng/ml