2/15/2022

REVIEWED
By Britany Wylie at 7:57 pm, Feb 17, 2022

Worklist: 5599

LAB_CASE	ITEM	ITEM_TYPE	DESCRIPTION
C2022-0078	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ
C2022-0089	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ
C2022-0102	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ
C2022-0109	1	UCK	AM 25/AM 26 Urine MultiDrug/THC Screen by LC-QQQ
C2022-0114	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ
C2022-0115	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ
C2022-0117	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ
C2022-0120	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ
C2022-0132	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ
C2022-0154	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ
C2022-0155	1	UCK	AM 25/AM 26 Urine MultiDrug/THC Screen by LC-QQQ
C2022-0166	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ
C2022-0168	1	UCK	AM 25/AM 26 Urine MultiDrug/THC Screen by LC-QQQ
C2022-0176	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ
C2022-0177	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ
C2022-0186	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ
C2022-0191	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ
C2022-0192	1	UCK	AM 25/AM 26 Urine MultiDrug/THC Screen by LC-QQQ
C2022-0195	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ
C2022-0206	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ
C2022-0212	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ

Worklist: 5599

LAB_CASE	ITEM	ITEM_TYPE	DESCRIPTION
C2022-0234	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ
C2022-0241	1	UCK	AM 25/AM 26 Urine MultiDrug/THC Screen by LC-QQQ
C2022-0255	1	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ
C2022-0273	2	BCK	AM 25/AM 26 Blood MultiDrug/THC Screen by LC-QQQ
C2022-0274	1	UCK	AM 25/AM 26 Urine MultiDrug/THC Screen by LC-QQQ

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

Extraction Date: 2/10/22 Analyst: Anne Nord
Plate lot#: 210611 Plate retest date: 12/11/21

Mobile phase A: 10mM Ammonium Formate **Mobile phase B:** 0.1% Formic Acid in MeOH
0.5M Ammonium Hydroxide Ethyl Acetate LC 20% Methanol
Blank Blood Lot: 21D52496 **Blank Urine lot:** 83121 **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. 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 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:
For the urine samples the 500mm sodium phosphate buffer expired on 1/31/22, all of the urine samples (with the exception of C2022-0109) were re-extracted and run, that run will be used for evaluation of those samples. There is a separate checklist for that extraction.

	1	2	3	4	5	6	7	8	9	10	11	12
A							115-1	191-1		241-1	274-1	
B							117-1	195-1		155-1		
C						negative blood	120-1	206-1		109-1		
D						blood positive control	132-1	212-1		192-1		
						078-1	154-1	234-1		168-1		
F						089-1	166-1	255-1				
G						102-1	176-1	273-2		positive control urine		cal 1
H						114-1	186-1	177-1		neg urine		

C2022-0___

Toxicology AM method 25/28 urine external control prep

working solution 10000 ng/ml in meoh diphendydramine, methamphetamine, alprazolam, methocarbamol, morphine

Stock solution 1mg/ml 50 ul each in 4750 ul MeOH (Honeywell EA078-US)

ppd 6/25/21: Exp: 6/25/2022 lot 62522 by AMN

Drug	lot	expiration
Methamphetamine	FE03132001	7/1/2025
methocarbamol	FN01212005	1/1/2023
alprazolam	FE06102008	6/1/2025
Diphendydramine	FN02212011	3/1/2025
Morphine	FE03232010	4/1/2025

AM 25/28 control 500 ul working solution (62522) in 4500 ul negative urine (1000ng/mL Expected concentration)

ppd 6/25/21, exp 6/25/22 lot u62522 negative urine 5621 by AMN

AM 25/28 Blood Control: 50ul working solution (41422) in 4950 ul neg blood (100ng/mL Expected concentration)

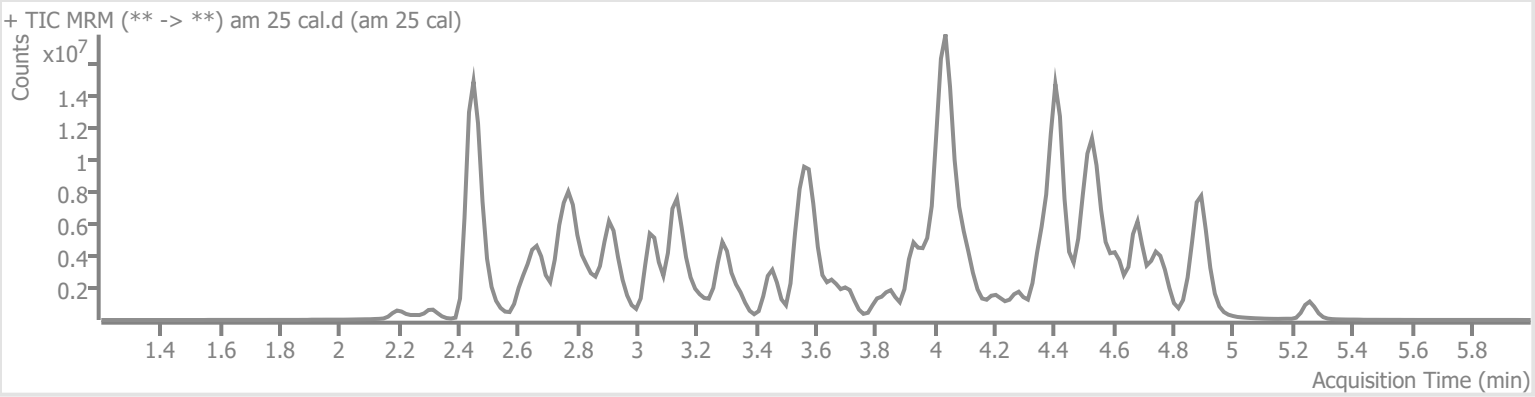
ppp 6/25/21, exp 6/25/22 lot b62522 neg blood 21D52496 by AMN

AM #25 Multi-Drug Screen Results

Batch results D:\MassHunter\Data\2022\am 25-26\021022\QuantResults\mds.batch.bin
Calibration Last Update 2/10/2022 4:30:32 PM

Instrument	69679	**Data File**	am 25 cal.d
Type	Cal	**Sample**	am 25 cal
Acq. Method	mds713.m	**Operator**	Anne Nord
Sample Position	P2-G12	**Comment**	
Injection Volume	2.5		
Acq. Date-Time	2/10/2022 12:22:56 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
6-MAM	3.012	37536	5773.6	7.7	1263640	10.000
7-aminoclonazepam	3.354	390215	485014.7	327.6	2520259	10.000
7-aminoflunitrazepam	3.583	778526	906.5	132.9	2520259	10.000
Acetyl Fentanyl	4.285	231908	119.3	37523.8	18757526	10.000
Acetyl Norfentanyl	2.656	201065	1170.8	207.1	18757526	10.000
a-hydroxyalprazolam	4.377	226861	∞	714.5	2520259	10.000
alpha-hydroxymidazolam	4.468	1090142	229.4	221111.1	2520259	10.000
alpha-PHP	4.002	1759477	1006.6	429.6	7207542	10.000
alpha-PVP	3.666	2631057	1899.6	327.0	7207542	10.000
Alprazolam	4.488	1273389	521.9	308.6	11682774	10.000
Amitriptyline	4.599	776478	97.0	408.9	4285787	10.000
Amphetamine	2.662	2713693	1335.3	976.3	7207542	10.000
Benzoylecgonine	3.137	94887	592.5	121.8	171571	10.000
Brompheniramine	4.055	55403	56.4	45.4	36479013	10.000
Buprenorphine	5.272	118335	14235.3	716.9	2840045	10.000
Bupropion	3.987	2533805	1737.7	1424.5	10628875	10.000
Carbamazepine	4.064	4231133	1583.3	1333.8	90880	10.000
Carisoprodol	4.046	726104	235.3	276.0	3968576	10.000
Chlordiazepoxide	4.627	476500	2707.6	106.3	11682774	10.000
Chlorpheniramine	3.952	3867901	5858.3	38.7	36479013	10.000
Citalopram	4.038	1805018	611.5	292.9	36479013	10.000
Clomimpramine	4.854	1388522	1426.1	141.5	5184642	10.000
Clonazepam	4.301	719709	601.9	567.2	11682774	10.000
Clonazolam	4.220	1055008	1353.4	114861.1	11682774	10.000
Cocaethylene	3.809	2527380	857.2	727.0	36479013	10.000
Cocaine	3.611	3107045	1036.3	353.8	16724933	10.000
Codeine	2.954	289985	36586.9	2568.4	138481	10.000
Cyclobenzaprine	4.461	1782942	486.0	203.7	4285787	10.000
Desipramine	4.354	2545191	692113.3	989.1	4285787	10.000
Dextromethorphan	4.122	1248756	605.8	642.8	6738806	10.000
Dextrorphan	3.281	1705299	455.5	1430.0	6738806	10.000
Diazepam	4.750	769852	286.9	784.1	11682774	10.000
Dihydrocodeine	2.694	752016	586.5	340.3	2210401	10.000
Diphenhydramine	4.047	5334001	793.7	375.4	36479013	10.000

AM #25 Multi-Drug Screen Results

Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Doxepin	4.259	1241559	6245.4	165.1	15469734	10.000
Doxylamine	3.570	5389606	572.5	4919.8	6738806	10.000
EDDP	3.998	957948	282.1	282.2	2210401	10.000
Estazolam	4.397	3025949	493.7	913.5	11682774	10.000
Etizolam	4.514	129049	72039.8	∞	11682774	10.000
Fentanyl	4.515	167527	109.2	54303.4	11475563	10.000
Flualprazolam	4.346	513721	710.3	3281.9	11682774	10.000
Flunitrazepam	4.425	1433208	6708.6	101570.0	11682774	10.000
Fluoxetine	4.287	1432223	1579.5	57750.2	2840149	10.000
Flurazepam	4.543	2099770	1258.5	203011.4	11682774	10.000
Hydrocodone	3.245	943650	408.6	65.6	6155370	10.000
Hydromorphone	2.500	751826	239.0	187.2	138481	10.000
Imipramine	4.506	3056415	1448473.9	491.2	4285787	10.000
Ketamine	3.987	1989919	1585.5	102.2	13975091	10.000
Lamotrigine	3.434	160861	23711.8	64814.3	36479013	10.000
Levamisole	3.085	1496431	6614.4	260.1	6738806	10.000
Levetireacetam	2.325	696924	520.2	237.6	5184642	10.000
Lorazepam	4.285	227761	246.0	∞	11682774	10.000
Maprotiline	4.583	435263	649.5	162.9	4285787	10.000
MDA	2.796	1856565	722.8	132.3	17999648	10.000
MDEA	3.069	2626578	530.7	1367.4	17999648	10.000
MDMA	2.902	3171509	439.5	2909.7	17999648	10.000
Meperidine	3.664	1581859	1304.6	363.4	6738806	10.000
Meprobamate	3.437	452116	1352385.5	86.6	3968576	10.000
Methadone	4.379	3207594	64802.4	347.0	2210401	10.000
Methamphetamine	2.797	7155392	4832.9	∞	17999648	10.000
Methocarbamol	3.343	252654	1022.0	500.8	2210401	10.000
Methylphenidate	3.466	5638738	988.6	322.5	13975091	10.000
Metoprolol	3.279	462478	2003.0	8388.0	6738806	10.000
Midazolam	4.684	426425	1160.2	849.5	11682774	10.000
Mirtazapine	4.555	2264101	2816.9	1255.2	6738806	10.000
Mitragynine	4.527	283462	92127.6	296914.7	6738806	10.000
Morphine	2.274	186112	410.4	1696.8	138481	10.000
Norbuprenorphine	3.790	56031	26278.7	29641.5	138481	10.000
Nordiazepam	4.569	646003	545.4	589.5	11682774	10.000
Norfentanyl	3.160	3654901	23671.7	371.1	18757526	10.000
Norhydrocodone	2.743	58182	116.5	6561.6	6155370	10.000
norketamine	3.957	401855	160.5	2457.5	13975091	10.000
Normeperidine	3.482	1698984	8199.5	235.2	36479013	10.000
Noroxycodone	2.664	1126631	323.3	354.2	8845114	10.000
Nortriptyline	4.416	957478	648987.2	657.6	4285787	10.000
O-desmethyl-tramadol	2.685	4591068	19774.4	404.5	36479013	10.000
Olanzapine	4.087	907868	1022.0	832.0	90880	10.000
Oxazepam	4.367	1006390	383.2	249.8	4859423	10.000
Oxycodone	2.876	1770452	252.1	293.0	8845114	10.000
Oxymorphone	2.195	972276	666.7	101.4	138481	10.000
Paroxetine	4.346	282820	652.5	430.7	2840149	10.000
Phenazepam	4.514	1025332	1276.7	454.6	11682774	10.000
Phencyclidine	3.864	2779702	373.4	177.6	6738806	10.000
Phentermine	2.949	40884	98.4	∞	13975091	10.000
Phenytoin	3.955	155942	17746.1	85.5	90880	10.000
Promethazine	4.629	3902062	754.0	323.2	36479013	10.000
Pseudoephedrine	2.461	47118926	649.6	4150.1	17999648	10.000
Quetiapine	4.743	3131277	1023.4	787290.7	26678885	10.000
Sertraline	4.626	581019	460.8	∞	2840149	10.000
Sufentanil	4.940	150915	4096.2	584.4	18757526	10.000
Tapentadol	3.298	2997706	6904.8	2825.1	2210401	10.000
Temazepam	4.551	2246231	707.0	620.4	11682774	10.000
Tramadol	3.311	4649256	2164.7	53.7	36479013	10.000
Trazodone	4.911	3270517	1316.6	756.2	15469734	10.000

AM #25 Multi-Drug Screen Results

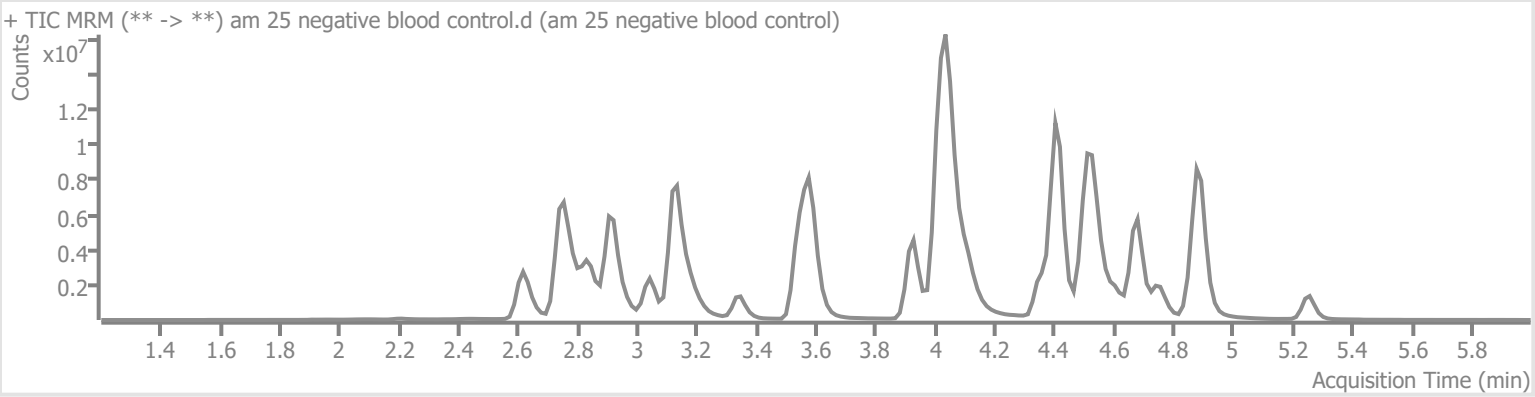
Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Venlafaxine	3.721	3606129	2112.7	291.9	2840149	10.000
Zaleplon	4.196	1254758	5345.7	504.8	26678885	10.000
Zolpidem	4.427	5038156	4289.0	1947.8	26678885	10.000
Zopiclone	4.420	397164	2145.3	281.4	2068192	10.000

AM #25 Multi-Drug Screen Results

Batch results D:\MassHunter\Data\2022\am 25-26\021022\QuantResults\mds.batch.bin
Calibration Last Update 2/10/2022 4:30:32 PM

Instrument	69679	**Data File**	am 25 negative blood control.d
Type	Sample	**Sample**	am 25 negative blood control
Acq. Method	mds713.m	**Operator**	Anne Nord
Sample Position	P2-C6	**Comment**	
Injection Volume	2.5		
Acq. Date-Time	2/10/2022 12:29:40 PM		
Sample Info.			

Sample Chromatogram

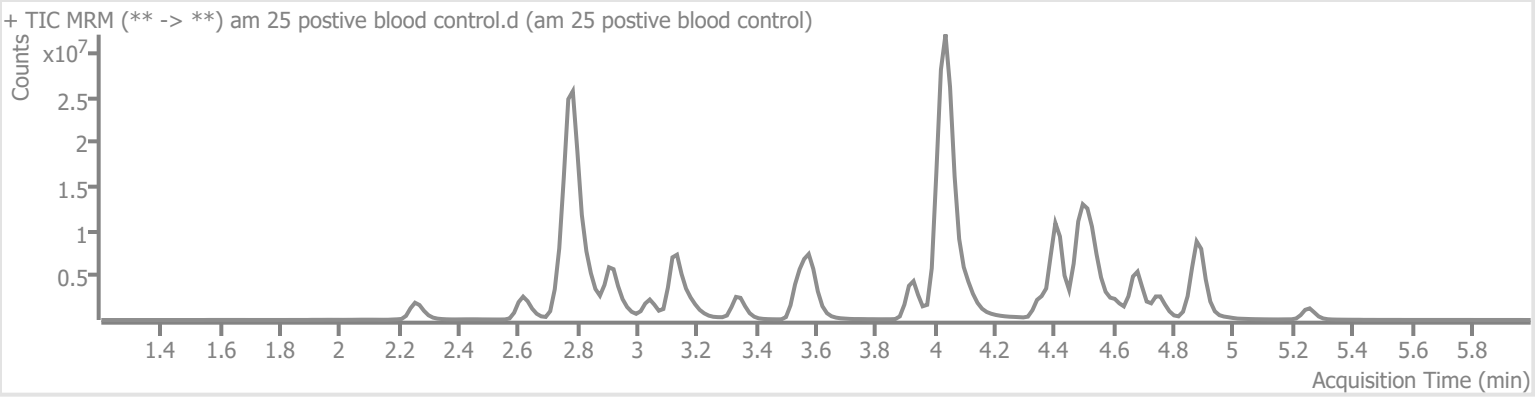


AM #25 Multi-Drug Screen Results

Batch results D:\MassHunter\Data\2022\am 25-26\021022\QuantResults\mds.batch.bin
Calibration Last Update 2/10/2022 4:30:32 PM

Instrument	69679	**Data File**	am 25 postive blood control.d
Type	Sample	**Sample**	am 25 postive blood control
Acq. Method	mds713.m	**Operator**	Anne Nord
Sample Position	P2-D6	**Comment**	
Injection Volume	2.5		
Acq. Date-Time	2/10/2022 12:36:21 PM		
Sample Info.			

Sample Chromatogram



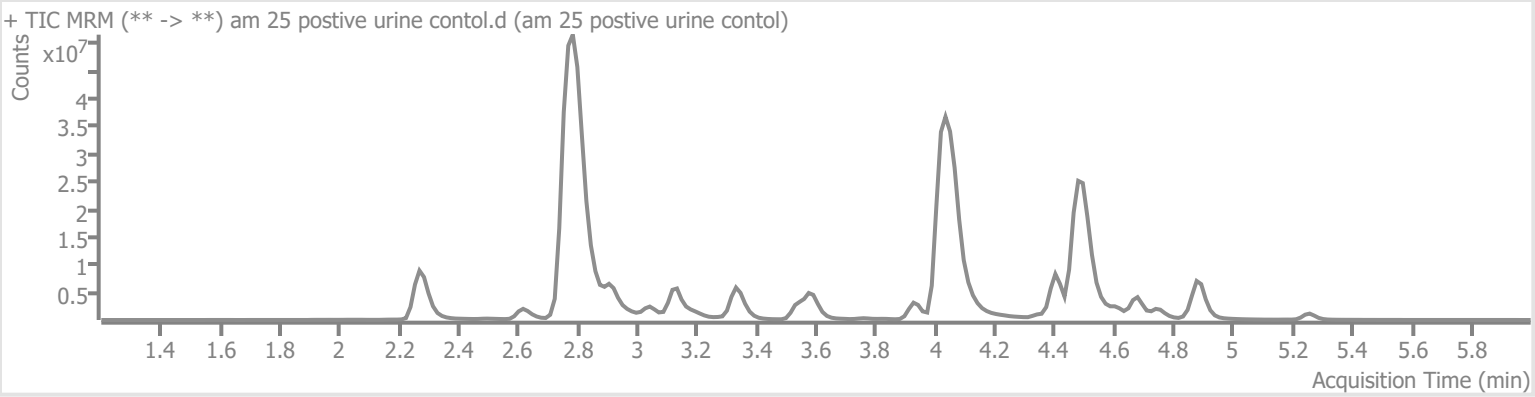
Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Alprazolam	4.488	13054215	889.2	1297.9	15957217	75.055
Diphenhydramine	4.047	44352601	20227.1	843.1	41437630	73.201
Methamphetamine	2.797	38189980	12097.8	21420.8	20738501	46.324
Methocarbamol	3.343	2226008	20713.9	1438.4	2814821	69.186
Morphine	2.259	2044032	40558.2	12761.5	192094	79.175

AM #25 Multi-Drug Screen Results

Batch results D:\MassHunter\Data\2022\am 25-26\021022\QuantResults\mds.batch.bin
Calibration Last Update 2/10/2022 4:30:32 PM

Instrument	69679	**Data File**	am 25 postive urine contol.d
Type	Sample	**Sample**	am 25 postive urine contol
Acq. Method	mds713.m	**Operator**	Anne Nord
Sample Position	P2-G10	**Comment**	
Injection Volume	2.5		
Acq. Date-Time	2/10/2022 4:03:34 PM		
Sample Info.			

Sample Chromatogram



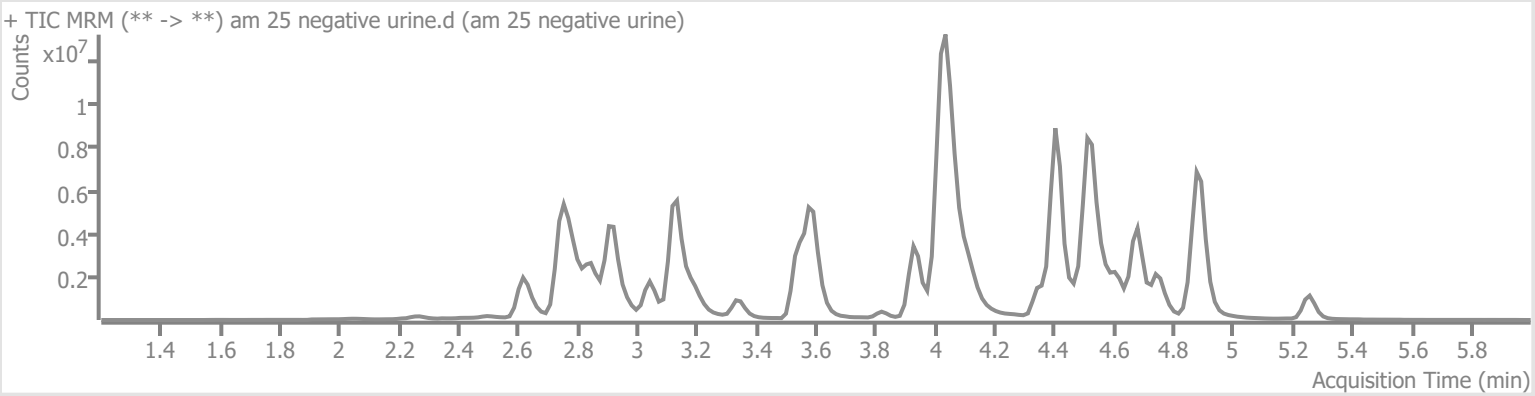
Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Alprazolam	4.488	44149078	699.1	455.4	8788921	460.862
Diphenhydramine	4.062	85614901	26381.4	30008.0	29611767	197.731
Methamphetamine	2.797	86872969	∞	∞	13909002	157.116
Methocarbamol	3.343	8392221	5515.3	7448.0	1968620	372.957
Morphine	2.274	9963476	18383.7	5215.9	138766	534.249

AM #25 Multi-Drug Screen Results

Batch results D:\MassHunter\Data\2022\am 25-26\021022\QuantResults\mds.batch.bin
Calibration Last Update 2/10/2022 4:30:32 PM

Instrument	69679	**Data File**	am 25 negative urine.d
Type	Sample	**Sample**	am 25 negative urine
Acq. Method	mds713.m	**Operator**	Anne Nord
Sample Position	P2-H10	**Comment**	
Injection Volume	2.5		
Acq. Date-Time	2/10/2022 4:10:17 PM		
Sample Info.			

Sample Chromatogram



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

Extraction Date: 2/14/22 Analyst: Anne Nord
Plate lot#: 211015 Plate retest date: 04/15/22

Mobile phase A: 10mM Ammonium Formate **Mobile phase B:** 0.1% Formic Acid in MeOH
0.5M Ammonium Hydroxide Ethyl Acetate LC 20% Methanol
Blank Blood Lot: 22B52020 **Blank Urine lot:** 83121 **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. 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 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:
Re-extracted urine samples – C2022-0155-1, C2022-0168-1, C2022-0192-1, C2022-0241-1, C2022-0274-1

	1	2	3	4	5	6	7	8	9	10	11	12
A		neg blood										
B	cal 1	neg urine										
C		positive control urine										
D	168-1											
E	192-1											
F	274-1											
G	155-1											
H	241-1											

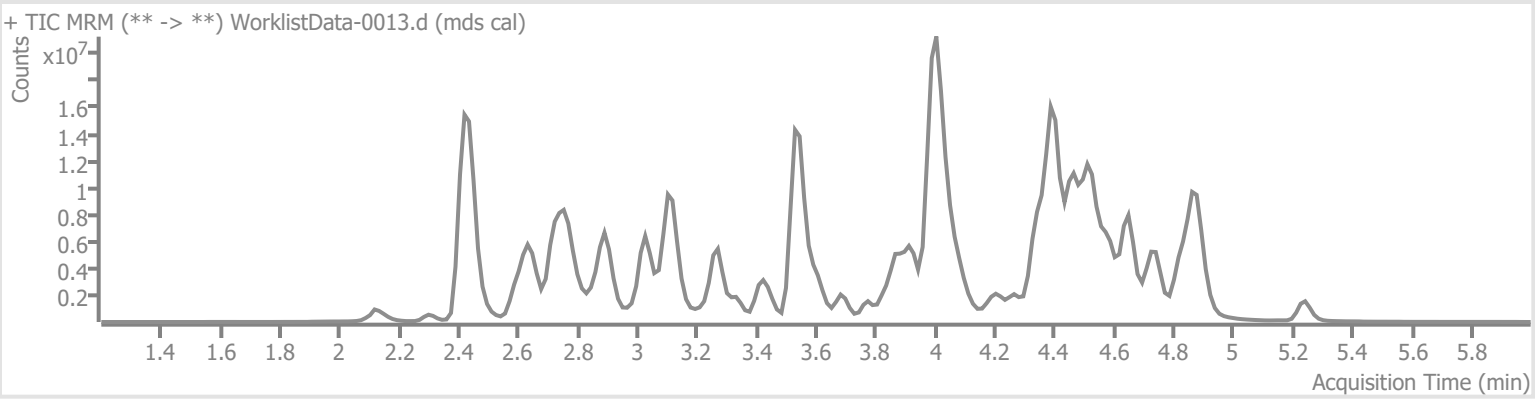
C2022-0___

AM #25 Multi-Drug Screen Results

Batch results D:\MassHunter\Data\2022\am 27-28\021122\QuantResults\mds urine re-run.batch.bin
Calibration Last Update 2/15/2022 12:10:13 PM

Instrument	69679	**Data File**	WorklistData-0013.d
Type	Cal	**Sample**	mds cal
Acq. Method	mds713.m	**Operator**	Anne Nord
Sample Position	P1-B1	**Comment**	
Injection Volume	2.5		
Acq. Date-Time	2/15/2022 10:51:44 AM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
6-MAM	2.921	41075	88.6	41856.3	1252169	10.000
7-aminoclonazepam	3.354	726008	1112.2	1587429.2	3026860	10.000
7-aminoflunitrazepam	3.583	1144688	4291.7	1226.1	3026860	10.000
Acetyl Fentanyl	4.223	311566	129.1	902.9	22479150	10.000
Acetyl Norfentanyl	2.641	254693	∞	330.9	22479150	10.000
a-hydroxyalprazolam	4.377	283046	∞	7443.0	3026860	10.000
alpha-hydroxymidazolam	4.468	2246960	714.1	222.9	3026860	10.000
alpha-PHP	3.940	2197726	758.6	340.8	8022858	10.000
alpha-PVP	3.620	2965527	4260.4	684.4	8022858	10.000
Alprazolam	4.488	1434586	462.4	531.2	12956303	10.000
Amitriptyline	4.553	1300163	268.5	312.0	7175138	10.000
Amphetamine	2.646	3135773	∞	1141.7	8022858	10.000
Benzoylecgonine	3.122	80557	77956.6	110.1	169234	10.000
Brompheniramine	4.040	66209	90.8	47.7	40670783	10.000
Buprenorphine	5.257	167195	2852.7	1338.1	3801056	10.000
Bupropion	3.941	3078546	1067.7	664.6	12910569	10.000
Carbamazepine	4.064	4884681	∞	850.3	91444	10.000
Carisoprodol	4.046	837343	4144.2	120.3	4378161	10.000
Chlordiazepoxide	4.612	664338	348.5	289.3	12956303	10.000
Chlorpheniramine	3.921	4669125	2427.0	∞	40670783	10.000
Citalopram	4.023	2044778	345.1	408274.7	40670783	10.000
Clomimpramine	4.823	2743519	1020.3	315.7	5907022	10.000
Clonazepam	4.286	775076	278.8	268726.3	12956303	10.000
Clonazolam	4.205	1126727	2329.9	156955.2	12956303	10.000
Cocaethylene	3.778	2892875	1428.1	3478.6	40670783	10.000
Cocaine	3.565	3366928	669.8	519.1	19670583	10.000
Codeine	2.863	374082	642.1	765.0	189031	10.000
Cyclobenzaprine	4.430	2681799	480.3	390.1	7175138	10.000
Desipramine	4.339	4443108	4985.2	1490.5	7175138	10.000
Dextromethorphan	4.091	1637447	545.4	474.4	9009810	10.000
Dextrorphan	3.250	1921656	837.9	458.0	9009810	10.000
Diazepam	4.735	957860	448.8	10727.6	12956303	10.000
Dihydrocodeine	2.633	881208	837.3	853.5	2747636	10.000

AM #25 Multi-Drug Screen Results

Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Diphenhydramine	4.016	6281522	768.0	367.5	40670783	10.000
Doxepin	4.229	1767705	426.7	140.8	19703697	10.000
Doxylamine	3.539	6166661	156.7	9879.8	9009810	10.000
EDDP	3.982	1234964	10215.7	4145.4	2747636	10.000
Estazolam	4.397	3515530	3169.1	1149.4	12956303	10.000
Etizolam	4.499	146626	52310.1	1360.6	12956303	10.000
Fentanyl	4.469	280541	164.9	1614530.6	17128611	10.000
Flualprazolam	4.330	560979	133721.2	352.5	12956303	10.000
Flunitrazepam	4.425	1625782	458.8	419.7	12956303	10.000
Fluoxetine	4.271	2921096	942.7	69898.2	6223117	10.000
Flurazepam	4.497	2466586	2687294.5	580736.9	12956303	10.000
Hydrocodone	3.137	1035358	75.6	66.8	6752158	10.000
Hydromorphone	2.394	870375	104.2	641.9	189031	10.000
Imipramine	4.476	4833425	704.6	1749.3	7175138	10.000
Ketamine	3.926	2254168	3077.5	68.5	15729144	10.000
Lamotrigine	3.434	176627	193.7	49955.1	40670783	10.000
Levamisole	2.993	1653565	283.0	137.0	9009810	10.000
Levetireacetam	2.310	634844	253.8	551.9	5907022	10.000
Lorazepam	4.285	212402	272.6	162.0	12956303	10.000
Maprotiline	4.553	748351	1941.5	126.2	7175138	10.000
MDA	2.765	2036123	576.5	167.1	19977400	10.000
MDEA	3.039	2795911	417.9	563.8	19977400	10.000
MDMA	2.871	3401302	398.9	336.0	19977400	10.000
Meperidine	3.618	1803848	809.4	586.9	9009810	10.000
Meprobamate	3.437	431029	313475.1	52.0	4378161	10.000
Methadone	4.364	4243513	9312.0	16676.3	2747636	10.000
Methamphetamine	2.767	5257666	∞	∞	19977400	10.000
Methocarbamol	3.328	216066	1745.1	246.8	2747636	10.000
Methylphenidate	3.420	6028195	1071.3	931.0	15729144	10.000
Metoprolol	3.264	521679	576.2	21753.7	9009810	10.000
Midazolam	4.669	514062	166489.2	143453.7	12956303	10.000
Mirtazapine	4.508	2473657	1084.2	1144.8	9009810	10.000
Mitragynine	4.481	361954	120559.7	361926.2	9009810	10.000
Morphine	2.153	236444	671.7	259.2	189031	10.000
Norbuprenorphine	3.775	68710	21081.2	48301.3	189031	10.000
Nordiazepam	4.569	792953	466109.9	1140.8	12956303	10.000
Norfentanyl	3.129	4341249	22954.6	191.9	22479150	10.000
Norhydrocodone	2.712	64860	118.5	60.9	6752158	10.000
norketamine	3.911	438664	380.2	4024.3	15729144	10.000
Normeperidine	3.451	1978759	374.5	1850.4	40670783	10.000
Noroxycodone	2.634	1435083	∞	417.3	10367171	10.000
Nortriptyline	4.385	1834078	1355.9	356.1	7175138	10.000
O-desmethyl-tramadol	2.670	4989326	8712.0	248.0	40670783	10.000
Olanzapine	4.041	1492299	1118.3	622.8	91444	10.000
Oxazepam	4.367	1112653	325.3	65.9	4724242	10.000
Oxycodone	2.815	2131072	503.2	645.2	10367171	10.000
Oxymorphone	2.119	1229482	570.9	475.9	189031	10.000
Paroxetine	4.315	505757	572.5	1165.3	6223117	10.000
Phenazepam	4.514	1244953	486283.3	368853.5	12956303	10.000
Phencyclidine	3.848	3438196	1408.2	188.6	9009810	10.000
Phentermine	2.919	47817	5693689319054.7	∞	15729144	10.000
Phenytoin	3.939	174796	993.2	52.0	91444	10.000
Promethazine	4.583	6046876	1276.4	439.4	40670783	10.000
Pseudoephedrine	2.431	49017986	1422.9	870.0	19977400	10.000
Quetiapine	4.712	4171815	1357.5	1164630.4	30680355	10.000
Sertraline	4.596	1142145	45501.9	181062.9	6223117	10.000
Sufentanil	4.910	241148	89583.3	526.8	22479150	10.000
Tapentadol	3.283	3451096	∞	1689.2	2747636	10.000

AM #25 Multi-Drug Screen Results

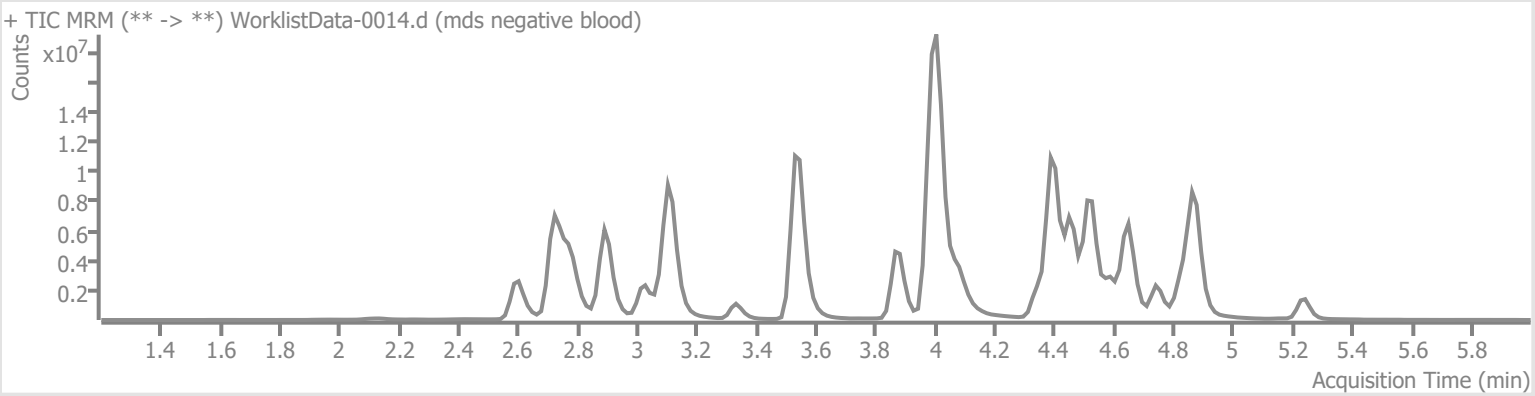
Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Temazepam	4.535	2418886	1022.8	122.1	12956303	10.000
Tramadol	3.280	5474160	1306.4	31.5	40670783	10.000
Trazodone	4.896	4347298	1895.2	1800.4	19703697	10.000
Venlafaxine	3.691	4197554	2494.5	244.1	6223117	10.000
Zaleplon	4.196	1401598	304520.2	872.5	30680355	10.000
Zolpidem	4.411	5880530	4212.7	722.9	30680355	10.000
Zopiclone	4.405	169613	24498.5	29887.2	912631	10.000

AM #25 Multi-Drug Screen Results

Batch results D:\MassHunter\Data\2022\am 27-28\021122\QuantResults\mds urine re-run.batch.bin
Calibration Last Update 2/15/2022 12:10:13 PM

Instrument	69679	**Data File**	WorklistData-0014.d
Type	Sample	**Sample**	mds negative blood
Acq. Method	mds713.m	**Operator**	Anne Nord
Sample Position	P1-A2	**Comment**	
Injection Volume	2.5		
Acq. Date-Time	2/15/2022 10:58:26 AM		
Sample Info.			

Sample Chromatogram

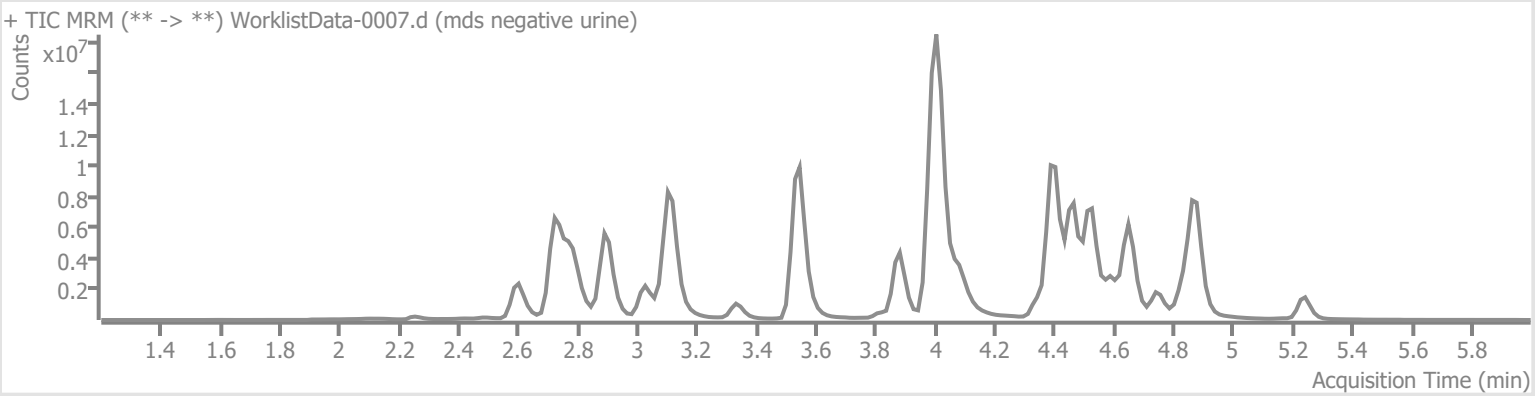


AM #25 Multi-Drug Screen Results

Batch results D:\MassHunter\Data\2022\am 27-28\021122\QuantResults\mds urine re-run.batch.bin
Calibration Last Update 2/15/2022 12:10:13 PM

Instrument	69679	**Data File**	WorklistData-0007.d
Type	Sample	**Sample**	mds negative urine
Acq. Method	mds713.m	**Operator**	Anne Nord
Sample Position	P1-B2	**Comment**	
Injection Volume	2.5		
Acq. Date-Time	2/15/2022 11:05:08 AM		
Sample Info.			

Sample Chromatogram

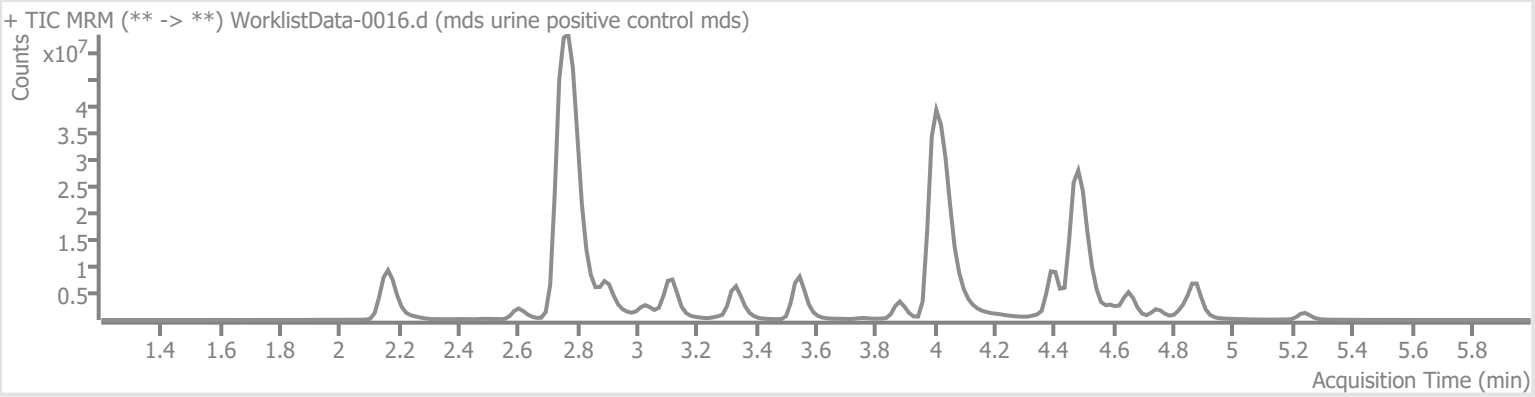


AM #25 Multi-Drug Screen Results

Batch results D:\MassHunter\Data\2022\am 27-28\021122\QuantResults\mds urine re-run.batch.bin
Calibration Last Update 2/15/2022 12:10:13 PM

Instrument	69679	**Data File**	WorklistData-0016.d
Type	Sample	**Sample**	mds urine positive control mds
Acq. Method	mds713.m	**Operator**	Anne Nord
Sample Position	P1-C2	**Comment**	
Injection Volume	2.5		
Acq. Date-Time	2/15/2022 11:11:51 AM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Alprazolam	4.488	48110637	214624.1	417787.2	8321484	522.149
Diphenhydramine	4.057	90755051	376.0	∞	30395452	193.321
Methamphetamine	2.782	88606769	∞	∞	15895169	211.811
Methocarbamol	3.343	9371323	8820.6	11102.4	2682561	444.247
Morphine	2.168	9258269	∞	4085.5	165585	447.007

zopiclone was not evaluated in the sample due to poor internal standard response.

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

Extraction Date: 2/10/22 Analyst: Anne Nord

Plate lot#: 211018 Plate retest date: 4/18/22

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: 22B52020 **Urine Blank:** 83121 **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 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: C2022-0177-1 was not extracted, insufficient sample volume.

	1	2	3	4	5	6
A	cal 1	Internal control	120-1	206-1	168-1	
B	cal 2	negative blood	132-1	212-1	192-1	
C	cal 3	078-1	154-1	234-1	241-1	
D	cal 4	089-1	166-1	255-1	274-1	
E	Cal 5	102-1	176-1	273-2		
	cal 6	114-1	186-1	negative urine		
G	cal 7	115-1	191-1	109-1		
H	Internal control	117-1	195-1	155-1		

C2022-0___

Added to central file on 3/3/2022.

IDAHO STATE POLICE

MEMORANDUM

DATE: 3/3/2022

TO: Toxicology Discipline/ Jason Crowe

FROM: Celena Shrum- Toxicology Discipline lead

SUBJECT: Use of internal control in lieu of external control

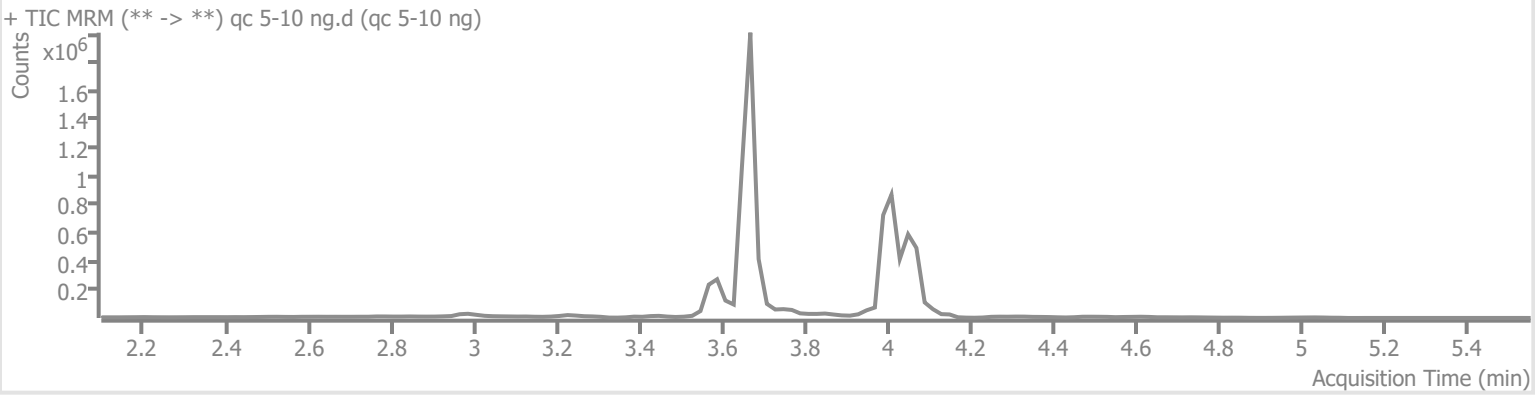
Toxicology Analytical Methods #25, 26, and 27 specify that if a run contains urine samples, a negative control and **external** urine control must also be included in the run. The purpose of this control is to demonstrate that the extraction worked as intended and to ensure that the results and concentrations obtained are accurate. It was decided in October 2021 that extra QC's would be included on the analytical plates so that they could be used as an internal control for runs with urine cases instead of continuing with including an external control. An internal control serves the same purpose as an external control but is prepared and placed on the analytical plate rather than being prepared in-house and placed on the plate at the time of testing. Utilizing internal controls versus external increases the efficacy of the controls used by ensuring consistent spiking and preparation, eliminating evaporation of compounds, etc. There is no quality issue with any of the cases, since an additional urine control was used that served the same purpose as the external control, but it was a violation of the wording specified in the method.

AM #26 Cannabinoids Screen Results

Batch results D:\MassHunter\Data\2022\am 25-26\021022\QuantResults\cann.batch.bin
Calibration Last Update 2/11/2022 8:55:49 AM

Instrument	69679	**Data File**	qc 5-10 ng.d
Type	QC	**Sample**	qc 5-10 ng
Acq. Method	am 26 cann scr 5-5-20.m	**Operator**	Anne Nord
Sample Position	P3-H1	**Comment**	Blood
Injection Volume	5		
Acq. Date-Time	2/10/2022 5:37:13 PM		
Sample Info.			

Sample Chromatogram



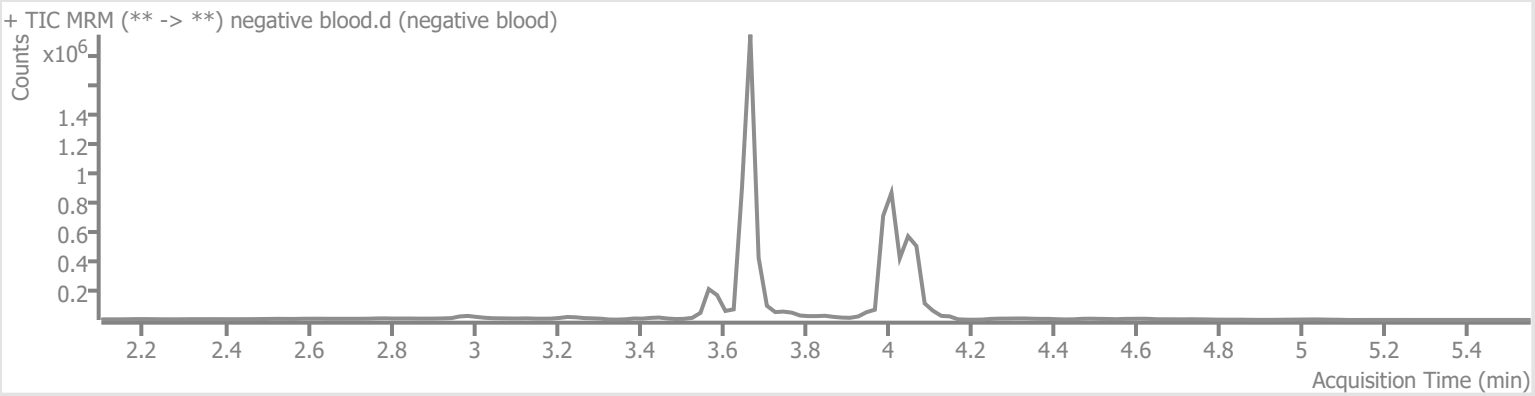
Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	4.064	50267	1209836	4.760 ng/ml
THC-COOH	3.592	111800	549487	17.467 ng/ml
THC-OH	3.679	33821	4123285	5.136 ng/ml

AM #26 Cannabinoids Screen Results

Batch results D:\MassHunter\Data\2022\am 25-26\021022\QuantResults\cann.batch.bin
Calibration Last Update 2/11/2022 8:55:49 AM

Instrument	69679	**Data File**	negative blood.d
Type	Sample	**Sample**	negative blood
Acq. Method	am 26 cann scr 5-5-20.m	**Operator**	Anne Nord
Sample Position	P3-B2	**Comment**	
Injection Volume	5		
Acq. Date-Time	2/10/2022 5:43:51 PM		
Sample Info.			

Sample Chromatogram

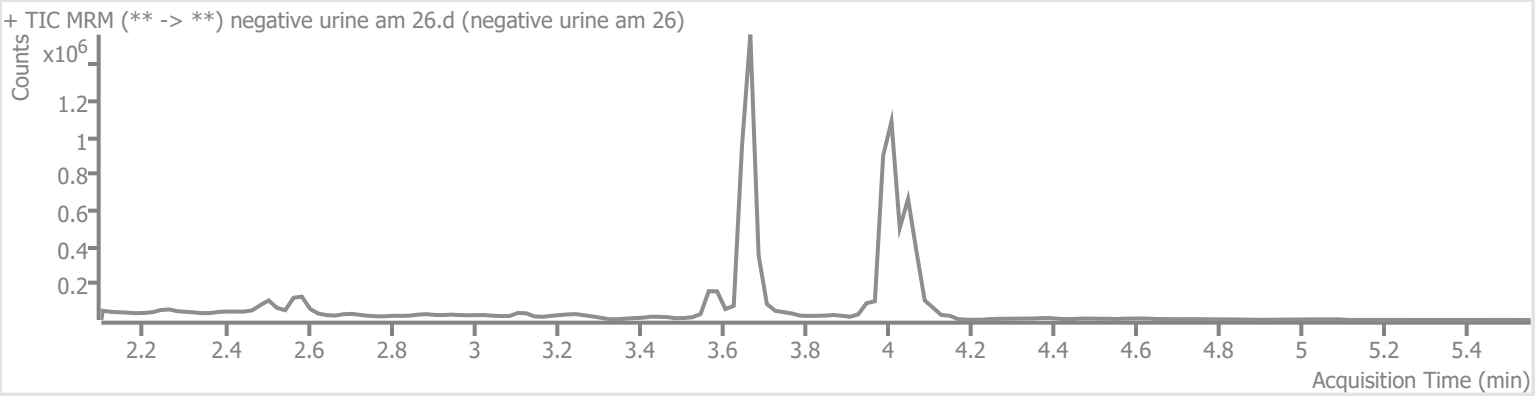


AM #26 Cannabinoids Screen Results

Batch results D:\MassHunter\Data\2022\am 25-26\021022\QuantResults\cann.batch.bin
Calibration Last Update 2/11/2022 8:55:49 AM

Instrument	69679	**Data File**	negative urine am 26.d
Type	Sample	**Sample**	negative urine am 26
Acq. Method	am 26 cann scr 5-5-20.m	**Operator**	Anne Nord
Sample Position	P3-F4	**Comment**	
Injection Volume	5		
Acq. Date-Time	2/10/2022 7:56:19 PM		
Sample Info.			

Sample Chromatogram

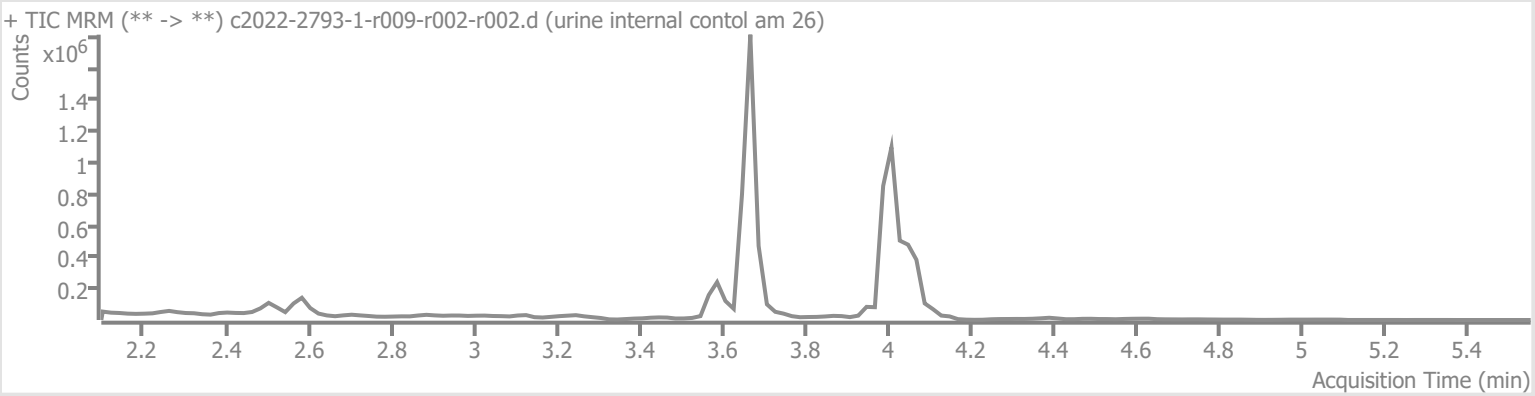


AM #26 Cannabinoids Screen Results

Batch results D:\MassHunter\Data\2022\am 25-26\021022\QuantResults\cann.batch.bin
Calibration Last Update 2/11/2022 8:55:49 AM

Instrument	69679	**Data File**	c2022-2793-1-r009-r002-r002.d
Type	Sample	**Sample**	urine internal contol am 26
Acq. Method	am 26 cann scr 5-5-20.m	**Operator**	Anne Nord
Sample Position	P3-A2	**Comment**	Internal control 5/15
Injection Volume	5		
Acq. Date-Time	2/10/2022 9:21:46 PM		
Sample Info.			

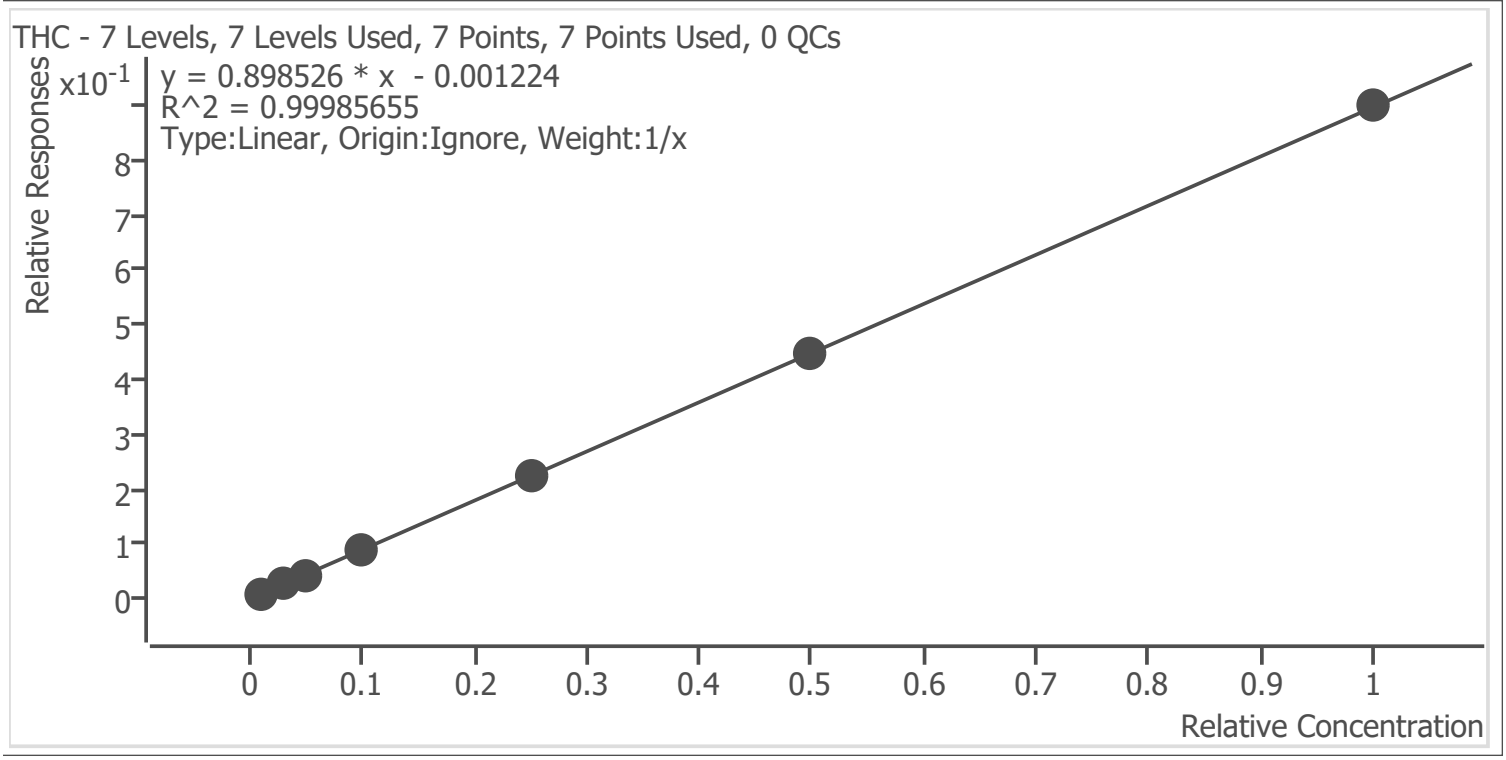
Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	4.064	34133	871622	4.495 ng/ml
THC-COOH	3.592	85445	439695	16.706 ng/ml
THC-OH	3.679	30912	3566187	5.414 ng/ml

Compound Calibration Report

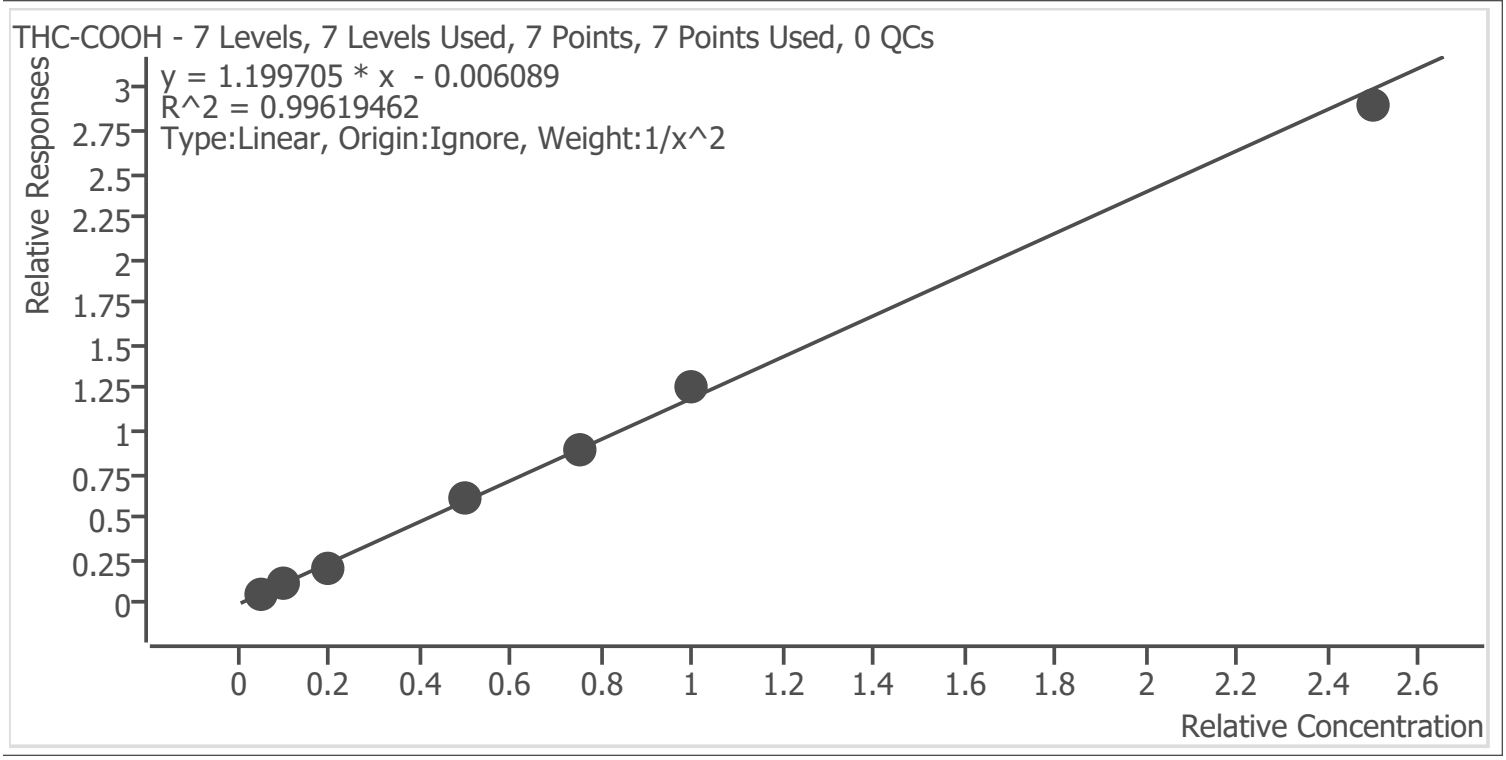
Batch results	D:\MassHunter\Data\2022\am 25-26\021022\QuantResults\cann.batch.bin
Last Cal. Update	2/11/2022 8:55 AM
Analyst Name	ISP\datastor
Analyte	THC
Internal Standard	THC-d3



Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
cal 1	1	✓	1.0	1.1	106.7
cal 2	2	✓	3.0	3.0	98.6
cal 3	3	✓	5.0	4.9	97.8
cal 4	4	✓	10.0	9.6	96.1
cal 5	5	✓	25.0	25.0	100.1
cal-6	6	✓	50.0	50.1	100.2
cal-7	7	✓	100.0	100.3	100.3

Compound Calibration Report

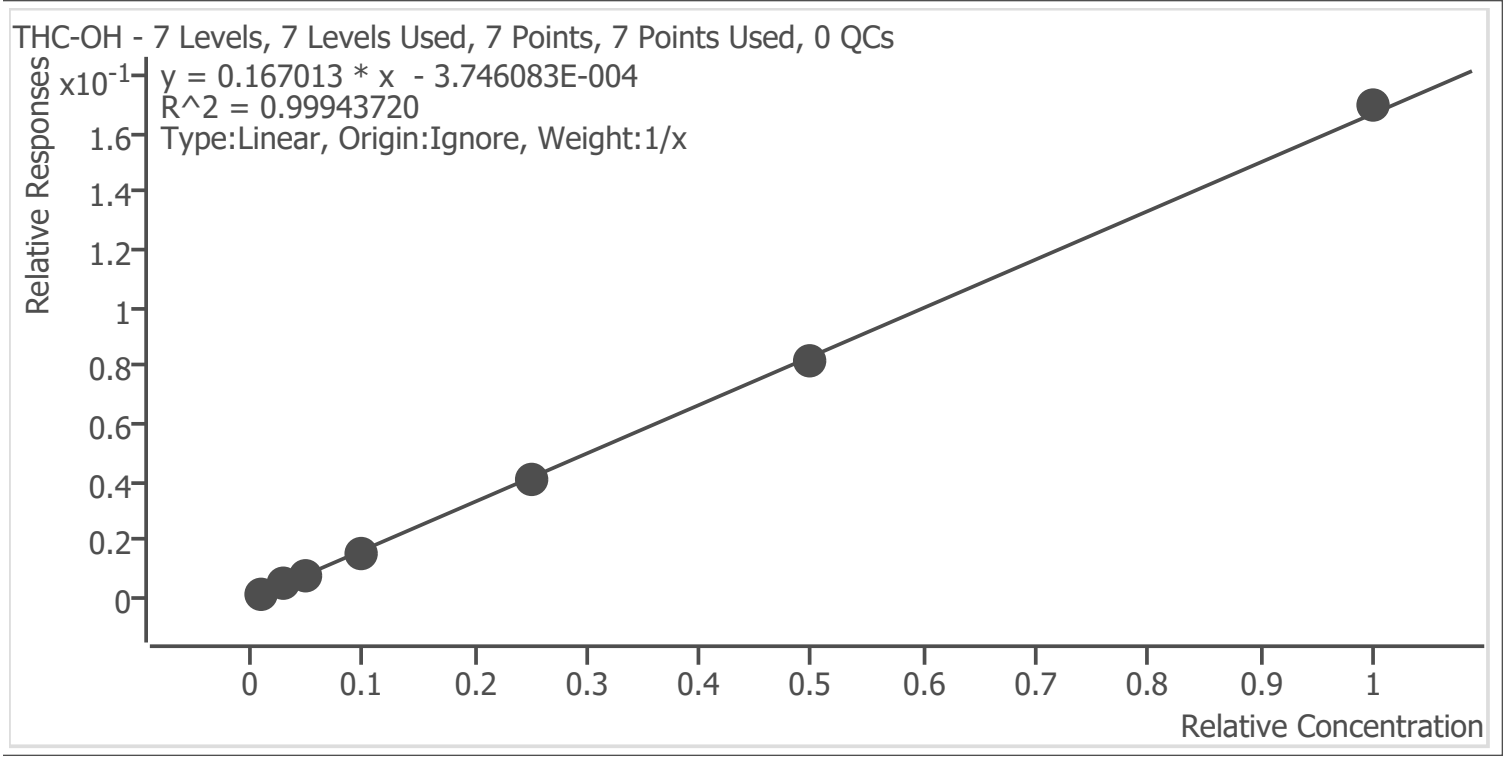
Batch results	D:\MassHunter\Data\2022\am 25-26\021022\QuantResults\cann.batch.bin
Last Cal. Update	2/11/2022 8:55 AM
Analyst Name	ISP\datastor
Analyte	THC-COOH
Internal Standard	THC-COOH-d9



Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
cal 1	1	✓	5.0	5.1	101.9
cal 2	2	✓	10.0	9.9	99.4
cal 3	3	✓	20.0	18.2	90.9
cal 4	4	✓	50.0	52.3	104.7
cal 5	5	✓	75.0	75.5	100.6
cal-6	6	✓	100.0	105.8	105.8
cal-7	7	✓	250.0	241.9	96.8

Compound Calibration Report

Batch results	D:\MassHunter\Data\2022\am 25-26\021022\QuantResults\cann.batch.bin
Last Cal. Update	2/11/2022 8:55 AM
Analyst Name	ISP\datastor
Analyte	THC-OH
Internal Standard	THC-OH-d3



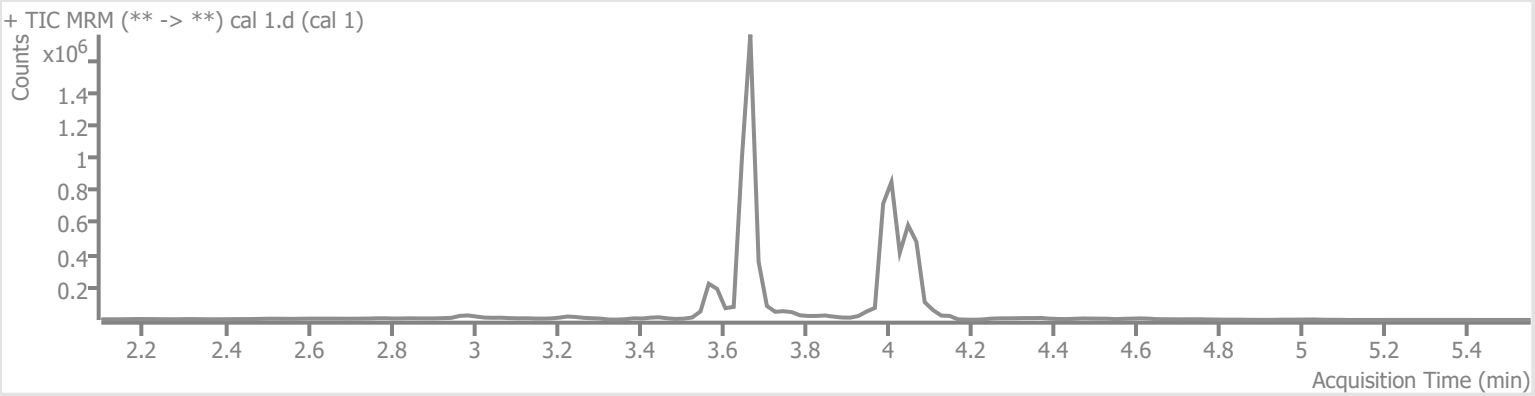
Sample	Level	Enabled	Expected Concentration	Final Concentration	Accuracy
cal 1	1	✓	1.0	1.1	110.5
cal 2	2	✓	3.0	2.9	98.0
cal 3	3	✓	5.0	4.9	98.7
cal 4	4	✓	10.0	9.4	93.9
cal 5	5	✓	25.0	24.7	98.6
cal-6	6	✓	50.0	49.3	98.6
cal-7	7	✓	100.0	101.7	101.7

AM #26 Cannabinoids Screen Results

Batch results D:\MassHunter\Data\2022\am 25-26\021022\QuantResults\cann.batch.bin
Calibration Last Update 2/11/2022 8:55:49 AM

Instrument	69679	**Data File**	cal 1.d
Type	Cal	**Sample**	cal 1
Acq. Method	am 26 cann scr 5-5-20.m	**Operator**	Anne Nord
Sample Position	P3-A1	**Comment**	
Injection Volume	5		
Acq. Date-Time	2/10/2022 4:50:49 PM		
Sample Info.			

Sample Chromatogram



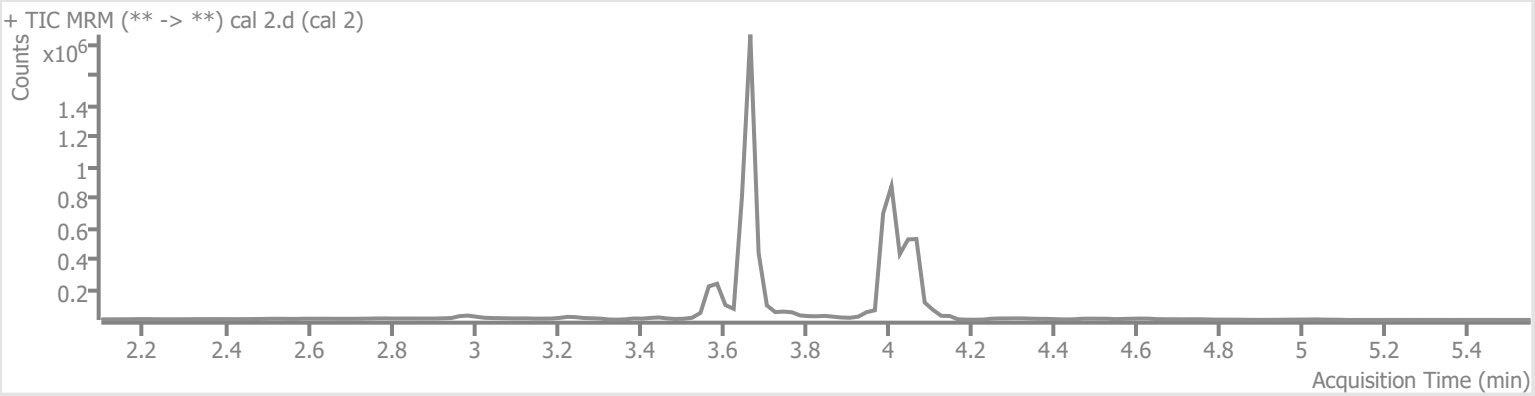
Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	4.064	10333	1235197	1.067 ng/ml **Low**
THC-COOH	3.592	32447	589784	5.093 ng/ml **Low**
THC-OH	3.679	5795	3937555	1.105 ng/ml **Low**

AM #26 Cannabinoids Screen Results

Batch results D:\MassHunter\Data\2022\am 25-26\021022\QuantResults\cann.batch.bin
Calibration Last Update 2/11/2022 8:55:49 AM

Instrument	69679	**Data File**	cal 2.d
Type	Cal	**Sample**	cal 2
Acq. Method	am 26 cann scr 5-5-20.m	**Operator**	Anne Nord
Sample Position	P3-B1	**Comment**	
Injection Volume	5		
Acq. Date-Time	2/10/2022 4:57:29 PM		
Sample Info.			

Sample Chromatogram



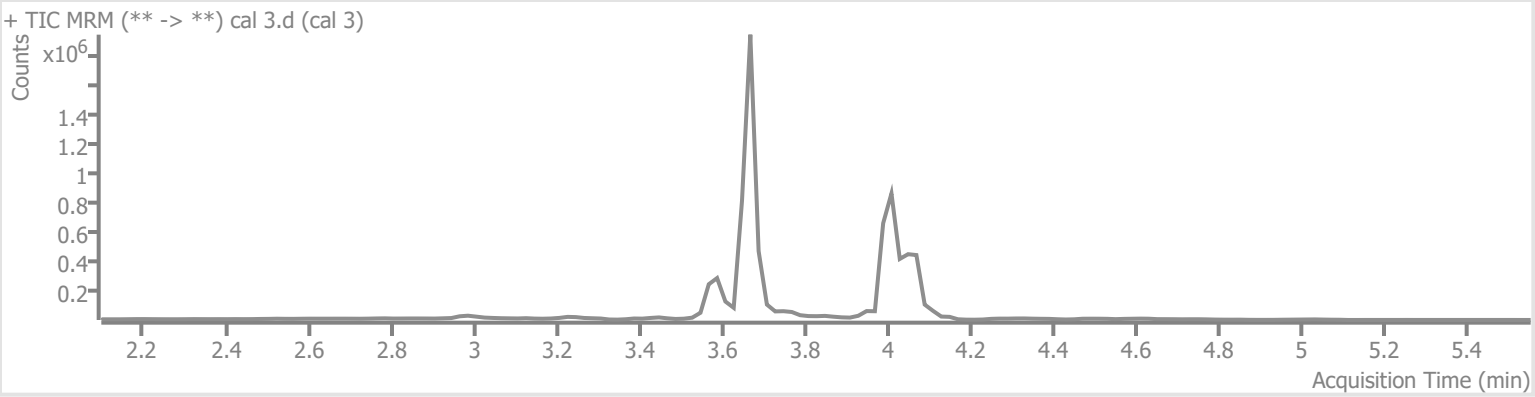
Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	4.084	30223	1191550	2.959 ng/ml **Low**
THC-COOH	3.592	65223	576611	9.936 ng/ml **Low**
THC-OH	3.679	17387	3834078	2.940 ng/ml **Low**

AM #26 Cannabinoids Screen Results

Batch results D:\MassHunter\Data\2022\am 25-26\021022\QuantResults\cann.batch.bin
Calibration Last Update 2/11/2022 8:55:49 AM

Instrument	69679	**Data File**	cal 3.d
Type	Cal	**Sample**	cal 3
Acq. Method	am 26 cann scr 5-5-20.m	**Operator**	Anne Nord
Sample Position	P3-C1	**Comment**	
Injection Volume	5		
Acq. Date-Time	2/10/2022 5:04:06 PM		
Sample Info.			

Sample Chromatogram



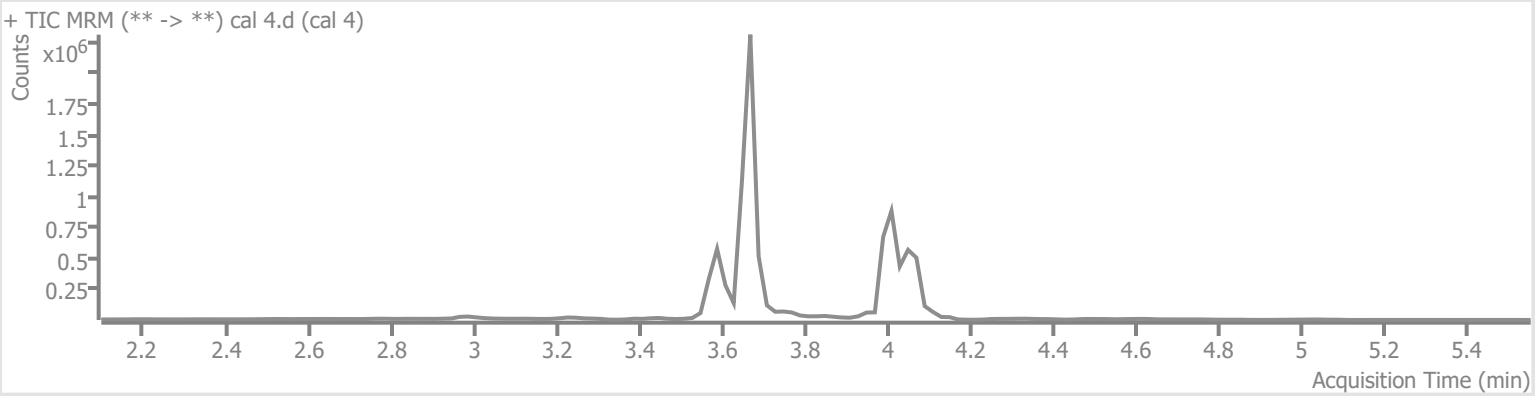
Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	4.084	41696	975758	4.892 ng/ml
THC-COOH	3.592	121506	573262	18.175 ng/ml
THC-OH	3.679	30526	3880870	4.934 ng/ml

AM #26 Cannabinoids Screen Results

Batch results D:\MassHunter\Data\2022\am 25-26\021022\QuantResults\cann.batch.bin
Calibration Last Update 2/11/2022 8:55:49 AM

Instrument	69679	**Data File**	cal 4.d
Type	Cal	**Sample**	cal 4
Acq. Method	am 26 cann scr 5-5-20.m	**Operator**	Anne Nord
Sample Position	P3-D1	**Comment**	
Injection Volume	5		
Acq. Date-Time	2/10/2022 5:10:43 PM		
Sample Info.			

Sample Chromatogram



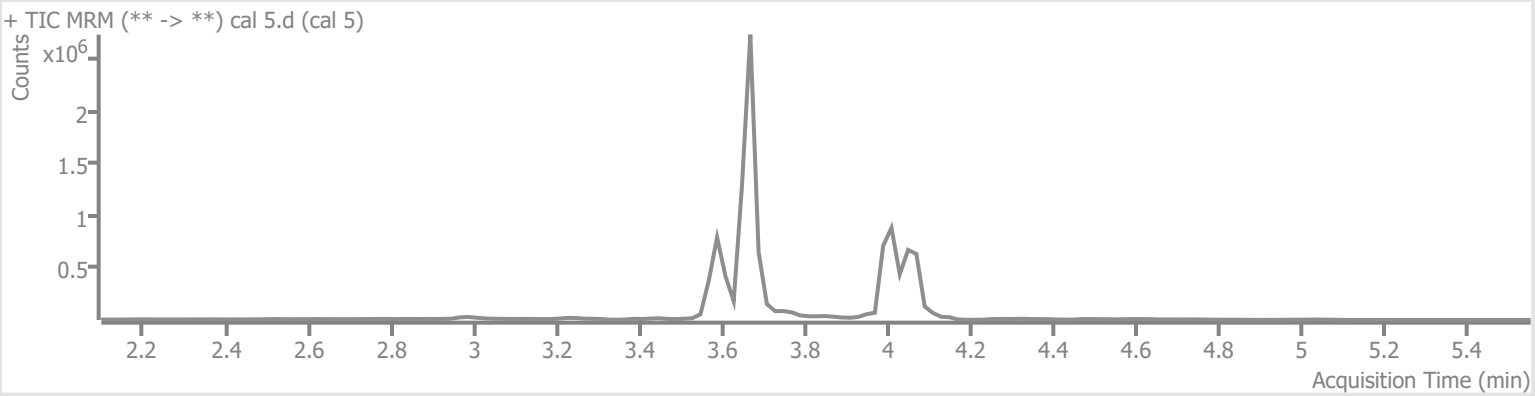
Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	4.084	96602	1134402	9.614 ng/ml
THC-COOH	3.592	365671	588108	52.335 ng/ml
THC-OH	3.679	66876	4368800	9.390 ng/ml

AM #26 Cannabinoids Screen Results

Batch results D:\MassHunter\Data\2022\am 25-26\021022\QuantResults\cann.batch.bin
Calibration Last Update 2/11/2022 8:55:49 AM

Instrument	69679	**Data File**	cal 5.d
Type	Cal	**Sample**	cal 5
Acq. Method	am 26 cann scr 5-5-20.m	**Operator**	Anne Nord
Sample Position	P3-E1	**Comment**	
Injection Volume	5		
Acq. Date-Time	2/10/2022 5:17:22 PM		
Sample Info.			

Sample Chromatogram



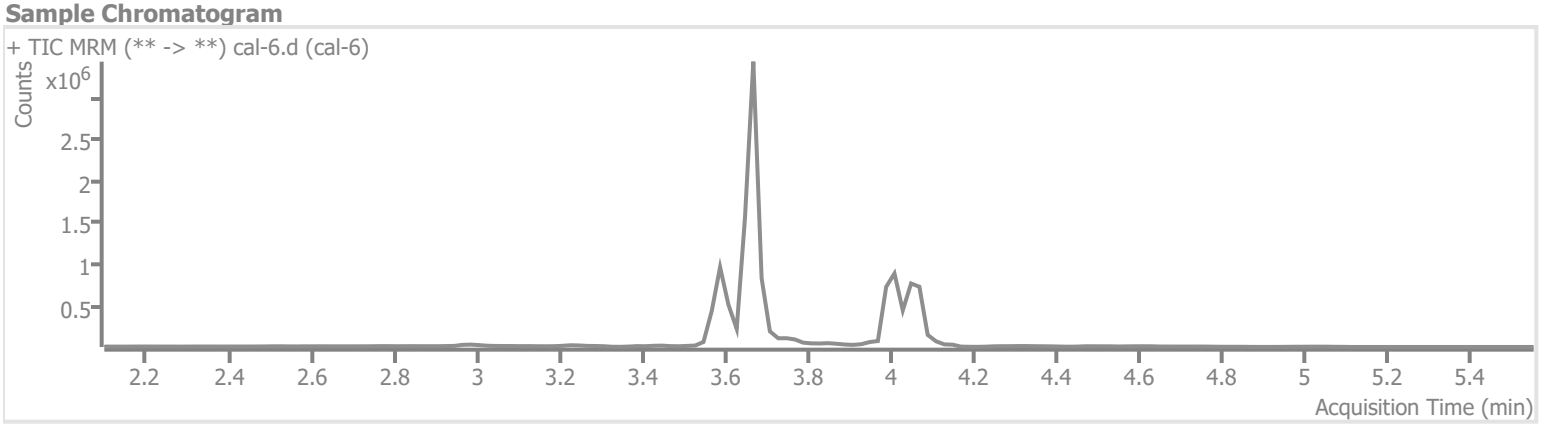
Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	4.084	274078	1225586	25.025 ng/ml
THC-COOH	3.592	561957	624819	75.475 ng/ml
THC-OH	3.679	174530	4278249	24.650 ng/ml

AM #26 Cannabinoids Screen Results

Batch results D:\MassHunter\Data\2022\am 25-26\021022\QuantResults\cann.batch.bin
Calibration Last Update 2/11/2022 8:55:49 AM

Instrument	69679	**Data File**	cal-6.d
Type	Cal	**Sample**	cal-6
Acq. Method	am 26 cann scr 5-5-20.m	**Operator**	Anne Nord
Sample Position	P3-F1	**Comment**	
Injection Volume	5		
Acq. Date-Time	2/10/2022 5:23:59 PM		
Sample Info.			

Sample Chromatogram



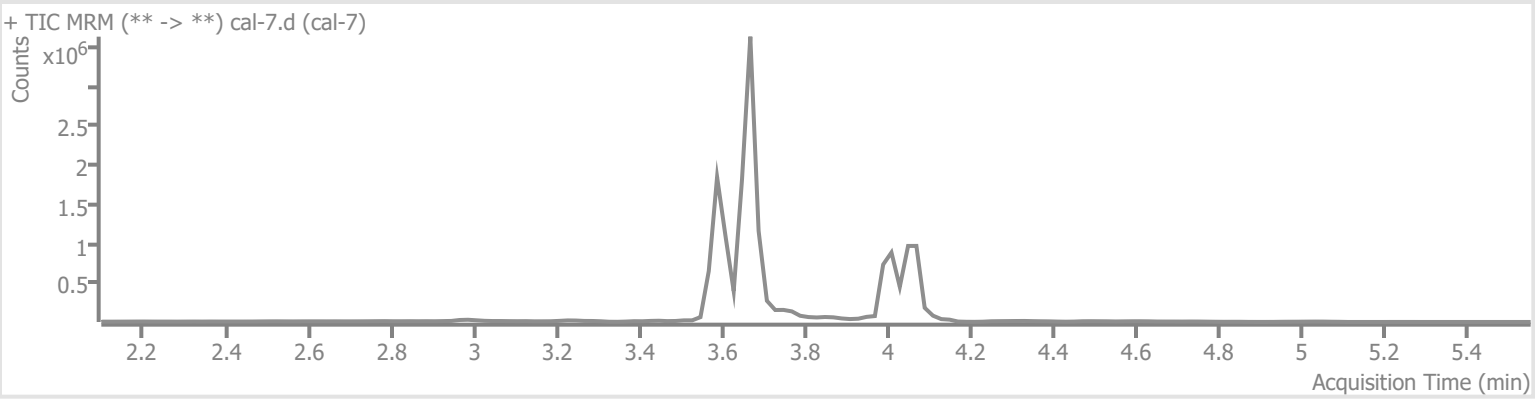
Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	4.084	525733	1170754	50.113 ng/ml
THC-COOH	3.592	730986	578451	105.841 ng/ml
THC-OH	3.679	345527	4215200	49.305 ng/ml

AM #26 Cannabinoids Screen Results

Batch results D:\MassHunter\Data\2022\am 25-26\021022\QuantResults\cann.batch.bin
Calibration Last Update 2/11/2022 8:55:49 AM

Instrument	69679	**Data File**	cal-7.d
Type	Cal	**Sample**	cal-7
Acq. Method	am 26 cann scr 5-5-20.m	**Operator**	Anne Nord
Sample Position	P3-G1	**Comment**	
Injection Volume	5		
Acq. Date-Time	2/10/2022 5:30:36 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	ISTD Resp.	Final Conc.
THC	4.084	1018870	1131743	100.330 ng/ml
THC-COOH	3.592	1597559	551668	241.890 ng/ml
THC-OH	3.679	624641	3686592	101.675 ng/ml