

Worklist: 3516

<u>LAB_CASE</u>	<u>ITEM</u>	<u>TASK_ID</u>	<u>DESCRIPTION</u>	
M2019-2409	1	152531	AM 25 Blood Multi-Drug Screen by LC-QQQ	
M2019-2445	1	152848	AM 25 Blood Multi-Drug Screen by LC-QQQ	
M2019-2447	2	154692	AM 25 Blood Multi-Drug Screen by LC-QQQ	
M2019-2555	1	153584	AM 25 Blood Multi-Drug Screen by LC-QQQ	
M2019-2609	1	153814	AM 25 Blood Multi-Drug Screen by LC-QQQ	
M2019-2733	2	155214	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-1758	1	154085	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-1763	1	154111	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-1776	1	154303	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-1780	1	154410	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-1787	1	154442	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-1788	1	154445	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-1861	1	154706	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-1873	1	154772	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-1888	1	155044	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-1903	1	155176	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-1909	1	155208	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-1910	1	155211	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-1911	1	155217	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-1912	1	155267	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-1914	1	155456	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-1922	1	155474	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-1923	1	155477	AM 25 Blood Multi-Drug Screen by LC-QQQ	

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<u>LAB CASE</u>	<u>ITEM</u>	<u>TASK ID</u>	<u>DESCRIPTION</u>
P2019-1924	1	155480	AM 25 Blood Multi-Drug Screen by LC-QQQ
P2019-1927	1	155598	AM 25 Blood Multi-Drug Screen by LC-QQQ



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

Extraction Date: ~~7/2/19~~ [⌘] 07/01/19
 Plate lot#: 0543908

Analyst: Sarah Pickle
 Plate Expiration: 11/28/19

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: 445283-2
LCMS-QQQ ID: 069901

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

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. Pipette **250 µL blood (calibrated pipette)** in wells of analytical (standards) plate. **Pipette ID: #3**
- 3. Place on shaking incubator at ambient temp., 900 rpm for 15 minutes. *Shaker ID: 067105*
- 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+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: 067104
- 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. Place on SPE Dry and evaporate to dryness at approx. 35°C.
SPE Dry ID: 067103
- 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. 070119 ⌘
 Batch Name: MDS Worklist path: D:\MassHunter\Data\2019\AM 25\070219 MDS SP
- 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? Y / N _____
- 5. Central File Packet to include: LIMS Worklist, Method Checklist, Calibration and Control Reports

COMMENTS: *The calibrator, negative control, and external control were reinjected to update the retention time for sufentanil. Did not evaluate olanzapine due to poor peak shape.*



Idaho State Police Forensic Services

AM #25 Blood Multi-Drug Screen by LCMS-QQQ

Methanol External Control Solution (Lot: 042719)

100 ul of 1mg/mL stock was added to each drug to 9600 ul of LC MeOH.

<i>Component</i>	<i>Source</i>	<i>Source Lot Number</i>	<i>Expiration Date</i>
Methanol (LCMS)	Fisher	184782	
Morphine	Cerilliant	FE08141515	November 2020
Metoprolol	Cerilliant	FN06091510	July 2020
Flunitrazepam	Cerilliant	FE08051602	August 2021
Trazodone	Cerilliant	FN12151403	January 2020
Prepared:	04/27/19		
Prepared By:	Tamara Salazar		
Expires:	01/31/2020		

Blood External Control Solution (Lot: WS042719)

100 ul of methanol external control solution was added to 9900 ul of blood.

Approximately 50ng/mL of each compound.

<i>Component</i>	<i>Source</i>	<i>Source Lot Number</i>
Negative Blood	Hemostat	445283-1
Methanol External Control Solution		042719
Prepared:	04/27/19	
Prepared by:	Tamara Salazar	
Expires:	01/31/2020	

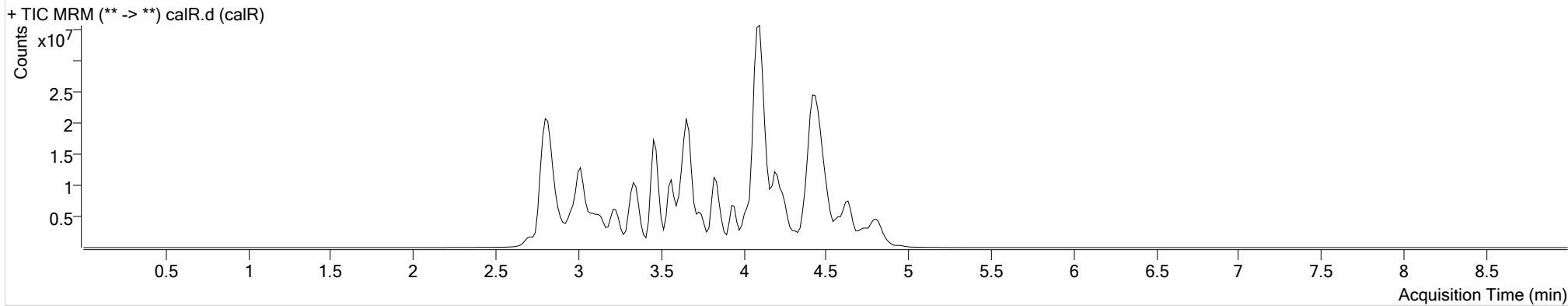
AM #25 Multi-Drug Screen Results



Batch results D:\MassHunter\Data\2019\AM 25\070119 MDS SP\QuantResults\MDS.batch.bin
Calibration Last Update 7/2/2019 10:42:33 AM

Instrument Falco **Data File** calR.d
Type Cal **Sample** calR
Acq. Method am 25 all.m **Operator**
Sample Position P1-H7 **Comment**
Injection Volume 5
Acq. Date-Time 7/1/2019 3:58:19 PM
Sample Info.

Sample Chromatogram



Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
6-MAM	3.272	43205	∞	16965.28	1111021	10.0000
7-aminoclonazepam	3.551	141850	∞	101.76	653359	10.0000
7-aminoflunitrazepam	3.765	474529	∞	270.27	2379302	10.0000
Acetyl Fentanyl	4.039	267767	351.86	228.04	16419482	10.0000
Acetyl Norfentanyl	2.991	206306	54.57	134.53	10049592	10.0000
a-hydroxyalprazolam	4.499	27069	53.23	∞	112523	10.0000
alpha-hydroxymidazolam	4.574	352631	900.87	8288.63	2606970	10.0000
alpha-PVP	3.651	2257608	3812.84	∞	10014648	10.0000
Alprazolam	4.593	664563	720.48	∞	2049116	10.0000
Amitriptyline	4.521	2274791	∞	97.74	5705652	10.0000
Amphetamine	3.025	782270	1612.27	321.03	1974176	10.0000
Benzoyllecgonine	3.336	481542	645.71	558.28	2292811	10.0000
Buprenorphine	4.860	320622	944.06	4604.58	1422090	10.0000
Bupropion	3.879	2272497	4361.93	∞	8351308	10.0000
Carbamazepine	4.218	3485086	∞	∞	17622918	10.0000
Carisoprodol	4.201	527712	14173.45	103.12	2741774	10.0000
Chlordiazepoxide	4.717	144092	134.34	9215.75	4003392	10.0000
Chlorpheniramine	4.013	16678	10.61	440.48	21087033	10.0000

AM #25 Multi-Drug Screen Results



Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Citalopram	4.130	1883272	6731.05	∞	7687365	10.0000
Clonazepam	4.439	44523	47.68	∞	85472	10.0000
Cocaine	3.641	3419180	504484.13	1999.11	16825835	10.0000
Codeine	3.274	352726	318.71	70.00	1660035	10.0000
Cyclobenzaprine	4.445	2088734	62946.19	106.33	7224687	10.0000
Desipramine	4.462	2557134	3929.55	∞	14541245	10.0000
Dextromethorphan	4.153	1624672	150132.63	4735.70	7558023	10.0000
Dextrorphan	3.462	1797211	2725.86	∞	9436700	10.0000
Diazepam	4.826	420558	∞	∞	1943289	10.0000
Dihydrocodeine	3.076	942842	697.34	∞	4760412	10.0000
Diphenhydramine	4.078	3129809	∞	2491.56	21087033	10.0000
Doxepin	4.259	1639529	∞	30.98	8977528	10.0000
Doxylamine	3.675	7315161	19576.34	∞	29034660	10.0000
EDDP	4.105	4092182	10446.81	8133.47	21417724	10.0000
Estazolam	4.503	946798	1003.60	∞	2254898	10.0000
Etizolam	4.604	108830	253.30	18264.58	2254898	10.0000
Fentanyl	4.252	242880	70.69	1041.27	11151855	10.0000
Flunitrazepam	4.562	354009	1577.93	403.69	71366	10.0000
Fluoxetine	4.379	2808299	∞	652.64	11955940	10.0000
Flurazepam	4.312	1789262	33423.62	341.54	71366	10.0000
Hydrocodone	3.350	670985	∞	∞	3371240	10.0000
Hydromorphone	3.002	854203	41.08	18.59	3384735	10.0000
Imipramine	4.490	4293963	471914.68	94.54	13729903	10.0000
Ketamine	3.772	2082736	4152.83	276.49	9693447	10.0000
Lamotrigine	3.632	152307	360.24	981.25	7767875	10.0000
Levamisole	3.329	1452573	2226.19	382.51	16825835	10.0000
Lorazepam	4.423	6017	∞	11.50	85472	10.0000
Maprotiline	4.521	2612799	153.46	∞	5705652	10.0000
MDA	3.161	1387509	909.41	1865.14	6373813	10.0000
MDEA	3.329	2770550	5985.68	2367.14	13019823	10.0000
MDMA	3.237	3151462	73410.92	1879.60	1960409	10.0000
Meperidine	3.678	1742336	5707.75	3551.90	7767875	10.0000
Meprobamate	3.636	146578	393.49	131.52	777224	10.0000
Methadone	4.424	4540490	7582.26	∞	20645068	10.0000
Methamphetamine	3.131	2106323	314.60	∞	8477101	10.0000
Methocarbamol	3.541	155758	5188.72	139.06	7767875	10.0000
Methylphenidate	3.573	6098619	∞	537.41	26368033	10.0000
Metoprolol	3.477	420672	1289.68	930.01	7767875	10.0000
Midazolam	4.742	442010	1371.33	∞	5319753	10.0000
Mirtazapine	4.185	2045495	10397.44	7796.63	7767875	10.0000
Mitragynine	4.326	372695	193683.79	143591.02	8977528	10.0000
Morphine	2.850	259956	5.73	∞	203511	10.0000
Norbuprenorphine	3.928	23712	2533.58	1657.08	118791	10.0000
Nordiazepam	4.676	131187	20064.54	159.04	400901	10.0000

AM #25 Multi-Drug Screen Results



Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.	
Norfentanyl	3.373	2843692	600659.93	1315.75	11938606	10.0000	
Norhydrocodone	3.123	56869	83.36	∞	1194206	10.0000	
Normeperidine	3.650	1227627	7110.50	∞	4638807	10.0000	
Noroxycodone	3.045	721976	∞	∞	2230027	10.0000	
Nortriptyline	4.493	1164146	155.84	∞	3008182	10.0000	
O-desmethyl-tramadol	3.035	5612427	14397.97	2417.01	26588422	10.0000	
Olanzapine	4.147	489248	188.65	1354.52	10078	10.0000	Did not evaluate
Oxazepam	4.504	37624	83.44	8.10	176020	10.0000	
Oxycodone	3.241	1430776	∞	∞	6404612	10.0000	
Oxymorphone	2.741	1528198	289.23	284.23	6373584	10.0000	
Paroxetine	4.452	173974	60.34	1306.59	6101496	10.0000	
Phenazepam	4.634	144322	1121.02	142.17	586513	10.0000	
Phencyclidine	3.954	3339880	17622.16	141.10	15983821	10.0000	
Phentermine	3.239	483341	124.89	7.49	4947223	10.0000	
Phenytoin	4.109	2991	78.54	6.49	10078	10.0000	
Promethazine	4.458	5128385	31746.13	∞	22000298	10.0000	
Pseudoephedrine	2.826	23241022	7429.40	∞	80929000	10.0000	
Quetiapine	4.618	2566680	59651.08	503375.52	4157038	10.0000	
Sertraline	4.655	1271806	∞	5027.79	6101496	10.0000	
Sufentanil	4.618	214716	46692.18	11345.84	11063652	10.0000	
Tapentadol	3.482	2919634	5876.77	2708.83	13518662	10.0000	
Temazepam	4.656	520032	∞	79.31	2294959	10.0000	
Tramadol	3.477	4987161	∞	∞	24931651	10.0000	
Trazodone	4.832	3148174	∞	844.64	13548917	10.0000	
Venlafaxine	3.827	4753689	11938.46	1425.93	22788187	10.0000	
Zaleplon	4.334	476674	∞	1582.63	1404320	10.0000	
Zolpidem	4.425	4744842	9728.31	∞	23267806	10.0000	
Zopiclone	4.373	153037	2294.69	373.08	687296	10.0000	

AM #25 Multi-Drug Screen Results



Batch results
Calibration Last Update

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7/2/2019 10:42:33 AM

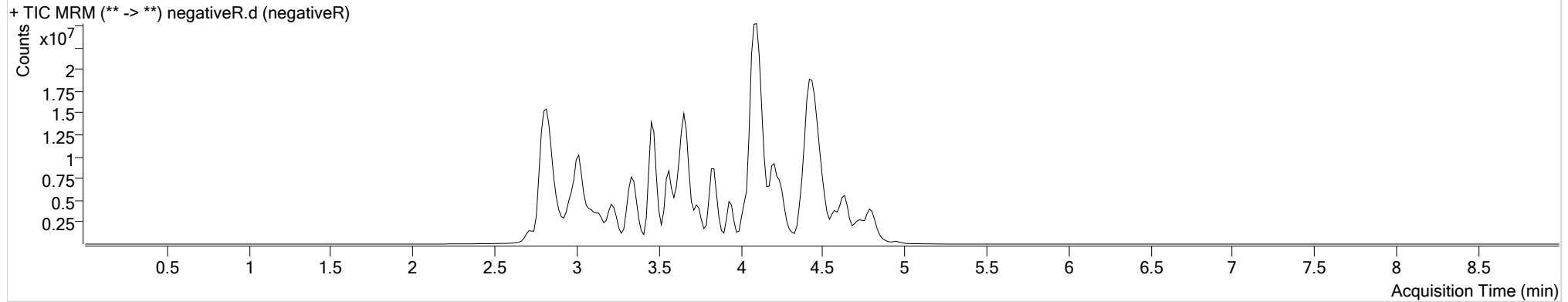
Instrument
Type
Acq. Method
Sample Position
Injection Volume
Acq. Date-Time
Sample Info.

Falco
Sample
am 25 all.m
P1-F7
5
7/1/2019 4:07:59 PM

Data File
Sample
Operator
Comment

negativeR.d
negativeR

Sample Chromatogram



AM #25 Multi-Drug Screen Results



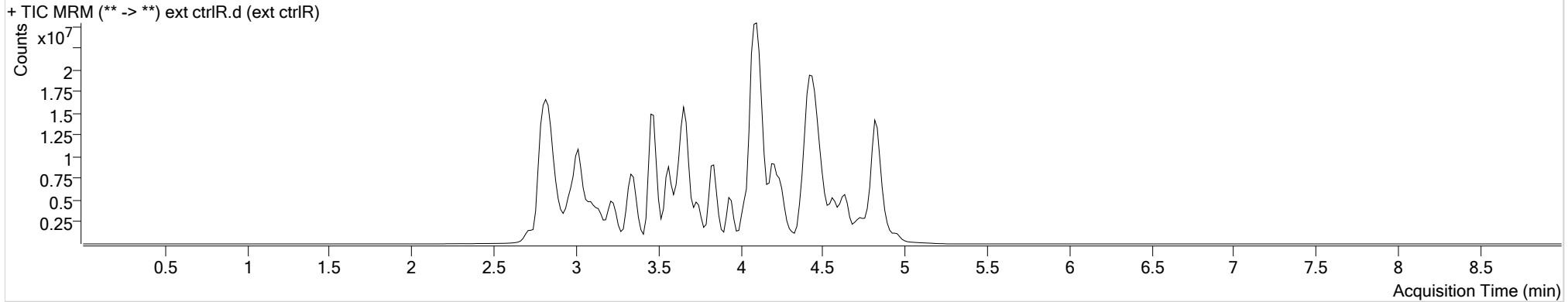
Batch results
Calibration Last Update

D:\MassHunter\Data\2019\AM 25\070119 MDS SP\QuantResults\MDS.batch.bin
7/2/2019 10:42:33 AM

Instrument Falco
Type Sample
Acq. Method am 25 all.m
Sample Position P1-E7
Injection Volume 5
Acq. Date-Time 7/1/2019 4:17:28 PM
Sample Info.

Data File ext ctrlR.d
Sample ext ctrlR
Operator
Comment

Sample Chromatogram



Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Flunitrazepam	4.562	3523235	∞	67599.09	85101	83.4612
Metoprolol	3.477	3396392	21651.67	22517.02	8611026	72.8318
Morphine	2.850	2410839	∞	3021.23	188489	100.1313
Trazodone	4.832	28039065	136195.31	96043.53	14069564	85.7687