






















Worklist: 3473

<u>LAB_CASE</u>	<u>ITEM</u>	<u>TASK_ID</u>	<u>DESCRIPTION</u>	
M2019-2164	1	151256	AM 25 Blood Multi-Drug Screen by LC-QQQ	
M2019-2175	1	151290	AM 25 Blood Multi-Drug Screen by LC-QQQ	
M2019-2201	1	154423	AM 25 Blood Multi-Drug Screen by LC-QQQ	
M2019-2303	1	151921	AM 25 Blood Multi-Drug Screen by LC-QQQ	
M2019-2338	1	152098	AM 25 Blood Multi-Drug Screen by LC-QQQ	
M2019-2366	2	152499	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-1446	1	151358	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-1497	1	151805	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-1513	1	151926	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-1524	1	151954	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-1525	1	151989	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-1526	1	151992	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-1562	1	152343	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-1585	1	152412	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-1586	1	152415	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-1587	1	152444	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-1604	1	152496	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-1616	1	152629	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-1617	1	152669	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-1618	1	152672	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-1621	1	152677	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-1635	2	152803	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-1647	1	152959	AM 25 Blood Multi-Drug Screen by LC-QQQ	

Worklist: 3473

<u>LAB CASE</u>	<u>ITEM</u>	<u>TASK ID</u>	<u>DESCRIPTION</u>
P2019-1670	1	153019	AM 25 Blood Multi-Drug Screen by LC-QQQ
P2019-1671	1	153022	AM 25 Blood Multi-Drug Screen by LC-QQQ



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

Extraction Date: 6/13/19
 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.
 Batch Name: MDS Worklist path: D:\MassHunter\Data\2019\AM 25\061319 MDS THCQ 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 widen retention time windows for compounds that were cut off.*



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\061319 MDS THCQ SP\QuantResults\MDS.batch.bin

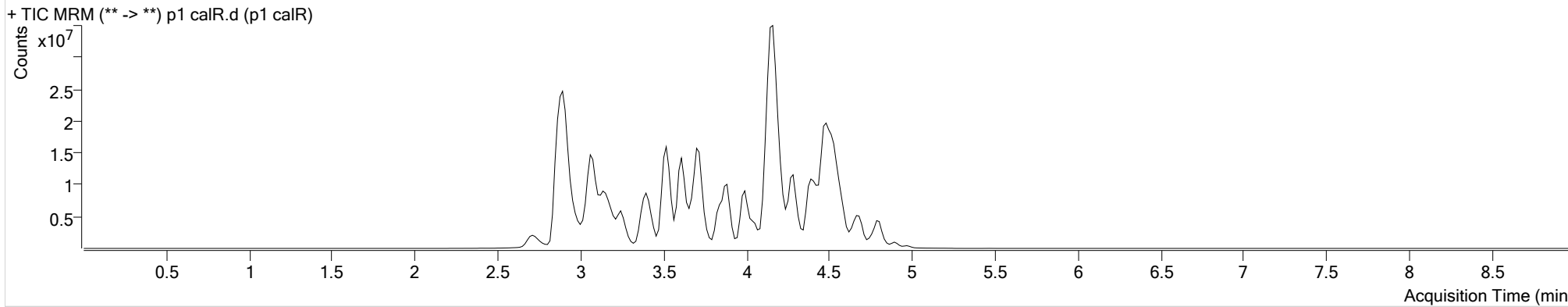
Calibration Last Update

6/14/2019 9:47:02 AM

Instrument Falco
Type Cal
Acq. Method am 25 all.m
Sample Position P1-H12
Injection Volume 5
Acq. Date-Time 6/13/2019 12:27:07 PM
Sample Info.

Data File p1 calR.d
Sample p1 calR
Operator
Comment

Sample Chromatogram



Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
6-MAM	3.164	27918	7763.05	22551.89	862315	10.0000
7-aminoclonazepam	3.644	190009	104.92	311.71	1045404	10.0000
7-aminoflunitrazepam	3.842	1154370	18157.02	523.50	7445031	10.0000
Acetyl Fentanyl	3.993	244793	639.46	246.39	13965522	10.0000
Acetyl Norfentanyl	3.052	190452	427524.78	78.20	9575529	10.0000
a-hydroxyalprazolam	4.591	36723	109.67	114.10	216809	10.0000
alpha-hydroxymidazolam	4.650	369124	421.33	1070.43	3351950	10.0000
alpha-PVP	3.635	1927388	3351.81	2714.25	8048712	10.0000
Alprazolam	4.670	674081	295.08	739.82	2499328	10.0000
Amitriptyline	4.568	2277107	233.25	158.05	4766795	10.0000
Amphetamine	3.102	1596627	2041.92	270.31	3668220	10.0000
Benzoylcegonine	3.459	523262	986.26	43.99	2944646	10.0000
Buprenorphine	4.632	349024	1461.32	∞	1202653	10.0000
Bupropion	3.864	2415592	∞	∞	8746865	10.0000
Carbamazepine	4.295	2908569	646.83	∞	18123636	10.0000
Carisoprodol	4.262	460387	1698.75	116.96	3069466	10.0000
Chlordiazepoxide	4.808	121354	9.17	91.87	3740718	10.0000
Chlorpheniramine	4.059	16396	12.34	∞	25774900	10.0000

AM #25 Multi-Drug Screen Results



Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Citalopram	4.207	1804080	2943.38	1883.50	7873573	10.0000
Clonazepam	4.531	42600	53.95	∞	110005	10.0000
Cocaine	3.672	2812041	739751.62	5556.29	13214849	10.0000
Codeine	3.167	222796	156.18	∞	1360900	10.0000
Cyclobenzaprine	4.476	2045471	983.76	∞	7362470	10.0000
Desipramine	4.508	2703719	1248.40	2158.27	14873859	10.0000
Dextromethorphan	4.200	1338242	∞	5433.39	5906041	10.0000
Dextrorphan	3.508	1791171	20112.39	611596.86	10773641	10.0000
Diazepam	4.918	337679	∞	777.59	1570389	10.0000
Dihydrocodeine	3.076	724967	∞	565.29	4578825	10.0000
Diphenhydramine	4.124	4615306	∞	4388.66	25774900	10.0000
Doxepin	4.305	1471003	∞	∞	7930347	10.0000
Doxylamine	3.721	6330925	∞	101480.62	24581297	10.0000
EDDP	4.167	3842228	17762.68	3674.99	20302125	10.0000
Estazolam	4.596	1175192	285.48	1901.09	3121318	10.0000
Etizolam	4.680	108104	77003.86	188804.52	3121318	10.0000
Fentanyl	4.206	183563	8644.48	53103.12	8195986	10.0000
Flunitrazepam	4.638	367307	359.51	208.25	95378	10.0000
Fluoxetine	4.425	2691132	405.91	204819.94	11006760	10.0000
Flurazepam	4.281	1672270	371791.45	28420.87	95378	10.0000
Hydrocodone	3.213	889081	∞	∞	5040270	10.0000
Hydromorphone	3.002	911289	∞	∞	4106573	10.0000
Imipramine	4.521	3702572	9360.56	∞	11851771	10.0000
Ketamine	3.619	1409459	∞	187.01	6652876	10.0000
Lamotrigine	3.708	115349	853.79	33.14	6009176	10.0000
Levamisole	3.175	1673383	3936.58	2937.82	13214849	10.0000
Lorazepam	4.499	5746	8.44	6.58	110005	10.0000
Maprotiline	4.568	2287017	∞	∞	4766795	10.0000
MDA	3.191	840937	115.65	236.23	3934254	10.0000
MDEA	3.390	3228830	8597.73	1763.24	14727787	10.0000
MDMA	3.268	3436217	19053.51	315.21	2062236	10.0000
Meperidine	3.709	1395994	3845.53	2130.28	6009176	10.0000
Meprobamate	3.728	154380	834.14	157.41	680785	10.0000
Methadone	4.486	4122116	∞	∞	18880829	10.0000
Methamphetamine	3.162	2677967	∞	2993.29	10447313	10.0000
Methocarbamol	3.649	49186	361.30	58.97	6009176	10.0000
Methylphenidate	3.620	4955059	∞	24.28	21340687	10.0000
Metoprolol	3.538	421406	808.75	∞	6009176	10.0000
Midazolam	4.803	441531	224.70	∞	5108791	10.0000
Mirtazapine	4.060	1730652	293.97	3940.26	6009176	10.0000
Mitragynine	4.311	346718	36757.06	107807.98	7930347	10.0000
Morphine	2.820	274555	342.83	772.29	345370	10.0000
Norbuprenorphine	3.958	19511	∞	8168.29	128176	10.0000
Nordiazepam	4.767	92251	388.92	∞	270221	10.0000

AM #25 Multi-Drug Screen Results



Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Norfentanyl	3.420	2953048	∞	2245.21	12806676	10.0000
Norhydrocodone	3.139	27783	∞	∞	957348	10.0000
Normeperidine	3.711	1039616	2216.87	9.98	3524994	10.0000
Noroxycodone	3.106	575322	28.26	∞	2640713	10.0000
Nortriptyline	4.554	1174113	5096.41	72.35	2887466	10.0000
O-desmethyl-tramadol	3.081	4999646	∞	544.97	27648342	10.0000
Olanzapine	4.101	555251	436.95	2337.39	29561	10.0000
Oxazepam	4.597	46117	29.20	7.15	261846	10.0000
Oxycodone	3.150	1291330	∞	∞	6090587	10.0000
Oxymorphone	2.726	1676896	185.72	∞	7303365	10.0000
Paroxetine	4.513	211444	∞	8493.61	3709323	10.0000
Phenazepam	4.695	88952	1407.53	2995.02	472495	10.0000
Phencyclidine	4.001	2875626	11480.46	1132.54	13240533	10.0000
Phentermine	3.269	783440	∞	∞	7401031	10.0000
Phenytoin	4.217	5380	28.68	∞	29561	10.0000
Promethazine	4.489	4570493	∞	∞	20250924	10.0000
Pseudoephedrine	2.902	31219371	37582.05	∞	105588960	10.0000
Quetiapine	4.573	2768949	6052.31	356.04	3612299	10.0000
Sertraline	4.686	823928	88612.71	3855.90	3709323	10.0000
Sufentanil	4.542	167168	1687.71	861.20	8824368	10.0000
Tapentadol	3.543	3006445	∞	277.28	14297414	10.0000
Temazepam	4.747	125071	47.97	11.35	557621	10.0000
Tramadol	3.523	4911026	22717.18	113.01	23588249	10.0000
Trazodone	4.771	2382416	456.74	∞	7908916	10.0000
Venlafaxine	3.889	4483040	8830.53	1441.98	20818343	10.0000
Zaleplon	4.441	552247	3020.12	2336.63	1954165	10.0000
Zolpidem	4.395	5191871	428716.67	1436.47	26525567	10.0000
Zopiclone	4.342	154076	∞	∞	769379	10.0000

AM #25 Multi-Drug Screen Results

**Batch results**

D:\MassHunter\Data\2019\AM 25\061319 MDS THCQ SP\QuantResults\MDS.batch.bin

Calibration Last Update

6/14/2019 9:47:02 AM

Instrument

Falco

Data File

p1 negativeR.d

Type

Sample

Sample

p1 negativeR

Acq. Method

am 25 all.m

Operator**Comment****Sample Position**

P1-F12

Injection Volume

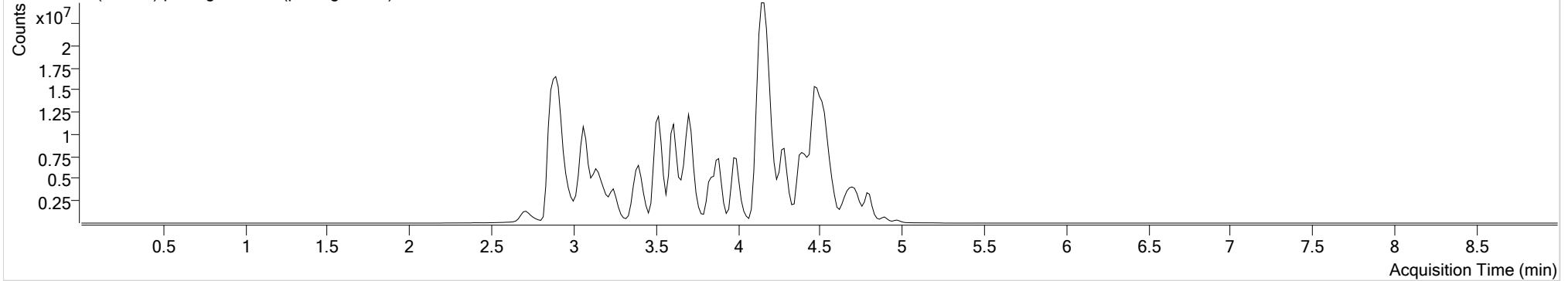
5

Acq. Date-Time

6/13/2019 12:36:46 PM

Sample Info.**Sample Chromatogram**

+ TIC MRM (** -> **) p1 negativeR.d (p1 negativeR)



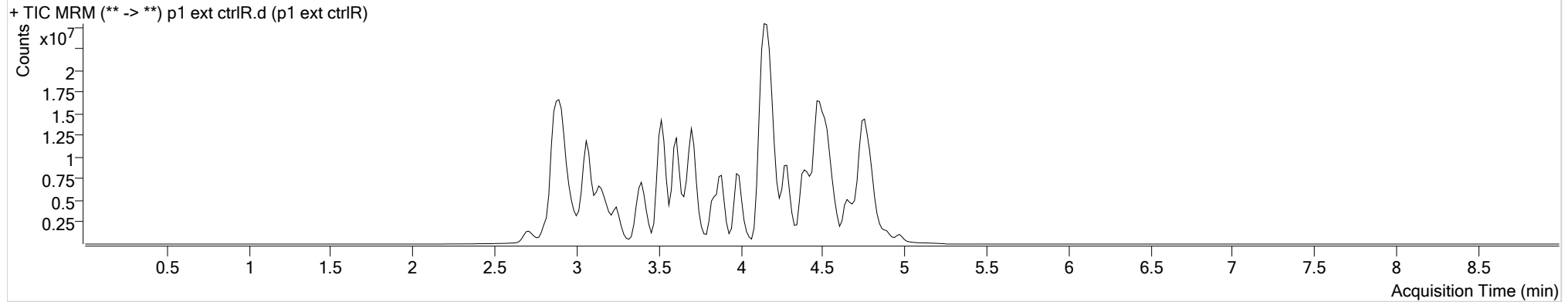
AM #25 Multi-Drug Screen Results



Batch results D:\MassHunter\Data\2019\AM 25\061319 MDS THCQ SP\QuantResults\MDS.batch.bin
Calibration Last Update 6/14/2019 9:47:02 AM

Instrument	Falco	Data File	p1_ext_ctrlR.d
Type	Sample	Sample	p1_ext_ctrlR
Acq. Method	am 25_all.m	Operator	
Sample Position	P1-E12	Comment	
Injection Volume	5		
Acq. Date-Time	6/13/2019 12:46:15 PM		
Sample Info.			

Sample Chromatogram



Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Flunitrazepam	4.638	4429215	337043.30	137146.80	85074	135.1922
Metoprolol	3.538	4058508	456.56	614.43	7284301	79.4498
Morphine	2.820	3160135	70052.15	42278.06	263980	150.5880
Trazodone	4.755	33904587	41881.25	∞	11966470	94.0571