

*AM 7 central data available upon request. - TS

TS

9/4/2019

Worklist: 3635

REVIEWED
By Sarah Pickle at 10:43 am, Sep 12, 2019

<u>LAB CASE</u>	<u>ITEM</u>	<u>TASK ID</u>	<u>DESCRIPTION</u>	
M2019-3066	1	156515	AM 25 Blood Multi-Drug Screen by LC-QQQ	
M2019-3336	1	158032	AM 25 Blood Multi-Drug Screen by LC-QQQ	
M2019-3336	3	158036	AM 25 Blood Multi-Drug Screen by LC-QQQ	
M2019-3511	2	159454	AM 25 Blood Multi-Drug Screen by LC-QQQ	
M2019-3580	2	159461	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-2297	1	158272	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-2308	1	158620	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-2330	1	158895	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-2335	1	158936	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-2336	1	158939	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-2339	1	158959	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-2340	1	158964	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-2341	1	158967	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-2342	1	158970	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-2348	1	159022	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-2349	1	159025	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-2375	1	159296	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-2395	1	159451	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-2396	1	159464	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-2397	1	159522	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-2398	1	159525	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-2399	2	159529	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-2409	1	159558	AM 25 Blood Multi-Drug Screen by LC-QQQ	

Worklist: 3635

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<u>LAB CASE</u>	<u>ITEM</u>	<u>TASK ID</u>	<u>DESCRIPTION</u>
P2019-2443	1	159749	AM 25 Blood Multi-Drug Screen by LC-QQQ
P2019-2491	1	160331	AM 25 Blood Multi-Drug Screen by LC-QQQ



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

Extraction Date: 08/29/19
Plate lot#: 0543908

Analyst: Tamara Salazar
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: Hemostat 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.
- 3. Create worklist

Analytic:

- 1. Remove standards, plate, controls, and samples from cold storage. Allow to reach room temperature.
- 2. Pipette **250µL blood (calibrated pipette) Pipette ID: 3** in wells of analytical (standards) plate.
- 3. Place on shaking incubator at ambient temp., 900rpm for 15 minutes. *Shaker ID: 067105*
- 4. Pipette **250µL 00.5M ammonium hydroxide** in wells of analytical plate.
- 5. Place on shaking incubator at ambient temp., 900rpm for 15 minutes.
- 6. Transfer **300µL 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 **900uL ethyl acetate.**
- 10. Wait 5 minutes.
- 11. Apply positive pressure for approx. 15 seconds. *(10-15 PSI- Selector to the left).*
- 12. Add **900uL ethyl acetate.**
- 13. Wait 5 minutes.
- 14. Apply positive pressure for approx. 15 seconds. *(10-15 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 **100µL 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 TS
Worklist path: D:\MassHunter\Data\2019\AM 25\082919 MDS wklst 3635 TS
- 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:

Case number p2019-2341 was not evaluated for alpha-pvp, dextrophan, norfentanyl, or tapentadol due to retention time shifts in the internal standard.

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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	



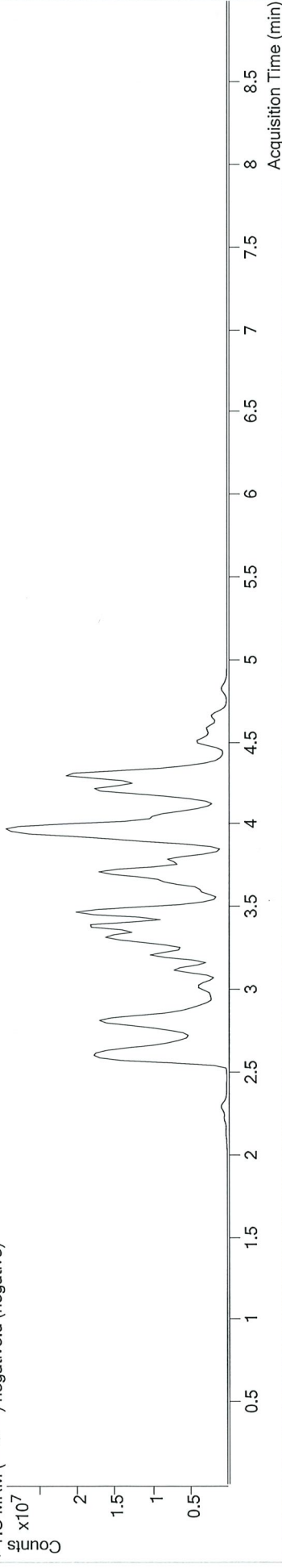
AM #25 Multi-Drug Screen Results

Batch results D:\MassHunter\Data\2019\AM 25\082919 MDS wklist 3635 TS\QuantResults\MDS TS.batch.bin
Calibration Last Update 9/4/2019 11:38:53 AM

Instrument Type	Falco	Data File	negative.d
Acq. Method	am 25 all.m	Sample Operator	negative
Sample Position	P1-C9	Comment	
Injection Volume	5		
Acq. Date-Time	8/29/2019 4:55:16 PM		

Sample Chromatogram

+ TIC MRM (** -> **) negative.d (negative)



Name	Methamphetamine	RT	2.887	Resp.	690094	S/N	4.50 Low	S/N	32.18	ISTD Resp.	14098997	Calc. Conc.	2.2600
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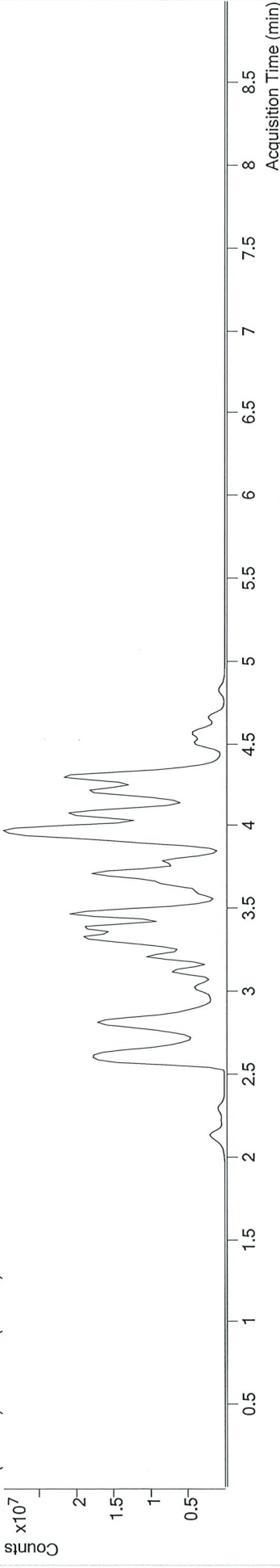
AM #25 Multi-Drug Screen Results

Batch results Calibration Last Update D:\MassHunter\Data\2019\AM 25\082919 MDS wk1st 3635 TS\QuantResults\MDS TS.batch.bin
9/4/2019 11:38:53 AM

Instrument Type	Falco	Data File	ext ctrl.d
Acq. Method	Sample	Sample Operator	ext ctrl
Sample Position	am 25 all.m	Comment	
Injection Volume	P1-B9		
Acq. Date-Time	5		
Sample Info.	8/29/2019 5:04:47 PM		

Sample Chromatogram

+ TIC MRM (** -> **) ext ctrl.d (ext ctrl)



Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Flunitrazepam	4.562	4020686	7145.31	239.59	74753	99.0652
Lorazepam	4.316 Low	1003	2.37 Low		159003	1.0899
Metoprolol	3.338	6068707	∞	344.82	12979565	76.4054
Morphine	2.143	2954099	∞	∞	179817	123.0554
Trazodone	4.082	36679136	∞	41157850.68	15828770	88.1480

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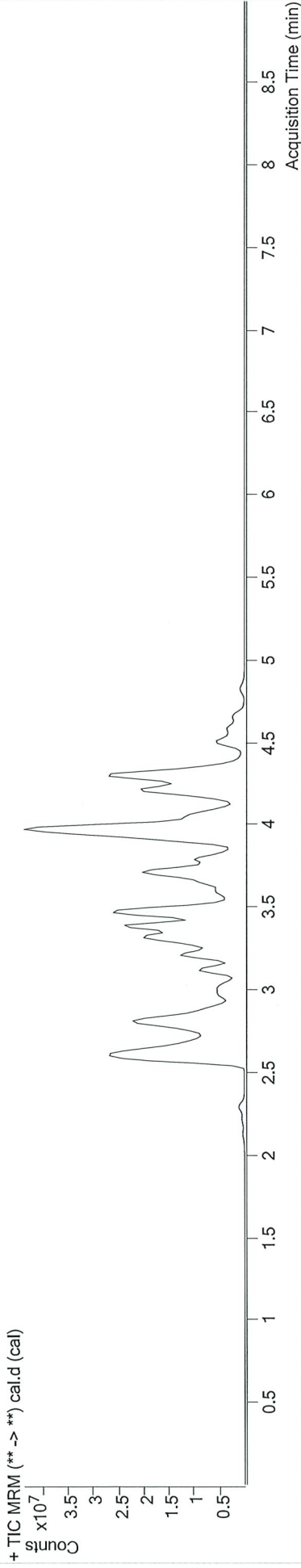
AM #25 Multi-Drug Screen Results

Batch results Calibration Last Update D:\MassHunter\Data\2019\AM 25\082919 MDS wk1st 3635 TS\QuantResults\MDS TS.batch.bin
 9/11/2019 8:11:12 AM

Instrument Falco
Type Cal
Acq. Method am 25 all.m
Sample Position P1-G12
Injection Volume 5
Acq. Date-Time 8/29/2019 4:45:37 PM
Sample Info.

Data File cal.d
Sample cal
Operator
Comment

Sample Chromatogram



Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
6-MAM	2.768	31393	80.14	99.16	858726	10.0000
7-aminoclonazepam	3.536	396713	277.79	15997.67	1683659	10.0000
7-aminoflunitrazepam	3.765	1458323	255.44	165.22	6775569	10.0000
Acetyl Fentanyl	3.670	314481	288.79	172034.02	21317154	10.0000
Acetyl Norfentanyl	2.793	198435	31546.61	696.43	8799175	10.0000
a-hydroxyalprazolam	4.498	31026	35.10	3600.26	222393	10.0000
alpha-hydroxymidazolam	4.543	692866	145.96	162749.13	4520370	10.0000
alpha-PVP	3.404	4568562	894.76	∞	17372862	10.0000
Alprazolam	4.593	722890	∞	866.21	2168117	10.0000
Amitriptyline	4.352	3755773	∞	242.39	7093049	10.0000
Amphetamine	2.797	1748069	495.89	∞	4215145	10.0000
Benzoylcegonine	3.336	530026	75.21	364.78	2392360	10.0000
Buprenorphine	4.065	354338	89.31	32739.22	1384213	10.0000
Bupropion	3.618	3149074	4691.17	1486.98	9528525	10.0000
Carbamazepine	4.218	3435642	3949.80	399.87	18426321	10.0000
Carisoprodol	4.216	256466	375.22	149.51	1454026	10.0000
Chlordiazepoxide	4.687	217262	∞	∞	4552990	10.0000
Chlorpheniramine	3.843	19171	24.19	2170.51	43056893	10.0000

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AM #25 Multi-Drug Screen Results

Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Citalopram	4.008	1783136	∞	1753.51	7004561	10.0000
Clonazepam	4.454	84279	7.83	1602.63	155897	10.0000
Cocaine	3.458	4739343	5274038.32	601.11	21359752	10.0000
Codeine	2.651	226556	1956.93	479.46	891864	10.0000
Cyclobenzaprine	4.276	2656850	247.51	127.44	7505435	10.0000
Desipramine	4.324	3864623	7914.17	2010.76	22265243	10.0000
Dextromethorphan	3.967	1195070	571.13	54222.27	5745902	10.0000
Dextroproprian	3.278	3040515	1131.17	570.04	18426785	10.0000
Diazepam	4.841	429295	732.77	6500.02	2136499	10.0000
Dihydrocodeine	2.604	700239	1765.68	897.00	3854368	10.0000
Diphenhydramine	3.938	8523655	∞	1124.07	43056893	10.0000
Doxepin	4.074	1985835	∞	203.23	12455207	10.0000
Doxylamine	3.491	10638983	9889.56	9351039.13	38338878	10.0000
EDDP	3.981	5334888	160157.28	155734.53	30713885	10.0000
Estazolam	4.519	1320768	1056.54	11885.99	3809546	10.0000
Etizolam	4.619	127385	18068.41	5280.08	3809546	10.0000
Fentanyl	3.914	263873	152.53	117611.04	15218322	10.0000
Flunitrazepam	4.562	386891	254.72	3163.04	71259	10.0000
Fluoxetine	4.271	2708049	∞	108.38	10648496	10.0000
Flurazepam	4.020	1961043	2038403.28	248.62	71259	10.0000
Hydrocodone	2.834	844267	347.89	388.62	4640399	10.0000
Hydromorphone	2.308	729809	87.04	217.43	2582585	10.0000
Imipramine	4.321	4965096	∞	∞	18186790	10.0000
Ketamine	3.234	3347126	∞	146.17	14401790	10.0000
Lamotrigine	3.417	226048	589.97	∞	11523593	10.0000
Levamisole	2.900	49064	∞	13.04	21359752	10.0000
Lorazepam	4.423	9026	∞	∞	155897	10.0000
Maprotiline	4.352	3755773	∞	470.58	7093049	10.0000
MDA	2.916	1223522	702.44	296.99	5454923	10.0000
MDEA	3.145	4723563	759.58	1050.17	19975069	10.0000
MDMA	2.992	5513606	32294.57	317.72	3228169	10.0000
Meperidine	3.478	2435858	∞	∞	11523593	10.0000
Meprobamate	3.636	82586	62.63	51.35	351914	10.0000
Methadone	4.317	5976330	521.26	566.53	22409357	10.0000
Methamphetamine	2.887	3655779	91.99	∞	16879756	10.0000
Methocarbamol	3.556	130374	15.42	140.88	11523593	10.0000
Methylphenidate	3.403	10156720	∞	∞	40148386	10.0000
Metoprolol	3.338	705180	575.68	42182.89	11523593	10.0000
Midazolam	4.605	477479	3549.45	272.87	5437775	10.0000
Mirtazapine	3.569	2758986	4471.87	2477.82	11523593	10.0000
Mirtagynine	4.050	331265	229.49	439659.24	12455207	10.0000
Morphine	2.143	241609	∞	∞	180976	10.0000
Norbuprenorphine	3.744	15678	5422.23	19338.93	83543	10.0000
Nordiazepam	4.691	109057	444.83	121.82	363671	10.0000

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AM #25 Multi-Drug Screen Results

Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Norfentanyl	3.235	3923838	3442512.84	945.54	15270654	10.0000
Norhydrocodone	2.835	73107	1676.01	238.89	940508	10.0000
Normeperidine	3.511	2034463	4481.42	656.56	6507016	10.0000
Noroxycodone	2.787	429312	31.75	∞	1796441	10.0000
Nortriptyline	4.355	1903269	1133596.75	720.61	4663334	10.0000
O-desmethyl-tramadol	2.822	9659545	∞	409.05	38095388	10.0000
Olanzapine	3.181	364071	∞	72.95	35599	10.0000
Oxazepam	4.504	50410	35.58	∞	236509	10.0000
Oxycodone	2.784	1648597	1601.88	970.83	6963343	10.0000
Oxymorphone	2.212	461641	41.62	∞	1446839	10.0000
Paroxetine	4.298	261186	216.01	84.40	7893377	10.0000
Phenazepam	4.634	117104	148591.26	376.97	637448	10.0000
Phencyclidine	3.816	4744272	23389.23	528.12	20169433	10.0000
Phentermine	3.055	975857	∞	27.48	10738950	10.0000
Phenytol	4.124	5926	205.46	16.87	35599	10.0000
Promethazine	4.227	7222800	∞	204.56	30806393	10.0000
Pseudoephedrine	2.612	36759040	∞	5764.90	153845031	10.0000
Quetiapine	4.189	3476280	207.36	1714.99	4371879	10.0000
Sertraline	4.517	1606897	217.25	4391.15	7893377	10.0000
Sufentanil	4.189	222970	4715.36	∞	13173154	10.0000
Tapentadol	3.358	4825393	328.55	6134.26	22641376	10.0000
Temazepam	4.656	407488	320.10	21.00	2009732	10.0000
Tramadol	3.323	9092994	1717.56	1837.42	36099257	10.0000
Trazodone	4.082	3971975	2040260.33	248283.25	15109385	10.0000
Venlafaxine	3.704	6140259	526.88	216.57	29534408	10.0000
Zaleplon	4.349	529573	194118.91	115.31	1233793	10.0000
Zolpidem	3.748	6683344	669.98	66908.75	31274952	10.0000
Zopiclone	3.668	212252	147030.39	90.65	860676	10.0000

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