




















*AM7 central data available upon request. ^{TS} 6/24/2019

B

Worklist: 3494

<u>LAB CASE</u>	<u>ITEM</u>	<u>TASK ID</u>	<u>DESCRIPTION</u>	
M2019-2353	1	152134	AM 25 Blood Multi-Drug Screen by LC-QQQ	
M2019-2410	1	152535	AM 25 Blood Multi-Drug Screen by LC-QQQ	
M2019-2509	1	153131	AM 25 Blood Multi-Drug Screen by LC-QQQ	
M2019-2510	1	153135	AM 25 Blood Multi-Drug Screen by LC-QQQ	
M2019-2511	1	153139	AM 25 Blood Multi-Drug Screen by LC-QQQ	
M2019-2512	1	153142	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-1672	1	153026	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-1675	1	153055	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-1677	1	153090	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-1678	1	153093	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-1679	1	153100	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-1686	1	153487	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-1691	1	153537	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-1710	1	153580	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-1711	1	153612	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-1712	1	153615	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-1713	1	153619	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-1714	1	153622	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-1717	1	153631	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-1718	1	153634	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-1719	1	153637	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-1720	1	153640	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-1725	1	153850	AM 25 Blood Multi-Drug Screen by LC-QQQ	

B

Worklist: 3494

<u>LAB CASE</u>	<u>ITEM</u>	<u>TASK ID</u>	<u>DESCRIPTION</u>
P2019-1746	2	154045	AM 25 Blood Multi-Drug Screen by LC-QQQ
P2019-1752	1	153952	AM 25 Blood Multi-Drug Screen by LC-QQQ



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

TS

Extraction Date: 06/20/19
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 062019 TS
Worklist path: D:\MassHunter\Data\2019\AM 25\062019 MDS wklst 3494 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: *Not evaluated: Codeine—seems to be coeluting.*

For case samples P2019-1679-1 and P2019-1718-1, dihydrocodeine, morphine, oxymorphone, and pseudoephedrine will not be evaluated due to retention time shifts in the internal standard.



Idaho State Police Forensic Services

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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	

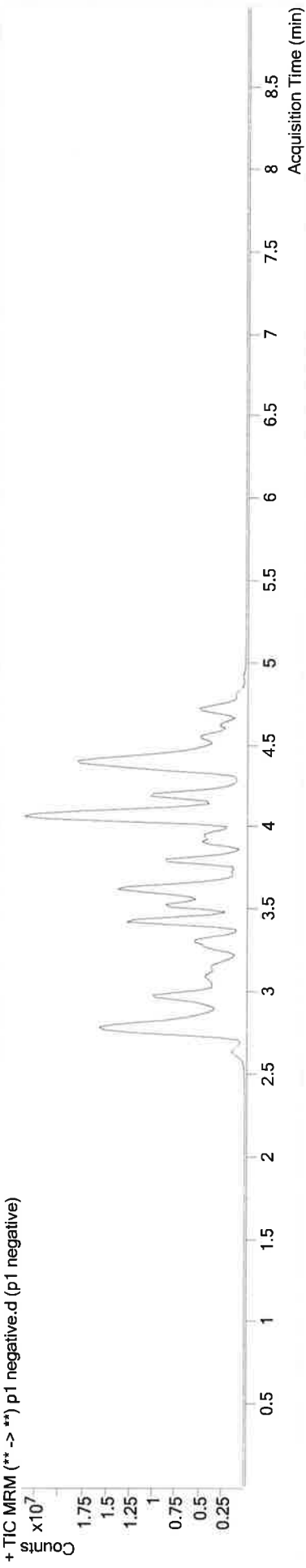


AM #25 Multi-Drug Screen Results

Batch results D:\MassHunter\Data\2019\MDS\062019 MDS wklist 3494 TS\QuantResults\MDS 062019 TS.batch.bin
Calibration Last Update 6/24/2019 11:54:46 AM

Instrument Type	Falco	Data File	p1 negative.d
Acq. Method	am 25 all.m	Sample	p1 negative
Sample Position	P1-D3	Operator	
Injection Volume	5	Comment	
Acq. Date-Time	6/20/2019 11:20:40 AM		

Sample Chromatogram



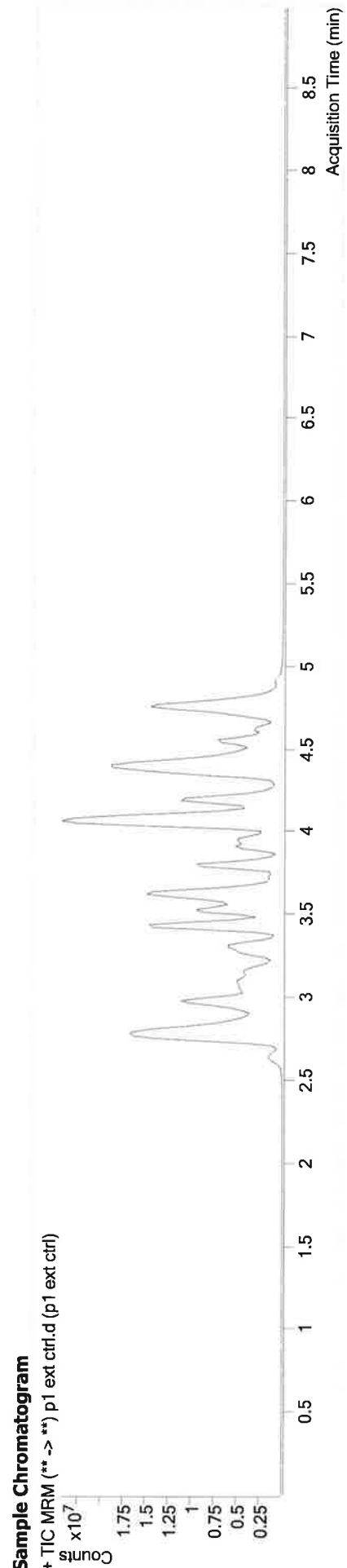
TS



AM #25 Multi-Drug Screen Results

Batch results D:\MassHunter\Data\2019\MDS\062019 MDS wk1st 3494 TS\QuantResults\MDS 062019 TS.batch.bin
Calibration Last Update 6/24/2019 11:54:46 AM

Instrument Type Falco
Sample p1 ext ctrl.d
Acq. Method am 25 all.m
Operator p1 ext ctrl
Sample Position P1-E3
Injection Volume 5
Comment
Acq. Date-Time 6/20/2019 11:30:09 AM
Sample Info.



Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Flunitrazepam	4.562	3545189	8342.13	87547.71	82843	91.1560
Metoprolol	3.461	3518075	4840.30	4453488.07	7390400	75.0481
Morphine	2.744	2233071	8051.13	∞	245484	84.8069
Trazodone	4.771	30469196	203821.28	648171.07	12516542	84.8741

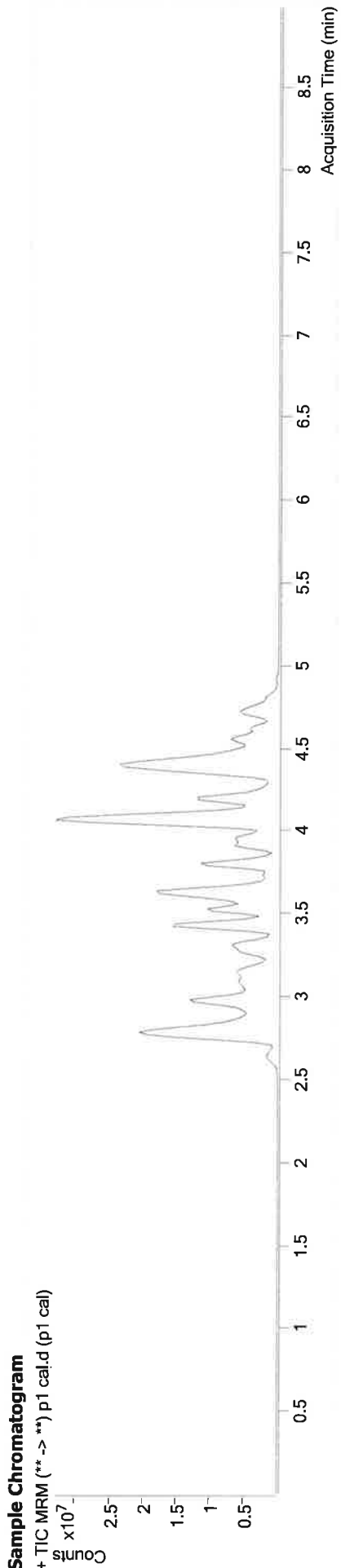
AM #25 Multi-Drug Screen Results



Batch results D:\MassHunter\Data\2019\MDS\062019 MDS wklist 3494 TS\QuantResults\MDS 062019 TS.batch.bin
Calibration Last Update 6/24/2019 11:54:46 AM

Instrument Falco
Type Cal
Acq. Method am 25 all.m
Sample Position P1-B1
Injection Volume 5
Acq. Date-Time 6/20/2019 11:11:01 AM
Sample Info.

Data File p1 cal.d
Sample p1 cal
Operator
Comment



Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
6-MAM	3.134	29697	122.18	217.22	818786	10.0000
7-aminoclonazepam	3.551	135515	267.74	∞	627526	10.0000
7-aminoflunitrazepam	3.750	782044	1565.89	1061.24	4096143	10.0000
Acetyl Fentanyl	3.977	241921	133.07	288.69	14282228	10.0000
Acetyl Norfentanyl	2.960	161699	1245.99	274.54	7805853	10.0000
a-hydroxylprazolam	4.483	31153	75.77	71.04	158938	10.0000
alpha-hydroxymidazolam	4.574	349219	876.95	3207.54	2608655	10.0000
alpha-PVP	3.604	1966684	9626.77	1995.05	7956908	10.0000
Alprazolam	4.594	689821	222.83	1398.83	2091678	10.0000
Amitriptyline	4.491	2002389	55.21	∞	5126862	10.0000
Amphetamine	2.995	963110	1253.37	174.66	2430379	10.0000
Benzoylcegonine	3.336	576131	1658.83	17234.07	2539610	10.0000
Buprenorphine	4.769	355453	3274.56	414.38	1440392	10.0000
Bupropion	3.833	1978845	3356.82	∞	6963109	10.0000
Carbamazepine	4.218	2844208	∞	∞	14554417	10.0000
Carisoprodol	4.201	457082	102455.81	151.23	2344277	10.0000
Chlordiazepoxide	4.717	122503	58.59	65.25	3200427	10.0000
Chlorpheniramine	3.982	16418	19.77	454.23	25484668	10.0000

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AM #25 Multi-Drug Screen Results

Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Citalopram	4.115	1733839	∞	∞	7321089	10.0000
Clonazepam	4.439	50414	87.38	16.70	94279	10.0000
Cocaine	3.611	3138151	266674.55	1170.80	14630846	10.0000
Codeine	3.122	273633	9934.32	∞	1300071	10.0000
Cyclobenzaprine	4.415	1911597	110001.92	192.18	6872915	10.0000
Desipramine	4.431	2582224	1228.14	∞	13684603	10.0000
Dextromethorphan	4.123	1470336	3467.49	∞	6442899	10.0000
Dextroproprian	3.417	1723922	2094.01	1504.08	9447629	10.0000
Diazepam	4.841	442237	1490.33	749.35	1978144	10.0000
Dihydrocodeine	2.999	784968	576.27	174.81	3962018	10.0000
Diphenhydramine	4.045	4299677	15590.99	4171.18	25484668	10.0000
Doxepin	4.228	1526386	∞	8.94	8273542	10.0000
Doxylamine	3.645	6465012	41452.67	∞	24256614	10.0000
EDDP	4.075	3229838	33587.45	182423.48	16794695	10.0000
Estazolam	4.503	1040568	750.55	192.99	2459363	10.0000
Etizolam	4.604	128469	379.01	581.02	2459363	10.0000
Fentanyl	4.191	200273	111.59	96115.70	9996673	10.0000
Flunitrazepam	4.562	337488	466.80	148.20	71889	10.0000
Fluoxetine	4.364	2108666	∞	69505.00	8814589	10.0000
Flurazepam	4.250	1679707	3490.09	283466.59	71889	10.0000
Hydrocodone	3.183	916899	∞	∞	4851558	10.0000
Hydromorphone	2.912	893892	23.46	115.40	3392880	10.0000
Imipramine	4.444	4109633	5043.81	∞	13152736	10.0000
Ketamine	3.665	1787256	199.75	274.77	7227639	10.0000
Lamotrigine	3.617	125154	∞	66.70	6260282	10.0000
Levamisole	3.160	1649053	∞	702.51	14630846	10.0000
Lorazepam	4.423	5502	10.69	4.31	94279	10.0000
Maprotiline	4.491	2471428	∞	1443.13	5126862	10.0000
MDA	3.115	801700	5077.24	361.88	3691959	10.0000
MDEA	3.283	3145075	7893.22	3212.70	13544401	10.0000
MDMA	3.161	2984114	∞	1157.73	1802194	10.0000
Meperidine	3.648	1408081	625.44	1305.02	6260282	10.0000
Meprobamate	3.636	113975	595.85	40.65	537263	10.0000
Methadone	4.409	4286171	∞	1185.05	19273471	10.0000
Methamphetamine	3.085	1593539	∞	∞	6654300	10.0000
Methocarbamol	3.541	87401	414.43	24.82	6260282	10.0000
Methylphenidate	3.542	5257826	∞	∞	23111899	10.0000
Metoprolol	3.446	397092	628.62	591.76	6260282	10.0000
Midazolam	4.742	415242	1268.94	∞	4733414	10.0000
Mirtazapine	4.108	1174735	5202.64	10423.38	6260282	10.0000
Mitragynine	4.280	341080	361453.88	∞	8273542	10.0000
Morphine	2.744	252314	791.79	∞	235231	10.0000
Norbuprenorphine	3.897	18091	10068.37	3505.33	97334	10.0000
Nordiazepam	4.676	112902	403.82	∞	380395	10.0000

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AM #25 Multi-Drug Screen Results

Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Norfentanyl	3.342	2574801	∞	1166.18	10502938	10.0000
Norhydrocodone	3.063	37039	∞	19.61	844679	10.0000
Normeperidine	3.620	875898	4983.15	∞	3218557	10.0000
Noroxycodone	3.015	615675	66.91	284.50	2124852	10.0000
Nortriptyline	4.462	1137354	110652.05	370.40	2803022	10.0000
O-desmethyl-tramadol	2.989	5203514	53581.36	186.51	23322957	10.0000
Olanzapine	4.025	540872	1099.70	3.49	18257	10.0000
Oxazepam	4.504	40236	22.85	21.76	205879	10.0000
Oxycodone	3.119	1324041	∞	125.35	5644689	10.0000
Oxymorphone	2.665	1631013	448.00	416.15	5768800	10.0000
Paroxetine	4.437	181494	∞	8128.72	5336288	10.0000
Phenazepam	4.634	154996	102.27	∞	644938	10.0000
Phencyclidine	3.939	2987388	276.24	237.20	13850770	10.0000
Phentermine	3.193	467030	67.32	4.01	4720057	10.0000
Phenytol	4.124	4898	25.32	4.90	18257	10.0000
Promethazine	4.412	4576211	∞	∞	19593055	10.0000
Pseudoephedrine	2.795	23025546	13704.03	16703.42	101714891	10.0000
Quetiapine	4.573	2812011	110313.00	660463.20	3801465	10.0000
Sertraline	4.624	1120446	106769.15	15216.82	5336288	10.0000
Sufentanil	4.557	176392	52261.86	220.10	9264996	10.0000
Tapentadol	3.451	2837498	21376.61	1414.53	13028280	10.0000
Temazepam	4.656	538249	1478.88	46.90	2500808	10.0000
Tramadol	3.447	4904814	15253.90	129.36	22909327	10.0000
Trazodone	4.771	3296223	9657.69	∞	11492511	10.0000
Venlafaxine	3.812	4350506	8389.35	∞	20336940	10.0000
Zaleplon	4.334	502264	553498.89	3783.04	1443091	10.0000
Zolpidem	4.380	4586980	121663.15	4748.34	22557864	10.0000
Zopiclone	4.312	185225	2188.38	59687.93	866441	10.0000