*AM 7 central data available upon request. — TS

TS

5/21/2019

Worklist: 3400

LAB CASE	ITEM	TASK ID	DESCRIPTION	
M2019-1673	1	148036	AM 25 Blood Multi-Drug Screen by LC-QQQ	
M2019-1694	1	148224	AM 25 Blood Multi-Drug Screen by LC-QQQ	
M2019-1743	1	148610	AM 25 Blood Multi-Drug Screen by LC-QQQ	
M2019-1778	1	148864	AM 25 Blood Multi-Drug Screen by LC-QQQ	
M2019-1833	2	149984	AM 25 Blood Multi-Drug Screen by LC-QQQ	
M2019-1939	1	149831	AM 25 Blood Multi-Drug Screen by LC-QQQ	
M2019-1991	1	149979	AM 25 Blood Multi-Drug Screen by LC-QQQ	
M2019-1992	1	150103	AM 25 Blood Multi-Drug Screen by LC-QQQ	
M2019-2010	1	150249	AM 25 Blood Multi-Drug Screen by LC-QQQ	
M2019-2014	2	150442	AM 25 Blood Multi-Drug Screen by LC-QQQ	
M2019-2025	2	150448	AM 25 Blood Multi-Drug Screen by LC-QQQ	
M2019-2030	1	150307	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-1301	1	150100	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-1321	1	150445	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-1324	1	150457	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-1326	1	150465	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-1364	1	150650	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-1365	1	150657	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-1371	1	150675	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-1383	1	150772	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-1416	1	151067	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-1417	1	151070	AM 25 Blood Multi-Drug Screen by LC-QQQ	
P2019-1421	1	151158	AM 25 Blood Multi-Drug Screen by LC-QQQ	

Worklist: 3400

LAB CASE	ITEM	TASK_ID	DESCRIPTION
P2019-1422	1	151167	AM 25 Blood Multi-Drug Screen by LC-QQQ
P2019-1423	1	151170	AM 25 Blood Multi-Drug Screen by LC-QQQ

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

Extraction Date: ___05/24/19___   Analyst: Tamara Salazar

Plate lot#: 0543908   Plate Expiration: 11/28/19

Mobile phase A: 10mM Amm Form   **Mobile phase B:** 0.1% Formic Acid in MeOH

     0.5M Ammonium Hydroxide   Ethyl Acetate   LC Methanol

Blank Blood Lot: Hemostat 445283-2   **Column**: Phenomenex Phenyl Hexyl (4.6x50mm, 2.6um)

LCMS-QQQ ID: 069901

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: Data Path Name: _____

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 052419
Worklist path: D:\MassHunter\Data\2019\AM 25\052419 MDS wklst 3400 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: Click here to enter text.

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.

Component	Source	Source Lot Number	Expiration Date
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.

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

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AM #25 Multi-Drug Screen Results

Batch results D:\MassHunter\Data\2019\MDS\052419 MDS wklst 3400 TS\QuantResults\MDS TS 052419.batch.bin
Calibration Last Update 5/28/2019 9:55:51 AM

Instrument	FALCO-LCMS (Property ID 069901)	**Data File**	p1 negative.d
Type	Sample	**Sample**	p1 negative
Acq. Method	am 25 all.m	**Operator**	
Sample Position	P1-F12	**Comment**	
Injection Volume	5		
Acq. Date-Time	5/24/2019 5:55:27 PM		
Sample Info.			

Sample Chromatogram

+ TIC MRM (** -> **) p1 negative.d (p1 negative)
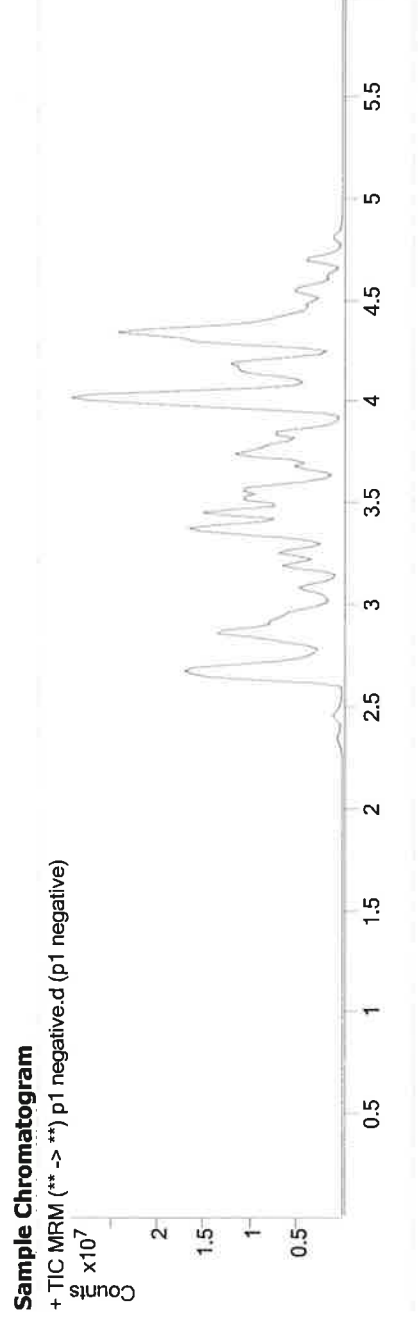
Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Methocarbamol	3.479	8036	26.33	1.48 Low	8026995	1.0590

Page 1 of 1

Generated at 9:58 AM on 5/28/2019

p1 negative

AM #25 Multi-Drug Screen Results

Batch results   D:\MassHunter\Data\2019\MDS\052419 MDS wklst 3400 TS\QuantResults\MDS TS 052419.batch.bin
Calibration Last Update   5/28/2019 9:55:51 AM

Instrument	FALCO-LCMS (Property ID 069901)	**Data File**	p1 ext ctrl.d
Type	Sample	**Sample**	p1 ext ctrl
Acq. Method	am 25 all.m	**Operator**	
Sample Position	P1-E12	**Comment**	
Injection Volume	5		
Acq. Date-Time	5/24/2019 6:04:57 PM		
Sample Info.			

Sample Chromatogram

+ TIC MRM (** -> **) p1 ext ctrl.d (p1 ext ctrl)
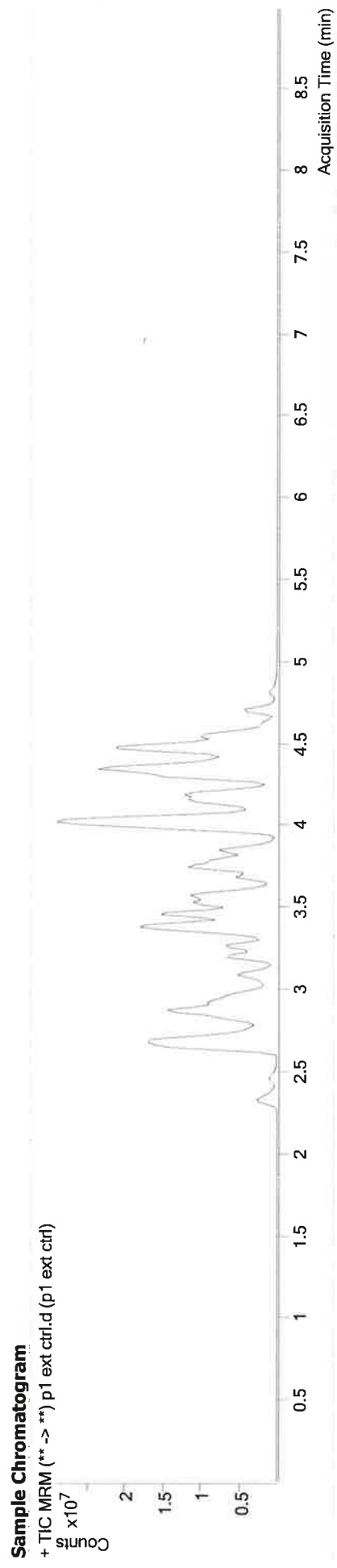
Name	RT	Resp.	S/N	ISTD Resp.	S/N	Calc. Conc.
Flunitrazepam	4.562	5774848	10374.25	116854	246.10	109.1494
Metoprolol	3.400	4888159	8531.10	8452396	44223.50	89.7039
Morphine	2.338	2701111	57525.35	194696	26029.37	109.5623
Trazodone	4.482	42641453	39570366.60	14725139	29770.06	105.8917

AM #25 Multi-Drug Screen Results

Batch results
Calibration Last Update D:\MassHunter\Data\2019\AM 25\052419 MDS wklst 3400 TS\QuantResults\MDS TS 052419.batch.bin
6/11/2019 8:05:24 AM

		Data File	p1 cal.d
Instrument	FALCO-LCMS (Property ID 069901)	**Sample**	p1 cal
Type	Cal	**Operator**	
Acq. Method	am 25 all.m	**Comment**	
Sample Position	P1-H12		
Injection Volume	5		
Acq. Date-Time	5/24/2019 5:45:49 PM		
Sample Info.			

Sample Chromatogram

+ TIC MRM (** -> **) p1 cal.d (p1 cal)
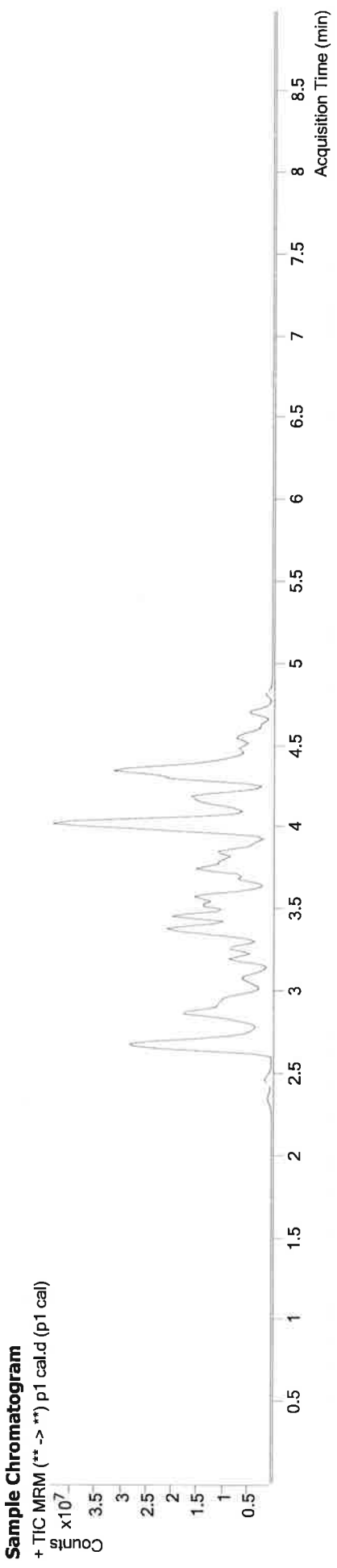
Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
6-MAM	2.890	31345	1263.49	67.53	803471	10.0000
7-aminoclonazepam	3.536	212561	597.11	1236.08	1220514	10.0000
7-aminoflunitrazepam	3.751	1463943	527.43	970.74	7927026	10.0000
Acetyl Fentanyl	3.809	389071	755.46	382.21	22455359	10.0000
Acetyl Norfentanyl	2.854	206805	49.32	94.53	10667308	10.0000
a-hydroxyalprazolam	4.484	66040	∞	∞	332199	10.0000
alpha-hydroxymidazolam	4.575	563828	450.72	∞	4168454	10.0000
alpha-PVP	3.482	3634559	5989.72	560.06	14374984	10.0000
Alprazolam	4.594	1045676	∞	263.83	3296958	10.0000
Amitriptyline	4.399	3035621	∞	∞	6694139	10.0000
Amphetamine	2.873	1762767	288.25	∞	5448732	10.0000
Benzoylecgonine	3.336	632239	3609.60	5471.08	3268179	10.0000
Buprenorphine	4.418	432967	1944.01	5925.37	1292335	10.0000
Bupropion	3.711	3580603	8340.59	∞	14116184	10.0000
Carbamazepine	4.219	4298553	211.62	552.88	21314750	10.0000
Carisoprodol	4.202	652600	234658.57	64.34	3192023	10.0000
Chlordiazepoxide	4.717	210665	378.00	351.85	4477302	10.0000
Chlorpheniramine	3.906	19875	14.09	1001.86	36394975	10.0000

p1 cal

Generated at 8:06 AM on 6/11/2019

AM #25 Multi-Drug Screen Results

Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Citalopram	4.055	1791080	3651.42	2881.61	7457537	10.0000
Clonazepam	4.439	105625	226.74	1077.87	150409	10.0000
Cocaine	3.519	4796442	20602.38	3638.68	22500002	10.0000
Codeine	2.788	373664	1866.41	457.52	1742470	10.0000
Cyclobenzaprine	4.323	2516635	∞	∞	9339218	10.0000
Desipramine	4.370	3488826	2900.81	2807.40	18597095	10.0000
Dextromethorphan	4.046	1182562	2533.78	6028.93	5191886	10.0000
Dextrorphan	3.355	2718691	4750.31	784415.58	14765929	10.0000
Diazepam	4.825	492384	∞	1105.32	2447057	10.0000
Dihydrocodeine	2.726	977394	1457.45	450.91	4080190	10.0000
Diphenhydramine	3.985	7864741	18188.48	4892.21	36394975	10.0000
Doxepin	4.137	1850513	362.65	4.49 Low	10428224	10.0000
Doxylamine	3.599	7583174	92239.75	506349.21	30310751	10.0000
EDDP	4.028	5411265	7464.74	8592.15	27504584	10.0000
Estazolam	4.504	2048624	∞	163.77	5022183	10.0000
Etizolam	4.604	168228	103567.14	177206.44	5022183	10.0000
Fentanyl	4.053	123472	252.17	19.83	5486172	10.0000
Flunitrazepam	4.562	499725	163.31	157805.72	110371	10.0000
Fluoxetine	4.302	2668073	654.56	67697.08	11857238	10.0000
Flurazepam	4.113	2357002	1395421.20	283031.18	110371	10.0000
Hydrocodone	2.985	1157698	465.02	146.57	5747149	10.0000
Hydromorphone	2.473	871844	∞	51.88	3033570	10.0000
Imipramine	4.368	4737355	181141.33	∞	15322134	10.0000
Ketamine	3.419	2589041	117.30	157.37	10586488	10.0000
Lamotrigine	3.539	110699	2362.42	307.24	8036867	10.0000
Levamisole	2.931	2780045	297952.32	1645.97	22500002	10.0000
Lorazepam	4.424	8619	12.99	6.75	150409	10.0000
Maprotiline	4.399	3078070	50.25	∞	6694139	10.0000
MDA	2.993	1457934	179.08	925.70	6578220	10.0000
MDEA	3.206	4418770	3732.64	3239.97	19558659	10.0000
MDMA	3.069	5017508	13897.48	1656.83	3028104	10.0000
Meperidine	3.555	1689301	∞	4736.59	8036867	10.0000
Meprobamate	3.636	277598	272.04	177.99	1186800	10.0000
Methadone	4.349	5351409	∞	2558.43	24170179	10.0000
Methamphetamine	2.964	4135165	∞	2550.74	16724395	10.0000
Methocarbamol	3.541	75978	∞	7120.24	8036867	10.0000
Methylphenidate	3.465	7950983	31.70	∞	32851918	10.0000
Metoprolol	3.400	518133	1415.11	159.86	8036867	10.0000
Midazolam	4.712	572630	∞	∞	6506081	10.0000
Mirtazapine	3.814	2804625	∞	18135.63	8036867	10.0000
Mitragynine	4.143	379208	161.24	1270858.07	10428224	10.0000
Morphine	2.323	266891	4440.39	2869.49	210770	10.0000
Norbuprenorphine	3.821	28784	43.08	193.74	150378	10.0000
Nordiazepam	4.692	67852	89.07	152.76	180199	10.0000

p1 cal

AM #25 Multi-Drug Screen Results

Name	RT	Resp.	S/N	S/N	ISTD Resp.	Calc. Conc.
Norfentanyl	3.281	4435434	367.38	∞	18365347	10.0000
Norhydrocodone	2.911	45295	∞	36.30	1229424	10.0000
Normeperidine	3.558	816272	2196.66	∞	3130172	10.0000
Noroxycodone	2.863	595224	∞	∞	2394483	10.0000
Nortriptyline	4.402	1874836	155066.77	1250.33	4655381	10.0000
O-desmethyl-tramadol	2.882	6298712	10470.72	179.78	28896540	10.0000
Olanzapine	3.871	598618	8.32	321.59	78094	10.0000
Oxazepam	4.505	79603	65.70	30.33	396384	10.0000
Oxycodone	2.891	1679024	619.26	369.54	6600061	10.0000
Oxymorphone	2.363	533493	∞	∞	1824384	10.0000
Paroxetine	4.345	241565	∞	∞	8658513	10.0000
Phenazepam	4.619	201609	49.45	∞	886373	10.0000
Phencyclidine	3.863	4387590	6233.23	379.08	20353654	10.0000
Phentermine	3.116	1183831	149.17	29.38	11633545	10.0000
Phenytoin	4.110	11461	26.97	8.29	78094	10.0000
Promethazine	4.305	6251380	∞	∞	27623750	10.0000
Pseudoephedrine	2.688	38254404	16803.97	∞	97145965	10.0000
Quetiapine	4.374	3267987	66245.78	917224.36	3683845	10.0000
Sertraline	4.549	1854924	639557.62	135.97	8658513	10.0000
Sufentanil	4.358	206966	25610.10	518.12	10591625	10.0000
Tapentadol	3.405	3892024	∞	753.17	17856568	10.0000
Temazepam	4.641	385768	175.82	20.56	2462302	10.0000
Tramadol	3.386	6635558	3849.00	248.57	31002497	10.0000
Trazodone	4.482	4418129	10982.49	3227.41	16155776	10.0000
Venlafaxine	3.751	5853776	583.82	2026.55	27661218	10.0000
Zaleplon	4.319	363160	1057.32	37231.50	1188196	10.0000
Zolpidem	4.180	6368194	36585.01	786.85	27284698	10.0000
Zopiclone	4.051	144288	35971.43	37774.51	654889	10.0000