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<u>LAB CASE</u>	<u>ITEM</u>	<u>TASK ID</u>	<u>DESCRIPTION</u>	
M2017-5203	1	99661	AM 7/AM 25 Blood Screen ELIS	
M2017-5294	1	100302	AM 7/AM 25 Blood Screen ELIS	
M2017-5295	1	100308	AM 7/AM 25 Blood Screen ELIS	
M2017-5422	2	101274	AM 7/AM 25 Blood Screen ELIS	
M2017-5581	1	101734	AM 7/AM 25 Blood Screen ELIS	
M2017-5777	1	102733	AM 7/AM 25 Blood Screen ELIS	
P2017-2585	1	98736	AM 7/AM 25 Blood Screen ELIS	
P2017-2668	1	103955	AM 7/AM 25 Blood Screen ELIS	
P2017-2676	1	99713	AM 7/AM 25 Blood Screen ELIS	
P2017-2681	1	100029	AM 7/AM 25 Blood Screen ELIS	
P2017-2747	1	100390	AM 7/AM 25 Blood Screen ELIS	
P2017-2748	1	100392	AM 7/AM 25 Blood Screen ELIS	
P2017-2808	1	101007	AM 7/AM 25 Blood Screen ELIS	
P2017-2817	1	101128	AM 7/AM 25 Blood Screen ELIS	
P2017-2821	1	101171	AM 7/AM 25 Blood Screen ELIS	
P2017-2834	1	101287	AM 7/AM 25 Blood Screen ELIS	
P2017-2841	1	101383	AM 7/AM 25 Blood Screen ELIS	
P2017-2847	1	101586	AM 7/AM 25 Blood Screen ELIS	
P2017-2848	1	101591	AM 7/AM 25 Blood Screen ELIS	
P2017-2889	2	101985	AM 7/AM 25 Blood Screen ELIS	
P2017-2968	1	102804	AM 7/AM 25 Blood Screen ELIS	
P2017-3012	1	103069	AM 7/AM 25 Blood Screen ELIS	
P2017-3037	1	103198	AM 7/AM 25 Blood Screen ELIS	

* The ELISA central file is available upon request. P

<u>LAB CASE</u>	<u>ITEM</u>	<u>TASK ID</u>	<u>DESCRIPTION</u>
P2017-3084	1	103718	AM 7/AM 25 Blood Screen ELI:
P2017-3085	1	103720	AM 7/AM 25 Blood Screen ELI:



LS

Multi-Drug Screen in Blood by LC-MS/MS

Extraction Date: 01/03/18

Analyst: Sarah Pickle

Plate lot#: 0515207

Plate Expiration: 10/18/18

Mobile phase A: 10mM Ammonium Formate
0.5M Ammonium Hydroxide

Mobile phase B 0.1% Formic acid in MeOH
Ethyl Acetate

Blank Blood Lot: 361331-3
LCMS-QQQ ID: 59740

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

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: 010318 SP MD Screen

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 0.5M ammonium hydroxide** buffer 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. 4 seconds (or until no liquid remains on top of sorbent).
(Load at 85-100 PSI- Selector to the right) Manifold ID: 067104
Wait 5 minutes
8. Add **900µL ethyl acetate** and allow to flow for 5 minutes under gravity.
9. Apply positive pressure for approx. 15 seconds. (10-15 PSI- Selector to the left)
10. Add **900µL ethyl acetate** and allow to flow for 5 minutes under gravity.
11. Apply positive pressure for approx. 15 seconds. (10-15 PSI- Selector to the left)
12. Remove plate containing eluate. Place on SPE Dry and evaporate to dryness at approx. 35°C.
SPE Dry ID 067103
13. Reconstitute in **100µL 100% MeOH** and heat seal plate with foil. Place in autosampler and run worklist.

POST-ANALYTIC

1. Create batch and process data.
Worklist path: 010317 SP MD Screen Batch Name: 010318 SA MD Screen Panel 2
2. 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. > 1/5 the response of administrative control.
3. Did all QCs pass for each analyte? Y N Did not evaluate protriptyline. P
4. Central File Packet to include: LIMS Worklist, Method Checklist, Calibration and Control Reports

COMMENTS:

Protriptyline was not evaluate due to low peak area for the qualifier.

See deviation for tapentadol not being evaluated.

Multidrug Screen External Control Preparation Information

Lot 053117

Drug	Lot	Expiration date
Temazepam	Cerilliant FE08191401	October 2019
Quetiapine	Cerilliant FN02021502	February 2020
Zolpidem	Cerilliant FE12181402	February 2020
Zopiclone	Cerilliant FE12031501	December 2020

Ext. Control

100ul of 1mg/mL stock was added for each drug to ^{9600ul} ~~9960ul~~ of LC MeOH (BDH Lot 15H250514). 100ul of the working solution was added to 9900ul of blood (Hemostat Lot 361331-3).

Prepared: 12/27/17 By: TNS
Expired: ~~06/27/18~~
05/31/18 Φ

Idaho State Police
Forensic Services
Toxicology Discipline

DA

Request for Departure from an Analytical Method

Date of Request

01/08/2018

Forensic Scientist

Sarah Pickle

Analytical Method

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

Request

I am formally requesting a deviation to drop tapentadol from the panel 2 screen and use the remaining data. Tapentadol showed up in all of the samples, including the negative control, indicating that there was contamination. After several tests, it was determined that there was a contamination in mobile phase A that provided a false positive for this compound. The contamination issue has since been resolved.

Discipline Leader Review

Departure approved

Comments:

Departure Not Approved

Comments:

Celena Shrum

Celena Shrum
Toxicology Discipline Lead

Date: 01/10/2018

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Compound Method	p1 cal 1a-SP	Qualifer 1 M...	ISTD Method	ISTD Results						
Name	Transition	Pos.	Acq. Date-Time	RT	Resp.	S/N	Name	Transition	RT	Resp
Temazepam	301.1 -> 255...	P2-H12	1/3/2018 2:21 PM	6.167	40657	44.22	Temazepam-D5	306.1 -> 260...	6.166	289273
Tramadol	264.2 -> 58.3	P2-H12	1/3/2018 2:21 PM	5.174	258427	Infinity	Tramadol-13C-D3	268.2 -> 58.3	5.153	11374...
Trazodone	372.2 -> 176...	P2-H12	1/3/2018 2:21 PM	6.158	238763	Infinity	Sufentanil-D5	392.2 -> 238...	6.034	364000
Venlafaxine	278.2 -> 58.3	P2-H12	1/3/2018 2:21 PM	5.499	230402	Infinity	Venlafaxine-D6	284.2 -> 64.3	5.498	651598
Zolpidem	308.2 -> 235...	P2-H12	1/3/2018 2:21 PM	5.881	213127	602.27	Zolpidem-D6	314.2 -> 235...	5.859	15489...

Compound Method		p1 negative-Sp		p1 negative-SP Results		Qualifier 1 M_		Qualifier 2		ISTD Method		ISTD Results	
Name	Transition	Pos.	Acq. Date-Time	RT	Resp	S/N	Transition	S/N	Transition	Name	Transition	RT	Resp
Temazepam	301.1 -> 255...	P2-F...	1/3/2018 2:40 PM				301.1 -> 283...		306.1 -> 260...	Temazepam-D5		6.166	276595
Tramadol	264.2 -> 58.3	P2-F...	1/3/2018 2:40 PM	5.194	7486	310.56	264.2 -> 43.3	0.53	268.2 -> 58.3	Tramadol-13C-D3		5.174	12037...
Trazodone	372.2 -> 176...	P2-F...	1/3/2018 2:40 PM	6.137	2058	8.38	372.2 -> 148...	478.22	392.2 -> 238...	Sufentanil-D5		6.034	380314
Venlafaxine	278.2 -> 58.3	P2-F...	1/3/2018 2:40 PM	5.519	879	1.55	278.2 -> 260...		284.2 -> 64.3	Venlafaxine-D6		5.518	620328
Zolpidem	308.2 -> 235...	P2-F...	1/3/2018 2:40 PM				308.2 -> 263...		314.2 -> 235...	Zolpidem-D6		5.879	15081...

Compound Method		p1 external control-SP				p1 external control-SP Results				Qualifier 1 M...				Qualifier...				ISTD Method				ISTD Results	
Name	Transition	Pos.	Acq. Date-Time	RT	Resp.	S/N	Transition	RT	Resp.	S/N	Transition	RT	Resp.	S/N	Transition	RT	Resp.	Name	Transition	RT	Resp.		
Temazepam	301.1 -> 255...	P2-E..	1/3/2018 3:00 PM	6.207	453905	Infinity	301.1 -> 283...	6.207	453905	Infinity	306.1 -> 260...	6.206	30544	Infinity	306.1 -> 260...	6.206	30544	Temazepam-D5	306.1 -> 260...	6.206	30544		
Tramadol	264.2 -> 58.3	P2-E..	1/3/2018 3:00 PM	5.174	3155	Infinity	264.2 -> 43.3	5.174	3155	0.49	268.2 -> 53.3	5.174	12691	0.49	268.2 -> 53.3	5.174	12691	Tramadol-13C-D3	268.2 -> 53.3	5.174	12691		
Trazodone	372.2 -> 176...	P2-E..	1/3/2018 3:00 PM	6.198	1026	1.33	372.2 -> 148...	6.198	1026	126.18	392.2 -> 238...	6.075	37401	126.18	392.2 -> 238...	6.075	37401	Sufentamil-D5	392.2 -> 238...	6.075	37401		
Venlafaxine	278.2 -> 58.3	P2-E..	1/3/2018 3:00 PM				278.2 -> 260...				284.2 -> 64.3	5.518	64741		284.2 -> 64.3	5.518	64741	Venlafaxine-D6	284.2 -> 64.3	5.518	64741		
Zolpidem	308.2 -> 235..	P2-E..	1/3/2018 3:00 PM	5.901	2227802	612353.64	308.2 -> 263...	5.901	2227802	1985.88	314.2 -> 235...	5.900	15121	1985.88	314.2 -> 235...	5.900	15121	Zolpidem-D6	314.2 -> 235...	5.900	15121		

Table with columns: Compound Method, p2 cal 1b-SP, p2 cal 1b-SP Results, Qualifier 1 M..., Qualifier 1 Results, ISTD Method, ISTD Results. Contains data for various compounds like 7-aminoflunitrazepam, alpha-hydroxymidazolam, Amitriptyline, Amoxapine, Benzylecgonine, Carbamazepine, Chlordiazepoxide, Clomipramine, Cocaine, Desipramine, Doxepin, Estazolam, Flunitrazepam, Fluoxetine, Imipramine, Levamisole, Meprobamate, Methylphenidate, Metoprolol, Midazolam, Mirtazapine, Mitragynine, Normeperidine, Norpropoxyphene, Nortriptyline, Ondansetron, Pentazocine, Phenazepam, Phencyclidine, Phenytoin, Prazepam, Primidone, Propoxyphene, Protriptyline, Pseudoephedrine, Tapentadol, Trimipramine, Verapamil, Zaleplon, Zopiclone.

Did not evaluate protriptyline or tapentadol.

