



Blood Drug Analysis Test No. 16-5661 Summary Report

This test was sent to 135 participants. The sample sets contained blood samples from three cases, each with an individual case scenario. Each case sample consisted of two grey-topped vials containing human blood with various drugs/metabolites. Participants were requested to examine these items and report their findings. Data were returned from 100 participants (74% response rate) and are compiled into the following tables:

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This report contains the data received from the participants in this test. Since these participants are located in many countries around the world, and it is their option how the samples are to be used (e.g., training exercise, known or blind proficiency testing, research and development of new techniques, etc.), the results compiled in the Summary Report are not intended to be an overview of the quality of work performed in the profession and cannot be interpreted as such. The Summary Comments are included for the benefit of participants to assist with maintaining or enhancing the quality of their results. These comments are not intended to reflect the general state of the art within the profession.

Manufacturer's Information

The sample sets contained blood samples from three cases, each with an individual case scenario. Each case sample consisted of two grey-topped vials containing 10mL of human blood. Participants were asked to analyze the blood samples and report the presence of any drugs/metabolites, any quantitative data obtained (including uncertainty), methods used, and any additional comments.

SAMPLE PREPARATION-

The human blood used in this test was from the same lot, which tested negative for a variety of common controlled substances prior to being obtained from a commercial supplier.

A stock solution of 1.0mg/mL of each drug in methanol or acetonitrile was used to spike each item. These solutions were obtained in sealed ampoules and were not opened until needed for production. Items were prepared at separate times using the following procedure, and different glassware was used for each item.

ITEMS 1, 2, and 3 (PREPARATION): Item preparation consisted of adding a predetermined amount of drug stock solution to a beaker containing human whole blood. It was stirred using a magnetic stirrer for 10 minutes before pipetting 10mL of the mixture into each of the pre-labeled vials, which contained 20mg Potassium Oxalate and 100mg Sodium Fluoride. The vials were sealed and inverted 8-10 times to mix the chemicals in the vials with the blood solution. All vials were placed in a refrigerator immediately after production until the sample sets were prepared.

SAMPLE SET ASSEMBLY: Each sample set contained two vials of each of Items 1, 2, and 3 and was placed into a Department of Transportation regulated shipping container. Each sample pack was labeled and returned to the refrigerator until shipment.

VERIFICATION-

Laboratories that conducted predistribution analysis of the samples reported consistent results that were comparable to the preparation drug concentrations.

Item 1 Drug (Concentration)	Item 2 Drug (Concentration)	Item 3 Drug (Concentration)
Hydromorphone (50ng/mL)	Amobarbital (1,300ng/mL)	Meperidine (500ng/mL)
Lorazepam (200ng/mL)		Normeperidine (300ng/mL)

Please note that the Preparation Value is the value used for calculations during the test preparation phase and may not necessarily represent the final concentration of the samples. It is advised to wait for the Grand Mean statistics available in the Summary and Individual Reports before evaluating performance.

Summary Comments

This test was designed to allow participants to assess their proficiency in the examination for the presence and concentration of drugs and/or metabolites in blood. Each participant was supplied with two vials containing 10mL of human blood spiked with differing drugs and/or metabolites for each of three case scenarios. Participants were asked to report the presence of any drugs/metabolites, any quantitative data obtained (including uncertainty), methods used, and any additional comments. (Refer to the Manufacturer's Information for preparation details.)

Of the 99 participants who reported screening results for Item 1, 87 (87.9%) reported the presence of benzodiazepines and/or lorazepam. Forty-five (45.5%) participants reported the presence of opiates and/or hydromorphone. Twelve (12.1%) participants reported "no drugs/metabolites detected" and one participant reported the presence of other drug classes and/or analytes. Of the 94 participants who reported confirmatory results for Item 1, 78 (83.0%) reported the presence of lorazepam and 43 (45.7%) reported the presence of hydromorphone. Fifteen (16.0%) participants reported "no drugs/metabolites detected."

Of the 98 participants who reported screening results for Item 2, 83 (84.7%) reported the presence of barbiturates and/or amobarbital. Fifteen (15.3%) participants reported "no drugs/metabolites detected" and three participants reported the presence of other drug classes and/or analytes. Of the 90 participants who reported confirmatory results for Item 2, 80 (88.9%) reported the presence of amobarbital. Nine participants (10.0%) reported "no drugs/metabolites detected" and three reported the presence of other analytes.

Of the 99 participants who reported screening results for Item 3, 41 (41.4%) reported the presence of meperidine and/or normeperidine. Fifty-seven (57.6%) reported "no drugs/metabolites detected" and three reported the presence of other drug classes and/or analytes. Of the 91 participants who reported confirmatory results for Item 3, 88 (96.7%) reported the presence of meperidine and 63 (69.2%) also reported the presence of normeperidine. Three participants reported "no drugs/metabolites detected" and four reported the presence of other analytes.

If a participant indicated that the confirmatory quantitative result was a single determination, the conclusive quantitative result was included in the raw data table. The raw data was used to calculate the grand mean and standard deviation for each item. For Item 1, one participant was determined to have "extreme" data (±3 STD from grand mean) for hydromorphone and one participant was determined to have extreme data for lorazepam. For Item 3, four participants were determined to have extreme data for meperidine. The grand mean and standard deviation are supplied to assist the participants and accrediting bodies in determining the acceptability of results.

**Revised 8/29/2016: Information regarding "extreme" data added.

Screening Results - Item 1

TABLE 1A Item 1

Item 1 Scenario:

Case 1: A 26 year old male died due to an apparent accidental overdose. Family members told investigators that the individual had become addicted to, and abused, opioids after surgery the previous year.

Item Contents and Preparation Concentration:

Hydromorphone (50ng/mL) Lorazepam (200ng/mL)

Webcode	Screening Results
2KJBL2	Opiates, Benzodiazepines
2M4887	LORAZEPAM, HYDROMORPHONE
2U89C7	Hydromorphone, Lorazepam
2UK3NZ	Benzodiazepines
4K9HJV	Benzodiazepines
4L42LW	Benzodiazepine (drug class)
6EWYU2	No drugs/metabolites detected
6LY4QR	No drugs/metabolites detected
6MGXQ2	Benzodiazepines
78H9AV	No drugs/metabolites detected
7CN26Q	Opiates, Benzodiazepines
7J8CCZ	Benzodiazepines, Opiates
7RGWEV	No drugs/metabolites detected
84RLTR	Benzodiazepine
8D3MER	Benzodiazepines
8GFPX3	Hydromorphone, Lorazepam

Webcode	Screening Results
8GHHUP	No drugs/metabolites detected
8J2EFU	Opiates and Benzodiazepines
8ZB7HY	No drugs/metabolites detected
9TT7QT	Hydromorphone and Lorazepam
9WKJ2W	opiate, benzodiazepine
A8L3HQ	Benzodiazepines
AHMUKP	Hydromorphone, Lorazepam
AY9DGW	benzodiazepines, opioids, lorazepam
B2EZQV	Benzodiazepines, Opiates
BJE6YP	Drug Class - Benzodiazepine
BRQ6TZ	lorazepam, hydromorphone
BY8ZAV	Benzodiazepines
C9BAGK	Benzodiazepines
CAHPMQ	Benzodiazepines
D248PP	Hydromorphone, Lorazepam
DPE4MK	No drugs/metabolites detected
DQLN6T	No drugs/metabolites detected
E3TTVK	Lorazepam
E6XGCW	Benzodiazepines, Opiates

Webcode	Screening Results
E8949P	Benzodiazepines, Opiates
EAGCFN	Benzodiazepines, Opiates - confirmation pending
EFJNBK	Elevated Benzo EMIT result
ENCXFP	No drugs/metabolites detected
ET8RDQ	Benzodiazepines
FE3QJL	Benzodiazepine
FE89GK	Benzodiazepines
FKUX2U	Benzodiazepines
FLPEEQ	Benzodiazepines
GE3BJU	lorazepam, hydromorphone
GKMBXL	Hydromorphone, Lorazepam
GXC8YJ	Benzodiazepines
HHCN2T	Benzodiazepines
HNGRMK	Benzodiazepines, Opiates
HV68HJ	Benzodiazepines
JTCNZH	LORAZEPAM, HYDROMORPHONE
KJZYRC	Hydromorphone, Lorazepam
KZ9U4J	Benzodiazepines.
L2WNKK	Benzodiazepines

Webcode	Screening Results
LP6YLE	Benzodiazepines
LQDETK	No drugs/metabolites detected
LWJ3CD	Elevated Benzodiazepine
M7ATRE	Benzodiazepines
MZJBFN	Benzodiazepines
N288HM	Opiates and Benzodiazepines
N29ZEA	No drugs/metabolites detected
NQC2KH	Lorazepam, Hydromorphone
NWDDGE	Benzodiazepines, Opiates
PCQ4YE	Benzodiazepine
PZ9JEH	Benzodiazepine
Q2Y6KD	Hydromorphone and Lorazepam
QH8YE9	Opiates, Benzodiazepines
QJN7MB	hydromorphone and lorazepam
QRD43H	Benzodiazepines
R3A78C	EMIT Benzodiazepine result was elevated and not positive.
R79H3C	Benzodiazepines, hydromorphone
R9GWAH	Hydromorphone, Lorazepam
RT3N9E	certain benzodiazepines and common opioids classifications. Hydromorphone, caffeine, doxylamine, lorazepam, fluoxetine

Webcode	Screening Results
RTN3YD	Benzodiazepines, Opiates + Opioids
T34GBE	Hydromorphone, Lorazepam
TDPDJ7	Benzodiazepines
U4VRQD	LCMSMS screen: Lorazepam. EIA indicative: Benzo, opioids
U7HBRB	Opiates, Benzodiazepines.
UNL3DD	Lorazepam, Hydromorphone
VDETG8	Opiates, Benzodiazepines
VRY8K8	Benzodiazepines
VX3AP8	Benzodiazepines
W7WJTB	HYDROMORPHONE, LORAZEPAM
WH4PJ4	Lorazepam, Hydromorphone
WYRVV4	Benzodiazepine
X38PBZ	Opiates, Benzodiazepines
XJFGD7	Benzodiazepines (EMIT results were not flagged "positive" but results were elevated)
XNBBB8	Benzodiazepines
XPHQHD	lorazepam, hydromorphone
XY8EFZ	Benzodiazepines
Y4X9P8	Benzodiazepines
YP2WG3	Benzodiazepines, Opiates

Webcode	Screening Results
YQCX42	Benzodiazepines
YUBAY2	Benzodiazepine
ZJ4VC7	HIDROMORFONA, LORAZEPAM
ZPGCAB	No drugs/metabolites detected
ZVHN78	Lorazepam, Hydromorphone
ZWFY2B	Opiates, Benzodiazepines
ZY2NJ3	Benzodiazepines

Response Summary for Item 1	Participants: 99
Benzodiazepines:	64
Opiates:	22
Hydromorphone:	24
Lorazepam:	26
Other:	1
No drugs/metabolites detected:	12
Totals may add up to more than because some participants report	

Confirmatory Results - Item 1

What drugs/metabolites were detected in Item 1?

TABLE 1B Item 1

Item 1 Scenario:

Case 1: A 26 year old male died due to an apparent accidental overdose. Family members told investigators that the individual had become addicted to, and abused, opioids after surgery the previous year.

Item Contents and Preparation Concentration:

Hydromorphone (50ng/mL) Lorazepam (200ng/mL)

Webcode	Analyte Reported	Qualitative Only	Reported Concentration	Uncertainty	Units
2KJBL2	Hydromorphone	✓			
	Lorazepam	1			
2M4887	HYDROMORPHONE		LESS THAN 62,5		ng/mL
	LORAZEPAM		212		ng/mL
2U89C7	Hydromorphone		38	10	mcg/L
	Lorazepam		190	57	mcg/L
2UK3NZ	No drugs/metabolites detecte	d			
4K9HJV	Lorazepam		139	113-164	ng/mL
4L42LW	Lorazepam		132	± 24	ng/mL
6EWYU2	Lorazepam	✓			
6LY4QR	Lorazepam	✓			
6MGXQ2	No drugs/metabolites detecte	d			
78H9AV	No drugs/metabolites detecte	d			
7CN26Q	Hydromorphone	1			
	Lorazepam		160.0		ng/mL
7J8CCZ	Hydromorphone		50	32	%
	Lorazepam		200	39	%

TABLE 1B Item 1

Qualitative Reported						
Webcode	Analyte Reported	Only	Concentration	Uncertainty	Units	
84RLTR	Lorazepam		138	113-163	ng/mL	
8D3MER	Lorazepam		125 ng/mL	101-148	ng/mL	
8GFPX3	Hydromorphone		42	+/- 10	ng/mL	
	Lorazepam		189	+/- 43	ng/mL	
8GHHUP	No drugs/metabolites detec	ted				
8J2EFU	Hydromorphone		50	+/- 20%	ng/mL	
	Lorazepam		196	+/- 20%	ng/mL	
8ZB7HY	Lorazepam	✓				
9TT7QT	Hydromorphone		50	13		
	Lorazepam		120	19		
9WKJ2W	hydromorphone	✓				
	lorazepam	✓				
A8L3HQ	Lorazepam		132	18.42%	ng/ml	
AHMUKP	Hydromorphone		55	+/- 5.17	ng/mL	
	Lorazepam		183	+/- 26.53	ng/mL	
AY9DGW	hydromorphone		44	11	μ g/L	
	lorazepam		0.17	0.05	mg/L	
B2EZQV	Hydromorphone	✓				
	Lorazepam		196	+/- 61	ug/l	
BJE6YP	Lorazepam		125	±23	ng/mL	
BRQ6TZ	hydromorphone		36	9	mcg/L	
	lorazepam		0.16	0.05	mg/L	

TABLE 1B Item 1

Webcode	Analyte Reported	Qualitative Only	Reported Concentration	Uncertainty	Units
BY8ZAV	No drugs/metabolites detecte				
C9BAGK	Hydromorphone	✓			
	Lorazepam	✓			
CAHPMQ	Lorazepam		153	18.42%	ng/mL
D248PP	Hydromorphone		54	4	ng/mL
	Lorazepam		196	22	ng/mL
DPE4MK	No drugs/metabolites detecte	ed			
DQLN6T	Lorazepam	✓			
E3TTVK	Lorazepam	✓			
E6XGCW	Hydromorphone (free)		50 ng/mL	+/- 8	ng/mL
	Lorazepam	✓			
E8949P	Lorazepam				
EAGCFN	Lorazepam		218	37	ng/mL
EFJNBK	Lorazepam		108	88-128	ng/mL
ENCXFP	LORAZEPAM		42		ng/ml
ET8RDQ	Lorazepam		0.2		mg/L
FE3QJL	Lorazepam		124	+/- 22	ng/ml
FE89GK	Lorazepam		131	106-155	ng/mL
FLPEEQ	No drugs/metabolites detecte	ed			
FTJQAK	hydromorphone	1			

TABLE 1B Item 1

Webcode	Analyte Reported	Qualitative Only	Reported Concentration	Uncertainty	Units
GE3BJU	hydromorphone		38	10	mcg/L
	lorazepam		0.17	0.05	mg/L
GKMBXL	Hydromorphone	✓			
	Lorazepam	✓			
GXC8YJ	No drugs/metabolites detecte	ed			
HNGRMK	Hydromorphone	✓			
	Lorazepam	✓			
HV68HJ	Lorazepam		139	+/-25	ng/mL
JTCNZH	Hydromorphone		0.04	15%	mg/L
	Lorazepam		0.14	15%	mg/L
KZ9U4J	Hydromorphone	✓			
	Lorazepam	✓			
L2WNKK	No drugs/metabolites detecte	ed			
LP6YLE	Lorazepam		210		ng/mL
LQDETK	Lorazepam	✓			
LWJ3CD	Lorazepam		141	115-167	ng/mL
M7ATRE	No drugs/metabolites detecte	ed			
MZJBFN	Lorazepam	✓			
N288HM	Hydromorphone		0.044 mcg/ml	0.008	mcg/ml
	Lorazepam	✓			
N29ZEA	No drugs/metabolites detecte	ed			

TABLE 1B Item 1

Webcode	Analyte Reported	Qualitative Only	Reported Concentration	Uncertainty	Units
NQC2KH	Hydromorphone	✓			
	Lorazepam	✓			
NWDDGE	Hydromorphone	✓			
	Lorazepam	✓			
PCQ4YE	lorazepam		122	99-144	ng/ml
Q2Y6KD	Hydromorphone		49	28	ng/mL
	Lorazepam		192	23	ng/mL
QH8YE9	Hydromorphone	✓			
	Lorazepam	✓			
QJN7MB	hydromorphone	✓			
	lorazepam		160	20	ng/mL
QRD43H	Lorazepam		224	45	ng/mL
R3A78C	Lorazepam		147	120-174	ng/ml
R79H3C	Hydromorphone		0.05		mg/L
	Lorazepam		0.17		mg/L
R9GWAH	Hydromorphone		50	6	ng/mL
	Lorazepam		181	22	ng/ml
RT3N9E	Hydromorphone		38 μg/L	10	μg/L
	lorazepam		0.16 mg/L	0.05	mg/L
T34GBE	Lorazepam	1			
TDPDJ7	Lorazepam		161	+/- 29	ng/mL

TABLE 1B Item 1

TABLE TO HOLL I								
Webcode	Analyte Reported	Qualitative Only	Reported Concentration	Uncertainty	Units			
U4VRQD	Hydromorphone		33	+/- 8	mcg/L			
	Lorazepam		0.17	+/-0.05	mg/L			
U7HBRB	No drugs/metabolites detected	I						
UNL3DD	Hydromorphone		41	10	μg/L			
	Lorazepam		0.16	0.05	mg/L			
VDETG8	Lorazepam	✓						
VRY8K8	No drugs/metabolites detected	I						
VX3AP8	lorazepam		134	110-158	ng/ml			
W7WJTB	HYDROMORPHONE	✓						
	LORAZEPAM	1						
WH4PJ4	Hydromorphone		44.6	4.4	ng/ml			
	Lorazepam		159.4	11.1	ng/ml			
WYRVV4	Lorazepam		111	+/- 20.4	ng/ml			
X38PBZ	Hydromorphone	✓						
	Lorazepam	✓						
XJFGD7	lorazepam		141	115-167	ng/mL			
XNBBB8	No drugs/metabolites detected	I						
XPHQHD	hydromorphone		34 μg/L	+/- 9	μg/L			
	lorazepam		0.15 mg/L	+/-0.05	mg/L			
XY8EFZ	Hydromorphone	√						
	Lorazepam		181	58	ng/mL			
Y4X9P8	No drugs/metabolites detected	I						

TABLE 1B Item 1

Webcode	Analyte Reported	Qualitative Only	Reported Concentration	Uncertainty	Units
YP2WG3	Hydromorphone		0.050	0.008	mg/L
	Lorazepam		0.153	0.036	mg/L
YQCX42	Lorazepam		102	+/- 18	ng/mL
YUBAY2	Lorazepam		123	+/- 22	ng/mL
ZJ4VC7	HIDROMORFONA		89,6	11,81	ng/mL
	LORAZEPAM		223,0	12,00	ng/mL
ZPGCAB	Hydromorphone		47	+/- 4 ng/mL	ng/mL
	Lorazepam		147	+/- 40 ng/mL	ng/mL
ZVHN78	Hydromorphone		38	10	μg/L
	Lorazepam		0.17	0.05	mg/L
ZWFY2B	Hydromorphone		0.025	+/- 0.005	μg/mL
	Lorazepam	✓			
ZY2NJ3	Lorazepam	1			

Response Summary for Item 1		Participants: 94
Hydromorphone:	43	
Lorazepam:	78	
No drugs/metabolites detected:	15	
	n the total number of participants orted multiple drugs/metabolites.	

Raw Data - Item 1

List of raw data determinations in ng/mL.

TABLE 1C Item 1

Item 1 Raw Data - Hydromorphone Preparation concentration: 50ng/mL

Webcode	Raw Data	(ng/mL)				Pa	rticipant Mean
2U89C7	38.020						38.020
7J8CCZ	49.510						49.510
8GFPX3	42.000	38.000	38.000				39.333
8J2EFU	50.000						50.000
9TT7QT	48.000	49.000					48.500
AHMUKP	55.420						55.420
AY9DGW	44.220						44.220
BRQ6TZ	36.370						36.370
D248PP	54.254	54.349	56.362	52.690			54.414
E6XGCW	49.530	49.950					49.740
GE3BJU	38.220						38.220
JTCNZH	36.000	35.000					35.500
N288HM	44.000						44.000
Q2Y6KD	49.200						49.200
R79H3C	50.000						50.000
R9GWAH	49.531	47.900	53.759	51.089	47.127	48.799	49.701
RT3N9E	37.680						37.680
U4VRQD	33.010						33.010
UNL3DD	40.840						40.840
WH4PJ4	44.600						44.600
XPHQHD	34.040						34.040
YP2WG3	51.400	50.600	51.100	48.200			50.325
ZJ4VC7	85.000	83.000	101.000				89.667 X
ZPGCAB	47.050	47.620					47.335
ZVHN78	37.630						37.630
ZWFY2B	25.000						25.000

Statistical Analysis for Item 1- Hydromorphone							
Grand Mean	43.304	Number of Participants Included 25	Number of Participants without Raw Data or Data that was not 17				
Standard Deviation	7.600	Number of Participants Excluded 1	reported in ng/mL				

TABLE 1C Item 1

Item 1 Raw Data - Lorazepam Preparation concentration: 200ng/mL

194.945	Webcode	Raw Data	(ng/mL)			Participant Mear	1
4K9HJV 139,000 139,000 4L42LW 132,000 132,000 7CN26Q 160,020 160,020 7JBCCZ 205,600 205,600 84RLTR 138,100 138,100 8D3MER 125,700 125,700 8GFPX3 186,000 176,000 189,000 195,000 8J2EFU 196,000 196,000 196,000 9TT7QT 120,000 132,000 AHMUKP 183,900 183,900 AY9DGW 168,055 168,055 BZEZQV 192,000 200,000 BRQ6TZ 162,801 162,801 CAHPMQ 153,400 153,400 D248PP 193,338 203,217 192,560 195,281 196,099 EAGCFN 218,000 218,000 EFINBK 108,600 EFINBK 108,600 ENCKPP 42,000 42,000 X 200,000 FESQJL 124,000 124,000 TERRDQ 200,000 TERRDQ 131,200 GE3BJU 168,935 168,935 168,935 168,935 168,935	2M4887	201.000	224.000			212.500	
132.000	2U89C7	194.945				194.945	
7CN26Q 160.020 160.020 7J8CCZ 205.600 205.600 84RLTR 138.100 138.100 8D3MER 125.700 125.700 8GFPX3 186.000 176.000 189.000 195.000 8JZEFU 196.000 196.000 196.000 9TT7QT 120.000 120.000 132.000 ABL3HQ 132.000 132.000 1332.000 AHMUKP 183.900 183.900 183.900 AY9DGW 168.055 168.055 168.055 BEZZQV 192.000 200.000 196.000 BRG6TZ 162.801 162.801 162.801 CAHPMQ 153.400 153.400 153.400 D248PP 193.338 203.217 192.560 195.281 196.099 EAGCFN 218.000 218.000 218.000 EFJNBK 108.600 108.600 ENCXFP 42.000 42.000 X 26.500 124.000 T24.000 T24.000 T24.000 T39.100 T39.100 T39.100 T39.100 T39.100 T39.100	4K9HJV	139.000				139.000	
7/8CCZ 205.600 205.600 384RLTR 138.100 138.100 38D3MER 125.700 125.700 125.700 38GFPX3 186.000 176.000 189.000 195.000 186.500 38J2EFU 196.000 176.000 197.000 120.000 38J2EFU 196.000 120.000 132.000 38J2EFU 132.000	4L42LW	132.000				132.000	
84RLTR 138.100 138.100 8D3MER 125.700 125.700 8GFPX3 186.000 176.000 189.000 195.000 8J2EFU 196.000 196.000 196.000 9TT7QT 120.000 120.000 120.000 ABL3HQ 132.000 132.000 132.000 AHMUKP 183.900 183.900 183.900 AY9DGW 168.055 168.055 168.055 BZEZQV 192.000 200.000 196.000 BRC6TZ 162.801 162.801 162.801 CAHPMQ 153.400 153.400 153.400 D248PP 193.338 203.217 192.560 195.281 196.099 EAGCFN 218.000 218.000 218.000 EFINBK 108.600 ENCXFP 42.000 42.000 X 28.600 X ETBRDQ 200.000 200.000 124.000 131.200 131.200 139.100 17CNZH 134.000 146.000 140.000 140.000 140.000 140.000 141.500 141.500 141.500 <td>7CN26Q</td> <td>160.020</td> <td></td> <td></td> <td></td> <td>160.020</td> <td></td>	7CN26Q	160.020				160.020	
803MER 125.700 125.700 126.000 186.500 186.500 186.500 186.500 186.500 186.500 186.500 186.500 186.500 186.500 186.500 186.500 186.500 186.000 186.000 186.000 186.000 186.000 186.000 186.000 186.000 186.000 186.005 186.055 186.055 186.055 186.055 186.055 186.055 186.000 186.0	7J8CCZ	205.600				205.600	
86FPX3 186.000 176.000 189.000 195.000 8J2EFU 196.000 196.000 9TT7QT 120.000 120.000 A8L3HQ 132.000 132.000 AHMUKP 183.900 183.900 AY9DGW 168.055 168.055 B2EZQV 192.000 200.000 196.000 BIE6YP 125.000 125.000 BRQ6TZ 162.801 162.801 162.801 CAHPMQ 153.400 153.400 153.400 D248PP 193.338 203.217 192.560 195.281 196.099 EAGCFN 218.000 218.000 218.000 EFJNBK 108.600 ENCXFP 42.000 42.000 X X ETSQJL 124.000 X ETSRDQ 200.000 200.000 131.200 131.200 139.100 JTCNZH 134.000 146.000 140.000 LWJ3CD 141.500 PCQ4YE 122.000 122.000 122.000 122.000 122.000 122.000 122.000 122.000 122.000 122.000 122.000	84RLTR	138.100				138.100	
812EFU	8D3MER	125.700				125.700	
9TT7QT 120.000 120.000 132.000 ABL3HQ 132.000 132.000 AHMUKP 183.900 183.900 AY9DGW 168.055 168.055 BZEZQV 192.000 200.000 196.000 BJE6YP 125.000 125.000 BRQ6TZ 162.801 162.801 CAHPMQ 153.400 153.400 D248PP 193.338 203.217 192.560 195.281 196.099 EAGCFN 218.000 218.000 EFJNBK 108.600 108.600 ENCXFP 42.000 42.000 X ETBRDQ 200.000 200.000 FE3QJL 124.000 124.000 FE8SGK 131.200 124.000 GE3BJU 168.935 168.935 HV68HJ 139.100 139.100 JTCNZH 134.000 146.000 141.500 LWJ3CD 141.500 202.000 PCQ4YE 122.000 192.000 IROUGH 192.000 192.000	8GFPX3	186.000	176.000	189.000	195.000	186.500	
ABL3HQ 132.000 AHMUKP 183.900 AYPDGW 168.055 BZEZQV 192.000 200.000 BJE6YP 125.000 BRQ6TZ 162.801 CAHPMQ 153.400 D248PP 193.338 203.217 192.560 195.281 196.099 EAGCFN 218.000 EFJNBK 108.600 ENCXFP 42.000 ENCXFP 42.000 TETSRDQ 200.000 FE3QJL 124.000 FE3BJU 168.935 HV68HJ 139.100 JTCNZH 134.000 146.000 LWJ3CD 141.500 PCQ4YE 122.000 183.900 183.900 196.000 196.000 196.000 196.000 197.000 197.000 198.000 199.000 190.000	8J2EFU	196.000				196.000	
AHMUKP 183.900 1883.900 1883.900 1883.900 AY9DGW 168.055 168.055 168.055 82EZQV 192.000 200.000 196.000 196.000 8DE6YP 125.000 125.000 125.000 162.801 162.801 162.801 162.801 162.801 153.400 153.400 153.400 153.400 153.400 218.000 EFJNBK 108.600 108.600 EFJNBK 108.600 108.600 ENCXFP 42.000 42.000 X ETBRDQ 200.000 200.000 FE3QJL 124.000 124.000 TEBRDQ 131.200 124.000 TEBRDQ 131.200 131.200 GE3BJU 168.935 168.935 168.935 168.935 HV68HJ 139.100 146.000 140.000 LP6YLE 206.500 206.500 LWJ3CD 141.500 PCQ4YE 122.000 192.000 192.000 192.000 192.000	9TT7QT	120.000				120.000	
AY9DGW 168.055 B2EZQV 192.000 200.000 196.000 BIE6YP 125.000 125.000 BRQ6TZ 162.801 162.801 CAHPMQ 153.400 153.400 D248PP 193.338 203.217 192.560 195.281 196.099 EAGCFN 218.000 218.000 EFJNBK 108.600 108.600 ENCXFP 42.000 42.000 X ETBRDQ 200.000 FE3QJL 124.000 124.000 FE89GK 131.200 124.000 GE3BJU 168.935 168.935 HV68HJ 139.100 139.100 JTCNZH 134.000 146.000 LP6YLE 206.500 LWJ3CD 141.500 PCQ4YE 122.000 G2Y6KD 192.000 196.000	A8L3HQ	132.000				132.000	
BZEZQV 192.000 200.000 196.000 BJE6YP 125.000 125.000 BRQ6TZ 162.801 162.801 CAHPMQ 153.400 153.400 D248PP 193.338 203.217 192.560 195.281 196.099 EAGCFN 218.000 218.000 218.000 EFJNBK 108.600 108.600 ENCXFP 42.000 X ETBRDQ 200.000 200.000 FE3QJL 124.000 124.000 FE89GK 131.200 131.200 131.200 GE3BJU 168.935 168.935 168.935 140.000 140.000 170.00 </td <td>AHMUKP</td> <td>183.900</td> <td></td> <td></td> <td></td> <td>183.900</td> <td></td>	AHMUKP	183.900				183.900	
BJE6YP 125.000 BRQ6TZ 162.801 CAHPMQ 153.400 D24BPP 193.338 203.217 192.560 195.281 EAGCFN 218.000 EFJNBK 108.600 ENCXFP 42.000 ETSRDQ 200.000 FE3QJL 124.000 FE3QJL 124.000 FE3QJL 124.000 FE3QJL 124.000 FE3BJU 168.935 HV68HJ 139.100 JTCNZH 134.000 146.000 LP6YLE 206.500 LWJ3CD 141.500 PCQ4YE 122.000 153.400 153.400 153.400 153.400 195.281 196.099 218.000 218.000 218.000 218.000 218.000 218.000 218.000 218.000 218.000 218.000 218.000 218.000 218.000 218.000 218.000 218.000 200.000 200.000 200.000 200.000 200.000 200.000 124.000 139.100 139.100 140.000 140.000 140.000 141.500 PCQ4YE 122.000 192.000	AY9DGW	168.055				168.055	
BRQ6TZ 162.801 162.801 CAHPMQ 153.400 153.400 D248PP 193.338 203.217 192.560 195.281 196.099 EAGCFN 218.000 218.000 EFJNBK 108.600 108.600 ENCXFP 42.000 42.000 X ETBRDQ 200.000 200.000 FE3QJL 124.000 124.000 FE89GK 131.200 131.200 GE3BJU 168.935 168.935 HV68HJ 139.100 139.100 JTCNZH 134.000 146.000 140.000 LP6YLE 206.500 LWJ3CD 141.500 PCQ4YE 122.000 Q2Y6KD 192.000 192.000	B2EZQV	192.000	200.000			196.000	
CAHPMQ 153.400 153.400 D248PP 193.338 203.217 192.560 195.281 196.099 EAGCFN 218.000 218.000 218.000 EFJNBK 108.600 108.600 108.600 ENCXFP 42.000 X ETBRDQ 200.000 200.000 X FE3QJL 124.000 124.000 124.000 FE89GK 131.200 131.200 131.200 GE3BJU 168.935 168.935 168.935 HV68HJ 139.100 139.100 JTCNZH 134.000 140.000 LP6YLE 206.500 206.500 206.500 206.500 LWJ3CD 141.500 141.500 122.000 Q2Y6KD 192.000 192.000 192.000	BJE6YP	125.000				125.000	
D248PP 193.338 203.217 192.560 195.281 196.099 EAGCFN 218.000 218.000 EFJNBK 108.600 108.600 ENCXFP 42.000 42.000 X ET8RDQ 200.000 200.000 FE3QJL 124.000 124.000 FE89GK 131.200 131.200 131.200 GE3BJU 168.935 168.935 168.935 HV68HJ 139.100 JTCNZH 134.000 140.000 140.000 LP6YLE 206.500 206.500 206.500 LWJ3CD 141.500 PCQ4YE 122.000 122.000 192.000 </td <td>BRQ6TZ</td> <td>162.801</td> <td></td> <td></td> <td></td> <td>162.801</td> <td></td>	BRQ6TZ	162.801				162.801	
EAGCFN 218.000 EFJNBK 108.600 ENCXFP 42.000 42.000 X ETBRDQ 200.000 FE3QJL 124.000 FE8PGK 131.200 GE3BJU 168.935 HV68HJ 139.100 JTCNZH 134.000 146.000 LP6YLE 206.500 LWJ3CD 141.500 PCQ4YE 122.000 Q2Y6KD 192.000	CAHPMQ	153.400				153.400	
EFJNBK 108.600 ENCXFP 42.000 X ETBRDQ 200.000 200.000 FE3QJL 124.000 124.000 FE89GK 131.200 131.200 GE3BJU 168.935 168.935 HV68HJ 139.100 139.100 JTCNZH 134.000 146.000 LP6YLE 206.500 206.500 LWJ3CD 141.500 141.500 PCQ4YE 122.000 122.000 Q2Y6KD 192.000 192.000	D248PP	193.338	203.217	192.560	195.281	196.099	
ENCXFP 42.000 X ET8RDQ 200.000 200.000 FE3QJL 124.000 124.000 FE89GK 131.200 131.200 GE3BJU 168.935 168.935 HV68HJ 139.100 139.100 JTCNZH 134.000 146.000 140.000 LP6YLE 206.500 206.500 LWJ3CD 141.500 141.500 PCQ4YE 122.000 192.000	EAGCFN	218.000				218.000	
ET8RDQ 200.000 FE3QJL 124.000 124.000 FE89GK 131.200 131.200 GE3BJU 168.935 168.935 HV68HJ 139.100 139.100 JTCNZH 134.000 146.000 140.000 LP6YLE 206.500 206.500 LWJ3CD 141.500 PCQ4YE 122.000 Q2Y6KD 192.000 192.000	EFJNBK	108.600				108.600	
FE3QJL 124.000 FE89GK 131.200 GE3BJU 168.935 HV68HJ 139.100 JTCNZH 134.000 LP6YLE 206.500 LWJ3CD 141.500 PCQ4YE 122.000 Q2Y6KD 192.000	ENCXFP	42.000				42.000	Χ
FE89GK 131.200 GE3BJU 168.935 HV68HJ 139.100 JTCNZH 134.000 146.000 LP6YLE 206.500 206.500 LWJ3CD 141.500 141.500 PCQ4YE 122.000 122.000 Q2Y6KD 192.000 192.000	ET8RDQ	200.000				200.000	
GE3BJU 168.935 HV68HJ 139.100 JTCNZH 134.000 146.000 LP6YLE 206.500 206.500 LWJ3CD 141.500 141.500 PCQ4YE 122.000 122.000 Q2Y6KD 192.000 192.000	FE3QJL	124.000				124.000	
HV68HJ 139.100 JTCNZH 134.000 146.000 LP6YLE 206.500 206.500 LWJ3CD 141.500 141.500 PCQ4YE 122.000 122.000 Q2Y6KD 192.000 192.000	FE89GK	131.200				131.200	
JTCNZH 134.000 146.000 LP6YLE 206.500 206.500 LWJ3CD 141.500 141.500 PCQ4YE 122.000 122.000 Q2Y6KD 192.000 192.000	GE3BJU	168.935				168.935	
LP6YLE 206.500 LWJ3CD 141.500 PCQ4YE 122.000 Q2Y6KD 192.000 192.000	HV68HJ	139.100				139.100	
LWJ3CD 141.500 PCQ4YE 122.000 Q2Y6KD 192.000 192.000 192.000	JTCNZH	134.000	146.000			140.000	
PCQ4YE 122.000 122.000 Q2Y6KD 192.000 192.000	LP6YLE	206.500				206.500	
Q2Y6KD 192.000 192.000	LWJ3CD	141.500				141.500	
	PCQ4YE	122.000				122.000	
QJN7MB 152.000 159.000 159.000 156.667	Q2Y6KD	192.000				192.000	
	QJN7MB	152.000	159.000	159.000		156.667	

TABLE 1C Item 1

Item 1 Raw Data - Lorazepam Preparation concentration: 200ng/mL

Webcode	Raw Data	(ng/mL)			Participant Mean
QRD43H	224.000				224.000
R3A78C	147.800				147.800
R79H3C	170.000				170.000
R9GWAH	187.846	183.653	176.455	175.852	180.952
RT3N9E	157.996				157.996
TDPDJ7	161.400				161.400
U4VRQD	168.906				168.906
UNL3DD	156.275				156.275
VX3AP8	134.000				134.000
WH4PJ4	159.400				159.400
WYRVV4	111.000				111.000
XJFGD7	141.400				141.400
XPHQHD	152.576				152.576
XY8EFZ	181.000				181.000
YP2WG3	169.000	147.000	158.000	141.000	153.750
YQCX42	102.000				102.000
YUBAY2	123.600				123.600
ZJ4VC7	258.000	188.000			223.000
ZPGCAB	135.200	157.800			146.500
ZVHN78	168.469				168.469

,	Statistical Analysis for Item 1 - Lorazepam						
	Grand Mean	160.387	Number of Participants Included 52	Number of Participants without Raw Data or Data that was not 25			
	Standard Deviation	31.688	Number of Participants Excluded 1	reported in ng/mL			

Reporting Procedures - Item 1

If quantitative analysis was performed, the reported concentrations are:

Webcode	Quantitative Reporting Procedures
2M4887	The mean of duplicate/several determinations.
2U89C7	A single determination.
4K9HJV	A single determination.
4L42LW	A single determination.
7CN26Q	A single determination.
7J8CCZ	A single determination.
84RLTR	A single determination.
8D3MER	A single determination.
8GFPX3	A single determination.
8GHHUP	A single determination.
8J2EFU	A single determination.
9TT7QT	A single determination.
A8L3HQ	A single determination.
AHMUKP	A single determination.
AY9DGW	A single determination.
B2EZQV	The mean of duplicate/several determinations.
BJE6YP	A single determination.
BRQ6TZ	A single determination.
CAHPMQ	A single determination.
D248PP	The mean of duplicate/several determinations.
E6XGCW	The mean of duplicate/several determinations.
EAGCFN	A single determination.
EFJNBK	A single determination.
ENCXFP	A single determination.
ET8RDQ	The mean of duplicate/several determinations.
FE3QJL	A single determination.
FE89GK	A single determination.
GE3BJU	A single determination.
HV68HJ	A single determination.
JTCNZH	The mean of duplicate/several determinations.
LP6YLE	A single determination.

Webcode	Quantitative Reporting Procedures	
LWJ3CD	A single determination.	
N288HM	A single determination.	
PCQ4YE	A single determination.	
Q2Y6KD	A single determination.	
QJN7MB	The mean of duplicate/several determinations.	
QRD43H	A single determination.	
R3A78C	A single determination.	
R79H3C	A single determination.	
R9GWAH	The mean of duplicate/several determinations.	
RT3N9E	A single determination.	
TDPDJ7	A single determination.	
U4VRQD	A single determination.	
U7HBRB	A single determination.	
UNL3DD	A single determination.	
VX3AP8	A single determination.	
WH4PJ4	A single determination.	
WYRVV4	A single determination.	
XJFGD7	A single determination.	
XPHQHD	A single determination.	
XY8EFZ	A single determination.	
YP2WG3	The mean of duplicate/several determinations.	
YQCX42	A single determination.	
YUBAY2	A single determination.	
ZJ4VC7	The mean of duplicate/several determinations.	
ZPGCAB	The mean of duplicate/several determinations.	
ZVHN78	A single determination.	
ZWFY2B	A single determination.	

Participants: 58
7 (81.0%)
(19.0%)
0 (0.0%)

Method of Analysis - Item 1

Webcode	Method	Screening	Confirmatory	Quantitation
2KJBL2	Immunoassay	✓		
	GC/MS		✓	
2M4887	GC/MS		✓	✓
	LC/MS/MS		✓	✓
2U89C7	lmmunoassay	✓		
	GC/MS		✓	✓
	LC/MS/MS	✓	✓	✓
2UK3NZ	lmmunoassay	✓		
	GC/MS		✓	
4K9HJV	Immunoassay	✓		
	LC/MS/MS		✓	✓
4L42LW	Immunoassay	✓		
	LC/MS/MS		✓	✓
6EWYU2	Immunoassay	✓		
	GC/MS		✓	
6LY4QR	Immunoassay	✓		
	GC/MS		✓	
6MGXQ2	Immunoassay	✓		
OMONQZ	GC/MS	•	✓	
78H9AV	Immunoassay	✓		
7011/AV	GC/MS	•	✓	✓
7CN26Q		✓	<u> </u>	
7CN20Q	Immunoassay GC/MS	V	✓	✓
7.10.007	<u> </u>		•	•
7J8CCZ	Immunoassay GC/MS	✓	✓	
	LC/MS		•	✓
700\4/5\/				•
7RGWEV	Immunoassay	✓		
84RLTR	Immunoassay	✓		,
	LC/MS/MS		✓	√
8D3MER	Immunoassay	✓		
	LC/MS/MS		✓	✓
8GFPX3	Immunoassay	✓		
	GC/MS	✓		
	LC/MS/MS	✓	✓	✓

Webcode	Method	Screening	Confirmatory	Quantitation
8GHHUP	Immunoassay GC/MS	/	✓	✓
8J2EFU	Immunoassay GC/MS GC/NPD	<i>\</i>	✓	1
8ZB7HY	Immunoassay GC/MS	<i>'</i>	✓	
9TT7QT	Immunoassay LC/MS/MS LC QTOF MS	✓ ✓	✓	✓
9WKJ2W	lmmunoassay GC/MS	✓	✓	
A8L3HQ	Immunoassay LC/MS/MS	✓	/	1
AHMUKP	LC/MS/MS	✓	✓	✓
AY9DGW	Immunoassay GC/MS LC/MS/MS	✓ ✓	<i>J</i>	<i>,</i>
B2EZQV	Immunoassay GC/MS	/	✓	✓
BJE6YP	Immunoassay LC/MS/MS	√	/	✓
BRQ6TZ	Immunoassay GC/MS LC/MS/MS	✓ ✓	√	√
BY8ZAV	lmmunoassay GC/MS	✓	✓	
C9BAGK	Immunoassay LC/MS/MS	✓	✓	
CAHPMQ	lmmunoassay LC/MS/MS	✓	✓	√
D248PP	GC/MS LC/MS/MS	√ ✓	✓	✓
DPE4MK	Immunoassay GC/MS	✓	✓	
DQLN6T	lmmunoassay GC/MS	✓	/	

E3TTVK LC/MS/MS	
GC/MS FE8949P Immunoassay GC/MS LC/MS/MS EAGCFN Immunoassay GC/MS LC/MS V FFINBK Immunoassay CC/MS CC	
E8949P Immunoassay	
GC/MS LC/MS/MS EAGCFN Immunoassay GC/MS LC/MS LC/MS LC/MS FEJNBK Immunoassay LC/MS/MS FENCXFP Immunoassay GC/MS GC/HS FERRDQ Immunoassay GC/MS HPLC-DAD FESQJL Immunoassay FE89GK Immunoassay	
LC/MS/MS EAGCFN Immunoassay ✓ GC/MS ✓ ✓ LC/MS ✓ ✓ EFJNBK Immunoassay ✓ LC/MS/MS ✓ ✓ ENCXFP Immunoassay ✓ GC/MS ✓ ✓ GC/HS ✓ ✓ ET8RDQ Immunoassay ✓ GC/MS ✓ ✓ HPLC-DAD ✓ ✓ FE3QJL Immunoassay ✓ LC/MS/MS ✓ ✓ FE89GK Immunoassay ✓	
EAGCFN	
GC/MS LC/MS FFSJNBK Immunoassay LC/MS/MS FESQJL Immunoassay GC/MS GC/MS HPLC-DAD FESQGK Immunoassay	
LC/MS ✓ ✓ EFJNBK Immunoassay ✓ LC/MS/MS ✓ ✓ ENCXFP Immunoassay ✓ GC/MS ✓ ✓ GC/HS ✓ ✓ ET8RDQ Immunoassay ✓ HPLC-DAD ✓ ✓ FE3QJL Immunoassay ✓ LC/MS/MS ✓ ✓ FE89GK Immunoassay ✓	
LC/MS/MS ✓ ✓ ENCXFP Immunoassay ✓ GC/MS ✓ ✓ GC/HS ✓ ✓ ET8RDQ Immunoassay ✓ GC/MS ✓ ✓ HPLC-DAD ✓ ✓ FE3QJL Immunoassay ✓ ✓ FE89GK Immunoassay ✓ ✓	
ENCXFP Immunoassay GC/MS GC/MS GC/HS FE3QJL Immunoassay LC/MS/MS FE89GK Immunoassay ✓ ✓ FE89GK ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓	_
GC/MS GC/HS FE89GK GC/MS GC/MS GC/MS FE89GK FE89GK FCMS FC	
GC/MS GC/HS FE89GK GC/MS GC/MS GC/MS GC/MS HPLC-DAD FE89GK J J J J J J J J J J J J J	
GC/HS ET8RDQ Immunoassay GC/MS HPLC-DAD FE3QJL Immunoassay LC/MS/MS FE89GK Immunoassay	
GC/MS	
HPLC-DAD FE3QJL Immunoassay LC/MS/MS ✓ FE89GK Immunoassay	
FE3QJL Immunoassay LC/MS/MS	
LC/MS/MS FE89GK Immunoassay	
FE89GK Immunoassay ✓	
· ze, e, ·	
LC/MS/MS ✓ ✓	
FKUX2U Immunoassay ✓	
FLPEEQ Immunoassay ✓	
GC/MS ✓	
FTJQAK GC/MS	
GE3BJU Immunoassay ✓	
GC/MS ✓ ✓	
LC/MS/MS ✓ ✓	
GKMBXL GC/MS ✓ ✓	
LC/MS/MS ✓ ✓	
GXC8YJ Immunoassay 🗸	
GC/MS ✓	
HHCN2T Immunoassay ✓	
HNGRMK Immunoassay 🗸	
GC/MS ✓ ✓	
GC/NPD ✓	

Webcode	Method	Screening	Confirmatory	Quantitation
HV68HJ	lmmunoassay LC/MS/MS	√	√	√
JTCNZH	Immunoassay	✓		
	GC/MS	✓		
	LC/MS	✓		
	LC/MS/MS	✓	✓	✓
	HPLC - DAD	✓		
KJZYRC	LC/MS/MS	✓		
KZ9U4J	lmmunoassay	✓		
	GC/MS		✓	
	LC/MS/MS		✓	
L2WNKK	Immunoassay	✓		
	GC/MS		✓	
LP6YLE	Immunoassay	✓		
	GC/MS	✓		
	LC/MS/MS		✓	✓
LQDETK	Immunoassay	✓		
-	GC/MS	✓	✓	
LWJ3CD	Immunoassay	✓		
	GC/MS		✓	
	LC/MS/MS		✓	✓
M7ATRE	Immunoassay	✓		
TVI / TITLE	GC/MS		✓	
MZJBFN	Immunoassay	✓		
	GC/MS	✓	✓	
	LC/MS/MS		✓	
N288HM	Immunoassay	✓		
	GC/MS		✓	✓
N29ZEA	Immunoassay	✓		
,	GC/MS		✓	
NQC2KH	Immunoassay	√		
	GC/MS		✓	
NWDDGE	Immunoassay	√		
	GC/MS	✓	/	
	GC/NPD	✓	-	
PCQ4YE	Immunoassay	✓		
. 54112	LC/MS/MS	•	/	✓
	LC/IVI3/IVI3		•	•

Webcode	Method	Screening	Confirmatory	Quantitation
PZ9JEH	lmmunoassay	✓		
Q2Y6KD	Immunoassay	✓		
	GC/MS	✓		
	LC/MS/MS		✓	✓
QH8YE9	Immunoassay	✓		
	LC/MS/MS		✓	
QJN7MB	Immunoassay	✓		
	LC/MS/MS			✓
	LC-TOFMS	✓	✓	
QRD43H	Immunoassay	✓		
	LC/MS/MS		✓	✓
R3A78C	Immunoassay	✓		
	LC/MS/MS		✓	✓
R79H3C	Immunoassay	✓		
	GC/MS	✓	✓	✓
	LC/MS/MS	✓	✓	✓
R9GWAH	LC/MS/MS	✓	1	✓
RT3N9E	Immunoassay	✓		
	GC/MS		✓	✓
	LC/MS/MS	✓	✓	✓
RTN3YD	Immunoassay	✓		
T34GBE	GC/MS		✓	
	LC/MS/MS	✓		
TDPDJ7	Immunoassay	✓		
	LC/MS/MS		✓	✓
U4VRQD	Immunoassay	✓		
	GC/MS			✓
	LC/MS/MS	✓		✓
U7HBRB	Immunoassay	✓		
	GC/MS	✓	✓	✓
	GC/NPD	✓		
UNL3DD	Immunoassay	✓		
	GC/MS		✓	✓
	LC/MS/MS	✓	✓	✓
VDETG8	Immunoassay	✓		
	GC/MS		✓	
	LC/MS/MS		✓	

Webcode	Method	Screening	Confirmatory	Quantitation
VRY8K8	Immunoassay	✓		
	GC/MS		✓	
VX3AP8	lmmunoassay	✓		
	LC/MS/MS		✓	✓
W7WJTB	LC/MS	✓		
	LC/MS/MS		✓	
WH4PJ4	Immunoassay	✓		
	GC/MS	✓		
	LC/MS/MS		✓	✓
WYRVV4	Immunoassay	✓		
	LC/MS		✓	✓
X38PBZ	Immunoassay	✓		
	LC/MS/MS		✓	
XJFGD7	Immunoassay	✓		
,	GC/MS		✓	
	LC/MS/MS		✓	✓
XNBBB8	Immunoassay	✓		
7.1 1 <i>D D D D</i>	GC/MS		✓	
XPHQHD	Immunoassay	✓		
7QTID	GC/MS		✓	✓
	LC/MS/MS	✓	✓	✓
XY8EFZ	Immunoassay	✓		
X10212	GC/MS		/	
	LC/MS/MS		✓	✓
Y4X9P8	Immunoassay	✓		
14//10	GC/MS	•	✓	
YP2WG3	Immunoassay	✓		
112003	GC/MS	,		
	LC/MS/MS	•	1	✓
YQCX42	Immunoassay	✓		
I WCA42	Immunoassay LC/MS/MS	V	✓	/
			•	•
YUBAY2	Immunoassay	✓	/	✓
	LC/MS/MS		-	v
ZJ4VC7	LC/MS	✓	√	
	LC/MS/MS		✓	

Webcode	Method	Screening	Confirmatory	Quantitation
ZPGCAB	lmmunoassay	✓		
	GC/MS	✓		
	LC/MS/MS			✓
ZVHN78	Immunoassay	✓		
	GC/MS		✓	✓
	LC/MS/MS	✓	✓	✓
ZWFY2B	Immunoassay	✓		
	GC/MS		✓	✓
ZY2NJ3	Immunoassay	✓		
	GC/MS		✓	

Response Summary for Item 1			Participants: 100
	Screening	Confirmatory	Quantitation
lmmunoassay:	89	0	0
GC/MS:	17	55	21
LC/MS:	3	3	3
LC/MS/MS:	19	52	43
Other:	7	2	1

Additional Comments for Item 1

Webcode	Item 1 - Comments
2M4887	HYDROMORPHONE RAW DATA (ng/ml): LESS THAN 62,5. INTERNAL STANDARD: LORAZEPAM FLURAZEPAM / NALORPHINE. LIMIT OF DETECTION: LORAZEPAM: 20 ng/ml / HYDROMORPHONE: 10 ng/ml. LIMIT OF QUANTIFICATION: HYDROMORPHONE: 62,5 ng/ml / LORAZEPAM: 100 ng/ml.
2U89C7	The internal standard used for hydromorphone quantitation is nalorphine with the limit of report being 3.1 micrograms/L. They are both butylated. For lorazepam quantitation, the internal standard is diazepam-d5 with the limit of report being 6.25 micrograms/L.
2UK3NZ	Small peak of fluoxetine with a weak mass spectra seen in the sample. Confirmatory testing for Benzodiazepines was performed, but no benzodiazepines were able to be identified.
4K9HJV	IS used for Benzodiazepine analysis = $d5$ -alpha-hydroxyalprazolam and $d5$ -diazepam, $LOQ = 5$ ng/mL. IS used for Basic drug analysis = Mepivacaine, $LOD = 0.05$ ug/mL (50 ng/mL).
4L42LW	Screen was elevated for Benzodiazepines.
6EWYU2	Internal standard: Heptabarbital and Phenyltoloxamine
6MGXQ2	Mepivicaine used as internal standard. Hydromorphone observed, not reported due to non-indicative immunoassay
84RLTR	Internal Standard: D5-Diazepam and D5-alpha-hydroxyalprazolam. LOD: 5 ng/mL, LOQ: 5 ng/mL.
8GFPX3	Hydromorphone D3 was used as internal standard for hydromorphone. Lorazepam-d4 was used as internal standard for lorazepam
8ZB7HY	Phenyltoloxamine was used as the internal reference material for basic drugs. Heptabarbital was used as the internal reference material for acidic drugs. Screening tests indicate the presence of other drugs not confirmed in this item
9TT7QT	Screening: Instrument: UPLC-QTOF MS (Waters) (which is LC/MS/MS), Salting-out assisted extraction, Internal Standards: Cyclobarbitone, Prazepam & D3-Methadone. Hydromorphone Quantitative Analysis: Instrument: UPLC-TQD (Waters), Internal Standard: D3-Hydromorphone, LOD: 2 ng/mL. Lorazepam: Instrument: UPLC-TQD (Waters), Internal Standard: D5-Diazepam, LOD: 5 ng/mL.
A8L3HQ	Internal Standards: Mepivicaine, d5-diazepam, d5-alpha-hydroxyalprazolam
AHMUKP	Fluoxetine was present above our cutoff.
AY9DGW	Internal standards used- diazepam-d5, nalorphine
BJE6YP	Screening Results: EMIT Benzodiazepine screening was not "positive", but was elevated.
BRQ6TZ	Internal standard for lorazepam - diazepam-d5. Internal standard for hydromorphone - Nalorphine.
BY8ZAV	Opiate immunoassay screened negative but at an elevated response. Cut-off for the opiate assay is established at 50 ng/mL with Morphine. Confirmatory analysis indicated Hydromorphone.
C9BAGK	LOD 25 ng/mL - tested for [Laboratory] drug panel
D248PP	Hydromorphone LOD: 6.25 ng/mL, iStd: hydromorphone-D6. Lorazepam LOD: 6.25 ng/mL, iStd: lorazepam-D4
E6XGCW	Hydromorphone: Internal Std. = Hydromorphone D3, LOD = 10 ng/mL
E8949P	Hydromorphone was detected. However, data was not definitive for confirmation.
EAGCFN	Alprazolam-d5 = internal standard

Webcode	Item 1 - Comments
ET8RDQ	Internal Standard: Mepivacaine
FE3QJL	Benzodiazepine screen was elevated.
FKUX2U	Sample was not confirmed.
FLPEEQ	Internal standard: Mepivacaine. The screening test indicated benzodiazepines. The case scenario eluded to an opiate. The opiate assay gave an "elevated" response however the opiate assay was negative. For the confirmatory analysis, an extraction for base drugs was performed. Hydromorphone was indicated however not reportable due to negative opiate assay. No base drugs were confirmed.
GE3BJU	internal standards: diazepam-d5, nalorphine
GXC8YJ	Fluoxetine, Acetyl: Identified, but not reported, see Proficiency test provider paperwork. Hydromorphone: Identified but not reported; Immunoassay not indicative. Internal Standard: Mepivacaine. LODs- Benzodiazepine Immunoassay - Oxazepam 50 ng/ml, Opiate Immunoassay- Morphine 50 ng/ml, Alprazolam- 50 ng/ml, Diazepam- 25 ng/ml, Midazolam- 25 ng/ml, Nordiazepam- 25 ng/ml, Hydromorphone- 50 ng/ml.
HHCN2T	Screen only. Confirmations performed by outside laboratory
HNGRMK	Internal standards used: Promazine, Nalorphine
HV68HJ	The screen was elevated for benzodiazepines, so the confirmation was analyzed.
JTCNZH	Lorazepam - Internal standard-prazepam, Limit of detection-30 ng/ml. Hydromorphone - Internal standard-d3-hydromorphone, Limit of detection - 30 ng/ml.
KZ9U4J	Internal Standard used for Lorazepam: Clonazepam-D4. Limit of Detection used for Benzodiazepines: 50ng/ml in blood. Internal Standard used for Hydromorphone: Morphine-D3. Limit of Detection for this determination: 50ng/ml in blood.
L2WNKK	Internal standard used: Mepivacaine. Confirmatory testing did not identify any drugs. This may due to the limitations in the procedure, instrumentation or method used by the [Laboratory] in identifying those drugs. However, the confirmatory testing give indications of the presence of Hydromorphone in the sample, but it is not reported due to the negative opiate screening test result.
LP6YLE	Opiates ELISA screen positive. Hydromorphone detected in GC/MS screen at levels less than LOD (50ng/mL).
LQDETK	Internal standards - Phenyltoloxamine, Heptabarbital
M7ATRE	Fluoxetine, Fluoxetine acetyl, and Doxylamine seen. Not reported, see Proficiency test provider paperwork. Hydromorphone seen. Not reported due to negative immunoassay results. Internal standard used: Mepivacaine. LOD: Hydromorphone - 50 ng/ml, Benzodiazepines - 25-50 ng/ml, Fluoxetine - 100 ng/ml, Doxylamine - 50 ng/ml.
N288HM	Hydromorphone: LOQ 0.02 mcg/ml; HYM-D6 internal std. Lorazepam: Cut off 0.01 mcg/ml; LOR-D4 internal std [Since it was indicated that a single determination was made, the conclusive quantitative result was converted to ng/mL and included in the raw data table. CTS used a conversion factor of 1 mcg/mL = 1000 ng/mL]
NWDDGE	Internal standards used: Drug Screening Promazine, Benzodiazepine ConfirmationPrazepam, Opiate ConfirmationNalorphine.
R3A78C	LOD = 5 ng/ml (Benzodiazepines). Internal Standard(s): d5-alpha-hydroxy-alprazolam and d5-diazepam.
R79H3C	Lorazepam: LOQ=0.01 mg/L, IS = d5-Diazepam. Hydromorphone: LOQ=0.05 mg/L, IS = d3-Hydromorphone. Opiate screen was negative (limited response) by ELISA but Hydromorphone was indicated by LC-MS/MS screen.

Webcode	Item 1 - Comments
RT3N9E	Internal Standards: LCMS: mepivacaine diazepam-d5, GCMS: mepivacaine nalorphine BZE-d8. caffeine, doxylamine, and fluoxetine are artifacts (not confirming)
rtn3yd	Not able to perform confirmation tests at this time.
TDPDJ7	Immunoassay benzodiazepine result was elevated (but not positive) therefore according to policy a benzodiazepine confirmation by LC/MS/MS was performed.
U4VRQD	Internal Standards: Mepivacaine, Nalorphine
U7HBRB	Opiates confirmatory/quantitative testing provided an "Inconclusive due to analytical difficulties" result for Hydromorphone. The internal standards for this test were D6-Codeine, D6-Morphine, D3-Hydrocodone, D3-Hydromorphone, D6-Oxycodone, and D3-Oxymorphone. The limit of detection was 0.025 ug/mL. Benzodiazepine confirmatory/quantitative testing is currently outsourced to [Laboratory], therefore confirmatory/quantitative analysis on this sample was not requested as it would not reflect the work of our lab.
UNL3DD	Screening testing: Internal standard is mepivacaine. Confirmation testing: Internal standard for lorazepam is diazepam-d5. Internal standard for hydromorphone is nalorphine. Limit of report for lorazepam is 6.25 mcg/L. Limit of report for hydromorphone is 3.1 mcg/L.
VDETG8	Hydromorphone was detected. However, data was not definitive for confirmation.
VRY8K8	Fluoxetine and hydrocodone peaks were seen. Fluoxetine was not reported due to poor chromatography and weak Mass Spectra. Hydrocodone was not reported due to negative opiate immunoassay.
W7WJTB	Internal Standard(s): estazolam, oxazepam-glucoronide, deuterate, thc-d9-deuterate.
WYRVV4	Benzodiazepine was elevated using our immunoassay screening method.
XJFGD7	Internal standard (benzodiazepines): D5-alphahydroxyalprazolam & D5-diazepam. Limit of detection (benzodiazepines): 5 ng/mL.
XNBBB8	Confirmatory testing via GCMS analysis showed indications of Hydromorphone. No benzodiazepines were detected in the confirmatory testing; however, there are some benzodiazepines that this labs is unable to confirm with the current analytical procedures available.
XPHQHD	diazepam-d5, nalorphine
XY8EFZ	A confirmation for opiates was conducted based on elevated screening data.
Y4X9P8	Hydromorphone was detected in the GCMS analysis, Immunoassay for opiates was close to the cutoff, but screened negative (IA cutoff 50ng/mL Morphine platform). Several Benzodiazepines are known to have LODs well above the therapeutic range.
YP2WG3	Hydromorphone IS: Hydromorphone-D3, Lower limit of quantitation (LLOQ) = 10 ng/mL . Lorazepam IS: Oxazepam-D5, LLOQ = 10 ng/mL .
YQCX42	Benzodiazepines were elevated in immunoassay screen.
YUBAY2	Benzodiazepine screen was elevated.
ZWFY2B	HydromorphonelS: Hydromorphone-D6. Hydromorphone LOQ: $0.02~\mu g/mL$. Lorazepam IS: Lorazepam-D4. Lorazepam LOD: $0.01~\mu g/mL$ [Since it was indicated that a single determination was made, the conclusive quantitative result was converted to ng/mL and included in the raw data table. CTS used a conversion factor of $1~mcg/mL = 1000~ng/mL$]
ZY2NJ3	Internal standard used (Desalkyl Flurazepam)

Screening Results - Item 2

TABLE 2A Item 2

Item 1 Scenario:

Case 2: A 34 year old female was admitted to the hospital after a workplace accident. Blood samples were taken for testing for the workers' compensation claim. Coworkers stated they did not believe she appeared under the influence of drugs at the time of the accident.

Item Contents and Preparation Concentration: Amobarbital (1,300ng/mL)

Webcode	Screening Results
2KJBL2	No drugs/metabolites detected
2M4887	AMOBARBITAL
2U89C7	Amobarbital
2UK3NZ	Barbiturates
4K9HJV	Barbiturates
4L42LW	Barbiturate (drug class)
6EWYU2	Barbiturates
6LY4QR	No drugs/metabolites detected
6MGXQ2	Barbiturates
78H9AV	Barbiturate
7CN26Q	Amobarbital
7J8CCZ	Barbiturates
7RGWEV	No drugs/metabolites detected
84RLTR	Barbiturate
8D3MER	Barbiturates
8GFPX3	Amobarbital
8GHHUP	barbiturate
8J2EFU	Barbiturates

Webcode	Screening Results
8ZB7HY	Barbiturates
9TT7QT	Amylobarbitone
9WKJ2W	barbiturate
A8L3HQ	Barbiturates
AHMUKP	No drugs/metabolites detected
AY9DGW	barbiturates
B2EZQV	Barbiturates
BJE6YP	Drug Class - Barbiturate
BRQ6TZ	amobarbital
BY8ZAV	Barbiturates
C9BAGK	Barbiturate
CAHPMQ	Barbiturates
D248PP	Barbiturates
DPE4MK	Barbiturates
DQLN6T	Barbiturates
E3TTVK	Amobarbital
E6XGCW	No drugs/metabolites detected
E8949P	Barbiturates
EAGCFN	Amobarbital
EFJNBK	EMIT positive for Barbiturates
ENCXFP	No drugs/metabolites detected

Webcode	Screening Results
ET8RDQ	Barbiturates
FE3QJL	Barbiturate
FE89GK	Barbiturates
FKUX2U	No drugs/metabolites detected
FLPEEQ	Barbiturates
GE3BJU	amobarbital
GKMBXL	Amobarbital
GXC8YJ	Barbiturates
HHCN2T	Barbiturates
HNGRMK	Barbiturates
HV68HJ	Barbiturate
JTCNZH	Amylobarbitone
KJZYRC	No drugs/metabolites detected
KZ9U4J	Barbiturates
L2WNKK	Barbiturates
LP6YLE	No drugs/metabolites detected
LQDETK	Barbiturates
LWJ3CD	Barbiturates
M7ATRE	Barbiturates
MZJBFN	Barbiturates
N288HM	No drugs/metabolites detected
N29ZEA	barbiturate
-	

Webcode	Screening Results	
NQC2KH	Barbiturates	
NWDDGE	Barbiturates	
PCQ4YE	Barbiturate	
PZ9JEH	Barbiturate	
Q2Y6KD	amobarbital	
QH8YE9	Barbiturates	
QJN7MB	either amylobarbitone or pentobarbitone	
QRD43H	No drugs/metabolites detected	
R3A78C	EMIT Barbiturates	
R79H3C	Amobarbital	
R9GWAH	Barbiturates	
RT3N9E	barbiturates classification, caffine, doxylamine, fluoxetine	
RTN3YD	Barbiturates	
T34GBE	Amobarbital and/or Pentobarbital	
TDPDJ7	Barbiturates	
U4VRQD	EIA indicative: Barbs	
U7HBRB	Barbiturates.	
UNL3DD	Amobarbital	
VDETG8	Barbiturates	
VRY8K8	Barbiturates	
VX3AP8	barbiturates	

Webcode	Screening Results
W7WJTB	AMOBARBITAL
WH4PJ4	No drugs/metabolites detected
WYRVV4	Barbiturate
XJFGD7	Barbiturates
XNBBB8	Barbiturates
XPHQHD	amobarbital
XY8EFZ	No drugs/metabolites detected
Y4X9P8	Barbiturates
YP2WG3	Barbiturates (elevated ELISA screen)
YQCX42	Barbiturate
YUBAY2	Barbiturate
ZJ4VC7	AMOBARBITAL
ZPGCAB	No drugs/metabolites detected
ZVHN78	Barbiturates (nonspecific)
ZWFY2B	No drugs/metabolites detected
ZY2NJ3	Barbiturates, Amobarbital

Response Summary for Item 2	Participants: 98
Barbiturates:	64
Amobarbital:	20
Other:	3
No drugs/metabolites detected:	15
	n the total number of participants ported multiple drugs/analytes.

Confirmatory Results - Item 2

What drugs/metabolites were detected in Item 2?

TABLE 2B Item 2

Item 2 Scenario:

Case 2: A 34 year old female was admitted to the hospital after a workplace accident. Blood samples were taken for testing for the workers' compensation claim. Coworkers stated they did not believe she appeared under the influence of drugs at the time of the accident.

Item Contents and Preparation Concentration: Amobarbital (1,300ng/mL)

Webcode	Analyte Reported	Qualitative Only	Reported Concentration	Uncertainty	Units
2M4887	AMOBARBITAL		LESS THAN 1000		ng/mL
2U89C7	Amobarbital		Lower than the lowest m		mg/L
2UK3NZ	Amobarbital				
4K9HJV	Amobarbital	✓	Positive		
4L42LW	Amobarbital	✓	Positive		μ g/mL
6EWYU2	Amobarbital	✓			
6LY4QR	Amobarbital	✓			
6MGXQ2	Amobarbital	✓			
78H9AV	Amobarbital	✓			
7CN26Q	Amobarbital	✓			
7J8CCZ	Amobarbital	✓			
84RLTR	Amobarbital	✓	Positive		
8D3MER	Amobarbital	✓			
8GFPX3	Amobarbital		1100	+/- 253	ng/mL
8GHHUP	amobarbital	✓			

Webcode	Analyte Reported	Qualitative Only	Reported Concentration	Uncertainty	Units
8J2EFU	Amobarbital		1425 ng/mL	+/- 20%	ng/mL
	Phenobarbital]	2716 ng/mL	+/- 20%	ng/mL
8ZB7HY	Amobarbital	✓			
9TT7QT	Amylobarbitone		1600	380	
9WKJ2W	amobarbital	✓			
A8L3HQ	Amobarbital	1	Positive		
AHMUKP	No drugs/metabolites detected	Н			
AY9DGW	amobarbital		llc		
B2EZQV	Amobarbital	✓			
BJE6YP	Amobarbital	1	Positive		ug/mL
BRQ6TZ	amobarbital		lower than the lowest		
BY8ZAV	Amobarbital	1			
C9BAGK	No drugs/metabolites detected	Н			
CAHPMQ	Amobarbital	✓			
D248PP	Amobarbital	✓			
DPE4MK	Amobarbital	✓			
DQLN6T	Amobarbital	✓			
E3TTVK	Amobarbital	✓			
E6XGCW	Amobarbital	✓			
E8949P	Amobarbital	1			
EAGCFN	Amobarbital	✓			

Webcode	Analyte Reported	Qualitative Only	Reported Concentration	Uncertainty	Units
EFJNBK	Amobarbital	1			
ENCXFP	AMOBARBITAL		1500		ng/ml
ET8RDQ	Amobarbital		2.2		mg/L
FE3QJL	Amobarbital	✓			
FE89GK	Amobarbital	✓			
FKUX2U	No drugs/metabolites detected	H			
FLPEEQ	Amobarbital	1			
FTJQAK	No drugs/metabolites detected	Я			
GE3BJU	amobarbital		lower than lowest calibrator of 2.5		mg/L
GKMBXL	Amobarbital	✓			
GXC8YJ	Amobarbital	✓			
HNGRMK	Amobarbital	✓			
HV68HJ	Amobarbital	✓			
JTCNZH	Amylobarbitone	✓			
KZ9U4J	Amobarbital or Pentobarbital] 🗸			
L2WNKK	Amobarbital	✓			
LP6YLE	No drugs/metabolites detected	Н			
LQDETK	Amobarbital	✓			
LWJ3CD	Amobarbital	✓			
M7ATRE	Amobarbital	1			

Webcode	Analyte Reported	Qualitative Only	Reported Concentration	Uncertainty	Units
MZJBFN	No drugs/metabolites detected	d			
N29ZEA	amobarbital	✓			
NQC2KH	Amobarbital	✓			
NWDDGE	Amobarbital	✓			
PCQ4YE	amobarbital	✓			
Q2Y6KD	amobarbital	✓			
QH8YE9	Amobarbital	✓			
	Fluoxetine	✓			
QJN7MB	amylobarbitone		900		ng/mL
R3A78C	Amobarbital	1			
R79H3C	Amobarbital	✓			
R9GWAH	Amobarbital	✓			
RT3N9E	Amobarbital		llc		
T34GBE	Amobarbital	✓			
TDPDJ7	Amobarbital	✓			
U4VRQD	amobarbital		lower than the lowest calibrator of 2.5		mg/L
U7HBRB	No drugs/metabolites detected	Н			
UNL3DD	Amobarbital		lower than lowest calibrator of 2.5 mg/l	-	mg/L
VDETG8	Amobarbital	1			_
VRY8K8	Amobarbital	✓			

Webcode	Analyte Reported	Qualitative Only	Reported Concentration	Uncertainty	Units
VX3AP8	amobarbital	✓			
W7WJTB	AMOBARBITAL	1			
WH4PJ4	No drugs/metabolites detected	d			
WYRVV4	Amobarbital	/			
XJFGD7	amobarbital	✓	Postive		
XNBBB8	Amobarbital	✓			
XPHQHD	amobarbital		lower than the lowest calibrator of 2.5 mg/L		
XY8EFZ	No drugs/metabolites detected	Н			
Y4X9P8	Amobarbital	✓			
YP2WG3	Amobarbital	✓			
YQCX42	Amobarbital	✓			
YUBAY2	Amobarbital	✓			
ZJ4VC7	AMOBARBITAL	✓			
ZPGCAB	Amobarbital	✓			
ZVHN78	Amobarbital		Less than 2.5		mg/L
ZY2NJ3	Amobarbital	✓			

Response Summary for Item 2	Participants: 90
Amobarbital:	80
No drugs/metabolites detected:	9
Other:	3

Raw Data - Item 2

List of raw data determinations in ng/mL.

TABLE 2C Item 2

Item 2 Raw Data - Amobarbital Preparation concentration: 1,300ng/mL

Webcode	Raw Data (ng	g/mL)		Participant Mean
2U89C7	1,740.000			1,740.000
8GFPX3	1,130.000	1,060.000		1,095.000
8J2EFU	1,425.000			1,425.000
9TT7QT	1,689.000	1,585.000		1,637.000
AY9DGW	1,740.000			1,740.000
BRQ6TZ	1,850.000			1,850.000
ENCXFP	1,500.000			1,500.000
ET8RDQ	2,200.000			2,200.000
GE3BJU	1,770.000			1,770.000
QJN7MB	869.000	878.000	896.000	881.000
RT3N9E	1,760.000			1,760.000
UNL3DD	1,690.000	1,860.000		1,775.000
XPHQHD	1,910.000			1,910.000
ZVHN78	1,730.000			1,730.000

Statistical Analysis for Item 2 - Amobarbital						
Grand Mean 1,643.786	Number of Participants Included 14	Number of Participants without Raw Data or Data that was not 66				
Standard Deviation 333.624	Number of Participants Excluded 0	reported in ng/mL				

TABLE 2C Item 2

Item 2 Raw Data - Other

Webcode	Analyte	Raw Data (ng/mL)			
8J2EFU	Phenobarbital	2,716.000			
Statistical Analysis for Item 2- Other					
Please note statistical analysis is not provided for other drug responses.					

Reporting Procedures - Item 2

If quantitative analysis was performed, the reported concentrations are:

Webcode	Quantitative Reporting Procedures
2M4887	A single determination.
2U89C7	A single determination.
8D3MER	A single determination.
8GFPX3	The mean of duplicate/several determinations.
8GHHUP	A single determination.
8J2EFU	A single determination.
9TT7QT	The mean of duplicate/several determinations.
AHMUKP	A single determination.
AY9DGW	A single determination.
BRQ6TZ	A single determination.
CAHPMQ	A single determination.
ENCXFP	A single determination.
et8rdQ	The mean of duplicate/several determinations.
GE3BJU	A single determination.
JTCNZH	The mean of duplicate/several determinations.
N29ZEA	A single determination.
PCQ4YE	A single determination.
QJN7MB	The mean of duplicate/several determinations.
R9GWAH	Duplicate analyses performed with intent to quantify. Qualitative result reported. See Comment 2-6[Table 2F - Additional Comments for Item 2].
RT3N9E	A single determination.
U4VRQD	A single determination.
U7HBRB	A single determination.
UNL3DD	The mean of duplicate/several determinations.
XJFGD7	The mean of duplicate/several determinations.

Webcode	Quantitative Reporting Procedures
XPHQHD	A single determination.
ZVHN78	A single determination.

Response Summary for Item 2		Participants: 26
A single determination:	18 (69.2%)	
The mean of duplicate/several determinations:	7 (26.9%)	
Other:	1 (3.8%)	

Method of Analysis - Item 2

Webcode	Method	Screening	Confirmatory	Quantitation
2KJBL2	lmmunoassay	✓		
2M4887	GC/MS		✓	✓
2U89C7	Immunoassay	✓		
	GC/MS		✓	✓
	LC/MS/MS	✓		
2UK3NZ	Immunoassay	✓		
	GC/MS		✓	
4K9HJV	Immunoassay	✓		
	GC/MS		✓	
4L42LW	Immunoassay	✓		
	GC/MS		✓	
	GC/FID		✓	
6EWYU2	Immunoassay	✓		
	GC/MS		✓	
6LY4QR	Immunoassay	✓		
	GC/MS		✓	
6MGXQ2	Immunoassay	✓		
	GC/MS		✓	
78H9AV	Immunoassay	✓		
	GC/MS		✓	
7CN26Q	Immunoassay	✓		
	GC/MS	✓	✓	
7J8CCZ	Immunoassay	✓		
	GC/MS		✓	
	GC/NPD	✓		
7RGWEV	Immunoassay	✓		
84RLTR	Immunoassay	√		
	GC/MS		✓	
8D3MER	Immunoassay	✓		
	GC/MS		✓	
	GC/FID		✓	

Webcode	Method	Screening	Confirmatory	Quantitation
8GFPX3	Immunoassay	✓		
	GC/MS	✓	✓	✓
	LC/MS/MS	✓		
8GHHUP	Immunoassay	✓		
	GC/MS		✓	✓
8J2EFU	Immunoassay	✓		
	GC/MS		✓	
	GC/NPD	✓		
	HPLC		✓	✓
8ZB7HY	Immunoassay	✓		
	GC/MS		✓	
9TT7QT	Immunoassay	✓		
	LC QTOF MS	✓	✓	✓
9WKJ2W	Immunoassay	✓		
	GC/MS		✓	
A8L3HQ	lmmunoassay	✓		
	GC/MS		✓	
AHMUKP	LC/MS/MS	✓	✓	✓
AY9DGW	Immunoassay	✓		
	GC/MS		✓	✓
	LC/MS/MS	✓		
B2EZQV	lmmunoassay	✓		
	GC/MS		✓	
BJE6YP	lmmunoassay	✓		
	GC/MS		✓	
	GC/FID		✓	
BRQ6TZ	lmmunoassay	✓		
	GC/MS		✓	✓
	LC/MS/MS	✓		
BY8ZAV	Immunoassay	✓		
	GC/MS		✓	
C9BAGK	lmmunoassay	✓		
	LC/MS/MS		✓	

Webcode	Method	Screening	Confirmatory	Quantitation
CAHPMQ	lmmunoassay	✓		
	GC/MS		✓	
D248PP	lmmunoassay	✓		
	GC/MS	✓		
	LC/MS/MS	✓	✓	✓
DPE4MK	Immunoassay	✓		
	GC/MS		✓	
DQLN6T	Immunoassay	✓		
	GC/MS		✓	
E3TTVK	GC/MS	✓	✓	
E6XGCW	Immunoassay	√		
	GC/MS		✓	
E8949P	Immunoassay	✓		
	GC/MS		✓	
EAGCFN	Immunoassay	✓		
	GC/MS	✓	✓	
EFJNBK	Immunoassay	√		
	GC/MS		✓	
ENCXFP	Immunoassay	√		
	GC/MS		✓	✓
	GC/HS		✓	
ET8RDQ	Immunoassay	✓		
	GC/MS		✓	✓
FE3QJL	Immunoassay	✓		
	GC/MS		✓	
	GC-FID		✓	
FE89GK	Immunoassay	✓		
	GC/MS		✓	
FKUX2U	Immunoassay	✓		
FLPEEQ	Immunoassay	✓		
	GC/MS		✓	
FTJQAK	GC/MS		✓	
	LC/MS/MS		✓	

Webcode	Method	Screening	Confirmatory	Quantitation
GE3BJU	lmmunoassay	✓		
	GC/MS		✓	✓
	LC/MS/MS	✓		
GKMBXL	GC/MS	✓	✓	
	LC/MS/MS	✓	✓	
GXC8YJ	Immunoassay	/		
	GC/MS		✓	
HHCN2T	Immunoassay	✓		
HNGRMK	Immunoassay	✓		
	GC/MS	✓	✓	
	GC/NPD	/		
HV68HJ	Immunoassay	✓		
,	GC/MS		✓	
	GC/FID		✓	
JTCNZH	Immunoassay	✓		
	GC/MS	✓		
	LC/MS	✓	✓	
	LC/MS/MS		✓	
	HPLC DAD	✓		
KJZYRC	LC/MS/MS	/		
KZ9U4J	Immunoassay	✓		
	LC/MS/MS		✓	
L2WNKK	Immunoassay	✓		
	GC/MS		✓	
LP6YLE	Immunoassay	✓		
	GC/MS	✓		
LQDETK	Immunoassay	✓		
LXDLIN	GC/MS	-	✓	
LWJ3CD	Immunoassay	✓		
1,13000	GC/MS	·	✓	
M7ATRE			-	
IVI/ AT ILL	Immunoassay GC/MS	V	√	
	GC/IVIS		v	

Webcode	Method	Screening	Confirmatory	Quantitation
MZJBFN	lmmunoassay	✓		
	GC/MS	✓	✓	
N29ZEA	Immunoassay	✓		
	GC/MS		✓	
NQC2KH	Immunoassay	✓		
	GC/MS		✓	
	GC/NPD	✓		
NWDDGE	Immunoassay	✓		
	GC/MS	✓	✓	
	GC/NPD	✓		
PCQ4YE	Immunoassay	✓		
	GC/MS		✓	
PZ9JEH	Immunoassay	✓		
Q2Y6KD	Immunoassay	✓		
	GC/MS	✓	✓	
QH8YE9	Immunoassay	✓		
	GC/MS		✓	
QJN7MB	Immunoassay	✓		
	GC/MS		✓	✓
	LC-TOFMS	✓		
QRD43H	Immunoassay	✓		
R3A78C	Immunoassay	√		
	GC/MS		✓	
R79H3C	Immunoassay	✓		
	GC/MS	✓	✓	
	LC/MS/MS	✓		
R9GWAH	Immunoassay	✓		
.,, .,, .,	GC/MS	✓		
	LC/MS/MS	✓	✓	
RT3N9E	Immunoassay	✓		
	GC/MS		✓	✓
	LC/MS/MS	✓		
RTN3YD	Immunoassay	√		

Webcode	Method	Screening	Confirmatory	Quantitation
T34GBE	GC/MS		✓	
	LC/MS/MS	✓		
TDPDJ7	Immunoassay	✓		
	GC/MS		✓	
	GC/FID		✓	
U4VRQD	Immunoassay	✓		
	GC/MS			✓
	LC/MS/MS	✓		
U7HBRB	Immunoassay	✓		
	GC/MS	✓	✓	✓
	GC/NPD	✓		
UNL3DD	Immunoassay	✓		
	GC/MS		✓	✓
	LC/MS/MS	✓		
VDETG8	Immunoassay	✓		
	GC/MS		✓	
VRY8K8	Immunoassay	✓		
	GC/MS		✓	
VX3AP8	Immunoassay	✓		
	GC/MS		✓	
W7WJTB	GC/MS	✓	✓	
WH4PJ4	Immunoassay	✓		
	GC/MS	✓		
WYRVV4	Immunoassay	✓		
	GC/MS		✓	
	GC/FID		✓	
XJFGD7	Immunoassay	/		
	GC/MS		✓	
XNBBB8	Immunoassay	✓		
	GC/MS		✓	
XPHQHD	Immunoassay	/		
	GC/MS		✓	✓
	LC/MS/MS	✓		

Webcode	Method	Screening	Confirmatory	Quantitation
XY8EFZ	lmmunoassay	✓		
	GC/MS		✓	
Y4X9P8	Immunoassay	✓		
	GC/MS		✓	
YP2WG3	Immunoassay	✓		
	GC/MS	✓	✓	
YQCX42	Immunoassay	✓		
	GC/MS		✓	
	GC/FID		✓	
YUBAY2	Immunoassay	✓		
	GC/MS		✓	
	GC/FID		✓	
ZJ4VC7	GC/MS	✓	1	
ZPGCAB	Immunoassay	✓		
	GC/MS	✓		
	LC/MS/MS	✓		
ZVHN78	Immunoassay	✓		
	GC/MS		✓	✓
	LC/MS/MS	✓		
ZWFY2B	Immunoassay	✓		
ZY2NJ3	Immunoassay	✓		
	GC/MS	✓	✓	

Response Summary for Item 2			Participants: 98
	Screening	Confirmatory	Quantitation
Immunoassay:	89	0	0
GC/MS:	21	78	16
LC/MS:	1	1	0
LC/MS/MS:	18	8	2
Other:	9	12	2

Additional Comments for Item 2

Webcode	Item 2 - Comments
2M4887	AMOBARBITAL RAW DATA (ng/ml): LESS THAN 1000. INTERNAL STANDARD: FLURAZEPAM. LIMIT OF DETECTION: 500 ng/ml. LIMIT OF QUANTIFICATION: 1000 ng/ml.
2U89C7	The internal standard for quantifying amobarbital is hexobarbital with the limit of report being 1 mg/L.
2UK3NZ	Small peak of fluoxetine with a weak mass spectra seen in the sample
4K9HJV	IS used for acidic drug analysis = Aprobarbital. IS used for basic drug analysis = Mepivacaine. LOD = 0.05 ug/mL (50 ng/mL).
4L42LW	Workers' compensation case, so only call the drug(s) positive (per supervisors).
6EWYU2	Internal standard: Heptabarbital and Phenyltoloxamine
6MGXQ2	Methohexital used as internal standard.
78H9AV	Quantitation was not since the sample appears to be a workers' compensation case.
7J8CCZ	Promazine Internal Standard used in extract ran on GC/NPD and GC/MS.
84RLTR	Internal Standard: Aprobarbital, LOD: N/A, LOQ: 1.0 ug/mL.
8D3MER	Because workers comp. claim and no death occurred, only a qualitative result is given.
8GFPX3	Amobarbital-D5 was used as internal standard.
8GHHUP	quantitation not completed for workers compensation case
8J2EFU	Phenobarbital and Amobarbital quantitative analysis has an LOD = 1000 ng/mL and an LOQ = 2000 ng/mL . Routine analysis for a level of Amobarbital at a level of 1425 ng/mL would be reported as $<2000 \text{ ng/mL}$.
8ZB7HY	Phenyltoloxamine was used as the internal reference material for basic drugs. Heptabarbital was used as the internal reference material for acidic drugs. Screening test indicate the presence of other drugs not confirmed in this item.
9TT7QT	Screening/ Confirmation/ Quantitation - Instrument: UPLCC QTOF MS (Waters) (which is LC/MS/MS). Salting-out assisted extraction. ISTD: Cyclobarbitone, D3-Methadone, Prazepam.
A8L3HQ	Internal Standards: Aprobarbital, Mepivicaine
AHMUKP	Fluoxetine present above cutoff.
AY9DGW	The lowest calibrator used is 2500 ng/mL for calibration curve. The amobarbital result for item 2 was below 2500 ng/mL. Ilc=lower than lowest calibrator. Internal standards used - hexobarbital.
BJE6YP	Due to the case being a worker's comp case, Amobarbital will be reported as "Positive", per instructions from my supervisor. Worker's comp cases are outside our scope of testing.
BRQ6TZ	Internal standard for amobarbital - hexobarbital. Limit of reporting/quantitation for amobarbital is 1.0 mg/L, lowest calibrator is 2.5 mg/L.
C9BAGK	25 ng/mL LOD - tested for [Laboratory] Drug Panel
CAHPMQ	Due to the type of case (worker's comp) and drug not normally in our acid extraction panel, the drug was reported as a qualitative result only.
D248PP	Amobarbital less than LOQ (1.25 mg/L), LOD: 0.625 mg/L, iStd: pentobarbital-D5

Webcode	Item 2 - Comments
DPE4MK	Sample was not quantitated due to toxicology policy.
FE3QJL	Worker Comp case is outside the scope of testing. Therefore, all drugs found were qualitatively reported.
FLPEEQ	Internal Standard: Methohexital.
GE3BJU	internal standard: hexobarbital
GXC8YJ	Fluoxetine, Acetyl: Identified, but not reported, see Proficiency test provider paperwork. Cetirizine Related: Not reported, no standard available for comparison. Internal Standard: Methohexital LODs-Barbiturate Immunoassay - Phenobarbital 300 ng/ml
HHCN2T	Screen only. Confirmations performed by outside laboratory
HNGRMK	Internal standard used: Promazine
HV68HJ	Quantitation not performed on workers comp cases.
JTCNZH	Reference standard required for quantitation not received before proficiency trial due as such reported as qualitative only.
KZ9U4J	Internal Standard used for Pentobarbital or Amobarbital: Phenobarbital-D5. IMPORTANT: The analysis using LC/MS/MS doesn't allow to differentiate between the barbiturates Amobarbital or Pentobarbital because they share the same Retention Time, Precursor Ion and Product Ions.
L2WNKK	Internal standard used was Methohexital.
LQDETK	Internal standards - Phenyltoloxamine, Heptabarbital
LWJ3CD	Due to item being a workplace drug testing case, only qualitative testing performed.
M7ATRE	Fluoxetine, Fluoxetine acetyl, and Doxylamine seen. Not reported, see Proficiency test provider paperwork. Internal standard used: Methohexital and Mepivacaine. LOD: Amobarbital - not determined, Fluoxetine - 100 ng/ml, Doxylamine - 50 ng/ml.
N29ZEA	Workman's comp case, no quantitation per tech leader
NWDDGE	Internal standard for extraction Promazine
PCQ4YE	Workplace testing is outside our scope of testing, therefore this drug was not quantitated.
QJN7MB	The amylobarbitone level would be reported as approximate
R3A78C	Work place drug testing is not part of our scope. Internal Standard- Aprobarbital
R79H3C	Our laboratory does not have a validated method to quantitate amobarbital due to the fact that it is rarely, if ever, detected.
R9GWAH	Amobarbital less than LOQ (1.25 mg/L), LOD 0.625 mg/L.
rt3n9e	Lowest calibrator for quantitating amobarbital is 2500 ng/mL (2.5 mg/L). Internal standards: GCMS-butalbital-d5 hexobarbital mephobarbital phenobarbital-d5, LCMS- mepivacaine. caffeine, fluoxetine, and doxylamine are artifacts (not confirming).
rtn3yd	Not able to peform confirmation tests at this time.
TDPDJ7	Due to information provided that it is a workman's comp case, quantitation was not performed. It is out of the scope of our testing and therefore called positive.
U4VRQD	Internal Standard: hexobarbital, LOR = 1 mg/L.

Webcode	Item 2 - Comments
U7HBRB	Barbiturates confirmatory/quantitative testing provided an "Inconclusive due to an interfering substance" result for Amobarbital. The internal standards for this test were D5-Butalbital and D5-Phenobarbital. The limit of detection was 0.50 ug/mL.
UNL3DD	Amobarbital is lower than the lowest calibrator of 2.5 mg/L. Screening testing: Internal standard is mepivacaine. Confirmation test: Internal standard is hexobarbital. Limit of report is 1.0 mg/L for barbiturates.
VRY8K8	A fluoxetine peak was seen in one extraction. Not reported due to poor chromatography and weak mass spectra.
VX3AP8	Our laboratory does not quantitate amobarbital.
W7WJTB	TOXICOLOGY LABORATORY DOES NOT HAVE STANDARD OF AMOBARBITAL. IDENTIFICATION HAS BEEN PERFORMED BY SEARCH IN LIBRARY.
WH4PJ4	No drugs detected by the ELISA and GC/MS screening process. No drugs or metabolites to confirm for this sample.
WYRVV4	Workers comp cases are reported as positive with no quantitation.
XJFGD7	Internal standard (acidic/neutral drugs): aprobarbital
XPHQHD	hexobarbital
XY8EFZ	No basic drugs were detected using GC/MS test method.
YP2WG3	Confirmed by GC/MS with two separate extractions
YQCX42	Workers' comp cases are reported as positive only. No quantitation performed.
YUBAY2	Case is a workers comp case, which is outside our scope of testing, and therefore it was called positive.
ZJ4VC7	AMOBARBITAL WAS IDENTIFIED WITH NIST LIBRARY. IT DOES NOT HAVE REFERENCE MATERIAL.
ZY2NJ3	Internal standard used (Butalbital)

Screening Results - Item 3

TABLE 3A Item 3

Item 1 Scenario:

Case 3: A 47 year old male was responsible for a fatal car accident. Officers at the scene reported that the suspect displayed disorientation, agitation, drowsiness, constricted pupils, and was "on the nod".

Item Contents and Preparation Concentration:

Meperidine (500ng/mL) Normeperidine (300ng/mL)

Webcode	Screening Results
2KJBL2	No drugs/metabolites detected
2M4887	MEPERIDINA, NORMEPERIDINA
2U89C7	Meperidine, Normeperidine
2UK3NZ	No drugs/metabolites detected
4K9HJV	Meperidine, Normeperidine
4L42LW	No drugs/metabolites detected
6EWYU2	No drugs/metabolites detected
6LY4QR	No drugs/metabolites detected
6MGXQ2	No drugs/metabolites detected
78H9AV	No drugs/metabolites detected
7CN26Q	Meperidine, Normeperidine
7J8CCZ	Meperidine, Normeperidine
7RGWEV	No drugs/metabolites detected
84RLTR	No drugs/metabolites detected
8D3MER	No drugs/metabolites detected
8GFPX3	meperidine, normeperidine
8GHHUP	No drugs/metabolites detected
8J2EFU	Meperidine
8ZB7HY	No drugs/metabolites detected

Webcode	Screening Results
9TT7QT	Pethidine
9WKJ2W	No drugs/metabolites detected
A8L3HQ	No drugs/metabolites detected
AHMUKP	Meperidine, Normeperidine
AY9DGW	meperidine, normeperidine
B2EZQV	Meperidine, Normeperidine
BJE6YP	No drugs/metabolites detected
BRQ6TZ	meperidine, normeperidine
BY8ZAV	No drugs/metabolites detected
C9BAGK	No drugs/metabolites detected
CAHPMQ	No drugs/metabolites detected
D248PP	Meperidine, normeperidine
DPE4MK	No drugs/metabolites detected
DQLN6T	No drugs/metabolites detected
E3TTVK	Pethidine (Meperidine)
E6XGCW	No drugs/metabolites detected
E8949P	No drugs/metabolites detected
EAGCFN	Meperidine / Normeperidine
EFJNBK	No drugs/metabolites detected
ENCXFP	No drugs/metabolites detected
ET8RDQ	No drugs/metabolites detected
FE3QJL	No drugs/metabolites detected
FE89GK	No drugs/metabolites detected
-	

Webcode	Screening Results
FKUX2U	No drugs/metabolites detected
FLPEEQ	No drugs/metabolites detected
GE3BJU	meperidine, normeperidine
GKMBXL	Meperidine, Normeperidine
GXC8YJ	No drugs/metabolites detected
HHCN2T	Meperidine
HNGRMK	Meperidine, Normeperidine
HV68HJ	No drugs/metabolites detected
JTCNZH	Pethidine, Norpethidine
KJZYRC	No drugs/metabolites detected
KZ9U4J	No drugs/metabolites detected
L2WNKK	No drugs/metabolites detected
LP6YLE	Meperidine
LQDETK	No drugs/metabolites detected
LWJ3CD	No drugs/metabolites detected
M7ATRE	No drugs/metabolites detected
MZJBFN	Meperidine, Normeperidine
N288HM	No drugs/metabolites detected
N29ZEA	No drugs/metabolites detected
NQC2KH	Meperidine, Normeperidine
NWDDGE	Meperidine, Normeperidine
PCQ4YE	No drugs/metabolites detected
PZ9JEH	No drugs/metabolites detected

Webcode	Screening Results
Q2Y6KD	Meperidine
QH8YE9	No drugs/metabolites detected
QJN7MB	pethidine
QRD43H	No drugs/metabolites detected
R3A78C	No drugs/metabolites detected
R79H3C	Fluoxetine. meperidine, normeperidine
R9GWAH	Meperidine, Normeperidine
RT3N9E	caffeine, doxylamine, meperidine, normeperidine, fluoxetine
RTN3YD	No drugs/metabolites detected
T34GBE	Meperidine, Normeperidine
TDPDJ7	No drugs/metabolites detected
U4VRQD	LCMSMS screen: meperidine, normeperidine
U7HBRB	Bases.
UNL3DD	Meperidine, Normeperidine
VDETG8	No drugs/metabolites detected
VRY8K8	No drugs/metabolites detected
VX3AP8	Meperidine, normeperidine
W7WJTB	MEPERIDINA
WH4PJ4	Meperidine, Normeperidine
WYRVV4	No drugs/metabolites detected
X38PBZ	No drugs/metabolites detected
XJFGD7	No drugs/metabolites detected
XNBBB8	No drugs/metabolites detected

Webcode	Screening Results
XPHQHD	meperidine, normeperidine
XY8EFZ	Meperidine
Y4X9P8	No drugs/metabolites detected
YP2WG3	None detected by ELISA; Meperidine detected by GC/MS
YQCX42	No drugs/metabolites detected
YUBAY2	No drugs/metabolites detected
ZJ4VC7	meperidina, normeperidina
ZPGCAB	No drugs/metabolites detected
ZVHN78	Meperidine, Normeperidine
ZWFY2B	No drugs/metabolites detected
ZY2NJ3	Meperidine

Response Summary for Item 3	Participants: 99
Meperidine and/or Normeperidine:	41
Other:	3
No drugs/metabolites detected:	57
Totals may add up to more than because some participants rep	the total number of participants ported multiple drugs/analytes.

Confirmatory Results - Item 3

What drugs/metabolites were detected in Item 3?

TABLE 3B Item 3

Item 3 Scenario:

Case 3: A 47 year old male was responsible for a fatal car accident. Officers at the scene reported that the suspect displayed disorientation, agitation, drowsiness, constricted pupils, and was "on the nod".

Item Contents and Preparation Concentration:

Meperidine (500ng/mL) Normeperidine (300ng/mL)

		Qualitative	Reported		
Webcode	Analyte Reported	Only	Concentration	Uncertainty	Units
2M4887	MEPERIDINA		1042		ng/mL
	NORMEPERIDINA	✓			
2U89C7	Meperidine		0.43	0.13	mg/L
	Normeperidine		0.26	0.08	mg/L
2UK3NZ	Meperidine				
4K9HJV	Meperidine		460	398-521	ng/mL
	Normeperidine	✓	Positive		
4L42LW	Meperidine		0.46	± 0.06	μg/mL
	Normeperidine	✓	Positive		μ g/mL
6EWYU2	Meperidine	✓			
6LY4QR	Meperidine	√			
	Normeperidine	✓			
6MGXQ2	Mepiridine	✓			
78H9AV	Meperidine		0.52	+/- 0.07	ug/ml
	Normeperidine		0.27	+/- 0.03	ug/ml
7CN26Q	Meperidine	1			
	Normeperidine	✓			
7J8CCZ	Meperidine		380	31	%
	Normeperidine	✓			

TABLE 3B Item 3

Webcode	Analyte Reported	Qualitative Only	Reported Concentration	Uncertainty	Units
84RLTR	Meperidine		0.50	0.43-0.57	ug/mL
	Normeperidine	✓	positive		
8D3MER	Meperidine		0.50 ug/mL	0.43-0.56	ug/mL
	Normeperidine	✓			
8GFPX3	Meperidine		460	+/- 106	ng/mL
	Normeperidine		289	+/- 66	ng/mL
8GHHUP	meperidine		0.48	+/-0.06	ug/ml
	normeperidine		0.28	+/-0.03	ug/ml
8J2EFU	Meperidine		847 ng/mL	+/- 20%	ng/mL
8ZB7HY	Meperidine	✓			
	Fluoxetine	✓			
9TT7QT	Pethidine		580	170	
9WKJ2W	meperidine	✓			
	normeperidine	✓			
A8L3HQ	Meperidine		0.46	13.39%	ug/ml
	Normeperidine	✓	positive		
AHMUKP	Meperidine		505	+/- 41.41	ng/mL
	Normeperidine		371	+/- 36.72	ng/mL
AY9DGW	meperidine		0.49	0.15	mg/L
	normeperidine		0.29	0.09	mg/L
B2EZQV	Meperidine		570	42%	ng/ml
	Normeperidine	✓			
BJE6YP	Meperidine		0.39	±0.05	ug/mL
	Normeperidine	✓	Positive		ug/mL

TABLE 3B Item 3

Webcode	Analyte Reported	Qualitative Only	Reported Concentration	Uncertainty	Units
BRQ6TZ	meperidine		0.40	0.12	mg/L
	normeperidine		0.29	0.09	mg/L
BY8ZAV	Pethidine (Meperidine)	✓			
C9BAGK	No drugs/metabolites detected				
CAHPMQ	Meperidine		0.52	13.39%	ug/mL
	Normeperidine	✓			
D248PP	Meperidine		0.50	0.05	mg/L
	Normeperidine		0.32	0.03	mg/L
DPE4MK	Meperidine		0.51	+/-0.07	ug/ml
	Normeperidine		0.26	+/-0.02	ug/ml
DQLN6T	Meperidine	✓			
E3TTVK	Pethidine (Meperidine)	✓			
E6XGCW	Meperidine	✓			
	Normeperidine	✓			
E8949P	Meperidine	✓			
	Normeperidine	✓			
EAGCFN	No drugs/metabolites detected				
EFJNBK	Meperidine		0.45	0.39-0.51	ug/mL
	Normeperidine	✓			
ENCXFP	MEPERIDINE		237		ng/ml
	NORMEPERIDINE	✓			
ET8RDQ	Meperidine		0.5		mg/L
FE3QJL	Meperidine		0.43	+/- 0.05	ug/ml
FE89GK	Meperidine		0.42	0.36-0.47	ug/mL
FLPEEQ	Meperidine (Pethidine)	√			

TABLE 3B Item 3

Webcode	Analyte Reported	Qualitative Only	Reported Concentration	Uncertainty	Units
FTJQAK	pethidine	/			
GE3BJU	meperidine		0.47	0.14	mg/L
	normeperidine		0.30	0.09	mg/L
GKMBXL	Meperidine	✓			
	Normeperidine	✓			
GXC8YJ	Pethidine	✓			
HNGRMK	Meperidine	✓			
	Normeperidine	✓			
HV68HJ	Meperidine		0.46	+/- 0.06	ug/mL
	Normeperidine	✓			
JTCNZH	Pethidine		0.40	15%	mgL
	Norpethidine		0.25	15%	mg/L
KZ9U4J	Meperidine	✓			
L2WNKK	Pethidine (Mepirdine)	/			
LP6YLE	Meperidine		440		ng/mL
LQDETK	Meperidine	✓			
	Normeperidine	✓			
	Possible Fluoxetine	✓			
LWJ3CD	Meperidine		0.50	0.43-0.57	ug/mL
	Normeperidine	✓			
M7ATRE	Pethidine	✓			
MZJBFN	Meperidine		500		ng/mL
	Normeperidine	✓			
N29ZEA	meperidine		0.45	+/- 0.06	ug/ml
	normeperidine		0.27	+/- 0.03	ug/ml

TABLE 3B Item 3

Webcode	Analyte Reported	Qualitative Only	Reported Concentration	Uncertainty	Units
NQC2KH	Meperidine	✓			
	Normeperidine	✓			
NWDDGE	Meperidine	✓			
	Normeperidine	✓			
PCQ4YE	meperidine		0.48	0.41-0.54	ug/ml
	normeperidine	✓			
Q2Y6KD	Meperidine	✓			
QH8YE9	Meperidine	✓			
	Normeperidine	✓			
QJN7MB	pethidine		400		ng/mL
QRD43H	No drugs/metabolites detected				
R3A78C	Meperidine		0.45	0.39-0.51	ug/ml
	Normereridine	✓			
R79H3C	Meperidine		450		ng/mL
	Normeperidine		290		ng/mL
	Fluoxetine	✓			
R9GWAH	Meperidine		0.49	0.05	mg/L
	Normeperidine		0.33	0.06	mg/L
RT3N9E	meperidine		0.45 mg/L	0.14	mg/L
	normeperidine		0.45 mg/L	0.08	mg/L
T34GBE	Meperidine	√			
	Normeperidine	✓			
TDPDJ7	Mepiridine		0.44	+/- 0.05	ug/mL
	Normepiridine	✓			

TABLE 3B Item 3

Webcode	Analyte Reported	Qualitative Only	Reported Concentration	Uncertainty	Units
U4VRQD	Meperidine		0.52	+/- 0.16	mg/L
	normeperidine		0.32	+/- 10	mg/L
U7HBRB	Meperidine		0.47		ug/mL
	Normeperidine		0.31		ug/mL
UNL3DD	Meperidine		0.50	0.15	mg/L
	Normeperidine		0.29	0.09	mg/L
VDETG8	Meperidine	✓			
	Normeperidine	✓			
VRY8K8	Meperidine	✓			
	Normeperidine	✓			
VX3AP8	meperidine		0.40	0.35-0.45	ug/ml
	normeperidine	✓			
W7WJTB	MEPERIDINA	✓			
WH4PJ4	Meperidine		394.5	51.2	ng/ml
	Normeperidine		231.2	27.7	ng/ml
WYRVV4	Meperidine		0.44	+/- 0.05	ug/ml
	Normeperidine	✓			
X38PBZ	Meperidine	✓			
	Normeperidine	✓			
	Fluoxetine	✓			
XJFGD7	meperidine		0.46	0.40-0.52	ug/mL
	normeperidine	✓	Positive		
XNBBB8	Meperidine	✓			
	Normeperidine	✓			
XPHQHD	meperidine		0.42 mg/L	+/- 0.13	mg/L
	normeperidine		0.28 mg/L	+/- 0.08	mg/L

TABLE 3B Item 3

Webcode	Analyte Reported	Qualitative Only	Reported Concentration	Uncertainty	Units
XY8EFZ	Meperidine	✓			
Y4X9P8	Meperidine	✓			
YP2WG3	Meperidine		0.513	0.050	mg/L
YQCX42	Pethidine		0.42	+/- 0.05	ug/mL
	Norpethidine	✓			
YUBAY2	Meperidine		0.44	+/- 0.05	ug/mL
	Normeperidine	✓			
ZJ4VC7	MEPERIDINA		874,6	13,50	ng/mL
	NORMEPERIDINA	✓			
ZPGCAB	Meperidine		578	+/- 81 ng/mL	ng/mL
	Normeperidine	✓			
ZVHN78	Meperidine		0.45	0.14	mg/L
	Normeperidine		0.28	0.08	mg/L
ZY2NJ3	Meperidine	✓			
	Normeperidine	✓			

Response Summary for Item 3	Participants: 91
Meperidine:	88
Normeperidine:	63
No drugs/metabolites detected:	3
Other:	4
Totals may add up to more than because some participants repo	the total number of participants rted multiple drugs/metabolites.

Raw Data - Item 3

List of raw data determinations in ng/mL.

TABLE 3C Item 3

Item 3 Raw Data - Meperidine Preparation concentration: 500ng/mL

Webcode	Raw Data (n	g/mL)			Participant Me	an
2M4887	1,013.000	1,171.000			1,092.000	Χ
2U89C7	425.986				425.986	
4K9HJV	460.000				460.000	
4L42LW	461.000				461.000	
78H9AV	520.000				520.000	
7J8CCZ	378.000				378.000	
84RLTR	503.000				503.000	
8D3MER	500.000				500.000	
8GFPX3	460.000				460.000	
8GHHUP	486.000				486.000	
8J2EFU	847.000				847.000	Χ
9TT7QT	579.000				579.000	
A8L3HQ	463.000				463.000	
AHMUKP	505.930				505.930	
AY9DGW	489.957				489.957	
B2EZQV	567.000				567.000	
BJE6YP	398.000				398.000	
BRQ6TZ	403.000				403.000	
CAHPMQ	526.000				526.000	
D248PP	495.535	504.069			499.802	
DPE4MK	519.000				519.000	
EFJNBK	458.000				458.000	
ENCXFP	237.000				237.000	Χ
ET8RDQ	500.000				500.000	
FE3QJL	430.000				430.000	
FE89GK	422.000				422.000	
GE3BJU	468.321				468.321	
HV68HJ	462.000				462.000	
JTCNZH	411.000	405.000	396.000	403.000	403.750	
LP6YLE	442.000				442.000	
LWJ3CD	500.000				500.000	
MZJBFN	499.930				499.930	

TABLE 3C Item 3

Item 3 Raw Data - Meperidine Preparation concentration: 500ng/mL

Webcode	Raw Data (n	g/mL)			Participant Mean
N29ZEA	450.000				450.000
PCQ4YE	481.000				481.000
QJN7MB	430.000	420.000	420.000		423.333
R3A78C	456.000				456.000
R79H3C	450.000				450.000
R9GWAH	439.485	460.801	518.290	526.970	486.387
RT3N9E	454.975				454.975
TDPDJ7	448.000				448.000
U4VRQD	516.496				516.496
U7HBRB	465.900				465.900
UNL3DD	495.291				495.291
VX3AP8	402.000				402.000
WH4PJ4	394.500				394.500
WYRVV4	448.000				448.000
XJFGD7	463.000				463.000
XPHQHD	415.711				415.711
YP2WG3	555.000	472.000	553.000	473.000	513.250
YQCX42	426.000				426.000
YUBAY2	440.000				440.000
ZJ4VC7	1,024.000	817.000			920.500 X
ZPGCAB	586.600	569.500			578.050
ZVHN78	451.454				451.454

Statistical Analysis for Item 3 - Meperidine						
Grand Mean	467.800	Number of Participants Included 50	Number of Participants without Raw Data or Data that was not 34			
Standard Deviation	46.052	Number of Participants Excluded 4	reported in ng/mL			

TABLE 3C Item 3

Item 3 Raw Data - Normeperidine Preparation concentration: 300ng/mL

Webcode	Raw Data (r	ng/mL)			Participant Mean
2U89C7	264.139				264.139
78H9AV	270.000				270.000
8GFPX3	289.000				289.000
8GHHUP	287.000				287.000
AHMUKP	371.490				371.490
AY9DGW	287.801				287.801
BRQ6TZ	288.141				288.141
D248PP	320.353	320.947	333.206	318.501	323.252
DPE4MK	266.000				266.000
GE3BJU	302.256				302.256
JTCNZH	255.000	256.000	253.000	257.000	255.250
N29ZEA	270.000				270.000
R79H3C	290.000				290.000
R9GWAH	326.210	335.586	338.766	331.587	333.037
RT3N9E	278.191				278.191
U4VRQD	316.670				316.670
U7HBRB	314.300				314.300
UNL3DD	286.207				286.207
WH4PJ4	231.200				231.200
XPHQHD	278.086				278.086
ZVHN78	281.110				281.110

Statistical Analysis for Item 3 - Normeperidine					
Grand Mean	289.673	Number of Participants Included 21	Number of Participants without Raw Data or Data that was not 42		
Standard Deviation	30.126	Number of Participants Excluded 0	reported in ng/mL		

Reporting Procedures - Item 3

If quantitative analysis was performed, the reported concentrations are:

WebCode	Quantitative Reporting Procedures			
2M4887	The mean of duplicate/several determinations.			
2U89C7	A single determination.			
4K9HJV	A single determination.			
4L42LW	A single determination.			
78H9AV	A single determination.			
7J8CCZ	A single determination.			
84RLTR	A single determination.			
8D3MER	A single determination.			
8GFPX3	A single determination.			
8GHHUP	A single determination.			
8J2EFU	The mean of duplicate/several determinations.			
9TT7QT	A single determination.			
A8L3HQ	A single determination.			
AHMUKP	A single determination.			
AY9DGW	A single determination.			
B2EZQV	A single determination.			
BJE6YP	A single determination.			
BRQ6TZ	A single determination.			
CAHPMQ	A single determination.			
D248PP	The mean of duplicate/several determinations.			
DPE4MK	A single determination.			
EFJNBK	A single determination.			
ENCXFP	A single determination.			
ET8RDQ	The mean of duplicate/several determinations.			
FE3QJL	A single determination.			
FE89GK	A single determination.			
GE3BJU	A single determination.			
HV68HJ	A single determination.			

WebCode	Quantitative Reporting Procedures
JTCNZH	The mean of duplicate/several determinations.
LP6YLE	A single determination.
LWJ3CD	A single determination.
MZJBFN	A single determination.
N29ZEA	A single determination.
PCQ4YE	A single determination.
QJN7MB	The mean of duplicate/several determinations.
R3A78C	A single determination.
R79H3C	A single determination.
R9GWAH	The mean of duplicate/several determinations.
RT3N9E	A single determination.
TDPDJ7	A single determination.
U4VRQD	A single determination.
U7HBRB	A single determination.
UNL3DD	A single determination.
VX3AP8	A single determination.
WH4PJ4	A single determination.
WYRVV4	A single determination.
XJFGD7	A single determination.
XPHQHD	A single determination.
YP2WG3	The mean of duplicate/several determinations.
YQCX42	A single determination.
YUBAY2	A single determination.
ZPGCAB	The mean of duplicate/several determinations.
ZVHN78	A single determination.

Response Summary for Item 3		Participants: 53
A single determination:	44 (83.0%)	
The mean of duplicate/several determinations:	9 (17.0%)	
Other:	0 (0.0%)	

Method of Analysis - Item 3

WebCode	Method	Screening	Confirmatory	Quantitation
2KJBL2	Immunoassay	✓		
2M4887	LC/MS		✓	
	LC/MS/MS		✓	✓
2U89C7	Immunoassay	✓		
	LC/MS/MS	✓	✓	✓
2UK3NZ	Immunoassay	✓		
	GC/MS		✓	
4K9HJV	GC/MS	✓		
	GC-FID		✓	✓
4L42LW	Immunoassay	✓		
	GC/MS		✓	
	GC/FID		✓	✓
6EWYU2	Immunoassay	✓		
	GC/MS		✓	
6LY4QR	Immunoassay	✓		
	GC/MS		✓	
6MGXQ2	Immunoassay	✓		
	GC/MS		✓	
78H9AV	Immunoassay	✓		
	GC/MS		✓	✓
7CN26Q	Immunoassay	✓		
	GC/MS	✓	✓	
7J8CCZ	Immunoassay	✓		
	GC/MS	✓	✓	
	GC/NPD	✓		✓
7RGWEV	Immunoassay	1		

WebCode	Method	Screening	Confirmatory	Quantitation
84RLTR	lmmunoassay	✓		
	GC/MS		✓	
	GC/FID			✓
8D3MER	lmmunoassay	✓		
	GC/MS		✓	
	GC-FID			✓
8GFPX3	Immunoassay	✓		
	GC/MS	✓	✓	✓
	LC/MS/MS	✓		
8GHHUP	Immunoassay	✓		
	GC/MS		✓	✓
8J2EFU	Immunoassay	✓		
	GC/MS		✓	
	GC/NPD	✓		✓
8ZB7HY	Immunoassay	✓		
	GC/MS	✓	✓	
9TT7QT	Immunoassay	✓		
	LC-QOF MS	✓	✓	✓
9WKJ2W	GC/MS		✓	
A8L3HQ	Immunoassay	✓		
	GC/MS		✓	
	GC/FID			✓
AHMUKP	LC/MS/MS	✓	✓	✓
AY9DGW	Immunoassay	1		
	LC/MS/MS	✓	✓	✓
B2EZQV	Immunoassay	✓		
	GC/MS	✓	✓	
	GC/NPD			✓

WebCode	Method	Screening	Confirmatory	Quantitation
BJE6YP	Immunoassay	✓		
	GC/MS		✓	
	GC/FID			✓
BRQ6TZ	Immunoassay	✓		
	LC/MS/MS	✓	✓	✓
BY8ZAV	Immunoassay	✓		
	GC/MS		✓	
C9BAGK	Immunoassay	✓		
	LC/MS/MS		✓	
CAHPMQ	Immunoassay	1		
	GC/MS		✓	
	GC/FID			✓
D248PP	Immunoassay	✓		
	GC/MS	✓		
	LC/MS/MS	✓	✓	✓
DPE4MK	Immunoassay	✓		
	GC/MS		✓	✓
DQLN6T	Immunoassay	✓		
	GC/MS		✓	
E3TTVK	GC/MS	✓		
	LC/MS/MS	✓	✓	
E6XGCW	Immunoassay	✓		
	GC/MS		✓	
E8949P	Immunoassay	✓		
	GC/MS	✓	✓	
EAGCFN	Immunoassay	✓		
	GC/MS	✓		
EFJNBK	Immunoassay	✓		
	GC/MS		✓	✓

WebCode	Method	Screening	Confirmatory	Quantitation
ENCXFP	Immunoassay	✓		
	GC/MS		✓	✓
	GC/HS		✓	
ET8RDQ	Immunoassay	1		
	GC/MS		✓	✓
FE3QJL	Immunoassay	✓		
	GC/MS		✓	
	GC-FID			✓
FE89GK	GC/MS	✓		
	GC/FID		✓	✓
FKUX2U	Immunoassay	✓		
FLPEEQ	Immunoassay	✓		
	GC/MS		✓	
FTJQAK	GC/MS		✓	
GE3BJU	Immunoassay	1		
	LC/MS/MS	✓	✓	✓
GKMBXL	GC/MS	✓	✓	
	LC/MS/MS	✓	✓	
GXC8YJ	Immunoassay	✓		
	GC/MS		✓	
HHCN2T	Immunoassay	✓		
HNGRMK	lmmunoassay	✓		
	GC/MS	✓	✓	
	GC/NPD	✓		
HV68HJ	Immunoassay	✓		
	GC/MS		✓	
	GC/FID			✓

WebCode	Method	Screening	Confirmatory	Quantitation
JTCNZH	Immunoassay	✓		
	LC/MS	✓		
	LC/MS/MS		✓	
	HPLC DAD	✓		
KJZYRC	LC/MS/MS	1		
KZ9U4J	GC/MS		✓	
	LC/MS/MS		✓	
L2WNKK	Immunoassay	✓		
	GC/MS		✓	
LP6YLE	Immunoassay	✓		
	GC/MS	✓	✓	✓
LQDETK	Immunoassay	✓		
	GC/MS	✓	✓	
LWJ3CD	Immunoassay	✓		
	GC/MS		✓	✓
M7ATRE	Immunoassay	✓		
	GC/MS		✓	
MZJBFN	Immunoassay	1		
	GC/MS	✓	✓	✓
N29ZEA	Immunoassay	✓		
	GC/MS		✓	✓
NQC2KH	Immunoassay	✓		
	GC/MS		✓	
	GC/NPD	✓		
NWDDGE	Immunoassay	✓		
	GC/MS	✓	✓	
	GC/NPD	✓		
PCQ4YE	Immunoassay	1		
	GC/MS		✓	
	GC/FID			✓

WebCode	Method	Screening	Confirmatory	Quantitation
PZ9JEH	Immunoassay	✓		
Q2Y6KD	Immunoassay	✓		
	GC/MS	✓	✓	
QH8YE9	GC/MS	1	✓	
QJN7MB	Immunoassay	✓		
	GC/MS	✓		✓
	LC-TOFMS	✓	✓	
QRD43H	Immunoassay	1		
R3A78C	GC/MS		✓	✓
R79H3C	Immunoassay	1		
	GC/MS	✓	✓	✓
	LC/MS/MS	✓		
R9GWAH	Immunoassay	✓		
	GC/MS	✓		
	LC/MS/MS	✓	✓	✓
RT3N9E	Immunoassay	✓		
	LC/MS/MS	✓	✓	✓
RTN3YD	Immunoassay	✓		
T34GBE	GC/MS		✓	
	LC/MS/MS	✓		
TDPDJ7	Immunoassay	✓		
	GC/MS		✓	
	GC/FID			✓
U4VRQD	Immunoassay	✓		
	LC/MS/MS	✓		✓
U7HBRB	Immunoassay	✓		
	GC/MS	✓		
	GC/NPD	✓	✓	✓

WebCode	Method	Screening	Confirmatory	Quantitation
UNL3DD	Immunoassay	✓		
	LC/MS/MS	✓	✓	✓
VDETG8	Immunoassay	✓		
	GC/MS	✓	✓	
VRY8K8	Immunoassay	✓		
	GC/MS		✓	
VX3AP8	GC/MS	✓		
	GC/FID		✓	✓
W7WJTB	GC/MS	✓	✓	
WH4PJ4	Immunoassay	✓		
	GC/MS	✓		
	LC/MS/MS		✓	✓
WYRVV4	Immunoassay	✓		
	GC/MS		✓	
	GC/FID		✓	✓
X38PBZ	GC/MS	✓	✓	
XJFGD7	Immunoassay	✓		
	GC/MS		✓	✓
XNBBB8	Immunoassay	✓		
	GC/MS	✓		
XPHQHD	Immunoassay	✓		
	LC/MS/MS	✓	✓	✓
XY8EFZ	Immunoassay	✓		
	GC/MS	✓	✓	
Y4X9P8	Immunoassay	✓		
	GC/MS		✓	
YP2WG3	lmmunoassay	1		
	GC/MS	✓		
	LC/MS/MS		✓	✓

WebCode	Method	Screening	Confirmatory	Quantitation
YQCX42	Immunoassay	✓		
	GC/MS		✓	
	GC/FID			✓
YUBAY2	Immunoassay	1		
	GC/MS		✓	
	GC/FID			✓
ZJ4VC7	GC/MS	✓	✓	
	LC/MS	✓	✓	
	LC/MS/MS		✓	
ZPGCAB	Immunoassay	✓		
	GC/MS	✓		
	LC/MS/MS			✓
ZVHN78	Immunoassay	✓		
	LC/MS/MS	✓	✓	✓
ZWFY2B	Immunoassay	1		
ZY2NJ3	GC/MS	✓	✓	

Response Summary for Item 3			Participants: 99
	Screening	Confirmatory	Quantitation
Immunoassay:	81	0	0
GC/MS:	34	63	15
LC/MS:	2	2	0
LC/MS/MS:	18	20	16
Other:	9	9	21

Additional Comments for Item 3

WebCode	Item 3 - Comments
2M4887	INTERNAL STANDARD: FLURAZEPAM / NALORPHINE. LIMIT OF DETECTION: MEPERIDINE 20 ng/ml. LIMIT OF QUANTIFICATION: MEPERIDINE 100 ng/ml. IDENTIFICATION OF NORMEPERIDINE PERFORMED BY COMPARATION AGAINST ITS LIBRARY. IN NEXT CASE WORK LOAD CASES IDENTIFIED BY ITS LIBRARY ARE NOT TO BE REPORTED.
2U89C7	Both meperidine and normeperidine are quantitated from the internal standard mepivacaine with the limit of report being 25 micrograms/L.
2UK3NZ	Normeperidine was seen in the sample, but was not confirmed due to not having a standard for comparison available. Small peak of fluoxetine with a weak mass spectra seen in the sample.
4K9HJV	IS used for basic drug analysis = Mepivacaine. LOD = 0.05 ug/mL (50 ng/mL).
4L42LW	Normeperidine is not quantitated by the laboratory (per current operating procedures).
6EWYU2	Internal standard: Heptabarbital and Phenyltoloxamine
6MGXQ2	Mepivacaine used as internal standard.
84RLTR	Internal Standard: Mepivicaine, LOD: N/A, LOQ: 0.05 ug/mL.
8D3MER	Do not quant. normeperidine. Screening was performed, but not used to identify this class of drug.
8GFPX3	Meperidine-D4, normeperidine-D4 were used as internal standards.
8ZB7HY	Phenyltoloxamine was used as the internal reference material for basic drugs. Heptabarbital was used as the internal reference material for acidic drugs. As indicated in the instructions, Fluoxetine is an artifact that may be present in the submitted blood. Screening tests indicate the presence of other drugs not confirmed in this item.
9TT7QT	Screening/ Confirmation/ Quantitation - Instrument: UPLCC QTOF MS (Waters) (which is LC-MS-MS). Salting-out assisted extraction. ISTD: Cyclobarbitone, D3-Methadone, Prazepam.
A8L3HQ	Internal Standard: Mepivicaine
AHMUKP	Fluoxetine present above cutoff.
AY9DGW	Internal standard used - mepivacaine
BJE6YP	The lab does not quantitate normeperidine.
BRQ6TZ	Internal standard for meperidine and normeperidine - Mepivacaine
BY8ZAV	Confirmatory analysis detected Normeperidine.
C9BAGK	25 ng/mL LOD - tested for [Laboratory] Drug Panel
CAHPMQ	Normeperidine is a qualitative result only per our policy.
D248PP	Meperidine LOD: 12.5 ng/mL, iStd: meperidine-D4. Normeperidine LOD: 12.5 ng/mL, iStd: normeperidine-D4
EAGCFN	We don't confirm meperidine with in-house testing.
FE3QJL	Normeperidine is not quantitated per laboratory standards.

WebCode	Item 3 - Comments
FLPEEQ	Internal standard: Mepivacaine. Indicated: Normeperidine. (Standard information not available for identification.)
GE3BJU	internal standard: mepivacaine
GXC8YJ	Meperidine: Identified, reported as Pethidine. Normeperidine: Identified, but not reported due to no RRT for this method. Fluoxetine: Identified, but not reported, see Proficiency test provider paperwork. Meperidine Related: Not reported, no standard available for comparison. Internal Standard: Mepivacaine
HHCN2T	Screen only. Confirmations performed by outside laboratory
HNGRMK	Internal standard used: Promazine
HV68HJ	Normeperidine called positive due to standard procedures
JTCNZH	Internal standard used-d4-pethidine and d4-norpethidine. Limit of detection 10 ng/ml for pethidine and norpethidine.
KZ9U4J	Internal Standard used for Meperidine: Morphine-D3. Limit of Detection for this determination: 50ng/ml in blood.
L2WNKK	Internal standard: Mepivacaine. An additional base extraction with GCMS analysis was performed to confirm Pethidine in the sample.
LQDETK	Internal standards - Phenyltoloxamine, Heptabarbital. Very weak Fluoxetine, not able to call Positive.
M7ATRE	Fluoxetine, Fluoxetine acetyl, and Doxylamine seen. Not reported, see Proficiency test provider paperwork. Meperidine is being reported as Pethidine. Normeperidine was seen. No RRT data for reporting. Internal standard used: Mepivacaine. LOD: Pethidine - not determined, Normeperidine - not determined, Fluoxetine - 100 ng/ml, Doxylamine - 50 ng/ml.
MZJBFN	Meperidine ULOQ = 750 ng/mL, LLOQ = 25 ng/mL, IS = Meperidine D4
NWDDGE	Internal standard for extractionPromazine
PCQ4YE	This lab does not quantitate normeperidine per our policy.
QJN7MB	The pethidine level would be reported as approximate. There were indications of the presence of norpethidine but this was not confirmed
R3A78C	Internal Standard: Mepivicaine
R79H3C	d-4 meperdine used as internal standard to quantitate meperidine. Calibration range 10-1000 ng/mL. d-4 normeperidine used as internal standard to quantitate normeperidine. Calibration range 50-1000 ng/mL.
RT3N9E	Internal Standards: LCMS- mepivacaine, diazepam-d5
rtn3yd	Not able to peform confirmation tests at this time.
TDPDJ7	Normepiridine was not quantitated per standard procedures.
U4VRQD	Internal Standard: Mepivacaine

WebCode	Item 3 - Comments
U7HBRB	Bases confirmatory/quantitative analysis internal standard was Cabinoxamine. The limit of detection was 0.10 ug/mL. (Note: Calculation of uncertainty for this service is in progress of being determined, but is not required by our customers.)
UNL3DD	Internal standard used is mepivacaine.
VRY8K8	Fluoxetine peak seen not reported due to poor chromatography.
XJFGD7	Internal standard (basic drugs): mepivicaine
XPHQHD	mepivacaine
Y4X9P8	Normeperidine was detected, however, standard RRT information was not available for reporting. A normeperidine related compound (library search: Normeperidine acetate) was also observed, however standard information was not available for reporting.
YP2WG3	No drugs detected by ELISA immunoassay. IS: Meperidine-D4, LLOQ = 10 ng/mL , ULOQ = 1000 ng/mL .
YQCX42	The lab does not quantitate Norpethidine.
YUBAY2	The lab does not quantitate Normeperidine.
ZY2NJ3	Internal standard used (Nalorphine)

Additional Test Comments

TABLE 4

WebCode	Additional Comments
9TT7QT	All 3 samples appeared to contain traces of Ibuprofen and Fluoxetine. Sample 2 was received with one of the tubes having been smashed.
BRQ6TZ	Artifacts found - doxylamine, fluoxetine, caffeine
PZ9JEH	Only trained to complete DSX analysis.
FLPEEQ	Unable to confirm benzodiazepines indicative with Item 1, with limitations due to extraction procedures and instrumentation, this laboratory is unable to identify some benzodiazepines. Due to negative Opiate assay with screening test, unable to report Hydromorphone for Item 1. Item 3 unable to report Normeperidine - standard information not available.
7RGWEV	Our E.L.I.S.A. Test Panel Includes: Benzodiazepines, Cannabinoids, Cocaine, Methamphetamine, Opiates, PCP.
YP2WG3	Observed artifacts: caffeine, cotinine, fluoxetine. All blood samples are screened by ELISA immunoassay and GC/MS (when sufficient volume is available). Drugs are quantitated by LC/MS/MS.
2M4887	AMOBARBITAL IS NOT COMMERCIALLY AVAILABLE IN [Country] (NOT AUTHORIZED DISTRIBUTION BY [Country] HEALTH AUTORITIES).
KZ9U4J	IMPORTANT: The analysis using LC/MS/MS doesn't allow to differentiate between the barbiturates Amobarbital or Pentobarbital because they share the same Retention Time, Precursor Ion and Product Ions.

Appendix: Data Sheet

Collaborative Testing Services ~ Forensic Testing Program

Test No. 16-5661: Blood Drug Analysis

DATA MUST BE RECEIVED BY July 05, 2016 TO BE INCLUDED IN THE REPORT

Accreditation Release Statement

CTS submits external proficiency test data directly to ASCLD/LAB, ANAB, and A2LA. Please select one of the following statements to ensure your data is handled appropriately.

This participant's data is intended for submission to ASCLD/LAB, ANAB, and/or A2LA.

This participant's data is NOT intended for submission to ASCLD/LAB, ANAB or A2LA.

(Accreditation Release section on the last page must be completed and submitted.)

L----

Scenario:

Investigators have submitted two vials of blood from each of three separate cases for your analysis. Using your laboratory's procedures, analyze each item and report the presence of any drugs and/or metabolites.

Case 1: A 26 year old male died due to an apparent accidental overdose. Family members told investigators that the individual had become addicted to, and abused, opioids after surgery the previous year.

Case 2: A 34 year old female was admitted to the hospital after a workplace accident. Blood samples were taken for testing for the workers' compensation claim. Coworkers stated they did not believe she appeared under the influence of drugs at the time of the accident.

Case 3: A 47 year old male was responsible for a fatal car accident. Officers at the scene reported that the suspect displayed disorientation, agitation, drowsiness, constricted pupils, and was "on the nod".

Instructions:

- **PLEASE NOTE** The purpose of this test is the examination of drugs listed in section 1308 of Title 21 Code of Federal Regulations under the United States Controlled Substances Act that fall into the following classes: benzodiazepines, nonbenzodiazepine hypnotics (z-drugs), barbiturates, opioids, illicit hallucinogens, illicit stimulants, illicit depressants, and cannabinoids. Please test accordingly.
- -Please do not report the presence/concentration of drugs in concentrations less than 10ng/mL.
- -Samples may contain methanol and acetonitrile as artifacts from production. Other artifacts that may be present in the blood include caffeine, cotinine, fluoxetine, and doxylamine.

Items Submitted (Sample Pack BDRG):

Item 1: Two vials of blood from Case 1

Item 2: Two vials of blood from Case 2

Item 3: Two vials of blood from Case 3

Participant Code: WebCode:

1-1.) Please indicate t	he screening results f	or Item 1		
· —	ected utilizing screening mo			
Drug(s) detec	ted (list each class and/or	drug name below).		
Confirmatory Res	sults for Item 1:			
•	abolites were detected se record raw data in	_		ons
	es shown does not indicate	•	•	space is
needed, copy this p	page or attach your own fo	orm following this layout.		
No drugs/me	tabolites detected utilizing	confirmatory methods.		
	Qualitative	Reported		
	Qualitative Only?	Reported Concentration	Uncertainty	Units
Analyte	•		Uncertainty	Units
Analyte	Only?	Concentration		Units
Analyte Date(s) Quantitative Analys	•	Concentration		Units (
Analyte Date(s) Quantitative Analys	Only?	Concentration		Units (
Analyte	Only?	Concentration		Units (
Analyte Date(s) Quantitative Analys Raw Data (ng/mL):	Only?	Concentration		(
Analyte Date(s) Quantitative Analys Raw Data (ng/mL):	Only?	Concentration		Units
Analyte Date(s) Quantitative Analys Raw Data (ng/mL):	Only? Sis Performed on Analyte: Qualitative	Concentration		(
Analyte Date(s) Quantitative Analys Raw Data (ng/mL): Analyte	Only? Sis Performed on Analyte: Qualitative	Reported Concentration	Uncertainty	(
Analyte Date(s) Quantitative Analys Raw Data (ng/mL): Analyte Date(s) Quantitative Analys	Only? Sis Performed on Analyte: Qualitative Only?	Reported Concentration	Uncertainty	(
Analyte Date(s) Quantitative Analys Raw Data (ng/mL): Analyte Date(s) Quantitative Analys	Only? Sis Performed on Analyte: Qualitative Only?	Reported Concentration	Uncertainty	(
Analyte Date(s) Quantitative Analys Raw Data (ng/mL): Analyte	Qualitative Only? Gualitative Only? Sis Performed on Analyte:	Reported Concentration	Uncertainty	(
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Analyte Date(s) Quantitative Analys Raw Data (ng/mL): Analyte Date(s) Quantitative Analys	Only? Sis Performed on Analyte: Qualitative Only? Sis Performed on Analyte:	Reported Concentration	Uncertainty	Units

Participant Code: WebCode:

Results for Item 1 (continued):

1-3.) If quantitative analysis was per	formed, are t	he reported cond	entrations for Item 1:	
A single determination?	The mean of	duplicate / several c	leterminations?	
Other? (Specify):				
1-4.) Please check the methods used used was for screening, confirmatory			whether each method	
Method Used	<u>Screening</u>	Confirmatory	Quantitation	
lmmunoassay				
GC/MS				
LC/MS				
LC/MS/MS				
Other:				
Other:				
1-5.) Date Samples Received: 1-6.) Additional Comments for Item Please include any relevant informa	1		used, limits of detection, e	tc.

Participant Code: WebCode:

2-1.) Please indicate tl	ne screening results f	or Item 2		
No drugs dete	cted utilizing screening me	ethods.		
Drug(s) detecte	ed (list each class and/or	drug name below).		
Confirmatory Res	ults for Item 2:			
2-2.) What drugs/meta were performed, pleas				ions
	es shown does not indicate age or attach your own fo	,	•	space is
	abolites detected utilizing	confirmatory methods.		
No drugs/met	abomos donocios omizing			
	Qualitative Only?	Reported Concentration	Uncertainty	Units
	Qualitative		Uncertainty	Units
Analyte	Qualitative Only?		Uncertainty	Units
Analyte Date(s) Quantitative Analys	Qualitative Only?		Uncertainty	Units
Analyte Date(s) Quantitative Analys	Qualitative Only?		Uncertainty	Units
Analyte Date(s) Quantitative Analys	Qualitative Only?		Uncertainty	Units
Analyte Date(s) Quantitative Analys Raw Data (ng/mL):	Qualitative Only?		Uncertainty	Units
Analyte Date(s) Quantitative Analys Raw Data (ng/mL): Analyte	Qualitative Only? is Performed on Analyte: Qualitative Only?	Reported Concentration	Uncertainty	(
Analyte Date(s) Quantitative Analys Raw Data (ng/mL): Analyte Date(s) Quantitative Analys	Qualitative Only? is Performed on Analyte: Qualitative Only?	Reported Concentration	Uncertainty	(
Analyte Date(s) Quantitative Analys Raw Data (ng/mL): Analyte Date(s) Quantitative Analys	Qualitative Only? is Performed on Analyte: Qualitative Only?	Reported Concentration	Uncertainty	(
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Participant Code: WebCode:

Results for Item 2 (continued):

2-3.) If quantitative analysis was per	formed, are t	he reported cond	entrations for Item 2:
A single determination?	The mean of	duplicate / several c	determinations?
Other? (Specify):			
2-4.) Please check the methods used used was for screening, confirmatory			whether each method
Method Used	<u>Screening</u>	Confirmatory	Quantitation
lmmunoassay			
GC/MS			
LC/MS			
LC/MS/MS			
Other:			
Other:			
2-5.) Date Samples Received: 2-6.) Additional Comments for Item 2	2		
Please include any relevant informa	ation such as in	ternal standard(s)	used, limits of detection, etc.

Participant Code: WebCode:

3-1.) Please indicate t	he screening results f	or Item 3		
No drugs dete	ected utilizing screening m	ethods.		
Drug(s) detect	ed (list each class and/or	drug name below).		
_				
.	h (h o			
Confirmatory Res	sults for Item 3:			
3-2.) What drugs/met were performed, plea		-		ons
	es shown does not indicat page or attach your own fo	,	•	space is
No drugs/met	rabolites detected utilizing	confirmatory methods.		
Analyte	Qualitative Only?	Reported Concentration	Uncertainty	Units
·	Only?	Concentration		Units
Date(s) Quantitative Analys	Only?	Concentration		Units
Date(s) Quantitative Analys	Only?	Concentration		Units
Date(s) Quantitative Analys	Only?	Concentration		Units
Analyte Date(s) Quantitative Analys Raw Data (ng/mL): Analyte	Only?	Concentration		Units
Date(s) Quantitative Analys Raw Data (ng/mL):	Only? is Performed on Analyte: Qualitative	Concentration		(
Date(s) Quantitative Analys Raw Data (ng/mL): Analyte	Only? Sis Performed on Analyte: Qualitative Only?	Reported Concentration	Uncertainty	(
Date(s) Quantitative Analys Raw Data (ng/mL): Analyte Date(s) Quantitative Analys	Only? Sis Performed on Analyte: Qualitative Only?	Reported Concentration	Uncertainty	(
Date(s) Quantitative Analys Raw Data (ng/mL): Analyte Date(s) Quantitative Analys	Only? Sis Performed on Analyte: Qualitative Only?	Reported Concentration	Uncertainty	(
Date(s) Quantitative Analys Raw Data (ng/mL): Analyte Date(s) Quantitative Analys	Only? Sis Performed on Analyte: Qualitative Only?	Reported Concentration	Uncertainty	(
Date(s) Quantitative Analys Raw Data (ng/mL): Analyte Date(s) Quantitative Analys Raw Data (ng/mL):	Qualitative Only? Qualitative Only? Qualitative Only? Qualitative	Reported Concentration Reported	Uncertainty	Units
Date(s) Quantitative Analys Raw Data (ng/mL):	Qualitative Only? Qualitative Only? ———————————————————————————————————	Reported Concentration	Uncertainty	(

Participant Code: WebCode:

Results for Item 3 (continued):

3-3.) If quantitative analysis was per	formed, are t	he reported cond	entrations for Item 3:
A single determination?	The mean of	duplicate / several c	leterminations?
Other? (Specify):			
3-4.) Please check the methods used used was for screening, confirmatory			whether each method
Method Used	<u>Screening</u>	Confirmatory	<u>Quantitation</u>
lmmunoassay			
GC/MS			
LC/MS			
LC/MS/MS			
Other:			
Other:			
3-5.) Date Samples Received:			
3-6.) Additional Comments for Item 3 Please include any relevant informa		ternal standard(s)	used, limits of detection, etc.

Participant Code: WebCode:

Additional Comments on Test		

Return Instructions: Data must be received via Participant Code:

online data entry, fax (please include a cover sheet), ONLINE DATA ENTRY: www.cts-portal.com

or mail by July 05, 2016 to be included in the

report. Emailed data sheets are not accepted. FAX: +1-571-434-1937

QUESTIONS?

TEL: +1-571-434-1925 (8 am - 4:30 pm EST)

MAIL: Collaborative Testing Services, Inc.

EMAIL: forensics@cts-interlab.com
P.O. Box 650820

www.ctsforensics.com Sterling, VA 20165-0820 USA

Collaborative Testing Services ~ Forensic Testing Program

RELEASE OF DATA TO ACCREDITATION BODIES

The following Accreditation Releases will apply only to:

Participant Code:

WebCode:

for Test No. 16-5661: Blood Drug Analysis

This release page must be completed and received by <u>July 5, 2016</u> to have this participant's submitted data included in the reports forwarded to the respective Accreditation Bodies.

Have the laboratory's designated individual complete the following steps only if your laboratory is accredited in this testing/calibration discipline by one or more of the following Accreditation Bodies.

Step 1: Provide the applicable Accreditation Certificate Number(s) for your laboratory
ASCLD/LAB Certificate No.
ANAB Certificate No.
A2LA Certificate No.
Step 2: Complete the Laboratory Identifying Information in its entirety
Signature and Title
Laboratory Name
Location (City/State)

Return Instructions

Please submit the completed Accreditation Release at the same time as your full data sheet. See Data Sheet Return Instructions on the previous page.

Questions? Contact us 8 am-4:30 pm EST
Telephone: +1-571-434-1925
email: forensics@cts-interlab.com

Accreditation Release