Collaborative Testing Services, Inc
FORENSIC TESTING PROGRAM

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Urine Drug Analysis
Test No. 25-5671 Summary Report

Each participant received a sample pack containing urine samples from four individual cases with unique scenarios; they were asked to analyze the samples and report the presence of any drugs/metabolites, any quantitative data obtained (including uncertainty), and the methods used. Data were returned from 137 participants and are compiled into the following tables:

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.

Participant results are reported using a randomly assigned "WebCode". This code maintains participant's anonymity, provides linking of the various report sections, and will change with every report.

Manufacturer's Information

Each sample pack contained urine samples from four cases, each with an individual case scenario. Participants were asked to analyze the contents of each sample and report the presence of any drugs/metabolites, any quantitative data obtained (including uncertainty), and the methods used.

SAMPLE PREPARATION: The urine used in this test was from the same lot, which tested negative for a panel of common drugs and controlled substances. A stock solution of each chosen drug 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 with different glassware.

ITEM PREPARATION: A predetermined amount of drug stock solution and the equivalent of 2% w/v sodium fluoride was added to pooled human urine. Mixing continuously to ensure homogeneity, 50 mL aliquots of the mixture were transferred into each of the pre-labeled specimen cups. All specimens were placed in a refrigerator immediately after production and remained there until the sample packs were prepared.

VERIFICATION: Predistribution results were consistent with each other and the manufacturer's preparation information. During predistribution, it was determined that the GHB concentration in Item 2 fell below the majority of laboratory's cutoff concentrations for this analyte.

SAMPLE PACK ASSEMBLY: Once verification was completed, all items were placed into Department of Transportation regulated shipping containers and the sample packs were returned to the refrigerator until shipment.

Item 1 Drug(s)	Item 2 Drug(s)	Item 3 Drug(s)	Item 4 Drug(s)
6-MAM (80 ng/mL)	Gamma-hydroxybutyrate [GHB] (1500 ng/mL)*	Nortriptyline (600 ng/mL)	Alprazolam (100 ng/mL)
Codeine (230 ng/mL)		Phenobarbital (1000 ng/mL)	alpha-hydroxyalprazolam (500 ng/mL)
Morphine (2080 ng/mL)			

**GHB was added to the item at a concentration lower than most laboratory's limits of detection. Although CTS did not add morphine to this sample, approximately 14% of participants confirmed its presence in Item 2, one noting a concentration very close to their limit of detection. Our supplier screened the original source material; however, their cut off is 100 ng/mL for morphine.*

This section provides details on test sample preparation and design, including preparation concentrations which may not necessarily represent the results that could or should be obtained. The statistical analysis, including the calculation of the Grand Mean statistics, was performed on participant results and is available in this Summary Report.

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 urine. Participants were supplied with four urine samples from individual cases with unique scenarios. Each of the four urine specimens was spiked with varying concentrations of specific drugs and/or metabolites in case-like ranges. The sample specifications are as follows: Item 1 contained 80 ng/mL 6-monoacetylmorphine (6-MAM), 230 ng/mL codeine, and 2080 ng/mL morphine. Item 2 contained 1500 ng/mL gamma-hydroxybutyrate (GHB). Item 3 contained 600 ng/mL nortriptyline and 1000 ng/mL phenobarbital. Item 4 contained 100 ng/mL alprazolam and 500 ng/mL alpha-hydroxyalprazolam. Refer to the Manufacturer's Information for preparation details.

A total of 137 participants returned data for this test.

Of the 131 participants who reported screening results for Item 1, the most commonly reported drug category was analgesics. Ninety-four participants detected the presence of morphine, 88 detected 6-MAM, and 87 detected codeine. Of the 123 participants who reported confirmatory results, 116 participants reported the presence of codeine, 114 participants reported the presence of morphine, and 111 reported 6-MAM.

Of the 126 participants who reported screening results for Item 2, the most commonly reported drug category was analgesics. Eleven participants reported the presence of morphine, four reported amphetamine, and three reported GHB. The majority of participants (105) indicated that no drugs were detected utilizing screening methods. Of the 76 participants who reported confirmatory results, two reported GHB, 13 listed other drugs (11 of which were morphine), and 62 did not detect any drugs/metabolites. Although GHB was added to this item, its concentration was lower than most laboratory's limits of detection. Consequently, participants who reported that no drugs/metabolites were detected in this item are not highlighted as inconsistent. While CTS did not add morphine to this sample, 11 participants (14%) confirmed its presence in Item 2, one noting a concentration very close to their limit of detection of 5 ng/mL. Our supplier had screened the original source material, however, their-cut off is 100 ng/mL for morphine. Given this information, the participants who reported morphine were also not highlighted as inconsistent.

Of the 126 participants who reported screening results for Item 3, the most commonly reported drug categories were antidepressants and barbiturates. Seventy-four participants reported the presence of nortriptyline and 36 reported phenobarbital. Of the 114 participants who reported confirmatory results, 100 reported nortriptyline, and 46 detected phenobarbital.

Of the 123 participants who reported screening results for Item 4, the most commonly reported drug category was benzodiazepines. Seventy-nine participants reported the presence of alprazolam and 53 reported alpha-hydroxyalprazolam. Of the 114 participants who reported confirmatory results, 106 reported the presence of alprazolam and 73 reported alpha-hydroxyalprazolam.

For all four items, the majority of the population used immunoassay, GC/MS and LC/MS/MS for screening, GC/MS and LC/MS/MS for confirmation testing, and LC/MS/MS for quantitation.

If a participant did not provide raw data, but indicated that their result was a single determination and reported in ng/mL, 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 this item, which are supplied to assist the participants and accrediting bodies in determining the acceptability of results. Participants with extreme data have been marked with an "X" and their results were excluded from the calculations of the grand mean and standard deviation. Extreme data has been determined using the Critical Value of h defined within ASTM E 691-19, and calculated for each analyte as ± (CrH * STD) from the grand mean.

Due to the low number of participants who reported quantitative data across all items, 6-MAM in Item 1 was the only analyte with sufficient quantitative results for statistical analysis. One participant's data was marked as extreme in statistical analysis of the raw data for this analyte.

Screening Results - Item 1

TABLE 1 A

Item Scenario:

A 19 year old male was pulled over for running a red light. The individual appeared very drowsy and displayed confusion. He was arrested after failing a field sobriety test, and submitted a urine sample 1 hour later.

Item Contents and Preparation Concentration: 6-MAM (80 ng/mL)
Morphine (2080 ng/mL)
Codeine (230 ng/mL)

WebCode	Category	Drug/Metabolite
28YUXX	Analgesics	6-monoacetylmorphine Codeine Morphine
2GLQ2K	Analgesics	6-monoacetylmorphine Codeine Morphine
2GNHTZ	Analgesics Cannabinoids	Codeine
2MQPAN	Analgesics	6-monoacetylmorphine Codeine Morphine
2N8L3N	Analgesics	6-monoacetylmorphine Codeine Morphine
2VQ8RL	Analgesics	6-monoacetylmorphine Codeine Morphine
43ZRVP	Analgesics	Morphine
4BBUGP	Analgesics	Morphine
4EBPRX	Analgesics	6-monoacetylmorphine Codeine Morphine
4K23TL	Analgesics	6-monoacetylmorphine Codeine Morphine
4UPTJJ	Analgesics	6-monoacetylmorphine Codeine Morphine

TABLE 1 A: Screening Results - Item 1

WebCode	Category	Drug/Metabolite
63D7RH	Analgesics	6-monoacetylmorphine Codeine Morphine
64TBNV	Analgesics	
6C3Y2U	Analgesics	
6JHD7K	Analgesics	
7YPWFV	Analgesics	6-monoacetylmorphine Codeine Morphine
88HN2V	Analgesics	
8A7XDG	Analgesics	 6-monoacetylmorphine
8F9CWX	Analgesics	6-monoacetylmorphine Codeine Morphine
8N8UFF	Analgesics	
8QUDGD	Analgesics	6-monoacetylmorphine Codeine Hydrocodone Morphine
98FJYQ	Analgesics	6-monoacetylmorphine Codeine Morphine
9XM73C	Analgesics	6-monoacetylmorphine Codeine Morphine
A2N9PT	Analgesics	
A2Q2LF	Analgesics	
AH9YNR	Analgesics	Morphine Oxymorphone
AHBRKE	Analgesics	6-monoacetylmorphine Codeine Morphine
AJ7BLF	Analgesics	

TABLE 1 A: Screening Results - Item 1

WebCode	Category	Drug/Metabolite
AMJD7Q	Analgesics	6-monoacetylmorphine
		Codeine
		Morphine
AMK63D	Analgesics	Codeine
		Morphine
BJZFEU	Analgesics	6-monoacetylmorphine
		Codeine
		Morphine
BMJP9D	Analgesics	6-monoacetylmorphine
		Codeine
		Morphine
CB36JP	Analgesics	
CB6WEC	Analgesics	
		6-monoacetylmorphine
CKCRDB	Miscellaneous	
CP2D3P	Analgesics	6-monoacetylmorphine
		Codeine
		Morphine
CQWW4Q	Analgesics	
D2T3XN	Analgesics	
DAQRGE	Analgesics	Morphine
DDP4CD	Analgesics	Codeine
		Morphine
DPFZCQ	Analgesics	6-monoacetylmorphine
		Codeine
		Morphine
DUXX4M	Analgesics	6-monoacetylmorphine
		Codeine
		Morphine
DV92FQ	Analgesics	
	CNS Stimulants	Amphetamine
E9MMEA	Analgesics	Morphine
EG6V38	Analgesics	6-monoacetylmorphine
		Codeine
		Hydrocodone
		Morphine

TABLE 1 A: Screening Results - Item 1

WebCode	Category	Drug/Metabolite
F293TP	Analgesics	6-monoacetylmorphine Codeine Morphine
F7YD3N	Analgesics	
FL8N8L	Analgesics	6-monoacetylmorphine
FL9G49	Analgesics	6-monoacetylmorphine Codeine Morphine
FM4Y7A	Analgesics	6-monoacetylmorphine
FX9RWP	Analgesics	6-monoacetylmorphine Codeine Morphine
FZCKQN	Analgesics	
G7CL6M	Analgesics	6-monoacetylmorphine Codeine Hydrocodone Hydromorphone Morphine
GAVJWK	Analgesics	6-monoacetylmorphine Codeine Morphine
GAWBT8	Analgesics	6-monoacetylmorphine Codeine Morphine
GDTWKA	No drugs detected utilizing screening methods.	
GDWLML	Analgesics	
GNFXZJ	Analgesics	6-monoacetylmorphine Codeine Morphine
GQG2R7	Analgesics	6-monoacetylmorphine Codeine Morphine
GRBRXK	Analgesics	
GRCKU8	Analgesics	6-monoacetylmorphine Codeine Morphine

TABLE 1 A: Screening Results - Item 1

WebCode	Category	Drug/Metabolite
GRFAVJ	Analgesics	6-monoacetylmorphine Codeine Morphine
GVFB39	Analgesics	6-monoacetylmorphine Codeine Morphine
HBMYLL	Analgesics	6-monoacetylmorphine Codeine Morphine
HV72J7	Analgesics	6-monoacetylmorphine Codeine Morphine
J2CWZL	Analgesics	6-monoacetylmorphine Codeine Morphine
J2U6PF	Analgesics	
J2VXL3	Analgesics	Morphine
JTHR8K	Analgesics	
JVPZG6	Analgesics	Codeine
JWKHH7	Analgesics	6-monoacetylmorphine Codeine Morphine
K3G4H6	Analgesics	6-monoacetylmorphine Codeine Morphine
K4ECMH	Analgesics	6-monoacetylmorphine
K9A7KJ	Analgesics	6-monoacetylmorphine Codeine Morphine
KHYP84	Analgesics	6-monoacetylmorphine Codeine Morphine
KLWDJ6	Analgesics	6-monoacetylmorphine Codeine Morphine
KPR6PG	Analgesics	

TABLE 1 A: Screening Results - Item 1

WebCode	Category	Drug/Metabolite
KRJ44E	Analgesics	
KYGTM6	Analgesics	6-monoacetylmorphine
		Codeine
		Morphine
LNJ6B2	Analgesics	6-monoacetylmorphine
		Codeine
		Morphine
	CNS Stimulants	Benzoylecgonine
LYDMKZ	Analgesics	6-monoacetylmorphine
		Codeine
		Morphine
M8AK94	Analgesics	6-monoacetylmorphine
		Codeine
		Morphine
M9JUXF	Analgesics	Codeine
		Morphine
MEA3P2	Analgesics	6-monoacetylmorphine
		Codeine
		Morphine
MQZWV3	Analgesics	6-monoacetylmorphine
MW7M4Z	Analgesics	6-monoacetylmorphine
		Morphine
N2G36C	Analgesics	6-monoacetylmorphine
		Codeine
		Morphine
NE4A4X	Analgesics	Morphine
NH2T4B	Analgesics	6-monoacetylmorphine
		Codeine
		Morphine
NH3LZX	Analgesics	Morphine
		Oxycodone
NVTKPE	Analgesics	
	CNS Stimulants	Amphetamine
NXGUZ2	Analgesics	6-monoacetylmorphine
		Codeine
		Morphine

TABLE 1 A: Screening Results - Item 1

WebCode	Category	Drug/Metabolite
NZJU2Y	Analgesics	6-monoacetylmorphine
		Codeine
		Morphine
PKLZ4X	Analgesics	6-monoacetylmorphine
		Codeine
		Morphine
PLFQAD	Analgesics	6-monoacetylmorphine
		Codeine
		Morphine
PLGH6Z	Analgesics	6-monoacetylmorphine
		Codeine
		Morphine
PWY6CF	Analgesics	6-monoacetylmorphine
		Codeine
		Morphine
Q6RTPW	Analgesics	6-monoacetylmorphine
		Codeine
		Morphine
QLW2PW	Analgesics	6-monoacetylmorphine
		Codeine
		Morphine
QUQ8JX	Analgesics	6-monoacetylmorphine
		Codeine
		Morphine
R8B8TX	Analgesics	6-monoacetylmorphine
		Codeine
		Morphine
RAE279	Analgesics	6-monoacetylmorphine
		Codeine
		Morphine
RJ8E8T	Analgesics	Codeine
		Morphine
RNXR6B	Analgesics	Codeine
		Morphine

TABLE 1 A: Screening Results - Item 1

WebCode	Category	Drug/Metabolite
RRFPX8	Analgesics	6-monoacetylmorphine
		Codeine
		Morphine
RRHGTU	Analgesics	6-monoacetylmorphine
		Codeine
		Morphine
RUPUBV	Analgesics	6-monoacetylmorphine
		Codeine
		Morphine
RYXHNX	Analgesics	6-monoacetylmorphine
TWL3UW	Analgesics	Codeine
U7PGDA	Analgesics	Codeine
		Morphine
UG9TR8	Analgesics	
UQXEX7	Analgesics	6-monoacetylmorphine
		Codeine
		Morphine
V7N2G3	Analgesics	6-monoacetylmorphine
		Codeine
		Morphine
VANCC3	Analgesics	6-monoacetylmorphine
		Codeine
		Morphine
VAP69P	Analgesics	6-monoacetylmorphine
		Codeine
		Morphine
VK42B9	Analgesics	
	CNS Stimulants	Amphetamine
VK6U8V	Analgesics	6-monoacetylmorphine
		Codeine
		Morphine
VXTYER	Analgesics	Morphine
WC7QF4	Analgesics	6-monoacetylmorphine
		Codeine
		Morphine

TABLE 1 A: Screening Results - Item 1

WebCode	Category	Drug/Metabolite
WC9JCQ	Analgesics	6-monoacetylmorphine
		Codeine
		Morphine
X9NUM7	Analgesics	6-monoacetylmorphine
		Codeine
		Morphine
XBPUN4	Analgesics	6-monoacetylmorphine
		Codeine
		Morphine
XERVNZ	Analgesics	6-monoacetylmorphine
		Codeine
		Morphine
XLBYV4	Analgesics	6-monoacetylmorphine
		Codeine
		Morphine
XQM2NQ	Analgesics	6-monoacetylmorphine
		Codeine
		Morphine
XRYJ24	Analgesics	6-monoacetylmorphine
		Codeine
		Morphine
XZ9B7T	Analgesics	6-monoacetylmorphine
		Codeine
		Morphine
YT7HCP	Analgesics	6-monoacetylmorphine
		Codeine
		Morphine
ZFXWPP	Analgesics	6-monoacetylmorphine
ZGRMV6	Analgesics	
		6-monoacetylmorphine
ZZ73CY	Analgesics	6-monoacetylmorphine
		Codeine
		Morphine

Screening Response Summary for Item 1			Participants: 131
Drug Category Totals		Drug/Metabolite Totals	
Analgesics	129	**Morphine**	94
CNS Stimulants	4	**6-monoacetylmorphine**	88
		Codeine	87
		Amphetamine	3
No drugs detected utilizing screening methods:	1		

Total number of screening responses provided may be more than the number of participants due to multiple drugs/metabolites being reported.

Confirmatory Results - Item 1

TABLE 1B

Item Scenario:

A 19 year old male was pulled over for running a red light. The individual appeared very drowsy and displayed confusion. He was arrested after failing a field sobriety test, and submitted a urine sample 1 hour later.

Item Contents and Preparation Concentration: 6-MAM (80 ng/mL)
Morphine (2080 ng/mL)
Codeine (230 ng/mL)

What drugs/metabolites were detected in Item 1?

WebCode	Analyte Reported	Qualitative Only	Reported Concentration	Uncertainty	Units
28YUXX	6-monoacetylmorphine	✓			
	codeine	✓			
	morphine	✓			
2GLQ2K	6-Monoacetylmorphine		73.1		ng/mL
	Codeine		233		ng/mL
	Morphine		2181		ng/mL
2GNHTZ	6-Acetylmorphine	✓			
	Codeine	✓			
	Morphine	✓			
2MQPAN	6-monoacetylmorphine	✓			
	Codeine	✓			
	Morphine	✓			
2VQ8RL	6-Monoacetylmorphine	✓			
	Codeine	✓			
	Morphine	✓			
4EBPRX	6-monoacetylmorphine	✓			
	Codeine	✓			
	Morphine	✓			
4K23TL	6-monoacetylmorphine	✓			
	codeine	✓			
	morphine	✓			
63D7RH	6-Monoacetylmorphine	✓			
	Codeine	✓			
	Morphine	✓			
63U3JH	6-monoacetylmorphine	✓			
	codeine	✓			
	morphine	✓			
64TBNV	6-monoacetylmorphine (6-MAM)	✓			
	codeine	✓			
	morphine	✓			

TABLE 1B: Confirmatory Results - Item 1

What drugs/metabolites were detected in Item 1?					
WebCode	**Analyte Reported**	**Qualitative Only**	**Reported Concentration**	**Uncertainty**	**Units**
6C3Y2U	6-monoacetyl-morphine	✓			
	codeine	✓			
	morphine	✓			
6JHD7K	6-Monoacetylmorphine	✓			
	Codeine	✓			
	Morphine	✓			
7YPWFV	6-monoacetylmorphine	✓			
	Codeine	✓			
	Morphine	✓			
88HN2V	6-acetylmorphine	✓			
	Codeine	✓			
	Morphine	✓			
8F9CWX	6-Monoacetylmorphine	✓			
	Codeine	✓			
	Morphine	✓			
8QUDGD	6-Monoacetylmorphine		78.76	14.17	ng/mL
	Codeine	✓			
	Morphine	✓			
98FJYQ	6-monoacetylmorphine	✓			
	Codeine	✓			
	Morphine	✓			
9XM73C	6 monoacetylmorphina	✓			
	Codeine	✓			
	morphine	✓			
A2N9PT	6-MONOACETYLMORPHINE	✓			
	CODEINE	✓			
	MORPHINE	✓			
A2Q2LF	6-MAM	✓			
	Codeine	✓			
	Morphine	✓			
	Ibuprofen	✓			
	Paracetamol	✓			
AH9YNR	Codeine	✓			
	Morphine	✓			
AHBRKE	6-monoacetylmorphine		113		ng/ml
	Codeine		247		ng/ml
	Morphine		2370		ng/ml

TABLE 1B: Confirmatory Results - Item 1

What drugs/metabolites were detected in Item 1?					
WebCode	**Analyte Reported**	**Qualitative Only**	**Reported Concentration**	**Uncertainty**	**Units**
AJ7BLF	Heroin-M(6-acetyl-morphine) TMS	✓			
	Codeine TMS	✓			
	Morphine 2TMS	✓			
AMJD7Q	6-monoacetylmorphine	✓			
	codeine	✓			
	morphine	✓			
AMK63D	Codeine	✓			
	Morphine	✓			
B7FXMC	6-acetylmorphine	✓			
	codeine	✓			
	Morphine	✓			
BJZFEU	6-monoacetylmorphine	✓			
	Codeine	✓			
	Morphine				
BMJP9D	6-MAM	✓			
	codeine	✓			
	morphine	✓			
CB36JP	6-acetylmorphine	✓			
	codeine	✓			
	morphine	✓			
CKCRDB	codeine	✓			
	Morphine	✓			
	clomipramine	✓			
	hydrocodone	✓			
	hydromorphone	✓			
CP2D3P	6-Monoacetylmorphine	✓			
	Codeine	✓			
	Morphine	✓			
CQWW4Q	6-monoacetylmorphine	✓			
	Codeine	✓			
	Morphine	✓			
D2T3XN	6-acetylmorphine	✓			
	codeine	✓			
	morphine	✓			
DAQRGE	Morphine		2255.3	90	ng/ml

TABLE 1B: Confirmatory Results - Item 1

What drugs/metabolites were detected in Item 1?					
WebCode	**Analyte Reported**	**Qualitative Only**	**Reported Concentration**	**Uncertainty**	**Units**
DDP4CD	6-monoacetylmorphine	✓			
	Codeine	✓			
	Morphine	✓			
DHGDLC	Codeine	✓			
DPFZCQ	6-monoacetylmorphine	✓			
	codeine	✓			
	morphine	✓			
DUXX4M	6-monoacetylmorphine	✓			
	Codeine	✓			
	Morphine	✓			
DV92FQ	No drugs/metabolites detected utilizing confirmatory methods.				
E9MMEA	6-monoacetylmorphine	✓			
	codeine	✓			
	Morphine	✓			
EG6V38	6-Monoacetylmorphine		70.30	12.65	ng/mL
	Codeine	✓			
	Morphine	✓			
F293TP	6-monoacetylmorphine	✓			
	Codeine	✓			
	Morphine	✓			
F7YD3N	6-Monoacetylmorphine	✓			
	Codeine	✓			
	Morphine	✓			
FL8N8L	6-MAM,Codeine, Morphine	✓			
FL9G49	6-monoacetylmorphine	✓			
	Codeine	✓			
	Morphine	✓			
FX9RWP	6-monoacetylmorphine	✓			
	Codeine	✓			
	Morphine	✓			
FZCKQN	6-Acetylmorphine	✓			
	Codeine	✓			
G7CL6M	6-Monoacetylmorphine		87.75	15.79	ng/mL
	Codeine	✓			
	Morphine	✓			

TABLE 1B: Confirmatory Results - Item 1

What drugs/metabolites were detected in Item 1?					
WebCode	**Analyte Reported**	**Qualitative Only**	**Reported Concentration**	**Uncertainty**	**Units**
GAVJWK	6-acetylmorphine	✓			
	CODEINE	✓			
	MORPHINE	✓			
GAWBT8	6-monoacetylmorphine	✓			
	Codeine	✓			
	Morphine	✓			
GDTWKA	No drugs/metabolites detected utilizing confirmatory methods.				
GDWLML	6-acetylmorphine	✓			
	Codeine	✓			
	Morphine	✓			
GNFXZJ	6-monoacetylmorphine	✓			
	codeine	✓			
	morphine	✓			
GQG2R7	6-monoacetylmorphine	✓			
	Codeine	✓			
	Morphine	✓			
GRBRXK	6-acetylmorphine	✓			
	codeine	✓			
	morphine	✓			
GRCKU8	6-monoacetylmorphine	✓			
	Codeine	✓			
	Morphine	✓			
GRFAVJ	6-monoacetylmorphine	✓			
	codeine	✓			
	morphine	✓			
GVFB39	6-monoacetylmorphine	✓			
	Codeine	✓			
	Morphine	✓			
GX3U47	6-monoacetylmorphine	✓			
	Codeine	✓			
	morphine	✓			
HBMYLL	6-monoacetylmorphine	✓			
	codeine	✓			
	morphine	✓			
HV72J7	6-Monoacetylmorphine		78	5	ng/ml
	Codeine		206	7	ng/ml
	Morphine	✓			

TABLE 1B: Confirmatory Results - Item 1

What drugs/metabolites were detected in Item 1?					
WebCode	**Analyte Reported**	**Qualitative Only**	**Reported Concentration**	**Uncertainty**	**Units**
J2CWZL	6-monoacetylmorphine	✓			
	Codeine	✓			
	Morphine	✓			
J2U6PF	6mam	✓			
	codeine	✓			
	morphine	✓			
J2VXL3	6-monoacetylmorphine	✓			
	Codeine	✓			
	Morphine	✓			
JTHR8K	6-monoacetylmorphine	✓			
	Codeine	✓			
	Morphine	✓			
JVPZG6	Codeine	✓			
JWKHH7	6-monoacetylmorphine	✓			
	Codeine	✓			
	morphine	✓			
K3G4H6	6-Monoacetylmorphine				
	Codeine				
	Morphine				
K4ECMH	6-Monoacetylmorphine	✓			
	Codeine	✓			
	Morphine	✓			
K9A7KJ	6-monoacetylmorphine		0,16		mg/l
	codeine		0,21		mg/l
	morphine		1,8		mg/l
KHYP84	6-monoacetylmorphine	✓			
	codeine	✓			
	morphine	✓			
KLWDJ6	6-monoacetylmorphine	✓			
	Codeine	✓			
	Morphine	✓			
KPR6PG	6-monoacetylmorphine	✓			
	codeine	✓			
	morphine	✓			
KRJ44E	6-monoacetylmorphine	✓			
	codeine	✓			
	morphine	✓			

TABLE 1B: Confirmatory Results - Item 1

What drugs/metabolites were detected in Item 1?					
WebCode	**Analyte Reported**	**Qualitative Only**	**Reported Concentration**	**Uncertainty**	**Units**
KYGTM6	6-monoacetylmorphine	✓			
	Codeine	✓			
	Morphine	✓			
LNJ6B2	6-monoacetylmorphine	✓			
	Codeine	✓			
	Morphine	✓			
LYDMKZ	6-monoacetylmorphine	✓			
	Codeine	✓			
	Morphine	✓			
M8AK94	6-Monoacetylmorphine		61.2		ng/mL
	Codeine		227.23		ng/mL
	Morphine		1911.78		ng/mL
M9JUXF	6-Acetyl Morphine		76	16	ng/mL
	Codeine	✓			
	Morphine	✓			
MEA3P2	6-monoacetylmorphine	✓			
	Codeine	✓			
	morphine	✓			
MW7M4Z	6-monoacetylmorphine		58		ng/mL
	Morphine		2248		ng/mL
N2G36C	6-monoacetylmorphine	✓			
	Codeine	✓			
	Morphine	✓			
NE4A4X	6-Monoacetylmorphine	✓			
	Codeine	✓			
	Morphine	✓			
NH2T4B	6-monoacetylmorphine	✓			
	codeine	✓			
	morphine	✓			
NH3LZX	6-Monoacetylmorphine	✓			
	Codeine	✓			
	Morphine	✓			
NVTKPE	No drugs/metabolites detected utilizing confirmatory methods.				
NXGUZ2	6-monoacetylmorphine	✓			
	codeine	✓			
	morphine	✓			

TABLE 1B: Confirmatory Results - Item 1

What drugs/metabolites were detected in Item 1?					
WebCode	**Analyte Reported**	**Qualitative Only**	**Reported Concentration**	**Uncertainty**	**Units**
NZJU2Y	6-Monoacetylmorphine		52,3		ng/ml
	Codeine		252		ng/ml
	Morphine	✓			
PKLZ4X	6-monoacetylmorphine	✓			
	Codeine	✓			
	Morphine	✓			
PLFQAD	6-Acetylmorphine	✓			
	Codeine	✓			
	Morphine	✓			
PLGH6Z	6-monoacetylmorph		82	5	ng/mL
	Codeine		225	7	ng/mL
	Morphine		2029	7	ng/mL
PWY6CF	6-monoacetylmorphine	✓			
	codeine	✓			
	morphine	✓			
Q6RTPW	6-monoacetylmorphine	✓	Detected		
	Codeine	✓	Detected		
	Morphine	✓	Detected		
QLW2PW	6-monoacetylmorphine	✓			
	Codeine	✓			
	Morphine	✓			
QUQ8JX	6-monoacetylmorphine		102.95		ng/ml
	codeine		317.5		ng/ml
	morphine		1580.5		ng/ml
R8B8TX	6-monoacetylmorphine	✓			
	Codeine	✓			
	Morphine	✓			
RAE279	6-monoacetylmorphine	✓			
	Codeine				
	Morphine				
RJ8E8T	6-acetylmorphine	✓			
	Codeine	✓			
	morphine	✓			
RNXR6B	Codeine	✓			
	Morphine	✓			
RRFPX8	6-monoacetyl morphine	✓			
	codeine	✓			
	morphine	✓			

TABLE 1B: Confirmatory Results - Item 1

What drugs/metabolites were detected in Item 1?					
WebCode	**Analyte Reported**	**Qualitative Only**	**Reported Concentration**	**Uncertainty**	**Units**
RRHGTU	6-monoacetylmorphine		53	16.1	ng/mL
	Codeine		140	9.6	ng/mL
	Morphine		318	8.1	ng/mL
RUPUBV	6-Monoacetylmorphine	✓			
	Codeine	✓			
	Morphine	✓			
U7PGDA	Codeine	✓			
	Morphine	✓			
UG9TR8	6-MAM				
	codeine	✓			
	morphine	✓			
UQXEX7	6-monoacetylmorphine	✓			
	codeine	✓			
	morphine	✓			
V7N2G3	6-monoacetyl-morphine (6-MAM)	✓			
	codeine	✓			
	morphine	✓			
VANCC3	6-monoacetylmorphine	✓			
	codeine	✓			
	morphine	✓			
VAP69P	6-monoacetylmorphine (6-MAM)	✓			
	Codeine	✓			
	Morphine	✓			
VK42B9	No drugs/metabolites detected utilizing confirmatory methods.				
VK6U8V	6-monoacetylmorphine	✓			
	Codeine	✓			
	Morphine	✓			
VXTYER	6-Monoacetylmorphine	✓			
	Codeine	✓			
	Morphine	✓			
WC7QF4	6-Monoacetylmorphine	✓			
	Codeine	✓			
	morphine	✓			
WC9JCQ	6-monoacetylmorphine	✓			
	Codeine	✓			
	Morphine	✓			

TABLE 1B: Confirmatory Results - Item 1

What drugs/metabolites were detected in Item 1?					
WebCode	**Analyte Reported**	**Qualitative Only**	**Reported Concentration**	**Uncertainty**	**Units**
X9NUM7	6-monoacetylmorphine	✓			
	Codeine	✓			
	Morphine	✓			
XBPUN4	6-Acetylmorphine	✓			
	Codeine	✓			
	Morphine	✓			
XERVNZ	6-monoacetyl-morphine	✓			
	Codeine	✓			
	Morphine	✓			
XLBYV4	6-monoacetylmorphine	✓			
	Codeine	✓			
	Morphine	✓			
XQM2NQ	6-monoacetylmorphine	✓			
	codeine	✓			
	morphine	✓			
XRYJ24	6-monoacetylmorphine	✓			
	Codeine	✓			
	Morphine	✓			
XZ9B7T	6-monoacetylmorphine	✓			
	Codeine	✓			
	Morphine	✓			
YT7HCP	6-Monoacetylmorphine	✓			
	Codeine	✓			
	Morphine	✓			
ZGRMV6	6-Monoacetylmorphine	✓			
	Codeine	✓			
	Morphine	✓			
ZZ73CY	6-monoacetyl-morphine (6-MAM)	✓			
	codeine	✓			
	morphine	✓			

Confirmatory Response Summary for Item 1	Participants: 123
6-monoacetylmorphine (6-MAM):	111
Codeine:	116
Morphine:	114
Other Identified Drugs/Metabolites:	5
No Drugs/Metabolites Detected Utilizing Confirmatory Methods:	4

Total number of confirmatory responses provided may be more than the number of participants due to multiple drugs/metabolites being reported.

Raw Data - Item 1

TABLE 1C

Item 1 Raw Data - 6-monoacetylmorphine (6-MAM)
Preparation concentration: 80 ng/mL

WebCode	List of Raw Data determinations (ng/mL)			
2GLQ2K	73.180		73.180	
2MQPAN	70.740		70.740	
8QUDGD	78.760		78.760	
AHBRKE	113.00	112.00	112.50	X
EG6V38	70.300		70.300	
G7CL6M	87.750		87.750	
HV72J7	78.000		78.000	
M8AK94	74.600	61.200	67.900	
M9JUXF	76.000		76.000	
MW7M4Z	58.000		58.000	
NZJU2Y	52.300		52.300	
PLGH6Z	82.000		82.000	

Statistical Analysis for Item 1 - 6-monoacetylmorphine (6-MAM)

Grand Mean 72.27

Standard Deviation 10.26

Number of Participants Included 11

Number of Participants Excluded 1

by Critical H value of 2.339

TABLE 1C: Raw Data - Item 1

Item 1 Raw Data - Codeine
Preparation concentration: 230 ng/mL

WebCode	List of Raw Data determinations (ng/mL)	
2GLQ2K	233.80	
2MQPAN	226.34	
AHBRKE	246.00	248.00
HV72J7	206.00	
M8AK94	203.50	227.20
NZJU2Y	252.00	
PLGH6Z	225.00	

Statistical Analysis for Item 1 - Codeine

Please note: Statistical analysis has not been provided due to the low number of raw data responses.

TABLE 1C: Raw Data - Item 1

Item 1 Raw Data - Morphine
Preparation concentration: 2080 ng/mL

WebCode	List of Raw Data determinations (ng/mL)		
2GLQ2K	2,181.1		
2MQPAN	1,949.2		
AHBRKE	2,329.0	2,411.0	
DAQRGE	2,216.0	2,267.0	2,283.0
M8AK94	1,911.8	1,430.5	
MW7M4Z	2,248.0		
PLGH6Z	2,029.0		

Statistical Analysis for Item 1 - Morphine

Please note: Statistical analysis has not been provided due to the low number of raw data responses.

Reporting Procedures - Item 1

TABLE 1D - Item 1

WebCode	Quantitative Reporting Procedures
2GLQ2K	A single determination.
8QUDGD	A single determination.
AHBRKE	The mean of duplicate/several determinations.
DAQRGE	The mean of duplicate/several determinations.
EG6V38	A single determination.
G7CL6M	A single determination.
HV72J7	A single determination.
K9A7KJ	A single determination.
M8AK94	A single determination.
M9JUXF	A single determination.
MW7M4Z	A single determination.
NZJU2Y	A single determination.
PLGH6Z	A single determination.
QUQ8JX	The mean of duplicate/several determinations.
RAE279	A single determination.
RRHGTU	The mean of duplicate/several determinations.

Response Summary for Item 1	Participants: 16
A single determination:	12 (75.0%)
The mean of duplicate/several determinations:	4 (25.0%)
Other:	0 (0.0%)

Methods of Analysis - Item 1

TABLE 1E - Item 1

WebCode	Method	Screening	Confirmatory	Quantitation
28YUXX	Immunoassay	✓		
	LC/MS/MS	✓	✓	
	LC-HRMS/MS	✓	✓	
	GC/MS	✓	✓	
2GLQ2K	Immunoassay	✓		
	GC/MS		✓	✓
	LC/MS/MS		✓	✓
	LC/Orbitrap/MS	✓		
2GNHTZ	GC/MS		✓	
	LC/MS/MS		✓	
	Immunoassay	✓		
2MQPAN	LC/MS/MS	✓	✓	
2N8L3N	Immunoassay	✓		
	GC/MS		✓	
2VQ8RL	LC-HRAM-MS	✓	✓	
43ZRVP	Immunoassay	✓		
4BBUGP	Immunoassay	✓		
4EBPRX	Immunoassay	✓		
	LC-QTOF-MS	✓		
	GC/MS	✓	✓	
4K23TL	LC-QTOF-MS	✓		
	LC/MS/MS		✓	
	GC/MS		✓	
4UPTJJ	LC-QTOF-MS	✓		
	LC/MS/MS	✓		
63D7RH	Immunoassay	✓		
	GC/MS	✓	✓	
63U3JH	GC/MS		✓	
64TBNV	Immunoassay	✓		
	GC/MS		✓	
	LC/MS/MS		✓	
	LC-HRMS/MS		✓	

TABLE 1E: Methods of Analysis - Item 1

WebCode	Method	Screening	Confirmatory	Quantitation
6C3Y2U	Immunoassay	✓		
	GC/MS		✓	
	LC/MS/MS		✓	
	HR-LC/MS/MS		✓	
6JHD7K	Immunoassay	✓		
	GC/MS		✓	
	GC/MS/MS		✓	
	LC/MS/MS		✓	
7YPWFV	Immunoassay	✓		
	LC-QTOF-MS	✓		
	GC/MS	✓	✓	
88HN2V	Immunoassay	✓		
	GC/MS		✓	
8A7XDG	Immunoassay	✓		
8F9CWX	Immunoassay	✓		
	GC/MS	✓	✓	
	LC/MS/MS	✓		✓
8N8UFF	Immunoassay	✓		
8QUDGD	LC-QTOF-MS	✓		
	LC/MS/MS		✓	✓
98FJYQ	LC-HRMS/MS	✓	✓	
9XM73C	GC/MS	✓	✓	
	LC-QTOF	✓		
	LC-QTOF-MS		✓	
A2N9PT	Immunoassay	✓		
	GC/MS		✓	
A2Q2LF	Immunoassay	✓		
	GC/MS		✓	
AH9YNR	Immunoassay	✓		
	GC/MS		✓	
AHBRKE	LC/MS/MS	✓	✓	✓
AJ7BLF	Immunoassay	✓		
	GC/MS		✓	
AMJD7Q	LC-HRMS/MS	✓	✓	
AMK63D	Immunoassay	✓		
	GC/MS	✓	✓	

TABLE 1E: Methods of Analysis - Item 1

WebCode	Method	Screening	Confirmatory	Quantitation
B7FXMC	GC/MS		✓	
BJZFEU	Immunoassay	✓		
	GC/MS	✓	✓	
BMJP9D	Immunoassay	✓		
	LC/MS/MS	✓	✓	
	HR-LCMS	✓	✓	
	GC/MS	✓	✓	
CB36JP	Immunoassay	✓		
	LC/MS/MS		✓	
CB6WEC	Immunoassay	✓		
CKCRDB	LC/MS/MS		✓	
	Immunoassay	✓		
CP2D3P	Immunoassay	✓		
	LC-QTOF-MS	✓		
	GC/MS		✓	
CQWW4Q	Immunoassay	✓		
	LC-QTOF	✓	✓	
D2T3XN	Immunoassay	✓		
	LC/MS/MS		✓	
DAQRGE	Immunoassay	✓		✓
	LC/MS/MS		✓	
DDP4CD	Immunoassay	✓		
	GC/MS	✓	✓	
DHGDLC	GC/MS		✓	
DPFZCQ	Immunoassay	✓		
	GC/MS	✓	✓	
	LC/MS/MS	✓		✓
DUXX4M	Immunoassay	✓		
	LC/MS/MS	✓	✓	
	GC/MS	✓	✓	
	LC-Orbitrap	✓	✓	
DV92FQ	Immunoassay	✓		
	LC/MS/MS		✓	
E9MMEA	Immunoassay	✓		
	LC/MS/MS		✓	
	GC/MS		✓	

TABLE 1E: Methods of Analysis - Item 1

WebCode	Method	Screening	Confirmatory	Quantitation
EG6V38	LC-QTOF-MS	✓		
	LC/MS/MS		✓	✓
F293TP	Immunoassay	✓		
	GC/MS	✓	✓	
	LC/MS/MS	✓		✓
F7YD3N	Immunoassay	✓		
	LC-QTOF		✓	
	GC/MS		✓	
FL8N8L	Immunoassay	✓		
	LC/MS		✓	
FL9G49	LC/MS/MS	✓		
	GC/MS		✓	
FM4Y7A	Immunoassay	✓		
FX9RWP	Immunoassay	✓		
	GC/MS	✓	✓	
	LC/MS/MS	✓		✓
FZCKQN	Immunoassay	✓		
	GC/MS		✓	
G7CL6M	LC-QTOF-MS	✓		
	LC/MS/MS		✓	✓
GAVJWK	LC-HRMS/MS	✓		
	GC/MS		✓	
GAWBT8	Immunoassay	✓		
	GC/MS	✓	✓	
GDTWKA	LC/MS/MS	✓	✓	✓
GDWLML	Immunoassay	✓		
	GC/MS		✓	
GNFXZJ	LC-HRAMS	✓	✓	
GQG2R7	Immunoassay	✓		
	GC/MS	✓	✓	
GRBRXK	Immunoassay	✓		
	LC/MS/MS		✓	
GRCKU8	Immunoassay	✓		
	LC/MS/MS		✓	
	GC/MS	✓		

TABLE 1E: Methods of Analysis - Item 1

WebCode	Method	Screening	Confirmatory	Quantitation
GRFAVJ	High Resolution Accurate Mass	✓	✓	
GVFB39	Immunoassay	✓		
	LC-HRMS/MS		✓	
	LC/MS/MS	✓	✓	
	GC/MS	✓	✓	
GX3U47	GC/MS		✓	
HBMYLL	Immunoassay	✓		
	GC/MS	✓	✓	
	LC/MS/MS	✓		✓
HV72J7	GC/MS		✓	✓
	Immunoassay	✓		
J2CWZL	Immunoassay	✓		
	GC/MS	✓	✓	
	LC/MS/MS	✓		✓
J2U6PF	Immunoassay	✓		
	LC-HRMS/MS		✓	
	LC/MS/MS		✓	
	GC/MS		✓	
J2VXL3	Immunoassay	✓		
	GC/MS		✓	
JTHR8K	Immunoassay	✓		
	LC-QTOF		✓	
JVPZG6	Immunoassay	✓		
	GC/MS		✓	
JWKHH7	GC/MS	✓	✓	
	LC/MS/MS	✓		
K3G4H6	LC-QTOF	✓	✓	
K4ECMH	GC/MS		✓	
K9A7KJ	LC/MS/MS	✓	✓	✓
	LC-QTOF-MS	✓	✓	
KHYP84	Immunoassay	✓		
	LC/MS/MS	✓	✓	
	GC/MS	✓	✓	
	LC/HRMS/MS		✓	
KLWDJ6	Immunoassay	✓		
	LC-QTOF	✓	✓	
	LC/MS/MS		✓	

TABLE 1E: Methods of Analysis - Item 1

WebCode	Method	Screening	Confirmatory	Quantitation
KPR6PG	Immunoassay	✓		
	GC/MS		✓	
KRJ44E	Immunoassay	✓		
	GC/MS		✓	
	LC/MS/MS		✓	
	LC-HRMS (orbitrap)		✓	
KYGTM6	Immunoassay	✓		
	GC/MS		✓	
	LC-QTOF	✓		
LNJ6B2	LC-QTOF-MS	✓		
	LC/MS/MS		✓	
LYDMKZ	Immunoassay	✓		
	GC/MS	✓	✓	
M8AK94	Immunoassay	✓		
	GC/MS		✓	✓
M9JUXF	LC/MS/MS	✓	✓	✓
MEA3P2	Immunoassay	✓		
	GC/MS	✓	✓	
	LC/MS/MS		✓	
	LC-QTOF	✓		
MQZWV3	Immunoassay	✓		
MW7M4Z	LC/MS/MS		✓	✓
	GC/MS		✓	✓
N2G36C	Immunoassay	✓		
	LC/MS/MS	✓	✓	
	GC/MS	✓	✓	
	LC-HRMSMS		✓	
NE4A4X	Immunoassay	✓		
	GC/MS		✓	
NH2T4B	Immunoassay	✓		
	LC/MS/MS		✓	
	GC/MS		✓	
	LC-HRMSMS		✓	
NH3LZX	Immunoassay	✓		
	GC/MS		✓	
NVTKPE	Immunoassay	✓		
	LC/MS/MS		✓	✓

TABLE 1E: Methods of Analysis - Item 1

WebCode	Method	Screening	Confirmatory	Quantitation
NXGUZ2	Immunoassay	✓		
	GC/MS		✓	
NZJU2Y	LC/MS/MS	✓	✓	
	LC/MS		✓	✓
	LC-QTOF-MS	✓		
PKLZ4X	Immunoassay	✓		
	GC/MS	✓	✓	
PLFQAD	Immunoassay	✓		
	GC/MS	✓	✓	
PLGH6Z	Immunoassay	✓		
	GC/MS		✓	✓
PWY6CF	Immunoassay	✓		
	GC/MS	✓	✓	
	LC/MS/MS	✓		✓
Q6RTPW	GC/MS	✓	✓	
	LC-QTOF	✓	✓	
	Immunoassay	✓		
	GC/MS/MS	✓		
QLW2PW	GC/MS	✓		
	Immunoassay	✓		
	LC/MS/MS		✓	
QUQ8JX	Immunoassay	✓		
	LC/MS/MS		✓	✓
R8B8TX	Immunoassay	✓		
	LC/MS/MS	✓	✓	
	GC/MS		✓	
	LC-HRMS/MS	✓	✓	
RAE279	LC-QTOF-MS	✓		
	GC/MS		✓	✓
RJ8E8T	GC/MS	✓	✓	
RNXR6B	LC/MS/MS	✓	✓	
RRFPX8	Immunoassay	✓		
	LC/MS/MS	✓	✓	
	LC-HRMS/MS		✓	
	GC/MS	✓	✓	
RRHGTU	LC/MS	✓	✓	✓
	LC-QTOF	✓	✓	✓

TABLE 1E: Methods of Analysis - Item 1

WebCode	Method	Screening	Confirmatory	Quantitation
RUPUBV	Immunoassay	✓		
	GC/MS	✓	✓	
RYXHNX	Immunoassay	✓		
TWL3UW	GC/MS	✓		
U7PGDA	LC/MS/MS	✓	✓	
UG9TR8	Immunoassay	✓		
	LC/MS/MS	✓	✓	
UQXEX7	Immunoassay	✓		
	LC/MS/MS	✓	✓	
	GC/MS		✓	
	LC-HRMS/MS		✓	
V7N2G3	Immunoassay	✓		
	GC/MS	✓	✓	
	LC/MS/MS	✓	✓	
	LC-HRMS/MS (Orbitrap)		✓	
VANCC3	Immunoassay	✓		
	LC/MS/MS	✓	✓	
	GC/MS	✓	✓	
	LC-HRMS/MS		✓	
VAP69P	LC/MS/MS	✓	✓	
	Rapid Chromatographic Immunoassay	✓		
VK42B9	Immunoassay	✓		
	LC/MS/MS		✓	
VK6U8V	LC/MS/MS	✓	✓	
VXTYER	Immunoassay	✓		
	GC/MS		✓	
WC7QF4	LC-HRMS/MS	✓	✓	
WC9JCQ	Immunoassay	✓		
	GC/MS	✓	✓	
X9NUM7	Immunoassay	✓		
	GC/MS	✓	✓	
	LC/MS/MS	✓		✓
XBPUN4	Immunoassay	✓		
	GC/MS	✓	✓	

TABLE 1E: Methods of Analysis - Item 1

WebCode	Method	Screening	Confirmatory	Quantitation
XERVNZ	Immunoassay	✓		
	Orbitrap-High Resolution LCMS/MS	✓	✓	
	LC/MS/MS	✓	✓	
	GC/MS	✓	✓	
XLBYV4	LC-High Resolution Tandem Mass Spectrometry	✓		
	GC/MS		✓	
XQM2NQ	Immunoassay	✓		
	HR-MS		✓	
	GC/MS	✓		
	LC/MS/MS	✓		
XRYJ24	LC/MS/MS	✓	✓	
	GC/MS		✓	
XZ9B7T	LC/MS/MS	✓	✓	
YT7HCP	Immunoassay	✓		
	GC/MS	✓	✓	
ZFXWPP	Immunoassay	✓		
ZGRMV6	Immunoassay	✓		
	GC/MS		✓	
ZZ73CY	Immunoassay	✓		
	LC/MS	✓	✓	
	GC/MS	✓	✓	
	LC-HRMS/MS		✓	

Response Summary for Item 1 - Methods of Analysis **Participants: 135**

	Screening	Confirmatory	Quantitation
Immunoassay:	95	0	1
GC/MS:	43	84	6
LC/MS:	2	4	2
LC/MS/MS:	37	53	19
LC-QTOF:	8	7	1
LC-QTOF-MS:	12	2	0
Other:	16	26	0

Additional Comments for Item 1

TABLE 1F

WebCode	Item Comments
28YUXX	Internal Standard - mepivacaine
2GNHTZ	Delta-9 THC and Delta-9 Carboxy THC not confirmed by LCMSMS
4EBPRX	Internal standards used included mepivacaine (LC-QTOF-MS and GC/MS) and nalorphine (GC/MS). Screening limits of detection were 10 ng/mL for 6-monoacetylmorphine, and 5 ng/mL for codeine and morphine. Confirmation limits of detection were 25 ng/mL for codeine and 6-monoacetylmorphine, and 50 ng/mL for morphine. Acetaminophen was indicated but not confirmed.
6C3Y2U	GCMS, LCMSMS, and HR-LCMSMS tests utilized mepivacaine for internal standard.
7YPWFV	Internal standards used included mepivacaine (LC-QTOF-MS and GC/MS) and nalorphine (GC/MS). Screening limits of detection were 10 ng/mL for 6-monoacetylmorphine, and 5 ng/mL for codeine and morphine. Confirmation limits of detection were 25 ng/mL for codeine and 6-monoacetylmorphine, and 50 ng/mL for morphine. Normorphine was seen but not confirmed.
8A7XDG	Opiates (analgesics) cutoff : 300 ng/mL. 6-AM cutoff: 10 ng/mL. Creatinine is Normal.
8N8UFF	The laboratory only screens for the following drugs/drug classes utilizing the Enzyme Multiplied Immunoassay Technique (EMIT): amphetamines, benzodiazepines, cannabinoids, cocaine, opiates, and pcp. This sample screened positive for Opiates (analgesics). The current confirmation method for opiates is off-line. Therefore, no opiates confirmation testing was performed.
8QUDGD	Codeine LOD set at 50 ng/mL Morphine LOD set at 50 ng/mL
98FJYQ	Internal Standard: mepivacaine
9XM73C	ESTAZOLAM WAS USED AS INTERNAL ESTANDAR
AH9YNR	ELISA was used for screening purposes. For this item, the opiate and oxycodone assays screened positive. Their target analytes are listed above. Confirmatory analysis indicates 6-MAM, this compound was not confirmed.
AHBRKE	Caffeine was also detected
AMJD7Q	Internal Standards: Mepivacaine/Mephobarbital
AMK63D	Nalorphine used for internal standard for Opiate confirmation. Promazine used for internal standard for GC/MS drug screen.
B7FXMC	Internal standard: Flurazepam
BMJP9D	Mepivacaine Internal Standard
CB6WEC	Analgesics detected are opiates and 6-AM. Opiates screening cutoff is 300 ng/mL. 6-AM screening cutoff is 10 ng/mL. Creatinine is normal.
CKCRDB	Immunoassay screening kits from Vaxpert INC were used for screening with Limit of Detection 100 ng/mL and morphine was identified in Item 1. LC-MS/MS was employed for confirmation. It also contained clomipramine, codeine, hyrocodone and hydromorphone.
CP2D3P	Internal standards used were Mepivacaine and Nalorphine-diTMS
CQWW4Q	ELISA positive for Opiates. Internal standards used for LC-QTOF test: Fentanyl-D5, Imipramine-D3, MDMA-D5, Methaqualone-D7, Triazolam-D4. Negative for GHB by GC/MS. Caffeine detected but not confirmed.
DAQRGE	The reported concentration is the average result of 3 runs from immunoassay analysis, confirming the positive outcome for opiates. The qualitative result of morphine was obtained by using LC-MS/MS (6460 LC-TQ).

TABLE 1F: Additional Comments for Item 1

WebCode	Item Comments
DDP4CD	Ibuprofin was found in Itam 1
DHGDLC	Internal Standard: SKF-525A
DV92FQ	This item screened presumptive positive for amphetamine and opiates using an immunoassay screen. Confirmation testing was performed for amphetamine and this drug was not detected. Our laboratory does not currently have a validated method for the confirmation of opiates so confirmation testing for this result was not performed. Scope for Drug Screening: Immunoassay Drug Screen (Enzyme Linked Immunosorbent Assay- ELISA): amphetamine, barbiturates, benzodiazepines, buprenorphine, cocaine/benzoylecgonine, cannabinoids, carisoprodol, fentanyl, methadone, methamphetamine, opiates, oxycodone/oxymorphone, phencyclidine (PCP), tramadol, zolpidem
E9MMEA	The cut-off value of codeine and morphine are 60 ng/mL for GC/MS The cut-off value of 6-monoacetylmorphine is 20 ng/mL for GC/MS
EG6V38	Codeine LOD set at 50 ng/mL Morphine LOD set at 50 ng/mL
F7YD3N	Internal Standards used: Fentanyl-D5, Imipramine-D3, MDMA-D5, Methaqualong-D7, Triazolam-D4.
FL8N8L	Internal Standard: 6MAM used 6MAM, codeine used, morphine used.
FM4Y7A	All substances are detected using immunoassay qualitative testing. Cutoffs are as follows: 6AM-10 ng/mL, Amphetamine- 1,000 ng/mL, Benzodiazepine- 200 ng/mL, COC- 300 ng/mL, Creatinine - 20 mg/dL, THC- 50 ng/mL, Opiates- 300 ng/mL, Oxycodone- 100 ng/mL, Fentanyl- 1 ng/mL, Methamphetamine- 500 ng/mL.
FZCKQN	Opiates assay indicated positive by ELISA. Our current GC/MS method does not extract all opioids and opiates and our LC/MS-MS method that is used for opioids/opiates is only validated for blood. SKF 525-A and NPA are the internal standards used for basic drug screen by GC/MS.
G7CL6M	Codeine LOD set at 50 ng/mL Morphine LOD set at 50 ng/mL
GAVJWK	Mepivacaine is the internal standard in the screen. Nalorphine is the internal standard in the confirmation test, which was also a quant on a scale of 12.5-200 μg/L, but analytes only reported qualitative due to nature of the sample.
GAWBT8	Internal Standards: Promazine/Nalorphine
GDTWKA	Panel includes only the following analytes: Fentanyl, Hydromorphone, MDEA, MDPV, Sufentanil, Xylazine
GQG2R7	Promazine was used as the internal standard for the Drug Screen analysis and nalorphine was used as the internal standard for the Opiate confirmation analysis.
GRFAVJ	internal standards: mepivacaine, mephobarbital
GVFB39	Internal standard used was Mepivacaine.
GX3U47	Internal standard: flurazepam/ THC-d9 Sample preparation: L/L extraction. The final extract is derivatized with BSTFA, and analyzed by GC/MS.
HV72J7	The result for Morphine is presented as Qualitative because it fail to complain with all the criteria established in our Procedures to asign a Quantitative value.
J2U6PF	mepivacaine used as internal standard
J2VXL3	The internal reference materials used for SPE with GC/MS analysis were Phenyltoloxamine and Heptabarbital. Also noted in the GC/MS analysis data was possible Ibuprofen and Acetaminophen. These drugs were not confirmed.
JTHR8K	ELISA screening data positive for "opiates" per our instrumentation, but positive drugs fall under "analgesics" per the CTS analyte list. Internal standards used for LC-QTOF analysis: Fentanyl-D5, Imipramine-D3, MDMA-D5, Methaqualone-D7, Triazolam-D4.

TABLE 1F: Additional Comments for Item 1

WebCode	Item Comments
JVPZG6	Detected indication of 6-MAM but unable to report due to reporting criteria (S/N). We do not perform quantitative analysis of urine samples.
K4ECMH	In normal casework, if 6-Monoacetylmorphine is present, we are allowed to identify codeine and morphine as "screening procedure indicated . . .", but not perform the quantitation, since we would expect to see those metabolites.
KHYP84	internal standard: mepivacaine
KPR6PG	Internal standards used were SKF-525A and hexobarbital.
LNJ6B2	LOD for benzoylecgonine confirmation: 25 ng/mL
LYDMKZ	Drug Screen Internal Standard used was Promazine. Opiate Confirmation Internal Standard used was Nalorphine.
MQZWV3	All substances are detected using immunoassay qualitative testing. Cutoffs are as follows: 6AM-10 ng/mL, Amphetamine- 1,000 ng/mL, Benzodiazepine- 200 ng/mL, COC- 300 ng/mL, Creatinine - 20 mg/dL, THC- 50 ng/mL, Opiates- 300 ng/mL, Oxycodone- 100 ng/mL, Fentanyl- 1 ng/mL, Methamphetamine- 500 ng/mL.
MW7M4Z	ISTD 6-monoacetylmorphine is d3-6-monoacetylmorphine ISTD morphine is d3-morphine
N2G36C	Internal Standard: Mepivacaine. Opiates class of drugs indicative in immunoassay.
NE4A4X	Unconfirmed Ibuprofen.
NH2T4B	Internal standard: Mepivacaine
NH3LZX	Phenyltoloxamine was used as an internal reference material (IRM) for the basic extraction. Hexobarbital was used as an IRM for the acidic extraction. The Neogen brand immunoassay kit used for screening of synthetic opiates cross reacts with morphine and can screen positive when morphine is present in the sample. Unconfirmed Ibuprofen was found by the acidic extraction. Ibuprofen is not an impairing drug, and it is not the lab's procedure to confirm the presence of this drug.
NVTKPE	The laboratory does not currently have a validated method for opiates, so the presumptive positive result could not be confirmed.
PLFQAD	N-Propylamphetamine, Mepivacaine, and Hexobarbital were used as Internal Standards.
Q6RTPW	A mixed internal standard is used with LC-QTOF analysis. Internal standards include, D3-Morphine, D3-Hydromorphone, D3-Oxycodone, D5-Methylamphetamine, D3-Benzoylecgonine, D5-Doxylamine, D3-Tramadol, D3-Cocaine, D6-Zolpidem, D5-Fentanyl, D4-Buprenorphine, D3-Nortriptyline, D3-Methadone, D3-Sertraline, D9-25I-NB2OMe, D5-Desmethyldiazepam. Non-hydrolysed and hydrolysed urine was analysed with LC-QTOF. A mixed internal standard is used with GC/MS analysis. Internal standards include, Mephentermine, Acepromazine, Brucine. Sample also screened for GHB by GC-MS/MS, screened for cannabinoids by immunoassay and screened for NPS by LC-QTOF.
QBCXFC	Item not tested
R8B8TX	1-1) Opioid (Analgesics) class was indicative via immunoassay. No specific analyte available. Internal Standard: Mepivacaine for all LC/MS/MS, GC/MS, and LC-HRMS/MS Acetaminophen, caffeine, and ibuprofen detected - All not in the list of possible sample analytes.
RAE279	Per policy, we do report these urine results qualitatively. However, the confirmatory test for codeine and morphine do produce a quant. Those came back at 243.46 µg/L and 875.02 µg/L, respectively, which is higher than our highest calibrator of 200 ng/mL. Internal Standards used for LC-QTOF-MS: Mepivacaine and Mephobarbital Internal Standard used for GC/MS: Mepivacaine and Nalorphine
RNXR6B	Codeine - LOD 5ng/ml; ISTD Codeine-d6 Morphine - LOD 5ng/ml; ISTD Morphine-d6

TABLE 1F: Additional Comments for Item 1

WebCode	Item Comments
RRFPX8	Mepivacaine used as internal standard
RUPUBV	Drug Screen ISTD - Promazine Opiate Confirm ISTD - Nalorphine
RYXHNX	All substances are detected using immunoassay qualitative testing. Cutoffs are as follows: 6AM-10 ng/mL, Amphetamine- 1,000 ng/mL, Benzodiazepine- 200 ng/mL, COC- 300 ng/mL, Creatinine - 20 mg/dL, THC- 50 ng/mL, Opiates- 300 ng/mL, Oxycodone- 100 ng/mL, Fentanyl- 1 ng/mL, Methamphetamine- 500 ng/mL.
TWL3UW	Basification, and extraction with DCM with and without derivatization . Sample volume : 2 mL. Derivatization : BSTFA (50 uL) + EtOAc (100 uL)
U7PGDA	Codeine: ISTD Codeine-d6; LOD 5ng/mL Morphine: ISTD Morphine-d6; LOD 5ng/mL
UQXEX7	Internal Standard: mepivacaine
V7N2G3	Internal standard used was mepivacaine.
VANCC3	I.S. Mepivacaine
VAP69P	iCassette (THC) test device was used to screen for THC, referred to in [Table 2E: Methods of Analysis] as rapid chromatographic immunoassay.
VK42B9	Item 1 screened positive for opiates and amphetamine. Confirmatory testing was carried out for amphetamine and no substances were identified. Opiates cannot be confirmed by the [Laboratory].
VXTYER	As per laboratory policy urine is not screened for alcohol.
WC7QF4	LC-HRMS/MS (liquid chromatography high resolution accurate mass spectrometry). Instrument used was a Thermo Orbitrap Q-Exploris 120. Internal standards were mepivacaine and mephobarbital.
WC9JCQ	Immunoassay screening is for drug classes, not specific drugs. GC/MS screening is for specific drugs. Internal standard for GC/MS Opiate confirmation is Nalorphine. Internal standard for GC/MS drug screen is Promazine. EMIT Opiate cut-off (LOD) is 300 ng/mL.
XBPUN4	Mepivacaine, n-Propylamphetamine and Hexobarbital were used as internal standards.
XERVNZ	Caffeine was potentially detected, but in accordance with our standard operating procedure it was not confirmed in the absence of a specific request. Mepivacaine was used as internal standard in all LC and GC analyses.
XLBYV4	Internal standards used: Mepivacaine (screening), Nalorphine (confirmatory).
XQM2NQ	Mepivacaine was the internal standard used for HR-MS, GCMS,and LCMSMS testing.
YT7HCP	1. Internal Standards used: Promazine; Nalorphine.
ZFXWPP	All substances are detected using immunoassay qualitative testing. Cutoffs are as follows: 6AM-10 ng/mL, Amphetamine- 1,000 ng/mL, Benzodiazepine- 200 ng/mL, COC- 300 ng/mL, Creatinine - 20 mg/dL, THC- 50 ng/mL, Opiates- 300 ng/mL, Oxycodone- 100 ng/mL, Fentanyl- 1 ng/mL, Methamphetamine- 500 ng/mL.
ZGRMV6	Urine Screen results: EMIT Opiates - Positive EMIT 6-Acetylmorphine - Positive Analgesics is not a screening category on the laboratory report Scope for confirmation testing performed on 03/11/2025 included: 6-monoacetylmorphine, codeine, and morphine. Internal Standards: 6-monoacetylmorphine-D6 (for 6-monoacetylmorphine) Codeine-D6 (for codeine) Morphine-D6 (for morphine) Limit of Detection (for all drugs): 50 ng/mL Scope of confirmation testing performed on 03/12/2025 included: codeine, hydrocodone, hydromorphone, morphine, and oxycodone. Internal Standards: Codeine-D6 (for codeine) Hydrocodone-D6 (for hydrocodone) Hydromorphone-D6 (for hydromorphone) Morphine-D6 (for morphine) Limit of Detection (for all drugs): 50 ng/mL

Screening Results - Item 2

TABLE 2 A

Item Scenario:

A 28-year-old male fell unconscious after ingestion of a mouthful of an unknown beverage and was admitted to a medical facility. Urine collection was delayed until 8 hours after he swallowed the substance.

Item Contents and Preparation Concentration: GHB (1500 ng/mL)*

WebCode	Category	Drug/Metabolite
28YUXX	No drugs detected utilizing screening methods.	
2GLQ2K	No drugs detected utilizing screening methods.	
2GNHTZ	Analgesics Cannabinoids	
2MQPAN	No drugs detected utilizing screening methods.	
2N8L3N	No drugs detected utilizing screening methods.	
2VQ8RL	No drugs detected utilizing screening methods.	
43ZRVP	No drugs detected utilizing screening methods.	
4BBUGP	No drugs detected utilizing screening methods.	
4EBPRX	No drugs detected utilizing screening methods.	
4K23TL	No drugs detected utilizing screening methods.	
4UPTJJ	Miscellaneous	Gamma-hydroxy butyrate (GHB)
63D7RH	No drugs detected utilizing screening methods.	
64TBNV	No drugs detected utilizing screening methods.	
6C3Y2U	No drugs detected utilizing screening methods.	
6JHD7K	No drugs detected utilizing screening methods.	
7YPWFV	No drugs detected utilizing screening methods.	
88HN2V	No drugs detected utilizing screening methods.	
8A7XDG	No drugs detected utilizing screening methods.	
8F9CWX	No drugs detected utilizing screening methods.	
8N8UFF	No drugs detected utilizing screening methods.	
8QUDGD	No drugs detected utilizing screening methods.	
98FJYQ	Analgesics	Morphine
9XM73C	No drugs detected utilizing screening methods.	
A2N9PT	No drugs detected utilizing screening methods.	
A2Q2LF	No drugs detected utilizing screening methods.	
AH9YNR	No drugs detected utilizing screening methods.	
AHBRKE	No drugs detected utilizing screening methods.	
AJ7BLF	No drugs detected utilizing screening methods.	
AMJD7Q	Analgesics	Morphine

TABLE 2 A: Screening Results - Item 2

WebCode	Category	Drug/Metabolite
AMK63D	No drugs detected utilizing screening methods.	
BJZFEU	No drugs detected utilizing screening methods.	
BMJP9D	No drugs detected utilizing screening methods.	
CB36JP	No drugs detected utilizing screening methods.	
CB6WEC	No drugs detected utilizing screening methods.	
CKCRDB	Benzodiazepines	Oxazepam
CP2D3P	No drugs detected utilizing screening methods.	
CQWW4Q	No drugs detected utilizing screening methods.	
D2T3XN	No drugs detected utilizing screening methods.	
DAQRGE	No drugs detected utilizing screening methods.	
DDP4CD	No drugs detected utilizing screening methods.	
DPFZCQ	No drugs detected utilizing screening methods.	
DUXX4M	No drugs detected utilizing screening methods.	
DV92FQ	Analgesics	
	CNS Stimulants	Amphetamine
E9MMEA	No drugs detected utilizing screening methods.	
EG6V38	No drugs detected utilizing screening methods.	
F293TP	No drugs detected utilizing screening methods.	
F7YD3N	No drugs detected utilizing screening methods.	
FL8N8L	No drugs detected utilizing screening methods.	
FL9G49	No drugs detected utilizing screening methods.	
FM4Y7A	No drugs detected utilizing screening methods.	
FX9RWP	No drugs detected utilizing screening methods.	
FZCKQN	Analgesics	
	CNS Stimulants	Amphetamine
G7CL6M	No drugs detected utilizing screening methods.	
GAVJWK	Analgesics	Morphine
GAWBT8	No drugs detected utilizing screening methods.	
GDTWKA	No drugs detected utilizing screening methods.	
GDWLML	No drugs detected utilizing screening methods.	
GNFXZJ	Analgesics	Morphine
GQG2R7	No drugs detected utilizing screening methods.	
GRBRXK	No drugs detected utilizing screening methods.	
GRCKU8	No drugs detected utilizing screening methods.	
GRFAVJ	Analgesics	Morphine

TABLE 2 A: Screening Results - Item 2

WebCode	Category	Drug/Metabolite
GVFB39	No drugs detected utilizing screening methods.	
HBMYLL	No drugs detected utilizing screening methods.	
HV72J7	No drugs detected utilizing screening methods.	
J2CWZL	No drugs detected utilizing screening methods.	
J2U6PF	No drugs detected utilizing screening methods.	
JTHR8K	No drugs detected utilizing screening methods.	
JWKHH7	No drugs detected utilizing screening methods.	
K3G4H6	No drugs detected utilizing screening methods.	
K4ECMH	No drugs detected utilizing screening methods.	
K9A7KJ	No drugs detected utilizing screening methods.	
KHYP84	No drugs detected utilizing screening methods.	
KLWDJ6	No drugs detected utilizing screening methods.	
KPR6PG	No drugs detected utilizing screening methods.	
KRJ44E	No drugs detected utilizing screening methods.	
KYGTM6	Miscellaneous	Gamma-hydroxy butyrate (GHB)
LNJ6B2	Analgesics	Methadone
	CNS Stimulants	Benzoylecgonine
LYDMKZ	No drugs detected utilizing screening methods.	
M8AK94	No drugs detected utilizing screening methods.	
M9JUXF	Analgesics	Morphine
MEA3P2	No drugs detected utilizing screening methods.	
MQZWV3	No drugs detected utilizing screening methods.	
MW7M4Z	No drugs detected utilizing screening methods.	
N2G36C	No drugs detected utilizing screening methods.	
NH2T4B	No drugs detected utilizing screening methods.	
NVTKPE	Analgesics	
	CNS Stimulants	Amphetamine
NXGUZ2	No drugs detected utilizing screening methods.	
NZJU2Y	No drugs detected utilizing screening methods.	
PKLZ4X	No drugs detected utilizing screening methods.	
PLFQAD	No drugs detected utilizing screening methods.	
PLGH6Z	No drugs detected utilizing screening methods.	
PWY6CF	No drugs detected utilizing screening methods.	
Q6RTPW	No drugs detected utilizing screening methods.	
QLW2PW	No drugs detected utilizing screening methods.	

TABLE 2 A: Screening Results - Item 2

WebCode	Category	Drug/Metabolite
QUQ8JX	No drugs detected utilizing screening methods.	
R8B8TX	No drugs detected utilizing screening methods.	
RAE279	Analgesics	Morphine
RJ8E8T	No drugs detected utilizing screening methods.	
RNXR6B	Analgesics	Morphine
RRFPX8	No drugs detected utilizing screening methods.	
RRHGTU	No drugs detected utilizing screening methods.	
RUPUBV	No drugs detected utilizing screening methods.	
RYXHNX	No drugs detected utilizing screening methods.	
TWL3UW	Miscellaneous	Gamma-hydroxy butyrate (GHB)
U7PGDA	Analgesics	Morphine
UG9TR8	No drugs detected utilizing screening methods.	
UQXEX7	No drugs detected utilizing screening methods.	
V7N2G3	No drugs detected utilizing screening methods.	
VANCC3	No drugs detected utilizing screening methods.	
VAP69P	No drugs detected utilizing screening methods.	
VK42B9	Analgesics CNS Stimulants	 Amphetamine
VK6U8V	No drugs detected utilizing screening methods.	
WC7QF4	Analgesics	Morphine
WC9JCQ	No drugs detected utilizing screening methods.	
X9NUM7	No drugs detected utilizing screening methods.	
XBPUN4	No drugs detected utilizing screening methods.	
XERVNZ	No drugs detected utilizing screening methods.	
XLBYV4	Analgesics	Morphine
XQM2NQ	No drugs detected utilizing screening methods.	
XRYJ24	No drugs detected utilizing screening methods.	
XZ9B7T	No drugs detected utilizing screening methods.	
YT7HCP	No drugs detected utilizing screening methods.	
ZFXWPP	No drugs detected utilizing screening methods.	
ZGRMV6	No drugs detected utilizing screening methods.	
ZZ73CY	No drugs detected utilizing screening methods.	

Screening Response Summary for Item 2			Participants: 126
Drug Category Totals		Drug/Metabolite Totals	
Analgesics	17	**Morphine**	11
CNS Stimulants	5	**Amphetamine**	4
Miscellaneous	3	**Gamma-hydroxy butyrate (GHB)**	3
No drugs detected utilizing screening methods:	105		

Total number of screening responses provided may be more than the number of participants due to multiple drugs/metabolites being reported.

Confirmatory Results - Item 2

TABLE 2B

Item Scenario:

A 28-year-old male fell unconscious after ingestion of a mouthful of an unknown beverage and was admitted to a medical facility. Urine collection was delayed until 8 hours after he swallowed the substance.

Item Contents and Preparation Concentration: GHB (1500 ng/mL)*

What drugs/metabolites were detected in Item 2?					
WebCode	**Analyte Reported**	**Qualitative Only**	**Reported Concentration**	**Uncertainty**	**Units**
28YUXX	No drugs/metabolites detected utilizing confirmatory methods.				
2GNHTZ	Morphine	✓			
2N8L3N	No drugs/metabolites detected utilizing confirmatory methods.				
4EBPRX	No drugs/metabolites detected utilizing confirmatory methods.				
4K23TL	No drugs/metabolites detected utilizing confirmatory methods.				
63U3JH	No drugs/metabolites detected utilizing confirmatory methods.				
64TBNV	No drugs/metabolites detected utilizing confirmatory methods.				
6JHD7K	No drugs/metabolites detected utilizing confirmatory methods.				
7YPWFV	No drugs/metabolites detected utilizing confirmatory methods.				
98FJYQ	Morphine	✓			
A2N9PT	No drugs/metabolites detected utilizing confirmatory methods.				
A2Q2LF	No drugs/metabolites detected utilizing confirmatory methods.				
AH9YNR	No drugs/metabolites detected utilizing confirmatory methods.				
AJ7BLF	No drugs/metabolites detected utilizing confirmatory methods.				
B7FXMC	No drugs/metabolites detected utilizing confirmatory methods.				
BMJP9D	No drugs/metabolites detected utilizing confirmatory methods.				
CB36JP	No drugs/metabolites detected utilizing confirmatory methods.				
CKCRDB	Oxazepam	✓			

TABLE 2B: Confirmatory Results - Item 2

What drugs/metabolites were detected in Item 2?					
WebCode	**Analyte Reported**	**Qualitative Only**	**Reported Concentration**	**Uncertainty**	**Units**
CP2D3P	No drugs/metabolites detected utilizing confirmatory methods.				
CQWW4Q	No drugs/metabolites detected utilizing confirmatory methods.				
D2T3XN	No drugs/metabolites detected utilizing confirmatory methods.				
DDP4CD	No drugs/metabolites detected utilizing confirmatory methods.				
DHGDLC	No drugs/metabolites detected utilizing confirmatory methods.				
DUXX4M	No drugs/metabolites detected utilizing confirmatory methods.				
DV92FQ	No drugs/metabolites detected utilizing confirmatory methods.				
F7YD3N	No drugs/metabolites detected utilizing confirmatory methods.				
FL8N8L	No drugs/metabolites detected utilizing confirmatory methods.				
FZCKQN	No drugs/metabolites detected utilizing confirmatory methods.				
GAVJWK	MORPHINE	✓			
GDTWKA	No drugs/metabolites detected utilizing confirmatory methods.				
GDWLML	No drugs/metabolites detected utilizing confirmatory methods.				
GNFXZJ	morphine	✓			
GRCKU8	No drugs/metabolites detected utilizing confirmatory methods.				
GRFAVJ	morphine	✓			
GVFB39	No drugs/metabolites detected utilizing confirmatory methods.				
GX3U47	No drugs/metabolites detected utilizing confirmatory methods.				
J2U6PF	No drugs/metabolites detected utilizing confirmatory methods.				
JTHR8K	No drugs/metabolites detected utilizing confirmatory methods.				

TABLE 2B: Confirmatory Results - Item 2

What drugs/metabolites were detected in Item 2?					
WebCode	**Analyte Reported**	**Qualitative Only**	**Reported Concentration**	**Uncertainty**	**Units**
K4ECMH	No drugs/metabolites detected utilizing confirmatory methods.				
K9A7KJ	No drugs/metabolites detected utilizing confirmatory methods.				
KHYP84	No drugs/metabolites detected utilizing confirmatory methods.				
KLWDJ6	No drugs/metabolites detected utilizing confirmatory methods.				
KPR6PG	No drugs/metabolites detected utilizing confirmatory methods.				
KRJ44E	No drugs/metabolites detected utilizing confirmatory methods.				
KYGTM6	Gamma-hydroxy butyrate	✓			
LNJ6B2	No drugs/metabolites detected utilizing confirmatory methods.				
M8AK94	No drugs/metabolites detected utilizing confirmatory methods.				
M9JUXF	Morphine	✓			
MEA3P2	No drugs/metabolites detected utilizing confirmatory methods.				
MW7M4Z	No drugs/metabolites detected utilizing confirmatory methods.				
NH2T4B	No drugs/metabolites detected utilizing confirmatory methods.				
NVTKPE	No drugs/metabolites detected utilizing confirmatory methods.				
NXGUZ2	Lorazepam	✓			
NZJU2Y	No drugs/metabolites detected utilizing confirmatory methods.				
PLFQAD	No drugs/metabolites detected utilizing confirmatory methods.				
Q6RTPW	No drugs/metabolites detected utilizing confirmatory methods.				
QLW2PW	No drugs/metabolites detected utilizing confirmatory methods.				
R8B8TX	No drugs/metabolites detected utilizing confirmatory methods.				
RAE279	Morphine				

TABLE 2B: Confirmatory Results - Item 2

What drugs/metabolites were detected in Item 2?					
WebCode	**Analyte Reported**	**Qualitative Only**	**Reported Concentration**	**Uncertainty**	**Units**
RJ8E8T	No drugs/metabolites detected utilizing confirmatory methods.				
RNXR6B	Morphine	✓			
RRFPX8	No drugs/metabolites detected utilizing confirmatory methods.				
U7PGDA	Morphine	✓			
UG9TR8	No drugs/metabolites detected utilizing confirmatory methods.				
UQXEX7	No drugs/metabolites detected utilizing confirmatory methods.				
V7N2G3	No drugs/metabolites detected utilizing confirmatory methods.				
VANCC3	No drugs/metabolites detected utilizing confirmatory methods.				
VK42B9	No drugs/metabolites detected utilizing confirmatory methods.				
WC7QF4	morphine	✓			
XBPUN4	No drugs/metabolites detected utilizing confirmatory methods.				
XLBYV4	Morphine	✓			
XQM2NQ	No drugs/metabolites detected utilizing confirmatory methods.				
XRYJ24	No drugs/metabolites detected utilizing confirmatory methods.				
XZ9B7T	No drugs/metabolites detected utilizing confirmatory methods.				
YT7HCP	Gamma-Hydroxy Butyrate (GHB)		2.2	0.4	mg/L
ZZ73CY	No drugs/metabolites detected utilizing confirmatory methods.				

Confirmatory Response Summary for Item 2	**Participants: 76**
GHB:	2
Other Identified Drugs/Metabolites:	13
No Drugs/Metabolites Detected Utilizing Confirmatory Methods:	62

Total number of confirmatory responses provided may be more than the number of participants due to multiple drugs/metabolites being reported.

Raw Data - Item 2

TABLE 2C

Item 2 Raw Data - GHB
Preparation concentration: 1500 ng/mL

WebCode	List of Raw Data determinations (ng/mL)	
YT7HCP	2.2800	2.2000

Statistical Analysis for Item 2 - GHB

Please note: Statistical analysis has not been provided due to the low number of raw data responses.

Reporting Procedures - Item 2

TABLE 2D - Item 2

WebCode	Quantitative Reporting Procedures
RAE279	A single determination.

Response Summary for Item 2	Participants: 1
A single determination:	1 (100.0%)
The mean of duplicate/several determinations:	0 (0.0%)
Other:	0 (0.0%)

Methods of Analysis - Item 2

TABLE 2E - Item 2

WebCode	Method	Screening	Confirmatory	Quantitation
28YUXX	Immunoassay	✓		
	LC/MS/MS	✓	✓	
	GC/MS	✓	✓	
2GLQ2K	Immunoassay	✓		
	LC/Orbitrap/MS	✓		
2GNHTZ	Immunoassay	✓		
	GC/MS		✓	
	LC/MS/MS		✓	
2MQPAN	LC/MS/MS	✓		
2N8L3N	Immunoassay	✓		
	GC/MS		✓	
2VQ8RL	LC-HRAM-MS	✓		
	LC/MS/MS	✓		
43ZRVP	Immunoassay	✓		
4BBUGP	Immunoassay	✓		
4EBPRX	Immunoassay	✓		
	LC-QTOF-MS	✓		
	GC/MS	✓	✓	
4K23TL	Immunoassay			
	GC/MS	✓	✓	
	LC/MS/MS		✓	
	LC-QTOF-MS	✓		
4UPTJJ	LC-QTOF-MS	✓		
	LC/MS/MS	✓		
63D7RH	Immunoassay	✓		
	GC/MS	✓		
	LC/MS	✓		✓
63U3JH	GC/MS		✓	
64TBNV	Immunoassay	✓		
	GC/MS		✓	
	LC/MS/MS		✓	
6C3Y2U	Immunoassay	✓		
	GC/MS	✓		
	LC/MS/MS	✓		

TABLE 2E: Methods of Analysis - Item 2

WebCode	Method	Screening	Confirmatory	Quantitation
6JHD7K	Immunoassay	✓		
	GC/MS		✓	
	LC/MS/MS		✓	
	GC/MS/MS		✓	
7YPWFV	Immunoassay	✓		
	LC-QTOF-MS	✓		
	GC/MS	✓	✓	
8A7XDG	Immunoassay	✓		
8F9CWX	Immunoassay	✓		
	GC/MS	✓		
	LC/MS/MS	✓		✓
8N8UFF	Immunoassay	✓		
8QUDGD	LC-QTOF-MS	✓		
98FJYQ	LC-HRMS/MS	✓	✓	
9XM73C	GC/MS	✓	✓	
	LC-QTOF	✓		
A2N9PT	Immunoassay	✓		
	GC/MS		✓	
A2Q2LF	Immunoassay	✓		
	GC/MS	✓	✓	
	LC/MS/MS	✓		
AH9YNR	Immunoassay	✓		
	GC/MS		✓	
AHBRKE	LC/MS/MS	✓	✓	
AJ7BLF	Immunoassay	✓		
	GC/MS		✓	
AMJD7Q	LC-HRMS/MS	✓	✓	
AMK63D	Immunoassay	✓		
	GC/MS	✓		
	LC/MS/MS	✓		✓
B7FXMC	GC/MS		✓	
BJZFEU	Immunoassay	✓		
	GC/MS	✓		
	LC/MS/MS	✓		✓

TABLE 2E: Methods of Analysis - Item 2

WebCode	Method	Screening	Confirmatory	Quantitation
BMJP9D	Immunoassay	✓		
	LC/MS	✓	✓	
	GC/MS	✓	✓	
CB36JP	Immunoassay	✓		
	LC/MS/MS		✓	
CB6WEC	Immunoassay	✓		
CKCRDB	LC/MS/MS		✓	
	Immunoassay	✓		
CP2D3P	Immunoassay	✓		
	LC-QTOF-MS	✓		
	GC/MS		✓	
CQWW4Q	Immunoassay	✓		
	LC-QTOF	✓		
	GC/MS	✓		
D2T3XN	Immunoassay	✓		
	LC/MS/MS		✓	
DAQRGE	Immunoassay	✓		
	LC/MS/MS	✓	✓	✓
	GC/MS	✓	✓	✓
DDP4CD	Immunoassay	✓		
	GC/MS	✓	✓	
DHGDLC	GC/MS		✓	
DPFZCQ	Immunoassay	✓		
	GC/MS	✓		
	LC/MS/MS	✓		✓
DUXX4M	Immunoassay	✓		
	LC/MS/MS	✓	✓	
	GC/MS	✓	✓	
DV92FQ	Immunoassay	✓		
	LC/MS/MS		✓	
E9MMEA	Immunoassay	✓		
	LC/MS/MS	✓		
EG6V38	LC-QTOF-MS	✓		
F293TP	Immunoassay	✓		
	GC/MS	✓		
	LC/MS	✓		✓

TABLE 2E: Methods of Analysis - Item 2

WebCode	Method	Screening	Confirmatory	Quantitation
F7YD3N	Immunoassay	✓		
	GC/MS		✓	
	LC-QTOF		✓	
FL9G49	LC/MS/MS	✓		
	GC/MS	✓		
FM4Y7A	Immunoassay	✓		
FX9RWP	Immunoassay	✓		
	GC/MS	✓		
	LC/MS/MS	✓		✓
FZCKQN	Immunoassay	✓		
	GC/MS		✓	
G7CL6M	LC-QTOF-MS	✓		
GAVJWK	LC-HRMS/MS	✓		
	GC/MS		✓	
GAWBT8	Immunoassay	✓		
	GC/MS	✓		
	LC/MS/MS	✓		✓
GDTWKA	LC/MS/MS	✓	✓	✓
GDWLML	Immunoassay	✓	✓	
GNFXZJ	LC-HRAMS	✓	✓	
GQG2R7	Immunoassay	✓		
	GC/MS	✓		
	LC/MS/MS	✓		✓
GRBRXK	Immunoassay	✓		
	LC/MS/MS	✓		
GRCKU8	Immunoassay	✓		
	LC/MS/MS	✓		
	GC/MS	✓		
GRFAVJ	High Resolution Accurate Mass	✓	✓	
GVFB39	Immunoassay	✓		
	LC/MS/MS	✓	✓	
	GC/MS	✓	✓	
GX3U47	GC/MS		✓	

TABLE 2E: Methods of Analysis - Item 2

WebCode	Method	Screening	Confirmatory	Quantitation
HBMYLL	Immunoassay	✓		
	GC/MS	✓		
	LC/MS/MS	✓		✓
HV72J7	Immunoassay	✓		
J2CWZL	Immunoassay	✓		
	GC/MS	✓		
	LC/MS/MS	✓		✓
J2U6PF	Immunoassay	✓		
	GC/MS		✓	
	LC/MS/MS		✓	
JTHR8K	Immunoassay	✓		
	LC-QTOF	✓		
	GC/MS	✓		
JWKHH7	GC/MS	✓		
	LC/MS/MS	✓		
K3G4H6	LC-QTOF	✓		
K4ECMH	GC/MS	✓	✓	
K9A7KJ	LC/MS/MS	✓	✓	✓
	LC-QTOF-MS	✓	✓	
KHYP84	Immunoassay	✓		
	LC/MS/MS	✓		
	GC/MS	✓		
KLWDJ6	Immunoassay	✓		
	LC-QTOF	✓	✓	
KPR6PG	Immunoassay	✓		
	GC/MS		✓	
KRJ44E	Immunoassay	✓		
	LC/MS/MS		✓	
	GC/MS		✓	
KYGTM6	Immunoassay	✓		
	LC-QTOF	✓		
	GC/MS		✓	
	Head Space - GC/MS		✓	
LNJ6B2	LC-QTOF-MS	✓		
	LC/MS/MS	✓	✓	

TABLE 2E: Methods of Analysis - Item 2

WebCode	Method	Screening	Confirmatory	Quantitation
LYDMKZ	Immunoassay	✓		
	GC/MS	✓		
	LC/MS/MS	✓		✓
M8AK94	GC/MS		✓	
M9JUXF	LC/MS/MS	✓	✓	
MEA3P2	Immunoassay	✓		
	LC-QTOF	✓		
	GC/MS	✓	✓	
	LC/MS/MS		✓	
MQZWV3	Immunoassay	✓		
N2G36C	Immunoassay	✓		
	LC/MS	✓		
	GC/MS	✓		
NH2T4B	Immunoassay	✓		
	LC/MS/MS		✓	
	GC/MS		✓	
NVTKPE	Immunoassay	✓		
	LC/MS/MS		✓	✓
NXGUZ2	Immunoassay	✓		
	GC/MS		✓	
NZJU2Y	LC/MS/MS	✓	✓	
	LC-QTOF-MS	✓		
PKLZ4X	Immunoassay	✓		
	GC/MS	✓		
	LC/MS/MS	✓		✓
PLFQAD	Immunoassay	✓		
	GC/MS	✓		
PLGH6Z	Immunoassay	✓		
PWY6CF	Immunoassay	✓		
	LC/MS/MS	✓		✓
	GC/MS	✓		
Q6RTPW	GC/MS	✓	✓	
	LC-QTOF	✓	✓	
	Immunoassay	✓		
	GC-MS/MS	✓		

TABLE 2E: Methods of Analysis - Item 2

WebCode	Method	Screening	Confirmatory	Quantitation
QLW2PW	GC/MS	✓		
	Immunoassay	✓		
	LC/MS/MS		✓	
QUQ8JX	Immunoassay	✓		
	LC/MS/MS		✓	
R8B8TX	Immunoassay	✓		
	LC/MS/MS	✓	✓	
	GC/MS		✓	
RAE279	LC-QTOF-MS	✓		
	GC/MS		✓	✓
RJ8E8T	GC/MS	✓		
RNXR6B	LC/MS/MS	✓	✓	
RRFPX8	LC/MS/MS	✓	✓	
	GC/MS	✓	✓	
	Immunoassay	✓		
RRHGTU	LC-QTOF	✓		
RUPUBV	Immunoassay	✓		
	GC/MS	✓		
	LC/MS/MS	✓		✓
RYXHNX	Immunoassay	✓		
TWL3UW	GC/MS	✓		
U7PGDA	LC/MS/MS	✓	✓	
UG9TR8	Immunoassay	✓		
	LC/MS/MS	✓		
UQXEX7	Immunoassay	✓		
	LC/MS/MS	✓	✓	
	GC/MS		✓	
V7N2G3	Immunoassay	✓		
	GC/MS	✓	✓	
	LC/MS/MS	✓	✓	
VANCC3	Immunoassay	✓		
	LC/MS/MS	✓	✓	
	GC/MS	✓	✓	
VAP69P	LC/MS/MS	✓		
	GC/MS	✓		
	Rapid Chromatographic Immunoassay	✓		

TABLE 2E: Methods of Analysis - Item 2

WebCode	Method	Screening	Confirmatory	Quantitation
VK42B9	Immunoassay	✓		
	LC/MS/MS		✓	
VK6U8V	LC/MS/MS	✓		
WC7QF4	LC-HRMS/MS	✓	✓	
WC9JCQ	Immunoassay	✓		
	GC/MS	✓		
	LC/MS/MS	✓		
X9NUM7	Immunoassay	✓		
	GC/MS	✓		
	LC/MS/MS	✓		✓
XBPUN4	Immunoassay	✓		
	GC/MS	✓		
XERVNZ	Immunoassay	✓		
	GC/MS	✓		
	LC/MS/MS	✓		
XLBYV4	LC-High Resolution Tandem Mass Spectrometry	✓		
	GC/MS		✓	
XQM2NQ	Immunoassay	✓		
	GC/MS	✓		
	LC/MS/MS	✓		
XRYJ24	LC/MS/MS	✓	✓	
	GC/MS		✓	
XZ9B7T	GC/MS	✓		
	LC/MS/MS	✓		
YT7HCP	Immunoassay	✓		
	GC/MS	✓		
	LC/MS/MS	✓	✓	✓
ZFXWPP	Immunoassay	✓		
ZGRMV6	Immunoassay	✓		
ZZ73CY	Immunoassay	✓		
	LC/MS	✓		
	GC/MS	✓		

Response Summary for Item 2 - Methods of Analysis			Participants: 127
	Screening	**Confirmatory**	**Quantitation**
Immunoassay:	87	1	0
GC/MS:	53	44	2
LC/MS:	5	1	2
LC/MS/MS:	51	35	19
LC-QTOF:	9	3	0
LC-QTOF-MS:	12	1	0
Other:	11	7	0

Additional Comments for Item 2

TABLE 2F

WebCode	Item Comments
28YUXX	Internal Standard - mepivacaine
2GNHTZ	Delta-9 THC and Delta-9 Carboxy THC not confirmed by LCMSMS
4EBPRX	Internal standards used included mepivacaine (LC-QTOF-MS and GC/MS) and nalorphine (GC/MS). Morphine was seen but did not pass criteria for reporting. Screening limit of detection was 5 ng/mL for morphine. Confirmation limit of detection was 50 ng/mL for morphine.
4UPTJJ	The GHB level from the screen was consistent with it being present as an endogenous compound
6C3Y2U	Mepivacaine is the internal standard used for GCMS and LCMSMS tests.
7YPWFV	Internal standards used included mepivacaine (LC-QTOF-MS and GC/MS) and nalorphine (GC/MS). Morphine was seen but did not pass criteria for reporting. Screening limit of detection was 5 ng/mL for morphine. Confirmation limit of detection was 50 ng/mL for morphine.
8A7XDG	Creatinine is Normal.
8N8UFF	The laboratory only screens for the following drugs/drug classes utilizing the Enzyme Multiplied Immunoassay Technique (EMIT): amphetamines, benzodiazepines, cannabinoids, cocaine, opiates, and pcp.
98FJYQ	Internal Standard: mepivacaine
9XM73C	ESTAZOLAM WAS USED AS INTERNAL ESTANDAR
A2Q2LF	Methanol was found in the sample using GC-HS method with concentration 130 mg/dL.
AHBRKE	Caffeine and Paracetamol were detected.
AMJD7Q	Morphine was detected in confirmation but not reported due to weak a mass spectrum. Internal Standards: Mepivacaine/Mephobarbital
AMK63D	GHB Quantitative screen results are below LOQ (2.0 mg/L), therefore reported as not detected. GHB-D6 used for internal standard. Promazine used for internal standard in GC/MS drug screen.
B7FXMC	Internal standard: Flurazepam
BMJP9D	Mepivacaine Internal Standard
CB6WEC	Creatinine is normal.
CKCRDB	Immunoassay screening kits from Vaxpert, INC were used for screening with Limit of Detection of 300 ng/ml and the item tested positive for oxazepam. LC-MS/MS was used for confirmatory analysis.
CP2D3P	Internal standard used Mepivacaine. Acetaminophen indicated not reported.
CQWW4Q	ELISA negative. Internal standards used for LC-QTOF test: Fentanyl-D5, Imipramine-D3, MDMA-D5, Methaqualone-D7, Triazolam-D4. Negative for GHB by GC/MS. Caffeine detected but not confirmed.
DAQRGE	No drug or drug metabolite detected in item 2 using the above specified methods of analysis.
DHGDLC	Internal Standard: SKF-525A

TABLE 2F: Additional Comments for Item 2

WebCode	Item Comments
DV92FQ	This item screened presumptive positive for amphetamine and opiates using an immunoassay screen. Confirmation testing was performed for amphetamine and this drug was not detected. Our laboratory does not currently have a validated method for the confirmation of opiates so confirmation testing for this result was not performed. Scope for Drug Screening: Immunoassay Drug Screen (Enzyme Linked Immunosorbent Assay- ELISA): amphetamine, barbiturates, benzodiazepines, buprenorphine, cocaine/benzoylecgonine, cannabinoids, carisoprodol, fentanyl, methadone, methamphetamine, opiates, oxycodone/oxymorphone, phencyclidine (PCP), tramadol, zolpidem
F7YD3N	Internal Standards used: Fentanyl-D5, Imipramine-D3, MDMA-D5, Methaqualong-D7, Triazolam-D4. GHB analysis performed but GHB was not confirmed.
FM4Y7A	All substances are detected using immunoassay qualitative testing. Cutoffs are as follows: 6AM-10 ng/mL, Amphetamine- 1,000 ng/mL, Benzodiazepine- 200 ng/mL, COC- 300 ng/mL, Creatinine - 20 mg/dL, THC- 50 ng/mL, Opiates- 300 ng/mL, Oxycodone- 100 ng/mL, Fentanyl- 1 ng/mL, Methamphetamine- 500 ng/mL.
FZCKQN	Opiates and Amphetamine assays indicated positive by ELISA. Our current GC/MS method does not extract all opioids and opiates and our LC/MS-MS method that is used for opioids/opiates is only validated for blood. SKF 525-A and NPA are the internal standards used for basic drug screen by GC/MS.
GAVJWK	Mepivacaine is the internal standard in the screen. Nalorphine is the internal standard in the confirmation test, which was also a quant on a scale of 12.5-200 μg/L, but analyte only reported qualitative due to nature of the sample.
GAWBT8	Internal Standard: Promazine/Prazepam/GHB-d6
GDTWKA	Panel includes only the following analytes: Fentanyl, Hydromorphone, MDEA, MDPV, Sufentanil, Xylazine
GQG2R7	Internal standards used were promazine for the Drug Screen analysis, prazepam for the Benzodiazepine confirmation analysis, and GHB-d6 for the GHB Quantitative Screen analysis. The limit of detection for the GHB Quantitation analysis is 2mg/L.
GRCKU8	Sample was not amenable to GHB extraction method.
GRFAVJ	Internal standards: Mepivacaine, Mephobarbital
GVFB39	Internal standard used was Mepivacaine.
GX3U47	Internal standard: flurazepam/THC-d9 Sample preparation: L/L extraction. The final extract is derivatized with BSTFA, and analyzed by GC/MS.
J2U6PF	mepivacaine used as internal standard
J2VXL3	Due to submission requirements not being met (no criminal charges), this sample was not analyzed.
JTHR8K	Internal standards used for LC-QTOF analysis: Fentanyl-D5, Imipramine-D3, MDMA-D5, Methaqualone-D7, Triazolam-D4.
JVPZG6	Item not tested.
K3G4H6	Screened in positive ion mode.
KHYP84	internal standard: mepivacaine
KPR6PG	Internal standards used were SKF-525A and hexobarbital. confirmation analysis performed 03/17/2025
KYGTM6	Methanol detected
LNJ6B2	LOD for Benzoylecgonine confirmation: 25 ng/mL LOD for Methadone confirmation: 12.5 ng/mL

TABLE 2F: Additional Comments for Item 2

WebCode	Item Comments
LYDMKZ	Drug Screen Internal Standard used was Promazine. GHB Quantitation Internal Standard used was GHB-D6. Benzodiazepine Internal Standard used was Prazepam.
M9JUXF	Morphine was right at LOD of 5 ng/mL
MQZWV3	All substances are detected using immunoassay qualitative testing. Cutoffs are as follows: 6AM-10 ng/mL, Amphetamine- 1,000 ng/mL, Benzodiazepine- 200 ng/mL, COC- 300 ng/mL, Creatinine - 20 mg/dL, THC- 50 ng/mL, Opiates- 300 ng/mL, Oxycodone- 100 ng/mL, Fentanyl- 1 ng/mL, Methamphetamine- 500 ng/mL.
N2G36C	Internal Standard: Mepivacaine
NE4A4X	Due to submission requirements not being met (no criminal charges), this sample was not analyzed
NH2T4B	internal standard used: mepivacaine
NH3LZX	Due to submission requirements not being met (no criminal charges), this sample was not analyzed.
NVTKPE	The laboratory does not currently have a validated method for opiates, so the presumptive positive result could not be confirmed.
PLFQAD	N-Propylamphetamine, Mepivacaine, and Hexobarbital were used as Internal Standards.
Q6RTPW	A mixed internal standard is used with LC-QTOF analysis. Internal standards include, D3-Morphine, D3-Hydromorphone, D3-Oxycodone, D5-Methylamphetamine, D3-Benzoylecgonine, D5-Doxylamine, D3-Tramadol, D3-Cocaine, D6-Zolpidem, D5-Fentanyl, D4-Buprenorphine, D3-Nortriptyline, D3-Methadone, D3-Sertraline, D9-25I-NB2OMe, D5-Desmethyldiazepam. Non-hydrolysed and hydrolysed urine was analysed with LC-QTOF. A mixed internal standard is used with GC/MS analysis. Internal standards include, Mephentermine, Acepromazine, Brucine. Sample also screened for GHB by GC-MS/MS, screened for cannabinoids by immunoassay and screened for NPS by LC-QTOF.
QBCXFC	Item not tested
R8B8TX	Internal standard: Mepivacaine for both LC/MS/MS and GC/MS Caffeine and ibuprofen detected, both not in list of possible sample analytes
RAE279	Per policy, we do report these urine results qualitatively. However, the confirmatory test for morphine does produce a quant that came back at 13.17 μg/L Internal Standards used for LC-QTOF-MS: Mepivacaine and Mephobarbital Internal Standard used for GC/MS: Mepivacaine and Nalorphine
RNXR6B	Morphine - LOD 5ng/ml; ISTD Morphine -d6
RRFPX8	Mepivacaine used as internal standard
RUPUBV	Drug Screen ISTD - Promazine Benzodiazepine Confirm ISTD - Prazepam GHB Quantitative Screen ISTD - GHB D6
RYXHNX	All substances are detected using immunoassay qualitative testing. Cutoffs are as follows: 6AM-10 ng/mL, Amphetamine- 1,000 ng/mL, Benzodiazepine- 200 ng/mL, COC- 300 ng/mL, Creatinine - 20 mg/dL, THC- 50 ng/mL, Opiates- 300 ng/mL, Oxycodone- 100 ng/mL, Fentanyl- 1 ng/mL, Methamphetamine- 500 ng/mL.
TWL3UW	Acidification, and extraction with DCM with derivatization . Sample volume : 0.6 mL. Derivatization : BSTFA (50 uL) + EtOAc (100 uL)
U7PGDA	Morphine: ISTD Morphine-d6; LOD 5ng/mL
UQXEX7	Internal Standard: mepivacaine
V7N2G3	Internal standard used was mepivacaine.
VANCC3	I.S. Mepivacaine

TABLE 2F: Additional Comments for Item 2

WebCode	Item Comments
VAP69P	iCassette (THC) test device was used to screen for THC, referred to in [Table 2E: Methods of Analysis] as rapid chromatographic immunoassay.
VK42B9	Item 2 screened positive for opiates and amphetamine. Confirmatory testing was carried out for amphetamine and no substances were identified. Opiates cannot be confirmed by the [Laboratory].
VXTYER	Due to submission requirements not being met (no criminal charges), this sample was not analyzed.
WC7QF4	LC-HRMS/MS (liquid chromatography high resolution accurate mass spectrometry). Instruments used were a Thermo Orbitrap Q-Exploris 120 and a Q-Exactive model. Internal standards were mepivacaine and mephobarbital.
WC9JCQ	Immunoassay screening is for drug classes, not specific drugs. GC/MS screening is for specific drugs. Internal standard for GC/MS drug screen is Promazine. Internal standard for GC/MS Lorazepam screening is Prazepam. Internal standard for LC/MS/MS GHB quantitative screen is GHB-D6. LOD for GHB is 2 mg/L.
XBPUN4	Mepivacaine, n-Propylamphetamine and Hexobarbital were used as internal standards.
XERVNZ	Caffeine was potentially detected, but in accordance with our standard operating procedure it was not confirmed in the absence of a specific request. Mepivacaine was used as internal standard in all LC and GC analyses.
XLBYV4	Internal Standards used: Mepivacaine (screening), Nalorphine (confirmatory).
XQM2NQ	Mepivacaine was the internal standard used for GCMS and LCMSMS testing.
YT7HCP	1. Internal Standards used: Promazine; Prazepam; GHB-d6. 2. Per procedure, concentrations below 10.0 mg/L are considered "Not Detected".
ZFXWPP	All substances are detected using immunoassay qualitative testing. Cutoffs are as follows: 6AM-10 ng/mL, Amphetamine- 1,000 ng/mL, Benzodiazepine- 200 ng/mL, COC- 300 ng/mL, Creatinine - 20 mg/dL, THC- 50 ng/mL, Opiates- 300 ng/mL, Oxycodone- 100 ng/mL, Fentanyl- 1 ng/mL, Methamphetamine- 500 ng/mL.

Screening Results - Item 3

TABLE 3 A

Item Scenario:

A 35 year old woman arrived at a police station at 8:00 in the morning. She had been consuming alcohol with a male she engaged with on a dating app the night before, and had large gaps in her memory upon waking up. The woman awoke with bruises she could not explain, and believed she may have been sexually assaulted. A urine sample was collected soon after her arrival at the station.

Item Contents and Preparation Concentration: Nortriptyline (600 ng/mL)
Phenobarbital (1000 ng/mL)

WebCode	Category	Drug/Metabolite
28YUXX	Antidepressants	Nortriptyline
	Barbiturates	Phenobarbital
2GLQ2K	Antidepressants	Nortriptyline
	Barbiturates	Phenobarbital
2GNHTZ	Cannabinoids	
2MQPAN	Antidepressants	Nortriptyline
2N8L3N	Antidepressants	Nortriptyline
2VQ8RL	Antidepressants	Nortriptyline
	Barbiturates	Phenobarbital
43ZRVP	Barbiturates	Phenobarbital
4BBUGP	Barbiturates	Phenobarbital
4UPTJJ	Antidepressants	Nortriptyline
	Barbiturates	Phenobarbital
63D7RH	Antidepressants	Amitriptyline
		Nortriptyline
64TBNV	Barbiturates	
6C3Y2U	Antidepressants	Nortriptyline
	Barbiturates	
6JHD7K	No drugs detected utilizing screening methods.	
7YPWFV	Antidepressants	Nortriptyline
	Barbiturates	
88HN2V	Barbiturates	
8A7XDG	No drugs detected utilizing screening methods.	
8F9CWX	Antidepressants	Nortriptyline
8N8UFF	No drugs detected utilizing screening methods.	
8QUDGD	No drugs detected utilizing screening methods.	
98FJYQ	Antidepressants	Nortriptyline
	Barbiturates	Phenobarbital

TABLE 3 A: Screening Results - Item 3

WebCode	Category	Drug/Metabolite
9XM73C	Antidepressants	Nortriptyline
	Barbiturates	Phenobarbital
A2N9PT	Antidepressants	
	Barbiturates	
A2Q2LF	Antidepressants	
	Barbiturates	
AH9YNR	Barbiturates	Secobarbital
AHBRKE	Antidepressants	Nortriptyline
AJ7BLF	Barbiturates	
AMJD7Q	Antidepressants	Nortriptyline
	Barbiturates	Phenobarbital
AMK63D	Antidepressants	Nortriptyline
BJZFEU	Antidepressants	Nortriptyline
BMJP9D	Antidepressants	Nortriptyline
	Barbiturates	Phenobarbital
CB36JP	Antidepressants	
	Barbiturates	
CB6WEC	No drugs detected utilizing screening methods.	
CKCRDB	Barbiturates	Phenobarbital
CP2D3P	Antidepressants	Nortriptyline
	Barbiturates	Phenobarbital
CQWW4Q	Antidepressants	
	Barbiturates	
D2T3XN	Antidepressants	
	Barbiturates	
DAQRGE	Barbiturates	Phenobarbital
DDP4CD	No drugs detected utilizing screening methods.	
DPFZCQ	Antidepressants	Nortriptyline
DUXX4M	Antidepressants	Nortriptyline
	Barbiturates	
DV92FQ	Barbiturates	
	CNS Stimulants	Amphetamine
E9MMEA	Antidepressants	Nortriptyline
EG6V38	No drugs detected utilizing screening methods.	
F293TP	Antidepressants	Nortriptyline

TABLE 3 A: Screening Results - Item 3

WebCode	Category	Drug/Metabolite
F7YD3N	Antidepressants	
	Barbiturates	
FL8N8L	Antidepressants	
	Barbiturates	
FL9G49	Antidepressants	Nortriptyline
	Barbiturates	Phenobarbital
FM4Y7A	No drugs detected utilizing screening methods.	
FX9RWP	Antidepressants	Nortriptyline
FZCKQN	Barbiturates	
	Miscellaneous	
G7CL6M	No drugs detected utilizing screening methods.	
GAVJWK	Antidepressants	Nortriptyline
GAWBT8	Antidepressants	Nortriptyline
GDTWKA	No drugs detected utilizing screening methods.	
GDWLML	No drugs detected utilizing screening methods.	
GNFXZJ	Antidepressants	Nortriptyline
GQG2R7	Antidepressants	Nortriptyline
GRBRXK	Antidepressants	
	Barbiturates	
GRCKU8	Antidepressants	Nortriptyline
	Barbiturates	Phenobarbital
GRFAVJ	Antidepressants	Nortriptyline
	Barbiturates	Phenobarbital
GVFB39	Antidepressants	Nortriptyline
	Barbiturates	
HBMYLL	Antidepressants	Nortriptyline
HV72J7	Barbiturates	
J2CWZL	Antidepressants	Nortriptyline
J2U6PF	Barbiturates	
JTHR8K	Antidepressants	
	Barbiturates	
JWKHH7	Antidepressants	Nortriptyline
	Barbiturates	Phenobarbital
K3G4H6	Antidepressants	Nortriptyline
K4ECMH	Antidepressants	Nortriptyline
	Barbiturates	Phenobarbital

TABLE 3 A: Screening Results - Item 3

WebCode	Category	Drug/Metabolite
K9A7KJ	Antidepressants	Nortriptyline
KHYP84	Barbiturates	
KLWDJ6	Antidepressants	Nortriptyline
	Barbiturates	Phenobarbital
KPR6PG	Antidepressants	
	Barbiturates	
KRJ44E	Barbiturates	
KYGTM6	Antidepressants	Nortriptyline
LNJ6B2	Antidepressants	Nortriptyline
LQN3F3	Antidepressants	Nortriptyline
	Barbiturates	Phenobarbital
LYDMKZ	Antidepressants	Nortriptyline
M8AK94	Antidepressants	Nortriptyline
	Barbiturates	Phenobarbital
M9JUXF	Antidepressants	Nortriptyline
	Barbiturates	Phenobarbital
MQZWV3	No drugs detected utilizing screening methods.	
MW7M4Z	Barbiturates	Phenobarbital
N2G36C	Antidepressants	Nortriptyline
	Barbiturates	
NH2T4B	Barbiturates	
NH3LZX	Antidepressants	Nortriptyline
	Barbiturates	Secobarbital
NVTKPE	Barbiturates	
	CNS Stimulants	Amphetamine
NXGUZ2	No drugs detected utilizing screening methods.	
NZJU2Y	Antidepressants	Nortriptyline
PKLZ4X	Antidepressants	Nortriptyline
PLFQAD	Antidepressants	Amitriptyline
		Nortriptyline
	Barbiturates	Phenobarbital
PLGH6Z	Barbiturates	
PWY6CF	Antidepressants	Nortriptyline
Q6RTPW	Antidepressants	Nortriptyline
QBCXFC	Antidepressants	Nortriptyline
	Barbiturates	

TABLE 3 A: Screening Results - Item 3

WebCode	Category	Drug/Metabolite
QLW2PW	Antidepressants	Nortriptyline
	Barbiturates	
QUQ8JX	Antidepressants	Nortriptyline
R8B8TX	Antidepressants	Nortriptyline
	Barbiturates	
RAE279	Antidepressants	Nortriptyline
	Barbiturates	Phenobarbital
RJ8E8T	Antidepressants	Amitriptyline
	Barbiturates	Phenobarbital
RNXR6B	Barbiturates	Phenobarbital
RRFPX8	Antidepressants	Nortriptyline
	Barbiturates	
RRHGTU	Antidepressants	Nortriptyline
RUPUBV	Antidepressants	Nortriptyline
RYXHNX	No drugs detected utilizing screening methods.	
TWL3UW	Barbiturates	Phenobarbital
U7PGDA	Barbiturates	Phenobarbital
UG9TR8	Antidepressants	
	Barbiturates	
UQXEX7	Antidepressants	Nortriptyline
	Barbiturates	
V7N2G3	Antidepressants	Nortriptyline
	Barbiturates	
VANCC3	Antidepressants	Nortriptyline
	Barbiturates	
VAP69P	Antidepressants	Nortriptyline
	Barbiturates	Phenobarbital
VK42B9	Barbiturates	
	CNS Stimulants	Amphetamine
VK6U8V	Antidepressants	Nortriptyline
WC7QF4	Antidepressants	Nortriptyline
	Barbiturates	Phenobarbital
WC9JCQ	Antidepressants	Nortriptyline
X9NUM7	Antidepressants	Nortriptyline

TABLE 3 A: Screening Results - Item 3

WebCode	Category	Drug/Metabolite
XBPUN4	Antidepressants	Amitriptyline
		Nortriptyline
	Barbiturates	Phenobarbital
XERVNZ	Antidepressants	Nortriptyline
	Barbiturates	Phenobarbital
XLBYV4	Antidepressants	Nortriptyline
	Barbiturates	Phenobarbital
XQM2NQ	Antidepressants	Nortriptyline
	Barbiturates	Phenobarbital
XRYJ24	No drugs detected utilizing screening methods.	
XZ9B7T	Antidepressants	Nortriptyline
	Barbiturates	Phenobarbital
YT7HCP	Antidepressants	Nortriptyline
ZFXWPP	No drugs detected utilizing screening methods.	
ZGRMV6	Antidepressants	
	Barbiturates	
ZZ73CY	Antidepressants	Nortriptyline
	Barbiturates	

Screening Response Summary for Item 3 **Participants: 126**

Drug Category Totals		Drug/Metabolite Totals	
Antidepressants	87	**Nortriptyline**	74
Barbiturates	76	**Phenobarbital**	36
CNS Stimulants	3	**Amitriptyline**	4
		Amphetamine	3
No drugs detected utilizing screening methods:	16		

Total number of screening responses provided may be more than the number of participants due to multiple drugs/metabolites being reported.

Confirmatory Results - Item 3

TABLE 3B

Item Scenario:

A 35 year old woman arrived at a police station at 8:00 in the morning. She had been consuming alcohol with a male she engaged with on a dating app the night before, and had large gaps in her memory upon waking up. The woman awoke with bruises she could not explain, and believed she may have been sexually assaulted. A urine sample was collected soon after her arrival at the station.

Item Contents and Preparation Concentration: Nortriptyline (600 ng/mL)
Phenobarbital (1000 ng/mL)

What drugs/metabolites were detected in Item 3?

WebCode	Analyte Reported	Qualitative Only	Reported Concentration	Uncertainty	Units
28YUXX	Nortriptyline	✓			
2GLQ2K	Nortriptyline	✓			
	Phenobarbital	✓			
2GNHTZ	Nortriptyline	✓			
	Phenobarbital	✓			
	Amitriptyline	✓			
2MQPAN	Nortriptyline	✓			
2N8L3N	Nortriptyline	✓			
2VQ8RL	Nortriptyline	✓			
	Phenobarbital	✓			
63D7RH	Nortriptyline	✓			
63U3JH	Nortriptyline	✓			
	Phenobarbital	✓			
64TBNV	Nortriptyline	✓			
6C3Y2U	Nortriptyline	✓			
6JHD7K	Nortriptyline	✓			
	Amitriptyline	✓			
	GHB	✓			
7YPWFV	Nortriptyline	✓			
	Phenobarbital	✓			
88HN2V	Phenobarbital	✓			
8F9CWX	Nortriptyline	✓			
98FJYQ	Nortriptyline	✓			
9XM73C	Nortriptyline	✓			
	Phenobarbital				
A2N9PT	NORTRIPTYLINE	✓			

TABLE 3B: Confirmatory Results - Item 3

What drugs/metabolites were detected in Item 3?					
WebCode	**Analyte Reported**	**Qualitative Only**	**Reported Concentration**	**Uncertainty**	**Units**
A2Q2LF	Nortriptyline	✓			
	Phenobarbital	✓			
	Ibuprofen	✓			
	Paracetamol	✓			
AH9YNR	Phenobarbital	✓			
AHBRKE	Nortriptyline	✓			
AJ7BLF	Phenobarbital 2ME	✓			
AMJD7Q	Nortriptyline	✓			
AMK63D	Nortriptyline	✓			
B7FXMC	Nortriptyline	✓			
	Phenobarbital	✓			
BJZFEU	Nortriptyline	✓			
BMJP9D	Nortriptyline	✓			
	phenobarbital		<LOR		
CB36JP	Nortriptyline	✓			
	phenobarbital	✓			
CKCRDB	Phenobarbital	✓			
CP2D3P	Nortriptyline	✓			
	Phenobarbital	✓			
CQWW4Q	Nortriptyline	✓			
	Phenobarbital	✓			
D2T3XN	Nortriptyline	✓			
	phenobarbital	✓			
DAQRGE	Phenobarbital		394.5	60	ng/ml
DDP4CD	Nortriptyline	✓			
DHGDLC	Nortriptyline	✓			
DPFZCQ	Nortriptyline	✓			
DUXX4M	Nortriptyline	✓			
DV92FQ	No drugs/metabolites detected utilizing confirmatory methods.				
E9MMEA	Nortriptyline	✓			
F293TP	Nortriptyline	✓			
F7YD3N	Nortriptyline	✓			
	Phenobarbital	✓			

TABLE 3B: Confirmatory Results - Item 3

What drugs/metabolites were detected in Item 3?					
WebCode	**Analyte Reported**	**Qualitative Only**	**Reported Concentration**	**Uncertainty**	**Units**
FL8N8L	Nortriptyline	✓			
FL9G49	Nortriptyline	✓			
	Phenobarbital	✓			
FX9RWP	Nortriptyline	✓			
FZCKQN	Nortriptyline	✓			
	Phenobarbital	✓			
GAVJWK	NORTRIPTYLINE	✓			
GAWBT8	Nortriptyline	✓			
GDTWKA	No drugs/metabolites detected utilizing confirmatory methods.				
GDWLML	No drugs/metabolites detected utilizing confirmatory methods.				
GNFXZJ	Nortriptyline	✓			
GQG2R7	Nortriptyline	✓			
GRBRXK	Nortriptyline	✓			
	phenobarbital	✓			
GRCKU8	Nortriptyline	✓			
	Phenobarbital	✓			
GRFAVJ	Notriptyline	✓			
GVFB39	Nortriptyline	✓			
GX3U47	Amitriptyline	✓			
	Nortriptyline	✓			
	Phenobarbital	✓			
HBMYLL	Nortriptyline	✓			
J2CWZL	Nortriptyline	✓			
J2U6PF	Nortriptyline	✓			
JTHR8K	Nortriptyline	✓			
	Phenobarbital	✓			
JWKHH7	Nortriptyline	✓			
	Phenobarbital	✓			
K3G4H6	Nortriptyline				
K4ECMH	Nortriptyline	✓			
	Phenobarbital	✓			
K9A7KJ	Nortriptyline		0,28		mg/l

TABLE 3B: Confirmatory Results - Item 3

What drugs/metabolites were detected in Item 3?					
WebCode	**Analyte Reported**	**Qualitative Only**	**Reported Concentration**	**Uncertainty**	**Units**
KHYP84	Nortriptyline	✓			
KLWDJ6	Nortriptyline	✓			
	Phenobarbital	✓			
KPR6PG	Nortriptyline	✓			
	phenobarbital	✓			
KRJ44E	Nortriptyline	✓			
KYGTM6	Nortriptyline	✓			
LNJ6B2	Nortriptyline	✓			
LQN3F3	Nortriptyline	✓			
	Phenobarbital	✓			
LYDMKZ	Nortriptyline	✓			
M8AK94	Nortriptyline		500.445		ng/mL
	Phenobarbital	✓	N/A		
M9JUXF	Nortriptyline	✓			
	Phenobarbital	✓			
MW7M4Z	Phenobarbital		952		ng/mL
N2G36C	Nortriptyline	✓			
NH2T4B	Nortriptyline	✓			
NH3LZX	Nortriptyline	✓			
	Phenobarbital	✓			
NVTKPE	No drugs/metabolites detected utilizing confirmatory methods.				
NXGUZ2	No drugs/metabolites detected utilizing confirmatory methods.				
NZJU2Y	Nortriptyline	✓			
PKLZ4X	Nortriptyline	✓			
PLFQAD	Nortriptyline	✓			
	Phenobarbital	✓			
	Amitriptyline	✓			
PWY6CF	Nortriptyline	✓			
Q6RTPW	Nortriptyline	✓	Detected		
QBCXFC	Nortriptyline	✓			
	Phenobarbital	✓			

TABLE 3B: Confirmatory Results - Item 3

What drugs/metabolites were detected in Item 3?					
WebCode	**Analyte Reported**	**Qualitative Only**	**Reported Concentration**	**Uncertainty**	**Units**
QLW2PW	Nortriptyline	✓			
	Phenobarbital	✓			
QUQ8JX	Nortriptylline		1237.0		ng/ml
R8B8TX	Nortriptyline	✓			
RAE279	Nortriptyline	✓			
RJ8E8T	N-acetylnortriptyline	✓			
	Nortriptyline	✓			
	amitriptyline	✓			
	Phenobarbital	✓			
RNXR6B	Phenobarbital	✓			
RRFPX8	Nortriptyline	✓			
RRHGTU	Nortriptyline		976	6	ng/mL
RUPUBV	Nortriptyline	✓			
U7PGDA	Phenobarbital	✓			
UG9TR8	Nortriptyline	✓			
	phenobarbital	✓			
UQXEX7	Nortriptyline	✓			
V7N2G3	Nortriptyline	✓			
VANCC3	Nortriptyline	✓			
VAP69P	Nortriptyline	✓			
	Phenobarbital	✓			
VK42B9	No drugs/metabolites detected utilizing confirmatory methods.				
VK6U8V	Nortriptyline	✓			
WC7QF4	Nortriptyline	✓			
WC9JCQ	Nortriptyline	✓			
X9NUM7	Nortriptyline	✓			
XBPUN4	Nortriptyline	✓			
	Phenobarbital	✓			
	Amitriptyline	✓			
XERVNZ	Nortriptyline	✓			
XLBYV4	Nortriptyline	✓			
XQM2NQ	Nortriptyline	✓			

TABLE 3B: Confirmatory Results - Item 3

What drugs/metabolites were detected in Item 3?					
WebCode	**Analyte Reported**	**Qualitative Only**	**Reported Concentration**	**Uncertainty**	**Units**
XRYJ24	Nortriptyline	✓			
	Phenobarbital	✓			
XZ9B7T	Nortriptyline	✓			
	Phenobarbital	✓			
YT7HCP	Nortriptyline	✓			
ZGRMV6	Nortriptyline	✓			
ZZ73CY	Nortriptyline	✓			
	phenobarbital	✓			

Confirmatory Response Summary for Item 3	**Participants: 114**
Nortriptyline:	100
Phenobarbital:	46
Other Identified Drugs/Metabolites:	7
No Drugs/Metabolites Detected Utilizing Confirmatory Methods:	6

Total number of confirmatory responses provided may be more than the number of participants due to multiple drugs/metabolites being reported.

Raw Data - Item 3

TABLE 3C

Item 3 Raw Data - Nortriptyline
Preparation concentration: 600 ng/mL

WebCode	List of Raw Data determinations (ng/mL)
2MQPAN	556.58
M8AK94	500.45

Statistical Analysis for Item 3 - Nortriptyline

Please note: Statistical analysis has not been provided due to the low number of raw data responses.

TABLE 3C: Raw Data - Item 3

Item 3 Raw Data - Phenobarbital
Preparation concentration: 1000 ng/mL

WebCode	List of Raw Data determinations (ng/mL)					
DAQRGE	395.00	394.00	399.00	397.00	390.00	392.00
MW7M4Z	952.00					
ZZ73CY	840.00					

Statistical Analysis for Item 3 - Phenobarbital

Please note: Statistical analysis has not been provided due to the low number of raw data responses.

Reporting Procedures - Item 3

TABLE 3D - Item 3

WebCode	Quantitative Reporting Procedures
DAQRGE	The mean of duplicate/several determinations.
K9A7KJ	A single determination.
M8AK94	A single determination.
MW7M4Z	A single determination.
N2G36C	A single determination.
QUQ8JX	The mean of duplicate/several determinations.
RRHGTU	The mean of duplicate/several determinations.

Response Summary for Item 3	Participants: 7
A single determination:	4 (57.1%)
The mean of duplicate/several determinations:	3 (42.9%)
Other:	0 (0.0%)

Methods of Analysis - Item 3

TABLE 3E - Item 3

WebCode	Method	Screening	Confirmatory	Quantitation
28YUXX	Immunoassay	✓		
	LC/MS/MS	✓	✓	
	GC/MS	✓	✓	
2GLQ2K	LC/IT/MS	✓	✓	
2GNHTZ	Immunoassay	✓		
	GC/MS		✓	
	LC/MS/MS		✓	
2MQPAN	LC/MS/MS	✓	✓	
2N8L3N	Immunoassay	✓		
	GC/MS		✓	
2VQ8RL	LC-HRAM-MS	✓	✓	
	LC/MS/MS	✓		
43ZRVP	Immunoassay	✓		
4BBUGP	Immunoassay	✓		
4UPTJJ	LC-QTOF-MS	✓		
	LC/MS/MS	✓		
63D7RH	Immunoassay	✓		
	GC/MS	✓	✓	
	LC/MS	✓		✓
63U3JH	GC/MS		✓	
64TBNV	Immunoassay	✓		
	GC/MS		✓	
	LC/MS/MS		✓	
6C3Y2U	Immunoassay	✓		
	GC/MS		✓	
	LC/MS/MS	✓		
6JHD7K	Immunoassay	✓		
	GC/MS		✓	
	LC/MS/MS		✓	
	GC/MS/MS		✓	
7YPWFV	Immunoassay	✓		
	LC-QTOF-MS	✓		
	GC/MS		✓	

TABLE 3E: Methods of Analysis - Item 3

WebCode	Method	Screening	Confirmatory	Quantitation
88HN2V	Immunoassay	✓		
	GC/MS		✓	
8A7XDG	Immunoassay	✓		
8F9CWX	Immunoassay	✓		
	GC/MS	✓	✓	
	LC/MS/MS	✓		✓
8N8UFF	Immunoassay	✓		
	GC/MS	✓		
8QUDGD	LC-QTOF-MS	✓		
98FJYQ	LC-HRMS/MS	✓	✓	
	GC/MS		✓	
9XM73C	GC/MS	✓	✓	
	LC-QTOF	✓		
	LC-QTOF-MS		✓	
A2N9PT	Immunoassay	✓		
	GC/MS		✓	
A2Q2LF	Immunoassay	✓		
	GC/MS		✓	
AH9YNR	Immunoassay	✓		
	GC/MS		✓	
AHBRKE	LC/MS/MS	✓	✓	
AJ7BLF	Immunoassay	✓		
	GC/MS		✓	
AMJD7Q	LC-HRMS/MS	✓	✓	
	GC/MS		✓	✓
AMK63D	Immunoassay	✓		
	GC/MS	✓	✓	
	LC/MS/MS	✓		✓
B7FXMC	GC/MS		✓	
BJZFEU	Immunoassay	✓		
	GC/MS	✓	✓	
	LC/MS/MS	✓		✓
BMJP9D	Immunoassay	✓		
	LC/MS	✓	✓	
	GC/MS		✓	

TABLE 3E: Methods of Analysis - Item 3

WebCode	Method	Screening	Confirmatory	Quantitation
CB36JP	Immunoassay	✓		
	LC/MS/MS		✓	
	GC/MS		✓	
CB6WEC	Immunoassay	✓		
CKCRDB	GC/MS		✓	
	Immunoassay	✓		
CP2D3P	Immunoassay	✓		
	LC-QTOF-MS	✓		
	GC/MS		✓	
CQWW4Q	Immunoassay	✓		
	LC-QTOF	✓	✓	
	GC/MS	✓	✓	
D2T3XN	Immunoassay	✓		
	LC/MS/MS		✓	
	GC/MS		✓	
DAQRGE	Immunoassay	✓		✓
	GC/MS		✓	
DDP4CD	Immunoassay	✓		
	GC/MS	✓	✓	
DHGDLC	GC/MS		✓	
DPFZCQ	Immunoassay	✓		
	GC/MS	✓	✓	
	LC/MS/MS	✓		✓
DUXX4M	Immunoassay	✓		
	LC/MS/MS	✓	✓	
	GC/MS	✓	✓	
DV92FQ	Immunoassay	✓		
	LC/MS/MS		✓	
E9MMEA	Immunoassay	✓		
	LC/MS/MS	✓	✓	
EG6V38	LC-QTOF-MS	✓		
F293TP	Immunoassay	✓		
	GC/MS	✓	✓	
	LC/MS/MS	✓		✓
F7YD3N	Immunoassay	✓		
	LC-QTOF		✓	
	GC/MS		✓	

TABLE 3E: Methods of Analysis - Item 3

WebCode	Method	Screening	Confirmatory	Quantitation
FL8N8L	Immunoassay	✓		
	LC/MS		✓	
FL9G49	LC/MS/MS	✓		
	GC/MS		✓	
FM4Y7A	Immunoassay	✓		
FX9RWP	Immunoassay	✓		
	GC/MS	✓	✓	
	LC/MS/MS	✓		✓
FZCKQN	Immunoassay	✓		
	GC/MS		✓	
G7CL6M	LC-QTOF-MS	✓		
GAVJWK	LC-HRMS/MS	✓		
GAWBT8	Immunoassay	✓		
	GC/MS	✓	✓	
	LC/MS/MS	✓		✓
GDTWKA	LC/MS/MS	✓	✓	✓
GDWLML	Immunoassay	✓	✓	
GNFXZJ	LC-HRAMS	✓	✓	
GQG2R7	Immunoassay	✓		
	GC/MS	✓	✓	
	LC/MS/MS	✓		✓
GRBRXK	Immunoassay	✓		
	LC/MS/MS	✓	✓	
	GC/MS		✓	
GRCKU8	Immunoassay	✓		
	LC/MS/MS	✓		
	GC/MS	✓	✓	
GRFAVJ	High resolution accurate mass	✓	✓	
	GC/MS		✓	✓
GVFB39	Immunoassay	✓		
	LC/MS/MS	✓	✓	
	GC/MS	✓	✓	
GX3U47	GC/MS		✓	

TABLE 3E: Methods of Analysis - Item 3

WebCode	Method	Screening	Confirmatory	Quantitation
HBMYLL	Immunoassay	✓		
	GC/MS	✓	✓	
	LC/MS/MS	✓		✓
HV72J7	Immunoassay	✓		
J2CWZL	Immunoassay	✓		
	GC/MS	✓	✓	
	LC/MS/MS	✓		✓
J2U6PF	Immunoassay	✓		
	LC/MS/MS		✓	
	GC/MS		✓	
JTHR8K	Immunoassay	✓		
	GC/MS		✓	
	LC-QTOF		✓	
JWKHH7	GC/MS	✓	✓	
	LC/MS/MS	✓		
K3G4H6	LC-QTOF	✓	✓	
K4ECMH	GC/MS		✓	
K9A7KJ	LC/MS/MS	✓	✓	✓
	LC-QTOF-MS	✓	✓	
KHYP84	Immunoassay	✓		
	LC/MS/MS	✓	✓	
	GC/MS	✓	✓	
KLWDJ6	Immunoassay	✓		
	LC-QTOF	✓	✓	
	LC/MS/MS		✓	
KPR6PG	Immunoassay	✓		
	GC/MS		✓	
KRJ44E	Immunoassay	✓		
	GC/MS		✓	
	LC/MS/MS		✓	
KYGTM6	Immunoassay	✓		
	LC-QTOF	✓		
	GC/MS		✓	
LNJ6B2	LC-QTOF-MS	✓		
	LC/MS/MS	✓	✓	

TABLE 3E: Methods of Analysis - Item 3

WebCode	Method	Screening	Confirmatory	Quantitation
LQN3F3	Immunoassay	✓		
	LC-QTOF	✓		
	LC/MS/MS	✓	✓	
	GC/MS	✓	✓	
LYDMKZ	Immunoassay	✓		
	GC/MS	✓	✓	
	LC/MS/MS	✓		✓
M8AK94	LC/MS/MS		✓	✓
	GC/MS	✓	✓	
M9JUXF	LC/MS/MS	✓		
	GC/MS		✓	
MQZWV3	Immunoassay	✓		
MW7M4Z	GC/MS		✓	✓
N2G36C	Immunoassay	✓		
	LC/MS	✓	✓	
	GC/MS	✓	✓	
NH2T4B	Immunoassay	✓		
	GC/MS		✓	
	LC/MS/MS		✓	
NH3LZX	Immunoassay	✓		
	GC/MS	✓	✓	
NVTKPE	Immunoassay	✓		
	LC/MS/MS		✓	✓
NXGUZ2	Immunoassay	✓		
	GC/MS		✓	
NZJU2Y	LC-QTOF-MS	✓		
	GC/MS		✓	
	LC/MS/MS	✓	✓	
PKLZ4X	Immunoassay	✓		
	GC/MS	✓	✓	
	LC/MS/MS	✓		✓
PLFQAD	Immunoassay	✓		
	GC/MS	✓	✓	
PLGH6Z	Immunoassay	✓		
PWY6CF	Immunoassay	✓		
	GC/MS	✓	✓	
	LC/MS/MS	✓		✓

TABLE 3E: Methods of Analysis - Item 3

WebCode	Method	Screening	Confirmatory	Quantitation
Q6RTPW	GC/MS	✓	✓	
	LC-QTOF	✓	✓	
	Immunoassay	✓		
	GC-MS/MS	✓		
QBCXFC	Immunoassay	✓		
	LC-QTOF-MS	✓		
	GC/MS		✓	
QLW2PW	GC/MS	✓	✓	
	Immunoassay	✓		
	LC/MS/MS		✓	
QUQ8JX	Immunoassay	✓		
	LC/MS/MS		✓	✓
R8B8TX	Immunoassay	✓		
	LC/MS/MS	✓	✓	
	GC/MS		✓	
RAE279	LC-QTOF-MS	✓	✓	
RJ8E8T	GC/MS	✓	✓	
RNXR6B	LC/MS/MS	✓	✓	
RRFPX8	Immunoassay	✓		
	LC/MS/MS	✓	✓	
	GC/MS		✓	
RRHGTU	LC/MS	✓	✓	✓
	LC-QTOF-MS	✓	✓	✓
RUPUBV	Immunoassay	✓		
	GC/MS	✓	✓	
	LC/MS/MS	✓		✓
RYXHNX	Immunoassay	✓		
TWL3UW	GC/MS	✓		
U7PGDA	LC/MS/MS	✓	✓	
UG9TR8	Immunoassay	✓		
	GC/MS		✓	
	LC/MS/MS	✓	✓	
UQXEX7	Immunoassay	✓		
	LC/MS/MS	✓	✓	
	GC/MS		✓	

TABLE 3E: Methods of Analysis - Item 3

WebCode	Method	Screening	Confirmatory	Quantitation
V7N2G3	Immunoassay	✓		
	GC/MS	✓	✓	
	LC/MS/MS	✓	✓	
VANCC3	Immunoassay	✓		
	LC/MS/MS	✓	✓	
	GC/MS	✓	✓	✓
VAP69P	LC/MS/MS	✓	✓	
	GC/MS	✓	✓	
	Rapid Chromatographic Immunoassay	✓		
VK42B9	Immunoassay	✓		
	LC/MS/MS		✓	
VK6U8V	LC/MS/MS	✓	✓	
WC7QF4	LC-HRMS/MS	✓	✓	
	GC/MS		✓	
WC9JCQ	Immunoassay	✓		
	GC/MS	✓	✓	
	LC/MS/MS	✓		
X9NUM7	Immunoassay	✓		
	GC/MS	✓	✓	
	LC/MS/MS	✓		✓
XBPUN4	Immunoassay	✓		
	GC/MS	✓	✓	
XERVNZ	Immunoassay	✓		
	GC/MS	✓	✓	
	LC/MS/MS	✓	✓	
XLBYV4	LC-High Resolution Tandem Mass Spectrometry	✓	✓	
	GC/MS		✓	
XQM2NQ	Immunoassay	✓		
	GC/MS	✓	✓	
	LC/MS/MS	✓		
XRYJ24	LC/MS/MS	✓	✓	
	GC/MS		✓	
XZ9B7T	GC/MS	✓	✓	
	LC/MS/MS	✓		
YT7HCP	Immunoassay	✓		
	GC/MS	✓	✓	
	LC/MS/MS	✓		✓

TABLE 3E: Methods of Analysis - Item 3

WebCode	Method	Screening	Confirmatory	Quantitation
ZFXWPP	Immunoassay	✓		
ZGRMV6	Immunoassay	✓		
	GC/MS		✓	
ZZ73CY	Immunoassay	✓		
	LC/MS	✓	✓	
	GC/MS	✓	✓	

Response Summary for Item 3 - Methods of Analysis **Participants: 130**

	Screening	Confirmatory	Quantitation
Immunoassay:	89	1	1
GC/MS:	45	91	4
LC/MS:	5	5	2
LC/MS/MS:	51	40	21
LC-QTOF:	7	6	0
LC-QTOF-MS:	12	4	1
Other:	11	9	0

Additional Comments for Item 3

TABLE 3F

WebCode	Item Comments
28YUXX	Internal Standard for LC/MS/MS and GC/MS - mepivacaine. Internal Standards for GC/MS (barbiturates confirmation) - butalbital-d5, hexobarbital, phenobarbital-d5, mephobarbital. Barbiturates was indicative by immunoassay. Phenobarbital quantitation at 0.82 mg/L (not reported, LOR of 1.0 mg/L).
2GNHTZ	Delta-9 THC and Delta-9 Carboxy THC not confirmed by LCMSMS
64TBNV	phenobarbital was shown to be present below our limit of report (1 mg/L).
6C3Y2U	Mepivacaine was the internal standard used for the GCMS-basic drug test and the LCMSMS test. Phenobarbital was detected in the GCMS-barb extraction. The internal standard that it was quanted off of was phenobarbital-d5. It lower than our limit of report of 1 mg/L so it is considered negative.
7YPWFV	Internal standards used included mepivacaine (LC-QTOF-MS and GC/MS) and methohexital (GC/MS). Screening limit of detection was 300 ng/mL for phenobarbital. Confirmation limits of detection were 200 ng/mL for nortriptyline and 250 ng/mL for phenobarbital. Acetaminophen, buspirone, amitriptyline, morphine, ibuprofen, caffeine, theobromine, 1,7-dimethylxanthine and theophylline were seen but not confirmed.
8A7XDG	Creatinine is Normal.
8N8UFF	The laboratory only screens for the following drugs/drug classes utilizing the Enzyme Multiplied Immunoassay Technique (EMIT): amphetamines, benzodiazepines, cannabinoids, cocaine, opiates, and pcp. Sexual assault cases are also screened for Ketamine, Gamma-hydroxybutyric acid (GHB), and 7-aminoflunitrazapam (Rohypnol) using GC/MS.
98FJYQ	Internal Standards: mepivacaine (LC-HRMS/MS); hexobarbital, mephobarbital, butalbital-d5, phenobarbital-d5 (GC/MS). Phenobarbital not reported because it quantified below limit of report (1.0 mg/L)
9XM73C	ESTAZOLAM WAS USED AS INTERNAL ESTANDAR
A2Q2LF	During the extraction procedure, diazepam-d5 was used as the internal standard, and the positive control consisted of a urine sample spiked with phenobarbital standard.
AH9YNR	ELISA was used for screening purposes. For this item, the barbiturate assay screened positive. It's target analyte is listed above.
AHBRKE	No reference standard for Nortriptyline available to perform quantification. Caffeine was detected.
AMJD7Q	Phenobarbital was detected by GCMS in confirmation but is less than the limit of report of 1mg/L Internal Standards: Mepivacaine/Mephobarbital for LC-HRMS/MS Internal Standards: Butalbital-d5, Hexobarbital, Phenobarbital-d5, and Mephobarbital for GC/MS
AMK63D	Phenobarbital preliminarily detected in sample, but not included on reportable drug panel. Therefore no confirmatory testing performed for Phenobarbital, and it is not included in reported drugs. Promazine used for internal standard for GC/MS drug screen. GHB-D6 used for internal standard for LC/MS/MS GHB Quantitative Screen.
B7FXMC	Internal standard: Flurazepam
BMJP9D	Internal Standards: Mepivacaine, butalbital-d5, hexobarbital, phenobarbital-d5, mephobarbital Barbiturates detected in the screen. Phenobarbital was found below limit of report. Reporting negative.
CB6WEC	Creatinine is normal.
CKCRDB	Immunoassay kits from Vaxpert INC, USA were used for screening with Limit of Detection of 300 ng/mL and it indicated phenobarbital. It was confirmed using GC-MS.
CP2D3P	Internal standards used were Mepivacaine and Methohexital

TABLE 3F: Additional Comments for Item 3

WebCode	Item Comments
CQWW4Q	ELISA positive for Barbiturates and Tricyclic Antidepressants. Internal standards used for LC-QTOF test: Fentanyl-D5, Imipramine-D3, MDMA-D5, Methaqualone-D7, Triazolam-D4. Negative for GHB by GC/MS. Caffeine detected but not confirmed.
DAQRGE	The reported concentration is the average result of 6 runs from immunoassay analysis, confirming the positive outcome for barbiturates. The qualitative result of Phenobarbital was obtained by using GC-MS (Agilent 7010B/8890 GC-TQ).
DHGDLC	Internal Standard: SKF-525A
DUXX4M	Phenobarbital detected in the screen, but was below the LOR in confirmation.
DV92FQ	This item screened presumptive positive for amphetamine and barbiturates using an immunoassay screen. Confirmation testing was performed for amphetamine and this drug was not detected. Our laboratory does not currently have a validated method for the confirmation of barbiturates so confirmation testing for this result was not performed. Scope for Drug Screening: Immunoassay Drug Screen (Enzyme Linked Immunosorbent Assay- ELISA): amphetamine, barbiturates, benzodiazepines, buprenorphine, cocaine/benzoylecgonine, cannabinoids, carisoprodol, fentanyl, methadone, methamphetamine, opiates, oxycodone/oxymorphone, phencyclidine (PCP), tramadol, zolpidem
E9MMEA	The cut-off value of nortriptyline is 50 ng/mL for LC/MS/MS
F7YD3N	Internal Standards used: Fentanyl-D5, Imipramine-D3, MDMA-D5, Methaqualong-D7, Triazolam-D4. GHB analysis performed but GHB was not confirmed.
FL8N8L	Screened positive for barbiturate, could not confirm before deadline, standard needed.
FM4Y7A	All substances are detected using immunoassay qualitative testing. Cutoffs are as follows: 6AM-10 ng/mL, Amphetamine- 1,000 ng/mL, Benzodiazepine- 200 ng/mL, COC- 300 ng/mL, Creatinine - 20 mg/dL, THC- 50 ng/mL, Opiates- 300 ng/mL, Oxycodone- 100 ng/mL, Fentanyl- 1 ng/mL, Methamphetamine- 500 ng/mL.
FZCKQN	Zolpidem and barbiturates indicated positive by ELISA. SKF 525-A and NPA are the internal standards used for basic drug screen by GC/MS. Hexobarbital is the internal standard used for acid/neutral by GC/MS.
GAVJWK	Internal standard is mepivacaine. PHENOBARBITAL WAS INDICATIVE IN THE SCREEN, BUT CONFIRMED BELOW OUR LIMIT OF REPORT VIA GC/MS.
GAWBT8	Internal Standard: Promazine/Prazepam/GHB-d6
GDTWKA	Panel includes only the following analytes: Fentanyl, Hydromorphone, MDEA, MDPV, Sufentanil, Xylazine
GNFXZJ	Phenobarbital was found at 0.83 mg/L, below our limit of report of 1.0 mg/L and would not be reported by our policies.
GQG2R7	Internal standards used were promazine for the Drug Screen analysis, prazepam for the Benzodiazepine confirmation analysis, and GHB-d6 for the GHB Quantitative Screen analysis. The limit of detection for the GHB Quantitation analysis is 2mg/L.
GRCKU8	Sample was not amenable to GHB extraction method.
GRFAVJ	internal standards: mepivacaine, mephobarbital, butalbital-d5, hexobarbital, phenobarbital-d5 phenobarbital quantitation: 890 ng/mL; limit of report for phenobarbital: 1000 ng/mL
GVFB39	Phenobarbital was detected but not reported because it falls below our limit of report which is 1000 ng/mL. The internal standard used was Phenobarbital-d5. Mepivacaine was another internal standard used during testing.
GX3U47	Internal standard: flurazepam/THC-d9 Sample preparation: L/L extraction. The final extract is derivatized with BSTFA, and analyzed by GC/MS.

TABLE 3F: Additional Comments for Item 3

WebCode	Item Comments
J2U6PF	mepivacaine used as internal standard phenobarbital was detected but below limit of report during confirmatory test
J2VXL3	Due to this type of testing being beyond our laboratory's scope of accreditation, this sample was not analyzed.
JTHR8K	ELISA screening data positive for "tricyclics" per our instrumentation, but positive drugs fall under "antidepressants" per the CTS analyte list. Internal standards used for LC-QTOF analysis: Fentanyl-D5, Imipramine-D3, MDMA-D5, Methaqualone-D7, Triazolam-D4.
JVPZG6	Item not tested.
KHYP84	internal standard: mepivacaine phenobarbital below limit of report (1.0 mg/L) by GC/MS
KPR6PG	Internal standards used were SKF-525A and hexobarbital.
KRJ44E	phenobarbital was lower than our limit of report of 1 mg/L by GC/MS and was not reported.
LNJ6B2	Confirmatory analysis by LC-MS/MS, Urine Drug Screen, with an internal standard of Nortriptyline-D3. Limit of detection is 25 ng/mL.
LYDMKZ	Drug Screen Internal Standard used was Promazine. Benzodiazepine Internal Standard used was Prazepam. GHB Quantitation Internal Standard used was GHB-D6.
MQZWV3	All substances are detected using immunoassay qualitative testing. Cutoffs are as follows: 6AM-10 ng/mL, Amphetamine- 1,000 ng/mL, Benzodiazepine- 200 ng/mL, COC- 300 ng/mL, Creatinine - 20 mg/dL, THC- 50 ng/mL, Opiates- 300 ng/mL, Oxycodone- 100 ng/mL, Fentanyl- 1 ng/mL, Methamphetamine- 500 ng/mL.
MW7M4Z	ISTD Phenobarbital is Butabarbital
N2G36C	Internal Standards: Mepivacaine, butalbital-d5, hexobarbital, phenobarbital-d5, mephobarbital. Immunoassay results showed the class of drugs barbituates as indicative. Phenobarbital was detected in confirmatory testing but quantitation was below our limit of reporting of 1.0 mg/L, therefore reported negative in casework.
NE4A4X	Due to this type of testing being beyond our laboratory's scope of accreditation, this sample was not analyzed
NH2T4B	Phenobarbital found at lower than the limit of detection on the quantitative confirmatory test which makes it not reportable. Internal Standards used: mepivacaine, phenobarbital-d5; butalbital-d5; hexobarbital; and mephobarbital
NH3LZX	Phenyltoloxamine was used as an internal reference material (IRM) for the basic extraction. Hexobarbital was used as an IRM for the acidic extraction. The Neogen brand immunoassay kit was used to find the positive screen for Barbiturates. There is no immunoassay screens used at the office of forensic sciences that would detect nortriptyline. Nortriptyline was both screened and confirmed using GC/MS. Unconfirmed Ibuprofen was found by the acidic extraction. Ibuprofen is not an impairing drug, and it is not the lab's procedure to confirm the presence of this drug.
NVTKPE	The laboratory does not currently have a validated method for barbiturates, so the presumptive positive result could not be confirmed.
PLFQAD	N-Propylamphetamine, Mepivacaine, and Hexobarbital were used as Internal Standards. This lab does not currently offer DFC testing.
PLGH6Z	No methodology available for Barbiturates confirmatory analysis.

TABLE 3F: Additional Comments for Item 3

WebCode	Item Comments
Q6RTPW	A mixed internal standard is used with LC-QTOF analysis. Internal standards include, D3-Morphine, D3-Hydromorphone, D3-Oxycodone, D5-Methylamphetamine, D3-Benzoylecgonine, D5-Doxylamine, D3-Tramadol, D3-Cocaine, D6-Zolpidem, D5-Fentanyl, D4-Buprenorphine, D3-Nortriptyline, D3-Methadone, D3-Sertraline, D9-25I-NB2OMe, D5-Desmethyldiazepam. Non-hydrolysed and hydrolysed urine was analysed with LC-QTOF. A mixed internal standard is used with GC/MS analysis. Internal standards include, Mephentermine, Acepromazine, Brucine. Sample also screened for GHB by GC-MS/MS, screened for cannabinoids by immunoassay and screened for NPS by LC-QTOF.
QBCXFC	Amitriptyline indicated in GC/MS- below cutoff and LOD in screening, therefore not confirmed
R8B8TX	3-1) Barbiturate class was indicative via immunoassay. No specific analyte available. Barbiturates extraction (BARBS031325) was performed to confirm the barbiturates positive screen result. Phenobarbital was detected at 0.78 mg/L, which is below limit of report of 1.0 mg/L. Phenobarbital was therefore reported as negative. Internal Standard: Mepivacaine for both LC/MS/MS and GC/MS Caffeine, and ibuprofen detected. Both not in the list of possible sample analytes.
RAE279	Phenobarbital was indicative in our initial screening. The confirmatory test for phenobarbital confirmed lower than our limit of report (of 1 μg/L) via GC/MS. Internal Standards used for LC-QTOF-MS: Mepivacaine and Mephobarbital Internal Standards used for GC/MS: Butalbital-d5, Hexobarbital, Phenobarbital-d5, and Mephobarbital
RNXR6B	Phenobarbital LOD 50ng/ml; ISTD Phenobarbital - d5
RRFPX8	Mepivacaine and Phenobarbital-d5 used as internal standards. Limit of report for barbiturates, including phenobarbital is 1000 ng/mL.
RUPUBV	Drug Screen ISTD - Promazine Benzodiazepine Confirm ISTD - Prazepam GHB Quantitative Screen ISTD - GHB D6
RYXHNX	All substances are detected using immunoassay qualitative testing. Cutoffs are as follows: 6AM-10 ng/mL, Amphetamine- 1,000 ng/mL, Benzodiazepine- 200 ng/mL, COC- 300 ng/mL, Creatinine - 20 mg/dL, THC- 50 ng/mL, Opiates- 300 ng/mL, Oxycodone- 100 ng/mL, Fentanyl- 1 ng/mL, Methamphetamine- 500 ng/mL.
TWL3UW	Acidification, extraction with DCM with and without derivatization . Sample volume : 2 mL. Derivatization : BSTFA (50 uL) + EtOAc (100 uL)
U7PGDA	Phenobarbital: ISTD Phenobarbital-d5; LOD 50ng/mL
UQXEX7	Internal Standard: mepivacaine, butalbital-d5, phenobarbital-d5, mephobarbital, hexobarbital barbiturates such as phenobarbital: limit of reporting (LOR) = 1.0 mg/L; confirmation < LOR
V7N2G3	Internal standards used were mepivacaine, phenobarbital-d5, hexobarbital, mephobarbital, and butalbital-d5. Phenobarbital was detected in our screen test but it was below our LOR of 1.0 mg/L in our confirmatory test; and therefore it was not reported.
VANCC3	I.S. Mepivacaine, phenobarbital-d5 Phenobarbital detected but not reported due to being below limit of report (1000 ng/mL).
VAP69P	iCassette (THC) test device was used to screen for THC, referred to in [Table 2E: Methods of Analysis] as rapid chromatographic immunoassay.
VK42B9	Item 3 screened positive for barbiturates and amphetamine. Confirmatory testing was carried out for amphetamine and no substances were identified. Barbiturates cannot be confirmed by the [Laboratory].
VXTYER	Due to this type of testing being beyond our laboratory's scope of accreditation, this sample was not analyzed.

TABLE 3F: Additional Comments for Item 3

WebCode	Item Comments
WC7QF4	LC-HRMS/MS (liquid chromatography high resolution accurate mass spectrometry). Instrument used was a Thermo Orbitrap Q-Exploris 120. Internal standards were mepivacaine and mephobarbital. GCMS used phenobarbital-d5, hexobarbital, butalbital-d5 and mephobarbital as internal standards. Confirmation of phenobarbital was attempted via GCMS on 3/13/25, but not reported due to being lower than the limit of report of 1 mg/L for our testing.
WC9JCQ	Immunoassay screening is for drug classes, not specific drugs. GC/MS screening is for specific drugs. Internal standard for GC/MS drug screen and confirmation is Promazine. Internal standard for GC/MS Lorazepam screening is Prazepam. LOD for Nortriptyline is 250 ng/mL. Internal standard for GHB quantitative screen is GHB-D6. LOD for GHB is 2 mg/L.
XBPUN4	Mepivacaine, n-Propylamphetamine and Hexobarbital were used as internal standards. This lab does not currently offer DFC testing.
XERVNZ	Caffeine was potentially detected, but in accordance with our standard operating procedure it was not confirmed in the absence of a specific request. Mepivacaine was used as internal standard in all LC and GC analyses. This sample screened positive for barbiturates, but the GC/MS confirmatory result for phenobarbital was below our LOR of 1.0 mg/L. For this reason, the case was reported negative for barbiturates.
XLBYV4	Internal Standards used: Mepivacaine (screening), Phenobarbital-d5 (confirmatory). Phenobarbital was found in confirmatory testing at 0.90 mg/L, which is below the Limit of Reporting (1 mg/L).
XQM2NQ	Mepivacaine was the internal standard used for GCMS and LCMSMS testing. Phenobarbital-d5, hexobarbital, mephobarbital, and butalbital-d5 were the internal standards used for BARB GCMS testing. Phenobarbital was detected during testing, however during confirmation, it was found to be below the limit of report.
YT7HCP	1. Internal Standards used: Promazine; Prazepam; GHB-d6. 2. Phenobarbital detected; Non-panel drug for Urine. Not pursued, not reported.
ZFXWPP	All substances are detected using immunoassay qualitative testing. Cutoffs are as follows: 6AM-10 ng/mL, Amphetamine- 1,000 ng/mL, Benzodiazepine- 200 ng/mL, COC- 300 ng/mL, Creatinine - 20 mg/dL, THC- 50 ng/mL, Opiates- 300 ng/mL, Oxycodone- 100 ng/mL, Fentanyl- 1 ng/mL, Methamphetamine- 500 ng/mL.
ZGRMV6	Confirmation testing not performed for Barbiturates. No In-House confirmation method for barbiturates. Nortriptyline: Internal Standard: Carbinoxamine Limit of Detection: 20 ng/mL
ZZ73CY	Phenobarbital quantitated below our limit of report for the test used, which is typically for blood samples, but can be used for urine. Considering the circumstances of the case scenario, I consulted the technical leaders to approve reporting of the drug despite the below limit of report designation.

Screening Results - Item 4

TABLE 4 A

Item Scenario:

A 68 year old man who was found unconscious on a city bus awoke to find his possessions stolen. He told authorities that he remembered accepting a beverage offered to him by the person sitting next to him. He submitted a urine sample 1 day after reporting the incident.

Item Contents and Preparation Concentration: Alprazolam (100 ng/mL)
alpha-hydroxyalprazolam (500 ng/mL)

WebCode	Category	Drug/Metabolite
28YUXX	Benzodiazepines	Alprazolam
2GLQ2K	Benzodiazepines	Alpha-hydroxyalprazolam Alprazolam
2GNHTZ	Benzodiazepines Cannabinoids	
2MQPAN	Benzodiazepines	Alpha-hydroxyalprazolam Alprazolam
2N8L3N	Benzodiazepines	Alprazolam
2VQ8RL	Benzodiazepines	Alpha-hydroxyalprazolam Alprazolam
43ZRVP	Benzodiazepines	Oxazepam
4BBUGP	Benzodiazepines	Oxazepam
4UPTJJ	Benzodiazepines	Alpha-hydroxyalprazolam Alprazolam
63D7RH	Benzodiazepines	Alpha-hydroxyalprazolam Alprazolam
64TBNV	Benzodiazepines	
6C3Y2U	Benzodiazepines	
6JHD7K	Benzodiazepines	
88HN2V	Benzodiazepines	
8A7XDG	Benzodiazepines	
8F9CWX	Benzodiazepines	Alpha-hydroxyalprazolam Alprazolam
8N8UFF	Benzodiazepines	
8QUDGD	Benzodiazepines	Alpha-hydroxyalprazolam Alprazolam
98FJYQ	Benzodiazepines	Alprazolam Nordiazepam
9XM73C	Benzodiazepines	Alpha-hydroxyalprazolam Alprazolam

TABLE 4 A: Screening Results - Item 4

WebCode	Category	Drug/Metabolite
A2N9PT	Benzodiazepines	
A2Q2LF	Benzodiazepines	
AH9YNR	Benzodiazepines	Oxazepam
AHBRKE	Benzodiazepines	Alpha-hydroxyalprazolam
		Alprazolam
AJ7BLF	Benzodiazepines	
AMJD7Q	Benzodiazepines	Alprazolam
		Nordiazepam
AMK63D	Benzodiazepines	Alpha-hydroxyalprazolam
		Alprazolam
BJZFEU	Benzodiazepines	Alpha-hydroxyalprazolam
		Alprazolam
BMJP9D	Benzodiazepines	Alprazolam
CB36JP	Benzodiazepines	
CB6WEC	Benzodiazepines	
CKCRDB	No drugs detected utilizing screening methods.	
CP2D3P	Benzodiazepines	Alpha-hydroxyalprazolam
		Alprazolam
CQWW4Q	Benzodiazepines	
D2T3XN	Benzodiazepines	
DAQRGE	Benzodiazepines	Alpha-hydroxyalprazolam
		Alprazolam
DDP4CD	Benzodiazepines	Alpha-hydroxyalprazolam
DPFZCQ	Benzodiazepines	Alpha-hydroxyalprazolam
		Alprazolam
DUXX4M	Benzodiazepines	Alprazolam
DV92FQ	Benzodiazepines	
	CNS Stimulants	Amphetamine
E9MMEA	Benzodiazepines	
EG6V38	Benzodiazepines	Alpha-hydroxyalprazolam
		Alprazolam
F293TP	Benzodiazepines	Alpha-hydroxyalprazolam
		Alprazolam
F7YD3N	Benzodiazepines	
FL8N8L	Benzodiazepines	

TABLE 4 A: Screening Results - Item 4

WebCode	Category	Drug/Metabolite
FL9G49	Benzodiazepines	Alpha-hydroxyalprazolam Alprazolam
FM4Y7A	Benzodiazepines	
FX9RWP	Benzodiazepines	Alpha-hydroxyalprazolam Alprazolam
FZCKQN	Benzodiazepines	
G7CL6M	Benzodiazepines	Alpha-hydroxyalprazolam Alprazolam
GAVJWK	Benzodiazepines	Alprazolam
GAWBT8	Benzodiazepines	Alpha-hydroxyalprazolam Alprazolam
GDTWKA	No drugs detected utilizing screening methods.	
GDWLML	Benzodiazepines	
GNFXZJ	Benzodiazepines	Alprazolam
GQG2R7	Benzodiazepines	Alpha-hydroxyalprazolam Alprazolam
GRBRXK	Benzodiazepines	
GRCKU8	Benzodiazepines	Alprazolam
GRFAVJ	Benzodiazepines	Alprazolam Nordiazepam
GVFB39	Benzodiazepines	Alprazolam
HBMYLL	Benzodiazepines	Alpha-hydroxyalprazolam Alprazolam
HV72J7	Benzodiazepines	
J2CWZL	Benzodiazepines	Alpha-hydroxyalprazolam Alprazolam
J2U6PF	Benzodiazepines	
JTHR8K	Benzodiazepines	
JWKHH7	Benzodiazepines	Alpha-hydroxyalprazolam Alprazolam
K3G4H6	Benzodiazepines	Alpha-hydroxyalprazolam Alprazolam
K4ECMH	Benzodiazepines	Alpha-hydroxyalprazolam Alprazolam
K9A7KJ	Benzodiazepines	Alpha-hydroxyalprazolam Alprazolam

TABLE 4 A: Screening Results - Item 4

WebCode	Category	Drug/Metabolite
KHYP84	Benzodiazepines	Alprazolam
KLWDJ6	Benzodiazepines	Alpha-hydroxyalprazolam Alprazolam
KPR6PG	Benzodiazepines	
KRJ44E	Benzodiazepines	
KYGTM6	Benzodiazepines	Alpha-hydroxyalprazolam Alprazolam
LNJ6B2	Benzodiazepines	Alpha-hydroxyalprazolam Alprazolam
LYDMKZ	Benzodiazepines	Alpha-hydroxyalprazolam Alprazolam
M8AK94	Benzodiazepines	Alpha-hydroxyalprazolam Alprazolam
M9JUXF	Benzodiazepines	Alprazolam
MQZWV3	Benzodiazepines	
MW7M4Z	Benzodiazepines	Alpha-hydroxyalprazolam Alprazolam
N2G36C	Benzodiazepines	Alprazolam
NH2T4B	Benzodiazepines	Alprazolam
NH3LZX	Benzodiazepines	Oxazepam
NVTKPE	Benzodiazepines CNS Stimulants	 Amphetamine
NXGUZ2	Benzodiazepines	Alpha-hydroxyalprazolam
NZJU2Y	Benzodiazepines	Alpha-hydroxyalprazolam Alprazolam
PKLZ4X	Benzodiazepines	Alpha-hydroxyalprazolam Alprazolam
PLFQAD	Benzodiazepines	Alprazolam
PLGH6Z	Benzodiazepines	
PWY6CF	Benzodiazepines	Alpha-hydroxyalprazolam Alprazolam
Q6RTPW	Benzodiazepines	Alpha-hydroxyalprazolam Alprazolam
QLW2PW	Benzodiazepines	Alpha-hydroxyalprazolam Alprazolam

TABLE 4 A: Screening Results - Item 4

WebCode	Category	Drug/Metabolite
QUQ8JX	Benzodiazepines	Alpha-hydroxyalprazolam
		Alprazolam
R8B8TX	Benzodiazepines	Alprazolam
RAE279	Benzodiazepines	Alprazolam
RJ8E8T	Benzodiazepines	Alprazolam
RNXR6B	Benzodiazepines	Alpha-hydroxyalprazolam
		Alprazolam
RRFPX8	Benzodiazepines	Alprazolam
RRHGTU	Benzodiazepines	Alpha-hydroxyalprazolam
		Alprazolam
RUPUBV	Benzodiazepines	Alpha-hydroxyalprazolam
		Alprazolam
RYXHNX	Benzodiazepines	
TWL3UW	Benzodiazepines	Alpha-hydroxyalprazolam
U7PGDA	Benzodiazepines	Alpha-hydroxyalprazolam
		Alprazolam
UG9TR8	Benzodiazepines	
UQXEX7	Benzodiazepines	Alprazolam
V7N2G3	Benzodiazepines	Alprazolam
VANCC3	Benzodiazepines	Alprazolam
VAP69P	Benzodiazepines	Alpha-hydroxyalprazolam
		Alprazolam
VK42B9	Benzodiazepines	
	CNS Stimulants	Amphetamine
VK6U8V	Benzodiazepines	Alpha-hydroxyalprazolam
		Alprazolam
WC7QF4	Benzodiazepines	Alprazolam
		Nordiazepam
WC9JCQ	Benzodiazepines	Alpha-hydroxyalprazolam
		Alprazolam
X9NUM7	Benzodiazepines	Alpha-hydroxyalprazolam
		Alprazolam
XBPUN4	Benzodiazepines	Alprazolam
XERVNZ	Benzodiazepines	Alprazolam
XLBYV4	Benzodiazepines	Alprazolam
XQM2NQ	Benzodiazepines	Alprazolam

TABLE 4 A: Screening Results - Item 4

WebCode	Category	Drug/Metabolite
XRYJ24	Benzodiazepines	Alpha-hydroxyalprazolam
		Alprazolam
XZ9B7T	Benzodiazepines	Alpha-hydroxyalprazolam
		Alprazolam
YT7HCP	Benzodiazepines	Alpha-hydroxyalprazolam
		Alprazolam
ZFXWPP	Benzodiazepines	
ZGRMV6	Benzodiazepines	
ZZ73CY	Benzodiazepines	Alprazolam

Screening Response Summary for Item 4 **Participants: 123**

Drug Category Totals		Drug/Metabolite Totals	
Benzodiazepines	121	**Alprazolam**	79
CNS Stimulants	3	**Alpha-hydroxyalprazolam**	53
		Nordiazepam	4
		Oxazepam	4
No drugs detected utilizing screening methods:	2		

Total number of screening responses provided may be more than the number of participants due to multiple drugs/metabolites being reported.

Confirmatory Results - Item 4

TABLE 4B

Item Scenario:

A 68 year old man who was found unconscious on a city bus awoke to find his possessions stolen. He told authorities that he remembered accepting a beverage offered to him by the person sitting next to him. He submitted a urine sample 1 day after reporting the incident.

Item Contents and Preparation Concentration: Alprazolam (100 ng/mL)
alpha-hydroxyalprazolam (500 ng/mL)

What drugs/metabolites were detected in Item 4?

WebCode	Analyte Reported	Qualitative Only	Reported Concentration	Uncertainty	Units
28YUXX	alprazolam	✓			
2GLQ2K	Alprazolam	✓			
	Hydroxyalprazolam	✓			
2GNHTZ	Alprazolam	✓			
	Alpha-hydroxyalprazolam	✓			
2MQPAN	Alprazolam	✓			
	Alpha-hydroxyalprazolam	✓			
2VQ8RL	Alprazolam	✓			
	Alpha-hydroxyalprazolam	✓			
4UPTJJ	Alprazolam	✓			
	Alpha-hydroxyalprazolam	✓			
63D7RH	Alprazolam	✓			
	alpha-Hydroxyalprazolam	✓			
63U3JH	Alprazolam	✓			
	Hydroxyalprazolam	✓			
64TBNV	alprazolam	✓			
6C3Y2U	alprazolam	✓			
6JHD7K	Alprazolam	✓			
	Alpha-hydroxyalprazolam	✓			
88HN2V	alpha-hydroxyalprazolam	✓			
8F9CWX	Alprazolam	✓			
	Alpha-hydroxyalprazolam	✓			
8N8UFF	Alprazolam	✓			
	Alpha-Hydroxy Alprazolam	✓			
8QUDGD	Alprazolam	✓			
	Alpha-Hydroxyalprazolam	✓			
98FJYQ	Alprazolam	✓			
9XM73C	Alprazolam	✓			
	Alphahydroxyalprazolam	✓			

TABLE 4B: Confirmatory Results - Item 4

What drugs/metabolites were detected in Item 4?					
WebCode	**Analyte Reported**	**Qualitative Only**	**Reported Concentration**	**Uncertainty**	**Units**
A2N9PT	ALPRAZOLAM	✓			
	HYDROXYALPRAZOLAM	✓			
A2Q2LF	Alprazolam	✓			
	Ibuprofen	✓			
	Paracetamol	✓			
AH9YNR	Alprazolam	✓			
AHBRKE	Alprazolam		154		ng/ml
	Alpha-hydroxyalprazolam	✓			
AJ7BLF	Alprazolam	✓			
	Alphahydroxyalprazolam	✓			
	Nordiazepam	✓			
AMJD7Q	alprazolam	✓			
AMK63D	Alprazolam	✓			
	Alpha-Hydroxyalprazolam	✓			
B7FXMC	Alprazolam	✓			
	alpha-hydroxyalprazolam	✓			
BJZFEU	Alprazolam	✓			
	Alpha-hydroxyalprazolam	✓			
BMJP9D	alprazolam	✓			
CB36JP	alprazolam	✓			
	alpha-hydroxyalprazolam	✓			
CKCRDB	No drugs/metabolites detected utilizing confirmatory methods.				
CP2D3P	Alprazolam	✓			
	Alpha-Hydroxyalprazolam	✓			
CQWW4Q	Alprazolam	✓			
	alpha-Hydroxyalprazolam	✓			
D2T3XN	alprazolam	✓			
	alpha-hydroxyalprazolam	✓			
DAQRGE	Alprazolam		580.6	16	ng/ml
DDP4CD	Alpha-hydroxyalprazolam	✓			
DHGDLC	No drugs/metabolites detected utilizing confirmatory methods.				
DPFZCQ	alprazolam	✓			
	alpha-hydroxyalprazolam	✓			

TABLE 4B: Confirmatory Results - Item 4

What drugs/metabolites were detected in Item 4?					
WebCode	**Analyte Reported**	**Qualitative Only**	**Reported Concentration**	**Uncertainty**	**Units**
DUXX4M	Alprazolam	✓			
DV92FQ	Alprazolam		102	32	ng/mL
E9MMEA	Alprazolam				
	Alpha-hydroxyalprazolam	✓			
EG6V38	Alprazolam	✓			
	Alpha-Hydroxyalprazolam	✓			
F293TP	alprazolam	✓			
	alpha-hydroxyalprazolam	✓			
F7YD3N	Alprazolam	✓			
	alpha-Hydroxyalprazolam	✓			
FL8N8L	alprazolam	✓			
	alpha-hydroxyalpzolam	✓			
FL9G49	Alprazolam	✓			
	Alpha-hydroxyalprazolam	✓			
FX9RWP	Alprazolam	✓			
	Alpha-hydroxyalprazolam	✓			
FZCKQN	Alprazolam	✓			
G7CL6M	Alprazolam	✓			
	Alpha-Hydroxyalprazolam	✓			
GAVJWK	ALPRAZOLAM	✓			
GAWBT8	Alprazolam	✓			
	Alpha-hydroxyalprazolam	✓			
GDTWKA	No drugs/metabolites detected utilizing confirmatory methods.				
GDWLML	Alprazolam	✓			
	Alpha-hydroxyalprazolam	✓			
GNFXZJ	alprazolam	✓			
GQG2R7	Alprazolam	✓			
	Alpha-hydroxyalprazolam	✓			
GRBRXK	alprazolam	✓			
	alpha-hydroxyalprazolam	✓			
GRCKU8	Alprazolam	✓			
GRFAVJ	alprazolam	✓			
GVFB39	Alprazolam	✓			

TABLE 4B: Confirmatory Results - Item 4

What drugs/metabolites were detected in Item 4?					
WebCode	**Analyte Reported**	**Qualitative Only**	**Reported Concentration**	**Uncertainty**	**Units**
GX3U47	Alprazolam	✓			
	Alpha-hydroxy-alprazolam	✓			
HBMYLL	alprazolam	✓			
	alpha-hydroxyalprazolam	✓			
J2CWZL	Alprazolam	✓			
	Alpha-hydroxyalprazolam	✓			
J2U6PF	alprazolam				
JTHR8K	Alprazolam	✓			
	alpha-Hydroxyalprazolam	✓			
JWKHH7	alprazolam	✓			
	alpha-hydroxyalprazolam	✓			
K3G4H6	Alprazolam				
	alpha-Hydroxyalprazolam				
K4ECMH	Alprazolam	✓			
	alpha-hydroxyalprazolam	✓			
K9A7KJ	alprazolam		0,097		mg/l
	alpha-hydroxyalprazolam		0,28		mg/l
KHYP84	alprazolam	✓			
KLWDJ6	Alprazolam	✓			
	Alpha-hydroxyalprazolam	✓			
KPR6PG	No drugs/metabolites detected utilizing confirmatory methods.				
KRJ44E	alprazolam	✓			
KYGTM6	Alprazolam	✓			
	Alpha-hydroxyalprazolam	✓			
LNJ6B2	Alprazolam	✓			
	Alpha-hydroxyalprazolam	✓			
LYDMKZ	Alprazolam	✓			
	Alpha-Hydroxyalprazolam	✓			
M8AK94	Alprazolam		89.689		ng/mL
	Alpha-hydroxyalprazolam	✓			
M9JUXF	Alprazolam	✓			
	alpha-hydroxy alprazolam	✓			
MW7M4Z	Alprazolam		99		ng/mL
	Alpha-hydroxyalprazolam		424		ng/mL
N2G36C	Alprazolam	✓			

TABLE 4B: Confirmatory Results - Item 4

What drugs/metabolites were detected in Item 4?					
WebCode	**Analyte Reported**	**Qualitative Only**	**Reported Concentration**	**Uncertainty**	**Units**
NH2T4B	alprazolam	✓			
NH3LZX	Alprazolam	✓			
	a-Hydroxyalprazolam	✓			
NVTKPE	Alprazolam		107	34	ng/mL
NXGUZ2	Alpha-hydroxyalprazolam	✓			
NZJU2Y	Alprazolam		72,6		ng/ml
	Alpha-hydroxyalprazolam	✓			
PKLZ4X	Alprazolam	✓			
	Alpha-hydroxyalprazolam	✓			
PLFQAD	Alprazolam	✓			
PWY6CF	alprazolam	✓			
	alpha-hydroxyalprazolam	✓			
Q6RTPW	Alprazolam	✓	Detected		
	Alpha-hydroxyalprazolam	✓	Detected		
QLW2PW	Alprazolam	✓			
	Alpha-hydroxyalprazolam	✓			
QUQ8JX	Alprazolam		186.97		ng/ml
	Alpha-Hydroxyalprazolam		845.2		ng/ml
R8B8TX	Alprazolam	✓			
RAE279	Alprazolam	✓			
RJ8E8T	Alprazolam	✓			
	alpha-hydroxyalprazolam	✓			
RNXR6B	alprazolam	✓			
	alpha-hydroxyalprazolam	✓			
RRFPX8	alprazolam	✓			
RRHGTU	Alprazolam		96	2.1	ng/mL
	Alpha-hydroxyalprazolam		539	8.9	ng/mL
RUPUBV	Alprazolam	✓			
	Alpha-Hydroxyalprazolam	✓			
U7PGDA	Alprazolam	✓			
	Alpha-hydroxyalprazolam	✓			
UG9TR8	alprazolam	✓			
	alpha-hydroxyalprazolam	✓			
UQXEX7	alprazolam	✓			
V7N2G3	alprazolam	✓			

TABLE 4B: Confirmatory Results - Item 4

What drugs/metabolites were detected in Item 4?					
WebCode	**Analyte Reported**	**Qualitative Only**	**Reported Concentration**	**Uncertainty**	**Units**
VANCC3	alprazolam	✓			
VAP69P	Alprazolam	✓			
	Alpha-hydroxyalprazolam	✓			
VK42B9	No drugs/metabolites detected utilizing confirmatory methods.				
VK6U8V	Alprazolam	✓			
	Alpha-hydroxyalprazolam	✓			
WC7QF4	alprazolam	✓			
WC9JCQ	Alprazolam	✓			
	Alpha-hydroxyalprazolam	✓			
X9NUM7	Alprazolam	✓			
	Alpha-hydroxyalprazolam	✓			
XBPUN4	Alprazolam	✓			
XERVNZ	alprazolam	✓			
XLBYV4	Alprazolam	✓			
XQM2NQ	alprazolam	✓			
XRYJ24	Alprazolam	✓			
	Alpha-hydroxyalprazolam	✓			
XZ9B7T	Alprazolam	✓			
	Alpha-hydroxyalprazolam	✓			
YT7HCP	Alprazolam	✓			
	Alpha-Hydroxyalprazolam	✓			
ZZ73CY	alprazolam	✓			

Confirmatory Response Summary for Item 4	**Participants: 114**
Alprazolam:	106
alpha-hydroxyalprazolam:	73
Other Identified Drugs/Metabolites:	3
No Drugs/Metabolites Detected Utilizing Confirmatory Methods:	5

Total number of confirmatory responses provided may be more than the number of participants due to multiple drugs/metabolites being reported.

Raw Data - Item 4

TABLE 4C

Item 4 Raw Data - Alprazolam
Preparation concentration: 100 ng/mL

WebCode	List of Raw Data determinations (ng/mL)					
2MQPAN	93.721					
AHBRKE	150.00	158.00				
DAQRGE	571.00	578.00	580.00	591.00	579.00	585.00
DV92FQ	104.74	102.10				
M8AK94	89.689					
MW7M4Z	99.000					
NVTKPE	107.00	109.00				
NZJU2Y	72.600					

Statistical Analysis for Item 4 - Alprazolam

Please note: Statistical analysis has not been provided due to the low number of raw data responses.

TABLE 4C: Raw Data - Item 4

Item 4 Raw Data - alpha-hydroxyalprazolam
Preparation concentration: 500 ng/mL

WebCode	List of Raw Data determinations (ng/mL)
2MQPAN	485.35
MW7M4Z	424.00

Statistical Analysis for Item 4 - alpha-hydroxyalprazolam

Please note: Statistical analysis has not been provided due to the low number of raw data responses.

Reporting Procedures - Item 4

TABLE 4D - Item 4

WebCode	Quantitative Reporting Procedures
AHBRKE	The mean of duplicate/several determinations.
DAQRGE	The mean of duplicate/several determinations.
DV92FQ	The lowest of the duplicates
K9A7KJ	A single determination.
M8AK94	A single determination.
MW7M4Z	A single determination.
NVTKPE	Lowest of duplicate samples, truncated
NZJU2Y	A single determination.
QUQ8JX	The mean of duplicate/several determinations.
RRHGTU	The mean of duplicate/several determinations.

Response Summary for Item 4	Participants: 10
A single determination:	4 (40.0%)
The mean of duplicate/several determinations:	4 (40.0%)
Other:	2 (20.0%)

Methods of Analysis - Item 4

TABLE 4E - Item 4

WebCode	Method	Screening	Confirmatory	Quantitation
28YUXX	Immunoassay	✓		
	LC/MS/MS	✓	✓	
	GC/MS	✓	✓	
2GLQ2K	LC/MS/MS	✓	✓	
	LC/Orbitrap/MS	✓		
2GNHTZ	Immunoassay	✓		
	GC/MS		✓	
	LC/MS/MS		✓	
2MQPAN	LC/MS/MS	✓	✓	
2N8L3N	Immunoassay	✓		
	GC/MS		✓	
2VQ8RL	LC-HRAM-MS	✓	✓	
43ZRVP	Immunoassay	✓		
4BBUGP	Immunoassay	✓		
4UPTJJ	LC-QTOF-MS	✓		
	LC/MS/MS	✓	✓	
63D7RH	Immunoassay	✓		
	GC/MS	✓	✓	
	LC/MS	✓		✓
63U3JH	GC/MS		✓	
64TBNV	Immunoassay	✓		
	LC/MS/MS		✓	
	GC/MS		✓	
6C3Y2U	Immunoassay	✓		
	GC/MS		✓	
	LC/MS/MS		✓	
6JHD7K	Immunoassay	✓		
	GC/MS		✓	
	LC/MS/MS		✓	
	GC/MS/MS		✓	
88HN2V	Immunoassay	✓		
	GC/MS		✓	
8A7XDG	Immunoassay	✓		

TABLE 4E: Methods of Analysis - Item 4

WebCode	Method	Screening	Confirmatory	Quantitation
8F9CWX	GC/MS	✓	✓	
	Immunoassay	✓		
	LC/MS/MS	✓		✓
8N8UFF	Immunoassay	✓		
	GC/MS		✓	
8QUDGD	LC-QTOF-MS	✓		
	LC/MS/MS		✓	
98FJYQ	LC-HRMS/MS	✓		
	GC/MS		✓	
9XM73C	GC/MS	✓	✓	
	LC-QTOF	✓		
	LC-QTOF-MS		✓	
A2N9PT	Immunoassay	✓		
	GC/MS		✓	
A2Q2LF	Immunoassay	✓		
	GC/MS		✓	
AH9YNR	Immunoassay	✓		
	GC/MS		✓	
AHBRKE	LC/MS/MS	✓	✓	✓
AJ7BLF	Immunoassay	✓		
	LC/MS/MS		✓	
AMJD7Q	LC-HRMS/MS	✓	✓	
	GC/MS		✓	
AMK63D	Immunoassay	✓		
	GC/MS	✓	✓	
	LC/MS/MS	✓		✓
B7FXMC	GC/MS		✓	
BJZFEU	Immunoassay	✓		
	GC/MS	✓	✓	
	LC/MS/MS	✓		✓
BMJP9D	Immunoassay	✓		
	GC/MS		✓	
	LC/MS		✓	
CB36JP	Immunoassay	✓		
	LC/MS/MS		✓	
CB6WEC	Immunoassay	✓		

TABLE 4E: Methods of Analysis - Item 4

WebCode	Method	Screening	Confirmatory	Quantitation
CKCRDB	GC/MS		✓	
	LC/MS/MS		✓	
	Immunoassay	✓		
CP2D3P	Immunoassay	✓		
	LC-QTOF-MS	✓	✓	
	GC/MS		✓	
CQWW4Q	Immunoassay	✓		
	LC-QTOF	✓	✓	
D2T3XN	Immunoassay	✓		
	LC/MS/MS		✓	
DAQRGE	Immunoassay	✓		✓
	LC/MS/MS		✓	
DDP4CD	Immunoassay	✓		
	GC/MS	✓	✓	
DHGDLC	GC/MS		✓	
DPFZCQ	Immunoassay	✓		
	GC/MS	✓	✓	
	LC/MS/MS	✓		✓
DUXX4M	Immunoassay	✓		
	LC/MS/MS	✓	✓	
	GC/MS	✓	✓	
DV92FQ	Immunoassay	✓		
	LC/MS/MS		✓	
E9MMEA	Immunoassay	✓		
	LC/MS/MS		✓	
EG6V38	LC-QTOF-MS	✓		
	LC/MS/MS		✓	
F293TP	Immunoassay	✓		
	GC/MS	✓	✓	
	LC/MS/MS	✓		✓
F7YD3N	Immunoassay	✓		
	LC-QTOF		✓	
	GC/MS		✓	
FL8N8L	Immunoassay	✓		
	LC/MS		✓	
FL9G49	LC/MS/MS	✓		
	GC/MS		✓	

TABLE 4E: Methods of Analysis - Item 4

WebCode	Method	Screening	Confirmatory	Quantitation
FM4Y7A	Immunoassay	✓		
FX9RWP	Immunoassay	✓		
	GC/MS	✓	✓	
	LC/MS/MS	✓		✓
FZCKQN	Immunoassay	✓		
	GC/MS		✓	
G7CL6M	LC-QTOF-MS	✓		
	LC/MS/MS		✓	
GAVJWK	LC-HRMS/MS	✓	✓	
GAWBT8	Immunoassay	✓		
	GC/MS	✓	✓	
	LC/MS/MS	✓		✓
GDTWKA	LC/MS/MS	✓	✓	✓
GDWLML	Immunoassay	✓		
	GC/MS		✓	
GNFXZJ	HRAMS	✓		
	GC/MS		✓	
GQG2R7	Immunoassay	✓		
	GC/MS	✓	✓	
	LC/MS/MS	✓		✓
GRBRXK	Immunoassay	✓		
	LC/MS/MS	✓	✓	
GRCKU8	Immunoassay	✓		
	LC/MS/MS	✓	✓	
	GC/MS	✓		
GRFAVJ	High resolution accurate mass	✓		
	GC/MS		✓	
GVFB39	Immunoassay	✓		
	LC/MS/MS	✓	✓	
	GC/MS	✓	✓	
GX3U47	GC/MS		✓	
HBMYLL	Immunoassay	✓		
	GC/MS	✓	✓	
	LC/MS/MS	✓		✓
HV72J7	Immunoassay	✓		

TABLE 4E: Methods of Analysis - Item 4

WebCode	Method	Screening	Confirmatory	Quantitation
J2CWZL	Immunoassay	✓		
	GC/MS	✓	✓	
	LC/MS/MS	✓		✓
J2U6PF	Immunoassay	✓		
	LC/MS/MS		✓	
	GC/MS		✓	
JTHR8K	Immunoassay	✓		
	GC/MS		✓	
JWKHH7	GC/MS	✓	✓	
	LC/MS/MS	✓		
K3G4H6	LC-QTOF	✓	✓	
K4ECMH	GC/MS		✓	
K9A7KJ	LC/MS/MS	✓	✓	✓
	LC-QTOF-MS	✓	✓	
KHYP84	Immunoassay	✓		
	LC/MS/MS	✓	✓	
	GC/MS	✓	✓	
KLWDJ6	Immunoassay	✓		
	LC-QTOF	✓	✓	
	LC/MS/MS		✓	
KPR6PG	Immunoassay	✓		
	GC/MS		✓	
KRJ44E	Immunoassay	✓		
	LC/MS/MS		✓	
	GC/MS		✓	
KYGTM6	Immunoassay	✓		
	LC-QTOF	✓		
	GC/MS		✓	
LNJ6B2	LC-QTOF-MS	✓		
	LC/MS/MS		✓	
LYDMKZ	Immunoassay	✓		
	GC/MS	✓	✓	
	LC/MS/MS	✓		✓
M8AK94	LC/MS/MS		✓	✓
	GC/MS		✓	
	Immunoassay	✓		
M9JUXF	LC/MS/MS	✓	✓	

TABLE 4E: Methods of Analysis - Item 4

WebCode	Method	Screening	Confirmatory	Quantitation
MQZWV3	Immunoassay	✓		
MW7M4Z	LC/MS/MS		✓	✓
N2G36C	Immunoassay	✓		
	LC/MS/MS	✓	✓	
	GC/MS	✓	✓	
NH2T4B	Immunoassay	✓		
	LC/MS/MS		✓	
	GC/MS		✓	
NH3LZX	Immunoassay	✓		
	GC/MS		✓	
	LC/MS		✓	
NVTKPE	Immunoassay	✓		
	LC/MS/MS		✓	✓
NXGUZ2	Immunoassay	✓		
	GC/MS		✓	
NZJU2Y	LC/MS/MS	✓	✓	
	LC-QTOF-MS	✓		
	LC/MS		✓	✓
PKLZ4X	Immunoassay	✓		
	GC/MS	✓	✓	
	LC/MS/MS	✓		✓
PLFQAD	Immunoassay	✓		
	GC/MS	✓	✓	
PLGH6Z	Immunoassay	✓		
PWY6CF	Immunoassay	✓		
	GC/MS	✓	✓	
	LC/MS/MS	✓		✓
Q6RTPW	GC/MS	✓	✓	
	LC-QTOF	✓	✓	
	Immunoassay	✓		
	GC-MS/MS	✓		
QLW2PW	GC/MS	✓		
	Immunoassay	✓		
	LC/MS/MS		✓	
QUQ8JX	Immunoassay	✓		
	LC/MS/MS		✓	✓

TABLE 4E: Methods of Analysis - Item 4

WebCode	Method	Screening	Confirmatory	Quantitation
R8B8TX	Immunoassay	✓		
	LC/MS/MS	✓	✓	
	GC/MS		✓	
RAE279	LC-QTOF-MS	✓	✓	
RJ8E8T	GC/MS	✓	✓	
RNXR6B	LC/MS/MS	✓	✓	
RRFPX8	Immunoassay	✓		
	LC/MS/MS	✓	✓	
	GC/MS		✓	
RRHGTU	LC/MS	✓	✓	✓
	LC-QTOF	✓	✓	✓
RUPUBV	Immunoassay	✓		
	GC/MS	✓	✓	
	LC/MS/MS	✓		✓
RYXHNX	Immunoassay	✓		
TWL3UW	GC/MS	✓		
U7PGDA	LC/MS/MS	✓	✓	
UG9TR8	Immunoassay	✓		
	LC/MS/MS	✓	✓	
UQXEX7	Immunoassay	✓		
	LC/MS/MS	✓	✓	
	GC/MS		✓	
V7N2G3	Immunoassay	✓		
	LC/MS/MS	✓	✓	
	GC/MS	✓	✓	
VANCC3	Immunoassay	✓		
	LC/MS/MS	✓	✓	
	GC/MS	✓	✓	
VAP69P	LC/MS/MS	✓	✓	
	GC/MS	✓		
	Rapid Chromatographic Immunoassay	✓		
VK42B9	Immunoassay	✓		
	LC/MS/MS		✓	
VK6U8V	LC/MS/MS	✓	✓	

TABLE 4E: Methods of Analysis - Item 4

WebCode	Method	Screening	Confirmatory	Quantitation
WC7QF4	LC-HRMS/MS	✓	✓	
	GC/MS		✓	
WC9JCQ	Immunoassay	✓		
	GC/MS	✓	✓	
	LC/MS/MS	✓		
X9NUM7	Immunoassay	✓		
	GC/MS	✓	✓	
	LC/MS/MS	✓		✓
XBPUN4	Immunoassay	✓		
	GC/MS	✓	✓	
XERVNZ	Immunoassay	✓		
	GC/MS	✓	✓	
	LC/MS/MS	✓	✓	
XLBYV4	LC-High Resolution Tandem Mass Spectrometry	✓	✓	
XQM2NQ	Immunoassay	✓		
	GC/MS		✓	
	LC/MS/MS	✓		
XRYJ24	LC/MS	✓	✓	
	GC/MS		✓	
XZ9B7T	LC/MS/MS	✓	✓	
YT7HCP	Immunoassay	✓		
	GC/MS	✓	✓	
	LC/MS/MS	✓		✓
ZFXWPP	Immunoassay	✓		
ZGRMV6	Immunoassay	✓		
ZZ73CY	Immunoassay	✓		
	LC/MS	✓	✓	
	GC/MS	✓	✓	

Response Summary for Item 4 - Methods of Analysis			Participants: 127
	Screening	Confirmatory	Quantitation
Immunoassay:	87	0	1
GC/MS:	38	75	0
LC/MS:	4	7	3
LC/MS/MS:	47	52	23
LC-QTOF:	7	6	1
LC-QTOF-MS:	9	4	0
Other:	11	6	0

Additional Comments for Item 4

TABLE 4F

WebCode	Item Comments
28YUXX	Internal Standard - mepivacaine
2GNHTZ	Delta-9 THC and Delta-9 Carboxy THC not confirmed by LCMSMS
6C3Y2U	Internal standard used was mepivacaine for GCMS and LCMSMS test.
8A7XDG	Benzodiazepines cutoff: 300 ng/mL. Creatinine is normal.
8N8UFF	The laboratory only screens for the following drugs/drug classes utilizing the Enzyme Multiplied Immunoassay Technique (EMIT): amphetamines, benzodiazepines, cannabinoids, cocaine, opiates, and pcp.
8QUDGD	Alpha-Hydroxyalprazolam LOD set at 50 ng/mL Alprazolam LOD set at 50 ng/mL
98FJYQ	Internal Standards: mepivacaine (LC-HRMS/MS); mepivacaine/nalorphine (GC/MS). Nordiazepam not reported due to weak MS.
9XM73C	ESTAZOLAM WAS USED AS INTERNAL ESTANDAR
A2Q2LF	Both codeine-d3 and diazepam-d5 were used as internal standards during the extraction procedure
AH9YNR	ELISA was used for screening purposes. For this item, the benzodiazepine assay screened positive. It's target analyte is listed above.
AHBRKE	No reference standard for Alpha-hydroxyalprazolam available to perform quantification. Caffeine and Paracetamol were detected.
AMJD7Q	Internal Standards: Mepivacaine/Mephobarbital for LC-HRMS/MS Internal Standard: Mepivacaine for GC/MS Nordiazepam was detected in confirmation but not reported due to weak a mass spectrum in GC/MS.
AMK63D	Promazine was used for internal standard for GC/MS drug screen. Prazepam was used for internal standard for Benzodiazepine confirmation. GHB-D6 was used for internal standard for LC/MS/MS GHB Quantitative Screen.
B7FXMC	Internal standard: Flurazepam
CB6WEC	Benzodiazepines screening cutoff is 300 ng/mL. Creatinine is normal.
CKCRDB	Immunoassay screening kits from Vaxpert, INC were used for screening and no drug was detected. Similarly, GC-MS and LC-MS/MS techniques were used for confirmatory analysis.
CP2D3P	Internal standard used was Mepivacaine. Acetaminophen indicated.
CQWW4Q	ELISA positive for Benzodiazepines. Internal standards used for LC-QTOF test: Fentanyl-D5, Imipramine-D3, MDMA-D5, Methaqualone-D7, Triazolam-D4. Negative for GHB by GC/MS. Caffeine detected but not confirmed.
DAQRGE	The reported concentration is the average result of 6 runs from immunoassay analysis, confirming the positive outcome for Benzodiazepines. The qualitative results of Alprazolam and Alpha-hydroxyalprazolam were obtained by using LC-MS (6460 LC-TQ).
DHGDLC	Internal Standard: SKF-525A

TABLE 4F: Additional Comments for Item 4

WebCode	Item Comments
DV92FQ	Scope: Immunoassay Drug Screen (Enzyme Linked Immunosorbent Assay- ELISA): amphetamine, barbiturates, benzodiazepines, buprenorphine, cocaine/benzoylecgonine, cannabinoids, carisoprodol, fentanyl, methadone, methamphetamine, opiates, oxycodone/oxymorphone, phencyclidine (PCP), tramadol, zolpidem Benzodiazepines Confirmation (Liquid Chromatography/Tandem Mass Spectrometry LC/MS/MS): Quantitatively: 7-aminoclonazepam, alprazolam, chlordiazepoxide, clonazepam, diazepam, flunitrazepam, lorazepam, nordiazepam, oxazepam, temazepam, zolpidem Qualitatively: 7-aminoflunitrazepam, estazolam, etizolam, midazolam, nitrazepam, triazolam, zopiclone
E9MMEA	The cut-off value of alprazolam is 10 ng/mL for LC/MS/MS The cut-off value of Alpha-hydroxyalprazolam is 20 ng/mL for LC/MS/MS
EG6V38	Alpha-Hydroxyalprazolam LOD set at 50 ng/mL Alprazolam LOD set at 50 ng/mL
F7YD3N	Internal Standards used: Fentanyl-D5, Imipramine-D3, MDMA-D5, Methaqualong-D7, Triazolam-D4.
FL8N8L	Internal standard for alpha-hydroxyalprazolam is flunitrazepam and internal standard for alprazolam is temazepam
FM4Y7A	All substances are detected using immunoassay qualitative testing. Cutoffs are as follows: 6AM-10 ng/mL, Amphetamine- 1,000 ng/mL, Benzodiazepine- 200 ng/mL, COC- 300 ng/mL, Creatinine - 20 mg/dL, THC- 50 ng/mL, Opiates- 300 ng/mL, Oxycodone- 100 ng/mL, Fentanyl- 1 ng/mL, Methamphetamine- 500 ng/mL.
FZCKQN	Benzodiazepines assay indicated positive by ELISA. SKF 525-A and NPA are the internal standards used for basic drug screen by GC/MS.
G7CL6M	Alpha-Hydroxyalprazolam LOD set at 50 ng/mL Alprazolam LOD set at 50 ng/mL
GAVJWK	Internal standard is mepivacaine.
GAWBT8	Internal Standard: Promazine/Prazepam/GHB-d6
GDTWKA	Panel includes only the following analytes: Fentanyl, Hydromorphone, MDEA, MDPV, Sufentanil, Xylazine
GNFXZJ	Nordiazepam gcms testing produced weak mass spectral data and would not be reported by our policies.
GQG2R7	Internal standards used were promazine for the Drug Screen analysis, prazepam for the Benzodiazepine confirmation analysis, and GHB-d6 for the GHB Quantitative Screen analysis. The limit of detection for the GHB Quantitation analysis is 2mg/L.
GRCKU8	Sample was not amenable to GHB extraction method.
GRFAVJ	internal standards: mepivacaine, mephobarbital Nordiazepam not reported due to weak chromatography and weak mass spectrum in both tests.
GVFB39	Internal standard used was Mepivacaine.
GX3U47	Internal standard: flurazepam/THC-d9 Sample preparation: L/L extraction. The final extract is derivatized with BSTFA, and analyzed by GC/MS. GC/MS
J2U6PF	mepivacaine used as internal standard
J2VXL3	Due to this type of testing being beyond our laboratory's scope of accreditation, this sample was not analyzed.
JTHR8K	Internal standards used for LC-QTOF analysis: Fentanyl-D5, Imipramine-D3, MDMA-D5, Methaqualone-D7, Triazolam-D4.
JVPZG6	Item not tested.
KHYP84	internal standard: mepivacaine

TABLE 4F: Additional Comments for Item 4

WebCode	Item Comments
KPR6PG	Internal standards used were SKF-525A and hexobarbital. confirmation analysis performed 03/17/2025
LNJ6B2	Internal standards of alprazolam-D5 and hydroxyalprazolam-D5. Limit of detection is 2 ng/mL for alprazolam and 2.5 ng/mL for hydroxyalprazolam
LYDMKZ	Drug Screen Internal Standard Used was Promazine. Benzodiazepine Internal Standard used Prazepam. GHB Quantitation Internal Standard used was GHB-D6.
MQZWV3	All substances are detected using immunoassay qualitative testing. Cutoffs are as follows: 6AM-10 ng/mL, Amphetamine- 1,000 ng/mL, Benzodiazepine- 200 ng/mL, COC- 300 ng/mL, Creatinine - 20 mg/dL, THC- 50 ng/mL, Opiates- 300 ng/mL, Oxycodone- 100 ng/mL, Fentanyl- 1 ng/mL, Methamphetamine- 500 ng/mL.
MW7M4Z	ISTD for Alprazolam and Alpha-hydroxyalprazolam is d5-Oxazepam
N2G36C	Internal Standard: Mepivacaine. Benzodiazepines class of drug indicative in immunoassay.
NE4A4X	Due to this type of testing being beyond our laboratory's scope of accreditation, this sample was not analyzed
NH2T4B	internal standard: mepivacaine
NH3LZX	Phenyltoloxamine was used as an internal reference material (IRM) for the basic extraction. Prazepam was used as an internal reference material (IRM) for the benzodiazepine specific extraction. Hexobarbital was used as an IRM for the acidic extraction. Unconfirmed Ibuprofen was found by the acidic extraction. Ibuprofen is not an impairing drug, and it is not the lab's procedure to confirm the presence of this drug.
PLFQAD	N-Propylamphetamine, Mepivacaine, and Hexobarbital were used as Internal Standards.
PLGH6Z	No methodology available for Benzodiazepines confirmatory analysis.
Q6RTPW	A mixed internal standard is used with LC-QTOF analysis. Internal standards include, D3-Morphine, D3-Hydromorphone, D3-Oxycodone, D5-Methylamphetamine, D3-Benzoylecgonine, D5-Doxylamine, D3-Tramadol, D3-Cocaine, D6-Zolpidem, D5-Fentanyl, D4-Buprenorphine, D3-Nortriptyline, D3-Methadone, D3-Sertraline, D9-25I-NB2OMe, D5-Desmethyldiazepam. Non-hydrolysed and hydrolysed urine was analysed with LC-QTOF. A mixed internal standard is used with GC/MS analysis. Internal standards include, Mephentermine, Acepromazine, Brucine. Sample also screened for GHB by GC-MS/MS, screened for cannabinoids by immunoassay and screened for NPS by LC-QTOF.
QBCXFC	Item not tested
R8B8TX	4-1) Benzodiazepines class was indicative via immunoassay. No specific analyte available. Internal Standard: Mepivacaine for both LC/MS/MS and GC/MS Caffeine and ibuprofen detected. Both not in the list of possible sample analytes.
RAE279	Internal Standards used for LC-QTOF-MS: Mepivacaine and Mephobarbital
RNXR6B	alpha-hydroxyalprazolam LOD 5ng/ml; ISTD alpha-hydroxyalprazolam-d5 alprazolam LOD 5ng/ml; ISTD Alprazolam-d5
RRFPX8	Mepivacaine used as internal standard
RUPUBV	Drug Screen ISTD - Promazine Benzodiazepine Confirm ISTD - Prazepam GHB Quantitative Screen ISTD - GHB D6
RYXHNX	All substances are detected using immunoassay qualitative testing. Cutoffs are as follows: 6AM-10 ng/mL, Amphetamine- 1,000 ng/mL, Benzodiazepine- 200 ng/mL, COC- 300 ng/mL, Creatinine - 20 mg/dL, THC- 50 ng/mL, Opiates- 300 ng/mL, Oxycodone- 100 ng/mL, Fentanyl- 1 ng/mL, Methamphetamine- 500 ng/mL.

TABLE 4F: Additional Comments for Item 4

WebCode	Item Comments
TWL3UW	OH- and H+, and extraction with DCM with and without derivatization . Sample volume : 2 mL. Derivatization : BSTFA (50 uL) + EtOAc (100 uL)
U7PGDA	Alpha-hydroxyalprazolam: ISTD Alpha-hydroxyalprazolam-d5; LOD 5ng/mL Alprazolam: ISTD: Alprazolam-d5; LOD 5ng/mL
UQXEX7	Internal Standard: mepivacaine
V7N2G3	Internal standard used was mepivacaine.
VANCC3	I.S. Mepivacaine
VAP69P	iCassette (THC) test device was used to screen for THC, referred to in [Table 2E: Methods of Analysis] as rapid chromatographic immunoassay.
VK42B9	Item 4 screened positive for benzodiazepines and amphetamine. Confirmatory testing was carried out for amphetamine and no substances were identified. I am not qualified to confirm benzodiazepines.
VXTYER	Due to this type of testing being beyond our laboratory's scope of accreditation, this sample was not analyzed.
WC7QF4	LC-HRMS/MS (liquid chromatography high resolution accurate mass spectrometry). Instrument used was a Thermo Orbitrap Q-Exploris 120. Internal standards were mepivacaine and mephobarbital. Nordiazepam was not reported due to small size and poor quality mass spectrum in both LC-HRMS/MS screen data (2/27/25) and GCMS confirmatory testing (3/11/25).
WC9JCQ	Immunoassay screening is for drug classes, not specific drugs. GC/MS screening is for specific drugs. Internal standard for GC/MS confirmation is Prazepam. Internal standard for GC/MS drug screen is Promazine. EMIT Benzodiazepine cut-off (LOD) is 200 ng/mL. Internal standard for LC/MS/MS GHB quantitative screen is GHB-D6. LOD for GHB is 2 mg/L.
XBPUN4	Mepivacaine, n-Propylamphetamine and Hexobarbital were used as internal standards.
XERVNZ	Caffeine was potentially detected, but in accordance with our standard operating procedure it was not confirmed in the absence of a specific request. Mepivacaine was used as internal standard in all LC and GC analyses.
XLBYV4	Internal Standard used: Mepivacaine (screening and confirmatory).
XQM2NQ	Mepivacaine was the internal standard used for GCMS and LCMSMS testing.
YT7HCP	1. Internal Standards used: Promazine; Prazepam; GHB-d6.
ZFXWPP	All substances are detected using immunoassay qualitative testing. Cutoffs are as follows: 6AM-10 ng/mL, Amphetamine- 1,000 ng/mL, Benzodiazepine- 200 ng/mL, COC- 300 ng/mL, Creatinine - 20 mg/dL, THC- 50 ng/mL, Opiates- 300 ng/mL, Oxycodone- 100 ng/mL, Fentanyl- 1 ng/mL, Methamphetamine- 500 ng/mL.
ZGRMV6	Confirmation testing not performed for Benzodiazepines. Benzodiazepine confirmation method offline.

Additional Test Comments

TABLE 5

WebCode	Additional Comments
43ZRVP	Confirmatory analysis was not conducted on the above samples, as the drugs detected during screening are currently outside the scope of the laboratory.
4BBUGP	Confirmatory analysis was not conducted on the above samples, as the drugs detected during screening are currently outside the scope of the laboratory.
7YPWFV	Item 4 not analyzed
CKCRDB	Quantification was not done for the identified drugs due to lack of standards.
CQWW4Q	Samples available on 2/21/25 but received by analyst on 3/11/25.
DAQRGE	All 4 items were stored in a freezer (-35 Oc) for one month and 10 days before the analysis.
FM4Y7A	All substances are detected using immunoassay qualitative testing. Cutoffs are as follows: 6AM-10 ng/mL, Amphetamine- 1,000 ng/mL, Benzodiazepine- 200 ng/mL, COC- 300 ng/mL, Creatinine - 20 mg/dL, THC- 50 ng/mL, Opiates- 300 ng/mL, Oxycodone- 100 ng/mL, Fentanyl- 1 ng/mL, Methamphetamine- 500 ng/mL.
GDTWKA	Panel includes only the following analytes: Fentanyl, Hydromorphone, MDEA, MDPV, Sufentanil, Xylazine
K4ECMH	Over-the-counter drugs/ substances which are not expected to cause impairment will not be reported unless a reason is provided. These include: acetaminophen, ibuprofen, aspirin, caffeine, theobromine, nicotine, and cotinine.
MQZWV3	All substances are detected using immunoassay qualitative testing. Cutoffs are as follows: 6AM-10 ng/mL, Amphetamine- 1,000 ng/mL, Benzodiazepine- 200 ng/mL, COC- 300 ng/mL, Creatinine - 20 mg/dL, THC- 50 ng/mL, Opiates- 300 ng/mL, Oxycodone- 100 ng/mL, Fentanyl- 1 ng/mL, Methamphetamine- 500 ng/mL.
NVTKPE	Immunoassay Drug Screen (Enzyme Linked Immunosorbent Assay- ELISA): amphetamine, barbiturates, benzodiazepines, buprenorphine, cocaine/benzoylecgonine, cannabinoids, carisoprodol, fentanyl, methadone, methamphetamine, opiates, oxycodone/oxymorphone, phencyclidine (PCP), tramadol, zolpidem
Q6RTPW	The results apply to the sample as received.
RYXHNX	All substances are detected using immunoassay qualitative testing. Cutoffs are as follows: 6AM-10 ng/mL, Amphetamine- 1,000 ng/mL, Benzodiazepine- 200 ng/mL, COC- 300 ng/mL, Creatinine - 20 mg/dL, THC- 50 ng/mL, Opiates- 300 ng/mL, Oxycodone- 100 ng/mL, Fentanyl- 1 ng/mL, Methamphetamine- 500 ng/mL.
VK42B9	The included items were analyzed for the following drugs utilizing the listed methods: Immunoassay Drug Screen (Enzyme Linked Immunosorbent Assay- ELISA): amphetamine, barbiturates, benzodiazepines, buprenorphine, cocaine/benzoylecgonine, cannabinoids, carisoprodol, fentanyl, methadone, methamphetamine, opiates, oxycodone/oxymorphone, phencyclidine (PCP), tramadol, zolpidem Basic Drug Confirmation (Liquid Chromatography/Tandem Mass Spectrometry LC/MS/MS): Quantitatively: amphetamine, diphenhydramine, ketamine, MDA, MDMA, mescaline, methamphetamine, phentermine, LSD Qualitatively: ephedrine/pseudoephedrine, psilocin
WC7QF4	I would recommend the testing agency spike samples with higher concentrations of analytes to ensure they are detectable and reportable levels for various laboratories and limits of reporting.
XQM2NQ	Misc. drugs detected during testing, but not reported: acetaminophen, caffeine, ibuprofen.
ZFXWPP	All substances are detected using immunoassay qualitative testing. Cutoffs are as follows: 6AM-10 ng/mL, Amphetamine- 1,000 ng/mL, Benzodiazepine- 200 ng/mL, COC- 300 ng/mL, Creatinine - 20 mg/dL, THC- 50 ng/mL, Opiates- 300 ng/mL, Oxycodone- 100 ng/mL, Fentanyl- 1 ng/mL, Methamphetamine- 500 ng/mL.

-End of Report-
(Appendix may follow)

Collaborative Testing Services ~ Forensic Testing Program

Test No. 25-5671: Urine Drug Analysis

DATA MUST BE SUBMITTED BY **April 21, 2025, 11:59 p.m. EDT** TO BE INCLUDED IN THE REPORT

Participant Code: U1234A WebCode: EKLFR8

Scenario:

Investigators have submitted four urine specimens from four separate cases for your analysis. Using your laboratory's procedures, analyze each sample and report the presence of any drugs and/or metabolites.

Case 1: A 19 year old male was pulled over for running a red light. The individual appeared very drowsy and displayed confusion. He was arrested after failing a field sobriety test, and submitted a urine sample 1 hour later.

Case 2: A 28-year-old male fell unconscious after ingestion of a mouthful of an unknown beverage and was admitted to a medical facility. Urine collection was delayed until 8 hours after he swallowed the substance.

Case 3: A 35 year old woman arrived at a police station at 8:00 in the morning. She had been consuming alcohol with a male she engaged with on a dating app the night before, and had large gaps in her memory upon waking up. The woman awoke with bruises she could not explain, and believed she may have been sexually assaulted. A urine sample was collected soon after her arrival at the station.

Case 4: A 68 year old man who was found unconscious on a city bus awoke to find his possessions stolen. He told authorities that he remembered accepting a beverage offered to him by the person sitting next to him. He submitted a urine sample 1 day after reporting the incident.

-A list of potential analytes is located here: https://cts-forensics.com/pdfs/CTS_UrineDrug_AnalyteList.pdf

-Samples may contain methanol and acetonitrile as artifacts from production.

Items Submitted (Sample Pack UDRG):

Item 1: Urine sample from Case 1
Item 2: Urine sample from Case 2
Item 3: Urine sample from Case 3
Item 4: Urine sample from Case 4

Screening Results for Item 1:

1-1). Please indicate the screening results for Item 1.

- ○ No drugs detected utilizing screening methods.
- ○ Drug(s) detected. Select each drug category and drug below.

Drug Category	Drug/Metabolite

Confirmatory Results for Item 1:

1-2). Was confirmatory analysis performed for this item? ○ Yes ○ No

1-3). What drugs/metabolites were detected in Item 1? If quantitative determinations were performed, please record raw data in the provided spaces in ng/mL.

☐ No drugs/metabolites detected utilizing confirmatory methods.

Analyte	Qualitative Only?	Reported Concentration	Uncertainty	Units
	☐			( )

Date(s) Analysis Performed on Analyte:

Raw Data (ng/mL):

1-4). If quantitative analysis was performed, are the reported concentrations above

- ○ A single determination?
- ○ The mean of duplicate / several determinations?
- ○ Other? (Specify):

1-5). Please select the analysis method(s) performed and check whether it was used for screening, confirmatory testing, and/or quantitation.

Please list each method only once.

Method Used	Screening	Confirmatory	Quantitation
	☐	☐	☐

1-6). Additional Comments for Item 1

Please include any relevant information such as internal standard(s) used, limits of detection, etc.

Note: *Please use appropriate punctuation to indicate the end of sentences, sections, and statements in the free-form space below. Extra spacing and returns used for separation within your text will not transfer and may cause your information to be illegible in the Summary Report. The use of lists and tabular formats to deliver information is also cautioned against, as these do not transfer.*

Screening Results for Item 2:

2-1). Please indicate the screening results for Item 2.

- ○ No drugs detected utilizing screening methods.
- ○ Drug(s) detected. Select each drug category and drug below.

Drug Category	Drug/Metabolite

Confirmatory Results for Item 2:

2-2). Was confirmatory analysis performed for this item? ○ Yes ○ No

2-3). What drugs/metabolites were detected in Item 2? If quantitative determinations were performed, please record raw data in the provided spaces in ng/mL.

☐ No drugs/metabolites detected utilizing confirmatory methods.

Analyte	Qualitative Only?	Reported Concentration	Uncertainty	Units
	☐			( )

Date(s) Analysis Performed on Analyte:

Raw Data (ng/mL):

2-4). If quantitative analysis was performed, are the reported concentrations above

- ○ A single determination?
- ○ The mean of duplicate / several determinations?
- ○ Other? (Specify):

2-5). Please select the analysis method(s) performed and check whether it was used for screening, confirmatory testing, and/or quantitation.

Please list each method only once.

Method Used	Screening	Confirmatory	Quantitation
	☐	☐	☐

2-6). Additional Comments for Item 2

Please include any relevant information such as internal standard(s) used, limits of detection, etc.

Note: *Please use appropriate punctuation to indicate the end of sentences, sections, and statements in the free-form space below. Extra spacing and returns used for separation within your text will not transfer and may cause your information to be illegible in the Summary Report. The use of lists and tabular formats to deliver information is also cautioned against, as these do not transfer.*

Screening Results for Item 3:

3-1). Please indicate the screening results for Item 3.

- ○ No drugs detected utilizing screening methods.
- ○ Drug(s) detected. Select each drug category and drug below.

Drug Category	Drug/Metabolite

Confirmatory Results for Item 3:

3-2). Was confirmatory analysis performed for this item? ○ Yes ○ No

3-3). What drugs/metabolites were detected in Item 3? If quantitative determinations were performed, please record raw data in the provided spaces in ng/mL.

☐ No drugs/metabolites detected utilizing confirmatory methods.

Analyte	Qualitative Only?	Reported Concentration	Uncertainty	Units
	☐			( )

Date(s) Analysis Performed on Analyte:

Raw Data (ng/mL):

3-4). If quantitative analysis was performed, are the reported concentrations above

- ○ A single determination?
- ○ The mean of duplicate / several determinations?
- ○ Other? (Specify):

3-5). Please select the analysis method(s) performed and check whether it was used for screening, confirmatory testing, and/or quantitation.

Please list each method only once.

Method Used	Screening	Confirmatory	Quantitation
	☐	☐	☐

3-6). Additional Comments for Item 3

Please include any relevant information such as internal standard(s) used, limits of detection, etc.

Note: *Please use appropriate punctuation to indicate the end of sentences, sections, and statements in the free-form space below. Extra spacing and returns used for separation within your text will not transfer and may cause your information to be illegible in the Summary Report. The use of lists and tabular formats to deliver information is also cautioned against, as these do not transfer.*

Screening Results for Item 4:

4-1). Please indicate the screening results for Item 4.

- ○ No drugs detected utilizing screening methods.
- ○ Drug(s) detected. Select each drug category and drug below.

Drug Category	Drug/Metabolite

Confirmatory Results for Item 4:

4-2). Was confirmatory analysis performed for this item? ○ Yes ○ No

4-3). What drugs/metabolites were detected in Item 4? If quantitative determinations were performed, please record raw data in the provided spaces in ng/mL.

☐ No drugs/metabolites detected utilizing confirmatory methods.

Analyte	Qualitative Only?	Reported Concentration	Uncertainty	Units
	☐			( )

Date(s) Analysis Performed on Analyte:

Raw Data (ng/mL):

4-4). If quantitative analysis was performed, are the reported concentrations above

- ○ A single determination?
- ○ The mean of duplicate / several determinations?
- ○ Other? (Specify):

4-5). Please select the analysis method(s) performed and check whether it was used for screening, confirmatory testing, and/or quantitation.

Please list each method only once.

Method Used	Screening	Confirmatory	Quantitation
	☐	☐	☐

4-6). Additional Comments for Item 4

Please include any relevant information such as internal standard(s) used, limits of detection, etc.

Note: *Please use appropriate punctuation to indicate the end of sentences, sections, and statements in the free-form space below. Extra spacing and returns used for separation within your text will not transfer and may cause your information to be illegible in the Summary Report. The use of lists and tabular formats to deliver information is also cautioned against, as these do not transfer.*

Date Samples Received:

Additional Comments on Test

Note: *Please use appropriate punctuation to indicate the end of sentences, sections, and statements in the free-form space below. Extra spacing and returns used for separation within your text will not transfer and may cause your information to be illegible in the Summary Report. The use of lists and tabular formats to deliver information is also cautioned against, as these do not transfer.*

RELEASE OF DATA TO ACCREDITATION BODIES

The Accreditation Release is accessed by pressing the "Continue to Final Submission" button online and can be completed at any time prior to submission to CTS.

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

- ○ This participant's data is intended for submission to ANAB and/or A2LA. (Accreditation Release section below must be completed.)
- ○ This participant's data is **not** intended for submission to ANAB and/or A2LA.

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

ANAB Certificate No.

A2LA Certificate No.

Step 2: Complete the Laboratory Identifying Information in its entirety

Authorized Contact Person and Title

Laboratory Name

Location (City/State)