Exclusionary Drug Screen by UPLC-ESI-FTMS

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1   INTRODUCTION

A rapid ultra-performance liquid chromatography electrospray Fourier transform mass spectrometry (UPLC-ESI-FTMS) method can be used to quickly screen blood and urine specimens for common drugs of abuse and prescription medications.

2   SCOPE

Analyses	☒ Screening ☐ Confirmation ☐ Quantitation
Matrices	Blood, Urine
Analytes	Cocaine and metabolites, opioids, antihistamines, benzodiazepines and other hypnotics (selected analytes) See Section 11 for details of validated analytes and detection limits.
Personnel	This document applies authorized personnel who perform the described tasks, singly or in combination.

3   PRINCIPLE

Urine specimens are subjected to enzymatic hydrolysis. Blood and hydrolyzed urine specimens are diluted with buffer and made alkaline before supported liquid extraction (SLE). Final extracts are analyzed by UPLC-ESI-FTMS in full scan mode.

4   SPECIMEN CRITERIA

0.3 mL of blood or urine is required for this assay.

5   EQUIPMENT

5.1   Equipment

1. pH meter
2. Vortex mixer
3. Vacuum extraction box
4. Heating block
5. Heated evaporator

5.1.1   Columns

1. Waters Cortecs® C18, 1.6 μ; 2.1 x 50 mm UPLC Column
2. Cortecs® C18 1.6 μ precolumn

5.2   Consumables

1. 13 x 100 mm test tubes
2. 16 x 100 mm test tubes
3. SLE cartridges (Biotage Isolute SLE+; 2 mL sorbent mass; part number 820-0290-D)
4. 0.2 μm centrifugal filter tubes
5. 12 x 32 mm autosampler vials with approved split-septa caps

5.3   Instruments

5.3.1   *Mass Spectrometer*

Thermo Q-Exactive-1

5.3.2   *UPLC*

Waters Acquity I-Class

5.4   Software

Component	Software	Version
Operating System	Microsoft Windows	7 Pro SP 1
Mass Spectrometer	Foundation	3.1
	Xcalibur	3.1
	Q-Exactive Orbitrap MS	2.8 SP1
	Waters Acquity	3.0.0
Chromatography	Acquity Instrument Driver	1.51.3347
	Binary Solvent Manager	1.50.1521
	Column Manager	1.50.1678
	Sample Manager	1.50.2736
Data Analysis	Tracefinder Forensic	5.1

5.5   Chemicals/Reagents

5.5.1   *Purchased*

Storage/stability determined by manufacturer unless otherwise noted.

Acetic acid, glacial	ACS grade
Acetonitrile	Optima grade
Ammonium acetate	99.999% purity
Ammonium formate	LC/MS grade
Ammonium hydroxide, concentrated	ACS grade
β-glucuronidase	>120,000 u/mL β glucuronidase activity; from Red Abalone, H. Rufescena; available from Kura Biotec
Formic Acid	≥ LC/MS grade
Isopropanol	≥ HPLC grade
Methanol	Optima grade
Methylene chloride	Optima grade
Water	≥ 18mΩ, HPLC, Optima, or UPLC grade

5.5.2 *Prepared*

1. Mobile Phase 1 (5 mM Ammonium Formate with 0.1% formic acid)(Aqueous)	
	Add 0.158 g ammonium formate to a 500 mL volumetric flask. Add approximately 400 mL deionized water and mix well. Add 0.5 mL formic acid, and bring to the mark with deionized water. Store in glass at room temperature. Stable for one week.
2. Mobile Phase 2 (Acetonitrile with 0.1% Formic Acid)(Organic)	
	Combine 500 mL acetonitrile and 0.5 mL formic acid and mix well. Store in glass at room temperature. Stable for at least 1 month.
3. Ammonium Acetate Buffer (0.5 M, pH 5)	
	Add 3.854 g ammonium acetate to a 100-mL volumetric flask containing about 75 mL deionized water. Mix well to dissolve. Add glacial acetic acid until pH registers between 4.5 and 5.5. Bring to volume with deionized water and mix well. Store refrigerated in glass or plastic. Stable at least 3 months.
4. Elution Solvent (Methylene Chloride/Isopropanol) (95/5)	
	Combine 95 mL dichloromethane and 5 mL isopropanol and mix well. Store at room temperature in brown glass. Stable for at least one month.
5. Ammonium Hydroxide (4.5 M)	
	Mix 1.4 mL deionized water and 0.6 mL concentrated ammonium hydroxide in a test tube. Prepare daily.
6. Water/Acetonitrile (95/5)	
	Combine 9.5 mL deionized water and 0.5 mL acetonitrile and mix well. Store at room temperature in glass. Prepare weekly.
7. Seal/Weak Wash Solvent (Water/Acetonitrile; 90/10)	
	Combine 450 mL deionized water and 50 mL acetonitrile and mix well. Store at room temperature in glass. Stable for one month.
8. Strong Wash Solvent (Methanol/Acetonitrile/Water/Isopropanol; 45/40/10/5)	
	Combine 90 mL methanol, 80 mL acetonitrile, 20 mL deionized water and 10 mL isopropanol and mix well. Store at room temperature in glass. Stable for at least six months.
9. Methanol: Water (1:1)	
	Combine equal volumes of methanol and water and mix well. Store at room temperature in glass. Stable for at least six months.

5.6 Standards/Controls

5.6.1 *Purchased*

Storage/stability determined by manufacturer unless otherwise noted.

1. Negative Control:

Purchased from Cliniqa, Dynatek or an equivalent approved supplier, or prepared in-house from an appropriate blank specimen. Store refrigerated or obtain fresh.

2. Internal Standard Components (100 µg/mL) – Purchased from Cerilliant Corporation or equivalent.

    1. 7-aminoclonazepam-d4
    2. Alprazolam-d5
    3. Benzoylecgonine-d3/d8
    4. Clonazepam-d4
    5. Diazepam-d5
    6. Diphenhydramine-d3
    7. Hydrocodone-d3
    8. Morphine-d3
    9. Oxazepam-d5
    10. Oxycodone-d6
    11. Zolpidem-d6
    12. α-hydroxyalprazolam-d5

3. Positive Control Components (1.0 mg/mL) – Purchased from Cerilliant Corporation or equivalent.

6-acetylmorphine	dihydrocodeine	morphine
7-aminoclonazepam	diphenhydramine	norchlorcyclizine
7-aminoflunitrazepam	doxylamine	norcodeine
alprazolam	ecgonine methyl ester	nordiazepam
benzoylecgonine	EDDP	normorphine
bromazepam	estazolam	noroxycodone
brompheniramine	etizolam	oxazepam
chlordiazepoxide	flunitrazepam	oxycodone
chlorpheniramine	flurazepam	oxymorphone
clonazepam	hydrocodone	prazepam
cocaethylene	hydromorphone	temazepam
cocaine	hydroxyalprazolam	tetrahydrozoline
codeine	hydroxymidazalam	tetrazepam
desalkylflurazepam	hydroxytriazolam	triazolam
dextromethorphan	hydroxyzine	zolpidem
dextrorphan	lorazepam	zopiclone
diazepam	midazolam	morphine-3-β-glucuronide (or morphine-6-β-glucuronide)

5.6.2 *Prepared*

5.6.2.1 *Internal Standard Working Solution*

Combine the listed volumes of each Internal Standard Component in a 100-mL volumetric flask and bring to the mark with acetonitrile. Store refrigerated in glass. Stable for at least two years.

Component	Volume (µL)	Final Concentration (ng/mL)	Final Concentration in Specimen (ng/mL)
benzoylecgonine-d_3/d_8	120	120	10
morphine-d_3	120	120	10
hydrocodone-d_3	60	60	5
oxycodone-d_6	60	60	5
clonazepam-d_4	60	60	5
7-aminoclonazepam-d_4	36	36	3
α-hydroxyalprazolam-d_5	36	36	3
alprazolam-d_5	36	36	3
oxazepam-d_5	36	36	3
diazepam-d_5	36	36	3
zolpidem-d_6	24	24	2
diphenhydramine-d_3	36	36	3

5.6.2.2   Positive Control Stock Solution-Blood

Add the listed amounts of Positive Control Components to a 10-mL flask and bring to the mark with acetonitrile. Store in glass at <0ºC. Stable for at least two years.

Analytes (1000 µg/mL)	Volume added (mL)	Conc (µg/mL)
6-acetylmorphine	0.015	1.5
7-aminoclonazepam	0.015	1.5
Alprazolam	0.015	1.5
Benzoylecgonine	0.015	1.5
Chlorpheniramine	0.015	1.5
Clonazepam	0.150	15
Cocaethylene	0.015	1.5
Cocaine	0.015	1.5
Codeine	0.015	1.5
Dextromethorphan	0.150	15
Diazepam	0.015	1.5
Diphenhydramine	0.075	7.5
Doxylamine	0.075	7.5
Hydrocodone	0.015	1.5
Hydromorphone	0.015	1.5
Hydroxyalprazolam	0.015	1.5
Hydroxyzine	0.75	75
Lorazepam	0.15	15
Morphine	0.015	1.5
Nordiazepam	0.045	4.5
Normorphine	0.045	4.5
Oxazepam	0.015	1.5

Oxycodone	0.015	1.5
Oxymorphone	0.015	1.5
Temazepam	0.150	15
Zolpidem	0.045	4.5

5.6.2.3 Positive Control Stock Solution-Urine

Add the listed amounts of Positive Control Components to a 10-mL flask and bring to the markwith acetonitrile. Store in glass at <0ºC. Stable for at least two years.

Analytes (1000 µg/mL)	Volume added (mL)	Conc (µg/mL)
6-acetylmorphine	0.135	13.5
7-aminoclonazepam	0.150	15
7-aminoflunitrazepam	0.150	15
Alprazolam	0.015	1.5
Benzoylecgonine	0.045	4.5
Bromazepam	0.045	4.5
Brompheniramine	0.045	4.5
Chlordiazepoxide	0.150	15
Chlorpheniramine	0.150	15
Clonazepam	0.150	15
Cocaethylene	0.045	4.5
Cocaine	0.045	4.5
Codeine	0.045	4.5
Desalkylflurazepam	0.150	15
Dextromethorphan	0.015	1.5
Dextrorphan	0.015	1.5
Diazepam	0.015	1.5
Dihydrocodeine	0.015	1.5
Diphenhydramine	0.015	1.5
Doxylamine	0.015	1.5
Ecgonine Methyl Ester	0.225	22.5
EDDP	0.150	15
Estazolam	0.015	1.5
Etizolam	0.015	1.5
Flunitrazepam	0.045	4.5
Flurazepam	0.015	1.5
Hydrocodone	0.150	15
Hydromorphone	0.045	4.5
Hydroxyalprazolam	0.015	1.5
Hydroxymidazolam	0.045	4.5
Hydroxytriazolam	0.015	1.5
Hydroxyzine	0.150	15

Lorazepam	0.150	15
Midazolam	0.150	15
Morphine-glucuronide	0.0750	4.6
Norchlorcyclizine	0.150	15
Norcodeine	0.450	45
Nordiazepam	0.045	4.5
Normorphine	0.150	15
Noroxycodone	0.150	15
Oxazepam	0.015	1.5
Oxycodone	0.045	4.5
Oxymorphone	0.045	4.5
Prazepam	0.045	4.5
Temazepam	0.045	4.5
Tetrahydrozoline	0.150	15
Tetrazepam	0.045	4.5
Triazolam	0.015	1.5
Zolpidem	0.450	45
Zopiclone	0.150	15

5.6.2.4   Positive Control Working Solution-Blood

Solution	Added Volume (mL)	Diluted to (mL) Methanol:Water 1:1
Positive Control Stock Solution-Blood	0.300	10

Store in glass at <0ºC. Stable for 6 months.

5.6.2.5   Positive Control Working Solution-Urine

Solution	Added Volume (mL)	Diluted to (mL) Methanol:Water 1:1
Positive Control Stock Solution-Urine	0.300	10

Store in glass at <0ºC. Stable for 6 months.

5.6.2.6   Positive Control Blood

0.020 mL of the Positive Control Working Solution – Blood is added to 0.3 mL Negative Control Blood on the day of analysis.

Analyte	Resulting concentration when 20 µL is added to 0.3 mL matrix (ng/mL)
6-acetylmorphine	3
7-aminoclonazepam	3
Alprazolam	3
Benzoylecgonine	3
Chlorpheniramine	3
Clonazepam	30
Cocaethylene	3
Cocaine	3
Codeine	3
Dextromethorphan	30
Diazepam	3
Diphenhydramine	15
Doxylamine	15
Hydrocodone	3
Hydromorphone	3
Hydroxyalprazolam	3
Hydroxyzine	150
Lorazepam	30
Morphine	3
Nordiazepam	9
Normorphine	9
Oxazepam	3
Oxycodone	3
Oxymorphone	3
Temazepam	30
Zolpidem	9

5.6.2.7 Positive Control Urine

0.020 mL of the Positive Control Working Solution – Urine is added to 0.3 mL Negative Control Urine on the day of testing.

Analyte	Resulting concentration when 20 µL is added to 0.3 mL matrix (ng/mL)
6-acetylmorphine	27
7-aminoclonazepam	30
7-aminoflunitrazepam	30
Alprazolam	3
Benzoylecgonine	9
Bromazepam	9
Brompheniramine	9
Chlordiazepoxide	30
Chlorpheniramine	30
Clonazepam	30
Cocaethylene	9
Cocaine	9
Codeine	9
Desalkylflurazepam	30
Dextromethorphan	3
Dextrorphan	3
Diazepam	3
Dihydrocodeine	3
Diphenhydramine	3
Doxylamine	3
Ecgonine Methyl Ester	45
EDDP	30
Estazolam	3
Etizolam	3
Flunitrazepam	9
Flurazepam	3

Hydrocodone	30
Hydromorphone	9
Hydroxyalprazolam	3
Hydroxymidazolam	9
Hydroxytriazolam	3
Hydroxyzine	30
Lorazepam	30
Midazolam	30
Morphine (concentration as free morphine)	9.2
Norchlorcyclizine	30
Norcodeine	90
Nordiazepam	9
Normorphine	30
Noroxycodone	30
Oxazepam	3
Oxycodone	9
Oxymorphone	9
Prazepam	9
Temazepam	9
Tetrahydrozoline	30
Tetrazepam	9
Triazolam	3
Zolpidem	90
Zopiclone	30

5.6.2.8 *Performance Standard Mix*

Solution	Added Volume (mL)	Added to Deionized Water (mL)
Internal Standard Working Solution	0.025	0.375

Prepare on day of use.

6 PROCEDURE

Step	Note	Reference/Lot
A. Samples		
a. To labeled 13 x 100 mm tubes add:		
i. 0.3 mL of biological fluid		
B. Controls		
a. Prepare Negative Control(s)	▯	
b. Prepare Positive Control(s) i. Add 20 µL of Positive Control Working Solution to Negative Control(s)	▯	
C. Internal Standard(s)		
a. Add 25 µL of Internal Standard Working Solution	▯	
D. Buffer		
a. Add ammonium acetate buffer (0.5M, pH 5)	▯	
i. Blood: 0.7 mL		
ii. Urine: 0.6 mL		
1. Hydrolysis (urine only)		
a. Add 100 µL β-glucuronidase	▯	
b. Vortex and cap		
c. Incubate 30 minutes at ~68°C		
d. Cool to ~room temperature		
b. Add 0.6 mL deionized water		
c. Add 0.080 mL ammonium hydroxide (4.5M) (prep daily)	▯	
d. Vortex		
E. Extract (SLE Cartridge)	▯	
a. Load samples followed by brief vacuum pulse		
b. Absorb for 5 minutes		
c. Elute		
i. Add 3 mL Elution Solvent	▯	
ii. Absorb for 5 minutes		

	iii. Add 4 mL Elution Solvent		
	iv. Add 4 mL Elution Solvent		
	v. Apply brief vacuum pulse to complete elution		
F. Concentration			
	a. Evaporate at 45°C		
	b. When eluent volume reaches ~1mL, vortex briefly		
	c. Complete evaporation		
G. Reconstitute			
	a. Add 100 µL of water:acetonitrile (95:5)	▯▯▯	
	b. Vortex		
	c. Transfer to 0.2 µm centrifugal filter tubes		
	d. Centrifuge for 5 minutes at 10,000 rpm		
	e. Transfer filtrate to 12 x 32 mm autosampler vial with approved split-septa cap		
H. Instrumental Analysis			
	a. LC/MS: analyze 20 µL	▯▯▯	
	i. Analyze LC/MS Performance Standard prior to batch analysis (prep daily)	▯▯▯	
	ii. Mobile Phase 1 (aqueous)	▯▯▯	
	iii. Mobile Phase 2 (organic)	▯▯▯	
	iv. LC Column	▯▯▯	
	v. Seal/Weak Wash Solvent	▯▯▯	
	vi. Strong Wash Solvent	▯▯▯	

7 ANALYTICAL PARAMETERS

7.1 Waters Acquity i-Class UPLC Gradient/Conditions

Time (min)	1-Aqueous %	2-Organic %	(mL/min)	Curve	Column Heater (ºC)	30
0.00	95	5	0.50	Initial	**Autosampler (ºC)**	14
0.10	95	5	0.50	9	**Run Time (min)**	10
0.90	95	5	0.50	9	**Autosampler Volumes**	µL
2.67	60	40	0.50	6	**Weak Wash**	1000
4.67	60	40	0.50	6	**Strong Wash**	800
5.56	0	100	0.50	6	**Sample Loop**	20
7.00	0	100	0.50	6	**Needle Overfill Flush**	5
7.25	95	5	0.50	6	**Event Table**	6.25 min
10.00	95	5	0.50	6	**Cycle inject valve**	

7.2 Thermo Q-Exactive Conditions

General		Full MS- SIM	
Tune File	TOX215.mtune	**Microscans**	1
Scan Type	Full Scan	**Resolution**	70,000
Run Time	10	**AGC Target**	1e6
Polarity	positive	**Maximum IT (ms)**	50
Mode	ESI	**Number of Scan Ranges**	1
In-Source CID	0.0 eV	**Scan Range (m/z)**	180-525
		Spectrum Data Type	Profile

8   DATA ANALYSIS

8.1   Data Processing

Data files are processed using TraceFinder Quan Processing Method "TOX 215-5 blood" or "TOX 215-5 urine", and reports are generated using the "TOX 215-5" Report Template. See Appendices 1 and 2 for details of the Processing Methods.

Note: Level of Reporting (LOR) area counts have been hard coded into the Quan Processing Methods based on 2023 LOD batches.[1] When these threshold LORs are reached, a filled dot appears to the left of the analyte name in the Target Compound Chart of the Report Template printout.

8.2   Decision Criteria

8.2.1   *LC/MS Performance Standard*

In addition to the performance checks specified in the instrument standard operating procedure, a performance standard mix is analyzed through the analytical column to monitor the performance of the column.

8.2.1.1   *Chromatography*

The analyte's molecular ion traces should:

A. Have reasonable peak shape
B. Compare favorably to the previous analysis of the standard using the same equipment
    1. Retention times ±0.05 min
    2. Responses 50-200%

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[1] LORs were set as the average of LOD samples minus 2 standard deviations and were rounded down to one significant figure. When this value was not greater than the average response for any peak seen in the Negative Control samples, the LOR was set at 50% below the lowest LOD sample which was rounded down to one significant figure. For specifics, consult 2023 validation supplementation records.

8.2.1.2 Mass Spectrometry

The analyte mass assignments shall be present:

Analyte	Unit.Exact Mass (±0.005 m/z)
d_5-alprazolam	314.1215
d_5-hydroxyalprazolam	330.1165
d_4-clonazepam	320.0735
d_4-7-aminoclonazepam	290.0993
d_5-diazepam	290.1103
d_5-oxazepam	292.0896
d_6-zolpidem	314.2134
d_6-oxycodone	322.1920
d_3-morphine	289.1626
d_3-hydrocodone	303.1783
d_3-benzoylecgonine or d_8-benzoylecgonine	293.1575 298.1889
d_3-diphenhydramine	259.1884

8.2.2 Batch Acceptance

A. Negative Control
   No target analytes are detected. If target analytes are detected in the Negative Control, the batch will be unsuitable for that analyte.

B. Positive Control
   The target analytes are detected.

C. Internal Standards for Controls
   Peaks for each internal standard are present at the ions specified in 8.2.1.2. Note: The d_4-clonazepam, d_3-diphenhydramine and d_6-zolpidem internal standards are spiked at a level below the updated detection limit (except for d_3-diphenhydramine in urine), so theymay not be recovered in each sample.

8.2.3 Unknown Sample Acceptance

8.2.3.1 Internal Standard Recovery

All 12 internal standards should be detectable in the unknown sample, with the exception of d_4-clonazepam, d_3-diphenhydramine and d_6-zolpidem, as described in 8.2.2 C above. If any of the other internal standards are not detected in a case sample and/or controls, the data for that case should be interpreted with care.

8.2.4 Unknown Sample Compound Detection

8.2.4.1 Points of Comparison

A. Retention Time
B. Accurate Mass (M+1)

8.2.4.2 Chromatography

The peak of interest will show good chromatographic fidelity, with reasonable peak shape, width and resolution.

Additionally, the retention time of the peak will be within ±0.05 min of the expected retention time.

8.2.4.3 Mass Spectrometry

Unknown sample files are reviewed using M+1 layouts with a mass tolerance of ±2.5 mmu. Following is a list of validated analytes for this method and their corresponding molecular ions and retention times. Detection of a peak at the proper retention time is an indication that the analyte may be present, and confirmation testing will be performed.

8.2.5 Analytes with Retention Times and Molecular Ions

Analyte	Retention Time (RT; min) / RT of labeled Internal Standard, if applicable	Molecular Ion (M+1)
Benzodiazepines and Metabolites		
α-hydroxyalprazolam	2.87 / 2.86	325.0851
α-hydroxymidazolam	2.63	342.0804
α-hydroxytriazolam	2.87	359.0461
7-aminoclonazepam	2.03 / 2.02	286.0742
7-aminoflunitrazepam	2.23	284.1194
alprazolam	3.03 / 3.01	309.0902
bromazepam	2.62	316.0080
chlordiazepoxide	2.42	300.0898
clonazepam	3.03 / 3.03	316.0484
desalkylflurazepam	3.15	289.0539
diazepam	3.65 / 3.61	285.0789
estazolam	2.95	295.0745
etizolam	3.18	343.0778
flunitrazepam	3.18	314.0936
flurazepam	2.68	388.1586
lorazepam	3.01	321.0192
midazolam	2.63	326.0855
nordiazepam	3.15	271.0633
oxazepam	2.93 / 2.95	287.0582

prazepam	5.27	325.1102
temazepam	3.23	301.0738
tetrazepam	3.58	289.1102
triazolam	3.07	343.0511
Opioids and Metabolites		
6-acetylmorphine	1.74	328.1543
codeine	1.50	300.1594
dihydrocodeine	1.43	302.1751
EDDP	2.84	278.1903
hydrocodone	1.76 / 1.76	300.1594
hydromorphone	0.78	286.1438
morphine	0.51 / 0.50	286.1438
norcodeine	1.37	286.1438
normorphine	0.43	272.1281
noroxycodone	1.64	302.1387
oxycodone	1.68 / 1.66	316.1543
oxymorphone	0.61	302.1387
Cocaine and Metabolites		
ecgonine methyl ester	0.27	200.1281
benzoylecgonine	1.93 / 1.93	290.1387
cocaethylene	2.46	318.1700
cocaine	2.26	304.1543
Antihistamines and Related Compounds		
brompheniramine	2.47	319.0804
chlorpheniramine	2.39	275.1309
dextromethorphan	2.60	272.2008
dextrorphan	2.06	258.1852
diphenhydramine	2.68 / 2.68	256.1695
doxylamine	1.91	271.1804
hydroxyzine	2.95	375.1833
norchlorcyclizine	2.95	287.1309
tetrahydrozoline	1.85	201.1386
Hypnotics		
zolpidem	2.32 / 2.31	308.1757
zopiclone	2.10	389.1123

9 REPORTING

TraceFinder software generates a report which lists the analytes detected. The assigned authorized individual evaluates the report in the context of each case scenario.

Target compounds with a filled dot to the left of their name in the Target Compound Chart are considered detected when their associated peak(s) meet Decision Criteria in 8.2.4.

Target compounds without a filled dot to the left of their name in the Target Compound Chart may be considered detected when their associated peak(s) meet Decision Criteria in 8.2.4.

All detected compounds require identification by a second method to be reported as positive.

10 CORRECTIVE MEASURES

Refer to Quality Control for Toxicology Examinations (TOX-101) for guidance on action steps in the event of a quality control failure.

10.1 LC/MS Performance Standard

A retention time shift of >0.05 minutes or poor peak shape may be an indicator for a guard column change or other LC maintenance.

11 PERFORMANCE CHARACTERISTICS

11.1 LOD

Analyte	Blood LOD (ng/mL)	Urine LOD (ng/mL)
Benzodiazepines and Metabolites		
α-hydroxyalprazolam	1	1
α-hydroxymidazolam	3	3
α-hydroxytriazolam	3	1
7-aminoclonazepam	1	>10
7-aminoflunitrazepam	1	>10
alprazolam	1	1
bromazepam	10	3
chlordiazepoxide	10	10
clonazepam	>10	>10
desalkylflurazepam	10	>10
diazepam	1	1
estazolam	1	1
etizolam	1	1
flunitrazepam	3	3
flurazepam	1	1
lorazepam	>10	>10
midazolam	1	10
nordiazepam	3	3

oxazepam	1	1
prazepam	>50	3
temazepam	10	3
tetrazepam	3	3
triazolam	1	1
Opioids and Metabolites		
6-acetylmorphine	1	9
codeine	1	3
dihydrocodeine	3	1
EDDP	1	>10
hydrocodone	1	>10
hydromorphone	1	3
morphine	1	3
norcodeine	3	30
normorphine	3	10
noroxycodone	1	10
oxycodone	1	3
oxymorphone	1	3
Cocaine and Metabolites		
ecgonine methyl ester	1	15
benzoylecgonine	1	3
cocaethylene	1	3
cocaine	1	3
Antihistamines and Related Compounds		
brompheniramine	3	3
chlorpheniramine	1	>10
dextromethorphan	10	1
dextrorphan	5	1
diphenhydramine	5	1
doxylamine	5	1
hydroxyzine	50	>10
norchlorcyclizine	>50	>10
tetrahydrozoline	>10	10
Hypnotics		
zolpidem	3	>30
zopiclone	>10	>10

Note: Supplemental validation experiments were performed to meet the requirements of ASB036, using various lots and quality of matrices. These experiments showed that there may be wide variability for recovery and/or ion suppression for some analytes, which may affect the LOD. For that reason, analytes listed with LODs "> a value" are not excluded by this method,

which is an acknowledged limitation. To mitigate this limitation, TOX-203 will also be performed on all cases. Additionally, TOX-426 will be performed in cases when lorazepam and other benzodiazepines are of interest at low levels (e.g., driving under the influence cases and drug-facilitated assault cases).

11.2 Carryover

High analyte concentrations in samples may carry over into subsequent samples. Analysts will investigate evidence for carryover if high sample analytes loads are encountered. This may be accomplished by viewing the data through TraceFinder in a batch-wise manner in addition to viewing generated sample reports.

12   LIMITATIONS

A. Specificity: No known interferences. However, matrix variability affects detection limits and ion suppression. This procedure will be used as a screen only and all positive findings will be confirmed by a second procedure.
B. Some matrix lots may show poor recovery and/or ion suppression for some analytes. For that reason, this method may only be used to exclude analytes at the LODs listed. (See Note in Section 11.1 above.)

13   SAFETY

Take standard precautions for the handling of chemicals and biological materials. Refer to the *FBI Laboratory Safety Manual* for guidance.

14 REVISION HISTORY

Revision	Issued	Changes
04	02/11/2022	Complete document reformat. 1, 2, 3 – Phrase updates 5-Equipment section reordered and reformat 6-Reformat of Procedure 7-Reformat of instrument information 8-Simplified decision acceptance language 8.2-Added software calculations
05	02/15/2024	5.3.1 – Specified use of Exactive-1 for this procedure. 5.6.1.3 – Added additional positive control components. 8.1 – Added Data processing guidance 8.2.1.2 - Updated unit.exact mass values 8.2.2 C – Updated criteria 8.2.3.1 – Updated criteria 8.2.4.1 – Updated criteria 8.2.5 – Updated retention times to align with additional validation experiments performed in 2023 8.2.5 and 11.1 – Removed the following analytes from the method due to not being included in routine scope of analysis: desmethylflunitrazepam, lormetazepam, medazepam, phenazepam, dihydromorphine, pheniramine, zaleplon, and duloxetine. Removed Calculations Section Clarified reporting criteria in Section 9. Updated LOD Table in 11.1 with newly validated LODs. Updated Limitations in 12A and 12B. Added Appendices with processing method details.

APPENDIX 1 – BLOOD PROCESSING METHOD (28 pages)

Method Report

Method Name:	Error: Unable to get field value. Message:Object reference not set to an instance of an object..
Master Method Name:	TOX215-3 CONC Estimate POST CAP 042
Current Calibration File:	
Assay Type:	TOX215
Inj. Vol:	1.000
Instrument Method:	
Tune/Breakdown Method:	
Ion Range Calc Method:	eManual

Compound Identification:

Compound	Quan Mass	RT	Window	View Width	Use as Reference	Reference Compound
ecgonine methyl ester	200.13 mz	0.27	8.00	0.40	No	
normorphine	272.13 mz	0.43	8.00	0.40	No	
dihydromorphine	288.16 mz	0.48	8.00	0.40	No	
(4)d3-morphine	289.16 mz	0.50	12.00	0.40	No	
morphine	286.14 mz	0.51	8.00	0.40	No	
oxymorphone	302.14 mz	0.61	8.00	0.40	No	
hydromorphone	286.14 mz	0.78	8.00	0.40	No	
norcodeine	286.14 mz	1.37	8.00	0.40	No	
dihydrocodeine	302.18 mz	1.43	8.00	0.40	No	
codeine	300.16 mz	1.50	8.00	0.40	No	
noroxycodone	302.14 mz	1.64	8.00	0.40	No	
(11)d6-oxycodone	322.19 mz	1.66	8.00	0.40	No	
oxycodone	316.15 mz	1.68	8.00	0.40	No	
6-acetylmorphine	328.15 mz	1.74	6.00	0.40	No	
(3)d3-hydrocodone	303.18 mz	1.76	8.00	0.40	No	
hydrocodone	300.16 mz	1.76	8.00	0.40	No	
tetrahydrozoline	201.14 mz	1.85	8.00	0.40	No	
doxylamine	271.18 mz	1.91	8.00	0.40	No	
pheniramine	241.17 mz	1.91	8.00	0.40	No	
(1)d3-benzoylecgonine	293.16 mz	1.93	8.00	0.40	No	
benzoylecgonine	290.14 mz	1.93	8.00	0.40	No	
(5)d4-7-aminoclonazepam	290.10 mz	2.02	8.00	0.40	No	
7-aminoclonazepam	286.07 mz	2.03	6.00	0.40	No	
dextrorphan	258.19 mz	2.06	8.00	0.40	No	
zopiclone	389.11 mz	2.10	8.00	0.40	No	
7-aminoflunitrazepam	284.12 mz	2.23	6.00	0.40	No	
cocaine	304.15 mz	2.26	8.00	0.40	No	
(12)d6-zolpidem	314.21 mz	2.31	8.00	0.40	No	
zolpidem	308.18 mz	2.32	8.00	0.40	No	
chlorpheniramine	275.13 mz	2.39	8.00	0.40	No	
chlordiazepoxide	300.09 mz	2.42	8.00	0.40	No	
cocaethylene	318.17 mz	2.46	8.00	0.40	No	
brompheniramine	319.08 mz	2.47	8.00	0.40	No	

Method Report

Method Name:	Error: Unable to get field value. Message:Object reference not set to an instance of an object..
Master Method Name:	TOX215-3 CONC Estimate POST CAP 042
Current Calibration File:	
Assay Type:	TOX215
Inj. Vol:	1.000
Instrument Method:	
Tune/Breakdown Method:	
Ion Range Calc Method:	eManual

dextromethorphan	272.20 mz	2.60	8.00	0.40	No
bromazepam	316.01 mz	2.62	8.00	0.40	No
hydroxymidazolam	342.08 mz	2.63	8.00	0.40	No
midazolam	326.09 mz	2.63	8.00	0.40	No
medazepam	271.10 mz	2.67	8.00	0.40	No
(2)d3-diphenhydramine	259.19 mz	2.68	8.00	0.40	No
diphenhydramine	256.17 mz	2.68	8.00	0.40	No
flurazepam	388.16 mz	2.68	8.00	0.40	No
zaleplon	306.13 mz	2.82	8.00	0.40	No
EDDP	278.19 mz	2.84	8.00	0.40	No
(9)d5-hydroxyalprazolam	330.12 mz	2.86	8.00	0.40	No
hydroxyalprazolam	325.09 mz	2.87	8.00	0.40	No
hydroxytriazolam	359.05 mz	2.87	8.00	0.40	No
desmethylflunitrazepam	300.08 mz	2.92	8.00	0.40	No
(10)d5-oxazepam	292.09 mz	2.93	8.00	0.40	No
estazolam	295.07 mz	2.95	8.00	0.40	No
hydroxyzine	375.18 mz	2.95	8.00	0.40	No
norchlorcyclizine	287.13 mz	2.95	8.00	0.40	No
oxazepam	287.06 mz	2.95	8.00	0.40	No
duloxetine	298.13 mz	2.97	8.00	0.40	No
(7)d5-alprazolam	314.12 mz	3.01	8.00	0.40	No
lorazepam	321.02 mz	3.01	8.00	0.40	No
(6)d4-clonazepam	320.07 mz	3.03	8.00	0.40	No
alprazolam	309.09 mz	3.03	8.00	0.40	No
clonazepam	316.05 mz	3.03	8.00	0.40	No
triazolam	343.05 mz	3.07	8.00	0.40	No
desalkylflurazepam	289.05 mz	3.15	8.00	0.40	No
nordiazepam	271.06 mz	3.15	8.00	0.40	No
etizolam	343.08 mz	3.18	8.00	0.40	No
flunitrazepam	314.09 mz	3.18	8.00	0.40	No
temazepam	301.07 mz	3.23	8.00	0.40	No
lormetazepam	335.03 mz	3.36	8.00	0.40	No
phenazepam	348.97 mz	3.41	8.00	0.40	No
tetrazepam	289.11 mz	3.58	8.00	0.40	No
(8)d5-diazepam	290.11 mz	3.61	8.00	0.40	No
diazepam	285.08 mz	3.65	8.00	0.40	No
prazepam	325.11 mz	5.27	8.00	0.40	No

Method Report

Method Name:	Error: Unable to get field value. Message:Object reference not set to an instance of an object..
Master Method Name:	TOX215-3 CONC Estimate POST CAP 042
Current Calibration File:	
Assay Type:	TOX215
Inj. Vol:	1.000
Instrument Method:	
Tune/Breakdown Method:	
Ion Range Calc Method:	eManual

Compound Calibration

Compound	Response	Calibration	Curve Type	Weighting	OriginType	Units	ISTD Name	ISTD Units
ecgonine methyl ester		Estimated	Ratio			ng/mL		
normorphine		Estimated	Ratio			ng/mL		
dihydromorphine		Estimated	Ratio			ng/mL		
morphine		Estimated	Ratio			ng/mL		
oxymorphone		Estimated	Ratio			ng/mL		
hydromorphone		Estimated	Ratio			ng/mL		
norcodeine		Estimated	Ratio			ng/mL		
dihydrocodeine		Estimated	Ratio			ng/mL		
codeine		Estimated	Ratio			ng/mL		
noroxycodone		Estimated	Ratio			ng/mL		
oxycodone		Estimated	Ratio			ng/mL		
6-acetylmorphine		Estimated	Ratio			ng/mL		
hydrocodone		Estimated	Ratio			ng/mL		
tetrahydrozoline		Estimated	Ratio			ng/mL		
doxylamine		Estimated	Ratio			ng/mL		
pheniramine		Estimated	Ratio			ng/mL		
benzoylecgonine		Estimated	Ratio			ng/mL		
7-aminoclonazepam		Estimated	Ratio			ng/mL		
dextrorphan		Estimated	Ratio			ng/mL		
zopiclone		Estimated	Ratio			ng/mL		
7-aminoflunitrazepam		Estimated	Ratio			ng/mL		
cocaine		Estimated	Ratio			ng/mL		
zolpidem		Estimated	Ratio			ng/mL		
chlorpheniramine		Estimated	Ratio			ng/mL		
chlordiazepoxide		Estimated	Ratio			ng/mL		
cocaethylene		Estimated	Ratio			ng/mL		
brompheniramine		Estimated	Ratio			ng/mL		
dextromethorphan		Estimated	Ratio			ng/mL		
bromazepam		Estimated	Ratio			ng/mL		
hydroxymidazolam		Estimated	Ratio			ng/mL		
midazolam		Estimated	Ratio			ng/mL		
medazepam		Estimated	Ratio			ng/mL		
diphenhydramine		Estimated	Ratio			ng/mL		

Method Report

Method Name:	Error: Unable to get field value. Message:Object reference not set to an instance of an object..
Master Method Name:	TOX215-3 CONC Estimate POST CAP 042
Current Calibration File:	
Assay Type:	TOX215
Inj. Vol:	1.000
Instrument Method:	
Tune/Breakdown Method:	
Ion Range Calc Method:	eManual

flurazepam	Estimated	Ratio	ng/mL
zaleplon	Estimated	Ratio	ng/mL
EDDP	Estimated	Ratio	ng/mL
hydroxyalprazolam	Estimated	Ratio	ng/mL
hydroxytriazolam	Estimated	Ratio	ng/mL
desmethylflunitrazepam	Estimated	Ratio	ng/mL
estazolam	Estimated	Ratio	ng/mL
hydroxyzine	Estimated	Ratio	ng/mL
norchlorcyclizine	Estimated	Ratio	ng/mL
oxazepam	Estimated	Ratio	ng/mL
duloxetine	Estimated	Ratio	ng/mL
lorazepam	Estimated	Ratio	ng/mL
alprazolam	Estimated	Ratio	ng/mL
clonazepam	Estimated	Ratio	ng/mL
triazolam	Estimated	Ratio	ng/mL
desalkylflurazepam	Estimated	Ratio	ng/mL
nordiazepam	Estimated	Ratio	ng/mL
etizolam	Estimated	Ratio	ng/mL
flunitrazepam	Estimated	Ratio	ng/mL
temazepam	Estimated	Ratio	ng/mL
lormetazepam	Estimated	Ratio	ng/mL
phenazepam	Estimated	Ratio	ng/mL
tetrazepam	Estimated	Ratio	ng/mL
diazepam	Estimated	Ratio	ng/mL
prazepam	Estimated	Ratio	ng/mL

Method Report

Method Name:	Error: Unable to get field value. Message:Object reference not set to an instance of an object..
Master Method Name:	TOX215-3 CONC Estimate POST CAP 042
Current Calibration File:	
Assay Type:	TOX215
Inj. Vol:	1.000
Instrument Method:	
Tune/Breakdown Method:	
Ion Range Calc Method:	eManual

QAQC Limits

Compound	LOD	LOQ	LOR	ULOL	Carryover
ecgonine methyl ester	1.000	1.000	300000.000	1.00	0.00
normorphine	3.000	1.000	30000.000	1.00	0.00
dihydromorphine	1.000	1.000	200000.000	1.00	0.00
morphine	1.000	1.000	90000.000	1.00	0.00
oxymorphone	1.000	1.000	100000.000	1.00	0.00
hydromorphone	1.000	1.000	90000.000	1.00	0.00
norcodeine	3.000	1.000	50000.000	1.00	0.00
dihydrocodeine	3.000	1.000	400000.000	1.00	0.00
codeine	1.000	1.000	300000.000	1.00	0.00
noroxycodone	1.000	1.000	70000.000	1.00	0.00
oxycodone	1.000	1.000	700000.000	1.00	0.00
6-acetylmorphine	1.000	1.000	100000.000	1.00	0.00
hydrocodone	1.000	1.000	300000.000	1.00	0.00
tetrahydrozoline	3.000	1.000	3000000.000	1.00	0.00
doxylamine	5.000	1.000	200000.000	1.00	0.00
pheniramine	1.000	1.000	100000.000	1.00	0.00
benzoylecgonine	1.000	1.000	400000.000	1.00	0.00
7-aminoclonazepam	1.000	1.000	30000.000	1.00	0.00
dextrorphan	5.000	1.000	1000000.000	1.00	0.00
zopiclone	10.000	1.000	300000.000	1.00	0.00
7-aminoflunitrazepam	1.000	1.000	90000.000	1.00	0.00
cocaine	1.000	1.000	1000000.000	1.00	0.00
zolpidem	3.000	1.000	6000000.000	1.00	0.00
chlorpheniramine	1.000	1.000	50000.000	1.00	0.00
chlordiazepoxide	3.000	1.000	10000.000	1.00	0.00
cocaethylene	1.000	1.000	1000000.000	1.00	0.00
brompheniramine	1.000	1.000	10000.000	1.00	0.00
dextromethorphan	10.000	1.000	1000000.000	1.00	0.00
bromazepam	3.000	1.000	70000.000	1.00	0.00
hydroxymidazolam	3.000	1.000	80000.000	1.00	0.00
midazolam	1.000	1.000	200000.000	1.00	0.00
medazepam	5.000	1.000	200000.000	1.00	0.00
diphenhydramine	5.000	1.000	2000000.000	1.00	0.00

Method Report

Method Name:	Error: Unable to get field value. Message:Object reference not set to an instance of an object..
Master Method Name:	TOX215-3 CONC Estimate POST CAP 042
Current Calibration File:	
Assay Type:	TOX215
Inj. Vol:	1.000
Instrument Method:	
Tune/Breakdown Method:	
Ion Range Calc Method:	eManual

flurazepam	1.000	1.000	200000.000	1.00	0.00
zaleplon	1.000	1.000	60000.000	1.00	0.00
EDDP	1.000	1.000	400000.000	1.00	0.00
hydroxyalprazolam	1.000	1.000	40000.000	1.00	0.00
hydroxytriazolam	3.000	1.000	100000.000	1.00	0.00
desmethylflunitrazepam	10.000	1.000	200000.000	1.00	0.00
estazolam	1.000	1.000	40000.000	1.00	0.00
hydroxyzine	50.000	1.000	300000.000	1.00	0.00
norchlorcyclizine	5.000	1.000	1000.000	1.00	0.00
oxazepam	1.000	1.000	10000.000	1.00	0.00
duloxetine	500.000	1.000	10000.000	1.00	0.00
lorazepam	10.000	1.000	20000.000	1.00	0.00
alprazolam	1.000	1.000	300000.000	1.00	0.00
clonazepam	10.000	1.000	1000.000	1.00	0.00
triazolam	1.000	1.000	100000.000	1.00	0.00
desalkylflurazepam	3.000	1.000	40000.000	1.00	0.00
nordiazepam	3.000	1.000	40000.000	1.00	0.00
etizolam	1.000	1.000	100000.000	1.00	0.00
flunitrazepam	1.000	1.000	40000.000	1.00	0.00
temazepam	10.000	1.000	1000000.000	1.00	0.00
lormetazepam	1.000	1.000	20000.000	1.00	0.00
phenazepam	1.000	1.000	1000.000	1.00	0.00
tetrazepam	3.000	1.000	200000.000	1.00	0.00
diazepam	1.000	1.000	100000.000	1.00	0.00
prazepam	15.000	1.000	60000.000	1.00	0.00

Method Report

Method Name:	Error: Unable to get field value. Message:Object reference not set to an instance of an object..
Master Method Name:	TOX215-3 CONC Estimate POST CAP 042
Current Calibration File:	
Assay Type:	TOX215
Inj. Vol:	1.000
Instrument Method:	
Tune/Breakdown Method:	
Ion Range Calc Method:	eManual

Groups:

GroupName	Compounds
Antidepressant	duloxetine
Antihistamines and Others	pheniramine
	doxylamine
	chlorpheniramine
	brompheniramine
	diphenhydramine
	hydroxyzine
	norchlorcyclizine
	dextromethorphan
	dextrorphan
	tetrahydrozoline

Method Report

Method Name:	Error: Unable to get field value. Message:Object reference not set to an instance of an object..
Master Method Name:	TOX215-3 CONC Estimate POST CAP 042
Current Calibration File:	
Assay Type:	TOX215
Inj. Vol:	1.000
Instrument Method:	
Tune/Breakdown Method:	
Ion Range Calc Method:	eManual

Benzodiazepines and Metabolite
7-aminoclonazepam
7-aminoflunitrazepam
chlordiazepoxide
bromazepam
hydroxymidazolam
midazolam
flurazepam
medazepam
hydroxyalprazolam
hydroxytriazolam
desmethylflunitrazepam
oxazepam
estazolam
lorazepam
clonazepam
alprazolam
triazolam
desalkylflurazepam
nordiazepam
flunitrazepam
etizolam
temazepam
lormetazepam
phenazepam
tetrazepam
diazepam
prazepam

Cocaine and Metabolites
ecgonine methyl ester
benzoylecgonine
cocaine
cocaethylene

Hypnotics
zopiclone
zolpidem
zaleplon

Method Report

Method Name:	Error: Unable to get field value. Message:Object reference not set to an instance of an object..
Master Method Name:	TOX215-3 CONC Estimate POST CAP 042
Current Calibration File:	
Assay Type:	TOX215
Inj. Vol:	1.000
Instrument Method:	
Tune/Breakdown Method:	
Ion Range Calc Method:	eManual

Internal Standards
(4)d3-morphine
(11)d6-oxycodone
(3)d3-hydrocodone
(1)d3-benzoylecgonine
(5)d4-7-aminoclonazepam
(12)d6-zolpidem
(2)d3-diphenhydramine
(9)d5-hydroxyalprazolam
(10)d5-oxazepam
(6)d4-clonazepam
(7)d5-alprazolam
(8)d5-diazepam

Opioids
normorphine
dihydromorphine
morphine
oxymorphone
hydromorphone
norcodeine
dihydrocodeine
codeine
noroxycodone
oxycodone
6-acetylmorphine
hydrocodone
EDDP

Method Report

Method Name:	Error: Unable to get field value. Message:Object reference not set to an instance of an object..
Master Method Name:	TOX215-3 CONC Estimate POST CAP 042
Current Calibration File:	
Assay Type:	TOX215
Inj. Vol:	1.000
Instrument Method:	
Tune/Breakdown Method:	
Ion Range Calc Method:	eManual

Report Options

Quan Report Options

Report concentration:	Always
Decimal places to be reported:	2
Show chromatogram on quantitation report:	TRUE
Display compounds above set limit:	TRUE

Qual Options

Sort qual results by:	Reverse Search Index
Enable limiting peaks:	FALSE
Limit peaks to:	N/A

User Inferface Options

Shade row when sample is outside of evaluation criteria:	FALSE
Separate ion overlay display:	TRUE
Use alternative calibration report format:	FALSE
Display quan flags and legend:	TRUE

Mass Tolerance Settings

Mass tolerance:	2.50 MMU

TraceFinder Settings

Quan Flags

Flag values below LOD:	TRUE
Flag values below LOQ:	TRUE
Flag values above LOR:	TRUE
Flag values above ULOL:	TRUE
Flag values above Carryover:	TRUE
Flag values between LOD and LOQ:	TRUE

Correct for Surrogates Option

Correct for Surrogates:	FALSE

Calculated amount option

Calculate concentration as:	Rounded

Tune Time Tracking Options

Enable tune time tracking:	TRUE
Tune file lifetime (hrs):	12

Method Report

Method Name:	Error: Unable to get field value. Message:Object reference not set to an instance of an object..
Master Method Name:	TOX215-3 CONC Estimate POST CAP 042
Current Calibration File:	
Assay Type:	TOX215
Inj. Vol:	1.000
Instrument Method:	
Tune/Breakdown Method:	
Ion Range Calc Method:	eManual

QAQC Calibration

Compound	Max RSD (%)	Min RF	R^2 Threshold	Max Amt Diff (%)
ecgonine methyl ester	20.00	0.00	0.990	20.000
normorphine	20.00	0.00	0.990	20.000
dihydromorphine	20.00	0.00	0.990	20.000
morphine	20.00	0.00	0.990	20.000
oxymorphone	20.00	0.00	0.990	20.000
hydromorphone	20.00	0.00	0.990	20.000
norcodeine	20.00	0.00	0.990	20.000
dihydrocodeine	20.00	0.00	0.990	20.000
codeine	20.00	0.00	0.990	20.000
noroxycodone	20.00	0.00	0.990	20.000
oxycodone	20.00	0.00	0.990	20.000
6-acetylmorphine	20.00	0.00	0.990	20.000
hydrocodone	20.00	0.00	0.990	20.000
tetrahydrozoline	20.00	0.00	0.990	20.000
doxylamine	20.00	0.00	0.990	20.000
pheniramine	20.00	0.00	0.990	20.000
benzoylecgonine	20.00	0.00	0.990	20.000
7-aminoclonazepam	20.00	0.00	0.990	20.000
dextrorphan	20.00	0.00	0.990	20.000
zopiclone	20.00	0.00	0.990	20.000
7-aminoflunitrazepam	20.00	0.00	0.990	20.000
cocaine	20.00	0.00	0.990	20.000
zolpidem	20.00	0.00	0.990	20.000
chlorpheniramine	20.00	0.00	0.990	20.000
chlordiazepoxide	20.00	0.00	0.990	20.000
cocaethylene	20.00	0.00	0.990	20.000
brompheniramine	20.00	0.00	0.990	20.000
dextromethorphan	20.00	0.00	0.990	20.000
bromazepam	20.00	0.00	0.990	20.000
hydroxymidazolam	20.00	0.00	0.990	20.000
midazolam	20.00	0.00	0.990	20.000
medazepam	20.00	0.00	0.990	20.000
diphenhydramine	20.00	0.00	0.990	20.000

Method Report

Method Name:	Error: Unable to get field value. Message:Object reference not set to an instance of an object..
Master Method Name:	TOX215-3 CONC Estimate POST CAP 042
Current Calibration File:	
Assay Type:	TOX215
Inj. Vol:	1.000
Instrument Method:	
Tune/Breakdown Method:	
Ion Range Calc Method:	eManual

flurazepam	20.00	0.00	0.990	20.000
zaleplon	20.00	0.00	0.990	20.000
EDDP	20.00	0.00	0.990	20.000
hydroxyalprazolam	20.00	0.00	0.990	20.000
hydroxytriazolam	20.00	0.00	0.990	20.000
desmethylflunitrazepam	20.00	0.00	0.990	20.000
estazolam	20.00	0.00	0.990	20.000
hydroxyzine	20.00	0.00	0.990	20.000
norchlorcyclizine	20.00	0.00	0.990	20.000
oxazepam	20.00	0.00	0.990	20.000
duloxetine	20.00	0.00	0.990	20.000
lorazepam	20.00	0.00	0.990	20.000
alprazolam	20.00	0.00	0.990	20.000
clonazepam	20.00	0.00	0.990	20.000
triazolam	20.00	0.00	0.990	20.000
desalkylflurazepam	20.00	0.00	0.990	20.000
nordiazepam	20.00	0.00	0.990	20.000
etizolam	20.00	0.00	0.990	20.000
flunitrazepam	20.00	0.00	0.990	20.000
temazepam	20.00	0.00	0.990	20.000
lormetazepam	20.00	0.00	0.990	20.000
phenazepam	20.00	0.00	0.990	20.000
tetrazepam	20.00	0.00	0.990	20.000
diazepam	20.00	0.00	0.990	20.000
prazepam	20.00	0.00	0.990	20.000

Method Report

Method Name:	Error: Unable to get field value. Message:Object reference not set to an instance of an object..
Master Method Name:	TOX215-3 CONC Estimate POST CAP 042
Current Calibration File:	
Assay Type:	TOX215
Inj. Vol:	1.000
Instrument Method:	
Tune/Breakdown Method:	
Ion Range Calc Method:	eManual

QAQC Check Standard

Compound	Max RF Diff (%)	Min RF	Max Amt Diff (%)
ecgonine methyl ester	20.000	0.000	20.000
normorphine	20.000	0.000	20.000
dihydromorphine	20.000	0.000	20.000
morphine	20.000	0.000	20.000
oxymorphone	20.000	0.000	20.000
hydromorphone	20.000	0.000	20.000
norcodeine	20.000	0.000	20.000
dihydrocodeine	20.000	0.000	20.000
codeine	20.000	0.000	20.000
noroxycodone	20.000	0.000	20.000
oxycodone	20.000	0.000	20.000
6-acetylmorphine	20.000	0.000	20.000
hydrocodone	20.000	0.000	20.000
tetrahydrozoline	20.000	0.000	20.000
doxylamine	20.000	0.000	20.000
pheniramine	20.000	0.000	20.000
benzoylecgonine	20.000	0.000	20.000
7-aminoclonazepam	20.000	0.000	20.000
dextrorphan	20.000	0.000	20.000
zopiclone	20.000	0.000	20.000
7-aminoflunitrazepam	20.000	0.000	20.000
cocaine	20.000	0.000	20.000
zolpidem	20.000	0.000	20.000
chlorpheniramine	20.000	0.000	20.000
chlordiazepoxide	20.000	0.000	20.000
cocaethylene	20.000	0.000	20.000
brompheniramine	20.000	0.000	20.000
dextromethorphan	20.000	0.000	20.000
bromazepam	20.000	0.000	20.000
hydroxymidazolam	20.000	0.000	20.000
midazolam	20.000	0.000	20.000
medazepam	20.000	0.000	20.000
diphenhydramine	20.000	0.000	20.000

Method Report

Method Name:	Error: Unable to get field value. Message:Object reference not set to an instance of an object..
Master Method Name:	TOX215-3 CONC Estimate POST CAP 042
Current Calibration File:	
Assay Type:	TOX215
Inj. Vol:	1.000
Instrument Method:	
Tune/Breakdown Method:	
Ion Range Calc Method:	eManual

flurazepam	20.000	0.000	20.000
zaleplon	20.000	0.000	20.000
EDDP	20.000	0.000	20.000
hydroxyalprazolam	20.000	0.000	20.000
hydroxytriazolam	20.000	0.000	20.000
desmethylflunitrazepam	20.000	0.000	20.000
estazolam	20.000	0.000	20.000
hydroxyzine	20.000	0.000	20.000
norchlorcyclizine	20.000	0.000	20.000
oxazepam	20.000	0.000	20.000
duloxetine	20.000	0.000	20.000
lorazepam	20.000	0.000	20.000
alprazolam	20.000	0.000	20.000
clonazepam	20.000	0.000	20.000
triazolam	20.000	0.000	20.000
desalkylflurazepam	20.000	0.000	20.000
nordiazepam	20.000	0.000	20.000
etizolam	20.000	0.000	20.000
flunitrazepam	20.000	0.000	20.000
temazepam	20.000	0.000	20.000
lormetazepam	20.000	0.000	20.000
phenazepam	20.000	0.000	20.000
tetrazepam	20.000	0.000	20.000
diazepam	20.000	0.000	20.000
prazepam	20.000	0.000	20.000

Method Report

Method Name:	Error: Unable to get field value. Message:Object reference not set to an instance of an object..
Master Method Name:	TOX215-3 CONC Estimate POST CAP 042
Current Calibration File:	
Assay Type:	TOX215
Inj. Vol:	1.000
Instrument Method:	
Tune/Breakdown Method:	
Ion Range Calc Method:	eManual

QAQC Matrix Blank

Compound	Criterion	Max Value
ecgonine methyl ester	Concentration	0.00
normorphine	Concentration	0.00
dihydromorphine	Concentration	0.00
morphine	Concentration	0.00
oxymorphone	Concentration	0.00
hydromorphone	Concentration	0.00
norcodeine	Concentration	0.00
dihydrocodeine	Concentration	0.00
codeine	Concentration	0.00
noroxycodone	Concentration	0.00
oxycodone	Concentration	0.00
6-acetylmorphine	Concentration	0.00
hydrocodone	Concentration	0.00
tetrahydrozoline	Concentration	0.00
doxylamine	Concentration	0.00
pheniramine	Concentration	0.00
benzoylecgonine	Concentration	0.00
7-aminoclonazepam	Concentration	0.00
dextrorphan	Concentration	0.00
zopiclone	Concentration	0.00
7-aminoflunitrazepam	Concentration	0.00
cocaine	Concentration	0.00
zolpidem	Concentration	0.00
chlorpheniramine	Concentration	0.00
chlordiazepoxide	Concentration	0.00
cocaethylene	Concentration	0.00
brompheniramine	Concentration	0.00
dextromethorphan	Concentration	0.00
bromazepam	Concentration	0.00
hydroxymidazolam	Concentration	0.00
midazolam	Concentration	0.00
medazepam	Concentration	0.00
diphenhydramine	Concentration	0.00

Method Report

Method Name:	Error: Unable to get field value. Message:Object reference not set to an instance of an object..
Master Method Name:	TOX215-3 CONC Estimate POST CAP 042
Current Calibration File:	
Assay Type:	TOX215
Inj. Vol:	1.000
Instrument Method:	
Tune/Breakdown Method:	
Ion Range Calc Method:	eManual

flurazepam	Concentration	0.00
zaleplon	Concentration	0.00
EDDP	Concentration	0.00
hydroxyalprazolam	Concentration	0.00
hydroxytriazolam	Concentration	0.00
desmethylflunitrazepam	Concentration	0.00
estazolam	Concentration	0.00
hydroxyzine	Concentration	0.00
norchlorcyclizine	Concentration	0.00
oxazepam	Concentration	0.00
duloxetine	Concentration	0.00
lorazepam	Concentration	0.00
alprazolam	Concentration	0.00
clonazepam	Concentration	0.00
triazolam	Concentration	0.00
desalkylflurazepam	Concentration	0.00
nordiazepam	Concentration	0.00
etizolam	Concentration	0.00
flunitrazepam	Concentration	0.00
temazepam	Concentration	0.00
lormetazepam	Concentration	0.00
phenazepam	Concentration	0.00
tetrazepam	Concentration	0.00
diazepam	Concentration	0.00
prazepam	Concentration	0.00

Method Report

Method Name:	Error: Unable to get field value. Message:Object reference not set to an instance of an object..
Master Method Name:	TOX215-3 CONC Estimate POST CAP 042
Current Calibration File:	
Assay Type:	TOX215
Inj. Vol:	1.000
Instrument Method:	
Tune/Breakdown Method:	
Ion Range Calc Method:	eManual

QAQC ISTD

Compound	Min Recovery (%)	Max Recovery (%)	Min RT (-min)	Max RT (+min)
(4)d3-morphine	50.00	150.00	0.25	0.25
(11)d6-oxycodone	50.00	150.00	0.25	0.25
(3)d3-hydrocodone	50.00	150.00	0.25	0.25
(1)d3-benzoylecgonine	50.00	150.00	0.25	0.25
(5)d4-7-aminoclonazepam	50.00	150.00	0.25	0.25
(12)d6-zolpidem	50.00	150.00	0.25	0.25
(2)d3-diphenhydramine	50.00	150.00	0.25	0.25
(9)d5-hydroxyalprazolam	50.00	150.00	0.25	0.25
(10)d5-oxazepam	50.00	150.00	0.25	0.25
(7)d5-alprazolam	50.00	150.00	0.25	0.25
(6)d4-clonazepam	50.00	150.00	0.25	0.25
(8)d5-diazepam	50.00	150.00	0.25	0.25

Method Report

Method Name:	Error: Unable to get field value. Message:Object reference not set to an instance of an object..
Master Method Name:	TOX215-3 CONC Estimate POST CAP 042
Current Calibration File:	
Assay Type:	TOX215
Inj. Vol:	1.000
Instrument Method:	
Tune/Breakdown Method:	
Ion Range Calc Method:	eManual

QAQC Solvent Blank

Compound	Method	Upper Limit(%)
ecgonine methyl ester	None	0.000
normorphine	None	0.000
dihydromorphine	None	0.000
(4)d3-morphine	None	0.000
morphine	None	0.000
oxymorphone	None	0.000
hydromorphone	None	0.000
norcodeine	None	0.000
dihydrocodeine	None	0.000
codeine	None	0.000
noroxycodone	None	0.000
(11)d6-oxycodone	None	0.000
oxycodone	None	0.000
6-acetylmorphine	None	0.000
(3)d3-hydrocodone	None	0.000
hydrocodone	None	0.000
tetrahydrozoline	None	0.000
doxylamine	None	0.000
pheniramine	None	0.000
(1)d3-benzoylecgonine	None	0.000
benzoylecgonine	None	0.000
(5)d4-7-aminoclonazepam	None	0.000
7-aminoclonazepam	None	0.000
dextrorphan	None	0.000
zopiclone	None	0.000
7-aminoflunitrazepam	None	0.000
cocaine	None	0.000
(12)d6-zolpidem	None	0.000
zolpidem	None	0.000
chlorpheniramine	None	0.000
chlordiazepoxide	None	0.000
cocaethylene	None	0.000
brompheniramine	None	0.000

Method Report

Method Name:	Error: Unable to get field value. Message:Object reference not set to an instance of an object..
Master Method Name:	TOX215-3 CONC Estimate POST CAP 042
Current Calibration File:	
Assay Type:	TOX215
Inj. Vol:	1.000
Instrument Method:	
Tune/Breakdown Method:	
Ion Range Calc Method:	eManual

dextromethorphan	None	0.000
bromazepam	None	0.000
hydroxymidazolam	None	0.000
midazolam	None	0.000
medazepam	None	0.000
(2)d3-diphenhydramine	None	0.000
diphenhydramine	None	0.000
flurazepam	None	0.000
zaleplon	None	0.000
EDDP	None	0.000
(9)d5-hydroxyalprazolam	None	0.000
hydroxyalprazolam	None	0.000
hydroxytriazolam	None	0.000
desmethylflunitrazepam	None	0.000
(10)d5-oxazepam	None	0.000
estazolam	None	0.000
hydroxyzine	None	0.000
norchlorcyclizine	None	0.000
oxazepam	None	0.000
duloxetine	None	0.000
(7)d5-alprazolam	None	0.000
lorazepam	None	0.000
(6)d4-clonazepam	None	0.000
alprazolam	None	0.000
clonazepam	None	0.000
triazolam	None	0.000
desalkylflurazepam	None	0.000
nordiazepam	None	0.000
etizolam	None	0.000
flunitrazepam	None	0.000
temazepam	None	0.000
lormetazepam	None	0.000
phenazepam	None	0.000
tetrazepam	None	0.000
(8)d5-diazepam	None	0.000
diazepam	None	0.000
prazepam	None	0.000

Method Report

Method Name:	Error: Unable to get field value. Message:Object reference not set to an instance of an object..
Master Method Name:	TOX215-3 CONC Estimate POST CAP 042
Current Calibration File:	
Assay Type:	TOX215
Inj. Vol:	1.000
Instrument Method:	
Tune/Breakdown Method:	
Ion Range Calc Method:	eManual

QAQC Surrogates

Compound	Theo Conc	Min Recovery (%)	Max Recovery (%)
No data			

Method Report

Method Name:	Error: Unable to get field value. Message:Object reference not set to an instance of an object..
Master Method Name:	TOX215-3 CONC Estimate POST CAP 042
Current Calibration File:	
Assay Type:	TOX215
Inj. Vol:	1.000
Instrument Method:	
Tune/Breakdown Method:	
Ion Range Calc Method:	eManual

QAQC Matrix Spike

Compound	Theo Conc	Min Recovery (%)	Max Recovery (%)	Max RPD
ecgonine methyl ester	0.000	0.00	0.00	0.00
normorphine	0.000	0.00	0.00	0.00
dihydromorphine	0.000	0.00	0.00	0.00
morphine	0.000	0.00	0.00	0.00
oxymorphone	0.000	0.00	0.00	0.00
hydromorphone	0.000	0.00	0.00	0.00
norcodeine	0.000	0.00	0.00	0.00
dihydrocodeine	0.000	0.00	0.00	0.00
codeine	0.000	0.00	0.00	0.00
noroxycodone	0.000	0.00	0.00	0.00
oxycodone	0.000	0.00	0.00	0.00
6-acetylmorphine	0.000	0.00	0.00	0.00
hydrocodone	0.000	0.00	0.00	0.00
tetrahydrozoline	0.000	0.00	0.00	0.00
doxylamine	0.000	0.00	0.00	0.00
pheniramine	0.000	0.00	0.00	0.00
benzoylecgonine	0.000	0.00	0.00	0.00
7-aminoclonazepam	0.000	0.00	0.00	0.00
dextrorphan	0.000	0.00	0.00	0.00
zopiclone	0.000	0.00	0.00	0.00
7-aminoflunitrazepam	0.000	0.00	0.00	0.00
cocaine	0.000	0.00	0.00	0.00
zolpidem	0.000	0.00	0.00	0.00
chlorpheniramine	0.000	0.00	0.00	0.00
chlordiazepoxide	0.000	0.00	0.00	0.00
cocaethylene	0.000	0.00	0.00	0.00
brompheniramine	0.000	0.00	0.00	0.00
dextromethorphan	0.000	0.00	0.00	0.00
bromazepam	0.000	0.00	0.00	0.00
hydroxymidazolam	0.000	0.00	0.00	0.00
midazolam	0.000	0.00	0.00	0.00
medazepam	0.000	0.00	0.00	0.00
diphenhydramine	0.000	0.00	0.00	0.00

Method Report

Method Name:	Error: Unable to get field value. Message:Object reference not set to an instance of an object..
Master Method Name:	TOX215-3 CONC Estimate POST CAP 042
Current Calibration File:	
Assay Type:	TOX215
Inj. Vol:	1.000
Instrument Method:	
Tune/Breakdown Method:	
Ion Range Calc Method:	eManual

flurazepam	0.000	0.00	0.00	0.00
zaleplon	0.000	0.00	0.00	0.00
EDDP	0.000	0.00	0.00	0.00
hydroxyalprazolam	0.000	0.00	0.00	0.00
hydroxytriazolam	0.000	0.00	0.00	0.00
desmethylflunitrazepam	0.000	0.00	0.00	0.00
estazolam	0.000	0.00	0.00	0.00
hydroxyzine	0.000	0.00	0.00	0.00
norchlorcyclizine	0.000	0.00	0.00	0.00
oxazepam	0.000	0.00	0.00	0.00
duloxetine	0.000	0.00	0.00	0.00
lorazepam	0.000	0.00	0.00	0.00
alprazolam	0.000	0.00	0.00	0.00
clonazepam	0.000	0.00	0.00	0.00
triazolam	0.000	0.00	0.00	0.00
desalkylflurazepam	0.000	0.00	0.00	0.00
nordiazepam	0.000	0.00	0.00	0.00
etizolam	0.000	0.00	0.00	0.00
flunitrazepam	0.000	0.00	0.00	0.00
temazepam	0.000	0.00	0.00	0.00
lormetazepam	0.000	0.00	0.00	0.00
phenazepam	0.000	0.00	0.00	0.00
tetrazepam	0.000	0.00	0.00	0.00
diazepam	0.000	0.00	0.00	0.00
prazepam	0.000	0.00	0.00	0.00

Method Report

Method Name:	Error: Unable to get field value. Message:Object reference not set to an instance of an object..
Master Method Name:	TOX215-3 CONC Estimate POST CAP 042
Current Calibration File:	
Assay Type:	TOX215
Inj. Vol:	1.000
Instrument Method:	
Tune/Breakdown Method:	
Ion Range Calc Method:	eManual

QAQC Lab Control

Compound	Theo Conc	Min Recovery (%)	Max Recovery (%)	Max RPD
ecgonine methyl ester	0.000	0.00	0.00	0.00
normorphine	0.000	0.00	0.00	0.00
dihydromorphine	0.000	0.00	0.00	0.00
morphine	0.000	0.00	0.00	0.00
oxymorphone	0.000	0.00	0.00	0.00
hydromorphone	0.000	0.00	0.00	0.00
norcodeine	0.000	0.00	0.00	0.00
dihydrocodeine	0.000	0.00	0.00	0.00
codeine	0.000	0.00	0.00	0.00
noroxycodone	0.000	0.00	0.00	0.00
oxycodone	0.000	0.00	0.00	0.00
6-acetylmorphine	0.000	0.00	0.00	0.00
hydrocodone	0.000	0.00	0.00	0.00
tetrahydrozoline	0.000	0.00	0.00	0.00
doxylamine	0.000	0.00	0.00	0.00
pheniramine	0.000	0.00	0.00	0.00
benzoylecgonine	0.000	0.00	0.00	0.00
7-aminoclonazepam	0.000	0.00	0.00	0.00
dextrorphan	0.000	0.00	0.00	0.00
zopiclone	0.000	0.00	0.00	0.00
7-aminoflunitrazepam	0.000	0.00	0.00	0.00
cocaine	0.000	0.00	0.00	0.00
zolpidem	0.000	0.00	0.00	0.00
chlorpheniramine	0.000	0.00	0.00	0.00
chlordiazepoxide	0.000	0.00	0.00	0.00
cocaethylene	0.000	0.00	0.00	0.00
brompheniramine	0.000	0.00	0.00	0.00
dextromethorphan	0.000	0.00	0.00	0.00
bromazepam	0.000	0.00	0.00	0.00
hydroxymidazolam	0.000	0.00	0.00	0.00
midazolam	0.000	0.00	0.00	0.00
medazepam	0.000	0.00	0.00	0.00
diphenhydramine	0.000	0.00	0.00	0.00

Method Report

Method Name:	Error: Unable to get field value. Message:Object reference not set to an instance of an object..
Master Method Name:	TOX215-3 CONC Estimate POST CAP 042
Current Calibration File:	
Assay Type:	TOX215
Inj. Vol:	1.000
Instrument Method:	
Tune/Breakdown Method:	
Ion Range Calc Method:	eManual

flurazepam	0.000	0.00	0.00	0.00
zaleplon	0.000	0.00	0.00	0.00
EDDP	0.000	0.00	0.00	0.00
hydroxyalprazolam	0.000	0.00	0.00	0.00
hydroxytriazolam	0.000	0.00	0.00	0.00
desmethylflunitrazepam	0.000	0.00	0.00	0.00
estazolam	0.000	0.00	0.00	0.00
hydroxyzine	0.000	0.00	0.00	0.00
norchlorcyclizine	0.000	0.00	0.00	0.00
oxazepam	0.000	0.00	0.00	0.00
duloxetine	0.000	0.00	0.00	0.00
lorazepam	0.000	0.00	0.00	0.00
alprazolam	0.000	0.00	0.00	0.00
clonazepam	0.000	0.00	0.00	0.00
triazolam	0.000	0.00	0.00	0.00
desalkylflurazepam	0.000	0.00	0.00	0.00
nordiazepam	0.000	0.00	0.00	0.00
etizolam	0.000	0.00	0.00	0.00
flunitrazepam	0.000	0.00	0.00	0.00
temazepam	0.000	0.00	0.00	0.00
lormetazepam	0.000	0.00	0.00	0.00
phenazepam	0.000	0.00	0.00	0.00
tetrazepam	0.000	0.00	0.00	0.00
diazepam	0.000	0.00	0.00	0.00
prazepam	0.000	0.00	0.00	0.00

Method Report

Method Name:	Error: Unable to get field value. Message:Object reference not set to an instance of an object..
Master Method Name:	TOX215-3 CONC Estimate POST CAP 042
Current Calibration File:	
Assay Type:	TOX215
Inj. Vol:	1.000
Instrument Method:	
Tune/Breakdown Method:	
Ion Range Calc Method:	eManual

QAQC Method Validation

Compound	Theo Conc	Min Recovery (%)	Max Recovery (%)	Max RSD
ecgonine methyl ester	0.000	0.00	0.00	0.00
normorphine	0.000	0.00	0.00	0.00
dihydromorphine	0.000	0.00	0.00	0.00
morphine	0.000	0.00	0.00	0.00
oxymorphone	0.000	0.00	0.00	0.00
hydromorphone	0.000	0.00	0.00	0.00
norcodeine	0.000	0.00	0.00	0.00
dihydrocodeine	0.000	0.00	0.00	0.00
codeine	0.000	0.00	0.00	0.00
noroxycodone	0.000	0.00	0.00	0.00
oxycodone	0.000	0.00	0.00	0.00
6-acetylmorphine	0.000	0.00	0.00	0.00
hydrocodone	0.000	0.00	0.00	0.00
tetrahydrozoline	0.000	0.00	0.00	0.00
doxylamine	0.000	0.00	0.00	0.00
pheniramine	0.000	0.00	0.00	0.00
benzoylecgonine	0.000	0.00	0.00	0.00
7-aminoclonazepam	0.000	0.00	0.00	0.00
dextrorphan	0.000	0.00	0.00	0.00
zopiclone	0.000	0.00	0.00	0.00
7-aminoflunitrazepam	0.000	0.00	0.00	0.00
cocaine	0.000	0.00	0.00	0.00
zolpidem	0.000	0.00	0.00	0.00
chlorpheniramine	0.000	0.00	0.00	0.00
chlordiazepoxide	0.000	0.00	0.00	0.00
cocaethylene	0.000	0.00	0.00	0.00
brompheniramine	0.000	0.00	0.00	0.00
dextromethorphan	0.000	0.00	0.00	0.00
bromazepam	0.000	0.00	0.00	0.00
hydroxymidazolam	0.000	0.00	0.00	0.00
midazolam	0.000	0.00	0.00	0.00
medazepam	0.000	0.00	0.00	0.00
diphenhydramine	0.000	0.00	0.00	0.00

Method Report

Method Name:	Error: Unable to get field value. Message:Object reference not set to an instance of an object..
Master Method Name:	TOX215-3 CONC Estimate POST CAP 042
Current Calibration File:	
Assay Type:	TOX215
Inj. Vol:	1.000
Instrument Method:	
Tune/Breakdown Method:	
Ion Range Calc Method:	eManual

flurazepam	0.000	0.00	0.00	0.00
zaleplon	0.000	0.00	0.00	0.00
EDDP	0.000	0.00	0.00	EDDP
hydroxyalprazolam	0.000	0.00	0.00	0.00
hydroxytriazolam	0.000	0.00	0.00	0.00
desmethylflunitrazepam	0.000	0.00	0.00	0.00
estazolam	0.000	0.00	0.00	0.00
hydroxyzine	0.000	0.00	0.00	0.00
norchlorcyclizine	0.000	0.00	0.00	0.00
oxazepam	0.000	0.00	0.00	0.00
duloxetine	0.000	0.00	0.00	0.00
lorazepam	0.000	0.00	0.00	0.00
alprazolam	0.000	0.00	0.00	0.00
clonazepam	0.000	0.00	0.00	0.00
triazolam	0.000	0.00	0.00	0.00
desalkylflurazepam	0.000	0.00	0.00	0.00
nordiazepam	0.000	0.00	0.00	0.00
etizolam	0.000	0.00	0.00	0.00
flunitrazepam	0.000	0.00	0.00	0.00
temazepam	0.000	0.00	0.00	0.00
lormetazepam	0.000	0.00	0.00	0.00
phenazepam	0.000	0.00	0.00	0.00
tetrazepam	0.000	0.00	0.00	0.00
diazepam	0.000	0.00	0.00	0.00
prazepam	0.000	0.00	0.00	0.00

Method Report

Method Name:	Error: Unable to get field value. Message:Object reference not set to an instance of an object..
Master Method Name:	TOX215-3 CONC Estimate POST CAP 042
Current Calibration File:	
Assay Type:	TOX215
Inj. Vol:	1.000
Instrument Method:	
Tune/Breakdown Method:	
Ion Range Calc Method:	eManual

Breakdown Groups

Group Name	Members	Max % Breakdown

No Breakdown groups exist in this method

Method Report

Method Name:	Error: Unable to get field value. Message:Object reference not set to an instance of an object..
Master Method Name:	TOX215-3 CONC Estimate POST CAP 042
Current Calibration File:	
Assay Type:	TOX215
Inj. Vol:	1.000
Instrument Method:	
Tune/Breakdown Method:	
Ion Range Calc Method:	eManual

QAQC Tune

Tune Compound:	No tune compounds in method
Tune Method:	
Use Selected Method Only:	FALSE
Require Background Subtraction:	FALSE
Step Off:	1

Eval Mass	Base Peak?	Low Op	Low Limit(%)	High Op	High Limit(%)	Relative To
No data						

APPENDIX 2 – URINE PROCESSING METHOD (28 pages)

Method Report

Method Name:	Error: Unable to get field value. Message:Object reference not set to an instance of an object..
Master Method Name:	TOX215-5 urine
Current Calibration File:	
Assay Type:	TOX215
Inj. Vol:	1.000
Instrument Method:	
Tune/Breakdown Method:	
Ion Range Calc Method:	eManual

Compound Identification:

Compound	Quan Mass	RT	Window	View Width	Use as Reference	Reference Compound
ecgonine methyl ester	200.13 mz	0.27	8.00	0.40	No	
normorphine	272.13 mz	0.43	8.00	0.40	No	
dihydromorphine	288.16 mz	0.48	8.00	0.40	No	
(4)d3-morphine	289.16 mz	0.50	12.00	0.40	No	
morphine	286.14 mz	0.51	8.00	0.40	No	
oxymorphone	302.14 mz	0.61	8.00	0.40	No	
hydromorphone	286.14 mz	0.78	8.00	0.40	No	
norcodeine	286.14 mz	1.37	8.00	0.40	No	
dihydrocodeine	302.18 mz	1.43	8.00	0.40	No	
codeine	300.16 mz	1.50	8.00	0.40	No	
noroxycodone	302.14 mz	1.64	8.00	0.40	No	
(11)d6-oxycodone	322.19 mz	1.66	8.00	0.40	No	
oxycodone	316.15 mz	1.68	8.00	0.40	No	
6-acetylmorphine	328.15 mz	1.74	6.00	0.40	No	
(3)d3-hydrocodone	303.18 mz	1.76	8.00	0.40	No	
hydrocodone	300.16 mz	1.76	8.00	0.40	No	
tetrahydrozoline	201.14 mz	1.85	8.00	0.40	No	
doxylamine	271.18 mz	1.91	8.00	0.40	No	
pheniramine	241.17 mz	1.91	8.00	0.40	No	
(1)d3-benzoylecgonine	293.16 mz	1.93	8.00	0.40	No	
benzoylecgonine	290.14 mz	1.93	8.00	0.40	No	
(5)d4-7-aminoclonazepam	290.10 mz	2.02	8.00	0.40	No	
7-aminoclonazepam	286.07 mz	2.03	6.00	0.40	No	
dextrorphan	258.19 mz	2.06	8.00	0.40	No	
zopiclone	389.11 mz	2.10	8.00	0.40	No	
7-aminoflunitrazepam	284.12 mz	2.23	6.00	0.40	No	
cocaine	304.15 mz	2.26	8.00	0.40	No	
(12)d6-zolpidem	314.21 mz	2.31	8.00	0.40	No	
zolpidem	308.18 mz	2.32	8.00	0.40	No	
chlorpheniramine	275.13 mz	2.39	8.00	0.40	No	
chlordiazepoxide	300.09 mz	2.42	8.00	0.40	No	
cocaethylene	318.17 mz	2.46	8.00	0.40	No	
brompheniramine	319.08 mz	2.47	8.00	0.40	No	

Method Report

Method Name:	Error: Unable to get field value. Message:Object reference not set to an instance of an object..
Master Method Name:	TOX215-5 urine
Current Calibration File:	
Assay Type:	TOX215
Inj. Vol:	1.000
Instrument Method:	
Tune/Breakdown Method:	
Ion Range Calc Method:	eManual

dextromethorphan	272.20 mz	2.60	8.00	0.40	No
bromazepam	316.01 mz	2.62	8.00	0.40	No
hydroxymidazolam	342.08 mz	2.63	8.00	0.40	No
midazolam	326.09 mz	2.63	8.00	0.40	No
medazepam	271.10 mz	2.67	8.00	0.40	No
(2)d3-diphenhydramine	259.19 mz	2.68	8.00	0.40	No
diphenhydramine	256.17 mz	2.68	8.00	0.40	No
flurazepam	388.16 mz	2.68	8.00	0.40	No
zaleplon	306.13 mz	2.82	8.00	0.40	No
EDDP	278.19 mz	2.84	8.00	0.40	No
(9)d5-hydroxyalprazolam	330.12 mz	2.86	8.00	0.40	No
hydroxyalprazolam	325.09 mz	2.87	8.00	0.40	No
hydroxytriazolam	359.05 mz	2.87	8.00	0.40	No
desmethylflunitrazepam	300.08 mz	2.92	8.00	0.40	No
(10)d5-oxazepam	292.09 mz	2.93	8.00	0.40	No
estazolam	295.07 mz	2.95	8.00	0.40	No
hydroxyzine	375.18 mz	2.95	8.00	0.40	No
norchlorcyclizine	287.13 mz	2.95	8.00	0.40	No
oxazepam	287.06 mz	2.95	8.00	0.40	No
duloxetine	298.13 mz	2.97	8.00	0.40	No
(7)d5-alprazolam	314.12 mz	3.01	8.00	0.40	No
lorazepam	321.02 mz	3.01	8.00	0.40	No
(6)d4-clonazepam	320.07 mz	3.03	8.00	0.40	No
alprazolam	309.09 mz	3.03	8.00	0.40	No
clonazepam	316.05 mz	3.03	8.00	0.40	No
triazolam	343.05 mz	3.07	8.00	0.40	No
desalkylflurazepam	289.05 mz	3.15	8.00	0.40	No
nordiazepam	271.06 mz	3.15	8.00	0.40	No
etizolam	343.08 mz	3.18	8.00	0.40	No
flunitrazepam	314.09 mz	3.18	8.00	0.40	No
temazepam	301.07 mz	3.23	8.00	0.40	No
lormetazepam	335.03 mz	3.36	8.00	0.40	No
phenazepam	348.97 mz	3.41	8.00	0.40	No
tetrazepam	289.11 mz	3.58	8.00	0.40	No
(8)d5-diazepam	290.11 mz	3.61	8.00	0.40	No
diazepam	285.08 mz	3.65	8.00	0.40	No
prazepam	325.11 mz	5.27	8.00	0.40	No

Method Report

Method Name:	Error: Unable to get field value. Message:Object reference not set to an instance of an object..
Master Method Name:	TOX215-5 urine
Current Calibration File:	
Assay Type:	TOX215
Inj. Vol:	1.000
Instrument Method:	
Tune/Breakdown Method:	
Ion Range Calc Method:	eManual

Compound Calibration

Compound	Response	Calibration	Curve Type	Weighting	OriginType	Units	ISTD Name	ISTD Units
ecgonine methyl ester		Estimated	Ratio			ng/mL		
normorphine		Estimated	Ratio			ng/mL		
dihydromorphine		Estimated	Ratio			ng/mL		
morphine		Estimated	Ratio			ng/mL		
oxymorphone		Estimated	Ratio			ng/mL		
hydromorphone		Estimated	Ratio			ng/mL		
norcodeine		Estimated	Ratio			ng/mL		
dihydrocodeine		Estimated	Ratio			ng/mL		
codeine		Estimated	Ratio			ng/mL		
noroxycodone		Estimated	Ratio			ng/mL		
oxycodone		Estimated	Ratio			ng/mL		
6-acetylmorphine		Estimated	Ratio			ng/mL		
hydrocodone		Estimated	Ratio			ng/mL		
tetrahydrozoline		Estimated	Ratio			ng/mL		
doxylamine		Estimated	Ratio			ng/mL		
pheniramine		Estimated	Ratio			ng/mL		
benzoylecgonine		Estimated	Ratio			ng/mL		
7-aminoclonazepam		Estimated	Ratio			ng/mL		
dextrorphan		Estimated	Ratio			ng/mL		
zopiclone		Estimated	Ratio			ng/mL		
7-aminoflunitrazepam		Estimated	Ratio			ng/mL		
cocaine		Estimated	Ratio			ng/mL		
zolpidem		Estimated	Ratio			ng/mL		
chlorpheniramine		Estimated	Ratio			ng/mL		
chlordiazepoxide		Estimated	Ratio			ng/mL		
cocaethylene		Estimated	Ratio			ng/mL		
brompheniramine		Estimated	Ratio			ng/mL		
dextromethorphan		Estimated	Ratio			ng/mL		
bromazepam		Estimated	Ratio			ng/mL		
hydroxymidazolam		Estimated	Ratio			ng/mL		
midazolam		Estimated	Ratio			ng/mL		
medazepam		Estimated	Ratio			ng/mL		
diphenhydramine		Estimated	Ratio			ng/mL		

Method Report

Method Name:	Error: Unable to get field value. Message:Object reference not set to an instance of an object..
Master Method Name:	TOX215-5 urine
Current Calibration File:	
Assay Type:	TOX215
Inj. Vol:	1.000
Instrument Method:	
Tune/Breakdown Method:	
Ion Range Calc Method:	eManual

flurazepam	Estimated	Ratio		ng/mL
zaleplon	Estimated	Ratio		ng/mL
EDDP	Estimated	Ratio		ng/mL
hydroxyalprazolam	Estimated	Ratio		ng/mL
hydroxytriazolam	Estimated	Ratio		ng/mL
desmethylflunitrazepam	Estimated	Ratio		ng/mL
estazolam	Estimated	Ratio		ng/mL
hydroxyzine	Estimated	Ratio		ng/mL
norchlorcyclizine	Estimated	Ratio		ng/mL
oxazepam	Estimated	Ratio		ng/mL
duloxetine	Estimated	Ratio		ng/mL
lorazepam	Estimated	Ratio		ng/mL
alprazolam	Estimated	Ratio		ng/mL
clonazepam	Estimated	Ratio		ng/mL
triazolam	Estimated	Ratio		ng/mL
desalkylflurazepam	Estimated	Ratio		ng/mL
nordiazepam	Estimated	Ratio		ng/mL
etizolam	Estimated	Ratio		ng/mL
flunitrazepam	Estimated	Ratio		ng/mL
temazepam	Estimated	Ratio		ng/mL
lormetazepam	Estimated	Ratio		ng/mL
phenazepam	Estimated	Ratio		ng/mL
tetrazepam	Estimated	Ratio		ng/mL
diazepam	Estimated	Ratio		ng/mL
prazepam	Estimated	Ratio		ng/mL

Method Report

Method Name:	Error: Unable to get field value. Message:Object reference not set to an instance of an object..
Master Method Name:	TOX215-5 urine
Current Calibration File:	
Assay Type:	TOX215
Inj. Vol:	1.000
Instrument Method:	
Tune/Breakdown Method:	
Ion Range Calc Method:	eManual

QAQC Limits

Compound	LOD	LOQ	LOR	ULOL	Carryover
ecgonine methyl ester	15.000	1.000	10000000.000	1.00	0.00
normorphine	10.000	1.000	400000.000	1.00	0.00
dihydromorphine	3.000	1.000	3000000.000	1.00	0.00
morphine	3.000	1.000	800000.000	1.00	0.00
oxymorphone	3.000	1.000	400000.000	1.00	0.00
hydromorphone	30.000	1.000	4000000.000	1.00	0.00
norcodeine	30.000	1.000	6000000.000	1.00	0.00
dihydrocodeine	1.000	1.000	400000.000	1.00	0.00
codeine	3.000	1.000	1000000.000	1.00	0.00
noroxycodone	10.000	1.000	1000000.000	1.00	0.00
oxycodone	3.000	1.000	2000000.000	1.00	0.00
6-acetylmorphine	9.000	1.000	3000000.000	1.00	0.00
hydrocodone	10.000	1.000	600000.000	1.00	0.00
tetrahydrozoline	10.000	1.000	3000000.000	1.00	0.00
doxylamine	1.000	1.000	2000000.000	1.00	0.00
pheniramine	3.000	1.000	600000.000	1.00	0.00
benzoylecgonine	3.000	1.000	2000000.000	1.00	0.00
7-aminoclonazepam	1.000	1.000	50000.000	1.00	0.00
dextrorphan	1.000	1.000	1000000.000	1.00	0.00
zopiclone	10.000	1.000	20000.000	1.00	0.00
7-aminoflunitrazepam	10.000	1.000	400000.000	1.00	0.00
cocaine	3.000	1.000	2000000.000	1.00	0.00
zolpidem	30.000	1.000	100000.000	1.00	0.00
chlorpheniramine	10.000	1.000	100000.000	1.00	0.00
chlordiazepoxide	10.000	1.000	200000.000	1.00	0.00
cocaethylene	3.000	1.000	8000000.000	1.00	0.00
brompheniramine	1.000	1.000	200000.000	1.00	0.00
dextromethorphan	1.000	1.000	400000.000	1.00	0.00
bromazepam	1.000	1.000	20000.000	1.00	0.00
hydroxymidazolam	3.000	1.000	100000.000	1.00	0.00
midazolam	3.000	1.000	90000.000	1.00	0.00
medazepam	3.000	1.000	100000.000	1.00	0.00
diphenhydramine	1.000	1.000	400000.000	1.00	0.00

Method Report

Method Name:	Error: Unable to get field value. Message:Object reference not set to an instance of an object..
Master Method Name:	TOX215-5 urine
Current Calibration File:	
Assay Type:	TOX215
Inj. Vol:	1.000
Instrument Method:	
Tune/Breakdown Method:	
Ion Range Calc Method:	eManual

flurazepam	1.000	1.000	200000.000	1.00	0.00
zaleplon	10.000	1.000	1000000.000	1.00	0.00
EDDP	10.000	1.000	1000000.000	1.00	0.00
hydroxyalprazolam	1.000	1.000	200000.000	1.00	0.00
hydroxytriazolam	1.000	1.000	100000.000	1.00	0.00
desmethylflunitrazepam	3.000	1.000	100000.000	1.00	0.00
estazolam	1.000	1.000	600000.000	1.00	0.00
hydroxyzine	500.000	1.000	100000.000	1.00	0.00
norchlorcyclizine	5.000	1.000	8000.000	1.00	0.00
oxazepam	1.000	1.000	100000.000	1.00	0.00
duloxetine	10.000	1.000	2000.000	1.00	0.00
lorazepam	1.000	1.000	200000.000	1.00	0.00
alprazolam	1.000	1.000	800000.000	1.00	0.00
clonazepam	10.000	1.000	400000.000	1.00	0.00
triazolam	1.000	1.000	100000.000	1.00	0.00
desalkylflurazepam	1.000	1.000	300000.000	1.00	0.00
nordiazepam	10.000	1.000	300000.000	1.00	0.00
etizolam	1.000	1.000	2000000.000	1.00	0.00
flunitrazepam	1.000	1.000	300000.000	1.00	0.00
temazepam	3.000	1.000	1000000.000	1.00	0.00
lormetazepam	1.000	1.000	200000.000	1.00	0.00
phenazepam	1.000	1.000	4000.000	1.00	0.00
tetrazepam	1.000	1.000	10000.000	1.00	0.00
diazepam	1.000	1.000	1000000.000	1.00	0.00
prazepam	3.000	1.000	100000.000	1.00	0.00

Method Report

Method Name:	Error: Unable to get field value. Message:Object reference not set to an instance of an object..
Master Method Name:	TOX215-5 urine
Current Calibration File:	
Assay Type:	TOX215
Inj. Vol:	1.000
Instrument Method:	
Tune/Breakdown Method:	
Ion Range Calc Method:	eManual

Groups:

GroupName	**Compounds**
Antidepressant	duloxetine
Antihistamines and Others	pheniramine
	doxylamine
	chlorpheniramine
	brompheniramine
	diphenhydramine
	hydroxyzine
	norchlorcyclizine
	dextromethorphan
	dextrorphan
	tetrahydrozoline

Method Report

Method Name:	Error: Unable to get field value. Message:Object reference not set to an instance of an object..
Master Method Name:	TOX215-5 urine
Current Calibration File:	
Assay Type:	TOX215
Inj. Vol:	1.000
Instrument Method:	
Tune/Breakdown Method:	
Ion Range Calc Method:	eManual

Benzodiazepines and Metabolite 7-aminoclonazepam
7-aminoflunitrazepam
chlordiazepoxide
bromazepam
hydroxymidazolam
midazolam
flurazepam
medazepam
hydroxyalprazolam
hydroxytriazolam
desmethylflunitrazepam
oxazepam
estazolam
lorazepam
clonazepam
alprazolam
triazolam
desalkylflurazepam
nordiazepam
flunitrazepam
etizolam
temazepam
lormetazepam
phenazepam
tetrazepam
diazepam
prazepam

Cocaine and Metabolites ecgonine methyl ester
benzoylecgonine
cocaine
cocaethylene

Hypnotics zopiclone
zolpidem
zaleplon

Method Report

Method Name:	Error: Unable to get field value. Message:Object reference not set to an instance of an object..
Master Method Name:	TOX215-5 urine
Current Calibration File:	
Assay Type:	TOX215
Inj. Vol:	1.000
Instrument Method:	
Tune/Breakdown Method:	
Ion Range Calc Method:	eManual

Internal Standards
(4)d3-morphine
(11)d6-oxycodone
(3)d3-hydrocodone
(1)d3-benzoylecgonine
(5)d4-7-aminoclonazepam
(12)d6-zolpidem
(2)d3-diphenhydramine
(9)d5-hydroxyalprazolam
(10)d5-oxazepam
(6)d4-clonazepam
(7)d5-alprazolam
(8)d5-diazepam

Opioids
normorphine
dihydromorphine
morphine
oxymorphone
hydromorphone
norcodeine
dihydrocodeine
codeine
noroxycodone
oxycodone
6-acetylmorphine
hydrocodone
EDDP

Method Report

Method Name:	Error: Unable to get field value. Message:Object reference not set to an instance of an object..
Master Method Name:	TOX215-5 urine
Current Calibration File:	
Assay Type:	TOX215
Inj. Vol:	1.000
Instrument Method:	
Tune/Breakdown Method:	
Ion Range Calc Method:	eManual

Report Options

Quan Report Options

Report concentration:	Always
Decimal places to be reported:	2
Show chromatogram on quantitation report:	TRUE
Display compounds above set limit:	TRUE

Qual Options

Sort qual results by:	Reverse Search Index
Enable limiting peaks:	FALSE
Limit peaks to:	N/A

User Inferface Options

Shade row when sample is outside of evaluation criteria:	FALSE
Separate ion overlay display:	TRUE
Use alternative calibration report format:	FALSE
Display quan flags and legend:	TRUE

Mass Tolerance Settings

Mass tolerance:	2.50 MMU

TraceFinder Settings

Quan Flags

Flag values below LOD:	TRUE
Flag values below LOQ:	TRUE
Flag values above LOR:	TRUE
Flag values above ULOL:	TRUE
Flag values above Carryover:	TRUE
Flag values between LOD and LOQ:	TRUE

Correct for Surrogates Option

Correct for Surrogates:	FALSE

Calculated amount option

Calculate concentration as:	Rounded

Tune Time Tracking Options

Enable tune time tracking:	TRUE
Tune file lifetime (hrs):	12

Method Report

Method Name:	Error: Unable to get field value. Message:Object reference not set to an instance of an object..
Master Method Name:	TOX215-5 urine
Current Calibration File:	
Assay Type:	TOX215
Inj. Vol:	1.000
Instrument Method:	
Tune/Breakdown Method:	
Ion Range Calc Method:	eManual

QAQC Calibration

Compound	Max RSD (%)	Min RF	R^2 Threshold	Max Amt Diff (%)
ecgonine methyl ester	20.00	0.00	0.990	20.000
normorphine	20.00	0.00	0.990	20.000
dihydromorphine	20.00	0.00	0.990	20.000
morphine	20.00	0.00	0.990	20.000
oxymorphone	20.00	0.00	0.990	20.000
hydromorphone	20.00	0.00	0.990	20.000
norcodeine	20.00	0.00	0.990	20.000
dihydrocodeine	20.00	0.00	0.990	20.000
codeine	20.00	0.00	0.990	20.000
noroxycodone	20.00	0.00	0.990	20.000
oxycodone	20.00	0.00	0.990	20.000
6-acetylmorphine	20.00	0.00	0.990	20.000
hydrocodone	20.00	0.00	0.990	20.000
tetrahydrozoline	20.00	0.00	0.990	20.000
doxylamine	20.00	0.00	0.990	20.000
pheniramine	20.00	0.00	0.990	20.000
benzoylecgonine	20.00	0.00	0.990	20.000
7-aminoclonazepam	20.00	0.00	0.990	20.000
dextrorphan	20.00	0.00	0.990	20.000
zopiclone	20.00	0.00	0.990	20.000
7-aminoflunitrazepam	20.00	0.00	0.990	20.000
cocaine	20.00	0.00	0.990	20.000
zolpidem	20.00	0.00	0.990	20.000
chlorpheniramine	20.00	0.00	0.990	20.000
chlordiazepoxide	20.00	0.00	0.990	20.000
cocaethylene	20.00	0.00	0.990	20.000
brompheniramine	20.00	0.00	0.990	20.000
dextromethorphan	20.00	0.00	0.990	20.000
bromazepam	20.00	0.00	0.990	20.000
hydroxymidazolam	20.00	0.00	0.990	20.000
midazolam	20.00	0.00	0.990	20.000
medazepam	20.00	0.00	0.990	20.000
diphenhydramine	20.00	0.00	0.990	20.000

Method Report

Method Name:	Error: Unable to get field value. Message:Object reference not set to an instance of an object..
Master Method Name:	TOX215-5 urine
Current Calibration File:	
Assay Type:	TOX215
Inj. Vol:	1.000
Instrument Method:	
Tune/Breakdown Method:	
Ion Range Calc Method:	eManual

flurazepam	20.00	0.00	0.990	20.000
zaleplon	20.00	0.00	0.990	20.000
EDDP	20.00	0.00	0.990	20.000
hydroxyalprazolam	20.00	0.00	0.990	20.000
hydroxytriazolam	20.00	0.00	0.990	20.000
desmethylflunitrazepam	20.00	0.00	0.990	20.000
estazolam	20.00	0.00	0.990	20.000
hydroxyzine	20.00	0.00	0.990	20.000
norchlorcyclizine	20.00	0.00	0.990	20.000
oxazepam	20.00	0.00	0.990	20.000
duloxetine	20.00	0.00	0.990	20.000
lorazepam	20.00	0.00	0.990	20.000
alprazolam	20.00	0.00	0.990	20.000
clonazepam	20.00	0.00	0.990	20.000
triazolam	20.00	0.00	0.990	20.000
desalkylflurazepam	20.00	0.00	0.990	20.000
nordiazepam	20.00	0.00	0.990	20.000
etizolam	20.00	0.00	0.990	20.000
flunitrazepam	20.00	0.00	0.990	20.000
temazepam	20.00	0.00	0.990	20.000
lormetazepam	20.00	0.00	0.990	20.000
phenazepam	20.00	0.00	0.990	20.000
tetrazepam	20.00	0.00	0.990	20.000
diazepam	20.00	0.00	0.990	20.000
prazepam	20.00	0.00	0.990	20.000

Method Report

Method Name:	Error: Unable to get field value. Message:Object reference not set to an instance of an object..
Master Method Name:	TOX215-5 urine
Current Calibration File:	
Assay Type:	TOX215
Inj. Vol:	1.000
Instrument Method:	
Tune/Breakdown Method:	
Ion Range Calc Method:	eManual

QAQC Check Standard

Compound	Max RF Diff (%)	Min RF	Max Amt Diff (%)
ecgonine methyl ester	20.000	0.000	20.000
normorphine	20.000	0.000	20.000
dihydromorphine	20.000	0.000	20.000
morphine	20.000	0.000	20.000
oxymorphone	20.000	0.000	20.000
hydromorphone	20.000	0.000	20.000
norcodeine	20.000	0.000	20.000
dihydrocodeine	20.000	0.000	20.000
codeine	20.000	0.000	20.000
noroxycodone	20.000	0.000	20.000
oxycodone	20.000	0.000	20.000
6-acetylmorphine	20.000	0.000	20.000
hydrocodone	20.000	0.000	20.000
tetrahydrozoline	20.000	0.000	20.000
doxylamine	20.000	0.000	20.000
pheniramine	20.000	0.000	20.000
benzoylecgonine	20.000	0.000	20.000
7-aminoclonazepam	20.000	0.000	20.000
dextrorphan	20.000	0.000	20.000
zopiclone	20.000	0.000	20.000
7-aminoflunitrazepam	20.000	0.000	20.000
cocaine	20.000	0.000	20.000
zolpidem	20.000	0.000	20.000
chlorpheniramine	20.000	0.000	20.000
chlordiazepoxide	20.000	0.000	20.000
cocaethylene	20.000	0.000	20.000
brompheniramine	20.000	0.000	20.000
dextromethorphan	20.000	0.000	20.000
bromazepam	20.000	0.000	20.000
hydroxymidazolam	20.000	0.000	20.000
midazolam	20.000	0.000	20.000
medazepam	20.000	0.000	20.000
diphenhydramine	20.000	0.000	20.000

Method Report

Method Name:	Error: Unable to get field value. Message:Object reference not set to an instance of an object..
Master Method Name:	TOX215-5 urine
Current Calibration File:	
Assay Type:	TOX215
Inj. Vol:	1.000
Instrument Method:	
Tune/Breakdown Method:	
Ion Range Calc Method:	eManual

flurazepam	20.000	0.000	20.000
zaleplon	20.000	0.000	20.000
EDDP	20.000	0.000	20.000
hydroxyalprazolam	20.000	0.000	20.000
hydroxytriazolam	20.000	0.000	20.000
desmethylflunitrazepam	20.000	0.000	20.000
estazolam	20.000	0.000	20.000
hydroxyzine	20.000	0.000	20.000
norchlorcyclizine	20.000	0.000	20.000
oxazepam	20.000	0.000	20.000
duloxetine	20.000	0.000	20.000
lorazepam	20.000	0.000	20.000
alprazolam	20.000	0.000	20.000
clonazepam	20.000	0.000	20.000
triazolam	20.000	0.000	20.000
desalkylflurazepam	20.000	0.000	20.000
nordiazepam	20.000	0.000	20.000
etizolam	20.000	0.000	20.000
flunitrazepam	20.000	0.000	20.000
temazepam	20.000	0.000	20.000
lormetazepam	20.000	0.000	20.000
phenazepam	20.000	0.000	20.000
tetrazepam	20.000	0.000	20.000
diazepam	20.000	0.000	20.000
prazepam	20.000	0.000	20.000

Method Report

Method Name:	Error: Unable to get field value. Message:Object reference not set to an instance of an object..
Master Method Name:	TOX215-5 urine
Current Calibration File:	
Assay Type:	TOX215
Inj. Vol:	1.000
Instrument Method:	
Tune/Breakdown Method:	
Ion Range Calc Method:	eManual

QAQC Matrix Blank

Compound	Criterion	Max Value
ecgonine methyl ester	Concentration	0.00
normorphine	Concentration	0.00
dihydromorphine	Concentration	0.00
morphine	Concentration	0.00
oxymorphone	Concentration	0.00
hydromorphone	Concentration	0.00
norcodeine	Concentration	0.00
dihydrocodeine	Concentration	0.00
codeine	Concentration	0.00
noroxycodone	Concentration	0.00
oxycodone	Concentration	0.00
6-acetylmorphine	Concentration	0.00
hydrocodone	Concentration	0.00
tetrahydrozoline	Concentration	0.00
doxylamine	Concentration	0.00
pheniramine	Concentration	0.00
benzoylecgonine	Concentration	0.00
7-aminoclonazepam	Concentration	0.00
dextrorphan	Concentration	0.00
zopiclone	Concentration	0.00
7-aminoflunitrazepam	Concentration	0.00
cocaine	Concentration	0.00
zolpidem	Concentration	0.00
chlorpheniramine	Concentration	0.00
chlordiazepoxide	Concentration	0.00
cocaethylene	Concentration	0.00
brompheniramine	Concentration	0.00
dextromethorphan	Concentration	0.00
bromazepam	Concentration	0.00
hydroxymidazolam	Concentration	0.00
midazolam	Concentration	0.00
medazepam	Concentration	0.00
diphenhydramine	Concentration	0.00

Method Report

Method Name:	Error: Unable to get field value. Message:Object reference not set to an instance of an object..
Master Method Name:	TOX215-5 urine
Current Calibration File:	
Assay Type:	TOX215
Inj. Vol:	1.000
Instrument Method:	
Tune/Breakdown Method:	
Ion Range Calc Method:	eManual

flurazepam	Concentration	0.00
zaleplon	Concentration	0.00
EDDP	Concentration	0.00
hydroxyalprazolam	Concentration	0.00
hydroxytriazolam	Concentration	0.00
desmethylflunitrazepam	Concentration	0.00
estazolam	Concentration	0.00
hydroxyzine	Concentration	0.00
norchlorcyclizine	Concentration	0.00
oxazepam	Concentration	0.00
duloxetine	Concentration	0.00
lorazepam	Concentration	0.00
alprazolam	Concentration	0.00
clonazepam	Concentration	0.00
triazolam	Concentration	0.00
desalkylflurazepam	Concentration	0.00
nordiazepam	Concentration	0.00
etizolam	Concentration	0.00
flunitrazepam	Concentration	0.00
temazepam	Concentration	0.00
lormetazepam	Concentration	0.00
phenazepam	Concentration	0.00
tetrazepam	Concentration	0.00
diazepam	Concentration	0.00
prazepam	Concentration	0.00

Method Report

Method Name:	Error: Unable to get field value. Message:Object reference not set to an instance of an object..
Master Method Name:	TOX215-5 urine
Current Calibration File:	
Assay Type:	TOX215
Inj. Vol:	1.000
Instrument Method:	
Tune/Breakdown Method:	
Ion Range Calc Method:	eManual

QAQC ISTD

Compound	Min Recovery (%)	Max Recovery (%)	Min RT (-min)	Max RT (+min)
(4)d3-morphine	50.00	150.00	0.25	0.25
(11)d6-oxycodone	50.00	150.00	0.25	0.25
(3)d3-hydrocodone	50.00	150.00	0.25	0.25
(1)d3-benzoylecgonine	50.00	150.00	0.25	0.25
(5)d4-7-aminoclonazepam	50.00	150.00	0.25	0.25
(12)d6-zolpidem	50.00	150.00	0.25	0.25
(2)d3-diphenhydramine	50.00	150.00	0.25	0.25
(9)d5-hydroxyalprazolam	50.00	150.00	0.25	0.25
(10)d5-oxazepam	50.00	150.00	0.25	0.25
(7)d5-alprazolam	50.00	150.00	0.25	0.25
(6)d4-clonazepam	50.00	150.00	0.25	0.25
(8)d5-diazepam	50.00	150.00	0.25	0.25

Method Report

Method Name:	Error: Unable to get field value. Message:Object reference not set to an instance of an object..
Master Method Name:	TOX215-5 urine
Current Calibration File:	
Assay Type:	TOX215
Inj. Vol:	1.000
Instrument Method:	
Tune/Breakdown Method:	
Ion Range Calc Method:	eManual

QAQC Solvent Blank

Compound	Method	Upper Limit(%)
ecgonine methyl ester	None	0.000
normorphine	None	0.000
dihydromorphine	None	0.000
(4)d3-morphine	None	0.000
morphine	None	0.000
oxymorphone	None	0.000
hydromorphone	None	0.000
norcodeine	None	0.000
dihydrocodeine	None	0.000
codeine	None	0.000
noroxycodone	None	0.000
(11)d6-oxycodone	None	0.000
oxycodone	None	0.000
6-acetylmorphine	None	0.000
(3)d3-hydrocodone	None	0.000
hydrocodone	None	0.000
tetrahydrozoline	None	0.000
doxylamine	None	0.000
pheniramine	None	0.000
(1)d3-benzoylecgonine	None	0.000
benzoylecgonine	None	0.000
(5)d4-7-aminoclonazepam	None	0.000
7-aminoclonazepam	None	0.000
dextrorphan	None	0.000
zopiclone	None	0.000
7-aminoflunitrazepam	None	0.000
cocaine	None	0.000
(12)d6-zolpidem	None	0.000
zolpidem	None	0.000
chlorpheniramine	None	0.000
chlordiazepoxide	None	0.000
cocaethylene	None	0.000
brompheniramine	None	0.000

Method Report

Method Name:	Error: Unable to get field value. Message:Object reference not set to an instance of an object..
Master Method Name:	TOX215-5 urine
Current Calibration File:	
Assay Type:	TOX215
Inj. Vol:	1.000
Instrument Method:	
Tune/Breakdown Method:	
Ion Range Calc Method:	eManual

dextromethorphan	None	0.000
bromazepam	None	0.000
hydroxymidazolam	None	0.000
midazolam	None	0.000
medazepam	None	0.000
(2)d3-diphenhydramine	None	0.000
diphenhydramine	None	0.000
flurazepam	None	0.000
zaleplon	None	0.000
EDDP	None	0.000
(9)d5-hydroxyalprazolam	None	0.000
hydroxyalprazolam	None	0.000
hydroxytriazolam	None	0.000
desmethylflunitrazepam	None	0.000
(10)d5-oxazepam	None	0.000
estazolam	None	0.000
hydroxyzine	None	0.000
norchlorcyclizine	None	0.000
oxazepam	None	0.000
duloxetine	None	0.000
(7)d5-alprazolam	None	0.000
lorazepam	None	0.000
(6)d4-clonazepam	None	0.000
alprazolam	None	0.000
clonazepam	None	0.000
triazolam	None	0.000
desalkylflurazepam	None	0.000
nordiazepam	None	0.000
etizolam	None	0.000
flunitrazepam	None	0.000
temazepam	None	0.000
lormetazepam	None	0.000
phenazepam	None	0.000
tetrazepam	None	0.000
(8)d5-diazepam	None	0.000
diazepam	None	0.000
prazepam	None	0.000

Method Report

Method Name:	Error: Unable to get field value. Message:Object reference not set to an instance of an object..
Master Method Name:	TOX215-5 urine
Current Calibration File:	
Assay Type:	TOX215
Inj. Vol:	1.000
Instrument Method:	
Tune/Breakdown Method:	
Ion Range Calc Method:	eManual

QAQC Surrogates

Compound	Theo Conc	Min Recovery (%)	Max Recovery (%)
No data			

Method Report

Method Name:	Error: Unable to get field value. Message:Object reference not set to an instance of an object..
Master Method Name:	TOX215-5 urine
Current Calibration File:	
Assay Type:	TOX215
Inj. Vol:	1.000
Instrument Method:	
Tune/Breakdown Method:	
Ion Range Calc Method:	eManual

QAQC Matrix Spike

Compound	Theo Conc	Min Recovery (%)	Max Recovery (%)	Max RPD
ecgonine methyl ester	0.000	0.00	0.00	0.00
normorphine	0.000	0.00	0.00	0.00
dihydromorphine	0.000	0.00	0.00	0.00
morphine	0.000	0.00	0.00	0.00
oxymorphone	0.000	0.00	0.00	0.00
hydromorphone	0.000	0.00	0.00	0.00
norcodeine	0.000	0.00	0.00	0.00
dihydrocodeine	0.000	0.00	0.00	0.00
codeine	0.000	0.00	0.00	0.00
noroxycodone	0.000	0.00	0.00	0.00
oxycodone	0.000	0.00	0.00	0.00
6-acetylmorphine	0.000	0.00	0.00	0.00
hydrocodone	0.000	0.00	0.00	0.00
tetrahydrozoline	0.000	0.00	0.00	0.00
doxylamine	0.000	0.00	0.00	0.00
pheniramine	0.000	0.00	0.00	0.00
benzoylecgonine	0.000	0.00	0.00	0.00
7-aminoclonazepam	0.000	0.00	0.00	0.00
dextrorphan	0.000	0.00	0.00	0.00
zopiclone	0.000	0.00	0.00	0.00
7-aminoflunitrazepam	0.000	0.00	0.00	0.00
cocaine	0.000	0.00	0.00	0.00
zolpidem	0.000	0.00	0.00	0.00
chlorpheniramine	0.000	0.00	0.00	0.00
chlordiazepoxide	0.000	0.00	0.00	0.00
cocaethylene	0.000	0.00	0.00	0.00
brompheniramine	0.000	0.00	0.00	0.00
dextromethorphan	0.000	0.00	0.00	0.00
bromazepam	0.000	0.00	0.00	0.00
hydroxymidazolam	0.000	0.00	0.00	0.00
midazolam	0.000	0.00	0.00	0.00
medazepam	0.000	0.00	0.00	0.00
diphenhydramine	0.000	0.00	0.00	0.00

Method Report

Method Name:	Error: Unable to get field value. Message:Object reference not set to an instance of an object..
Master Method Name:	TOX215-5 urine
Current Calibration File:	
Assay Type:	TOX215
Inj. Vol:	1.000
Instrument Method:	
Tune/Breakdown Method:	
Ion Range Calc Method:	eManual

flurazepam	0.000	0.00	0.00	0.00
zaleplon	0.000	0.00	0.00	0.00
EDDP	0.000	0.00	0.00	0.00
hydroxyalprazolam	0.000	0.00	0.00	0.00
hydroxytriazolam	0.000	0.00	0.00	0.00
desmethylflunitrazepam	0.000	0.00	0.00	0.00
estazolam	0.000	0.00	0.00	0.00
hydroxyzine	0.000	0.00	0.00	0.00
norchlorcyclizine	0.000	0.00	0.00	0.00
oxazepam	0.000	0.00	0.00	0.00
duloxetine	0.000	0.00	0.00	0.00
lorazepam	0.000	0.00	0.00	0.00
alprazolam	0.000	0.00	0.00	0.00
clonazepam	0.000	0.00	0.00	0.00
triazolam	0.000	0.00	0.00	0.00
desalkylflurazepam	0.000	0.00	0.00	0.00
nordiazepam	0.000	0.00	0.00	0.00
etizolam	0.000	0.00	0.00	0.00
flunitrazepam	0.000	0.00	0.00	0.00
temazepam	0.000	0.00	0.00	0.00
lormetazepam	0.000	0.00	0.00	0.00
phenazepam	0.000	0.00	0.00	0.00
tetrazepam	0.000	0.00	0.00	0.00
diazepam	0.000	0.00	0.00	0.00
prazepam	0.000	0.00	0.00	0.00

Method Report

Method Name:	Error: Unable to get field value. Message:Object reference not set to an instance of an object..
Master Method Name:	TOX215-5 urine
Current Calibration File:	
Assay Type:	TOX215
Inj. Vol:	1.000
Instrument Method:	
Tune/Breakdown Method:	
Ion Range Calc Method:	eManual

QAQC Lab Control

Compound	Theo Conc	Min Recovery (%)	Max Recovery (%)	Max RPD
ecgonine methyl ester	0.000	0.00	0.00	0.00
normorphine	0.000	0.00	0.00	0.00
dihydromorphine	0.000	0.00	0.00	0.00
morphine	0.000	0.00	0.00	0.00
oxymorphone	0.000	0.00	0.00	0.00
hydromorphone	0.000	0.00	0.00	0.00
norcodeine	0.000	0.00	0.00	0.00
dihydrocodeine	0.000	0.00	0.00	0.00
codeine	0.000	0.00	0.00	0.00
noroxycodone	0.000	0.00	0.00	0.00
oxycodone	0.000	0.00	0.00	0.00
6-acetylmorphine	0.000	0.00	0.00	0.00
hydrocodone	0.000	0.00	0.00	0.00
tetrahydrozoline	0.000	0.00	0.00	0.00
doxylamine	0.000	0.00	0.00	0.00
pheniramine	0.000	0.00	0.00	0.00
benzoylecgonine	0.000	0.00	0.00	0.00
7-aminoclonazepam	0.000	0.00	0.00	0.00
dextrorphan	0.000	0.00	0.00	0.00
zopiclone	0.000	0.00	0.00	0.00
7-aminoflunitrazepam	0.000	0.00	0.00	0.00
cocaine	0.000	0.00	0.00	0.00
zolpidem	0.000	0.00	0.00	0.00
chlorpheniramine	0.000	0.00	0.00	0.00
chlordiazepoxide	0.000	0.00	0.00	0.00
cocaethylene	0.000	0.00	0.00	0.00
brompheniramine	0.000	0.00	0.00	0.00
dextromethorphan	0.000	0.00	0.00	0.00
bromazepam	0.000	0.00	0.00	0.00
hydroxymidazolam	0.000	0.00	0.00	0.00
midazolam	0.000	0.00	0.00	0.00
medazepam	0.000	0.00	0.00	0.00
diphenhydramine	0.000	0.00	0.00	0.00

Method Report

Method Name:	Error: Unable to get field value. Message:Object reference not set to an instance of an object..
Master Method Name:	TOX215-5 urine
Current Calibration File:	
Assay Type:	TOX215
Inj. Vol:	1.000
Instrument Method:	
Tune/Breakdown Method:	
Ion Range Calc Method:	eManual

flurazepam	0.000	0.00	0.00	0.00
zaleplon	0.000	0.00	0.00	0.00
EDDP	0.000	0.00	0.00	0.00
hydroxyalprazolam	0.000	0.00	0.00	0.00
hydroxytriazolam	0.000	0.00	0.00	0.00
desmethylflunitrazepam	0.000	0.00	0.00	0.00
estazolam	0.000	0.00	0.00	0.00
hydroxyzine	0.000	0.00	0.00	0.00
norchlorcyclizine	0.000	0.00	0.00	0.00
oxazepam	0.000	0.00	0.00	0.00
duloxetine	0.000	0.00	0.00	0.00
lorazepam	0.000	0.00	0.00	0.00
alprazolam	0.000	0.00	0.00	0.00
clonazepam	0.000	0.00	0.00	0.00
triazolam	0.000	0.00	0.00	0.00
desalkylflurazepam	0.000	0.00	0.00	0.00
nordiazepam	0.000	0.00	0.00	0.00
etizolam	0.000	0.00	0.00	0.00
flunitrazepam	0.000	0.00	0.00	0.00
temazepam	0.000	0.00	0.00	0.00
lormetazepam	0.000	0.00	0.00	0.00
phenazepam	0.000	0.00	0.00	0.00
tetrazepam	0.000	0.00	0.00	0.00
diazepam	0.000	0.00	0.00	0.00
prazepam	0.000	0.00	0.00	0.00

Method Report

Method Name:	Error: Unable to get field value. Message:Object reference not set to an instance of an object..
Master Method Name:	TOX215-5 urine
Current Calibration File:	
Assay Type:	TOX215
Inj. Vol:	1.000
Instrument Method:	
Tune/Breakdown Method:	
Ion Range Calc Method:	eManual

QAQC Method Validation

Compound	Theo Conc	Min Recovery (%)	Max Recovery (%)	Max RSD
ecgonine methyl ester	0.000	0.00	0.00	0.00
normorphine	0.000	0.00	0.00	0.00
dihydromorphine	0.000	0.00	0.00	0.00
morphine	0.000	0.00	0.00	0.00
oxymorphone	0.000	0.00	0.00	0.00
hydromorphone	0.000	0.00	0.00	0.00
norcodeine	0.000	0.00	0.00	0.00
dihydrocodeine	0.000	0.00	0.00	0.00
codeine	0.000	0.00	0.00	0.00
noroxycodone	0.000	0.00	0.00	0.00
oxycodone	0.000	0.00	0.00	0.00
6-acetylmorphine	0.000	0.00	0.00	0.00
hydrocodone	0.000	0.00	0.00	0.00
tetrahydrozoline	0.000	0.00	0.00	0.00
doxylamine	0.000	0.00	0.00	0.00
pheniramine	0.000	0.00	0.00	0.00
benzoylecgonine	0.000	0.00	0.00	0.00
7-aminoclonazepam	0.000	0.00	0.00	0.00
dextrorphan	0.000	0.00	0.00	0.00
zopiclone	0.000	0.00	0.00	0.00
7-aminoflunitrazepam	0.000	0.00	0.00	0.00
cocaine	0.000	0.00	0.00	0.00
zolpidem	0.000	0.00	0.00	0.00
chlorpheniramine	0.000	0.00	0.00	0.00
chlordiazepoxide	0.000	0.00	0.00	0.00
cocaethylene	0.000	0.00	0.00	0.00
brompheniramine	0.000	0.00	0.00	0.00
dextromethorphan	0.000	0.00	0.00	0.00
bromazepam	0.000	0.00	0.00	0.00
hydroxymidazolam	0.000	0.00	0.00	0.00
midazolam	0.000	0.00	0.00	0.00
medazepam	0.000	0.00	0.00	0.00
diphenhydramine	0.000	0.00	0.00	0.00

Method Report

Method Name:	Error: Unable to get field value. Message:Object reference not set to an instance of an object..
Master Method Name:	TOX215-5 urine
Current Calibration File:	
Assay Type:	TOX215
Inj. Vol:	1.000
Instrument Method:	
Tune/Breakdown Method:	
Ion Range Calc Method:	eManual

flurazepam	0.000	0.00	0.00	0.00
zaleplon	0.000	0.00	0.00	0.00
EDDP	0.000	0.00	0.00	EDDP
hydroxyalprazolam	0.000	0.00	0.00	hy.00
hydroxytriazolam	0.000	0.00	0.00	hy.00
desmethylflunitrazepam	0.000	0.00	0.00	0.00
estazolam	0.000	0.00	0.00	es.00
hydroxyzine	0.000	0.00	0.00	hy.00
norchlorcyclizine	0.000	0.00	0.00	0.00
oxazepam	0.000	0.00	0.00	0.00
duloxetine	0.000	0.00	0.00	0.00
lorazepam	0.000	0.00	0.00	0.00
alprazolam	0.000	0.00	0.00	0.00
clonazepam	0.000	0.00	0.00	0.00
triazolam	0.000	0.00	0.00	0.00
desalkylflurazepam	0.000	0.00	0.00	0.00
nordiazepam	0.000	0.00	0.00	0.00
etizolam	0.000	0.00	0.00	0.00
flunitrazepam	0.000	0.00	0.00	0.00
temazepam	0.000	0.00	0.00	0.00
lormetazepam	0.000	0.00	0.00	0.00
phenazepam	0.000	0.00	0.00	ph.00
tetrazepam	0.000	0.00	0.00	0.00
diazepam	0.000	0.00	0.00	0.00
prazepam	0.000	0.00	0.00	0.00

Method Report

Method Name:	Error: Unable to get field value. Message:Object reference not set to an instance of an object..
Master Method Name:	TOX215-5 urine
Current Calibration File:	
Assay Type:	TOX215
Inj. Vol:	1.000
Instrument Method:	
Tune/Breakdown Method:	
Ion Range Calc Method:	eManual

Breakdown Groups

Group Name	Members	Max % Breakdown

No Breakdown groups exist in this method

Method Report

Method Name:	Error: Unable to get field value. Message:Object reference not set to an instance of an object..
Master Method Name:	TOX215-5 urine
Current Calibration File:	
Assay Type:	TOX215
Inj. Vol:	1.000
Instrument Method:	
Tune/Breakdown Method:	
Ion Range Calc Method:	eManual

QAQC Tune

Tune Compound:	No tune compounds in method
Tune Method:	
Use Selected Method Only:	FALSE
Require Background Subtraction:	FALSE
Step Off:	1

Eval Mass	Base Peak?	Low Op	Low Limit(%)	High Op	High Limit(%)	Relative To
No data						