

Leaders in Laboratory Medicine

Specimen hydrolysis performed prior to analysis by liquid chromatography/mass spectrometry (LC-MS/MS) allowing detection of both free and conjugated drug. All drugs listed are analyzed on each specimen. Only drug or drug metabolites detected above stated cutoffs are reported.

Creatinine is reported on all specimens. Drugs may be missed or reported as not detected in specimens where the creatinine is ≤ 1.80 mmol/L.

Amphetamines & Stimulants	Interpretive Notes	Cut-Off (ng/mL)
Methamphetamine		50
- Amphetamine	Amphetamine can be drug on its own as well as a metabolite of Methamphetamine	50
MDMA (Methylene Dioxymethamphetamine)		50
- MDA (Methylene Dioxyamphetamine)	MDA can be a drug on its own as well as a metabolite of MDMA	50
Methylphenidate		50
Atomoxetine		50
MDPV (3,4-Methylenedioxypyrovalerone)		50
25I-NBOMe		50

Cocaine & Adulterants	Interpretive Notes	Cut-Off (ng/mL)
Cocaine		50
- Benzoylecgonine	Metabolite of cocaine	100
Cocaethylene	Cocaethylene is the formed by the liver when cocaine and ethanol are taken together.	50
Phenacetin	Phenacetin is a pain-relieving and fever-reducing drug that has been banned for human consumption in Canada. Used as a cocaine adulterant.	50
Levamisole	Levamisole is used to treat parasitic worm infections in animals. May cause neutropenia in humans. Used as a cocaine adulterant.	10

Benzodiazepines	Interpretive Notes	Cut-Off (ng/mL)
Diazepam	Metabolized to nordiazepam, temazepam and oxazepam	50
Demoxepam	Metabolite of chlordiazepoxide, further metabolized to oxazepam	50
Nordiazepam	Metabolite of diazepam and chlordiazepoxide, further metabolized to oxazepam	50
Temazepam	Metabolite of diazepam, metabolized to oxazepam	50
- Oxazepam	Metabolite of diazepam, temazepam and chlordiazepoxide	50



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Benzodiazepines	Interpretive Notes	Cut-Off (ng/mL)
7-Aminoclonazepam	Metabolite of clonazepam	50
Flunitrazepam		50
- 7-Aminoflunitrazepam	Metabolite of flunitrazepam	50
Midazolam		50
Lorazepam		50
Alprazolam		50
- α-Hydroxyalprazolam	Metabolite of alprazolam	50
α-Hydroxytriazolam	Metabolite of triazolam	50
7-Aminonitrazepam	Metabolite of nitrazepam	50
Bromazepam		50
Clobazam		50
- Norclobazam	Metabolite of clobazam	50
Zopiclone		50
- N-Desmethylzopiclone	Metabolite of zopiclone	50
Zolpidem		50

Opioids & Related	Interpretive Notes	Cut-Off (ng/mL)
- 6-MAM (6-monoacetylmorphine)	Metabolite of heroin (diacetylmorphine)	10
Morphine	Morphine can be a drug on its own or a metabolite of 6-monoacetylmorphine or codeine	50
Codeine	Metabolized to morphine, norcodeine and hydrocodone	50
- Norcodeine	Norcodeine can be a drug on its own or a metabolite of codeine	50
- Hydrocodone	Hydrocodone can be a drug on its own or a metabolite of codeine	50
Hydromorphone	Hydromorphone is a drug on its own, but is also a minor metabolite of morphine	50
Fentanyl		10
- Norfentanyl	Metabolite of fentanyl	10
Methylfentanyl		10
Oxycodone	Metabolized to oxymorphone and noroxycodone	50
- Noroxycodone	Metabolite of oxycodone	50
Methadone		50
 EDDP (2-ethylidene-1,5-dimethyl-3,3-diphenylpyrrolidin) 	Metabolite of methadone	50
Buprenorphine		10
- Norbuprenorphine	Metabolite of buprenorphine	10
Meperidine		50
- Normeperidine	Metabolite of meperidine	50



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Opioids & Related	Interpretive Notes	Cut-Off (ng/mL)
Tramadol		50
- O-desmethyltramadol	Metabolite of tramadol	50
Tapentadol		50
Naltrexone (antagonist)		50
U47700		10

Other Sedatives & Hypnotics	Interpretive Notes	Cut-Off (ng/mL)
Ketamine		50
- Norketamine	Metabolite of ketamine	50

Cannabinoids	Interpretive Notes	Cut-Off (ng/mL)
THC-COOH (11-Nor-9-carboxy-Δ ⁹ -tetrahydrocannabinol)	Major metabolite of tetrahydrocannabinol (THC)	20

Hallucinogens	Interpretive Notes	Cut-Off (ng/mL)
LSD (Lysergic acid diethylamide)		10

Antidepressants	Interpretive Notes	Cut-Off (ng/mL)
Amitriptyline		50
- Nortriptyline	Nortriptyline can be a drug on its own as well as metabolite of amitriptyline	50
Citalopram		50
Venlafaxine		50
- O-Desmethylvenlafaxine (Desvenlafaxine)	Desvenlafaxine can be a drug on its own as well as a metabolite of venlafaxine	50
Bupropion		50
Trazodone		50
- mCPP (1-(3-Chlorophenyl)piperazine)	mCPP can be the metabolite of trazodone as well as a designer psychoactive drug	50
Sertraline		50
Paroxetine		50
Duloxetine		50

Antipsychotics	Interpretive Notes	Cut-Off (ng/mL)
Quetiapine		50
- Norquetiapine	Metabolite of quetiapine	50
Olanzapine		50
- N-Desmethylolanzapine	Metabolite of olanzapine	50



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Anticonvulsants	Interpretive Notes	Cut-Off (ng/mL)
Lamotrigine		50
Gabapentin		300

Other	Interpretive Notes	Cut-Off (ng/mL)
Caffeine		100
Cotinine	Metabolite of nicotine	50
Loperamide		50
Diphenhydramine		100
Dextromethorphan		50
- Dextrorphan	Metabolite of dextromethorphan	50