



Prescription and over-the-counter (OTC) drug screens are available to test for a broad spectrum of drugs in either serum or urine. Testing is performed by gas chromatography mass spectrometry (GC-MS). When drugs are identified above the reportable (detection) limits in the specimen, they will be reported as “Present.”

These tests are intended to manage an apparent overdose, intoxicated patient, or determine if a specific set of symptoms might be due to the presence of drugs. They are designed to detect those drugs that have toxic effects for which there are known antidotes or active therapies to treat the toxic effect.

This test is **not appropriate** for detecting drugs of abuse and is not designed to screen for intermittent or illicit use of drugs nor should it be used for controlled substance monitoring.

**Note:** Alcohol, LSD (lysergic acid diethylamide), digoxin, lithium, THC (tetrahydrocannabinol), and some benzodiazepines, opiates, amphetamine-type stimulants, and most drugs of abuse are not detected by this procedure. For these drugs, the specific confirmation tests should be ordered.

**Limits of Detection Table**

The limits of detection (LOD) reflect the concentrations at which the specific drugs can be reliably detected. If the drug is detected at a level below the listed LOD, it will be reported only if it meets laboratory quality criteria for identification. Drugs other than those listed in the table may be detected by GC-MS library matching and will be reported if the laboratory quality criteria for identification is met.

The stated detection limits are only for serum specimens; detection limits in other matrices may deviate from those listed. In alternate matrices like urine, it is also important to remember that drug metabolites are the predominant finding.

**Note:** Submission of less than the minimum specimen volume requires increasing the limit of detection.

Drug	Aliases	LOD (mcg/mL)	Approximate Upper Therapeutic Level in Serum (mcg/mL)	Notes
Acetaminophen	Tylenol	10.00	30.00	
Amitriptyline	Vanatrip, Elavil	1.00	0.20	
Amobarbital	Amytal	0.50	5.00	Preferred test for detection of barbiturates is a specific request; see BARBU / Barbiturates Confirmation, Random, Urine
Brompheniramine	Dimetapp, Lodrane	0.50	0.015	
Bupropion	Wellbutrin, Zyban	1.00	0.10	
Butabarbital	Butisol	0.50	25.00	Preferred test for detection of barbiturates is a specific request; see BARBU / Barbiturates Confirmation, Random, Urine
Butalbital		1.00	10.00	Preferred test for detection of barbiturates is a specific request; see BARBU / Barbiturates Confirmation, Random, Urine
Caffeine		1.50	20.00	
Carbamazepine	Tegretol	2.00	12.00	
Carisoprodol	Soma, Vanadom	1.00	4.00	
Chlorpheniramine		0.50	0.01	
Chlorpromazine	Thorazine	1.00	0.30	
Citalopram	Celexa	0.50	0.11	
Clomipramine	Anafranil	0.30	0.50	

# Prescription and Over-the-Counter Drug Screening List and Limits of Detection (continued)

Drug	Aliases	LOD (mcg/mL)	Approximate Upper Therapeutic Level in Serum (mcg/mL)	Notes
Clozapine	Clozaril	0.50	0.35	
Codeine		1.00	0.20	Preferred test for detection of opiates is a specific request; see TOSU / Targeted Opioid Screen, Random, Urine
Cyclobenzaprine	Flexeril	0.50	0.03	
Desipramine	Norpramin	1.00	0.30	
Dextromethorphan	Robitussin, Benylin, Vicks 44	1.00	0.006	
Diazepam	Valium	0.25	2.50	Preferred test for detection of benzodiazepines is a specific request; see TBSU / Targeted Benzodiazepine Screen, Random, Urine
Diphenhydramine	Benadryl, Nytol	0.50	1.00	
Doxepin	Sinequan, Zonalon	0.50	0.15	
Doxylamine	Unisom	1.00	0.20	
Fentanyl	Duragesic, Actiq, Sublimaze	0.50	0.011	Preferred test for detection of opioids is a specific request; see TOSU / Targeted Opioid Screen, Random, Urine
Fluoxetine	Prozac	2.00	0.30	
Guaifenesin	Mucinex, Robitussin	1.00	1.50	
Ibuprofen	Advil, Motrin	2.50	50.00	
Imipramine	Tofranil	0.50	0.30	
Lamotrigine	Lamictal	4.00	15.00	
Levetiracetam	Keppra	5.00	46.00	
Lidocaine		1.00	5.00	
Meperidine	Demerol	1.00	0.70	Preferred test for detection of opioids is a specific request; see TOSU / Targeted Opioid Screen, Random, Urine
Mephobarbital		1.00	7.00	Preferred test for detection of barbiturates is a specific request; see BARBU / Barbiturates Confirmation, Random, Urine
Meprobamate	Miltown, Trancot	1.00	30.00	
Metaxalone	Skelaxin	0.50	2.00	
Methadone	Dolophine	0.50	1.00	Preferred test for detection of opioids is a specific request; see TOSU / Targeted Opioid Screen, Random, Urine
Methsuximide	Celontin	0.50	0.04	
Methylphenidate	Concerta, Ritalin	1.00	0.02	
Midazolam	Versed	0.50	0.60	Preferred test for detection of benzodiazepines is a specific request; see TBSU / Targeted Benzodiazepine Screen, Random, Urine

# Prescription and Over-the-Counter Drug Screening List and Limits of Detection (continued)

Drug	Aliases	LOD (mcg/mL)	Approximate Upper Therapeutic Level in Serum (mcg/mL)	Notes
Mirtazapine	Remeron	0.20	0.04	
Naproxen	Naprosyn, Aleve	10.00	90.00	
Nordiazepam	Nordazepam, Nordaz, Stilny, Madar, Vegesan	0.50	2.50	Preferred test for detection of benzodiazepines is a specific request; see TBSU / Targeted Benzodiazepine Screen, Random, Urine
Nortriptyline	Aventyl, Pamelor	0.50	0.17	
Oxcarbazepine Metabolite	10-Hydroxy-10,11-Dihydrocarbamazepine, Trileptal, 10-monohydroxy metabolite (MHD)	6.00		
Pentobarbital	Nembutal	0.50	10.00	Preferred test for detection of barbiturates is a specific request; see BARBU / Barbiturates Confirmation, Random, Urine
Phenobarbital	Luminal	0.50	40.00	Preferred test for detection of barbiturates is a specific request; see BARBU / Barbiturates Confirmation, Random, Urine
Phenytoin	Dilantin	2.50	2.00	
Primidone	Mysoline	2.50	12.00	
Promethazine	Phenergan	0.50	0.15	
Salicylate	Aspirin	50.00	300.00	Variability in the LOD, not reliably detected in urine.
Secobarbital	Seconal	0.50	2.00	Preferred test for detection of barbiturates is a specific request; see BARBU / Barbiturates Confirmation, Random, Urine
Sertraline	Zoloft	0.50	0.20	
Strychnine		0.50		
Topiramate	Topamax	2.00	20.00	
Tramadol	Ultram	0.50	0.80	Preferred test for detection of opioids is a specific request; see TOSU / Targeted Opioid Screen, Random, Urine
Trazodone	Desyrel	4.00	1.60	
Trimipramine	Surmontil	0.50	0.30	
Valproic Acid	Depakene, Depakote, Depacon, Divalproex	50.00	125.00	Exhibits variable recovery in urine.
Venlafaxine	Effexor	0.40	0.40	
Zaleplon	Sonata	1.00	49.00	Preferred test for detection of this drug is a specific request; see TBSU / Targeted Benzodiazepine Screen, Random, Urine
Zolpidem	Ambien	0.50	0.25	Preferred test for detection of this drug is a specific request; see TBSU / Targeted Benzodiazepine Screen, Random, Urine