

# drugs of abuse testing *-urine*

## LABORATORY SERVICES



Are they abusing? We'll find out.

Urine testing from Redwood Toxicology Laboratory accurately detects drugs of abuse in urine with the assurance of legally defensible test results.

Confidence in testing.

### REDWOOD TOXICOLOGY LABORATORY DoA URINE TESTING

Redwood Toxicology Laboratory, Inc. (RTL) utilizes the most sophisticated, sensitive and specific equipment and technology available to screen, confirm and quantitate drugs of abuse in urine. Our methodologies provide highly accurate, legally defensible results. As with all of RTL's testing options, full customer support is provided.

RTL's objective is to help its clients detect and prevent drug and alcohol abuse. Urine testing through RTL is reliable, affordable and convenient. Turn to RTL for confidence in testing—we'll find out.

### BENEFITS INCLUDE:

- Toll-free customer support services with access to board certified toxicologists
- Expert witness services and litigation packages available
- Results available via internet, fax and/or U.S. mail
- Affordable pricing (ask about combining your drug testing panels)
- Fast turn-around time from receipt of specimen (24 hours<sup>1</sup> negative, 48-72 hours positive)
- Third party government insurance billing consultation

popular urine lab tests — test panels include creatinine and THC/creatinine ratio screens

Urine 5 Panel <small>H39</small>	Urine 8 Panel <small>R53</small>	Urine 10 Panel <small>R57</small>
Amphetamines	Alcohol (Ethanol)	Alcohol (Ethanol)
Cocaine	Amphetamines	Amphetamines
Opiates	Barbiturates	Barbiturates
THC (Marijuana)	Benzodiazepines	Benzodiazepines
Phencyclidine (PCP)*	Cocaine	Cocaine
	Opiates	Methadone
	Phencyclidine (PCP)	Opiates
	THC (Marijuana)	Phencyclidine (PCP)
		Propoxyphene
		THC (Marijuana)

\*Available with Benzodiazepines in place of Phencyclidine. Panel code P28 (Creatinine and THC/Creatinine ratio screens not included)

Many panels available, including:  
**Buprenorphine & Oxycodone**

Call Now: **800-255-2159**

or visit: [www.redwoodtoxicology.com/3279](http://www.redwoodtoxicology.com/3279)

## FREQUENTLY ASKED QUESTIONS

Complete list of FAQs available online at [www.redwoodtoxicology.com](http://www.redwoodtoxicology.com)**How do I collect the urine and send in a specimen?**

Collection and shipping guidelines are included in the RTL Reference Guide. A copy is provided with your new account supplies. Please read these instructions carefully. RTL also offers telephonic training and client service support.

**How long does it take for results?**

Results are typically reported in 24 hours<sup>1</sup> for negatives, 48-72 hours for positives. All presumptive positive results go through a confirmation process to ensure accurate results.

**What methodology does RTL use to perform initial screening?**

RTL screens urine specimens by enzyme immunoassay (EIA). An immunoassay is a test that uses antibodies to detect the presence of drugs and other substances in urine. The initial screening process does not measure the specific amount of drug present in urine samples. It provides either a positive or negative result, indicating the presence or absence of detectable drug.

**Screening Cut-off Levels by EIA**

Cut-off levels updated periodically

Drug	EIA
Alcohol (Ethanol)	0.04 gm/dL
Amphetamines	1000 ng/mL
Barbiturates	200 ng/mL
Benzodiazepines	200 ng/mL
Buprenorphine	5 ng/mL
Cocaine Metabolite (Benzoylecgonine)	300 ng/mL
Methadone	150 ng/mL
Methamphetamine	1000 ng/mL
Methaqualone	300 ng/mL
Opiates (Morphine and Codeine)	300 ng/mL
Oxycodone	300 ng/mL
Phencyclidine (PCP)	25 ng/mL
Propoxyphene	300 ng/mL
THC (Cannabinoids)	20/50 ng/mL <sup>2</sup>

**What testing methodology does RTL use for confirmations?**

Confirmations are available by thin layer chromatography (TLC), radioimmunoassay (RIA), gas chromatography (GC), gas chromatography/mass spectrometry (GC/MS) and liquid chromatography/mass spectrometry/mass spectrometry (LC/MS/MS). GC/MS is used to confirm presumptive positive drug screen specimens obtained from RTL's instant on-site screening devices.

**Confirmation Cut-off Levels by Procedure**

Cut-off levels updated periodically

Drug	TLC	RIA	GC/MS
Alcohol (Ethanol)			.02 gm/dL (GC-FID) <sup>3</sup>
Amphetamines			
- Amphetamine/Methamphetamine/MDMA & MDA	<500 ng/mL		100 ng/mL
Barbiturates	<500 ng/mL		200 ng/mL
Benzodiazepines		200 ng/mL	50 ng/mL (LC/MS/MS) <sup>4</sup>
Buprenorphine			0.5 ng/mL
Cocaine <sup>5</sup>		150 ng/mL	50 ng/mL
EtG			100 ng/mL (LC/MS/MS) <sup>4</sup>
EtS			25 ng/mL (LC/MS/MS) <sup>4</sup>
Fentanyl			5 ng/mL
GHB			10 mcg/mL
Marijuana Metabolite (THC-COOH)		25 ng/mL	5 ng/mL
Methadone	<500 ng/mL		100 ng/mL
Opiates			
- Total Morphine/Codeine	<500 ng/mL		100 ng/mL
- 6-Monoacetylmorphine			5ng/mL
- Hydrocodone/Hydromorphone/Hydromorphone & Oxycodone	1000 ng/mL		100 ng/mL
Phencyclidine (PCP)			10 ng/mL
Propoxyphene	<500 ng/mL		200 ng/mL
Tricyclic Antidepressants			
- Amitriptyline/Desipramine/Imipramine/Nortriptyline/Maprotiline			50 ng/mL
- Doxepine			100 ng/mL

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**Why are screening & confirmation cut-off levels different?**

Screening and confirmation testing are performed using different methodologies that require separate cut-off levels. The immunoassay tests used to perform initial drug screens are designed to detect a wide range of chemically similar compounds that react with antibodies which are at the core of the chemistry making up the tests. In contrast, GC/MS and LC/MS/MS confirmatory testing detects specific metabolites that provide identification and quantification of a specific drug.

1. Excludes specimens received Saturday
2. Agency has the ability to choose cut-off levels indicated.
3. Test performed by Gas Chromatography Flame Ionization Detection (GC/FID)
4. Test performed by Liquid Chromatography/Mass Spectrometry/Mass Spectrometry (LC/MS/MS)
5. Cocaine Metabolite Benzoylecgonine