URINE AMPHETAMINES

The Emit II Amphetamine Assay detects amphetamine compounds in human urine.

Non-Interfering Substances

Each of the following compounds, when added to urine containing d-methamphetamine at +/- 25% concentration of the cutoff, do not yield a false response relative to the 300, 500, and 1000 ng/mL cutoffs.

Compound	Concentration
Acetone	1.0 g/dL
Ascorbic Acid	1.5 g/dL
Bilirubin	2.0 mg/dL
Creatinine	0.5 g/dL
Ethanol	1.0 g/dL
Gamma Globulin	0.5 g/dL
Glucose	2.0 g/dL
Hemoglobin	115 mg/dL
Human Serum Albumin	0.5 g/dL
Oxalic Acid	0.1 g/dL
Riboflavin	7.5 mg/dL
Sodium Chloride	6.0 g/dL
Urea	6.0 g/dL

Specificity

The tables below give the compounds this assay is designed to detect and the levels at which the compounds have been found to give a response approximately equivalent to that of the selected cutoff (300, 500, or 1000 ng/mL d-methamphetamine). Each concentration represents the reactivity level for the stated compound when it is added to a negative urine specimen. These concentrations are within the range of the levels found in urine following use of the compound, or in case of metabolites, the parent compound. If a sample contains more than one compound detected by the assay, lower concentrations than those listed below may combine to produce a rate approximately equivalent to or greater than that of the cutoff calibrator.

Concentration of Amphetamines Producing a Result Approximately Equivalent to the 300 ng/mL, 500 ng/mL and 1000 ng/mL Amphetamine Cutoffs

(Concentration (ng/mL) Giving a Response Approximately Equivalent to the cutoff.)

Compound at cutoff:	300 ng/mL	500 ng/mL	1000 ng/mL
D,I-4-Methylamphetamine	4400	10200	16500
d-Amphetamine	300	500	1000
d,l-Amphetamine	625	1050	2150
d,l-Methamphetamine	450	700	2100
l-Amphetamine	3450	3750	11500
l-Methamphetamine	725	1325	3650

Methylenedioxyamphetamine (MDA)	1100	1700	6500
Methylenedioxymethamphetamine (MDMA)	5200	9150	34300
Methylenedioxyethylamphetamine (MDEA)	4400	6800	27200

The table below lists concentrations of compounds that produce a result that is approximately equivalent to the 300 ng/mL, 500 ng/mL, and 1000 ng/mL cutoffs. Each concentration represents the reactivity level for the stated compound when it is added to a negative urine specimen. Most of the compounds react at levels much higher than typically found in urine (but which may occasionally occur). If a specimen contains more than one compound detected by the assay, lower concentrations than those listed may combine to produce a rate approximately equivalent to or greater than that of the cutoff calibrator.

(Concentration (µg/mL) Giving a Response Approximately Equivalent to the cutoff.)

Compound at cutoff:	**300 ng/mL**	**500 ng/mL**	**1000 ng/mL**
4-Chloramphetamine	2.6	4.5	12.2
Benzphetamine*	0.4	0.7	1
Bupropion	250	500	2200
Chloroquine	2100	2200	4500
l-Ephedrine	400	800	3500
Fenfluramine	25	40	150
Mephentermine	8	15	60
Methoxyphenamine	90	160	360
Nor-pseudoephedrine	40	93	188
Phenmetrazine	2.3	3.5	13
Phentermine	5.8	9	25
Phenylpropanolamine (PPA)	700	1000	2000
Propranolol	100	125	500
Pseudoephedrine	1400	2600	8300
Quinacrine	2500	3800	16500
Tranylcypromine	30	60	200

*Benzphetamine metabolizes to amphetamine and methamphetamine.
Note: Selegiline, a prescription medication used in the treatment of Parkinson's disease, metabolizes to l-amphetamine and l-methamphetamine. Therefore, patients taking Selegiline may test positive by amphetamine assays.

Each of the following compounds was added to drug free urine and gave negative AMPH results at the concentration listed for either the 300, 500, or 1000 ng/mL cutoff.

Compound	Concentration (µg/mL)
Acetaminophen	1000
α-Acetyl-N,N-dinormethadol (dinor LAAM)	25
l-α-Acetylmethadol (LAAM)	25
N-Acetylprocainamide (NAPA)	400
Acetylsalicylic Acid	1000
Albuterol	1000
p-Aminobenzoic Acid (PABA)	1000
Amitriptyline	1000
Amoxicillin	100
Atenolol	1000
Benzoylecgonine	1000
Buprenorphine	1000
Caffeine	1000
Carbamazepine	250
Carisoprodol	1000
Chlorpheniramine	100
Chlorpromazine	200
Cimetidine	1000
Clomipramine	2.5
Clonidine	1000
Codeine	500
l-Cotinine	100
Cyclobenzaprine	1000
Desipramine	300
Dextromethorphan	1000
Dextrorphan	280
Diphenhydramine	1000
Doxepin	1000
Doxylamine	1000
1-Epinephrine	1000
2-Ethylidene-1,5-dimethyl-3,3-diphenylpyrrolidine (EDDP)	1000
Fenoprofen	150
Fluoxetine	500
Furosemide	1000
Glutethimide	500
Haloperidol	500
Ibuprofen	1000
Imipramine	750
Isoxsuprine	300
Ketamine	100
Ketoprofen	1000

Ketorolac Tromethamine	1000
Labetalol	750
Lidocaine	100
LSD	2.5
Meperidine	1000
Mescaline	1000
Methadone	1000
Methaqualone	1500
d,l-Methyldopa	1000
l-Methyldopa	1000
Monoethylglycinexylidide (MEGX)	1000
Morphine	1000
Nalmefene	20
Naloxone	500
Naproxen	1000
Nicotinic Acid	500
Noracetylmethadol (nor LAAM)	25
11-nor-Δ^9-THC-9-COOH	100
Nortriptyline	750
Nylidrin	750
Ofloxacin	100
Oxazepam	300
Phencyclidine	1000
Phenelzine	50
1-Phenylcyclohexylamine (PCA)	50
Phenytoin (DPH)	1000
Phthalic Acid	1000
1-Piperidinocyclohexane Carbonitrile (PCC)	50
Procainamide	1000
Promethazine	1000
Propoxyphene	1000
Ranitidine	1000
Scopolamine	500
Secobarbital	1000
Thioridazine	100
Tolmetin Sodium	2000
Tramadol	1000
Trazodone	1000
Trifluoperazine	1000
Trimethobenzamide	500
Trimethoprim	1000
Verapamil	1000
Zidovudine (AZT)	2000
Zolpidem	100

Sympathomimetic Amines	**Concentration (µg/mL)**

Diethylpropion	1000
d,l-Isoproterenol	1000
Metaproterenol	500
Methylphenidate (Ritalin®)	1000
Phenethylamine	15
Phenylephrine	1000
Propylhexedrine	20
3-OH-Tyramine (dopamine)	300
4-Methyenedioxpyrovalerone	100
4-Methylmethcathione	100
Methyicne	100

Sensitivity

The sensitivity level of the Emit II Plus Amphetamine Assay is 50 ng/mL at the 300 ng/mL cutoff, 75 ng/mL at the 500 ng/mL cutoff and 100 ng/mL at the 1000 ng/mL cutoff. This level represents the lowest concentration of d-methamphetamine that can be distinguished from 0 ng/mL with a confidence level of 95%.

CAMC laboratories use the 500 ng/mL cutoff for the amphetamine assay.

(Syva/EMIT are trademarks of **Siemens Healthcare** Diagnostics Inc.)