

URINE ECSTASY (MDMA)

The EMIT II Plus Ecstasy Assay detects methylenedioxymethamphetamine (MDMA) and closely related drugs in human urine.

Non-Interfering Substances

Each of the following compounds, when added to urine containing methylenedioxymethamphetamine (MDMA) at +/- 25% concentration of the cutoff, do not yield a false response relative to the 300 and 500 ng/mL cutoff levels.

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 table below lists concentrations ($\mu\text{g/mL}$) of compounds that produce a result approximately equivalent to the 300 ng/mL and 500 ng/mL cutoffs, respectively. Each concentration represents the reactivity level for the stated compound when it is added to a negative urine specimen. If a specimen 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.

Compound	Conc. At 300 ng/mL cutoff	Conc. At 500 ng/mL cutoff
MDA	0.247	0.495
MDEA	0.250	0.435
MBDB	0.20	0.43
BDB	0.22	0.78
PMA	13	22
PMMA	3.1	9.0
HMMA	182.63	377.214
D-Amphetamine	41	80
D-Methamphetamine	9.1	18
D,L-Methamphetamine	7	14.5
D,L-Amphetamine	28	62
L-Amphetamine	28	48
L-Methamphetamine	8	13.8

4-Chloramphetamine	9	12
D,L 4-Methylamphetamine	5.3	12.9
Benzphetamine	5	11
Bupropion	108	214
L-Ephedrine	56	106
Fenfluramine	5	10
Mephentermine	26	64
Methoxyphenamine	162	385
Nor-pseudoephedrine	330	780
Phenmetrazine	262	477
Phentermine	79	207
Phenylpropanolamine (PPA)	269	565
Propranolol	98	148
D-Pseudoephedrine	46	83
Tranylcypromine	102	224

The table below lists the compounds that produce a positive result by the EMIT II Plus Ecstasy Assay. Specificity testing was performed at the 300 ng/mL cutoff and 500 ng/mL cutoff which represents the greatest potential for cross-reactivity.

Compound	Conc. At 300 ng/mL cutoff	Conc. At 500 ng/mL cutoff
m-Chlorophenylpiperazine (m-CPP) (Trazodone and Nefazodone metabolite)	7.4	14
Dobutamine	86.7	240
Haloperidol	77	138.8
Isoxsuprine	92	165
Labelatol	16.1	29
Moboverine	2.426	4.858
Methylone	24	74
Nylidrin	24	70
Trazodone	7	24

The table below lists the compounds that produce a negative result by the EMIT II Plus Ecstasy Assay at both the 300 and 500 ng/mL cutoffs.

Compound	Conc. at 300 & 500 ng/mL cutoffs
Acetaminophen	1000
α-Acetyl- N, N-dinormethadol	25
L-α-Acetylmethadol (LAAM)	25
N-Acetylprocainamide (NAPA)	400
Acetylsalicylic Acid	1000
Albuterol	1000
p-Aminobenzoic Acid (PABA)	1000
Amitriptyline	100 and 500
Amoxicillin	1000
Atenolol	1000
Benzoyllecgonine	1000
Buprenorphine	1000

Caffeine	1000
Carbamazepine	250
Carisoprodol	1000
Chloroquine	10,125
Chlorpheniramine	333 and 500
Cimetidine	1000
Clomipramine	2.5
Clonidine	1000
Codeine	500
Cyclobenzaprine	125
Desipramine	800
Dextromethorphan	1000
Dextrorphan	280
Diphenhydramine	1000
Donepezil	20 and 113
Doxepin	250
Doxylamine	1000
L-Epinephrine	1000
2-Ethylidene-1,5-dimethyl-3,3-	1000
Diphenylpyrrolidine (EDDP)	
Fenoprofen	1000
Fluoxetine	125
Furosemide	1000
Glutethimide	500
Ibuprofen	1000
Imipramine	750
Ketamine	100
Ketoprofen	1000
Ketorolac Tromethamine	350
Lidocaine	1000
LSD	0.15
Meperidine HCl	1000
Mescaline	1500
Metaclopramide	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
Nitroglycerin	1000
Noracetylmethadol	25
11-nor- Δ^9 -THC-9-COOH	100
Nortriptyline	1000

Ofloxacin	100
Oxazepam	300
Paroxetine	5
Phencyclidine	1000
Phenelzine	100
L-Phenylcyclohexylamine (PCA)	50
Phenytoin	1000
Phthalic Acid	1000
L-Piperidinocyclohexane Carbonitrile	50
Procainamide	1000
Promethazine	334 and 1000
Propoxyphene	1000
Quinacrine	6630
Ranitidine	1000
Sertraline	42 and 83
Scopolamine	500
Secobarbital	1000
Thioridazine	100
Tolmetin Sodium	2000
Tramadol	1000
Trifluoperazine	1000
Trimethobenzamide	500
Trimethoprim	1000
Tyramine	856 and 3608
Verapamil	149 and 667
Zidovudine (AZT)	2000
Zolpidem	100

Sensitivity

The sensitivity level (minimum detectable limit) of the Emit II Plus Ecstasy Assay is <75 ng/mL. This level represents the lowest concentration of methylenedioxymethamphetamine (MDMA) that can be distinguished from 0 ng/mL with a confidence level of 95%.

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

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