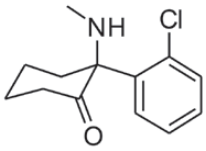
Ketamine

Homogeneous Enzyme Immunoassay (HEIA™)

IMMUNALYSIS



Exclusively from Immunalysis

- **Semi-Quantitative or Qualitative Testing**
- **Accurate and reliable**
- **Ready to use**

Formula: $C_{13}H_{16}ClNO$

Systematic Name:
(RS)-2-(2-chlorophenyl)-2-(methylamino)cyclohexanone

Brand Names: Ketanest®, Ketaset®, Ketalar®

About Ketamine: Ketamine is an anesthetic agent used in the United States since 1972 for veterinary and pediatric medicine. It is also used in the treatment of depression and postoperative pain management. However, in recent years it has gained popularity as a street drug used at clubs and raves due to its hallucinogenic effects.

Administration: Oral; intravenous; intramuscular; insufflation

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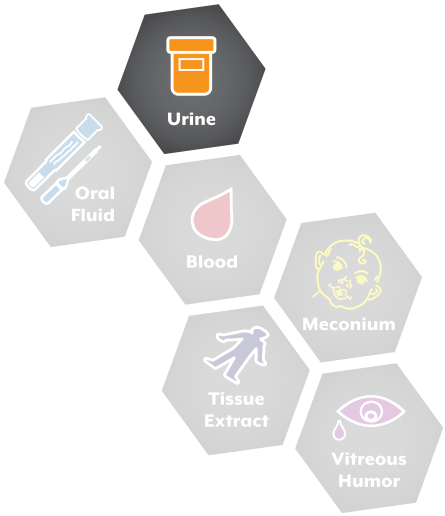
Elimination: Ketamine metabolizes by N-demethylation to Norketamine and further dehydrogenates to Dehydronorketamine. After 72 hours of a single dose, 2.3% of Ketamine is unchanged, 1.6% is Norketamine, 16.2% is Dehydronorketamine, and 80% is hydroxylated derivatives of Ketamine.[1,2]

Abuse Potential: An overdose can cause unconsciousness and dangerously slowed breathing.



1) R. Baselt, *Disposition of Toxic Drugs and Chemicals in Man*, Fourth Edition, p. 412-414.
2) K. Moore, J.Skerov, B.Levine, and A.Jacobs, *Urine Concentrations of Ketamine and Norketamine Following Illegal Consumption*, J.Anal, Toxicol. 25: 583-588 (2001).

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ISO 13485:2003 CERTIFIED

Ketamine (HEIA™)

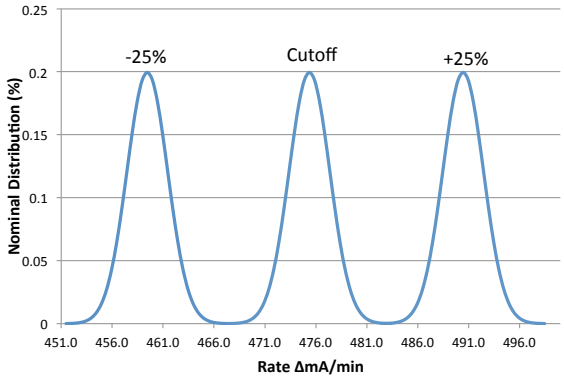
Urine

IMMUNALYSIS

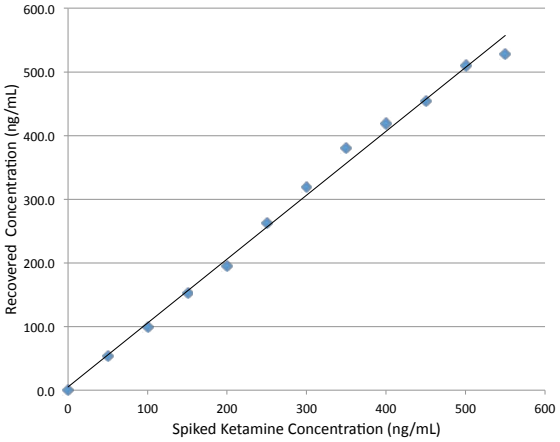
Assay Specifications

Methodology: Homogeneous Enzyme Immunoassay
Cutoff: 100 ng/mL
Calibration Range: 0-500 ng/mL

Overlap: Ketamine (100 ng/mL Cutoff)*



Analytical Recovery: Ketamine



ORDER - Ketamine (HEIA)

Catalog #	Description
340UR-0025 / -0100 / -0500	25 mL / 100 mL / 500 mL Kit
C340UR-5-1	100 ng/mL Calibrator
C340UR-5-2	75 ng/mL and 125 ng/mL Controls
C340UR-5-5	0, 50, 100, 200 and 500 ng/mL Calibrators
Neg-10-1	10 mL Negative Urine Control

Cross-Reactivity 100 ng/mL Cutoff*

Analyte	Analyte Concentration (ng/mL)	Ketamine Equivalent (ng/mL)	Cross-Reactivity (%)
Ketamine	100	100	100.00
Dehydronorketamine	100,000	100	ND
Methoxetamine	100,000	100	ND
Norketamine	400	100	25.00

No interference was observed by the addition of the following potentially interfering substances at 100,000ng/mL. Acetaminophen, Acetylsalicylic Acid, Benzoylecgonine, Caffeine, Diphenhydramine, Ibuprofen, and Methadone were added at 500,000 ng/mL. Lorazepam Glucuronide, Morphine-6-D-Glucuronide, Norbuprenorphine and Sufentanil Citrate were added at 50,000ng/mL.

4-Bromo-2,5,Dimethoxyphenethylamine, 6-Acetylcodeine, 6-Acetylmorphine, 7-Aminoclonazepam, 7-Aminoflurnitrazepam, 7-Aminonitrazepam, 11-hydroxy-delta-9-THC, 11-nor-9 carboxy THC, Acetaminophen, Acetylsalicylic Acid, Alprazolam,Amitriptyline, Amobarbital, S-(+) Amphetamine, Benzoylecgonine, Benzylpiperazine,Bromazepam, Buprenorphine, Bupropion, Butabarbital, Butalbital, Caffeine,Cannabidiol, Cannabinol, Carbamazeprine, Carisoprodol, Chlordiazepoxide,Chlorpromazine, cis-Tramadol, Clobazam, Clomipramine, Clonazepam, Cocaine, Codeine, Cotinine, Cyclobenzaprine, Delta-9-THC, Demoxepam, Desakylflurazepam, Desipramine, Dextromethorphan, Diazepam, Digoxin, Dihydrocodeine, Diphenhydramine, Doxepin, Doxylamine, Ecgonine, Ecgonine methyl ester, EDDP, 1R,2S(-)-Ephedrine, 1S,2R(+)-Ephedrine, Ethyl β-D-glucuronide, Ethylmorphine, Fenfluramine, Fentanyl, Flunitrazepam, Fluoxetine, Flurazepam, Haloperidol, Heroin, Hexobarbital, Hydrocodone, Hydromorphone, Ibuprofen, Imipramine, Lamotrignine, Levorphanol, Lidocaine, Lorazepam, Lorazepam Glucuronide, Lormetazepam, LSD, Maprotiline, (+)-MDA, MDEA, MDMA, Meperidine, Meprobamate, Methadone, S(+)-Methamphetamine, Methaquolone, Methylphenidate, Midazolam, Morphine, Morphine 3-D-glucuronide, Morphine 6-D-glucuronide, Nalorphine, Naloxone, Naltrexone, Naproxen, N-desmethyltapentadol, Nitrazepam, Norbuprenorphine, Norcodeine, Nordiazepam , Normorphine, Norproxyphene, Norpseudoephedrine, Nortriptyline, Oxazepam, Oxycodone, Oxymorphone, PCP, Pentazocine, Pentobarbital, Phenobarbital, Phentermine, Phenylephedrine, Phenylopropanolamine, Phenytoine, PMA, Prazepam, Propoxyphene, Propranolol, Protriptyline, R,R(-)-Pseudoephedrine, S,S(+)-Pseudoephedrine, Ranitidine, Ritalinic Acid, Salicylic Acid, Secobarbital, Sertraline, Sufentanil Citrate, Temazepam, Theophylline, Thioridazine, Trazodone, Triazolam, Trifluoromethylphenyl-piperazine, Trimipramine, Venlafaxine, Verapamil, Zolpidem Tartrate

ND=None detected

GC-MS Confirmation (100 ng/mL)

HEIA (100 ng/mL)		Positive	Negative
	Positive	51*	0
	Negative	0	40

Semi-Quantitative Precision (100 ng/mL)

Interday Precision (N = 80)

Concentration (ng/mL)	Mean Concentration (ng/mL)	CV%
25 Calibrator	26.6	7.4
50 Calibrator	51.5	5.6
75 Control LOW	77.7	5.6
100 Calibrator	103.1	4.9
125 Control HIGH	129.7	4.1
150 Calibrator	157.5	3.5
175 Calibrator	181.3	3.1
200 Calibrator	203.2	4.8

***18 of the 51 samples were confirmed by Mass Spectrometry with results of both Ketamine & Norketamine. 33 of the 51 samples were confirmed by Mass Spectrometry with results of Ketamine.**

Information on Qualitative Precision is provided in the product insert.

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