Multi-Drug Rapid Test Cassette With/Without Adulteration (Urine)

Package Insert

Instruction Sheet for testing of any combination of the following drugs: ACE/AMP/BAR/BZO/BUP/COC/THC/MTD/MET/MDMA/MOP/MQL/OPI/PCP/PPX/TCA/TML/KET/OXY/COT/EDDP/FYL/K2/6-MAM/MDA/ETG/CLO/LSD/MPD/ZOL/ALC/ZOP/MCAT/7-ACL/CFYL /CAF/CAT/TRO/MDPV/MEP /ALP

Including Specimen Validity Tests (S.V.T.) for:

Oxidants/PCC, Specific Gravity, pH, Nitrite, Glutaraldehyde, Creatinine and Bleach

A rapid test for the simultaneous, qualitative detection of multiple drugs and drug metabolites in human urine. For healthcare professionals including professionals at point of care sites. Immunoassay for in vitro diagnostic use only.

【INTENDED USE】

The Multi-Drug Rapid Test Cassette is a rapid chromatographic immunoassay for the qualitative detection of multiple drugs and drug metabolites in urine at the following cut-off concentrations:

Test	Calibrator	Cut-off (ng/mL)
Acetaminophen (ACE 5,000)	Acetaminophen	5,000
Amphetamine (AMP1,000)	d-Amphetamine	1,000
Amphetamine (AMP 500)	d-Amphetamine	500
Amphetamine (AMP 300)	d-Amphetamine	300
Barbiturates (BAR 300)	Secobarbital	300
Barbiturates (BAR 200)	Secobarbital	200
Benzodiazepines (BZO 500)	Oxazepam	500
Benzodiazepines (BZO 300)	Oxazepam	300
Benzodiazepines (BZO 200)	Oxazepam	200
Benzodiazepines (BZO 100)	Oxazepam	100
Buprenorphine (BUP 10)	Buprenorphine	10
Buprenorphine (BUP 5)	Buprenorphine	5
Cocaine (COC 300)	Benzoylecgonine	300
Cocaine (COC 200)	Benzoylecgonine	200
Cocaine (COC 150)	Benzoylecgonine	150
Cocaine (COC 100)	Benzoylecgonine	100
Marijuana (THC150)	11-nor-Δ9-THC-9 COOH	150
Marijuana (THC 50)	11-nor-Δ9-THC-9 COOH	50
Marijuana (THC 25)	11-nor-Δ9-THC-9 COOH	25
Methadone (MTD 300)	Methadone	300
Methadone (MTD 200)	Methadone	200
Methamphetamine (MET 1,000)	d-Methamphetamine	1,000
Methamphetamine (MET 500)	d-Methamphetamine	500
Methamphetamine (MET 300)	d-Methamphetamine	300
Methylenedioxymethamphetamine (MDMA 300)	d,l-Methylenedioxymethamphetamine	300
Methylenedioxymethamphetamine (MDMA 500)	d,l-Methylenedioxymethamphetamine	500
Methylenedioxymethamphetamine (MDMA 1,000)	d,l-Methylenedioxymethamphetamine	1,000
Morphine (MOP 300)	Morphine	300
Morphine (MOP 100)	Morphine	100
Methaqualone(MQL)	Methaqualone	300
Opiate (OPI 2,000)	Morphine	2,000
Phencyclidine (PCP)	Phencyclidine	25
Propoxyphene (PPX)	Propoxyphene	300
Tricyclic Antidepressants (TCA)	Nortriptyline	1,000
Tramadol (TML 100)	Cis-Tramadol	100
Tramadol (TML 200)	Cis-Tramadol	200
Tramadol (TML 300)	Cis-Tramadol	300
Ketamine (KET 1,000)	Ketamine	1,000
Ketamine (KET 500)	Ketamine	500
Ketamine (KET 300)	Ketamine	300
Ketamine (KET100)	Ketamine	100
Oxycodone (OXY100)	Oxycodone	100
Oxycodone (OXY300)	Oxycodone	300
Cotinine(COT200)	Cotinine	200
Cotinine(COT100)	Cotinine	100
2-ethylidene-1,5-dimethyl-3,3-diphenylpyrrolidine (EDDP300)	2-ethylidene-1,5-dimethyl-3,3-diphenylpyrrolidine	300
2-ethylidene-1,5-dimethyl-3,3-diphenylpyrrolidine (EDDP100)	2-ethylidene-1,5-dimethyl-3,3-diphenylpyrrolidine	100
Fentanyl(FYL20)	Norfentanyl	20
Fentanyl(FYL10)	Norfentanyl	10
Synthetic Marijuana (K2-50)	JWH-018、JWH-073	50
Synthetic Marijuana (K2-30)	JWH-018、JWH-073	30
6-mono-aceto-morphine (6-MAM10)	6-MAM	10
(±) 3,4-Methylenedioxy-Amphetamine(MDA500)	(±) 3,4-Methylenedioxy-Amphetamine	500
Ethyl- β-D-Glucuronide(ETG500)	Ethyl- β -D-Glucuronide	500
Ethyl- β-D-Glucuronide(ETG1,000)	Ethyl- β -D-Glucuronide	1,000
Clonazepam(CLO 400)	Clonazepam	400
Clonazepam(CLO 150)	Clonazepam	150
Lysergic Acid Diethylamide (LSD)	Lysergic Acid Diethylamide	20
Lysergic Acid Diethylamide (LSD)	Lysergic Acid Diethylamide	50
Methylphenidate (MPD)	Methylphenidate	300
Zolpidem(ZOL)	Zolpidem	50
Diazepam(DIA 300)	Diazepam	300
Diazepam(DIA 200)	Diazepam	200
Zopiclone（ZOP 50）	Zopiclone	50
Methcathinone（MCAT 500）	S(-)-Methcathinone	500
7-Aminoclonazepam(7-ACL300)	7-Aminoclonazepam	300
7-Aminoclonazepam(7-ACL200)	7-Aminoclonazepam	200
7-Aminoclonazepam(7-ACL100)	7-Aminoclonazepam	100
Carfentanyl(CFYL500)	Carfentanyl	500
Caffeine(CAF)	Caffeine	1000
Cathine (CAT)	(+)-Norpseudoephedrine	150
Tropicamide(TRO)	Tropicamide	350
3, 4-methylenedioxypyrovalerone (MDPV)	3, 4-methylenedioxypyrovalerone	1000
Mephedrone(MEP)	Mephedrone	100
Alprazolam(ALP)	Alprazolam	100
Test	**Calibrator**	**Cut-off**
Alcohol(ALC)	Alcohol	0.02%

Configurations of the Multi-Drug Rapid Test Cassette come with any combination of the above listed drug analytes with or without S.V.T. This assay provides only a preliminary analytical test result. A more specific alternate chemical method must be used in order to obtain a confirmed analytical result. Gas chromatography/mass spectrometry (GC/MS) is the preferred confirmatory method. Clinical consideration and professional judgment should be applied to any drug of abuse test result, particularly when preliminary positive results are indicated.

【SUMMARY】

The Multi-Drug Rapid Test Cassette is a rapid urine screening test that can be performed without the use of an instrument. The test utilizes monoclonal antibodies to selectively detect elevated levels of specific drugs in urine.

Acetaminophen (ACE)

Acetaminophen is one of the most commonly used drugs, yet it is also an important cause of serious liver injury. Acetaminophen is the generic name of a drug found in many common brand name over-the-counter (OTC) products, such as Tylenol, and Prescription (Rx) products, such as Vicodin and Percocet. Acetaminophen is an important drug, and its effectiveness in relieving pain and fever is widely known. Unlike other commonly used drugs to reduce pain and fever (e.g., non steroidalant inflammatory drugs (NSAIDs), such as aspirin, ibuprofen, and naproxen), at recommended doses acetaminophen does not cause adverse effects, such as stomach discomfort and bleeding, and acetaminophen is considered safe when used according to the directions on its OTC or Rx labeling. However, taking more than the recommended amount can cause liver damage, ranging from abnormalities in liver function blood tests, to acute liver failure, and even death. Many cases of overdose are caused by patients inadvertently taking more than the recommended dose (i.e., 4 grams a day) of a particular product, or by taking more than one product containing acetaminophen (e.g., an OTC product and an Rx drug containing acetaminophen). The mechanism of liver injury is not related to acetaminophen itself, but to the production of a toxic metabolite. The toxic metabolite binds with liver proteins, which cause cellular injury. The ability of the liver to remove this metabolite before it binds to liver protein influences the extent of liver injury.

The Multi-Drug Rapid Test Cassette yields a positive result when the concentration of Acetaminophen in urine exceeds 5,000ng/mL.

Amphetamine (AMP)

Amphetamine is a Schedule II controlled substance available by prescription (Dexedrine®) and is also available on the illicit market. Amphetamines are a class of potent sympathomimetic agents with therapeutic applications. They are chemically related to the human body's natural catecholamines: epinephrine and norepinephrine. Acute higher doses lead to enhanced stimulation of the central nervous system (CNS) and induce euphoria, alertness, reduced appetite, and a sense of increased energy and power. Cardiovascular responses to amphetamines include increased blood pressure and cardiac arrhythmias. More acute responses produce anxiety, paranoia, hallucinations, and psychotic behavior. The effects of Amphetamines generally last 2-4 hours following use and the drug has a half-life of 4-24 hours in the body. About 30% of amphetamines are excreted in the urine in unchanged form, with the remainder as hydroxylated and deaminated derivatives.

The Multi-Drug Rapid Test Cassette yields a positive result when the concentration of amphetamines in urine exceeds detective level.

Barbiturates (BAR)

Barbiturates are CNS depressants. They are used therapeutically as sedatives, hypnotics, and anticonvulsants barbiturates are almost always taken orally as capsules or tablets. The effects resemble those of intoxication with alcohol. Chronic use of barbiturates leads to tolerance and physical dependence.

Short-acting barbiturates taken at 400 mg/day for 2-3 months can produce a clinically significant degree of physical dependence. Withdrawal symptoms experienced during periods of drug abstinence can be severe enough to cause death.

Only a small amount (less than 5%) of most barbiturates are excreted unaltered in the urine.

The approximate detection time limits for barbiturates are:

Short acting (e.g. Secobarbital)	100 mg PO (oral)	4.5 days
Long acting (e.g. Phenobarbital)	400 mg PO (oral)	7 days[2]

The Multi-Drug Rapid Test Cassette yields a positive result when the concentration of barbiturates in urine exceeds detective level.

Benzodiazepines (BZO)

Benzodiazepines are medications that are frequently prescribed for the symptomatic treatment of anxiety and sleep disorders. They produce their effects via specific receptors involving a neurochemical called gamma aminobutyric acid (GABA). Because they are safer and more effective, benzodiazepines have replaced barbiturates in the treatment of both anxiety and insomnia. Benzodiazepines are also used as sedatives before some surgical and medical procedures, and for the treatment of seizure disorders and alcohol withdrawal.

Risk of physical dependence increases if benzodiazepines are taken regularly (e.g., daily) for more than a few months, especially at higher than normal doses. Stopping abruptly can bring on such symptoms as trouble sleeping, gastrointestinal upset, feeling unwell, loss of appetite, sweating, trembling, weakness, anxiety and changes in perception.

Only trace amounts (less than 1%) of most benzodiazepines are excreted unaltered in the urine; most of the concentration in urine is conjugated drug. The detection period for benzodiazepines in urine is 3-7 days.

The Multi-Drug Rapid Test Cassette yields a positive result when the concentration of benzodiazepines in urine exceeds detective level.

Buprenorphine (BUP)

Buprenorphine is a potent analgesic often used in the treatment of opioid addiction. The drug is sold under the trade names Subutex™, Buprenex™, Temgesic™ and Suboxone™, which contain Buprenorphine HCl alone or in combination with Naloxone HCl. Therapeutically, Buprenorphine is used as a substitution treatment for opioid addicts. Substitution treatment is a form of medical care offered to opiate addicts (primarily heroin addicts) based on a similar or identical substance to the drug normally used. In substitution therapy, Buprenorphine is as effective as Methadone but demonstrates a lower level of physical dependence. Concentrations of free Buprenorphine and Norbuprenorphine in urine may be less than 1 ng/ml after therapeutic administration, but can range up to 20 ng/ml in abuse situations. The plasma half -life of Buprenorphine is 2-4 hours.[1]While complete elimination of a single dose of the drug can take as long as 6 days, the window of detection for the parent drug in urine is thought to be approximately 3 days.

Substantial abuse of Buprenorphine has also been reported in many countries where various forms of the drug are available. The drug has been diverted from legitimate channels through theft, doctor shopping, and fraudulent prescriptions, and been abused via intravenous, sublingual, intranasal and inhalation routes.

The Multi-Drug Rapid Test Cassette yields a positive result when the Buprenorphine in urine exceeds detective level.

Cocaine(COC)

Cocaine is a potent central nervous system stimulant and a local anesthetic. Initially, it brings about extreme energy and restlessness while gradually resulting in tremors, over-sensitivity and spasms. In large amounts, cocaine causes fever, unresponsiveness, difficulty in breathing and unconsciousness.

Cocaine is often self-administered by nasal inhalation, intravenous injection and free-base smoking. It is excreted in the urine in a short time primarily as benzoylecgonine.[3,4]Benzoylecgonine, a major metabolite of cocaine, has a longer biological half-life (5-8 hours) than cocaine (0.5-1.5 hours), and can generally be detected for 24-48 hours after cocaine exposure.[4]

The Multi-Drug Rapid Test Cassette yields a positive result when the concentration of benzoylecgonine in urine exceeds detective level.

Marijuana (THC)

THC (Δ9-tetrahydrocannabinol) is the primary active ingredient in cannabis (marijuana). When smoked or orally administered, THC produces euphoric effects. Users have impaired short-term memory and slowed learning. They may also experience transient episodes of confusion and anxiety. Long-term, relatively heavy use may be associated with behavioral disorders. The peak effect of marijuana administered by smoking occurs in 20-30 minutes and the duration is 90-120 minutes after one cigarette. Elevated levels of urinary metabolites are found within hours of exposure and remain detectable for 3-10 days after smoking. The main metabolite excreted in the urine is 11-nor-Δ9-tetrahydrocannabinol-9-carboxylic acid (THC-COOH).

The Multi-Drug Rapid Test Cassette yields a positive result when the concentration of THC-COOH in urine exceeds detective level.

Methadone (MTD)

Methadone is a narcotic analgesic prescribed for the management of moderate to severe pain and for the treatment of opiate dependence (heroin, Vicodin, Percocet, morphine). The pharmacology of oral methadone is very different from IV methadone. Oral methadone is partially stored in the liver for later use. IV methadone acts more like heroin. In most states you must go to a pain clinic or a methadone maintenance clinic to be prescribed methadone.

Methadone is a long acting pain reliever producing effects that last from twelve to forty-eight hours. Ideally, methadone frees the client from the pressures of obtaining illegal heroin, from the dangers of injection, and from the emotional roller coaster that most opiates produce. Methadone, if taken for long periods and at large doses, can lead to a very long withdrawal period. The withdrawals from methadone are more prolonged and troublesome than those provoked by heroin cessation, yet the substitution and phased removal of methadone is an acceptable method of detoxification for patients and therapists.[7]

The Multi-Drug Rapid Test Cassette yields a positive result when the concentration of methadone in urine exceeds detective level.

Methamphetamine (MET)

Methamphetamine is an addictive stimulant drug that strongly activates certain systems in the brain. Methamphetamine is closely related chemically to Amphetamine, but the central nervous system effects of Methamphetamine are greater. Methamphetamine is made in illegal laboratories and has a high potential for abuse and dependence. The drug can be taken orally, injected, or inhaled. Acute higher doses lead to enhanced stimulation of the central nervous system and induce euphoria, alertness, reduced appetite, and a sense of increased energy and power. Cardiovascular responses to Methamphetamine include increased blood pressure and cardiac arrhythmias. More acute responses produce anxiety, paranoia, hallucinations, psychotic behavior, and eventually, depression and exhaustion.

The effects of Methamphetamine generally last 2-4 hours and the drug have a half-life of 9-24

hours in the body. Methamphetamine is excreted in the urine primarily as Amphetamine, and oxidized and deaminated derivatives. However, 10-20% of Methamphetamine is excreted unchanged. Thus, the presence of the parent compound in the urine indicates Methamphetamine use. Methamphetamine is generally detectable in the urine for 3-5 days, depending on urine pH level.
The Multi-Drug Rapid Test Cassette is a rapid urine screening test that can be performed without the use of an instrument. The test utilizes a monoclonal antibody to selectively detect elevated levels of Methamphetamine in urine. The Multi-Drug Rapid Test Cassette yields a positive result when the Methamphetamine in urine exceeds detective level.

Methylenedioxymethamphetamine (MDMA500)

Methylenedioxymethamphetamine (ecstasy) is a designer drug first synthesized in 1914 by a German drug company for the treatment of obesity.[5] Those who take the drug frequently report adverse effects, such as increased muscle tension and sweating. MDMA is not clearly a stimulant, although it has, in common with amphetamine drugs, a capacity to increase blood pressure and heart rate. MDMA does produce some perceptual changes in the form of increased sensitivity to light, difficulty in focusing, and blurred vision in some users. Its mechanism of action is thought to be via release of the neurotransmitter serotonin. MDMA may also release dopamine, although the general opinion is that this is a secondary effect of the drug (Nichols and Oberlender, 1990). The most pervasive effect of MDMA, occurring in virtually all people who took a reasonable dose of the drug, was to produce a clenching of the jaws.
The Multi-Drug Rapid Test Cassette yields a positive result when the concentration of Methylenedioxymethamphetamine in urine exceeds detective level.

Morphine (MOP)

Opiate refers to any drug that is derived from the opium poppy, including the natural products, morphine and codeine, and the semi-synthetic drugs such as heroin. Opioid is more general, referring to any drug that acts on the opioid receptor.
Opioid analgesics comprise a large group of substances which control pain by depressing the CNS. Large doses of morphine can produce higher tolerance levels, physiological dependency in users, and may lead to substance abuse. Morphine is excreted unmetabolized, and is also the major metabolic product of codeine and heroin. Morphine is detectable in the urine for several days after an opiate dose.[2]
The Multi-Drug Rapid Test Cassette yields a positive result when the concentration of morphine in urine exceeds detective level.

Morphine/Opiate (OPI)

The Multi-Drug Rapid Test Cassette yields a positive result when the concentration of morphine in urine exceeds 2,000 ng/mL. This is the suggested screening cut-off for positive specimens set by the Substance Abuse and Mental Health Services Administration (SAMHSA, USA).1 See morphine (MOP 300) for summary.

Methaqualone (MQL)

Methaqualone (Quaalude, Sopor) is a quinazoline derivative that was first synthesized in 1951 and found clinically effective as a sedative and hypnotic in 1956.[10]It soon gained popularity as a drug of abuse and in 1984 was removed from the US market due to extensive misuse. It is occasionally encountered in illicit form, and is also available in European countries in combination with diphenhydramine (Mandrax). Methaqualone is extensively metabolized *in vivo* principally by hydroxylation at every possible position on the molecule. At least 12 metabolites have been identified in the urine.
The Multi-Drug Rapid Test Cassette yields a positive result when the concentration of Methaqualone in urine exceeds 300ng/mL.

Phencyclidine (PCP)

Phencyclidine, also known as PCP or Angel Dust, is a hallucinogen that was first marketed as a surgical anesthetic in the 1950's. It was removed from the market because patients receiving it became delirious and experienced hallucinations.
PCP is used in powder, capsule, and tablet form. The powder is either snorted or smoked after mixing it with marijuana or vegetable matter. PCP is most commonly administered by inhalation but can be used intravenously, intra-nasally, and orally. After low doses, the user thinks and acts swiftly and experiences mood swings from euphoria to depression. Self-injurious behavior is one of the devastating effects of PCP.
PCP can be found in urine within 4 to 6 hours after use and will remain in urine for 7 to 14 days, depending on factors such as metabolic rate, user's age, weight, activity, and diet.6 PCP is excreted in the urine as an unchanged drug (4% to 19%) and conjugated metabolites (25% to 30%).[6]
The Multi-Drug Rapid Test Cassette yields a positive result when the concentration of phencyclidine in urine exceeds 25 ng/mL. This is the suggested screening cut-off for positive specimens set by the Substance Abuse and Mental Health Services Administration (SAMHSA, USA).[1]

Propoxyphene (PPX)

Propoxyphene (PPX) is a narcotic analgesic compound bearing structural similarity to methadone. As an analgesic, propoxyphene can be from 50-75% as potent as oral codeine. Darvocet™, one of the most common brand names for the drug, contains 50-100 mg of propoxyphene napsylate and 325-650 mg of acetaminophen. Peak plasma concentrations of propoxyphene are achieved from 1 to 2 hours post dose. In the case of overdose, propoxyphene blood concentrations can reach significantly higher levels.
In humans, propoxyphene is metabolized by N-demethylation to yield norpropoxyphene. Norpropoxyphene has a longer half-life (30 to 36 hours) than parent propoxyphene (6 to 12 hours).The accumulation of norpropoxyphene seen with repeated doses may be largely responsible for resultant toxicity.
The Multi-Drug Rapid Test Cassette yields a positive result when the concentration of Propoxyphene or Norpropoxyphene in urine exceeds 300 ng/mL. At present, the Substance Abuse and Mental Health Services Administration (SAMHSA) does not have a recommended screening cut-off for propoxyphene positive specimens.

Tricyclic Antidepressants (TCA)

TCA (Tricyclic Antidepressants) are commonly used for the treatment of depressive disorders. TCA overdoses can result in profound CNS depression, cardiotoxicity and anticholinergic effects. TCA overdose is the most common cause of death from prescription drugs. TCAs are taken orally or sometimes by injection. TCAs are metabolized in the liver. Both TCAs and their metabolites are excreted in urine mostly in the form of metabolites for up to ten days.
The Multi-Drug Rapid Test Cassetteyields a positive result when the concentration of tricyclic antidepressants in urine exceeds 1,000 ng/mL. At present, the Substance Abuse and Mental Health Services Administration (SAMHSA) does not have a recommended screening cut-off for tricyclic antidepressant positive specimens.

Tramadol (TML)

Tramadol(TML) is a quasi-narcotic analgesic used in the treatment of moderate to severe pain. It is a synthetic analog of codeine, but has a low binding affinity to the mu-opioid receptors. Large doses of tramadol can develop tolerance and physiological dependency and lead to its abuse. Tramadol is extensively metabolized after oral administration. Approximately 30% of the dose is excreted in the urine as unchanged drug, whereas 60% is excreted as metabolites. The major pathways appear to be N- and O- demethylation, glucoronidation or sulfation in the liver.
The Multi-Drug Rapid Test Cassette is a rapid urine screening test that can be performed without the use of an instrument. The test utilizes a monoclonal antibody to selectively detect elevated levels of Tramadol in urine. The Multi-Drug Rapid Test Cassette yields a positive result when Tramadol in urine exceed detective level.

Ketamine(KET)

Ketamine is a dissociative anesthetic developed in 1963 to replace PCP (Phencyclidine). While Ketamine is still used in human anesthesia and veterinary medicine, it is becoming increasingly abused as a street drug. Ketamine is molecularly similar to PCP and thus creates similar effects including numbness, loss of coordination, sense of invulnerability, muscle rigidity, aggressive / violent behavior, slurred or blocked speech, exaggerated sense of strength, and a blank stare. There is depression of respiratory function but not of the central nervous system, and cardiovascular function is maintained.The effects of Ketamine generally last 4-6 hours following use. Ketamine is excreted in the urine as unchanged drug (2.3%) and metabolites (96.8%).[10]
The Multi-Drug Rapid Test Cassette is a rapid urine screening test that can be performed without the use of an instrument. The test utilizes a monoclonal antibody to selectively detect elevated levels of Ketamine in urine. The Multi-Drug Rapid Test Cassette yields a positive result when Ketamine in urine exceeds detective level.

Oxycodone (OXY)

Oxycodone is a semi-synthetic opioid with a structural similarity to codeine. The drug is manufactured by modifying thebaine, an alkaloid found in the opium poppy. Oxycodone, like all opiate agonists, provides pain relief by acting on opioid receptors in the spinal cord, brain, and possibly directly in the affected tissues. Oxycodone is prescribed for the relief of moderate to high pain under the well-known pharmaceutical trade names of OxyContin®, Tylox®, Percodan® and Percocet®. While Tylox®, Percodan® and Percocet® contain only small doses of oxycodone hydrochloride combined with other analgesics such as acetaminophen or aspirin, OxyContin consists solely of oxycodone hydrochloride in a time-release form. Oxycodone is known to metabolize by demethylation into oxymorphone and noroxycodone. In a 24-hour urine, 33-61% of a single, 5 mg oral dose is excreted with the primary constituents being unchanged drug (13-19%), conjugated drug (7-29%) and conjugated oxymorphone (13-14%). The window of detection for Oxycodone in urine is expected to be similar to that of other opioids such as morphine.
The Multi-Drug Rapid Test Cassette is a rapid urine screening test that can be performed without the use of an instrument. The test utilizes a monoclonal antibody to selectively detect elevated levels of Oxycodone in urine. The Multi-Drug Rapid Test Cassette yields a positive result when Oxycodone in urine exceeds 100ng/mL.

Cotinine (COT)

Cotinine is the first-stage metabolite of nicotine, a toxic alkaloid that produces stimulation of the autonomic ganglia and central nervous system when in humans. Nicotine is a drug to which virtually every member of a tobacco-smoking society is exposed whether through direct contact or second-hand inhalation. In addition to tobacco, nicotine is also commercially available as the active ingredient in smoking replacement therapies such as nicotine gum, transdermal patches and nasal sprays.
In a 24-hour urine, approximately 5% of a nicotine dose is excreted as unchanged drug with 10% as cotinine and 35% as hydroxycotinine; the concentrations of other metabolites are believed to account for less than 5%.[10]While cotinine is thought to be an inactive metabolite, it's elimination profile is more stable than that of nicotine which is largely urine pH dependent. As a result, cotinine is considered a good biological marker for determining nicotine use. The plasma half-life of nicotine is approximately 60 minutes following inhalation or parenteral administration.[11]Nicotine and cotinine are rapidly eliminated by the kidney; the window of detection for cotinine in urine at a cutoff level of 200 ng/mL is expected to be up to 2-3 days after nicotine use.
The Multi-Drug Rapid Test Cassette yields a positive result when the concentration of Cotinine in urine exceeds detective level.

2-ethylidene-1,5-dimethyl-3,3-diphenylpyrrolidine (EDDP)

Methadone is an unusual drug in that its primary urinary metabolites (EDDP and EMDP) are cyclic in structure, making them very difficult to detect using immunoassays targeted to the native compound.[10]Exacerbating this problem, there is a subsection of the population classified as "extensive metabolizers" of methadone. In these individuals, a urine specimen may not contain enough parent methadone to yield a positive drug screen even if the individual is in compliance with their methadone maintenance. EDDP represents a better urine marker for methadone maintenance than unmetabolized methadone.
The Multi-Drug Rapid Test Cassette yields a positive result when the concentration of EDDP in urine exceeds detective level.

Fentanyl (FYL)

Fentanyl, belongs to powerful narcotics analgesics, and is a μ special opiates receptor stimulant. Fentanyl is one of the varieties that been listed in management of United Nations "Single Convention of narcotic drug in 1961". Among the opiates agents that under international control, fentanyl is one of the most commonly used to cure moderate to severe pain1. After continuous injection of fentanyl, the sufferer will have the performance of protracted opioid abstinence syndrome, such as ataxia and irritability etc2,3, which presents the addiction after taking fentanyl in a long time. Compared with drug addicts of amphetamine, drug addicts who take fentanyl mainly have got the possibility of higher infection rate of HIV, more dangerous injection behavior and more lifelong medication overdose 4.
The FYL Rapid Test Dipstick (Urine) is a rapid urine screening test that can be performed without the use of an instrument. The test utilizes a monoclonal antibody to selectively detect elevated levels of FYL in urine. The FYL Rapid Test Dipstick (Urine) yields a positive result when FYL in urine exceeds detective level.

Synthetic Marijuana (K2)

Synthetic Marijuana or K2 a psychoactive herbal and chemical product that, when consumed, mimics the effects of Marijuana. It is best known by the brand names K2 and Spice, both of which have largely become genericized trademarks used to refer to any synthetic Marijuana product. The studies suggest that synthetic marijuana intoxication is associated with acute psychosis, worsening of previously stable psychotic disorders, and also may have the ability to trigger a chronic (long-term) psychotic disorder among vulnerable individuals such as those with a family history of mental illness.
Elevated levels of urinary metabolites are found within hours of exposure and remain detectable for 72 hours after smoking (depending on usage/dosage). Asof March 1, 2011, five cannabinoids, JWH -018, JWH- 073, CP- 47, JWH- 200and cannabicyclohexanol are now illegal in the US because these substances have the potential to be extremely harmful and, therefore, pose an imminent hazard to the public safety.
The Multi-Drug Rapid Test Cassette yields a positive result when the syntheticmarijuana metabolite in urine exceeds detective level.

6-mono-aceto-morphine (6-MAM)

6-Monoacetylmorphine (6-MAM) or 6-acetylmorphine (6-AM) is one of three active metabolites of heroin (diacetylmorphine), the others being morphine and the much less active 3-monoacetylmorphine (3-MAM). 6-MAM is rapidly created from heroin in the body, and then is either metabolized into morphine or excreted in the urine. 6-MAM remains in the urine for no more than 24 hours. So a urine specimen must be collected soon after the last heroin use, but the presence of 6-MAM guarantees that heroin was in fact used as recently as within the last day. 6-MAM is naturally found in the brain, but in such small quantities that detection of this compound in urine virtually guarantees that heroin has recently been consumed.
The 6-MAM Rapid Test Cassette is a rapid urine screening test that can be performed without the use of an instrument. The test utilizes a monoclonal antibody to selectively detect elevated levels of 6-MAM in urine. The 6-MAM Rapid Test Cassette yields a positive result when 6-MAM in urine reaches 10ng/ml. This is the suggested screening cut-off for positive specimens set by the Substance Abuse and Mental Health Services Administration (SAMHSA, USA).

(±) 3, 4-Methylenedioxyamphetamine (MDA)

3,4-Methylenedioxyamphetamine (MDA), also known as tenamfetamine (INN), or with the street name "Sally" or "Sass" or "Sass-a-frass", is a psychedelic and entactogenic drug of the phenethylamine and amphetamine chemical classes. It is mainly used as a recreational drug, an entheogen, and a tool in use to supplement various types of practices for transcendence, including in meditation, psychonautics, and as an agent in psychedelic psychotherapy. It was first synthesized by G. Mannish and W. Jacobson in 1910. There are about 20 different synthetic routes described in the literature for its preparation.

Ethyl- β-D-Glucuronide(ETG)

Ethyl Glucuronide (ETG) is a metabolite of ethyl alcohol which is formed in the body by glucuronidation following exposure to ethanol, such as by drinking alcoholic beverages. It is used as a biomarker to test for ethanol use and to monitor alcohol abstinence in situations where drinking is prohibited, such as in the military, in professional monitoring programs(health professionals, attorneys, airline pilots in recovery from addictions), in schools, inliver transplant clinics, or in recovering alcoholic patients. ETG can be measured in urine up to approximately 80 hours after ethanol is ingested. ETG is a more accurate indicator of the recent exposure to alcohol than measuring for the presence of ethanol itself.
The Multi-Drug Rapid Test Cassette yields a positive result when the concentration of Ethyl Glucuronide in urine exceeds detective level

Clonazepam(CLO)

Clonazepam is a benzodiazepine drug having anxiolytic, anticonvulsant, muscle relaxant, amnestic, sedative, and hypnotic properties. Clonazepam has an intermediate onset of action, with a peak blood level occurring one to four hours after oral administration. Long-term effects of benzodiazepines include tolerance, benzodiazepine dependence, and benzodiazepine withdrawal syndrome, which occurs in one third of patients treated with clonazepam for longer than four weeks. Benzodiazepines such as clonazepam have a fast onset of action, high effectivity rate, and low toxicity in overdose; however, as with most medications, it may have drawbacks due to adverse or paradoxical effects. The detection period for the Benzodiazepines in the urine is 3-7 days.
The Multi-Drug Rapid Test Cassette yields a positive result when the Benzodiazepines in urine exceeds detective level.

Lysergic Acid Diethylamide (LSD)

Lysergic acid diethylamide (LSD) is a white powder or a clear, colorless liquid. LSD is manufactured from lysergic acid which occurs naturally in the ergot fungus that grows on wheat and rye. It is a Schedule I controlled substance, available in liquid, powder, tablet (microdots), and capsule form. LSD is recreationally used as a hallucinogen for its ability to alter human perception and mood. LSD is primarily used by oral administration, but can be inhaled, injected, and transdermally applied. LSD is a non-selective 5-HT agonist, may exert its hallucinogenic effect by interacting with 5-HT 2Areceptors as a partial agonist and modulating the NMDA receptor-mediated sensory, perceptual, affective and cognitive processes. LSD mimics 5-HT at 5-HT 1A receptors, producing a marked slowing of the firing rate of serotonergic neurons. LSD has a plasma half-life of 2.5-4 hours. Metabolites of LSD include N-desmethyl-LSD, hydroxy-LSD, 2-oxo-LSD, and 2-oxo-3-hydroxy-LSD .These metabolites are all inactive. LSD use can typically be detected in urine for periods of 2-5 days.
The Multi-Drug Rapid Test Cassette yields a positive result when Lysergic Acid Diethylamide in urine exceeds detective level..

Methylphenidate (MPD)

Methylphenidate (Ritalin) is a psychostimulant drug approved for treatment of ADHD or attention-deficit hyperactivity disorder, postural orthostatic tachycardia syndrome and narcolepsy. Methylphenidate primarily acts as a norepinephrine-dopamine reuptake inhibitor. Methylphenidate is most active at modulating levels of dopamine and to a lesser extent norepinephrine. Similar to cocaine, methylphenidate binds to and blocks dopamine transporters and norepinephrine transporters. Methylphenidate has both dopamine transporter and norepinephrine transporter binding affinity, with the dextromethylphenidate enantiomers displaying a prominent affinity for the norepinephrine transporter. Methylphenidate may also exert a neuroprotective action against the neurotoxic effects of Parkinson's disease and methamphetamine abuse. Methylphenidate taken orally has a bioavailability of 11-52% with a duration of action around 1-4 hours for instant release, 3–8 hours for sustained release, and 8–12 hours for extended release(Concerta). The half-life of methylphenidate is 2-3 hours, depending on the individual. The peak plasma time is achieved at about 2 hours.
The Multi-Drug Rapid Test Cassette yields a positive result when the Methylphenidate (Ritalin) in urine exceeds 300 ng/mL.

Zolpidem(ZOL)

Zolpidem (brand names Ambien, Ambien CR, Intermezzo, Stilnox, Stilnoct, Sublinox, Hypnogen, Zonadin, Sanval and Zolsana) is a prescription medication used for the treatment of insomnia and some brain disorders.[1]It is a short-acting nonbenzodiazepine hypnotic of the imidazopyridine class[1] that potentiates GABA, an inhibitory neurotransmitter, by binding to GABAA receptors at the same location as benzodiazepines.[2] It works quickly, usually within 15 minutes, and has a short half-life of two to three hours.
Zolpidem may be detected in blood or plasma to confirm a diagnosis of poisoning in hospitalized patients, provide evidence in an impaired driving arrest, or to assist in a medico-legal death investigation. Blood or plasma Zolpidem concentrations are usually in a

range of 30–300 µg/l in persons receiving the drug therapeutically, 100–700 µg/l in those arrested for impaired driving, and 1000–7000 µg/l in victims of acute over dosage. Analytical techniques, in general, involve gas or liquid chromatography.[3,4,5]
The Multi-Drug Rapid Test Cassette yields a positive result when Zolpidem in urine reaches 50ng/ml.

Diazepam (DIA)

Diazepam is a medication of the benzodiazepine family that typically produces a calming effect. It has anticonvulsant properties. Diazepam has no effect on GABA levels and no effect on glutamate decarboxylase activity, but has a slight effect on gamma-amino butyric acid transaminase activity. Diazepam can be administered orally, intravenously intramuscularly (IM), or as a suppository. When administered orally, it is rapidly absorbed and has a fast onset of action. The onset of action is one to five minutes for IV administration and 15–30 minutes for IM administration. The duration of diazepam's peak pharmacological effects is 15 minutes to one hour for both routes of administration. The bioavailability after oral administration is 100% and 90% after rectal administration. Peak plasma levels occur between 30 and 90 minutes after oral administration and between 30 and 60 minutes after intramuscular administration; after rectal administration, peak plasma levels occur after 10 to 45 minutes. Diazepam is highly protein-bound, with 96 to 99% of the absorbed drug being protein-bound. The distribution half-life of diazepam is 2 to 13 minutes. When diazepam is administered IM, absorption is slow, erratic, and incomplete.

Zopiclone (ZOP)

Zopiclone is a nonbenzodiazepine hypnotic agent used in the treatment of insomnia. It is a cyclopyrrolone, which increases the normal transmission of the neurotransmitter gamma-aminobutyric acid in the central nervous system, as benzodiazepines do, but in a different way. Zopiclone is indicated for the short-term treatment of insomnia where sleep initiation or sleep maintenance are prominent symptoms. Long-term use is not recommended, as tolerance, dependence, and addiction can occur with prolonged use. Zopiclone is partly extensively metabolized in the liver to form an active N-demethylated derivative (N-desmethylzopiclone) and an inactive zopiclone-N-oxide.
In urine, the N-demethyl and N-oxide metabolites account for 30% of the initial dose. Between 7 and 10% of zopiclone is recovered from the urine, indicating extensive metabolism of the drug before excretion. The terminal elimination half-life of zopiclone ranges from 3.5 to 6.5 hours (5 hours on average).[12] Time to peak plasma concentration is 1 - 2 h, the absorption rate constant is 1.3 h-1 and maximum plasma concentration after administration of 7.5 mg is 131µg/l.
Zopiclone may be measured in blood, plasma, or urine by chromatographic methods. Plasma concentrations are typically less than 100µg/l during therapeutic use, but frequently exceed 100µg/l in automotive vehicle operators arrested for impaired driving ability and may exceed 1000µg/l in acutely poisoned patients. Post mortem blood concentrations are usually in a range of 0.4-3.9 mg/l in victims of fatal acute overdose.[13 14 15]

Methcathinone(MCAT)

Methcathinone, is a monoamine alkaloid and psychoactive stimulant, a substituted cathinone. Methcathinone is a highly addictive drug, primarily psychologically addicting and most of the signs of addiction to the drug are emotional or psychological. It has been popularized and continues to be sold under misleading names such as "bath salts", "plant fertilizers" or "research chemicals", but it is actually a powerful psycho-stimulant used as a recreational drug. Effects of this drug typically last from 4 to 6 hours. It is used as a recreational drug due to its potent stimulant and euphoric effects and is considered to be addictive, with both physical and psychological withdrawal occurring if its use is discontinued after prolonged or high-dosage administration [16]. It is usually snorted, but can be smoked, injected, or taken orally. Methcathinone is listed as a Schedule I controlled substance by the Convention on Psychotropic Substances and the United States' Controlled Substances Act, and as such it is not considered to be safe or effective in the treatment, diagnosis, prevention, or cure of any disease, and has no approved medical use. Methcathinone has very strong affinities for the dopamine transporter and the norepinephrine (noradrenaline) transporter. Its affinity for the serotonin transporter is less than that of methamphetamine.[17]
Effects of short term intoxication are similar to those produced by crack cocaine or methamphetamine: stimulation of heart rate and respiration; feeling of euphoria; loss of appetite; increased alertness; pupils may be dilated; body temperature may be slightly elevated. Acute intoxication at higher doses may also result in: insomnia, tremors and muscle twitching, fever, headaches, convulsions, irregular heart rate and respirations, anxiety, restlessness, paranoia, hallucinations and delusions.

7-aminoclonazepam (7-ACL)

7-aminoclonazepam is the major metabolite of clonazepam. Clonazepam sold under the brandname Klonopin among others, is a medication used to prevent and treat seizures, panic disorder, and for the movement disorder known as akathisia. It is a type of benzodiazepine. As a major metabolite, 7-aminoclonazepam may be used to monitor use of the parent drug, clonazepam. Clonazepam, marketed as Klonopin and Rivotril, is a long-acting benzodiazepine with anxiolytic, anticonvulsant, muscle relaxant, and hypnotic properties.
The Multi-Drug Rapid Test Panel (Urine) is a rapid urine-screening test that can be performed without the use of an instrument. The test utilizes the antibody to selectively detect elevated levels of 7-aminoclonazepam in urine. The Multi-Drug Rapid Test Panel (Urine) yields a positive result when the 7-aminoclonazepam in urine exceed the cut-off level.

Carfentanyl(CFYL)

Carfentanyl is an analog of the synthetic opioid analgesic fentanyl. It is 10,000 times more potent than morphine, making it among the most potent commercially used opioids. Carfentanil was first synthesized in 1974. It is marketed under the trade name Wildnil as a general anaesthetic agent for large animals. Side effects of carfentanil are similar to those of fentanyl, which include itching, nausea and respiratory depression, which can be life-threatening. Carfentanil is classified as Schedule II under the Controlled Substances Act in the United States with a DEA ACSCN of 9743.

Cathine (CAT)

Cathinone, also known as benzoylethanamine, or β-keto-amphetamine is a monoamine alkaloid found in the shrub Catha edulis (CAT) and is chemically similar to ephedrine, Cathinone, methCathinone and other amphetamines. It with amphetamine, ephedrine, methamphetamine and mephedrone belongs to excitatory amphetamines psychiatric drugs, has the strong central excitement and suppress appetite, has been widely applied in the depression, fatigue, obesity, gastric ulcer, etc. The earliest found in Arab tea, because of its structure and pharmacological activities are similar to amphetamines, so called "natural amphetamine. [18]It has approximately 10-14% the potency of amphetamine. [19]
S-(-)-Cathinone (S-(-)-alpha-aminopropiophenone) is the major active principle of khat leaves (Catha edulis), which are widely used in East Africa and the Arab peninsula as an amphetamine-like stimulant. After oral administration of synthesized cathinone (isomers, racemate), 22-52% was recovered in 24 h urine samples mainly as aminoalcohol metabolites. With GC/MS, HPLC and CD, the main metabolite of S-(-)-cathinone was identified as R/S-(-)-norephedrine and the main metabolite of R-(+)-cathinone as R/R-(-)-norpseudoephedrine. Both aminoalcohols are formed by a stereospecific keto reduction. [20]
Use too much Cathinone can cause loss of appetite, anxiety, irritability, insomnia, illusion and panic attacks. Abusers have for a long time for the development of personality disorder and continuing the risk of myocardial infarction. The World Anti-Doping Agency's list of prohibited substances (used for the Olympic Games among other athletic events) bars cathine in concentrations of over 5 micrograms per milliliter in urine.Cathine is a Schedule III drug under the Convention on Psychotropic Substances.[21]

Tropicamide(TRO)

Tropicamide is an antimuscarinic drug usually prescribed as an ophthalmic solution to induce short-term mydriasis and cycloplegia. Tropicamide is currently abused (injected intravenously) as an inexpensive recreational deliriant drug[22].
Misuse of tropicamide typically occurs through IV injection; its effects last from 30 min to 6 h, and It is usually mixed with heroin, methadone, and other opioid drugs to potentiate the " rush" when injected intravenously.Medical effects of tropicamide misuse include slurred speech, persistent mydriasis, unconsciousness/unresponsiveness, hallucinations, kidney pain, dysphoria, “open eye dreams,” hyperthermia, tremors, suicidal feelings, convulsions, psychomotor agitation, tachycardia and headache.
The TRO Rapid Test Dipstick (Urine) is a rapid urine screening test that can be performed without the use of an instrument. The test utilizes a monoclonal antibody to selectively detect elevated levels of tropicamide in urine. The TRO Rapid Test Dipstick (Urine) yields a positive result when tropicamide in urine exceeds 350ng/mL

3, 4-methylenedioxypyrovalerone(MDPV)

3, 4-methylenedioxypyrovalerone (MDPV) is a psychoactive recreational drug with stimulant properties which acts as a norepinephrine-dopamine reuptake inhibitor (NDRI). It was first developed in the 1960s by a team at Boehringer Ingelheim. MDPV remained an obscure stimulant until around 2004 when it was reportedly sold as a designer drug. Products labeled as bath salts containing MDPV were previously sold as recreational drugs in gas stations and convenience stores in the United States, similar to the marketing for Spice and K2 as incense.
MDPV is the 3,4-methylenedioxy ring-substituted analog of the compound pyrovalerone, developed in the 1960s, which has been used for the treatment of chronic fatigue and as an anorectic, but caused problems of abuse and dependence. However, despite its structural similarity, the effects of MDPV bear little resemblance to other methylenedioxy phenylalkylamine derivatives such as 3,4-methylenedioxy-N-methylamphetamine (MDMA), instead producing primarily stimulant effects with only mild entactogenic qualities.
MDPV undergoes CYP450 2D6, 2C19, 1A2, and COMT phase 1 metabolism (liver) into methylcatechol and pyrrolidine, which in turn are glucuronated (uridine 5'-diphospho-glucuronosyl-transferase) allowing it to be excreted by the kidneys, with only a small fraction of the metabolites being excreted into the stools. No free pyrrolidine will be detected in the urine.

Caffeine(CAF)

Caffeine is a central nervous system (CNS) stimulant of the methylxanthine class. It is the world's most widely consumed psychoactive drug. It is found in the seeds, nuts, or leaves of a number of plants native to South America and East Asia and confers on them several survival and reproductive benefits.
Caffeine can produce a mild form of drug dependence – associated with withdrawal symptoms such as sleepiness, headache, and irritability – when an individual stops using caffeine after repeated daily intake. [23.24.25]After intravenous administration of caffeine the urine level of the drug is approximately the same in each of the first 4 hourly specimens. Blood samples taken 10 and 70 minutes after injection of the drug were analyzed and showed 0.29 and 0.28mg. per 100 cc. respectively. There are to be contrasted with the 1st hour urine which contained 0.73mg.per 100 cc., essentially 3 times that in the blood. After oral administration of caffeine to the horse the concentration of caffeine in the urine rose progressively during the first 3 hours, remained relatively constant through the 8th hours. At 48 hours, a urine specimen contained approximately 0.17mg. per 100 cc. of caffeine. In addition, flu-like symptoms, nausea/vomiting, and muscle pain/stiffness were judged likely to represent valid symptom categories. In experimental studies, the incidence of headache was 50% and the incidence of clinically significant distress or functional impairment was 13%. Typically, onset of symptoms occurred 12–24 h after abstinence, with peak intensity at 20–51 h, and for a duration of 2–9 days. 1% to 3% of caffeine is excreted unchanged in the urine. The rate of caffeine metabolism is variable, with a half-life of 4 to 6h. [26.27]

Mephedrone(MEP100)

Mephedrone, also known as 4-methylmethcathinone (4-MMC) or 4-methylephedrone is a synthetic stimulant drug of the amphetamine and cathinone classes. Slang names include drone, [28]M-CAT, [29] White Magic[30] and meow meow. [31]It is chemically similar to the cathinone compounds found in the khat plant of eastern Africa.
Mephedrone comes in the form of tablets or a powder, which users can swallow, snort or inject, producing similar effects to MDMA, amphetamines and cocaine. In addition to its stimulant effects, Mephedrone produces side effects, of which teeth grinding are the most common. A number of metabolites are possible, however the n-demethyl metabolite of Mephedrone will be 4-Methylcathinone. This metabolite appears to be nearly inactive as a Monoamine Oxydase Inhibitor .On further metabolism of this metabolite one of the possible metabolites is 4-Methylnorephedrine, caused by the reduction of the Keto.A dose of 150mg-250mg is the average, giving a duration of around 2 hours.the duration will lengthen in larger 250mg+ dosages .

Alprazolam（ALP）

Alprazolam, available under the trade name Xanax among others, is a short-acting anxiolytic of the benzodiazepine class. It is commonly used for the treatment of panic disorder, and anxiety disorders, such as generalized anxiety disorder (GAD) or social anxiety disorder (SAD). [32.33]Alprazolam, like other benzodiazepines, binds to specific sites on the GABAA receptor. It possesses anxiolytic, sedative, hypnotic, skeletal muscle relaxant, anticonvulsant, and amnestic properties.
A mean half-life of alprazolam of 16.3 hours has been observed in healthy elderly subjects (range: 9.0-26.9 hours, n=16) compared to 11.0 hours (range: 6.3-15.8 hours, n=16) in healthy adult subjects. Alprazolam and its metabolites are excreted primarily in the urine. The pharmacokinetics of alprazolam and two of its major active metabolites (4-hydroxyalprazolam and α-hydroxyalprazolam) are linear, and concentrations are proportional up to the recommended maximum daily dose of 10 mg given once daily. Peak concentrations in the plasma occur in one to two hours following administration. Plasma levels are proportionate to the dose given; over the dose range of 0.5 to 3.0 mg, peak levels of 8.0 to 37ng/ml were observed.[34]

Alcohol(ALC)

Alcohol intoxication can lead to loss of alertness, coma, death and birth defects. Determination of ethyl alcohol in blood, saliva and urine is commonly used for measuring legal impairment, alcohol poisoning, etc. The BAC (Blood Alcohol Content) at which a person becomes impaired is variable. The United States Department of Transportation (DOT) has established a BAC of 0.02% (0.02g/dL) as the cut-off level at which an individual is considered positive for the presence of alcohol.
The Multi-Drug Rapid Test Panel yields a positive result when the concentration of Alcohol in urine exceeds 0.02%.

【WHAT IS ADULTERATION】

Adulteration is the tampering of a urine specimen with the intention of altering the test results. The use of adulterants can cause false negative results in drug tests by either interfering with the screening test and/or destroying the drugs present in the urine. Dilution may also be employed in an attempt to produce false negative drug test results.
One of the best ways to test for adulteration or dilution is to determine certain urinary characteristics such as pH, specific gravity and creatinine and to detect the presence of oxidants/PCC, nitrites or glutaraldehyde in urine.
Oxidants/PCC (Pyridiniumchlorochromate)tests for the presence of oxidizing agents such as bleach and hydrogen peroxide. Pyridiniumchlorochromate (sold under the brand name Urine Luck) is a commonly used adulterant.8 Normal human urine should not contain oxidants of PCC.
Specific gravity tests for sample dilution. The normal range is from 1.003 to 1.030. Values outside this range may be the result of specimen dilution or adulteration.
PH tests for the presence of acidic or alkaline adulterants in urine. Normal pH levels should be in the range of 4.0 to 9.0. Values outside of this range may indicate the sample has been altered.
Nitrite tests for commonly used commercial adulterants such as Klear and Whizzies. They work by oxidizing the major cannabinoid metabolite THC-COOH.9 Normal urine should contain no trace of nitrite. Positive results generally indicate the presence of an adulterant.
Glutaraldehyde tests for the presence of an aldehyde. Adulterants such as Urin Aid and Clear Choice contain glutaraldehyde which may cause false negative results by disrupting the enzyme used in some immunoassay tests.9 Glutaraldehyde is not normally found in urine; therefore, detection of glutaraldehyde in a urine specimen is generally an indicator of adulteration.
Creatinine is a waste product of creatine; an amino-acid contained in muscle tissue and found in urine.2 A person may attempt to foil a test by drinking excessive amounts of water or diuretics such as herbal teas to “ flush” the system. Creatinine and specific gravity are two ways to check for dilution and flushing, which are the most common mechanisms used in an attempt to circumvent drug testing. Low Creatinine and specific gravity levels may indicate dilute urine. The absence of Creatinine (<5 mg/dl) is indicative of a specimen not consistent with human urine.
Bleach tests for the presence of bleach bleach refers to a number of chemicals which remove color, whiten or disinfect, often by oxidation, Bleaches are used as household chemicals to whiten clothes and remove stains and as disinfectants. Normal human urine should not contain bleach.

【PRINCIPLE (FOR DOA TESTS EXCLUDING ALCOHOL)】

During testing, a urine specimen migrates upward by capillary action. A drug, if present in the urine specimen below its cut-off concentration, will not saturate the binding sites of its specific antibody. The antibody will then react with the drug-protein conjugate and a visible colored line will show up in the test region of the specific drug dipstick. The presence of drug above the cut-off concentration will saturate all the binding sites of the antibody. Therefore, the colored line will not form in the test region.
A drug-positive urine specimen will not generate a colored line in the specific test region of the dipstick because of drug competition, while a drug-negative urine specimen will generate a line in the test region because of the absence of drug competition.
To serve as a procedural control, a colored line will always appear at the control region, indicating that proper volume of specimen has been added and membrane wicking has occurred.

【PRINCIPLE (FOR ALCOHOL) 】

The urine Alcohol Rapid Test consists of a plastic strip with a reaction pad attached at the tip. On contact with alcohol, the reaction pad will change colors depending on the concentration of alcohol present. This is based on the high specificity of alcohol oxidase for ethyl alcohol in the presence of peroxidase and enzyme substrate such as TMB.

【REAGENTS(FOR DOA TESTS EXCLUDING ALCOHOL)】

Each test line contains anti-drug mouse monoclonal antibody and corresponding drug-protein conjugates. The control line contains goat anti-rabbit IgG polyclonal antibodies and rabbit IgG.

【REAGENTS (FOR ALCOHOL) 】

Tetramethylbenzidine
Alcohol Oxidase
Peroxidase

【S.V.T REAGENTS】

Adulteration Pad	Reactive indicator	Buffers and non-reactive ingredients
Creatinine	0.04%	99.95%
Nitrite	0.07%	99.94%
Bleach	0.39%	99.77%
Glutaraldehyde	0.02%	99.97%
pH	0.06%	99.94%
Specific Gravity	0.25%	99.78%
Oxidants / PCC	0.36%	99.70%

【PRECAUTIONS】

- For healthcare professionals including professionals at point of care sites.
- Immunoassay for *in vitro* diagnostic use only. The test Cassette should remain in the sealed pouch until use.
- All specimens should be considered potentially hazardous and handled in the same manner as an infectious agent.
- The used test Cassette should be discarded according to federal, state and local regulations.

【STORAGE AND STABILITY】

Store as packaged in the sealed pouch at 2-30°C. The test is stable through the expiration date printed on the sealed pouch. The test Cassettes must remain in the sealed pouch until use. DO NOT FREEZE. Do not use beyond the expiration date.

【SPECIMEN COLLECTION AND PREPARATION】

Urine Assay

The urine specimen should be collected in a clean and dry container. Urine collected at any time of the day may be used. Urine specimens exhibiting visible precipitates should be centrifuged, filtered, or allowed to settle to obtain a clear specimen for testing.

Specimen Storage

Urine specimens may be stored at 2-8°C for up to 48 hours prior to testing. For prolonged storage, specimens may be frozen and stored below -20°C. Frozen specimens should be thawed and mixed well before testing. When testing cards with S.V.T. or Alcohol storage of urine specimens should not exceed 2 hours at room temperature or 4 hours refrigerated prior to testing.

【MATERIALS】

Materials Provided

- Test Cassettes
- Droppers
- Package insert

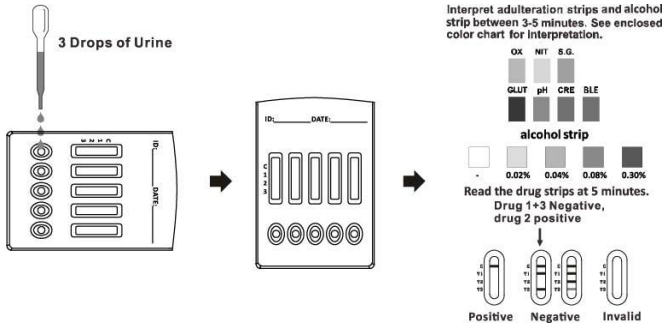
Materials Required But Not Provided

- timer

【DIRECTIONS FOR USE】

Allow the test, urine specimen, and/or controls to reach room temperature (15-30ºC) prior to testing.

1. Bring the pouch to room temperature before opening it. Remove the test cassette from the sealed pouch and use it within one hour.
2. Place the test cassette on a clean and level surface. Hold the dropper vertically and **transfer 3 full drops of urine** (approx. 75 μL) to the specimen well (S) of the test cassette, and then start the timer. Avoid trapping air bubbles in the specimen well (S). See the illustration below.
3. Read the adulteration strips and Alcohol strip between 3-5 minutes according to color chart provided separately/on foil pouch. Refer to your Drug Free Policy for guidelines on adulterated specimens. We recommend not to interpret the drug test results and either retest the urine or collect another specimen in case of any positive result for any adulteration test.
4. The drug strip result should be read at 5 minutes. Do not interpret the result after 10 minutes.



【INTERPRETATION OF RESULTS】

(Please refer to the illustration above)

NEGATIVE:* A colored line appears in the Control region (C) and colored lines appear in the Test region (T). This negative result means that the concentrations in the urine sample are below the designated cut-off levels for a particular drug tested.

***NOTE:** The shade of the colored lines(s) in the Test region (T) may vary. The result should be considered negative whenever there is even a faint line.

POSITIVE: A colored line appears in the Control region (C) and NO line appears in the Test region (T). The positive result means that the drug concentration in the urine sample is greater than the designated cut-off for a specific drug.

INVALID: No line appears in the Control region (C). Insufficient specimen volume or incorrect procedural techniques are the most likely reasons for Control line failure. Read the directions again and repeat the test with a new test card. If the result is still invalid, contact your manufacturer.

【INTERPRETATION OF RESULTS (S.V.T/ ADULTERATION)】

(Please refer to the color chart)

Semi Quantitative results are obtained by visually comparing the reacted color blocks on the strip to the printed color blocks on the color chart.

No instrumentation is required.

【INTERPRETATION OF RESULTS (ALCOHOL STRIP)】

Negative: Almost no color change by comparing with the background. The negative result indicates that the urine alcohol level is less than 0.02%.

Positive: A distinct color developed all over the pad. The positive result indicates that the urine alcohol concentration is 0.02% or higher.

Invalid: The test should be considered invalid If only the edge of the reactive pad turned color that might be ascribed to insufficient sampling. The subject should be re-tested. Besides, if the color pad has a blue color before applying urine sample, do not use the test.

【QUALITY CONTROL】

A procedural control is included in the test. A line appearing in the control region (C) is considered an internal procedural control. It confirms sufficient specimen volume, adequate membrane wicking and correct procedural technique.

Control standards are not supplied with this kit. However, it is recommended that positive and negative controls be tested as good laboratory practice to confirm the test procedure and to verify proper test performance.

【LIMITATIONS】

1. The Multi-Drug Rapid Test Cassette provides only a qualitative, preliminary analytical result. A secondary analytical method must be used to obtain a confirmed result. Gas chromatography/mass spectrometry (GC/MS) is the preferred confirmatory method.[1,10]
2. There is a possibility that technical or procedural errors, as well as interfering substances in the urine specimen may cause erroneous results.
3. Adulterants, such as bleach and/or alum, in urine specimens may produce erroneous results regardless of the analytical method used. If adulteration is suspected, the test should be repeated with another urine specimen.
4. A positive result does not indicate level or intoxication, administration route or concentration in urine.
5. A negative result may not necessarily indicate drug-free urine. Negative results can be obtained when drug is present but below the cut-off level of the test.
6. This test does not distinguish between drugs of abuse and certain medications.
7. A positive test result may be obtained from certain foods or food supplements.

【S.V.T/ ADULTERATION LIMITATIONS】

1. The adulteration tests included with the product are meant to aid in the determination of abnormal specimens. While comprehensive, these tests are not meant to be an "all-inclusive" representation of possible adulterants.
2. Oxidants/PCC: Normal human urine should not contain oxidants or PCC. The presence of high levels of antioxidants in the specimen, such as ascorbic acid, may result in false negative results for the oxidants/PCC pad.
3. Specific Gravity: Elevated levels of protein in urine may cause abnormally high specific gravity values.
4. Nitrite: Nitrite is not a normal component of human urine. However, nitrite found in urine may indicate urinary tract infections or bacterial infections. Nitrite levels of > 20 mg/dL may produce false positive glutaraldehyde results.
5. Glutaraldehyde: is not normally found in urine. However certain metabolic abnormalities such as ketoacidosis (fasting, uncontrolled diabetes or high protein diets) may interfere with the test results.
6. Creatinine: Normal Creatinine levels are between 20 and 350 mg/dL. Under rare conditions, certain kidney diseases may show dilute urine.
7. Bleach: Normal human urine should not contain bleach. The presence of high levels of bleach in the specimen may result in false negative results for the bleach pad.

【EXPECTED VALUES】

The negative result indicates that the drug concentration is below the detectable level. Positive result means the concentration of drug is above the detectable level.

【PERFORMANCE CHARACTERISTICS】

Accuracy

A side-by-side comparison was conducted using the Multi-Drug Rapid Test Cassette and commercially available drug rapid tests. Testing was performed on approximately 250 specimens per drug type previously collected from subjects presenting for Drug Screen Testing. Presumptive positive results were confirmed by GC/MS.

Method		GC/MS		% agreement with GC/MS
Multi-Drug Rapid Test Cassette		Positive	Negative	
ACE 5,000	Positive	29	1	93.5%
	Negative	2	68	98.6%
AMP 1,000	Positive	103	3	98.1%
	Negative	2	142	97.9%
AMP 500	Positive	110	2	99.1%
	Negative	1	137	98.6%
AMP 300	Positive	116	2	99.1%
	Negative	1	131	98.5%
BAR 300	Positive	98	2	96.1%
	Negative	4	146	98.6%
BAR 200	Positive	101	3	95.3%
	Negative	5	141	97.9%
BZO 500	Positive	112	3	98.2%
	Negative	2	133	97.8%
BZO 300	Positive	121	1	98.4%
	Negative	2	126	99.2%
BZO 200	Positive	127	2	99.2%
	Negative	1	120	98.4%
BZO 100	Positive	128	3	99.2%
	Negative	1	118	97.5%
BUP 10	Positive	105	0	99.1%
	Negative	1	144	>99.9%
BUP 5	Positive	105	0	99.1%
	Negative	1	144	>99.9%
COC 300	Positive	111	3	98.2%
	Negative	2	134	97.8%
COC 200	Positive	40	0	>99.9%
	Negative	0	60	>99.9%
COC 150	Positive	116	4	98.3%
	Negative	2	128	97.0%
COC 100	Positive	117	4	99.2%
	Negative	1	128	97.0%
THC 150	Positive	86	4	94.5%
	Negative	5	155	97.5%
THC 50	Positive	92	3	97.9%
	Negative	2	153	98.1%
THC 25	Positive	95	4	96.9%
	Negative	3	148	97.4%
MTD 300	Positive	89	2	98.9%
	Negative	1	158	98.8%
MTD 200	Positive	91	2	98.7%
	Negative	1	156	98.7%
MET 1,000	Positive	76	5	96.2%
	Negative	3	166	97.1%
MET 500	Positive	83	5	97.6%
	Negative	2	160	97.0%
MET 300	Positive	88	4	97.8%
	Negative	2	156	97.5%
MDMA 1,000	Positive	99	1	98.0%
	Negative	2	148	99.3%
MDMA 500	Positive	102	1	98.1%
	Negative	2	145	99.3%
MDMA 300	Positive	103	1	98.1%
	Negative	2	144	99.3%
MOP 300	Positive	95	7	95.0%
	Negative	5	143	95.3%
MOP 100	Positive	98	5	97.0%
	Negative	3	144	96.6%
MQL	Positive	79	11	89.8%
	Negative	9	151	93.2%
OPI	Positive	117	8	96.7%
	Negative	4	121	93.8%
PCP	Positive	85	5	92.4%
	Negative	7	153	96.8%
PPX	Positive	97	9	96.0%
	Negative	4	140	94.0%
TCA	Positive	91	13	94.8%
	Negative	5	141	91.6%
TML 100	Positive	82	12	88.2%
	Negative	11	145	92.4%
TML 200	Positive	82	6	88.2%
	Negative	11	151	96.2%
TML 300	Positive	81	6	88.0%
	Negative	11	152	96.2%
KET 1,000	Positive	77	3	97.5%
	Negative	2	168	98.2%
KET 500	Positive	81	3	97.6%
	Negative	2	164	98.2%
KET 300	Positive	89	4	96.7%
	Negative	3	154	97.5%
KET 100	Positive	97	4	96.0%
	Negative	4	145	97.3%
OXY 100	Positive	84	1	97.7%
	Negative	2	163	99.4%
OXY 300	Positive	83	1	96.5%
	Negative	3	163	99.4%
COT 200	Positive	88	4	96.7%
	Negative	3	155	97.5%
COT 100	Positive	93	3	97.9%
	Negative	2	152	98.1%
EDDP 300	Positive	92	1	97.9%
	Negative	2	155	99.4%
EDDP 100	Positive	95	5	96.9%
	Negative	3	147	96.7%
FYL 20	Positive	79	1	98.8%
	Negative	1	169	99.4%
FYL 10	Positive	80	1	98.8%
	Negative	1	168	99.4%
K2-50	Positive	78	3	97.5%
	Negative	2	167	98.2%
K2-30	Positive	82	2	97.6%
	Negative	2	164	98.8%
6-MAM10	Positive	42	2	97.7%
	Negative	1	105	98.1%
MDA500	Positive	103	3	98.1%
	Negative	2	142	97.9%
ETG500	Positive	83	1	97.6%
	Negative	2	164	99.4%
ETG1,000	Positive	81	1	95.3%
	Negative	4	164	99.4%
CLO 400	Positive	101	1	97.1%
	Negative	3	145	99.3%
CLO 150	Positive	103	2	99.0%
	Negative	1	144	98.6%
LSD 20	Positive	33	1	94.3%
	Negative	2	64	98.5%
LSD 50	Positive	32	1	94.1%
	Negative	2	65	98.5%
MPD	Positive	35	1	94.6%
	Negative	2	62	98.4%
ZOL	Positive	20	2	90.9%
	Negative	2	66	97.1%
DIA 300	Positive	121	1	98.4%
	Negative	2	126	99.2%
DIA 200	Positive	121	1	98.4%
	Negative	2	126	99.2%
ZOP 50	Positive	19	2	86.4%

Method		GC/MS		% agreement with GC/MS
Multi-Drug Rapid Test Cassette		Positive	Negative	
	Negative	3	69	97.2%
MCAT 500	Positive	20	4	90.9%
	Negative	2	76	95.0%
7-ACL 300	Positive	32	1	94.1%
	Negative	2	43	97.7%
7-ACL 200	Positive	35	1	94.6%
	Negative	2	40	97.6%
7-ACL 100	Positive	36	1	94.7%
	Negative	2	39	97.5%
CFYL 500	Positive	36	1	94.7%
	Negative	2	72	98.6%
CAF 1000	Positive	21	3	91.3%
	Negative	2	66	95.7%
CAT 150	Positive	19	2	90.5%
	Negative	2	73	97.3%
TRO 350	Positive	23	2	92.0%
	Negative	2	64	97.0%
MDPV	Positive	28	1	93.3%
	Negative	2	69	98.6%
MEP	Positive	19	2	90.5%
	Negative	2	64	97.0%
ALP	Positive	20	2	90.9%
	Negative	2	74	97.4%

% Agreement with Commercial Kit

	ACE 5,000	AMP 1,000	AMP 500	AMP 300	BAR 300	BAR 200	BZO 500	BZO 300	BZO 200	BZO 100	BUP 10
Positive Agreement	*	>99.9 %	>99.9 %	>99.9 %	>99.9 %	>99.9 %	>99.9 %	>99.9 %	>99.9 %	>99.9 %	>99.9 %
Negative Agreement	*	>99.9 %	>99.9 %	>99.9 %	>99.9 %	>99.9 %	>99.9 %	>99.9 %	>99.9 %	>99.9 %	>99.9 %
Total Results	*	>99.9 %	>99.9 %	>99.9 %	>99.9 %	>99.9 %	>99.9 %	>99.9 %	>99.9 %	>99.9 %	>99.9 %

	BUP 5	COC 300	COC 200	COC 150	COC 100	THC 150	THC 50	THC 25	MTD 300	MTD 200	MET 1,000
Positive Agreement	*	>99.9%	*	*	>99.9%	>99.9%	>99.9%	>99.9%	>99.9%	>99.9%	>99.9%
Negative Agreement	*	>99.9%	*	*	>99.9%	>99.9%	>99.9%	>99.9%	>99.9%	>99.9%	>99.9%
Total Results	*	>99.9%	*	*	>99.9%	>99.9%	>99.9%	>99.9%	>99.9%	>99.9%	>99.9%

	MET 500	MET 300	MDMA 1,000	MDMA 500	MOP 300	MOP 100	MQL	OPI	PCP	PPX	TCA
Positive Agreement	>99.9%	>99.9%	>99.9%	>99.9%	>99.9%	>99.9%	>99.9%	*	>99.9%	>99.9%	*
Negative Agreement	>99.9%	>99.9%	>99.9%	>99.9%	>99.9%	>99.9%	>99.9%	*	>99.9%	>99.9%	*
Total Results	>99.9%	>99.9%	>99.9%	>99.9%	>99.9%	>99.9%	>99.9%	*	>99.9%	>99.9%	*

	TML 100	TML 200	TML 300	KET 1,000	KET 500	KET 300	KET 100	OXY	COT 200	COT 100	EDDP 300
Positive Agreement	*	*	*	>99.9%	>99.9%	>99.9%	>99.9%	*	*	*	*
Negative Agreement	*	*	*	>99.9%	>99.9%	>99.9%	>99.9%	*	*	*	*
Total Results	*	*	*	>99.9%	>99.9%	>99.9%	>99.9%	*	*	*	*

	EDDP 100	FYL 20	FYL 10	K2 50	K2 30	6-MAM 10	MDA 500	ETG 500	ETG 1,000	CLO 400	CLO 150
Positive Agreement	*	*	*	*	*	*	*	*	*	*	*
Negative Agreement	*	*	*	*	*	*	*	*	*	*	*
Total Results	*	*	*	*	*	*	*	*	*	*	*

	LSD20	LSD50	MPD	ZOL	MDMA 300	OXY 300	DIA 300	DIA 200	ZOP 50	MCAT 500	7-ACL 300
Positive Agreement	*	*	*	*	*	*	*	*	*	*	*
Negative Agreement	*	*	*	*	*	*	*	*	*	*	*
Total Results	*	*	*	*	*	*	*	*	*	*	*

	7-ACL 200	7-ACL 100	CFYL 500	CAF 1000	CAT 150	TRO 350	MDPV 1000	MEP 100	ALP 100
Positive Agreement	*	*	*	*	*	*	*	*	*
Negative Agreement	*	*	*	*	*	*	*	*	*
Total Results	*	*	*	*	*	*	*	*	*

* Note: Based on GC/MS data instead of Commercial Kit.

Precision

A study was conducted at three hospitals by laypersons using three different lots of product to demonstrate the within run, between run and between operator precision. An identical card of coded specimens, containing drugs at concentrations of ± 50% and ± 25% cut-off level, was labeled, blinded and tested at each site. The results are given below:

ACETAMINOPHEN (ACE5,000)

Amphetamine conc. (ng/mL)	n per site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
2,500	10	10	0	10	0	10	0
3,750	10	9	1	9	1	8	2
6,250	10	1	9	1	9	1	9
7,500	10	0	10	0	10	0	10

AMPHETAMINE (AMP 1,000)

Amphetamine conc. (ng/mL)	n per site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
500	10	10	0	10	0	10	0
750	10	9	1	8	2	9	1
1,250	10	1	9	2	8	2	8
1,500	10	0	10	0	10	0	10

AMPHETAMINE (AMP 500)

Amphetamine conc. (ng/mL)	n per site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
250	10	10	0	10	0	10	0
375	10	9	1	9	1	9	1
625	10	2	8	1	9	2	8
750	10	0	10	0	10	0	10

AMPHETAMINE (AMP 300)

Amphetamine conc. (ng/mL)	n per site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
150	10	10	0	10	0	10	0
225	10	8	2	8	2	8	2
375	10	2	8	2	8	2	8
450	10	0	10	0	10	0	10

BARBITURATES (BAR 300)

Secobarbital conc. (ng/mL)	n per site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
150	10	10	0	10	0	10	0
225	10	9	1	8	2	9	1
375	10	2	8	1	9	2	8
450	10	0	10	0	10	0	10

BARBITURATES (BAR 200)

Secobarbital conc. (ng/mL)	n per site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
100	10	10	0	10	0	10	0
150	10	9	1	9	1	9	1
250	10	1	9	1	9	1	9
300	10	0	10	0	10	0	10

BENZODIAZEPINES (BZO 500)

Oxazepam conc. (ng/mL)	n per site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
250	10	10	0	10	0	10	0
375	10	8	2	9	1	8	2
625	10	1	9	2	8	1	9
750	10	0	10	0	10	0	10

BENZODIAZEPINES (BZO 300)

Oxazepam conc. (ng/mL)	n per site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
150	10	10	0	10	0	10	0
225	10	9	1	9	1	9	1
375	10	1	9	1	9	1	9
450	10	0	10	0	10	0	10

BENZODIAZEPINES (BZO 200)

Oxazepam conc. (ng/mL)	n per site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
100	10	10	0	10	0	10	0
150	10	9	1	8	2	9	1
250	10	1	9	1	9	2	8
300	10	0	10	0	10	0	10

BENZODIAZEPINES (BZO 100)

Oxazepam conc. (ng/mL)	n per site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
50	10	10	0	10	0	10	0
75	10	9	1	8	2	7	3
125	10	1	9	1	9	2	8
150	10	0	10	0	10	0	10

Buprenorphine (BUP 10)

Buprenorphine conc. (ng/mL)	n per site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
5	10	10	0	10	0	10	0
7.5	10	9	1	9	1	8	2
12.5	10	1	9	1	9	1	9
15	10	0	10	0	10	0	10

Buprenorphine (BUP 5)

Buprenorphine conc. (ng/mL)	n per site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
2.5	10	10	0	10	0	10	0
3.75	10	9	1	9	1	8	2
6.25	10	1	9	1	9	1	9
7.5	10	0	10	0	10	0	10

COCAINE (COC 300)

Benzoylecgonine conc. (ng/mL)	n per site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
150	10	10	0	10	0	10	0
225	10	9	1	9	1	9	1
375	10	1	9	1	9	1	9
450	10	0	10	0	10	0	10

COCAINE (COC 200)

Benzoylecgonine conc. (ng/mL)	n per site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
100	10	10	0	10	0	10	0
150	10	9	1	9	1	9	1
250	10	1	9	1	9	1	9
300	10	0	10	0	10	0	10

COCAINE (COC 150)

Benzoylecgonine conc. (ng/mL)	n per site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
75	10	10	0	10	0	10	0
112.5	10	9	1	9	1	9	1
187.5	10	2	8	2	8	2	8
225	10	0	10	0	10	0	10

COCAINE (COC 100)

Benzoylecgonine conc. (ng/mL)	n per site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
50	10	10	0	10	0	10	0
75	10	9	1	9	1	9	1
125	10	2	8	2	8	2	8
150	10	0	10	0	10	0	10

MARIJUANA (THC150)

11-nor-Δ^9-COOH conc. (ng/mL)	n per site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
75	10	10	0	10	0	10	0
112.5	10	9	1	9	1	9	1
187.5	10	2	8	1	9	1	9
225	10	0	10	0	10	0	10

MARIJUANA (THC50)

11-nor-Δ^9-COOH conc. (ng/mL)	n per site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
25	10	10	0	10	0	10	0
37.5	10	9	1	8	2	9	1
62.5	10	1	9	1	9	2	8
75	10	0	10	0	10	0	10

MARIJUANA (THC25)

11-nor-Δ^9-COOH conc. (ng/mL)	n per site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
12.5	10	10	0	10	0	10	0
18.75	10	8	2	8	2	8	2
31.25	10	1	9	1	9	2	8
37.5	10	0	10	0	10	0	10

METHADONE (MTD300)

Methadone conc. (ng/mL)	n per site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
150	10	10	0	10	0	10	0
225	10	9	1	9	1	9	1
375	10	1	9	1	9	1	9
450	10	0	10	0	10	0	10

METHADONE (MTD200)

Methadone conc. (ng/mL)	n per site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
100	10	10	0	10	0	10	0
150	10	8	2	8	2	8	2
250	10	1	9	1	9	2	8
300	10	0	10	0	10	0	10

METHAMPHETAMINE (MET1,000)

Methamphetamine conc. (ng/mL)	n per site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
500	10	10	0	10	0	10	0
750	10	9	1	9	1	9	1
1,250	10	1	9	2	8	1	9
1,500	10	0	10	0	10	0	10

METHAMPHETAMINE (MET 500)

Methamphetamine conc. (ng/mL)	n per site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
250	10	10	0	10	0	10	0
375	10	9	1	9	1	9	1
625	10	1	9	1	9	1	9
750	10	0	10	0	10	0	10

METHAMPHETAMINE (MET300)

Methamphetamine conc. (ng/mL)	n per site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
150	10	10	0	10	0	10	0
225	10	9	1	9	1	9	1
375	10	1	9	1	9	1	9
450	10	0	10	0	10	0	10

METHYLENEDIOXYMETHAMPHETAMINE (MDMA1, 000) Ecstasy

Methylenedioxymethamphetamine conc. (ng/mL)	n per site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
500	10	10	0	10	0	10	0
750	10	9	1	9	1	8	2
1,250	10	1	9	1	9	1	9
1,500	10	0	10	0	10	0	10

METHYLENEDIOXYMETHAMPHETAMINE (MDMA 500) Ecstasy

Methylenedioxymethamphetamine conc. (ng/mL)	n per site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
250	10	10	0	10	0	10	0
375	10	8	2	9	1	9	1
625	10	1	9	1	9	1	9
750	10	0	10	0	10	0	10

METHYLENEDIOXYMETHAMPHETAMINE (MDMA 300) Ecstasy

Methylenedioxymethamphetamine conc. (ng/mL)	n per site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
150	10	10	0	10	0	10	0
225	10	8	2	9	1	7	3
375	10	2	8	1	9	1	9
450	10	0	10	0	10	0	10

MORPHINE (MOP 300)

Morphine conc. (ng/mL)	n per site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
150	10	10	0	10	0	10	0
225	10	9	1	9	1	9	1
375	10	1	9	1	9	1	9
450	10	0	10	0	10	0	10

MORPHINE (MOP 100)

Morphine conc. (ng/mL)	n per site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
50	10	10	0	10	0	10	0
75	10	9	1	9	1	9	1
125	10	1	9	1	9	1	9
150	10	0	10	0	10	0	10

METHAQUALONE (MQL 300)

Methaqualone conc. (ng/mL)	n per site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
150	10	10	0	10	0	10	0
225	10	9	1	9	1	9	1
375	10	1	9	1	9	1	9
450	10	0	10	0	10	0	10

MORPHINE/OPIATE (OPI 2,000)

Morphine conc. (ng/mL)	n per site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
1,000	10	10	0	10	0	10	0
1,500	10	9	1	9	1	9	1
2,500	10	1	9	1	9	1	9
3,000	10	0	10	0	10	0	10

PHENCYCLIDINE (PCP)

Phencyclidine conc. (ng/mL)	n per site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
12.5	10	10	0	10	0	10	0
18.75	10	8	2	9	1	9	1
31.25	10	1	9	1	9	1	9
37.5	10	0	10	0	10	0	10

PROPOXYPHENE (PPX)

Propoxyphene conc. (ng/mL)	n per site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
150	10	10	0	10	0	10	0
225	10	8	2	9	1	9	1
375	10	1	9	1	9	1	9
450	10	0	10	0	10	0	10

TRICYCLIC ANTIDEPRESSANTS (TCA)

Nortriptyline conc. (ng/mL)	n per site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
500	10	10	0	10	0	10	0
750	10	9	1	8	2	8	2
1,250	10	1	9	1	9	1	9
1,500	10	0	10	0	10	0	10

TRAMADOL (TML 100)

Tramadol conc. (ng/mL)	n per site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
50	10	10	0	10	0	10	0
75	10	9	1	9	1	8	2
125	10	1	9	1	9	2	8
150	10	0	10	0	10	0	10

TRAMADOL (TML 200)

Tramadol conc. (ng/mL)	n per site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
100	10	10	0	10	0	10	0
150	10	9	1	9	1	8	2
250	10	1	9	1	9	2	8
300	10	0	10	0	10	0	10

TRAMADOL (TML 300)

Tramadol conc. (ng/mL)	n per	Site A		Site B		Site C	

	site	-	+	-	+	-	+
0	10	10	0	10	0	10	0
150	10	10	0	10	0	10	0
225	10	9	1	9	1	8	2
375	10	1	9	1	9	2	8
450	10	0	10	0	10	0	10

KETAMINE (KET1, 000)

Ketamine conc. (ng/mL)	n per site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
500	10	10	0	10	0	10	0
750	10	9	1	8	2	9	1
1,250	10	1	9	1	9	2	8
1,500	10	0	10	0	10	0	10

KETAMINE (KET500)

Ketamine conc. (ng/mL)	n per site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
250	10	10	0	10	0	10	0
375	10	9	1	9	1	8	2
625	10	1	9	1	9	2	8
750	10	0	10	0	10	0	10

KETAMINE (KET300)

Ketamine conc. (ng/mL)	n per site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
150	10	10	0	10	0	10	0
225	10	9	1	9	1	9	1
375	10	1	9	1	9	1	9
450	10	0	10	0	10	0	10

KETAMINE (KET100)

Ketamine conc. (ng/mL)	n per site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
50	10	10	0	10	0	10	0
75	10	9	1	9	1	9	1
125	10	1	9	1	9	2	8
150	10	0	10	0	10	0	10

Oxycodone (OXY100)

Oxycodone conc. (ng/mL)	n per site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
50	10	10	0	10	0	10	0
75	10	9	1	9	1	9	1
125	10	1	9	1	9	1	9
150	10	0	10	0	10	0	10

Oxycodone (OXY300)

Oxycodone conc. (ng/mL)	n per site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
150	10	10	0	10	0	10	0
225	10	9	1	9	1	9	1
375	10	1	9	1	9	1	9
350	10	0	10	0	10	0	10

Cotinine (COT 200)

Cotinine conc. (ng/mL)	n per site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
100	10	10	0	10	0	10	0
150	10	9	1	9	1	9	1
250	10	1	9	1	9	2	8
300	10	0	10	0	10	0	10

COTININE (COT 100)

Cotinine conc. (ng/mL)	n per site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
50	10	10	0	10	0	10	0
75	10	9	1	9	1	9	1
125	10	1	9	1	9	1	9
150	10	0	10	0	10	0	10

2-Ethylidene-1,5-dimethyl-3,3-diphenylpyrrolidine (EDDP 300)

EDDP conc. (ng/mL)	n per site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
150	10	10	0	10	0	10	0
225	10	9	1	9	1	9	1
375	10	1	9	2	8	1	9
450	10	0	10	0	10	0	10

2-Ethylidene-1,5-dimethyl-3,3-diphenylpyrrolidine (EDDP 100)

EDDP conc. (ng/mL)	n per site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
50	10	10	0	10	0	10	0
75	10	9	1	9	1	9	1
125	10	1	9	1	9	1	9
150	10	0	10	0	10	0	10

Fentanyl (FYL20)

FYL conc. (ng/mL)	n per site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
10	10	10	0	10	0	10	0
15	10	9	1	9	1	9	1
25	10	1	9	1	9	1	9
30	10	0	10	0	10	0	10

Fentanyl (FYL10)

FYL conc. (ng/mL)	n per site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
5	10	10	0	10	0	10	0
7.5	10	9	1	9	1	9	1
12.5	10	1	9	1	9	1	9
15	10	0	10	0	10	0	10

K2 50

K2 conc. (ng/mL)	n per site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
25	10	10	0	10	0	10	0
37.5	10	8	2	8	2	9	1
62.5	10	1	9	2	8	2	8
75	10	0	10	0	10	0	10

K2 30

K2 conc. (ng/mL)	n per site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
15	10	10	0	10	0	10	0
22.5	10	8	2	9	1	9	1
37.5	10	1	9	1	9	1	9
45	10	0	10	0	10	0	10

6-MAM

6-MAM conc. (ng/mL)	n per site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
5	10	10	0	10	0	10	0
7.5	10	9	1	9	1	9	1
12.5	10	1	9	1	9	1	9
15	10	0	10	0	10	0	10

MDA 500

MDA conc. (ng/mL)	n per site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
250	10	10	0	10	0	10	0
375	10	9	1	9	1	9	1
625	10	1	9	1	9	1	9
750	10	0	10	0	10	0	10

ETG500

Ethyl Glucuronide Concentration (ng/mL)	n per Site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
250	10	10	0	10	0	10	0
375	10	8	2	8	2	9	1
625	10	1	9	2	8	2	8
750	10	0	10	0	10	0	10

ETG1,000

Ethyl Glucuronide Concentration (ng/mL)	n per Site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
500	10	10	0	10	0	10	0
750	10	8	2	8	2	9	1
1250	10	1	9	2	8	2	8
1500	10	0	10	0	10	0	10

CLO 400

Clonazepam Concentration (ng/mL)	n per Site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
200	10	10	0	10	0	10	0
300	10	9	1	8	2	9	1
500	10	1	9	2	8	1	9
600	10	0	10	0	10	0	10

CLO 150

Clonazepam Concentration (ng/mL)	n per Site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
75	10	10	0	10	0	10	0
112	10	9	1	8	2	9	1
187	10	1	9	2	8	1	9
225	10	0	10	0	10	0	10

LSD 20

Clonazepam Concentration (ng/mL)	n per Site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
10	10	10	0	10	0	10	0
15	10	9	1	9	1	9	1
25	10	1	9	1	9	1	9
30	10	0	10	0	10	0	10

LSD 50

Clonazepam Concentration (ng/mL)	n per Site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
25	10	10	0	10	0	10	0
37.5	10	9	1	9	1	9	1
62.5	10	1	9	1	9	1	9
75	10	0	10	0	10	0	10

MPD

Methylphenidate (Ritalin) Concentration (ng/mL)	n per Site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
150	10	10	0	10	0	10	0
225	10	9	1	8	2	9	1
375	10	1	9	2	8	1	9
450	10	0	10	0	10	0	10

ZOL

Zolpidem Concentration (ng/mL)	n per Site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
25	10	9	1	10	0	10	0
75	10	0	10	1	9	0	10

DIA 300

Diazepam Concentration (ng/mL)	n per Site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
150	10	10	0	10	0	10	0
225	10	9	1	9	1	9	1
375	10	1	9	1	9	1	9
450	10	0	10	0	10	0	10

DIA 200

Diazepam Concentration (ng/mL)	n per Site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
100	10	10	0	10	0	10	0
150	10	9	1	9	1	9	1
250	10	1	9	1	9	1	9
300	10	0	10	0	10	0	10

Zopiclone (ZOP 50)

Zopiclone Concentration (ng/mL)	n per Site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
25	10	10	0	10	0	10	0
37.5	10	9	1	8	2	9	1
62.5	10	2	8	2	8	2	8
75	10	0	10	0	10	0	10

Methcathinone (MCAT 500)

Methcathinone Concentration (ng/mL)	n per Site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
250	10	10	0	10	0	10	0
375	10	9	1	8	2	9	1
625	10	2	8	2	8	2	8
750	10	0	10	0	10	0	10

7-ACL(300)

7- Aminoclonazepam Concentration (ng/mL)	n per Site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
150	10	10	0	10	0	10	0
225	10	8	2	9	1	9	1
375	10	2	8	2	8	3	7
450	10	0	10	0	10	0	10

7-ACL(200)

7- Aminoclonazepam Concentration (ng/mL)	n per Site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
100	10	10	0	10	0	10	0
150	10	8	2	9	1	8	2
250	10	2	8	2	8	2	8
300	10	0	10	0	10	0	10

7-ACL(100)

7- Aminoclonazepam Concentration (ng/mL)	n per Site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
50	10	10	0	10	0	10	0
75	10	7	3	7	3	9	1
125	10	2	8	1	9	2	8
150	10	0	10	0	10	0	10

Carfentanyl(CFYL500)

Carfentanyl Concentration (ng/mL)	n per site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
250	10	10	0	10	0	10	0
375	10	7	3	9	1	8	2
625	10	2	8	1	9	2	8
750	10	0	10	0	10	0	10

Caffeine (CAF 1000)

Caffeine Concentration (ng/mL)	n per site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
500	10	10	0	10	0	10	0
750	10	9	1	8	2	9	1
1250	10	2	8	2	8	2	8
1500	10	0	10	0	10	0	10

Cathine (CAT 150)

(+)-Norpseudoephedrine HCl Concentration(ng/mL)	n per site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
75	10	10	0	10	0	10	0
112.5	10	9	1	8	2	9	1
187.5	10	2	8	2	8	2	8
225	10	0	10	0	10	0	10

Tropicamide (TRO)

Tropicamide Concentration (ng/ml)	n per site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
175	10	10	0	10	0	10	0
262.5	10	8	2	8	2	8	2
437.5	10	2	8	2	8	2	8
525	10	0	10	0	10	0	10

3, 4-methylenedioxypyrovalerone (MDPV)

3, 4-methylenedioxypyrovalerone Concentration (ng/mL)	n per site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
500	10	10	0	10	0	10	0
750	10	9	1	9	1	8	2
1250	10	1	9	1	9	1	9
1500	10	0	10	0	10	0	10

Mephedrone (MEP 100)

Mephedrone HCl Concentration. (ng/mL)	n per site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
50	10	10	0	10	0	10	0
75	10	9	1	8	2	9	1
125	10	2	8	2	8	2	8
150	10	0	10	0	10	0	10

Alprazolam (ALP 100)

Alprazolam Concentration (ng/ml)	n per site	Site A		Site B		Site C	
		-	+	-	+	-	+
0	10	10	0	10	0	10	0
50	10	10	0	10	0	10	0
75	10	9	1	8	2	9	1
125	10	2	8	2	8	2	8
150	10	0	10	0	10	0	10

Analytical Sensitivity

A drug-free urine pool was spiked with drugs at the listed concentrations. The results are summarized below.

Drug Concentration Cut-off Range	ACE 5000		AMP 1,000		AMP500		AMP 300		BAR 300		BAR 200		BZO500		BZO300	
	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+
0% Cut-off	30	0	30	0	30	0	30	0	30	0	30	0	30	0	30	0
-50% Cut-off	30	0	30	0	30	0	30	0	30	0	30	0	30	0	30	0
-25% Cut-off	26	4	26	4	25	5	27	3	27	3	26	4	27	3	27	3
Cut-off	14	16	15	15	15	15	15	15	16	14	15	15	15	15	15	15
+25% Cut-off	3	27	3	27	3	27	4	26	4	26	3	27	4	26	3	27
+50% Cut-off	0	30	0	30	0	30	0	30	0	30	0	30	0	30	0	30
+300% Cut-off	0	30	0	30	0	30	0	30	0	30	0	30	0	30	0	30

Drug Concentration Cut-off Range	BZO200		BZO100		BUP 10		BUP 5		COC300		COC 200		COC 150		COC100	
	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+
0% Cut-off	30	0	30	0	30	0	30	0	30	0	30	0	30	0	30	0
-50% Cut-off	30	0	30	0	30	0	30	0	30	0	30	0	30	0	30	0
-25% Cut-off	27	3	27	3	26	4	26	4	26	4	26	4	27	3	27	3
Cut-off	16	14	14	16	14	16	14	16	13	17	14	16	16	14	16	14
+25% Cut-off	3	27	3	27	3	27	3	27	3	27	4	26	4	26	4	26
+50% Cut-off	0	30	0	30	0	30	0	30	0	30	0	30	0	30	0	30
+300% Cut-off	0	30	0	30	0	30	0	30	0	30	0	30	0	30	0	30

Drug Concentration Cut-off Range	THC150		THC50		THC25		MTD300		MTD200		MET1,000		MET500		MET300	
	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+
0% Cut-off	30	0	30	0	30	0	30	0	30	0	30	0	30	0	30	0
-50% Cut-off	30	0	30	0	30	0	30	0	30	0	30	0	30	0	30	0
-25% Cut-off	27	3	26	4	27	3	26	4	25	5	27	3	27	3	27	3
Cut-off	15	15	14	16	15	15	14	16	15	15	16	14	16	14	15	15
+25% Cut-off	4	26	3	27	4	26	3	27	4	26	3	27	4	26	3	27
+50% Cut-off	0	30	0	30	0	30	0	30	0	30	0	30	0	30	0	30
+300% Cut-off	0	30	0	30	0	30	0	30	0	30	0	30	0	30	0	30

Drug Concentration Cut-off Range	MDMA 1,000		MDMA 500		MOP 300		MOP 100		OPI		PCP		PPX		TCA	
	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+
0% Cut-off	30	0	30	0	30	0	30	0	30	0	30	0	30	0	30	0
-50% Cut-off	30	0	30	0	30	0	30	0	30	0	30	0	30	0	30	0
-25% Cut-off	26	4	25	5	27	3	26	4	27	3	25	5	26	4	25	5
Cut-off	15	15	14	16	15	15	15	15	14	16	15	15	15	15	15	15
+25% Cut-off	5	25	4	26	5	25	3	27	4	26	3	27	3	27	4	26
+50% Cut-off	0	30	0	30	0	30	0	30	0	30	0	30	0	30	0	30
+300% Cut-off	0	30	0	30	0	30	0	30	0	30	0	30	0	30	0	30

Drug Concentration Cut-off Range	TML 100		TML 200		TML 300		KET 1,000		KET 500		KET 300		KET 100		MQL	
	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+
0% Cut-off	30	0	30	0	30	0	30	0	30	0	30	0	30	0	30	0
-50% Cut-off	30	0	30	0	30	0	30	0	30	0	30	0	30	0	30	0
-25% Cut-off	27	3	27	3	27	3	27	3	27	3	26	4	27	3	26	4
Cut-off	15	15	15	15	15	15	15	15	15	15	16	14	15	15	15	15
+25% Cut-off	4	26	4	26	3	27	3	27	4	26	4	26	3	27	4	26
+50% Cut-off	0	30	0	30	0	30	0	30	0	30	0	30	0	30	0	30
+300% Cut-off	0	30	0	30	0	30	0	30	0	30	0	30	0	30	0	30

Drug Concentration Cut-off Range	OXY100		COT 200		COT 100		EDDP 300		EDDP 100		FYL 20		FYL 10		K2 50	
	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+
0% Cut-off	30	0	30	0	30	0	30	0	30	0	30	0	30	0	30	0
-50% Cut-off	30	0	30	0	30	0	30	0	30	0	30	0	30	0	30	0
-25% Cut-off	27	3	27	3	27	3	27	3	26	4	27	3	27	3	27	3
Cut-off	15	15	15	15	14	16	15	15	15	15	14	16	15	15	15	15
+25% Cut-off	5	25	4	26	3	27	3	27	5	25	3	27	3	27	3	27
+50% Cut-off	0	30	0	30	0	30	0	30	0	30	0	30	0	30	0	30
+300% Cut-off	0	30	0	30	0	30	0	30	0	30	0	30	0	30	0	30

Drug Concentration Cut-off Range	K2 30		6-MAM 10		MDA 500		ETG500		ETG1000		CLO 400		CLO 150	
	-	+	-	+	-	+	-	+	-	+	-	+	-	+
0% Cut-off	30	0	30	0	30	0	30	0	30	0	30	0	30	0
-50% Cut-off	30	0	30	0	30	0	30	0	30	0	30	0	30	0
-25% Cut-off	27	3	27	3	26	4	26	4	26	4	26	4	26	4
Cut-off	16	14	15	15	15	15	15	15	15	15	14	16	14	16
+25% Cut-off	4	26	4	26	3	27	3	27	3	27	5	25	5	25
+50% Cut-off	0	30	0	30	0	30	0	30	0	30	0	30	0	30
+300% Cut-off	0	30	0	30	0	30	0	30	0	30	0	30	0	30

Drug Concentration Cut-off Range	LSD20		LSD50		MPD		ZOL		MDMA300		OXY300		DIA 300	
	-	+	-	+	-	+	-	+	-	+	-	+	-	+
0% Cut-off	30	0	30	0	30	0	30	0	30	0	30	0	30	0
-50% Cut-off	30	0	30	0	29	1	30	0	30	0	30	0	30	0
-25% Cut-off	27	3	27	3	*	*	26	4	25	5	27	3	27	3
Cut-off	14	16	14	16	15	15	14	16	15	15	15	15	15	15
+25% Cut-off	3	27	3	27	*	*	5	25	3	27	4	26	3	27
+50% Cut-off	0	30	0	30	1	29	0	30	0	30	0	30	0	30
+300% Cut-off	0	30	0	30	0	30	0	30	0	30	0	30	0	30

Drug Concentration Cut-off Range	DIA 200		ZOP 50		MCAT 500		7-ACL 300		7-ACL 200		7-ACL 100		CFYL500	
	-	+	-	+	-	+	-	+	-	+	-	+	-	+
0% Cut-off	30	0	30	0	30	0	30	0	30	0	30	0	30	0
-50% Cut-off	30	0	30	0	30	0	30	0	30	0	29	1	30	0
-25% Cut-off	27	3	27	3	28	2	26	4	27	3	27	3	25	5
Cut-off	15	15	17	13	17	13	14	16	14	16	13	17	14	16
+25% Cut-off	3	27	4	26	3	27	5	25	3	27	4	26	6	24
+50% Cut-off	0	30	0	30	0	30	0	30	0	30	1	29	0	30
+300% Cut-off	0	30	0	30	0	30	0	30	0	30	0	30	0	30

Drug Concentration Cut-off Range	CAF 1000		CAT 150		TRO 350		MDPV 1000		MEP 100		ALP 100	
	-	+	-	+	-	+	-	+	-	+	-	+
0% Cut-off	30	0	30	0	30	0	30	0	30	0	30	0
-50% Cut-off	30	0	30	0	30	0	30	0	30	0	30	0
-25% Cut-off	27	3	27	3	27	3	26	4	27	3	28	2
Cut-off	17	13	17	13	15	15	14	16	17	13	17	13
+25% Cut-off	5	25	4	26	3	27	3	27	5	25	3	27
+50% Cut-off	0	30	0	30	0	30	0	30	0	30	0	30
+300% Cut-off	0	30	0	30	0	30	0	30	0	30	0	30

Analytical Specificity

The following table lists the concentrations of compounds (ng/mL) that are detected as positive in urine by the Multi-Drug Rapid Test Cassette at 5 minutes.

Analytes	**Concentration (ng/mL)**	**Analytes**	**Concentration (ng/mL)**
ACETAMINOPHEN (ACE)			
Acetaminophen	5,000		
AMPHETAMINE (AMP 1,000)			
D,L-Amphetamine sulfate	300	Phentermine	1,000
L-Amphetamine	25,000	Maprotiline	50,000
(±) 3,4-Methylenedioxy amphetamine	500	Methoxyphenamine	6,000
		D-Amphetamine	1,000
AMPHETAMINE (AMP 500)			
D,L-Amphetamine sulfate	150	Phentermine	500
L-Amphetamine	12,500	Maprotiline	25,000
(±) 3,4-Methylenedioxy amphetamine	250	Methoxyphenamine	3,000
		D-Amphetamine	500
AMPHETAMINE (AMP 300)			
D,L-Amphetamine sulfate	75	Phentermine	300
L-Amphetamine	10,000	Maprotiline	15,000
(±) 3,4-Methylenedioxy amphetamine	150	Methoxyphenamine	2,000
		D-Amphetamine	300
BARBITURATES (BAR 300)			
Amobarbital	5,000	Alphenol	600
5,5-Diphenylhydantoin	8,000	Aprobarbital	500
Allobarbital	600	Butabarbital	200
Barbital	8,000	Butalbital	8,000
Talbutal	200	Butethal	500
Cyclopentobarbital	30,000	Phenobarbital	300
Pentobarbital	8,000	Secobarbital	300
BARBITURATES (BAR 200)			
Amobarbital	3,000	Alphenol	400
5,5-Diphenylhydantoin	5,000	Aprobarbital	300
Allobarbital	400	Butabarbital	150
Barbital	5,000	Butalbital	5,000
Talbutal	150	Butethal	300
Cyclopentobarbital	20,000	Phenobarbital	200
Pentobarbital	5,000	Secobarbital	200
BENZODIAZEPINES (BZO 500)			
Alprazolam	200	Bromazepam	1,500
a-hydroxyalprazolam	2,500	Chlordiazepoxide	1,500
Clobazam	300	Nitrazepam	300
Clonazepam	800	Norchlordiazepoxide	200
Clorazepatedipotassium	800	Nordiazepam	1,500
Delorazepam	1,500	Oxazepam	500
Desalkylflurazepam	300	Temazepam	300
Flunitrazepam	300	Diazepam	500
(±) Lorazepam	5,000	Estazolam	10,000
RS-Lorazepamglucuronide	300	Triazolam	5,000
Midazolam	10,000		
BENZODIAZEPINES (BZO 300)			
Alprazolam	100	Bromazepam	900
a-hydroxyalprazolam	1,500	Chlordiazepoxide	900
Clobazam	200	Nitrazepam	200
Clonazepam	500	Norchlordiazepoxide	100
Clorazepatedipotassium	500	Nordiazepam	900
Delorazepam	900	Oxazepam	300
Desalkylflurazepam	200	Temazepam	100
Flunitrazepam	200	Diazepam	300
(±) Lorazepam	3,000	Estazolam	6,000
RS-Lorazepamglucuronide	200	Triazolam	3,000
Midazolam	6,000		
BENZODIAZEPINES (BZO 200)			
Alprazolam	70	Bromazepam	600
a-hydroxyalprazolam	1,000	Chlordiazepoxide	600
Clobazam	120	Nitrazepam	120
Clonazepam	300	Norchlordiazepoxide	70
Clorazepatedipotassium	300	Nordiazepam	600
Delorazepam	600	Oxazepam	200
Desalkylflurazepam	120	Temazepam	70
Flunitrazepam	120	Diazepam	200
(±) Lorazepam	2,000	Estazolam	4,000
RS-Lorazepamglucuronide	120	Triazolam	2,000
Midazolam	4,000		
BENZODIAZEPINES (BZO 100)			
Alprazolam	40	Bromazepam	300
a-hydroxyalprazolam	500	Chlordiazepoxide	300
Clobazam	60	Nitrazepam	60
Clonazepam	150	Norchlordiazepoxide	40
Clorazepatedipotassium	150	Nordiazepam	300
Delorazepam	300	Oxazepam	100
Desalkylflurazepam	60	Temazepam	40
Flunitrazepam	60	Diazepam	100
(±) Lorazepam	1,000	Estazolam	2,000
RS-Lorazepamglucuronide	60	Triazolam	1,000
Midazolam	2,000		
BUPRENORPHINE (BUP 10)			
Buprenorphine	10	Norbuprenorphine	50
Buprenorphine 3-D-Glucuronide	50	Norbuprenorphine 3-D-Glucuronide	100
BUPRENORPHINE (BUP 5)			
Buprenorphine	5	Norbuprenorphine	25
Buprenorphine 3-D-Glucuronide	25	Norbuprenorphine 3-D-Glucuronide	50
COCAINE (COC 300)			
Benzoylecgonine	300	Cocaethylene	20,000
Cocaine HCl	200	Ecgonine	30,000
COCAINE (COC 200)			
Benzoylecgonine	200	Cocaethylene	13,500
Cocaine HCl	135	Ecgonine	20,000
COCAINE (COC 150)			
Benzoylecgonine	150	Cocaethylene	1,0000
Cocaine HCl	120	Ecgonine	15,000
COCAINE (COC 100)			
Benzoylecgonine	100	Cocaethylene	7,000
Cocaine HCl	80	Ecgonine	10,000
MARIJUANA (THC150)			
Cannabinol	100,000	△8-THC	50,000
11-nor-△8-THC-9 COOH	100	△9-THC	50,000
11-nor-△9-THC-9 COOH	150		
MARIJUANA (THC50)			
Cannabinol	35,000	△8-THC	17,000
11-nor-△8-THC-9 COOH	30	△9-THC	17,000
11-nor-△9-THC-9 COOH	50		

MARIJUANA (THC25)			
Cannabinol	17,500	△8-THC	8,500
11-nor-△8-THC-9 COOH	15	△9-THC	8,500
11-nor-△9-THC-9 COOH	25		
METHADONE (MTD300)			
Methadone	300	Doxylamine	100,000
METHADONE (MTD200)			
Methadone	200	Doxylamine	65,000
METHAMPHETAMINE (MET1, 000)			
ρ-Hydroxymethamphetamine	25,000	(±)-3,4-Methylenedioxy-methamphetamine	12,500
D-Methamphetamine	1,000		
L-Methamphetamine	20,000	Mephentermine	50,000
METHAMPHETAMINE (MET500)			
ρ-Hydroxymethamphetamine	12,500	(±)-3,4-Methylenedioxy-methamphetamine	6,250
D-Methamphetamine	500		
L-Methamphetamine	10,000	Mephentermine	25,000
METHAMPHETAMINE (MET300)			
ρ-Hydroxymethamphetamine	7,500	(±)-3,4-Methylenedioxy-methamphetamine	3,750
D-Methamphetamine	300		
L-Methamphetamine	6,000	Mephentermine	15,000
METHYLENEDIOXYMETHAMPHETAMINE (MDMA1, 000) Ecstasy			
(±) 3,4-Methylenedioxy methamphetamine HCl	1,000	3,4-Methylenedioxyethyl-amphetamine	600
(±) 3,4-Methylenedioxyamphetamine HCl	6,000		
METHYLENEDIOXYMETHAMPHETAMINE (MDMA500) Ecstasy			
(±) 3,4-Methylenedioxy methamphetamine HCl	500	3,4-Methylenedioxyethyl-amphetamine	300
(±) 3,4-Methylenedioxyamphetamine HCl	3,000		
METHYLENEDIOXYMETHAMPHETAMINE (MDMA300) Ecstasy			
(±) 3,4-Methylenedioxy methamphetamine HCl	300	3,4-Methylenedioxyethyl-amphetamine	180
(±) 3,4-Methylenedioxyamphetamine HCl	1,800		
MORPHINE (MOP 300)			
Codeine	200	Norcodeine	6,000
Levorphanol	1,500	Normorphone	50,000
Morphine-3-β-D-Glucuronide	800	Oxycodone	30,000
Ethylmorphine	6,000	Oxymorphone	50,000
Hydrocodone	50,000	Procaine	15,000
Hydromorphone	3,000	Thebaine	6,000
6-Monoacethylmorphine	300	Morphine	300
MORPHINE (MOP 100)			
Codeine	80	Norcodeine	2,000
Levorphanol	500	Normorphone	20,000
Morphine-3-β-D-Glucuronide	300	Oxycodone	10,000
Ethylmorphine	2,000	Oxymorphone	20,000
Hydrocodone	20,000	Procaine	5,000
Hydromorphone	1,000	Thebaine	2,000
6-Monoacethylmorphine	200	Morphine	100
Methaqualone (MQL 300)			
Methaqualone	300		
MORPHINE/OPIATE (OPI 2,000)			
Codeine	2,000	Morphine	2,000
Ethylmorphine	3,000	Norcodeine	25,000
Hydrocodone	50,000	Normorphone	50,000
Hydromorphone	15,000	Oxycodone	25,000
Levorphanol	25,000	Oxymorphone	25,000
6-Monoacetylmorphine	3,000	Procaine	50,000
Morphine 3-β-D-glucuronide	2,000	Thebaine	25,000
PHENCYCLIDINE (PCP)			
Phencyclidine	25	4-Hydroxyphencyclidine	12,500
PROPOXYPHENE (PPX)			
D-Propoxyphene	300	**D-Norpropoxyphene**	300
TRICYCLIC ANTIDEPRESSANTS (TCA)			
Nortriptyline	1,000	Imipramine	400
Nordoxepine	500	Clomipramine	50,000
Trimipramine	3,000	Doxepine	2,000
Amitriptyline	1,500	Maprotiline	2,000
Promazine	3,000	Promethazine	50,000
Desipramine	200	Perphenazine	50,000
Cyclobenzaprine	2,000	Dithiaden	10,000
TRAMADOL (TML 100)			
n-Desmethyl-cis-tramadol	200	o-Desmethyl-cis-tramadol	10,000
Cis-tramadol	100	Phencyclidine	100,000
Procyclidine	100,000	d,l-O-Desmethyl venlafaxine	50,000
TRAMADOL (TML 200)			
n-Desmethyl-cis-tramadol	400	o-Desmethyl-cis-tramadol	20,000
Cis-tramadol	200	Phencyclidine	200,000
Procyclidine	200,000	d,l-O-Desmethyl venlafaxine	100,000
TRAMADOL (TML 300)			
n-Desmethyl-cis-tramadol	600	o-Desmethyl-cis-tramadol	30,000
Cis-tramadol	300	Phencyclidine	300,000
Procyclidine	300,000	d,l-O-Desmethyl venlafaxine	150,000
KETAMINE (KET1, 000)			
Ketamine	1,000	Benzphetamine	25,000
Dextromethorphan	2,000	(+) Chlorpheniramine	25,000
Methoxyphenamine	25,000	Clonidine	100,000
d-Norpropoxyphene	25,000	EDDP	50,000
Promazine	25,000	4-Hydroxyphencyclidine	50,000
Promethazine	25,000	Levorphanol	50,000
Pentazocine	25,000	MDE	50,000
Phencyclidine	25,000	Meperidine	25,000
Tetrahydrozoline	500	d-Methamphetamine	50,000
Mephentermine	25,000	l-Methamphetamine	50,000
(1R, 2S) - (-)-Ephedrine	100,000	3,4-Methylendioxymethamphetamine (MDMA)	100,000
Disopyramide	25,000	Thioridazine	50,000
KETAMINE (KET500)			
Ketamine	500	Benzphetamine	12,500
Dextromethorphan	1,000	(+) Chlorpheniramine	12,500
Methoxyphenamine	12,500	Clonidine	50,000
d-Norpropoxyphene	12,500	EDDP	25,000
Promazine	12,500	4-Hydroxyphencyclidine	25,000
Promethazine	12,500	Levorphanol	25,000
Pentazocine	12,500	MDE	25,000
Phencyclidine	12,500	Meperidine	12,500
Tetrahydrozoline	250	d-Methamphetamine	25,000
Mephentermine	12,500	l-Methamphetamine	25,000
(1R, 2S) - (-)-Ephedrine	50,000	3,4-Methylendioxymethamphetamine (MDMA)	50,000
Disopyramide	12,500	Thioridazine	25,000
KETAMINE (KET300)			
Ketamine	300	Benzphetamine	6,250
Dextromethorphan	600	(+) Chlorpheniramine	6,250
Methoxyphenamine	6,250	Clonidine	30,000
d-Norpropoxyphene	6,250	EDDP	15,000
Promazine	6,250	4-Hydroxyphencyclidine	15,000
Promethazine	6,250	Levorphanol	15,000
Pentazocine	6,250	MDE	15,000
Phencyclidine	6,250	Meperidine	6,250
Tetrahydrozoline	150	d-Methamphetamine	15,000
Mephentermine	6,250	l-Methamphetamine	15,000
(1R, 2S) - (-)-Ephedrine	30,000	3,4-Methylendioxymethamphetamine (MDMA)	30,000
Disopyramide	6,250	Thioridazine	15,000
KETAMINE (KET100)			
Ketamine	100	Benzphetamine	2,000
Dextromethorphan	200	(+) Chlorpheniramine	2,000
Methoxyphenamine	2,000	Clonidine	10,000
d-Norpropoxyphene	2,000	EDDP	5,000
Promazine	2,000	4-Hydroxyphencyclidine	5,000
Promethazine	2,000	Levorphanol	5,000
Pentazocine	2,000	MDE	5,000
Phencyclidine	2,000	Meperidine	2,000
Tetrahydrozoline	50	d-Methamphetamine	5,000
Mephentermine	2,000	l-Methamphetamine	5,000
(1R, 2S) - (-)-Ephedrine	10,000	Thioridazine	5,000
Disopyramide	2,000	3,4-Methylendioxymethamphetamine (MDMA)	10,000
Oxycodone (OXY100)			
Oxycodone	100	Hydromorphone	50,000
Oxymorphone	300	Naloxone	25,000
Levorphanol	50,000	Naltrexone	25,000
Hydrocodone	25,000		
Oxycodone (OXY300)			
Oxycodone	300	Hydromorphone	150,000
Oxymorphone	900	Naloxone	75,000
Levorphanol	150,000	Naltrexone	75,000
Hydrocodone	75,000		
Cotinine (COT 200)			
(-)-Cotinine	200	(-)-Nicotine	5,000
Cotinine (COT 100)			
(-)-Cotinine	100	(-)-Nicotine	2,500
2-Ethylidene-1,5-dimethyl-3,3-diphenylpyrrolidine (EDDP300)			
2-Ethylidene-1,5-dimethyl-3,3-diphenylpyrrolidine (EDDP)			300
2-Ethylidene-1,5-dimethyl-3,3-diphenylpyrrolidine (EDDP100)			
2-Ethylidene-1,5-dimethyl-3,3-diphenylpyrrolidine (EDDP)			100
Fentanyl (FYL20)			
Alfentanyl	600,000	Buspirone	15,000
Fenfluramine	50,000	Fentanyl	100
Norfentanyl	20	Sufentanyl	50,000
Fentanyl (FYL10)			
Alfentanyl	300,000	Buspirone	8,000
Fenfluramine	25,000	Fentanyl	50
Norfentanyl	10	Sufentanyl	25,000
Synthetic Marijuana (K2-50)			
JWH-018 5-Pentanoic acid	50	JWH-073 4-butanoic acid	50
JWH-018 4-Hydroxypentyl	400	JWH-018 5-Hydroxypentyl	500
JWH-073 4-Hydroxybuty	500		
Synthetic Marijuana (K2-30)			
JWH-018 5-Pentanoic acid	30	JWH-073 4-butanoic acid	30
JWH-018 4-Hydroxypentyl	250	JWH-018 5-Hydroxypentyl	300
JWH-073 4-Hydroxybuty	300		
6-mono-aceto-morphine (6-MAM)			
6-Monoacethylmorphine	10	Morphine	100,000
(±) 3, 4-Methylenedioxyamphetamine (MDA 500)			
(±) 3,4-Methylenedioxy amphetamine	500	Methoxyphenamine	5,000
		D-Amphetamine	2,000
D,L-Amphetamine sulfate	400	Phentermine	2,000
L-Amphetamine	30,000	Maprotiline	100,000
Ethyl- β-D-Glucuronide(ETG500)			
Ethyl- β -D-Glucuronide	500	Propyl β-D-glucuronide	50,000
Morphine 3β-glucuronide	100,000	Morphine 6β-glucuronide	100,000
Glucuronic Acid	100,000	Ethanol	>100,000
Methanol	>100,000		
Ethyl- β-D-Glucuronide(ETG1,000)			
Ethyl- β -D-Glucuronide	1,000	Propyl β-D-glucuronide	100,000
Morphine 3β-glucuronide	>100,000	Morphine 6β-glucuronide	>100,000
Glucuronic Acid	>100,000	Ethanol	>100,000
Methanol	>100,000		
CLONAZEPAM(CLO 400)			
Clonazepam	400	Flunitrazepam	300
Alprazolam	200	(±) Lorazepam	1,250
a-hydroxyalprazolam	2,000	RS-Lorazepamglucuronide	250
Bromazepam	1,000	Midazolam	5,000
Chlordiazepoxide	1,000	Nitrazepam	200
Clobazam	250	Norchlordiazepoxide	200
Clorazepatedipotassium	600	Nordiazepam	1,000
Delorazepam	1,000	Oxazepam	350
Desalkylflurazepam	250	Temazepam	150
Diazepam	300	Triazolam	5,000
Estazolam	1,250		
CLONAZEPAM(CLO 150)			
Clonazepam	150	Flunitrazepam	120
Alprazolam	75	(±) Lorazepam	500
a-hydroxyalprazolam	750	RS-Lorazepamglucuronide	100
Bromazepam	400	Midazolam	2,000
Chlordiazepoxide	400	Nitrazepam	75
Clobazam	100	Norchlordiazepoxide	75
Clorazepatedipotassium	250	Nordiazepam	400
Delorazepam	400	Oxazepam	130
Desalkylflurazepam	100	Temazepam	60
Diazepam	120	Triazolam	2,000
Estazolam	500		
LYSERGIC ACID DIETHYLAMIDE (LSD 20)			
Lysergic Acid Diethylamide	20		
LYSERGIC ACID DIETHYLAMIDE (LSD 50)			
Lysergic Acid Diethylamide	50		
METHYLPHENIDATE (RITALIN)			
Methylphenidate (Ritalin)	300	Ritalinic Acid	1,000
ZOLPIDEM			
Zolpidem	50		
Diazepam (DIA 300)			
Diazepam	300	Midazolam	6,000
Clobazam	200	Nitrazepam	200
Clonazepam	500	Norchlordiazepoxide	100
Clorazepate dipotassium	500	Nordiazepam	900
Alprazolam	100	Flunitrazepam	200
a-hydroxyalprazolam	1,500	(±) Lorazepam	3,000
Bromazepam	900	RS-Lorazepam glucuronide	200
Chlordiazepoxide	900	Triazolam	3,000
Estazolam	6,000	Temazepam	100
Delorazepam	900	Oxazepam	300
Desalkylflurazepam	200		
Diazepam (DIA 200)			
Diazepam	200	Midazolam	4000
Clobazam	120	Nitrazepam	120
Clonazepam	300	Norchlordiazepoxide	70
Clorazepate dipotassium	300	Nordiazepam	600
Alprazolam	70	Flunitrazepam	120
a-hydroxyalprazolam	1000	(±) Lorazepam	2000
Bromazepam	600	RS-Lorazepam glucuronide	120
Chlordiazepoxide	600	Triazolam	2000
Estazolam	4000	Temazepam	70
Delorazepam	600	Oxazepam	200
Desalkylflurazepam	120		
Zopiclone (ZOP 50)			
Zopiclone-x-oxide	50	Zopiclone	50
Methcathinone (MCAT 500)			
S(-)-Methcathinone HCl	500	R(+)-Methcathinone HCl	1500

Methoxyphenamine	100000	3-Fluoromethcathinone HCl	1500
7-AMINOCLONAZEPAM(7-ACL300)			
a-hydroxyalprazolam	6,000	Flunitrazepam	3,000
Bromazepam	6,000	RS-Lorazepam glucuronide	2,700
Chlordiazepoxide	6,000	Norchlordiazepoxide	4,500
Clobazam	9,000	Nordiazepam	15,000
Clonazepam	2,400	Temazepam	9,000
Delorazepam	6,000	7-Aminoclonazepam	300
Desalkylflurazepam	6,000		
7-AMINOCLONAZEPAM(7-ACL200)			
a-hydroxyalprazolam	4,000	Flunitrazepam	2,000
Bromazepam	4,000	RS-Lorazepam glucuronide	1,800
Chlordiazepoxide	4,000	Norchlordiazepoxide	3,000
Clobazam	6,000	Nordiazepam	10,000
Clonazepam	1,600	Temazepam	6,000
Delorazepam	4,000	7-Aminoclonazepam	200
Desalkylflurazepam	4,000		
7-AMINOCLONAZEPAM(7-ACL100)			
a-hydroxyalprazolam	2,000	Flunitrazepam	1,000
Bromazepam	2,000	RS-Lorazepam glucuronide	900
Chlordiazepoxide	2,000	Norchlordiazepoxide	1,500
Clobazam	3,000	Nordiazepam	5,000
Clonazepam	800	Temazepam	3,000
Delorazepam	2,000	7-Aminoclonazepam	100
Desalkylflurazepam	2,000		
CARFENTANYL(CFYL500)			
Carfentanyl	500	Fentanyl	100
CAFFEINE (CAF 1000)			
Caffeine	1000		
CATHINE (CAT 150)			
(+)-Norpseudoephedrine HCl (Cathine)	150	(+)3,4-Methylenedioxyamphetamine (MDA)	100
d/l-Amphetamine	100	p-Hydroxyamphetamine	100
Tryptamine	12,500	Methoxyphenamine	12,500
TROPICAMIDE (TRO 350)			
Tropicamide	350		
3, 4-METHYLENEDIOXYPYROVALERONE (MDPV)			
3, 4-methylenedioxy pyrovalerone	1000		
MEPHEDRONE (MEP100)			
Mephedrone HCl	100	R(+)-Methcathinone HCl	1500
S(-)-Methcathinone HCl	500	3-Fluoromethcathinone HCl	1500
4-Fluoromethcathinone HCl	300	Methoxyphenamine	100,000
ALPRAZOLAM(ALP 100)			
Benzodiazepines	300	Flunitrazepam	200
a-hydroxyalprazolam	1,500	(±) Lorazepam	3,000
Bromazepam	900	RS-Lorazepamglucuronide	200
Chlordiazepoxide	900	Midazolam	6,000
Clobazam	200	Nitrazepam	200
Clonazepam	500	Norchlordiazepoxide	100
Clorazepatedipotassium	500	Nordiazepam	900
Delorazepam	900	Oxazepam	300
Desalkylflurazepam	200	Temazepam	100
Diazepam	300	Triazolam	3,000
Estazolam	6000		

Effect of Urinary Specific Gravity

Fifteen (15) urine samples of normal, high, and low specific gravity ranges (1.005-1.045) were spiked with drugs at 50% below and 50% above cut-off levels respectively. The Multi-Drug Rapid Test Cassette was tested in duplicate using fifteen drug-free urine and spiked urine samples. The results demonstrate that varying ranges of urinary specific gravity do not affect the test results.

Effect of Urinary pH

The pH of an aliquoted negative urine pool was adjusted to a pH range of 5 to 9 in 1 pH unit increments and spiked with drugs at 50% below and 50% above cut-off levels. The spiked, pH-adjusted urine was tested with the Multi-Drug Rapid Test Cassette. The results demonstrate that varying ranges of pH do not interfere with the performance of the test.

Cross-Reactivity

A study was conducted to determine the cross-reactivity of the test with compounds in either drug-free urine or drug positive urine containing, Amphetamine, Barbiturates, Benzodiazepines, Buprenorphine, Cocaine, Marijuana, Methadone, Methamphetamine, Methylenedioxymethamphetamine, Morphine, Tramadol ,Ketamine ,Phencyclidine, Propoxyphene or Tricyclic Antidepressants, Oxycodone, Cotinine, EDDP, Fentanyl, Synthetic Marijuana,6-mono-aceto-morphine, 3, 4-Methylenedioxyamphetamine, Ethyl- β-D-Glucuronide, Clonazepam, Lysergic Acid Diethylamide, Methylphenidate, Zolpidem 7- Aminoclonazepam, Carfentanyl and 3, 4-methylenedioxypyrovalerone. The following compounds show no cross-reactivity when tested with the Multi-Drug Rapid Test Cassette at a concentration of 100 µg/mL.

Non Cross-Reacting Compounds

Acetophenetidin	Cortisone	Zomepirac	d-Pseudoephedrine
N-Acetylprocainamide	Creatinine	Ketoprofen	Quinidine
Acetylsalicylic acid	Deoxycorticosterone	Labetalol	Quinine
Aminopyrine	Dextromethorphan	Loperamide	Salicylic acid
Amoxicillin	Diclofenac	Meprobamate	Serotonin
Ampicillin	Diflunisal	Isoxsuprine	Sulfamethazine
l-Ascorbic acid	Digoxin	d,l-Propanolol	Sulindac
Apomorphine	Diphenhydramine	Nalidixic acid	Tetracycline
Aspartame	Ethyl-p-aminobenzoate	Naproxen	Tetrahydrocortisone,
Atropine	β-Estradiol	Niacinamide	3-acetate
Benzilic acid	Estrone-3-sulfate	Nifedipine	Tetrahydrocortisone
Benzoic acid	Erythromycin	Norethindrone	Tetrahydrozoline
Bilirubin	Fenoprofen	Noscapine	Thiamine
d,l-Brompheniramine	Furosemide	d,l-Octopamine	Thioridazine
Caffeine	Gentisic acid	Oxalic acid	d,l-Tyrosine
Cannabidiol	Hemoglobin	Oxolinic acid	Tolbutamide
Chloral hydrate	Hydralazine	Oxymetazoline	Triamterene
Chloramphenicol	Hydrochlorothiazide	Papaverine	Trifluoperazine
Chlorothiazide	Hydrocortisone	Penicillin-G	Trimethoprim
d,l-Chlorpheniramine	o-Hydroxyhippuric acid	Perphenazine	d,l-Tryptophan
Chlorpromazine	3-Hydroxytyramine	Phenelzine	Uric acid
Cholesterol	d,l-Isoproterenol	Prednisone	Verapamil
Clonidine			

【ALCOHOL PERFORMANCE CHARACTERISTICS】

The detection limit on the **Urine Alcohol Rapid Test** is from 0.02% to 0.30% for approximate relative blood alcohol level. The cutoff level of the **Urine Alcohol Rapid Test** can vary based on local regulations and laws. Test results can be compared to reference levels with color chart on the foil package.

【ALCOHOL ASSAY SPECIFICITY】

The **Urine Alcohol Rapid Test** will react with methyl, ethyl and allyl alcohols.

【ALCOHOL INTERFERING SUBSTANCES】

The following substances may interfere with the **Urine Alcohol Rapid Test** when using samples other than urine. The named substances do not normally appear in sufficient quantity in urine to interfere with the test.

A. Agents which enhance color development
- Peroxidases
- Strong oxidizers

B. Agents which inhibit color development
- Reducing agents: Ascorbic acid, Tannic acid, Pyrogallol, Mercaptans and tosylates, Oxalic acid, Uric Acid
- Bilirubin
- L-methyldopa
- L-dopa
- Methampyrone

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Index of Symbols

	Attention, see instructions for use	Σ	Tests per kit	EC REP	Authorized Representative
IVD	For in vitro diagnostic use only		Use by		Do not reuse
2°C 30°C	Store between 2-30°C	LOT	Lot Number	**REF**	Catalog #
	Do not use if package is damaged				

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Effective date: 2017-05-05