

SCREEN[™]

SCREEN MULTI DRUG (Urine)

Package Insert

English

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/ML/KET/OXY/COT/EDDP/FYL/K2/6-MAM/MDA/ETG/CLO/LSD/MPD/ZOL

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

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

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 Panel 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) | Benzoylcegonine | 300 |
| Cocaine (COC 200) | Benzoylcegonine | 200 |
| Cocaine (COC 150) | Benzoylcegonine | 150 |
| Cocaine (COC 100) | Benzoylcegonine | 100 |
| Marijuana (THC150) | 11-nor- Δ^9 -THC-9 COOH | 150 |
| Marijuana (THC 50) | 11-nor- Δ^9 -THC-9 COOH | 50 |
| Marijuana (THC 25) | 11-nor- Δ^9 -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 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 (OXY) | Oxycodone | 100 |
| 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) | Ritalinic Acid | 1,000 |
| Zolpidem(ZOL) | Zolpidem | 50 |

Configurations of the Multi-Drug Rapid Test Panel 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 Panel 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 steroidal anti-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 Panel 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 Panel yields a positive result when the concentration of amphetamines in urine exceeds detectable 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 Panel yields a positive result when the concentration of barbiturates in urine exceeds detectable 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 Panel yields a positive result when the concentration of benzodiazepines in urine exceeds detectable 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. 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 Panel yields a positive result when the Buprenorphine in urine exceeds detectable 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, oversensitivity 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 benzoylcegonine.³ Benzoylcegonine, 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 Panel yields a positive result when the concentration of benzoylcegonine in urine exceeds detectable level.

Marijuana (THC)

THC (Δ^9 -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- Δ^9 -tetrahydrocannabinol-9-carboxylic acid (THC-COOH).

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

Methylenedioxyamphetamine (MDMA500)

Methylenedioxyamphetamine (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 Oberlander, 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 Panel yields a positive result when the concentration of Methylenedioxyamphetamine 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 Panel yields a positive result when the concentration of morphine in urine exceeds detective level.

Morphine/Opiate (OPI)

The Multi-Drug Rapid Test Panel 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 Panel 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 Panel 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 Panel 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 Panel yields 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, glucuronidation or sulfation in the liver.

The Multi-Drug Rapid Test Panel 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 Panel 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 Panel 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 Panel 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 Panel 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 Panel 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 Panel 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 Panel 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 pain. 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). As of 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 Panel yields a positive result when the synthetic marijuana metabolite in urine exceeds detective level.

(±) 3, 4-Methylenedioxyamphetamine (MDA)

3,4-Methylenedioxyamphetamine (MDA), also known as tenamfetamine (INN), or by 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, in liver 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 Panel 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, amnesic, 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 Panel 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 2A receptors 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 Panel 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 Panel yields a positive result when the Methylphenidate (Ritalin) in urine exceeds 1000 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 class¹ 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 μ g/l in persons receiving the drug therapeutically, 100-700 μ g/l in those arrested for impaired driving, and 1000-7000 μ g/l in victims of acute over dosage. Analytical techniques, in general, involve gas or liquid chromatography.^{3,4,5}

The Multi-Drug Rapid Test Panel yields a positive result when Zolpidem in urine reaches 50ng/ml.

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.

PRINCIPLE

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.

REAGENTS

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.

S.V.T. REAGENTS

| Adulteration Pad | Reactive indicator | Buffers and non-reactive ingredients |
|------------------|--------------------|--------------------------------------|
| Creatinine | 0.04% | 99.95% |
| Nitrite | 0.07% | 99.94% |
| 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 Panel 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 Panel 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 Panels 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. storage of urine specimens should not exceed 2 hours at room temperature or 4 hours refrigerated prior to testing.

MATERIALS

Materials Provided

- Panel
- Package insert
- Adulteration Color Chart (when applicable)

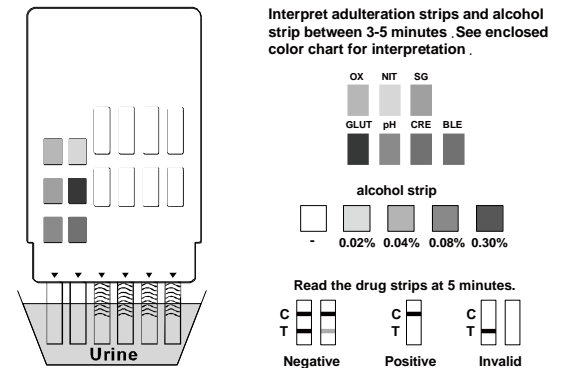
Materials Required But Not Provided

- Specimen collection container
- timer

DIRECTIONS FOR USE

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

- Bring the pouch to room temperature before opening it. Remove the test panel from the sealed pouch and use it within one hour.
- Remove the cap.
- With the arrow pointing toward the urine specimen, immerse the test panel vertically in the urine specimen for at least 10 to 15 seconds. **Immerse the dipstick to at least the level of the wavy lines, but not above the arrow on the test panel.**
- Replace the cap and place the test panel on a non-absorbent flat surface.
- Start the timer and wait for the colored line(s) to appear.
- 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

| Results | | | | | | | | | | | | |
|--------------------|--------|--------|--------|--------|--------|--------|--------|--------|---|--------|--------|---|
| 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% | * |

| | 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 |
|--------------------|-------|-------|-----|-----|
| 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)

| Benzoylcgonine 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)

| Benzoylcgonine 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)

| Benzoylcgonine 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)

| Benzoylcgonine 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 |
| | | | | | | | |

| Methamphetamine | n per | - | + | - | + | - | + |
|-----------------|-------|----|----|----|----|----|----|
| 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 |

METHYLENEDI-OXYMETHAMPHETAMINE (MDMA1,000) Ecstasy

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

METHYLENEDI-OXYMETHAMPHETAMINE (MDMA 500) Ecstasy

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

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 | | Site A | Site B | Site C |
|---------------|--|--------|--------|--------|
| | | | | |

| conc. (ng/mL) | n per | - | + | - | + | - | + |
|---------------|-------|----|----|----|----|----|----|
| 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 | 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 | 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)

| | | Site A | Site B | Site C |
|--|--|--------|--------|--------|
| | | | | |

| Ketamine conc. (ng/mL) | n per | - | + | - | + | - | + |
|------------------------|-------|----|----|----|----|----|----|
| 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 |

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</ |

| | | | | | | | |
|------------------|-------|----|----|----|----|----|----|
| K2 conc. (ng/mL) | n per | - | + | - | + | - | + |
| 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 |

| | | | | | | | |
|---|------------|--------|----|--------|----|--------|----|
| Methylphenidate (Ritalin) 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 | 1 | 9 | 2 | 8 | 1 | 9 |
| 1500 | 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 |

Analytical Sensitivity

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

| | | | | | | | | |
|--------------------|----------|-----------|---------|---------|---------|---------|---------|---------|
| Drug Concentration | ACE 5000 | AMP 1,000 | AMP 500 | AMP 300 | BAR 300 | BAR 200 | BZO 500 | BZO 300 |
| Cut-off Range | - | + | - | + | - | + | - | + |
| 0% Cut-off | 30 | 0 | 30 | 0 | 30 | 0 | 30 | 0 |
| -50% Cut-off | 30 | 0 | 30 | 0 | 30 | 0 | 30 | 0 |
| -25% Cut-off | 26 | 4 | 26 | 4 | 25 | 5 | 27 | 3 |
| Cut-off | 14 | 16 | 15 | 15 | 15 | 15 | 16 | 14 |
| +25% Cut-off | 3 | 27 | 3 | 27 | 3 | 27 | 4 | 26 |
| +50% Cut-off | 0 | 30 | 0 | 30 | 0 | 30 | 0 | 30 |
| +300% Cut-off | 0 | 30 | 0 | 30 | 0 | 30 | 0 | 30 |

| | | | | | | | | |
|--------------------|---------|---------|--------|-------|---------|---------|---------|---------|
| Drug Concentration | BZO 200 | BZO 100 | BUP 10 | BUP 5 | COC 300 | COC 200 | COC 150 | COC 100 |
| Cut-off Range | - | + | - | + | - | + | - | + |
| 0% Cut-off | 30 | 0 | 30 | 0 | 30 | 0 | 30 | 0 |
| -50% Cut-off | 30 | 0 | 30 | 0 | 30 | 0 | 30 | 0 |
| -25% Cut-off | 27 | 3 | 27 | 3 | 26 | 4 | 26 | 4 |
| Cut-off | 16 | 14 | 14 | 16 | 14 | 16 | 13 | 17 |
| +25% Cut-off | 3 | 27 | 3 | 27 | 3 | 27 | 3 | 27 |
| +50% Cut-off | 0 | 30 | 0 | 30 | 0 | 30 | 0 | 30 |
| +300% Cut-off | 0 | 30 | 0 | 30 | 0 | 30 | 0 | 30 |

| | | | | | | | | |
|--------------------|---------|--------|--------|---------|---------|-----------|---------|---------|
| Drug Concentration | THC 150 | THC 50 | THC 25 | MTD 300 | MTD 200 | MET 1,000 | MET 500 | MET 300 |
| Cut-off Range | - | + | - | + | - | + | - | + |
| 0% Cut-off | 30 | 0 | 30 | 0 | 30 | 0 | 30 | 0 |
| -50% Cut-off | 30 | 0 | 30 | 0 | 30 | 0 | 30 | 0 |
| -25% Cut-off | 27 | 3 | 26 | 4 | 27 | 3 | 26 | 4 |
| Cut-off | 15 | 15 | 14 | 16 | 15 | 15 | 16 | 14 |
| +25% Cut-off | 4 | 26 | 3 | 27 | 4 | 26 | 3 | 27 |
| +50% Cut-off | 0 | 30 | 0 | 30 | 0 | 30 | 0 | 30 |
| +300% Cut-off | 0 | 30 | 0 | 30 | 0 | 30 | 0 | 30 |

| | | | | | | | | |
|--------------------|------------|----------|---------|---------|-----|-----|-----|-----|
| Drug Concentration | MDMA 1,000 | MDMA 500 | MOP 300 | MOP 200 | OPI | PCP | PPX | TCA |
| Cut-off Range | - | + | - | + | - | + | - | + |
| 0% Cut-off | 30 | 0 | 30 | 0 | 30 | 0 | 30 | 0 |
| -50% Cut-off | 30 | 0 | 30 | 0 | 30 | 0 | 30 | 0 |
| -25% Cut-off | 26 | 4 | 25 | 5 | 27 | 3 | 25 | 5 |
| Cut-off | 15 | 15 | 14 | 16 | 15 | 15 | 16 | 14 |
| +25% Cut-off | 5 | 25 | 4 | 26 | 5 | 23 | 3 | 27 |
| +50% Cut-off | 0 | 30 | 0 | 30 | 0 | 30 | 0 | 30 |
| +300% Cut-off | 0 | 30 | 0 | 30 | 0 | 30 | 0 | 30 |

| | | | | | | | | |
|--------------------|---------|---------|---------|-----------|---------|---------|---------|-----|
| Drug Concentration | TML 100 | TML 200 | TML 300 | KET 1,000 | KET 500 | KET 300 | KET 100 | MQL |
| Cut-off Range | - | + | - | + | - | + | - | + |
| 0% Cut-off | 30 | 0 | 30 | 0 | 30 | 0 | 30 | 0 |
| -50% Cut-off | 30 | 0 | 30 | 0 | 30 | 0 | 30 | 0 |
| -25% Cut-off | 27 | 3 | 27 | 3 | 27 | 3 | 26 | 4 |
| Cut-off | 15 | 15 | 15 | 15 | 15 | 15 | 16 | 14 |
| +25% Cut-off | 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 | OXY | COT 200 | COT 100 | EDDP 300 | EDDP 100 | FYL 20 | FYL 10 | K2 50 |
| Cut-off Range | - | + | - | + | - | + | - | + |
| 0% Cut-off | 30 | 0 | 30 | 0 | 30 | 0 | 30 | 0 |
| -50% Cut-off | 30 | 0 | 30 | 0 | 30 | 0 | 30 | 0 |
| -25% Cut-off | 27 | 3 | 27 | 3 | 27 | 3 | 26 | 4 |
| Cut-off | 15 | 15 | 15 | 15 | 14 | 16 | 15 | 15 |
| +25% Cut-off | 4 | 26 | 4 | 26 | 4 | 26 | 3 | 27 |
| +50% Cut-off | 0 | 30 | 0 | 30 | 0 | 30 | 0 | 30 |
| +300% Cut-off | 0 | 30 | 0 | 30 | 0 | 30 | 0 | 30 |

| | | | | |
|--------------------|-------|-------|-----|-----|
| Drug Concentration | LSD20 | LSD50 | MPD | ZOL |
| Cut-off Range | - | + | - | + |
| 0% Cut-off | 30 | 0 | 30 | 0 |
| -50% Cut-off | 30 | 0 | 30 | 0 |
| -25% Cut-off | 27 | 3 | 27 | 3 |
| Cut-off | 14 | 16 | 14 | 16 |
| +25% Cut-off | 3 | 27 | 3 | 27 |
| +50% Cut-off | 0 | 30 | 0 | 30 |
| +300% Cut-off | 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 Panel 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-Methylenedioxyamphetamine | 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-Methylenedioxyamphetamine | 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-Methylenedioxyamphetamine | 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 Glucuronide | 3-D-50 | Norbuprenorphine Glucuronide | 3-D-100 |
| BUPRENORPHINE (BUP 5) | | | |
| Buprenorphine | 5 | Norbuprenorphine | 25 |
| Buprenorphine Glucuronide | 3-D-25 | Norbuprenorphine Glucuronide | 3-D-50 |
| COCAINE (COC 300) | | | |
| Benzoylcegonine | 300 | Cocacethylene | 20,000 |
| Cocaine HCl | 200 | Ecgonine | 30,000 |
| COCAINE (COC 200) | | | |
| Benzoylcegonine | 200 | Cocacethylene | 13,500 |
| Cocaine HCl | 135 | Ecgonine | 20,000 |
| COCAINE (COC 150) | | | |
| Benzoylcegonine | 150 | Cocacethylene | 1,000 |
| Cocaine HCl | 120 | Ecgonine | 15,000 |

| | | | |
|---|---------|--|---------|
| COCAINE (COC 100) | | | |
| Benzoylcegonine | 100 | Cocacethylene | 7,000 |
| Cocaine HCl | 80 | Ecgonine | 10,000 |
| MARIJUANA (THC150) | | | |
| Cannabinol | 100,000 | Δ8-THC | 50,000 |
| 11-nor-Δ8-THC-9 COOH | 100 | Δ9-THC | 50,000 |
| 11-nor-Δ9-THC-9 COOH | 150 | | |
| MARIJUANA (THC50) | | | |
| Cannabinol | 35,000 | Δ8-THC | 17,000 |
| 11-nor-Δ8-THC-9 COOH | 30 | Δ9-THC | 17,000 |
| 11-nor-Δ9-THC-9 COOH | 50 | | |
| MARIJUANA (THC25) | | | |
| Cannabinol | 17,500 | Δ8-THC | 8,500 |
| 11-nor-Δ8-THC-9 COOH | 15 | Δ9-THC | 8,500 |
| 11-nor-Δ9-THC-9 COOH | 25 | | |
| METHADONE (MTD300) | | | |
| Methadone | 300 | Doxylamine | 100,000 |
| METHADONE (MTD200) | | | |
| Methadone | 200 | Doxylamine | 65,000 |
| METHAMPHETAMINE (MET1, 000) | | | |
| p-Hydroxymethamphetamine | 25,000 | (±)-3,4-Methylenedioxy-methamphetamine | 12,500 |
| D-Methamphetamine | 1,000 | | |
| L-Methamphetamine | 20,000 | Mephentermine | 50,000 |
| METHAMPHETAMINE (MET500) | | | |
| p-Hydroxymethamphetamine | 12,500 | (±)-3,4-Methylenedioxy-methamphetamine | 6,250 |
| D-Methamphetamine | 500 | | |
| L-Methamphetamine | 10,000 | Mephentermine | 25,000 |
| METHAMPHETAMINE (MET300) | | | |
| p-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-Methylenedioxyamphetami-ne HCl | 6,000 | | |
| METHYLENEDIOXYMETHAMPHETAMINE (MDMA500) Ecstasy | | | |
| (±) 3,4-Methylenedioxy-methamphetamine HCl | 500 | 3,4-Methylenedioxyethyl-amphetamine | 300 |
| (±) 3,4-Methylenedioxyamphetami-ne HCl | 3,000 | | |
| 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 | | |
| 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-Methylendioxy-methamphetamine (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-Methylendioxy-methamphetamine (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- | 30,000 |

| | | | |
|--|----------|--------------------------------------|----------|
| | | Methylenedioxyamphetamine (MDMA) | |
| 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-Methylenedioxyamphetamine (MDMA) | 10,000 |
| Oxycodone (OXY100) | | | |
| Oxycodone | 100 | Hydromorphone | 50,000 |
| Oxymorphone | 300 | Naloxone | 25,000 |
| Levorphanol | 50,000 | Naltrexone | 25,000 |
| Hydrocodone | 25,000 | | |
| 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-Hydroxybutyl | 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-Hydroxybutyl | 300 | | |
| 6-mono-aceto-morphine (6-MAM) | | | |
| Codeine | 10 | Morphine | 10 |
| Ethylmorphine | 200 | Norcodeine | 200 |
| Hydrocodone | 2,000 | Normorphine | 2,000 |
| Hydromorphone | 100 | Oxycodone | 1,000 |
| Levorphanol | 50 | Oxymorphone | 2,000 |
| 6-Monoacethylmorphine | 10 | Procaine | 500 |
| Morphine 3-β-D-glucuronide | 30 | Thebaine | 200 |
| (±) 3, 4-Methylenedioxyamphetamine (MDA 500) | | | |
| (±) 3,4-Methylenedioxyamphetamine | 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) | 1000 | | |
| ZOLPIDEM | | | |
| Zolpidem | 50 | | |

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 Panel 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 Panel. 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, Methylenedioxyamphetamine, Morphine, Tramadol, Ketamine, Phencyclidine, Propoxyphene or Tricyclic Antidepressants, Oxycodone, Cotinine, EDDP, Fentanyl, Synthetic Marijuana, 6-mono-aceto-morphine, 3, 4-Methylenedioxyamphetamine and Ethyl-β-D-Glucuronide. The following compounds show no cross-reactivity when tested with the Multi-Drug Rapid Test Panel at a concentration of 100 µg/mL.

Non Cross-Reacting Compounds

| | | | |
|----------------------|-----------------------|------------------|----------------------|
| Acetophenetidin | Cortisone | Zomepirac | d-Pseudoephedrine |
| N-Acetylprocainamide | Creatinine | Ketoprofen | Quinidine |
| Acetylsalicylic acid | Deoxycorticosterone | Labeltalol | Quinine |
| Aminopyrine | Dextromethorphan | Loperamide | Salicylic acid |
| Amoxicillin | Diclofenac | Meprobamate | Serotonin |
| Ampicillin | Diflunisal | Methoxyphenamine | Sulfamethazine |
| l-Ascorbic acid | Digoxin | Methylphenidate | 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 | Gentic 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 | Isoxsuprine | d,l-Propranolol | |

BIBLIOGRAPHY

- Hawks RL, CN Chiang. Urine Testing for Drugs of Abuse. National Institute for Drug Abuse (NIDA), Research Monograph 73, 1986.
- Tietz NW. Textbook of Clinical Chemistry. W.B. Saunders Company. 1986; 1735.
- Stewart DJ, Inaba T, Lucassen M, Kalow W. Clin. Pharmacol. Ther. April 1979; 25 ed: 464, 264-8.
- Ambre J. J. Anal. Toxicol. 1985; 9:241.
- Winger, Gail, A Handbook of Drug and Alcohol Abuse, Third Edition, Oxford Press, 1992, page 146.
- Robert DeCresce. Drug Testing in the workplace, 1989 page 114.
- Glass, IB. The International Handbook of Addiction Behavior. Routledge Publishing, New York, NY. 1991; 216
- B. Cody, J.T., "Specimen Adulteration in drug urinalysis. Forensic Sci. Rev., 1990, 2:63.
- C. Tsai, S.C. et.al., J. Anal. Toxicol. 1998; 22 (6): 474
- Baselt RC. Disposition of Toxic Drugs and Chemicals in Man. 6th Ed. Biomedical Publ., Foster City, CA 2002.
- Hardman JG, Limbird LE. Goodman and Gilman's: The Pharmacological Basis for Therapeutics. 10th Edition. McGraw Hill Medical Publishing, 2001; 208-209.

INDEX OF SYMBOLS

| | | | | | |
|--|----------------------------------|--|---------------|--|---------------------------|
| | Consult Instructions for Use | | Tests per kit | | Authorized Representative |
| | For in vitro diagnostic use only | | Use by | | Do not reuse |
| | Store between 4-30°C | | Lot Number | | Catalog # |
| | Do not use if package is damaged | | Manufacturer | | |

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Numero: 145125103
Valido dal: 2021-05-20