

# **T-Cup Multi-Drug Urine Test Cup**

The SAFElife™ T-Cup Multi-Drug Urine Test Cup contains competitive binding, lateral flow ochromatographic assay for qualitative and simultaneous detection of 6-Monoacetylmorphin mphetamine, Secobarbital, Buprenorphine, Oxazepam, Cocaine, Cotinine, 2-ethylidene-1,5-dimethyl-3.3-diphenylpyrrolidine (EDDP), Ethyl Glucuronide, Fentanyl, Gabapentin, Hydromorphone, Synthetic Cannabinoids, Ketamine, Kratom, Lysergic acid diethylamide, Methylenedioxymethamphetamine, Methamphetamine, Propoxyphene, Nortriptyline, Cannabinoids, Tramadol and Alcohol in human urine with below cutoff concentrations and approximate detection time:

Drug (Identifier)	Calibrator	Cut-off Level	Minimum Detection Time	Maximum Detection Time
6-Monoacetylmorphine (6-MAM)	6-Monoacetylmorphine	10 ng/mL	2 hours	8 hours
Amphetamine (AMP300)	d-Amphetamine	300 ng/mL	2-7 hours	1-2 days
Amphetamine (AMP500)	d-Amphetamine	500 ng/mL	2-7 hours	1-2 days
Amphetamine (AMP1000)	d-Amphetamine	1000 ng/mL	2-7 hours	1-2 days
Secobarbital (BAR)	Secobarbital	300 ng/mL	2-4 hours	1-4 days
Buprenorphine (BUP5)	Buprenorphine	5 ng/mL	4 hours	1-3 days
Buprenorphine (BUP10)	Buprenorphine	10 ng/mL	4 hours	1-3 days
Oxazepam (BZO100)	Oxazepam	100 ng/mL	2-7 hours	1-2 days
Oxazepam (BZO200)	Oxazepam	200 ng/mL	2-7 hours	1-2 days
Oxazepam (BZO300)	Oxazepam	300 ng/mL	2-7 hours	1-2 days
Cocaine (COC100)	Benzoylecgonine	100 ng/mL	1-4 hours	2-4 days
Cocaine (COC150)	Benzoylecgonine	150 ng/mL	1-4 hours	2-4 days
Cocaine (COC300)	Benzoylecgonine	300 ng/mL	1-4 hours	2-4 days
Cotinine (COT)	Cotinine	200 ng/mL	2-8 hours	1-7 days
EDDP100	2-ethylidene-1,5-dimethyl- 3,3-diphenylpyrrolidine	100 ng/mL	3-8 hours	1-3 days
EDDP300	2-ethylidene-1,5-dimethyl- 3,3-diphenylpyrrolidine	300 ng/mL	3-8 hours	1-3 days
Ethyl Glucuronide (EtG300)	Ethyl Glucuronide	300 ng/mL	1-2 hours	Up to 3+ days
Ethyl Glucuronide (EtG500)	Ethyl Glucuronide	500 ng/mL	1-2 hours	Up to 3+ days
Fentanyl (FTY)	Norfentanyl	20 ng/mL	1-4 hours	1-3 days
Gabapentin (GAB)	Gabapentin	2000 ng/mL	5-7 hours	Up to 2 days
Hydromorphone (HMO)	Hydromorphone	300 ng/mL	4-6 hours	1-2 days
Synthetic Cannabinoid	JWH-018 Pentanoic Acid	50 ng/mL		Up to 5+
(K2)	JWH-073 Butanoic Acid	50 ng/mL	8-12 hours	days
Ketamine (KET300)	Ketamine	300 ng/mL	2-4 hours	2-3 days
Ketamine (KET1000)	Ketamine	1000 ng/mL	2-4 hours	2-3 days
Kratom (KRA100)	Mitragynine	1000 rig/mL	7 hours	5-6 days
Kratom (KRA300)	Mitragynine	300 ng/mL	7 hours	5-6 days
Lysergic acid	İ	, , , , , , , , , , , , , , , , , , ,		Up to 5+
diethylamide (LSD)	Lysergic acid diethylamide  3.4-	20 ng/mL	2.5 hours	days
Methylenedioxymethamp hetamine (MDMA)	Methylenedioxymethamphe tamine (MDMA)	500 ng/mL	2-7 hours	2-4 days
Methamphetamine (MET300/mAMP300)	D(+)-Methamphetamine	300 ng/mL	2-7 hours	2-4 days
Methamphetamine (MET500/mAMP500)	D(+)-Methamphetamine	500 ng/mL	2-7 hours	2-4 days
Methamphetamine (MET1000/mAMP1000)	D(+)-Methamphetamine	1000 ng/mL	2-7 hours	2-4 days
Morphine (MOP100/OPI100)	Morphine	100 ng/mL	2 hours	2-3 days
Morphine (MOP300/OPI300)	Morphine	300 ng/mL	2 hours	2-3 days
Methadone (MTD200)	Methadone	200 ng/mL	3-8 hours	1-3 days
Methadone (MTD300)	Methadone	300 ng/mL	3-8 hours	1-3 days
Methaqualone (MQL)	Methaqualone	300 ng/mL	6-8 hours	Up to 7+ days
Opiate (OPI)	Morphine	2000 ng/mL	2 hours	2-3 days
Oxycodone (OXY)	Oxycodone	100 ng/mL	4 hours	1-3 days
Phencyclidine (PCP)	Phencyclidine	25 ng/mL	4-6 hours	7-14 days
Pregabalin (PGB)	Pregabalin	500 ng/mL	6-8hours	1-3 days
Propoxyphene (PPX)	Propoxyphene	300 ng/mL	2 hours	2-3 days
	Nortriptyline	1000 ng/mL	8-12 hours	2-7 days
Nortriptyline (TCA)				Up to 5+
Nortriptyline (TCA)  Cannabinoids (THC15)	11-nor-Δ9-THC-9-COOH	15 ng/mL	2 hours	days
	11-nor-Δ9-THC-9-COOH 11-nor-Δ9-THC-9-COOH	15 ng/mL 25 ng/mL	2 hours	Up to 5+ days
				Up to 5+ days Up to 5+
Cannabinoids (THC15)  Cannabinoids (THC25)	11-nor-Δ9-THC-9-COOH	25 ng/mL	2 hours	Up to 5+ days Up to 5+ days Up to 5+
Cannabinoids (THC15) Cannabinoids (THC25) Cannabinoids (THC40) Cannabinoids (THC50)	11-nor-Δ9-THC-9-COOH 11-nor-Δ9-THC-9-COOH 11-nor-Δ9-THC-9-COOH	25 ng/mL 40 ng/mL 50 ng/mL	2 hours 2 hours 2 hours	Up to 5+ days Up to 5+ days Up to 5+ days
Cannabinoids (THC15) Cannabinoids (THC25) Cannabinoids (THC40) Cannabinoids (THC50) Tramadol (TRA 100)	11-nor-Δ9-THC-9-COOH 11-nor-Δ9-THC-9-COOH 11-nor-Δ9-THC-9-COOH Tramadol	25 ng/mL 40 ng/mL 50 ng/mL 100 ng/mL	2 hours 2 hours 2 hours 8-12 hours	Up to 5+ days Up to 5+ days Up to 5+ days 3-7 days
Cannabinoids (THC15) Cannabinoids (THC25) Cannabinoids (THC40) Cannabinoids (THC50)	11-nor-Δ9-THC-9-COOH 11-nor-Δ9-THC-9-COOH 11-nor-Δ9-THC-9-COOH	25 ng/mL 40 ng/mL 50 ng/mL	2 hours 2 hours 2 hours	Up to 5+ days Up to 5+ days Up to 5+ days

Configurations of the SAFElife™ T-Cup Multi-Drug Urine Test Cup can consist of any combination of the above listed drug analytes.

# It is intended for forensic use only.

It is not intended to distinguish between prescription use or abuse of these drugs. Professional judgment hould be applied to any drug of abuse test result, particularly in evaluating a preliminary positive result.

The tests provide only preliminary results. To obtain a confirmed analytical result, a more specific alternate hemical method must be used. Chromatography/Mass Spectrometry (GC/MS) or Liquid Chromatography/Tandem Mass Spectrometry (LC/MS-MS) is the recommended confirmatory method.

# WARNINGS AND PRECAUTIONS

- . Discard after first use. The test kit cannot be used more than once. . Do not use the test kit beyond expiration date.
- 4. Do not use the test kit if the pouch is punctured or not well sealed. 5 Keep out of the reach of children

- 1. 25 SAFElife™ T-Cup test devices, each in one pouch with desiccant. The desiccants are for storage
- purposes only and are not used in the test procedure. One (1) Package Insert
- Adulteration Color Comparison Charts (If equipped

MATERIAL REQUIRED BUT NOT PROVIDED

- 25 Security Seals
- 25 Pieces of Gloves

# Timer or Clock

# STORAGE AND STABILITY

Store at 39°F-86°F (4°C-30°C) in the sealed pouch up to the expiration date. Keep away from direct sunlight, moisture and heat.

# SPECIMEN COLLECTION

# WHEN TO COLLECT URINE FOR THE TEST?

Collect urine specimen after minimum detection time following suspected drug use. Urine collection time is very important in detecting any drugs of abuse. Each drug is cleared by the body and is detected in the urine at different times and rates. Please refer to the minimum or maximum detection time of each drug in

# HOW TO COLLECT URINE?

- Remove the test cup from the foil pouch by tearing at the notch. Use it as soon as possible, Instruct the donor to remove the test cup lid and void directly into the test cup until reach the Minimum Urine Level mark (approximately 25 mL). It is acceptable to collect extra volume of urine. If insufficient specimen has been collected instruct the donor to provide urine specimen again with another new test cup. Wine off any splashes or spills that may be on the outside of the cup. It is recommended to wear gloves when handling the test cup with urine specimen.
- Observe the temperature strip affixed on the test cup between 2 to 4 minutes after urine is voided into the cup. The temperature between 90°F-100°F (32°C-38°C) indicates the fresh uncontaminated specimen. If the temperature is out of this range, instruct the donor to provide urine specimen again with another new test cup.

# TEST PROCEDURE

Test should be performed at room temperature 65°F-86°F (18°C-30°C).

After the urine has been collected properly tighten the lid until an audible click is heard. Place the cup

- Peel off the label from right to left.
- For the adulteration strip(s) if equipped, read results immediately, or at 30 seconds, or at 45 seconds and compare each adulterant pad to verify pad color is within acceptable range according to the Adulteration Color Comparison Chart. If the results indicate adulteration, do not read the drug test esults. Instruct the donor to provide urine specimen again with another new test cup For the alcohol test, read the alcohol test result at 2 minutes, **Do not read results after 2 minutes**,
- For the drug tests, read the drug test results at 5 minutes. Do not read results after 5 minutes



# READING THE RESULTS

DRUG TEST:

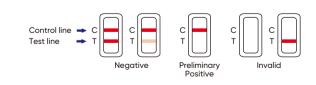
of the test

A colored band is visible in each Control Region (C) and the appropriate Test Region (T). It indicates the concentration of the corresponding drug of that specific test zone is zero or below the detection limit

Region (T). It indicates a preliminary positive result for the corresponding drug of that specific test zone.

A colored band is visible in each Control Region (C). No colored band appears in the appropriate Test

If a colored band is not visible in each of the Control Region (C) or a colored band is only visible in the Test Region (T), the test is invalid. Another test should be run to re-evaluate the specimen. If the new test still vides an invalid result, please contact the distributor from whom you purchased the product. When calling, be sure to provide the lot number of the test.



# Note: There is no meaning attributed to line color intensity or width.

A preliminary positive test result does not always mean a person took drugs and a negative test result does not always mean a person did not take drugs. There could be a number of factors that affect the reliability

Almost no color change on test pad in comparison with the provided colored chart. The negative result indicates that the concentration of ethyl alcohol in urine is less than 0.04 g/dL.

A distinct color developed all over the pad. The positive result indicates that the concentration of ethyl alcohol in urine is 0.04% or higher.



(0.04%)

The test should be considered invalid if only the edge of the reaction pad turned color that might be ascribed to insufficient sampling. Another test should be run to re-evaluate the specimen. If test still fails, please contact the distributor, with the lot number.

(0.08%)

(0.2%)

# What Is the False Positive Test?

the SAFFlife™ T-Cup Multi-Drug Urine Test Cup. The most common causes of the false positive test are cross reactants. Certain foods and medicines, diet plan drugs and nutritional supplements may cause the false positive test result

definition of the false negative test is that the initial drug is present but isn't detected by the SAFElife" T-Cup Multi-Drug Urine Test Cup. If the specimen is diluted or adulterated, it may cause false negative

If suspect someone is taking drugs but get the negative test results, please test again at another time.

# TEST LIMITATIONS

- This test kit has been developed for testing urine specimen only. No other fluids have been evaluated. DO NOT use it to test anything other than urine . Adulterated urine specimen may produce false results. Strong oxidizing agents such as bleach
- (hypochlorite) can oxidize drug analytes. If a specimen is suspected of being adulterated, obtain a new 3. It is possible that technical or procedural errors, as well as other interfering substances in the urine
- en may cause false results. 4. This test is a qualitative screening assay, It is not designed to determine the quantitative concentration

## 6-Monoacetylmorphine (6-MAM) Heroin is rapidly metabolized in the body. The half-life in blood is only 3-9 minutes. It is degraded by

of drugs or the level of intoxication

esterase in the body to 6-monoacetylmorphine (hereinafter abbreviated as 6-MAM) and the molecular formula is C<sub>21</sub>H<sub>23</sub>NO<sub>5</sub>, 6-MAM is deacetylated in the body to form morphine, and morphine cannot be Therefore, the US Department of Health and Human Services (DHHS) recommended 6-

mine and the structurally related "designer" drugs are sympathomimetic amines whose biological effects include potent central nervous system (CNS) stimulation, anorectic, hyperthemic, and rdiovascular properties. They are usually taken orally, intravenously, or by smoking. Amphetamines are readily absorbed from the gastrointestinal tract and are then either deactivated by the liver or excreted nchanged in the urine with a half-life of about 12 hours. It can be detected in the urine for 1 to 2 days after use. Amphetamine is metabolized to deaminated (hippuric and benzoic acids) and hydroxylated metabolites. Methamphetamine is partially metabolized to amphetamine and its major active metabolite mphetamines increase the heart rate and blood pressure, and suppress the appetite. Some studie indicate that heavy abuse may result in permanent damage to certain essential nerve structural in the

# Secobarbital (BAR)

Barbiturates are a class of central nervous system depressions. They have a wide range of half-life of 2 to 40 hours and can be detected in the urine for 1 to 4 days after use. Phenobarbital is a long acting Pentobarbital and secobarbital are two examples of a short actina barbiturate sedative. Abuse of barbiturates can lead not only to impaired motor coordination and mental disorder, but also to respirator collapse, coma and even death. Barbiturates are taken orally, rectally, or by intravenous and injections. Short-acting barbiturates will generally be excreted in urine as metabolites, while the longacting barbiturates will primarily appear unchanged.

# Rupreporphine (RUP)

the trade names Subutex", Buprenex", Temgesic" and Suboxone"; all of which contain Buprenorphine HCl alone or in combination with Naloxone HCl. Therapeutically, Buprenorphine is used as a substitution treatment for opioid addicts. A substitution treatment is a form of medical care offered to opiate addicts therapy. Buprenorphine is as effective as Methadone but demonstrates a lower level of physical dependence. 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 detection window for the parent drug in urine is thought to be approximately 3 days.

Benzodiazepines are the most widely used anxiolytic druas. They are used extensively as anti-anxiety agents, hypnotics, muscle relaxants and anti-convulsants. They are taken orally or sometimes by injectio and have a wide range of half-life from 2 to 40 hours. They can generally be detected for 1 to 2 days after Benzodiazepines use. Benzodiazepines are metabolized in the liver. Some Benzodiazepines and their metabolites are excreted in the urine. Their use can result in drowsiness and/or confusion. Benzodiazepines rentiate alcohol and other CNS depressants. Psychological and physical dependence on benzodiazepines can develop if high doses of the drug are given over a prolonged period.

Cocaine derived from leaves of coca plant, is a potent central nervous system stimulant and a local nesthetic. Among the psychological effects induced by using cocaine are euphoria, confidence and a sense of increased energy, accompanied by increased heart rate, dilation of the pupils, fever, tremors and sweating. Cocaine is excreted in urine primarily as benzoylecgonine in a short period of time.

otinine is an alkaloid found in tobacco and is also a major metabolite of Nicotine, which produces stimulation of the autonomic ganglia and central nervous system when in humans. Nicotine is found in tobacco products such as cigarettes, tobacco chew, and nicotine patches or gums. It is an addictive a large amount. In addition to addiction, some of the other sub pacco products, such as carbon monoxide or tar, are dangerous to the body and can lead to medical nditions such as emphysema, lung cancer, and heart disease. 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%. While Cotinine is thought to be an inactive metabolite, its elimination profile is more stable than that of Nicotine which is largely urine PH dependent. Cotinine is stable in body fluids and has a relatively long half-life of approximately 17 hour and is typically detectable for several days (up to one week) after the use of tobacco, therefore the detection of Cotinine is less dependent on the time of sampling than that of Nicotine, Nicotine and Cotinin 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.

EDDP (2-ethylidene -1, 5-dimethyl-3, 3-diphenylpyrrolidine) is the primary metabolite of methadone. Methadone is a synthetic analgesic drug that is originally used in the treatment of narcotic addicts. The detection of EDDP is more beneficial than traditional methadone screening since EDDP exists only in urine from individuals that ingested methodone. The tampering of specimens by spiking the urine with methadone can be prevented. Secondly, renal clearance of EDDP is not affected by urinary pH, therefore the EDDP test provides a more accurate result of methadone ingestion than the methadone parent

# Ethyl Glucuronide (EtG)

thyl Glucuronide is a direct metabolite of alcohol. Presence in urine may be used to detect recent alcohol intake, even after alcohol is no longer measurable. Traditional laboratory methods detect the actual alcohol in the body, which reflects current intake within the past few hours (depending on how much was consumed). The presence of EtG in urine is a definitive indicator that it can be detected in the urine for 3 to 4 days after drinking alcohol, even alcohol is eliminated from the body. Therefore, EtG is a more accurate indicator of the recent intake of alcohol than measuring for the presence of alcohol itself. The EtG test can aid in the diagnosis of drunk driving and alcoholism, which has important significance in the forensic

Fentanyl is a potent, synthetic narcotic analgesic with a rapid onset and short duration of action. It was first synthesized by Janssen Pharmaceutica (Belaium) in the late 1950s, and It is approximately 100 times e potent than morphine. Fentanyl is a strong agonist at the  $\mu$ -opioid receptors. Historically it has been used to treat breakthrough pain and is commonly used in pre-procedures as a pain reliever as well as an anesthetic in combination with a benzodiazepine. Fentanyl is frequently given intrathecally as part of spinal anesthesia or epidurally for epidural anesthesia and analgesia.

Gabapentin (GAB), sold under the brand name Neurontin, is a medication used to treat epilepsy. neuropathic pain, hot flashes, and restless legs syndrome. In epilepsy, it may be used for those with partial seizures. It is recommended as one of a number of first line medications for the treatment of neuropathic pain in diabetic neuronathy, posthernetic neuralgia, and central neuronathic pain. It is also used to relieve nerve pain following shingles (a painful rash due to herpes zoster infection) in adults. The most common side effects of aphapentin include dizziness fatigue drowsiness ataxia peripheral edema (swelling of extremities), nystagmus, and tremor. Serious side effects may include an increased risk of suicide, aggressive behavior, and drug reaction with eosinophilia and systemic symptoms.

# Hydromorphone, also known as dihydromorphone or dihydromorphinone is a semi-synthetic strong

analgesic. Its structure is similar to morphine, its analgesic effect is about 8 times that of morphine, and its side effects are lighter than morphine. It is mainly used for relieving medium-intensity pain caused by

# Synthetic cannabinoids (K2) . Synthetic cannabinoids are psychoactive designer drugs derived of natural herbs sprayed with synthet

chemicals that when consumed allegedly mimic the effects of cannabis. It is best known by the brand chemicals that, when constanting, allegany minic the effects of confidences, it is best known by the brain names K2 and Spice. Synthetic cannabinoids act on the body in a similar way to cannabinoids naturally found in cannabis, such as THC. Although synthetic cannabinoids do not produce positive results in drug tests for cannabis, it is possible to detect its metabolites in human urine.

Ketamine is a sort of medical stupefacient. The principal metabolites are non-ketamine. Smoking, mainlining, snuffing, and dissolving into drink or alcohol are the primary method of use of ketamine. Ketamine is usually administered in combination with heroin, marijuana etc. for the relief of moderate to severe pain. Overdose may cause central nervous system effects, do harm to liver and kidney, and even cause death. Ketamine is metabolized in the liver. Over 70% ketamine metabolites and only 5% original drugs are excreted in the urine. They can generally be detected for 2 to 4 hours after ketamine use.

complex stimulant and opioid-like analgesic effects. In Asia, it is often used to stave off fatigue and to nanage pain, diarrhea, cough, and opioid withdrawal. Recently, kratom has become widely available in the United States and Europe by means of smoke shops and the Internet. The clinical manifestations of kratom are not well defined and studies are limited, but its safety profile has become a national and international concern, primarily due to excessive consumption being linked to increase in hospital visits for hepatic injury, seizures, coma, and death. The main active ingredients include Mitragynine and 7-Hydroxymitrgynine, which can be detected in urine up to 72 hrs (1-3).

# Lysergic acid diethylamide (LSD) is a white powder or colorless liquid that is a strong semi artificial

on wheat and rye. It is a schedule I controlled substance, available in liquid, Powder, tablet (microdots), and capsule form. LSD is a non-selective 5-HTagonost, may exert its hallucinogenic effect by interacting with 5-HT 2Areceptors as a partial agonist and modulating the NMDA receptors, producing a marked slowing of the firing rate of serotoneraic neurons, LSD can cause the user's senses, feelings, memory, and awareness to intensify and change for 6 to 12 hours. In addition to causing mental confusion, LSD ca also cause physical pain, with symptoms in the nervous system, cardiovascular, and digestive systems. Most LSD users use marijuana, heroin, or other drugs together.

# Methylenedioxymethamphetamine (MDMA)

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

# Methamphetamine is a potent sympathomimetic agent with therapeutic applications. Acute higher doses

lead to enhanced stimulation of the central nervous system and induce euphoria, alertness, and a sense of increased energy and power. More acute responses produce anxiety, paranoia, psychotic behavior, and cardiac dysrhythmias. The pattern of psychosis which may appear at half-life of about 15 hours and i excreted in urine as amphetamine and oxidized as deaminated and hydroxylated derivatives. However, 40% of methamphetamine is excreted unchanged. Thus the presence of the parent compound in the urine indicates methamphetamine use.

# 'he opiates such as heroin, morphine, and codeine are derived from the resin of opium poppy. The principal

metabolites of opiates are morphine, morphine-3-glucuronide normorphine and codeine with a half-life of about 3 hours. Heroin is quickly metabolized to morphine. Thus, morphine and morphine glucuronide might both be found in the urine of a person who has taken only heroin. The body also changes codeine to heroin, morphine and/or codeine use. The test for Morphine (MOP300/OPI300) of the SAFElife™ T-Cup Multi-Drug Urine Test Cup yields a positive result when the morphine in urine exceeds 300 ng/ml Methadone (MTD)

# thadone is a synthetic analgesic drug that is originally used in the treatment of narcotic addicts. Among

the psychological effects induced by using methadone are analgesia, sedation and respiratory depression. Overdose of methadone may cause coma or even death. It is administered orally or intravenously and is metabolized in the liver and excreted in urine as methadone, EDDP, EMDA and methadol. The kidneys are a major route of methadone excretion. Methadone has a biological half-life of 15 to 60 hours.

qualone is a sedative that falls outside the benzodiazepine and barbiturate classes. It was once a

South Africa. Because it faced few restrictions when it first entered the market, the drug was wide prescribed and perceived as uniquely safe. We now know methagualone can be used recreationally and can cause physical dependence. A lot of lore exists around the effects. In reality, it's not a massively unique substance and it can be compared to barbiturates, ethanol, carisoprodol, and meprobamate. Methagualone is a sedative that increases the activity of the GABA receptors in the brain and nervous system. When GABA activity is increased, blood pressure drops and the breathing and pulse rates slow leading to a state of deep relaxation. These properties explain why methagualone was originally mainly prescribed for insomnia. Methaqualone peaks in the bloodstream within several hours, with a half-life of 20-60 hours. Regular users build up a physical tolerance, requiring larger doses for the same effect. Overdose can lead to nervous system shutdown, coma and death.

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 central nervous system. Large doses of morphine can produce higher tolerance levels, physiological dependency in users, and may lead to substance abuse. Morphine is excreted blized, and is also the major metabolic product of codeine and heroin. Morphine is dete the urine for several days after an opiate dose. The test for Morphine 2000 (OPI) of the SAFElife™ T-Cup Multi-Drug Urine Test Cup yields a positive result when the morphine in urine exceeds 2000 ng/ml.

# codone is known as Oxycontin and Roxicodone. It is an ingredient of Percodan, Percocet, Roxicet and

Tylox. Oxycodone is a semi-synthetic opiates derived from opium. Like other opiates, Oxycodone is characterized by its analgesic properties, and the tendency for users to form a physical dependency and develop tolerance with extended use. Oxycodone is usually administered in combination with non-opiate analgesics such as acetaminophen and salicylates for the relief of moderate to severe pain. Oxycodone is a central nervous system depressant that may cause drowsiness, dizziness, lethargy, weakness and confusion. Toxicity in an overdose of Oxycodone can lead to stupor, coma, muscle flaccidity, severe tory depression, hypotension, and cardiac arrest. Oxycodone is metabolized by N- and O demethylation. One of the metabolites, oxymorphone, is a potent narcotic analgesic, while the other, noroxycodone, is relatively inactive. Between 33 to 61% of a single dose of Oxycodone is excreted in a 24-nour urine collection and consists of 13-19% free Oxycodone, 7-29% glucuronide conjugated Oxycodone, 13-14% alucuronide conjugated oxymorphone and an unknown amount of noroxycodone. The detection time window of Oxycodone is 1-3 days following use.

# Phencyclidine (PCP)

nencyclidine is an arylcyclohexylamine that was originally used as an anesthetic agent and a veterinary tranquilizer. Phencyclidine can produce hallucinations, lethargy, disorientation, loss of coordination, trance-like ecstatic states, a sense of euphoria and visual distortions. It has many street names, such as "angel dust" and "crystal cyclone." etc. phencyclidine can be administered orally, by nasal ingestion, smoking, or by intravenous injection. It is metabolized in the liver and excreted through the kidneys in urine in unchanged form and oxidized metabolites with a half-life of about 12 hours. Suction and urinary

DRUG TEST: acidification in the treatment of overdose typically reduces its half-life from three days to one day.

# Pregabalin (PGB)

regabalin is an analogue of γ-aminobutyric acid (GABA), which is similar to gabapentin in structure and action, and has antiepileptic, analgesic and antianxiety activities. About 98% of pregabalin is recovered in the urine as the active drug after radiation labeling. Therefore, pregabalin abuse can be determined directly by measuring the amount of pregabalin in urine.

# Propoxyphene, a synthetic opiate agonist, is structurally similar to methadone. Propoxyphene is a narcotic

analgesic used to relieve mild to moderate pain. The principal metabolites are nordextropropoxyphene. oination usage of propoxyphene, aspirin, acetaminophen or other sedatives can lead cooperativ interaction. Abuse of propoxyphene can lead nausea, vomit, astriction, illusion, hallucination, hear poisoning, lung dropsy and even death. Propoxyphene is metabolized in the liver and excreted in urine as nordextropropoxyphene. Thus the presence of the propoxyphene or its metabolites in the urine indicates

# in urine mostly in the form of metabolites for up to ten days.

oids are hallucinogenic agents derived from the flowering portion of the hemp plant. The active ingredients in Cannabinoids, THC & Cannabinol can be metabolized and excreted as 11-nor-Δ9abinol-9-carboxylic acid with a half-life of 24 hours. They can be detected for 1 to 5 days after use. Smoking is the primary method of use of Cannabinoids/cannabis. Higher doses used by abusers produce central nervous system effects, altered mood and sensory perceptions, loss of coordination, impaired short-term memory, anxiety, paranoia, depression, confusion, hallucinations and increased her rate. A tolerance to the cardiac and psychotropic effects can occur, and withdrawal syndrome produces

TCA (Tricyclic Antidepressants) are commonly used for the treatment of depressive disorders. TCA

overdoses can result in profound central nervous system depression, cardiotoxicity and anticholineraic

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

Tramadol [2-(dimethylaminomethyl)-1-(3-methoxyphenyl) cyclohexanol] is used similarly to codeine to treat moderate to moderately severe pain. It is a synthetic analog of the phenanthrene alkaloid codeine to O-desmethyltramadol). Tramadol and its metabolites are excreted primarily in the urine with observed plasma half-lives of 6.3 and 7.4 hours for tramadal and Q-desmethyltramadal (denoted M1) respectively Approximately 30% of the dose is excreted in the urine as unchanged drug, whereas 60% of the dose is

Alcohol Test is intended for use to detect the presence of alcohol in urine greater than 0.04%. Alcohol intoxication can lead to loss of alertness, coma, death and as well as birth defects. The BAC at which a person becomes impaired is variable. The United States Department of Transportation (DOT) has established a BAC of 0.02% ( $0.02\,\text{g/dL}$ ) as the cut-off level at which an individual is considered positive for the presence of alcohol. Since the urine alcohol concentration is normally higher than that in saliva and od, the cutoff concentration for alcohol in urine was set at 0.04%. Normally, it will take at least 30 minutes for the alcohol to be detected in saliva, blood and urine after drinking.

 $The \; \mathsf{SAFE} \mathsf{life}^{\scriptscriptstyle\mathsf{TT}} \mathsf{T-Cup} \; \mathsf{Multi-Drug} \; \mathsf{Urine} \; \mathsf{Test} \; \mathsf{Cup} \; \mathsf{is} \; \mathsf{a} \; \mathsf{competitive} \; \mathsf{immunoassay} \; \mathsf{that} \; \mathsf{is} \; \mathsf{used} \; \mathsf{to} \; \mathsf{screen} \; \mathsf{for} \; \mathsf{the} \; \mathsf{undergoes} \; \mathsf{that} \; \mathsf{undergoes} \; \mathsf{undergoes} \; \mathsf{that} \; \mathsf{undergoes} \; \mathsf{undergoes} \; \mathsf{that} \; \mathsf{undergoes} \; \mathsf$ presence of drugs of abuse in urine. It is a chromatographic absorbent device in which drugs in a sample competitively combine to a limited number of drug monoclonal antibody (mouse) conjugate binding sites.

mmersed into urine specimen, the urine is absorbed into the device by capillary

action, mixes with the respective drug monoclonal antibody conjugate, and flows across the pre-coated membrane. When sample drug levels are zero or below the target cutoff (the detection sensitivity of the st), respective drug monoclonal antibody conjugate binds to the respective drug-protein immobilized in the Test Region (T) of the device. This produces a colored band in the Test Region (T) that.

respective drug monoclonal antibody conjugate preventing the respective drug monoclonal antibody conjugate from binding to the respective drug-protein conjugate immobilized in the Test Region (T) of the device. This prevents the development of a distinct colored band in the Test Region (T), indicating a potentially positive result.

mouse IaG polyclonal antibody immobilized in, if the test has been performed properly

Users should follow the appropriate federal, state, and local guidelines concerning the frequency of entrol materials. Even though there is an internal proced test device in the Control Region (C), the use of external controls is strongly recommended as good laboratory testing practice to confirm the test procedure and to verify proper test performance. Positive and negative controls should give the expected results. When testing the positive and negative controls the same assay procedure should be adopted. External Control (positive and negative) should be run with each new lot, each new shipment and each new operator to determine that tests are working properly

# ADULTERATION CONTROL:

PERFORMANCE CHARACTERISTICS

Creatinine (CR): Creatinine reacts with a creatinine indicator in an alkaline medium to form a purplish brown color complex if creatinine in the urine is present at the normal level. The color intensity is directly 20 mg/dL produces a very light, or no pad color change, which indicates adulteration in the form of

present in normal urine. The presence of glutaraldehyde in the urine specimen indicates the possibility of adulteration. However, false positive may result when ketone bodies are present in urine. Ketone bodies may appear in urine when a person is in ketoacidosis, starvation or other metabolic abnormalities

Glutaraldehyde (GL): Glutaraldehyde is not a natural component of human urine and it should not be

Nitrite (NI): Although nitrite is not a normal component of urine nitrite levels of up to 3.6 mg/dl may be

Oxidants/Bleach (OX): The presence of Bleach and other oxidizing reggents in the urine is indicative of

In this adulteration control, nitrite level above 15 ma/dL is considered abnormal.

Hydrogen Peroxide, Ferricyanide, Persulfate, Pyridinium Chlorochromate etc. pH (PH): Normal urine pH ranges from 4.5 to 8.0. Values below pH 4.0 or above pH 9.0 are indicative of

Specific Gravity (S.G.): The specific gravity test is based on the pKa change of certain pretreated polyelectrolytes in relation to the ionic concentration. The pad colors will change from dark blue to bluegreen in urine of low ionic concentration to green and yellow-green in urine of higher ionic concentration.

A urine specific gravity below 1.003 or above 1.025 is considered abnormal.

# 3920 (eighty of each drug) urine specimens were analyzed by GC-MS and by each corresponding drug test

Each test was read by three viewers. Samples were divided by concentration into five categories: Drug Free, Less than Half the Cutoff, Near Cutoff Negative, Near Cutoff Positive, and High Positive. Results were as

٥.										C	-	10	12	18		_
_			_							Viewer	+	0	0	0	17	- :
9	Resul	t	Drug	Less	Near	Near Cutoff	High	% Agreement with		Α	-	10	12	18	2	
١.			Free	than	Cutoff	Positive	Positive	GC/MS or LC/MS (95%CI)	EtG	Viewer	+	0	0	0	18	
				Half the	Negative	(Between	(Greate	(95%CI)	(500)	В	-	10	12	18	1	
				Cutoff	(Between	the cutoff	r than			Viewer	+	0	0	0	18	1
					50% below the	and 50%	50% above			С	-	10	12	18	1	
					cutoff and	above the cutoff)	the			Viewer	+	0	0	1	18	- 2
					the cutoff)	cutoni	cutoff)			Α	-	10	12	17	0	
$\dashv$	\ /:	Ι.	0	0	2	17		000 (07 00 00 (9))		Viewer	+	0	0	1	18	1
	Viewer A	+	10			17	21 0	95% (83.5% - 98.6%)	FTY	В	_	10	12	17	0	
H		+		15	13	2 18	21	95% (83.5% - 98.6%)		Viewer	+	0	0	1	18	1
	Viewer B	+	0 10	0	1 14	18	0	97.5% (87.1% - 99.6%)		С	-	10	12	17	0	
H		+	0	15 0	14	17	21	97.5% (87.1% - 99.6%) 95% (83.5% - 98.6%)		Viewer	+	0	0	2	1	1
	Viewer C	+			-					Α	-	50	0	1	1	
$\dashv$		+	10	15 0	14 2	29	0	97.5% (87.1% - 99.6%)		Viewer	+	0	0	1	2	1
	Viewer	+	10	17	11	0	11 0	100% (91.2% - 100%) 95% (83.5% - 98.6%)	GAB	В	-	50	0	2	0	
- 1	Α	-	0	0	1	29	11			Viewer	+	0	0	1	1	1
. I	Viewer B	+	_	17	12		0	100% (91.2% - 100%)		С	-	50	0	2	1	
'		-	10	0	1	0 29	11	97.5% (87.1% - 99.6%)		Viewer	+	0	0	2	18	
	Viewer C	+	0			0		100% (91.2% - 100%)		A	_	10	16	12	1	
$\dashv$		-	10	17	12		0	97.5% (87.1% - 99.6%)		Viewer	+	0	0	1	18	
	Viewer A	+	0	0	2	30	10	100% (91.2% - 100%)	нмо	В	-	10	16	13	1	
		+	10	17	11 1	0	0	95% (83.5% - 98.6%)		Viewer	+	0	0	2	17	
	Viewer B	+	0	0	<u> </u>	30	10	100% (91.2% - 100%)		С	-	10	16	12	2	_
'		-	10	17	12	0	0	97.5% (87.1% - 99.6%)		Viewer	+	0	0	1	18	1
	Viewer C	+	0 10	0 17	2 11	30 0	10	100% (91.2% - 100%)		A	-	10	12	17	0	
$\dashv$		+	0	0	1	11	29	95% (83.5% - 98.6%) 100% (84.5% - 100%)		Viewer	+	0	0	0	17	1
	Viewer A	+	10	18	11	0	0	97.5% (82% - 100%)	K2	В	-	10	12	18	1	
H	Viewer	+	0	0	2	11	29	100% (84.5% -100%)		Viewer	+	0	0	0	15	1
<sub>0)</sub>	B	т	10	18	10	0	0	95% (79.5% - 100%)		С	-	10	12	18	3	
"	Viewer	+	0	0	2	11	29	100% (84.5% -100%)		Viewer	+	0	0	0	17	:
	C	-	10	18	10	0	0	95% (79.5% - 100%)		Α	-	10	12	18	2	
$\dashv$	Viewer	+	0	0	2	20	20	100% (84.5% -100%)	KET	Viewer	+	0	0	1	18	:
	A	-	10	10	18	0	0	95% (79.5% - 100%)	(300)	В	-	10	12	17	1	
H	Viewer	+	0	0	2	20	20	100% (84.5% -100%)		Viewer	+	0	0	0	18	- :
	B	-	10	10	18	0	0	95% (79.5% - 100%)		С	-	10	12	18	1	
H	Viewer	+	0	0	2	20	20	100% (84.5% -100%)		Viewer	+	0	0	2	17	:
	C	<u> </u>	10	10	18	0	0	95% (79.5% - 100%)		Α	-	10	12	16	2	
$\dashv$	Viewer	+	0	0	1	16	24	100% (84.5% - 100%)	KET (1000)	Viewer	+	0	0	0	18	- :
	A	-	10	18	11	0	0	97.5% (82% - 100%)	(1000)	В	-	10	12	18	1	
	Viewer	+	0	0	1	16	24	100% (84.5% - 100%)		Viewer	+	0	0	0	18	- :
	В	-	10	18	11	0	0	97.5% (82% - 100%)		С	-	10	12	18	1	
ı	Viewer	+	0	0	2	16	24	100% (84.5% - 100%)		Viewer	+	0	0	2	20	2
	С	-	10	18	10	0	0	95% (79.5% - 100%)		Α	-	10	10	18	0	
	Viewer	+	0	0	1	16	24	100% (84.5% - 100%)	KRA	Viewer	+	0	0	1	20	2
	A	-	10	18	11	0	0	97.5% (82% - 100%)	(100)	В	-	10	10	19	0	
	Viewer	+	0	0	1	16	24	100% (84.5% - 100%)		Viewer	+	0	0	2	20	2
	В	-	10	18	11	0	0	97.5% (82% - 100%)		С	-	10	10	18	0	
- 1	Viewer	+	0	0	2	16	24	100% (84.5% - 100%)		Viewer	+	0	0	2	20	2
	С	-	10	18	10	0	0	95% (79.5% - 100%)		Α	-	10	10	18	0	
	Viewer	+	0	0	2	21	18	97.5% (91.2% - 100%)	KRA	Viewer	+	0	0	1	20	2
	Α	-	10	18	10	1	0	95.0% (83.5% - 98.6%)	(300)	В	-	10	10	19	0	
- 1	Viewer	+	0	0	1	20	18	95% (91.2% - 100%)		Viewer	+	0	0	2	20	2
	В	-	10	18	11	2	0	97.5% (87.1% - 99.6%)		С	-	10	10	18	0	
	Viewer	+	0	0	1	22	18	100% (91.2% - 100%)		Viewer	+	0	0	0	17	-
	С	-	10	18	11	0	0	95% (87.1% - 99.6%)		Α	-	10	12	18	2	
$\neg$	Viewer	+	0	0	2	22	18	100% (91.2% - 100%)	LSD	Viewer	+	0	0	1	18	
	Α	-	10	18	10	0	0	95.0% (83.5% - 98.6%)		В	-	10	12	17	1	
	Viewer	+	0	0	1	22	18	100% (91.2% - 100%)		Viewer	+	0	0	0	18	
	В	-	10	18	11	0	0	97.5% (87.1% - 99.6%)		C	-	10	12	18	1	<u> </u>
	Viewer	+	0	0	1	22	18	100% (91.2% - 100%)		Viewer	+	0	0	2	20	1 2
	С	-	10	18	11	0	0	95% (87.1% - 99.6%)	MDMA	A	-	10	10	18	0	<u> </u>
	Viewer	+	0	0	2	20	20	100% (84.5% -100%)		Viewer	+	0	0	2	20	1 2
						·				В	-	10	10	18	0	

# er + 0 0 2 21 19

_,								
P)	В	-	10	15	13	0	0	95% (83.5% - 98.6%)
(500)	Viewer	+	0	0	2	20	20	100% (91.2% - 100%)
	С	-	10	15	13	0	0	95% (83.5% - 98.6%)
	Viewer	+	0	0	1	20	20	100% (84.5% - 100%)
MET	A	-	10	16	13	0	0	97.5% (82% - 100%)
		_						
(mAM	Viewer	+	0	0	2	20	20	100% (84.5% - 100%)
P)	В	-	10	16	12	0	0	95% (79.5% - 100%)
(1000)	Viewer	+	0	0	2	20	20	100% (84.5% - 100%)
	С	-	10	16	12	0	0	95% (79.5% - 100%)
	Viewer	+	0	0	2	28	12	100% (91.2% - 100%)
	Α	-	10	16	12	0	0	95% (83.5% - 98.6%)
MOP1	Viewer	+	0	0	3	28	12	100% (91.2% - 100%)
00/0	В	_	10	16	11	0	0	92.5% (80.1% - 97.4%)
PI100		+	0	0	2	28	12	
	Viewer	-						100% (91.2% - 100%)
	С	-	10	16	12	0	0	95% (83.5% - 98.6%)
	Viewer	+	0	0	2	20	20	100% (84.5% - 100%)
MOD7	Α	-	10	19	9	0	0	95% (79.5% - 100%)
МОР3	Viewer	+	0	0	2	20	20	100% (84.5% - 100%)
00/0	В	-	10	19	9	0	0	95% (79.5% - 100%)
PI300	Viewer	+	0	0	1	20	20	100% (84.5% - 100%)
	C	Ė	10	19	10	0	0	97.5% (82% - 100%)
		-						
	Viewer	+	0	0	2	15	25	100% (91.2% - 100%)
	Α	-	10	13	15	0	0	95% (83.5% - 98.6%)
MTD	Viewer	+	0	0	2	15	25	100% (91.2% - 100%)
(200)	В	-	10	13	15	0	0	95% (83.5% - 98.6%)
	Viewer	+	0	0	1	15	25	100% (91.2% - 100%)
	C	-	10	13	16	0	0	97.5% (87.1% - 99.6)
	Viewer	+	0	0	1	19	21	100% (84.5% - 100%)
	ı	-	_					
	A	_	10	12	17	0	0	97.5% (82% - 100%)
MTD	Viewer	+	0	0	2	19	21	100% (84.5% - 100%)
(300)	В	-	10	12	16	0	0	95% (79.5% - 100%)
	Viewer	+	0	0	1	19	21	100% (84.5% - 100%)
	С	-	10	12	17	0	0	97.5% (82% - 100%)
	Viewer	+	0	0	2	29	10	97.5% (87.1% -99.6%)
	A	-						
		-	10	10	18	1	0	95% (83.5% - 98.6%)
MQL	Viewer	+	0	0	1	28	10	95% (83.5% - 98.6%)
	В	-	10	10	19	2	0	97.5% (87.1% - 99.6%)
	Viewer	+	0	0	2	29	10	97.5% (87.1% - 99.6%)
	С	-	10	10	18	1	0	95% (83.5% - 98.6%)
	Viewer	+	0	0	1	18	22	100% (84.5% - 100%)
	A	Ė	10		9	0		
		-		20			0	97.5% (82% - 100%)
OPI	Viewer	+	0	0	1	18	22	100% (84.5% - 100%)
	В	-	10	20	9	0	0	97.5% (82% - 100%)
	Viewer	+	0	0	1	18	22	100% (84.5% - 100%)
	С	-	10	20	9	0	0	97.5% (82% - 100%)
	Viewer	+	0	0	1	19	21	100% (84.5% - 100%)
	Α	-	10	20	9	0	0	97.5% (82% - 100%)
	Viewer	+	0	0	1	19	21	100% (84.5% - 100%)
OXY	B	-	10		9			
		-	_	20		0	0	97.5% (82% - 100%)
	Viewer	+	0	0	1	19	21	100% (84.5% - 100%)
	С	-	10	20	9	0	0	97.5% (82% - 100%)
	Viewer	+	0	0	1	18	22	100% (84.5% - 100%)
	Α	-	10	13	16	0	0	97.5% (82% - 100%)
000	Viewer	+	0	0	2	18	22	100% (84.5% - 100%)
PCP	В	-	10	13	15	0	0	95% (79.5% - 100%)
	Viewer	+	0	0	1	18	22	100% (84.5% - 100%)
	C	-	10	13	16	0	0	97.5% (82% - 100%)
		-	_		2			
	Viewer	+	0	0	2	17	22	97.5% (87.1%-99.6%)
	Α	-	10	12	16	1	0	95% (83.5%-98.6%)
PGB	Viewer	+	0	0	1	17	22	97.5% (87.1%-99.6%)
. 00	В	L- T	10	12	17	1	0	97.5% (87.1%-99.6%)
	Viewer	+	0	0	1	16	22	95% (83.5%-98.6%)
	С	-	10	12	17	2	0	97.5% (87.1%-99.6%)
	Viewer	+	0	0	2		20	100% (84.5% -100%)
	1	_				20		
	A	-	10	10	18	0	0	95% (79.5% - 100%)
PPX	Viewer	+	0	0	2	20	20	100% (84.5% -100%)
	В	-	10	10	18	0	0	95% (79.5% - 100%)
	Viewer	+	0	0	2	20	20	100% (84.5% -100%)
	С	-	10	10	18	0	0	95% (83.5% - 98.6%)
	Viewer	+	0	0	1	10	30	100% (84.5% - 100%)
	A	-	10	19	10	0	0	97.5% (82% - 100%)
	Viewer	+			2			
TCA		+	0	0		10	30	100% (84.5% - 100%)
	В	-	10	19	9	0	0	95% (79.5% - 100%)
	Viewer	+	0	0	1	10	30	100% (84.5% - 100%)
	С	-	10	19	10	0	0	97.5% (82% - 100%)
	Viewer	+	0	0	1	15	23	95% (83.5%-98.6%)
	Α	-	10	16	13	2	0	97.5% (87.1%-99.6%)
THC	Viewer	+	0	0	2	16	23	97.5% (87.1%-99.6%)
(15)	B	-	10	16	12	1		
(10)		-					0	95% (83.5%-98.6%)
	Viewer	+	0	0	2	16	23	97.5% (87.1%-99.6%)
	С	-	10	16	12	1	0	95% (83.5%-98.6%)
	Viewer	+	0	0	1	17	22	97.5% (84.5% - 100%)
	Α	-	10	12	17	1	0	97.5% (82% - 100%)
THC	Viewer	+	0	0	1	18	22	100% (84.5% - 100%)
	1	_						
		-	10	12	17	0	0	97.5% (82% - 100%)
(25)	В		0	0	1	18	22	100% (84.5% - 100%)
(25)	Viewer	+			17	0	0	97.5% (82% - 100%)
(25)	Viewer C	-	10	12				
(25)	Viewer			12 0	2	20	20	100% (91.2% - 100%)
(25)	Viewer C	-	10					
	Viewer C Viewer A	+	10 0 10	0 13	2 15	20 0	20 0	100% (91.2% - 100%) 95% (83.5% - 98.6%)
тнс	Viewer C Viewer	+	10 0 10 0	0 13 0	2 15 1	20 0 20	20 0 20	100% (91.2% - 100%) 95% (83.5% - 98.6%) 100% (91.2% - 100%)
	Viewer C Viewer A Viewer B	- + - +	10 0 10 0 10	0 13 0 13	2 15 1 16	20 0 20 0	20 0 20 0	100% (91.2% - 100%) 95% (83.5% - 98.6%) 100% (91.2% - 100%) 97.5% (87.1% - 99.6%)
тнс	Viewer C Viewer A Viewer B Viewer	+	10 0 10 0 10 0	0 13 0 13 0	2 15 1 16 2	20 0 20 0 20	20 0 20 0 20	100% (91.2% - 100%) 95% (83.5% - 98.6%) 100% (91.2% - 100%) 97.5% (87.1% - 99.6%) 100% (91.2% - 100%)
тнс	Viewer C Viewer A Viewer B Viewer C	- + - + - +	10 0 10 0 10 0 10	0 13 0 13 0 13	2 15 1 16 2 15	20 0 20 0 20 20 0	20 0 20 0 20 20	100% (91.2% - 100%) 95% (83.5% - 98.6%) 100% (91.2% - 100%) 97.5% (87.1% - 99.6%) 100% (91.2% - 100%) 95% (83.5% - 98.6%)
тнс	Viewer C Viewer A Viewer B Viewer C	- + - + - + - +	10 0 10 0 10 0 10 0	0 13 0 13 0 13 0	2 15 1 16 2 15 1	20 0 20 0 20 20 0	20 0 20 0 20 20 0 22	100% (91.2% - 100%) 95% (83.5% - 98.6%) 100% (91.2% - 100%) 97.5% (87.1% - 99.6%) 100% (91.2% - 100%) 95% (83.5% - 98.6%) 100% (84.5% - 100%)
тнс	Viewer C Viewer A Viewer B Viewer C	- + - + - +	10 0 10 0 10 0 10	0 13 0 13 0 13	2 15 1 16 2 15	20 0 20 0 20 20 0	20 0 20 0 20 20	100% (91.2% - 100%) 95% (83.5% - 98.6%) 100% (91.2% - 100%) 97.5% (87.1% - 99.6%) 100% (91.2% - 100%) 95% (83.5% - 98.6%)

When sample drug levels are at or above the target cutoff the free drug in the sample binds to the

o serve as a procedure control, a colored band will appear at the Control Region (C), where the Goat anti

QUALITY CONTROL popular pharmaceutical and recreational drug, but its current use is largely relegated to Africa, particularly

(100)	Α	-	10	20	8	0	0	95% (79.5% - 100%)
	Viewer	+	0	0	1	19	20	97.5% (84.5% - 100%)
	В	-	10	20	9	1	0	97.5% (79.5% - 100%)
	Viewer	+	0	0	1	18	20	95% (84.5% - 100%)
	С	-	10	20	9	2	0	97.5% (82% - 100%)
	Viewer	+	0	0	2	19	21	100% (84.5% - 100%)
	Α	-	10	20	8	0	0	95% (79.5% - 100%)
TRA	Viewer	+	0	0	2	19	21	100% (84.5% - 100%)
(200)	В	-	10	20	8	0	0	95% (79.5% - 100%)
	Viewer	+	0	0	1	19	21	100% (84.5% - 100%)
	С	-	10	20	9	0	0	97.5% (82% - 100%)
	Viewer	+	0	0	2	19	21	100% (84.5% - 100%)
	Α	-	10	20	8	0	0	95% (79.5% - 100%)
TRA	Viewer	+	0	0	1	19	20	97.5% (84.5% - 100%)
(1000)	В	-	10	20	9	1	0	97.5% (79.5% - 100%)
	Viewer	+	0	0	1	18	20	95% (84.5% - 100%)
	С	-	10	20	9	2	0	97.5% (82% - 100%)

# Precision and Sensitivity

To investigate the precision and sensitivity, each drug sample was analyzed at the follow concentrations: cutoff -100%, cutoff -75%, cutoff -50%, cutoff -25%, cutoff, cutoff +25%, cutoff +50%, cut +75% and the cutoff +100%. All concentrations were confirmed with GC-MS. The study was performed 2 r/day and lasted 25 days using three different lots of the corresponding drug test. Totally 3 operations

Drug Test	Approximate	Number of		Results	
	Concentration of Sample (ng/mL)	Determinations per Lot	Lot 1	egative/Positi	ive Lo
	0	50	50/0	50/0	50
	2.5	50	50/0	50/0	50
	5 7.5	50 50	50/0 47/3	50/0 48/2	50 47
6-MAM	10	50	4/46	5/45	6/
	12.5	50	3/47	2/48	2,
	15	50	0/50	0/50	0,
	17.5 20	50 50	0/50 0/50	0/50 0/50	0,
	0	50	50/0	50/0	50
	75	50	50/0	50/0	50
	150	50	50/0	50/0	50
AMP	225 300	50 50	50/0 5/45	50/0 5/45	50 4,
(300)	375	50	0/50	0/50	0,
	450	50	0/50	0/50	0,
	525	50	0/50	0/50	0,
	600	50	0/50	0/50	0,
	0 125	50 50	50/0 50/0	50/0 50/0	50
	250	50	50/0	50/0	50
AMD	375	50	50/0	50/0	50
MP 500)	500	50	6/44	7/43	6,
	625	50	0/50	0/50	0,
	750 875	50 50	0/50 0/50	0/50 0/50	0,
	1000	50	0/50	0/50	0,
	0	50	50/0	50/0	50
	250	50	50/0	50/0	50
	500 750	50 50	50/0 50/0	50/0 50/0	50 50
AMP	1000	50	5/45	6/44	6/
(1000)	1250	50	0/50	0/50	0,
	1500	50	0/50	0/50	0,
	1750	50	0/50	0/50	0,
	2000	50 50	0/50 50/0	0/50 50/0	0, 50
	75	50	50/0	50/0	50
	150	50	50/0	50/0	50
	225	50	50/0	50/0	50
BAR	300 375	50 50	5/45 0/50	5/45 0/50	6, 0,
	450	50	0/50	0/50	0,
BAR	525	50	0/50	0/50	0,
	600	50	0/50	0/50	0,
	0 1.25	50 50	50/0 50/0	50/0 50/0	50 50
	2.5	50	50/0	50/0	50
	3.75	50	50/0	50/0	50
BUP (5)	5.0	50	5/45	5/45	6,
	6.25	50	0/50	0/50	0,
	7.5 8.75	50 50	0/50 0/50	0/50 0/50	0,
	10	50	0/50	0/50	0,
	0	50	50/0	50/0	50
	2.5	50	50/0	50/0	50
	5.0	50	50/0	50/0	50
BUP (10)	7.5 10.0	50 50	50/0 5/45	50/0 5/45	50 6/
20. (10)	12.5	50	0/50	0/50	0,
	15.0	50	0/50	0/50	0,
	17.5	50	0/50	0/50	0,
	20.0	50 50	0/50 50/0	0/50 50/0	0, 50
	25	50	50/0	50/0	50
	50	50	50/0	50/0	50
	75	50	46/4	46/4	4
BZO (100)	100	50	4/46	4/46	4,
	125 150	50 50	3/47 0/50	3/47 0/50	0,
	175	50	0/50	0/50	0,
	200	50	0/50	0/50	0,
· · · · · · · · · · · · · · · · · · ·	0	50	50/0	50/0	50
	50	50	50/0	50/0	50
	100 150	50 50	50/0 50/0	50/0 50/0	50 50
BZO (200)	200	50	4/46	4/46	4,
	250	50	0/50	0/50	0,
	300	50	0/50	0/50	0,
	350	50	0/50	0/50	0,

					2 /22	
	400	50 50	0/50 50/0	0/50 50/0	0/50 50/0	Pento
	75	50	50/0	50/0	50/0	
	150 225	50 50	50/0 50/0	50/0 50/0	50/0 50/0	
BZO (300)	300	50	6/44	5/45	6/44	
	375 450	50 50	0/50 0/50	0/50 0/50	0/50 0/50	
	525	50	0/50	0/50	0/50	
	600	50 50	0/50 50/0	0/50 50/0	0/50 50/0	К2
	25	50	50/0	50/0	50/0	JWH-
	50 75	50 50	50/0 50/0	50/0 50/0	50/0 50/0	Butar
COC (100)	100	50	4/46	4/46	3/47	
	125 150	50 50	0/50 0/50	0/50 0/50	0/50 0/50	
	175	50	0/50	0/50	0/50	
	200	50 50	0/50 50/0	0/50 50/0	0/50 50/0	
	37.5	50	50/0	50/0	50/0	KET (3
	75 112.5	50 50	50/0 50/0	50/0 50/0	50/0 50/0	
COC (150)	150	50	7/43	6/44	7/43	
	187.5 225	50 50	0/50 0/50	0/50 0/50	0/50 0/50	
	262.5	50	0/50	0/50	0/50	
	300	50 50	0/50 50/0	0/50 50/0	0/50 50/0	
	75	50	50/0	50/0	50/0	KET (1
	150 225	50 50	50/0 50/0	50/0 50/0	50/0 50/0	
COC (300)	300	50	6/44	5/45	5/45	
-	375 450	50 50	0/50 0/50	0/50 0/50	0/50 0/50	-
	525	50	0/50	0/50	0/50	
	600	50 50	0/50 50/0	0/50 50/0	0/50 50/0	
	50	50	50/0	50/0	50/0	KRA
	100 150	50 50	50/0 48/2	50/0 49/1	50/0 47/3	
COT (200)	200	50	6/44	4/46	5/45	
	250 300	50 50	4/46 0/50	3/47 0/50	2/48 0/50	
	350	50	0/50	0/50	0/50	
	400	50 50	0/50 50/0	0/50 50/0	0/50 50/0	
	25 50	50 50	50/0 50/0	50/0 50/0	50/0 50/0	KRA
	75	50	48/2	46/4	47/3	
EDDP (100) 100 50 6/44 5/45 125 50 2/48 3/47	1	5/45 5/45				
	150	50	0/50	0/50	0/50	
	175 200	50 50	0/50 0/50	0/50 0/50	0/50 0/50	
	0	50	50/0	50/0	50/0	
	75 150	50 50	50/0 50/0	50/0 50/0	50/0 50/0	LSD
	225	50	50/0	50/0	50/0	
EDDP (300)	300 375	50 50	6/44 0/50	5/45 0/50	6/44 0/50	
	450	50	0/50	0/50	0/50	
	525 600	50 50	0/50 0/50	0/50 0/50	0/50 0/50	
	0	50	50/0	50/0	50/0	MET
	75 150	50 50	50/0 50/0	50/0 50/0	50/0 50/0	(mAN (300)
T. 0 (700)	225	50	50/0	50/0	50/0	
EtG (300)	300 375	50 50	5/45 0/50	4/46 0/50	5/45 0/50	
	450	50	0/50	0/50	0/50	
	525 600	50 50	0/50 0/50	0/50 0/50	0/50 0/50	
	0 125	50 50	50/0 50/0	50/0 50/0	50/0 50/0	MET (mAN
	250	50	50/0	50/0	50/0	(500)
EtG (500)	375 500	50 50	50/0 5/45	50/0 4/46	50/0 5/45	
	625	50	0/50	0/50	0/50	
	750 875	50 50	0/50 0/50	0/50 0/50	0/50 0/50	
	1000	50	0/50	0/50	0/50	
	5	50 50	50/0 50/0	50/0 50/0	50/0 50/0	MET (mAN
	10	50	50/0	50/0	50/0	(100)
FTY	15 20	50 50	50/0 4/46	50/0 5/45	50/0 5/45	
	25 30	50 50	0/50 0/50	0/50 0/50	0/50 0/50	
	35	50	0/50	0/50	0/50	
	40 0	50 50	0/50 50/0	0/50 50/0	0/50 50/0	
	500	50	50/0	50/0	50/0	MDN
	1000 1500	50 50	50/0 42/8	50/0 41/9	50/0 44/6	
GAB	2000	50	26/24	23/27	28/22	
	2500 3000	50 50	3/47 0/50	2/48 0/50	4/46 0/50	-
	3500	50	0/50	0/50	0/50	
	4000	50 50	0/50 50/0	0/50 50/0	0/50 50/0	
	75	50	50/0	50/0	50/0	MOF
	150 225	50 50	50/0 47/3	50/0 48/2	50/0 47/3	
НМО	300	50	5/45	3/47	4/46	
НМО	375	50 50	3/47 0/50	2/48	2/48	
		DU.	1 0/50	0/50	0/50	
	450 525	50	0/50	0/50	0/50	
K2				0/50 0/50 50/0	0/50 0/50 50/0	МОР

ntanoic Acid	25.0	50	50/0	50/0	50/0	1 -
itanole Acia	37.5	50	50/0	50/0	50/0	
	50.0	50	5/45	6/44	5/45	
	62.5 75.0	50 50	0/50 0/50	0/50 0/50	0/50 0/50	-
	87.5	50	0/50	0/50	0/50	
	100.0	50 50	0/50 50/0	0/50 50/0	0/50 50/0	
	12.5	50	50/0	50/0	50/0	мт
	25.0	50	50/0	50/0	50/0	
H-073	37.5	50 50	50/0 5/45	50/0	50/0 5/45	
anoic Acid	50.0 62.5	50	0/50	6/44 0/50	0/50	
	75.0	50	0/50	0/50	0/50	
	87.5 100.0	50 50	0/50 0/50	0/50 0/50	0/50 0/50	
	0	50	50/0	50/0	50/0	
	75	50	50/0	50/0	50/0	МТ
	150 225	50 50	50/0 48/2	50/0 47/3	50/0 47/3	
(300)	300	50	5/45	5/45	5/45	
	375	50	2/48	1/49	3/47	
	450 525	50 50	0/50 0/50	0/50 0/50	0/50 0/50	
	600	50	0/50	0/50	0/50	
	0	50	50/0	50/0	50/0	
	250 500	50 50	50/0 50/0	50/0 50/0	50/0 50/0	MG
	750	50	47/3	48/2	47/3	
(1000)	1000 1250	50 50	5/45 2/48	4/46 2/48	5/45 3/47	
	1500	50	0/50	0/50	0/50	
	1750	50	0/50	0/50	0/50	
	2000	50 50	0/50 50/0	0/50 50/0	0/50 50/0	
	25	50	50/0	50/0	50/0	ОР
	50	50	50/0	50/0	50/0	
A (100)	75 100	50 50	50/0 3/47	50/0 2/48	50/0 5/45	
1 (100)	125	50	0/50	0/50	0/50	
	150	50	0/50	0/50	0/50	
	175 200	50 50	0/50 0/50	0/50 0/50	0/50 0/50	
	0	50	50/0	50/0	50/0	
	75 150	50 50	50/0 50/0	50/0 50/0	50/0 50/0	OX
	225	50	50/0	50/0	50/0	
A (300)	300	50	3/47	5/45	4/46	
	375 450	50 50	0/50 0/50	0/50 0/50	0/50 0/50	
	525	50	0/50	0/50	0/50	
	600	50	0/50	0/50	0/50	
	<u> </u>	50 50	50/0 50/0	50/0 50/0	50/0 50/0	PC
	10	50	50/0	50/0	50/0	
	15	50	40/10	45/5	42/8	
,	20 25	50 50	25/25 5/45	23/27 8/42	27/23 6/44	
	30	50	0/50	0/50	0/50	
	35 40	50 50	0/50 0/50	0/50 0/50	0/50 0/50	
	0	50	50/0	50/0	50/0	
	75	50	50/0	50/0	50/0	PG
Т	150 225	50 50	50/0 50/0	50/0 50/0	50/0 50/0	
MP)	300	50	3/47	5/45	4/46	
0)	375 450	50 50	0/50 0/50	0/50 0/50	0/50 0/50	
	525	50	0/50	0/50	0/50	
	600	50	0/50	0/50	0/50	
	0 125	50 50	50/0 50/0	50/0 50/0	50/0 50/0	PP)
	250	50	50/0	50/0	50/0	'''
Γ	375	50	50/0	50/0	50/0	
AMP) 0)	500 625	50 50	5/45 0/50	4/46 0/50	4/46 0/50	
	750	50	0/50	0/50	0/50	
	875 1000	50 50	0/50 0/50	0/50 0/50	0/50 0/50	
	0	50	50/0	50/0	50/0	
	250	50	50/0	50/0	50/0	TC
г	500 750	50 50	50/0 50/0	50/0 50/0	50/0 50/0	
ı AMP)	1000	50	5/45	6/44	4/46	
00)	1250	50	0/50	0/50	0/50	
	1500 1750	50 50	0/50 0/50	0/50 0/50	0/50 0/50	
	2000	50	0/50	0/50	0/50	
	0	50	50/0	50/0	50/0	
	125 250	50 50	50/0 50/0	50/0 50/0	50/0 50/0	THO
	375	50	50/0	50/0	50/0	
MA	500	50	7/43	6/44	5/45	
	625 750	50 50	0/50 0/50	0/50 0/50	0/50 0/50	
	875	50	0/50	0/50	0/50	
	1000 0	50 50	0/50 50/0	0/50 50/0	0/50 50/0	
	25	50	50/0	50/0	50/0	THO
	50	50	50/0	50/0	50/0	
P100/OPI100	75 100	50 50	50/0 4/46	50/0 4/46	50/0 5/45	
55, 571100	125	50	0/50	0/50	0/50	L
	150	50	0/50	0/50	0/50	
	175 200	50 50	0/50 0/50	0/50 0/50	0/50 0/50	
	0	50	50/0	50/0	50/0	THO
	75	50	50/0	50/0	50/0	

MOP300/OPI300

	375	50	0/50	0/50	0/50
	450	50	0/50	0/50	0/50
	525	50	0/50	0/50	0/50
	600	50 50	0/50 50/0	0/50 50/0	0/50 50/0
	50	50	50/0	50/0	50/0
	100	50	50/0	50/0	50/0
MTD (200)	150 200	50 50	50/0 5/45	50/0 6/44	50/0 4/46
MTD (200)	250	50	0/50	0/50	0/50
	300	50	0/50	0/50	0/50
	350	50	0/50	0/50	0/50
	400	50 50	0/50 50/0	0/50 50/0	0/50 50/0
	75	50	50/0	50/0	50/0
	150	50	50/0	50/0	50/0
MTD (300)	225 300	50 50	50/0 5/45	50/0 7/43	50/0 5/45
1110 (300)	375	50	0/50	0/50	0/50
	450	50	0/50	0/50	0/50
	525	50	0/50	0/50	0/50
	600	50 50	0/50 50/0	0/50 50/0	0/50 50/0
	75	50	50/0	50/0	50/0
	150	50	50/0	50/0	50/0
MOI	225	50	48/2	49/1	47/3
MQL	300 375	50 50	6/44	4/46 3/47	5/45 2/48
	450	50	0/50	0/50	0/50
	525	50	0/50	0/50	0/50
	600	50 50	0/50 50/0	0/50	0/50 50/0
	500	50 50	50/0	50/0 50/0	50/0
	1000	50	50/0	50/0	50/0
	1500	50	50/0	50/0	50/0
OPI	2000	50 50	5/45 0/50	5/45 0/50	6/44 0/50
	2500 3000	50 50	0/50	0/50	0/50 0/50
	3500	50	0/50	0/50	0/50
	4000	50	0/50	0/50	0/50
	0 25	50 50	50/0 50/0	50/0 50/0	50/0 50/0
	50	50 50	50/0	50/0 50/0	50/0
	75	50	50/0	50/0	50/0
OXY	100	50	4/46	4/46	5/45
	125 150	50	0/50 0/50	0/50 0/50	0/50
	175	50 50	0/50	0/50	0/50 0/50
	200	50	0/50	0/50	0/50
	0	50	50/0	50/0	50/0
	6.25 12.5	50 50	50/0 50/0	50/0 50/0	50/0 50/0
	18.75	50	50/0	50/0	50/0
PCP	25	50	6/44	4/46	5/45
	31.25	50	0/50	0/50	0/50
	37.5 43.75	50 50	0/50 0/50	0/50 0/50	0/50 0/50
	50	50	0/50	0/50	0/50
	0	50	50/0	50/0	50/0
	125	50	50/0	50/0	50/0
	250 375	50 50	50/0 46/4	50/0 48/2	50/0 46/4
PGB	500	50	4/46	5/45	5/45
	625	50	3/47	2/48	4/46
	750	50	0/50	0/50	0/50
	875 1000	50 50	0/50 0/50	0/50 0/50	0/50 0/50
	0	50	50/0	50/0	50/0
	75	50	50/0	50/0	50/0
	150 225	50	50/0	50/0	50/0
PPX	300	50 50	50/0 6/44	50/0 5/45	50/0 5/45
	375	50	0/50	0/50	0/50
	450	50	0/50	0/50	0/50
	525 600	50 50	0/50 0/50	0/50 0/50	0/50 0/50
	0	50	50/0	50/0	50/0
	250	50	50/0	50/0	50/0
	500	50	50/0	50/0	50/0
TCA	750 1000	50 50	50/0 6/44	50/0 5/45	50/0 4/46
	1250	50	0/50	0/50	0/50
	1500	50	0/50	0/50	0/50
	1750	50	0/50	0/50	0/50
	2000	50 50	0/50 50/0	0/50 50/0	0/50 50/0
	3.75	50	50/0	50/0	50/0
	7.5	50	50/0	50/0	50/0
TUC (25)	11.25	50	44/6	49/1	43/7
THC (15)	15 18.75	50 50	21/29 2/48	24/26 2/48	23/27 1/49
	22.5	50	0/50	0/50	0/50
	26.25	50	0/50	0/50	0/50
	30	50	0/50	0/50	0/50
	0 6.25	50 50	50/0 50/0	50/0 50/0	50/0 50/0
	12.5	50	50/0	50/0	50/0
	18.75	50	50/0	48/2	47/3
THC (25)	25	50	5/45	5/45	3/47
	31.25	50	2/48	3/47	1/49
	37.5 43.75	50 50	0/50 0/50	0/50 0/50	0/50 0/50
	50	50	0/50	0/50	0/50
	0	50	50/0	50/0	50/0
	10	50	50/0	50/0	50/0
	20 30	50 50	50/0 50/0	50/0 50/0	50/0 50/0
		50	30/0		/-
THC (40)	40	50	5/45	5/45	3/47

	80	50	0/50	0/50	0/5
	0	50	50/0	50/0	50/
	12.5	50	50/0	50/0	50/
	25.0	50	50/0	50/0	50/
	37.5	50	50/0	50/0	50/
THC (50)	50.0	50	4/46	4/46	5/4
	62.5	50	0/50	0/50	0/5
	75.0	50	0/50	0/50	0/5
	87.5	50	0/50	0/50	0/5
	100.0	50	0/50	0/50	0/5
	0	50	50/0	50/0	50/
	25	50	50/0	50/0	50/
	50	50	50/0	50/0	50/
	75	50	48/2	49/1	47/
TRA (100)	100	50	4/46	5/45	5/4
	125	50	1/49	4/46	3/4
	150	50	0/50	0/50	0/5
	175	50	0/50	0/50	0/5
	200	50	0/50	0/50	0/5
	0	50	50/0	50/0	50/
	50	50	50/0	50/0	50/
	100	50	50/0	50/0	50/
	150	50	50/0	50/0	50/
TRA (200)	200	50	4/46	6/44	5/4
	250	50	0/50	0/50	0/5
	300	50	0/50	0/50	0/5
75.0 50 60 87.5 50 60 87.5 50 60 87.5 50 60 100.0 50 60 25 50 50 50 75 50 100 50 125 50 150 50 150 50 175 50 150 50 175 50 150 50 175 50 175 50 175 50 175 50 175 50 175 50 175 50 175 50 175 50 177 50 50	350	50	0/50	0/50	0/5
	0/50	0/50	0/5		
	0	50	50/0	50/0	50/
	250	50	50/0	50/0	50/
	500	50	50/0	50/0	50/
	750	50	50/0	49/1	49/
TRA (1000)	1000	50	4/46	5/45	5/4
	1250	50	2/48	3/47	2/4
	1500	50	0/50	0/50	0/5
	1750	50	0/50	0/50	0/5
	2000	50	0/50	0/50	0/5

# Specificity and Cross Reactivity

To test the specificity of the test, the test device was used to test various drugs, drug metabolites and oth components of the same class that are likely to be present in urine. All the components were added drug-free normal human urine. The following structurally related compounds produced positive results w the test when tested at levels equal to or greater than the concentrations listed below.

						(I IDA)
Items	Concentration (ng/mL)	Items	Concentratio n (ng/mL)	Clobazam	50	3,4- Methylenedioxyethylamphetamin e (MDEA)
6-Monoacetylmorphine (6-MAM)		JWH-073 3-Hydroxybutyl metabolite	1,000	Clonazepam	800	Morphine (MOP100/OPI100)
		JWH-073 3-Hydroxybutyl		Clorazepate dipotassium	75	Morphine
6-Monoacetylmorphine	10	metabolite-D5 (indole-D5)	1,000	Delorazepam	500	Codeine
Codeine	10,000	JWH-019 6-hydroxypentyl	1,000	Desalkylflurazepam	150	Ethyl Morphine
Ethyl morphine	>100,000	JWH-122 N-4-hydroxypentyl	2,000	Diazepam	75	Hydrocodone
Hydrocodone	1,0000	JWH-210 5-Hydroxypentyl		Estazolam	800	Hydromorphone
riyarocodone	1,0000	metabolite	5,000	Flunitrazepam	1,800	Levorphanol
Naltrexone	10,000	AM2201 4-Hydroxypentyl		D,L-Lorazepam	>100,000	6-Monoacetylmorphine
	,	metabolite	1,000	Midazolam	4,200	Morphine 3-β-D-glucuronide
Naloxone	1,0000	Ketamine (KET300)		Nitrazepam	3,000	Norcodeine
Thebaine	1,00000	Ketamine	300	Norchlordiazepoxide	75	Normorphine
Pholcodine	>100,000	Methadone	15,000	Nordiazepam	300	Oxycodone
Oxycodone	>10,0000	Pethidine	3,750	Temazepam	150	Oxymorphone
Hydromorphone	10000	Methylamphetamine	3,750	Trazolam	800	Procaine
Levorphanol	>10,0000	Methoxyphenamine	3,750	Demoxepam	1,500	Thebaine
morphine	50,000	Promethazine	7,500	Flurazepam	400	Morphine (MOP300/OPI300)
Amphetamine (AMP300)	00,000	Phencyclidine	7,500	Benzodiazepines (BZO200)	1.00	Morphine
d-Amphetamine	300	Ketamine (KET1000)	7,500	Oxazepam	200	Codeine
I-Amphetamine	17,500	Ketamine	1,000	Alprazolam	50	Ethyl Morphine
d,I-Amphetamine	850	Methadone	50,000	a-Hydroxyalprazolam	500	Heroin
(+/-) 3,4-	650	Metriddorie	30,000	Bromazepam	500	Hydrocodone
methylenedioxyamphetamine (MDA)	1,000	Pethidine	12,500	Chlordiazepoxide	800	Hydromorphone
Phentermine	1,000	Methylamphetamine	12,500	Clobazam	50	Morphine-3-β-d-glucuronide
	100,000		12,500			
β-Phenylethylamine	100,000	Methoxyphenamine Promethazine	25,000	Claraca at a dia at acciona	>100,000	6-Monoacetylmorphine
Tyramine				Clorazepate dipotassium	50	Normorphine
p-Hydroxynorephedrine	100,000	Phencyclidine (KDA100)	25,000	Delorazepam	500	Oxycodone
Phenylpropanolamine (1)	>100,000	Kratom (KRA100)	100	Desalkylflurazepam	200	Oxymorphone
(±)Phenylpropanolamine	>100,000	Mitragynine	100	Diazepam	50	Thebaine
p-Hydroxyamphetamine	100,000	7-Hydroxymitragynine	5,000	Estazolam	1,000	Methadone (MTD200)
d,l-Norephedrine	100,000	Kratom (KRA300)		Flunitrazepam	200	Methadone
d-Methamphetamine	>100,000	Mitragynine	300	D,L-Lorazepam	800	Doxylamine
I-Methamphetamine	>100,000	7-Hydroxymitragynine	600	Midazolam	5,000	Methadone (MTD300)
(+/-) 3,4-	100.000			Nitrazepam	50	Methadone
Methylenedioxyethylamphetamine	>100,000	Lysergic acid diethylamide (LSD)		Norchlordiazepoxide	100	Doxylamine
(MDEA)				Nordiazepam	200	Methaqualone (MQL)
(+/-)3,4-	×100.000	longuesia annial alinghodanasiala	20	Temazepam	50	Methaqualone
Methylenedioxymethamphetamine (MDMA)	>100,000	Lysergic acid diethylamide	20	Triazolam	500	Opiate (OPI)
Benzphetamine	>100,000	Fentanyl citrate	5	Benzodiazepines (BZO300)		Morphine
Ephedrine	>100,000	Haloperidol	200	Oxazepam	300	Codeine
•	-		1,000	Alprazolam	200	Ethyl Morphine
I-Ephedrine	>100,000	Paliperidone		a-Hydroxyalprazolam	1,500	Heroin
I-Epinephrine	>100,000	Risperidone	5,000	Bromazepam	1,500	Hydrocodone
d,I-Epinephrine	>100,000	Phenibut	10,000	Chlordiazepoxide	1,500	Hydromorphone
Amphetamine (AMP500)		Orthoxine	10,000	Clobazam	100	Levorphanol
d-Amphetamine	500	Methamphetamine		Clonazepam	>100,000	6-Monoacetylmorphine
L A control of control	25.000	(MET300/mAMP300)	700	Clorazepate dipotassium	200	Morphine 3-β-D-glucuronide
I-Amphetamine	25,000	D(+)-Methamphetamine	300	Delorazepam	1,500	Norcodeine
d,l-Amphetamine	1,500	D-Amphetamine	40,000	Desalkylflurazepam	400	Normorphine
(+/-) 3,4-	2,500	Chloroquine	8,000	Diazepam	200	Oxycodone
methylenedioxyamphetamine (MDA)		(r/) Falsadia		Estazolam	2,500	Oxymorphone
Phentermine	1,500	(+/-)-Ephedrine	20,000	Flunitrazepam	400	Procaine
Hydroxyamphetamine	8,000	(-)-Methamphetamine	8,000	D,L-Lorazepam	1500	Thebaine
d Mathematical	. 100 000	(+/-) 3,4-	000	Midazolam	12,500	Oxycodone (OXY)
d-Methamphetamine	>100,000	Methylenedioxymethamphetamin	800	Nitrazepam	100	Oxycodone
L Marthau and a transfer	. 100 000	e (MDMA)	10.000	Norchlordiazepoxide	200	Dihydrocodeine
I-Methamphetamine	>100,000	β-Phenylethylamine	10,000	Nordiazepam	400	Codeine
(+/-) 3,4-	. 100 000	The other bases and the	7.000	Temazepam	100	Hydromorphone
Methylenedioxyethylamphetamine	>100,000	Trimethobenzamide	3,000	Triazolam	2,500	Morphine
(MDEA)					2,500	
(+/-) 3,4-	>100,000	Methamphetamine		Buprenorphine (BUP5)	-	Acetylmorphine
Methylenedioxymethamphetamine	>100,000	(MET500/mAMP500)		Buprenorphine	5 10	Buprenorphine
					1.1(1)	Ethylmorphine
(MDMA)	>100,000	D(+)-Mothamphetamine	500	Buprenorphine -3-D-Glucuronide		
Ephedrine Amphetamine (AMP1000)	>100,000	D(+)-Methamphetamine D-Amphetamine	500 25,000	Norbuprenorphine	15	Phencyclidine (PCP)

d-Amphetamine	1,000	L-Amphetamine
d,l-Amphetamine	3,000	Chloroquine
I-Amphetamine	50,000	(+/-)-Ephedrine
(+/-)3,4- methylenedioxyamphetamine (MDA)	5,000	d,l-Methamphe
Phentermine	3,000	L-Methamphet
Phenylpropanolamine	3,000	(+/-) 3,4- Methylenedioxy e (MDEA)
d-methamphetamine	>100,000	(+/-) 3,4- Methylenedioxy (MDA)
l-methamphetamine	>100,000	(+/-) 3,4- Methylenedioxy e (MDMA)
3,4- Methylenedioxyethylamphetamine (MDEA)	100,000	β-Phenylethyla
(+/-) 3,4- Methylenedioxymethamphetamine (MDMA)	100,000	Trimethobenzar
Barbiturates (BAR300)		d,I-Amphetami
Secobarbital	300	p-Hydroxymeth
Amobarbital	300	Mephentermine
Alphenol	150	(1R,2S)-(-)-Ephe
Aprobarbital	200	I-Phenylephrine
Butabarbital	75	Methamphetan (MET1000/mAM
Butathal	100	D(+)-Methamph
Butalbital	2,500	D-Amphetamin
Cyclopentobarbital	600	Chloroquine
Pentobarbital	300	(+/-)-Ephedrine
Phenobarbital	100	(-)-Methamphe
Benzodiazepines (BZO100)		(+/-)3,4- methylenedioxy e (MDMA)
Oxazepam	100	β-Phenylethyla
Alprazolam	75	Trimethobenzar
a-Hydroxyalprazolam	500	Methylenedioxy e (MDMA)
Bromazepam	400	3,4- Methylenedioxy e (MDMA)

Benzodiazepines (BZO100)		(+/-)3,4- methylenedioxymethamphetamin e (MDMA)	2,000
Oxazepam	100	β-Phenylethylamine	50,000
Alprazolam a-Hydroxyalprazolam	75 500	Trimethobenzamide  Methylenedioxymethamphetamin e (MDMA)	10,000
Bromazepam	400	3,4- Methylenedioxymethamphetamin e (MDMA)	500
Chlordiazepoxide	500	3,4-Methylenedioxyamphetamine (MDA)	3,000
Clobazam	50	3,4- Methylenedioxyethylamphetamin e (MDEA)	300
Clonazepam	800	Morphine (MOP100/OPI100)	
Clorazepate dipotassium	75	Morphine	100
Delorazepam	500	Codeine	100
Desalkylflurazepam	150	Ethyl Morphine	200
Diazepam	75	Hydrocodone	400
Estazolam Flunitrazepam	1,800	Hydromorphone Levorphanol	2,000 5,000
D,L-Lorazepam	>100,000	6-Monoacetylmorphine	200
Midazolam	4,200	Morphine 3-β-D-glucuronide	200
Nitrazepam	3,000	Norcodeine	500
Norchlordiazepoxide	75	Normorphine	5,000
Nordiazepam	300	Oxycodone	1000
Temazepam	150	Oxymorphone	10,000
Trazolam	800	Procaine	100,000
Demoxepam	1,500	Thebaine	5,000
Flurazepam	400	Morphine (MOP300/OPI300)	
Benzodiazepines (BZO200)		Morphine	300
Oxazepam	200	Codeine	300
Alprazolam	50	Ethyl Morphine	300
a-Hydroxyalprazolam	500	Heroin	300
Bromazepam Chlanding a puid a	500 800	Hydrocodone	5,000
Chlordiazepoxide Clobazam	50	Hydromorphone Morphine-3-β-d-glucuronide	1,000
Clonazepam	>100,000	6-Monoacetylmorphine	400
Clorazepate dipotassium	50	Normorphine	10,000
Delorazepam	500	Oxycodone	25,000
Desalkylflurazepam	200	Oxymorphone	10,000
Diazepam	50	Thebaine	30,000
Estazolam	1,000	Methadone (MTD200)	
Flunitrazepam	200	Methadone	200
D,L-Lorazepam	800	Doxylamine	40,000
Midazolam	5,000	Methadone (MTD300)	
Nitrazepam	50	Methadone	300
Norchlordiazepoxide	100	Doxylamine	50,000
Nordiazepam	200	Methaqualone (MQL)	700
Temazepam Triazolam	500	Methaqualone Opiate (OPI)	300
Benzodiazepines (BZO300)	1500	Morphine	2,000
Oxazepam	300	Codeine	2,000
Alprazolam	200	Ethyl Morphine	5,000
a-Hydroxyalprazolam	1,500	Heroin	2,000
Bromazepam	1,500	Hydrocodone	12,500
Chlordiazepoxide	1,500	Hydromorphone	5,000
Clobazam	100	Levorphanol	75,000
Clonazepam	>100,000	6-Monoacetylmorphine	5,000
Clorazepate dipotassium	200	Morphine 3-β-D-glucuronide	2,000
Delorazepam	1,500	Norcodeine	12,500
Desalkylflurazepam	400	Normorphine	50,000
Diazepam	200	Oxycodone	25,000
Estazolam	2,500	Oxymorphone	25,000
Flunitrazepam	400	Procaine	150,000
D,L-Lorazepam Midazolam	1500 12,500	Thebaine Oxycodone (OXY)	100,000
	100	Oxycodone (OXY) Oxycodone	100
Nitrazepam  Norchlordiazepoxide	200	Dihydrocodeine	20,000
Nordiazepam	400	Codeine	100,000
		Hydromorphone	100,000
Temazepam	100		
Temazepam Triazolam	2.500		>100.00
Temazepam Triazolam Buprenorphine (BUP5)	2,500	Morphine Acetylmorphine	>100,00
Triazolam	_	Morphine	
Triazolam Buprenorphine (BUP5)	2,500	Morphine Acetylmorphine	>100,00

37,500	Norbuprenorphine 3-D-Glucuronide	100	Phencyclidine	25
10,000	Buprenorphine (BUP10)		4-Hydroxyphencyclidine	12,500
25,000	Buprenorphine	10	Pregabalin (PGB)	
500	Buprenorphine -3-D-Glucuronide	15	Pregabalin	500
	Norbuprenorphine	20	Vigabatrin	>100,000
10,000	Norbuprenorphine 3-D-Glucuronide	200	Gabapentin	>100,000
500	Cocaine (COC100)	100	Phenibut (PDV)	100,000
300	Benzoylecgonine	100	Propoxyphene (PPX)	700
	Cocaine	250	d-Propoxyphene	300
500	Cocaethylene Ecgonine	4,000	d-Norpropoxyphene	300
	Cocaine (COC150)	10,000	Nortriptyline (TCA) Nortriptyline	1,000
	Benzoylecgonine	150	Nordoxepin	1,000
1,000	Cocaine	375	Trimipramine	3,000
	Cocaethylene	6,250	Amitriptyline	1,500
25,000	Ecgonine	16,000	Promazine	1,500
	Norcocaine	50,000	Desipramine	200
	Cocaine (COC300)	30,000	Imipramine	400
5,000	Benzoylecgonine	300	Clomipramine	12,500
	Cocaine	750	Doxepin	2,000
75,000	Cocaethylene	12,500	Maprotiline	2,000
15,000	Ecgonine	32,000	Promethazine	25,000
25,000	Cotinine (COT)	,	Cannabinoids (THC15)	
50,000	Cotinine	200	11-nor-Δ9-THC-9-COOH	15
100,000	EDDDIOG		11-hydroxy-Δ9-	25.000
	EDDP100		Tetrahydrocannabinol	25,000
	2-ethylidene-1,5-dimethyl-3,3-	100	Δ8-Tetrahydrocannabinol	25,000
1,000	diphenylpyrrolidine		ŕ	
50,000	Methadone	100,000	Δ9-Tetrahydrocannabinol	25,000
50,000	EMDP	100,000	Cannabinol	25,000
50,000	EDDP300		Cannabidiol	50,000
25,000	2-ethylidene-1,5-dimethyl-3,3-	300	Cannabinoids (THC25)	
2000	diphenylpyrrolidine  Methadone	300,000	11-nor-Δ9-THC-9-COOH	25
2,000	EMDP	300,000	11-nor-Δ9-THC-9-COOH	15
50,000	EMDP	300,000	11-hydroxy-Δ9-	15
10,000	Ethyl Glucuronide (EtG300)		Tetrahydrocannabinol	1,250
10,000	Ethyl Glucuronide	300	Δ8-Tetrahydrocannabinol	3,750
	Ethyl Glucuronide (EtG500)		Δ9-Tetrahydrocannabinol	5,000
	Ethyl Glucuronide	500	Cannabinol	50,000
500	Fentanyl (FTY)		Cannabidiol	50,000
	Norfentanyl	20	Cannabinoids (THC40)	
3,000	Fentanyl	200	11-nor-Δ9-THC-9-COOH	40
3,000	Gabapentin (GAB)		11-nor-Δ8-THC-9-COOH	20
		2,000	11-hydroxy-∆9-	2,000
300	Gabapentin	2,000	Tetrahydrocannabinol	2,000
	Pregabalin	90,000	Δ8-Tetrahydrocannabinol	6,000
100	- Vigabatrin	>100,000	Δ9-Tetrahydrocannabinol	8,000
100	Hydromorphone (HMO)		Cannabinol	80,000
200	Hydromorphone	300	Cannabidiol	80,000
400	Thebaine	90000	Cannabinoids (THC50)	
2,000	Buprenophine	>100,000	11-nor-Δ9-THC-9-COOH	50
5,000	Morphine	50000	11-nor-Δ8-THC-9-COOH	30
200	Codeine	5000	11-hydroxy-Δ9-	2,500
200	( A I I I	> 100 000	Tetrahydrocannabinol	
500	6-Acetylmorphine Morphine-3-beta-D-glucuromide	>100,000	Δ8-Tetrahydrocannabinol	7,500
5,000	Hvdromorphone-3-beta-D-	>100,000	Δ9-Tetrahydrocannabinol	10,000
1000	glucuronide	>100,000	Cannabinol	100,000
10,000	Oxycodone	10000	Cannabidiol	100,000
100,000	Norhydromorphone HCI	100,000	Tramadol (TRA100)	100,000
5,000	Hydrocodone	100,000	Tramadol	100
i i	Naloxone hydrochloride	>100,000	Tramadol (TRA200)	1.00
300	Synthetic Cannabinoids (K2)	122/000	Tramadol	200
300	JWH-018 Pentanoic Acid	50	Tramadol (TRA1000)	
300	JWH-073 Butanoic Acid	50	Tramadol	1,000
300	JWH-018 N-4-hydroxypentyl	2,000		1,200
5,000	JWH-018 (Spice Cannabinoid)	1,000		
5,000	JWH-018 4-Hydroxypentyl	1000		

# Effect of Urinary Specific Gravity

metabolite-D5 (indole-D5)
JWH-073 (Spice Cannabinoid)

The results demonstrate that the urinary specific gravity range of 1.000~1.035 does not affect the test

The results demonstrate that the range of urinary pH from 4 to 9 does not interfere with the performance of test.

Interfering Substances

Cortisone

Urine specimens may contain substances that could potentially interfere with the test. The following compounds were added to drug-free urine, urine with a drug concentration 25% below the cutoff, and urine with a drug concentration 25% above the cutoff for the corresponding drug test. All potential interferents were added at a concentration of 100  $\mu$ g/mL. None of the urine samples tested showed any deviation from the expected results.

D-Pseudoephedrine Noscapine Acetophenetidin Acetylsalicylic Acid Aminopyrine Amoxicillin Gentisic Acid Hydrochlorothiazide Ampicillin 3-Hydroxytyramine Oxalic Acid Apomorphine Aspartame Oxolinic Acid Isoxsuprine Ketoprofen Labetalol Oxymetazoline Aspirin
Atropine
Benzilic Acid Lamotrigine Levonorgestrel Meperidine Penicillin-G Benzilic Acid
Benzoic Acid
Bilirubin
Captopril
Chloralhydrate
Chloramphenicol
Chlorothiazide Perphenazine Pethidine HCI Meprobamate Nalidixic Acid Naproxen
Niacinamide
Nifedipine
Nitroglycerin
Norethindrone Propranolol HCI Quinine Ranitidine Chlorpromazine Chloroquine Cholesterol Ranitidine HCl Salicylic Acid Clarithromycin Clonidine 5- Hydroxytyramine Sulfamethazine Sulindac Triamterene Uric Acid

Tetrahydrozoline

ALCOHOL TEST:

# Diclofenac Diflunisal Digoxin

It is designed for detection of alcohol in urine at the detection sensitivity of 40 mg/dL (0.04 g/dL)

The following substances were added to samples which had alcohol levels of 0 and 0.08%. None of the

substances at the concentrations tested interfered in the Alcohol Tests.

20 mg/dL 2,000 mg/dL Caffeine Glucose 2,000 mg/dL Human Serum Protein

The following substar terfere with the Alcohol Test:

Tannic acid Polyphenolic compounds

Oxalic acid

These compounds are not normally present in sufficient amounts in urine to interfere with the test.

# **ASSISTANCE**

If you have any question regarding to the use of this product, please call our Toll Free Number 1-888-444-3657(9:00 a.m. to 5:30 p.m. CDT M-F).

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# ADDITIONAL INFORMATION AND RESOURCES

The following list of organizations may be helpful to you for counseling support and resources. These groups also have an Internet address which can be accessed for additional information. Drug & Alcohol Clearinghouse https://clearinghouse.fmcsa.dot.gov/1-800-832-5660

Center for Substance Abuse Treatment https://www.samhsa.gov/about-us/who-we-are/offices-centers/

csat 1-800-662-HELP

The National Council on Alcoholism and Drug Dependence www.ncadd.org 1-800-NCA-CALL

American Council for Drug Education (ACDE) www.acde.org 1-800-488-DRUG

# **INDEX OF SYMBOLS**

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