



MULTI-DRUG X(2-20) DRUGS RAPID TEST PANEL WITH/WITHOUT ADULTERATION (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/OP/PCP/PPX/TCA/TML (TRA)/KET/OXY/COT/EDDP/FYL/K2/6-MAM/MDA/ETG/CLO/LSD/MPD/ZOL/MEP/MDPV/DI A/ZOP/MCAT/7-ACL/CAF/CFYL/CAT/TRO/ALP/PGB/ZAL/MPRD/CNB/GAB/TZD/CAR/ ABP(K3)/QTP/FLX/UR-144(K4)/KRA/TLD/α-PVP/MES/PAP/CIT/FKET/OZP/RPD/TAP/NND/ SCOP/MTZ/HMO/ETO/ALC

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

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

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

INTENDED USE

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

Test	Calibrator	Cut-off (ng/mL)
Acetaminophen (ACE)	Acetaminophen	5,000
Amphetamine (AMP)	d-Amphetamine	1,000/500/300
Barbiturates (BAR)	Secobarbital	300/200
Benzodiazepines (BZO)	Oxazepam	500/300/200/100
Buprenorphine (BUP)	Buprenorphine	10/5
Cocaine (COC)	Benzoyllecgonine	1,500/300/200/150/100
Marijuana (THC)	11-nor-Δ9-THC-9 COOH	800/500/300/200/150/50/30/2 5/20
Methadone (MTD)	Methadone	300/200/100
Methamphetamine (MET)	d-Methamphetamine	1,000/500/300/200
Methylenedioxy-me- thampheta- mine(MDMA)	d,l-Methylenedioxy-methampheta mine	1,000/500/300
Morphine/Opiate (MOP/OPI)	Morphine	300/200/100
Methaqualone (MQL)	Methaqualone	300
Meperidine (MPRD)	Normeperidine	100
Opiate (OPI)	Morphine	2,000/1,000/500
Phencyclidine (PCP)	Phencyclidine	50/25
Propoxyphene (PPX)	Propoxyphene	300
Tricyclic Antidepressants (TCA)	Nortriptyline	1,000/500/300
Tramadol (TML/TRA)	Cis-Tramadol	500/300/200/100
Ketamine (KET)	Ketamine	1,000/500/300/200/100
Oxycodone (OXY)	Oxycodone	300/100
Cotinine (COT)	Cotinine	500/300/200/100/50/10
2-ethylidene-1,5-dimethyl- 3,3-di- phenylpyrrolidine (EDDP)	2-ethylidene-1,5-dimethyl- 3,3-di- phenylpyrrolidine	300/100
Fentanyl (FYL)	Norfentanyl	20/10
Fentanyl (FYL)	Fentanyl	300/200/100
Synthetic Marijuana (K2)	JWH-018, JWH-073	50/30/25
6-Monoacetylmorphine (6-MAM)	6-MAM	10
(±) 3,4-Methylenedioxy- Amphetamine (MDA)	(±) 3,4-Methylenedioxy- Amphetamine	500
Ethyl- β-D-Glucuronide (ETG)	Ethyl- β -D-Glucuronide	1,500/1,000/500/300
Clonazepam (CLO)	Clonazepam	400/150
Lysergic Acid Diethylamide (LSD)	Lysergic Acid Diethylamide	50/20/10
Methylphenidate (MPD)	Methylphenidate	300/150
Methylphenidate (MPD)	Ritalin acid	1,000
Zolpidem (ZOL)	Zolpidem	50/25
Mephedrone (MEP)	Mephedrone	500/100
3, 4-methylenedioxy- pyrovalerone (MDPV)	3, 4-methylenedioxy-pyrovalerone	1,000/500/300
Diazepam (DIA)	Diazepam	300/200
Zopiclone (ZOP)	Zopiclone	300/50
Methcathinone (MCAT)	S(-)-Methcathinone	500
7-Aminoclonazepam (7-ACL)	7-Aminoclonazepam	300/200/100
Carfentanyl (CFYL)	Carfentanyl	500/250
Cannabinol (CNB)	Cannabinol	500
Caffeine (CAF)	Caffeine	1,000
Cathine (CAT)	(+)-Norpseudoephedrine	150
Tropicamide (TRO)	Tropicamide	350
Alprazolam (ALP)	Alprazolam	100
Pregabalin (PGB)	Pregabalin	50,000/500
Gabapentin (GAB)		
Gabapentin 2,000		
Zaleplon (ZAL)	Zaleplon	100
Carisoprodol (CAR)	Carisoprodol	2,000/1,000/500
AB-PINACA (ABP/K3)	AB-PINACA	10/5
Quetiapine (QTP)	Quetiapine	1,000
Fluoxetine (FLX)	Fluoxetine	500
UR-144/K4	UR-144 5-Pentanoic acid	25/50
Kratom (KRA)	Mitragynine	300
Tilidine (TLD)	Nortilidine	50
Trazodone (TZD)	Trazodone	200
Alpha-Pyrrolidinovale- rophen one (α-PVP)	Alpha-Pyrrolidinovale-rophenone	2,000/1,000/500/300
Mescaline (MES)	Mescaline	300/100
Papaverine (PAP)	Papaverine	500
Citalopram (CIT)	Citalopram	500
Fluoketamine (FKET)	Fluoketamine	1,000
Olanzapine (OZP)	Olanzapine	1,000
Risperidone (RPD)	Risperidone	150
Tapentadol (TAP)	Tapentadol	1,000
N,N-Dimethyltryptamine (NND)	N,N-Dimethyltryptamine	1,000
Scopolamine (SCOP)	Scopolamine	500
Mirtazapine (MTZ)	Desmethyilmirtazapine	500
Hydromorphone (HMO)	Hydromorphone	500/300/250
Etomidate (ETO)	Etomidate	20/1000
Etomidate (ETO)	Etomidate acid	300

Test	Calibrator	Cut-off
Alcohol(ALC)	Alcohol	0.02%

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 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 OF 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.

PRINCIPLE (FOR DOA TESTS EXCLUDING ALCOHOL)

During testing, a urine specimen migrates upward by capillary action. A drug, if present in the urine specimen below its cut-off concentration, will not saturate the binding sites of its specific antibody. The antibody will then react with the drug-protein conjugate and a visible colored line will show up in the test region of the specific drug dipstick. The presence of drug above the cut-off concentration will saturate all the binding sites of the antibody. Therefore, the colored line will not form in the test region.

A drug-positive urine specimen will not generate a colored line in the specific test region of the dipstick because of drug competition, while a drug-negative urine specimen will generate a line in the test region because of the absence of drug competition.

To serve as a procedural control, a colored line will always appear at the control region, indicating that proper volume of specimen has been added and membrane wicking has occurred.

PRINCIPLE OF ADULTERATION

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.2 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.3 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 immunoas- say tests.3 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.1 A person may attempt to foil a test by drinking excessive amounts of water or diuretics such as herbal teas to " flush" the system. Creatinine and specific gravity are two ways to check for dilution and flushing, which are the most common mechanisms used in an attempt to circumvent drug testing. Low Creatinine and specific gravity levels may indicate dilute urine. The absence of Creatinine (<5 mg/dL) is indicative of a specimen not consistent with human urine.

Bleach tests for the presence of bleach. Bleach refers to a number of chemicals which remove color, whiten or disinfect, often by oxidation. Bleaches are used as household chemicals to whiten clothes and remove stains and as disinfectants. Normal human urine should not contain bleach.

PRINCIPLE (FOR ALCOHOL)

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

REAGENTS(FOR DOA TESTS EXCLUDING ALCOHOL)

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

REAGENTS (FOR ALCOHOL)

Tetramethylbenzidine, Alcohol Oxidase, Peroxidase

S.V.T REAGENTS

Adulteration Pad	Reactive indicator	Buffers and non-reactive ingredients
Creatinine	0.04%	99.96%
Nitrite	0.07%	99.93%
Bleach	0.39%	99.61%
Glutaraldehyde	0.02%	99.98%
pH	0.06%	99.94%
Specific Gravity	0.25%	99.75%
Oxidants/PCC	0.36%	99.64%

PRECAUTIONS

- For healthcare professionals including professionals at point of care sites.
- Immunoassay for in vitro diagnostic use only. The test 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 should be discarded according to 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 must remain in the sealed pouch until use. DO NOT FREEZE. Do not use beyond the expiration date.

SPECIMEN COLLECTION AND PREPARATION

Urine Assay

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

Specimen Storage

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

MATERIALS

- Materials Provided
- Test Panels
- Package Insert
- Adulteration Color Chart (when applicable)

Materials Required But Not Provided

- Timer
- Specimen collection containers

DIRECTIONS FOR USE

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

to testing.

1. Bring the pouch to room temperature before opening it. Remove the test panel from the sealed pouch and use it within one hour.
2. Remove the cap.
3. 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.
4. Replace the cap and place the test panel on a non-absorbent flat surface.
5. Start the timer and wait for the colored line(s) to appear.
6. Read the adulteration strips and alcohol strip between 3-5 minutes according to color chart provided separately/on foil pouch. Refer to your Drug Free Policy for guidelines on adulterated specimens. We recommend not to interpret the drug test results and either retest the urine or collect another specimen in case of any positive result for any adulteration test.
7. 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)

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

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

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

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

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

(Please refer to the color chart)

Semi-Quantitative results are obtained by visually comparing the reacted color blocks on the strip to the printed color blocks on the color chart. No instrumentation is required.

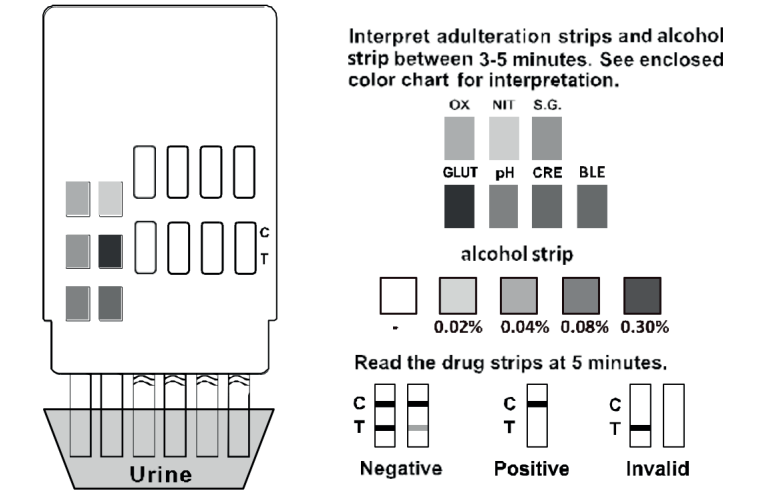
INTERPRETATION OF RESULTS (ALCOHOL STRIP)

Negative: Almost no color change by comparing with the background. The negative result

indicates that the urine alcohol level is less than 0.02%.

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

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



QUALITY CONTROL

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

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

LIMITATIONS

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

S.V.T/ADULTERATION LIMITATIONS

- 1.The adulteration tests included with the product are meant to aid in the determination of abnormal specimens. While comprehensive, these tests are not meant to be an "all-inclusive" representation of possible adulterants.
2. Oxidants/PCC: Normal human urine should not contain oxidants or PCC. The presence of high levels of antioxidants in the specimen, such as ascorbic acid, may result in false negative results for the oxidants/ PCC pad.
3. Specific Gravity: Elevated levels of protein in urine may cause abnormally high specific gravity values.
4. Nitrite: Nitrite is not a normal component of human urine. However, nitrite found in urine may indicate urinary tract infections or bacterial infections. Nitrite levels of >20 mg/dL may produce false positive glutaraldehyde results.
5. Glutaraldehyde: is not normally found in urine. However certain metabolic abnormalities such as ketoacidosis (fasting, uncontrolled diabetes or high protein diets) may interfere with the test results.
6. Creatinine: Normal Creatinine levels are between 20 and 350 mg/dL.. Under rare conditions, certain kidney diseases may show dilute urine.
7. Bleach: Normal human urine should not contain bleach. The presence of high levels of bleach in the specimen may result in false negative results for the bleach pad.
8. pH: Normal pH levels are between 4.0 and 9.0.

PERFORMANCE CHARACTERISTICS

Accuracy											
% % Agreement with GC/MS											
	ACE 5,000	AMP 1,000	AMP 500	AMP 300	BAR 300	BAR 200	BZO 500	BZO 300	BZO 200	BZO 100	BUP 10
Positive Agreement	93.5%	98.1%	99.1%	99.1%	96.1%	95.3%	98.2%	98.4%	99.2%	99.2%	99.1%
Negative Agreement	98.6%	97.9%	98.6%	98.5%	98.6%	97.9%	97.8%	99.2%	98.4%	97.5%	>99.9%
Total Results	97.0%	98.0%	98.8%	98.8%	97.6%	96.8%	98.0%	98.8%	98.8%	98.4%	99.6%
	BUP 5	COC 300	COC 200	COC 150	COC 100	THC 300	THC 150	THC 50	THC 25	THC 20	MTD 300
Positive Agreement	99.1%	98.2%	>99.9%	98.3%	99.2%	95.5%	94.5%	97.9%	96.9%	94.8%	98.9%
Negative Agreement	>99.9%	97.8%	>99.9%	97.0%	97.0%	98.1%	97.5%	98.1%	97.4%	99.3%	98.8%
Total Results	99.6%	98.0%	100.0%	97.6%	98.0%	97.2%	96.4%	98.0%	97.2%	97.6%	98.8%
	MTD 200	MET 1,000	MET 500	MET 300	MDMA 1,000	MDMA 500	MDMA 300	MOP/ OPI 300	MOP/ OPI 100	MQL 300	OPI 2,000
Positive Agreement	98.9%	96.2%	97.6%	97.8%	98.0%	98.1%	98.1%	95.0%	97.0%	89.8%	96.7%
Negative Agreement	98.7%	97.1%	97.0%	97.5%	99.3%	99.3%	99.3%	96.6%	93.2%	93.8%	
Total Results	98.8%	96.8%	97.2%	97.6%	98.8%	98.8%	98.8%	95.2%	96.8%	92.0%	95.2%
	PCP 25	PPX 300	TCA 1,000	TCA 500	TML/ TRA 100	TML/ TRA 200	TML/ TRA 300	KET 1,000	KET 500	KET 300	KET 100
Positive Agreement	92.4%	96.0%	94.8%	94.9%	88.2%	88.2%	88.0%	97.5%	97.6%	96.7%	96.0%
Negative Agreement	96.8%	94.0%	91.6%	92.1%	92.4%	96.2%	96.2%	98.2%	98.2%	97.5%	97.3%
Total Results	95.2%	94.8%	92.8%	93.2%	90.8%	93.2%	93.2%	98.0%	98.0%	97.2%	96.8%
	OXY 100	OXY 300	COT 500	COT 200	COT 100	COT 50	COT 10	EDDP 300	EDDP 100	FYL 20	FYL 10
Positive Agreement	97.7%	96.5%	95.7%	96.7%	97.9%	96.7%	97.8%	97.9%	96.9%	98.8%	98.8%
Negative Agreement	99.4%	99.4%	96.1%	97.5%	98.1%	97.5%	98.1%	99.4%	96.7%	99.4%	99.4%
Total Results	98.8%	98.4%	96.0%	97.2%	98.0%	97.2%	98.0%	98.8%	96.8%	99.2%	99.2%
	K2 50	K2 30	6-MAM 10	ETG 500	ETG 1,000	ETG 1,000	CLO 400	CLO 150	LSD 10	LSD 20	LSD 50
Positive Agreement	97.5%	97.6%	97.7%	98.1%	97.6%	95.3%	97.1%	99.0%	94.3%	94.3%	94.1%
Negative Agreement	98.2%	98.8%	98.1%	97.9%	99.4%	99.4%	99.3%	98.6%	98.5%	98.5%	
Total Results	98.0%	98.4%	98.0%	98.0%	98.8%	98.0%	98.4%	98.8%	97.0%	97.0%	
	MPD 300	MPD 1,000	ZOL 50	DIA 300	DIA 200	ZOP 50	MCAT 500	7-ACL 300	7-ACL 200	7-ACL 100	CFYL 500
Positive Agreement	94.6%	94.6%	90.9%	98.4%	98.4%	86.4%	90.9%	94.1%	94.6%	94.7%	94.7%
Negative Agreement	98.4%	98.4%	97.1%	99.2%	99.2%	97.2%	95.0%	97.7%	97.6%	97.5%	98.6%
Total Results	97.0%	97.0%	95.6%	98.8%	98.8%	94.6%	94.1%	96.2%	96.2%	96.2%	97.3%
	CAF 1,000	CAT 150	TRO 350	MDPV 1,000	MDPV 500	MEP 100	ALP 100	α-PVP/ K3 10	α-PVP 1,000	CNB 500	MPRD 100</

		PPX 300	TCA 1,000/ 500/ 300	TML TRA 500/ 300/ 200/ 100	KET 1,000/ 500/ 300/ 100	COT 500/ 300/ 200/ 100/50/ 10	OPI 2,000/ 1,000/ 500	PCP 50	PCP 25	DIA 300/ 200	MDPV 1,000/ 500/ 300i
Positive Agreement	>99.9%	*	*	>99.9%	*	*	*	*	>99.9%	*	*
Negative Agreement	>99.9%	*	*	>99.9%	*	*	*	*	>99.9%	*	*
Total Results	>99.9%	*	*	>99.9%	*	*	*	*	>99.9%	*	*

	OXY 300/ 100	EDDP 300/ 100	FYL 300/ 200/ 100/20/ 10	K2-50/ 30/25	6-MAM 10	MDA 500	ETG 1,500/ 1,000/ 500/ 300	CLO 400/ 150	ZOL 50/25	ZOP 300/50	MCAT 500
Positive Agreement	*	*	*	*	*	*	*	*	*	*	*
Negative Agreement	*	*	*	*	*	*	*	*	*	*	*
Total Results	*	*	*	*	*	*	*	*	*	*	*

	CFYL 500/ 250	CAF 1,000	CAT 150	TRO 350	ALP 100	PGB 50,000/ 500	ABP/ K3 10/5	CNB 500	TZD 200	GAB 2,000
Positive Agreement	*	*	*	*	*	*	*	*	*	*
Negative Agreement	*	*	*	*	*	*	*	*	*	*
Total Results	*	*	*	*	*	*	*	*	*	*

	CAR 2,000/ 1,000/ 500	MPRD 100	QTP 1,000	FLX 500	UR-144 /K4 25/50	KRA 300	TLD 50	α-PVP 2,000/ 1,000/ 500/ 300	MES 100/ 300	ZAL 100	KET 200
Positive Agreement	*	*	*	*	*	*	*	*	*	*	*
Negative Agreement	*	*	*	*	*	*	*	*	*	*	*
Total Results	*	*	*	*	*	*	*	*	*	*	*

	CIT 500	FKET 1,000	RPD 150	TAP 1,000	NND 1,000	SCOP 500	MTZ 500	OZP 1,000	PAP 500	HMO 500/ 300/ 250	ETO 20/ 300/ 1000
Positive Agreement	*	*	*	*	*	*	*	*	*	*	*
Negative Agreement	*	*	*	*	*	*	*	*	*	*	*
Total Results	*	*	*	*	*	*	*	*	*	*	*

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

Precision

A study was conducted at three hospitals 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 negative, 50% and 25% cut-off level, was labeled, blinded and tested at each site. The results gained ≥75% accuracy in ±25% cut-off level specimen and 100% accuracy in negative and ±50% cut-off level specimen.

Analytical Sensitivity

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

Drug Concentration Cut-off Range	ACE 5,000	AMP 1,000	AMP 500	AMP 300	BAR 300	BAR 200	BZO 500	BZO 300
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	15	15
+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 Cut-off Range	BZO 200	BZO 100	BUP 10	BUP 5	COC 1,500	COC 300	COC 200	COC 150	COC 100
0% Cut-off	30	0	30	0	30	0	30	0	30
-50% Cut-off	30	0	30	0	30	0	30	0	30
-25% Cut-off	27	3	27	3	26	4	25	5	26
Cut-off	16	14	14	16	14	16	15	13	17
+25% Cut-off	3	27	3	27	3	27	3	27	4
+50% Cut-off	0	30	0	30	0	30	0	30	0
300% Cut-off	0	30	0	30	0	30	0	30	0

Drug Concentration Cut-off Range	THC 150	THC 50	THC 25	MTD 300	MTD 200	MTD 100	MET 1,000	MET 500	MET 300	MET 200
0% Cut-off	30	0	30	0	30	0	30	0	30	0
-50% Cut-off	30	0	30	0	30	0	30	0	30	0
-25% Cut-off	27	3	26	4	27	3	27	3	27	3
Cut-off	15	15	14	16	15	13	17	15	15	15
+25% Cut-off	4	26	3	27	4	26	4	26	5	25
+50% Cut-off	0	30	0	30	0	30	0	30	0	30
300% Cut-off	0	30	0	30	0	30	0	30	0	30

Drug Concentration Cut-off Range	MDMA 1,000	MDMA 500	MOP/ OPI 300	MOP/ OPI 100	OPI 2,000	PCP 50	PCP 25	PPX 300
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	26	4	27	3
Cut-off	15	15	14	16	15	15	15	15
+25% Cut-off	5	25	4	26	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 Cut-off Range	TML/ TRA 100	TML/ TRA 200	TML/ TRA 300	TML/ TRA 500	KET 1,000	KET 500	KET 300	KET 100	MQL 300
0% Cut-off	30	0	30	0	30	0	30	0	30
-50% Cut-off	30	0	30	0	30	0	30	0	30
-25% Cut-off	27	3	27	3	27	3	26	4	27
Cut-off	15	15	15	15	15	15	14	16	15
+25% Cut-off	4	26	4	26	4	26	3	27	4
+50% Cut-off	0	30	0	30	0	30	0	30	0
300% Cut-off	0	30	0	30	0	30	0	30	0

Drug Concentration Cut-off Range	OXY 100	OXY 300	COT 200	COT 100	EDDP 300	EDDP 100	FYL 20	FYL 10
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	27	3
Cut-off	15	15	15	15	15	14	16	15
+25% Cut-off	4	26	4	26	4	26	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 Cut-off Range	K2 50	K2 30	6-MAM 10	MDA 500	ETG 300	ETG 500	ETG 1,000	CLO 400	CLO 150	LSD 20
0% Cut-off	30	0	30	0	30	0	30	0	30	0
-50% Cut-off	30	0	30	0	30	0	30	0	30	0
-25% Cut-off	26	4	27	3	27	3	26	4	26	4
Cut-off	15	15	16	14	15	15	15	15	14	16
+25% Cut-off	3	27	4	26	4	26	3	27	5	25
+50% Cut-off	0	30	0	30	0	30	0	30	0	30
300% Cut-off	0	30	0	30	0	30	0	30	0	30

Drug Concentration Cut-off Range	LSD 50	ZOL 50	ZOL 25	MDMA 300	THC 200	MOP/ OPI 200	MEP 500	MEP 100	MDPV 1,000	ETG 1,500
0% Cut-off	30	0	30	0	30	0	30	0	30	0
-50% Cut-off	30	0	30	0	30	0	30	0	30	0
-25% Cut-off	27	3	26	4	25	5	25	5	26	4
Cut-off	14	16	14	16	15	15	15	15	15	15
+25% Cut-off	3	27	5	25	4	26	3	27	4	26
+50% Cut-off	0	30	0	30	0	30	0	30	0	30
300% Cut-off	0	30	0	30	0	30	0	30	0	30

Drug Concentration Cut-off Range	MDPV 500	MDPV 300	DIA 300	THC 200	THC 300	K2 25	ZOP 300	ZOP 50	MCAT 500
0% Cut-off	30	0	30	0	30	0	30	0	30
-50% Cut-off	30	0	30	0	30	0	30	0	30
-25% Cut-off	25	5	26	4	27	3	26	4	25
Cut-off	15	15	14	16	15	15	15	15	15
+25% Cut-off	3	27	3	27	3	27	4	26	4
+50% Cut-off	0	30	0	30	0	30	1	29	0
300% Cut-off	0	30	0	30	0	30	0	30	0

Drug Concentration Cut-off Range	7-ACL 300	7-ACL 200	7-ACL 100	CFYL 500	CAF 1,000	CAT 150	TRO 350	ALP 100	α-PVP 1,000
0% Cut-off	30	0	30	0	30	0	30	0	30
-50% Cut-off	30	0	30	0	30	0	30	0	30
-25% Cut-off	26	4	27	3	27	3	25	5	26
Cut-off	14	16	14	16	13	17	14	16	17
+25% Cut-off	5	25	3	27	4	26	6	24	6
+50% Cut-off	0	30	0	30	0	30	0	30	0
300% Cut-off	0	30	0	30	0	30	0	30	0

Drug Concentration Cut-off Range	FYL 100	COT 300	TCA 1,000	TCA 500	TCA 300	OPI 1,000	THC 20	CAR 2,000	CAR 1,000	CAR 500
0% Cut-off	30	0	30	0	30	0	30	0	30	0
-50% Cut-off	30	0	30	0	30	0	30	0	30	0
-25% Cut-off	27	3	25	5	25	5	26	4	27	3
Cut-off	15	15	15	15	15	14	16	14	16	14
+25% Cut-off	3	27	4	26	4	26	3	27	3	27
+50% Cut-off	0	30	0	30	0	30	0	30	0	30
300% Cut-off	0	30	0	30	0	30	0	30	0	30

Drug Concentration Cut-off Range	ABP/ K3 10	QTP 1,000	FLX 500	KRA 300	TLD 50	α-PVP 2,000	α-PVP 500	α-PVP 300	LSD 10
0% Cut-off	30	0	30	0	30	0	30	0	30
-50% Cut-off	30	0	30	0	30	0	30	0	30
-25% Cut-off	25	5	29	1	29	1	28	2	29
Cut-off	15	15	15	15	15	15	15	15	15
+25% Cut-off	4	26	1	29	2	28	1	29	3
+50% Cut-off	0	30	0	30	0	30	0	30	0
300% Cut-off	0	30	0	30	0	30	0	30	0

Drug Concentration Cut-off Range	COT 500	COT 50	COT 10	CFYL 250	FYL 200	ZAL 100	MPRD 100	TAP 1,000	CIT 500	FKET 1,000	UR-144 /K4 25
0% Cut-off	30	0	30	0	30	0	30	0	30	0	30
-50% Cut-off	30	0	30	0	30	0	30	0	30	0	30
-25% Cut-off	26	4	27	3	27	3	25	5	27	3	27
Cut-off	14	16	16	14	15	15	15	15	15	15	15
+25% Cut-off	3	27	4	26	4	26	6	24	3	27	4
+50% Cut-off	0	30	0	30	0	30	0	30	0	30	0
300% Cut-off	0	30	0	30	0	30	0	30	0	30	0

Drug Concentration Cut-off Range	RPD 150	SCOP 500	NND 1,000	MTZ 500	OZP 1,000	MES 300	MES 100	FYL 300	HMO 250	HMO 300	THC 800
0% Cut-off	30	0	30	0	30	0	30	0	30	0	30
-50% Cut-off	30	0	30	0	30	0	30	0	30	0	30
-25% Cut-off	27	3	26	4	27	3	27	3	27	3	27
Cut-off	15	15	14	16	15	15	15	14	16	14	15
+25% Cut-off	4	26	3	27	4	26	4	26	5	25	4
+50% Cut-off	0	30	0	30	0	30	0	30	0	30	0
300% Cut-off	0	30	0	30	0	30	0	30	0	30	0

Drug Concentration Cut-off Range	THC 500		OPI 500		ETO 20		ETO 300		ETO 1000		ABP 5		UR-144 /K4 50		KET 200	
	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+
0% Cut-off	30	0	30	0	30	0	30	0	30	0	30	0	30	0	30	0
-50% Cut-off	30	0	30	0	30	0	30	0	30	0	30	0	30	0	30	0
-25% Cut-off	26	4	27	3	27	3	28	2	27	3	27	3	26	4	26	4
Cut-off	15	15	14	16	16	14	14	16	15	15	15	15	15	15	15	15
+25% Cut-off	3	27	4	26	2	28	3	27	4	26	4	26	3	27	4	26
+50% Cut-off	0	30	0	30	0	30	0	30	0	30	0	30	0	30	0	30
300% Cut-off	0	30	0	30	0	30	0	30	0	30	0	30	0	30	0	30

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- $\square$ -D-glucuronide	2,000	Thebaine	25,000
MORPHINE/OPIATE (OPI 1,000)			
Codeine	1,000	Morphine	1,000
Ethylmorphine	1,500	Norcodeine	12,500
Hydrocodone	25,000	Normorphone	25,000
Hydromorphone	7,500	Oxycodone	12,500
Levorphanol	12,500	Oxymorphone	12,500
6-Monoacetylmorphine	1,500	Procaine	25,000
Morphine 3- $\square$ -D-glucuronide	1,000	Thebaine	12,500
MORPHINE/OPIATE (OPI 500)			
Codeine	500	Morphine	500
Ethylmorphine	750	Norcodeine	6,250
Hydrocodone	12,500	Normorphone	12,500
Hydromorphone	3,750	Oxycodone	6,250
Levorphanol	6,250	Oxymorphone	6,250
6-Monoacetylmorphine	750	Procaine	12,500
Morphine 3- $\square$ -D-glucuronide	500	Thebaine	6,250
MEPERIDINE (MPRD 100)			
Normeperidine	100	Meperidine	100
PHENCYCLIDINE (PCP 50)			
Phencyclidine	50	4-Hydroxyphencyclidine	25,000
PHENCYCLIDINE (PCP 25)			
Phencyclidine	25	4-Hydroxyphencyclidine	12,500
PROPOXYPHENE (PPX 300)			
D-Propoxyphene	300	D-Norpropoxyphene	300
TRICYCLIC ANTIDEPRESSANTS (TCA 1,000)			
Nortriptyline	1,000	Imipramine	400
Nordoxepine	500	Clomipramine	50,000
Trimipramine	3,000	Doxepine	2,000
Amitriptyline	1,500	Maprotiline	2,000
Promazine	3,000	Promethazine	50,000
Desipramine	200	Perphenazine	50,000
Cyclobenzaprine	2,000	Dithiaden	10,000
TRICYCLIC ANTIDEPRESSANTS (TCA 500)			
Nortriptyline	300	Imipramine	120
Nordoxepine	150	Clomipramine	15,000
Trimipramine	900	Doxepine	600
Amitriptyline	450	Maprotiline	600
Promazine	900	Promethazine	15,000
Desipramine	60	Perphenazine	15,000
Cyclobenzaprine	600	Dithiaden	3,000
TRAMADOL (TML/TRA 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/TRA 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/TRA 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
TRAMADOL (TML/TRA 500)			
n-Desmethyl-cis-tramadol	10,00	o-Desmethyl-cis-tramadol	50,000
Cis-tramadol	500	Phencyclidine	500,000
Procyclidine	500,000	d,l,O-Desmethyl venlafaxine	250,000
KETAMINE (KET 1, 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-Methylenedioxy metham-phetamine (MDMA)	100,000
Disopyramide	25,000	Thioridazine	50,000
KETAMINE (KET 500)			
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-Methylenedioxy metham-phetamine (MDMA)	50,000
Disopyramide	12,500	Thioridazine	25,000
KETAMINE (KET 300)			

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-Methylenedioxy metham-phetamine (MDMA)	30,000
Disopyramide	6,250	Thioridazine	15,000
KETAMINE (KET 200)			
Ketamine	200	Benzphetamine	4,000
Dextromethorphan	400	(+) Chlorpheniramine	4,000
Methoxyphenamine	4,000	Clonidine	20,000
d-Norpropoxyphene	4,000	EDDP	10,000
Promazine	4,000	4-Hydroxyphencyclidine	10,000
Promethazine	4,000	Levorphanol	10,000
Pentazocine	4,000	MDE	10,000
Phencyclidine	4,000	Meperidine	4,000
Tetrahydrozoline	100	d-Methamphetamine	10,000
Mephentermine	4,000	l-Methamphetamine	10,000
(1R, 2S) - (-)-Ephedrine	20,000	Thioridazine	10,000
Disopyramide	4,000	3,4-Methylenedioxy metham-phetamine (MDMA)	20,000
KETAMINE (KET 100)			
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-Methylenedioxy metham-phetamine (MDMA)	10,000
OXYCODONE (OXY 300)			
Oxycodone	300	Hydromorphone	150,000
Oxymorphone	900	Naloxone	75,000
Levorphanol	15,000	Naltrexone	75,000
Hydrocodone	75,000		
OXYCODONE (OXY 100)			
Oxycodone	100	Hydromorphone	50,000
Oxymorphone	300	Naloxone	25,000
Levorphanol	50,000	Naltrexone	25,000
Hydrocodone	25,000		
COTININE (COT 300)			
(-)-Cotinine	300	(-)-Nicotine	7,500
COTININE (COT 200)			
(-)-Cotinine	200	(-)-Nicotine	5,000
COTININE (COT 100)			
(-)-Cotinine	100	(-)-Nicotine	2,500
COTININE (COT 500)			
(-)-Cotinine	500	(-)-Nicotine	12,500
COTININE (COT 50)			
(-)-Cotinine	50	(-)-Nicotine	1,250
COTININE (COT 10)			
(-)-Cotinine	10	(-)-Nicotine	250
2-ETHYLIDENE-1,5-DIMETHYL-3,3-DIPHENYLPYRROLIDINE (EDDP 300)			
2-Ethylidene-1,5-dimethyl-3,3-diphenylpyrrolidine (EDDP)			300
2-ETHYLIDENE-1,5-DIMETHYL-3,3-DIPHENYLPYRROLIDINE (EDDP 100)			
2-Ethylidene-1,5-dimethyl-3,3-diphenylpyrrolidine (EDDP)			100
FENTANYL (FYL 3000)			
Alfentanyl	>600,000	Buspirone	80,000
Norfentanyl	60	Fentanyl	300
Fenfluramine	150,000	Sufentanyl	150,000
FENTANYL (FYL 200)			
Alfentanyl	>600,000	Buspirone	30,000
Fenfluramine	100,000	Fentanyl	200
Norfentanyl	40	Sufentanyl	100,000
FENTANYL (FYL 100)			
Alfentanyl	600,000	Buspirone	15,000
Fenfluramine	50,000	Fentanyl	100
Norfentanyl	20	Sufentanyl	50,000
paliperidone	1,250	Risperidone	5,000
FENTANYL (FYL 10)			
Alfentanyl	300,000	Buspirone	8,000
Fenfluramine	25,000	Fentanyl	50
Norfentanyl	10	Sufentanyl	25,000
paliperidone	500	Risperidone	2,500
SYNTHETIC MARIJUANA (K2-50)			
JWH-018 5-Pentanoic acid	50	JWH-073 4-butanoic acid	50
JWH-018 4-Hydroxypentyl	400	JWH-018 5-Hydroxypentyl	500
JWH-073 4-Hydroxybuty	500		
SYNTHETIC MARIJUANA (K2-30)			
JWH-018 5-Pentanoic acid	30	JWH-073 4-butanoic acid	30
JWH-018 4-Hydroxypentyl	250	JWH-018 5-Hydroxypentyl	300
JWH-073 4-Hydroxybuty	300		

SYNTHETIC MARIJUANA (K2-25)			
JWH-018 5-Pentanoic acid	25	JWH-073 4-butanoic acid	25
JWH-018 4-Hydroxypentyl	200	JWH-018 5-Hydroxypentyl	250
JWH-073 4-Hydroxybuty	250		
6-MONOACETYLMORPHINE (6-MAM 10)			
6-Monoacethylmorphine	10	Morphine	100,000
(±) 3, 4-METHYLENEDIOXYAMPHETAMINE (MDA 500)			
(±) 3,4-Methylenedioxy amphetamine	500	Methoxyphenamine	6,000
		D-Amphetamine	2,000
D,L-Amphetamine sulfate	300	Phentermine	1,000
L-Amphetamine	25,000	Maprotiline	50,000
ETHYL-β-D-GLUCURONIDE (ETG 300)			
Ethyl- β -D-Glucuronide	300	Propyl β-D-glucuronide	30,000
Morphine 3β-glucuronide	60,000	Morphine 6β-glucuronide	60,000
Glucuronic Acid	60,000	Ethanol	>100,000
Methanol	>100,000		
ETHYL-β-D-GLUCURONIDE (ETG 500)			
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 (ETG 1,000)			
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		
ETHYL-β-D-GLUCURONIDE (ETG 1,500)			
Ethyl- β -D-Glucuronide	1,500	Propyl β-D-glucuronide	150,000
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-hydroxylalprazolam	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-hydroxylalprazolam	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 10)			
Lysergic Acid Diethylamide	10		
LYSERGIC ACID DIETHYLAMIDE (LSD 20)			
Lysergic Acid Diethylamide	20		
LYSERGIC ACID DIETHYLAMIDE (LSD 50)			
Lysergic Acid Diethylamide	50		
METHYLPHENIDATE (MPD 300)			
Methylphenidate (Ritalin)	300	Ritalinic Acid	1,000
METHYLPHENIDATE (MPD 150)			
Methylphenidate (Ritalin)	150	Ritalinic Acid	500
METHYLPHENIDATE (MPD 1,000)			
Methylphenidate (Ritalin)	350	Ritalinic Acid	1,000
ZOLPIDEM (ZOL 50)			
Zolpidem	50		
ZOLPIDEM (ZOL 25)			
Zolpidem	25		
MEPHEDRONE (MEP 500)			
Mephedrone HCl	500	R(+)-Methcathinone HCl	7,500
S(-)-Methcathinone HCl	2,500	3-Fluoromethcathinone HCl	7,500
4-Fluoromethcathinone HCl	1,500	Methoxyphenamine	100,000
MEPHEDRONE (MEP 100)			
Mephedrone HCl	100	R(+)-Methcathinone HCl	1,500
S(-)-Methcathinone HCl	500	3-Fluoromethcathinone HCl	1,500
4-Fluoromethcathinone HCl	300	Methoxyphenamine	100,000
3, 4-METHYLENEDIOXYPYROVALERONE (MDPV 1,000)			
3, 4-methylenedioxy pyro-valerone	1,000		
3, 4-METHYLENEDIOXYPYROVALERONE (MDPV 500)			
3, 4-methylenedioxy pyro-valerone	500		
3, 4-METHYLENEDIOXYPYROVALERONE (MDPV 300)			
3, 4-methylenedioxy pyro-valerone	300		
DIAZEPAM (DIA 300)			
Diazepam	300	Midazolam	6,000
Clobazam	200	Nitrazepam	200
Clonazepam	500	Norchlordiazepoxide	100
Clorazepate dipotassium	500	Nordiazepam	900
Alprazolam	100	Flunitrazepam	200
a-hydroxylalprazolam	1,500	(□) Lorazepam	3,000
Bromazepam	900	RS-Lorazepam glucuronide	200
Chlordiazepoxide	900	Triazolam	3,000

AB-PINACA 5-hydroxypentyl	10	AB-FUBINACA	10
AB-PINACA 4-hydroxypentyl	10,000	UR-144 5-Pentanoic	5,000
UR-144 5-hydroxypentyl	10,000	UR-144 4-hydroxypentyl	10,000
APINACA 5-hydroxypentyl	10,000	ADB-PINACA Pentanoic Acid	10
ADB-PINACA N-(5-hydroxypentyl)	30	5-fluoro AB-PINACA N-(4-hydroxypentyl)	30
5-fluoro AB-PINACA	25		
AB-PINACA/K3 (ABP/K3 5)			
AB-PINACA	5	AB-PINACA 5-Pentanoic	5
AB-PINACA 5-hydroxypentyl	5	AB-FUBINACA	5
AB-PINACA 4-hydroxypentyl	5,000	UR-144 5-Pentanoic	2,500
UR-144 5-hydroxypentyl	5,000	UR-144 4-hydroxypentyl	5,000
ADB-PINACA N-(5-hydroxypentyl)	15	5-fluoro AB-PINACA N-(4-hydroxypentyl)	15
5-fluoro AB-PINACA	15		
UR-144/K4 (25)			
UR-144 5-Pentanoic acid	25	UR-144 4-hydroxypentyl	10,000
UR-144 5-hydroxypentyl	5000	XLR-11 4-hydroxypentyl	2,000
5-fluoro AB-Pinaca N-(4-hydroxypentyl)	10,000	ADB-PINAC N-(4-hydroxypentyl)	>10,000
AB-PINACA 4-hydroxypentyl	>10,000		
UR-144/K4 (50)			
UR-144 5-Pentanoic acid	50	UR-144 4-hydroxypentyl	>10,000
UR-144 5-hydroxypentyl	10,000	XLR-11 4-hydroxypentyl	4,000
5-fluoro AB-Pinaca N-(4-hydroxypentyl)	>10,000	ADB-PINAC N-(4-hydroxypentyl)	>10,000
AB-PINACA 4-hydroxypentyl	>10,000		
QUETIAPINE (QTP 1,000)			
Quetiapine	1,000	Norquetiapine	10,000
FLUOXETINE (FLX 500)			
Fluoxetine	500		
KRATOM (KRA 300)			
Mitragynine	300	7-hydroxymitragynine	>50,000
TILIDINE (TLD 50)			
Nortilidine	50	Tilidine	100
ALPHA-PYRROLIDINOVALEROPHENONE (α-PVP 2,000)			
Alpha-Pyrrolidinovalerophenone	2,000		
ALPHA-PYRROLIDINOVALEROPHENONE (α-PVP 1,000)			
Alpha-Pyrrolidinovalerophenone	1,000		
ALPHA-PYRROLIDINOVALEROPHENONE (α-PVP 500)			
Alpha-Pyrrolidinovalerophenone	500		
ALPHA-PYRROLIDINOVALEROPHENONE (α-PVP 300)			
Alpha-Pyrrolidinovalerophenone	300		
MESCALINE (MES 100)			
Mescaline	100		
MESCALINE (MES 300)			
Mescaline	300		
PAPAVERINE (PAP 500)			
Papaverine	500	Diflunisal	1,000,000
Methortrexate	65,000	Methodrone	500,000
Pragablin	500,000	Phenelzine	8,000
Quinine	4,000		
TAPENTADOL (TAP 1,000)			
3-((1R,2R)-3-(dimethylamino)-1-ethyl-2-methylpropyl)phenol	1,000		
CITALOPRAM (CIT 500)			
Desmethylicitalopram	500		
F-KETAMINE (FKET 1,000)			
2-(2-fluorophenyl)-2-methylamino-cyclohexanone	1,000		
RISPERIDONE (RPD 150)			
Risperidone	150		
SCOPOLAMINE (SCOP 500)			
Scopolamine	500	Atropine	3,000
N, N-DIMETHYLTRYPTAMINE (NND 1,000)			
N, N-Dimethyltryptamine	1,000		
MIRTAZAPINE (MTZ 500)			
N-Desmethylmirtazapine	500	Mirtazapine	500
OLANZAPINE (OZP 1,000)			
Olanzapine	1,000		
HYDROMORPHONE (HMO 500)			
Hydromorphone	500	Morphine	200
Codeine	120	Ethylmorphine	120
Hydrocodone	500	Morphine 3-β-D-Glucuronide	250
Levorphanol	2,000	Oxycodone	125,000
Normorphine	125,000	Norcodeine	31,200
Oxymorphone	125,000	Nalorphine	50,000
Thebaine	10,000	Diacetylmorphine (Heroin)	250
6-Monoacetylmorphine	120		
HYDROMORPHONE (HMO 300)			
Hydromorphone	300	Morphine	120
Codeine	75	Ethylmorphine	75
Hydrocodone	300	Morphine 3-β-D-Glucuronide	150
Levorphanol	1,200	Oxycodone	75,000
Normorphine	75,000	Norcodeine	18,700
Oxymorphone	75,000	Nalorphine	30,000
Thebaine	6,000	Diacetylmorphine (Heroin)	150
6-Monoacetylmorphine	75		
HYDROMORPHONE (HMO 250)			
Hydromorphone	250	Morphine	100
Codeine	60	Ethylmorphine	60
Hydrocodone	250	Morphine 3-β-D-Glucuronide	125
Levorphanol	1,000	Oxycodone	62,500
Normorphine	62,500	Norcodeine	15,600
Oxymorphone	62,500	Nalorphine	25,000

Thebaine	5,000	Diacetylmorphine (Heroin)	125
6-Monoacetylmorphine	60		
ETOMIDATE(ETO20)			
Etomidate	20		
ETOMIDATE(ETO300)			
Etomidate acid	300		
ETOMIDATE(ETO1000)			
Etomidate	1000		

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 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. 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 above related calibrator substances. The following compounds show no cross-reactivity when tested with the Multi-Drug Rapid Test at a concentration of 100 µg/mL.

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

ALCOHOL PERFORMANCE CHARACTERISTICS

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

ALCOHOL ASSAY SPECIFICITY

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

ALCOHOL INTERFERING SUBSTANCES

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

A. Agents which enhance color development

- Peroxidases
- Strong oxidizers

B. Agents which inhibit color development Oxalic acid, Uric Acid

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Index of Symbols			
	Consult instructions for use or consult electronic instructions for use		Contains sufficient for <n> tests
	In vitro diagnostic medical device		Batch code
	Authorized representative in the European Community/European Union		Use-by date
	Do not use if package is damaged and consult instructions for use		Manufacturer
	Temperature limit		Catalogue number
	Do not re-use		Caution



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