# ISCREEN" ORAL FLUID TEST DRUG SCREEN CUBE

Catalogue No. See Box Label

For in vitro diagnostic use

iSCREEN<sup>™</sup> Oral Fluid Test Drug Screen Cube offers qualitative detection of the following drugs of abuse and their principal metabolites in human oral fluid at specified cut-off levels for use in employment and insurance testing: Amphetamine (AMP), Barbiturates (BAR), Cocaine (COC), Marijuana (THC), Methadone (MTD), Methamphetamine (MET), Methylenedioxymethamphetamine (MDMA), Opiate (OPI), Oxycodone (OXY) and Phencyclidine (PCP).

#### INTENDED USE AND SUMMARY

iSCREEN<sup>™</sup> Oral Fluid Test Drug Screen Cube is a rapid oral fluid screening test. The test is a lateral flow, one-step immunoassay for the qualitative detection of specific drugs and their metabolites in human oral fluid at the following cut off concentrations for use in employment and insurance testing.

Test	Calibrator	Cut off (ng/mL)
Amphetamine (AMP)	D-Amphetamine	50
Barbiturates (BAR)	Secobarbital	20
Cocaine (COC)	Cocaine	20
Marijuana (THC)	∆9-THC	40
Methadone (MTD)	Methadone	30
Methamphetamine (MET)	D-Methamphetamine	50
Methylenedioxymethamphetamine (MDMA)	3,4- Methylenedioxymethamphetaminel	50
Opiate (OPI)	Morphine	40
Oxycodone (OXY)	Oxycodone	20
Phencyclidine (PCP)	Phencyclidine	10

This test will detect other related compounds, please refer to the Analytical Specificity table in this package insert.

The assay provides a qualitative, preliminary test result. A more specific analytical method must be used in order to obtain a confirmed result. Gas Chromatography/Mass Spectrometry (GC/MS) or Liquid Chromatography/Tandem Mass Spectrometry (LC/MS-MS) are preferred confirmatory methods. Professional judgment should be applied to any drug test result, particularly when preliminary results are positive.

iSCREEN™ Oral Fluid Test Drug Screen Cube is a competitive immunoassay that is used to screen for the presence of drugs in oral fluid. It is a chromatographic absorbent device in which drugs or drug metabolites in a sample competitively combine to a limited number of antibody-dye conjugate binding sites. When the sponge end of the collector is immersed into the oral fluid sample, the sample is absorbed into the device by capillary action, mixes with the antibody-dye conjugate, and flows across the pre-coated membrane. When sample drug levels are zero or below the target cutoff (the detection sensitivity of the test), antibody-dye conjugate binds to the drug/protein conjugate immobilized in the Test Region (T) of the device. This produces a colored band that, regardless of its intensity, indicates a negative result. When sample drug levels are at or above the target cutoff, the free drug in the sample binds to the antibody-dye conjugate from binding to the 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. To serve as a procedure control, a colored band will appear at the Control Region (C), if the test has been performed properly.

# WARNINGS AND PRECAUTIONS

1. Not to be used for clinical diagnosis.

2. Do not swallow.

- 3. Discard after first use. The test cannot be used more than once.
- 4. Do not use the test kit beyond expiration date.
- 5. Do not use the test if the pouch is punctured or not well-sealed.
- ${\rm 6. \ Keep \ out \ of \ the \ reach \ of \ children.}$
- 7. Do not read results after 5 minutes.
- 8. The used collector and cube should be discarded according to local regulations.

# CONTENT OF THE KIT

- 25 iSCREEN™ Oral Fluid Test Drug Screen Cubes
- 25 Sponge Collectors
- 5 Additional Sponge Collectors
- One (1) Package Insert
- One (1) Procedure Card

# MATERIAL REQUIRED BUT NOT PROVIDED

Timer or Clock

## STORAGE AND STABILITY

1. Store at 4°C ~ 30°C (39°F ~ 86°F) in the sealed pouch up to the expiration date.

- 2. Keep away from direct sunlight, moisture and heat.
- 3. DO NOT FREEZE.
- 4. Preferably open the pouch only shortly before collection and testing.

#### SPECIMEN COLLECTION AND PREPARATION

Use the sponge collector provided to collect the oral fluid sample. Instruct the donor not to place anything in the mouth including food, drink, gum, or tobacco products for at least 10 minutes prior to collection. No other collection devices should be used with this assay. Oral fluid collected at any time of the day may be used.

## TEST PROCEDURE

Allow the kit and specimen to come to room temperature (18°C  $\sim$  30°C/65°F  $\sim$  86°F) prior to testing. AVOID PLACING ANYTHING IN THE MOUTH 10 MINUTES PRIOR TO TESTING.

- 1. Remove the test cube and the sponge collector from the foil pouch by tearing at the notch. Place the test cube upright on a level surface.
- 2. Put the sponge end of the collector on your tongue or near cheek to collect oral fluid for about 3 minutes until color on saturation indicator strip appears RED in the indicator window. If color on saturation indicator has not turned red after 7 minutes, repeat the collection using one additional sponge collector provided, beginning with Step 1.
- Open the test cube and place the saturated oral fluid collector inside the test cube. Press the sponge collector down firmly until it reaches the bottom of the test cube then tightly close the cube lid. Keep test cube upright on flat surface and follow Step 4.
- 4. Interpreting Drug Test Results:

Read results at 5 minutes. Do not read after 5 minutes.



# READING THE RESULTS

## Negative (-)

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

## Preliminary Positive (+)

A colored band is visible in the Control Region (C). No colored band appears in the appropriate Test Region (T). It indicates a preliminary positive result for the corresponding drug of that specific test zone.

#### Invalid

If a colored band is not visible in the Control Region (C) or a colored band is only visible in the Test Region (T), the test is invalid. Another test should be opened and run to re-evaluate the specimen. If the new test still provides 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.

The preliminary positive test result does not always mean that a person took illegal drugs. The negative test result does not always mean that a person did not take illegal drugs. There could be a number of factors that affect the reliability of drug tests. Certain drugs of abuse tests are more accurate than others.

#### What Is the False Positive Test?

The definition of the false positive test would be an instance where a substance is identified incorrectly by iSCREEN™ Oral Fluid Test Drug Screen Cube. The most common causes of the false positive test are cross reactants. Certain foods, medicines, diet plan drugs and nutritional supplements may cause the false positive test result with this product.

#### What Is the False Negative Test?

The definition of the false negative test is that the initial drug is present but isn't detected by iSCREEN™ Oral Fluid Test Drug Screen Cube. If the specimen is diluted or adulterated, it may cause the false negative result.

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

# TEST LIMITATIONS

- This test has been developed for testing oral fluid specimen only. No other fluids have been evaluated. DO NOT use this device to test substances other than oral fluid.
- 2. It is possible that technical or procedural errors, as well as other interfering substances in the oral fluid specimen may cause false results.
- 3. This test is a qualitative screening assay. It is not designed to determine the quantitative concentration of drugs or the level of intoxication.

## QUALITY CONTROL

Users should follow the appropriate federal, state, and local guidelines concerning the frequency of assaying external quality control materials. Even though there is an internal procedural control line in the 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.

#### PERFORMANCE CHARACTERISTICS

## A. Analytical Sensitivity

Standard drugs were spiked into negative PBS pool to the concentration of 0% Cut-off, -50% Cut-off, - 25% Cut-off, cut-off and +50% Cut-off. The results were summarized below.

Drug Conc.	N	A	MP	BA	٨R	CC	C	Tł	HC	N	TD
Drug Conc. (Cut-off Range)	Ν	-	+	-	+	-	+	-	+	-	+
0% Cut-off	30	30	0	30	0	30	0	30	0	30	0
-50% Cut-off	30	30	0	30	0	30	0	30	0	30	0
-25% Cut-off	30	28	2	25	5	25	5	14	16	25	5
Cut-off	30	12	18	10	20	10	20	14	16	12	18
+25% Cut-off	30	8	22	6	24	6	24	5	25	6	24
+50% Cut-off	30	0	30	0	30	0	30	0	30	0	30

Drug Conc.	N	ME	Т	MD	MA	0	PI	0	XY	PC	CP
(Cut-off Range)	Ν	-	+	-	+	-	+	-	+	-	+
0% Cut-off	30	30	0	30	0	30	0	30	0	30	0
-50% Cut-off	30	30	0	30	0	30	0	30	0	30	0
-25% Cut-off	30	28	2	25	5	14	16	14	16	26	4
Cut-off	30	10	20	10	20	10	20	14	16	14	16
+25% Cut-off	30	8	22	6	24	5	25	5	25	5	25
+50% Cut-off	30	0	30	0	30	0	30	0	30	0	30

#### **B.** Analytical Specificity

The following table lists the concentration of compounds (ng/mL) above which iSCREEN $^{\rm m}$  Oral Fluid Test Drug Screen Cube identified positive results at the read time of 5 minutes.

Amphetamine (AMP)		Methamphetamine (MET)	
D-Amphetamine	50	D-Methamphetamine	50
D,L-Amphetamine	125	Fenfluramine	10,000
β-Phenylethylamine	4,000	p-Hydroxymethamphetamine	400
Tryptamine	1,500	Methoxyphenamine	25,000
p-Hydroxyamphetamine	800	3,4- Methylenedioxymethampheta mine	500
(+)3,4- Methylenedioxyamphetamine (MDA)	2,500	4,000	
Methamphetamine	11,000	Procaine	2,000
3,4- Methylenedioxymethampheta mine	100,000	(1R,2S) - (-) Ephedrine	400
Dopamine hydrochloride	8,000		
		Methylenedioxymethampheta mine (MDMA)	
Barbiturates (BAR)		3,4- Methylenedioxymethampheta mine	50
Secobarbital	20	3,4- Methylenedioxyamphetamine HCl	300
Amobarbital 30		3,4- Methylenedioxyethylampheta mine	60
Alphenol	15		
Aprobarbital	20	Opiate (OPI)	
Butabarbital	10	Morphine	40
Butathal	10	Codeine	100
Butalbital	250	Ethyl morphine	100
Cyclopentobarbital	60	Hydromorphine	1,000
Pentobarbital	30	Hydrocodone	2,000
Phenobarbital	10	Levorphanol	400
		Morphine 3-β-D-Glucuronide	50
Cocaine (COC)		Norcodeine	1,500
Cocaine	20	Normorphine	12,500
Benzoylecgonine	100	Nalorphine	10,000
Cocaethylene	25	Oxycodone	>300,00 0
Ecgonine	40,000	Oxymorphone	25,000
Ecgonine methylester	12,500	Thebaine	1,500
Marijuana (THC)	1	Oxycodone (OXY)	
11-nor-∆9-THC-9-COOH	25	Oxycodone	20
11-nor-∆8-THC-9-COOH	60	Dihydrocodeine	4,000
11-hydroxy-∆9-THC	2,500	Codeine	10,000
∆8-THC	7,500	Hydromorphone	300,000
∆9-THC	40	Morphine	11,000
Cannabinol	1,000	Acetylmorphine	> 100,000

	1		1
Cannabidiol	10,000	Buprenorphine	>
	,	F	100,000
		Et la la	>
		Ethyl morphine	100,000
Methadone (MTD)			
Methadone	30	Phencyclidine (PCP)	
Doxylamine	5,000	Phencyclidine	10
		4-Hydroxyphencyclidine	12,500

# C. Cross-Reactivity

A study was conducted to determine the cross-reactivity of the test with compounds spiked into drug-free PBS stock. The following components show no cross-reactivity when tested with iSCREEN<sup>™</sup> Oral Fluid Test Drug Screen Cube at a concentration up to 100  $\mu$ g/mL.

Acetaminophen Acetophenetidin N-Acetylprocainamide Acetylsalicylic Acid Aminopyrine Amoxicillin Ampicillin Ascorbic Acid Apomorphine Aspartame Atropine Benzilic Acid Benzoic Acid Benzphetamine D,L-Brompheniramine Caffeine Chloralhydrate Chloramphenicol Chlorothiazide (±) Chlorpheniramine Chlorpromazine Chloroquine Cholesterol Clonidine Cortisone (-) Cotinine Creatinine Deoxycorticosterone Dextromethorphan Diclofenac Diflunisal Digoxin Diphenhydramine (-)-Ephedrine β-Estradiol Ethyl-p-aminobenzoate Fenoprofen Furosemide Gentisic Acid Hemoglobin Hydralazine Hydrochlorothiazide Hydrocortisone O-Hydroxyhippuric Acid p-Hydroxytyramine Ibuprofen Iproniazid Isoproterenol Isoxsuprine Ketamine

Ketoprofen Loperamide Maprotiline Meprobamate Labetalol Meperidine Meprobamate Methylphenidate Nalidixic Acid Naloxone Naltrexone Naproxen Niacinamide Nifedipine Norethindrone D-Norpropoxyphene Noscapine D.L-Octopamine Oxalic Acid Oxolinic Acid Oxymetazoline Papaverine Penicillin-G Pentazocine Perphenazine Phenelzine D,L-Propranolol D-Propoxyphene D-Pseudoephedrine Quinidine Ouinine Ranitidine Salicylic acid Serotonin (5-Hydroxytyramine) Sulfamethazine Sulindac Tetracycline Tetrahydrocortisone, 3 Acetate Thiamine Thioridazine D, L-Tyrosine Tolbutamide Triamterene Trifluoperazine Trimethoprim D, L-Tryptophan Tyramine Uric Acid Verapamil Zomepirac

## BIBLIOGRAPHY OF SUGGESTED READING

- Moolchan, E., et al, "Saliva and Plasma Testing for Drugs of Abuse: Comparison of the Disposition and Pharmacological Effects of Cocaine", Addiction Research Center, IRP, NIDA, NIH, Baltimore, MD. As presented at the SOFT-TIAFT meeting October 1998.
- Kim, I, et al, "Plasma and oral fluid pharmacokinetics and pharmacodynamics after oral codeine administration", Clin Chem, 2002 Sept.; 48 (9), pp 1486-96.
- 3. Schramm, W. et al, "Drugs of Abuse in Saliva: A Review," J Anal Tox, 1992 Jan-Feb; 16 (1), pp 1-9.
- McCarron, MM, et al, "Detection of Phencyclidine Usage by Radioimmunoassay of Saliva," J Anal Tox. 1984 Sep-Oct.; 8 (5), pp 197-201.

## 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. National Clearinghouse for Alcohol and Drug Information <u>www.health.org</u> 1-800-729-6686 Center for Substance Abuse Treatment www.health.org 1-800-662-HELP The National Council on Alcoholism and Drug Dependence <u>www.mcadd.org</u> 1-800-NCA-CALL American Council for Drug Education (ACDE) <u>www.acde.org</u> 1-800-488-DRUG

#### INDEX OF SYMBOLS

(	Do not reuse	Ĩ	See Instruction for Use		Expiration Date
$\sum_{i=1}^{n}$	Tests per Kit	4°C 86°F	Store Between 4°C-30°C (39°F-86°F)	Ť	Keep Dry
LOT	Batch Number	REF	Catalog #	*	Keep Away from Sunlight
IVD	In Vitro Diagnostic Use	UDI	Unique Device Identifier		

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ASSISTANCE

If you have any question regarding to the use of this product, please contact 1-888-669-4337.