



MEDTOX[®] OXYCODONE

The MEDTOX[®] OXYCODONE product is a rapid qualitative screening assay for the detection of oxycodone or its metabolites in human urine.

1. INTENDED USE

The MEDTOX[®] OXYCODONE Test System uses immunochromatographic test strips for the rapid, qualitative detection of oxycodone in human urine. It is intended for prescription use.

The test detects oxycodone at concentrations of 100 ng/mL and above.

THE MEDTOX[®] OXYCODONE PROVIDES ONLY A PRELIMINARY ANALYTICAL TEST RESULT. A MORE SPECIFIC ALTERNATE CHEMICAL METHOD MUST BE USED IN ORDER TO OBTAIN A CONFIRMED ANALYTICAL RESULT. GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS) IS THE PREFERRED CONFIRMATORY METHOD. CLINICAL CONSIDERATION AND PROFESSIONAL JUDGMENT SHOULD BE APPLIED TO ANY DRUG OF ABUSE TEST RESULT.

Special Condition for Use Statement

MEDTOX[®] OXYCODONE is intended for prescription point-of-care use including physician office laboratories and central laboratory settings. It is also intended for workplace settings, criminal justice or forensic settings, and drug rehabilitation centers. MEDTOX[®] OXYCODONE is not for over-the-counter sale.

Workplace operators that may use this device are defined as individuals with a minimum of a high school education who also satisfy the following training and certification guidelines:

(1) Training should be conducted by a qualified professional and include a demonstration of the MEDTOX[®] OXYCODONE test system and (2) the use of quality assurance samples for monitoring and confirming the performance of the test system. Trainers should observe and confirm that the operator (3) uses proper technique when running a test sample and quality assurance samples, (4) has a basic understanding of test results, including the potential for false positive and false negative results, (5) knows how to prepare a sample for shipment to the laboratory for confirmation testing, (6) has reviewed the information contained in the MEDTOX[®] Training and Certification Program (available at www.medtox.com) and (7) that the operator minimally achieves a score of 80% on the written exam provided by MEDTOX[®].

Operators achieving a score of 80% will be provided with a certificate of training participation. Quality assurance samples appropriate for training are available from MEDTOX[®] Diagnostics, Inc. Additionally, MEDTOX[®] Technical Support will provide access to assistance from individuals who are experienced in the interpretation of drug testing results.

2. SUMMARY AND EXPLANATION OF THE TEST

The qualitative MEDTOX[®] OXYCODONE Test screen utilizes a rapid, solid-phase immunoassay technology to provide a very rapid test requiring no instrumentation. This test may be used to screen urine samples for oxycodone and its metabolites prior to confirmatory testing:

Oxycodone (Oxycontin[®], Percodan[®], Percocet[®], etc) is a semi synthetic narcotic analgesic that is prescribed for moderately severe pain. It is available in both standard and sustained release oral formulations. Oxycodone is metabolized to oxymorphone and noroxycodone.

Many factors influence the length of time required for drugs to be metabolized and excreted in the urine. A variety of factors influence the time period during which drug metabolites are detected in urine; the rate of urine production, the volume of fluid consumption, the amount of drug taken, the urine pH, and the length of time over which drug was consumed. Drinking large volumes of liquid or using diuretics to increase urine volume will lower the drug concentration in the urine and may decrease the detection period. Although the detection period for these drugs varies widely depending upon the compound taken, dose and route of administration and individual rates of metabolism, some general times have been established and are listed below.¹

<u>Drug</u>	<u>Detection Period</u>
Oxycodone	1-3 days

3. PRINCIPLES OF THE PROCEDURE

The MEDTOX[®] OXYCODONE Test is a rapid, competitive, membrane-based immunochromatographic assay. A single urine sample can be evaluated for the presence of oxycodone in a single device. The device consists of antibody-colloidal gold, drug-conjugate and a control line.

- ANTIBODY-COLLOIDAL GOLD** Antibody-colloidal gold solutions were prepared by absorbing mouse monoclonal antibody developed to bind oxycodone onto colloidal gold. The colloidal gold solution is applied to the sample well pad in the drug test.
- DRUG-CONJUGATE** A drug derivative of oxycodone was conjugated to bovine serum albumin (BSA). The drug conjugate is immobilized as a line at a labeled location on the membrane strip.
- CONTROL LINE** Each test strip has rabbit polyclonal anti-mouse immunoglobulin antibody immobilized as a line on the membrane at the CTRL location on the device window. The anti-mouse immunoglobulin antibody binds to the mouse antibody coated on the colloidal gold.

Drug in the urine and the drug conjugated to the protein compete to bind to the antibody-colloidal gold. When the urine is placed in the sample well, the dried antibody-colloidal gold on the sample pad dissolves and the urine wicks up the white test strip carrying the red antibody-colloidal gold with it.

Negative Samples

When no drug is present in the urine sample, the reddish purple antibody-colloidal gold solution migrates along the strip then binds to the appropriate drug conjugate immobilized on the membrane. The binding of the antibody-colloidal gold to the drug conjugate generates an easily visible reddish-purple line at the labeled location in the result window. Negative results can be reported as soon as the drug and control lines are visible.

Positive Samples

When drug is present in the urine sample the antibody-colloidal gold binds to the drug before it migrates along the strip. However, when the antibody-colloidal gold binds to the drug in the urine, the antibody colloidal gold cannot bind to the drug conjugate immobilized on the membrane. When the drug concentration is at or above the cutoff concentration, the majority of the antibody-colloidal gold is bound to the drug from the urine. Therefore, as the drug bound antibody-colloidal gold migrates along the strip, it is unable to bind to the appropriate drug conjugate immobilized on the membrane. Therefore no line is generated at the drug-specific location in the result window for a positive sample. Read positive results at 5 minutes. The test result after 5 minutes may not be consistent with the original reading.

CTRL Line

Each test strip has an internal procedural control. A line must form at the Control (CTRL) position in the result window to indicate that the proper sample volume was used and that the reagents are migrating properly. If a Control line does not form, the test is considered invalid. A Control line forms when the antibody-colloidal gold binds to the anti-mouse immunoglobulin antibody immobilized on the membrane at the CTRL location(s) near the top of the device window.

4. MATERIALS PROVIDED/STORAGE CONDITIONS

Each MEDTOX[®] OXYCODONE Test contains all the reagents necessary to test one urine sample for oxycodone.

1. The test device contains one test strip composed of a membrane strip coated with drug conjugate and a pad coated with antibody dye complexes in a protein matrix.
2. One disposable 100 µl sample pipette.

Kit Contents-Device Only

1. Twenty-five (25) test devices in individual foil packages containing a sample pipette.
2. One instructional package insert.

Storage Conditions

The kit, in its original packaging, should be stored at 2-25°C (36-77°F) until the expiration date on the label.

5. PRECAUTIONS

1. Urine specimens and all materials coming in contact with them should be handled and disposed of as if infectious and capable of transmitting infection. Never pipette by mouth and avoid contact with broken skin.
2. Avoid cross-contamination of urine samples by using a new urine specimen container and pipette for each urine sample.
3. The device should remain in its original sealed foil pouch until ready to use. If the pouch is damaged, do not use the test.
4. Do not store the test kit at temperatures above 25°C (77°F).
5. If devices have been stored refrigerated, bring to ambient temperature (18-25°C/ 64-77°F) prior to opening foil pouch.
6. Do not use tests after the expiration date printed on the package label.
7. For *in vitro* diagnostic use only.
8. If any of the lines formed are outside the arrow indicated by the drug name, the test is invalid.

6. SAMPLE COLLECTION AND PREPARATION

The urine sample should be collected in a clean glass or plastic container. Approximately 100 µL is required for each sample well. Collection of 45 mL of urine is more than sufficient for initial and subsequent testing. No preservatives should be added. Urine may be tested immediately following collection. The specimen may be refrigerated if testing is going to be delayed for more than a day. Urine may be frozen for longer storage. Stored urine must be brought to ambient temperature (18 to 25°C/64 to 77°F) and mixed well to assure a homogeneous sample prior to testing.

7. MATERIALS REQUIRED BUT NOT PROVIDED

1. Urine collection container.

NOTE: Specimen containers, disposable gloves and urine temperature strips are available from MEDTOX Diagnostics, Inc.

8. TEST PROCEDURE

1. Open one pouch for each sample to be tested and label the device with the patient or sample identification (ID). (You may notice a reddish-purple color in the sample well. This is normal, do not discard the test). Place the device on a flat level surface.



2. Apply 100 µl of urine to sample well as follows:
 - Hold the 100 µl sample pipette by the upper bulb.
 - Lower the pipette stem into the urine sample.

- Squeeze the upper bulb then release it. This motion will draw 100 µl of urine into the stem. The urine sample should reach the top of the stem, and a drop or two should overflow into the middle bulb, if not, repeat this process.
 - Dispense the urine into the sample well by squeezing the upper bulb. This will empty the stem delivering 100 µL of sample. Excess urine in the middle bulb should remain in the bulb.
3. Read the results at 5 minutes after application.

9. READING THE TEST RESULTS

Negative: The appearance of a reddish purple line at both the control area (CTRL) and test area (OXY) indicates a negative test result. **The color intensities of the control lines (CTRL) and test lines (OXY) may not be equal and may vary from test to test. The test line and control line positions may vary slightly from test strip to test strip. Any line of faint color intensity indicates a negative test result.**

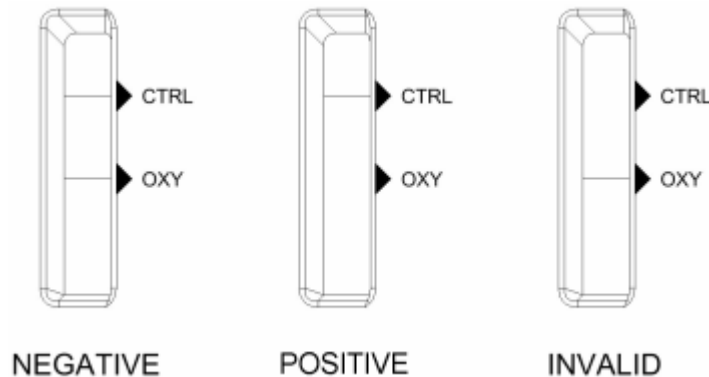
Positive: The appearance of a control line and the absence of a test line indicate a preliminary positive test result for that drug.

Invalid: The control line must be present for the test to be valid. The absence of a control line indicates the test is invalid. The urine sample should be retested on a new device.

10. INTERPRETATION OF TEST RESULTS

A NEGATIVE test result for a specific drug indicates that the sample does not contain the drug/drug metabolite above the cutoff level.

A POSITIVE test result for a specific drug indicates that the sample may contain drug/drug metabolite near or above the cutoff level. Examples of Negative and Non-Negative results are shown below.



11. QUALITY CONTROL

An internal procedural control is included on each test strip. A line must form at the control (CTRL) position on the test strip to indicate that adequate sample volume has been added, the reagents migrated properly, and the test strip is intact. If a control line does not form, the test is considered invalid. The control line consists of immobilized anti-mouse antibody that reacts with the antibody-colloidal gold as it passes this region of the membrane. Formation of a visible line verifies the control line antibody antigen reaction occurred. A visible control line should always be present regardless of whether drug is absent or present in the sample.

Minimally, a QC program includes external negative and positive control material used to monitor the performance of each new lot of product, each new shipment of product and may be used to assess the competency of new operators.

For additional information concerning QC, forensic or workplace testing requirements, contact the appropriate regulatory authority. Users should follow federal, state, and local QC requirements.

12. LIMITATIONS OF THE PROCEDURE

1. The MEDTOX[®] OXYCODONE Test is only for use with unadulterated human urine samples.
2. There is a possibility that other substances and/or factors, e.g. technical or procedural errors, may interfere with the test and cause false results.

13. PERFORMANCE CHARACTERISTICS

13A. Sensitivity, Accuracy, and Precision

Accuracy in a Point of Care setting

The accuracy was evaluated by assaying a panel of blind coded clinical urine samples containing varying concentrations of drugs and comparing to GC/MS results. The samples were obtained from MEDTOX Laboratories. Samples that screened negative by the predicate device were not confirmed by GC/MS. Positive samples were confirmed by GC/MS. The GC/MS determination included oxycodone and oxymorphone and a weighted concentration using 100% cross-reactivity for oxycodone and a 50% cross-reactivity for oxymorphone was calculated. Clinical urine samples containing oxycodone and oxymorphone at higher concentrations were diluted with negative urine to obtain the desired number of samples with concentrations below and above the cutoff. The testing was performed by nine point of care personnel at three sites.

MEDTOX[®] OXYCODONE Results vs stratified GC/MS Values

MEDTOX[®] OXYCODONE Results	Negative by Immunoassay (Predicate Device)	Concentration up to 50% below the cutoff	Near Cutoff Negative (Between 50% below the cutoff and the cutoff concentration)	Near Cutoff Positive (Between the cutoff and 50% above the cutoff concentration)	High Positive (Greater than 50% above the cutoff concentration)
Positive	0	2	2	6	37
Negative	103	5	4	1	1

GC/MS values used to categorize samples in this table are determined by adding together the concentration of oxycodone plus 50% of the concentration of oxymorphone, based on the MEDTOX[®] OXYCODONE cross-reactivity studies.

% Agreement among positives is 96%

% Agreement among negatives is 97%

A second, in-house accuracy study was done using many of the same samples as in the POC study above. Results between the two studies were similar.

Sensitivity/Precision at One Location

Performance around the specific cutoff for oxycodone was evaluated by testing standard drug solutions diluted in drug-free urine in triplicate on 6 different intervals by 3 in-house operators. Drug free urine was also tested on each interval. The results were interpreted at five minutes and are summarized below:

MEDTOX[®] OXYCODONE Precision Study Results

Concentration of sample (ng/mL)	Number of determinations	Results #Neg / #Pos
0	54	54 / 0
25	54	54 / 0
50	54	50 / 4
75	54	14 / 40
100	54	4 / 50
125	54	1 / 53
150	54	0 / 54

Sensitivity/Precision at Point of Care Sites

Performance around the cutoff was evaluated by testing standard drug solutions diluted in drug-free urine at the various concentrations listed in the following table. 9 POC users at 3 different sites each tested 5 replicates of the 6 levels. The results obtained from the 3 sites, (Site1, Site2, Site3) are listed below:

MEDTOX[®] OXYCODONE Precision Study Results at Point of Care Sites

Concentration of sample (ng/mL)	Number of determinations			Results #Neg / #Pos		
	Site 1	Site 2	Site 3	Site 1	Site 2	Site 3
0	15	15	15	15 / 0	15 / 0	15 / 0
25	15	15	15	15 / 0	15 / 0	15 / 0
50	15	15	15	13 / 2	15 / 0	14 / 1
100	15	15	15	0 / 15	3 / 12	3 / 12
125	15	15	15	0 / 15	2 / 13	1 / 14
150	15	15	15	0 / 15	0 / 15	0 / 15

13B. Non Crossreactive Endogenous Compounds

Listed compounds were initially dissolved in appropriate solvents and then added to drug-free urine for evaluation with the MEDTOX[®] OXYCODONE test. Most of the compounds were evaluated for reactivity with the test at 100 µg/mL (albumin was evaluated at 20 mg/mL and bilirubin was evaluated at 200 µg/mL). Samples were evaluated in triplicate by in-house operators. The listed compounds gave negative results with the MEDTOX[®] OXYCODONE test.

Acetaldehyde
Acetone
Albumin, Human
Bilirubin
Cholesterol

Creatinine
Epinephrine
β-Estradiol
Estriol
Glucose Std. Solution

Hemoglobin, Human
Sodium Chloride
Tetrahydrocortisone
d,1-Thyroxine
Uric Acid

13C. Unrelated Compounds, Prescription and Over-the-Counter Medications

Listed compounds were initially dissolved in appropriate solvents and then added to drug-free urine for evaluation with the MEDTOX[®] OXYCODONE test. Most of the compounds listed in Section 13C were evaluated for reactivity with the test at 100 µg/mL. (Alprazolam, 1-hydroxy was evaluated at 25 µg/mL; Buprenorphine, Fentanyl, l-11-Hydroxy- Δ^9 -THC, Lorazepam glucuronide, 11-Nor-9-carboxy- Δ^9 -THC, Olanzapine, Oxazepam glucuronide, and Triazolam, 1-hydroxy were evaluated at 10µg/mL). Samples were evaluated in triplicate by in-house operators, and the listed compounds gave negative results with the test.

Acecaïnide (N-Acetylprocainamide)	Desalkylflurazepam	Loxapine	Phenobarbital
Acetaminophen	Desipramine	Lysergic Acid	Phenothiazine
Acetylsalicylic Acid	Desmethyl chlordiazepoxide	Lysergic Acid Diethylamide (LSD)	Phentermine
Allobarbitol	(Norchlordiazepoxide)	Maprotiline	Phentoin
Alprazolam	Desmethylflunitrazepam	MDA	(Diphenylhydantoin)
Alprazolam, 1-Hydroxy	Desmethylvenlafaxine	MDE (MDEA)	Phenylbutazone
p-Aminobenzoic Acid	Dexamethasone	MDMA	Phenylephrine
7-Amino-clonazepam	Dextromethorphan	Melanin	Phenylpropanolamine
7-Amino-flunitrazepam	Diazepam	Meperidine	Piroxicam
Aminoglutethimide	Diclofenac	Mephobarbital	Prazosin
l-Aminopyrine (4-dimethylamino) antipyrine)	Diethylpropion	Mepivacaine	Prednisolone
Amitriptyline	Diflunisal	Mesoridazine	Prednisone
Amobarbital	Digoxin	Methadone	Procaine
Amoxapine	Dimenhydrinate (Dramamine)	d-Methamphetamine	Procainamide
Amoxicillin	1,3-Dimethylbarbituric acid	l-Methamphetamine	Prochlorperazine
d-Amphetamine	Diphenhydramine	Methaqualone	Promazine
l- Amphetamine	Domperidone	Methcathinone	Promethazine
Ampicillin	Dopamine	Methocarbamol	Propoxyphene
Aprobarbital	Doxepin	Methoxyphenamine	Propranolol
l-Ascorbic Acid	Doxylamine	Methylphenidate	Protriptyline
Aspartame	Ecgonine	Methylprylon	d-Pseudoephedrine
Atenolol	Ecgonine Methyl Ester	Metoprolol	Pyrimidine
Atropine Sulfate	EDDP	Midazolam	Quetiapine (Seroquel)
Barbital	Efavirenz (Sustiva)	Mirtazapine	Quinidine
Barbituric Acid	EMDP	Nalidixic Acid	Ranitidine
Benzilic Acid	Ephedrine	Naproxen	Riboflavin
Benzoic Acid	Equilin	Niacinamide	Rifampin
Benzocaine (ethyl -4-aminobenzoate)	Erythromycin	Nicotine	Salicylic Acid
Benzoylcegonine	Estrone	Nifedipine	Secobarbital
Benzphetamine	Ethanol	Nitrazepam	Selegiline (Deprenyl)
Benzpropine	Fenfluramine	Nitrofurantoin	Serotonin (5-Hydroxytryptamine)
Brompheniramine	Fenopropfen	Norclomipramine	Sertraline (Zoloft)
Buprenorphine	Fentanyl (Synthetic opiate)	Nordiazepam	Sildenafil (Viagra)
Bupropion	Flunitrazepam	Nordoxepin	Sulfamethazine
Butabarbital	Fluoxetine (Prozac)	Norethindrone	Sulindac
Butalbital	lurazepam	Norlysergic Acid	Talbutal
Caffeine	Furosemide	Normeperidine	Temazepam
Cannabidiol	Fuvoxamine	Norpropoxyphene	Tetracycline
Cannabinol	Gentisic Acid (2,5-Dihydroxybenzoic acid)	l-Norpseudoephedrine	Δ^9 -Tetrahydrocannabinol
Captopril	Glutethimide	11-Nor-9-carboxy- Δ^9 -THC	Δ^8 -Tetrahydrocannabinol (also called Δ^8 -Tetrahydrocannabinol)
Carbamazepine	Guaiacol Glyceryl Ether	11-Nor-9-carboxy- Δ^8 -THC	
Carbamazepine-10,11 epoxide	Haloperidol	Nortriptyline	
Carisoprodol (Meprobamate)	Hexobarbital	Noscapine	Tetrahydrozoline
Cephalexin	Hippuric acid	Nylidrin	Theopylline
Chloral Hydrate	Hydralazine	Octopamine	Thiamine
Chloramphenicol	Hydrochlorothiazide	Ofloxacin	Thiopental
Chlordiazepoxide	Hydrocortisone	Olanzapine (Zyprexa)	Thioridazine
Chloroquine	Hydroxybupropion	Omeprazole	Thiothixine
Chlorothiazide	Hydroxyhippuric acid	Orphenadrine	Tolbutamide
Chlorpheniramine	l-11-Hydroxy- Δ^9 -THC	Oxalic Acid	Tolmetin (Tolactin)
Chlorpromazine	p-Hydroxyphenobarbital	Oxaprosin	Trazodone
Chlorprothixene	4-Hydroxyphenacyclidine	Oxazepam	Triamterene
Clobazam	3-Hydroxytyramine	Oxazepam glucuronide	Triazolam
Clomipramine	Hydroxyzine	Oxolinic Acid	Triazolam, 1-hydroxy
Clonazepam	lbutrofen	Oxymetazoline	Trifluoperazine
Clonidine	Imipramine	Papaverine hydrochloride	Trimethoprim
Clorazepate	Iproniazid	Penicillin G	Trimipramine
Clozapine	(R)-Isoproterenol	Pentazocine	Tripelennamine
Cocaine	Isoxsuprine	Pentobarbital	Tryptamine
Cortisone	Ketamine	Perphenazine	Tryptophan
Cotinine	Ketoprofen	Phenallymal (Alphenal)	Tyramine
Cyclobenzaprine	Labetalol	Phenacetin (Acetophenetidin)	Tyrosine
Cyclopentobarbital	Lidocaine	Phencyclidine	Valproic Acid
Deoxycorticosterone	Lithium carbonate	Phendimetrazine	Venlafaxine
	Loperamide	Phenelzine	Verapamil
	Lorazepam	Phenethylamine	Zomepirac
	Lorazepam glucuronide	Pheniramine	
		Phenmetrazine	

13D. Related and Reactive Compounds

The following oxycodone metabolites and related compounds were initially dissolved in appropriate solvents and then added at varying concentrations to drug-free urine for evaluation with the MEDTOX[®] OXYCODONE test. Samples were evaluated in triplicate by in-house operators. Results are expressed as the minimum concentration of metabolite or compound required to produce a positive test result with the test. Percent cross reactivity of a compound is calculated by dividing the cutoff concentration by the minimum concentration required to obtain a positive result and then multiplying by 100%.

Oxycodone, cutoff = 100 ng/mL	Result	% Cross-Reactivity
	Positive at 100 ng/mL	100%
Apomorphine	Negative at 100,000 ng/mL	< 1%
Codeine	Positive at 5,000 ng/mL	2%
Diacetylmorphine	Negative at 100,000 ng/mL	< 1%
Dihydrocodeine	Positive at 10,000 ng/mL	1%
Ethylmorphine	Positive at 5,000 ng/mL	2%
Hydrocodone	Positive at 75,000 ng/mL	< 1%
Hydromorphone	Positive at 50,000 ng/mL	< 1%
Levorphanol	Negative at 50,000 ng/mL	< 1%
Morphine	Positive at 50,000 ng/mL	< 1%
6-Monoacetylmorphine	Negative at 100,000 ng/mL	< 1%
Morphine 3-β-D-Glucuronide	Negative at 100,000 ng/mL	< 1%
Morphine 6-β-D-Glucuronide	Negative at 100,000 ng/mL	< 1%
Nalorphine	Negative at 100,000 ng/mL	< 1%
Naloxone	Positive at 50,000 ng/mL	< 1%
Naltrexone	Negative at 100,000 ng/mL	< 1%
Norcodeine	Positive at 100,000 ng/mL	< 1%
Oxymorphone	Positive at 200 ng/mL	50%
Thebaine	Negative at 100,000 ng/mL	< 1%

13E. Interference

pH and Specific Gravity:

The MEDTOX[®] OXYCODONE test was assayed with six negative clinical samples with pH values of 4.0, 5.0, 6.0, 7.0, 8.0 and 9.0 ± 0.1. Each sample was assayed in triplicate. The pH samples were fortified with oxycodone to the concentrations of 25 ng/mL and 150 ng/mL. All the pH levels gave negative results when fortified to 25 ng/mL, and all pH levels gave positive results when fortified to 150 ng/mL.

The MEDTOX[®] OXYCODONE test was assayed with eight samples with specific gravity values of 1.003, 1.005, 1.010, 1.015, 1.020, 1.025, 1.030 and 1.035 ± 0.001. Each sample was assayed in triplicate. The specific gravity samples were fortified with oxycodone to the concentrations of 25 ng/mL and 150 ng/mL. All the specific gravity levels gave negative results when fortified to 25 ng/mL, and all specific gravity levels gave positive results when fortified to 150 ng/mL.

Common Drugs:

Following the study of M.L. Smith, et. al.² drug free urine samples were spiked with oxycodone to the concentrations of 25 ng/mL and 150 ng/mL. 100 µg/mL of the common drugs were then added to the preparation and assayed by the MEDTOX[®] OXYCODONE test. Samples were evaluated in triplicate by in-house operators. None of the common drugs listed in the following table affected the expected results.

COMMON DRUGS EVALUATED WITH MEDTOX[®] OXYCODONE TESTS

Acetylsalicylic Acid	Chlorpheniramine	Ibuprofen
Acetaminophen	Cocaine	Morphine-OPI
Brompheniramine maleate	Dextromethorphan	Phenobarbital
Caffeine	Diphenylhydantoin	d-Pseudoephedrine
Carbamazepine	Doxylamine	Salicylic Acid

14. BIBLIOGRAPHY

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- Smith, M.L., Shimomura, E.T., Summers, J., Paul, B.D., Nichols, D., Shippee, R., Jenkins, A.J., Darwin, W.D., and Cone, E.J. Detection Times and Analytical Performance of Commercial Urine Opiate Immunoassays Following Heroin Administration, *Journal of Analytical Toxicology*. Volume 24:7. October 2000, pages 522-529.

15. LIMITED EXPRESS WARRANTIES

The manufacturer makes no express warranty other than the diagnostic test kit will measure certain drugs and/or drug metabolites when used in accordance with the manufacturer's printed instructions. The use of the kit for any other purpose is outside the intended use of this product. The manufacturer gives no express warranty as to what the legal or clinical significance of the level of drug/drug metabolites detected by the MEDTOX[®] OXYCODONE test. The manufacturer disclaims any and all implied warranties of merchantability, fitness for use or implied utility for any other purposes. Any and all damages for failure of the kit to perform to its instructions are limited to the replacement value of the kit.

Covered by one or more patents.

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This product does not contain controlled substances.

This product does not contain hazardous or toxic chemicals as defined by the OSHA Hazard Communication Rule [29 CFR 1910.1200(g)].

To place an order or for technical services call 1-800-832-3244.