

First Sign® Drug of Abuse Dip Card Test

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First Sign® Drug of Abuse Dip Card Test is an immunochromatographic assay for the qualitative detection of D-Amphetamine, Benzoylcegonine, 11-nor- Δ^9 -THC-9-COOH, Oxazepam, Methamphetamine, Morphine, Methadone, Phencyclidine, Oxycodone, Butalbital, Buprenorphine, Morphine, 2-Ethylidene-1,5-Dimethyl-3,3-Diphenylpyrrolidine, Methylendioxyamphetamine, and Nortriptyline in human urine at a cutoff concentration indicated in the table below.

The test may yield preliminary positive results when prescription drugs are ingested at prescribed doses. It is not intended to distinguish between prescription use and abuse of any drug. There are no uniformly recognized cutoff concentration levels for any drug in urine. The test provides only preliminary test results. A more specific alternative 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 exercised with any drug of abuse test result, particularly when the preliminary result is positive.

For *in vitro* diagnostic use only.

WHAT IS FIRST SIGN® DRUG OF ABUSE DIP CARD TEST?

First Sign® Drug of Abuse Dip Card Test is a rapid test for qualitative detection of D-Amphetamine, Benzoylcegonine, 11-nor- Δ^9 -THC-9-COOH, Oxazepam, Methamphetamine, Morphine, Methadone, Oxycodone, Phencyclidine, Butalbital, Buprenorphine, Morphine, 2-Ethylidene-1,5-Dimethyl-3,3-Diphenylpyrrolidine, Methylendioxyamphetamine, and Nortriptyline in human urine. **First Sign® Drug of Abuse Dip Card Test** yields a positive result when drug and/or its metabolite in urine is at or exceeds its cutoff concentration.

WHAT IS THE CUT-OFF VALUE AND APPROXIMATE DETECTION TIME?

Drug (Identifier)	Cutoff Level	Minimum Detection Time	Maximum Detection Time
D-Amphetamine	1000ng/mL	4-6 hours	2-3 days
Benzoylcegonine	300ng/mL	2-6 hours	2-3 days
11-nor- Δ^9 -THC-9-COOH	50ng/mL	1-3 hours	1-7 days
Oxazepam	300ng/mL	2-7 hours	1-4 days
Methamphetamine	1000ng/mL	4-6 hours	2-3 days
Morphine	2000ng/mL	2-6 hours	1-3 days
Methadone	300ng/mL	3-8 hours	1-3 days
Oxycodone	100ng/mL	1-3 hours	1-2 days
Phencyclidine	25ng/mL	4-6 hours	7-14 days
Butalbital	300ng/mL	2-4 hours	1-3 weeks
Buprenorphine	10ng/mL	2-6 hours	2-4 days
Morphine	300ng/mL	2-6 hours	1-3 days
2-Ethylidene-1,5-Dimethyl-3,3-Diphenylpyrrolidine	300ng/mL	3-8 hours	1-3 days
Methylendioxyamphetamine	500ng/mL	2-7 hours	2-4 days
Nortriptyline	1,000ng/mL	8-12 hours	2-7 days

PRINCIPLE

The **First Sign® Drug of Abuse Dip Card Test** is an immunoassay. During testing, a urine specimen migrates upward on the test strip. A drug-positive urine specimen will not generate a colored line in the specific test line region of the strip, while a drug-negative urine specimen will generate a line in the test line region. A colored line will always appear at the control line region, indicating that proper volume of specimen has been added.

WARNINGS AND PRECAUTIONS

- For *in vitro* diagnostic use.
- For external use only.
- For single use. Discard after first use.
- Do not use the test if the pouch is punctured or not well sealed.
- Do not use after expiration date.
- Keep out of the reach of children.
- The used test dip card and urine specimen should be discarded according to federal, state and local regulations.

CONTENT OF THE PACKAGE

- Included in package:
 - User Instruction
 - Dip Card (inside foil pouch)

Not included in package:

- Watch, Timer or Clock
- Collection Cup

STORAGE AND STABILITY

Store as packaged in the sealed pouch at 39°F - 86°F (4°C - 30°C). The test is stable through the expiration date printed on the sealed pouch. The test dip card must remain in the sealed pouch until use. Keep away from direct sunlight, moisture and heat. DO NOT FREEZE. Do not use beyond the expiration date.

WHEN TO COLLECT URINE FOR THE TEST?

You can use urine from any time of the day. The minimum detection time varies for different drugs. (Refer to the approximate detection timetable).

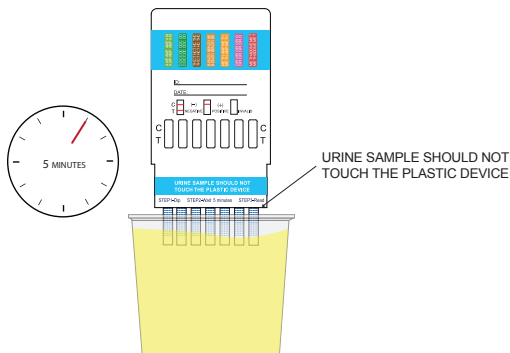
HOW TO COLLECT URINE?

- When you are ready to begin, remove the dip card from the sealed foil pouch.
- Notice the colored tape on each strip indicates the name of the drug you are testing for.
- Fill the collection cup with a fresh urine sample. Do not over-fill. (see the Max line mark).

HOW TO DO THE TEST?

- Remove the cap from the dip card. Insert the exposed test strips into the urine sample for 10 to 15 seconds. **DO NOT** let the urine sample touch the plastic device; this could cause inconclusive drug test results.
- Insert the cap firmly back onto the dip card and lay it on a flat surface.
- Wait for 5 minutes (start timing immediately after dip card is taken out of the urine sample) and read the results. **DO NOT** read results after 5 minutes.

Note: Results after 5 minutes may be not accurate and should not be read.



READING THE RESULTS

Preliminary Positive (+)

If a line appears in the C - Control area, but NO line appears in the T - Test area, then it indicates a Preliminary Positive result for the corresponding drug.

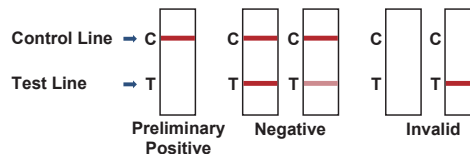
Negative (-)

If a line appears in both the C - Control and T - Test area, then it indicates a Negative result for the corresponding drug regardless of how dark or how light the line may appear.

Invalid

If at 5 minutes, NO line appears in the C - Control area, then the results are Invalid. In such case, retest with a new dip card.

Note: Each test strip needs to be looked at individually. Each line may vary in color and darkness or the rate at which the line appears. (DO NOT compare lines within the same test strip or between different test strips).



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

IMPORTANT: The result you obtained is called preliminary for a reason. The sample must be tested by laboratory in order to determine if a drug of abuse is actually present.

What Is A False Positive Test?

The definition of a false positive test would be an instance where the test result from the **First Sign® Drug of Abuse Dip Card Test** is positive, even though the initial target drug is not present in the sample. The most common causes of a false positive test are cross reactants. Certain foods and medicines, diet plan drugs and nutritional supplements may also cause a false positive test result with this product.

What Is A False Negative Test?

The definition of a false negative test is that the initial target drug is present but isn't detected by **First Sign® Drug of Abuse Dip Card Test**. If the sample is diluted, or if the sample is tainted or contaminated with a substance this could cause false negative results.

TEST LIMITATIONS

- First Sign® Drug of Abuse Dip Card Test** provides only a qualitative, preliminary analytical result. A secondary analytical method must be used to obtain a confirmed result. Gas chromatography/mass spectrometry (GC/MS) is the preferred confirmatory method.
- There is a possibility that interfering substances in the urine specimen may cause erroneous results.
- Substances, such as bleach and/or alum, in urine specimens may produce erroneous results.
- A positive result does not indicate intoxication, the concentration of drug in the urine, or the route of drug administration.
- A negative result will not necessarily indicate drug-free urine. Negative result can be obtained when drug is present but below the cutoff level of the test.
- Test does not distinguish between drugs of abuse and certain medications.
- A positive test result may be obtained from certain foods or food supplements.

QUALITY CONTROL

If you work in a laboratory you should perform quality control testing and you should read this section. A procedural control is included in the test. A color 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. Please contact our Technical Support at 1-888-HEMOSURE (436-6787) for controls that work with the dip card.

PERFORMANCE CHARACTERISTICS

Eighty clinical urine specimens were analyzed by GC/MS and by **First Sign® Drug of Abuse Dip Card 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 follows:

Accuracy - D-Amphetamine

Viewer A:

WHPM Result	Drug-free	Less than half the cutoff Concentration by GC/MS analysis	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	0	1	10	26
Negative	10	10	19	4	0

% agreement among positives is 90%
% agreement among negatives is 97.5%

Viewer B:

WHPM Result	Drug-free	Less than half the cutoff Concentration by GC/MS analysis	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	0	1	11	26
Negative	10	10	19	3	0

% agreement among positives is 92.5%
% agreement among negatives is 97.5%

Viewer C:

WHPM Result	Drug-free	Less than half the cutoff Concentration by GC/MS analysis	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	0	1	12	26
Negative	10	10	19	2	0

% agreement among positives is 95%
% agreement among negatives is 97.5%

From the results of the above tables, the total results are shown as below for D-Amphetamine:

The average positive agreement is 92.5%.
The average negative agreement is 97.5%.

Accuracy - Benzoylcegonine

Viewer A:

WHPM Result	Drug-free	Less than half the cutoff Concentration by GC/MS analysis	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	0	1	10	26
Negative	10	10	19	4	0

% agreement among positives is 90.0%
% agreement among negatives is 97.5%

Viewer B:

WHPM Result	Drug-free	Less than half the cutoff Concentration by GC/MS analysis	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	0	1	10	26
Negative	10	10	19	4	0

% agreement among positives is 90.0%
% agreement among negatives is 97.5%

Viewer C:

WHPM Result	Drug-free	Less than half the cutoff Concentration by GC/MS analysis	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	0	0	11	26
Negative	10	10	20	3	0

% agreement among positives is 92.5%
% agreement among negatives is 100.0%

From the results of the above tables, the total results are shown as below for Benzoylcegonine:

The average positive agreement is 90.8%.
The average negative agreement is 98.3%.

Accuracy - 11-nor- Δ^9 -THC-9-COOH

Viewer A:

WHPM Result	Drug-free	Less than half the cutoff Concentration by GC/MS analysis	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	0	2	14	26
Negative	10	10	18	0	0

% agreement among positives is 100%
% agreement among negatives is 95%

Precision and Sensitivity - Benzoylcegonine

Lot 1

Approximate concentration of sample (ng/mL)	Number of determinations	Results Negative/Positive
0	50	50/0
75	50	50/0
150	50	50/0
225	50	50/0
300	50	3/47
375	50	0/50
450	50	0/50
525	50	0/50
600	50	0/50

Lot 2

Approximate concentration of sample (ng/mL)	Number of determinations	Results Negative/Positive
0	50	50/0
75	50	50/0
150	50	50/0
225	50	50/0
300	50	4/46
375	50	0/50
450	50	0/50
525	50	0/50
600	50	0/50

Lot 3

Approximate concentration of sample (ng/mL)	Number of determinations	Results Negative/Positive
0	50	50/0
75	50	50/0
150	50	50/0
225	50	50/0
300	50	3/47
375	50	0/50
450	50	0/50
525	50	0/50
600	50	0/50

Precision and Sensitivity - 11-nor- Δ^8 -THC-9-COOH

Lot 1

Approximate concentration of sample (ng/mL)	Number of determinations	Results Negative/Positive
0	50	50/0
12.5	50	50/0
25	50	50/0
37.5	50	50/0
50	50	4/46
62.5	50	0/50
75	50	0/50
87.5	50	0/50
100	50	0/50

Lot 2

Approximate concentration of sample (ng/mL)	Number of determinations	Results Negative/Positive
0	50	50/0
12.5	50	50/0
25	50	50/0
37.5	50	50/0
50	50	3/47
62.5	50	0/50
75	50	0/50
87.5	50	0/50
100	50	0/50

Lot 3

Approximate concentration of sample (ng/mL)	Number of determinations	Results Negative/Positive
0	50	50/0
12.5	50	50/0
25	50	50/0
37.5	50	50/0
50	50	3/47
62.5	50	0/50
75	50	0/50
87.5	50	0/50
100	50	0/50

Precision and Sensitivity - Oxazepam

Lot 1

Approximate concentration of sample (ng/mL)	Number of determinations	Results Negative/Positive
0	50	50/0
75	50	50/0
150	50	50/0
225	50	50/0
300	50	3/47
375	50	0/50
450	50	0/50
525	50	0/50
600	50	0/50

Lot 2

Approximate concentration of sample (ng/mL)	Number of determinations	Results Negative/Positive
0	50	50/0
75	50	50/0
150	50	50/0
225	50	50/0
300	50	4/46
375	50	0/50
450	50	0/50
525	50	0/50
600	50	0/50

Lot 3

Approximate concentration of sample (ng/mL)	Number of determinations	Results Negative/Positive
0	50	50/0
75	50	50/0
150	50	50/0
225	50	50/0
300	50	3/47
375	50	0/50
450	50	0/50
525	50	0/50
600	50	0/50

Precision and Sensitivity- Methamphetamine

Lot 1

Approximate concentration of sample (ng/mL)	Number of determinations	Results Negative/Positive
0	50	50/0
250	50	50/0
500	50	50/0
750	50	50/0
1000	50	4/46
1250	50	0/50
1500	50	0/50
1750	50	0/50
2000	50	0/50

Lot 2

Approximate concentration of sample (ng/mL)	Number of determinations	Results Negative/Positive
0	50	50/0
250	50	50/0
500	50	50/0
750	50	50/0
1000	50	3/47
1250	50	0/50
1500	50	0/50
1750	50	0/50
2000	50	0/50

Lot 3

Approximate concentration of sample (ng/mL)	Number of determinations	Results Negative/Positive
0	50	50/0
250	50	50/0
500	50	50/0
750	50	50/0
1000	50	3/47
1250	50	0/50
1500	50	0/50
1750	50	0/50
2000	50	0/50

Precision and Sensitivity - Morphine

Lot 1

Approximate concentration of sample (ng/mL)	Number of determinations	Results Negative/Positive
0	50	50/0
500	50	50/0
1000	50	50/0
1500	50	50/0
2000	50	3/47
2500	50	0/50
3000	50	0/50
3500	50	0/50
4000	50	0/50

Lot 2

Approximate concentration of sample (ng/mL)	Number of determinations	Results Negative/Positive
0	50	50/0
500	50	50/0
1000	50	50/0
1500	50	50/0
2000	50	3/47
2500	50	0/50
3000	50	0/50
3500	50	0/50
4000	50	0/50

Lot 3

Approximate concentration of sample (ng/mL)	Number of determinations	Results Negative/Positive
0	50	50/0
500	50	50/0
1000	50	50/0
1500	50	50/0
2000	50	4/46
2500	50	0/50
3000	50	0/50
3500	50	0/50
4000	50	0/50

Precision and Sensitivity - Methadone

Lot 1

Approximate concentration of sample (ng/mL)	Number of determinations	Results Negative/Positive
0	50	50/0
75	50	50/0
150	50	50/0
225	50	50/0
300	50	3/47
375	50	0/50
450	50	0/50
525	50	0/50
600	50	0/50

Lot 2

Approximate concentration of sample (ng/mL)	Number of determinations	Results Negative/Positive
0	50	50/0
75	50	50/0
150	50	50/0
225	50	50/0
300	50	3/47
375	50	0/50
450	50	0/50
525	50	0/50
600	50	0/50

Lot 3

Approximate concentration of sample (ng/mL)	Number of determinations	Results Negative/Positive
0	50	50/0
75	50	50/0
150	50	50/0
225	50	50/0
300	50	1/49
375	50	0/50
450	50	0/50
525	50	0/50
600	50	0/50

Precision and Sensitivity - Oxycodone

Lot 1		
Approximate concentration of sample (ng/mL)	Number of determinations	Results Negative/Positive
0	50	50/0
25	50	50/0
50	50	50/0
75	50	50/0
100	50	4/46
125	50	0/50
150	50	0/50
175	50	0/50
200	50	0/50

Lot 2		
Approximate concentration of sample (ng/mL)	Number of determinations	Results Negative/Positive
0	50	50/0
25	50	50/0
50	50	50/0
75	50	50/0
100	50	3/47
125	50	0/50
150	50	0/50
175	50	0/50
200	50	0/50

Lot 3		
Approximate concentration of sample (ng/mL)	Number of determinations	Results Negative/Positive
0	50	50/0
25	50	50/0
50	50	50/0
75	50	50/0
100	50	3/47
125	50	0/50
150	50	0/50
175	50	0/50
200	50	0/50

Precision and Sensitivity - Phencyclidine

Lot 1		
Approximate concentration of sample (ng/mL)	Number of determinations	Results Negative/Positive
0	50	50/0
6.3	50	50/0
12.5	50	50/0
18.8	50	50/0
25	50	3/47
31.3	50	0/50
37.5	50	0/50
43.8	50	0/50
50	50	0/50

Lot 2		
Approximate concentration of sample (ng/mL)	Number of determinations	Results Negative/Positive
0	50	50/0
6.3	50	50/0
12.5	50	50/0
18.8	50	50/0
25	50	2/48
31.3	50	0/50
37.5	50	0/50
43.8	50	0/50
50	50	0/50

Lot 3		
Approximate concentration of sample (ng/mL)	Number of determinations	Results Negative/Positive
0	50	50/0
6.3	50	50/0
12.5	50	50/0
18.8	50	50/0
25	50	2/48
31.3	50	0/50
37.5	50	0/50
43.8	50	0/50
50	50	0/50

Precision and Sensitivity - Butalbital

Lot 1		
Approximate concentration of sample (ng/mL)	Number of determinations	Results Negative/Positive
0	50	50/0
75	50	50/0
150	50	50/0
225	50	50/0
300	50	3/47
375	50	0/50
450	50	0/50
525	50	0/50
600	50	0/50

Lot 2		
Approximate concentration of sample (ng/mL)	Number of determinations	Results Negative/Positive
0	50	50/0
75	50	50/0
150	50	50/0
225	50	50/0
300	50	4/46
375	50	0/50
450	50	0/50
525	50	0/50
600	50	0/50

Lot 3		
Approximate concentration of sample (ng/mL)	Number of determinations	Results Negative/Positive
0	50	50/0
75	50	50/0
150	50	50/0
225	50	50/0
300	50	3/47
375	50	0/50
450	50	0/50
525	50	0/50
600	50	0/50

Precision and Sensitivity - Buprenorphine

Lot 1		
Approximate concentration of sample (ng/mL)	Number of determinations	Results Negative/Positive
0	50	50/0
2.5	50	50/0
5	50	50/0
7.5	50	50/0
10	50	3/47
12.5	50	0/50
15	50	0/50
17.5	50	0/50
20	50	0/50

Lot 2		
Approximate concentration of sample (ng/mL)	Number of determinations	Results Negative/Positive
0	50	50/0
2.5	50	50/0
5	50	50/0
7.5	50	50/0
10	50	3/47
12.5	50	0/50
15	50	0/50
17.5	50	0/50
20	50	0/50

Lot 3		
Approximate concentration of sample (ng/mL)	Number of determinations	Results Negative/Positive
0	50	50/0
2.5	50	50/0
5	50	50/0
7.5	50	50/0
10	50	3/47
12.5	50	0/50
15	50	0/50
17.5	50	0/50
20	50	0/50

Precision and Sensitivity - Morphine

Lot 1		
Approximate concentration of sample (ng/mL)	Number of determinations	Results Negative/Positive
0	50	50/0
75	50	50/0
150	50	50/0
225	50	50/0
300	50	2/48
375	50	0/50
450	50	0/50
525	50	0/50
600	50	0/50

Lot 2		
Approximate concentration of sample (ng/mL)	Number of determinations	Results Negative/Positive
0	50	50/0
75	50	50/0
150	50	50/0
225	50	50/0
300	50	1/49
375	50	0/50
450	50	0/50
525	50	0/50
600	50	0/50

Lot 3		
Approximate concentration of sample (ng/mL)	Number of determinations	Results Negative/Positive
0	50	50/0
75	50	50/0
150	50	50/0
225	50	50/0
300	50	2/48
375	50	0/50
450	50	0/50
525	50	0/50
600	50	0/50

Precision and Sensitivity - 2-Ethylidene-1,5-Dimethyl-3,3-Diphenylpyrrolidine

Lot 1		
Approximate concentration of sample (ng/mL)	Number of determinations	Results Negative/Positive
0	50	50/0
75	50	50/0
150	50	50/0
225	50	50/0
300	50	3/47
375	50	0/50
450	50	0/50
525	50	0/50
600	50	0/50

Lot 2		
Approximate concentration of sample (ng/mL)	Number of determinations	Results Negative/Positive
0	50	50/0
75	50	50/0
150	50	50/0
225	50	50/0
300	50	2/48
375	50	0/50
450	50	0/50
525	50	0/50
600	50	0/50

Lot 3		
Approximate concentration of sample (ng/mL)	Number of determinations	Results Negative/Positive
0	50	50/0
75	50	50/0
150	50	50/0
225	50	50/0
300	50	2/48
375	50	0/50
450	50	0/50
525	50	0/50
600	50	0/50

Precision and Sensitivity - Methylendioxyamphetamine

Lot 1

Approximate concentration of sample (ng/mL)	Number of determinations	Results Negative/Positive
0	50	50/0
125	50	50/0
250	50	50/0
375	50	50/0
500	50	2/48
625	50	0/50
750	50	0/50
875	50	0/50
1000	50	0/50

Lot 2

Approximate concentration of sample (ng/mL)	Number of determinations	Results Negative/Positive
0	50	50/0
125	50	50/0
250	50	50/0
375	50	50/0
500	50	3/47
625	50	0/50
750	50	0/50
875	50	0/50
1000	50	0/50

Lot 3

Approximate concentration of sample (ng/mL)	Number of determinations	Results Negative/Positive
0	50	50/0
125	50	50/0
250	50	50/0
375	50	50/0
500	50	3/47
625	50	0/50
750	50	0/50
875	50	0/50
1000	50	0/50

Precision and Sensitivity - Nortriptyline

Lot 1

Approximate concentration of sample (ng/mL)	Number of determinations	Results Negative/Positive
0	50	50/0
250	50	50/0
500	50	50/0
750	50	50/0
1000	50	3/47
1250	50	0/50
1500	50	0/50
1750	50	0/50
2000	50	0/50

Lot 2

Approximate concentration of sample (ng/mL)	Number of determinations	Results Negative/Positive
0	50	50/0
250	50	50/0
500	50	50/0
750	50	50/0
1000	50	2/48
1250	50	0/50
1500	50	0/50
1750	50	0/50
2000	50	0/50

Lot 3

Approximate concentration of sample (ng/mL)	Number of determinations	Results Negative/Positive
0	50	50/0
250	50	50/0
500	50	50/0
750	50	50/0
1000	50	2/48
1250	50	0/50
1500	50	0/50
1750	50	0/50
2000	50	0/50

Specificity and Cross Reactivity

To test the specificity of the test, the test device was used to D-Amphetamine, Benzoylcegonine, 11-nor- Δ^8 -THC-9-COOH, Oxazepam, Methamphetamine, Morphine, Methadone, Phencyclidine, Oxycodone, Butalbital, Buprenorphine, Morphine, 2-Ethylidene-1,5-Dimethyl-3,3-Diphenylpyrrolidine, Methylendioxyamphetamine, and Nortriptyline drug metabolites and other components of the same class that are likely to be present in urine. All the components were added to drug-free normal human urine. The following structurally related compounds produced positive results with the test when tested at levels equal to or greater than the concentrations listed below.

D-Amphetamine	Result
(D-Amphetamine, Cutoff = 1,000ng/mL)	Positive at 1000ng/mL
1-Amphetamine	Positive at 100000ng/mL
d1-Amphetamine	Positive at 500ng/mL
(+/-) 3,4-methylenedioxyamphetamine (MDA)	Positive at 1300ng/mL
Phentermine	Positive at 100000ng/mL
Apomorphine	Positive at 50000ng/mL
β -Phenethylamine	Positive at 25000ng/mL
Tyramine	Positive at 10000ng/mL
Tryptamine	Positive at 25000ng/mL
d-Methamphetamine	>100000
l-Methamphetamine	>100000
Ephedrine	>100000
3,4-Methylenedioxyethylamphetamine (MDE)	>100000

Benzoylcegonine	Result
(Benzoylcegonine, Cutoff = 300ng/mL)	Positive at 300ng/mL
Cocaine HCl	Positive at 500ng/mL
Cocaethylene	>100000
Ecgonine	>100000

11-nor- Δ^8 -THC-9-COOH	Result
(11-nor- Δ^8 -THC-9-COOH, Cutoff = 50ng/mL)	Positive at 50ng/mL
11-hydroxy- Δ^8 -Tetrahydrocannabinol	Positive at 15000ng/mL
Δ^8 -Tetrahydrocannabinol	Positive at 8000ng/mL
Δ^9 -Tetrahydrocannabinol	Positive at 7000ng/mL
Cannabinol	>200000
Cannabidiol	>200000

Oxazepam	Result
(Oxazepam, Cutoff = 300ng/mL)	Positive at 300ng/mL
Alprazolam	Positive at 125ng/mL
<i>n</i> - Hydroxylalprazolam	Positive at 2500ng/mL
Bromazepam	Positive at 1565ng/mL
Chlordiazepoxide	Positive at 1560ng/mL
Clobazam	Positive at 65ng/mL
Clonazepam	Positive at 10000ng/mL
Clorazepate dipotassium	Positive at 195ng/mL
Delorazepam	Positive at 1560ng/mL
Desalkylfurazepam	Positive at 1565ng/mL
Diazepam	Positive at 115ng/mL
Estazolam	Positive at 165ng/mL
Flunitrazepam	Positive at 166ng/mL
Midazolam	Positive at 6500ng/mL
Nitrazepam	Positive at 300ng/mL
Norchlordiazepoxide	Positive at 250ng/mL
Nordiazepam	Positive at 400ng/mL
Temazepam	Positive at 100ng/mL
Triazolam	Positive at 2500ng/mL
D,L-Lorazepam	Negative at \leq 10 ³ ng/mL
Methamphetamine	Negative at \leq 10 ³ ng/mL
Morphine	Negative at \leq 10 ³ ng/mL

Methamphetamine	Result
(D-Methamphetamine, Cutoff = 1000ng/mL)	Positive at 1000ng/mL
(+/-)3,4-Methylenedioxy-n-ethylamphetamine (MDEA)	Positive at 41600ng/mL
DL-Methamphetamine	Positive at 1000ng/mL
p-Hydroxymethamphetamine	Positive at 27000ng/mL
(+/-)3,4-Methylenedioxyamphetamine (MDMA)	Positive at 8000ng/mL
L-Methamphetamine	Positive at 10000ng/mL
Trimethobenzamide	Negative at \leq 10 ³ ng/mL
Chloroquine	Negative at \leq 10 ³ ng/mL
Ephedrine	Negative at \leq 10 ³ ng/mL
Fenfluramine	Negative at \leq 10 ³ ng/mL
Procaine (Novocain)	Negative at \leq 10 ³ ng/mL
Ranitidine (Zantac)	Negative at \leq 10 ³ ng/mL
D-Amphetamine	Negative at \leq 10 ³ ng/mL

L-Amphetamine	Negative at \leq 10 ³ ng/mL
Oxazepam	Negative at \leq 10 ³ ng/mL
Morphine	Negative at \leq 10 ³ ng/mL

Morphine	Result
(Morphine, Cutoff = 2000ng/mL)	Positive at 2000ng/mL
Codeine	Positive at 1000ng/mL
Ethylmorphine	Positive at 560ng/mL
Hydrocodone	Positive at 5000ng/mL
Hydromorphone	Positive at 7315ng/mL
Levorphanol	Positive at 16000ng/mL
α -Monoacetylmorphine	Positive at 1000ng/mL
Morphine 3- β -D-Glucuronide	Positive at 1300ng/mL
Thebaine	Negative at \leq 10 ³ ng/mL
Norcodeine	Negative at \leq 10 ³ ng/mL
Normorphine	Negative at \leq 10 ³ ng/mL
Oxycodone	Negative at \leq 10 ³ ng/mL
Oxymorphone	Negative at \leq 10 ³ ng/mL
Procaine	Negative at \leq 10 ³ ng/mL
Oxazepam	Negative at \leq 10 ³ ng/mL
Methamphetamine	Negative at \leq 10 ³ ng/mL

Methadone	Result
(Methadone, Cutoff = 300ng/mL)	Positive at 300ng/mL
LAAM	Positive at 10000ng/mL
Alphamethadol	Negative at \leq 10 ³ ng/mL
Doxylamine	Negative at \leq 10 ³ ng/mL
EDDP	Negative at \leq 10 ³ ng/mL
EMDP	Negative at \leq 10 ³ ng/mL

Oxycodone	Result
(Oxycodone, Cutoff = 100ng/mL)	Positive at 100ng/mL
Dihydrocodeine	Positive at 50,000ng/mL
Hydrocodone	Positive at 10,000ng/mL
Heroin	Negative at \leq 10 ³ ng/mL
Morphine-3- β -Glucuronide	Negative at \leq 10 ³ ng/mL
Codeine	Negative at \leq 10 ³ ng/mL
Hydromorphone	Negative at \leq 10 ³ ng/mL
Morphine	Negative at \leq 10 ³ ng/mL
Acetylmorphine	Negative at \leq 10 ³ ng/mL
Buprenorphine	Negative at \leq 10 ³ ng/mL
Ethylmorphine	Negative at \leq 10 ³ ng/mL

Phencyclidine	Result
(Phencyclidine, Cutoff = 25ng/mL)	Positive at 25ng/mL
Phencyclidine Morpholine	Positive at 625ng/mL
4-Hydroxyphencyclidine	Positive at 250ng/mL

Butalbital	Result
(Butalbital, Cutoff = 300ng/mL)	Positive at 300ng/mL
Secobarbital	Positive at 300ng/mL
Amobarbital	Positive at 3000ng/mL
Alphenal	Positive at 250ng/mL
Aprobarbital	Positive at 200ng/mL
Allobarbital	Positive at 500ng/mL
Butabarbital	Positive at 1000ng/mL
Butethal	Positive at 500ng/mL
Cyclopentobarbital	Positive at 300ng/mL
Pentobarbital	Positive at 1300ng/mL
Phenobarbital	Positive at 1900ng/mL

Buprenorphine	Result
(Buprenorphine, Cutoff = 10ng/mL)	Positive at 10ng/mL
Buprenorphine-3-D-Glucuronide	Positive at 15ng/mL
Norbuprenorphine	Positive at 40ng/mL
Norbuprenorphine-3-D-Glucuronide	Positive at 500ng/mL
Morphine	Negative at \leq 10 ³ ng/mL
Oxymorphone	Negative at \leq 10 ³ ng/mL
Hydromorphone	Negative at \leq 10 ³ ng/mL

Morphine	Result
(Morphine, Cutoff = 300ng/mL)	Positive at 300ng/mL
6-Acetylmorphine	Positive at 750ng/mL
Codeine	Positive at 300ng/mL
Ethyl Morphine	Positive at 200ng/mL
Heroin	Positive at 700ng/mL

Hydromorphone	Positive at 4000ng/mL
Hydrocodone	Positive at 2000ng/mL
Levorphanol	Positive at 12000ng/mL
Thebaine	Positive at 90000ng/mL
Methyprylon	Positive at 4000ng/mL
Morphine-3-β-Glucuronide	Positive at 450ng/mL
Oxycodone	Negative at ≤ 10 ³ ng/mL
Procaine	Negative at ≤ 10 ³ ng/mL

2-Ethylidene-1,5-Dimethyl-3,3-Diphenylpyrrolidine	Result
(2-Ethylidene-1,5-Dimethyl-3,3-Diphenylpyrrolidine, Cutoff = 300ng/mL)	Positive at 300ng/mL
2-Ethyl-5-methyl-3,3-diphenylpyrrolidine (EMDP)	Negative at ≤ 10 ³ ng/mL
Disopyramide	Negative at ≤ 10 ³ ng/mL
Methadone	Negative at ≤ 10 ³ ng/mL
Levo-alpha-acetylmethadol (LAAM) HCl	Negative at ≤ 10 ³ ng/mL
Alphamethadol	Negative at ≤ 10 ³ ng/mL
Doxylamine	Negative at ≤ 10 ³ ng/mL

Methylenedioxyamphetamine	Result
(Methylenedioxyamphetamine, Cutoff = 500ng/mL)	Positive at 500ng/mL
3,4-Methylenedioxyamphetamine HCl (MDA)	Positive at 8000ng/mL
3,4-Methylenedioxyethylamphetamine (MDEA)	Positive at 1000ng/mL
(-)-ψ-Ephedrine	Positive at 40000ng/mL
d-methamphetamine	Negative at ≤ 10 ³ ng/mL
d-amphetamine	Negative at ≤ 10 ³ ng/mL
l-amphetamine	Negative at ≤ 10 ³ ng/mL
l-methamphetamine	Negative at ≤ 10 ³ ng/mL

Nortriptyline	Result
(Nortriptyline, Cutoff = 1000ng/mL)	Positive at 1000ng/mL
Amiritypyline	Positive at 1500ng/mL
Clomipramine	Positive at 15000ng/mL
Desipramine	Positive at 1000ng/mL
Doxepin	Positive at 2000ng/mL
Imipramine	Positive at 600ng/mL
Nordoxepin	Positive at 1000ng/mL
Promazine	Positive at 24000ng/mL
Trimipramine	Positive at 4000ng/mL
Cyclobenzaprine Hydrochloride	Positive at 1500ng/mL
Maprotiline	Negative at ≤ 10 ³ ng/mL
Promethazine	Negative at ≤ 10 ³ ng/mL
Norclomipramine	Negative at ≤ 10 ³ ng/mL

Effect of Urinary Specific Gravity

Urine samples of normal, high, and low specific gravity ranges (1,000 - 1,035) were spiked with drugs at 25% below and 25% above cut-off levels respectively. The **First Sign® Drug of Abuse Dip Card Test** was tested using twelve 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 aliquot of negative urine pool was adjusted to pH ranges of 4.0- 9.0, and spiked with drugs at 25% below and 25% above cut-off levels. The spiked, pH-adjusted urine was tested with **First Sign® Drug of Abuse Dip Card Test**. The results demonstrate that varying ranges of pH do not interfere with the performance of the test.

Non Cross-Reacting Compounds - D-Amphetamine

4-Acetamidophenol	L-Ephedrine	Oxycodone
Acetophenetidin	(-) Y Ephedrine	Oxymetazoline
N-Acetylprocainamide	Erythromycin	Papaverine
Acetylsalicylic acid	β-Estradiol	Penicillin-G
Aminopyrine	Estrone-3-sulfate	Pentazocine
Amiritypyline	Ethyl-p-aminobenzoate	Pentobarbital
Amobarbital	Fenfluramine	Perphenazine
Amoxicillin	Fenpropofen	Phencyclidine
Ampicillin	Furosemide	Phenelzine
Ascorbic acid	Gentisic acid	Phenobarbital
Aspartame	Hemoglobin	
Atropine	Hydralazine	L-Phenylephrine
Benzilic acid	Hydrochlorothiazide	Phenylpropanolamine
Benzoic acid	Hydrocodone	Prednisolone
Benzoylcegonine	Hydrocortisone	Prednisone
Bilirubin	O-Hydroxyhippuric acid	Procaine
Brompheniramine	3-Hydroxytyramine	Promazine
Caffeine	Ibuprofen	Promethazine
Cannabidiol	Imipramine	D,L-Propranolol
Cannabinol	(-) Isoproterenol	D-Propoxyphene
Chloralhydrate	Isosuprine	Quinidine

Chloramphenicol	Ketamine	Quinine
Chlordiazepoxide	Ketoprofen	Ranitidine
Chlorothiazide	Labelalol	Salicylic acid
(±) Chlorpheniramine	Levorphanol	Secobarbital
Chlorpromazine	Loperamide	Sulfamethazine
Chlorquine	Maprotiline	Sulindac
Cholesterol	Meperidine	Temazepam
Clomipramine	Meprobamate	Tetracycline
Clonidine	Methadone	Tetrahydrocortisone
Cocaine hydrochloride	Methylphenidate	Tetrahydrozoline
Codeine	Morphine-3-D-Glucuronide	Δ ³ -THC-COOH
Cortisone	Nalidixic acid	Thebaine
(-) Cotinine	Naloxone	Thiamine
Creatinine	Naltrexone	Thionidazine
Deoxycorticosterone	Naproxen	D,L-Thyroxine
Dextromethorphan	Niacinamide	Tolbutamine
Diazepam	Nifedipine	Triamterene
Diclofenac	Norcodein	Trifluoperazine
Diffunisal	Norethindrone	Trimethoprim
Digoxin	D-Norpropoxyphene	Trimipramine
Diphenhydramine	Noscapine	Tryptamine
Doxylamine	D,L-Octopamine	D, L-Tyrosine
Ecgonine hydrochloride	Oxalic acid	Uric acid
Ecgonine methylester	Oxazepam	Verapamil
(IR,2S)-(-)-Ephedrine	Oxolinic acid	Zomepirac

Non Cross-Reacting Compounds - Benzoylcegonine

Acetaminophen	Estrone-3-sulfate	Oxymetazoline
Acetophenetidin	Ethyl-p-aminobenzoate	Papaverine
N-Acetylprocainamide	Fenpropofen	Penicillin-G
Acetylsalicylic acid	Furosemide	Pentobarbital
Aminopyrine	Gentisic acid	Perphenazine
Amiritypyline	Hemoglobin	Phencyclidine
Amobarbital	Hydralazine	Phenelzine
Amoxicillin	Hydrochlorothiazide	Phenobarbital
Ampicillin	Hydrocodone	Phentermine
L-Ascorbic acid	Hydrocortisone	L-Phenylephrine
DL-Amphetamine sulfate	O-Hydroxyhippuric acid	β-Phenylethylamine
Apomorphine	p-Hydroxymethamphetamine	Phenylpropanolamine
Aspartame	3-Hydroxytyramine	Prednisolone
Atropine	Ibuprofen	Prednisone
Benzilic acid	Imipramine	Procaine
Benzoic acid	Iproniazid	Promazine
Benzphetamine	(±) - Isoproterenol	Promethazine
(±) -Brompheniramine	Isosuprine	DL-Propranolol
Caffeine	Ketamine	D-Propoxyphene
Cannabidiol	Ketoprofen	D-Pseudoephedrine
Cannabinol	Labelalol	Quinidine
Chloralhydrate	Levorphanol	Quinine
Chloramphenicol	Loperamide	Ranitidine
Chlordiazepoxide	Maprotiline	Salicylic acid
Chlorothiazide	Meperidine	Secobarbital
(±) -Chlorpheniramine	Meprobamate	Serotonin
Chlorpromazine	Methadone	Sulfamethazine
Chlorquine	Methoxyphenamine	Sulindac
Cholesterol	(±) -3,4-Methylenedioxyamphetamine	Temazepam
Clomipramine	hydrochloride(±)-3,4-Methylenedioxyamphetamine hydrochloride	Tetracycline
Clonidine	Morphine-3-β-D-Glucuronide	Tetrahydrocortisone 3 (β-D-Glucuronide)
Codeine	Morphine sulfate	Tetrahydrozoline
Cortisone	Nalidixic acid	Thebaine
(-) Cotinine	Naloxone	Thiamine
Creatinine	Naltrexone	Thionidazine
Deoxycorticosterone	Phetoin	DL-Tyrosine
Dextromethorphan	Naproxen	D,L-Tyrosine
Diazepam	Niacinamide	Tolbutamide
Diclofenac	Nifedipine	Triamterene
Diffunisal	Norcodein	Trifluoperazine
Digoxin	D-Norpropoxyphene	Trimethoprim
Diphenhydramine	Noscapine	Tryptamine
Doxylamine	DL-Octopamine	DL-Tryptophan
Ecgonine methylester	Oxalic acid	Tyramine
(-) - ψ-Ephedrine	Oxazepam	Uric acid

Erythromycin	Oxolinic acid	Verapamil
β-Estradiol	Oxycodone	Zomepirac

Non Cross-Reacting Compounds - 11-nor-Δ⁹-THC-COOH

4-Acetamidophenol	β-Estradiol	Papaverine
Acetophenetidin	Estrone-3-sulfate	Penicillin-G
N-Acetylprocainamide	Ethyl-p-aminobenzoate	Pentazocine
Acetylsalicylic acid	Fenpropofen	Pentobarbital
Aminopyrine	Furosemide	Perphenazine
Amiritypyline	Gentisic acid	Phencyclidine
Amobarbital	Hemoglobin	Phenelzine
Amoxicillin	Hydralazine	Phenobarbital
Ampicillin	Hydrochlorothiazide	Phentermine
Ascorbic acid	Hydrocodone	L-Phenylephrine
D,L-Amphetamine	Hydrocortisone	β-Phenylethylamine
L-Amphetamine	O-Hydroxyhippuric acid	β-Phenylethylamine
Apomorphine	3-Hydroxytyramine	Phenylpropanolamine
Aspartame	Ibuprofen	Prednisolone
Atropine	Imipramine	Prednisone
Benzilic acid	Iproniazid	Procaine
Benzoic acid	(-) Isoproterenol	Promazine
Benzoylcegonine	Isosuprine	Promethazine
Benzphetamine	Ketamine	D,L-Propranolol
Bilirubin	Labelalol	D-Propoxyphene
Brompheniramine	Levorphanol	D-Pseudoephedrine
Caffeine	Loperamide	Quinidine
Chloralhydrate	Maprotiline	Quinine
Chloramphenicol	Meprobamate	Ranitidine
Chlordiazepoxide	Methadone	Salicylic acid
Chlorothiazide	Methoxyphenamine	Secobarbital
(±) Chlorpheniramine	(+)-3,4-Methylenedioxyamphetamine	Serotonin (5-Hydroxytyramine)
Chlorpromazine	(+)-3,4-Methylenedioxyamphetamine	Sulfamethazine
Chlorquine	Methylphenidate	Sulindac
Cholesterol	Methyprylon	Temazepam
Clomipramine	Morphine-3-β-D-Glucuronide	Tetracycline
Clonidine	Nalorphine	Tetrahydrocortisone 3 (β-D-Glucuronide)
Cocaine hydrochloride	Naloxone	Tetrahydrozoline
Codeine	Nalidixic acid	Thebaine
Cortisone	Naltrexone	Thiamine
(-) Cotinine	Naproxen	Thionidazine
Creatinine	Niacinamide	D, L-Thyroxine
Deoxycorticosterone	Nifedipine	Tolbutamine
Dextromethorphan	Norcodein	Triamterene
Diazepam	Norethindrone	Trifluoperazine
Diclofenac	D-Norpropoxyphene	Trimethoprim
Diffunisal	Noscapine	Trimipramine
Digoxin	D,L-Octopamine	Tryptamine
Diphenhydramine	Oxalic acid	D, L-Tryptophan
Doxylamine	Oxazepam	Tyramine
Ecgonine hydrochloride	Oxolinic acid	PrD, L-Tyrosine
Ecgonine methylester	Oxycodone	Uric acid
(-) Y Ephedrine	Oxymetazoline	Verapamil
Erythromycin	p-Hydroxymethamphetamine	Zomepirac

Non Cross-Reacting Compounds - Oxazepam

4-Acetamidophenol	Diphenhydramine	D,L-Octopamine
Acetophenetidin	Doxylamine	Oxalic acid
N-Acetylprocainamide	Ecaonine dydrochloride	Oxolinic acid
Acetylsalicylic acid	Ecgonine methylester	Pentobarbital
Aminopyrine	(-) -Y-Ephedrine	Perphenazine
Amiritypyline	Fenpropofen	Phencyclidine
Amobarbital	Furosemide	Phenelzine
Amoxicillin	Gentisic acid	Phenobarbital
Ampicillin	Hemoglobin	Phentermine
L-Ascorbic acid	Hydrocortisone	L-Phenylephrine
D,L-Amphetamine	O-Hydroxyhippuric acid	β-Phenylethylamine
Apomorphine	p-Hydroxymethamphetamine	Phenylpropanolamine
Aspartame	3-Hydroxytyramine	Prednisone
Atropine	Ibuprofen	D,L-Propranolol
Benzilic acid	Imipramine	D-Pseudoephedrine
Benzoic acid	Iproniazid	Quinine
Benzoylcegonine	(±)Isoproterenol	Ranitidine
Benzphetamine	Isosuprine	Salicylic acid

Bilirubin	Ketamine	Secobarbital
(±) Chlorpheniramine	Ketoprofen	Serotonin (5-Hydroxytyramine)
Caffeine	Labeltalol	Sertraline
Cannabidiol	Loperamide	Sulfamethazine
Chloralhydrate	Maprotiline	Sulindac
Chloramphenicol	Meperidine	Tetrahydrocortisone 3 (β-D-Glucuronide)
Chlorothiazide	Meprobamate	Tetrahydrozoline
(±)Chlorpheniramine	Methadone	Thiamine
Chlorpromazine	Methoxyphenamine	Thioridazine
Chlorquine	(+)-3,4-Methylenedioxyamphetamine	D,L-Tyrosine
Cholesterol	(+)-3,4-Methylenedioxyamphetamine	Tolbutamide
Clomipramine	Nalidixic acid	Triamterene
Clonidine	Nalorphine	Trifluoperazine
Cocaine hydrochloride	Naloxone	Trimethoprim
Cortisone	Naltrexone	Triptamine
(-)cotinine	Naproxen	D,L-Tryptophan
Creatinine	Niacinamide	Tyramine
Dextromethorphan	Nifedipine	Uric acid
Diclofenac	Norethindrone	Verapamil
Diffunisal	D-Norpropoxyphene	Zomepirac
Diaoxin	Noscapine	Sulfamethazine

Non Cross-Reacting Compounds - Methamphetamine

Acetamidophen	Gentisic acid	Oxycodone
Acetophenetidin	Glucuronide	Oxymetazoline
N-Acetylprocainamide	Glutethimide	Papaverine
Acetylsalicylate	Guafenesin	Penicillin-G
Aminopyrine	Hippuric acid	Pentazocine
Amityryptiline	Hydralazine	Pentobarbital
Amobarbital	Hydrochlorothiazide	Perphenazine
Amoxicillin	Hydrocodone	Phencyclidine
Ampicillin	Hydrocortisone	Phenelzine
Apomorphine	O-Hydroxyhippuric acid	Phenobarbital
Aspartame	3-Hydroxytyramine	Prednisolone
Atropine	Ibuprofen	Phenylpropanolamine
Benzilic acid	Imipramine	Prednisone
Benzoic acid	(-) Isoproterenol	Procaine
Benzoylcegonine	Isoxsuprine	Promazine
Butabartital	Ketamine	Promethazine
Cannabidiol	Ketoprofen	D, L-Propranolol
Chloralhydrate	Labeltalol	D-Propoxyphene
Chloramphenicol	Lovorphanol	D-Pseudoephedrine
Chlordiazepoxide	Loperamide	Quinidine
Chlorothiazide	Loxapine succinate	Quinine
Chlorpromazine	Maprotiline	Ranitidine
Cholesterol	Meperidine	Salicylic acid
Clomipramine	Meprobamate	Secobarbital
Clonidine	Methadone	Serotonin (5-Hydroxytyramine)
Cocaine hydrochloride	Methaqualone	Sulfamethazine
Codeine	Methylphenidol	Sulindac
Cortisone	Methypnylon	Temazepam
(-) Cotinine	Morphine-3-β-D-Glucuronide	Tetracycline
Creatinine	Nalidixic acid	Tetrahydrocortisone 3 (β-D-Glucuronide)
Deoxycorticosterone	Nalorphine	Tetrahydrozoline
Dextromethorphan	Naloxone	Thebaine
Diazepam	Naltrexone	Thiamine
Diclofenac	Naproxen	Thioridazine
Diffunisal	Niacinamide	Tolbutamide
Digoxin	Nifedipine	Triamterene
Diphenhydramine	Norcodein	Trifluoperazine
Doxylamine	Norethindrone	Trimethoprim
Ecgonine hydrochloride	Noroxymorphone	Trimipramine
Ecgonine methyl ester	D-Norpropoxyphene	D, L-Tryptophan
Erythromycin	Noscapine	Tyramine
β-Estradiol	Nylidrin	D, L-Tyrosine
Estrone-3-sulfate	Uric acid	Uric acid
Ethyl-p-aminobenzoate	Oxalic acid	Verapamil
Fenoprofen	Oxazepam	Zomepirac
Furosemide	Oxolinic acid	

Non Cross-Reacting Compounds - Morphine

4-Acetamidophenol	Ecgonine methylester	Oxolinic acid
Acetophenetidin	(-) -Y -Ephedrine	Oxymetazoline

N-Acetylprocainamide	Erythromycin	Papaverine
Acetylsalicylic acid	β-Estradiol	Penicillin-G
Aminopyrine	Estrone-3-sulfate	Pentazocine
Amityryptiline	Ethyl-p-aminobenzoate	Pentobarbital
Amobarbital	Fenoprofen	Perphenazine
Amoxicillin	Furosemide	Phencyclidine
Ampicillin	Gentisic acid	Phenelzine
Ascorbic acid	Hemoglobin	Phenobarbital
D,L-Amphetamine	Hydralazine	Phentermine
Apomorphine	Hydrochlorothiazide	L-Phenylephrine
Aspartame	Hydrocortisone	β-Phenylethylamine
Atropine	O-Hydroxyhippuric acid	Phenylpropanolamine
Benzilic acid	p-Hydroxymethamphetamine	Prednisone
Benzoic acid	3-Hydroxytyramine	D,L-Propranolol
Benzoylcegonine	Ibuprofen	D-Propoxyphene
Benzphetamine	Imipramine	D-Pseudoephedrine
Bilirubin (±)	Iproniazid	Quinidine
Brompheniramine	Isoproterenol	Quinine
Caffeine	Isoxsuprine	Ranitidine
Cannabidiol	Ketamine	Salicylic acid
Chloralhydrate	Ketoprofen	Secobarbital
Chloramphenicol	Labeltalol	Serotonin (5-Hydroxytyramine)
Chlordiazepoxide	Loperamide	Sulfamethazine
Chlorothiazide	Maprotiline	Sulindac
(±) Chlorpheniramine	Meperidine	Temazepam
Chlorpromazine	Meprobamate	Tetracycline
Chlorquine	Methadone	Tetrahydrocortisone 3 (β-D-Glucuronide)
Cholesterol	Methoxyphenamine	Tetrahydrozoline
Clomipramine	(+) 3,4-Methylenedioxyamphetamine	Thiamine
Clonidine	(+)-3,4-Methylenedioxyamphetamine	Thioridazine
Cocaine hydrochloride	Nalidixic acid	D, L-Tyrosine
Cortisone	Nalorphine	Tolbutamide
(-) Cotinine	Naloxone	Triamterene
Creatinine	Naltrexone	Trifluoperazine
Deoxycorticosterone	Naproxen	Trimethoprim
Dextromethorphan	Niacinamide	Trimipramine
Diazepam	Nifedipine	Tryptamine
Diclofenac	Norethindrone	D, L-Tryptophan
Diffunisal	D-Norpropoxyphene	Tyramine
Digoxin	Noscapine	Uric acid
Diphenhydramine	D,L-Octopamine	Verapamil
Doxylamine	Oxalic acid	Zomepirac
Ecgonine hydrochloride	Oxazepam	

Non Cross-Reacting Compounds - Methadone

Acetaminophen	Erythromycin	Oxycodone
Acetophenetidin	β-Estradiol	Oxymetazoline
N-Acetylprocainamide	Estrone-3-sulfate	Papaverine
Acetylsalicylic acid	Ethyl-p-aminobenzoate	Penicillin-G
Aminopyrine	Fenoprofen	Pentazocine hydrochloride
Amityryptiline	Furosemide	Pentobarbital
Amobarbital	Gentisic acid	Perphenazine
Amoxicillin	Hemoglobin	Phencyclidine
Ampicillin	Hydralazine	Phenelzine
L-Ascorbic acid	Hydrochlorothiazide	Phenobarbital
DL-Amphetamine sulfate	Hydrocodone	Phentermine
Apomorphine	Hydrocortisone	L-Phenylephrine
Aspartame	O-Hydroxyhippuric acid	β-Phenylethylamine
Atropine	p-Hydroxyamphetamine	Phenylpropanolamine
Benzilic acid	p-Hydroxymethamphetamine	Prednisolone
Benzoic acid	3-Hydroxytyramine	Prednisone
Benzoylcegonine	Ibuprofen	Procaine
Benzphetamine	Imipramine	Promazine
Bilirubin	Iproniazid	Promethazine
Caffeine	(±) - Isoproterenol	DL-Propranolol
Cannabidiol	Isoxsuprine	D-Propoxyphene
Cannabinol	Ketamine	D-Pseudoephedrine
Chloralhydrate	Ketoprofen	Quinacrine
Chloramphenicol	Labeltalol	Quinidine
Chlorothiazide	Lovorphanol	Quinine
Chlorpromazine	Loperamide	Ranitidine
Chlorquine	Maprotiline	Salicylic acid
Cholesterol	Meperidine	Secobarbital

Clomipramine	Meprobamate	Serotonin
Clonidine	Methamphetamine	Sulfamethazine
Cocaeethylene	Methoxyphenamine	Sulindac
Temazepam	(±)-3,4-Methylenedioxyamphetamine hydrochloride	Tetracycline
Cocaine hydrochloride	(±)-3,4-Methylenedioxyamphetamine hydrochloride	Tetrahydrocortisone 3 (β-D-Glucuronide)
Codeine	Morphine-3-β-D-Glucuronide	Tetrahydrozoline
Cortisone	Morphine Sulfate	Thebaine
(-) Cotinine	Nalidixic acid	Thiamine
Creatinine	Naloxone	Thioridazine
Deoxycorticosterone	Naltrexone	DL-Tyrosine
Dextromethorphan	Naproxen	Tolbutamide
Diazepam	Niacinamide	Triamterene
Diclofenac	Nifedipine	Trifluoperazine
Diffunisal	Norcodein	Trimethoprim
Digoxin	Norethindrone	Trimipramine
Diphenhydramine	D-Norpropoxyphene	Triptamine
Ecgonine hydrochloride	Noscapine	DL-Tryptophan
Ecgonine methyl ester	DL-Octopamine	Tyramine
(-) -ψ-Ephedrine	Oxalic acid	Uric acid
[1R,2S] (-) Ephedrine	Oxazepam	Verapamil
(L) - Epinephrine	Oxolinic acid	Zomepirac

Non Cross-Reacting Compounds - Oxycodone

Acetophenetidin	Ethyl-p-aminobenzoate	Papaverine
Acetylsalicylic acid	β-Estradiol	Penicillin-G
Aminopyrine	Estrone-3-sulfate	Perphenazine
Amoxicillin	Erythromycin	Phenelzine
Ampicillin	Fenoprofen	L-Phenylephrine
Apomorphine	Furosemide	β-Phenylethylamine
Aspartame	Gentisic acid	Phenylpropanolamine
Atropine	Hemoglobin	Prednisone
Benzilic acid	Hydralazine	Loperamide
Benzoic acid	Hydrochlorothiazide	Quinine
Benzphetamine	Hydrocortisone	Quinidine
Bilirubin	O-Hydroxyhippuric acid	Ranitidine
Deoxycorticosterone	3-Hydroxytyramine	Salicylic acid
Caffeine	Labeltalol	Serotonin
Chloralhydrate	D, L-Isoproterenol	Sulfamethazine
Chloramphenicol	Meprobamate	Sulindac
Chlorothiazide	Methoxyphenamine	Tetracycline
D,L-Chlorpheniramine	Nalidixic acid	Tetrahydrocortisone
Chlorpromazine	Naloxone	Morphine-3-β-D-Glucuronide
Chlorquine	Naltrexone	Tetrahydrozoline
Cholesterol	Naproxen	Thiamine
Clonidine	Niacinamide	Thioridazine
L-Cotinine	Nifedipine	D, L-Tyrosine
Cortisone	Isoxsuprine	Tolbutamide
Creatinine	D,L-Propranolol	Triamterene
D-Pseudoephedrine	Ketoprofen	Trifluoperazine
Dextromethorphan	Norethindrone	Trimethoprim
Diclofenac	D-Norpropoxyphene	Tyramine
Diffunisal	Noscapine	D,L-Tryptophan
Digoxin	D,L-Octopamine	Urine acid
Diphenhydramine	Oxalic acid	Verapamil
L-Ephedrine	Oxolinic acid	Zomepirac
Ecgonine methylester	Oxymetazoline	

Non Cross-Reacting Compounds - Phencyclidine

Acetaminophen	(-) Y Ephedrine	Oxycodone
Acetophenetidin	Erythromycin	Oxymetazoline
N-Acetylprocainamide	β-Estradiol	Papaverine
Acetylsalicylic acid	Estrone-3-sulfate	Penicillin-G
Aminopyrine	Ethyl-p-aminobenzoate	Pentazocine hydrochloride
Amityryptiline	Fenoprofen	Pentobarbital
Amobarbital	Furosemide	Perphenazine
Amoxicillin	Gentisic acid	Phenelzine
Ampicillin	Hemoglobin	Phenobarbital
Ascorbic acid	Hydralazine	Phentermine
D,L-Amphetamine	Hydrochlorothiazide	L-Phenylephrine
Apomorphine acid	Hydrocodone	β-Phenylethylamine
Aspartame	Hydrocortisone	Phenylpropanolamine
Atropine	O-Hydroxyhippuric	Prednisolone
Benzilic acid	p-Hydroxymethamphetamine	Prednisone

Benzoic acid	3-Hydroxytyramine	Procaine
Benzoylcegonine	Ibuprofen	Promazine
Benzphetamine	Imipramine	Promethazine
Bilirubin	Iproniazid	D, L-Propranolol
Brompheniramine	(±) - Isoproterenol	D-Propoxyphene
Caffeine	Isosuprine	D-Pseudoephedrine
Cannabidiol	Ketamine	Quinidine
Cannabinol	Ketoprofen	Quinine
Chloralhydrate	Labeltalol	Ranitidine
Chloramphenicol	Loperamide	Salicylic acid
Chlordiazepoxide	Maprotiline	Secobarbital
Chlorothiazide	Meperidine	Serotonin (5-Hydroxytyramine)
(±) Chlorpheniramine	Meprobamate	Sulfamethazine
Chlorpromazine	Methadone	Sulindac
Chlorquine	Methoxyphenamine	Temazepam
Cholesterol	(+) 3,4-Methylenedioxyamphetamine	Tetracycline
Clomipramine	(+)-3,4-Methylenedioxyamphetamine	Tetrahydrocortisone 3 (β-D-Glucuronide)
Clonidine	Morphine-3-β-D-Glucuronide	Tetrahydrozoline
Cocaine hydrochloride	Morphine Sulfate	Thiamine
Codeine	Nalidixic acid	Thioridazine
Cortisone	Naloxone	D, L-Tyrosine
(-) Cotinine	Naltrexone	Tolbutamide
Creatinine	Naproxen	Triamterene
Deoxycorticosterone	Niacinamide	Trifluoperazine
Dextromethorphan	Nifedipine	Trimethoprim
Diazepam	Norcodeine	Trimipramine
Diclofenac	Norethindrone	Tryptamine
Diffunisal	D-Norpropoxyphene	D, L-Tryptophan
Digoxin	Noscapine	Tyramine
Diphenhydramine	D, L-Octopamine	Uric acid
Doxylamine	Oxalic acid	Verapamil
Ecgonine hydrochloride	Oxazepam	Zomepirac
Ecgonine methylester	Oxolinic acid	

Non Cross-Reacting Compounds – Butalbital

Acetaminophen	Erythromycin	Nortriptyline
Acetophenetidin	β-Estradiol	O-Hydroxyhippuric acid
Acetylsalicylic acid	Estrone-3-sulfate	D, L-Octopamine
Aminopyrine	Ethyl-p-aminobenzoate	
Amitypyline	Fenoprofen	Oxazepam
Amoxicillin	Furosemide	Oxolinic acid
Amphetamine	Gentisic acid	Oxycodone
Ampicillin	Hemoglobin	Oxymetazoline
Apomorphine	Hydralazine	Papaverine
Ascorbic acid	Hydrochlorothiazide	Penicillin-G
Aspartame	Hydrocodone	Pentazocine
Atropine	Hydrocortisone	Perphenazine
Benzilic acid	p-Hydroxyamphetamine	Phencyclidine
Benzoic acid	p-Hydroxymethamphetamine	Phenelzine
Benzoylcegonine	3-Hydroxytyramine	β-Phenylethylamine
Bilirubin	Ibuprofen	Phenylpropanolamine
Brompheniramine	Imipramine	Prednisolone
Buprenorphine	(-) Isoproterenol	Prednisone
Caffeine	Isosuprine	Procaine
Cannabidiol	Ketamine	Promazine
Cannabinol	Ketoprofen	Promethazine
Chloralhydrate	Labeltalol	D, L-Propranolol
Chloramphenicol	Levorphanol	D-Propoxyphene
Chlorothiazide	Loperamide	Quinidine
(±)Chlorpheniramine	L-Phenylephrine	Quinine
Chlorpromazine	Maprotiline	Ranitidine
Chlorquine	Meperidine	Salicylic acid
Cholesterol	Meprobamate	Serotonin
Clomipramine	Morphine	Sulfamethazine
Clonidine	Morphine-3-β-D-Glucuronide	Sulindac
Cocaine hydrochloride	Methadone	Temazepam
Codeine	Methamphetamine	Tetracycline
Cortisone	(±)-3,4-Methylenedioxy-amphetamine hydrochloride	Tetrahydrozoline
(-) Cotinine	Methylenedioxy-methamphetamine	Thebaine
Creatinine	Morphine Sulfate	Thiamine
Deoxycorticosterone	N-Acetylprocainamide	Thioridazine
Dextromethorphan	Nalidixic acid	Triamterene
Diazepam	Naloxone	Trifluoperazine

Diclofenac	Naltrexone	Trimethoprim
Diffunisal	Naproxen	Trimipramine
Digoxin	Niacinamide	Tryptamine
Diphenhydramine	Nifedipine	D, L-Tyrosine
Doxylamine	Norcodein	Uric acid
Ecgonine hydrochloride	Norethindrone	Verapamil
Ecgonine methylester	D-Norpropoxyphene	Zomepirac
(1R,2S)-Ephedrine	Noscapine	
2-ethylidene-1,5-dimethyl-3,3-diphenylpyrrolidine	11-nor-Δ ⁸ -THC-9-COOH	

Non Cross-Reacting Compounds - Buprenorphine

4-Acetamidophenol	Erythromycin	Oxolinic acid
Acetophenetidin	β-Estradiol	Oxycodone
N-Acetylprocainamide	Estrone-3-sulfate	Oxymetazoline
Acetylsalicylic acid	Ethyl-p-aminobenzoate	Papaverine
Aminopyrine	Fenoprofen	Penicillin-G
Amobarbital	Furosemide	Pentazocine hydrochloride
Amoxicillin	Gentisic acid	Pentobarbital
Ampicillin	Hemoglobin	Perphenazine
L-Ascorbic acid	Hydralazine	Phencyclidine
Amphetamine	Hydrochlorothiazide	Phenelzine
Apomorphine	Hydrocodone	Phenobarbital
Aspartame	Hydrocortisone	Phentermine
Atropine	O-Hydroxyhippuric acid	β-Phenylethylamine
Benzilic acid	p-Hydroxyamphetamine	Trans-2-phenylcyclopropylamine hydrochloride
Benzoic acid	p-Hydroxy-methamphetamine	L-Phenylephrine
Benzoylcegonine	3-Hydroxytyramine	Phenylpropanolamine
Benzphetamine	Ibuprofen	Prednisolone
Bilirubin	Iprazid	Prednisone
(±) - Brompheniramine	(±) - Isoproterenol	Procaine
Butalbital	Isosuprine	DL-Propranolol
Caffeine	Ketamine	D-Propoxyphene
Cannabidiol	Ketoprofen	D-Pseudoephedrine
Cannabinol	Labeltalol	Quinacrine
Chloralhydrate	Loperamide	Quinidine
Chloramphenicol	Methylenedioxyethylamphetamine	Quinine
Chlorothiazide	Meperidine	Ranitidine
(±) Chlorpheniramine	Meprobamate	Salicylic acid
Chlorpromazine	Methadone	Secobarbital
Chlorquine	(L)Methamphetamine	Serotonin
Cholesterol	Methoxyphenamine	Sulfamethazine
Clonidine	(±)-3,4-Methylenedioxyamphetamine hydrochloride	Sulindac
Cocacethylene	Methylenedioxy-methamphetamine	Tetracycline
Cocaine hydrochloride	Morphine	Tetrahydrocortisone 3 (β-D-Glucuronide)
Codeine	Morphine-3-β-D-Glucuronide	Tetrahydrozoline
Cortisone	Morphine sulfate	Thiamine
(-) Cotinine	Nalidixic acid	Thioridazine
Creatinine	Naloxone	DL-Tyrosine
Deoxycorticosterone	Naltrexone	Tolbutamide
Dextromethorphan	Naproxen	Triamterene
Diclofenac	Niacinamide	Trifluoperazine
Diffunisal	Nifedipine	Trimethoprim
Digoxin	Norcodeine	Tryptamine
Diphenhydramine	Norethindrone	DL-Tryptophan
Doxylamine	D-Norpropoxyphene	Tyramine
Ecgonine hydrochloride	11-nor-Δ ⁸ -THC-9-COOH	Uric acid
Ecgonine methyl ester	Nortriptyline	Verapamil
Ephedrine	Noscapine	Zomepirac
(L) - Epinephrine	Oxalic acid	
2-ethylidene-1,5-dimethyl-3,3-diphenylpyrrolidine	Oxazepam	

Non Cross-Reacting Compounds - Morphine

Acebutolol	(-) Y Ephedrine	Oxymetazoline
Acetopromazine – d6	Erythromycin	Hydroxymethamphetamine
4-Acetamidophenol	β-Estradiol	Papaverine
Acetophenetidin	Estrone-3-sulfate	Penicillin-G
N-Acetylprocainamide	Ethyl-p-aminobenzoate	Pentazocine
Acetylsalicylic acid	2-ethylidene-1,5-dimethyl-3,3-diphenylpyrrolidine	Pentobarbital
Aminopyrine	Fenoprofen	Perphenazine
Amitypyline	Furosemide	Phencyclidine

Amobarbital	Gentisic acid	Phenelzine
Amoxicillin	Hemoglobin	Phenobarbital
Ampicillin	Hydralazine	Phentermine
Ascorbic acid	Hydrochlorothiazide	L-Phenylephrine
Amphetamine	Hydrocortisone	β-Phenylethylamine
L-Amphetamine	O-Hydroxyhippuric acid	β-Phenylethylamine
Apomorphine	3-Hydroxytyramine	Phenylpropanolamine
Aspartame	Ibuprofen	Prednisolone
Atropine	Imipramine	Prednisone
Benzilic acid	Iprazid	Promazine
Benzoic acid	(-) -Isoproterenol	Promethazine
Benzoylcegonine	Isosuprine	D, L-Propranolol
Benzphetamine	Ketamine	D-Propoxyphene
Bilirubin	Ketoprofen	D-Pseudoephedrine
Brompheniramine	Labeltalol	Quinidine
Buprenorphine	Loperamide	Quinine
Butalbital	Maprotiline	Ranitidine
Caffeine	Meprobamate	Salicylic acid
Chloralhydrate	Methadone	Secobarbital
Chloramphenicol	Methamphetamine	Serotonin (5-Hydroxytyramine)
Chlordiazepoxide	Methoxyphenamine	Sulfamethazine
Chlorothiazide	(+)-3,4-Methylenedioxyamphetamine	Sulindac
(±) Chlorpheniramine	Methylenedioxy-methamphetamine	Temazepam
Chlorpromazine	Methylphenidate	Tetracycline
Chlorquine	Nalorphine	Tetrahydrocortisone 3 (β-D-Glucuronide)
Cholesterol	Naloxone	Tetrahydrozoline
Clomipramine	Nalidixic acid	Thiamine
Clonidine	Naltrexone	Thioridazine
Cocaine hydrochloride	Naproxen	D, L-Thyroxine
Cortisone	Niacinamide	Tolbutamide
(-) Cotinine	Nifedipine	Triamterene
Creatinine	Norcodein	Trifluoperazine
Deoxycorticosterone	Norethindrone	Trimethoprim
Dextromethorphan	D-Norpropoxyphene	Trimipramine
Diazepam	11-nor-Δ ⁸ -THC-9-COOH	Tryptamine
Diclofenac	Nortriptyline	D, L-Tryptophan
Diffunisal	Noscapine	Tyramine
Digoxin	D, L-Octopamine	D, L-Tyrosine
Diphenhydramine	Oxalic acid	Uric acid
Doxylamine	Oxazepam	Verapamil
Ecgonine hydrochloride	Oxycodone	Zomepirac
Ecgonine methylester	Oxolinic acid	

Non Cross-Reacting Compounds – 2-Ethylidene-1,5-Dimethyl-3,3-Diphenylpyrrolidine

Acetaminophen	Ecgonine hydrochloride	O-Hydroxyhippuric acid
Acetophenetidin	Ecgonine methylester	Oxalic acid
Acetylsalicylic acid	(1R,2S)-Ephedrine	Oxazepam
Amobarbital	Erythromycin	Oxolinic acid
Aminopyrine	β -Estradiol	Oxycodone
Amitypyline	Estrone-3-sulfate	Oxymetazoline
Amoxicillin	Ethyl-p-aminobenzoate	Papaverine
DL-Amphetamine sulfate	Fenoprofen	Penicillin-G
Ampicillin	Furosemide	Pentazocine
Apomorphine	Gentisic acid	Pentobarbital
Ascorbic acid	Hemoglobin	Perphenazine
Aspartame	Hydralazine	Phencyclidine
Atropine	Hydrochlorothiazide	Phenelzine
Benzilic acid	Hydrocodone	Phenobarbital
Benzoic acid	Hydrocortisone	Phentermine
Benzoylcegonine	p-Hydroxyamphetamine	β-Phenylethylamine
Bilirubin	p-Hydroxymethamphetamine	Phenylpropanolamine
Brompheniramine	3-Hydroxytyramine	Prednisolone
Caffeine	Ibuprofen	Prednisone
Cannabidiol	Imipramine	Procaine
Cannabinol	(-) Isoproterenol	Promazine
Chloralhydrate	Isosuprine	Promethazine
Chloramphenicol	Ketamine	Quinidine
Chlorothiazide	Ketoprofen	Quinine
(±) - Chlorpheniramine	Labeltalol	Ranitidine
Chlorpromazine	Levorphanol	Salicylic acid
Chlorquine	Loperamide	Secobarbital
Cholesterol	L-Phenylephrine	Serotonin
Clomipramine	Maprotiline	Sulfamethazine

Clonidine	Meperidine	Sulindac
Cocaine hydrochloride	Meprobamate	Temazepam
Codeine	Methamphetamine	Tetracycline
(-) Cotinine	Methoxyphenamine	Tetrahydrocortisone 3 (β-D Glucuronide)
Cortisone	(±) - 3,4-Methylenedioxy-amphetamine hydrochloride	Tetrahydrozoline
Creatinine	(±)-3,4-Methylenedioxy-methamphetamine hydrochloride	Thebaine
Deoxycorticosterone	Morphine Sulfate	Thiamine
Dextromethorphan	Morphine-3-β-D-Glucuronide	Thioridazine
Diazepam	N-Acetylprocainamide	Triamterene
Diclofenac	Nalidixic acid	Trifluoperazine
Diffunisal	Naloxone	Trimethoprim
Digoxin	Naltrexone	Trimipramine
Diphenhydramine	Naproxen	Tryptamine
D-Norpropoxyphene	Niacinamide	DL-Tryptophan
D-Propoxyphene	Nifedipine	Tyramine
D,L-Tyrosine	Norcodein	Uric acid
DL-Octopamine	Norethindrone	Verapamil
DL-Propranolol	Noscapine	Zomepirac

Non Cross-Reacting Compounds – Methylenedioxyamphetamine

4-Acetamidophenol	(L) - Epinephrine	Pentobarbital
Acetophenetidin	Erythromycin	Perphenazine
N-Acetylprocainamide	β-Estradiol	Phencyclidine
Acetylsalicylic acid	Estrone-3-sulfate	Phenelzine
Aminopyrine	Ethyl-p-aminobenzoate	Phenobarbital
Amitypyline	Fenopropfen	Phentermine
Amobarbital	Furosemide	Trans-2-phenylcyclopropylamine hydrochloride
Amoxicillin	Genitic acid	L-Phenylephrine
Ampicillin	Hemoglobin	β-Phenylethylamine
L-Ascorbic acid	Hydralazine	Phenylpropanolamine
Apomorphine	Hydrochlorothiazide	Prednisolone
Aspartame	Hydrocodone	Prednisone
Atropine	Hydrocortisone	Procaine
Benzilic acid	O-Hydroxyhippuric acid	Promazine
Benzoic acid	3-Hydroxytyramine	Morphine
Benzoyllecgonine	Ibuprofen	DL-Propranolol
Bilirubin	Imipramine	D-Propoxyphene
(±) - Brompheniramine	Iproniadiz	D-Pseudoephedrine
Buspiron	(±) - Isoproterenol	Quinacrine
Caffeine	Isoxsuprine	Quinidine
Cannabidiol	Ketamine	Quinine
Cannabinal	Ketoprofen	Ranitidine
Chloralhydrate	Labetalol	Salicylic acid
Chloramphenicol	Levorphanol	Secobarbital
Chlordiazepoxide	Loperamide	Serotonin (5- Hydroxytyramine)
Chlorothiazide	Maprotiline	Sulfamethazine
(±) - Chlorpheniramine	Meperidine	Sulindac
Chlorpromazine	Meprobamate	Sustiva
Chloroquine Methylphenidate	Methodone	Temazepam
Cholesterol	Morphine-3-β-D-Glucuronide	Tetracycline
Clomipramine	Morphine sulfate	Tetrahydrocortisone 3 (β-D-Glucuronide)
Clonidine	Nalidixic acid	Tetrahydrozoline
Cocaethylene	Naloxone	Thebaine
Cocaine hydrochloride	Naltrexone	Theophylline
Codeine	Naproxen	Thiamine
Cortisone	Niacinamide	Thioridazine
(-) Cotinine	Nifedipine	Tolbutamide
Creatinine	Nimesulidate	Trazodone
Deoxycorticosterone	Norcodein	Triamterene
Dextromethorphan	Norethindrone	DL-Tyrosine
Diclofenac	D-Norpropoxyphene	Trifluoperazine
Diazepam	Noscapine	Trimethoprim
Diffunisal	D,L-Octopamine	Trimipramine
Digoxin	Oxalic acid	Tryptamine
Dicyclimine	Oxazepam	D L-Tryptophan
Diphenhydramine	Oxolinic acid	Tyramine
5,5 - Diphenylhydantoin	Oxycodone	Uric acid
Doxylamine	Oxymetazoline	Verapamil
Ecgonine hydrochloride	Papaverine	Zomepirac
Ecgonine methylester	Penicillin-G	
[1R,2S](-) Ephedrine	Pentazocinehydrochloride	

Non Cross-Reacting Compounds – Nortriptyline

4-Acetamidophenol	Erythromycin	Oxycodone
Acetophenetidin	β-Estradiol	Oxymetazoline
N-Acetylprocainamide	Estrone-3-sulfate	Papaverine
Acetylsalicylic acid	Ethyl-p-aminobenzoate	Penicillin-G
Aminopyrine	Fenopropfen	Pentazocine hydrochloride
Amobarbital	Furosemide	Pentobarbital
Amoxicillin	Genitic acid	Perphenazine
Ampicillin	Hemoglobin	Phencyclidine
L-Ascorbic acid	Hydralazine	Phenelzine
DL-Amphetamine sulfate	Hydrochlorothiazide	Phenobarbital
Apomorphine	Hydrocodone	Phentermine
Aspartame	Hydrocortisone	β-Phenylethylamine
Atropine	O-Hydroxyhippuric acid	Trans-2-phenylcyclopropylamine hydrochloride
Benzilic acid	p-Hydroxyamphetamine	L-Phenylephrine
Benzoic acid	p-Hydroxy- methamphetamine	Phenylpropanolamine
Benzoyllecgonine	3-Hydroxytyramine	Prednisolone
Benzphetamine	Ibuprofen	Prednisone
Bilirubin	Iproniadiz	Procaine
(±) - Brompheniramine	(±) - Isoproterenol	DL-Propranolol
Caffeine	Isoxsuprine	D-Propoxyphene
Cannabidiol	Ketamine	D-Pseudoephedrine
Cannabinal	Ketoprofen	Quinacrine
Chloralhydrate	Labetalol	Quinidine
Chloramphenicol	Loperamide	Quinine
Chlorothiazide	MDE	Ranitidine
(±) Chlorpheniramine	Meperidine	Salicylic acid
Chlorpromazine	Meprobamate	Secobarbital
Chlorquine	Methodone	Serotonin
Cholesterol	(L)Methamphetamine	Sulfamethazine
Clonidine	Methoxyphenamine	Sulindac
Cocaethylene	(±)-3,4-Methylenedioxyamphetamine hydrochloride	Tetracycline
Cocaine hydrochloride	(+)-3,4-Methylenedioxyamphetamine hydrochloride	Tetrahydrocortisone 3 (β-D-Glucuronide)
Codeine	Morphine-3-β-D-Glucuronide	Tetrahydrozoline
Cortisone	Morphine sulfate	Thiamine
(-) Cotinine	Nalidixic acid	Thioridazine
Creatinine	Naloxone	DL-Tyrosine
Deoxycorticosterone	Naltrexone	Tolbutamide
Dextromethorphan	Naproxen	Triamterene
Diclofenac	Niacinamide	Trifluoperazine
Diffunisal	Nifedipine	Trimethoprim
Digoxin	Norcodeine	Tryptamine
Diphenhydramine	Norethindrone	DL-Tryptophan
Doxylamine	D-Norpropoxyphene	Tyramine
Ecgonine hydrochloride	Noscapine	Uric acid
Ecgonine methylester	Oxalic acid	Verapamil
Ephedrine	Oxazepam	Zomepirac
(L) - Epinephrine	Oxolinic acid	

Lay User

A lay user study was performed at three intended user sites with 140 laypersons for each drug device. They had diverse educational and professional backgrounds and ranged in age from 21 to >50. Urine samples were prepared at the following concentrations; negative, +/-75%, +/-50%, +/-25% of the cutoff by spiking drug(s) into drug free-pooled urine specimens. The concentrations of the samples were confirmed by GC/MS. Each sample was aliquoted into individual containers and blind-labeled. Each participant was provided with the package insert, 1 blind labeled sample and a device. The results are summarized below.

% of Cutoff	Number of samples	D-Amphetamine Concentration by GC/MS (ng/mL)	Lay person results		The percentage agreement (%)
			No. of Positive	No. of Negative	
-100% Cutoff	20	0	0	20	100%
-75% Cutoff	20	246	0	20	100%
-50% Cutoff	20	492	0	20	100%
-25% Cutoff	20	738	1	19	95%
+25% Cutoff	20	1268	18	2	90%
+50% Cutoff	20	1521	20	0	100%
+75% Cutoff	20	1775	20	0	100%

% of Cutoff	Number of samples	Benzoyllecgonine Concentration by GC/MS (ng/mL)	Lay person results		The percentage agreement (%)
			No. of Positive	No. of Negative	
-100% Cutoff	20	0	0	20	100%
-75% Cutoff	20	71	0	20	100%
-50% Cutoff	20	142.5	0	20	100%
-25% Cutoff	20	213.8	3	17	85%
+25% Cutoff	20	379	19	1	95%
+50% Cutoff	20	454.5	20	0	100%
+75% Cutoff	20	530	20	0	100%

% of Cutoff	Number of samples	11-nor-Δ ⁹ -THC-9-COOH Concentration by GC/MS (ng/mL)	Lay person results		The percentage agreement (%)
			No. of Positive	No. of Negative	
-100% Cutoff	20	0	0	20	100%
-75% Cutoff	20	12	0	20	100%
-50% Cutoff	20	24.5	0	20	100%
-25% Cutoff	20	36.8	1	19	95%
+25% Cutoff	20	64	20	0	100%
+50% Cutoff	20	77	20	0	100%
+75% Cutoff	20	90	20	0	100%

% of Cutoff	Number of samples	Oxazepam Concentration by GC/MS (ng/mL)	Lay person results		The percentage agreement (%)
			No. of Positive	No. of Negative	
-100% Cutoff	20	0	0	20	100%
-75% Cutoff	20	76	0	20	100%
-50% Cutoff	20	145	0	20	100%
-25% Cutoff	20	222	0	20	100%
+25% Cutoff	20	384	18	2	90%
+50% Cutoff	20	468	20	0	100%
+75% Cutoff	20	542	20	0	100%

% of Cutoff	Number of samples	Methamphetamine Concentration by GC/MS (ng/mL)	Lay person results		The percentage agreement (%)
			No. of Positive	No. of Negative	
-100% Cutoff	20	0	0	20	100%
-75% Cutoff	20	245	0	20	100%
-50% Cutoff	20	488	0	20	100%
-25% Cutoff	20	729	0	20	100%
+25% Cutoff	20	1212	19	1	95%
+50% Cutoff	20	1441	20	0	100%
+75% Cutoff	20	1666	20	0	100%

% of Cutoff	Number of samples	Morphine Concentration by GC/MS (ng/mL)	Lay person results		The percentage agreement (%)
			No. of Positive	No. of Negative	
-100% Cutoff	20	0	0	20	100%
-75% Cutoff	20	527	0	20	100%
-50% Cutoff	20	1053	0	20	100%
-25% Cutoff	20	1573	1	19	95%
+25% Cutoff	20	2652	20	0	100%
+50% Cutoff	20	3254	20	0	100%
+75% Cutoff	20	3711	20	0	100%

% of Cutoff	Number of samples	Methodone Concentration by GC/MS (ng/mL)	Lay person results		The percentage agreement (%)
			No. of Positive	No. of Negative	
-100% Cutoff	20	0	0	20	100%
-75% Cutoff	20	74	0	20	100%
-50% Cutoff	20	148	0	20	100%
-25% Cutoff	20	222	2	18	90%
+25% Cutoff	20	378	19	1	95%
+50% Cutoff	20	452	20	0	100%
+75% Cutoff	20	530	20	0	100%

% of Cutoff	Number of samples	Oxycodone Concentration by GC/MS (ng/mL)	Lay person results		The percentage agreement (%)
			No. of Positive	No. of Negative	
-100% Cutoff	20	0	0	20	100%
-75% Cutoff	20	24	0	20	100%
-50% Cutoff	20	49	0	20	100%
-25% Cutoff	20	74	1	19	95%
+25% Cutoff	20	124	19	1	95%
+50% Cutoff	20	148	20	0	100%
+75% Cutoff	20	173	20	0	100%

% of Cutoff	Number of samples	Phencyclidine Concentration by GC/MS (ng/mL)	Lay person results		The percentage agreement (%)
			No. of Positive	No. of Negative	
-100% Cutoff	20	0	0	20	100%
-75% Cutoff	20	6	0	20	100%
-50% Cutoff	20	12.2	0	20	100%
-25% Cutoff	20	19	0	20	100%
+25% Cutoff	20	31.3	19	1	95%
+50% Cutoff	20	37	20	0	100%
+75% Cutoff	20	44	20	0	100%

% of Cutoff	Number of samples	Butalbital Concentration by GC/MS (ng/mL)	Lay person results		The percentage agreement (%)
			No. of Positive	No. of Negative	
-100% Cutoff	20	0	0	20	100%
-75% Cutoff	20	77	0	20	100%
-50% Cutoff	20	156	0	20	100%
-25% Cutoff	20	234	1	19	95%
+25% Cutoff	20	390	19	1	95%
+50% Cutoff	20	468	20	0	100%
+75% Cutoff	20	547	20	0	100%

% of Cutoff	Number of samples	Buprenorphine Concentration by GC/MS (ng/mL)	Lay person results		The percentage agreement (%)
			No. of Positive	No. of Negative	
-100% Cutoff	20	0	0	20	100%
-75% Cutoff	20	2.6	0	20	100%
-50% Cutoff	20	5.2	0	20	100%
-25% Cutoff	20	7.8	0	20	100%
+25% Cutoff	20	13	19	1	95%
+50% Cutoff	20	15.7	20	0	100%
+75% Cutoff	20	18.3	20	0	100%

% of Cutoff	Number of samples	Morphine Concentration by GC/MS (ng/mL)	Lay person results		The percentage agreement (%)
			No. of Positive	No. of Negative	
-100% Cutoff	20	0	0	20	100%
-75% Cutoff	20	74	0	20	100%
-50% Cutoff	20	148	0	20	100%
-25% Cutoff	20	228	1	19	95%
+25% Cutoff	20	379	20	0	100%
+50% Cutoff	20	443	20	0	100%
+75% Cutoff	20	516	20	0	100%

% of Cutoff	Number of samples	EDDP Concentration by GC/MS (ng/mL)	Lay person results		The percentage agreement (%)
			No. of Positive	No. of Negative	
-100% Cutoff	20	0	0	20	100%
-75% Cutoff	20	81	0	20	100%
-50% Cutoff	20	157	0	20	100%
-25% Cutoff	20	235	2	18	90%
+25% Cutoff	20	410	20	0	100%
+50% Cutoff	20	485	20	0	100%
+75% Cutoff	20	566	20	0	100%

% of Cutoff	Number of samples	Methylenedioxy methamphetamine Concentration by GC/MS (ng/mL)	Lay person results		The percentage agreement (%)
			No. of Positive	No. of Negative	
-100% Cutoff	20	0	0	20	100%
-75% Cutoff	20	115	0	20	100%
-50% Cutoff	20	237	0	20	100%
-25% Cutoff	20	358	0	20	100%
+25% Cutoff	20	598	19	1	95%
+50% Cutoff	20	755	20	0	100%
+75% Cutoff	20	912	20	0	100%

% of Cutoff	Number of samples	Nortriptyline Concentration by GC/MS (ng/mL)	Lay person results		The percentage agreement (%)
			No. of Positive	No. of Negative	
-100% Cutoff	20	0	0	20	100%
-75% Cutoff	20	261	0	20	100%
-50% Cutoff	20	495	0	20	100%
-25% Cutoff	20	720	1	19	95%
+25% Cutoff	20	1180	20	0	100%
+50% Cutoff	20	1485	20	0	100%
+75% Cutoff	20	1687	20	0	100%

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2. Ambre J. J. Anal. Toxicol. 1985; 9:241.
3. Hawks RL, CN Chiang. Urine Testing for Drugs of Abuse. National Institute for Drug Abuse (NIDA), Research Monograph 73, 1986.

ADDITIONAL INFORMATION AND REFERENCES

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 www.health.org 1-800-729-6686

Center for Substance Abuse Treatment www.health.org 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

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