

T-Dip®

CLIA WAIVED Oxazepam (BZO) Urine Test Panel

Catalogue No. See Box label

CLIA CATEGORIZATION: WAIVED

URINE SCREENING TEST RESULTS AT 5 MINUTES

The T-Dip® Oxazepam (BZO) Urine Test Panel is a competitive binding, lateral flow immunochromatographic assay for qualitative and simultaneous detection of Oxazepam (BZO) in human urine with below cutoff concentration and approximate detection time:

Drug (Identifier)	Calibrator	Cut-off Level	Minimum Detection Time	Maximum Detection Time
Oxazepam (BZO)	Oxazepam	300 ng/mL	2-7 hours	1-2 days

It is intended for over-the-counter and for prescription use. For *in vitro* diagnostic use only.

The test is not intended to distinguish between prescription use or abuse of these drugs. Clinical consideration and professional judgment should be applied to any drug of abuse test result, particularly in evaluating a preliminary positive result.

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

WARNINGS AND PRECAUTIONS

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

CONTENT OF THE KIT

- Test devices, one test in one pouch. One pouch containing a test and a desiccant.
- The desiccant is for storage purposes only, and is not used in the test procedures.
- Package Insert

MATERIAL REQUIRED BUT NOT PROVIDED

- Urine collection cup
- Timer or clock

STORAGE AND STABILITY

Store at 4°C-30°C (39°F-86°F) in the sealed pouch up to the expiration date. Keep away from direct sunlight, moisture and heat. DO NOT FREEZE.

SPECIMEN COLLECTION

WHEN TO COLLECT URINE FOR THE TEST?

The minimum detection time of Oxazepam (BZO) is 2-7 hours, urine specimens may be collected 2-7 hours after the suspected drug use.

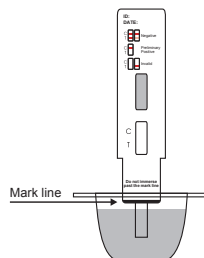
HOW TO COLLECT URINE?

Instruct the donor to void directly into the urine collection cup. Wipe off any splashes or spills that may be on the outside of the cup. It is recommended to wear gloves when handling the urine collection cup with urine specimen.

TEST PROCEDURE

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

- Remove the test device from the foil pouch by tearing at the notch. Use it as soon as possible.
- Hold one side of the device with one hand. Use the other hand to pull out the cap and expose the absorbent end.
- Immerse the absorbent end into the urine specimen for approximately 10 seconds. **Make sure that the urine level is not above the marked line printed on the front of the device.**
- Re-cap the device and lay it flat on a clean, dry, non-absorbent surface.
- Read the result at 5 minutes. **Do not read after 5 minutes.**



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

READING THE RESULTS

Negative (-)

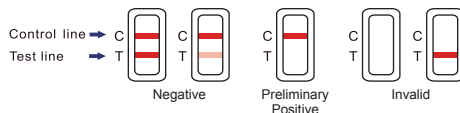
A colored band is visible in each Control Region (C) and the appropriate Test Region (T). It indicates that the concentration of the corresponding drug of that specific test zone is zero or below the detection limit of the test.

Preliminary Positive (+)

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

Invalid

If a colored band is not visible in each of the Control Region (C) or a colored band is only visible in each of the Test Region (T), the test is invalid. Another test should be run to re-evaluate the specimen. If test still fails, please contact the distributor with the lot number.



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

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

What is the False Positive Test?

The definition of the false positive test would be an instance where a substance is identified incorrectly by the T-Dip® Oxazepam (BZO) Urine Test Panel. The most common causes of the false positive test are cross reactants. Certain foods and medicines, diet plan drugs and nutritional supplements may cause the false positive test result.

What is the False Negative Test?

The definition of the false negative test is that the initial drug is present but isn't detected by the T-Dip® Oxazepam (BZO) Urine Test Panel. If the specimen is diluted, or the specimen is adulterated that may cause false negative result.

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

TEST LIMITATIONS

- This test kit has been developed for testing urine samples only. No other fluids have

- been evaluated. DO NOT use it to test anything other than urine.
- Adulterated urine samples may produce false results. Strong oxidizing agents such as bleach (hypochlorite) can oxidize drug analytes. If a specimen is suspected of being adulterated, obtain a new specimen.
- It is possible that technical or procedural errors, as well as other interfering substances in the urine specimen may cause false results.
- This test is a qualitative screening assay. It is not designed to determine the quantitative concentration of drug or the level of intoxication.

QUESTIONS AND ANSWERS

- What does the T-Dip® Oxazepam (BZO) Urine Test Panel do?**
This test detects if Oxazepam (BZO) is present in urine.

The testing is done in two steps. First, test urine with T-Dip® Oxazepam (BZO) Urine Test Panel. Second, if the drug test result is preliminary positive, please send the test with urine to the drug testing laboratory for confirmatory result.

- What is "cut-off level"?**
The cut-off level is the specified concentration of a drug in a urine sample. If the concentration of a drug in urine is above the cutoff concentration, this drug test result will be preliminary positive. If the concentration of a drug in urine is below the cutoff concentration, this drug test result will be negative.

- What are drugs of abuse?**
Drugs of abuse are illegal or prescription drugs (for example, Oxycodone or Valium) that are taken for a non-medical purpose, including taking the medication longer than doctor prescribed or for a purpose other than what the doctor prescribed.

- What are the Common Street Names for the Drug to be detected?**

Drug	Common Street Names
Oxazepam (BZO)	Benzos, Downers, Nerve Pills, Tranks

- How accurate is the test?**
The test is sensitive to drug and accurate. This test, however, is not as accurate as lab test. In some cases, certain foods and drugs may cause false positives as well as false negatives for those who use drug testing kit.

- If the test result is negative, can the conclusion be that the person is free of drugs?**
This means that if the sample was collected properly and if the test was performed according to direction, then the drug screened was not present in the urine.

- Does a preliminary positive screen test mean that drugs of abuse have been found?**
This means that the test has reacted with something in the urine and the urine must be sent to the lab for a more accurate test.

- What should I do, if the lab test confirms a positive result?**
If you have received a confirmed positive result, please consult with counselor for a proper course of action. It is important that you remain calm and do not react in a negative way to the situation. If you do not believe the test result, please consult with your physician. They will have your background medical history and be able to provide you with detailed information on both the test and the meaning of the result.

SUMMARY

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

PRINCIPLE

The T-Dip® Oxazepam (BZO) Urine Test Panel is a competitive immunoassay that is used to screen for the presence of drugs in urine. It is chromatographic absorbent device in which drugs in a specimen competitively combined to a limited number of drug monoclonal antibody conjugate binding sites.

When the absorbent end is immersed into urine specimen, the urine is absorbed into the

device by capillary action, mixes with the respective drug monoclonal antibody conjugate, and flows across the pre-coated membrane. When sample drug levels are zero or below the target cutoff (the detection sensitivity of the test), respective drug monoclonal antibody conjugate binds to the respective drug-protein conjugate immobilized in the Test Region (T) of the device. This produces a colored Test line that, regardless of its intensity, indicates a negative result.

When sample drug levels are at or above the target cutoff, the free drug in the sample binds to the respective drug monoclonal antibody conjugate preventing the respective drug monoclonal antibody conjugate from binding to the respective drug-protein conjugate immobilized in the Test Region (T) of the device. This prevents the development of a distinct colored band in the Test Region (T), indicating a potentially positive result.

To serve as a procedure control, a colored line will appear at the Control Region (C), if the test has been performed properly. This control line should always appear regardless of the presence of drug or metabolite. If the control line does not appear the test device should be discarded.

QUALITY CONTROL

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

PERFORMANCE CHARACTERISTICS

Accuracy

Eighty clinical urine specimens were analyzed by GC/MS or LC-MS/MS and by the T-Dip® Oxazepam (BZO) Urine Test Panel. 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:

Result		Drug Free	Less than Half the Cutoff	Near Cutoff Negative (Between 50% below the cutoff and the cutoff)	Near Cutoff Positive (Between the cutoff and 50% above the cutoff)	High Positive (Greater than 50% above the cutoff)	% Agreement with GC/MS or LC/MS
Viewer A	+	0	0	2	20	20	100%
	-	10	10	18	0	0	95%
Viewer B	+	0	0	2	20	20	100%
	-	10	10	18	0	0	95%
Viewer C	+	0	0	2	20	20	100%
	-	10	10	18	0	0	95%

Precision and Sensitivity

To investigate the precision and sensitivity, each drug sample was analyzed at the following concentrations: cutoff -100%, cutoff -75%, cutoff -50%, cutoff -25%, cutoff, cutoff +25%, cutoff +50%, cutoff +75% and the cutoff +100%. All concentrations were confirmed with GC/MS or LC-MS/MS. The study was used three different lots of the T-Dip® Oxazepam (BZO) Urine Test Panel. The data are summarized below:

Approximate Concentration of Sample (ng/mL)	Number of Determinations per Lot	Results (Negative/Positive)		
		Lot 1	Lot 2	Lot 3
0	50	50/0	50/0	50/0
75	50	50/0	50/0	50/0
150	50	50/0	50/0	50/0
225	50	50/0	50/0	50/0
300	50	6/44	5/45	6/44
375	50	0/50	0/50	0/50
450	50	0/50	0/50	0/50

525	50	0/50	0/50	0/50
600	50	0/50	0/50	0/50

Specificity and Cross Reactivity

To test the specificity of the test, the test device was used to test various drugs, 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.

Substance	Concentration (ng/mL)
Oxazepam	300
Alprazolam	200
a-Hydroxylalprazolam	1,500
Bromazepam	500
Chlordiazepoxide	1,500
Clobazam	100
Clonazepam	800
Clorazepate dipotassium	200
Delorazepam	1,500
Desalkylflurazepam	400
Diazepam	200
Estazolam	1,000
Flunitrazepam	2,500
D,L-Lorazepam	>100,000
Midazolam	12,500
Nitrazepam	4,000
Norchlordiazepoxide	200
Nordiazepam	500
Temazepam	250
Triazolam	1,200
Demoxepam	2,000
Flurazepam	500

Effect of Urinary Specific Gravity

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

Effect of Urinary pH

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

Interfering Substances

The following compounds were added to drug-free urine, urine with drug concentration 25% below the cutoff, and urine with drug concentration 25% above the cutoff for the corresponding T-Dip® Oxazepam (BZO) Urine Test Panel. All potential interferents were added at a concentration of 100 µg/mL. None of the urine samples showed any deviation from the expected results.

Acetaminophen	Diphenhydramine	Noscapine
Acetophenetidin	D,L-Octopamine	O-Hydroxyhippuric Acid
Acetylsalicylic Acid	DL-Propranolol	Omeprazole
Aminopyrine	DL-Tyrosine	Oxalic Acid
Amoxicillin	D-Pseudoephedrine	Oxolinic Acid
Ampicillin	Estrogen	Oxymetazoline
Apomorphine	Fenoprofen	Papaverine
Aspartame	Furosemide	Penicillin V Potassium
Aspirin	Gentisic Acid	Penicillin-G
Atropine	Hydrochlorothiazide	Perphenazine
Benzilic Acid	3-Hydroxytyramine	Pethidine HCl
Benzoic Acid	5-Hydroxytyramine	Phenelzine
Billirubin	Hydrocortisone	Prednisone
Captopril	Isoxsuprine	Propranolol HCl
Chloralhydrate	Ketoprofen	Quinine
Chloramphenicol	Labetalol	Ranitidine

Chlorothiazide	Lamotrigine	Ranitidine HCl
Chlorpromazine	Levonorgestrel	Sulfamethazine Sulindac
Chloroquine	Meperidine	Salicylic Acid
Cholesterol	Meprobamate	Sertraline
Clarithromycin	Nalidixic Acid	Tetrahydrozoline
Clonidine	Naloxone	Thiamine
Cotinine	Naltrexone	Thioridazine
Cortisone	Naproxen	Triamterene
Deoxycorticosterone	Niacinamide	Uric Acid
Dextromethorphan	Nifedipine	Venlafaxine HCl
Diclofenac	Nitroglycerin	Verapamil
Diflunisal	Norethindrone	Zomepirac
Digoxin		

ASSISTANCE

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

BIBLIOGRAPHY OF SUGGESTED READING

Baselt, R.C. Disposition of Toxic Drugs and Chemicals in Man. Biomedical Publications, Davis, CA, 1982.
Ellenhorn, M.J. and Barceloux, D. G Medical Toxicology. Elsevier Science Publishing Company, Inc., New York, 1988.
Gilman, A. G., and Goodman, L. S. The Pharmacological Fluids, in Martin WR (ed): Drug Addiction I, New York, Spring – Verlag, 1977.
Harvey, R.A., Champe, P.C. Lippincotts Illustrated Reviews. Pharmacology. 91-95, 1992.
Hawwks RL, CN Chiang. Urine Testing for drugs of Abuse. National Institute for Drug Abuse (NIDA), Research Monography 73, 1986.
Hofmann F.E., A Handbook on Drug and Alcohol Abuse: The Biomedical Aspects, New York, Oxford University Press, 1983.
McBay, A. J. Clin. Chem. 33,33B-40B, 1987.

ADDITIONAL INFORMATION AND RESOURCES

The following list of organizations may be helpful to you for counseling support and resources. These groups also have an Internet address which can be accessed for additional information.
National Clearinghouse for Alcohol and Drug Information 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

INDEX OF SYMBOLS



Keep away from sunlight



Store between 4°C - 30°C (39°F - 86°F)



Keep dry



Do not re-use

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Made in China