

# Rapid Response™ Xylazine Test Strip

(Liquid / Powder)

REF:XYL-18S 2-10 0

Product Insert

For Forensic Use Only

**WARNING: THIS TEST DOES NOT EVALUATE DRUG SAFETY OR PURITY**

## Intended Use

The Rapid Response™ Xylazine Test Strip (Liquid / Powder) is a rapid visual immunoassay for the qualitative, presumptive detection of xylazine in suspicious substances at the cut-off concentration listed below:

Parameter	Calibrator	Cut-off(ng/mL)
XYL (Xylazine)	Xylazine	1,000

## Introduction

Xylazine (colloquially known as tranq/tranq dope) is a non-opioid tranquilizer used as a sedative, analgesic, and muscle relaxant in animals such as horses and cattle<sup>1,3</sup>. In humans, it could cause central nervous system depression, respiratory depression, bradycardia, hypotension, and even death<sup>1</sup>. Most of the non-fatal cases required medical intervention. In recent years, xylazine has emerged as an adulterant in recreational drugs such as heroin<sup>2</sup>. Chronic use of xylazine is reported to be associated with physical deterioration and skin ulceration. Combining xylazine with other drugs that cause central nervous system depression compounds the sedative effects and can increase the risk of overdose and death<sup>2</sup>.

## Materials

### Materials Provided

- Individually packed test strips
- Product insert

### Materials Required but not Provided

- Timer

## Precautions

- The test device is **NOT** intended to determine the purity, composition, or if the substance being examined is safe to use.
- A positive or negative test result is **NOT** an indication that the substance being examined is safe to use. Many factors come into play when examining the samples, including but not limited to mixture of multiple substances, solubility, and pH of the sample.
- BTNX Inc. does not encourage the use, supply, or production of illegal drugs or controlled substances in any way. The device is intended for harm reduction purposes.** Follow the advice of your local harm reduction or public health agency.
- Not for testing Cocaine.
- There are no direct therapeutic or diagnostic claims being made for this product. These tests are not involved in diagnosing, treating, mitigating, or preventing a disease, disorder or symptom in human being, nor do they restore, modify or correct a body structure,

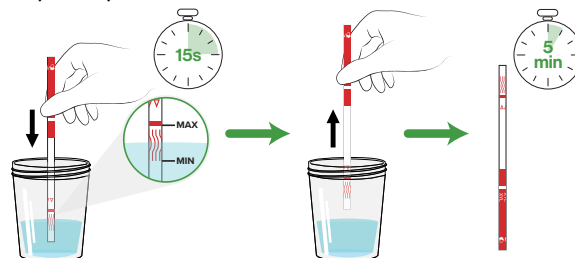
- function of the human body.
- The Rapid Response™ Xylazine Test Strip only gives an indication and should be used solely as a presumptive guide to work in conjunction with further analysis such as Gas Chromatography-Mass Spectrometry or High Performance Liquid Chromatography (HPLC). For complete analysis, we recommend all samples should be sent to a professionally certified laboratory.
- The Rapid Response™ Xylazine Test Strip is not suitable for use with presumed cocaine samples. Lidocaine, a common adulterant in cocaine samples reacts with this test and will produce a false positive result.
- Do not use after expiration date indicated on the package. Do not use the test if its foil pouch is damaged. Do not reuse tests.
- This kit contains products of animal origin. Certified knowledge of the origin and/or sanitary state of the animals does not totally guarantee the absence of transmissible pathogenic agents. It is therefore, recommended that these products be treated as potentially infectious, and handled observing the usual safety precautions (do not ingest or inhale).
- Read the entire procedure carefully prior to performing any tests.
- Do not eat, drink or smoke in the area where the samples and kits are handled. It is recommended to wear protective clothing such as disposable gloves and eye protection when handling harmful substances.
- Humidity and temperature can adversely affect results.
- The used testing materials should be discarded in accordance with local, state and/or federal regulations.

## Storage And Stability

- The kit should be stored at 36-86°F (2-30°C) until the expiry date printed on the sealed pouch.
- The test must remain in the sealed pouch until use.
- Do not freeze.** Care should be taken to protect the components of the kit from contamination. Do not use if there is evidence of microbial contamination or precipitation. Biological contamination of dispensing equipment, containers or reagents can lead to false results.

## Test Procedure

Bring tests, samples, buffer and/or controls to room temperature 59-86°F (15-30°C) before use.



- Dilute the drug to be tested in water. The Center for Forensic Science Research and Education (CFSRE) recommends adding one scoop (5-10mg) of drug sample to 5mL of water. Refer to the advice of your local health or harm reduction authority on how much water and drug sample you should use.
- Remove the test strip from its sealed pouch and use it as soon as possible. For best results, the test should be performed within one hour.

- Hold the strip by the end, where the product name (XYL) is printed. To avoid contamination, do not touch the strip membrane (the white section of the strip).
- Holding the strip vertically, dip the test strip in the liquid for at least 10-15 seconds. Immerse the strip where the wavy lines are, but not above the solid (maximum) line on the test strip.
- Remove the strip from the sample and place it on a non-absorbent flat surface. Start the timer and wait for the colored band(s) to appear. Read the test result at 5 minutes. Do not interpret the result after 10 minutes.

## Result Interpretation

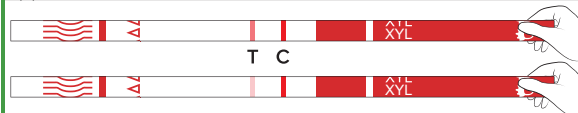
### Positive - Xylazine Detected

Only one colored band appears in the control region (C). No apparent colored band appears in the test region (T).



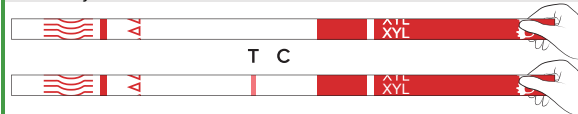
### Negative – Xylazine Could Not be Detected

Two colored bands appear on the membrane. One band appears in the control region (C) and another band appears in the test region (T).



### Invalid

Control band fails to appear. Results from any test which has not produced a control band at the specified read time must be discarded. Please review the procedure and repeat with a new test. If the problem persists, discontinue using the kit immediately and contact your local distributor.



### NOTE:

- The intensity of color in the test region (T) may vary depending on the concentration of analytes present in the sample. Therefore, any shade of color in the test region should be considered negative. Note that this is a qualitative test only and cannot determine the concentration of analytes in the sample.
- Insufficient sample volume, incorrect operating procedure or expired tests are the most likely reasons for control band failure.

## Quality Control

### Internal Procedural Controls

Internal procedural controls are included in the test. A colored band appearing in the control region (C) is considered an internal positive procedural control, confirming sufficient sample volume and correct procedural technique.

## Limitations of the Test

- There is a possibility that technical or procedural errors as well as other substances and factors may interfere with the Rapid Response™ Xylazine Test Strip (Liquid / Powder) and cause false results.**
- A positive result indicates the presence of xylazine only and does not indicate quantity.**
- A negative result does not at any time rule out the presence of xylazine, as they may be present below the minimum detection level of the test.**
- The Rapid Response™ Xylazine Test Strip (Liquid / Powder) test is for forensic use and should be only used for the qualitative detection of xylazine.
- This assay provides a preliminary analytical test result only. A more specific alternative chemical method must be used to obtain a confirmed analytical result. Gas chromatography/mass spectrometry (GC/MS) has been established as the preferred confirmatory method by the National Institute on Drug Abuse (NIDA). Clinical consideration and professional judgment should be applied to any test result, particularly when preliminary positive results are indicated.
- This test may not distinguish between xylazine and certain substances.

## Performance Characteristics

### A. Accuracy

The accuracy of the Rapid Response™ Xylazine Test Strip (Liquid / Powder) was compared and checked against commercially available tests with a threshold value at the same cut-off levels. The results were >96.9% in agreement.

### B. Reproducibility

The reproducibility of the Rapid Response™ Xylazine Test Strip (Liquid / Powder) was verified by blind tests performed at four different locations. Samples with xylazine concentrations at 50% of the cut-off were all determined to be negative, while samples with xylazine concentrations at 200% of the cut-off were all determined to be positive.

### C. Precision

Test precision was determined by blind tests with control solutions. Controls with xylazine concentrations at 50% of the cut-off yielded negative results, and controls with xylazine concentrations at 150% of the cut-off yielded positive results.

### D. Specificity

The following tables list the concentrations of compounds (ng/mL) above which the Rapid Response™ Xylazine Test Strip (Liquid / Powder) identified positive results at 5 minutes.

Xylazine 1000 related compounds	Concentration (ng/ml)
Xylazine	1000
Lidocaine	3000

### Non Cross-Reacting Compounds

The following compounds were found not to cross-react when tested at concentrations at 100 µg/ml.

(-)-Ephedrine	Chlorpheniramin	Oxalic Acid
(+)-Naproxen	Creatine	Penicillin-G
(+/-)-Ephedrine	Dextromethorph	Pheniramine
4-	Dextrorphan	Phenothiazine
Acetaminophen	Dopamine	Procaine

Acetone	Erythromycin	Protonix
Albumin	Ethanol	Pseudoephedrine
Amitriptyline	Furosemide	Quinidine
Ampicillin	Glucose	Ranitidine
Aspartame	Guaiacol	Sertraline
	Glyceryl Ether	
Aspirin	Hemoglobin	Tyramine
Benzocaine	Imipramine	Trimeprazine
Bilirubin	(+/-)-	Venlafaxine
	Isoproterenol	
b-Phenylethyl-	Methadone	Ibuprofen
Caffeine	Vitamin C	Cocaine
	(Ascorbic Acid)	
Chloroquine	Methamphetami	

### Literature References

1. GREENE, S.A. and THURMON, J.C. (1988), Xylazine – a review of its pharmacology and use in veterinary medicine. Journal of Veterinary Pharmacology and Therapeutics, 11: 295-313.
2. Reyes, J.C., Negrón, J.L., Colón, H.M. et al. The Emerging of Xylazine as a New Drug of Abuse and its Health Consequences among Drug Users in Puerto Rico. J Urban Health 89, 519–526 (2012).
3. Baselt RC. Disposition of Toxic Drugs and Chemicals in Man. 2nd ed. Davis: Biomedical Publications; 1982.
4. Hawks RL, Chiang CN, eds. Urine Testing for Drugs of Abuse. Rockville: Department of Health and Human Services, National Institute on Drug Abuse; 1986.
5. Substance Abuse and Mental Health Services Administration. Mandatory Guidelines for Federal Workplace Drug Testing Programs. 53 Federal Register; 1988.

### Glossary of Symbols



Consult instructions for use



Test per Kit



Catalogue #



Store between 36-86°F (2-30°C)



Use by



Do Not Reuse



Lot Number



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