

- **INTENDED USE**

Artron GeneTrue test Kit for PAT/*bar* is designed to be used for the rapid and qualitative detection of the herbicide-resistant transgenic phosphinothricin-N-acetyltransferase protein in plants (PAT/*bar*).

Transgenic PAT/*bar* protein when expressed in plants confers plant resistance to herbicides; the test kit is able to detect the presence of the PAT/*bar* protein expressed in transgenic plants. Experienced researchers can determine the expression level based on the color revealed on the strip test line, allowing for a qualitative or semi-quantitative analysis relative to the degree within which the PAT/*bar* protein is expressed in a plant.

The test will provide direct evidence of the PAT/*bar* protein in transgenic plants. It can be used to police unauthorized border entry, monitor phytosanitary conditions of plant imports and exports by inspection officers, and for quick screening of plants and plant products by plant growers.

**Limit of detection:** 1 ng/ml or 1 in 1000 Kernels

- **STORAGE**

The test device in seal pouch should be stored at 2-30°C. Do not freeze the test device

The test device should be kept away from direct sunlight, moisture and heat

- **CONTENTS**

Pouch (contains: test strip and desiccant).  
Test instructions.

- **Materials Required (Not Provided)**



**Artron GeneTrue test Kit for  
PAT/*bar*  
Catalog Number: A07-13-413**

**Instructions for Use**

- Tube
- Pestle (for leaf samples only)
- Seed crusher (for seed samples only)
- Tap water

## • SAMPLE PREPARATION

Preparation of the sample is a crucial step for the test to run effectively. To prepare the sample, first grind the plant seeds/ leaves/ seedlings/ other materials that need testing. Mix the sample with water according to the predetermined ratio given below:

Type of Plant	Leaf	Seed
	Leaf/Water ( g / ml )	Seed/Water ( g / ml )
Rice	1 : 20	1 : 5
Corn	1 : 20	1 : 5
Cotton	1 : 10	1 : 20
Soybean	1 : 10	1 : 5
Rapeseed	1 : 10	1 : 5

For plant components that are not listed below, please refer to the table and draw inferences by selecting the closest component category that would be most applicable for the sample. After completing the process of grinding the sample and adding water, ensure that the sample is mixed properly. This can be done by shaking or centrifuging the test tube. Once this has been accomplished, allow the mixture to stand for a while. It is recommended that you remove the liquid (supernatant) fraction of the ground plant mixture to another container for testing.

### For single seed types:

Grind a single seed sample (0.5-2 g ground seeds) in a container and add water. Mix for 15–25 seconds and let the sample settle before testing.

### For a mixture of different seed types:

Grind 200 g of mixed seeds. In a beaker, combine 20-50 g of the ground sample with water. Mix for 2-5 minutes and let the sample settle before testing.

### For leaf tissue from the single plant type:

Take a 1-inch x 1-inch leaf punches from the sample leaf tissue (0.15-0.3 g); push the leaf punches into the tube using a pestle. Add 3 mL of water into tube and grind the tissue using the pestle. This will result in a dilution of 1:20, if 0.15 g or 1:10, if 0.3 g. Let the paste settle for at least 45 seconds before testing or further dilution with water.

### For leaf tissue from a mixture of different plant types:

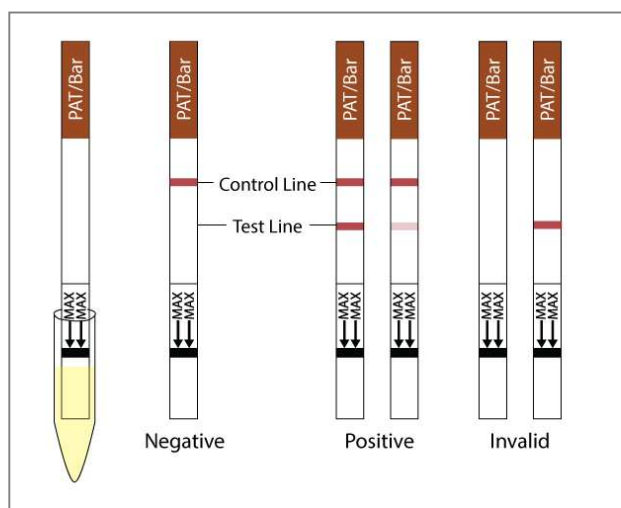
Take a 1-inch x 1-inch leaf punches from each of the different sample leaf tissue (total 0.2-0.4 g); push the leaf punches into the tube using a pestle. Add 4mL of water into tube and grind the tissue using the pestle. This will result in a dilution of 1:20, if 0.2 g or 1:10, if 0.4 g. Let the paste settle for at least 45 seconds before testing or further dilution with water.

## • HOW TO RUN THE STRIP TEST

- Remove the testing device from the foil pouch by tearing at the notch. Hold the strip at the colored end. Do not touch the arrow end or the test window (the middle part of the strip).
- Holding the strip vertically, immerse the end of the strip with the arrows into the sample liquid. Do not immerse past the MAX line.
- Take the strip out when the sample has migrated to the test window (about 10 seconds). Lay the strip (MAX side facing up) flat on a clean, dry, non-absorbent surface.
- Wait 2-5 minutes for the result. If there is only one line appears, allow the strip to develop for an extra 10 minutes before completion of the test. Results visible after 30 minutes are considered invalid.

## • INTERPRETING THE RESULTS

- A positive result is the presence of two purple bands: one on the test (T) line and one on the control (C) line.
- A negative result is the presence of one purple band on the control (C) line.
- An invalid result: no band is present on the control (C) line. This may suggest the procedure was done incorrectly or the test strip was faulty. Re-test with another strip. If the problem persists, please contact your local supplier.



For technical assistance or questions regarding the use of this test system, please call Artron Laboratories Inc.

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Email: [info@artronlab.com](mailto:info@artronlab.com)

## • FAQs

1. Organic seed samples are not climbing high enough to the test window. What should I do?  
Organic seeds are capable of absorbing liquid. Therefore less liquid would be available in the supernatant for strip testing. To avoid this, centrifugation can be used to separate the liquid

with the seeds. If a centrifuge is not available, you can increase the amount of samples and water (while maintaining the same ratio).

- **LIMITED WARRANTY**

Artron Laboratories Inc. warrants the products manufactured by Artron will be free of defects in materials and workmanship when used in accordance with the applicable instructions, for a period not to extend beyond a product's printed expiration date.

The sole obligation of Artron shall be repair or replace the defective products in the manner and for the period above. Under no circumstances, whether based on this Limited Warranty or otherwise, shall Artron be liable for any incidental, consequential, direct, indirect, or special damages.