

## Intended Use

■ Artron GeneTrue™ CP4 EPSPS Test Kit (Ultra Sensitive) is intended for the rapid qualitative detection for the presence of CP4 EPSPS protein in crops as an aid in the determination of genetically modified organisms especially for Roundup Ready crops.

■ The detection limit of the test kit is 0.2 ng/mL or 0.02% (1 in 5000 soybeans).

## Principles of the Test

■ Artron GeneTrue™ CP4 EPSPS Test Kit (Ultra Sensitive) is a double antibody sandwich immunochromatographic assay, detecting the presence of CP4 EPSPS proteins in the seeds or leaves of the crop tested.

## Contents of the Kit

- 100 test strips (50 Tests/Bottle; 2 Bottles/Box)
- 1 instructions for use
- 100 plastic droppers
- 100 test tubes

## Materials Needed but not Provided

- Graduated cylinder
- Balance (0–500g measuring range)
- Grinder and blender
- Sampling tube, pestle or sampling bag
- CP4 EPSPS positive reference standard
- Distilled water

## Storage and Stability

- Store between 2 and 30°C. Do not freeze.
- Avoid direct sunlight, heat and moist.
- The test can be used in the growing field, but long exposure to high temperature will interfere with the test results. Please do not open the lid of the bottle if the test is not ready to be used.

## Safety

- The test strips are nonhazardous and non-poisonous.

## Test Specimen Preparation

### For Seed Samples

■ Please refer to the table below, and use the grinder to finely grind the samples.

Sample Weight (g)	Grinding Time (s)
9 – 15	20
16 – 40	20
41 – 60	30
61 - 150	45



Note: seed samples can be grinded into powder with grinder or any other applicable machines; a blender can also be used when seeds are mixed with water.

■ Please refer to the table below to measure the respective weight of sample powder and volume of distilled water for mixing. (For example, 50mL of distilled water shall be added for 10g of corn seed powder, in the proportion of 1:5).

Type of Crop	Soybean	Corn	Cotton	Wheat
Powder:Water (g:mL)	1:5	1:5	1:20	1:5
Type of Crop	Canola	Beet	Medicago	Potato
Powder:Water (g:mL)	1:5	1:5	1:5	1:5

■ Well mix the sample and water by shaking the mixture in a sealed container for 20 to 30 seconds. Then let it stand still for sedimentation.

■ Use the plastic dropper provided in the kit to retrieve supernatant of the mixture to the marked line on the dropper. Please avoid any solid contents. Then transfer the solution to the test tube.



**Important: to avoid cross reaction, the grinder must be thoroughly washed and cleaned before used with the next sample. The plastic dropper and test tube are both designed for one-time use only and must not be reused.**

### For Leaf Samples

■ Use fresh leaves for testing. Place the leaf between the lid and the sampling tube, and rapidly press down the lid to obtain a round piece of leaf sample in the tube. Repeat the step to obtain another sample. For small-sized leaves, obtain 3 to 4 pieces of semicircular leaf samples. Please try to obtain samples from different parts of the leaf as possible.



■ Use a pestle to move all samples to the bottom of the sampling tube, and properly label the tube with a marker.

■ Insert the pestle into the sampling tube; keep twisting and pressing the leaf samples for 30 to 60 seconds until fully crushed.

■ Add 0.5mL of distilled water into the sampling tube (fill up to the 0.5mL mark line on the tube).

■ Repeat Step 3 to allow full contact and mixing of leaf samples with water.

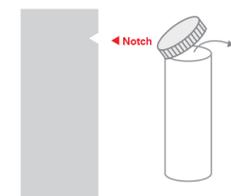
■ Take out the pestle and let the mixture stand still for sedimentation.

■ Use the plastic dropper provided in the kit to retrieve supernatant of the mixture to the marked line on the dropper. Please avoid any solid contents. Then transfer the solution to the test tube.

**Important: the sampling tube, pestle, plastic dropper and test tube are all designed for one-time use only and must not be reused.**

## Testing Procedure

1. Allow the test strip to come to room temperature (15–30°C). Remove the bottle of tests from the foil pouch by tearing the opening notch and take out the exact quantity of test strips needed; the bottle must be recapped immediately. Do not touch the side of the strip where there are arrows; do not bend the test strip. The test strip must be used within 1 hour after removing from the bottle and as soon as possible when the temperature is above 30°C or in humid atmosphere.



Please read the IFU in detail before use



GeneTrue™

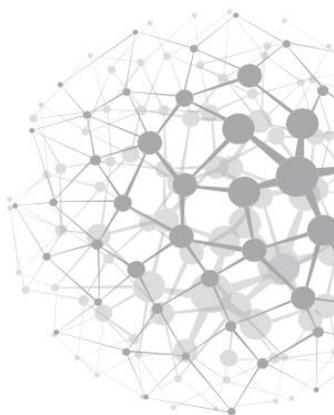


CP4 EPSPS Test Kit

Ultra Sensitive

## Instructions for Use

Specimen: Soybean, Corn, Cotton, Wheat, Beet, Medicago, Canola and Potato Seed & Leaf Extract

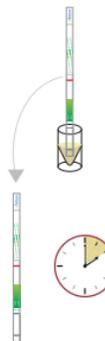


Format: Strip

Catalogue No.: A07-62-413

Store between 2 and 30°C. Please do not freeze.

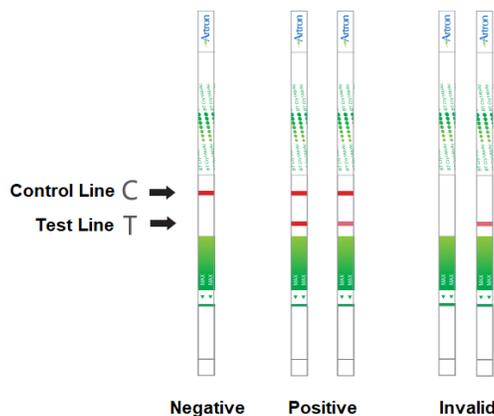
2. Hold the test tube vertically, and immerse the test strip in the prepared specimen with the arrows pointing downwards. Do not immerse beyond the MAX line.
3. During the testing, the strip can be either left immersing in the specimen or taken out to lay on a clean, dry and flat surface for result development after specimen has migrated onto the test window. Read the result after 5 mins; positive results can be observed sooner. Do not interpret after 30 minutes.



## Result Interpretation

The Test and Control lines typically appear within 1~5 minutes, but the time varies for different types of specimen. For the best result, please interpret result within 5~10 minutes. Results interpreted after 30 minutes are invalid because the test line may have non-specific changes.

- Negative (No CP4 EPSPS in the specimen): Only one pink or red colored line observed in the Control region.
- Positive (CP4 EPSPS detected in the specimen): Two pink or red colored lines observed with one in the Test region and the other in the Control region.
- Invalid Result: No visible line appears in the Control region. It indicates that the test was conducted improperly or the test strip is defective. Test with another strip. If the problem persists, stop using this lot and contact the local distributor immediately.



## Precautions

- Please use before the expiration date.
- Please do not touch the test area of the strip.
- If the test kit was improperly stored and the strips are exposed to humidity (the color of desiccant has changed), its performance will be compromised.
- Improper specimen preparation will substantially impact the performance of the test. If the specimen is too viscous and contains lots of solid contents, it may interfere with the strip absorbing the specimen; if the specimen is over-diluted, the test may give a false negative result.
- Do not immerse the strip beyond the MAX line, otherwise the active component of the test will be released to the specimen instead of reacting as designed. However, if the strip is not immersed deep enough, it will slow or even stop the migration of specimen, causing an invalid test result.
- Do not reuse the test.
- Unused test strips should be kept away from direct sunlight.
- Do not eat the test.

## Manufacturer Information

Manufacturer: Artron Laboratories Inc.

Address: 3938 North Fraser Way  
Burnaby, BC V5J 5H6  
Canada



Tel: 1-604-415-9757 Fax: 1-604-415-9795

Website: [www.gmodetect.com](http://www.gmodetect.com)

Doc No. IFU-A07-62-413-EN-P100 VER.23-01 Rev. June 2023