

Catalog Number AS 027 LS

Part #11576

### Highlights:

- Results in 10 minutes or less
- Available as 100-strip individual kits or bulk-packaged strips

### Contents of Kit:

- 100 QuickStix Strips packed in two moisture-resistant canisters
- EB2 Extraction Buffer
- Dropper bottle
- 100 Disposable Tissue Extractors, each consisting of a tube with punch cap and pestle (optional item with bulk packaging)

Contact EnviroLogix to order bulk-packaged kits. Bulk kits include EB2 Extraction Buffer Concentrate. To prepare 1 liter, mix 50 mL 20X Concentrate with 950 mL of distilled or deionized water. Store refrigerated when not in use; allow to come to room temperature before using. 1X solution expires 4 weeks from date of mixing when stored at 2-8°C, or 1 week when stored at room temperature.

### Leaf testing



Obtain leaf tissue, grind

## Intended Use

The EnviroLogix QuickStix Kit for CSPB is designed to extract and detect the presence of the CSPB protein at the levels typically expressed in MON87460 corn leaf and seed tissues.

## How the Test Works

Maize containing Event MON87460 expresses the CSPB protein in leaf and seed tissue. To detect the CSPB protein using this kit, tissue samples must be extracted with the Extraction Buffer provided in this kit.

Each QuickStix Strip has an absorbent pad at each end. The protective tape with the arrow indicates the end of the strip to insert into the extraction tube. The sample will travel up the membrane strip and be absorbed into the larger pad at the top of the strip. The portion of the strip between the protective tape and the absorbent pad at the top of the strip is used to view the reactions as described under “Interpreting the Results.” Please avoid bending the strips.

## Sample Preparation

**Note:** If Extraction Buffer has been refrigerated, allow it to warm up to room temperature before preparing samples.

### To extract leaf tissue:

1. Select tissue samples from closest to the corn stalk. Sandwich a folded section of leaf tissue between the cap and body of the Disposable Tissue Extractor tube. Snap 2 circular tissue punches by closing the cap. Push the leaf punches down into the tapered bottom of the tube with the pestle. Write the sample identification on the tube with a waterproof marker.
2. Insert the pestle into the tube and grind the tissue by rotating the pestle against the sides of the tube with twisting motions. Continue this process for 20 to 30 seconds, or until the leaf tissue is well ground.
3. Uncap the bottle of EB2 Extraction Buffer and invert it directly over the Tissue Extractor tube. Carefully squeeze 10 drops (0.5 mL) of Buffer into the tube containing leaf.
4. Repeat the grinding step to mix tissue with EB2 Extraction Buffer. Dispose of the pestle (do not re-use pestles on more than one sample).

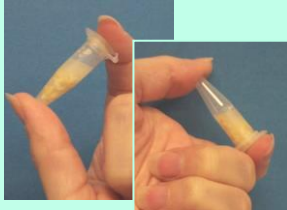
### To extract seed:

1. Crush a single seed (*Suggestion: use pliers with seed in microcentrifuge tube or resealable plastic bag*). Transfer to an extraction tube marked with sample identification. Note: Complete crushing of seed improves extraction efficiency and test performance.
2. Uncap the bottle of EB2 Extraction Buffer and invert it directly over the Tissue Extractor tube. Carefully squeeze 20 drops (1 mL) of Buffer into the tube.
3. Close the tube cap securely. Shake the tube vigorously for 20 to 30 seconds, using an **up-and-down motion**, ensuring that the crushed seed and buffer are

### Seed testing



Crush single seed



Extract seed sample—  
vigorous shaking is important



Insert QuickStix



Any clearly discernable pink  
Test Line is considered positive

well mixed. Allow the solid material to settle to the bottom of the tube. The extract takes on a yellow opaque color when the samples are prepared properly.

4. Use caution to prevent sample-to-sample cross-contamination with plant tissue, fluids, crushing equipment (*pliers*) or disposables. Be sure to use a new tube for each sample tested.

## How to Run the QuickStix Strip Test

1. Allow refrigerated canisters to come to room temperature before opening. Remove the QuickStix Strips to be used. Avoid bending the strips. Reseal the canister immediately.
2. Place the strip into the extraction tube. The sample will travel up the strip. Use a rack to support multiple tubes if needed.
3. Allow the strip to develop for 10 minutes before making final assay interpretations. Positive sample results may become obvious much more quickly.
4. Read and score strip immediately when wet, then discard. Do not save strips.

## Interpreting the Results

Development of the Control Line within 10 minutes indicates that the strip has functioned properly. Any strip that does not develop a Control Line should be discarded and the sample re-tested using another strip.

If the sample extract contains CSPB protein, a second line (Test Line) will develop on the membrane strip between the Control Line and the protective tape within 10 minutes of sample addition. The results should be interpreted as positive for CSPB expression.

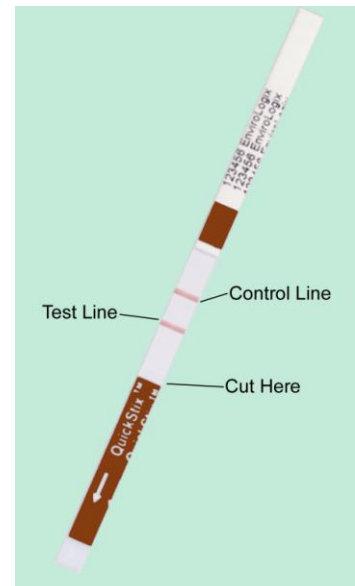
If no Test Line is observed after 10 minutes have elapsed, the results should be interpreted as negative.

## Kit Storage

This QuickStix Kit should be stored at room temperature, or refrigerated for a longer shelf life. Please note the shelf life on the kit box for each storage temperature. The kit may be taken into the field for use; however, prolonged exposure to high temperatures may adversely affect the test results. Important: do not open the desiccated canister until you are ready to use the test strips.

## Precautions and Limitations

- This kit is designed for screening for presence or absence only and is not meant to be quantitative.
- As with all tests, it is recommended that results be confirmed by an alternate method when necessary.





- The assay has been optimized to be used with the protocol provided in the kit. Deviation from this protocol may invalidate the results of the test.
- The results generated through the proper use of this kit reflect the condition of the working sample directly tested. Extrapolation as to the condition of the originating lot from which the working sample was derived should be based on sound sampling procedures and statistical calculations which address random sampling effects, non-random seed lot sampling effects, and assay system uncertainty. A negative result obtained when properly testing the working sample does not necessarily mean the originating lot is entirely negative for the analyte or protein in question.
- A negative result with this kit does not mean that the sampled tissue has not been otherwise genetically modified.
- A strong positive result may safely be interpreted in as little as 2 minutes after sample addition. It is not safe, however, to conclude that a sample is negative before a full 10 minutes has elapsed, as a weak positive sample may require the full 10 minutes for a distinct Test Line to appear.
- Protect all components from hot or cold extremes of temperature when not in use. Do not leave in direct sunlight or in vehicle.



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