

Catalog Number AS 050 LS

Part #11771

## Highlights:

- Results in 5 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 and pestle, with punch cap)

Contact EnviroLogix to order bulk-packaged kits. Bulk kits include EB2 Extraction Buffer Concentrate. To prepare 1 liter, mix 50 mL of 20X Concentrate with 950 mL of distilled or deionized water. Store refrigerated when not in use; allow to come to room temperature before using. Expiration date for prepared buffer is equal to that stated on the 20X container.

## Leaf tissue testing:



Obtain a circular leaf tissue punch, grind

## Intended Use

The EnviroLogix QuickStix Kit for DMO (Dicamba Mono-oxygenase) Soy Leaf & Seed is designed to extract and detect the DMO protein at levels typically expressed in MON 87708 soybean leaf and single seed tissue. For DMO detection in soy bulk grain, please use Cat. No. AS 050 BGB.

## How the Test Works

MON87708 soybeans will express the DMO protein in their leaf and seed tissues. To detect the protein with the QuickStix Strip, tissue samples must be extracted and the protein solubilized in the Extraction Buffer provided.

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.”

## Sample Preparation

### Soy leaf tissue:

- Sandwich a section of leaf tissue between the cap and body of the Disposable Tissue Extractor tube; snap a circular tissue punch by closing the cap. Push the leaf punch down into the tapered bottom of the tube with the pestle. Sample identification should be marked on the tube with a waterproof marker.
- 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.
- Add 0.5 mL (10 drops, if using dropper bottle) of EB2 Extraction Buffer into the Tissue Extractor tube containing leaf tissue.
- Repeat the grinding step to mix tissue with Extraction Buffer. Dispose of the pestle (do not re-use pestles).

### Single Soybean:

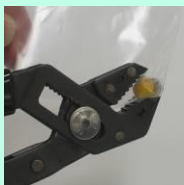
- Crush a single soybean (*Suggestion: Use pliers with seed in a small plastic bag*). Transfer to a Disposable Tissue Extractor tube marked with sample identification.
- Add 1 mL (20 drops) of EB2 Extraction Buffer into the Tissue Extractor tube with the crushed soybean particles.
- Close the tube cap securely and shake the tube vigorously for 20 to 30 seconds. Allow the solid material to settle to the bottom of the tube.

Repeat the protocol for each sample to be tested, using a new tube and pestle for each. Use caution to prevent sample-to-sample cross-contamination with plant tissue, fluids, or disposables.



Add EB2 Extraction Buffer,  
grind again

#### Seed tissue testing:



Crush single soybean



Extract seed sample



Insert QuickStix

## How to Run the QuickStix Strip Test

- 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.
- Place the strip into the Tissue Extractor tube. The sample will travel up the strip. Use a rack to support multiple tubes if needed.
- Allow the strip to develop for 5 minutes before making final assay interpretations. Positive sample results may become obvious much more quickly.
- To retain the strip, cut off and discard the bottom section of the strip covered by the arrow tape.

## Interpreting the Results

Development of the Control Line within 5 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 contained DMO protein, a second line (Test Line) will develop on the membrane strip between the Control Line and the protective tape, within 5 minutes of sample addition. *The results should be interpreted as positive for DMO protein expression. Any clearly discernible pink Test Line is considered positive.*

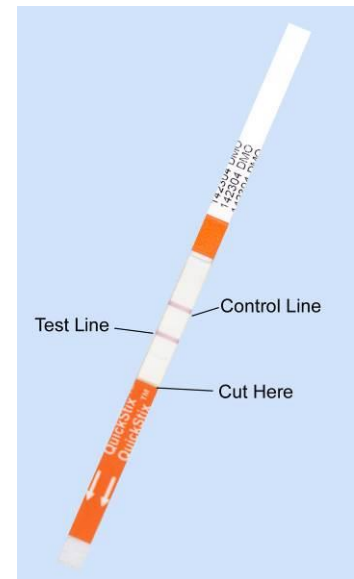
**If no Test Line is observed after 5 minutes have elapsed, the results should be interpreted as negative.**

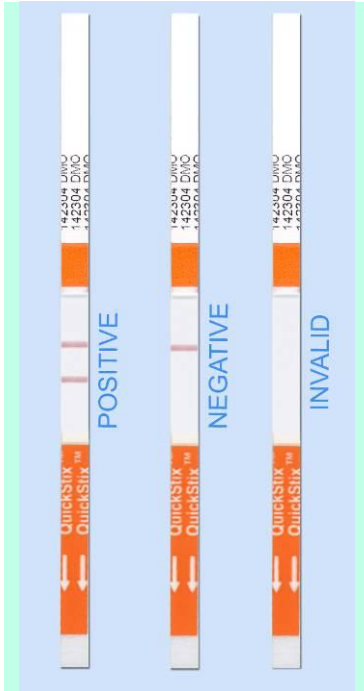
## Kit Storage

QuickStix can be stored at room temperature, or refrigerated for a longer shelf life. Note the shelf life on the kit box for each storage temperature. The kit may be used in field applications; however, prolonged exposure to high temperatures may adversely affect the test results. Do not open the desiccated canister until ready to use the test strips.

## Precautions and Notes

- This kit is designed for screening for presence or absence only and is not meant to be quantitative.
- This product is currently only applicable for use in soybean single seed or leaf testing, and not applicable for use in any other crop or in bulk soybean testing.
- As with all tests, it is recommended that results be confirmed with an alternate method if necessary.
- The assay has been optimized using the protocol and buffer 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





*Any pink Test Line indicates a positive*

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.
- Warning: 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 5 minutes has elapsed, as a weak positive sample may require the full 5 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.





**For Technical Support  
Contact Us At:**

**EnviroLogix**  
500 Riverside Industrial  
Parkway  
Portland, ME 04103-1486  
USA

**Tel: (207) 797-0300**  
**Toll Free: 866-408-4597**  
**Fax: (207) 797-7533**

e-mail:  
***info@envirologix.com***

website:  
***www.envirologix.com***



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