QuickStix™ Kit
Cry2Ab2 Bulk Soybeans

Catalog Number AS 095 BGBR *Part #12900*

Highlights:

- *Results in 10 minutes*
- *Available as 100-strip individual kits or bulk-packaging*

Contents of Kit:

- *100 QuickStix Strips packed in moisture-resistant canisters*
- *100 transfer pipettes*
- *100 sample cups*

Items Not Provided:

- *Blender for sample prep: Oster® Sunbeam blender model #4000 series*
- *Graduated cylinder*
- *Tap water*



Grind sample

Soybean Extraction

Grams of beans x 3.5 = mL tap water

For example: (1000 x 0.15 average seed weight) =150g

150g x 3.5 = 525 mL tap water



Fill cup to ridge with extract

Intended Use

The EnviroLogix QuickStix Kit for Cry2Ab2 Bulk Soybeans is a qualitative test designed to extract and detect the presence of Cry2Ab2 protein in ground soy extracts. The sensitivity of this test is 0.25% (1 in 400).

How the Test Works

In order to detect the Cry2Ab2 protein expressed in the soybeans, the sample must first be extracted to solubilize the protein. 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 reaction cup. 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

Step 1: Determine Size of Sub-samples

1. Determine the average individual weight of seeds/grain being tested, weighing 100 grains and dividing by 100.
2. Calculate the total weight of the seeds/grains to be tested by multiplying the number of seeds/grains x average seed/grain weight. A sample size of 1000 seeds/grain is recommended; other sample sizes may also be used.

Step 2: Prepare the sample extract

3. Weigh or count beans into the Oster blender (or appropriate vessel).
4. Grind sample on high speed for 30 seconds. Do not over-grind.
5. Add the volume of water calculated by the formula (left).
6. Pulse blender three times to mix well.
7. Let sample settle for 20-30 seconds then draw off liquid at that time. Avoid pulling up particles with the transfer pipette.
8. Transfer approximately 2 mL of the liquid extract from above the settled soybean solids into the reaction vial. The level of extract should be to the ridge of the cup.
9. To prevent cross-contamination, thoroughly clean blender parts and jars of dust and residue prior to preparation of a second sample. Use a new transfer pipette and cup for each sample.

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 sample cup containing 2 mL of the liquid soybean extract. The sample will travel up the strip.
3. Allow the strip to develop for 10 minutes before making final assay interpretations. Positive sample results may become obvious much more quickly. Allow the test to run for the full 10 minutes before concluding a sample in negative
4. To retain the strip, cut off and discard the bottom section of the strip covered by the arrow tape.

NOTE: Use extreme caution to prevent sample-to-sample cross-contamination with grain/seeds, fluids, materials, or disposables.



Add QuickStix Strip, wait 10 minutes



Any pink Test Line is considered positive

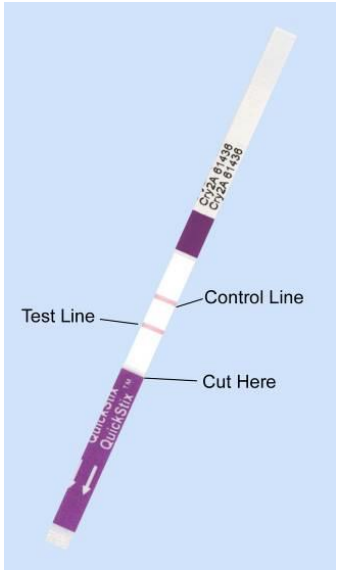


Interpreting the Results

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 Cry2Ab2 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 Cry2Ab2 protein expression.*

If the extract is from a negative sample, the strip will only develop the Control Line.



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 not applicable for use in any other crop.
- This product will not perform as expected if the seed/grain is treated.
- 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 diagnostic tool 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.
- Protect all components from hot or cold extremes of temperature when not in use.
- This kit may not be used after its expiration date.
- CAUTION: Tightly closed containers of soy extract, if left sitting for several hours, may ferment and cause the lid or container to burst. Dispose of extract when testing is complete.



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