QuickStix™ AP Kit for Cry51 Cottonseed

Highlights:

- *Detects 1 in 400*
- *Results in 10 minutes or less*
- *Available as 100-strip kits or bulk packaging*

Contents of Kit:

- *100 QuickStix Strips packed in two moisture-resistant canisters*
- *100 fixed volume transfer pipettes*
- *100 reaction vials*
- *Buffer Concentrate*

Items Not Provided:

- *Waring blender, model 31BL91 or equivalent**
- *Glass jar adapter (Eberbach # E8495)*
- *Glass Mason jars*
- *Protective cover for blender jar while grinding*
- *Graduated cylinder**
- *Centrifuge**
- *Centrifuge tubes and transfer pipettes**

**Available as Accessories through EnviroLogix:*

- *ACC-068 Graduated cylinder*
- *ACC-064-E Centrifuge*
- *ACC-010 Centrifuge set (contains microcentrifuge tubes and transfer pipettes)*



Catalog Number AS 051 AP

Intended Use

The EnviroLogix QuickStix AP Kit for Cry51 Cottonseed is designed to extract and detect the adventitious presence of Cry51 protein at the levels typically expressed in genetically modified cottonseed. The detection level of the QuickStix AP Kit for Cry51 is 0.25% (i.e. one positive seed in 400 conventional cottonseeds).

NOTE: A negative result with this test on cottonseed extracts does not necessarily rule out the presence of genetically modified material in the sample.

How the Test Works

In order to detect Cry51 protein with this Kit, the sample must first be ground and extracted in buffer to solubilize the protein.

Each QuickStix Strip has an absorbent pad at one end. The protective tape with the arrow indicates the end of the strip to insert into the reaction vial. 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

Prepare 1X Extraction Buffer as directed on the Buffer Concentrate container.

1. Determine the number of seeds to be tested – the table below lists the guidelines for jar size and grinding time according to sample size.

   ***NOTE:** If using a different grinding method than the Waring blender, the buffer volume may need to be adjusted. Please contact Technical Service (1-866-408-4597) for details.

Commodity	Sample Size	Jar Size (oz.)	Grind Time (sec.)	Buffer Volume (mL)*
Cottonseed	400 seeds	8	30	140 ±5
Cottonseed	200 seeds	4	30	70 ±1

2. Choose the appropriate size glass Mason-type jar for sample size and count the seeds into it.
3. Put protective cover over the jar attached to the blender.
4. Grind sample with a Waring blender (or equivalent) and jar adapter on high speed for 30 seconds or until all whole grains are broken.
5. Add the volume of 1X Extraction Buffer called for in the table.
6. Cap the jar and shake vigorously for 30 seconds to thoroughly wet all of the cottonseed in the sample.
7. Using a transfer pipette (not included), add about 1 mL of extract to a centrifuge tube and centrifuge for 30 seconds at 2,000 x *g* following manufacturer's instructions.



Grind



Centrifuge



Transfer of clarified extract to a reaction vial using a fixed volume transfer pipette



8. Using a fixed volume transfer pipette, add 0.25 mL of a clarified supernatant to a reaction vial. See Precautions and Notes section for instructions on how to use a fixed volume transfer pipette.
9. To prevent cross-contamination, thoroughly clean blender parts and jars to remove dust and residue prior to preparation of a second sample.

How to Run the QuickStix Strip Test

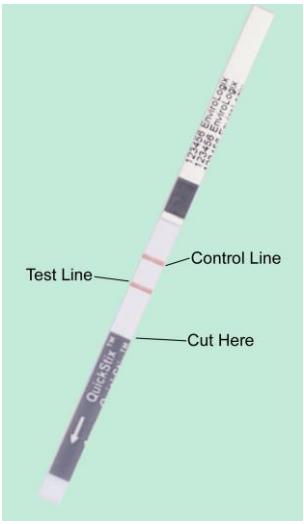
1. Allow refrigerated canisters to come to room temperature before opening. Remove the QuickStix Strips to be used. Avoid bending the strips. Reseal the canister immediately.
2. Place the strip into the reaction vial. The sample will travel up the strip. Reaction vials will stand on their own or may be inserted into the cardboard rack provided.
3. Allow the strip to develop for 10 minutes before making final assay interpretations. Positive sample results may become obvious much more quickly.
4. 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 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 Cry51, a second line (Test Line) will develop on the membrane strip between the Control Line and the protective arrow tape. The results should be interpreted as positive for Cry51 expression.

If no Test Line is observed after 10 minutes, the results should be interpreted as negative. A negative result means the sample contains less than 0.25% of Cry51.



Kit Storage

QuickStix strips 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

- To properly use the fixed volume pipette: squeeze the top bulb, place straw end into the extract, release the top bulb (extract should fill the straw and enter the lower bulb), place straw end in reaction vial, and squeeze the top bulb to dispense 0.25 mL (only the extract in the straw should be expelled into the reaction vial).
- This kit is designed to screen for presence or absence only, and is not meant to be quantitative.
- This product is currently not applicable for use in any other crop or in leaf or individual seed testing.



Any clearly discernable pink Test Line is considered positive



- This kit is designed for use in cottonseed only.
- As with all tests, it is recommended that results be confirmed by an alternate method if 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.
- Warning: a strong positive result may safely be interpreted in as little as 2 minutes after sample addition. It is not safe to interpret weak positive or negative results prior to 10 minutes.
- The assay has been optimized to develop an easily discernable red line at 1 in 400; experienced users may detect faint lines in samples with even lower concentrations.
- DO NOT leave in direct sunlight or in vehicle. Protect all components from hot or cold extremes of temperature when not in use.



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



LIMITED WARRANTY

EnviroLogix Inc. ("EnviroLogix") warrants the products sold hereunder ("the Products") against 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. If the Products do not conform to this Limited Warranty and the customer notifies EnviroLogix in writing of such defects during the warranty period, including an offer by the customer to return the Products to EnviroLogix for evaluation, EnviroLogix will repair or replace, at its option, any product or part thereof that proves defective in materials or workmanship within the warranty period.

ENVIROLOGIX MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. The warranty provided herein and the data, specifications and descriptions of EnviroLogix products appearing in EnviroLogix published catalogues and product literature are EnviroLogix' sole representations concerning the Products and warranty. No other statements or representations, written or oral, by EnviroLogix' employees, agents or representatives, except written statements signed by a duly authorized officer of EnviroLogix Inc., are authorized; they should not be relied upon by the customer and are not a part of the contract of sale or of this warranty.

EnviroLogix does not warrant against damages or defects arising in shipping or handling, or out of accident or improper or abnormal use of the Products; against defects in products or components not manufactured by EnviroLogix, or against damages resulting from such non-EnviroLogix made products or components. EnviroLogix passes on to customer the warranty it received (if any) from the maker thereof of such non-EnviroLogix made products or components. This warranty also does not apply to Products to which changes or modifications have been made or attempted by persons other than pursuant to written authorization by EnviroLogix.

THIS WARRANTY IS EXCLUSIVE. The sole and exclusive obligation of EnviroLogix shall be to repair or replace the defective Products in the manner and for the period provided above. EnviroLogix shall not have any other obligation with respect to the Products or any part thereof, whether based on contract, tort, strict liability or otherwise. Under no circumstances, whether based on this Limited Warranty or otherwise, shall EnviroLogix be liable for incidental, special, or consequential damages.

This Limited Warranty states the entire obligation of EnviroLogix with respect to the Products. If any part of this Limited Warranty is determined to be void or illegal, the remainder shall remain in full force and effect.

EnviroLogix, the EnviroLogix logo, and QuickStix are trademarks of EnviroLogix Inc.

© EnviroLogix 2020