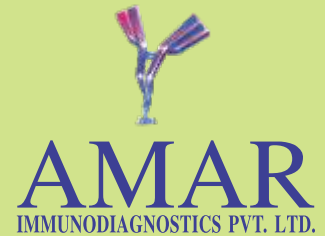


# Rapid lateral flow strip (LFS) for detection of Cry2A in bulk Cotton seed

Cat No. AID 046



## Intended use

Cry2A lateral flow strips (LFS) test kit for bulk grain Cotton seeds is intended to be used for the qualitative detection of Cry2A protein present Cotton. The kit detects one Cry2A Cotton seed in 400 conventional Cotton seeds (0.25%)

The total incubation time of the assay is 10 minutes.



Bulk Cotton Seeds

## Principle of the test:

An antibody specific to the Cry2A protein molecule is immobilized on the test line area of nitrocellulose membrane. Second antibody specific for Cry2A molecule is conjugated with colloidal gold and incorporated in the sample area of lateral flow strip. Anti mouse IgG is immobilized on the control line area of the LFS.

When the LFS is placed in the sample extract, the Cry2A protein present in the sample extracts binds to the antibody labelled with gold and the complex moves upward by capillary action. The complex then binds to the antibody coated on the test line resulting in pink/purple color test line. As the complex moves further up, it binds to the control line resulting in pink/purple color control line. In absence of Cry2A, the test line does not appear as no complex binds to the test line while control line turns pink/purple color indicating validity of test protocol

## Contents of the kit: Kit is sufficient for 100 tests.

Cry2ALFS strips 50 strips per canister. Two canisters per kit

Dropper	100
Microfuge tubes	100
Pack insert	One

## Material and equipment required but not provided

* Waring blender	* Graduated cylinder	* Glass jars
* water	* Pair of scissors	* Timer

## Precautions

The Cry2A LFS kit is intended for in vitro use only. The reagents contain thimersol as preservative. Prevent direct skin and eye contact with kit components. Seek medical attention in case of accidental ingestion of kit components.

## Storage of the kit

The kit should be stored at 2 - 8° C. The unopened kit is stable till the expiry date printed on the kit label. The cap of the canister should be closed firmly after removing the required strips. Exposure to moisture is likely to affect the performance of the test strips.

## Sample preparation guideline :

Please use following link as a guideline to decide sampling strategy

<http://www.archive.gipsa.usda.gov/biotech/sample1.htm>

Practical application of sampling for the detection of Biotech grains

To detect 0.25% Cry2A Cotton seeds at 95 % confidence, it is necessary to have 3 sub samples of 400 Cotton seeds each and all three sub samples should test negative. Weight of 400 Cotton seeds is 40 gm.



Grinding into fine powder using a blender

## Sample preparation:

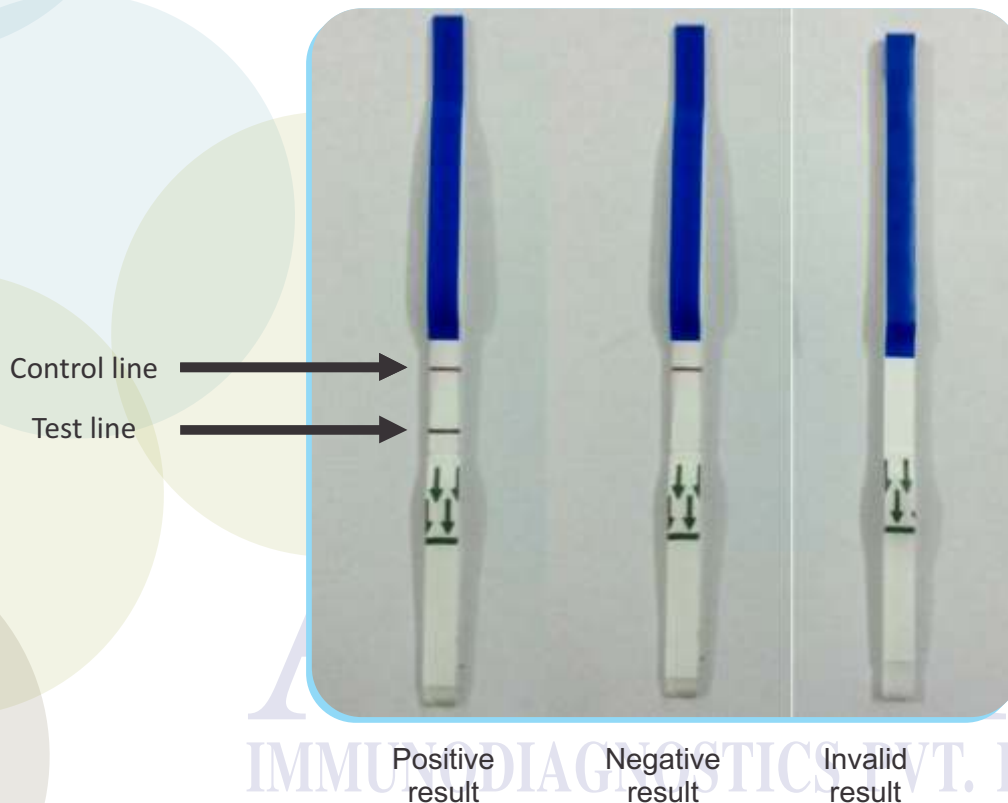
1. Weigh Cotton seeds (Approximate weight of one seed is 0.1 gm) in to appropriate size jar.
2. Place cover on the jar and grind it in a blender on high speed for 45 seconds or till fine grain powder is observed.
3. Add required quantity of water to the jar (For 40 gm seeds, add 140 ml water)
4. Shake jar vigorously till entire sample is properly mixed. Allow sample to settle following which liquid from top can be collected. Draw 0.5 ml sample using calibrated dropper and transfer it to 1.5 ml microfuge tubes.

## Assay Procedure:

1. Allow canister to come to room temperature before opening it to remove the desired number of strips.
2. Insert one strip in each sample. Part of the strip showing arrow should be dipped in sample extract. Allow the test strip to remain in the microfuge tube in vertical position for 10 minutes.
3. Remove the strip and observe the result. Positive sample result may appear much earlier than 10 minutes.
4. For permanent storage of strips, cut off the bottom section of the strip covered with arrow using pair of scissors.



Strip with positive result in bulk grain extract



## Interpretation of LFS results:

Read the strip in 10 minutes.

Presence of control line in 10 minutes indicates that the strip has performed properly. The absence of control line in 10 minutes makes test invalid and should be repeated.

If the extract is from sample containing at least 0.25% Cry2A Cotton (one Cry2A Cotton seed in 400 conventional Cotton seeds) , the test line will appear and hence sample should be treated as positive.

The appearance of faint test line after 10 minutes should not be necessarily interpreted as positive test.



Cutting of strip for permanent record and storage

## Notes:

- ❖ The procedure instructions should be strictly followed to get correct results. Change in procedure may lead to wrong results.
- ❖ Cross contamination between different samples during sample preparation will lead to wrong results
- ❖ This kit is meant for screening for presence or absence of Cry2A in bulk grain Cotton at 0.25% level.
- ❖ Experienced laboratory technologist may be able to observe a faint test line at level below 0.25% level.
- ❖ When in doubt, please confirm results with an alternate method.

## WARRANTY

Amar Immunodiagnostics Pvt Ltd warrants that the products sold hereunder (“the Products”) are defect-free in material and workmanship, provided they are used in accordance with the prescribed instructions before the expiry of the products as printed on the product label.

The customer should notify Amar Immunodiagnostics in writing of warranty defects during the warranty period, including an offer by the customer to return the products to Amar Immunodiagnostics for evaluation. Amar Immunodiagnostics will repair or replace, at its own option, any product or part thereof that proves defective in material or workmanship within the warranty period.

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 Amar Immunodiagnostics

## THIS WARRANTY IS EXCLUSIVE

The sole and exclusive obligation of Amar Immunodiagnostics shall be to repair or replace the defective products in the manner and for the period provided above.

Amar Immunodiagnostics shall not have any other obligation or liability, whatsoever it may be, with respect to the products or any part thereof. Under no circumstances, whatsoever the circumstances may be, shall Amar Immunodiagnostics be liable for accidental, special or consequential damages. If any part of this warranty is determined to be void or illegal, the remainder shall remain in full force and effect.

AMAR  
.....  
IMMUNODIAGNOSTICS PVT. LTD.

**For any further information, please contact:**

**AMAR IMMUNODIAGNOSTICS PVT. LTD.**

242/1, Road No. 18, Jubilee Hills, Hyderabad - 500033, India.

**Tel :** +91 40 2355 2953, 2354 7202 **Fax :** +91 40 2355 2954

**E-mail :** amar.immunodiagnostics@gmail.com; info@amarimmunodiagnostics.com

**Website :** www.amarimmunodiagnostics.com