

Rapid lateral flow strip (LFS) for detection of Cry1F in Cotton/Corn Seed or leaf

Cat No. AID 033



Technologies

Intended use

Cry1F lateral flow strips (LFS) test kit is intended to be used for the qualitative detection of Cry1F protein present in individual cotton/corn leaf or seed.

The total incubation time of the assay is 5 minutes.

Principle of the test

An antibody specific to the Cry1F protein molecule is immobilized on the test line area of nitrocellulose membrane. Second antibody specific for Cry1F 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 Cry1F protein present in the sample extracts binds to the antibody labelled with gold nano particles 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 resulting in pink/purple color control line. In absence of Cry1F, 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.

Cross-reactivity

The Cry1F LFS kit does not cross react with CP4EPSPS (RoundUp Ready**), Cry1Ac, eCry3.1Ab (AgriSure Duracade), Cry3Bb, Cry1Ab, Cry2A, Vip3A, Cry34Ab1, Cry35Ab1 or PAT (LibertyLink***).

Contents of the kit: Kit is sufficient for 100 tests

Cry1F LFS strips	50 strips per canister. Two canisters per kit
Extraction buffer	Two vials of 50 ml each. Ready to use
Pack insert	One
Calibrated dropper	One

Material and equipment required but not provided

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|-----------------------------------|--------------------------------|-------------------------|
| ❖ 1.5 ml Microfuge tubes with cap | ❖ 48 well seed crushing plate | ❖ 48 prong seed crusher |
| ❖ Hammer | ❖ Pair of scissors | ❖ Pliers |
| ❖ Timer | ❖ Marking pen and Paper Towels | ❖ Pestles |

Precautions

The Cry1F LFS kit is intended for in vitro use only. The reagents contain sodium azide 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.

The kit should not be frozen.

Sample preparation

Extraction of seed tissue:

Crush single cotton seed with pliers and transfer seed powder to 1.5ml microfuge tube. Add 1.0 ml of extraction buffer using calibrated dropper. Mix well and wait for 5 minutes.

Or



Punching a leaf in microfuge vial



Extracting protein by crushing with pestle

Use 48 well seed crushing plate, seed crusher and hammer to crush 48 seeds at a time. Add 1.0ml of extraction buffer using calibrated dropper. Mix well and wait for 5 minutes.

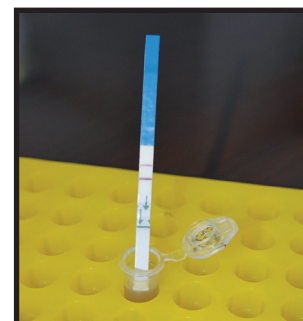
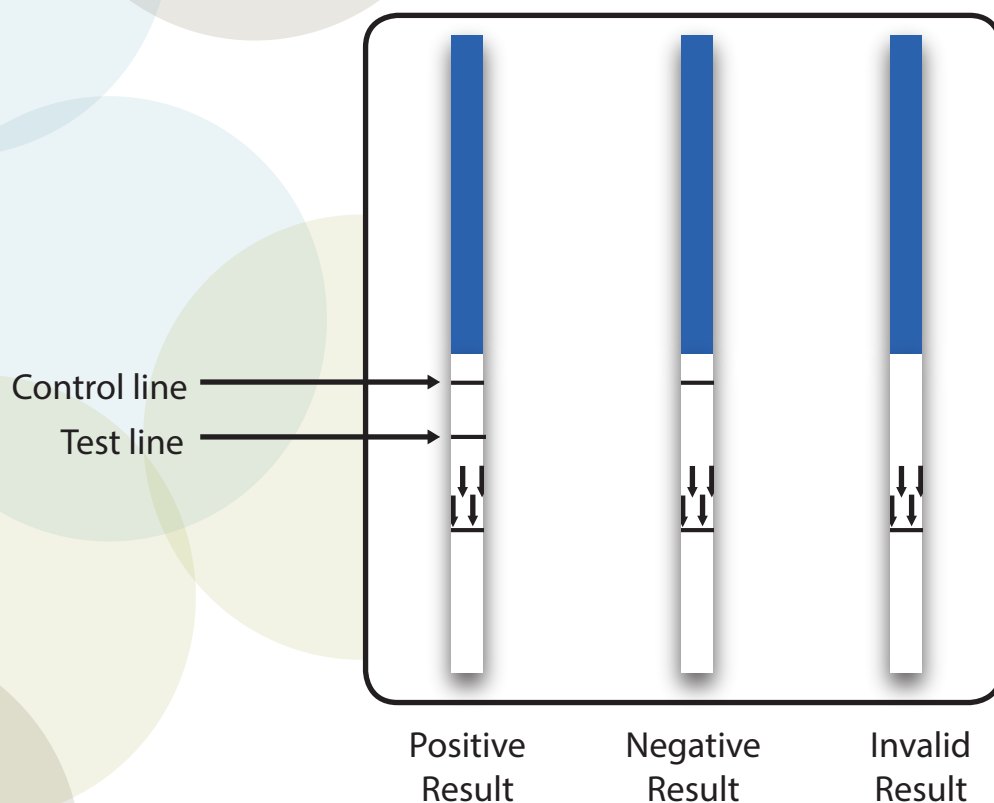
Crushed seeds should be tested on the same day.

Extraction of leaf tissue:

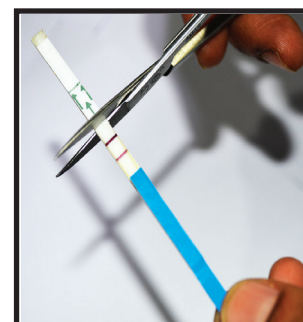
Take two leaf punch (approximate weight 20 mg) and transfer it to 1.5 ml microfuge tube. Grind the leaf tissue with pestle until the leaf tissue is well ground. Add 0.5 ml extraction buffer. Mix well and wait for 5 minutes. Use new pestle for each leaf sample to avoid cross contamination.

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 seed crushing plate/microfuge tube in vertical position for 5 minutes.
3. Remove the strip and observe the result. Positive sample result may appear much earlier than 5 minutes.
4. For permanent storage of strips, cut off the bottom section of the strip covered with arrow using pair of scissors.



LFS Strip in Sample



Cutting of strip for permanent record and storage

Interpretation of LFS results

Read the strip in 5 minutes.

Two line indicates positive test result while single line indicates negative results. Absence of control line in 5 minutes indicates invalid test.

The appearance of faint test line after 5 minutes should not be necessarily interpreted as positive test.

Notes

- ❖ The procedure instructions should be strictly followed to get correct results. Change in procedure may lead to wrong results.
- ❖ This kit has been optimized for individual Cotton/Corn seed and leaf.
- ❖ Cross contamination between different wells/microfuge tubes will lead to wrong results
- ❖ This kit is meant for screening for presence or absence of Cry1F in individual Cotton/Corn seed and leaf. When in doubt, please confirm results with an alternate method.

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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 Eurofins Amar Immunodiagnostics

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***Liberty Link is a register trademark of Bayer Crop Science.

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