

ECALBIO® Tobacco Mosaic Virus Rapid Test Kit

CAT#: FST901

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1 Summary

Tobacco mosaic is a common viral disease of worldwide distribution that affects over 200 species of herbaceous and, to a lesser extent, woody plants. Common hosts include tobacco, solanaceous vegetables (e.g., pepper, tomato) and vining vegetables (e.g., cucumber, melon, squash), as well as a wide range of ornamentals (e.g., begonia, coleus, geranium, impatiens, million bells, petunia). The disease has its biggest impact on vegetables, where it can reduce yield and affect quality to the point that commercial crops cannot be marketed.

2 Principle

Tobacco Mosaic Virus (TMV) Rapid Test Kit is based on lateral flow immunochromatographic assay to detect Tobacco Mosaic Virus content in the Tobacco leaf or tissue sample.

The testing window has an invisible T (test) zone and C (control) zone. When sample is applied into the sample hole on the device, the liquid will laterally flow on the surface of the test strip. If there is little Tobacco Mosaic Virus in the sample, a visible T band will appear; T band is invisible if it has more Tobacco Mosaic Virus in the sample. The C band should always appear after a sample is applied, indicating a valid result.

3 Technical Specification

Detect limit: 10 ppb

Specification: 40 tests/kit

Detect time: 30 min

4 Storage and expiry date

Store at 4-30°C for 12 months in the dark. Do not freeze.

Expiry date is labeled on the package.

5 Materials provided

Rapid Test Card	40PCS
Sample Extractant	20mL, 2bottle

6 Materials required not provided

Deionized water

Centrifuge tube: 5mL, 10mL

Micropipettors: 20~200μL, 100~ 100μL

Vortex, centrifuge, balance (0.01g), homogenizer, shaker

7 Sample Preparation

--Tobacco leaf

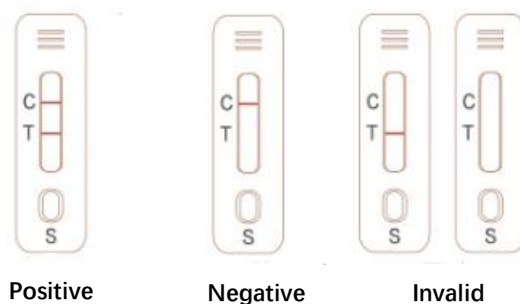
- ① Cut the Tobacco leaf using Tube CAP, repeat two time , immediately cove the tube.
- ② Cut the leaf into pieces completely using pestle, press continuously for 20 to 30 seconds .
- ③ Add 1 mL Sample Extractant , shake properly.
- ④ Press continuously using pestle , finally discard the pestle.
- ⑤ Take 100 μL supernatant for analysis.



8 Sample Determination

- ① Take out the cassette from the pack and place it horizontally.
- ② Return to room temperature (20-25°C), determine the cassette immediately.
- ③ Add 2 -3 drops (Approx 80μL) sample extraction, react for 5-10 min and read result.

9 Result Judgement



- ① **Positive:** The presence of “C” band and matter “T” band.
It means that Tobacco Mosaic Virus in the sample extraction is higher than 10 ppb.
- ② **Negative:** The presence of “C” band, no matter “T” band.
It means that Tobacco Mosaic Virus in the sample extraction is lower than 10 ppb .
- ③ **Invalid:** No colored band appears in C zone, no matter whether T band appears.

9 Note

- ① For best results, please strictly adhere to these instructions.
- ② All reagents must be at room temperature before running the assay.
- ③ Do not remove test cassette from its pouch until immediately before use.
- ④ Do not reuse the test kit.
- ⑤ Do not use the test beyond its expiration date marked on the foil pouch.
- ⑥ The components in this kit have been quality control tested as standard batch unit.
- ⑦ Do not mix components from different lot numbers.

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