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## Cucumber Mosaic Virus (CMV) Rapid Test

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*Cat.No: DTSPV4*

*Lot. No. (See product label)*

### Size

50 Tests

### Intended Use

The test can be simply used to on-site and rapid detect CMV in infected host plant foliage, without requiring any special equipment or expertise to run.

### General Description

CMV causes economically important diseases in a large variety of vegetable and horticultural crops, including over 1200 species in over 100 families of monocots and dicots, including many vegetables, ornamentals. The most common symptom is mosaic, and other symptoms include mottling, yellowing, flecking, dwarfing, and fern leaf. On average, losses of 10-20% are common by the infection, and in some instances the crop may still be harvested, but is of poorer quality and appearance. The virus can be transmitted from plant to plant both mechanically by sap and by aphids in a stylet-borne fashion, or transmitted in seeds.

### Principle of The Test

The development of rapid test strips is based on Lateral Flow Device (LFD) technology using specific antibodies. A LFD format consists of antibody-coated latex beads latex (or colloidal gold) which will bind the specific pathogen antigen absorbed from the plant extract. The agglutination is accumulated at a specific location by the presence of a line of target specific antibody, which immobilises the agglutinated latex whilst allowing the background reagents to be washed away by continued flow along the membrane. The membrane contains a strip of target-specific antibody, test strip and a strip of another antibody that binds to the specific antibody, control strip. Latex beads containing bound antigen are trapped on the test strip leaving a visible line. Surplus latex beads that do not contain antigen are trapped on the control strip showing that the assay has worked. This provides a non-subjective and clear read out of a positive result against a low background.

### Reagents and Materials Provided

1. 50 single-use test cassettes
2. 50 pre-filled extraction tubes with sample buffer
3. 50 disposable pipettes for sample application

### Storage

1) Store the strips and the extraction buffer at 4°C. However, exposure to ambient temperature (10 - 30°C), such as during transport and use in the field, does not affect the quality. Keep the packaging (containing desiccant bags) always hermetically closed. Absorbed moisture by the strips can lead to poor results or even complete failure of the test.

2) Strips must be used before the expiration date indicated on the label of the packaging.

## Assay Procedure

- 1) Remove a sample from infected root /leaf, add to the extraction bag.
- 2) Add contents of bottle to the extraction bag. Use the extraction tool to macerate the sample.
- 3) Draw some of the liquid from the extraction bag.
- 4) Add 2 drops to the sample well on the lateral flow device.
- 5) Wait until the colored control line appears and read the test (5 minutes).

## Interpretation of Results

Observed the result within 5min, if it presents two red zones and determined as positive, if it only presents one red control plot zone and determined as negative. If the reaction line and the control line all present evenly unknown, or only the reaction line presents red zone and the control line presents nothing ,then determined the reagent strip invalid.

## Performance Characteristics

Please Note:

Test kits and cassettes are not reusable.

## Sensitivity

The Rapid Test Strip provides high sensitivity comparable with ELISA

## Precautions

Please Note:

Test kits and cassettes are not reusable.