

Fusarium / Ralstonia Test Kit

◆ Principles

Fusarium Test Kit : The Fusarium Test Kit is designed to detect Fusarium Oxysporum that causes fungal wilt in plant. Fusarium Oxysporum titer is measured by solid phase immunochromatographic assay for the rapid and semi-quantitative detection fungi in soil sample. Two monoclonal antibodies in the kit specifically bind with different epitopes of the antigens. After being absorbed into the cellulose pad, the antigens of Fusarium Oxysporum move and bind with gold-colloid complex of monoclonal anti-Fusarium Oxysporum of the conjugate pad, forming Ab-Ag complex. This complex, then, forms Ab-Ag-Ab direct sandwich binding with the antibody of another monoclonal anti-Fusarium Oxysporum in the nitrocellulose membrane. The test results can appear on Control and Test lines where the principles of immuno-chromatography are applied.

Ralstonia Test Kit : The Ralstonia Test Kit is designed to detect Ralstonia Solanacearum that causes bacterial wilt in plant. Ralstonia Solanacearum titer is measured by solid phase immunochromatographic assay for the rapid and semi-quantitative detection bacteria in soil sample. The Ralstonia Solanacearum Test Device has a letter of "T" and "C" as test line and control line on the surface of the card. Both the test line and control line in result window are not visible before applying any samples. The control line is used for procedural control. Control line should be always appear if the test procedure is performed properly and the test reagents of control line are working. A purple test line will be visible in the result window if there are enough Ralstonia Solanacearum antigen in the specimen. The specially selected antibodies are used in test band as both capture and detector materials. These enable the device to identify Ralstonia Solanacearum antigen in soil sample with a high degree of accuracy.

◆ Characteristics

- 1) One-step rapid test of Fusarium Oxysporum and Ralstonia Solanacearum
- 2) Rapid test results between 10 minutes
- 3) Expensive equipment not required
- 4) Easy storage and maintenance
- 5) High-purity and high-quality materials of the test kit increases its sensitivity and Specificity

◆ Materials (5 tests/kit)

- 1) Test ----- 5 units
- 2) Diluent (Extraction buffer) ----- 5 ml x 5 units
- 3) Disposable dropper ----- 5 units
- 4) Disposable spoon ----- 5 units

◆ Composition

Specimen well (S: for dropping), Test line (T), and Control line (C) are marked on the device. Inside of it, the strip is composed of sample pad, conjugate pad, nitrocellulose membrane (test paper) and absorbent pad

◆ Effect

Detection of Fusarium Oxysporum and Ralstonia Solanacearum that cause wilt disease in plant from soil sample

◆ Uses

- 1) **Specimen**
Soil sample

2) Test procedure

- a) Collect soil sample into a sample bottle containing 5ml of extraction buffer.
- b) Shaking Bottle for 10 seconds.
- c) Wait until large particle sink to the bottom for 5 minutes.
- d) Drop supernatant 4 drops (100 µl) into the specimen well (S).
- e) Read the test results 10 minutes.

◆ Invalid result after 10 minutes

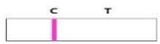
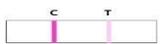
3) Interpretation of the results

A purple band should appear on the control line regardless of the test result. The presence of another band on the test line determines the result.

Control Line (C): The line should always appear regardless of the presence of the antigens of Fusarium Oxysporum or Ralstonia Solanacearum. If this line does not appear, the test should be considered invalid. This is might be because of impure buffer or the lack of specimen. It should be tested again with another kit.

Test Line (T): The presence of Fusarium Oxysporum and /or Ralstonia Solanacearum determines the test line.

(1) Fusarium Oxysporum and Ralstonia Solanacearum Interpretation

Interpretation	Line Intensity	(C vs T)	Fusarium Titer	Ralstonia Titer
Low		C>>>T	≤ 10 ² cfu/g	≤ 10 ³ cfu/g
Low (Early stage)		C > T	≤ 10 ³ cfu/g	≤ 10 ⁴ cfu/g
Middle (Middle stage)		C = T	10 ⁴ cfu/g	10 ⁵ cfu/g
High (Late stage)		C<<<T	≥ 10 ⁵ cfu/g	≥ 10 ⁶ cfu/g

(2) Retesting

- a) Both Test and Control lines do not appear.



- b) Test line only appears.



◆ Further examinations

This test is for primary screening only.

◆ Precautions

- 1) Use for plant disease diagnostic purposes only.
- 2) Use within 10 minutes after opening the pouch because the test kit is very sensitive to moisture and its effect may diminish.
- 3) Be careful of not touching the result window.
- 4) Every specimen should be used with different droppers and spoons.
- 5) For testing, the buffer included should be used.
- 6) Do not use excess soil sample, which may cause false positive or false negative result.
- 7) Deal with specimen carefully. They can deliver unknown virus or infectious bacteria.
- 8) Use disposable gloves when you suspect the infection cause by specimen. And wash your hands later.
- 9) Dispose solid wastes after sterilizing them at 121°C for over 1 hour.
- 10) Do not use the kit when its pouch is torn, sealing is not good in shape or expiration date is passed.

◆ Storage method

The test kits stored at 2~30°C can be used for 18 months after manufacturing. Do not keep them in a refrigerator. However, if they are stored under cold circumstances, keep them at room temperature for 15 ~ 30 minutes before use.

◆ Exchange

The test kits are manufactured under strict quality control system. Nevertheless, if they are deteriorated during delivery, ask our distributors for exchange.

◆ Liability

The entire risk due to the performance of this product is assumed by the purchaser. The manufacturer shall not be liable for indirect, special or consequential damages of any kind resulting from use of this product.



Manufactured by

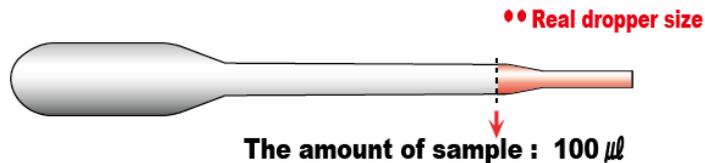
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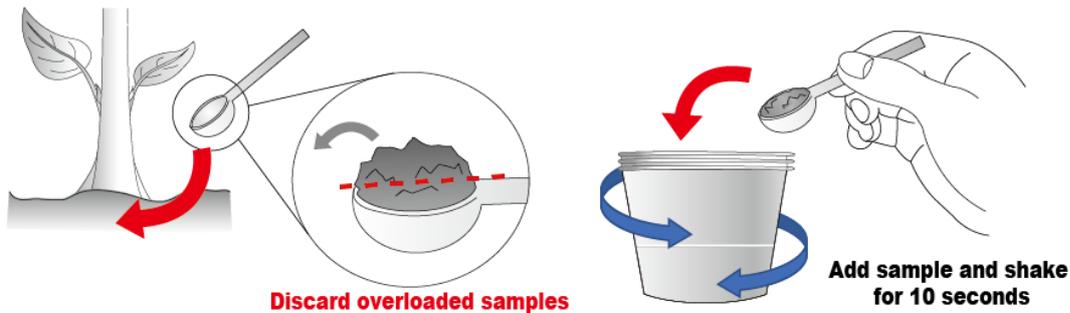


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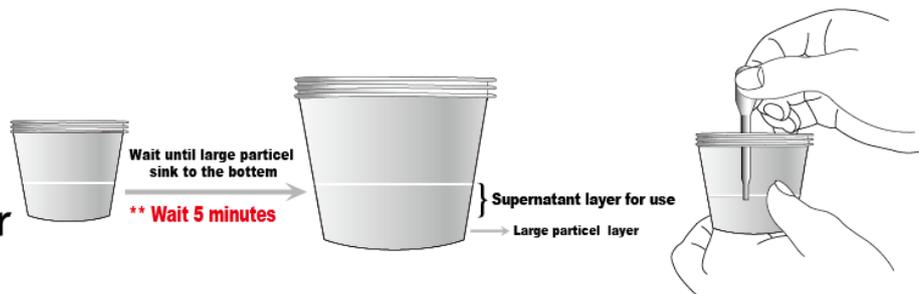
Instruction for Fusarium / Ralstonia test



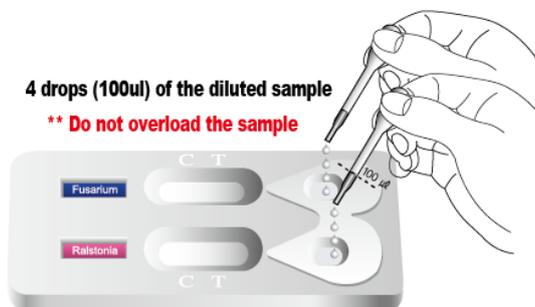
1 Sampling



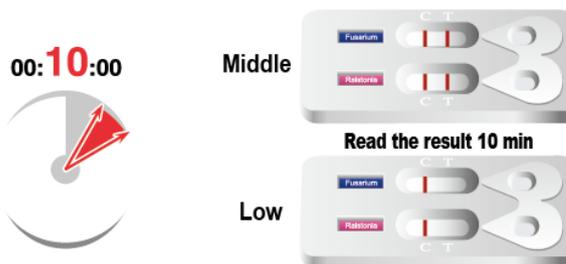
2 Use the Supernatant layer



3 Loading



4 Reading



5 Discard

