

Melon Fly High-Sensitivity Field Nucleic Acid Test Kit — Instructions for Use (IFU)

Product Name

Generic name: Melon Fly High-Sensitivity Field Nucleic Acid Test Kit

Package Specification

16 tests/box

Intended Use

This kit amplifies nucleic acid sequences specific to Melon Fly and uses directional signal amplification technology to achieve high-sensitivity detection of the target nucleic acid.

Test Principle

This kit amplifies nucleic acid sequences specific to Melon Fly and uses directional signal amplification technology to achieve high-sensitivity detection of the target nucleic acid.

Main Components

Table 1. Main components

No.	Component	Main ingredients	Specification	Qty.
1	Melon Fly enzyme pellet	Primers, probe, endonuclease, deoxyribonucleoside triphosphates, polymerase	16 tests/pack	1
2	Melon Fly positive control	Target plasmid containing the target fragment	280 μL/tube	1
3	Negative control	Nuclease-free water	280 μL/tube	1

Storage Conditions and Shelf Life

Store the test kit at 2–8°C. Shelf life: 12 months.

Test Procedure

1.

Remove and cut off the required number of enzyme-pellet tubes. Along the wall of separate tubes, add 50 μL of negative control, nucleic acid solution for testing, and positive control, respectively. After all solutions have been added, visually confirm that the solution has completely dissolved the enzyme pellet.
2.

Close the tube caps. Hold both ends of each tube between the thumb and index finger, mix up and down for 10 cycles, and flick gently 3 times to collect the liquid at the bottom. Visually confirm that the liquid level is uniform and no bubbles remain at the bottom; then place the tubes in the palm-sized fluorescence detector for testing.

Note: Manual mixing is a critical step. Before starting the test, make sure the enzyme-pellet tube caps and the lid of the palm-sized fluorescence detector are closed tightly.

Result Interpretation

At the end of the test program, the palm-sized fluorescence detector automatically analyzes and determines the result.

Table 2. Result interpretation for the palm-sized fluorescence detector

Assessment	TT display	Displayed result
Negative control	—	NC
Positive control	TT ≤ 10	PC
Positive sample	TT ≤ 20	Positive
Negative sample	—	Negative

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Equipment and Consumables Required but Not Provided

- 1. Personal protective equipment (disposable laboratory gloves, laboratory coat, protective eyewear, etc.).
- 2. Timer.
- 3. Liquid-waste container.

Precautions

- 1. Do not use expired reagents.
- 2. Perform the entire procedure in a nuclease-free environment.
- 3. Wear powder-free gloves when handling reagents and nucleic acids.
- 4. To avoid cross-contamination, filtered pipette tips are recommended.
- 5. All sample tubes, centrifuge tubes, tips, reagents, and test tubes are single-use.
- 6. Do not mix reagents from different product lots.

IFU Approval and Revision Date

August 13, 2026

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