



## Disposable Nucleic Acid Test Strip (Rainbow Version)

### Product Code

EDN-HZ0

### Working Principle

This product utilizes a chromatographic double-antibody sandwich method to rapidly detect nucleic acid amplification products. Compared to traditional agarose gel electrophoresis, nucleic acid test strips offer a simpler, faster, and safer alternative without toxic substances or the need for specialized equipment. For use, users only need to label one primer or probe with biotin, and the other with either fluorescein isothiocyanate (FITC) or 6-carboxyfluorescein (6-FAM). As long as both labels can integrate into the double-stranded amplification product, this product can be used effectively.

### Intended Use

Detection of nucleic acid amplification products.

### Specifications

10 strips/pack × 5, moisture-proof packaging in an aluminum foil bag.

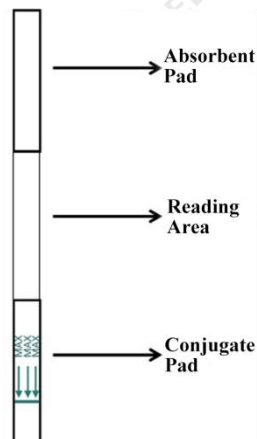


Figure 1. Schematic Diagram of the Structure of a Disposable Nucleic Acid Test Strip





## Storage Conditions and Shelf Life

Storage Conditions: Store in a dry, dark place at a temperature between 4-30°C.

Shelf Life: 12 months.

## Steps

1. Take out the appropriate number of test strips based on the number of samples to be tested and mark them on the absorbent pad (see Fig. 1). Each test strip can only be used once for a single sample. If the volume of the amplification product is between 50-100  $\mu\text{L}$ , nucleic acid detection can be performed directly in a 200  $\mu\text{L}$  PCR reaction tube. If the product volume is less than 50  $\mu\text{L}$ , add ultrapure water to the PCR tube to bring the volume to 50  $\mu\text{L}$ , mix thoroughly before testing.
2. After PCR, RPA, or RAA reactions, open the PCR reaction tube, and insert the test strip's conjugate pad end (indicated by the arrow) into the PCR reaction tube (see Fig. 1). Ensure that the liquid level does not exceed the top of the conjugate pad. Wait for the entire reading area to be soaked (this usually takes 1–2 minutes; during colder conditions, such as in winter, absorption may be slower, extending the soaking time for the reading area). Once the control line (C line) develops color, you can remove the test strip. Read the result directly based on the color development of the test strip.

Note: After completing the RPA or RAA reaction, dilute the reaction product before inserting the test strip.

3. Observe the result within 10 minutes after the control line (C line) develops color. Any reading after 10 minutes is invalid.
4. Record the result and dispose of the test strip in a sealed container in a safe location.





## Result Interpretation

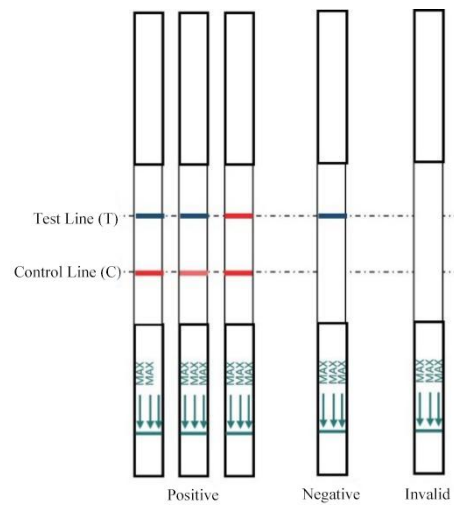


Figure 2. Interpretation Diagram for Disposable Nucleic Acid Test Strip Results

### 1. Positive (+):

A blue band appears on the control line (C line), and a red band appears on the test line (T line). A positive result indicates the presence of the target nucleic acid fragment in the sample, at or above the minimum detectable level of the test strip. When the target nucleic acid product concentration is low, the C-line will appear blue, and the T-line may show a light red or even pale pink band—this should also be interpreted as positive. When the target nucleic acid product concentration is higher, both the C-line and T-line will appear red, and this result should likewise be considered positive.

### 2. Negative (-):

A blue band appearing on the test strip's control line (C-line) with no band on the test line (T-line) indicates a negative result. This means the sample does not contain the target nucleic acid fragment, or its concentration is below the test strip's minimum detectable level.





### 3.Invalid:

No bands appear on either the control line (C line) or the test line (T line), indicating that the test strip or amplification reagent may be damaged, expired, or there was an operational error. In this case, carefully read the instructions and repeat the amplification and detection process. If the issue persists, stop using products from the same batch and contact your local supplier immediately.

### Precautions and Safety Tips

1. This product is for research use only. Please carefully read the instructions before use and follow them strictly. Failure to do so may result in incorrect outcomes.
2. The product should be stored in appropriate conditions as specified in the manual and used within its validity period. Improper storage or expired products may lead to inaccurate results. Once opened, the test strip should be used promptly to avoid moisture affecting the experimental results. Insufficient lighting in the testing environment or color vision deficiencies in the operator may also lead to incorrect results.
3. After use, promptly place the strip in a sealed bag and dispose of it properly. This product is intended for single use only; do not reuse.

