

# Penicilin Residue Rapid Test Strip (Honey)

Prod. No.: DTS033  
Pkg.Size: 40T

## INTENDED USE

Penicilin Residue Rapid Test Device is a rapid, one step test for the qualitative detection of Penicilin in honey samples. It takes only approx. 5~10 min.

## GENERAL DESCRIPTION

Penicilin(PEN), one kind of broad-spectrum antibiotic, is widely used in different lines of poultry, cattle, agriculture and bee-keeping for its excellent antibacterial and phamacokinetic properties. However, the nervous system will be affected. What is worse, allergic shock may be induced. Therefore, it is possible that Penicilin residues, after use in illegal practice, may lead to a risk for consumers.

## PRINCIPLE OF THE TEST

The test utilizes monoclonal gold conjugated antibody as a signal reagent and a Penicilin protein conjugate as a solid phase capture reagent. If Penicilin is present in the sample it will therefore bind with the conjugate and will be labelled. As the sample migrates along the membrane and reaches the capture zone an excess of labelled antibody will bind to the immobilised antigen so that no visible line is produced. The bound conjugate will then bind to the antibodies in the control zone producing a visible control line. A single control line on the membrane is a positive result, while two visible lines in the capture and control zones indicates negative. However, if an excess of unlabelled Penicilin is not present, a weak line may be produced in the capture zone, indicating an inconclusive result.

## REAGENTS AND MATERIALS PROVIDED

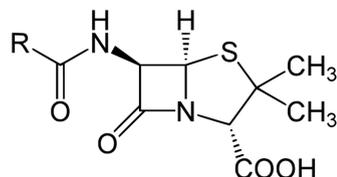
**Penicilin Residue Rapid Test Device:** 40 devices  
**Product Introduction:** 1 copy  
**Penicilin A(1/kit)**  
**Penicilin B(1/kit)**  
**PBST buffer only for PEN(1/kit)**

## ADDITIONAL MATERIAL

5ml cryovial  
Balance, transferpettor

## STORAGE

Store at 4-30°C, DO NOT FREEZE or use beyond the expiration date. The shelf life is 12 months.



Penicilin

## PRECAUTIONS

1. Do not use after the expiration date.
2. The test device should remain in the sealed pouch until use.
3. Use device as soon as possible but within 1 hour after removal from the pouch specially.
4. Do not touch the white membrane in the mid of the test device.
5. Use the plastic dropper for one time in case cross reaction happens.
6. It may lead into wrong result if there is bleach, oxydant, or fusty urine.
7. Do the test at room temperature. It takes longer time at high temperature, and shorter time at low temperature.
8. Different samples will influence the result on NC thecal. Read the result according to color differences of the color bar.
9. Be careful if you are allergic to antibiotics.

## SPECIMEN TREATMENT

The samples should be stored in a cool place, protected against light.

1. Weigh 2 g honey into the 5 ml centrifuge tube, add 1 ml Penicilin A solution, shake for 30 seconds.
2. Add 3.5 ml Penicilin B solution, shake for 1 min, and keep still for 2 min.
3. Suck 3 ml supematant into another centrifuge, and add 250 µl shake for 1 min, and keep still for 3 min.
4. Suck the under liquor 100 µl for test. There is about 250 µl muddy under layer solution.

**Note:** If test the quality of the device with standard substance, please use the sealed PBST buffer to dilute.

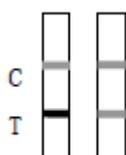
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## TEST PROCEDURE

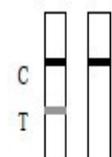
1. Prepare samples according to **SPECIMEN TREATMENT**.
2. Remove the Residue Rapid Test Devices from sealed pouch.
3. Hold the dropper vertically and transfer 5 full drops of solution obtained from specimen treatment to the specimen well (S) of the test device, and then start the timer. Avoid trapping air bubbles in the specimen well (S).
4. Wait for red bands to appear. The result should be read in approximately 3~5 minutes. It is significant that the background is clear before reading the test. Do not interpret results after 5 minutes.

## INTERPRETATION OF RESULTS



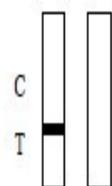
### NEGATIVE:

Two lines are visible and the Test Line (T) is the same as or darker than the Control Line (C), which also is the Reference Line (R). This indicates that the Penicilin concentration in sample is below 4 µg/kg.



### POSITIVE:

Two lines are visible, but the Test Line (T) is lighter than the Control Line (C), or there is no Test Line. This indicates that the Penicilin concentration in sample is above 4 µg/kg.



### INVALID:

Insufficient specimen volume or incorrect procedural technique is the most likely reasons for an invalid result. Review the procedure and repeat the test with a new test device. If the problem persists, discontinue using the test kit immediately and contact your local distributor.

## SENSITIVITY

To acquire the exact sensitivity, reduplicative experiment has been done on the sample containing 4 µg/kg Penicilin.

## SPECIFICITY

No cross-reaction with Eepharmycin, Chloramphicol, Streptomycin, or sulfametazine.

## QUALITY CONTROL

Procedural control is applied. A red band appears in the control region (C), which is also the reference region (R) that is for internal procedure control. It ensures efficiency and correct procedure technique.

Control standard is not supplied in this device. Proper laboratory practice is the confirmation of the test procedure and test performance.

## LIMITATION OF THE PROCEDURE

1. The Penicilin Residue Rapid Test Device is only a preliminary analytical result. A secondary analytical method must be taken for confirmation. Gas or liquid chromatography and mass spectrometry method (GC/LC/MS) is preferred.
2. The Penicilin Residue Rapid Test Device is a qualitative screening assay and cannot test the Penicilin concentration in the specimen.
3. Technical or procedural errors, as well as other interfering substance in the specimen may cause falseness.

## PRECISION

A multi-center test evaluation is conducted between the Penicilin Residue Rapid Test Device and other products. 663 specimen is tested, including 233 negative and 430 positive. 98.5% of the Penicilin Residue Rapid Test Device is effective when comparing to other ELISA Penicilin reagents.

## REFERENCE

1. Garrod, L.P.(1960). "Relative Antibacterial Activity of Three Penicillins." British Medical Journal (5172): 527-29.
2. Barbosa S., Taboada P., Ruso J.M., Attwood D., Mosquera V. (August 2003). "Complexes of penicillins and human serum albumin studied by static light scattering". Colloids and Surfaces A: Physicochemical and Engineering Aspects 224 (1-3): 251-6.