Tetracycline Rapid Test (Honey)

Cat. No.:DTS446
Pkg.Size:

Intended use

CD Tetracycline Rapid Test is a competitive immunoassay for the semi-quantitative detection of the presence of Tetracycline residue in honey sample.
Cut-off: 20 ppb
Assay Time: 10 - 15 min

General Description

Tetracycline (INN) is a broad-spectrum polyketide antibiotic produced by the Streptomyces genus of Actinobacteria, indicated for use against many bacterial infections. It is a protein synthesis inhibitor. It is commonly used to treat acne today, and, more recently, rosacea, and is historically important in reducing the number of deaths from cholera. Tetracycline is marketed under the brand names Sumycin, Tetracyn, and Panmycin, among others. Actisite is a thread-like fiber formulation used in dental applications. It is also used to produce several semisynthetic derivatives, which together are known as the tetracycline antibiotics. The term "tetracycline" is also used to denote the four-ring system of this compound; "tetracyclines" are related substances that contain the same four-ring system.

Principle Of The Test

CD Tetracycline Rapid Test is based on competitive lateral flow immunochromatographic assay. The Tetracycline conjugate in the test zone will capture the immuno-gold (colloid gold- Tetracycline antibody conjugate), when there is very little dissociative Tetracycline in the samples. A visible red test band indicates a negative result when the control line (C zone) shows that the card is valid. The test band (T zone) will be not visible if Tetracycline is present in concentration of 20 ppb and above which explains a positive result.

Reagents And Materials Provided

1. 10×foil pouches each containing one cassette and a desiccant
2. 10×assay buffer (0.75 mL each)
3. 20×pipettes
4. 1×plastic canister contained 10 microwells and a desiccant
5. Products Manual

Storage

The kit can be stored at room temperature (2-30°C). The test kit is stable through the expiration date (18 months) marked on the foil pouch. **DO NOT FREEZE**. Do not store the test kit in direct sunlight.

Assay Procedure

1. Add 0.25 mL of honey sample into an assay buffer tube and mix well. If there is crystal, thaw the sample in a water bath (60-80℃) beforehand.
2. Take out the microwells strip from the plastic canister. Take one well and tear off the film.

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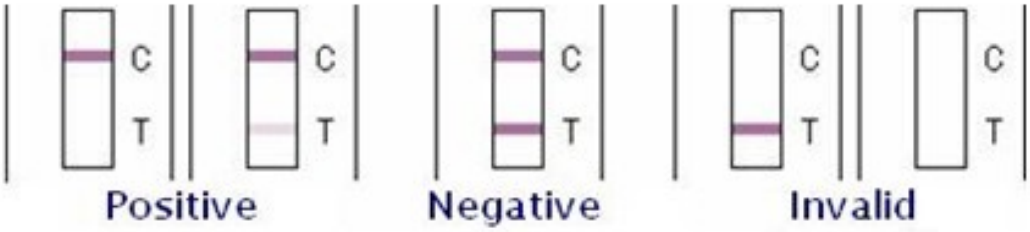
3. Suck 0.2 mL of the extract into the well with another pipette (the reticle level is 0.2 mL content). Repeatedly suck and extrude the sample until all red reagents are completely dissolved. Wait for 1 min.
4. Take out the cassette from the foil pouch and place it horizontally.
5. Suck the mixture in the well and gradually drop 3 drops into the assay sample hole “S”.
6. Interpret the result in 10-15 min. Result after 15 min is considered as invalid.

Interpretation of Results

Positive: Only one clear band in C zone C indicates a positive result. If a vague T band can be seen but apparently weaker than C band, we also consider it as a positive result. Positive shows that the concentration of Tetracycline is above 20 ppb (ng/mL) in the sample.
Negative: The presence of both clear bands in C zone and T zone. (T band is close to or stronger than C band.)
Invalid: No colored band appears in C zone.



Specificity

The results are negative when the test card is applied to detecting 100 ppm (μg/mL) of Chloramphenicol, Aminoglycosides, Beta -lactams, Sulfonamides, and Macrolides.

Precautions

1. For best results, please strictly adhere to these instructions.
2. All reagents must be at room temperature before running the assay.
3. Do not remove test cassette from its pouch until immediately before use.
4. Do not reuse the test kit.
5. Do not use the test beyond its expiration date marked on the foil pouch.
6. The components in this kit have been quality control tested as standard batch unit. Do not mix components from different lot numbers.

Limitations

CD Tetracycline Rapid Test is a useful tool offering a rapid and accurate testing in field screening, exceeding with its convenience. It provides a semi-quantitative method to detect the Tetracycline above 20 ppb in honey samples. If you want a quantitative result, please adopt other method such as ELISA/ HPLC in practice.

REFERENCES

1. "Coronagraph Mounts Done". The Science News 62 (6): 83. 1952.
2. Jukes, Thomas H. Some historical notes on chlortetracycline. Reviews of Infectious Diseases 7(5):702-707 (1985).
3. Olson CA, Mitchell KD, Werner PA (October 2000). "Bait ingestion by free-ranging raccoons and nontarget species in an oral rabies vaccine field trial in Florida". J. Wildl. Dis. 36 (4): 734-43.

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