

## Tetracycline Rapid Test (Aquatic Products)

Cat. No.:DTS425

Pkg.Size:

### Intended use

CD Tetracycline Rapid Test is a competitive immunoassay for the semi-quantitative detection of the presence of Tetracycline residue in aquatic product sample.

### 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 4-ring system of this compound; "tetracyclines" are related substances that contain the same 4-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 100 ppb and above which explains a positive result.

### Reagents And Materials Provided

10×foil pouches each containing one cassette, one pipette and a desiccant  
2×assay buffer (Diluent A, 30 mL; Diluent B, 30 mL)  
10×pipettes  
2×centrifugal tubes (15 mL)  
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

Materials selection. Fish: get rid of the squama and skin, collect muscle along the fish spine. Shrimp: get rid of the head, shell and intestinal gland, collect the muscle tissue as sample materials. Crab and turtle, take the edible parts as sample materials.

1.Get rid of the fat tissue and cut down the sample materials. Homogenize the sample at 10000 rpm for 1 min. Weigh out 4 g of the homogenized sample and place into a 15 mL centrifugal tube.

2.Add 2 mL of Diluent A and mix well. Then add 6 mL of ethyl acetate into the tube and shake sufficiently for 10 min. (If

emulsification appears, do a centrifugation at 5000rpm for 2-3 min.)

3. Collect 4 mL of the supernatant liquid into a clean beaker. Dry the liquid by blowing wind.

4. Redissolve the residue in the beaker with 1 mL of Diluent B. Stand for a while to separate into two layers.

5. Take out the cassette from the foil pouch and place it horizontally.

6. Suck the underlayer liquid with another pipette and gradually drip 3 drops into the assay sample hole "S".

7. Interpret the result in 5-10 min. Result after 10 min is considered as invalid.

## Interpretation of Results

Positive: Only one clear band in C zone indicates a positive result. Positive shows that the concentration of Tetracycline is at or above 100 ppb in the samples.

Negative: The presence of both clear bands in C zone and T zone.

Invalid: No colored band appears in C zone.

## Detection Limit

100 ppb

## Specificity

The results are negative when the test card is applied to detect 100 ppm ( $\mu\text{g/mL}$ ) of Chloramphenicol, Aminoglycosides, Beta-lactams, Sulfonamides, and Macrolides.

## Precautions

For best results, please strictly adhere to these instructions.

All reagents must be at room temperature before running the assay.

Do not remove test cassette from its pouch until immediately before use.

Do not reuse the test kit.

Do not use the test beyond its expiration date marked on the foil pouch.

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 an useful tool offering a rapid and accurate testing in field detection, exceeding with its convenience. It provides a semi-quantitative method to detect the existing of Tetracycline above 100 ppb in aquatic product samples. If you want a quantitative result, please adopt other method such as ELISA/ HPLC in practice.