

Streptomycin Rapid Test (Aquatic Products)

Cat. No.:DTS424

Pkg.Size:

Intended use

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

General Description

The first aminoglycoside was streptomycin, which was created from the fungus like bacterium *Streptomyces griseus*. Streptomycin's ototoxic potential was recognized quite early. In response, researchers modified the drug's molecule and created dihydrostreptomycin. Unlike its predecessor, dihydrostreptomycin is much more cochleotoxic than it is vestibulotoxic; in fact, it is almost exactly as cochleotoxic as streptomycin is vestibulotoxic. Later, investigators tried to reduce the risk of both toxicities by combining equal amounts of the two drugs, but this only resulted in patients experiencing both toxicities rather than neither.

Principle Of The Test

CD Streptomycin Rapid Test is based on competitive lateral flow immunochromatographic assay. The Streptomycin conjugate in the test zone will capture the immuno-gold (colloid gold-Streptomycin antibody conjugate), when there is very little dissociative Streptomycin 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 Streptomycin 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)
Product 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 5000 rpm 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 Streptomycin 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, and Fluoro quinolones.

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 Streptomycin 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 Streptomycin above 100 ppb in aquatic product samples. If you want a quantitative result, please adopt other method such as ELISA/ HPLC in practice.