

## Ceftiofur Rapid Test (Milk)

Cat. No.:DTS448

Pkg.Size:

### Intended use

CD Ceftiofur Rapid Test is a competitive immunoassay for the semi-quantitative detection of the presence of Ceftiofur residue in milk.

**Cut-off:** 50 ppb

**Assay Time:** 5 - 10 min

**Sample:** Defatted milk

### General Description

Ceftiofur is an antibiotic of the cephalosporin type (third generation), licensed for use in veterinary medicine. It was first described in 1987. It is marketed by pharmaceutical company Pfizer as Excenel. It is resistant to the antibiotic resistance enzyme beta-lactamase, and has activity against Gram-positive and Gram-negative bacteria. E. coli strains resistant to ceftiofur have been reported.

### Principle Of The Test

CD Ceftiofur Rapid Test is based on competitive lateral flow immunochromatographic assay. The Ceftiofur conjugate in the test zone will capture the immuno-gold (colloid gold- Ceftiofur antibody conjugate), when there is very little dissociative Ceftiofur 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 Ceftiofur is present in concentration of 50 ppb and above which explains a positive result.

### Reagents And Materials Provided

1. 10×foil pouches each contain one cassette and a desiccant
2. 10×centrifugal tubes (1.5 mL)
3. 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

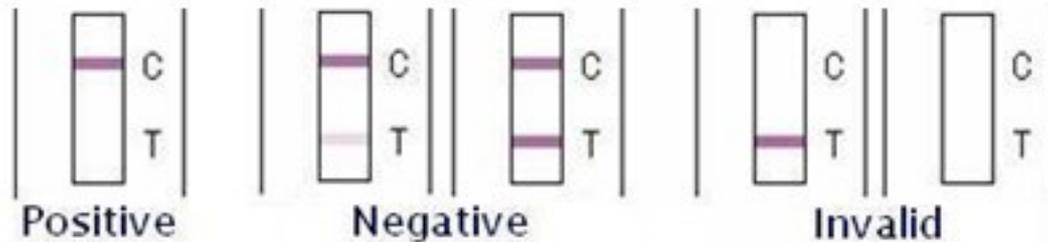
1. Bring 2-3 mL of the under tested milk to room temperature (20-30°C).
2. Collect 1mL of milk sample into a centrifugal tube. Do centrifugation at 7000 rpm for 3-4 min to separate the fat component.
3. Take out the cassette from the foil pouch and place it horizontally.
4. Insert the pipette through the fat layer (5 mm below) to collect the defatted milk and gradually drip 3 drops into the assay sample hole "S".
5. Interpret the result in 5-10 minutes. Result after 10 minutes 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 Ceftiofur is at or above 50 ppb in the samples.

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

**Invalid:** No colored band appears in C zone.



## Specificity

The results are negative when the test card is applied to detect 100 ppm of Chloramphenicol, Macrolides, Sulfonamides, Cephapirin, Aminoglycosides, Tetracycline and Penicillin.

## 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 Ceftiofur Rapid Test is an useful tool offering a rapid and accurate testing in field screening, exceeding with its convenience. It provides a semi-quantitative method to detect the Ceftiofur above 50 ppb in milk. If you want a quantitative result, it is suggested to apply other method such as ELISA / HPLC in practice.

## REFERENCES

1. Yancey RJ, Kinney ML, Roberts BJ, Goodenough KR, Hamel JC, Ford CW (1987). "Ceftiofur sodium, a broad-spectrum cephalosporin: evaluation in vitro and in vivo in mice". *Am. J. Vet. Res.* 48 (7): 1050-1053.
2. "Pfizer Animal Health Dairy Information on Products and Solutions". Retrieved 2007-11-20.
3. Donaldson SC, Straley BA, Hegde NV, Sawant AA, DebRoy C, Jayarao BM (2006). "Molecular epidemiology of ceftiofur-resistant *Escherichia coli* isolates from dairy calves". *Appl. Environ. Microbiol.* 72 (6): 3940-3948.