Zearalenone Test

Cat. No.:DTS435
Pkg.Size:

Intended use

CD Zearalenone Test is a competitive immunoassay for the semi-quantitative detection of the presence of Zearalenone in grain or feed.

General Description

Zearalenone (ZEA), also known as RAL and F-2 mycotoxin, is a potent estrogenic metabolite produced by some Gibberella species. Several Fusarium species produce toxic substances of considerable concern to livestock and poultry producers: namely, deoxynivalenol, T-2 toxin, HT-2 toxin, diacetoxyscirpenol (DAS) and zearalenone. Zearalenone is the primary toxin causing infertility, abortion or other breeding problems, especially in swine. Zearalenone is heat-stable and is found worldwide in a number of cereal crops, such as maize, barley, oats, wheat, rice, and sorghum and also in bread.

Principle Of The Test

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

Reagents And Materials Provided

10× foil pouches each contains one ZON cassette with a pipette and a desiccant
2×assay buffer (Diluent A, 30 mL; Diluent B, 40 mL)
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

1.Grind a representative sample to the particle size of fine instant coffee (50% passes through a 20 mesh screen). Weigh out 2.0 g ground portion of the sample into the centrifugal tube (15 mL).
2.Add 2 mL of assay Diluent A and 8 mL of ethyl acetate into the tube. Shake for 5 min. (If emulsification appears, do a centrifugation at 4000 rpm for 1 min.)
3.Collect accurately 3 mL of supernatant (ethyl acetate layer) into a small container (beaker or tube). Dry the liquid by blowing wind.
4.Redissolve the residues in the small beaker with an amount of the provided assay diluents.
Cut-off (ppb) 60 500

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Assay Diluent B (mL) 0.36 3.0
5.Take out the cassette from the foil pouch and place it horizontally.
6.Suck the liquid and drop 3 drops into the assay sample hole “S”.
7.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. The concentration of Zearalenone will be determined by the amount of assay diluent added as per table.
Negative: The presence of both bands in C zone and T zone.
Invalid: No band appears in C zone.

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 Zearalenone 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 Zearalenone above 60 ppb in grain or feed. If you want a quantitative result, please adopt other methods such as ELISA/HPLC in practice.

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