EZtest™ DON Strip for Quantitative Detection of Deoxynivalenol (Corn)

(Deoxynivalenol disrupts cell function)

EZtest™ Strip-105C MANUAL

(v. 1.00)
INTRODUCTION

Deoxynivalenol (DON) is a mycotoxin that commonly contaminates cereal-based foods worldwide. At the molecular level, DON disrupts normal cell function by inhibiting protein synthesis via binding to the ribosome and by activating critical cellular kinases involved in signal transduction related to proliferation, differentiation, and apoptosis. Relative to toxicity, there are marked species differences, with the pig being most sensitive to DON. The physiologic parameter that is most sensitive to low-level DON exposure is the emetic response, with as little as 0.05 to 0.1 mg/kg body weight inducing vomiting in swine and dogs. DON may also produce emetic effects in humans.

1 INTENDED USE

EZtest™ DON strip is lateral flow immunochromatographic assay based on a competitive immunoassay format. With EZtest™ Stripreader, it measures 250ppb-1500ppb of deoxynivalenol in corn.

2 KIT CONTENTS

1) EZtest™ DON strips (25/pk)
2) Dilution buffer (10ml)
3) 1.5ml Strip Test Vial (50)
4) 1ml Pipette Tip (25)
5) 200μl Pipette Tip (50)
6) Calibration RFID card
7) Manual

Materials required but not provided:

1) 200 and 1000μl precision micropipette
2) EZtest™ Stripreader (with ZERO card)
3) Vortex mixer
4) Multi-purpose rotary mixer
5) Timer
6) Incubator (37°C)
7) Weigh scale
8) Distilled water or pure water
9) Extraction solution: Methanol+Water(70+30)
10) Funnel
11) Filter paper
12) 50mL Extraction tube

3 PREPARATION
1) Store test kits at 4–8°C (39–42°F) when not in use, and do not use beyond the expiration date.
2) Keep from moisture, and do not use the damaged and damp kits.
3) All reagents must be at room temperature before assay is running.
4) Do not re-use test strips.
5) Avoid swallowing the desiccant.

4 SAMPLE PREPARATION
1) Grind samples of corn to pass a 20 mesh sieve and thoroughly mix prior to sub-sampling. Samples not being immediately analyzed should be stored refrigerated.
2) Weigh 5.0 g ground sample and transfer to a 50mL Extraction tube.
3) Add 20 mL 70% Methanol/water to the Extraction tube.
4) Mix it with rotary mixer for 5 minutes.
5) Filter 1-5 mL through a paper filter and transfer 100μl of extract to a 1.5ml Strip Test Vial.
6) Dilute 100μl of extract with 400μl of dilution buffer, and mix thoroughly with vortex mixer for 10 seconds.

5 TEST PROCEDURE
1) Please read the manual carefully before assay is running.
2) All reagents and kit components must be at room temperature 18-30°C (64-86°F) before use.
3) Calibrate zero for EZtest™ Stripreader with ZERO card.
4) Calibrate EZtest™ Stripreader with RFID card.
5) Remove strip sealer, and take out the test strip on a flat surface (such as a countertop).
6) Add 100µl of the sample extracts to the circular opening of strip.

7) Put the test strip in Incubator (37 °C) to develop color for 15 minutes.

8) Put the test strip into the EZtest™ Stripreader, and the result can be read immediately.

6 INTERPRETATIONS OF THE RESULTS

1) Test range: 250 ppb-1500ppb.

2) If there is no line in control zone, the test is invalid and the sample should be re-tested by using a valid test strip.

7 Contact Information

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