

## **EZtest™ Afla Total Strip for Quantitative Detection of Total Aflatoxin (Rice)**

(Aflatoxin is a class I carcinogenic substance)

### **EZtest™ Strip-103R MANUAL**

(v. 1.00)



## INTRODUCTION

Aflatoxins are toxic and carcinogenic. They are metabolites of the fungi *Aspergillus flavus* and *Aspergillus parasiticus*. There are four principle types of aflatoxin: B<sub>1</sub>, B<sub>2</sub>, G<sub>1</sub> and G<sub>2</sub>, which are named for their respective innate fluorescent properties. Aflatoxin B<sub>1</sub> is the most frequently encountered of the group and the most toxic. Aflatoxin B<sub>1</sub> is the most potent liver cancer-forming chemical known. It is a product of a mold called *Aspergillus flavus*, which is found in food that has been stored in a hot and humid environment. This mold is found in such foods as peanuts, rice, soybeans, corn, and wheat.

## 1 INTENDED USE

EZtest™ Afla Total strip is lateral flow immunochromatographic assay based on a competitive immunoassay format. With EZtest™ Stripreader, it measures 2.5ppb-20ppb of total aflatoxin B<sub>1</sub>, B<sub>2</sub>, G<sub>1</sub> and G<sub>2</sub> in rice.

## 2 KIT CONTENTS

- 1) EZtest™ Afla Total 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 rice 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 25 mL of 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 10 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: 2.5ppb-20ppb.
- 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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