Total Aflatoxin Rapid Test Kit for Cereals and Feed

Order Code: YRF1001-2

Introduction

This rapid test is used for detection of Total Aflatoxin in feed, cereals and grain by-products based on the colloidal gold immunochromatography technology. The whole process includes two parts: sample preparation and detection. It takes about 7-10mins for sample preparation and 6mins for detection for one test.

Application

Applicable for the rapid test of Total Aflatoxin in feed, cereals and grain by-products like wheat, corn, bran, wheat midding, flour, DDGS.

Performance Information

Specificity: No cross reaction with 100mg/kg Deoxynivalenol, Fumonisin, Zearalenone, Ochratoxin etc.

Sensitivity: limits of detection (μg/kg - ppb)

Residue Name	LOD
Aflatoxin (B1, B2, G1, G2)	3-50

Storage and Shelf Life

Storage: Store at 2-30℃. Do not freeze. Keep away from direct sunlight, moisture and heat.
Shelf Life: 12 months.

Test Kit Components (48tests/kit)

1. 6 test tubes, each containing 8 red reagent microwells and 8 dipsticks.
2. 2 bottles of Aflatoxin diluent.
3. 1 plate holder.
4. 1 instruction manual.

Materials Required but not provided

1. Distilled water or deionized water.
2. 50% Ethanol (Mix same volume of 100% Ethanol with water, recommend preparing before use. If it was prepared in advance, make sure the container is well-sealed to prevent volatilization. The shelf life of room temperature is 6 months).
3. Pipettes(20-200μL,100-1000μL), pipette tips, scale, timer, centrifuge, centrifuge tube(1.5mL, 50mL), vortex(optional).
4. Incubator(optional)，Reader(optional).

Sample Preparation

1. Weigh 5±0.2g homogeneous milled sample and put into 50mL centrifuge tube.
2. Add 6 times volume of 50% Ethanol, which is 30mL, vortex or shake the tube vigorously up and down for 2-3mins to mix samples thoroughly.
3. Put the solution standing for 3-7mins.The supernatant is the **Detection Solution 1.**
4. Take 1000μL Aflatoxin diluent, input 200μL **Detection Solution 1** and mix well, this is the **Detection Solution 2.**

Test Procedure

1. Pipette Detection Solution and distilled water in the volume according to below chart into red reagent microwells and mix well to achieve different limits of detection.

Limit of Detection	Operation
LOD 1 (3-5ppb)	Pipette 110μL Aflatoxin diluent and 90μL **Detection solution 1** into red reagent microwell, mix well by pipetting up and down for 5-10 times.
LOD 2 (8-10ppb)	Pipette 200μL **Detection solution 2** into red reagent microwell, mix well by pipetting up and down for 5-10 times.
LOD 3 (15-20ppb)	Pipette 90μL Aflatoxin diluent and 110μL **Detection solution 2** into red reagent microwell, mix well by pipetting up and down for 5-10 times.
LOD 4 (45-50ppb)	Pipette 160μL Aflatoxin diluent and 40μL **Detection solution 2** into red reagent microwell, mix well by pipetting up and down for 5-10 times.

2. Incubate 3mins at room temperature (20-40℃).
3. Insert the dipstick into the microwell after the first incubation. Incubate another 3mins at room temperature.
4. Take out the dipstick from the microwell and remove the sample pad at the lower end and then interpret the result.

Note: If the Room Temperature is below 20℃, please incubate at 40±2℃ by Bioeasy incubator for same time period during the above two incubation steps.

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Test Interpretation

Visual Interpretation

1. Check whether the top control line (C line) is present. If there is normal C line, compare the color intensity of test line (T line) and C line and interpret the test based on following chart.

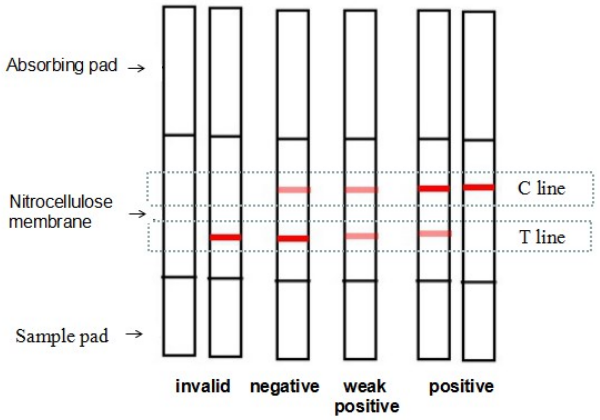
Test Line VS Control Line	Result Interpretation	Result Analysis
T>C	NEGATIVE	The sample contains no Aflatoxin or contains Aflatoxin at lower level than the detection limits
T=C	WEAK POSITIVE	The sample contains Aflatoxin close to the detection limits
T <C or NO T	POSITIVE	The sample contains Aflatoxin above the detection limits

2. If there is no visible C line, the test is judged as invalid.

Interpretation by Reader

1. Please refer to the reader instruction manual.
2. Negative: R>1.1, Weak positive:0.9≤R≤1.1, Positive: R<0.9.

Interpretation diagram



Precautions

1. It is advisable to use a clean table and wash hands thoroughly and wear gloves before testing to avoid any contamination of the test which is very sensitive to antibacterial substances.
2. As there is low concentration of acid in some of the reagents, please wear gloves for protection purpose.
3. Get the kit from refrigerator and allow the kit warm up to room temperature before testing(15-30℃).
4. Do not mix dipsticks and reagent microwells from different lots. Use dipsticks before they are expired.
5. The tube with microwells and dipsticks should always be well closed after reagents have been taken out. Empty one tube before opening another and try to finish one tube within a week.
6. Use a new pipette tip for every new sample.
7. Hold the dipstick from the upper side (Absorbing pad side). Do not touch the lower end (Sample pad and Nitrocellulose membrane areas), which may affect the performance of the dipsticks.
8. After the second incubation, read the result directly within 5mins. The result is invalid after more than 5mins.
9. When a positive result is identified, repeat testing for double confirmation.
10. If there is obvious breakpoint on the Test line, repeat the test.
11. This product is only used for preliminary screening, and the final result shall be subject to the official arbitration detection methods.

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