

Aflatoxin B1 (AFB1) Qualitative Rapid Test Strip

Product Code: CUS-G14A

1. Assay Principle

The Aflatoxin B1 (AFB1) Qualitative Rapid Test Strip is used for rapid onsite screening because it is convenient to use, provides rapid results and high sensitivity. Antigen is fixed on nitrocellulose membrane test area, which is called T line. Secondary antibody is fixed on control area which is named C line. Antibody conjugated with gold nanoparticles is fixed in microwell. If T-line does not change colour, then it means positive result; If T-line appears red, then it means negative result. C line shall turn red no matter if there is AFB1 in sample or not. It is suitable to detect AFB1 in cereals, feed and feedstuff.

2. Detection Range

5-100 ppb

3. Kit Contains

Product Name	QTY
Rapid Test Strip	96 (8pcs/vial, 12 vials)
40% Ethanol	2400mL
Sample Diluent	500mL × 1 bottle
1000uL Tips	100pcs
200uL Tips	100pcs
10mL Centrifuge Tube	100pcs
Manual	1pcs

4. Required for Test but Not In Kit

- Mycotoxin LFD Incubator – **Part # CUSFY-1**
- Electronic Balance – **Part # BPS-6002C**
- Centrifuge – **Part # CUS-D1008E**
- Centrifuge Tube 50ml – **Part #MBC2603-B**
- 50mL Graduated Cylinder - **Part # SC-55303**
- Pipettor (20-200uL) – **Part # MBP5200-200U**
- Pipettor (100-1000uL) – **Part # MBP5200-1M**
- Pulverizer – **Part #CUS-CG-7120**

5. Application

It is suitable to detect AFB1 in cereals, feed and feedstuff. Contact Scigiene regarding other materials.

6. Storage

Store at 2-8°C.

7. Expiry Date

Expiry Date is one year.



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8. Preparation before Test

1) Sample Preparation

40% Ethanol: Add 40mL absolute ethyl alcohol into 60mL distilled water and mix well.

2) Product Preparation

Equilibrate Rapid Test Strip and Sample Diluent until they reach at room temperature. If you do not use eight microwells, then put back the rest and cover and seal well.

3) Incubator Preparation

Add clean water into striped sink of Incubator until it reaches to 2/3 depth. Set Incubator Temperature at 40°C. Then let down the cover and incubate at 40°C for ten mins at least.

9. Sample Preparation

9.1) Add 100g representative samples, pulverize and pass 20 mesh sieve.

9.2) Add 5g pulverized sample into 50mL Centrifuge Tube and then add 25mL 40% ethanol. Shake it vigorously for two mins at least.

9.3) Centrifuge at 4000r/min for five mins or filter by filter paper.

9.4) Dilution

Sample: Feed and Feedstuff

A. 5-30ppb: Add 100uL supernatant and add suitable amount of sample diluent according to limit of detection as listed below. Mix well.

Limit of Detection (ppb)	5	10	15	20	30
Amount of Sample Diluent (uL)	700	1500	2400	3100	4900

B. 40-100ppb: Add 20uL supernatant and add suitable amount of sample diluent according to limit of detection as listed below. Mix well.

Limit of Detection (ppb)	40	50	100
Amount of Sample Diluent (uL)	1420	2480	4980

Sample: Cereals

5-50ppb: Add 50uL supernatant and add suitable amount of sample diluent according to limit of detection as listed below. Mix well.

Limit of Detection (ppb)	5	10	20	30	40	50
Amount of Sample Diluent (uL)	350	750	1550	2450	3550	4450

10. Key Notes

Do not use test strip, microwell and Sample Diluent from other batches.

Load too much or too little sample and it will influence result.

Do not touch test strip display area (T/C Line). Avoid direct sunlight or direct air flow from fan.

It is disposable. Do not use it again.

11. Test Procedure

1) Pull transverse baffle of Incubator to outermost place. Put required microwell on hole of incubator, and then put corresponding test strip on guide slot of incubator (please refer to Chart 1).

2) Before adding the sample, turn the test solution upside down to mix it well. Transfer 100uL of test solution into microwell. Slowly add and extrude solution over five times to mix well. Lay down Incubator Cover, then wait for reaction for four mins.

3) Push transverse baffle to let test strip fall into microwell to start reaction.

4) Wait for reaction of five mins and then discard sample pad and lay the test strip horizontally to get result. Result is invalid if reaction is over ten minutes.

Do not take off Incubator Cover nor let water in Striped Sink become dry during test!

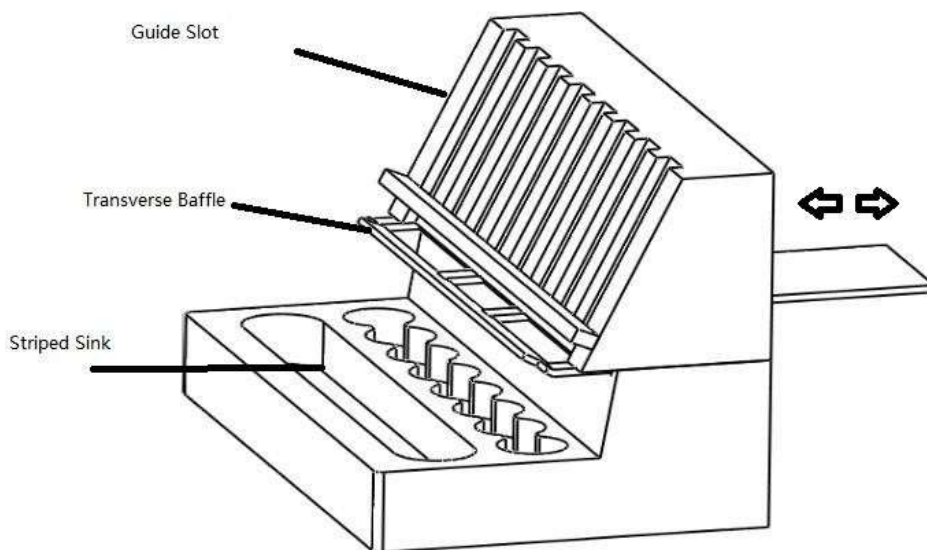
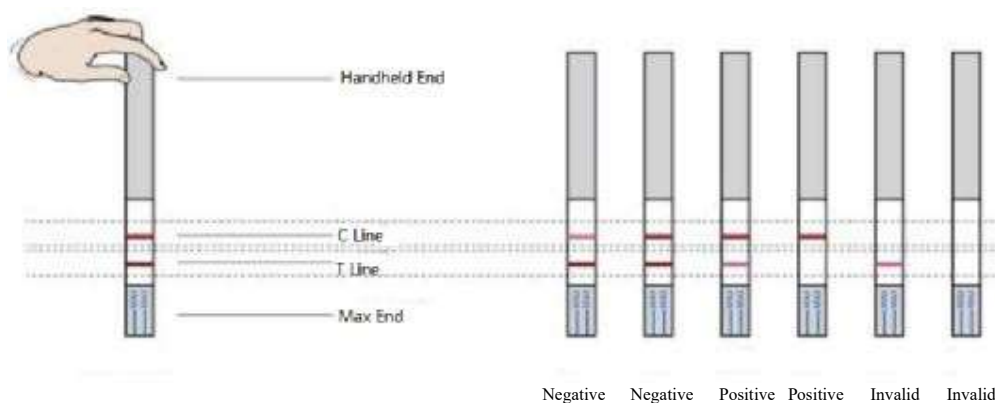


Chart 1: Incubator

12. Result Analysis



Negative (-): T line is darker or similar to C line. It means AFB1 concentration in sample is below LOD.

Positive (+): C line turns color, but T line does not turn color.

Invalid Result: C line has not changed or both lines (T&C) have not changed, which means incorrect operation or invalid test strip. Please read the manual again and test with new test strip.



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