Aflatoxin B1 Rapid Test Kit

Catalog No.: abx092050

Size: 50 tests

Storage: Store all reagents between 2-30 °C. Keep dry.

Application: For qualitative detection of Aflatoxin B1 in food samples.

Detection Limit: Grain/Feed: 20 ppb; Dry Grain/Feed: 5 ppb; Oil: 10 ppb

Sensitivity: 1 ppb (ng/ml)

Introduction and assay principle

Abbexa's Aflatoxin B1 (AFB1) Rapid Test Kit is a qualitative lateral flow immunochromatographic assay for the detection of Aflatoxin B1 in food samples. The cassette contains a colloidal gold conjugated antibody against Aflatoxin B1, which combines with any Aflatoxin B1 present in the samples, preventing the antibody binding with the Aflatoxin coated on the test region of the cassette. A colored band develops within 10 minutes in the test region if the concentration of Aflatoxin B1 in the sample is lower than the detection limit. A control region on the upper end of the cassette confirms if the test has been successful.

Kit Components

- Test cassettes with pipettes: 50

Material Required But Not Provided

- High-precision pipette and sterile pipette tips
- Nitrogen evaporator or water bath
- Centrifuge and vortex mixer
- Timer
- Distilled water
- 70% methanol
- N-hexane

Sample preparation

Samples and reagents should be brought to room temperature before use.

- **Grain/Feed:** Weigh 2 g of crushed homogenate. Add 70% methanol according to the desired detection limit:

Detection limit (ppb)	20	50	100
Volume of 70% methanol (ml)	4	10	20

  Vortex for 5 minutes, the centrifuge at 4000 RPM for 5 minutes at room temperature. Take 0.1 ml of supernatant and add 0.4 ml of distilled water. Mix thoroughly. *Detection limit: 20-100 ppb.*
- **Dry Grain/Feed:** Weigh 2 g of crushed homogenate. Add 4 ml of 70% methanol. Vortex for 5 minutes, then centrifuge at 4000 RPM for 5 minutes at room temperature. Take 1 ml of supernatant and dry the liquid at 50-60 °C with a nitrogen evaporator or water bath. Add 0.25 ml of 70% methanol to dissolve the residue, then vortex for 2 minutes. Add 1 ml of distilled water and mix thoroughly. *Detection limit: 5 ppb.*
- **Oil:** Weigh 2 g of sample. Add 70% methanol according to the desired detection limit:

Detection limit (ppb)	10	20	40	100
Volume of 70% methanol (ml)	2	4	8	20

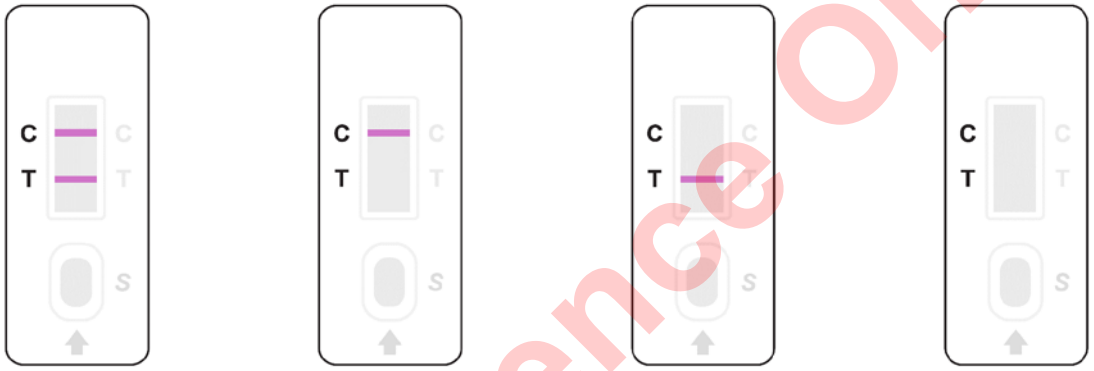
  Add 8 ml of N-hexane. Vortex for 5 minutes, the centrifuge at 4000 RPM for 5 minutes at room temperature. Discard the supernatant and take 0.1 ml of the lower layer liquid Add 0.4 ml of distilled water and mix thoroughly. *Detection limit: 10-100 ppb.*

Assay procedure

1. Take a test cassette and lay it flat on a clean table. Using the provided pipette, add 2-3 drops (approximately 60 µl) of sample to the sample well on the test cassette.
2. Leave at room temperature for 8-10 min, then analyze the result.

Results analysis

- **Negative result:** A colored line is observed in both the control (C) section and the test (T) section. A faint line in the T section counts as a negative result.
- **Positive result**: A colored line is observed in the control (C) section but not the test (T) section.
- **Invalid result**: No colored line is observed in the control (C) section.



Negative **Positive** **Invalid** **Invalid**

Notes

1. The test cassettes should be brought to room temperature before use.
2. After opening the aluminum foil, use the test cassette as soon as possible.
3. Samples should be clear with no visible particles, turbidity or bacterial pollution.
4. Do not mix or re-use the disposable pipettes to avoid cross-contamination.
5. Avoid touching the cassette membrane through the sample well or test result window.
6. This kit is for research use only.
7. All waste should be disposed appropriately. Please note that you may need to follow special waste disposal procedures for infectious samples. Please check local disposal regulations.
8. This kit is for qualitative detection of Aflatoxin B1 in food samples such as grain, feed, and oil. Suitability for other sample types would need to be determined by the end user. Positive samples can be tested with another method (e.g. HPLC, LC/MS) for quantitative results.