AFB1 (Aflatoxin B1) Lateral Flow Assay Kit

Catalog No: E-TO-C006

20T/50T/80T

Version Number:	V1.2
Replace version:	V1.1
Revision Date:	2024.03.14

This manual must be read attentively and completely before using this product.

If you have any problems, please contact our Technical Service Center for help.

Toll-free: 1-888-852-8623 Tel: 1-832-243-6086 Fax: 1-832-243-6017
Email: techsupport@elabscience.com
Website: www.elabscience.com

Please kindly provide us the lot number (on the outside of the box) of the kit for more efficient service.

Test principle

This kit uses the principle of Immunochromatography assay for the qualitative detection. It can detect Aflatoxin B1 (AFB1) in samples, such as grain, feed, etc. After adding the sample solution into the sample well of detection card, AFB1 in the sample solution combine with the gold-labelled antibody, so as to prevent the combining of gold-labelled antibody with AFB1 conjugate on the cellulose membrane. When the concentration of AFB1 in the sample solution is more than the detection limit, the detect line do not show color and the result is positive. When the concentration of AFB1 in the sample solution is less than the detection limit, the detect line show color and the result is negative.

Technical indicator

Detection limit: Grain, Feed, Oil---5 ppb.

Kits components

Item	Specifications
Detection Card (with disposable dropper)	20/50/80 T/kit
Manual	1 copy

Other materials required but not supplied

Instruments: Homogenizer, Vortex mixer, Centrifuge, Graduated pipette, Balance (sensibility 0.01 g).
High-precision transferpettor: Single channel (20-200 μL, 100-1000 μL).
Reagents: Methanol, N- hexane.

Notes

1. FOR RESEARCH USE ONLY. Do not use product out of date or in a broken aluminum foil.
2. The detection card should be adjusted to room temperature after removed from the refrigerator before opening. The opening detection card should be used as soon as possible so as not to be invalid because of moisture.
3. Avoid of contacting the white membrane at the middle of the sample well.
4. The disposable dropper cannot be mixing to avoid the cross-contaminant.
5. The tested sample should be clear, no turbidity particle and no bacterial pollution, otherwise it is easy to result in abnormal phenomena such as obstruction, unobvious color, etc., which affect the judgment of the experiment result.
6. If the samples are not indicated in the manual, a preliminary experiment to determine the validity of the kit is necessary.
7. The kit is used for rapid screening of actual samples. If the test result is positive, the instrument method such as HPLC, LC/MS, etc. can be used for quantitative confirmation.
8. Each reagent is optimized for use in the E-TO-C006. Do not substitute reagents from any other manufacturer into the test kit. Do not combine reagents from other E-TO-C006 with different lot numbers.

Storage and expiry date

Storage: Store at 2-30℃. With cool and dry environment.

Expiry date: expiration date is on the packing box.

Sample pretreatment

Restore all reagents and samples to room temperature before use.

1. **Sample pretreatment Notice:**

   Experimental apparatus should be clean, and the disposable dropper should be disposable to avoid the experiment result be interfered by the contamination.

2. **Solution preparation**

   Solution 1 (sample extracting solution):70% Methanol.

   Methanol (V): deionized water (V) =7:3.

3. **Sample pretreatment procedure:**

3.2 Pretreatment of grain, feed sample:

(1) Homogenize the representative sample with a homogenizer and mix fully.

(2) Weigh 2±0.05 g of crushed homogenate, add **70% Methanol** (Solution 1) according to the different detection limit as the following table:

Detection limit	5 ppb	10 ppb	20 ppb	50 ppb
70% Methanol	4 mL	8 mL	16 mL	40 mL

Vortex for 5 min. Centrifuge at 4000 r/min for 5 min at room temperature.

(3) Take 0.1 mL of the supernatant, add 0.15 mL of deionized water. Mix thoroughly to be used.

3.3 Pretreatment of oil (vegetable oil, sesame oil, salad oil, peanut oil, etc.) sample:

(1) Weigh 1±0.05 g of sample, add **70% Methanol** (Solution 1) according to the different detection limit as the following table:

Detection limit	5 ppb	10 ppb	20 ppb	50 ppb
70% Methanol	2 mL	4 mL	8 mL	20 mL

Add 8 mL of **N- hexane**. Vortex for 5 min and centrifuge at 4000 r/min for 10 min at room temperature.

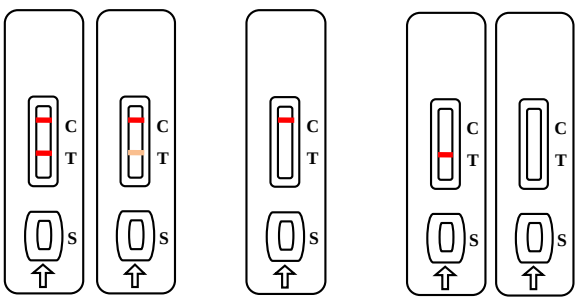
(2) Discard the supernatant and take 0.1 mL of the lower layer liquid. Add 0.15 mL of deionized water, mix thoroughly for use.

Assay procedure

1. Tear the aluminum foil bag of the detection card and take out the detection card, and put it on a smooth, clean table.
2. Take the prepared clear sample supernatant with the matching disposable dropper, add 3 drops (about 60 μL) of sample to the sample well (S) vertically and slowly (Avoid foaming).
3. Incubate for 8 to 10 minutes and then judge the results immediately.

Judgment of result

1. **Negative:** The test line region (T) and the control line region (C) show a line at the same time in the observation well. It indicates the content of AFB1 in the sample is lower than detection limit or the sample doesn't contain AFB1.
2. **Positive:** Only the control line region (C) show a line in the observation well. It indicates the content of AFB1 in the sample is higher than detection limit.
3. **Invalid:** The control line region (C) does not show a line in the observation well. It indicates operation process is wrong or the test card is invalid.



Negative Positive Invalid