

AFB1 (Aflatoxin B1) Lateral Flow Assay Kit

Catalog No: E-TO-C018

20T/40T/80T

Version Number:	V1.6
Replace version:	V1.5
Revision Date:	2026.06.05

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 of 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 shows color and the result is negative.

Technical indicator

Detection limit:

Corn oil, Peanut oil ---20 ppb

Other vegetable oils ---10 ppb

Feed---10 ppb

Cereals, Nuts, Bakery and steamed flour products, Seasonings (peanut butter, sesame paste, broad bean paste, soybean paste, fermented black beans)---5 ppb

(Note: $\mu\text{g}/\text{kg}=\text{ppb}$)

Kits components

Item	Specifications/20T	Specifications/40T	Specifications/80T
Detection Card	20T /kit	40T /kit	80T /kit
Gold-labelled micro well	20 wells	40 wells	80 wells
Extraction Solvent	2 vials	4 vials	8 vials
Manual	1 copy	1 copy	1 copy

Other materials required but not supplied

Instruments: Centrifuge, Micropipette, Electronic Balance

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 Do not use product out of date or in a broken aluminum foil.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. This test card is single-use only. Do not reuse.
6. If the samples are not indicated in the manual, a preliminary experiment to determine the validity of the kit is necessary.
7. The Use the processed sample within 30 minutes. If the time exceeds this limit, reprocess the sample before testing.
8. Avoid direct sunlight and airflow during testing.
9. Do not use water or other liquids as negative control.
10. **Each reagent is optimized for use in the E-TO-C018. Do not substitute reagents from any other manufacturer into the test kit. Do not combine reagents from other E-TO-C018 with different lot numbers.**

Storage and expiry date

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

Expiry date: expiration date is on the packing box.

Experimental preparation

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. Sample pretreatment procedure:

2.1 Pretreatment of edible oils:

- (1) Weigh 0.10 ± 0.05 g or 0.20 ± 0.05 g of corn oil or peanut oil sample into a 10 mL centrifuge tube.
- (2) Add 4 mL **Extraction Solvent**, then seal the tube tightly and vortex vigorously for 3 min. Centrifuge the mixture at $4000 \times g$ for 3 min at room temperature to achieve phase separation. Subsequently, transfer 100 μ L of the lower phase to a 1.5 mL microcentrifuge tube, mix with 150 μ L of **Extraction Solvent**, and obtain the test sample.

2.2 Pretreatment of bakery and steamed flour products, cereals, nuts, seasonings sample:

- (1) Grind the test sample into a fine powder.
- (2) Weigh 1.00 ± 0.05 g fine powder into a 10 mL centrifuge tube.
- (3) Add 4 mL **Extraction Solvent**, then seal the tube tightly and vortex vigorously for 3 min. Centrifuge the mixture at $4000 \times g$ for 3 min at room temperature, transfer 150 μ L of the supernatant to a 1.5 mL microcentrifuge tube, mix with 150 μ L of **Extraction Solvent**, and homogenize to obtain the test sample.

2.3 Pretreatment of feed sample:

- (1) Grind the test sample into a fine powder.
- (2) Weigh 1.00 ± 0.05 g fine powder into a 10 mL centrifuge tube.
- (3) Add 6 mL **Extraction Solvent**, then seal the tube tightly and vortex vigorously for 3 min. Centrifuge the mixture at $4000 \times g$ for 3 min at room temperature, transfer 150 μ L of the supernatant to a 1.5 mL microcentrifuge tube, mix with 150 μ L of **Extraction Solvent**, and homogenize to obtain the test sample.

Experiment 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. Use a dropper to draw 150 μ L of the sample solution to be tested from the above sample. Gently pipette for 30 s to completely dissolve the red substance at the bottom of the **gold-labelled micro well**. Let it stand horizontally and wait for 3 min for the reaction. Then, draw the red solution from the gold-labelled micro well, gently pipette for 10 s, and add all of it to the sample well (S) of the test card. Start timing.
3. Incubate for 5-8 min and then judge the results immediately.

Note: Results over 10 min should only be used as a reference.

Judgment of result

1. **Negative:** The control line region (C) show color, the test line region (T) shows equal or darker than line C. It indicates the content of AFB1 in the sample is lower than detection limit or the sample doesn't contain AFB1.
2. **Positive:** The control line region (C) show color, the test line region (T) shows no color or lighter color than line C. It indicates the content of AFB1 in the sample is higher than detection limit.
3. **Invalid:** The control line region (C) shows no color. It indicates operation process is wrong or the test card is invalid.

