8th Edition, revised in February, 2018

ZEN (Zearalenone) Lateral Flow Assay kit

Catalog No: E-TO-C002

50T

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.

Phone: 240-252-7368(USA) Fax: 240-252-7376(USA)
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 Colloidal Gold Immunochromatography assay. It can detect Zearalenone (ZEN) in samples, such as grain, feed, etc. After adding the sample solution into the sample well of detection card, ZEN in the sample solution combine with the gold-labelled antibody, so as to prevent the combining of gold-labelled antibody with ZEN conjugate on the cellulose membrane. When the concentration of ZEN 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 ZEN in the sample solution is less than the detection limit, the detect line show color and the result is negative.

Technical indicator

Sensitivity: 10 ppb (ng/mL)

Detection limit: Grain, Feed, Oil ---100 ppb

Grain, Feed (need to be dry) ---60 ppb

Kits components

Item	Specifications
Detection card (with pipette)	50T/kit
Manual	1 copy

Other materials required but not supplied

Instruments: Homogenizer, Oscillators, Nitrogen Evaporators, Water bath, Centrifuge, Graduated pipette, Balance (sensibility 0.01 g).

High-precision transferpettor: Single channel (20-200 μL, 100-1000 μL).

Reagent: Methanol, N-hexane.

Sample pretreatment

Restore all reagents and samples to room temperature before use.

1. **Sample pretreatment Notice:**

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

2. **Reagent preparation**

   Solution 1: 75% Methanol

   Methanol (v): deionized water (v) =3:1

3. Sample pretreatment procedure:

2.1 Pretreatment of grain, feed:

(1) Weigh 2 g of crushed homogenate to a 50 mL centrifuge tube, add **Methanol** according to the different detection limit as the following table:

Detection limit	100 ppb	200 ppb	400 ppb	500ppb
Methanol	3 mL	6 mL	12 mL	15 mL

(2) Oscillate for 5 min. Centrifuge at 4000 r/min for 5 min at room temperature.

(3) Take 0.15 mL of the supernatant, add 0.85 mL of deionized water. Mix thoroughly to be used.

2.2 Pretreatment of wheat bran feed:

(1) Weigh 2 g of crushed homogenate to a 50 mL centrifuge tube, add 5 mL of **75% Methanol**. Oscillate for 5 min and centrifuge at 4000 r/min for 5 min at room temperature.

(2) Take 0.15 mL of the supernatant, add 0.45 mL of deionized water. Mix thoroughly to be used

Note: Detection limit: 100 ppb

2.3 Pretreatment of grain, feed (need to be dry):

(3) Weigh 2 g of crushed homogenate to a 50 mL centrifuge tube, add 4 mL of **Methanol**. Oscillate for 5 min and centrifuge at 4000 r/min for 5 min at room temperature.

(4) Take 1 mL of the supernatant, dry the liquid with nitrogen evaporators/water bath at 50-60℃ condition.

(5) Add 0.45 mL of **Methanol** to dissolve the rest of the residue, oscillate strongly for 2 min.

(6) Take 0.15 mL of solution, add 0.85 mL of deionized water, mix thoroughly to be used.

Note: Detection limit: 60 ppb

2.4 Pretreatment of oil (vegetable oil, colza oil, salad oil, peanut oil, etc.):

(1) Weigh 2 g of oil sample to a 50 mL centrifuge tube, add 4 mL of **N-hexane** and 3 mL of **Methanol**. Oscillate for 5 min and centrifuge at 4000 r/min for 5 min at room temperature.

(2) Take 0.15 mL of the supernatant, add 0.85 mL of deionized water. Add 2 mL of deionized water, mix thoroughly to be used.

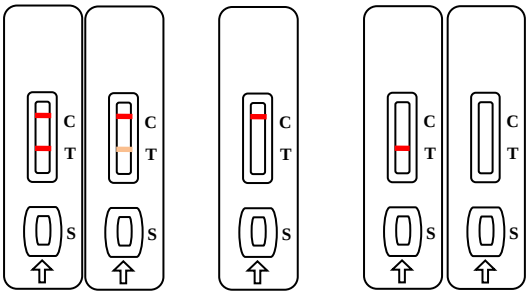
Note: Detection limit: 100 ppb

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. Take the prepared clear sample supernatant with the matching pipette, add 2-3 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 ZEN in the sample is lower than detection limit or the sample doesn't contain ZEN.
2. **Positive:** Only the control line region (C) show a line in the observation well. It indicates the content of ZEN 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

Notes

1. 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 pipette 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.

Storage and valid period

Storage: Store at 2-30℃ for 1 year. With cool and dry environment.

Expiry date: expiration date is on the packing box.