TCs (Tetracyclines) Lateral Flow Assay Kit

Catalog No: E-FS-C030

20/50T

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.

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 TCs (Tetracyclines) in muscle, honey and egg samples. After adding the sample solution into the sample well of detection card, TCs in the sample solution combine with the gold-labelled antibody, so as to prevent the combining of gold-labelled antibody with TCs conjugate on the cellulose membrane. When the concentration of TCs in the sample solution is more than the detection limit, the detect line do not show color (or shows lighter color than control line) and the result is positive. When the concentration of TCs in the sample solution is less than the detection limit, the detect line shows color (shows equal or darker than the control line) and the result is negative.

Technical indicator

Detection limit: Milk---10 ppb; Honey---50 ppb; Egg---60 ppb; Milk---10 ppb; Muscle ---10-200 ppb (as shown in the table).

Detection limit	Tetracycline	Oxytetracycline	Chlortetracycline	Doxycycline
Muscle	10 ppb	10 ppb	200 ppb	200 ppb

Kits components

Item	Specifications
Detection Card (with disposable dropper and gold-labelled micro well)	20/50 T/kit
Extractant	2/5 vial
Reconstitution Buffer	2/5 vial
Manual	1 copy

Note: All reagent bottle caps must be tightened to prevent evaporation and microbial pollution.

Other supplies required

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

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

Notes

1. FOR RESEARCH USE ONLY. Do not use product out of date or in a broken aluminum foil.
2. Bring detection card to room temperature before opening the aluminum foil. 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 and unobvious color 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-FS-C030. Do not substitute reagents from any other manufacturer into the test kit. Do not combine reagents from other E-FS-C030 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 pipette should be disposable to avoid the experiment result be interfered by the contamination.

2. Sample pretreatment

2.1 Pretreatment of milk sample:

(1) Collect an appropriate amount of fresh milk in a dry and clean centrifuge tube as the sample to be tested.

2.2 Pretreatment of muscle sample:

(1) Remove the skin and fat of sample, homogenize with homogenizer.

(2) Weigh 1±0.1 g of sample into a 15 mL centrifuge tube, add 4 mL of **Extractant**, Oscillate for 2 min and mix fully. **(Note: When testing shrimp meat samples, after adding the extractant, take a water bath at 80℃ for 5 minutes first, and then proceed to the next step.)**

(3) Centrifuge at 4000 rpm for 5 min. The supernatant is the **sample solution.**

(4) According of the sample type, take the supernatant from step 3 into a 1.5m centrifuge tube as shown in the following table, mix well for 30 seconds, and obtain the liquid to be tested.

Sample type / Dilution method	**Fish, Shrimp**	**Beef, Pork, Mutton, Chicken, Duck**
Sample solution + Reconstitution Buffer	200μL + 200μL	No dilution required

2.3 Pretreatment of honey sample:

(1) For laboratory samples without crystallization, stir well. For the sample with crystallization phenomenon, place it in a closed water bath not exceeding 60℃, heat it, shake, stir after the sample is all melted, and cool to room temperature.

(2) Weigh 0.2±0.05 g of homogenized honey sample (Crystallized honey must be melted in a water bath at 60-80℃) into a centrifuge tube.

(3) Add 0.8 mL of **Reconstitution Buffer.** Oscillate for 4 min and mix fully.

(4) Take the mixed liquid for analysis.

2.4 Pretreatment of egg sample:

(1) Weigh 0.2±0.05 g of homogenized egg sample into 5mL centrifuge tube.

(2) Add 1 mL of **Reconstitution Buffer**. Oscillate for 2 min and mix fully.

(3) Take the mixed liquid for analysis.

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 sample with the matching with pipette, add 4 drops (about 100 μL) of sample to the gold-labelled micro well, wait for 2 min, whip the purple residual with a burette until it is completely dissolved (Avoid foaming), wait for 2 min again, remove all the liquid of the gold-labelled micro well into the sample well, count down at the same time.
3. Incubate for 5 to 8 minutes and then judge the results immediately.

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 TCs in the sample is lower than detection limit or the sample doesn't contain TCs.
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 TCs in the sample is higher than detection limit.
3. **Invalid:** The control line region (C) show no color. It indicates operation process is wrong or the test card is invalid.