# Oxytetracycline (OTC) Rapid Test Kit

Technical Manual

(GICA)

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## 1 Principle and Application

The test kit is used for detecting Oxytetracycline (OTC) in samples such as tissue.

The kit is developed using the principle of competitive colloidal gold Immunochromatographic Assay (GICA). After the sample solution is added to sample hole, if OTC is present, it will bind with gold labeled antibodies, thereby preventing the labeled antibodies from binding to the OTC conjugates on the nitrocellulose membrane.

If the content of OTC in the sample solution is less than detection limit, it will make the test ( "T" ) line colored (The color is consistent with the control line or deeper) and the result is negative. If the content is greater than detection limit, no color reaction will be produced (or color is lighter than the control line) and the result is positive.

## 2 Technique Data

**Detection Limits:**

Tissue ..... 20ppb

## 3 Kit Content

| Package specification | 20T/Kit |
|---|---|
| Test device (with gold-labeled well and dropper) | 20 |
| OTC Reconstitution Buffer | 10mL×2 |
| Instruction | 1 |

## 4 Materials Required but Not Supplied

**Equipment:**grinder (for crushing solid samples), vortex mixer (for shake and mix), graduated transfer pipette, and balance with a division value of 0.01 g, nitrogen evaporator, water bath.

**Micropipettes:** single-channel (20-200µL and 100-1000µL)

**Reagents:** Ethyl acetate.

## 5 Sample Pre-treatment

**5.1 Instructions**

Labware must be clean. Use disposable pipette tips to avoid contamination of interference results.

**5.2 Sample pretreatment step:**

**5.2.1 Tissue treament.**

**For Fish, Shrimp, Crab, and Other Tissue Samples:**

Remove the skin and select parts with minimal fat content. Use a grinder to homogenize the sample.

**For Pork Tissue Samples:**

Includes lean meat, intestinal casing, liver, lungs, and kidneys.

*Samples must be tested immediately; if not possible, store at 2-8°C for up to 24 hours.*

*Prefer using non-frozen tissue samples for pre-treatment experiments.*

(1)Homogenize the sample with a grinder.

(2)Weigh 4±0.05g of the homogenized sample into a 15 mL centrifuge tube. Then add 2mL of OTC Reconstitution Buffer.

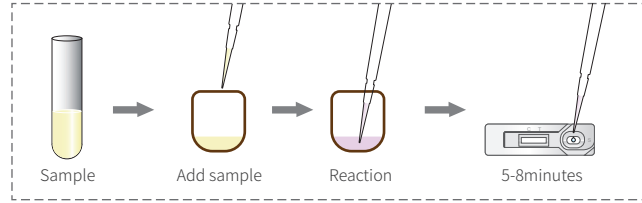
(3)Tighten the cap of the centrifuge tube. Vigorously vortex and shake for 5 minutes. Centrifuge at 4000 rpm for 5 minutes. The supernatant is the **sample solution.**

## 6 Test Steps

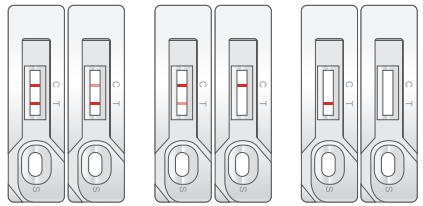
(1)Tear the foil pouch, take out of the test card, gold-labeled well and dropper. Then put them on a flat, clean work surface.

(2)Using the provided dropper, pipette 5 drops of sample solution (or transfer 120µL using a micropipette) vertically and slowly into the gold-labeled well. Prevent air bubbles during pipetting. Gently pipette up and down with the provided dropper (or a micropipette) for 30 seconds to completely dissolve the red substance at the bottom of the gold-labeled well. After allow it to stand for 2 minutes, draw the entire solution from the gold-labeled well and add them to the sample hole ("S") on the test card and start the timer.

(3)Determine the results in 5 to 8 minutes at room temperature.



## 7 Results Judgement




**Negative:** Test ( “T” ) line and control( “C” ) line both appear in the result window. The color of the test ( “T” ) line is consistent or deeper than the control( “C” ) line. It indicates that the concentration of OTC in the sample is below the detection limit, or absent.

**Positive:** In the result window, the control( “C” ) line appears, while the Test( “T” ) line does not appear or appears lighter in color than the control( “C” ) line. It indicates that the concentration of OTC in the sample is above the detection limit.

**Invalid:** If the control( “C” ) line does not appear, the result might be considered invalid.

## 8 Notice

8.1 Don’t use the expired or damaged products.

8.2 When the test card is taken out of the refrigerator, it should be restored to the room temperature and then opened. The opened test card should be used as soon as possible to avoid failure after being affected by moisture.

8.3 Avoid touching the white nitrocellulose membrane in the middle of the detection card.

8.4 In order to avoid cross-contamination, the droppers cannot pipet another Solution after pipetting one.

8.5 The sample solution to be examined needs to be clear and free of turbid particles. Otherwise, it is prone to lead to blockage, non-obvious color development and other abnormalities, affecting the determination of the experimental results.

## 9 Storage Conditions

The kit shall be stored at 2°C to 30°C (35.6°F to 86°F) in dry environment.

Shelf life: 12 months. The date of manufacture is presented in the label of the box.