

Ractopamine Rapid Test for Tissue Samples (20 tests/kit)

For detection of ractopamine residue from tissue, urine, food samples.

INTRODUCTION

Ractopamine is a potent beta agonist that can drive nutrients away from fat production and into the muscle. Therefore, it has been used as a feed additive to increase the lean yield of livestock. Upon entering human body, Ractopamine can cause cardiovascular effects such as tachycardia, decrease in blood pressure, and occasional palpitations. Especially for patients with underlying coronary artery disease or pre-existing arrhythmias, it may cause significant arrhythmias or myocardial ischaemia. In addition, Ractopamine could lead to symptoms including skeletal muscle tremor, nervousness, metabolic disturbances. As a result, it has been banned as livestock feed additive in over 150 countries.

The Tribo™ Ractopamine test strip provides a convenient test to screen tissue, urine, and feed samples. It allows for **fast, simple, sensitive, and reliable** detection of Ractopamine in tissue, urine, and feed samples.

KIT APPLICATIONS

The Ractopamine Rapid Test is a lateral flow strip test for the rapid detection of ractopamine in tissue, urine, and feed samples.

Assay sensitivity: Urine: 3 ng/ml (3 ppb); Tissue: 8ng/mL (8 ppb), and feed: 30 ng/mL (30 ppb).

Assay time: 5-10min

PRINCIPLE OF THE ASSAY

Assay Principles of The Ractopamine Rapid Test is based on the principle of competitive lateral flow immunochromatography. A ractopamine antibody is conjugated to colloidal gold and placed on conjugate pad. Colloidal gold provides red color to visualize antibody-antigen binding. Ractopamine antigen is immobilized on nitrocellulose membrane. After testing sample is loaded onto sample pad, it mixes with gold-antibody conjugate and migrates together along the membrane. If sample contains no ractopamine, antibody conjugated to colloidal gold will bind the antigen immobilized on membrane, leading to clear red color presented on membrane detection line where the test antigen is immobilized (indicating a negative result). If ractopamine is present the test sample, it will bind gold-antibody conjugate and prevent its binding onto the antigen line on membrane. As a result, no color will be visible on detection line on membrane (indicating a positive result).

KIT CONTENT AND STORAGE CONDITIONS

- 20×foil pouches/kit. Each pouch contains one cassette, one pipette and a desiccant.
- Assay buffer (10 mL)

Shelf-life: Storage at room temperature (2-30°C) is stable for one year.

PRECAUTIONS

Wear protective gloves, clothing, eye, and face protection. Wash hands thoroughly after handling.

SAMPLE PREPARATION AND TEST PROCEDURES

Bring test strip, samples, and all reagents to room temperature (20-25°C) before use.

Sample Preparation:

Urine Sample: Take urine sample, centrifuge at 6000rpm/min for 5min. The clear supernatant can be directly used for the assay.

Tissue Sample:

1. Collect tissue sample about 4g without fat tissue into 15mL tube.
2. Add 0.5mL of assay diluent, and tightly cover the lid, and incubate in water bath at 80°C for 10min.
3. Take out the extracted liquid into a 1.5mL tube. Then centrifuge at 4000 rpm for 1min to make the extract clear. Note: if there is fat layer, just insert the pipette through the fat layer, and take the water phase liquid for the assay.

Animal Feed Sample:

1. Take 1g feed sample into 15mL tube.
2. Add 1 mL of deionized water, and tightly cover the lid, and incubate in water bath at 80°C for 10min.
3. Take out the extracted liquid into a 1.5mL tube. Then centrifuge at 4000 rpm for 1min to make the extract clear. Note: if there is fat layer, just insert the pipette through the fat layer, and take the water phase liquid for the assay.

Testing Procedures

4. Take out the cassette from the foil pouch and place it horizontally.
5. Gradually drip 3 drops of sample into the sample hole “S”.
6. Interpret the result in 5-10 minutes.
7. Result Interpretation.

Test result is interpreted by observing test line and control line shown in result window as the below diagram (Fig. 1). **Negative (-):** both test (T) and control lines (C) are present, indicating “Negative” which means that the ractopamine concentration in sample is lower than the detectable amount; **Positive (+):** control line(C) is present, and test line (T) is absent. This result indicates the ractopamine concentration is higher than the detectable line in sample. **Invalid test:** no control line (C) is present. Please repeat the test using a new test strip following instructions in this user guide.

Fig. 1 Diagram for result interpretation.



RELATIVE PRODUCTS

- Clenbuterol Rapid Test for urine (TBS11111)
- OTA Rapid Test Strip (TBS11116)
- Chloramphenicol (CAP) Test Strip (TBS11121)
- Salbutamol Rapid Test Strip (TBS11141)
- Shiga Toxin Test Strip (TBS11151)
- Deoxynivalenol (DON) Test Strip (TBS11156)
- Aflatoxin B1 Test Strip (TBS11166)
- Zearalenone (ZEA) Test Strip (TBS11171)
- Microbial Magnetic DNA Extraction (TBS6025)
- STEC-Salmonella qPCR kit (TBS42029)
- 4-in-1 Aspergillus qPCR kit (TBS42025)

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