Salbutamol (SAL) Rapid Test Kit

Technical Manual

(GICA)

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1 Principle and Application

The test kit is used for detecting Salbutamol (SAL) in samples such as tissues, urine, feed, and more.

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

If the content of SAL in sample solution is less than detection limit, it will make the test ("T") line colored, and the result is negative. If the content is greater than detection limit, no color reaction will be produced, and the result is positive.

2 Technique Data

Limit of detection:

Tissues 10ppb

Urine 5ppb

Animal feed 50ppb

3 Kit Content

Package specification	20T/Kit
Test device	20
Instruction	1

4 Materials Required but Not Supplied

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

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

Reagents: Anhydrous Sodium Sulfate, n-Hexane, Methanol.

5 Sample Pre-treatment

Please note that the labware must be clean. Use disposable pipette tips to avoid contamination of interference results.

5.1 Sample pretreatment step:

5.1.1 Urine treatment:

(1) Collect a clear urine supernatant for testing. If the urine sample is cloudy, centrifuge it at 4000 rpm for 10 minutes and then use the supernatant for testing.

5.1.2 Tissue treatment:

(1)Weigh 3 ± 0.05 g of homogenized sample and place it in a 50 mL centrifuge tube. Add 3 mL of deionized water, shake for 5 minutes, and then heat in a water bath for 5-10 minutes. Centrifuge at 4000 rpm for 5 minutes at room temperature (for samples high in fat, centrifugation is essential). Allow the mixture to sit until cooled, then carefully collect the clear supernatant for testing (try to bring the sample to room temperature before use).

5.1.3 Feed treatment:

(1) Weigh 1.0 ± 0.05 g of homogenized feed sample, add 1 g of anhydrous sodium sulfate, and then add 10 mL of methanol. Shake for 3 minutes, then centrifuge at over 4000 rpm for 10 minutes at room temperature.

(2) Extract 1 mL of the supernatant, dry at 50-60°C using air or nitrogen, and re-dissolve in 1 mL of deionized water. Add 1 mL of n-hexane and mix for 30 seconds; then centrifuge at over 4000 rpm for 5 minutes at room temperature.

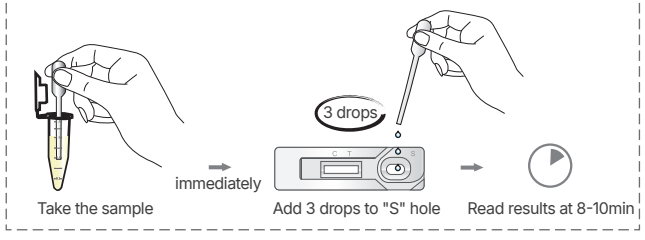
(3) Use 80μL of the lower phase for testing.

6 Test Steps

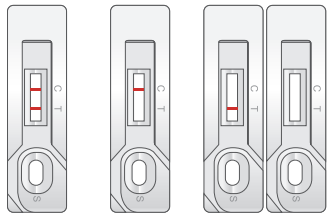
(1) Tear the foil pouch, take out of the test card, and put it on a flat, clean work surface.

(2) Pipette the processed sample with the provided dropper, then add 3 drops (approximately 60μL) vertically and slowly into the sample hole("S").

(3) Read the result at room temperature in 8 to 10 minutes.



7 Results Judgement



Negative Positive Invalid

Negative: Test("T") line and control("C") line both appear in the result window. It indicates that the concentration of SAL in the sample is below the detection limit, or absent.

Positive: Only control("C") line appears in the result window.It indicates that the concentration of SAL 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.