

Clenbuterol Residue Rapid Test Strip (Tissue)

Prod. No.: DTS003
Pkg.Size: 40T

INTENDED USE

Clenbuterol device is for rapid test to qualitatively detect the Clenbuterol in tissue sample at the sensitivity of 1 µg/kg. It only takes approx. 30~40 min.

GENERAL DESCRIPTION

Clenbuterol belongs to the group of β-agonists. Due to its function of improving the meat ratio in fattened animals and accelerating the growth, it is widely used in feed. However, Clenbuterol is prohibited in most countries as its residue may cause serious side effects, such as abnormal heart rate and heart disease.

In addition to its lipolytic and anabolic effect, Clenbuterol has a relaxing effect on non-striated musculature, on which its therapeutic employment as an antiasthmatic and a tocolytic agent is based. When employed as a fattening adjuvant, in comparison with the therapeutic use, Clenbuterol is administered with 5 to 10 times higher dose. Therefore, it is possible that Clenbuterol residues, after use in illegal practice, may lead to a risk for consumers.

PRINCIPLE OF THE TEST

Competitive assays are primarily used for testing small molecules. If Clenbuterol is present in the sample it will therefore bind with the conjugate and will be labelled. As the sample migrates along the membrane and reaches the capture zone an excess of labelled antibody will bind to the immobilised antigen so that no visible line is produced. The bound conjugate will then bind to the antibodies in the control zone producing a visible control line. A single control line on the membrane is a positive result. Two visible lines in the capture and control zones is a negative result. However, if an excess of unlabelled Clenbuterol is not present, a weak line may be produced in the capture zone, indicating an inconclusive result.

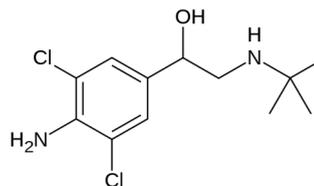
MATERIALS PROVIDED

Clenbuterol Residue Rapid Test Device: 40 devices
PBST buffer only for CLEN, pH 7.4: one vial per kit
Throwaway plastic dropper: 40 pieces per kit

ADDITIONAL MATERIAL

1. Ethyl acetate
2. N-hexane
3. 0.1M HCL, 4M NaOH
4. centrifuge tube, test tube

Agitator, balance, centrifuge, a mild stream of nitrogen or atmosphere, transferpettor and so on.



Clenbuterol

STORAGE

Store at 4-30°C, DO NOT FREEZE or use beyond the expiration date. The shelf life is 12 months.

PRECAUTIONS

1. Do not use after the expiration date.
2. The test device should remain in the sealed pouch until use.
3. Use device as soon as possible but within 1 hour after removal from the pouch specially.
4. Do not touch the white membrane in the mid of the test device.
5. Use the plastic dropper for one time in case cross reaction happens.
6. It may lead into wrong result if there is bleach, oxydant, or fusty serum.
7. Do the test at room temperature. It takes longer time at high temperature, and shorter time at low temperature.
8. Different samples will influence the result on NC thecal. Read the result according to color differences of the color bar.
9. If test the quality of the device, please use negative serum.
10. Be careful if you are allergic to antibiotics.

SPECIMEN TREATMENT

The samples should be stored in a cool place, protected against light.

1. Agitate the meat for 1 min(10,000r/min)
2. Transfer 4g of homogenized sample into a 15 ml centrifugal vial, add 5 ml of 0.1 M HCL. Shake for 10min.
3. Add 100 µl of 4M NaOH. after vortexing intensively for 30 sec.,centrifuge the mixture (4000rpm, room temperature for 5 min.).
4. Transfer 2 ml of the supernatant into a centrifuge, and add 50 µl of 4M NaOH and mix for a few seconds, and add 6 ml of ethyl acetate,shake for 5min.
5. Transfer 3 ml of ethyl acetate supematant into a test tube and dry at 65°C with a mild stream of nitrogen or atmosphere.

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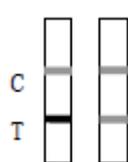
6. Add 0.2 ml N-hexane and 0.2 ml PBST only for CLEN orderly, dissolve the residue around the inner-tube.
7. Suck at least 100 µl of under layer solution for test.

Note: If test the quality of the device with standard substance, please use the sealed PBST buffer to dilute.

TEST PROCEDURE

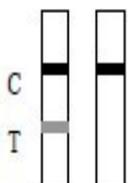
1. Prepare samples according to **SPECIMEN TREATMENT**.
2. Remove the Residue Rapid Test Devices from sealed pouch.
3. Hold the dropper vertically and transfer 3 full drops of solution obtained from specimen treatment to the specimen well (S) of the test device, and then start the timer. Avoid trapping air bubbles in the specimen well (S).
4. Wait for red bands to appear. The result should be read in approximately 3~5 minutes. It is significant that the background is clear before reading the test. Do not interpret results after 8 minutes.

INTERPRETATION OF RESULTS



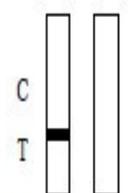
NEGATIVE:

Two lines are visible and the Test Line (T) is the same as or darker than the Control Line (C), which also is the Reference Line (R). This indicates that the Clenbuterol concentration in sample is below 1 µg/kg.



POSITIVE:

Two lines are visible, but the Test Line (T) is lighter than the Control Line (C), or there is no Test Line. This indicates that the Clenbuterol concentration in sample is above 1 µg/kg.



INVALID:

Insufficient specimen volume or incorrect procedural techniques are the most likely reasons for an invalid result. Review the procedure and repeat the test with a new test device. Stop using the test kit immediately if the problem is not solved and contact your local distributor.

QUALITY CONTROL

Procedural control is applied. A purplish red band appears in the control region (C), which is also the reference region (R) that is for internal procedure control. It ensures efficiency and correct procedure technique.

Control standard is not supplied in this device. Proper laboratory practice is the confirmation of the test procedure and test performance.

LIMITATION OF THE PROCEDURE

1. The Clenbuterol Residue Rapid Test Device is only a preliminary analytical result. A secondary analytical method must be taken for confirmation. Gas or liquid chromatography and mass spectrometry method (GC/LC/MS) is preferred.
2. The Clenbuterol Residue Rapid Test Device is a qualitative screening assay and cannot test the Clenbuterol concentration in the specimen.
3. Technical or procedural errors, as well as other interfering substance in the specimen may cause falseness.

PRECISION

A multi-center test evaluation is conducted between the Clenbuterol Residue Rapid Test Device and other products. 386 specimen is tested, including 206 negative and 180 positive. 98.5% of the Clenbuterol Residue Rapid Test Device is effective when comparing to other ELISA Clenbuterol reagents.

SENSITIVITY

To acquire the exact sensitivity, reduplicative experiment has been done on the sample containing 1 µg/kg Clenbuterol.

REFERENCE

1. R. Baselt, Disposition of Toxic Drugs and Chemicals in Man, 8th edition, Biomedical Publications, Foster City, CA, 2008, pp. 325-326.
2. "Clenbuterol", Daily Mail, 2009-10-01, retrieved 2010-04-07