

**Made in the U.S.A.**

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# CLENBUTEROL INSTANT TEST

## Intended Use:

This is a Competitive enzyme immunoassay for the quantitative analysis of Clenbuterol and other  $\beta$ -agonists in serum, plasma, whole blood and urine.

## General Background:

Clenbuterol belongs to the group of  $\beta$ -agonists. In livestock production clenbuterol improves the meat/fat ratio in fattened animals or accelerate the growth. Up to now  $\beta$ -agonists have not been authorized as adjuvants for fattening. In addition to its lipolytic and anabolic effect, clenbuterol has a relaxing effect on non-striated musculature on which is based its therapeutic use as an antiasthmatic and a tocolytic agent. When employed as a fattening adjuvant, as compared with the therapeutic use, clenbuterol is administered in a 5 to 10 times higher dose. Therefore, it is possible that clenbuterol residues may lead to a risk for consumers after illegal administration.

Using Clenbuterol assay, it is possible to detect clenbuterol and other  $\beta$ -agonists in urine, muscle and liver both rapidly and with accuracy.

## Principal of the test:

The test utilizes monoclonal gold conjugated antibody as a signal reagent and a Clenbuterol protein conjugate as a solid phase capture reagent. As the sample flows through the absorbent sample pad, the liquid reconstitutes the dried monoclonal gold conjugate. The clenbuterol in the sample will bind to this conjugate antibody and migrate further up the membrane to the test line. If there is no clenbuterol in the sample, the antibody conjugate will bind to the test line giving a negative result. A complex is formed at this site indicated by a pink line. When the concentration of Clenbuterol is greater than 20 ng/ml, no red complex is formed and no pink line is observed indicating a positive result.

## Materials supplied:

40 Individually packaged test cassette in a foil pouch with a pipette and a desiccant bag.

One bottle of Assay Buffer

Package insert

## Materials not supplied:

Stop watch

## STORAGE:

The kits should be stored at temperature 4-28° C, the sealed pouch for the duration of the shelf life (18 months).

## PRECAUTION:

1. For *in vitro* diagnostic use only.
2. Do not use after expiration date.
3. Test device should remain sealed until use.

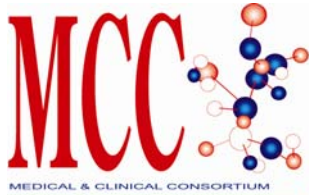
## Assay Procedure:

1. Remove the test cassette from pouch by tearing and label the device with specimen identification. Bring the cassette and the reagents to the room temperature.
2. Carefully place the cassette on a flat surface.

**For Whole Blood:** Use 2 drops (80 ul) of whole blood and place it in the sample well. Add 1 drop of assay buffer. Read the results at 5 minutes and discard the test cassette.

**For Serum or Plasma:** Use one drop (40 ul) of serum or plasma and place it in the sample well. Add 2 drops of assay buffer. Read results at 5 minutes and discard the test cassette.




**For Urine:** Use 3 drops (120 ul) of urine to cassette with pipette (**Do Not Add Buffer**). Read results within 5 minutes and discard the test cassette.



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**Interpretation of the Results:**

Negative	Positive	Invalid
Both the test line (T) and control line (C) are visible.	Only the control line (C) will be visible.	If the control line (C) does not form, the test results are inconclusive. Repeat the test with a new cassette.
		

**Sensitivity:**

Equal to or greater than 20 ng/ ml of Clenbuterol for serum or plasma samples.  
 40 ng/ml for whole blood samples.

**Reference Method:**

Specimen Type: plasma/ serum Reporting Limit: 100 ng/mL  
 Specimen Volume: 20 mL Critical Value: n/a  
 Specimen Handling: n/a Reference Range: n/a  
 Test Method: GC/MS  
 Note: n/a

**Cross reactivity:**

Clenbuterol approx. 100 %  
 Brombuterol approx. 150 %  
 Bromchlorbuterol approx. 95 %  
 Mabuteroal approx. 86 %  
 Clenproperol approx. 25 %  
 Terbutalin approx. 10 %  
 Salbutamol approx. 10 %  
 Cimaterol approx. 6 %  
 Carbuterol approx. 4 %  
 all other cross reactions are < 1.0%

**Precision:**

Triplicate of 5 selected negative and 5 positive control materials were assayed 10 times for 3 days in a row. The results were found to be 100% accurate.

**Bibliography:**

1. Laumen, F. (1978). Investigation on long-term treatment and cumulation with clenbuterol. *Med. Mon.schr.*, 29, 455-459.
2. Ballarini, G. (1978). Initial studies of the clinical pharmacology of the  $\beta_2$  sympathomimetic agent NAB 365 (Planipart) and its use for pharmacological tocolysis in cows. *Tierärztl. Umsch.*, 33, 421-427
3. Engelhardt, G. (1976). Pharmacological profile of the action of NAB 365 (clenbuterol), a new bronchodilator with a selective effect on the adrenergic  $\beta_2$  receptors. *Arzneim. Forsch.*, 26(7a), 1404-1420.