

# Ketosis in Cow Milk Samples Rapid Test

**REF** KINER5090

Ver 1.0

**IVT** For In-Vitro Test Only

 25 strips/bottle

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**Introduction:**

Ketosis is one of the most common metabolic disorders affecting high-producing dairy cows, particularly during the early postpartum period. It occurs when cows experience a negative energy balance, leading to excessive mobilization of body fat and increased production of ketone bodies such as  $\beta$ -hydroxybutyrate (BHB), acetoacetate, and acetone. Elevated levels of these ketone bodies in body fluids negatively impact milk yield, reproductive performance, and overall herd health.

Early identification of ketosis using rapid milk tests enables timely nutritional and management interventions, thereby reducing disease severity and preventing associated disorders such as displaced abomasum, fatty liver, and decreased fertility.

**Intended Use:**

The Ketosis in Cow Milk Samples Rapid Test is used for qualitative detection of  $\beta$ -hydroxybutyrate (BHB), a ketone body, in cow milk samples.

**Principle:**

This Rapid Test is an immuno-chromatographic test, using colloidal gold immunoassay method to detect the indicated antigen/antibody. After the addition of the sample, as per the instruction for use (IFU), the sample moves along with the colloidal gold labeling protein. If the relevant protein is present, it will develop a reddish color line near the space marked as "T". This indicates the sample is Positive and if a line is not developed or seen, it indicates the sample is Negative for the tested antigen/antibody.

**Materials Provided:**

1. Cassette: with a pad in the device.
2. Sample Diluent - 3 ml

**Materials to be provided by the End-User:**

1. Adjustable pipettes and multichannel pipettor to measure volumes ranging from 25 ul to 1000ul
2. Alcohol prep-pad
3. Clock or timer
4. Specimen collection container
5. Centrifuge
6. Biohazard waste container
7. Sterile gauze or cotton

**Handling / Storage:**

1. All reagents should be stored at 2°C to 8°C for stability.
2. All the reagents and wash solutions should be used within 12 months from manufacturing date.
3. Before using, bring all components to room temperature (18-25°C). Upon assay completion ensure all components of the kit are returned to appropriate storage conditions.

**Health Hazard Warnings:**

1. Reagents that contain preservatives may be harmful if ingested, inhaled or absorbed through the skin.
2. For Research Use Only.

### Sample Preparation and Storage:

Milk Samples : Milk should be collected aseptically during milking after proper cleaning and drying of the teat, discarding the first few streams of milk to minimize contamination. The sample should be collected in a clean, dry, sterile container and mixed gently to ensure homogeneity. Milk samples that are visibly contaminated, clotted, spoiled, or showing signs of fermentation should not be used for testing.

If testing cannot be performed immediately, milk samples may be stored at 2–8°C and tested within 24–48 hours. For longer storage, samples may be frozen at –20°C or lower. Frozen samples should be completely thawed and gently mixed before testing. Repeated freeze–thaw cycles must be avoided. All samples should be brought to room temperature prior to analysis.

### Preparation Before Use:

Instructions must be read entirely before taking the test. Allow the test device controls to equilibrate to room temperature for 30 minutes (20°C - 30°C) prior to testing. Do not open the inner packaging until ready, it must be used in one hour if opened (humidity ≤ 60%, temp: 20°C - 30°C). Please use immediately when the humidity > 60%.

### Assay Procedure:

#### For Milk

1. Remove the test cassette from the sealed pouch, place it on a clean and level surface with the sample well up.
2. Add one (1) full drop of milk (10  $\mu$ l) vertically into the sample well.
3. Add two (2) drops (80-100  $\mu$ l) of sample buffer into the sample well.
4. Observe the test results immediately within 15~20 minutes, the result is invalid over 20 minutes.

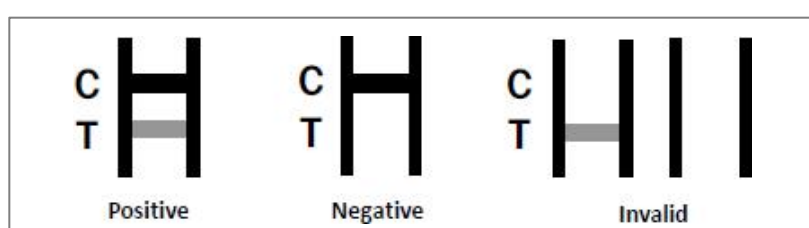


### Interpretation of Results:

**POSITIVE:** Two distinct red lines appear. One line should be in the control region (C) and the other line should be in the test region (T).

**NEGATIVE:** One red line appears in the control region (C). No red or pink line appears in the test region (T).

**INVALID:** No red lines appear or control line fails to appear, indicating that the operator error or reagent failure. Verify the test procedure and repeat the test with a new testing device.



### Quality Control:

It is recommended that for each laboratory assay appropriate quality control samples in each run to be used to ensure that all reagents and procedures are correct.

### Performance Characteristics of the Kit:

Sensitivity:

Negative coincident rate with Molecular testing:  $\geq 97\%$ , Positive coincident rate with Molecular testing:  $\geq 75\%$ .

### Limitations of Method

Any diagnosis should not be based on the results of in vitro methods alone. Veterinarians are suggested to consider all clinical and laboratory findings possible to state a diagnosis. This reagent is designed for the qualitative screening test.

### Safety Precautions:

- Follow the working instructions carefully.
- The expiration dates stated on the kit are to be observed. The same relates to the stability stated for reagents
- Do not use or mix reagents from different lots.
- Do not use reagents from other manufacturers.
- Avoid time shift during pipetting of reagents.
- All reagents should be kept in the original shipping container.
- Some of the reagents contain small amount of sodium azide ( $< 0.1\%$  w/w) as preservative. They must not be swallowed or allowed to come into contact with skin or mucosa.
- Since the kit contains potentially hazardous materials, the following precautions should be observed
  - Do not smoke, eat or drink while handling kit material
  - Always use protective gloves
  - Never pipette material by mouth
  - Wipe up spills promptly, washing the affected surface thoroughly with a decontaminant.
- In any case GLP should be applied with all general and individual regulations to the use of this kit.

### Symbols



Use by



Lot/Batch



Catalog number



Temperature limitation



Caution, consult accompanying documents



Manufacturer



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