

nova **Vet**

# FIELD ANALYSER FOR BLOOD KETONE MONITORING



## *Clinical Ketosis in Early Lactation Dairy Cattle: Economic Loss to Dairy Farmers*

The transition of dairy cows through calving and commencement of lactation is a critical time and is a strong determinant of the health and performance of the cow through the full lactation period. All transition cows are at risk of clinical ketosis, characterised by partial anorexia, poor appetite and signs of nervous dysfunction including abnormal licking, poor coordination, abnormal gait and bellowing. Clinical ketosis causes economic loss to the dairy farmer due to:

- Decreased milk production, poor milk quality
- Mastitis, risk of displaced abomasum
- Metritis, impaired fertility
- Increased herd removals and treatment costs

## *Early Detection of Subclinical Ketosis Can Prevent Economic Loss*

Subclinical ketosis is defined as abnormal concentrations of circulating ketones (primarily beta-hydroxybutyrate) in the absence of clinical signs of ketosis. Early detection of ketosis in its subclinical stage enables introduction of feeding strategies to prevent clinical ketosis, cow malaise and economic loss to the dairy producer.

- Measures blood beta-hydroxybutyrate (BHBA), the gold standard for detecting subclinical ketosis
- Ready-to-use, disposable biosensor
- No calibration required
- Simple test procedure in the field
- Accurate, quantitative blood ketone results in 10 seconds
- Small sample volume
- Stores 400 results

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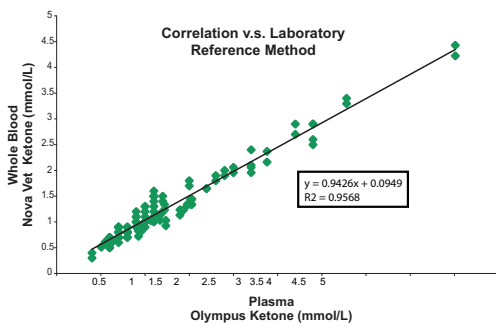
## Nova Vet Measures Blood Beta-Hydroxybutyrate (BHBA), the Gold Standard for Detecting Subclinical Ketosis

Blood BHBA is the gold standard for detecting subclinical ketosis in dairy cattle. A blood BHBA concentration of 1.2 -1.4 mmol/L is an important threshold for detection of subclinical ketosis and for predicting health risk in early lactation cows.

- Nova Vet's BHBA biosensors provide accurate analysis in this subclinical range.
- Blood BHBA offers better sensitivity and specificity for ketosis than urine or milk ketone testing.

## Accurate, Quantitative BHBA Results

Nova Vet provides accuracy comparable to reference laboratory testing for BHBA. Quantitative BHBA results eliminate subjective interpretation of semi-quantitative color charts used in milk or urine ketone testing.



## Simple Test Procedure in the Field

1. A very small drop of blood is obtained from the tail vein using a 20 or 22 gauge needle and vacuum tube.
2. A pre-calibrated biosensor is inserted into the meter. No calibration coding step is required for the meter or the biosensor.
3. A tiny drop of blood (0.8 microliters) is added to the end of the strip. BHBA results are ready in 10 seconds.

## Additional Nova Vet Features

- Large results display is easy to read in a darkened setting.
- Meter non-volatile memory stores up to 400 test results.
- Two levels of quality control check solutions provide verification of meter accuracy.
- Rugged carrying case provides convenient transport and storage of meter, glucose and ketone test strips, and quality control solutions.
- Corrects result for HCT.
- Eliminate interfering substances.

## Optimize Herd Management

Nova Vet provides simple, accurate and economical detection of ketosis in a herd. Herd management is improved when compared to relying on the dairy producer's subjective perception of clinical signs of ketosis, or less sensitive and specific milk or urine ketone tests. Herd management benefits of Nova Vet BHBA testing include:

- Early identification and monitoring of changes in transition cow performance
- Protection of herd milk production and quality
- Quantification of herd prevalence of ketosis
- Avoidance of treatment costs for clinical ketosis
- Monitoring and management of herd feeding program
- Protection of herd reproductive performance
- Reduction in herd culling rates

## Test Individual At-Risk Cattle

Nova Vet BHBA testing can be targeted for potential problem or high-risk cows. Individual testing of at-risk cows can identify ketosis early in the disease process so that more severe clinical disease can be avoided with clinical intervention.

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