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## A. Uses

What can this test be used for? This test is used for the screening of cows for sub-clinical ketosis.

- Monitoring *fresh cows*
- Checking *herd level* nutritional status

Can I use the PortaBHB™ milk ketone test to assay dairy goat and sheep samples? No. The PortaBHB™ milk ketone test has not been field tested in these animals.

## B. The Test Principle & Relation to Other Methods

How does the PortaBHB™ milk ketone test work? The PortaBHB™ milk ketone test is based on a chemical reaction between an enzyme on the test strip and a ketone called beta-hydroxybutyrate (BHB) found in the milk. This reaction makes the test strip sample area change to a purple color. The darker the purple color, the higher the BHB level.

How does the PortaBHB™ milk ketone test differ from reference lab testing? Lab instruments use a technique that measures the level of BHB in blood serum or plasma.

How does the PortaBHB™ milk ketone test compare to lab data? The correlation between BHB values in milk and in blood is low ( $r=0.66$ ). Therefore, in comparing the various tests on the market, investigators look at sensitivity and specificity around certain cutoff values, instead of a direct correlation.

Compared to a threshold of  $\geq 1.4$  mmol/L in blood, the PortaBHB™ milk ketone test shows the following sensitivity/specificity:

	<b>PortaBHB™ Milk Ketone Test Threshold</b>	
	$\geq 100 \mu\text{mol/L}$	$\geq 200 \mu\text{mol/L}$
<b>Sensitivity*</b>	89.2	40.3
<b>Specificity*</b>	79.6	99.5

\* Data based on a study of 577 cows at the University of Montreal.

What cut off values should be used?

Researchers at the University of Montreal suggested using a threshold of:

- 100  $\mu\text{mol/L}$  for herd level management of hyperketonemia
- 200  $\mu\text{mol/L}$  for detection of sub-clinical ketosis in individual cows, because of the excellent specificity.

### C. Kit Storage

How do I store the kit?

Store the kit at  $2^{\circ}\text{C} - 25^{\circ}\text{C}$  ( $36^{\circ}\text{F} - 77^{\circ}\text{F}$ ). Refrigerate, if possible. Keep the test strip vial tightly closed. Test strips are moisture sensitive. Use by the expiration date. (*Expiration Date label placed on the vial*).

What is the shelf life of the product?

Product shelf life is one (1) year from the date of manufacture if stored at room temperature. (*Expiration date may be found on the vial*).

### D. Conditions for Running the Test

At what temperature should I test the samples?

We recommend testing the milk samples at a place where the temperature is between  $8^{\circ}\text{C}$  and  $35^{\circ}\text{C}$  ( $65^{\circ}\text{F} - 95^{\circ}\text{F}$ ).

Can the test be done outside?

Yes.

Can I strip milk directly onto the test strip?

Yes, but we do not recommend doing this as it might give erroneous results.

## E. Milk Samples

How fresh must the milk be?	The milk should be tested within 24 hours of sampling.
Will the temperature of the milk affect the test?	If the milk is refrigerated, allow it to warm to room temperature before testing.
Should I mix the milk sample before testing?	Yes, it is recommended that the milk sample be mixed before testing.
Can samples with preservatives be tested?	If the preservative contains a colored dye, it may change the color of the test strip and affect the results.
Can samples with antibiotics be tested?	Yes. Antibiotics will not interfere with the test.

## F. Test Strips

Where are the <i>Lot Number</i> and <i>Expiration Date</i> for the kit?	The <i>Lot Number</i> and <i>Expiration Date</i> are printed on a label on the test strip vial.
What if the test strip is dropped/disturbed during color development?	If the test strip does not pick up dirt or water, it should be fine.
What if the test strip was exposed to direct sunlight or high humidity? What if I left the vial in the sun or inside of a hot vehicle?	If the test strips appear pink or purple before use, discard.

## G. Other

What if my question is not here, or I need additional information?	Please check our Web site at <b>www.portacheck.com</b> . You may also contact us by <b>email at info@portacheck.com</b> , or by using the toll-free number <b>866.500.7722 (US only)</b> . For other areas, please call <b>856.231.8894</b> .
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