

# Using milk recording (DHI) to detect pregnancy

*It is now possible to use your dhi milk samples to find out if your cows are pregnant as early as 28 days after breeding. so now you have a new tool in your reproductive management toolbox.*

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Once in the laboratory at Valacta, your milk samples become a treasure trove of information that can be applied to your herd management. On a daily basis, we work to decode the messages your cows are transmitting in their milk and provide you with an accurate and useful analysis to promote sustainable and prosperous herd management.

Recent research and development

efforts have led to a new method for detecting pregnancy from your DHI milk samples. You will now be able to integrate this conception-confirming tool in your reproductive management strategy.

## Didn't we already have that?

Yes and no. It's true there doesn't appear to be anything new to the idea of detecting pregnancy in milk; indeed, Valacta has been offering that service since October 2013. However, the scientific information available at the time only allowed us to use GESTALAB to confirm pregnancies from 60 days or more after breeding.

Since then, we have continued to work to validate the test for earlier pregnancy detection, specifically, from 28 days post-breeding.

## Does the test work well?

It certainly does!

To validate the reliability of the test, we worked with veterinarians to conduct a clinical trial on some of Quebec's dairy farms. Our aim was to compare the accuracy of the milk detection test with that of an ultrasound examination. The results of the trial confirmed that between 28 and 45 days after breeding both methods are reliable for detecting the presence of a foetus.

## What are the advantages of this test for me?

The answer to that question depends on your situation. For instance, some producers might benefit from an earlier confirmation of successful breeding, between two preventative medicine visits. If your herd is housed in a free-stall barn, the test may allow you to improve your work efficiency by reducing the time spent handling the cows during pregnancy diagnoses.

Discuss the matter with your veterinarian or contact customer service at Valacta to take full advantage of this technology.

## ELISA and PAGs

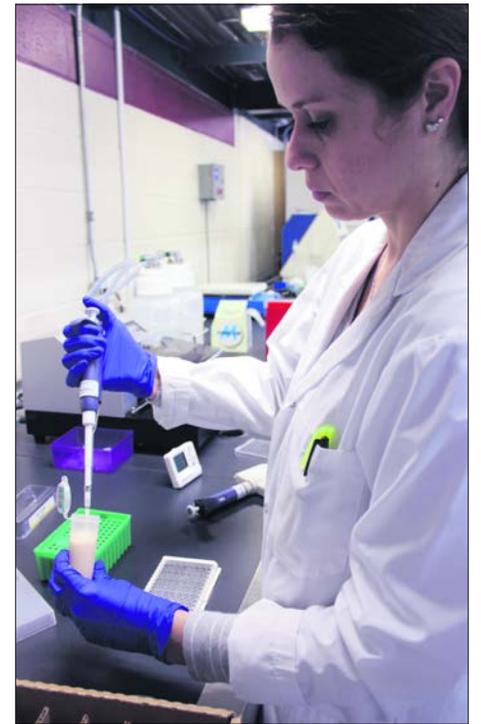
(Or how is pregnancy detected in milk?)

### ELISA

To detect pregnancy in milk samples, we use a commercial test kit from IDEXX Laboratories. The ELISA (enzyme-linked immunosorbent assay) technology used for the milk pregnancy test differs from the automated methods we use to measure component, somatic cell and BHB levels in milk.

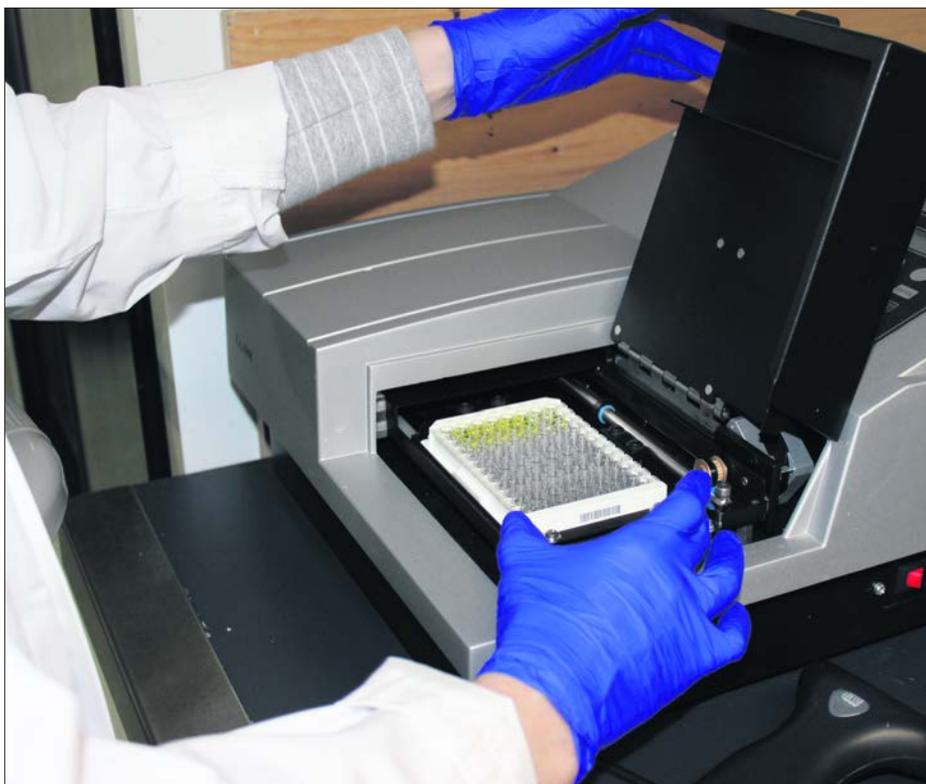
### PAGs

When your milk samples are submitted to IDEXX's ELISA test, the results tell us if the milk contains pregnancy-associated glycoproteins, also known



Milk is taken from the DHI sample and transferred to the well of the plate of the ELISA test kit.

as PAGs. When a cow is pregnant, PAGs are secreted by the placenta to indicate the presence of a foetus. PAGs circulate in the bloodstream and eventually end up in the cow's milk. These are the same PAGs that we have been measuring in blood sample pregnancy tests for the past few years.



Following an incubation period and the addition of reactants, the samples containing PAGs change colour. An ELISA reader is then used to measure the light absorbance, or colour intensity, of the solutions.



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