



The accuracy of using milk samples taken from Robots for milk pregnancy testing

How does the Milk Pregnancy Test work?

The test detects highly specific markers of pregnancy: **pregnancy-associated glycoproteins (PAGs)**.



PAGs are only produced in the presence of an embryo or fetus, making the test highly accurate from 28 days post insemination and throughout gestation, using your regular milk recorded samples.



Advantages of using the milk recorded samples from Robots for pregnancy testing



Pregnancy results with no need to block the cows: less stress and traffic jams at the robot.



Less somatic cells and lameness cases as cows spend less time standing and waiting.






Early and frequent pregnancy checks result in more cows in calf and better farm profitability.

Reliability of milk pregnancy test in milking robots

Result of 3 studies carried out in France

- The studies were run in **3 Milk Recording Organisations** in the East and West of France
- **771 cows** were involved in the studies. The ultrasound results were recorded along with related reproduction data.
- **15 farms were involved in the study:** 14 Lely (with the emptying time of the vacuum pump set at 9 seconds) and 1 DeLaval VMS 300 VMX

| Milk Recording Organisation | Farm | Number of tested cows | Test result of pregnant cows | | | Test result of open cows | | |
|---|---------------------|-----------------------|------------------------------|---------|------|--------------------------|---------|----------|
| | | | Pregnant | Recheck | Open | Open | Recheck | Pregnant |
|  BCEL ouest ⁽¹⁾ <i>Study carried out from February - July 2019</i> | A (Lely A5) | 51 | 22 | 1 | 0 | 25 | 0 | 3 |
| | B (Lely A3 Next) | 60 | 34 | 1 | 0 | 18 | 3 | 4 |
| | C (Lely A3 Next) | 101 | 50 | 0 | 0 | 46 | 2 | 3 |
| | D (Delaval 300 VMX) | 41 | 22 | 0 | 0 | 19 | 0 | 0 |
|  EILYPS ⁽²⁾ <i>Study carried out from October 2017 - February 2018</i> | E (Lely A4) | 32 | 19 | 0 | 0 | 13 | 0 | 0 |
| | F (Lely A3) | 84 | 61 | 0 | 0 | 21 | 1 | 1 |
| | G (Lely A4) | 63 | 38 | 0 | 0 | 19 | 5 | 1 |
| | H (Lely A4) | 75 | 68 | 0 | 0 | 3 | 3 | 1 |
| | I (Lely A4) | 37 | 30 | 0 | 0 | 3 | 1 | 3 |
| | J (Lely A4) | 27 | 17 | 0 | 0 | 8 | 2 | 0 |
| | K (Lely A4) | 47 | 25 | 0 | 0 | 20 | 1 | 1 |
|  3CE Alsace Moselle ⁽³⁾ <i>Study carried out from June - July 2018</i> | L (Lely) | 30 | 16 | 0 | 0 | 12 | 1 | 1 |
| | M (Lely) | 47 | 26 | 0 | 0 | 17 | 4 | 0 |
| | N (Lely) | 42 | 23 | 0 | 0 | 10 | 6 | 3 |
| | O (Lely) | 34 | 20 | 0 | 0 | 14 | 0 | 0 |

| | Pregnant cows | Open cows |
|-----------------------|---------------|-----------|
| Test result: Pregnant | 471 | 21 |
| Test result: Open | 0 | 248 |

Sensitivity
100%

Specificity
92,2%

Recheck
4,0 %

Reliability of
97,2 %

For more information about the Milk Pregnancy Test, contact your milk recording organisation or your laboratory.