

# TRUSTED SOLUTIONS FOR RAW MILK QUALITY TESTING

DR. DANIEL SCHWARZ, FOSS, DENMARK



**ICAR**2026  
VERONA**ITALY**

# FOSS AT A GLANCE

1956

company founded by Nils Foss

+1,750

employees

99% of our €360+<sub>mill.</sub>

revenue outside of Denmark

+40,000

customers worldwide



# OUR MISSION

We contribute to the sustainable use of our planet's agricultural resources and thus to the nutrition and health of the people of the world.

We innovate analytics beyond measure to empower our customers by improving quality and optimizing food and agricultural production.



2024



2024

LOADING THE **LARGEST INVESTMENT** IN THE HISTORY OF FOSS



2025



2025



HOPE TO SEE YOU AGAIN AT FOSS PRODUCTION & LOGISTICS  
IN DENMARK



# INDUSTRY LEADING SOLUTIONS

## FOSS' INDUSTRY SEGMENTS

**FOSS**

RAW MILK TESTING



DAIRY



GRAIN & OILSEED



WINE & BEER



MEAT



FEED & FORAGE



OTHER INDUSTRIES



LABORATORIES



80%

of the world's milk  
is tested with a  
FOSS solution



# BACTOSCAN™ 5

A THREAT TO  
BACTERIA IN MILK.  
A BOOST FOR YOUR  
BUSINESS.

Learn more:



Experience BactoScan 5 on our booth



Participate in our prize draw!

# EXPERIENCE SHARING – BACTOSCAN 5 TESTIMONIALS



SOLUTIONS SERVICES SUPPORT KNOWLEDGE CAREER ABOUT FOSS

Boost raw milk testing efficiency with BactoScan™ 5

Discover how Ligel improved speed, reduced costs, and simplified workflows by upgrading to BactoScan™ 5. Watch their story and learn how your lab can benefit too.





Raw milk testing labs face growing demands for speed, accuracy, and cost efficiency, meaning these challenges require more than incremental improvements – it calls for innovation.

In this video, Ligel shares how upgrading to BactoScan™ 5 transformed their operations, significantly boosting their raw milk testing efficiency. The new solution addressed the need for certain reagents, cutting preparation time and reducing reagent costs by around 50%. Lower power consumption is steadily made further supports sustainability goals.

**Ease of use and rapid onboarding**  
With intuitive software and minimal training requirements, Ligel's team mastered the system within hours. "After one week of installation and just a couple of hours of training, all operators knew how to use the P222 integration," says Technical Director Paulo Prado.

**Speed that makes a difference**  
Perhaps the most striking improvement is analysis speed. Ligel increased throughput from 30 to 300 samples per hour for high-capacity raw milk testing labs.

**Looking ahead**  
As Ligel's Director General, Roberto Guimarães, explains, the partnership with P222 goes beyond technology.





SOLUTIONS SERVICES SUPPORT KNOWLEDGE CAREER ABOUT FOSS

BactoScan™ 5 tested under routine conditions at mpr Bayern: How labs can benefit from operational efficiency

How mpr Bayern evaluated BactoScan™ 5 under routine laboratory conditions, focusing on faster startup, built-in automation, and smoother daily sample analysis.



As milk testing laboratories face increasing economic pressure and the need to optimize workflows, **Milchprüfing Bayern e.V. (mpr Bayern)** evaluated BactoScan™ 5 to assess how it performs in daily operation under their routine conditions. The evaluation was carried out by the technical team at mpr Bayern and summarized by **Christine Rißel, Head of Technical Operations**, based on their practical experience during the assessment phase.

Their evaluation shows how BactoScan™ 5 helped speed up daily readiness, prevent unplanned downtime, and reduce hands-on work for operators, contributing to improved efficiency and simpler operational routines.

**More efficient startup and automated performance checks**  
Mrs. Rißel notes that the BactoScan™ 5 startup routine has been reduced from approximately 15 minutes to just 5 minutes.





SOLUTIONS SERVICES SUPPORT KNOWLEDGE CAREER ABOUT FOSS

Cooprinsem: Reliable milk bacteria results at scale with BactoScan™ 5

"For us, the most important thing is stability. BactoScan™ 5 delivers that every day."



**Interview**  
Ingrid Lohrke  
Director of Cooprinsem's Laboratory Center

**Can you briefly describe Cooprinsem's laboratory operation?**  
Cooprinsem operates one of the most modern veterinary and agricultural laboratory centers in Chile. Our milk quality laboratory is ISO 17025 accredited and processes more than two million milk samples per year. Some of the test results we used directly in payment systems, so accuracy, consistency, and reliability are absolutely critical for us.

**What made you consider BactoScan™ 5?**  
We have many years of experience with BactoScan™ 40 instruments, so bacteria analysis using P222 technology is nothing new to us. However, we needed a new-generation solution that could support our growing test volumes, improve daily efficiency, and ensure long-term reliability without compromising result equivalence. BactoScan™ 5 was a natural step forward.

**How did the implementation go?**  
The transition was very smooth. We purchased the instrument in September 2023, followed by installation. Our validation in the last quarter of the year routine analysis started in February 2024. From day one, the system is expected. There were no surprises, no instability, and no disruption to our results.





# COMBIFOSS 7 – MORE RESULTS AT LESS COSTS

## CAPACITY: 100 TO 600 SAMPLES PER HOUR

**FOSS**



### MilkoScan 7 RM

- Diamond or CaF<sub>2</sub> cuvette
- Milk compositional analysis

### Fossomatic 7 Fossomatic 7 DC

- SCC
- DSCC parameter for improved udder health services (7 DC unit only)

ANALYTICS BEYOND MEASURE



# INSTRUMENT APPROVALS

FOSS

ANALYTICS BEYOND MEASURE



Certifications • Validations • Proficiency Tests • Guidelines • Publications • News • Webinars

## ICAR Certified Milk Analysers

← Milk analysers

### Full instrument validation and interlaboratory study

The "Full instrument validation" is granted to those milk analysers that, based on the data provided after the laboratory tests, positively pass the requirements established by ICAR. The certification is valid for five years and, to date, the following milk meters have been granted with the "Full instrument validation".

| Code | Name of the Milk Analyser | Manufacturer | Valid up to | Picture                                                                             | Report                 | Certificate                 |
|------|---------------------------|--------------|-------------|-------------------------------------------------------------------------------------|------------------------|-----------------------------|
| 09   | Fossomatic 7              | FOSS         | July 2030   |    | <a href="#">Report</a> | <a href="#">Certificate</a> |
| 08   | Fossomatic 7 DC           | FOSS         | July 2030   |   | <a href="#">Report</a> | <a href="#">Certificate</a> |
| 07   | MilkoScan 7 RM            | FOSS         | July 2030   |  | <a href="#">Report</a> | <a href="#">Certificate</a> |



### CERTIFICATE OF COMPLIANCE

LRQA

hereby declares that the certification assessment has demonstrated that

**Fossomatic™ 7**  
for enumeration of somatic cells in raw cow's milk  
Manufactured and supplied by:  
FOSS ANALYTICAL A/S  
FOSS ALLE  
DK-3400 HILLERØD  
DENMARK

has been validated and revealed to be at least equivalent to the reference method as demonstrated by the validation study report, which has been prepared by a MicroVal Expert Laboratory and approved by the MicroVal Technical Committee. The above-mentioned production facility complies to the GMS requirements as mentioned in the MicroVal Rules. The summary of the validation report is available on the MicroVal website: [www.microval.org](http://www.microval.org)

Reference method: ISO 13366-1:2008 Milk - Enumeration of somatic cells - Part 1: Microscopic method  
Scope: raw cow's milk

The validation and certification has been performed in accordance with with ISO 8196-3, ISO 13366-2, EURM MMP document - criteria for the validation of instrumental (epifluorescent) methods for the enumeration of somatic cells in raw cow's milk, version 2, 21 January 2013 and the MicroVal Rules.

Certificate no.: 2016LR62

First approval date: 17 October 2017  
Surveillance date: 20 June 2025  
Expiry date: 16 October 2029



ISSUED BY: LRQA Nederland B.V.  
Rotterdam, The Netherlands

Certificate no.: 2016LR62 12-08-2025 Page 1 of 1

George Verhoeven, T1, 9028 AA Rotterdam, The Netherlands, Tel no.: +31-61988  
This approval is limited and is in accordance with the LRQA assessment and certification procedures and monitored by LRQA



### CERTIFICATE OF COMPLIANCE

LRQA

hereby declares that the certification assessment has demonstrated that

**Fossomatic™ 7DC**  
for enumeration of somatic cells in raw cow's milk  
Manufactured and supplied by:  
FOSS ANALYTICAL A/S  
FOSS ALLE  
DK-3400 HILLERØD  
DENMARK

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Reference method: ISO 13366-1:2008 Milk - Enumeration of somatic cells - Part 1: Microscopic method (Reference method)  
Scope: raw cow's milk

The validation and certification has been performed in accordance with with ISO 8196-3, ISO 13366-2, the EURM MMP criteria - Criteria for the validation of instrumental (epifluorescent) methods for the enumeration of somatic cells in raw cow's milk, version 2, 21/01/2013 and the MicroVal Rules and Certification Scheme version 8.

Certificate no.: 2016LR63

First approval date: 12 June 2018  
Renewal date: 15 July 2022  
Expiry date: 11 June 2026



ISSUED BY: LRQA Nederland B.V.  
Rotterdam, The Netherlands

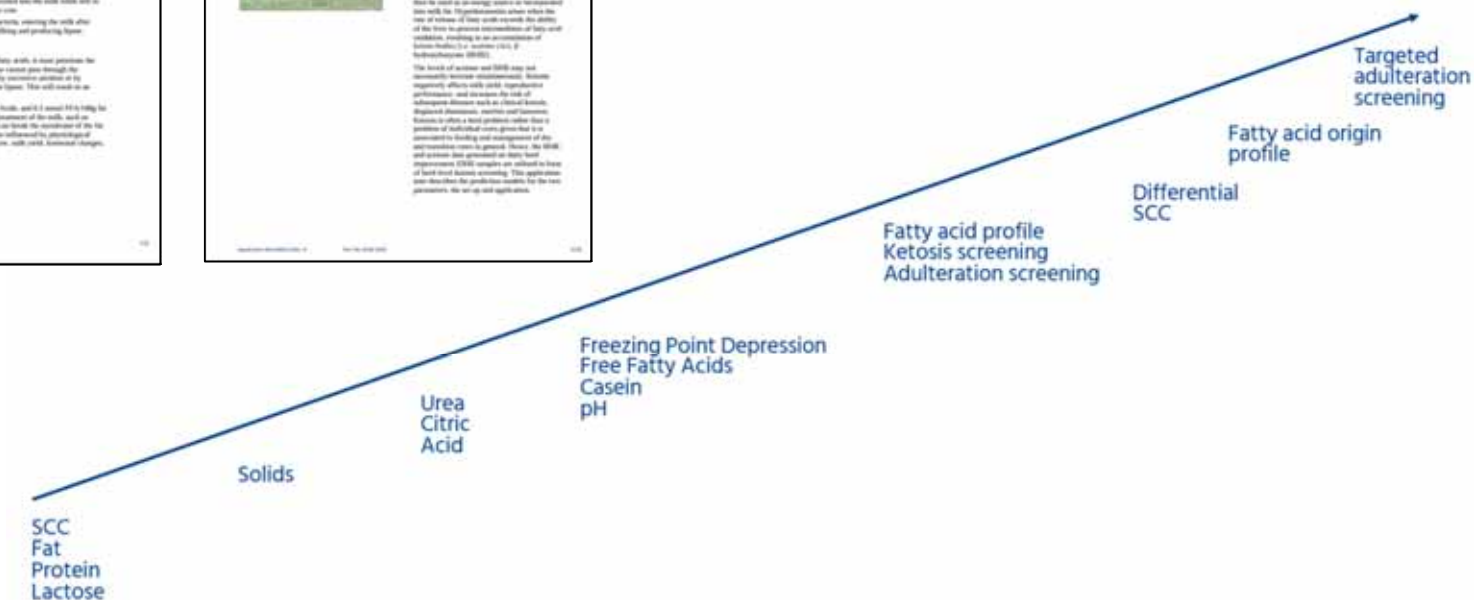
Certificate no.: 2016LR63 12-07-2022 Page 1 of 1

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# 60 YEARS OF JOINT DEVELOPMENT OF NEW APPLICATIONS WITH THE DAIRY SECTOR

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ANALYTICS BEYOND MEASURE



|        |        |         |         |         |        |                 |
|--------|--------|---------|---------|---------|--------|-----------------|
| CF 215 | CF 360 | CF 4000 | CF 5000 | CF 6000 | CF FT+ | CF 7 DC         |
| 1970s  | 1980s  | 1980s   | 1990s   | 2000s   | 2010s  | 2016 2018 2020s |

# ICAR PROFICIENCY TESTING & QUALITY ASSURANCE

**FOSS**



THE GLOBAL STANDARD  
FOR LIVESTOCK DATA

## Independent benchmark

20th ICAR PT round since 2016, a worldwide picture of milk-testing laboratory performance.

## ISO-aligned

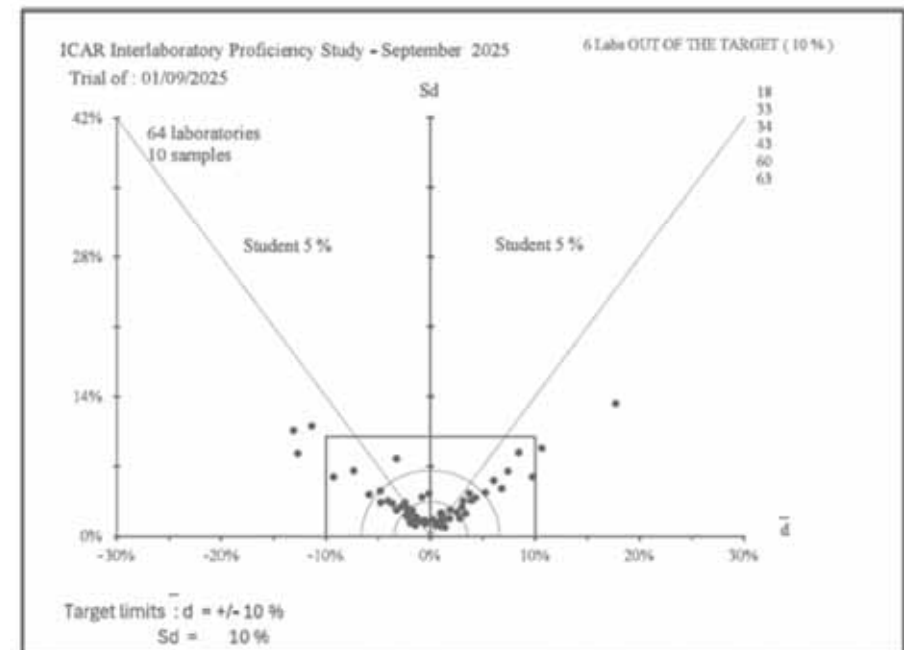
Based on ISO 17043; labs assessed against ISO 17025.  
Coordinated by ICAR.

## Broad parameter scope

SCC, fat, protein, lactose, urea, BHB, plus PAG, DNA and fatty acids.



Source: ICAR proficiency test results September 2025



**90% of labs within target** · (Sept 2025)

# AUTOMATED SAMPLE PREPARATION

ABOUT 30% OF FOSS' INSTALLED BASE WITH AUTOMATION

**FOSS**



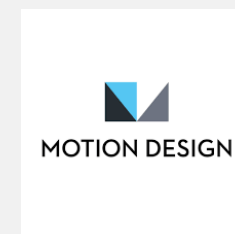
**LuWe Solutions**



**Raudszus Electronic**

**ULTRAKUST**

**Ultrakust**



**Motion Design - ILAS**

**FOSS**

Up to

**8%**

reduction of carbon footprint of milk  
through data-driven optimization of feed  
feeding and health management



**Let us talk more at our booth  
Hear more in Technical Session 5**

**Certificate**  
of appreciation

to

**Precision Analytics for Climate-Smart Livestock:  
From Feed to Food with Cost-Efficient Data**

for outstanding demonstration of innovation in  
advancing Sustainable Livestock Transformation

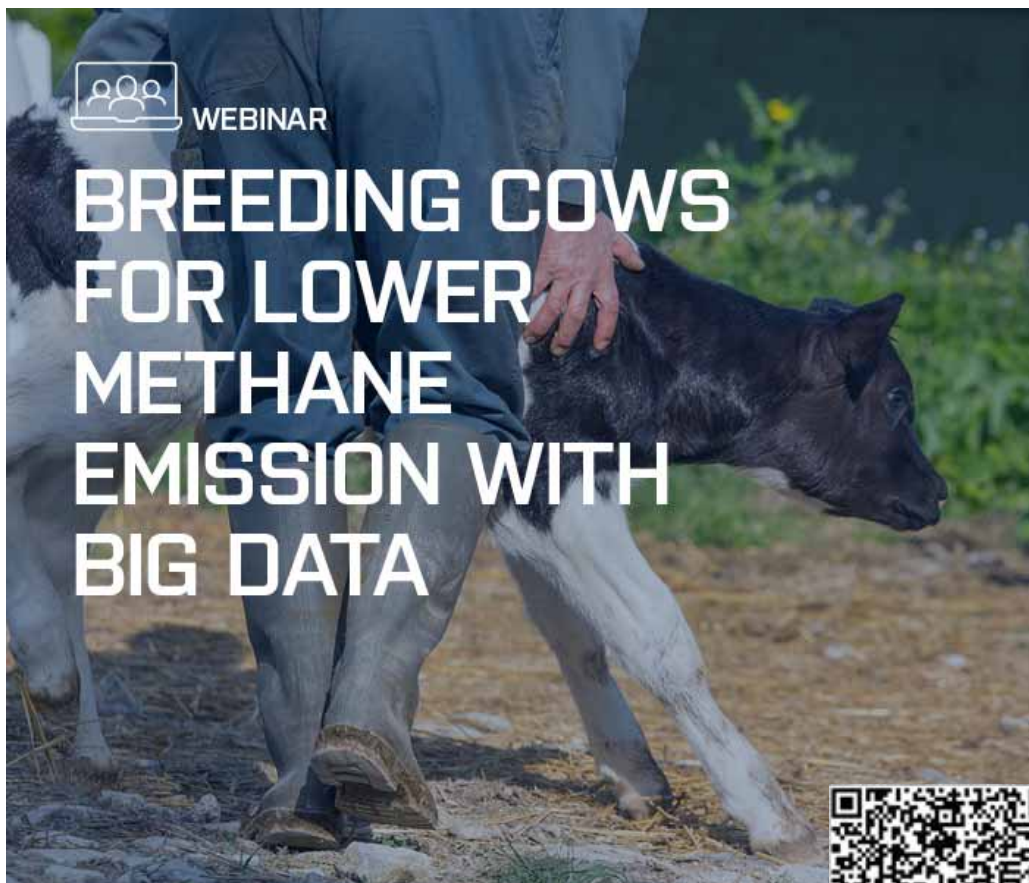
1 October 2025

Presented at the FAO 2025 Global Conference  
on Sustainable Livestock Transformation



KNOWLEDGE SHARING  
WEBINARS ON SUSTAINABLE MILK PRODUCTION

**FOSS**



# MILK – ONE OF THE MOST TESTED FOODS WORLDWIDE

**FOSS**

ANALYTICS BEYOND MEASURE



~200<sub>mill.</sub>

Total number of DHI/milk recording samples

~100<sub>mill.</sub>

Total number of payment samples

→ Smaller than healthcare (10-50 bill. tests) and food microbiology testing (2 bill. tests)

→ Highly standardized globally (ICAR, IDF/ISO standards)

Estimated based on data from: <https://my.icar.org/stats/list>